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A STUDY OF MICHIGAN DOWNHILL SKIERS

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Joseph D. Fridgen
Major professor

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SKIING INVOLVEMENT AND FAMILY LIFE CYCLE: A STUDY OF MICHIGAN DOWNHILL SKIERS

By

Hideo Kikuchi

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ABSTRACT

SKIING INVOLVEMENT AND FAMILY LIFE CYCLE:
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This study investigates the relationship between skiers' stages in the family life cycle and their skiing involvement. Existing cross-sectional data on downhill skiing participation in Michigan provided an appropriate data base for analysis. Three family life cycle stages specifically developed and used in the study are "younger childless," "older childless," and "married with children." Major results of the study include the following: active skiers were heavily represented in the "younger childless" stage, inactive skiers were primarily in the "older childless" stage, while dropout skiers were in the "married with children" stage; timing of adoption and withdrawal from the sport is associated with the skiers' family life cycle; and family life cycle is associated with active skiers' participation patterns (i.e., types of skiing trips and choice of skiing companions).

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CHAPTER I

INTRODUCTION

Problem Statement

Needless to say, numerous social and physiological factors influence leisure/recreation behavior. The present study deals with one of those factors, family life cycle. The focus of this study is the relationship between the family life cycle and recreation involvement, specifically skiing involvement.

Family life cycle (FLC)[1] is a term that has been used for many years in reference to the succession of critical stages during the family's life span (Glick, 1977). Since the family has been identified as one of the most influential source groups for general social behavior (Mayo and Javis, 1981), FLC has been acknowledged as a useful summary measure in tracting or understanding social behavior. As a result, FLC has been examined by sociologists and general consumer researchers for years.

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[1]"FLC" is an abbreviation for "family life cycle." This abbreviation will be used frequently throughout the present study.

In contrast with the above fields, however, FLC had received little attention in leisure/recreation behavior research. Although more attention has been focused upon FLC, relatively little information has been produced and available with respect to its relationship with leisure/recreation behavior. With this in mind, the present study was designed to expand information concerning the relationship between recreation involvement, specifically, downhill skiing involvement and the FLC.

In studying skiing involvement, the concept of skiing involvement cycle proposed by LaPage (1979) provides a useful framework. The concept assumes that there are stages through which people move as they become involved in and eventually leave skiing. This framework suggests that "at any given time, the market can be visualized as having an active participant component, a potential participant component made up of persons who are highly likely to try skiing, and an inactive participant component made up of skiers who have temporarily stopped skiing" (LaPage, 1979, p. 2). A more complete analysis of skiing involvement is possible if these components of skiers are taken into consideration. A survey of Michigan downhill skiers conducted at Michigan State University in 1978 provides an appropriate data base for the present investigation.

In summary, the basic questions asked in this study concerns two important concepts: family life cycle and skiing involvement cycle. Are skiers' stages in the FLC

related to their adoption and withdrawal from the sport? Are skiers' stages in the FLC related to their levels and types of skiing involvement?

Study Objectives

The general objective of this study is to explore the relationship between family life cycle and skiing involvement. Relative to this general objective, specific related objectives focused upon the relationship between family life cycle and

1. the adoption and dropping out of the sport;
2. participation characteristics (levels and types of participation);
3. perceptions of skiing;
4. reasons for not skiing; and
5. degree of interests in the sport.

Significance of the Study

Basically, the present study serves two functions. First, the study provides more information about the dynamics of skiing involvement and skier behavior in general. This contributes to the development of an explanatory theory of skiing behavior.

Secondly, this study provides important information for practitioners. That is, the study can provide significant information useful to planners and managers involved in the skiing industry. The results from the study can provide a useful data base. Use of this data base should

contribute to more informed decision making within the skiing industry.

Organization of the Study

The remainder of this study is organized in four chapters. A review of relevant literature is included in the next chapter. The main focus of the review is the FLC and its effects on social behavior. Relative to this focus, the literature review contains previous studies concerning: FLC concept, FLC and general consumer behavior, FLC and leisure/recreation behavior, problems associated with FLC, and the skiing involvement cycle concept. Chapter III presents the research methodology. This includes a summary of the original data collection effort on which the present study is based, operationalization of variables, and the treatment of the data. In addition, specific hypotheses to be tested are formulated and stated in the null form in this chapter. Chapter IV presents the results of the statistical analysis of the data. This chapter consists of three major sections: demographic characteristics of FLC, estimation of the stages in FLC at time of adoption and withdrawal from the sport, and tests of hypotheses. The last two sections are concerned with achieving the study objectives. Finally, the fifth chapter contains discussion, conclusion, study limitations, and recommendations.

CHAPTER II

REVIEW OF RELEVANT LITERATURE

Family life cycle and the effect it may have on the social, economic and consequently leisure/recreation behavior is the focus of this literature review. Relative to this focus, the literature reviewed is organized under the following topics: (1) Family life cycle concept; (2) Family life cycle and consumer behavior; (3) Family life cycle and leisure/recreation behavior; (4) Problems associated with the family life cycle concept; and (5) Skiing involvement cycle concept.

Family Life Cycle Concept

Family life cycle is not a new concept. As Wells and Gubar (1966) have acknowledged, the concept has appeared frequently in the field of sociology since the 1930s.

Glick, a leading FLC researcher briefly describes the FLC concept as follows (1947, p. 164):

> Typically, a family comes into being when a couple is married. The family gains in size with the birth of each child. From the time the last child is born until the first child leaves home, the family remains stable in size. As the children leave home for employment or marriage, the size of the family shrinks gradually back to the original two persons.

> Eventually one and the other of the parents die and the family cycle has come to an end.
>
> During the life of the typical family, important changes occur not only in the composition but also in many other measurable characteristics of the group.

In another paper, Glick explains FLC and its usage (1977, p. 5):

> The life cycle of the family is a term that has been used for many years in reference to the succession of critical stages during its life span. This concept provides of data on conjugal families as they pass through such stages as marriage, birth of children, children leaving home, the "post-children" or "empty nest" period and ultimate dissolution of the marriage through death of one of the spouses.

Due to its understandable nature, the concept is now well known and accepted by demographers, sociologists, and economists as a summary measure useful in tracting patterns of change or differences between groups in the timing of vital or natural events. These events occur within the hypothetically typical nuclear family as it progresses from inception to dissolution (Norton, 1974).

Norton maintains the importance of the use of FLC data as it relates to social behavior research in the following manner (1974, p. 169):

> One very important use of basic life-cycle data is that they signal the effect that prevailing social, psychological, and technological condition may have on the behavior of individuals, influencing their actions at any one of the sequential stages of the life cycle.
>
> Another feature of basic life cycle value is that they provide the foundation or starting points for the analysis of a number of variables (income, educational attainments, occupation, etc.) directly associated with and contributing to life styles as they apply to families.

Family Life Cycle and Consumer Behavior

As indicated the concept of FLC provides quite a useful model for studying and understanding social behavior. The concept assumes most households pass through an orderly progression of stages (Wells and Gubar, 1966):

1. The bachelor stage: young single people.
2. Newly married couples: young, no children.
3. The full nest I: young married couples with dependent children.
4. The full nest II: older married couples with dependent children.
5. The empty nest: older married couples with no children living with them.
6. The solitary survivors: older single people.

Because these stages in the life cycle are generally characterized or explained by the combination of several factors such as marital status, age, presence of children, age of children and whether or not children reside with their parents (Murphy and Staples, 1979), it is then expected that these stages are closely related to important changing wants, attitudes and values of the members of a family.

According to Berkman and Gilson (1981), the development of the concept of FLC as it relates to consumption theory goes back to the fifties and sixties. Since then, numerous studies indicating impressive associations between the life cycle and consumption pattern have been documented.

A study by Lansing and Morgan (1955) is one of the early works in this field. In the study entitled Consumer

Finances Over the Family Life Cycle, they documented that consumers' financial situation changed over the FLC of a typical family. By distinguishing six stages of the life cycle, they successfully described how family income, expenditures on durable goods, assets and debts, and subjective feelings about financial position differ at six different stages in the life cycle.

A similar study, but on buying patterns for non-durable goods, was conducted by Burton (1954). Burton suggested that FLC influenced a typical family's purchases of non-durable items. The presence of children, for example, was one of the major factors which affected a family's purchasing patterns for such goods.

Some other important studies on the life cycle as it relates to consumer behavior are also to be found in Clark's book titled: Consumer Behavior (1955). Results from those studies are rather apparent. They suggest that FLC is closely related to the economic behavior and would seem to be a more sensitive indication of the family's economic situation than conventional single age related variables in many kinds of consumer analyses.

In a study by Lansing and Kish (1957), a direct comparison was made between life cycle and age as independent variables. In this study the authors made comparisons between life cycle and age with respect to six important characteristics of the families' consumption patterns: family income, indebtedness, whether the wife works, home

ownership, purchase of new car and purchase of TV sets. In these comparisons, life cycle stages were better predictors of all six characteristics than age. The analysis provided useful information not revealed by using the simple age groupings as an independent variable. In conclusion, they suggested that researchers made more use of the FLC as an independent variable in consumer research.

In addition to those studies mentioned above, a relatively recent study which was concerned with the selection of a superior segmentation variable was conducted by Hisrish and Peters (1974). In their study, they investigated the relationship between FLC and patterns and levels of participation for fourteen entertainment activities including downhill skiing, golf, and recreational travel.

For the analysis, four life cycle stages were used: (1) Under 40 without children, (2) Under 40 with children, (3) 40 and over, with children, and (4) 40 and over, without children in residence. Hisrish and Peters found that the life cycle stages were more significantly correlated with participation/non-participation pattern than age or social class in a majority of the activities considered.

Thus, empirical studies seem to show and support that there is an association between FLC and consumption behavior. Consequently, it is generally accepted that the concept of FLC helps in understanding consumer behavior (Katona, 1960; Berkman and Gilson, 1981). Family life cycle

is also identified as a powerful segmentation variable by market researchers (Kotler, 1980).

Family Life Cycle and Leisure/Recreation Behavior

As discussed, the concept of FLC refers to the important stages in the life cycle of a hypothetically ordinary family. Although FLC analysis had not been a common concern in leisure and recreation behavior research, increased attention is now being focused upon FLC (Howard and Crompton, 1980). Several examples from recent literature in this field have suggested that stages in the FLC have an influence upon leisure/recreation behavior (Rapoport and Rapoport, 1975; Cheek and Burch, 1976; Godbey and Parker, 1976; Parker, 1976; Ibrahim and Martin, 1978; Robert, 1978; Iso-Ahola, 1980). Their arguments are based upon the following premise: various constraint patterns which change during the course of FLC play an important role in influencing recreation behavior.

Burch, for example, explains the relationship between FLC and recreation behavior as follows (1966, p. 608):

> The stage of family life cycle is dependent upon interaction between the ages of husband and wife, the number of children, and the ages of the oldest and youngest child. Each of these factors contributes to the kind of functional demands placed upon the family unit and consequently establishes limits for the range of potential action by the unit and its individual members.

More recently, Howard and Crompton (1980) and Mayo and Javis (1981) referred to the FLC and how it relates to

marketing recreation resources, specifically, market segmentation for recreational users.

In addition to the above literature, the findings of several empirical studies also indicate that there is a relationship between the life cycle and leisure/recreation behavior. Approaches employed in these studies vary, however, the findings suggest the impressive contrasts in uses of leisure and different stages in the FLC.

Kelly (1977) in his study of leisure socialization reported the family and FLC had a significant influence upon adult recreation participation and suggested a life long "career" model of leisure learning in which leisure activities are learned, expanded, dropped, relearned, and so on through the course of the life cycle.

Kelly (1978) also investigated the relationship between FLC and leisure associations, family role constraints and leisure satisfactions perceived in an inclusive range of leisure activities. The results of his study revealed leisure associations and orientations changed during the course of the life cycle. For example, the study showed marriage and parenthood decreased the proportion of activities participated in alone or with friends for reasons intrinsic to the activity itself. Thus, the result appeared to support his previous study which suggested that FLC plays an important role in the individual's or household's leisure learning process.

While these studies dealt with FLC in the context of broad recreation activities, other studies intended to investigate the relationship between FLC and participation in a particular recreation activity. A study that investigated the association between the life cycle and particular recreation activity preference was conducted by Burch (1966). Burch in his study focused upon camping style preference of Oregon wilderness visitors and auto campers, and empirically examined their choice of camping style. In doing so, he pooled the information on parents' ages, size of family, and ages of the youngest and oldest child in order to determine the characteristic stages in FLC for three camping styles. Statistically significant associations between campers' stages in FLC and their camping styles were found: combination camping families represented the early stages in the FLC; easy access camping families represented middle and post-retirement stages; and remote camping families represented those just beginning their families and those in the contracting stages of the FLC.

LaPage and Ragain (1974) in their eight-year panel study of family camping trends, also reported that changes in FLC were related to both increases and decreases in camping participation. Although they failed to find a consistent pattern in the relationship, the study itself was an unique longitudinal investigation of FLC using a panel design.

There are other studies in which the stages in FLC were found to be a powerful predictor of various recreation activities. Recent studies are also concerned with FLC as an explanatory or predictor variable for recreation participation. By using the data of the telephone survey conducted for the Heritage Conservation and Recreation Service (HCRS) in 1977, Kelly (1979; 1980) examined the correlation between stages in the FLC and participation in thirty selected outdoor recreation activities. Eight FLC categories were developed from four socioeconomic variables. The categories developed were Single, Preparental married, Preschool parent, School age parent, Launching, Postparental married, Retired married, and Retired widow. These studies indicated that FLC was closely associated with age as expected and had an influence upon participation and nonparticipation in certain outdoor recreation activities, especially, outdoor sports. Kelly, however, noted that age was a better predictor of the type of activity participants engaged in than was the FLC.

A recent study by Witt and Goodale (1981) again confirms the potential value of FLC as an explanatory or predictor variable. Witt and Goodale in their study examined the relationship between barriers to leisure enjoyment and the life cycle. Included among barriers were time, money, knowledge, attitudinal and motivational constraints. The results suggested both the changing nature of particular barriers over varying life cycle stages and the possibility

to assess the relative importance of barriers at a given stage. Thus, the potential value of FLC as an explanatory variable was reinforced in the study. Interestingly, Witt and Goodale noted that their study indicated the non-linear pattern for many of the barriers across the FLC, suggesting potential for many correlational and regression techniques to miss important relationships by applying a linear model.

Problems Associated with Family Life Cycle Concept

All research is subject to assumptions and consequent limitations and FLC related research is, of course, no exception. Problems associated with the use of FLC as a concept should be discussed.

First, FLC is essentially a depiction of "average" or "typical" experience based on certain assumptions. Whenever the life cycle is broken into various stages, there is always a danger of oversimplifications and it is assumed that people from diverse socioeconomic classes and cultures experience the various stages in the same way (Iso-Ahola, 1980). Results obtained for the life cycle stages, therefore, can and should be taken as general measures of a hypothetical normal family, always keeping in mind the underlying assumptions on which they are based (Norton, 1974).

Another problem is that categories (stages) in FLC vary from researcher to researcher (Wells and Gubar, 1966). How to categorize or define the life cycle depends on

individual researchers and no common criteria exist. This possibly makes it difficult to insure consistency of measurements and to lend comparative analysis of the phenomenon being considered.

Finally, there are always some people who do not fit neatly into any of the normal life cycle stages. That is, the stages in the FLC may easily be upset by such common occurrences as divorce and remarriage or the premature death of one of the spouses (Norton, 1974).[1]

Skiing Involvement Cycle Concept

The concept of skiing involvement cycle was initially introduced in a nationwide downhill skier market study by LaPage (1979). The concept assumes that there are stages through which people move as they become involved in and eventually leave the sport of skiing: persons or households become potential skiers, then active skiers, and finally become inactive skiers or dropout skiers. This also implies that the skier market can be visualized as having active, inactive, dropout, and potential skier components at any given time, suggesting the importance to study not only active skiers but also inactive, dropout, and potential skiers who may have impacts on the active skiers market in the future.

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[1]A recent model of the family life cycle developed by Murphy and Staples (1979) is an effort which attempts to cope with these occurrences. The model takes into consideration rising divorce rates, an overall decline in the average family size, later marriage, and other factors.

In the study, LaPage took into consideration four types of skiers. They were termed "active," "temporary inactive," "permanently inactive," and "potential" skiers. In addition to the estimation of the size of those major skier market segments, comparisons were made among those types of skiers in terms of their images (perceptions) of downhill skiing, patterns of participation and demographic characteristics. The results confirmed the skier market was as dynamic as it was assumed, suggesting the apparent existence of large numbers of possible additions to active skiers from potential and inactive skiers. The relationship between the process of skiing involvement and FLC was not explored in the LaPage study.

The same concept of involvement cycle is also found in a previous study of the camping market (Kottle et al., 1975). An approach applying the concept of camping involvement cycle was employed to examine the camping market using data collected in a nationwide household survey. As in the case of skiing involvement study, images of camping were assessed and compared among the involvement groups (active, temporary inactive, permanently inactive, and potential campers). The images of camping were found to follow and reinforce the camping involvement cycle. For example, active campers tended to have more positive images of camping, while other involvement groups tended to have negative images. An analysis was also made to determine the process of camping involvement cycle. Although no

systematic approach was made with respect to the relationship with the campers' FLC, the authors suggested a possible relationship between FLC and the involvement cycle.

In summary, the concept of involvement cycle appears to be a useful framework for investigating and understanding recreation behavior.

Summary

The main purpose of this chapter was to acquaint the reader with the pertinent literature dealing with the FLC concept and its application to social behavior research including leisure/recreation behavior research.

The development and application of the concept of the life cycle is not a recent effort in sociology and general consumption theory fields. However, its application in the area of leisure/recreation behavior is relatively new and still at the preliminary stages (Witt and Goodale, 1981). The present study is an effort to investigate the relationship between FLC and recreation behavior, specifically downhill skier behavior, and to provide further information on the relationship.

CHAPTER III

RESEARCH METHODOLOGY

Research Design

The literature review suggested that the family life cycle was possibly related to skiing involvement. It was then hypothesized that the skiers' stages in the family life cycle influence their skiing involvement. In other words, the basic question to which the investigation effort is directed is how the skiers' stages in the life cycle are related to their skiing involvement.

Ideally, answers to such a question would come from the longitudinal study of a representative sample of skiers with pertinent characteristics, observing changes in their involvement in the sport of skiing from stage to stage. Mainly due to the difficulty in time and monetary costs of conducting such long-term research, however, cross-sectional data were used for the present study. Relative to the focus of the study, a telephone survey of Michigan downhill skiers[1]

[1]The survey procedures were designed and implemented by Daniel Stynes and Edward Mahoney at the Department of Park and Recreation Resources, Michigan State University in 1978. The present author was not involved in the study at that point in time.

which identified active, inactive, dropout, and potential skiers provided an appropriate data base for the analysis. Although not considered a perfect substitute for a longitudinal study, cross-sectional methods are often identified as a valid approximation of longitudinal methods used in the analysis of processes over time (Babbie, 1973; 1979). In addition, other researchers have acknowledged and supported the use of cross-sectional data in the study of the family life cycle (Loomis and Hamilton, 1936; Stockwell, 1976).

Michigan Downhill Ski Market Survey

This section summarizes the 1978 Michigan Downhill Ski Market Survey which provided an appropriate data base for the present study.

Sample

The survey population consisted of adults who were 18 or more years of age and resided in the following five calling regions within Michigan: Detroit, Grand Rapids, Ann Arbor, Pontiac, and Lansing. These areas account for more than one-third of the state's population and substantially higher percentage of Michigan's downhill skiers (Farwell, 1977).

The most recent phone directories (1977) in existence at that time covering each of the five regions served as the sample frame. A systematic sampling scheme was employed to select the households from each directory. Interviews were conducted between February 1 and March 9, 1978, and were

restricted to one adult (18 or over) within each household. In 593 households a qualified active, inactive, dropout, and potential skier was interviewed. To obtain sufficient numbers of active skiers to perform segmentation analyses,[1] additional phone numbers were randomly selected and respondents were screened for active skiers only. This procedure added 78 additional skiers to the sample, resulting in a final data base of 671 respondents (Table 1).

Table 1.--Frequency of Respondents Within Each Downhill Skier Sub-population.

Types of Skier	n[a]
Active	229 (34.1)
Inactive	148 (22.1)
Dropout	126 (18.8)
Potential	168 (25.0)
Total	671 (100.0)

[a]Numbers in parentheses indicate the percentage.

Identification of Skier

One of the main characteristics of the survey was that it focused not solely on active skiers but also on those who were temporarily inactive, had permanently dropped

[1]Segmentation analysis of Michigan downhill ski market was a major concern in the data collection. The market segmentation analyses are presented in Mahoney (1979), Stynes and Mahoney (1980), Stynes, Mahoney, and Spotts (1980).

out, or were thinking of adopting the sport of skiing. Five population subgroups were identified and labelled "active skiers," "inactive skiers," "dropout skiers," "potential skiers," and "non-skiers." They were defined as follows:[1]

1. ACTIVE SKIERS: individuals who skied during the 1976-77 winter season and anyone taking up skiing for the first time in 1977-78 prior to the interview period.

2. INACTIVE SKIERS: those who have skied one or more years, did not ski in 1976-77, but indicate they expect to ski again in the future.

3. DROPOUT SKIERS: those who have skied one or more years, did not ski in 1976-77, and indicate they do not expect to ski again.

4. POTENTIAL SKIERS: individuals who have never skied, but express an interest in trying downhill skiing sometime in the future.

5. NON-SKIERS: those who have never skied and who expressed no interest in trying the sport.

Instrumentation and Administration

Based on the fact that information to be collected would vary from group to group, distinct questionnaires were designed for each of the four groups of the skiers. Questions comprising the telephone survey administered to active, inactive, dropout, and potential skiers were designed to produce the following information.

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[1]The same terms and definitions of skiers are adopted and used in the present study. In addition, a term "former skiers" is used in the study when inactive and dropout skiers are combined and treated as one subgroup of the skiers.

Active skiers:
Socioeconomic characteristics;
Skiing participation characteristics during the past year;
Time of adoption of skiing.

Inactive and Dropout skiers:
Socioeconomic characteristics;
Skiing participation characteristics when active;
Perceptions of skiing;
Reasons for inactivity;
Time of adoption and temporary or permanent inactivity.

Potential skiers:
Socioeconomic characteristics;
Degree of potentiality;
Perceptions of skiing;
Reasons for not adopting skiing as of yet.

In order to identify the skier category to which a respondent belonged, preliminary screening questions were asked. Respondents were then asked a series of questions related specifically to the respondent's individual skier category. Those respondents who were classified into "non-skiers" category were not interviewed.

Complete details about the survey procedure and the sampling design are discussed in Mahoney (1979). Those who are interested in further information about the original study should also consult Mahoney (1979).

Study Variables

Independent Variable

The independent variable selected for the present study is the family life cycle. As mentioned previously, these family life cycle indexes are generally characterized by the combination of several socio-demographic factors

such as the present age of respondent, marital status, presence of children and so on.

To characterize the stages in the family life cycle, three demographic variables which were readily available in the original data and were commonly used for life cycle analysis were selected for the analysis. In this study stages in the family life cycle represent the combination of present age of respondent, marital status, and the presence of children. By combining these three demographic factors, three characteristic stages in the family life cycle were developed and available for the analysis. The stages in the life cycle and their descriptions are listed below.

I. YOUNGER CHILDLESS (FLC-1):
Under 23 years of age, without children.

II. OLDER CHILDLESS (FLC-2):
23 or more years of age, without children. Divorced and widowed are included in this category.

III. MARRIED WITH CHILDREN (FLC-3):
Married, with a child or children. Any age.[1]

Skiers' stages in the FLC when they first adopted the sport and when their temporary or permanent inactivity began were also identified in addition to the present FLC stages. The information about age and marital status at the time of adoption and dropping out of the sport was available in the original data. However, the information about the

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[1]FLC-1, FLC-2, and FLC-3 are abbreviations for "Younger Childless," "Older Childless," and "Married with Children" stages respectively. They will be used constantly throughout the present study.

presence of children at the time was not available. Consequently, the presence of children during the process of skiing involvement was determined by manipulating the data related to the age of the oldest child. To obtain the presence of children at the time of adoption, the differences between the respondent's present age and his/her adoption age was calculated. This difference was then subtracted from the present age of the oldest child. If the result from this subtraction was a positive number, it was then judged that s/he had at least one child at the time of adoption of the sport. If the result was negative or zero, it was judged that s/he had no children at the time of adoption. In the same procedure, the presence of children at the time of withdrawal from the sport was determined. By using the information about age, marital status, and the presence of children at the time of adoption and withdrawal from the sport, it was possible to identify and determine the skiers' stages in the family life cycle at the time of adoption and withdrawal from the sport.

Finally, it should be kept in mind that the defined life cycle does not necessarily promise that a natural progression from FLC-1 to FLC-2 to FLC-3 will always occur: some may jump from FLC-1 to FLC-3 or some may move from FLC-3 to FLC-1 or FLC-2 due to divorce or other occurrences.

Dependent Variables

Dependent variables used in this study are presented in Table 2. Their brief descriptions are as follows:

Table 2.--Dependent Variables and Their Measures.

Dependent Variable	Measure
1. Frequency of participation in downhill skiing	as measured by the number of days skied during the 1976-77 winter season, reported by active skiers.
2. Predominant types of skiing trips	measure one 1. Overnight trips 2. Day trips measure two 1. Weekend trips 2. Weekday trips
3. Participation in ski vacation	1. Participated 2. Did not participate
4. Company with whom activities usually ski	1. Alone 2. Friends 3. Family
5. Ski equipment ownership	1. Own equipment 2. Rent equipment
6. Perceptions of downhill skiing	for each of eleven attitude statements 1. Agree 2. Disagree
7. Reasons for not skiing	for each of eleven reasons 1. Yes (Important factor) 2. No (Not a factor)
8. Degree of potentiality (interests in skiing)	for each of twelve questions 1. Yes 0. No (An individual score is the total of twelve sub-scores, the possible range of individual scores of this dependent measure is 0-12.)

1. Frequency of Participation: Frequency of participation in downhill skiing was measured as the number of days skied during the 1976-77 winter season, resulting in an interval scale (Hays, 1981).

2. Types of Skiing Trips: The respondents in the active skiers category were asked about their predominant types of skiing trips. The question contained two measures. First, were skiing trips predominantly overnight trips or day trips? Second, were trips predominantly on weekends or weekdays? These two measures of types of skiing trips represented dichotomized categorical scaling which is referred to a nominal scale (Hays, 1981).

3. Participation in Ski Vacation: Active skiers were asked whether they took a ski vacation during the 1976-77 winter season. This measure also represented a dichotomized nominal scale.

4. Company With Whom Active Skiers Usually Ski: Active skiers were also asked whether they usually ski alone or with others. For those who answered they ski with others, a subsequent question was asked if their company was predominantly family or friends. A combination of the two questions yielded the following nominal measure with three categories: (1) Alone, (2) Family, and (3) Friends.

5. Ski Equipment Ownership: A question was asked about the ski equipment ownership. The respondents in the active skiers category answered the question by indicating whether

they "own" or "rent" ski equipment. This dependent measure represented a dichotomized nominal scale.

6. Perceptions of Downhill Skiing: Perceptions were elicited through a series of eleven attitude statements about downhill skiing. That is, respondents in the inactive, dropout, and potential skiers categories were read a series of statements and asked to agree or disagree with the statement (Table 3). Under the name of perceptions of downhill skiing, a series of eleven dichotomized nominal measures were used in the analysis.

7. Reasons for Not Skiing: Those who agreed with an attitude statement about downhill skiing were asked if the item (statement) was a reason for not skiing. The phrasing of the statement was adjusted to suit the types of respondent. For example, potential skiers were asked if the item was a reason for not taking up skiing, inactive skiers for their inactivity, and dropout skiers for their withdrawal from the sport. As in the case of perceptions of skiing above, reasons for not skiing consisted of eleven dichotomized nominal measures.

8. Degree of Potentiality: For the potential skiers, information on the degree of their interests in downhill skiing was obtained. This information was elicited through a series of twelve "Yes" or "No" questions concerning potential skiers' interests in the sport (Table 4). The questions were elicited so that there would be a "Yes" for a positive answer and a "No" for a negative answer. A

Table 3.--The Perceptual Questions and Associated Follow-Up Questions Asked Inactive, Dropout, and Potential Skiers.

Attitude Statement	Follow-Up Question*	Keyword
1. Skiing requires a large amount of travel?	Was the amount of travel required a factor in your decision to stop skiing?	TRAVEL
2. Skiing is a dangerous activity?	Was danger a factor in your decision to drop out?	DANGEROUS
3. Skiing is a port primarily for the young?	Was age a factor in your decision to stop skiing?	YOUNG
4. Skiing requires a large investment in equipment?	Was the cost of equipment a reason why you dropped out?	INVESTMENT
5. Skiing is an expensive activity to participate in?	Was the expense of going skiing a factor in your decision to drop out?	EXPENSIVE
6. Skiing requires good physical fitness?	Was your physical condition a factor in your decision to stop skiing?	FITNESS
7. Skiing is a very crowded activity?	Were the crowded conditions a factor in your dropping out?	CROWDED
8. Skiing is a very status-oriented activity?	Was this a reason behind your dropping out?	STATUS

Table 3.--continued.

Attitude Statement	Follow-Up Question*	Keyword
9. Skiing is an activity the whole family can participate in together?	Was your feeling that skiing was not a good family activity a reason behind your dropping out?	FAMILY
10. Skiing requires a great deal of ability?	Was this a factor in your dropping out?	ABILITY
11. Skiing requires a large amount of free time?	Was a lack of free time a reason why you dropped out?	FREE TIME

*These questions were asked of dropout skiers. Inactives were asked if the factor "caused their current inactivity" and potentials were asked if the factor had prevented them "from taking up the sport."

Source: Spotts, 1980.

Table 4.--Questions About the Degree of Interest in Downhill Skiing.

	Question	Keyword
1.	Do any of your friends or immediate family member ski downhill?	FRIENDS
2.	Do you now and then read an article on downhill skiing or watch a skiing event on television?	READING
3.	Have you ever considered taking downhill skiing lessons?	LESSONS
4.	Have you ever sought information on where downhill skiing lessons are offered, their cost or how to enroll in them?	LESSON INFORMATION
5.	Have you ever considered joining a ski club?	SKI CLUB
6.	Have you ever sought information on downhill ski club (membership, dues)?	CLUB INFORMATION
7.	Have you ever considered renting downhill ski equipment?	RENT
8.	Have you ever sought information on downhill ski rentals?	RENT INFORMATION
9.	Have you ever considered purchasing downhill ski equipment (boots, skis)?	EQUIPMENT PURCHASE
10.	Have you ever sought information (from sales clerks, skiers or books) on the type and cost of downhill ski equipment which would be appropriate for you?	EQUIPMENT INFORMATION

Table 4.--continued.

	Question	Keyword
11.	Do you know the name of the downhill ski area nearest to your home?	NEAR AREA
12.	Have you ever sought information about downhill ski areas, their locations and their offerings?	AREA INFORMATION

composite measure was employed to determine individual scores of this dependent measure. Dummy coding was used so that the respondent received a sub-score "1" for a positive answer "Yes" and a sub-score "0" for a negative answer "No." Individual scores were then obtained by adding up their twelve sub-scores. Therefore, the possible range of individual scores of this composite measure was zero to twelve. It was assumed that this measure represented a scale called an interval scale.

Hypotheses

The specific hypotheses to be tested in the study were formulated. They are stated in the null form as follows:

ACTIVE SKIERS:

Among active skiers there is no relationship between family life cycle and

H_o - 1: number of days skied during the 1976-77 season.

H_o - 2: proportion taking predominantly "Overnight trips" vs. "Day trips."

H_o - 3: proportion taking predominantly "Weekend trips" vs. "Weekday trips."

H_o - 4: participation in ski vacation.

H_o - 5: predominant company with whom they ski.

H_o - 6: ski equipment ownership.

FORMER SKIERS:

Among former skiers there is no relationship between family life cycle and

H_o - 7: perceptions of downhill skiing.

H_o - 8: reasons for not skiing.

POTENTIAL SKIERS:

Among potential skiers there is no relationship between family life cycle and

H_o - 9: perceptions of downhill skiing.

H_o - 10: reasons for not adopting skiing as of yet.

H_o - 11: degree of interest in downhill skiing.

Analysis of Data

The data used for the analysis represented continuous and categorical information.

Categorical data provide the researcher information about the category in which the measurement falls. Scores can be obtained when the categories are limited to the degree of level of that given characteristics. Due to limitations inherent with categorical data, the use of parametric statistical procedures[1] is not appropriate. Categorical data, however, lend themselves to the use of

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[1]Parametric statistical procedures require the acceptance of the following assumptions (Kerlinger, 1973): (1) Normality: The samples with which the researcher works have been drawn from populations that are normally distributed. (2) Homogeneity of variance: Variances are homogeneous from group to group, within the bounds of random variation. (3) Continuity and equal intervals of measures: Measures to be analyzed are continuous measures with equal intervals.

non-parametric statistical procedures which require fewer and less stringent assumptions than parametric procedures.[1]

Analysis of variance, a parametric procedure, was selected for the analysis of continuous data, while the non-parametric procedure, Chi-square test of independence, was selected for the analysis of categorical data. A one-way fixed model of analysis of variance was performed on the hypotheses 1 and 11. Hypotheses 2, 3, 4, 5, 6, 7, 8, 9, and 10 were tested using Chi-square test of independence.

A .05 level of statistical significance, which is commonly employed in most social science research (Blalock, 1979), was chosen as sufficiently stringent for rejecting or not rejecting the null hypotheses throughout the study. Computations and data transformations associated with the analysis for the present study were performed with the use of the Statistical Package for the Social Sciences (Nie, Hull, et al., 1975) on the CDC 6500 computer at Michigan State University.

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[1]Non-parametric statistical procedures are procedures whose model does not require the normality assumption or any assumptions that specify the exact form of the population parameters of the population from which the sample was drawn (Blalock, 1979).

CHAPTER IV

RESULTS

This chapter consists of three major sections. The first section deals with basic demographic characteristics of the family life cycle (FLC).[1] In the second section, skiers' stages in the FLC at the time of adoption and dropping out of the sport are estimated relative to the study objective (1). The third section is concerned with the remaining objectives (2), (3), (4), and (5), which deal with hypothesis testing of differences in participation in skiing, perceptions of skiing, reasons for not skiing, and degree of interest in the sport.

Demographic Characteristics

Present Stages in the Family Life Cycle

A total of 669 respondents (99.7%) were classified into one of the three FLC groups (Table 5). Twenty-seven percent (N=183) of the respondents were classified into

[1]Descriptions of the family life cycle and the stages used in the present study are found on pages 22 and 23.

Table 5.--Present Stages in the Family Life Cycle by Type of Skier.

Stages in the Family Life Cycle	Type of Skier					
	All Respondents n[a]	Potentials n[a]	Actives n[a]	Inactives n[a]	Dropouts n[a]	Former (I & D) n[a]
FLC-1 "Younger Childless"	183(27.4)	51(30.4)	97(42.4)	27(18.4)	8(6.4)	35(12.9)
FLC-2 "Older Childless"	239(35.7)	54(32.1)	72(31.4)	72(49.0)	41(32.8)	113(41.5)
FLC-3 "Married w/Children"	247(36.9)	63(37.5)	60(26.2)	48(32.7)	76(60.8)	124(45.6)
Incomplete data	2	0	0	1	1	2
Total	671	168	229	274	126	274

[a]Numbers in parentheses indicate the percentage. The percentage was obtained for only those who were successfully classified into one of the three life cycle groups.

FLC-1, 36 percent (N=239) classified into FLC-2, and the rest (37%, N=249) classified into FLC-3, resulting in relatively balanced segments.

For active skiers, FLC-1 comprised the largest segment with 42 percent, followed by FLC-2 holding 31 percent of the skiers. Family life cycle-3 was the smallest segment with only 26 percent. Former skiers (including both inactive and dropout skiers) in FLC-3 and FLC-2 comprised the largest segments (46% and 41% respectively). Only 13 percent of the former skiers were in the FLC-1 category. This difference in the frequency distribution between active skiers and former skiers was significant at the .05 level (X^2 = 57.2995, df = 2, P<.0001).

Further analysis of skiers revealed a significant difference in the frequency distribution over the life cycle stages between the inactive skiers and dropout skiers (X^2 = 23.5798, df = 2, P<.001). While those in FLC-2 were more dominant among the inactive skiers (they represented 50 percent of the skiers), those in FLC-3 were more dominant among the dropout skiers, representing more than 60 percent of those skiers (Table 5).

The frequency distribution of potential skiers by the stages in the FLC was relatively similar to that of the population as a whole. Namely, 30 percent of the potential skiers were classified as FLC-1, 32 percent classified as FLC-2, and 38 percent classified as FLC-3.

Gender, Age, and Income

1. Gender: Although no statistically significant differences were found in the gender structures, small differences are noted. Male respondents were found to be more active skiers in all three FLC groups than females. This finding partly supports Stynes et al. (1980) finding that active skiers include significantly more males than females. In contrast, females were found to represent more former skiers than males across the three life cycle groups (Table 6).

Another contrast was observed in the gender structure between the inactive skiers and dropout skiers. The percentage of female inactive skiers dropped from 58 percent (FLC-2) to 46 percent (FLC-3), while the percentage of female dropout skiers increased from 49 percent (FLC-2) to 59 percent for FLC-3. This suggests the presence of children can be an inhibiting factor for female skiers with respect to readoption of the sport.

2. Age: Relatively clear differences were observed in the age structure over the three life cycle stages for all types of skiers, indicating a possible flow in the life cycle as a typical skier passes through the various stages of the FLC (Table 7). A one-way analysis of variance revealed significant differences in the age structure over the life cycle for each type of skiers at the .05 level. It should be kept in mind, however, that the differences were caused

Table 6.--Gender by Stages in the Family Life Cycle.

Stages in the Family Life Cycle	Type of Skier				
	Active	Inactive	Dropout	Potential	All Respondents
	----------percentage* of male skiers----------				
FLC-1 "Younger Childless"	58.8(57)	51.9(14)	37.5(3)	56.9(29)	56.3(103)
FLC-2 "Older Childless"	59.7(43)	41.7(30)	51.2(21)	46.3(25)	49.8(119)
FLC-3 "Married w/Children"	65.0(39)	54.2(26)	40.8(31)	41.9(26)	49.6(122)

*Numbers in parentheses indicate the frequencies.

Table 7.--Age by Stages in the Family Life Cycle.

Stages in FLC	n	Mean	STD DEV
All Respondents			
FLC-1	182	19.8	1.4669
FLC-2	239	30.3	9.6142
FLC-3	247	37.7	10.4543
Active Skiers			
FLC-1	96	19.8	1.4850
FLC-2	72	27.9	6.3762
FLC-3	60	39.9	9.8969
Former Skiers (Inactives & Dropouts)			
FLC-1	35	20.3	1.4260
FLC-2	113	32.3	11.5588
FLC-3	124	39.4	10.9551
Inactive Skiers			
FLC-1	27	20.4	1.4744
FLC-2	72	28.8	7.1665
FLC-3	48	34.8	8.4633
Dropout Skiers			
FLC-1	8	19.9	1.2464
FLC-2	41	38.5	14.8780
FLC-3	76	42.3	11.3844
Potential Skiers			
FLC-1	51	19.5	1.4050
FLC-2	54	29.3	7.7893
FLC-3	63	32.2	7.8353

partly because respondent age was used for the determination of FLC stages.[1]

Some contrasts in the age structure over the life cycle among the types of skiers were observed. First, the dropout skiers were older than their counterparts among inactive skiers in the same life cycle stages, except for FLC-1 stage (Table 7). That is, the mean age of the dropout skiers in FLC-2 and FLC-3 were 39 and 42 respectively, while the mean age of the inactive skiers in the same stages were 29 and 35 respectively. Secondly, potential skiers in FLC-3 had a mean age of 32. Compared with the counterparts of other types of skiers in the same stage, the potential skiers in this stage appear to be relatively younger.

3. Income: Skiers' stages in FLC were highly correlated with the family income (Table 8). While those in FLC-1 represented a lower income group (77 percent of those earned less than $10,000), a majority of those in FLC-3 earned more than $15,000 and furthermore a half (49.6%) of those earned more than 25,000, thus representing a relatively higher income group. Respondents in FLC-2 fell between the other two stages in terms of income, thus representing a middle income group.

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[1]The respondent's age was used for differentiating FLC-1 and FLC-2.

Table 8.--Income by Stages in the Family Life Cycle for All Respondents.

Income ($)	Stages in the Family Life Cycle		
	FLC-1 "Younger Childless" N=181	FLC-2 "Older Childless" N=233	FLC-3 "Married w/ Children" N=236
Less than 10,000	76.8	30.9	2.1
10,000 to 14,999	13.3	20.2	8.1
15,000 to 19,999	3.9	15.9	17.4
20,000 to 24,999	3.3	13.7	22.9
Over 25,000	2.8	19.3	49.6
Total	100.0%	100.0%	100.1%*

X^2 = 322.35293, df = 8, P<.0001.

*This does not add to 100 percent due to rounding.

Adoption and Dropping Out of Skiing

Family Life Cycle at Time of Adoption

A similar frequency distribution across the three life cycle stages at the time of adopting of the sport appears for each type of skier. For example, more than 80 percent of all types of skiers adopted downhill skiing when they were in FLC-1, while fewer skiers adopted the sport in FLC-2 and FLC-3 (Table 9). Thus, the result indicates that the time of adoption of the sport is quite similar across all types of skiers, suggesting that a majority (approximately 85%) of the potential skiers become the active skiers in FLC-1.

Family Life Cycle at Time of Dropping Out

A comparison of frequency distributions of the three life cycle groups for the former skiers as well as comparisons of frequency distributions for the inactive and dropout skiers is presented in Table 10. Roughly a half (51%) of the former skiers dropped the sport when they were in FLC-1 and 30 percent dropped the sport in FLC-2, and 20 percent dropped it in FLC-3 (Table 10).

Interaction of Adoption and Dropping Out

The interaction of the skiers' stages in FLC when they first adopted downhill skiing and their stages in FLC when their temporary or permanent inactivity began was

Table 9.--Stages in the Family Life Cycle at Time of Adoption.

Stages in the FLC When Adopted Skiing	Type of Skier				
	Actives n[a]	Formers (I & D) n[a]	Inactives n[a]	Dropouts n[a]	Total n[a]
FLC-1 "Younger Childless"	186(82.7)	235(86.7)	130(87.8)	105(85.4)	421(84.9)
FLC-2 "Older Childless"	17(7.6)	15(5.5)	10(6.8)	5(4.1)	32(6.5)
FLC-3 "Married w/Children"	22(9.8)	21(7.7)	8(5.4)	13(10.6)	43(8.6)
Incomplete Data	4	3	0	3	7
Total	229	274	148	126	503

[a]Numbers in parentheses indicate the percentage. The percentage was obtained for only those who were successfully classified into one of the three life cycle groups.

NOTE: There is no significant difference among different types of skiers at the .05 level.

Table 10.--Stages in the Family Life Cycle When Temporary or Permanent Inactivity Began.

Stages in the FLC When Inactivity Began	Type of Skier		
	Formers (I & D) n[a]	Inactives n[a]	Dropouts n[a]
FLC-1 "Younger Childless"	128(51.4)	79(55.6)	49(45.8)
FLC-2 "Older Childless"	72(28.9)	41(28.9)	31(29.0)
FLC-3 "Married w/Children"	49(19.7)	22(15.5)	27(25.2)
Incomplete Data	25	6	19
Total	274	248	126

[a]Numbers in parentheses indicate the percentage. The percentage was obtained for only those who were successfully classified in to one of the three life cycle groups.

examined by cross-tabulating FLC stages at time of adoption and FLC stages at the time of dropping out of the sport (Table 11).

Table 11.--Stages in the Family Life Cycle at Time of Adoption by the Family Life Cycle When Inactivity Began.

Stages in the FLC at the Time of Adoption	Stages in the FLC When Inactivity Began		
	FLC-1 "Younger Childless"	FLC-2 "Older Childless"	FLC-3 "Married w/ Children"
FLC-1 "Younger Childless"	128(60.1)*	60(28.2)*	25(11.7)*
FLC-2 "Older Childless"	--	11(73.3)*	4(26.7)*
FLC-3 "Married w/Children:	--	--	19(100.0)*

NOTE: Total N = 247, Incomplete data = 27.

*Numbers in parentheses indicate the percentage for the row.

The analysis revealed that 60 percent of those who adopted skiing in FLC-1 dropped the sport in the same stage and the remainder (40%) maintained the sport within FLC-2. Furthermore, 12 percent of the respondents were still skiing in FLC-3. As for those who started the sport in FLC-2, 73 percent of them dropped the sport in the same stage (FLC-2) in which they adopted it, and the remainder (27%) dropped the sport in the next stage (FLC-3). Thus, the information indicates that dropout rates may increase as adoption of the sport take place in later stages in FLC.

Tests of Hypotheses

Participation Characteristics

1. Frequency of Participation

Null Hypothesis 1: Among active skiers there is no relationship between FLC and the number of days skied during the 1976-77 winter season.
Decision: Fail to Reject.

Those in FLC-1 skied 11.52 days during the 1976-77 winter season on an average, those in FLC-2 skied 13.68 days and those in FLC-3 skied 10.40 days, yielding no significant differences (Table 12). Therefore, the null hypothesis was not rejected, thus resulting in a decision that there was insufficient evidence for concluding that the active skiers in different stages of the FLC differed with respect to the frequency of participation in the sport of skiing.

Table 12.--Analysis of Variance Test for Frequencies of Participation in Downhill Skiing.

Frequencies of Participation					
Group Means (Standard Deviations)					
FLC-1 "Younger Childless" 11.52 (12.8696)		FLC-2 "Older Childless" 13.68 (16.5477)		FLC-3 "Married w/ Children" 10.40 (11.6956)	
SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARE	F-RATIO	F-PROB.
BETWEEN GROUPS	2	377.6069	188.8034	.9829	.3758
WITHIN GROUPS	226	43412.2796	192.0897		
TOTAL	228	43789.8865			

2. Types of Skiing Trips (I)

Null Hypothesis 2: Among active skiers there is no relationship between FLC and the proportion taking predominantly "Overnight trips" vs. "Day trips."
Decision: Reject.

Compared with those in other two life cycle groups, skiers in FLC-1 tended to take more day trips, since 80 percent of those reported that their predominant trip type was day trips compared to percentage for skiers in FLC-2 (67%) and FLC-3 (50%). On the other hand, overnight trips were more prominent for those who were married and had children. Almost a half (47%) of them reported the majority of their trip took in the form of overnight trips, while fewer in FLC-1 and FLC-2 tended to take overnight trips (Table 13). This difference was significant at the .05 level. Thus, a systematic relationship existed between the two variables: types of skiing trips ("overnight" vs. "day") and active skiers' stages within FLC.

3. Types of Skiing Trips (II)

Null Hypothesis 3: Among active skiers there is no relationship between FLC and the proportion taking predominantly "Weekend trips" vs. "Weekday trips."
Decision: Fail to Reject.

Percentages reported for the types of trips ("weekend" vs. "weekday") appear to be quite similar across the three life cycle groups, suggesting no specific differences likely emerge from this dependent measure (Table 14). No statistically significant differences were observed, thus resulting in a failure to reject the null hypothesis.

Table 13.--Predominant Types of Ski Trips ("Day Trips vs. "Overnight Trips") by Stages in the Family Life Cycle.

Predominant Type of Ski Trip (I)	Stages in the Family Life Cycle		
	FLC-1 "Younger Childless" N=97	FLC-2 "Older Childless" N=72	FLC-3 "Married w/ Children" N=60
Day Trips	80.4	66.7	53.3
Overnight Trips	19.6	33.3	46.7
Total	100.0%	100.0%	100.0%

$X^2 = 12.97335$, df = 2, P = .0015.

Table 14.--Predominant Types of Ski Trips ("Weekday Trips" vs. "Weekend Trips") by Stages in the Family Life Cycle.

Predominant Type of Ski Trip (II)	Stages in the Family Life Cycle		
	FLC-1 "Younger Childless" N=97	FLC-2 "Older Childless" N=72	FLC-3 "Married w/ Children" N=59
Weekday Trips	35.1	40.3	32.2
Weekend Trips	64.9	59.7	67.8
Total	100.0%	100.0%	100.0%

$X^2 = .99914$, df = 2, P = .6129.

4. Participation in Ski Vacation

Null Hypothesis 4: Among active skiers there is no relationship between FLC and the participation in ski vacation during the 1976-77 winter season.
Decision: Fail to Reject.

Similar response patterns were observed for the three life cycle groups for this dependent measure, yielding no statistically significant differences. Approximately 70 percent of the active skiers across the three life cycle stages participated in one or more ski vacations, while the remainder (30%) did not (Table 15).

Table 15.--Participation in Ski Vacation by Stages in the Family Life Cycle.

Participation in Ski Vacation	Stages in the Family Life Cycle		
	FLC-1 "Younger Childless" N=97	FLC-2 "Older Childless" N=71	FLC-3 "Married w/ Children" N=60
Participated	70.1	66.2	70.0
Did Not Participate	29.9	33.8	30.0
Total	100.0%	100.0%	100.0%

$X^2 = .34104$, df = 2, P = .8432

5. Types of Company

Null Hypothesis 5: Among active skiers there is no relationship between FLC and the company with whom they usually ski.
Decision: Reject.

A majority (87%) of the active skiers in FLC-1 skied predominantly with their friends, while those in FLC-3 tended to ski more with their families (Table 16). This difference was significant at the .05 level. Thus, the result suggests the types of company with whom active skiers usually ski varies during the course of the FLC.

Table 16.--Predominant Types of Company by Stages in the Family Life Cycle.

Predominant Types of Company	Stages in the Family Life Cycle		
	FLC-1 "Younger Childless" N=97	FLC-2 "Older Childless" N=72	FLC-3 "Married w/ Children" N=60
Alone	9.3	8.3	5.0
Friends	86.6	77.8	38.3
Family	4.1	13.9	56.7
Total	100.0%	100.0%	100.0%

$X^2 = 44.29925$, df = 4, P<.0001.

6. Ski Equipment Ownership

Null Hypothesis 6: Among active skiers there is no relationship between FLC and the ski equipment ownership.
Decision: Fail to Reject.

Although it is observed that those in FLC-3 are more likely to own ski equipment than those in the other two life cycle stages (85% of those in FLC-3 reported that they had their own ski equipments compared with 71% and 74% of those

in FLC-1 and FLC-2 respectively), no statistically significant relationship was observed between the two variables (Table 17).

Table 17.--Ski Equipment Ownership by Stages in the Family Life Cycle.

Ski Equipment Ownership	Stages in the Family Life Cycle		
	FLC-1 "Younger Childless" N=97	FLC-2 "Older Childless" N=72	FLC-3 "Married w/ Children" N=60
Rent Equipment	28.9	26.4	15.0
Own Equipment	71.1	73.6	85.0
Total	100.0%	100.0%	100.0%

$X^2 = 4.07078$, df = 2, P = .1306.

Perceptions of Downhill Skiing

1. Former Skiers' Perceptions

Null Hypothesis 7: Among former skiers there is no relationship between FLC and the perceptions of downhill skiing.
Decision: Fail to Reject.

Chi-square statistics was used for the analysis of perceptual questions. No significant relationship was found between each of the eleven perceptual questions and the former skiers' stages in the FLC (Table 18).[1]

[1]The full coverage of the analysis including percentages agreeing with the attitude statements (perceptual questions) is found in Appendix A.

Table 18.--Results of Chi-square Analyses of Perceptions of Downhill Skiing.

Keyword	Types of Skiers			
	Formers X^2value	Inactives X^2value	Dropouts X^2value	Potential X^2value
TRAVEL	.94385	1.54646	.83767	3.98234
DANGEROUS	3.37653	1.90681	3.35707	.04693
YOUNG	5.98541	4.53421	1.82100	1.50544
INVESTMENT	4.14275	3.25933	3.11718	1.21077
EXPENSIVE	2.77138	3.24807	1.42916	1.94666
FITNESS	5.09981	1.24555	6.48766*	.74384
CROWDED	.37821	.77494	.32838	3.12233
STATUS	3.28648	7.41516*	1.09304	.29157
FAMILY	1.47918	.20817	1.87874	.27451
ABILITY	2.73523	.27483	2.56394	.05259
FREE TIME	1.11062	3.76095	1.35519	1.36462

NOTE: For all the analyses Degree of Freedom is 2 and the critical value at the .05 level of significance is 5.991.

*P<.05.

When the inactive skiers and dropout skiers were analyzed separately, however, a few relationships were observed. The item "STATUS" revealed a significant relationship with the stages in FLC for the inactive skiers, since more inactive skiers in FLC-1 and FLC-2 reported that they felt downhill skiing was a status-oriented sport than those in FLC-3 (Appendix A-2). In the same way, the item "FITNESS" was found to be associated with the statement that skiing requires good physical fitness. Ninety percent of the skiers in FLC-3 agreed with the statement, while this percentage decreased to 78 and 57 for those in FLC-2 and FLC-1 respectively (Appendix A-3).

2. Potential Skiers' Perceptions

Null Hypothesis 9: Among potential skiers there is no relationship between FLC and the perceptions of downhill skiing.
Decision: Fail to Reject.

As in the case of former skiers' perceptions, no significant relationship was observed between each of the perceptual questions and the skiers' stages in FLC (Table 18).[1]

Reasons for Not Skiing

1. Former Skiers' Reasons

Null Hypothesis 8: Among former skiers there is no relationship between FLC and the reasons for not skiing.
Decision: Fail to Reject.

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[1]The full coverage of the analysis including percentages agreeing with the attitude statements (Perceptual questions) is found in Appendix A.

Chi-square statistics was also used for the analysis of the reasons for not skiing. No significant relationship was observed between each of the eleven reasons for not skiing and the former skiers' stages in FLC (Table 19).[1]

Only separate analysis for the inactive skiers revealed two significant relationships. Items of "EXPENSIVE" and "CROWDED" were found to be associated with the stages in FLC for former skiers. Approximately half of the inactive skiers in FLC-1 and FLC-2 (45% and 44% respectively) reported that expensiveness of downhill skiing was a reason for not skiing, while fewer (25%) inactive skiers in FLC-3 reported that expense was an issue (Appendix B-2).

2. Potential Skiers' Reasons

> Null Hypothesis 10: Among potential skiers there is no relationship between FLC and the reasons for not adopting skiing as of yet.
> Decision: Fail to Reject.

As in the case of the former skiers' reasons, no significant relationship was observed between each of the eleven reasons and the potential skiers' stages in FLC (Table 19).[2]

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[1]The full coverage of the analysis including percentages citing the factor as a reason for not skiing is found in Appendix B.

[2]The full coverage of the analysis including percentages citing the factor as a reason for not adopting skiing as of yet is found in Appendix B.

Table 19.--Results of Chi-square Analyses of Reasons for Not Skiing.

Keyword	Types of Skiers			
	Formers X^2value	Inactives X^2value	Dropouts X^2value	Potential X^2value
TRAVEL	.89257	5.18951	.89257	4.1320
DANGEROUS	.02559	3.70360	.02559	.34995
YOUNG	2.62298	2.11207	2.62298	.99220
INVESTMENT	1.62019	.59756	1.62019	.01677
EXPENSIVE	.07697	8.01722*	.07697	2.66371
FITNESS	2.27701	.48836	2.27701	1.49693
CROWDED	.87687	7.48320*	.87687	.27005
STATUS	2.03100	2.11207	2.03100	4.65876
FAMILY	1.65296	2.07663	1.65296	.89960
ABILITY	.91437	1.88048	.91437	3.14396
FREE TIME	.14481	2.00497	.14481	.26028

NOTE: For all the analyses Degree of Freedom is 2 and the critical value at the .05 level of significance is 5.991.

*P<.05.

Degree of Potentiality

Null Hypothesis 11: Among potential skiers there is no relationship between FLC and the degree of interests in downhill skiing.
Decision: Fail to Reject.

With respect to the degree of interest in the sport, those in FLC-1 scored 4.76 on the average, those in FLC-2 scored 4.61 and those in FLC-3 scored 4.56, yielding no significant differences at the .05 level (Table 20).

In addition to the above analysis, a supplemental analysis was also made for this dependent measure. The supplemental analysis took on the form of item by item analysis with the use of Chi-square statistics, focusing upon the relationship between each of twelve questions asked for eliciting degrees of potentiality and the skiers' FLC. The anslysis revealed that two items, "READING" and "EQUIPMENT INFORMATION," were associated with the stages in FLC at the .05 level of significance (Table 21).

According to the information presented in Table 21, those in FLC-1 tended to read fewer articles on skiing or watched less skiing events on television than those in the other two life cycle stages, since 76 percent of those in FLC-1 read or watched skiing events in contrast with 90 percent of those in FLC-2 and FLC-3. As for the information on ski equipment, more potential skiers in earlier stages in FLC tended to seek information on ski equipments. Twenty-six percent of those in FLC-1 reported that they had sought the information on types and cost of downhill ski equipment,

Table 20.--Analysis of Variance Test for Degree of Potentiality.

Degree of Potentiality					
Group Means (Standard Deviations)					
FLC-1 "Younger Childless" 4.76 (2.5107)		FLC-2 "Older Childless" 4.61 (2.4295)		FLC-3 "Married w/ Children" 4.55 (1.8208)	
SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARE	F-RATIO	F-PROB.
BETWEEN GROUPS	2	1.2858	.2469	.1273	.8806
WITHIN GROUPS	226	833.5654	5.0519		
TOTAL	228	834.8512			

NOTE: The possible range of individual scores is 0-12.

Table 21.--Percentages of Potential Skiers on the Three Family Life Cycle Stages Answering "Yes" to the Questions About Degrees of Potentiality.

Keyword	Stages in the Family Life Cycle			X^2 value
	FLC-1 "Younger Childless" (N=51) %	FLC-2 "Older Childless" (N=54) %	FLC-3 "Married w/ Children" (N=63) %	
FRIENDS	72.5	61.1	68.3	1.60333
READING	76.5	90.7	90.5	6.00119*
LESSONS	43.1	57.4	57.1	2.84653
LESSON INFORMATION	7.8	24.1	14.3	5.39146
SKI CLUB	21.6	18.5	12.7	1.64066
CLUB INFORMATION	9.8	5.6	3.2	2.23500
RENT	60.8	61.1	55.6	.47500
RENT INFORMATION	31.4	18.5	22.2	2.52829
EQUIPMENT PURCHASE	33.3	27.8	22.2	1.75624
EQUIPMENT INFORMATION	25.5	14.8	7.9	6.66556*
NEAR AREA	80.4	63.0	77.8	4.94279
AREA INFORMATION	13.7	18.5	23.8	1.87313

NOTE: For all the items Degree of Freedom is 2 and the critical value at the .05 level of significance is 5.991.

*P<.05.

while this percentage decreased to 15 percent and 8 percent for those in FLC-2 and FLC-3, respectively.

The results of the hypothesis testing are summarized and presented in Table 22.

Summary

Statistical analysis of the data revealed:

1. There were significant differences in the frequency distribution over the three life cycle stages among different types of skiers. In general, active skiers were represented by those in FLC-1, inactive skiers by those in FLC-2, and dropout skiers by those in FLC-3.
2. Age and family income were highly correlated with the skiers' stages in the FLC.
3. The timing of adoption of downhill skiing was quite similar across all types of skiers. More than 80 percent of all types of skiers first adopted the sport when they were in FLC-1, while far fewer adopted the sport in FLC-2 and FLC-3.
4. A half of the former skiers dropped downhill skiing when they were in FLC-1 and 30 percent dropped the sport in FLC-2. The remainder (20%) of the skiers dropped the sport in FLC-3.
5. There was no significant difference among active skiers in different stages of the FLC in terms of the number of days they skied.

Table 22.--Summary of Hypothesis Testing.

Null Hypotheses (Description)	Statistical Test	Decision
H_o- 1 (Frequency of Participation)	F	Fail to Reject
H_o- 2 ("Overnight" vs. "Day" trips)	X^2	Reject
H_o- 3 ("Weekend" vs. "Weekday" trips)	X^2	Fail to Reject
H_o- 4 (Ski Vacation)	X^2	Fail to Reject
H_o- 5 (Ski Companion)	X^2	Reject
H_o- 6 (Equipment Ownership)	X^2	Fail to Reject
H_o- 7 (Perceptions: Former skiers)	X^2	Fail to Reject
H_o- 8 (Reasons: Former skiers)	X^2	Fail to Reject
H_o- 9 (Perceptions: Potential skiers)	X^2	Fail to Reject
H_o-10 (Reasons: Potential skiers)	X^2	Fail to Reject
H_o-11 (Degree of Interest)	F	Fail to Reject

6. There was a significant difference among active skiers in different stages of the FLC in terms of the predominant types of skiing trips taken. The active skiers in earlier stages of the FLC tended to take more day trips, while the actives in later stages of the FLC tended to take more overnight trips. However, there was no significant difference among the skiers with respect to the predominant types of skiing trips, specifically, "weekend trips" versus "weekday trips."
7. There were no differences among active skiers in different stages of the FLC in terms of the participation in ski vacations.
8. There were significant differences among active skiers in different stages of the FLC in terms of the types of company with whom they usually skied. While the active skiers in FLC-1 tended to ski more with their friends, those in FLC-3 tended to ski more with their families.
9. There were no differences among active skiers in different stages of the FLC in terms of ski equipment ownership.
10. There were no differences among former skiers in different stages of the FLC in terms of their perceptions of skiing.

11. There were no differences among potential skiers in different stages of the FLC in terms of their perceptions of skiing.
12. There were no differences among former skiers in different stages of the FLC in terms of their reasons for not skiing.
13. There were no differences among potential skiers in different stages of the FLC in terms of their reasons for not adopting skiing as of yet.
14. There were no differences among potential skiers in different stages of the FLC in terms of the degree of interests in the sport of skiing (as measured by a composite measure). An item-by-item analysis of this measure, however, revealed two significant contrasts: (1) The potential skiers in FLC-1 tended to read and watch less ski events, compared with those in other two life cycle stages. (2) More potential skiers in earlier stages of the FLC tended to seek information on ski equipments, compared with those in later stages of the FLC.

CHAPTER V

DISCUSSION, CONCLUSION, AND RECOMMENDATION

Discussion and Conclusion

The findings of the present study were obtained from the estimation of the skiers' stages in the FLC and the hypothesis testing. Several findings are worth noting here.

First, the analysis of the frequency distributions over the life cycle stages among different types of skiers indicate that active skiers significantly include more of those in FLC-1, inactive skiers include more of those in FLC-2, dropout skiers include more of those in FLC-3. This suggests that downhill skiers may be characterized by their FLC stages. Since a typical skier is more likely to pass through such stages in the life cycle, one may conclude that the process of one's skiing involvement is quite similar to and associated with his/her progression in the FLC. More precisely, it can be said that one's skiing involvement from adoption to withdrawal from the sport takes place as s/he passes through the stages in the FLC. Thus, this appears to suggest a relationship between skiing involvement and FLC and the nature of the relationship, as well as lending

support for the model of involvement cycle proposed by LaPage (1979).

This finding could be useful for the skiing industry. Needless to say, growth in each segment of the skier market is a major concern of the industry. Such growth can be expected through: (1) the activation of potential skiers, (2) the reactivation of inactive skiers, and (3) an increase in the rate of participation by active skiers (LaPage, 1979). Since the result indicates a possible relationship between FLC and skiing involvement, the industry needs to recognize and consider the FLC in developing strategies for the growth in each of the skier segments. For example, an increase in participation by active skiers can be facilitated by recruiting those in earlier stages go the FLC who are most likely to adopt the sport by the use of appropriate promotion or making ski area operation more attractive to them. For the reactivation of inactive skiers, however, a promotion attractive to those in middle stages in the FLC may be more successful.

With respect to the gender structure, there was no significant difference over the different stages of the FLC. Since some researchers have raised hypotheses which suggest that stages in the FLC influence differently the recreation behavior of males and females (Angrist, 1967; Unkel, 1981), one may also hypothesize that the FLC has a differential impact upon skiing involvement among males and females. In the present study, however, no effort was made to control

for gender. In this sense, some relationships that this study missed may emerge from the data when the control is made for the gender. Sex difference should be taken into consideration in future research.

Thirdly, this study revealed that stages of the FLC were highly correlated with family income. This general finding is similar to and supports the findings reported by other researchers who have focused upon the FLC as a summary measure of social and economic behavior (Lansing and Morgan, 1955; Lansing and Kish, 1957). Since family income certainly is one of the factors that is most likely to influence recreation participation (Kelly, 1980), it is reasonable to assume that the FLC also influences recreation participation.

In regard to the analysis of the timing of adoption and withdrawal from the sport, this also revealed interesting results. The results indicate that the timing of adoption was quite similar for all types of skiers, yielding no significant differences among the different types of skiers. In other words, there is no differences between former skiers and active skiers with respect to the timing of adopting. Since former skiers were at one time active skiers, the result appears to be fairly reasonable and understandable. As for the timing of dropping out of skiing, the timing was also similar for all types of skiers, again yielding no significant differences. These findings are also the one that supports and reinforces the skiing

involvement cycle which state that all skiers pass through phases including period of non-involvement, period of more or less intense involvement, period of temporary inactivity, and eventual permanent withdrawal from the sport (LaPage, 1979).

In addition to the timing of adoption and inactivity, the interaction of the timing of adoption and the timing of inactivity received attention in this study. The analysis of the interaction indicated that dropout rates of the skiers increased as the adoption took place in later stages of the FLC, suggesting that those who adopt the sport of skiing in earlier stages of the FLC are more likely to stay longer in the ski market. Therefore, recruiting more skiers in earlier stages of the FLC is more likely to yield positive results for the downhill ski industry. At this point, however, a word of caution is necessary: the number of FLC stages used in the analysis may not be large enough to recognize such a trend. In this study, three life cycle stages were used because this number was judged as an appropriate number relative to the sample size of the study. When a larger sample size is used, it is possible to use a larger number of FLC stages which would allow for a more reliable trend analysis. This should be kept in mind for future research.

In addition to the above findings from the estimations of skiers' stages in FLC, the hypothesis testing also revealed results worth noting. With respect to active

skiers' participation characteristics, for example, types of skiing trip ("day trip" vs. "overnight trip") and types of company with whom active skiers usually ski were found to be significantly related to the skiers' FLC.

The data indicated, skiers in FLC-1 tended to take more day trips, while those in FLC-3 tended to take more overnight trips. This suggests that FLC can have an influence upon skier' selection of ski trip. This finding is similar to that reported by Burch (1966) in his study of recreational choice, although his study was concerned with types of camping style and FLC.

The type of company with whom active skiers usually ski was found to vary during the course of the FLC. Those in FLC-1 tended to ski more with their friends, while those in FLC-3 had more opportunities to ski with their families. This finding is very similar to those reported by Kelly (1974; 1978) in his studies of leisure socializations and associations, suggesting that shifts in recreation participation during the course of FLC are more socially oriented.

In contrast with the above positive findings, negative findings were also obtained from the analysis. No significant relationships were observed in terms of following participation characteristics: frequency of participation, types of skiing trips ("weekend trip" vs. "weekday trip"), participation in ski vacations, and ski equipment ownership. These negative findings, however, are also worth discussion. One of these, for example, is concerned with types of skiing

trips. This measure did not reveal any significant relationships when "weekend trips" and "weekday trips" were compared, while it revealed a significant association with FLC when a comparison was made in terms of "day trips" vs. "overnight trips." This possibly suggests the selection of "day" or "overnight" trips is more important than the selection of "weekend" or "weekday" trips for a typical family. Such information can also be useful for the industry, especially for those concerned with managing the ski areas. For example, the development of a packaged ski tour should be upon such information.

With regard to the perceptions of downhill skiing and the related reasons for not skiing, there were few significant differences observed for former and potential skiers. Since some researchers have suggested a relationship between FLC and perceptual barriers or constraints to leisure participation (Witt and Goodale, 1981; Mayo and Javis, 1981), this is contrary to earlier stated hypotheses. Apparently, one possibility is that the use of different measures of perceptions is one reason why the results of the present study appear to be contradictory. Besides this, the possible explanations for this negative result may be: (1) The images of skiing are so strong and have similar appeals to the skiers in any stages of the FLC; or (2) FLC is insensitive to those measures. In any case, this study itself does not explain why FLC was not related to various perceptions and reasons for not skiing. Future research on

this question is needed. This may be one of the study's limitations: active skiers were not considered in the analysis of perceptions, although they are an important component of the skier population. In a future study, active skiers can and should be taken into consideration in the analysis of perception.

As for the potential skiers' degree of interest in downhill skiing, there were no significant differences in the mean scores of the three life cycle groups.

Overall, the general hypotheses of the study cannot be either entirely rejected or totally accepted. As discussed above, however, the study apparently produced important and updated information on the relationship between skiing involvement and the FLC. Given this information, though, there is a need to be cautious about the finding due to three major limitations of the study:

1. Cross-sectional data were used for approximating the process of skiing involvement.
2. FLC used in the analysis was specifically developed for the skier population of this study.
3. Only Michigan downhill skiers who were 18 or older were considered in this study.

In conclusion, the author believes, much was learned about the relationship between FLC and skier behavior. Conclusions based on the stated purpose of the study, the conditions under which it was conducted, and the results of the analysis of the data are as follows:

1. One's adoption and dropping out of the sport of skiing is associated with his/her stages in the FLC.
2. The stages in the FLC are related to active skiers' participation patterns.
3. Former skiers tend to have similar perceptions of skiing and reasons for not skiing, regardless of their position within the FLC.
4. Potential skiers tend to have similar perceptions of skiing and reasons for not adopting skiing as of yet, regardless of their position within the FLC.
5. Potential skiers in different stages in the FLC do not differ in terms of their degree of interest in the sport.

Study Limitations

There were several limitations and assumptions in the research design that should be acknowledged. The present study is limited in the following way:

1. Cross-sectional method was used for approximating the process of skiing involvement. Although this approach is generally accepted (Babbie, 1973; 1979), it is not free from pitfalls.
2. The study considered active, inactive, dropout, and potential skiers. Those who had never skied and expressed no interest in trying the sport of downhill skiing were not considered. Information on those non-skiers would complement this

investigation and permit a more complete analysis of skiing involvement.

3. Only adults who were 18 of age or over were considered in the present study. The Michigan Downhill Ski Marketing Study (Stynes and Mahoney, 1980) suggests there are substantial number of people who adopt downhill skiing under 18 years of age. Information on these people would complement the present research.

4. A small number of FLC stages were used in the present study. Three FLC stages, "younger childless," "older childless," and "married with children" were specifically defined for this study. There were two major reasons for this. The first one was concerned with the sample size. The number of FLC stages was considered necessary for the relatively small sample size of this study, facilitating statistical analysis. Secondly, the three FLC stages were defined based upon the information that skiing involvement was short lived and that downhill skiers were predominantly young (Stynes and Mahoney, 1980; Stynes et al., 1980). Due to these considerations, later stages of the FLC were lacking. As a result, the stages defined and used in the study do not necessarily represent the full range of FLC stages, nor do the FLC stages apply to the analyses of other

recreational activities. Generalizing these results to other populations should be done with caution.

5. The study was conducted in the State of Michigan.

Two major assumptions underlied the present study. An assumption was made that the course of life cycle of a family was properly characterized by the respondent's age, the timing of marriage and childbearing. Secondly, it was assumed that the validity and reliability of the 1978 Michigan Downhill Ski Marketing Survey, an original data collection effort, were sufficient for the purpose of the present study.

Recommendations

On the basis of the data from this study, the following are recommendations to facilitate future research:

1. A replication of this study controlling for gender should be conducted.
2. A study should be conducted with larger sample size so that more logical stages in the family life cycle could be used for analysis.
3. A replication of this study using a modified survey tool designed to better evaluate skiers' perceptual images of skiing. Modification of the survey tool should be such that active skiers' perceptions of the sport could be obtained and that more continuous type of data could be obtained so that it could allow for the use of more sophisticated statistical procedures.

4. A replication of this study should be conducted on the data base of a nationwide survey conducted by the U.S. Forest Service. The nationwide survey and the 1978 Michigan Downhill Ski Market Survey are quite similar.
5. Skiers and non-skiers under 18 years of age can and should be considered.
6. Additional research should be conducted to evaluate and determine how the results of this study can be incorporated into studies dealing with the relationships between FLC and other recreation activities.

Summary

The main purpose of this study was to investigate the relationship between skiers' stages in the family life cycle and their skiing involvement. A review of literature relative to the issue indicates the usefulness of the family life cycle as a summary measure or an independent variable for understanding one's social and economic behavior including his/her leisure behavior. However, relatively little research effort has focused upon the relationship between the skier behavior and the family life cycle. With this in mind, the present study was undertaken as an exploratory investigation. For the purpose of this study, it was hypothesized that skiers' stages in the family life cycle were related to types and levels of their skiing involvement.

Because of limited time and financial resources available, existing cross-sectional data were used for the analysis. The data specifically used for the analysis were collected on the 1978 Michigan Downhill Ski Market Survey, a telephone survey conducted at the Department of Park and Recreation Resources, Michigan State University.

The survey population consisted of 671 adults who were 18 of age or over and resided in the following calling regions within the State of Michigan: Detroit, Grand Rapids, Ann Arbor, Pontiac, and Lansing. The respondents were classified as "Active," "Inactive," "Dropout," and "Potential" skiers. Based upon the fact that information to be collected would vary from group to group, distinct questionnaires were designed and administered to each group of responents.

The family life cycle stages defined and used in the study were: "younger childless," "older childless," and "married with children." The data adopted from the telephone survey were analyzed using parametric and non-parametric statistical procedures. Specifically, analysis of variance was performed on continuous data, while Chi-square test of independence was used for the analysis of categorical data. Computations and data transformations associated with the analysis to be reported on were performed with the use of the Statistical Package for the Social Sciences (SPSS).

Major results of the study include the following:

1. Active skiers were heavily represented in the "younger childless" stage, inactive skiers were primarily in the "older childless" stage, while dropout skiers were in the "married with children" stage.
2. Timing of adoption and withdrawal from the sport is associated with the skiers' family life cycle.
3. Family life cycle is associated with active skiers' participation patterns (i.e., predominant types of skiing trips and types of companion with whom active skiers usually ski).

APPENDICES

APPENDIX A

PERCENTAGES OF THE SKIERS IN THE THREE FAMILY LIFE CYCLE STAGES AGREEING WITH THE ATTITUDE STATEMENTS (PERCEPTIONS)

Table A-1.--Percentages of Former Skiers in the Three Family Life Cycle Stages Agreeing With the Attitude Statements (Perceptions).

Keyword	Stages in the Family Life Cycle			X^2 value
	FLC-1 "Younger Childless" (N=35) %	FLC-2 "Older "Childless (N=113) %	FLC-3 "Married w/ Children" (N=124) %	
TRAVEL	34.3	41.1	43.4	.94385
DANGEROUS	17.6	25.5	32.5	3.37653
YOUNG	0.0	15.2	15.3	5.98541
INVESTMENT	84.4	65.7	70.9	4.14275
EXPENSIVE	90.6	81.8	77.8	2.77138
FITNESS	75.0	81.8	89.4	5.09981
CROWDED	71.0	76.0	76.1	.37821
STATUS	51.4	46.4	36.8	3.28648
FAMILY	97.1	93.8	96.7	1.47918
ABILITY	29.4	32.1	41.2	2.73523
FREE TIME	51.5	50.4	44.3	1.11062

NOTE: For all the items Degree of Freedom is 2 and the critical value at the .05 level of significance is 5.991.

*P<.05.

Table A-2.--Percentages of Inactive Skiers in the Three Family Life Cycle Stages Agreeing With the Attitude Statements (Perceptions).

Keyword	Stages in the Family Life Cycle			X^2 value
	FLC-1 "Younger Childless" (N=27) %	FLC-2 "Older "Childless (N=72) %	FLC-3 "Married w/ Children" (N=48) %	
TRAVEL	25.9	38.9	38.3	1.54146
DANGEROUS	15.4	29.0	27.7	1.90681
YOUNG	0.0	12.7	6.3	4.53421
INVESTMENT	84.0	68.1	63.6	3.25933
EXPENSIVE	91.7	88.6	78.3	3.24807
FITNESS	80.0	84.1	89.4	12.4555
CROWDED	66.7	75.8	71.4	.77494
STATUS	55.6	54.9	30.2	7.41516*
FAMILY	96.3	94.4	95.7	.20817
ABILITY	26.9	32.4	31.9	.27483
FREE TIME	48.0	55.6	37.5	3.76095

NOTE: For all the items Degree of Freedom is 2 and the critical value at the .05 level of significance is 5.991.

*P<.05.

Table A-3.--Percentages of Dropout Skiers in the Three Family Life Cycle Stages Agrees With the Attitude Statements (Perceptions).

Keyword	Stages in the Family Life Cycle			X^2 value
	FLC-1 "Younger Childless" (N=8) %	FLC-2 "Older "Childless (N=41) %	FLC-3 "Married w/ Children" (N=76) %	
TRAVEL	62.5	45.0	46.7	.83767
DANGEROUS	25.0	19.5	35.6	3.35707
YOUNG	0.0	19.5	21.1	1.82100
INVESTMENT	85.7	61.5	75.3	3.11718
EXPENSIVE	87.5	70.0	77.5	1.42916
FITNESS	57.1	78.0	89.5	6.48766*
CROWDED	85.7	76.3	78.9	.32838
STATUS	37.5	30.8	40.8	1.09304
FAMILY	100.0	92.7	97.4	1.87874
ABILITY	37.5	31.6	47.2	2.56394
FREE TIME	62.5	41.5	48.6	1.35519

NOTE: For all the items Degree of Freedom is 2 and the critical value at the .05 level of significance is 5.991.

*P<.05.

Table A-4.--Percentages of Potential Skiers in the Three Family Life Cycle Stages Agreeing With the Attitude Statements (Perceptions).

Keyword	Stages in the Family Life Cycle			X^2 value
	FLC-1 "Younger Childless" (N=51) %	FLC-2 "Older "Childless (N=54) %	FLC-3 "Married w/ Children" (N=63) %	
TRAVEL	20.8	38.0	25.0	3.98234
DANGEROUS	36.7	38.5	36.7	.04693
YOUNG	10.0	9.4	16.1	1.50544
INVESTMENT	65.9	73.5	63.8	1.21077
EXPENSIVE	69.8	68.6	57.7	1.94666
FITNESS	86.0	85.2	90.2	.74384
CROWDED	61.4	57.8	74.5	3.12233
STATUS	29.2	30.6	33.9	.29157
FAMILY	98.0	98.1	96.8	.27451
ABILITY	38.3	44.7	42.6	.41047
FREE TIME	61.2	56.0	50.0	1.36462

NOTE: For all the items Degree of Freedom is 2 and the critical value at the .05 level of significance is 5.991.

*P<.05.

APPENDIX B

PERCENTAGES OF THE SKIERS IN THE THREE FAMILY LIFE CYCLE STAGES CITING THE FACTOR AS A REASON FOR NOT SKIING

Table B-1.--Percentages of Former Skiers in the Three Family Life Cycle Stages Citing the Factor as a Reason for Not Skiing.

Keyword	Stages in the Family Life Cycle			X^2 value
	FLC-1 "Younger Childless" (N=35) %	FLC-2 "Older "Childless (N=113) %	FLC-3 "Married w/ Children" (N=124) %	
TRAVEL	14.3	21.2	16.9	1.17912
DANGEROUS	2.9	11.5	10.5	2.31406
YOUNG	0.0	2.7	5.6	3.02601
INVESTMENT	31.4	27.4	20.2	2.68364
EXPENSIVE	45.7	44.2	29.8	6.26837*
FITNESS	5.7	12.4	17.9	3.77694
CROWDED	14.3	36.3	25.8	7.24003*
STATUS	2.9	5.3	2.4	1.47090
FAMILY	0.0	1.8	1.6	.60959
ABILITY	5.7	9.7	8.9	.53750
FREE TIME	31.4	30.1	21.1	3.00844

NOTE: For all the items Degree of Freedom is 2 and the critical value at the .05 level of significance is 5.991.

*P<.05.

Table B-2.--Percentages of Inactive Skiers in the Three Family Life Cycle Stages Citing the Factor as a Reason for Not Skiing.

Keyword	Stages in the Family Life Cycle			x^2value
	FLC-1 "Younger Childless" (N=27) %	FLC-2 "Older "Childless (N=72) %	FLC-3 "Married w/ Children" (N=48) %	
TRAVEL	11.1	25.0	10.4	5.18951
DANGEROUS	0.0	9.7	4.2	3.70360
YOUNG	0.0	2.8	0.0	2.11207
INVESTMENT	33.3	27.8	25.0	.59756
EXPENSIVE	48.1	50.0	25.0	8.01722*
FITNESS	7.4	6.9	10.4	.48836
CROWDED	11.1	36.1	20.8	7.48320*
STATUS	0.0	2.8	0.0	2.11207
FAMILY	0.0	0.0	2.1	2.07663
ABILITY	3.7	12.5	8.3	1.88048
FREE TIME	33.3	34.7	22.9	2.00497

NOTE: For all the items Degree of Freedom is 2 and the critical value at the .05 level of significance is 5.991.

*P<.05.

Table B-3.--Percentages of Dropout Skiers in the Three Family Life Cycle Stages Citing the Factor as a Reason for Not Skiing.

Keyword	Stages in the Family Life Cycle			X^2 value
	FLC-1 "Younger Childless" (N=8) %	FLC-2 "Older "Childless (N=41) %	FLC-3 "Married w/ Children" (N=76) %	
TRAVEL	25.0	14.6	21.1	.89257
DANGEROUS	12.5	14.6	14.5	.02559
YOUNG	0.0	2.4	9.2	2.62298
INVESTMENT	25.0	26.8	17.1	1.62019
EXPENSIVE	37.5	34.1	32.9	.07697
FITNESS	0.0	22.0	22.7	2.27701
CROWDED	25.0	36.6	38.9	.87687
STATUS	12.5	9.8	3.9	2.03100
FAMILY	0.0	4.9	1.3	1.65296
ABILITY	12.5	4.9	9.2	.91437
FREE TIME	25.0	22.0	20.0	.14481

NOTE: For all the items Degree of Freedom is 2 and the critical value at the .05 level of significance is 5.991.

*P<.05.

Table B-4.--Percentages of Potential Skiers in the Three Family Life Cycle Stages Citing the Factor as a Reason for Not Adopting Skiing Yet.

Keyword	Stages in the Family Life Cycle			X^2value
	FLC-1 "Younger Childless" (N=51) %	FLC-2 "Older "Childless (N=54) %	FLC-3 "Married w/ Children" (N=63) %	
TRAVEL	9.8	22.2	11.1	4.13290
DANGEROUS	17.6	22.2	20.6	.34995
YOUNG	2.0	0.0	1.6	.99220
INVESTMENT	45.1	46.3	46.0	.01677
EXPENSIVE	41.2	48.1	33.3	2.66371
FITNESS	3.9	9.3	9.5	1.49693
CROWDED	17.6	14.8	14.3	.27005
STATUS	3.9	7.4	0.0	4.65876
FAMILY	0.0	1.9	1.6	.89960
ABILITY	11.8	7.4	3.2	3.14396
FREE TIME	41.2	38.9	36.5	.26028

NOTE: For all the items Degree of Freedom is 2 and the critical value at the .05 level of significance is 5.991.

*P<.05.

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