01

This is to certify that the

dissertation entitled

THR RELATIONSHIP BETWEEN LEISURE LIFESTYLE AND RISK: NATIVE AMERICAN YOUTH AND ALTERNATIVE SCHOOL STUDENTS

presented by

Stephen R. Yanni

has been accepted towards fulfillment
of the requirements for

Ph. D. degree in Park, Recreation and Tourism Resources

Charles M. Nelson
Major professor

Date 5/2/01

THE RELATIONSHIP BETWEEN LEISURE LIFESTYLE AND RISK: NATIVE AMERICAN YOUTH AND ALTERNATIVE SCHOOL STUDENTS

By

Stephen R. Yanni

A DISSERTATION

Submitted to

Michigan State University

in partial fulfillment of the requirements

for the degree of

DOCTOR OF PHILOSOPHY

Department of Park, Recreation, and Tourism Resources

2001

ABSTRACT

THE RELATIONSHIP BETWEEN LEISURE LIFESTYLE AND RISK: NATIVE AMERICAN YOUTH AND ALTERNATIVE SCHOOL STUDENTS

By

Stephen R. Yanni

If recreation practitioners are to provide effective youth risk prevention programs and obtain the necessary resources for such programs, the relationship between leisure lifestyle and the behaviors and choices associated with risk must be fully understood. This study was designed to: 1) examine leisure lifestyle (leisure boredom and leisure participation patterns) and risk, and 2) to explore the relationship between leisure lifestyle and risk among Native American youth attending regular schools and white and Native American students in alternative school students.

The subjects for this study were 63 youth from the Bay Mills Indian community located in upper Michigan attending regular schools and 38 students attending the Sault Ste. Marie, Michigan Alternative Education Center. Data were collected in May and June 2000 in a group interview format. Instruments used were the Adolescent Leisure Time Activity Scale (ALTAS), the Leisure Boredom Scale, an Indicator of Risk Scale, and a demographic questionnaire.

The key findings of this study were: 1) Native American youth from Bay Mills had significantly higher rates of participation in organized leisure activities, organized sport activities, activities at home, and self-directed leisure activities

while the alternative school students had significantly higher total risk and leisure boredom scores; 2) leisure variables explained 23.8% of the variance in total risk for the entire sample; 3) increased unsupervised socialization with friends, decreased organized leisure activity, decreased activities at home, and increased leisure boredom were found to contribute significantly to increased total risk for the whole sample; and 4) leisure variables predicted group membership as either youth from Bay Mills or students from the alternative school with accuracy rates of 82.5% and 84.2% respectively.

ACKNOWLEDGEMENTS

Without the encouragement, guidance, and understanding of members of my family this project would never have been considered, let alone completed.

To my wife Hedy, and my children Brandon, Caleb, and Rachel; were it not for the belief that all of the time spent away from you working on this project would ultimately benefit all of "us" I would not have found the motivation and discipline to carry on ... thank you.

My mother and father provided a foundation from my earliest days which was built on love, hard work, wisdom, and selflessness, these same building blocks were also provided to my wife, and later to myself by my wife's parents. To both sets of parents ... thank you.

To my brothers and sisters by blood and by marriage who quietly provided encouragement and assistance to my wife and myself ... thank you.

To Gary Deuman, his staff, and students at the Sault Ste. Marie Alternative Education Center; I thoroughly enjoyed the time I spent working with you. Thank you for welcoming me into your world during my data collection.

Without the support of the Bay Mills Indian Community this project would have been doomed. To the members of the Executive Council and the young people who participated in the data collection, I say Chi Migwetch.

To my colleagues at the Bay Mills Indian Community and Lake Superior State University who assisted with the collection of data, and playfully but effectively pushed me to completion of this project ... thank you. In particular I

would like to thank Dr. R. Lee Gardiner, you picked me up by the bootstraps many times when I was ready to throw in the towel; without your expertise, and kind friendship this project would not have been completed ... thank you.

To Dr. Charles Nelson, my major advisor at Michigan State University, thank you for your brilliance, patience, and friendship. My journey to completion of this project was a complex and unique one; with every twist in the path you urged me forward and displayed an unwavering confidence in my abilities.

To Dr. Joe Fridgen, Dr. Don Holecek, and Dr. George Cornell who provided time and guidance as members of my dissertation committee, your assistance was greatly needed and appreciated.

To God the Father who gave me the skills, support, and opportunities to be involved in a project such as this ... thank you.

TABLE OF CONTENTS

Chapter 1: Introduction

One of the greatest challenges of our time is to understand the factors involved in influencing the lifestyles of our youth. Some young people live according to the rules; they are successful in school, they abide by the laws of the land, they are able to stay clear of drugs and alcohol, their personal choices promote health rather than disease, and ultimately they become successful, productive members of society. Conversely we have "youth-at-risk" whose lives may take a decidedly different route. This route is characterized by conflict, rebellion, violence, substance abuse, academic failure, sexual promiscuity, and other behaviors which tend to reduce their chances of becoming successful, productive members of society.

Many factors have been linked to the development of at-risk youth. These include economic status, family characteristics, gang affiliations, racial and cultural affiliations, religious affiliations, extracurricular pursuits, birth order, gender, personality, leisure lifestyle, and various pathological conditions have all been examined for their contributions to the development of risk amongst youth. This study looked at leisure lifestyle as a potential factor in shaping the lives of young people.

Many in the recreation profession have made the argument that it is far less expensive to facilitate positive leisure lifestyles amongst youth than it is to rehabilitate them after they have been transformed to youth-in–trouble. "For as long as recreation has been institutionalized as a public service, it has been

argued by the field's evangelists that it can be an effective tool for alleviating delinquency and crime" (Crompton, 1993, p. 4).

Leisure time pursuits of young people are an important factor in determining the type of lifestyle an individual will pursue. For better or worse, "leisure can contribute in a positive way to maintenance of a healthy, vigorous lifestyle; on the other hand, it can detract from one's well-being in a significant manner" (Edginton, Jordan, DeGraff & Edginton, 1998, p. 13).

Evidence of the benefits of investments in leisure-based prevention programs for youth is growing. Schultz et. al. (1995) point out, if an at-risk youth prevention program prevents only one in every 178 individuals from detention in a state-run facility, the prevention program will be cost effective. While such analysis is encouraging, those who seek resources for youth prevention programs find that recreation programs often are not an allowable expenditure from many potential funding sources, such as state-level substance abuse prevention programs. Many of these prevention funding sources target youth at high risk, such as Native American youth and Alternative School students.

Concerning risk and minorities, the leisure-related literature does provide some information regarding the relationship between delinquency and risk amongst Mexican American, African American, and white youth; however, there is a void in the literature concerning leisure lifestyle and delinquency or risk amongst Native American youth.

This investigation is designed to assess leisure lifestyle and at-risk behaviors of Native American youth and alternative school students, and then to examine the relationship between risk and leisure lifestyle.

Statement of the Problem

Many communities, including those that are predominantly Native American, turn to leisure service professionals for help in preventing at-risk lifestyles among their younger members. However, these practitioners are currently without the benefit of a significant body of research concerning the relationship between leisure lifestyle and at-risk behaviors for Native American youth.

The lack of literature concerning Native Americans and leisure is partly due to the demographic realities. In Michigan, Native Americans comprise roughly 0.6% of the state's total population. There are portions of the state however, with a significantly higher proportion of Native Americans. In Chippewa County, in Michigan's Eastern Upper Peninsula, Native Americans are 11.0% of the county's population. (Hembroff, Cornell, & Hamlin, 1999)

There is a significant body of literature that examines the benefits of leisure, and the leisure lifestyles of white, African-American, and Mexican-American adolescents, but there is an obvious gap in the literature specific to Native Americans. There is also a gap in the delinquency research, which has ignored leisure activity as a contributing factor (Agnew and Petersen, 1989). The review of literature found in chapter two of this study will suggest that Native

American youth as a group are more likely to be classified as at-risk than their non-Native counterparts; a reality that further highlights the need to understand factors related to risk, including leisure lifestyle.

This study was designed to: 1) examine leisure lifestyle (leisure boredom and leisure participation patterns) and risk, and to explore the relationship between leisure lifestyle and risk among Native American youth attending regular schools and alternative school students; and 2) examine data from instruments used for potential predictive abilities and relationships.

Purpose of the Study

If recreation practitioners are to provide truly effective youth prevention programs, and obtain the necessary resources for such programs, the relationship between leisure lifestyle, behaviors, and choices associated with risk must be fully understood. Furthermore, it is necessary to understand if youth from differing cultural and racial groups show similar relationships between leisure lifestyle and indicators of risk. This avoids the potentially false assumption that all youth are impacted equally by similar prevention programs which focus on leisure. It is also important to obtain current knowledge of leisure practices amongst our youth, and to determine if those practices are consistent across risk indicators, and racial/cultural boundaries.

Need for the Study

Leisure service providers who work with Native American youth and at-risk youth must be better equipped to offer services which are likely to be effective in preventing at-risk lifestyles. Currently little is known of the relationship between leisure behaviors of Native American youth and at-risk behaviors. Additionally, if strong relationships between leisure lifestyle and indicators of risk are found, it may become important to explore the predictive value of leisure lifestyle assessments.

Delimitations

This study was delimited to:

1. Currently enrolled (second semester 2000) students in the Sault Ste. Marie, Michigan Area Alternative Education Center and registered members of the Bay Mills Indian Community between the ages of twelve and nineteen years living in Chippewa County.
2. Leisure lifestyle was assessed using the Adolescent Leisure Time Activity Scale (ALTAS) (Yin, Katims, and Zapata, 1999) and the Leisure Boredom Scale (Iso-Ahola & Weissinger, 1990)
3. Indicators of risk were assessed from student responses to questions pertaining to delinquent acts derived from Yin et al. (1999)
4. Demographic variables were assessed using student responses to researcher developed items concerning gender, grade in school, age, and race (Native American or non-Native American)

5. The data were collected between in May and June 2000.
6. The data were analyzed using SYSTAT 5.04.

Limitations

Limitations influencing the results of this study were:

1. The Native American youth who participated in this study were overwhelmingly members of one tribe, the Bay Mills Indian Community. Standards for membership in tribal communities vary, thus leading to concerns regarding the ability of the Native American subjects in this study to represent all Native American students.
2. Some of the Native American students in this study may be more integrated into the dominant society than tribal members of more rural or western tribal communities. This may also limit the generalizability of the results of this study.
3. The financial success of native enterprises of the Sault Ste. Marie Tribe of Chippewa Indians and the Bay Mills Indian Community has led to the development of extensive recreational facilities and programs for tribal youth. This may limit the generalizability of the results of this study to all tribal youth.
4. Non-response bias specific to the variables related to risk and leisure lifestyle was not measured; this may limit the generalizability of the results of this study.

Definition of Terms

For consistency of interpretation the following terms are defined:

Risk: For the purposes of this research project, risk will be represented by the following indicators: belonging to a gang, carrying a weapon, criminal activity, participation in tagging (gang logos being painted in public places), staying out late without parental permission, abusive language directed to teachers or parents, substance use, poor academic performance, and poor self-reported health and physical fitness (Yin, Katims, and Zapata, 1999)

Leisure Boredom: The subjective perception that available leisure experiences are not sufficient to instrumentally satisfy needs for optimal arousal. Perceptions of leisure as boredom are associated with negative affect and can be manifested as beliefs that available leisure resources are not sufficiently frequent, involving, exciting, varied or novel. (Iso-Ahola and Crowley, 1991, p. 262)

Leisure: Discretionary time.

Leisure Lifestyle: A combination of self-reported level of leisure boredom, and current free-time activity participation.

Native American: A member in full standing of a federally recognized tribe.

Youth: For the purposes of this research project, youth are to be defined as those between twelve and nineteen years of age at the time of data collection.

Hypotheses

The literature review completed for this study and the personal experiences of the author as a director of recreation and health promotion for a Native American community have led to the development of the hypotheses presented below.

Hypotheses are offered for leisure lifestyle and risk data comparing the groups of Bay Mills youth (all attending regular schools) and alternative school students.

1. Subjects who were students in the alternative school will have higher total risk scores than youth from Bay Mills who were students in regular schools. The above hypothesis is based on the risk behavior data from the 1998 Centers for Disease Control (CDC) Alternative School Risk Behavior Survey and the information provided by Gary Deuman, director of the Sault Ste. Marie Alternative Education Center. Both of these sources

indicated that students in alternative education programs are involved in risk behavior at higher rates than students in regular schools.

2. Alternative school students will have higher scores for participation in unsupervised socialization with friends than Bay Mills youth whom were students in regular school. Yin, Katims, and Zapata (1996) found that increased socialization with friends led to increased illegal substance use, and Agnew and Petersen (1989) found that leisure activities with peers had a positive relationship with both total and serious delinquency. Since it is expected that the alternative school students will have higher rates of total risk, it is expected based upon the above two sources that alternative school students will also have higher rates of involvement in unsupervised socialization with friends.

3. Bay Mills youth will have higher scores for: 1) organized sports activities, 2) organized leisure activities, 3) activities at home, and 4) self-directed leisure activities than alternative school students. Since only one of the five typologies of leisure (unsupervised socialization with friends) has been associated with higher rates of risk behaviors (Yin et. al, 1996), and Bay Mills youth are expected to have lower risk scores than the alternative school students; it is therefore expected that Bay Mills youth will have higher rates of participation in the other four typologies of leisure activities.

4. It is expected that alternative school students will have higher total risk scores (as was supported above), and Caldwell (1995) found that increased boredom leads to increased delinquency. Therefore, it is

hypothesized that alternative school students will have higher leisure boredom scores than youth from Bay Mills who were students in regular schools.

5. Agnew and Petersen (1989) found that leisure variables explained six percent of the variance in total and minor delinquency and four percent of the variance in serious delinquency. It is expected that leisure lifestyle in the current study will explain at least six percent of the variance in total risk scores for all subjects.

6. Based on the results of Yin et. al, (1999) and Caldwell (1995) it is expected that for Bay Mills youth unsupervised socialization with friends, organized leisure activities, organized sport activities, activities at home and leisure boredom will all contribute significantly to a prediction of total risk.

7. Based on the results of Yin et. al, (1999) and Caldwell (1995) it is expected that for Bay Mills youth participation in self-directed leisure activities will not be a significant variable in the prediction of total risk.

8. Based on the results of Yin et. al, (1999) and Caldwell (1995) it is expected that for alternative school students unsupervised socialization with friends, leisure boredom, organized leisure activities, organized sport activities, and activities at home will all contribute significantly to a prediction of total risk.

9. Based on the results of Yin et. al, (1999) and Caldwell (1995) it is expected that for alternative school students participation in self-directed

leisure activities will not be a significant variable in the prediction of total risk.

10. It is hypothesized that accuracy of predicting group membership as either Bay Mills youth or alternative school student based on leisure lifestyle will be greater than chance.

Although it will be shown in the literature review that Native American youth and alternative school students are at greater risk than youth in general in the United States; it is the author's belief that the alternative school students in the current study will show greater levels of at-risk behaviors than the youth from Bay Mills (see hypothesis two).

If the alternative school students and the youth from Bay Mills do differ on levels of at-risk behaviors, it is expected that since leisure may be a significant factor in understanding delinquency (Agnew and Petersen, 1989), predicting group membership based on leisure variables should be successful.

This hypothesis is also based on information concerning the leisure habits of the alternative school students provided to the author by Gary Deuman, director of the Sault Ste. Marie Alternative Education Center. (G. Deuman, personal communication, May, 2000)

Chapter Two : Literature Review

This study was designed to: 1) examine leisure lifestyle (leisure boredom and leisure participation patterns) and risk, and to explore the relationship between leisure lifestyle and risk among Native American youth attending regular schools and alternative school students; and 2) examine data from instruments used for potential predictive abilities and relationships.

The literature related to 1) leisure lifestyle, 2) adolescent leisure lifestyle and indicators of risk, 3) Native Americans and risk, and 4) leisure and Native Americans will be reviewed in this chapter.

Leisure Lifestyle

As the elements of leisure lifestyle are explored, the term leisure must first be examined. The term leisure has commanded a significant amount of attention over the centuries, as philosophers, social scientists, religious theorists, and leisure professionals have attempted to create the universally applicable definition of this term. As a result many theories of leisure have been discussed, including leisure as activity, leisure as a state of mind, leisure as a symbol of social status, the anti-utilitarian view of leisure, and leisure as a holistic concept (Edginton, et. al., 1998). The most widely accepted view of leisure in today's society is that leisure is some form of free time, time to do as you please (Bammel and Bammel, 1992). Shivers and DeLisle (1997) support the notion of leisure as free time, "the concept of leisure as time free of obligations is the most

effective and meaningful definition yet proposed. Instead of encrusting leisure with restrictive consequences and hedging it with certain values, activities, or partial time references, the free-time definition is theoretically sound and unambiguous" (p. 93).

Defining leisure as free time provides a simple, tidy understanding of the term leisure in isolation, but falls short in developing a thorough understanding of the leisure experience or leisure lifestyle. It is in exploring the lifestyles and experiences associated with leisure that the practitioner would benefit the most.

The state of mind view of leisure lends itself most readily to an understanding and measurement of leisure experience or lifestyle, "under the state of mind view, we would be more concerned with creating environments and utilizing leadership strategies that will maximize feelings and perceptions that have been denoted as typifying leisure" (Witt and Ellis, 1989. P. 3).

Central to the state of mind view of the leisure experience are the concepts of competence, control, intrinsic motivation and freedom (Witt and Ellis, 1989). Edginton et. al. (1998) support this notion by offering the following four similar central factors: freedom, perceived competence, intrinsic motivation, and positive affect.

Peterson and Stumbo (2000) assist in developing an understanding of the concept of leisure experience or lifestyle, "leisure lifestyle is the day-to-day behavioral expression of one's leisure-related attitudes, awareness, and activities revealed within the context and composite of the total life experience" (p. 7).

The issue of boredom related to leisure or free time is often studied (Iso-Ahola and Crowley, 1991; Iso-Ahola and Weissinger, 1987; Shaw, Kleiber, and Caldwell 1996; Caldwell 1995) as an important factor in understanding leisure lifestyle. Boredom is reported to be a factor in determining participation patterns as well as how leisure lifestyle plays a role in other important life choices and behaviors.

In summary, in order to understand leisure as an isolated term, one must consider the notion of leisure as free time; but, in order to develop a more thorough awareness of leisure as it relates to the life experience, one must look at, freedom, motivation, constraints, attitudes, boredom, competence, control, and activity choices as they relate to free time.

Adolescent Leisure Lifestyle and Indicators of Risk

This section of chapter two reviews literature examining the relationship between leisure lifestyle and various indicators of risk amongst adolescents. Leisure lifestyle is measured primarily by looking at current participation patterns and leisure boredom.

Yin, Katims, and Zapata (1996) surveyed 1190 sixth and seventh grade Mexican-American students from four middle schools in a South Texas metropolitan area for the purposes of: 1) investigating the typology of after-school-activities engaged in by a group of economically deprived and academically at-risk Mexican-American middle school students, 2) examining the relationship between the types of after-school activities and substance use, and

3) identifying factors that may act as mediators in the relationship between after-school activities and the use of alcohol and marijuana. Of the 1190 students surveyed in this study 573 were male and 617 female. Researcher-developed surveys were administered by trained undergraduate students in the classrooms of the subjects; these surveys gathered information concerning use of alcohol and drugs in the last thirty days, availability of alcohol and marijuana, friend's use of substances, and an after-school activity survey. The after-school activity survey asked students to indicate which of the eleven activities listed they participated in most often, second most often, and third most often; only the activities participated in "most often" were used in the analysis.

Following a method used by others (Agnew and Petersen, 1994) this study summarized after-school, or leisure activities by placing each activity in a category of activities. Three categories of activities were defined:

Type I: peer socialization activities that provide youth opportunities to interact freely without supervision,

Type II: organized activities that are structured to provide recreation and challenge to participants usually under adult supervision, and

Type III: activities that youth engage in at home under the direct or indirect supervision of adults, with limited opportunities to interact with peers. (Yin, et. al., 1996, p. 49)

With respect to use of alcohol and marijuana, the subjects of this study reported higher use than national averages. Participation in after-school activity typologies found type I (socializing in unsupervised settings) to be the most

frequently reported (41.2%), followed by type II (home-based activities) at 40%, and type III (organized activities) being the least often reported at 18.1%. Male verses female participation differences showed that males were more likely to socialize with friends in unsupervised settings and organized activities, while females were more likely to participate in home-based activities. Analysis indicated that substance use increased as socialization with peers in unsupervised settings (type I) increased as compared to the other two typologies; this trend was consistent across the genders. This study used only three typologies to summarize after-school activities; this may not be enough categories to examine the wider issue of leisure activities rather than after-school activities.

Yin, Katims, and Zapata (1999) completed another study focusing on leisure and delinquency that provided much of the framework for the current study. There were three purposes identified for this study:

1. To develop a typology of leisure time activities using the Adolescent Leisure Time Activity Scale (ALTAS) developed by the authors for the study;
2. To explore the relationship of this leisure typology and delinquency among Mexican American adolescents; and
3. To explore the effect of gender on participation in leisure activities and its mediating role on the relationship between leisure activity and delinquency. (Yin et. al., 1999, p. 172)

The subjects for this study included 2651 Mexican American students from a school district in south, central Texas; males represented 51% of the subjects. The mean age of the subjects was 14.6, with 36.9% from grade eight, 36.1% from grade nine, and 26.9% from grade ten. The three instruments used included the ALTAS, a self-report delinquency scale, and a questionnaire seeking demographic information. The ALTAS was developed by the authors based upon leisure activity scales developed by Agnew and Petersen (1989), Kelly (1996), Yu (1980), and Yin et al. (1996). The development and subsequent evaluation of the ALTAS as a means of assessing leisure time activities was one of the objectives of this research.

The ALTAS included 24 leisure activities. In it subjects were asked to indicate their participation in the 24 activities after school or on weekends and to respond whether participation was usually, sometimes, or never. The 24 leisure activities were associated with one of five typologies of leisure: 1) unsupervised socialization with friends, 2) organized leisure activities, 3) organized sport activities, 4) activities at home, and 5) self-directed leisure activities.

The delinquency scale developed for the study asked students to respond "yes" or "no" to questions pertaining to nine delinquent acts in which they had engaged during the past year. The nine delinquent acts included: 1) belonging to a gang, 2) carrying a weapon (knife/gun) to school, 3) charged with a crime/went to court for a felony charge, 4) did "tagging" (tagging is marking territory with a gang's or group's colors/logo), 5) stayed out late without permission/left home without parents knowing, 6) cussed out loud at a teacher/used bad language to

parents, 7) smoked marijuana at least once in last 30 days, 8) was drunk (had 5 or more drinks on one occasion) at least once in last two weeks, and 9) averaged "D" or less at school in last year.

Data were collected in the classrooms of the subjects during the Spring of 1995, with a response rate of 89%. To control for standardized administration and readability, university students were trained to administer the survey and they read the survey to the students in English. Subjects were instructed to follow along with the research assistant who read the questions and the multiple choice response options out loud. School personnel were asked to leave the classrooms during test administration so as not to influence subject responses. Subjects were each paid $1.00 for their participation.

Data were analyzed in the follows ways. A chi-square was performed on each activity item to assess possible differential associations with student gender. The relationship between leisure time activities and delinquent behavior was examined by conducting a univariate one-way F-test on each aggregate dimension score of the ALTAS, and the nine delinquency indices were used as criterion variables. Exploratory and confirmatory factor analysis were performed to determine the construct validity of the ALTAS. (Yin et. al, 1999) The results of this study are extensive, and will be summarized here in point form.

1. Males reported significantly more involvement than females in six of the nine delinquent behaviors.

2. Delinquency is significantly associated with increased participation in unsupervised socialization with friends and less frequent participation in organized leisure activities, organized sport activities, and activities at home.
3. Participation in self-directed leisure activities was not related to any delinquency index.
4. Most of the relationships between leisure activities and delinquency were consistent across gender; however participation in organized sport activities had a significant positive correlation with male use of marijuana.
5. Males had better school performance in association with participation in organized leisure activities, organized sport activities, and activities at home. Males left home at night without permission less often in association with participation in organized leisure activities and sport activities.
6. The ATLAS was shown to be a valid instrument for assessing typologies of adolescent leisure time activities. (Yin et. al, 1999)

A study by Widmer, Ellis, and Trunnell (1996) also focused on developing an instrument that might allow a greater understanding of the relationship between leisure and delinquency amongst youth. The purpose of their study was to develop an instrument to measure the ethical component of recreation and leisure behavior that can be used to distinguish between high and low risk adolescents. The instrument being developed was the Adolescent Ethical Behavior in Leisure Scale (AEBLS). This scale was based on an interpretation of the ethical system presented in Aristotelian philosophy. Variables related to Aristotelian philosophy such as intellectual activity, creative activity, meaningful

relationships, and moral behavior were identified and used in the study to establish construct and criterion validity and inferences that can be made from scores on the AEBLS. Many of these variables are of interest due to their similarity to the current study's focus on leisure lifestyle and indicators of risk amongst youth.

Widmer et. al, (1996) tested the following hypotheses:

1. The AEBLS mean of the low risk group will be significantly greater than the AEBLS score of the high risk group.
2. A significant, negative correlation will be found between the AEBLS and school bonding. School bonding is explained to be the choice to stay in high school, continue one's education, and an interest in learning; this would be termed retention in most of the literature.
3. A significant, negative relationship will be found between the AEBLS and leisure boredom.
4. A significant correlation will not be found between the AEBLS and gender.
5. A significant correlation will not be found between the AEBLS and race.
6. A significant, positive relationship will be found between the AEBLS scores and evaluation of cortical recreation activities (involving cognitive skills).
7. A significant, negative relationship will be found between the AEBLS scores and evaluation of sensory recreation activities.

The last two hypotheses were included in this review although they do

not relate to the current study; the results review will not include a discussion of these two hypotheses

Two studies were conducted investigating construct and criterion related evidence of validity of the AEBLS. The first study addressed the hypotheses of interest to the current study, examining the relationship between the AEBLS scores and leisure boredom, substance use, school bonding, race, and gender. (Widmer et. al, 1996) The developed AEBLS contained sixty-two items representing Aristotelian ethical leisure behavior. The Leisure Boredom Scale (Iso-Ahola and Weissinger, 1990) was used, as well as a set of questions related to school bonding, a questionnaire about substance abuse, and a list of questions concerning demographics. (Widmer et. al, 1996)

The subjects for this study included a sample of 346 high school aged adolescents from agencies serving high risk (n=145) and low risk youth (n=201) from Northern California and Utah. The participants in the first study were between twelve and nineteen years of age (mean=16.1). The low risk group was comprised of 111 males and 90 females while the high-risk group was made up of 91 males and 49 females. Fifteen percent of the low risk and 33 percent of the high risk group were racial minorities. (Widmer et. al, 1996) Unfortunately, for this study specific information regarding the racial minorities was not provided.

The results of the first study produced an alpha reliability estimate of .90 for the AEBLS and .86 for the Leisure Boredom Scale, respectively. Findings of significance were a positive correlation between AEBLS scores and school bonding and negative correlations between scores on the AEBLS and substance

use and leisure boredom. The relationships between scores on the AEBLS and race and gender were found to be nonsignificant. (Widmer et. al, 1996)

One of the most extensive studies published in recent times exploring the relationship between leisure and delinquency amongst youth is the work completed by Agnew and Petersen, (1989). Agnew and Petersen drew heavily from theories of criminologists attempting to explain the relationship between leisure and delinquency. Three theories are discussed as being "of the most influential" (p. 333), they are social control theory, subcultural deviance theory, and strain theory. The following eight hypotheses were tested in this study: The researchers expected to find:

1. a negative relationship between delinquency and time spent in pleasurable organized leisure activities
2. a positive relationship between delinquency and time spent in unsupervised peer-oriented social activities
3. a negative relationship between time spent in liked activities and delinquency
4. a negative relationship between delinquency and the amount of time spent in liked leisure activities with parents
5. a positive relationship between delinquency and the amount of time spent in leisure activities with peers
6. a negative relationship between delinquency and the amount of time spent in pleasurable leisure activities
7. a positive relationship between delinquency and the amount of time spent in disliked leisure activities

8. the relationship between delinquency and certain categories of leisure activities will be conditioned by the extent to which the leisure activity is liked (Agnew and Petersen, 1989, pp. 335-337)

One-hour interviews were conducted in the homes of 600 adolescents from the metropolitan Atlanta area. The subjects were white students attending grades 9-12 in 21 public high schools; the authors report that the subjects were from a prosperous sample area and generally came from well educated families. The variable of leisure for this study was measured in a way which differs from most other studies of leisure. Rather than creating a list of leisure activities and instructing subjects to check those that they participate in, the authors of this study defined leisure as any activity so defined by the respondent. In response to this understanding of the meaning of leisure, respondents were initially asked to answer the following open-ended question, "what are your favorite ways of spending your free time. Up to five responses were recorded for this item in order to capture a range of leisure activities; in all 265 activities were named with almost half the sample being unable to list more than four activities. The activities listed in response to the initial question were then classified into one of the following ten categories:

1. organized activities (e.g. drill team, band, school newspaper, cheerleader, scouts, church activities, school homework)
2. social activities (e.g. dating, parties, telephone conversations, visiting friends, play with friends)

3. hanging out/loafing (e.g. do nothing, sit around, pleasure driving, hang around house)
4. passive entertainment (e.g. listening to records, reading, radio, TV, movies, concerts, sporting events)
5. housework activities (e.g. baby-sit, cleaning, mow lawn, house work, yard work)
6. sports competitive (e.g. baseball, football, basketball, tennis) Includes both supervised and unsupervised competitive sports activities
7. sports noncompetitive (e.g. bike riding, horseback riding, roller skating, swimming, jogging, boating) Includes both supervised and unsupervised noncompetitive sports activities
8. games/crafts/hobbies (e.g. embroidering, sewing, model building, chess, cooking)
9. music/art (e.g. as a performer or active participant – includes dancing, playing guitar, playing piano, drawing, painting, and photography)
10. other activities (e.g. travel, go to beach, visit parks)

The above list seems to omit the specific category of outdoor recreation, and it separates sports based on competitiveness only, rather than competitiveness and level of structure or adult supervision (e.g. the pick up basketball game at the gym verses varsity high school basketball). Other questions asked of subjects in this study included: 1) with whom did you spend most of this leisure time? (options – parents, friends, alone); 2) how frequently do you do these leisure activities?; and list up to three activities you least enjoy doing. The responses to

the "least enjoy doing" item were classified according to the ten categories listed earlier. The variable of delinquency was measured using an adapted self-report scale that included 19 delinquent acts:

1. hurt somebody badly
2. steal something worth less than $50
3. use knife or gun to get something
4. steal car
5. serious fighting
6. steal something worth more than $50
7. set fire to property
8. get something through a threat
9. run away from home
10. hit instructor or supervisor
11. hit father
12. steal expensive part of a car
13. hit mother
14. trespass
15. argue or fight with parents
16. damage school property on purpose
17. steal from store
18. take part in a gang fight
19. steal inexpensive part of a car

The above items were weighted and three measures of delinquency were obtained, total amount of delinquency, serious delinquency, and minor delinquency. The authors also experimented with alternative versions of the above measure of delinquency, including an unweighted version that produced essentially the same results. A summary of the results of this study follows:

1. Leisure variables explained roughly six percent of the variance of total and minor delinquency and four percent of serious delinquency (this data would indicate that leisure variables played a minimal role in explaining delinquency);
2. The data suggest that leisure may be a factor (although a minimal one) in understanding delinquency;
3. Leisure activities are negatively associated with total and serious delinquency;
4. Hanging out is positively associated with total and serious delinquency while social activities are positively associated with total and minor delinquency;
5. Passive entertainment and noncompetitive sports had a significant negative relationship to delinquency;
6. Time spent in leisure activities with peers has a positive relationship with both total and serious delinquency;
7. Time spent in pleasurable leisure activities with parents is unrelated to delinquency;
8. The hypothesis predicting a negative relationship between delinquency and time spent in favorite leisure activities was not supported;

9. The hypothesis predicting a relationship between delinquency and the total and relative amount of free time spent in least favorite activities was not supported;
10. Delinquency is positively related to the amount of time spent in least favorite leisure activities with parents. (Agnew and Petersen, 1989)

A study by Caldwell (1995) examined the relationship between youth who appeared alienated in their leisure time to health compromising, or at-risk behaviors. Leisure alienation is explained to be a combination of leisure boredom and rejection of adult structure during leisure. A total of 2756 students in four high schools located in the southeastern United States completed self-administered questionnaires for this study during the spring of 1994. The closed ended questionnaire included standardized items from 1) Youth Risk Behavior Survey (Centers for Disease Control), 2) Profiles of Student Life (Search Institute), and the Leisure Experience Battery for Adolescents (LEBA). The health indices included smoking, drinking, suicide, vomiting on purpose, and depression; leisure participation behaviors measured were participation in clubs, going out for fun, and sports involvement in and outside school. Three item measurers for boredom and rejection of adult structure were used to determine leisure alienation. Questions focusing on adolescent use of leisure as a reaction to, or rejection of adult structure were also included.

Leisure alienation was found to be a significant feeling amongst respondents, as 8-9% of the high school students expressed boredom with their free time and 15% actively used leisure to reject adult structure. Adolescents who reported

boredom, or who rejected adult structure, were significantly more likely to smoke cigarettes, abuse alcohol, vomit on purpose, attempt suicide, and be depressed. An analysis of gender-based differences showed that females who express boredom in leisure were significantly less likely to participate in clubs or organizations, go out in the evenings for fun or recreation, or to participate in teams at school as compared to males. Lower participation in teams at school was the only significant difference among females who reject adult structure verses those who do not. Amongst the male subjects, those who were bored with their free time were significantly less likely to participate on teams outside of school; among the males who reject adult structure, there were no leisure participation differences. (Caldwell, 1995)

Bergin (1992) investigated the reciprocal relationship of high school students' school activities and their leisure activities and motivations. The following four research questions formed the foundation of his study:

1. "Do leisure activities and motivation predict in-school achievement?"
2. "Is student academic achievement related to intense participation in sports, academic leisure activities, and other leisure activities in different ways?"
3. "Does school influence leisure activities by creating continuing motivation?"
4. "Is continuing motivation positively related to achievement, intrinsic intellectual motivation, leisure activities, and self-efficacy? "(Bergin, 1992, p. 228)

A convenience sample from social studies classes from two San Francisco bay area high schools produced 159 subjects. Included in the 159 subjects were 74 males and 85 females. Although ethnicity was not a variable in this study, subjects were asked to self-report their ethnic affiliation. Only 4 of the subjects reported their ethnicity as Native American; reinforcing the need for a study focusing on the Native American population. Instruments for this study included a leisure activity questionnaire that asked students to indicate how much time per week they spent in each of 43 leisure activities, a subset of academic leisure activities was developed which focussed on identifying leisure activities which had obvious academic value. The Intrinsic Intellectual Motivation Scale, Self-Efficacy Scale, and an open-ended format concerning potential post secondary education were employed. Academic achievement was measured by computing GPA's and continuing motivation was measured through private interviews with 66 of the subjects. Continuing motivation was described as school activities generating interests that are pursued in leisure time activities. (Bergin, 1992) Reliability and validity data were provided only for the Intrinsic Intellectual Motivation Scale.

Bergin's (1992) results demonstrated that leisure activities are related to academic achievement, although the relationship was modest; the total number of academic leisure activities correlated most strongly with GPA ($r = .17$). Of the individual leisure activities, two correlated significantly with overall GPA, learning about current events ($r = .31$) and school-based music lessons ($r = .31$). Interestingly students who worked (paid jobs) did not differ in GPA from those

who did not work. For students who did work, time on the job correlated negatively (r = - .40) with GPA. Students who intensely pursued only high school sports were lower in intrinsic intellectual motivation than students with non-sport interests. This becomes important in that intrinsic intellectual motivation was a significant correlate of school achievement. Lastly, Bergin reported that continuing motivation (school generated interests being pursued in leisure) was low.

The hypothesis that adolescent substance abusers are more likely to experience leisure as boredom than non-substance abusers was the focus of a study by Iso-Ahola and Crowley (1991). This study is important to the current study in that it further substantiates the predictive validity of the Leisure Boredom Scale.

Two groups of subjects were utilized for this study; a group of substance abusers and a control group of non-substance abusers. The 39 subjects in the substance abusers group all met the criteria for the diagnosis of psychoactive substance abuse as defined by the American Psychiatric Association's DSM III-R. Of the 39 substance abusers, 19 were patients in a private psychiatric hospital and 20 were outpatients in a substance abuse treatment program at another psychiatric institute. The substance abuse group was made up of 21 males and 18 females representing a variety of socioeconomic levels, family structures, and ethnic backgrounds. The age range of the substance abusers was from 15 – 18 years with a mean age of 16.6. With regard to ethnic background, only one subject from this group reported ethnicity as Native American. The control group

of 81 non-substance abusing adolescents were 45 male and 34 female students at a private school from a variety of ethnic groups, socioeconomic levels, and family systems. None of the subjects in the control group reported being Native American. The age range of the non-substance abusers was from 15 – 18 years with a mean age of 16.1. (Iso-Ahola and Crowley, 1991) Since both groups of subjects in this study were nonprobability samples the external reliability and validity of this study may be limited.

Leisure boredom was assessed using the Leisure Boredom Scale (Iso-Ahola and Weissinger, 1990). With reliability reported in the mid eighties, this scale consists of 16 items to which the subjects responds on a 1 – 5 (strongly disagree to strongly agree) scale. Leisure participation in a variety of activities was self-reported; activities included those done at home and away from home either individually or with family and friends. As a validity check for the dependent variable, subjects were asked to indicate their frequency of drug and alcohol use, both alone and with friends on a 0 – 4 (never to very often) scale. Subjects were also asked to report gender, age, race, and family makeup. Socioeconomic status was determined by considering parental employment status. The instruments were self-administered to both groups of subjects in supervised settings (Iso-Ahola and Crowley, 1991).

The validity check for the dependent variable produced the expected results; the two groups (substance abusers and non-substance abusers) did indeed differ significantly in self-reported frequency of drug and alcohol use. The findings regarding substance abuse and boredom showed significant difference

between the means of the two groups of subjects; the substance abusers were significantly more bored with leisure than non-substance abusers.

Somewhat surprisingly, the overall leisure participation frequency for the substance abusers was significantly higher than the non-substance abusers. More specifically, frequency of participation in ten activities differed significantly between the two groups. The substance abusers participated more frequently in football, baseball, gymnastics, skateboarding, roller-skating, going to concerts, and going for a drive, while the non-substance abusers were significantly more likely to participate in reading, tennis, and going to movies. (Iso-Ahola and Crowley, 1991) These findings may suggest that the substance abusers have an overall higher need for excitement, activity, and stimulation, and when these are not met through leisure activities, they seek substances to produce the desired effects. The findings of this study also supported the predictive validity of the Leisure Boredom Scale, "for behaviors such as lethargy, drug and alcohol abuse, vandalism and other leisure-related problematic conditions" (Iso-Ahola and Crowley, 1991, p. 269).

Any review of the literature concerning adolescent risk factors and leisure lifestyle must look at the literature specific to sport and indicators of risk. Segrave (1983) undertook an extensive review of the research concerning sport and delinquency; he concluded that, "the research reviewed clearly shows a negative relationship between participation in sport and juvenile delinquency" (Segrave, 1983, p. 197). The study by Landers and Landers (1978) will be reviewed here to

represent the literature examining the relationship between sport and adolescent delinquency.

The purpose of the Landers and Landers (1978) study was to assess the relationship between extracurricular activity participation and delinquent acts. This ex-post-facto study collected data from senior directories of a high school located in a small northeastern town. Based on the activities listed for each student in the directories, students were placed into one of four groups, 1) athlete only (n = 113), 2) service only (n = 118), 3) athlete and service (n = 170), and 4) neither – no athletics or service activity (n = 120). Court records were used to determine the total number of misdemeanor and felony offenses for each of the four groups of students. Determining the occupation of the major wage earner of each student's family controlled for socioeconomic status (Landers and Landers, 1978).

It was found that the socioeconomic scores of the four groups of students did not differ significantly, and that there is a significant association between delinquent acts and extracurricular participation. Of the 87 total delinquent acts identified, only 10 were felony convictions, and these all involved students in the "neither" category. The "service only" and "athlete only" groups were essentially the same in frequency of delinquent acts. Students in the "neither" category had higher incidences of delinquent behaviors than students who were in "athlete only", and "service activities only," or both athletics and service (Landers and Landers, 1978).

Although this research included males only and is now somewhat dated, its findings do represent the majority of the literature in this area as evidenced by Segrave's (1983) review of research related to this topic.

Youth and Risk Behaviors

There is evidence that Native Americans, and in particular Native American youth, and alternative school students are at greater risk than youth in general, making it important to understand the factors leading to increased risk amongst Native American youth and alternative school students. This section will present some of this evidence.

The following information was taken from the Michigan Pre-Conference report to the White House Conference on Indian Education. (Dunham-Martell & Van Alstine, 1997)

Compared to a white child, a Michigan Indian child is:

- 4.5 times more likely to live in poverty
- 4.4 times more likely to have no phone in the home
- 3.5 times more likely to live in a home with no furnace
- 2.2 times more likely to live with parents who have no car
- 2.2 times more likely to have four or more siblings
- 4.5 times more likely to live in a single parent household living in poverty
- 4.5 times more likely to have a mother (if married), who married young (17 – 19 years of age)

- an Indian child's mother probably does not have a job, and she has a greater likelihood of having no husband and being unemployed
- an Indian child's family has 4.6 times the possibility of being on public assistance and is 1.6 times more likely to live in a rented home

The following information was taken from Changing America: Indicators of Social and Economic Well-Being by Race and Hispanic Origin (1998) for the President's Initiative on Race:

- according to the 1990 census data, the median family income of American Indians was lower than that of blacks, which was lower than that of Hispanics and white, non-Hispanics
- according to the 1990 census, the poverty rate for American Indians was the highest among the five racial and ethnic groups
- according to the 1990 census, American Indian children had a poverty rate second only to that of black children
- in general, blacks fare worse than any other group, and American Indians and Hispanics are often disadvantaged in health status relative to whites
- among persons 18 to 34 years of age, smoking rates for America Indians are higher than those of all other groups
- American Indians face much higher death rates due to suicides and unintentional injuries than any other group, and also face higher than average homicide rates
- Between 1983 and 1995 infant mortality rates for American Indians were second only to those of Blacks

According to the Kids Count in Michigan 1996 Data Book, the 1994-1995 dropout rate for the Brimley Schools (the school attended by the majority of the Bay Mills youth living in Chippewa County) was 8.6%. This compares with a dropout rate for the 1999-2000 school year among 16-18 year olds from Bay Mills of 24%. (C. Adair, personal communication, June 2000)

Perhaps the best indicator of risk amongst Native American youth comes from the Youth Risk Behavior Study undertaken by the Bureau of Indian Affairs (1997). This study, which was also conducted in 1994, used an instrument, the Youth Risk Behavior Survey, developed by the Center for Disease Control (CDC) for their national survey conducted every two years in over 100 selected high schools throughout the United States. The Bureau of Indian Affairs (BIA) felt compelled to replicate the CDC's efforts with strictly American Indian students due to the fact that "American Indians are too small a sample nationally to be statistically reliable." (BIA, 1997, p.2)

The subjects for the 1997 BIA study were 5,606 high school students (from a total population of 7,780) attending BIA funded schools, including some in Michigan. Of the 57 BIA funded schools with grades 9-12, 54 participated in this study (BIA, 1997).

Table 1 presents youth risk behaviors data (as percentages) from the 1997 BIA Youth Risk Behavior Study, the CDC's 1998 National Alternative High School Youth Risk Behavior Survey (CDC , 1998), and the CDC'c 1999 National Youth Risk Behavior Survey (CDC, 1999).

Table 1

National At-risk Youth Behavior Results

Risk Behavior	BIA (1997)	Alternative Schools (1998)	Nationwide Youth (1997)
Carried a weapon	25.4%	32.9%	17.3%
Considered suicide	22%	15.7% (attempted)	19.3%
Physical fight on school property	20.9%		14.2%
Lifetime cigarette use	84.9%		70.4%
Current cigarette use	64.2%	64.1%	34.8%
Frequent cigarette use	30.5%		16.8%
Lifetime alcohol use	84.9%		81%
Current alcohol use	53.5%	64.5%	50%
Episodic heavy drinking	42.6%	49.8%	31.5%
Current marijuana use	52.3%	53%	26.7%
Current cocaine use	10%	15.3%	4%
Lifetime inhalant use	29.4%		14.6%
Ever had sexual intercourse	63.3%	87.8%	49.9%
Ever had four or more sexual partners	24.6%	50.4%	16.2%
Currently sexually active	40.4%	68.5%	36.3%
Played in school team sports	52.85		55.1%
Participate in vigorous physical activity	57.4%	46.8%	64.7%
Thought they were overweight	35.2%	25.5%	30%

Leisure Lifestyle and Native Americans

"Traditionally, recreational or competitive sport and recreation activity have always been important elements within Aboriginal communities. Before the colonization of Canada, the Aboriginal people held activities at traditional gatherings, which were not only ceremonies, but also inter-tribal skills competitions such as bone games, leg wrestling, lacrosse, snow snake, hand game, and a moccasin game. Many times these competitions were seen as alternatives to tribal conflicts or combats" (Ontario Aboriginal Recreation Council, 1994).

As has been pointed out throughout the current review of literature, very little attention has been paid to the impact of leisure lifestyle on Native Americans. This section will present the limited information found in the literature aimed at examining the leisure lifestyle of the indigenous peoples of North America.

In the fall of 1993, the Ontario Ministry of Culture, Tourism and Recreation – Recreation Policy Branch and the Ontario Aboriginal Recreation Council formed a partnership for the purpose of studying the current state of recreation for Ontario's Aboriginal peoples. The purpose of the resultant survey was to obtain a snap shot of the status of recreation in the Aboriginal communities, (Henhawk, 1994) Some of the specific elements examined by the survey were:

1. leadership profile of Aboriginal people working/volunteering in recreation;
2. benefits of recreation to Aboriginal people;
3. evaluation of recreation opportunities, gaps and issues;

4. strengths and weaknesses in aboriginal recreation programs; and
5. barriers and opportunities for recreation development in aboriginal communities. (Henhawk, 1994)

In all, 56 Aboriginal communities were invited to participate in the study; twenty-one (37.5%) communities completed and returned the survey.

The results of this survey indicated:

1. that the majority of Aboriginal communities classify their recreation programs and/or services to be either fair or poor;
2. the five top ranking barriers to recreation were: 1) lack of funding, 2) lack of staff, 3) lack of facilities, 4) lack of volunteers, and 5) poor organization and lack of structure of recreation programs;
3. for the majority of Aboriginal communities, professional recreation staff, recreation departments and volunteer committees were non-existent;
4. Aboriginal people currently participate in a limited range of team and individual activities depending on the opportunities they have access to;
5. Aboriginal people participate in sport and recreation for a variety of reasons including social benefits, competition, exercise and personal growth;
6. on reserve communities generally have few recreation facilities located within the community itself and those facilities usually are in poor condition;
7. cultural benefits are a significant reason for participating in large sporting events;

8. Aboriginal communities unanimously agree that recreation services should be made a priority and that recreation is very important to an individual's health and to their community; and
9. the aboriginal communities unanimously agree that sport and recreation programming for youth is important as a means to teach constructive use of spare time, preventative measures to drug and/or alcohol abuse, provide an opportunity for social interaction and to build self-esteem. (Henhawk, 1994)

Caution must be used when considering the above results; the motivation to respond to the survey may have been the desire to justify higher levels of funding for recreational programming. It is also important to note that Aboriginal, or Native American communities can be as varied as non-Native communities; it would be a mistake to take the above results and generalize them to all Native American communities.

The purpose of a doctoral dissertation by Van Der Wal (1988) was to determine if recreation, sports or competitive activities affected age-grade displacement and academic achievement of elementary and secondary Indian (in this case Native Canadian) students. A case study approach was instituted for this study; this approach "was necessary in that scientific control and experimental groups and population samples were not possible at the time" (Van Der Wal, 1988, pp. 31-32). Since standardized tests were utilized in this study contemporary school environments were chosen as data collection sites since the standardized tests could only be administered in formal education situations.

The first of the two case study sites was the Marieval Community Education Center which was located approximately 10 miles due east from the city of Regina, Saskatchewan on Indian Reserve 73. The Marieval case study site sample included 63 high school students who were attending full time during the 1983-84 academic year. This sample included students who were of Plains Cree, Saulteaux, Sioux, and Assiniboine cultural background. The second case study site was on the campus of the University of Saskatchewan located in the city of Saskatoon, which hosted the Indian Track and Field Championships in 1984. Participants at this event came from all areas of the province of Saskatchewan. The Saskatoon case study site involved 267 Indian student participants whose ages ranged for 9-23 years and grades 4-12 were represented.

Provincial and tribal records were used in both case study sites to establish tribal affiliation and to verify ages of the subjects. The standardized instrument used to assess academic achievement was the Canadian Test of Basic Skills (C.T.B.S.) High School/Multilevel Edition/levels 15-18, form 5. This instrument was used "to provide comprehensive High School measurement of growth and academic achievement in the fundamental skills: listening, vocabulary, reading, word analysis, language, work-study and mathematics" (Van Der Wal, 1988, p. 41). The C.T.B.S. is the Canadian version of the Iowa Test of Basic Skills and is widely used in Canada. For the Marieval case study site, sports and recreation program participants were compared with non-participants. For the Saskatoon site, the track and field participants were

compared with the total Saskatchewan Indian population, which was provided by Indian Affairs 1983-84 Provincial Roll.

The results of this study indicated that Indian students who participated in sports and recreation programs were not significantly more age-grade displaced than those students who were not participants in sports and recreation programs. It was also shown that Indian students who participated in sports and recreation programs generally did not have significantly different academic achievement age-grade means than those students who were non-participants, with the exception of one grade twelve situation where the sports participants had significantly higher overall academic scores. (Van Der Wal, 1988).

Literature Review Summary

The reported relationship between leisure boredom and delinquency (Widmer et. al, 1996; Caldwell, 1995), and specifically substance abuse (Iso-Ahola & Crowley, 1991) is consistent and well supported. The greater the level of leisure boredom, the higher the incidence of delinquent behaviors.

The relationship between delinquency and participation in leisure activities varies based upon the typology of the leisure activity. In general a negative relationship between participation in sport and delinquency is found. (Segrave, 1983; Landers & Landers, 1978) Leisure that involves unsupervised interaction with peers is strongly associated with higher rates of delinquency and appears to be consistent across genders. (Agnew & Petersen, 1989; Yin, Katims & Zapata, 1996)

Most of the relationships between leisure activities and delinquency were shown to be consistent across genders. Exceptions included male participation in organized sports having a significant positive affect on increased marijuana use (Yin, Katims & Zapata, 1999); males had better school performance in association with participation in organized leisure activities, organized sport activities, and activities at home. (Yin, Katims & Zapata, 1999)

The impact of leisure lifestyle on academic performance seems to be less clear. Bergin (1992) reported a modest relationship between leisure activities and academic achievement. Van Der Wal (1988) reported no relationship between participation in sports and recreation programs and indicators of academic success amongst Native American youth. Bergin (1992) also reported that students who intensely pursued only high school sports during their leisure were lower in intrinsic motivation for academics than students with non-sports interests. Widmer et. al, (1996) found a significant correlation between ethical behavior in leisure and school retention.

As was pointed out in the introductory chapter and the literature review, there is an obvious lack of research concerning the leisure lifestyle of Native Americans. The literature does however clearly indicate that Native American youth experience increased levels of risk compared to youth in general (Dunha-Martell & Van Alstine, 1997; B.I.A., 1997). Henhawk (1994) reports that Aboriginal peoples, as do those from most communities, value leisure and fully understand the potential benefits of leisure and recreation on the health of the individual and the well being of their communities. The lack of qualified

recreation/leisure professionals working in Aboriginal communities is reported as a barrier to organized, successful recreational programming. (Henhawk, 1994)

Chapter Three: Methodology

At this point the author would like to make it known that the original focus of this study was to compare Native American and non-Native American high school-aged youth attending the same high school on the variables of leisure lifestyle and risk. Access to sufficient numbers of high school students was initially approved by public school administrators only to be denied later by a high school principal. The result of the last minute denial of access to the high school students was the inclusion of the Bay Mills youth and Alternative School students in the current study.

Subjects

The population for this study included two mutually exclusive groups, 1) students enrolled in the Sault Ste. Marie, Michigan Alternative Education Center during the Spring semester 2000, and 2) all registered members of the Bay Mills Indian Community between twelve and nineteen years of age living in Chippewa County (Michigan).

Sault Ste. Marie Alternative Education Center

Background

The Sault Ste. Marie Public School system serves 3,120 students in one High School, one Middle School, six Elementary Schools, one Vocational

Technical Career Center, and one Alternative High School. The Sault Schools are one of only twenty districts in Michigan to be totally K-12 accredited with the North central Association of Schools and Colleges (1998-1999 Annual Education Report, Sault Ste. Marie Area Public Schools).

Of the persons 20 years of age and older in the Sault Schools service area 3,115 had 12th grade or less/no diploma, 4,790 were high school graduates, 3,958 had some college/no bachelor degree, and 1,675 had a bachelor degree or higher (1989-1990 School District Data Book).

Of the total persons living in the Sault Schools service area none lived in Urban-Inside Urbanized Areas, 14,689 lived in Urban-Outside Urbanized Areas, 200 lived in Rural-Farm Areas, and 4,445 lived in Rural-Non-farm areas (1989-1990 School District Data Book).

The median household income for the service area was $21,965 compared to the state of Michigan household median of $31,020. Based on income in 1989, 15,167 persons lived above the poverty level and 3,120 lived below the poverty level (1989-1990 School District Data Book). The High School drop out rate in 1997 was 6.7% (1998-99 Annual Education Report, Sault Ste. Marie Public Schools).

The following information regarding the Sault Ste. Marie Alternative Education Center was provided in writing by Gary Deuman, the center's director in response to written questions from the researcher.

Question #1: Where geographically do your students come from?

The center is operated by the Sault Area Public Schools; the student's parents must reside in the Sault School district if the student is under eighteen. The center also takes about 6-8 school of choice students.

Question #2: How does a student initially become enrolled at the alternative school and for what reasons?

The students who are sixteen or older can self refer; students under sixteen and at least fourteen must be referred by a secondary school. Most students are referred by the sending school for either behavior or attendance problems. Self-referred students are there mainly because they couldn't or wouldn't follow the more restrictive rules of the high school.

Question #3: In general, what characteristics do your students share which may set them apart from other students?

The students seem to have difficulty with authority, whether it is the rules are too restrictive or with actual authority figures. They tend to however, have an ability to relate to at least one adult who shows interest in them and who displays consistent expectations of their behaviors. Many of the students engage in some sort of addictive behavior including smoking.

Question #4: How does the environment and approach to teaching differ at the alternative school compared to the main campus of the high school?

The alternative is smaller and everybody tends to know each other and what goes on. There are fewer opportunities for extra activities. The classes are shorter and the students can take more classes. I think the teachers have an

ability to accommodate a wide variety of abilities and motivation among students. They cannot rely on homework, as we generally do not assign homework.

Question #5: During the period of time when we were collecting data, (for the current dissertation project) how many total students would have been attending your school?

Approximately sixty students were in attendance. (G. Deuman, personal communication, May, 2000)

The following information from the CDC (1998) supports the above description of the alternative school and its students, "Alternative high schools serve approximately 280,000 students nationwide who are at risk for failing or dropping out of regular high school or who have been expelled from regular high school because of illegal activity or behavior problems." (p. 3)

Summary Statistics

Of the sixty (60) students attending the Alternative Education Center at the time of data collection thirty-eight (38) completed the research instruments; this represents a response rate of 63.3 %. The mean age for the subjects from the Alternative School was 16.4 years; the minimum age was 13 and the maximum was 20. There were 15 (39.5%) males and 23 (60.5%) females with 20 (52.6%) tribal members and 18 (47.4%) who were non-tribal. None of the tribal members were members of the Bay Mills Indian Community.

Youth of the Bay Mills Indian Community

Background

The Bay Mills Indian Community (BMIC) is located approximately 15 miles west/southwest of Sault Ste. Marie, Michigan in Chippewa County. The BMIC was one of the original four reservations established in Michigan with the passage of the Indian Reorganization Act of 1934. The BMIC has a total of 1269 tribal members, with 564 living within reservation boundaries or elsewhere in Chippewa County (Overall Economic Development Plan, 1999-2000). It should be noted that as this research was being conducted the BMIC was experiencing a substantial period of growth and tribal enrollment numbers were changing on a daily basis.

The majority of the school-aged children of the BMIC living on or near the reservation attend the Brimley Area Public Schools and account for 53% of the total enrollment of the Brimley Schools. All of the subjects from Bay Mills were attending regular, public school.

Summary Statistics

From the initial mailing list of 112 potential subjects, a total of sixty-three (63) young people completed the study instruments for a response rate of 56.3%. The mean age of the subjects from Bay Mills was 15.3 years; the minimum age was 12 and the maximum was 19. There were 34 (54%) males and 29 (46%) females. All of the subjects from Bay Mills were tribal members.

Instruments

Leisure lifestyle for this study was represented by self-reported recreation participation patterns and self-reported boredom during leisure. Recreation participation patterns were measured using a slightly modified version (Appendix A) of the Adolescent Leisure Time Activity Scale (ALTAS) developed by Yin et al., (1999). The original scale included 24 leisure activities that were taken from leisure activity scales by Agnew and Petersen (1989), Kelly (1996), Yu (1980), and Yin et al. (1996) - as reported in Yin et al. (1999). Students were asked if they usually, sometimes, or never participated in the individual leisure activities after school and/or on weekends. The ALTAS includes five typologies of leisure, 1) unsupervised socialization with friends, 2) organized leisure activities, 3) organized sport activities, 4) activities at home, and 5) self-directed leisure activities (Yin et al., 1999). Each of the 24 individual leisure activities is classified under one of the five typologies of leisure. The typologies of leisure then become the units of concern for analytic purposes. Exploratory and confirmatory factor analysis were conducted on the ALTAS by Yin et al. (1999) to provide support for the ALTAS as a valid and reliable instrument. The results of this analysis supported the ALTAS as an acceptable research instrument.

Leisure boredom was assessed using the Leisure Boredom Scale (Iso-Ahola and Weissinger, 1990). A copy of this scale is included as Appendix B. The Leisure Boredom Scale was utilized due to the reported correlations between this scale and other scales measuring important constructs of leisure lifestyle. These include the Intrinsic Leisure Motivation Scale, Leisure

Satisfaction, the Leisure Ethic Scale, Frequency of Leisure participation, Perceived Social Competence Scale, and the Self as Entertainment Scale (Iso-Ahola and Weissinger, 1990). The results of three separate studies by Iso-Ahola and Weissinger provide support for the reliability and validity of the Leisure Boredom Scale (1990). The scale itself includes 16 items to which subjects respond on a five-point Likert scale. Items 2, 4, 7, 8, 9, 12, 13, and 16 utilize reverse coding. (Iso-Aohla and Weissinger, 1990).

Indicators of risk were assessed using a slightly modified version of the Self-reported Delinquent Acts questionnaire by Yin et al., (1999). A copy of the modified version used for the current study is included as Appendix C. Segrave (1983) supports the use of self-report tests to measure indicators of risk or delinquent acts, "several self-report tests have provided favorable results when compared against such checks as official records, lie detectors, and the word of informants" (p. 188). Additionally, "after an extensive analysis of self-report methodology in delinquency research, Hardt and Peterson-Hardt concluded that the procedure yielded accurate results and can make an important contribution to etiological studies of delinquent behavior" (as cited in Segrave, 1983).

The three instruments described above were combined into a packet along with a separate page developed for the current study that included items concerning age, gender, grade in school, and tribal affiliation (Appendix D).

Arrangements for Data Collection

Application was made to the Michigan State University Committee on Research Involving Human Subjects (UCRIHS) for the approval of this research project. Approval from UCRIHS was received on May 9, 2000.

Alternative Education Center

The initial step in the process of arranging for data collection was a request to the Assistant Superintendent of Schools for the Sault Ste. Marie Public Schools to collect data at the Sault Ste. Marie Alternative Education Center. This request was initially made via a telephone conversation that was followed up with a mailing providing details regarding purpose, instruments, consent, and other specifics of the study. The Assistant Superintendent subsequently approved the request for data collection and recommendations for further meetings with school officials were made.

On April 17, 2000 the researcher met with Dr. Cathy Tibbett, Director of Academic Services for the Sault Ste. Marie Public Schools. The purposes of this meeting were to present the study purpose and design to Dr. Tibbett and to initiate planning for the actual data collection at the Sault Ste. Marie Alternative Education Center. As a result of this meeting numerous concerns were raised. These concerns included the supervision of students being asked to move from one room to another in the school, students who do not have informed consent may not be in the room with subjects during the data collection, assurance of confidentiality of subjects and their responses, and the need to meet with the Alternative Education Center Director and ultimately the teachers to get them "on

board". During this meeting the researcher was also provided with numerous sources of information about the Sault Ste. Marie Schools and its students and service area.

The researcher met with Gary Deuman, Director of the Alternative Education Center on May 8, 2000 to make arrangements for data collection. During the meeting the researcher visited each classroom and explained the project to the teachers and students. Students were made aware of the steps they needed to take in order to participate in the study. At this time parent/guardian informed consent forms (Appendix E) were distributed to all students under the age of eighteen and participant informed consent forms (Appendix F) were handed out to all students. It was further explained to students that when they returned the completed consent form(s) to Mr. Deuman, they would receive a soda and that all students who participated in the study would be eligible to win one of three $50.00 gift certificates from a local clothing store.

Additional copies of the informed consent forms were left with Mr. Deuman to distribute to students who misplaced their forms. Mr. Deuman and the school staff checked with students for a period of one week to remind them to bring in the completed consent form(s). Mr. Deuman maintained a list whereby he was able to keep track of which students had returned the required completed consent form(s). In some cases the school made phone calls to parents/guardians who then came to the school and completed informed consent forms.

Dates for the collection of data were set up for Tuesday, May 23 and Thursday, May 25, 2000.

Bay Mills Indian Community

On May 18, 2000 the researcher submitted a letter (Appendix G) to the Executive Council of the Bay Mills Indian Community requesting permission to invite all tribal youth between the ages of thirteen and nineteen to participate in this study. The tribal council at their regularly scheduled meeting on Monday, May 22, 2000 approved the researcher's request (Appendix H). Even though the researcher did not request it, the tribal council also approved an incentive of $50.00 for each tribal youth who participated in the study.

A list of names and addresses of all tribal youth of the Bay Mills Indian Community between the ages of thirteen and nineteen (N = 112) residing in Chippewa County was requested from the Tribal Enrollment office. All youth included on this list were mailed a cover letter (Appendix I) and consent forms on May 6, 2000. The purposes of the cover letter were to introduce the young people to the purpose of the study, to explain the informed consent requirements, to introduce the confidential and voluntary nature of the study, to explain the $50.00 incentive approved by the Executive Council, and to provide directions for participation in the study. The cover letter and consent forms were also sent as an attachment in an email sent to all employees of the Bay Mills Indian Community, many of whom are parents or guardians of the potential study participants.

The cover letter sent to the youth directed them to attend one of two sessions, Monday, June 12 or Saturday, June 17, 2000 at the Waishkey Center in the Bay Mills Indian Community. One weekday and one weekend date were chosen to provide the greatest amount of opportunity to accommodate various youth work and activity schedules. The Waishkey Center houses the community's Recreation and Health Promotion Department of which the researcher is the Director, as well as a large meeting room with enough tables and chairs to accommodate the youth who would be participating in the study.

The researcher made arrangements for two adult employees of the Department of Recreation and Health Promotion to assist with room supervision during each data collection session. One of the room assistants has a Ph.D. and is therefore familiar with the conditions required for data collection of this nature.

Data Collection Techniques

Sault Ste Marie Alternative Education Center

On two separate occasions (May 23 and May 25, 2000) the researcher visited the Alternative Education Center for the purpose of administering the research instruments. Two separate dates were chosen due to the high daily absentee rates at the school.

On the first occasion the researcher with the assistance of the center's director identified which students were present that day for whom completed parent/guardian informed consent forms and/or participant informed consent forms had been received. All of these students were then asked to gather in one

classroom. One teacher was present in the classroom during the data collection to ensure an orderly classroom environment. The researcher then double-checked that only students for whom completed informed consent forms were on file were present in the room.

Once it was determined that all students present were cleared to participate in the study the researcher explained the format of the data collection and reiterated the voluntary and confidential nature of the study. Participants were reminded that only if they completed the instruments would they be eligible for the drawing, and that they would be asked to leave the room if they were disruptive or were not proceeding in the manner described by the researcher.

At this point the researcher distributed writing instruments and described the following procedures:

1. After the questionnaires were handed out participants were not to begin reading the directions until the researcher began reading them out loud.
2. After the directions for each portion of the questionnaire packet were read an opportunity for participants to ask questions would be provided.
3. After the opportunity to ask questions had passed, the researcher would begin reading out loud each item of the questionnaires. After the item was read participants would be given an opportunity to ask questions about that item. Participants were asked not to respond to an item until they understood all words in the item and the overall nature of each item completely. The researcher would then proceed to the next item.

4. Participants are to keep their eyes on their own questionnaires and are to refrain from talking to one another.
5. Participants were asked to answer each item as honestly and accurately as possible keeping in mind that their name would never be associated with their responses.

At this point the researcher read out loud the directions followed by each item until the questionnaire packet was completed. Completed questionnaires were gathered by the researcher, placed in an envelope and then sealed. The date and location of the administration was indicated on the outside of the envelope. Each student then printed their name on a small piece of paper that was placed in a separate envelope for the purpose of the drawing for the gift certificates. The envelopes containing the responses and names for the drawing were kept separate from one another at all times.

Participants were then thanked for their participation and were dismissed to their respective classrooms.

The procedures for data collection on the second administration at the Alternative Education Center were identical to those described above. After the second administration all participants were asked to come to one classroom and witness the drawing for the gift certificates.

In the opinion of the researcher and the teacher present, the students participated in the study in a very well behaved and serious manner during both data collection sessions. It was not necessary to ask any of the participants to

leave the room for reasons of inappropriate behavior, talking, or not complying with the stated procedures.

Bay Mills Indian Community

The collection of data for the two sessions at the Bay Mills Indian Community were both conducted in the following manner.

All youth who arrived for the purpose of participating in the study were asked to line up in the hall way leading to the meeting room. One by one the young people entered the room where their names were checked against the tribal enrollment list and they were asked for their completed consent form(s). If they were not on the enrollment list they were asked to leave and if they did not have completed consent forms they were given another copy of the forms and asked to attend the next session with the consent forms completed.

Once all of the qualified youth were in the meeting room and seated the researcher provided instructions in a manner that was identical to those discussed earlier with the Alternative Education groups. The instructions were followed by the actual administration of the research instruments in a manner that was once again identical to the procedure described earlier with the Alternative Education groups.

After the administration was completed all instruments were placed in an envelope which was sealed with the date and location noted on the outside of the envelope. Participants were then asked to record their names and addresses on a sheet of paper for the purpose of requesting their $50.00 incentive from the

tribal accounting department. These names and addresses were at all times kept separate from the completed research instruments.

As was the case with the Alternative Education students, the participants from Bay Mills, in the opinion of the researcher and assistants, behaved in a very respectful and serious manner.

The completed consent forms from each administration at the Alternative Education Center and Bay Mills were placed in sealed envelopes and retained by the researcher in his office.

Analysis of Data

Instrument Scoring

In order to assure control and accuracy each completed questionnaire packet was numbered from 1 to 101. Scoring forms were then used to calculate leisure boredom scores, total risk scores, and leisure typology scores for each subject.

Each item on the Adolescent Leisure Time Activity Scale (ALTAS) was scored one (1) for a response of "never", two (2) for "sometimes", and three (3) for "usually". The score for each individual item was then included in the appropriate leisure typology and a cumulative score for each of the five typologies was calculated. The scoring form for the ALTAS is included as Appendix J.

The leisure boredom score for each subject was calculated by summing the responses from each 5-point likert item on the Leisure Boredom Scale. Items 2,4,7,8,9,13, and 16 were reverse scored and once again a score sheet (Appendix K) was developed and used by the researcher.

Each item on the Indicators of Risk Scale was scored one (1) for "no" responses and two (2) for "yes" responses. A scoring sheet was utilized (Appendix L) and items ten (10) and (12) were reverse scored. Each risk item was summed to calculate the total risk scores. Gender, Bay Mills tribal membership, and school affiliation were also noted.

Data Analysis

Initially histograms were developed for the variables of 1) five typologies of leisure, 2) total risk, and 3) leisure boredom. The purpose of the histograms was to visually inspect the data to determine the normalcy of the distribution for all subjects involved in this study. Statistical tests of normality are available but the visual inspection of a histogram is considered the most revealing means of becoming familiar with the characteristics of a distribution. (StatSoft Electronic Textbook, 2000) This step was important since subsequent statistical tests assumed normalcy of the distribution; although, most tests are quite robust with regard to violations of this assumption. (StatSoft Electronic Textbook, 2000)

Additional descriptive statistics were then calculated for the primary categorical and dependent variables. The descriptive statistics (mean, standard deviation, and standard error) provided the researcher with an initial awareness

of the data and provided the foundational knowledge necessary for more advanced analyses.

Multivariate measures of association were calculated to determine if differences existed between the categorical variables of gender (Bay Mills only) and school affiliation (Bay Mills youth and alternative school) on the dependent variables. The multivariate tests were used as an omnibus test of significance to determine if further analyses were warranted. Of the four most commonly used multivariate measures wilk's lambda was chosen as it is considered the most easily interpreted. (StatSoft Electronic Textbook, 2000)

As a follow up or "post hoc" test of significance univariate F tests were calculated to identify which of the dependent variables was contributing to any differences found in the multivariate analyses. (StatSoft Electronic Textbook, 2000)

ANOVA was used rather than the simple t-test because with ANOVA it is possible to test each factor while controlling all others, making ANOVA more statistically powerful than the simple t-test. Another advantage of ANOVA over the t-test is that ANOVA allows for detection of interaction effects between variables and therefore, the ability to test more complex hypotheses about reality. (StatSoft Electronic Textbook, 2000)

Assumptions for ANOVA include normality of the distribution and homogeneity of variances. It is also assumed that the dependent variable is measured on at least an interval scale. (StatSoft Electronic Textbook, 2000) The

F-statistic is remarkably robust to deviations from normality and homogeneity of variances. (StatSoft Electronic Textbook, 2000)

Regression analyses were calculated to learn more about the relationships between the categorical variables and the dependent or predictor variables. In the social and natural sciences multiple regression procedures are widely used in research. In general multiple regression allows the researcher to ask, "what is the best predictor of...". (StatSoft Electronic Textbook, 2000) Specifically, multiple regression was used to determine the variance in total risk explained by leisure lifestyle and the degree to which each of the leisure variables was related to the dependent variable of total risk.

The assumptions for regression analysis focus on the issues of linearity, normalcy of the distribution and redundancy or multicollinearity of the predictor variables. (StatSoft Electronic Textbook, 2000) In practice the assumption of linearity can virtually never be confirmed; fortunately regression procedures are not greatly affected by minor deviations from this assumption. (StatSoft Electronic Textbook, 2000) The assumption of normalcy of the distribution was examined with histograms. Multicollinearity issues were considered by examining tolerance levels, eigenvalues, or condition indices. (Wilkinson, L., 1990)

Chapter Four: Results

This chapter presents the results of the statistical analyses. The first results presented are the descriptive statistics, followed by multivariate analysis, univariate analysis, and regression analysis.

The variables included for analysis were: 1) Bay Mills youth or Alternative School student (categorical), 2) leisure boredom score and score for each of the five typologies of leisure (independent), and 3) total risk score (dependent).

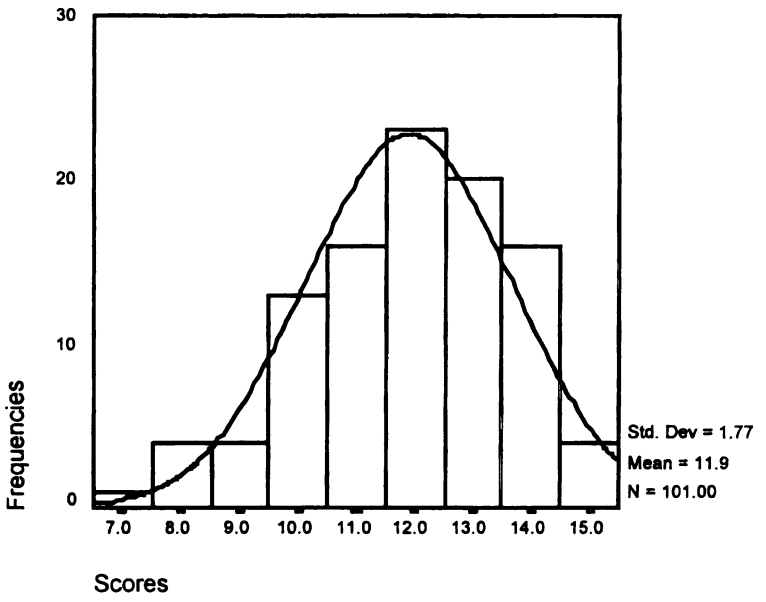
Data were analyzed with the software programs SYSTAT 5.04 and Microsoft Excel 97. Graphs were created with Microsoft Excel 97 and SPSS 10 Standard Version.

Descriptive Statistics Results

Histograms are presented for all subjects on each of the variables for the purpose of determining if the data approximate a normal distribution.

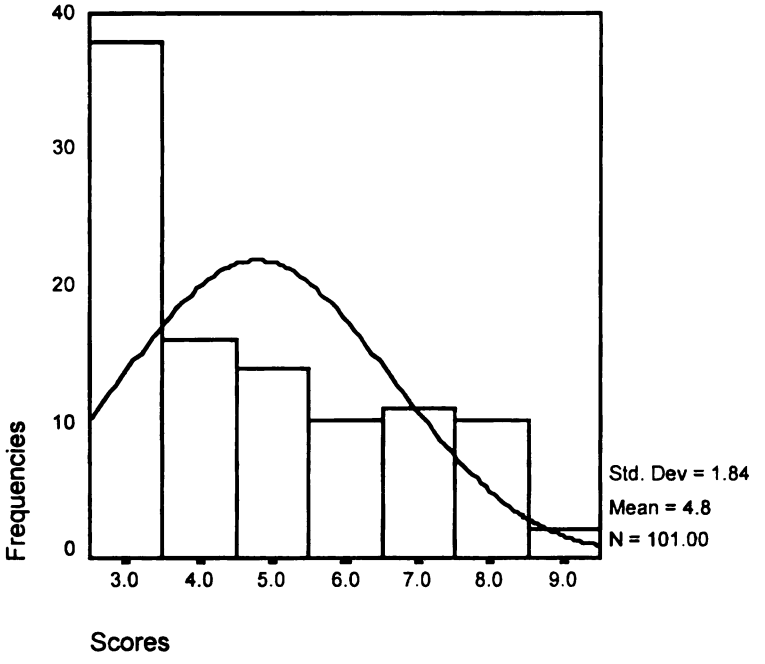
The statistical analyses tools used throughout this chapter assume that the data being analyzed approximate a normal distribution; thus the need create and visually inspect these histograms.

Figure 1. Unsupervised Socialization with Friends



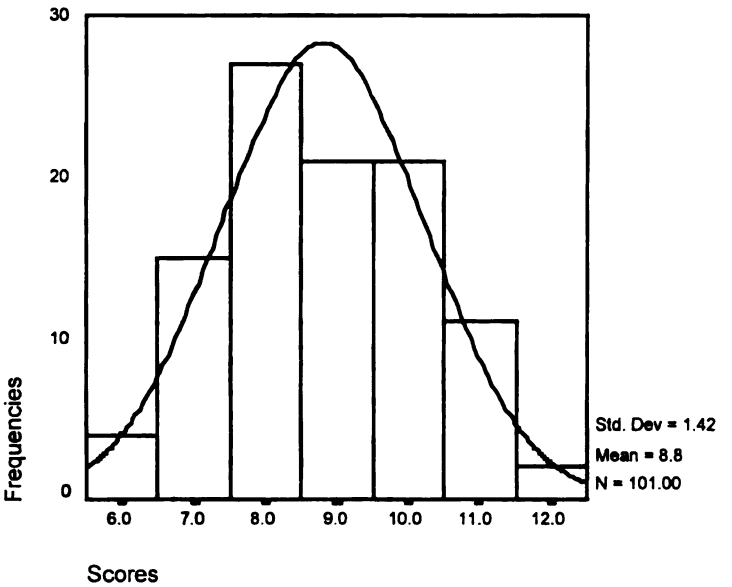
A visual inspection of Figure 1 indicates that the normalcy is present for the variable unsupervised socialization with friends for all subjects.

Figure 2. Organized Sport Activities



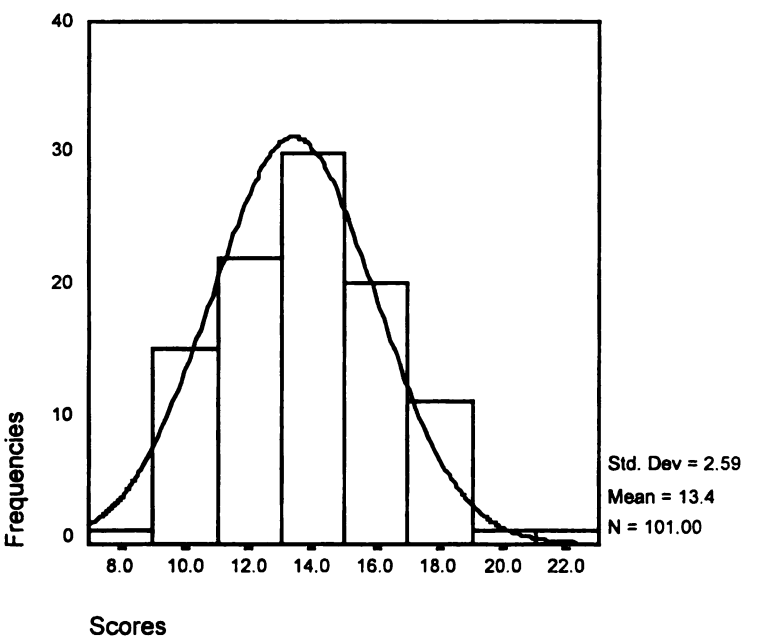
A visual inspection of Figure 2 indicates that the data is skewed. This is not surprising given the expected lack of organized sport activity participation by the alternative school students.

Figure 3. Activities at Home



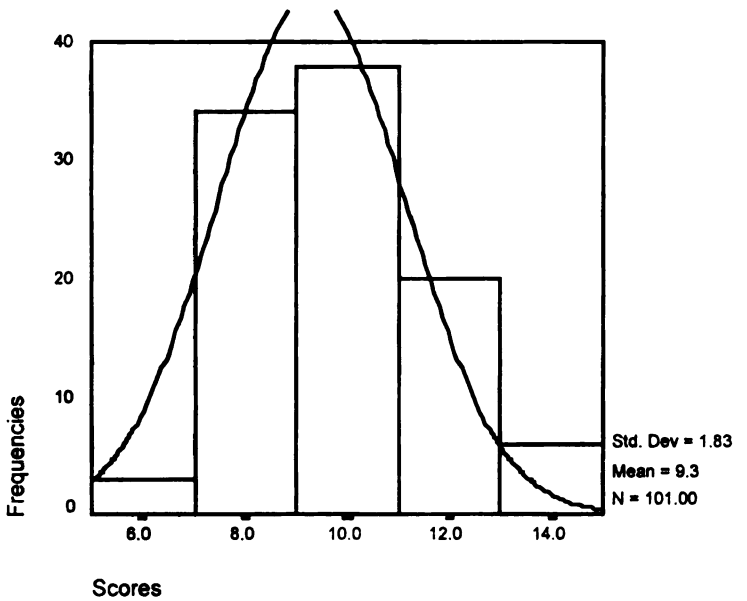
A visual inspection of Figure 3 indicates that the normalcy is present for the variable activities at home for all subjects.

Figure 4. Organized Leisure Activities



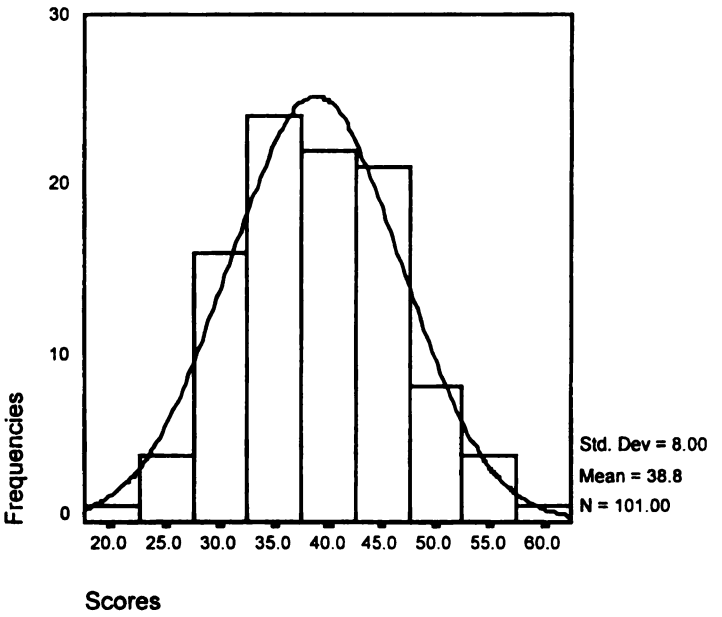
A visual inspection of Figure 4 indicates that the normalcy is present for the variable organized leisure activities for all subjects.

Figure 5. Self-directed Leisure Activities



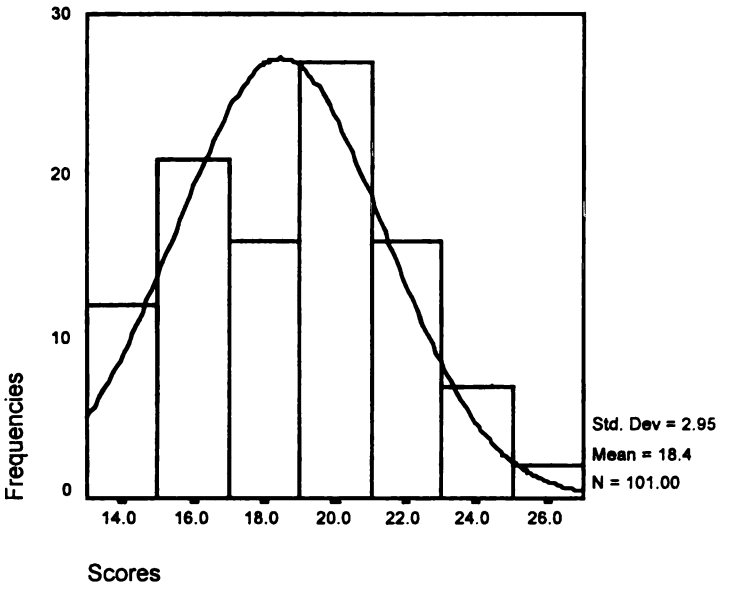
A visual inspection of Figure 5 indicates that the normalcy is present for the variable self-directed leisure activities for all subjects.

Figure 6. Leisure Boredom



A visual inspection of Figure 6 indicates that the normalcy is present for the variable leisure boredom for all subjects.

Figure 7. Total Risk



A visual inspection of Figure 7 indicates that the normalcy is present, and the curve appears to be bi-modal, for the variable total risk for all subjects.

The above histograms (figures 1-7) indicate that for six of the seven variables the shape of the distribution approximates a normal distribution. This provides evidence that assumptions concerning normalcy of the distributions are not being violated for statistical analyses.

Means, standard errors, and ranges for alternative school students and all youth from Bay Mills are presented for the following variables:

1. five typologies of leisure (unsupervised socialization with friends, organized leisure activities, organized sport activities, activities at home, and self-directed leisure activities)
2. total risk score
3. leisure boredom score

Descriptive statistics were utilized first to assist with identifying general tendencies and differences. This initial analysis was valuable for the purposes of developing an overall awareness of the data and determining which further statistical analyses may be warranted.

Implications of Tables 2, 3, 4, and 5 and along with Figure 8 will be summarized after Figure 8 is presented.

It is of no benefit to compare scores from the five typologies of leisure to one another. They represent sums from individual activities, and the typologies do not have equal numbers of activities available for scoring. It is useful however, to compare scores between the groups being analyzed.

Table 2

Means, Standard Errors, and Ranges for Bay Mills Youth for the Five Typologies of Leisure (n = 63)

	Unsupervised Socialization with Friends[a]	Organized Leisure Activities[b]	Organized Sport Activities[c]	Activities At Home[d]	Self-directed Leisure Activities[e]
Mean	11.87	14.43	5.38	9.25	9.84
Range (Min./Max.)	8 - 15	9 - 21	3 - 9	7 - 12	7 - 14
Standard Error	.24	.28	.24	.17	.22

Note. Minimum score for each variable indicating no participation:

[a] unsupervised socialization with friends (5)
[b] organized leisure activities (8)
[c] organized sport activities (3)
[d] activities at home (4)
[e] self-directed leisure activities (5)

Table 3

Means, Standard Errors, and Ranges for Alternative School Students for the Five Typologies of Leisure (n = 38)

	Unsupervised Socialization with Friends[a]	Organized Leisure Activities[b]	Organized Sport Activities[c]	Activities At Home[d]	Self-directed Leisure Activities[e]
Mean	11.92	11.71	3.79	8.05	8.39
Range (Min./Max.)	7 - 14	8 - 17	3 - 7	6 - 11	5 - 12
Standard Error	.26	.36	.20	.21	.25

Note. Minimum score for each variable indicating no participation:

[a] unsupervised socialization with friends (5)
[b] organized leisure activities (8)
[c] organized sport activities (3)
[d] activities at home (4)
[e] self-directed leisure activities (5)

Table 4

Means, Standard Errors, and Ranges for Bay Mills Youth for Leisure Boredom and Total Risk (n = 63)

	Leisure Boredom[a]	Total Risk[b]
Mean	37.54	17.38
Range (Min./Max.)	19 - 60	14 - 23
Standard Error	.99	.34

Note. Minimum possible score for each variable:
[a] leisure boredom (16), higher scores indicate higher boredom
[b] total risk score of (14) indicates absence of risk indicators, higher scores indicate higher risk

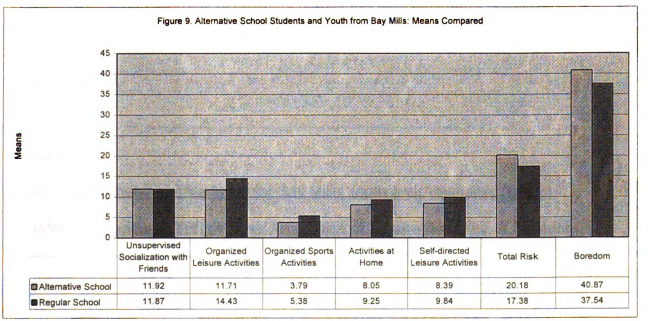
Table 5

Means, Standard Errors, and Ranges for Alternative School Students for Leisure Boredom and Total Risk (n = 38)

	Leisure Boredom[a]	Total Risk[b]
Mean	40.87	20.18
Range (Min./Max.)	28 - 55	15 - 24
Standard Error	1.27	.42

Note. Minimum possible score for each variable:
[a] leisure boredom (16), higher scores indicate higher boredom
[b] total risk score of (14) indicates absence of risk indicators, higher scores indicate higher risk

Figure 8. Means for five typologies of leisure, total risk, and leisure boredom scales comparing Bay Mills youth and alternative school students.



Tables 2, 3, 4, and 5, and Figure 8 show that the Bay Mills youth were more involved in organized leisure activities, organized sport activities, activities

at h

hig

diff

for

you

var

the

Mu

diff

are

Tab

Mu

Stu

F-st

DF

Pro

*p <

at home, and self-directed leisure activities; while alternative school students had higher scores for total risk and leisure boredom. There appears to be no difference between youth from Bay Mills and alternative school students' scores for the variable unsupervised socialization with friends.

Tables 2, 3, 4, and 5, and Figure 8 provide initial evidence that Bay Mills youth and alternative school students differ on six of the seven independent variables depicted. These differences warrant further analyses aimed at testing the significance of these differences and the relationships between the variables.

Results of multivariate and univariate analyses are presented next.

Multivariate and Univariate Analyses Results

Multivariate analysis of variance results are now presented to determine if differences seen earlier in leisure variables between the two groups of subjects are significant.

Table 6

Multivariate Analysis of Variance for Bay Mills Youth and Alternative School Students for Leisure Lifestyle (Five Typologies of Leisure and Leisure Boredom)

F-statistic	13.75
DF	6, 94
Prob	0.000*

*$p < .05$

The multivariate test results shown in Table 6 indicate that there is a statistically significant difference between Bay Mills youth and Alternative School students for leisure lifestyle.

Univariate F-test results are now presented to identify which of the variables are contributing to the significant difference found in Table 6.

Table 7

Univariate Analysis of Variance for Independent Variables Comparing Bay Mills Youth and Alternative School Students

Variable	SS	DF	F	P
Unsupervised Socialization with Friends	0.055	1	0.017	0.895
Organized Leisure Activity	175.112	1	35.147	0.000*
Organized Sport Activity	279.173	1	21.290	0.000*
Activities at Home	34.208	1	20.179	0.000*
Self-directed Leisure Activity	49.597	1	17.320	0.000*
Leisure Boredom	262.641	1	4.240	0.042*

*$p < .05$

As denoted by the asterisks (*) in Table 7 there are statistically significant differences at the .05 level of significance between Bay Mills youth and alternative school students for the variables organized leisure activity, organized sport activities, activities at home, self-directed leisure activity, and leisure boredom.

The results of Table 7 combined the information contained in Figure 8 indicate that the youth from Bay Mills are more likely than the alternative school

students to participate in organized leisure activity, organized sports activity, activities at home, and self-directed leisure activity; while the alternative school students show significantly greater levels of leisure boredom than the Bay Mills youth.

Hypothesis two of the current study suggested that alternative school students would have higher rates of participation in unsupervised socialization with friends than the youth from Bay Mills. This hypothesis was rejected by the data.

Hypothesis three of the current study predicted higher rates of participation in 1) organized sports activity, 2) organized leisure activity, 3) activities at home, and 4) self-directed leisure for the Bay Mills youth than for the alternative school students. These four components of hypothesis three were supported by the data.

Hypothesis four of the current study predicted higher rates of leisure boredom for the alternative school students compared to the Bay Mills youth; this hypothesis was supported by the data.

It was hypothesized that there would be categorical differences for the dependent variable total risk. Univariate F-test results are now presented comparing Bay Mills youth and alternative school students for total risk.

Table 8

Univariate Analysis of Variance for Bay Mills Youth and Alternative School Students for Total Risk

Variable	SS	DF	F	P
Total Risk	186.264	1	26.937	0.000*

*$p < .05$

As denoted by the asterisk (*) in Table 8 there is a statistically significant difference between Bay Mills youth and alternative school students for the variable total risk.

Table 8 combined with the information contained in Figure 8 indicate that the alternative school students have significantly higher total risk scores than the youth from Bay Mills; therefore hypothesis one is accepted.

Regression Analyses Results

Hypotheses five through nine of the current study were concerned with quantifying the amount of variance in total risk explained by leisure lifestyle and identifying which of the leisure lifestyle variables are contributing significantly to the explained variance in total risk.

Hypothesis ten of the current study suggested that leisure lifestyle will be able to predict group membership as either Bay Mils youth or alternative school student with a level of accuracy that is greater than chance.

Regression analyses will allow the researcher to arrive at conclusions regarding these hypotheses.

Table 9

Multiple Regression Analysis for all Subjects with Total Risk as the Dependent Variable and Leisure Lifestyle (Five Typologies of Leisure and Leisure Boredom) as the Independent Variables

N = 101, multiple R = 0.532, Squared Multiple R = 0.283, Adjusted Squared Multiple R = .238, Standard Error of the Estimate = 2.576

Variable	Coefficient	Std Error	Std Coef	Tolerance	T	P (2 tail)
Unsupervised Socialization with Friends	0.484	0.155	0.289	0.882	3.113	0.002*
Organized Leisure Activity	-0.265	0.114	-0.0232	0.770	-2.335	0.022*
Organized Sport Activity	-0.043	0.173	-0.027	0.655	-0.249	0.804
Activities at Home	-0.611	0.209	-0.294	0.749	-2.917	0.004*
Self-directed Leisure Activity	0.016	0.150	0.010	0.882	0.107	0.915
Leisure Boredom	0.106	0.036	0.287	0.811	2.965	0.004*

*$p < .05$

According to Table 9, 23.8% of the variance in total risk is accounted for by leisure lifestyle. As the coefficients indicate, for the significant variables the direction of the relationships is logical and consistent with expectations.

Hypothesis five predicted that leisure lifestyle in the current study would explain at least six percent of the variance in total risk for all subjects. With an adjusted squared multiple R of .238 in table 9, hypothesis five is accepted.

Table 10

Regression Analysis for Bay Mills Youth with Total Risk as the Dependent Variable and Leisure Lifestyle (Five Typologies of Leisure and Leisure Boredom) as the Independent Variables

N = 63, multiple R = 0.469, Squared Multiple R = 0.220, Adjusted Squared Multiple R = .137, Standard Error of the Estimate = 2.472

Variable	Coefficient	Std Error	Std Coef	Tolerance	T	P (2 tail)
Unsupervised Socialization with Friends	0.394	0.188	0.277	0.799	2.095	0.041*
Organized Leisure Activity	0.021	0.151	0.017	0.869	0.137	0.891
Organized Sport Activity	-0.084	0.190	-0.060	0.760	-0.440	0.661
Activities at Home	-0.491	0.274	-0.244	0.756	-1.794	0.078
Self-directed Leisure Activity	0.245	0.189	0.162	0.887	1.295	0.201
Leisure Boredom	0.129	0.045	0.382	0.799	2.891	0.005*

*$p < .05$

Table 10 suggests that 13.7% of the variance in total risk is accounted for by leisure lifestyle. Of the six variables included in leisure lifestyle, the variables unsupervised socialization with friends and leisure boredom contributed significantly to the prediction of total risk and were positively associated with total risk for youth from Bay Mills.

Hypothesis six predicted that for youth from Bay Mills unsupervised socialization with friends, organized leisure activities, organized sport activities, activities at home, and leisure boredom would be significant predictors of total risk. Based on the data presented in Table 10 hypothesis six is rejected.

It was predicted in hypothesis seven that for Bay Mills youth participation in self-directed leisure activities would not be a significant predictor of total risk. Based on the information presented in Table 10 hypothesis six is accepted.

Table 11

Regression Analysis for Alternative School Students with Total Risk as the Dependent Variable and Leisure Lifestyle (Five Typologies of Leisure and Leisure Boredom) as the Independent Variables

N = 38, multiple R = 0.421, Squared Multiple R = 0.177, Adjusted Squared Multiple R = .018, Standard Error of the Estimate = 2.554

Variable	Coefficient	Std Error	Std Coef	Tolerance	T	P (2 tail)
Unsupervised Socialization with Friends	0.386	0.285	0.240	0.847	1.354	0.185
Organized Leisure Activity	-0.488	0.216	-0.424	0.751	-2.257	0.031*
Organized Sport Activity	0.397	0.386	0.190	0.779	1.031	0.311
Activities at Home	-0149	0.374	-0.074	0.780	-0.399	0.692
Self-directed Leisure Activity	0.089	0.290	0.054	0.850	0.307	0.761
Leisure Boredom	0.046	0.057	0.140	0.872	0.800	0.430

*$p < .05$

Table 11 suggests that 1.8% of the variance in total risk is accounted for by leisure lifestyle. Of the six variables included as representing leisure lifestyle only the variable organized leisure activity contributes significantly toward the prediction of total risk for the alternative school students.

Hypothesis eight of the current study predicted that for the alternative school students unsupervised socialization with friends, leisure boredom, organized leisure activity, organized sport activity, and activities at home would

all contribute significantly to the prediction of total risk. The data presented in Table 11 do not support this hypothesis.

It was predicted in hypothesis nine that self-directed leisure activity would not contribute in a significant way to the prediction of total risk for the alternative school students. This hypothesis was supported by the data presented in Table 11.

Table 12

Discriminant Analysis Predicting Group Membership between Bay Mills Youth and Alternative School Students Based on the Independent Variables Organized Leisure Activity, Organized Sport Activity, Activities at Home, Self-directed Leisure Activity, and Leisure Boredom

Accuracy of Group Membership Prediction between Bay Mills Youth and Alternative School Students	
Bay Mills Youth	82.5%
Alternative School	84.2%

Note. The independent variables used for this analysis were found to differ significantly between the Bay Mills youth and the alternative school students in the univariate analysis presented in Table 7

Table 12 indicates that with far greater accuracy than chance, leisure lifestyle variables were able to predict membership as either youth from Bay Mills or alternative school student.

Hypothesis ten suggested that leisure lifestyle variables would predict group membership as either Bay Mills youth or alternative school student at a

accuracy level greater than chance. This hypothesis was supported by the data in Table 12.

Chapter 5: Discussion

Summary of Key Findings

Following is a summary in list form of the key findings from chapter four:

1. Bay Mills youth had significantly higher rates of participation than the alternative school students in organized leisure activities, organized sport activities, activities at home, and self-directed leisure activities;
2. The alternative school students had significantly higher total risk and leisure boredom scores than the youth from Bay Mills;
3. When all subjects (Bay Mills youth and alternative school students) were considered leisure variables explained 23.8% of the variance in total risk. The leisure lifestyle variables found to be significant in explaining the variance in total risk for all subjects were unsupervised socialization with friends, organized leisure activity, activities at home, and leisure boredom;
4. When Bay Mills youth were considered separately, leisure variables explained 13.7% of the variance in total risk ;
5. When the Alternative School students were considered separately, leisure variables explained only 1.8% of the variance in total risk;
6. For youth from Bay Mills, unsupervised socialization with friends and leisure boredom were the leisure variables contributing significantly toward a prediction of total risk. Increased participation in unsupervised socialization with friends led to increased total risk scores and higher leisure boredom scores led to higher total risk scores;

7. For the alternative school students, organized leisure activity was the only leisure variable contributing significantly toward a prediction of total risk. Decreased participation in organized leisure activities led to increased total risk;
8. Leisure variables were very useful in predicting group membership as either Bay Mills youth (82.5% accuracy) or alternative school students (84.2% accuracy);

Explanation for Findings and Integration with Past Literature

Hypothesis 1

It was apparent from the CDC Youth Risk Behavior Survey Results that alternative school students in general display higher rates of delinquent activity than regular school students do. (CDC, 1999) Gary Deuman, director of the Alternative Education center in Sault Ste. Marie also provided support for the notion that the alternative school students would show higher rates of delinquent activity than the regular school students would. (G. Deuman, personal communication, May, 2000) In the case of the current research, the regular school students were all Bay Mills youth, and evidence was provided in chapter two indicating that Native American children are at greater risk than non-Native American children.

It was primarily the personal experience of the researcher and the fact that approximately fifty percent of the students at the alternative school were Native

American that led to the hypothesis that the alternative school students would have higher total risk scores than the Bay Mills youth, as was supported by the data.

A reality to consider when reflecting on the total risk scores from the Bay Mills youth, is the researcher's belief, based on nearly four years of experience working in the Native American community involved in this study, that official consequences of law violations by youth may go unreported more often than is the case outside of the Native American community.

Hypothesis 2

It was expected that since alternative school students would have higher total risk scores they would have higher rates of participation in unsupervised socialization with friends than the Bay Mills youth. This was the relationship found in Yin et. al, 1999, Yin et. al, 1996 and Agnew and Petersen, 1989.

In the current study, no difference was found between alternative school students and Bay Mills youth for participation in unsupervised socialization with friends; even though, as was discussed earlier, alternative school students had higher scores for total risk. The similarities between the Bay Mills youth and alternative school students with respect to racial make-up may in part explain the lack of difference in participation in unsupervised socialization with friends. It also may be a risk factor both groups share.

Hypothesis 3

It was hypothesized that the youth from Bay Mills would have higher rates of participation than alternative school students in 1) organized sport activities, 2) organized leisure activities, 3) activities at home, and 4) self-directed leisure activities based on the results of Yin et. al, 1999 and the knowledge of the researcher. These expected results were supported by the data.

Yin et. al, 1999 found that delinquency is significantly associated with less frequent participation in organized leisure and sport activities and activities at home. Here again the higher expected total risk scores for the alternative school students motivated the hypothesized leisure participation results.

Alternative school students are not eligible, according to Gary Deuman, director of the Sault Alternative Education Center to participate in high school sports, nor does the alternative school offer intramural activities for its students. (G. Deuman, personal communication, May, 2000) The regular school students were all members of the Bay Mills Indian Community. They have access to many organized sports and leisure opportunities offered by the community's Department of Recreation and Health Promotion. These include gymnastics, boxing, year-round outdoor recreation programs, arts and crafts, organized sports leagues, and after-school programming. Within the city of Sault Ste. Marie, where most of the alternative school students live, there is a serious lack of organized sport and leisure opportunities for teenagers outside of the High School's main campus.

It is therefore not surprising that alternative school students showed lower rates of participation in four of the five typologies of leisure than the Bay Mills youth.

Hypothesis 4

The hypothesis that alternative school students would have higher leisure boredom scores than the Bay Mills youth was supported by the data.

This finding supports earlier research by Iso-Ahola and Crowley (1991) and Caldwell (1995) showing positive relationships between leisure boredom scores and delinquency and indicators of risk amongst youth.

Given the findings for hypothesis three, where alternative school students showed less participation in four of the five typologies of leisure, it is not surprising that they show higher level of boredom during their leisure time.

Hypothesis 5

Hypothesis five was based on the findings of Agnew and Petersen (1989). This was the only research reviewed that attempted to quantify the variance in total risk explained by leisure behavior. They found that leisure variables explained roughly six percent of the variance in total and minor delinquency and four percent of the variance in serious delinquency. Although the amount of explained variance in delinquency is not large in absolute terms, it is impressive given that complete models of delinquency considering family, school, peer, and other variables rarely explain more than twenty-five to thirty percent of the variance.

In light of the information provided in the above paragraph the results of the current study where leisure lifestyle explained roughly twenty-four percent of the variance in total risk for all subjects seems impressive. Explaining this result may be a formidable task, and one that will likely require more research.

Possible explanations include differences in the way risk and leisure was measured in the two studies. Agnew and Petersen (1989) did not include items regarding sexual activity or academic performance in their risk scale, nor did they include a leisure boredom score as part their leisure variables as did the current study. The differences in the findings between the two studies may also be a product of subject variations. Agnew and Petersen (1989) surveyed white, middle-class students from the Metropolitan Atlanta area; it is possible that leisure lifestyle is a greater predictor of risk for Native Americans and alternative school students than it is for white students, or for lower socioeconomic classes than for higher ones.

For the populations included in the current study it is suggested that leisure choices are influential and associated with participation in negative risky behaviors. Conversely, positive leisure choices are clearly associated with a lower incidence of negative risky behavior.

Hypothesis 6

Based on the findings of Yin et. al, (1999) and Caldwell (1995) it was expected that the leisure variables unsupervised socialization with friends, organized leisure activities, organized sport activities, activities at home, and

leisure boredom would all contribute significantly toward a prediction of total risk for youth from Bay Mills. In the current study unsupervised socialization with friends and leisure boredom were found to contribute significantly towards this prediction and explained 14% of the variance in total risk.

Hypothesis 7

Based on the findings of Yin et. al, (1999) and Caldwell (1995) it was expected that the leisure variable participation in self-directed leisure activity would not contribute significantly toward a prediction of total risk for youth from Bay Mills. In the current study this hypothesis was supported.

Hypothesis 8

Based on the findings of Yin et. al, (1999) and Caldwell (1995) it was expected that the leisure variables unsupervised socialization with friends, organized leisure activities, organized sport activities, activities at home, and leisure boredom would all contribute significantly toward a prediction of total risk for alternative school students. In the current study only organized leisure activity was found to contribute significantly towards this prediction. This group had little variation in these independent variables which may have limited their association with total risk scores.

Hypothesis 9

Based on the findings of Yin et. al, (1999) and Caldwell (1995) it was expected that the leisure variable, participation in self-directed leisure activity,

would not contribute significantly toward a prediction of total risk for students from the alternative school. In the current study this hypothesis was supported.

Hypothesis 10

In the current study leisure variables predicted group membership as either youth from Bay Mills or alternative school student with accuracy rates of 82.5% (Bay Mills) and 84.2% (alternative school). Hypothesis ten predicted accuracy prediction levels greater than chance and was supported by the data.

The alternative school students scored significantly higher than the youth from Bay Mills on total risk and significant differences were found between the two groups for five of the six leisure variables measured.

The findings for hypothesis ten supports past research findings (Widmer, Ellis, & Trunnell, 1996, Agnew & Petersen, 1989, Yin et. al, 1999) showing relationships between leisure variables and at-risk behaviors amongst youth.

Implications and Recommendations

Programmatic Implications and Recommendations

Leisure lifestyle as represented in the current study (participation patterns and leisure boredom) appears to play a major role in explaining levels of at-risk behaviors for Native American adolescents and alternative school students when both groups were considered together for analyses. By combining a robust measure of leisure participation trends (ALTAS) and a proven measure of leisure

boredom, the current study was able to explain far more variance in delinquency than previous work using either leisure boredom scores or leisure participation patterns, but rarely both.

The findings that considered all subjects in the current study suggest that the leisure variables unsupervised socialization with friends, organized leisure activity, activities at home and leisure boredom all contribute significantly to the relationship between leisure lifestyle and at-risk behaviors. Efforts aimed at reducing unsupervised socialization with friends and leisure boredom while increasing organized leisure activities and activities at home should be successful at reducing at-risk behaviors. The net result would be less unsupervised time with friends, more time at home with parental or adult supervision, and more time engaged in organized leisure activities. The increased participation in organized leisure activity and activities at home should help in reducing leisure boredom.

Analyses in the current study which separated the Bay Mills youth from the alternative school students suggested that increasing organized leisure activity for the alternative school students would be most helpful in reducing delinquent behaviors. The most effective strategy for the Bay Mills youth would be to reduce unsupervised socialization with friends and leisure boredom while increasing activities at home.

It must be considered that leisure boredom as an individual leisure variable has been shown to correlate highly with leisure repertoire, leisure ethic, work ethic, leisure awareness, leisure constraints, and self-motivation. (Iso-Ahola

& Weissinger, 1987) The significant impact of leisure boredom on at-risk behavior in the current study supports the assertion by Iso-Ahola & Weissinger (1987) that leisure education and counseling programs should be effective in reducing at-risk behaviors amongst youth.

Elementary and secondary school physical education classes might consider teaching more lifetime leisure skills, rather than developing sport specific skills in competitive environments. Doing so may increase perceived leisure confidence and increase the positive leisure repertoire amongst all students, not only those who excel in athletics.

The non-profit sector (i.e. Boy's and Girl's Clubs, Scouts, etc.) should also be looked to for recreation programming for underserved youth, such as the alternative school students in the current study.

The results of this study should be useful in justifying increased use of organized recreation programs as a prevention tool in grant applications and local recreation department budget requests.

Alternative education programs would be well served by providing organized leisure programs for their students as well as leisure counseling and leisure education programs.

Research Recommendations

The current study produced some significant finding for two groups of young people who have not been the target of leisure researchers in the past. Since this study included heretofore little studied subjects, further studies should

be completed using larger samples from different Indian communities and alternative education programs in order to build upon the generalizability of these results.

The current study brought together two instruments to measure leisure lifestyle in a way that should be further explored. Combining the leisure boredom score with the typologies of leisure participation created a very powerful measure of leisure lifestyle among these young people. More studies should be undertaken using this understanding of leisure lifestyle; the result may be a greater appreciation for the importance of leisure in explaining at-risk behaviors.

Further research should be conducted to determine if the relationship between leisure lifestyle and at-risk behaviors is consistent amongst young people from varying socioeconomic groups, cultural backgrounds, geographic locations, and family circumstances.

The amount of variance in total risk explained by leisure variables in the current study was considerable (23.8%) when both subject groups were considered together. When subject groups were analyzed separately the amount of variance explained by leisure variables dropped considerably; specifically the amount of variance explained was 13.7% for the Bay Mills youth and 1.8% for the alternative school students. Further research investigating these differences is warranted.

It would be of benefit to examine if the influence of leisure lifestyle on delinquent behavior varies with changes in age. For example, is leisure lifestyle

more important as a means of prevention at earlier ages, and at what age is leisure lifestyle no longer a significant factor in explaining delinquent behavior.

Future research should attempt to track a group of young people, monitoring their leisure lifestyle and participation in delinquent behaviors. It would be helpful to monitor young people from varied racial and economic groups. By entering as many variables as possible into the equation, including leisure, academic success, socioeconomic status etc., it may be possible to create a "profile" that seems to lead to success and one that seems to lead to delinquency. It would then be of interest to determine if the above noted "profile" differs amongst various racial and socioeconomic groups.

Appendix A

Adolescent Leisure Time Activity Scale (ALTAS)

Adolescent Leisure Time Activity Scale

The purpose of the following questionnaire is to find out which activities *you* participate in during your leisure time; leisure time is free time you have after school and/or on weekends. For each activity listed, indicate with a checkmark how often you participate in that activity, *usually, sometimes, or never.*

Thank you.

1. **Riding a bike, roller skating/blading, skate boarding, skiing, sledding, or snow boarding**

   _____ usually _____ sometimes _____ never

2. **Fishing (non- commercial) or hunting**

   _____ usually _____ sometimes _____ never

3. **Participating in band, school clubs, yearbook, or cheerleading**

   _____ usually _____ sometimes _____ never

4. **Participating in activities at community youth/recreation centers**

   _____ usually _____ sometimes _____ never

5. **Hanging out or driving around with friends**

   _____ usually _____ sometimes _____ never

6. **Hanging around my house with friends**

   _____ usually _____ sometimes _____ never

7. **Partying with friends and visiting with friends**

   _____ usually _____ sometimes _____ never

8. **Talking to friends on the phone**

____ usually ____ sometimes ____ never

9. **Watching television or listening to music at home**

____ usually ____ sometimes ____ never

10. **Helping around the house (watching your younger brothers or sisters, doing yard work or other chores)**

____ usually ____ sometimes ____ never

11. **Playing varsity, junior varsity sports, or junior high sports organized by school**

____ usually ____ sometimes ____ never

12. **Participating in after-school sports or recreational activities organized by your school**

____ usually ____ sometimes ____ never

13. **Playing sports (e.g. local league, church league, recreation center) that is supervised by adults or coaches**

____ usually ____ sometimes ____ never

14. **Playing sports in the neighborhood, snowmobiling, jet-skiing, or four wheeling without adult supervision**

____ usually ____ sometimes ____ never

15. **Playing computer or video games at home**

____ usually ____ sometimes ____ never

16. **Playing a musical instrument, taking dance lessons, or drawing/painting**

_____ usually _____ sometimes _____ never

17. **Going to malls/shopping centers (going to movies, playing video games, walking around, shopping)**

_____ usually _____ sometimes _____ never

18. **Going to local parks/beaches with friends**

_____ usually _____ sometimes _____ never

19. **Doing homework or class projects at home**

_____ usually _____ sometimes _____ never

20. **Doing activities with a church group**

_____ usually _____ sometimes _____ never

21. **Attending traditional (Native American) ceremonies**

_____ usually _____ sometimes _____ never

22. **Doing crafts or hobbies (chess, model building, or collecting stamps)**

_____ usually _____ sometimes _____ never

23. **Working at a part time job**

_____ usually _____ sometimes _____ never

24. **Doing volunteer work**

_____ usually _____ sometimes _____ never

25. Babysitting or doing yard work for neighbors

_____ usually _____ sometimes _____ never

Appendix B

Leisure Boredom Scale

Leisure Boredom Scale (Iso-Ahola and Weissinger, 1990)

Instructions: The statements listed below are intended to find out how you feel about your leisure time. Just respond to each statement as it applies to *your* leisure time. By leisure time, we mean free time you have after school and/or on the weekends.

Please respond to each of the following 16 statements. You do this by circling the number that shows how much you agree or disagree with the statement. For example, by circling a 5, you are showing that you *Strongly Agree* with the statement as it applies to your leisure time. Please use the scale below to respond to each statement

1 = Strongly Disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly Agree

1. **For me, leisure time just drags on and on.**

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

2. **During my leisure time, I become highly involved in what I do.**

   1 = Strongly Disagree

   2 = Disagree

   3 = Neutral

   4 = Agree

   5 = Strongly Agree

3. **Leisure time is boring.**

   1 = Strongly Disagree

   2 = Disagree

   3 = Neutral

   4 = Agree

   5 = Strongly Agree

4. **If I could retire now with a comfortable income, I would have plenty of exciting things to do for the rest of my life.**

   1 = Strongly Disagree

   2 = Disagree

   3 = Neutral

   4 = Agree

   5 = Strongly Agree

5. **During my leisure time, I feel like I'm just "spinning my wheels."**

   1 = Strongly Disagree

   2 = Disagree

   3 = Neutral

   4 = Agree

   5 = Strongly Agree

6. **In my leisure time, I usually don't like what I'm doing, but I don't know what else to do.**

   1 = Strongly Disagree

   2 = Disagree

   3 = Neutral

   4 = Agree

   5 = Strongly Agree

7. **Leisure time gets me aroused and going.**

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

8. **Leisure experiences are an important part of my quality of life.**

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

9. **I am excited about leisure time.**

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

10. **In my leisure time, I want to do something, but I don't know what to do.**

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

11. **I waste too much of my leisure time sleeping.**

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

12. **I like to try new leisure activities that I have never tried before.**

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

13. **I am very active during my leisure time.**

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

14. **Leisure time activities do not excite me.**

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

15. **I do not have many leisure skills.**

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

16. **During my leisure time, I almost always have something to do.**

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

Appendix C

Indicators of Risk Scale

Indicators of Risk Scale

Please check **yes** or **no** to the following questions:

1. **Have you belonged to gang in the last year?**

   _____ yes _____ no

2. **Have you carried a weapon (knife/gun) to school in the last year?**

   _____ yes _____ no

3. **Were you charged with a crime or went to court for a felony charge in the last year?**

   _____ yes _____ no

4. **Have you done "tagging" in the last year?**

   _____ yes _____ no

5. **Did you stay out late without permission or left home without your parents knowing in the last year?**

   _____ yes _____ no

6. **Have you cussed out loud at a teacher or used bad language to parents in the last year?**

   _____ yes _____ no

7. **Have you smoked marijuana 1-2 times in the last 30 days?**

   _____ yes _____ no

8. **Have you been drunk (had 5 or more drinks on one occasion) at least once in the last two months?**

_____ yes _____ no

9. **Have you averaged "D" or less at school in the last year?**

_____ yes _____ no

10. **Do you plan on attending college or university after high school?**

_____ yes _____ no

11. **Have you engaged willingly in sexual activity in the last year?**

_____ yes _____ no

12. **Would you consider yourself to currently be a healthy, physically fit person?**

_____ yes _____ no

13. **Have you smoked more than one cigarette per day over the past two weeks?**

_____ yes _____ no

14. **Have you done "huffing" 1-2 times in the last two weeks?**

_____ yes _____ no

Appendix D

Demographic Questionnaire

Dear student,

Respond to the following statements and requests for information as honestly and accurately as you can. This information will remain confidential; in other words, your name will never be associated with the information you provide. The researcher is not interested in your individual responses, but rather the responses of all students when added together. Your information is extremely valuable, and your cooperation is greatly appreciated.

Your Age: _____ **Current Grade in School:** _____

Gender: (Check one) _____ Male _____ Female

Are You A Registered Member of An Indian Tribe/Community? (check one)

_____ Yes _____ No

If yes, please indicate which tribe you are a member of:

_____

Appendix E

Parent/Guardian Informed Consent Form

Research Study: Parent/Guardian Informed Consent Form

Participation of your son or daughter in the study explained below is being sought. All students at the Sault Ste. Marie Alternative High School will be given the opportunity to participate in this study. The participation of your son or daughter is very important to the overall success of this project. All students who participate in the study will be entered into a drawing for gift certificates from a local clothing store. Please review the following information. You indicate your consent by signing below and sending this form back to school with your son or daughter.

Project Title: Examining the Relationship Between Leisure Lifestyle And Indicators of Risk of Youth and the Mediating Effects of Gender and Race on this Relationship.

The purpose of this study is to examine the free time activity patterns of youth and the impact of these free time activity patterns on indicators of risk. The influence of race/culture and gender on the relationship between free time activity patterns and indicators of risk will also be examined. The results of this study will be helpful in understanding which free time activity choices seem to lead to risk and those which seem to lead to indications of success. The results of this study will benefit all students by identifying interventions and programming that provide them with the most benefit.

Procedures

Three separate surveys will be completed by all high school students at the Sault Ste. Marie Alternative High School for whom consent has been received. The surveys will be administered in the classroom with the classroom teachers present. The time required for each student to complete the surveys is one hour. The researcher will be going into the school for two or three days to ensure that all consenting students are given the opportunity to participate in the study.

Voluntary/Confidential Participation

The participation of all students in this study is completely voluntary. The decision not to participate, or to withdraw from the study at any time, will involve no penalty or loss of benefits to which the student is otherwise entitled. All information obtained from the students will be treated with strict confidence on the part of the investigator. Students will not be identified in any report of research findings. **The privacy of all students will be protected to the maximum extent allowable by law.**

Questions/Concerns
If you have any questions or concerns regarding participation of your son/daughter in this project, please contact the following:

David E. Wright, Chair
University Committee on Research Involving Human Subjects
Michigan State University
(517) 355-2180

By signing this consent form, you indicate an understanding of the information presented above and grant permission for the student identified below to participate in this study.

Name of Student (Please print): _____

_____ _____
Signature of Parent/Guardian Date

Thank You,

Steve Yanni, Ph.D. Candidate
604 Johnston St.
Sault Ste. Marie, MI
632-8659

Appendix F

Subject Informed Consent Form

Research Study: Subject Informed Consent Form

Your participation in the study explained below is being sought. All students at the Sault Ste. Marie Alternative High School will be given the opportunity to participate in this study. All students who participate in the study will be entered into a drawing for gift certificates from a local clothing store. Your participation is very important to the overall success of this project. Please review the following information. You indicate your consent by signing below.

Project Title: Examining the Relationship Between Leisure Lifestyle And Indicators of Risk of Youth and the Mediating Effects of Gender and Race on this Relationship.

The purpose of this study is to examine the free time activity patterns of youth and the impact of these free time activity patterns on indicators of risk. The influence of race/culture and gender on the relationship between free time activity patterns and indicators of risk will also be examined. The results of this study will be helpful in understanding which free time activity choices seem to lead to risk and those which seem to lead to indications of success. The results of this study will benefit all students by identifying interventions and programming that provide them with the most benefit.

Procedures

Three separate surveys will be completed by all high school students at the Sault Ste. Marie Alternative High School for whom consent has been received. The surveys will be administered in the classroom with the classroom teachers present. The time required for each student to complete the surveys is one hour. The researcher will be going into the school for two or three days to ensure that all consenting students are given the opportunity to participate in the study.

Voluntary/Confidential Participation

The participation of all students in this study is completely voluntary. The decision not to participate, or to withdraw from the study at any time, will involve no penalty or loss of benefits to which the student is otherwise entitled. All information obtained from the students will be treated with strict confidence on the part of the investigator. Students will not be identified in any report of research findings. **The privacy of all students will be protected to the maximum extent allowable by law.**

Questions/Concerns
If you have any questions or concerns regarding participation of your son/daughter in this project, please contact the following:

David E. Wright, Chair
University Committee on Research Involving Human Subjects
Michigan State University
(517) 355-2180

By signing this consent form, you indicate an understanding of the information presented above and grant permission for the student identified below to participate in this study.

Name of Student (Please print): _____

_____ _____
Signature of Parent/Guardian Date

Thank You,

Steve Yanni, Ph.D. Candidate
604 Johnston St.
Sault Ste. Marie, MI
632-8659

Appendix G

Request to Bay Mills Indian Community Executive Council

5-18-00

To: Bay Mills Indian Community Executive Council
From: Steve Yanni
Re: Research Project

As many of you are aware I am closing in on the final stages of my doctoral dissertation. The topic of my research is examining the relationship between leisure lifestyle and indicators of risk amongst youth and the impact of race and gender on this relationship.

I am most interested in the results of this research specific to our own youth. The information gained could be very helpful in identifying interventions that seem to be effective and also in supporting grant applications from our Department of Recreation and Health Promotion.

My initial plan was to use the Brimley and Sault High Schools as the forum for the data collection; the data collection involves the administration of three questionnaires that require about an hour to complete. The schools, with the exception of the Alternative School in the Sault have been less than accommodating. Rather than fight with the schools and strain relations I thought that I would administer the surveys within the community. Specifically I would administer the surveys to all Bay Mills Tribal members who are currently enrolled in high school for whom consent has been provided. Research protocol requires parental/guardian consent for all research participants 17 years of age and younger; each participant regardless of age must also provide their own consent to participate. My plans for administering the surveys would be to mail all of our high school students (tribal only) the consent forms and a cover letter inviting them to come to the Waishkey Center on a predetermined date to complete the surveys. A pizza dinner would also be provided after the surveys had been completed. It may take some follow-up phone calls and subsequent meeting times to collect the data from as many of our young people as possible.

I am also administering the surveys at the Alternative School in the Sault.

The research project has been approved by the University Committee on Research Involving Human Subjects at Michigan State University as well as my dissertation committee from MSU. I have included a copy of the questionnaires and the informed consent forms to be used with this project.

Would the Executive Council be willing to approve of this research involving Tribal members who are currently enrolled in high school?

Respectfully,

Steve Yanni

Appendix H

Tribal Council Approval of Research

BAY MILLS EXECUTIVE COUNCIL
Meeting Minutes
May 22, 2000

PRESENT: Jeff Parker, President, L. John Lufkins, Vice-President, Terry Carrick, Secretary, Allyn Cameron, Treasurer, Mickey Parish, Councilperson

Meeting called to order at 1:40 p.m.

AGENDA The council reviewed the agenda and made additions.

INTRODUCTION - Shawn Kintigh introduced Becky Brown who will be her replacement for Mental Health Intake Worker for the tribe.

APPROVAL OF MAY 8th MEETING MINUTES

Mickey Parish motioned to approve the May 8th meeting minutes, seconded by Terry Carrick. Motion carried 4 for 0 opposed 1 abstaining.

ADMINISTRATIVE REPORTS

Mark Solberg - General Manager

Mark commented that the reports he receives from Greg are very useful. He reported on the slot revenue for April 2000, including allocating food costs, promotions, etc. He said that revenue has declined which is attributed to 37% loss of Canadian customers. He updated the council on the opening, the staffing, and the shuttle service.

NEW BUSINESS

Request from Steve Yanni for a Research Project

Jeff said that Steve had talked to him about the possibility of doing a research project for his dissertation that would involve tribal kids. He tried to work with Brimley Schools but could not get access to talk to any of the students. He has questionnaires that will take approximately an hour to complete and he would like to reward the kids that participate in the surveys with a gift not to exceed $50.00. It will be for approximately 56 students. Jeff said this information would be available for funding purposes in the future. Allyn Cameron motioned to support Steve Yanni's dissertation efforts and also to support it financially. Motion carried 4 for 0 opposed I abstaining.

Appendix I

Bay Mills Potential Subject Mailing Cover Letter

6-6-00

To: All youth of the Bay Mills Indian Community born between 1981 and 1987
From: Steve Yanni, Director – Department of Recreation and Health Promotion
Re: Research Project

I am asking for your assistance in providing some information for a research project I am working on. The Bay Mills executive council has approved my gathering information from the youth of the community.

The purpose of the study is to examine the relationship between leisure lifestyle and indicators of risk in youth. In other words, is there a link between what you do during your free time and indicators of risk that you may or may not be involved with. The results of this study will be very helpful for us in planning activities for you, and all of our youth that seem to be beneficial for everyone in the long run.

The way you can be of assistance is to fill out a survey that takes about 40 minutes to complete. All youth will be completing the same survey. The results of the survey are managed to ensure the highest level of confidentiality; your name is not requested and will never be associated with your answers to the survey questions. Participation in this study is completely voluntary.

Out of appreciation for your participation in this study, the executive council has approved an incentive of $50.00 to each young person who completes the survey. I have a list from tribal enrollment of all youth born between 1981 and 1987.

WHAT TO DO TO PARTICIPATE IN THE STUDY:

1. If you are 17 years of age or younger you must have your parent/guardian read and complete the enclosed informed consent form.
2. Come to the Bay Mills Waishkey Center (Gym) on **one** of the following dates (with the parental/guardian consent form signed if under 18). If you are under 18 and you do not have the consent form completed and with you, you will not be allowed to participate in the study. Please be on time for the session you choose.

   Date 1: Monday, June 12th at 5:00 PM
   Date 2: Saturday, June 17th at 10:00 AM

Each youth attends one session only. You may choose which session you will attend.

If you or your parents/guardians have any questions or concerns please call me at 248-3241 ext. 3115.

Thank You,

Steve Yanni

Appendix J

ALTAS Score Form

ALTAS Score Sheet

Subject # _____

Key
usually = 3; sometimes = 2; never = 1

Unsupervised Socialization with Friends
#5 ____
#6 ____
#7 ____
#17 ____
#18 ____

Total: _____

Self-Directed Leisure Activities
#1 ____
#2 ____
#14 ____
#15 ____
#22 ____

Total: _____

Organized Leisure Activities
#3 ____
#4 ____
#16 ____
#20 ____
#21 ____
#23 ____
#24 ____
#25 ____

Total: _____

Organized Sport Activities
#11 ____
#12 ____
#13 ____

Total: _____

Activities at Home
#8 ____
#9 ____
#10 ____
#19 ____

Total: _____

Appendix K

Leisure Boredom Scale Score Form

Leisure Boredom Scale Score Sheet

Subject # _____

1.	1	2	3	4	5
2.	5	4	3	2	1
3.	1	2	3	4	5
4.	5	4	3	2	1
5.	1	2	3	4	5
6.	1	2	3	4	5
7.	5	4	3	2	1
8.	5	4	3	2	1
9.	5	4	3	2	1
10.	1	2	3	4	5
11.	1	2	3	4	5
12.	5	4	3	2	1
13.	5	4	3	2	1
14.	1	2	3	4	5
15.	1	2	3	4	5
16.	5	4	3	2	1

Total Score: _____

Appendix L

Risk Behavior Scale Score Form

Indicators of Risk Score Sheet

Subject # _____

		Yes	No
1.	Gang	2	1
2.	Weapon	2	1
3.	Crime/Court	2	1
4.	Tagging	2	1
5.	Out Late Without Permission	2	1
6.	Bad Language	2	1
7.	Marijuana	2	1
8.	Drunk	2	1
9.	D or Less in School	2	1
10.	College Plans	1	2
11.	Sexual Activity	2	1
12.	Healthy/Fit	1	2
13.	Cigarettes	2	1
14.	Huffing	2	1

Total: _____

BIBLIOGRAPHY

Agnew, R. & Petersen, D.M. (1989) Leisure and delinquency. Social Problems 36 (4), 332-350

Agnew, R., & Petersen, D.M. (1994). Adolescent drug use and leisure activity. In P.J. Venturelli (Ed.), Drug use in america: Social, cultural and political perspectives. Boston: Jones and Bartlett

Bammel, G., & Burrus-Bammel, L.L. (1992). Leisure and human behavior (2nd ed.). Dubuque: Wm. C. Brown.

Bay Mills Indian Community (1999-2000). Overall economic development plan

Bergin, D.A. (1992). Leisure activity, motivation, and academic achievement in high school students. Journal of Leisure Research 24 (3), 225-239

Bureau of Indian Affairs (1997) Youth risk behavior survey of high school students attending bureau funded schools.

Centers for Disease Control (CDC) Fact Sheet: Health Risk Behavior of Alternative High School Students (1998). Available: www.cdc.gov/nccdphp/dash/yrbs/healthrisk-fs.htm

Centers for Disease Control (CDC) Youth Risk Behavior Trends (1999). Available: www.cdc.gov/nccdphp/dash/yrbs/trend.htm

Crompton, J.L. (1993). Repositioning recreation and park services: An overview. Trends 30(4), 2-5.

Council of Economic Advisers for the President's Initiative on Race. (1998). Changing america: indicators of social and economic well-being by race and hispanic origin U.S. Government Printing Office.

Dunham-Martell, P. & Van Alstine, R.N. (1997) Michigan pre-conference report to the white house conference on indian education.

Edginton, C.R., Jordan, D.J, DeGraaf, D.G., & Edginton, S.R. (1998). Leisure and life satisfaction: Foundational perspectives (2nd ed.). Boston: WCB McGraw Hill.

Hembroff, L.A., Cornell, G, & Hamlin, R. (1999) Catching the dream: higher education needs and economic opportunities among michigan's tribal communities Michigan State University

Henhawk, C.M. (1994) Ontario aboriginal recreation discussion paper. Ontario Ministry of Culture, Tourism and Recreation

Iso-Ahola, S.E., & Crowley, E.D. (1991) Adolescent substance abuse and leisure boredom. Journal of Leisure Research 23 (3), 260-271

Iso-Ahola, S.E., & Weissinger, E. (1987) Leisure and boredom. Journal of Social and Clinical Psychology 5 (3), 356-364

Iso-Ahola, S.E., & Weissinger, E. (1990) Perceptions of boredom in leisure: Conceptualization, reliability and validity of the leisure boredom scale. Journal of Leisure Research 22 (1), 1-17

Kids Count in Michigan (1996). County profiles of child and family well-being.

Landers, D.M., & Landers, D.M. (1978) Socialization via interscholastic athletics: Its effects on delinquency. Sociology of Education 51, 299-303

McDonald, D, & McAvoy, L. (1997) Native americans and leisure: State of the research and future directions. Journal of Leisure Research 29 (2), 145-166

Michigan School Report: Building Information (1999). Available: http:www.state.mi.us/mde/cfdata/msr99/msr_bldg.cfm

Ontario Aboriginal Recreation Council. (1994) Information Package

Peterson, C.A., & Stumbo, N.J. (2000). Therapeutic recreation program design: Principles and procedures (3rd ed.). Boston: Allyn and Bacon.

Report to the Community in Accordance with Public Act 25 (1998-99), Sault Ste. Marie Area Public Schools. Annual Education Report.

School District Data Book (1989-1990), Sault Ste. Marie Area Schools: General Characteristics-Detailed. Available: http://WWW.state.mi.us/webapp/dmb/...asp?cmd=data&id+30990&cat+gen_det

Schultz, L.E., Crompton, J.L, & Witt, P.A. (1995) A national profile of the status of public recreation services for at-risk children and youth. Journal of Park and Recreation Administration 13 (3), 1-25

Segrave (1983). Sport and juvenile delinquency. In R. L. Terjung (ed.) Exercise and Sport Sciences Review. (vol. 11, pp. 181-209). Philadelphia: Franklin Institute.

Shaw, S.M., Caldwell, L.L., & Kleiber, D.A. (1996) Boredom, stress and social control in the daily activities of adolescents. Journal of Leisure Research 28 (4), 274-292

Shivers, J.S., & deLisle, L.J. (1997). The story of leisure: Contexts, concepts, and current controversy. Champaign, IL: Human Kinetics.

StatSoft Electronic Textbook (2000) Available: www.StatSoft.com/textbook

Van Der Wal, H.T. (1988). Recreation and education achievement: A case study among cree and saulteaux indians in saskatchewan. Dissertation Abstracts International, 49 (10A), (University Microfilms No. AAG88-21322)

Widmer, M.A., Ellis, G.D., & Trunnell, E.P. (1996) Measurement of ethical behavior in leisure among high- and low-risk adolescents. Adolescence 31. 397-408

Wilkinson, Leland (1990) SYSTAT: the system for statistics. Evanston, IL: SYSTAT, Inc.

Witt, P.A., and Ellis, G.D. (1989). The leisure diagnostic battery: Users manual. State College, PA: Venture Publishing Inc.

Yin, Z., Katims, D.S., & Zapata, J.T. (1996) After-school activities and substance use among mexican american youth. The Journal of At-Risk Issues 2 (2), 47-54

Yin, Z., Katims, D.S., & Zapata, J.T. (1999) Participation in leisure activities and involvement in delinquency by mexican american adolescents. Hispanic Journal of Behavioral Sciences 21 (2), 170-185