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## **An investigation of the relationship between alcohol use and satisfaction with life among college students**

Robert James Channell

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To the Graduate Council:

I am submitting herewith a dissertation written by Robert James Channell entitled "An investigation of the relationship between alcohol use and satisfaction with life among college students." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Human Ecology.

Bill Wallace, Major Professor

We have read this dissertation and recommend its acceptance:

Robert J. Pursley

Accepted for the Council:

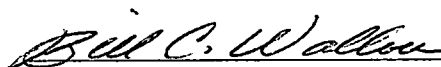
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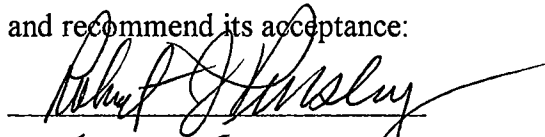
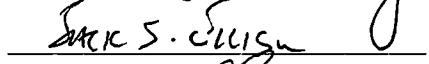
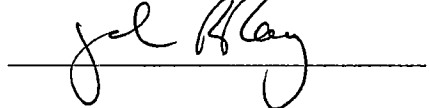
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Accepted for the Council:

  
Associate Vice Chancellor and  
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An Investigation of the Relationship Between Alcohol Use and Satisfaction  
With Life Among College Students

A Dissertation

Presented for the

Doctor of Philosophy

Degree

The University of Tennessee, Knoxville

Robert James Channell

August, 2000

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## **DEDICATION**

**This dissertation is dedicated to my mother**

**Elizabeth Ann Channell**

**and**

**to all those who have explored drugs to enhance life**

**satisfaction but have not returned.**

## ACKNOWLEDGEMENTS

I am grateful to the Department of Health and Safety Sciences Chair Dr. Charles Hamilton and Doctoral Student Coordinator Dr. Bill Wallace for accepting me into the program and awarding me a graduate teaching associateship. It has been a great experience. I would like to thank the department staff for all the help along the way, especially Ed Deep for his computer tutoring and Linda Pryor for always helping with such a pleasant demeanor. There have been many “trivial” moments where students, colleagues, and faculty have made this experience a positive one, for this I am most grateful.

Many people here at the University of Tennessee helped with the completion of this study. I would like to thank the committee members, Dr. Jack Ellison, Dr. Robert Pursley, Dr. John Ray and Dr. Bill Wallace for providing help and constructive criticism while respecting me, and my efforts. Thanks to Brenda Lawson, Office of Research Compliance Section, for helping with human subjects approval and Dr. Paula Zemel, Departmental Review Coordinator, for helping complete the forms for approval. I am grateful to the instructors and students who volunteered to participate in the study. I would like to thank Cary Springer at the Statistical Consulting Center for assisting me with the statistical analysis, and Heather Doncaster for editing and consulting.

A very special thanks to Teresa Dalton for assisting with the dissertation, but more importantly for providing positive reinforcement, being a “sounding board,” and for being so thoughtful and kind.

I am grateful to the fellowship of Alcoholics and Narcotics Anonymous, and my higher power for exposing me to a wonderful way of life, and for sharing experience, strength, and hope. I am indebted to Dr. Ron Ersay and Kay Stibell for their guidance and counseling.

Most of all, I would like to thank my mother Elizabeth Ann Channell for supporting me on this journey, and for the encouragement along the way. I am grateful for her unconditional love and thoughtfulness. I could never fully express how grateful I am for bringing me back to a kind, loving world away from the narrow focus of academia, and reassuring me of what is truly important.



## ABSTRACT

The purpose of the investigation was to determine the relationship between alcohol use and satisfaction with life among college students. Six null hypotheses were developed to address the purpose of the study. Null hypothesis one states, no significant relationship exists between satisfaction with life and frequency of alcohol use. In the five other hypotheses the relationship was interacted by class standing, ethnicity, gender, living arrangement, and social fraternity or sorority membership.

The population selected for the investigation was students attending the University of Tennessee-Knoxville and enrolled in selective courses during the spring 2000 semester. A sample of convenience was selected from students enrolled in Health and Safety Sciences classes during the spring 2000 semester. Nine sections, consisting of 216 students participated in the study.

Data were collected by administering a paper-and-pencil survey to students enrolled in general elective health classes during the Spring 2000 semester. Participants were given a packet of materials consisting of the demographic and drug use survey questionnaire, the Satisfaction with Life Scale (Diener and Pavot, 1985) instrument, and an envelope. The packets were completed in one sitting, during a regularly scheduled health class. Due to the lack of need for identifying each participant and the sensitivity of the drug use questions, total anonymity was required. Participants were informed of subjects' rights, and that participation was voluntary and could withdraw from the study at any time.

Each survey was visually inspected and data were entered into a Microsoft Excel spreadsheet. The Statistical Package for Social Sciences (SPSS) was used for data analysis. A Spearman's rho correlation was used to determine the overall, general relationship between alcohol use and satisfaction with life. Analysis of variance was used to evaluate differences in mean satisfaction with life scores between the levels of alcohol use. Analysis of variance was used to evaluate the relationship of alcohol use and satisfaction with life by class standing, ethnic origin, gender, living arrangement, and social fraternity or social sorority membership.

The Spearman's rho correlation indicated a nonsignificant, indirect correlation of  $-.109$  ( $p = .111$ ) for the overall, general relationship between alcohol use and satisfaction with life was reported. The analysis of variance did not find significant differences [ $F(3,212) = 1.13, p = .345$ ] in mean satisfaction with life scores for the four levels of use.

The main effect, the relationship of alcohol use and satisfaction with life was interacted by class standing, ethnicity, gender, living arrangement, and social fraternity or sorority membership. The analysis of variance did not find significant differences for any of the interactions. It was concluded that no evidence was found of a definitive nature to associate alcohol use with satisfaction with life. Based on the findings of this study, alcohol use does not influence or effect satisfaction with life.

## TABLE OF CONTENTS

Chapter	Page
I.	INTRODUCTION . . . . . 1
	Statement of the Problem . . . . . 4
	Purpose of the Study . . . . . 4
	Theoretical Basis . . . . . 5
	Need for the Study . . . . . 10
	Delimitations . . . . . 14
	Limitations . . . . . 15
	Assumptions . . . . . 15
	Definition of Terms . . . . . 16
	Summary . . . . . 17
II.	REVIEW OF RELATED LITERATURE . . . . . 18
	Literature Related in Content
	Alcohol Use Among College Students . . . . . 18
	Satisfaction with Life Among College Students . . . . . 27
	Literature Related in Methodology
	Self-report Studies Investigating Collegiate Drug Use . . . . . 30
	Self-report Studies Investigating Collegiate Satisfaction with Life . . . . . 38
	Literature Related in Content and Methodology
	Drug Use and Satisfaction with Life Among College Students . . . . . 42
	Summary . . . . . 44
III.	METHODOLOGY . . . . . 46
	Population . . . . . 47
	Sample Selection . . . . . 47
	Instrumentation . . . . . 48
	Data Collection . . . . . 55
	Data Analysis and Tabulation . . . . . 55
	Statistical Analysis . . . . . 56
	Summary . . . . . 57

Chapter	Page
IV. ANALYSIS OF THE DATA . . . . .	58
Introduction . . . . .	58
Characteristics of the Sample . . . . .	58
Alcohol Use . . . . .	62
Satisfaction with Life . . . . .	64
The Relationship Between Alcohol Use, and Satisfaction with Life . . . . .	65
Alcohol Use and Satisfaction with Life by Class Standing, Ethnicity, Gender, Living Arrangement, and Social Fraternity or Social Sorority Membership . . . . .	69
V. FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS. . . . .	77
Summary . . . . .	77
Findings . . . . .	80
Conclusion . . . . .	82
Recommendations. . . . .	82
VI. THE STUDY IN RETROSPECT . . . . .	84
Introduction . . . . .	84
Discussion . . . . .	84
Observations of the Study . . . . .	88
Future Directions . . . . .	90
BIBLIOGRAPHY . . . . .	93
APPENDICES . . . . .	103
A. Correspondence with the Office of Research Compliance Section . . . . .	104
B. Demographic and Drug Use Survey . . . . .	109
C. The Satisfaction with Life Scale . . . . .	112
VITA . . . . .	114

## LIST OF TABLES

Table	Page
4-1	Distribution of Sample by Age . . . . . 59
4-2	Distribution of Sample by Ethnicity . . . . . 61
4-3	Distribution of Sample by Class Standing . . . . . 61
4-4	Distribution of Alcohol Use Within the Year Prior to the Survey . . . . . 63
4-5	Distribution of Alcohol Use Modified Into Four Groups . . . 65
4-6	Spearman's rho Correlation Analysis of Satisfaction With Life by Alcohol Use. . . . . 66
4-7	Mean Satisfaction With Life Scores by Level of Alcohol Use . . . . . 67
4-8	Relationship of Alcohol Use and Satisfaction With Life Using ANOVA . . . . . 68
4-9	Mean Satisfaction With Life Scores by Class Standing . . . . . 70
4-10	Relationship of Alcohol Use and Satisfaction With Life by Class Standing Using ANOVA . . . . . 71
4-11	Mean Satisfaction With Life Scores by Gender . . . . . 72
4-12	Relationship of Alcohol Use and Satisfaction With Life by Gender Using ANOVA. . . . . 73
4-13	Mean Satisfaction With Life Scores by Living Arrangement . . . . . 73
4-14	Relationship of Alcohol Use and Satisfaction With Life by Living Arrangement Using ANOVA . . . . . 75
4-15	Mean Satisfaction With Life Scores by Social Fraternity or Sorority Membership . . . . . 75

Table	Page
4-16 Relationship of Alcohol Use and Satisfaction With Life by Social Fraternity or Sorority Membership Using ANOVA . . . . .	76

# CHAPTER I

## INTRODUCTION

Substance use and abuse continues to have a detrimental effect on the citizens of the United States. Alcohol and drug-related abuse kills more than 120,000 Americans each year (Department of Health and Human Services, 1999). Alcohol-related traffic fatalities make up 30.6% of all traffic crash fatalities (National Institute on Alcohol Abuse and Alcoholism, 1999). Not only is alcohol and drug abuse involved in premature death, familial adversity accompanies alcohol and drug abuse.

One in four children are exposed to alcohol abuse and/or dependence in the family (Grant, 2000). Parental alcohol and drug abuse exacerbates or causes over 70% of the child abuse and neglect cases (National Center on Addiction and Substance Abuse at Columbia University, 1999). Domestic violence and child abuse is linked to drug use. The children of alcohol and drug abusing parents are almost three times likelier to be abused and more than four times likelier to be neglected, than children of parents who are not substance abusers (National Center on Addiction and Substance Abuse at Columbia University, 1999).

Far too many women who give birth each year use drugs during pregnancy, leading to child developmental problems and inflated health care costs. The National Center on Addiction and Substance Abuse at Columbia University estimates that two billion dollars a year are spent to provide support for infants and adults suffering from fetal alcohol syndrome. Alcohol use and abuse use places a tremendous economic burden on society.

A study released by the National Institute on Drug Abuse and the National Institute on Alcohol Abuse and Alcoholism in 1998 estimated the annual economic cost of alcohol and drug abuse at 246 billion dollars. Loss of workplace productivity and job loss is associated with alcohol and drug use, placing a financial burden on businesses. Again, the family and society suffers. Nearly 73% of illegal drug users are employed (Substance Abuse and Mental Health Services Administration SAMHSA, 1999). The judicial system and law enforcement agencies are inundated with cases related to drug use. Thirty Billion was spent in 1996 to incarcerate inmates for drug and alcohol related crimes (National Center on Addiction and Substance Abuse, 1998). Health and emergency care systems, which already place an economic strain on society, are overburdened with drug-related accidents and treatment. Funding for research, prevention and cessation programs, and rehabilitation continues to escalate. In a weekly radio address President Clinton announced more than 100 Million in grants under the Safe Schools/Healthy Students Initiative (SAMHSA, 1999b). With continued substance use and abuse, and inflation, the economic burden will expand.

In the United States, adults willingly engage in behaviors that adversely effect society, health and well being. This baffling human characteristic of self-destruction is existent throughout life. Substance use and abuse is a public health issue of great national concern.

Collegiate substance use and abuse is associated with adverse consequences. In the latter 1990s, "binge drinking" led to the premature deaths of one student at



Massachusetts Institute of Technology and another at Louisiana State University. “Binge drinkers” are more likely to miss class, not complete schoolwork on time, have a lower grade point average (GPA) and get injured (Wechsler et al, 1998). As GPA drops, the average number of drinks consumed per week increases significantly (Presley, Leichliter, and Meilman, 1998).

Violence, sexual assault and legal problems are associated with collegiate alcohol and drug use. Eighty-six percent of college students reported having trouble with police/campus authorities as a result of alcohol and drug use (Presley, Leichliter, and Meilman, 1998). Of critical concern is relationship between sexual harassment, and alcohol and drug use. Of the students reporting having unwanted sex, 82.2% had consumed alcohol or drugs prior to these incidents (Presley, Leichliter, and Meilman, 1998).

Collegiate alcohol use has increased throughout the 1990s. The increase in drug use has occurred despite new prevention programs, governmental initiatives, and massive budget increases. The levels of use far exceed goals established by the Office of National Drug Control Policy (ONDCP), Executive Office of the President, in the National Drug Control Strategy (1999), and by the United States Department of Health and Human Services in Healthy People 2000 (1992). Substance use and abuse among college students is associated with poor academic performance, violence, high-risk sexual behavior and assault, automobile accidents and traffic fatalities, and even death from “binge drinking.”

The prevalence and impact of collegiate alcohol use and abuse warrant further investigation into the correlates of drug use. In identifying psychological characteristics associated with substance use and abuse, the process of diminishing this destructive behavior is initiated. If an investigation into the relationship between collegiate alcohol use and perceived satisfaction with life reports statistical significance, these findings may have a positive impact on prevention and cessation program efficacy. The college student who turns to drugs for the purpose of enhancing life satisfaction is bound to suffer severe consequences, and encourage both familial and social problems. Curricula can be designed and implemented to improve the skills necessary for finding and experiencing “healthy” alternatives to drug use that facilitate life satisfaction.

### **Statement of Problem**

To the extent that it can be determined, no empirical information exist relating satisfaction with life and frequency of alcohol use among college students.

### **Purpose of the Study**

The purpose of the investigation was to determine the relationship between alcohol use and satisfaction with life among students attending a large land grant University located in the southeastern United States. Six null hypotheses were developed

to address the purpose of the study.

One: No relationship exists between satisfaction with life, and frequency of alcohol use.

Two: No difference in class standing exists for the relationship between satisfaction with life, and frequency of alcohol use.

Three: No difference in ethnicity exists for the relationship between satisfaction with life, and frequency of alcohol use.

Four: No difference in gender exists for the relationship between satisfaction with life, and frequency of alcohol use.

Five: No difference in living arrangement exists for the relationship between satisfaction with life, and frequency of alcohol use.

Six: No difference in social fraternity or social sorority membership exists for the relationship between satisfaction with life, and frequency of alcohol use.

### **Theoretical Basis**

The personality theory found in Humanistic Psychology provided the theoretical basis for investigating the relationship between alcohol use and satisfaction with life among college students. Humanistic Psychology gained notoriety in America during the mid-twentieth century (Frick, 1971). Becoming more discontent with the dominant psychologies of the times such as behaviorism and psychoanalysis, a group of

academicians started a counter-movement labeled as the “third force” in 1958 by one of the founding fathers Abraham Maslow (Misiak, 1973). Humanistic psychologists claimed that contemporary psychologies “dehumanized” man and robbed man of his very essence. Although Humanistic psychology was quite controversial and challenged the popular psychologies of the times for emphasizing man’s resemblance to animals and neglecting man’s unique capacity for nobility and freedom, it was eventually adopted by the American Psychological Association, and as Maslow states (1999), “... is solidly established as a viable third alternative to objectivistic, behavioristic psychology and to orthodox Freudianism.” In 1962 the American Association of Humanistic Psychologists was founded and in 1970 the division of Humanistic Psychology was added to the American Psychological Association (Shaffer, 1978). Today Humanistic Theorists such as Abraham Maslow and Carl Rogers are identified as respected leaders in personality theory in most introductory psychology and health texts (Thompson and Rudolph, 1996; Butler, 1997; Hahn and Payne, 1997).

Humanistic Psychology differed dramatically from contemporary personality theories in that it viewed man as possessing a unique potential for experiencing. Behaviorism emphasized man’s resemblance to animals claiming that behavior is motivated by environmental cues, and that man is conditioned through stimulus-response experiences. Psychoanalytic theorists claimed that man is driven by instincts, like other animals (Maddi, 1989). These theories focused on using behavioral characteristics to describe one’s personality.

Humanistic Theory's rationale for motivation and behavior differs from these two theories, and does not concur with analyzing behavior to explain personality (Mahrer, 1978). Sheer behavior is not the whole person. Humanistic Psychology places the human person and his/her experience at the center of its concern (Frick, 1971). The potential for experiencing is the basis for the conception of personality in Humanistic Psychology. Behaviors are the means whereby potentials are experienced. Humanistic Theorists ask, "what are you experiencing?" and are concerned with the whole being not merely behaviors.

The potential for experiencing is a force present in humans that makes them unique from other animals. Life is a process of unfolding and experiencing this one force. This force is described as the inherent tendency to meet biological needs and to transcend or grow by fulfilling greater potentials, capabilities, or talents based on one's genetic makeup. Man is motivated by this intrinsic force to meet basic needs and fulfill greater potentialities or to become self-actualized. Misiak (1973) provides the following definition of Humanistic Psychology, "...is a multifaceted approach to human experience and behavior which focuses on man's uniqueness and his self-actualization."

The Association for Humanistic Psychology lists four characteristics of the Humanistic philosophy (Misiak and Sexton, 1973, page 116).

"A centering of attention on the experiencing person and thus a focus on experience as the primary phenomenon in the study of man. Both theoretical explanations and overt behavior are considered secondary to experience itself and to its meaning to the person."

“An emphasis on such distinctively human qualities as choice, creativity, valuation, and self-realization, as opposed to thinking about human beings in mechanistic and reductionistic terms.”

“An allegiance to meaningfulness in the selection of problems for study and of research procedures, and an opposition to a primary emphasis on objectivity at the expense of significance.”

“An ultimate concern with and valuing of the dignity and worth of man and an interest in the development of the potential inherent in every person. Central in this view is the person as he discovers his own being and relates to other persons and to social groups.”

The humanistic position is based on five interrelated and interdependent, central principles (Shaffer, 1978, pages 10-17).

1. “Humanism is strongly phenomenological or experiential; its starting point is conscious experience.”
2. “Humanistic Psychology insists on man’s essential wholeness and integrity.”
3. “While acknowledging that there are clear-cut limits inherent to human existence, Humanistic Psychology insists that human beings retain an essential freedom and autonomy.”
4. “Humanistic Psychology is antireductionist in its orientation.”
5. “Humanistic Psychology, consistent with its strong grounding in existentialism, believes that human nature can never be fully defined.”

Two of the founding fathers of Humanistic Psychology are Abraham Maslow and Carl Rogers (Misiak and Sexton, 1973). Both of these Humanistic Theorists agreed that an intrinsic force motivates man. Not only does this force create the potential for experiencing, it defines one’s personality. Maslow and Rogers specified that specific need fulfillment is generated by this force, and that there exists an intrinsic desire in humans that leads them to become whatever they are meant to be.

Rogers emphasized man's tendency to become actualized or to develop all capabilities in ways to maintain and enhance life (Maddi, 1989). This inherent potentiality created a desire for need fulfillment. Rogers identified two basic needs of positive regard and positive self-regard, simply referred to as the need for love and belonging.

Maslow also identified specific needs, and labeled them the hierarchy of needs (Maslow, 1970; Maslow, 1999). Like Rogers, Maslow believed that man possessed an inherent desire to develop all capabilities and potentialities. He referred to this as the desire to become self-actualized, and agreed with Rogers in that there exist in man a tendency to push towards actualization of inherent potentialities. Maslow also identified basic needs that man is motivated by as physiological, safety, belongingness and love, and esteem needs (Maslow, 1970; Maslow, 1999).

Although Humanistic psychologist believe that man is essentially good and possesses potentialities for experiencing that are consistent with social harmony and positive behavior, they acknowledge that anti-social and negative behavior is evident throughout life. Both Maslow and Rogers believe that adverse behavior is a result of lack of need fulfillment. For example, anti-social and abusive behavior may result from a failure to meet needs of love and belonging. Since people possess the capacity to control behavior and to become self-actualized, the key is to find the means for utilizing these resources and potentialities that are at the core of our personality.

## Need for the Study

This investigation is justified for the following three reasons, 1) undesirable levels and trends of increased alcohol use continue to be reported, 2) governmental support for researching alcohol and drug use, and 3) the lack of data pertaining to the relationship of alcohol use, and satisfaction with life. The following expands on the reasons therefore providing rationale for the investigation.

### Undesirable levels of and increased trends in alcohol use

In assessing progress towards substance abuse goals, the Healthy People 2000 Review, 1998-1999 (1999) indicates an increase in heavy drinking among college students and high school seniors since 1992. The major national data collection and surveillance systems used by the Department of Health and Human Services, see chapter two for a more detailed description, report undesirable levels of alcohol use throughout the 1990s that fall far short of Healthy People 2000 goals and objectives. Risk reduction objectives 3.20 and 4.6 in Healthy People 2000, Midcourse Review and 1995 Revisions (U.S. Department of Health & Human Services, 1996) recommend that year 2000 targets for reducing the portion of young people who have used alcohol in the past 30 days to 29%.

When asked if they had used alcohol in the thirty days prior to the survey, 65.8% (Johnson, O'Malley, and Bachman, 1998), 71.4% (Presley, Leichter, and Meilman, 1998), and 68.2% (CDC, 1997) of the subjects answered yes. The data indicate minimal



progress towards attaining national goals, and that the alcohol use problem among college students is worsening therefore indicating a need for more surveillance and prevention research.

Trends in alcohol use indicate that goals established by the Office of National Drug Control Policy (ONDCP), Executive Office of the President, and Healthy People 2000 are not being attained. In the National Drug Control Strategy (1999), the ONDCP states the following goals, a 20% decrease in alcohol and illicit drug use by 2002 and 50% decrease in use by 2007 when compared to 1996 data. Congress supports the Performance Measurement System developed within the strategy and requires the ONDCP to submit annual reports. The 1999 report to congress by the ONDCP states on pages 14 and 15, “there continues to be a serious problem with drug use among youth,” and reports an increase in marijuana use, with alcohol and tobacco use being “statistically unchanged.”

The major national data collection and surveillance systems, the same ones used by the Office of National Drug Control Policy to monitor alcohol and drug use, see chapter two for a more detailed description, indicate increased trends in “binge drinking” throughout the 1990s. “Binge drinking,” defined as having five or more drinks in a row two weeks prior to the survey, increased from 38.3% in 1996 to 40.7% in 1997 (Johnson, O’Malley, and Bachman, 1998) and from 40% in 1996 to 46.6% in 1997 (Presley, Leichliter, and Meilman, 1998). Students reporting “drinking to get drunk” increased from 39.4% in 1993 to 52.5% (.001) in 1997 (Wechsler et al, 1998). The trends in

increased alcohol use among college students clearly indicate a need for more prevention and cessation research.

#### Governmental support for alcohol use research

The need to monitor collegiate substance use and abuse, and identify correlates of substance use and abuse continues to be supported and funded by governmental and volunteer agencies, congress, and both the Secretary of Education and the Secretary of Health and Human Services. National Education Goals 2000 and Healthy People 2010 identify objectives for the reduction of drug use to promote optimum learning and well being. The American Cancer Society's National Health Standards include objectives for the reduction of drug use. The Centers of Disease Control and the National Institute of Drug Use continue to monitor alcohol use to ascertain the extent at which these objectives have been met.

In 1991, Congress ratified the Education Goals Act, which led to the creation of the National Education Goals Panel. To improve teaching and learning within the nation's schools, the panel created the National Education Goals. Goal six, "safe, disciplined, and alcohol and drug free schools," includes the task of drug use reduction and cessation. Healthy People 2010: National Health Promotion and Health Prevention Objectives, was released by the Secretary of the Department of Health and Human Services in January 2000. A consortium of over 350 national membership organizations, 250 agencies and 11,000 people contributed to the synthesis of 467 objectives designed to

promote health and prevent disease. Several of the objectives in Healthy People 2010 call for the reduction of alcohol and drug use. The American Cancer Society created the National Health Education Standards in 1995. Several objectives within this framework include drug use prevention and cessation. To attain goals stated within these national documents, monitoring drug use and investigating correlates of drug use are needed.

The National Institute of Drug Abuse (NIDA) and the Centers for Disease Control (CDC) continue to collect data pertaining to college students' alcohol use. Since 1975, the NIDH has endorsed the "Monitoring the Future Study" conducted by the University of Michigan's Institute for Social Research. This study monitors alcohol use among college students. The CDC developed the Youth Risk Behavior Surveillance System in 1990 to monitor health-risk behaviors among young persons. National, state, and local surveys have been conducted biennially since 1991. The CDC conducted the National Health-Risk Behavior Survey in 1995 for monitoring progress towards achieving the aforementioned national health objectives. Governmental agencies continue to support further monitoring of substance use and abuse among college students, and the investigation of correlates of substance use and abuse.

Lack of data on the relationship between satisfaction with life and drug use

Investigation into the correlates of substance use and abuse is necessary for prevention and cessation program efficacy. Although the literature includes numerous studies that investigate the relationships between demographic, socioeconomic and

psychosocial variables, and substance use and abuse, there is a scarcity of research investigating the relationship between satisfaction with life and alcohol use. Data collected within this study will aid in determining trends in drug use among college students, while identifying the relationship of satisfaction with life and frequency of alcohol use.

### **Delimitations**

The delimitations of this investigation were as follows:

1. This study was delimited to undergraduate students enrolled in Health 310 and Health 110 classes during the spring 2000 semester, and attending a state university located in the southeastern United States.
2. This study was delimited to the surveying of alcohol use among college students.
3. This study was delimited to measuring life satisfaction.
4. The measurement of the variable satisfaction with life was delimited to the usability of the instrument: Satisfaction with Life Scale (Diener et al, 1985).
5. This study was delimited to the period of time following spring break 2000.

## **Limitations**

The limitations of this investigation were as follows:

1. This study was limited by the fact that there was no control over the subjects' perception of satisfaction with life.
2. This study was limited by the fact that there was no control over the subjects' use or non-use of alcohol.
3. This study was limited by the fact that self-reported data are a function of the accuracy of recollection by each subject.
4. This study is limited by the fact that some subjects are asked to report on illegal activities.

## **Assumptions**

The assumptions made for this study were as follows:

1. Satisfaction with life could be measured.
2. Level of alcohol use could be measured.
3. The survey instrument used in the study was valid and reliable.
4. The participants would be honest in responding to the items.

## Definition of Terms

1. For the purposes of this study, scores obtained on the Satisfaction with Life Scale (Diener et al, 1985) determined satisfaction with life. Satisfaction with life may be broadly defined as the individual's perception of how content or satisfied they are with life as a whole. Satisfaction with life is a cognitive judgement of one's life both globally and with respect to specific life domains. Examples of life domains that may influence one's judgment are health, family, employment, wealth, and social status. Drawing upon current and past life events, subjects' use personal criteria for determining satisfaction with life.
2. For the purposes of this study, level of alcohol use was operationally defined by dividing the nine options from the drug use survey (Appendix B) into meaningful categories based on the observations recorded. The nine options were collapsed into four categories, "Never Used," "Low Use" (once/year, six/year, and once/month), "Moderate use" (2/month, 1/week), and "High Use" (3/week, 5/week, and daily). Further, the collapsed categories were assumed to have equal intervals for the purpose of this study.

## Summary

Chapter one identified the relationship between satisfaction with life and alcohol use among college students as the statement of the problem or focus of the study. Six null hypotheses were formed to guide the evaluation of the relationships. A need was established by revealing levels of and trends in use, governmental support, and a scarcity of information on the relationship between satisfaction with life and alcohol use in the literature. Basic assumptions pertaining to self-report questionnaires were discussed, limitations and delimitations of the study were revealed, and terms relating to the independent and dependent variables were operationally defined.

The remainder of the study is organized as follows:

Chapter II reviews related literature in content and methodology.

Chapter III describes the methodology and procedures used in the study.

Chapter IV consists of the data presentation.

Chapter V is a summary of the findings, along with conclusions and recommendations.

Chapter VI is the study in retrospect.

An introduction to the study has been completed in chapter one. Now that a focus and direction for the study has been established, the following chapter reveals the findings from an extensive review of the literature. Information ascertained during the completion of the following chapter assisted in the development of chapter three, methods and procedures.

## **CHAPTER II**

### **REVIEW OF THE RELATED LITERATURE**

The literature review consists of two main sections, literature related to the study in content and literature related to the study in methodology. For the purposes of this investigation, studies pertaining to the incidence of collegiate alcohol use and satisfaction with life were reviewed and presented in the “literature related in content” section of chapter two. Related methodological investigations were reviewed and presented in the latter portion of chapter two. The review of literature concludes with a review of an article related in both content and methodology that investigates the relationship of drug use and life satisfaction among college students. Along with providing justification for investigating the relationship of satisfaction with life and alcohol use among college students, the literature review aided in the synthesis of the research hypotheses and methodology used in the study.

#### **Literature Related in Content**

##### **Alcohol Use Among College Students**

Collegiate alcohol use has been monitored extensively through self-report surveys for decades. The ongoing collection of survey data has led to a synthesis of several national databases reporting alcohol and drug use among millions of college students. In



an attempt to be succinct in reviewing the most accurate, primary data sources on collegiate alcohol use, the review was completed using the following national databases: the Monitoring the Future Study (Johnson et al, 1998), the Core Alcohol and Drug Survey (Presley et al, 1998), the College Alcohol Study (Wechsler et al, 1998), the National College Health Risk Behavior Survey (Centers for Disease Control and Prevention, 1997), and the National Household Survey on Drug Abuse (United States Department of Health and Human Services, 1999). These five national databases are highly referenced throughout the literature, and provide the most recent comprehensive information on collegiate alcohol use. An overview of each survey's history, funding, and methodology precedes the presentation of corresponding data on collegiate alcohol use.

#### The Monitoring the Future Study

The Monitoring the Future program at the University of Michigan's Institute for Social Research has been funded by grants from the National Institute on Drug Abuse since 1975. Comprised of an ongoing series of annual national surveys, one of the many purposes of the program is to monitor prevalence and reveal trends of collegiate alcohol and drug use. Prevalence is tracked through an annual survey of 2,400 college students randomly selected from a national sample of 15,000 to 17,000 high school seniors originally participating in the study. The cohort of 2,400 college students participating in the follow-up study is divided into two groups, one group surveyed on the even and the other on the odd numbered year for seven follow-up surveys. For a more detailed

description of study design and overview refer to: National Survey Results On Drug Use From The Monitoring The Future Study, 1975-1997 Volume II (Johnson, O'Malley, and Bachman, 1998) or visit the web site at <http://monitoringthefuture.org>.

The history, longitudinal design, and twenty-five years of support from the U.S. Department of Health and Human Services gives the Monitoring the Future Study the distinction of being one of the most accurate and referenced data sources on trends in collegiate drug use. Results from the study are used in the White House strategy on drug abuse and for establishing national health goals. Results are also used to monitor progress towards goal #7 (safe, disciplined, and alcohol and drug free schools) of the congressionally mandated Education Goals 2000. The U.S. Department of Health and Human Services used data from the Monitoring the Future Program in their Midcourse Review (1996) of Healthy People 2000 goals and to aid the synthesis of Healthy People 2010 goals.

Johnson, O'Malley, and Bachman (1998) reveal dismal findings on trends in collegiate alcohol use. Despite the fact that the majority of college students who participated in the survey are under legal drinking age, 87.3% reported they have used alcohol, 82.4% reported using alcohol within the last year and 65.8% reported using alcohol within the last 30 days prior to the survey date. Most alarming was the increase in daily and heavy use. Daily use increased from 3.2% to 4.5%, and heavy use defined as having five or more drinks in a row over the two weeks prior to the survey date, increased from 38.3% to 40.7%. When 40.7% of the college population polled admits to "binge"

drinking and therefore relinquishing his/her ability to make healthy choices and sound decisions, it is logical to assume that violence, date rape, high-risk sexual behavior, and drunk-driving fatalities will follow. The trends in collegiate alcohol use reported in the most recent Monitoring the Future Study are shocking, and reveal a lack of progress toward the attainment of national goals.

#### The Core Alcohol and Drug Survey

The Core Alcohol and Drug Survey, managed by the Core Institute at Southern Illinois University-Carbondale, has been funded by the United States Department of Education's Fund for the Improvement of Postsecondary Education (FIPSE) since 1989. This granting agency FIPSE was given the responsibility to oversee administration of funds contained in the congressionally mandated Drug-Free Schools and Communities Act of 1986. In 1987 FIPSE held its first competition for prevention programs in higher education. An instrument selection committee was devised in 1989 to meet the need for identifying an instrument that would assist grantees in establishing baseline and trend data in alcohol and drug use among college students. After reviewing several existing instruments including the Monitoring the Future Survey, the Center of Disease Control's Youth Risk Behavior Survey (YRBS), and the precursor to the Harvard School of Public Health College Alcohol Study, the Instrument Selection Committee decided a new instrument was needed. The Core Alcohol and Drug Survey was created to assist

colleges and universities in evaluating the effectiveness of their substance abuse prevention programs.

The Core Drug and Alcohol Survey has been administered to over 800,000 students on 1400 college campuses. Data from these grantee institutions has been aggregated into the largest national database on substance use in post-secondary education (Presley, Leichliter, and Meilman, 1998). The process starts with the Core Institute dispatching surveys and the accompanying user's manual to participating FIPSE grantee and other institutions. Completed surveys are returned to the Core Institute where data is aggregated, and personalized reports are produced and sent back to the participating institutions. To date, the Core Institute has published national findings in four volumes of Alcohol and Drugs on American College Campuses released from 1993 through 1996. The most recent data is published in Alcohol and Drugs on American College Campuses: A Report to College Presidents (Presley, Leichliter, and Meilman, 1998). For a more detailed description of study design and overview refer to these monographs and/or visit the web site at <http://www.siu.edu/~coreinst/>.

Monographs published by the Core Institute, like reports from the Monitoring the Future Study, include categories of use such as prior year, prior thirty-day, and heavy use. Trends in prevalence of drug use and abuse in the Core Institute report are very similar to the Monitoring the Future Study, and just as discouraging. In Alcohol and Drugs on American College Campuses: A Report to College Presidents, Presley, Leichliter, and Meilman (1998) indicate that 84.2% of the students reported using alcohol within the last

year, and 71.4% reported using alcohol within the last 30 days prior to the survey date. These two categories increased 1.9% and 3.6% respectively, from the previous year. Moderate use, defined as drinking 6-19 times in the thirty days prior to the study, increased from 25.7% in 1996 to 30.4% in 1997. Heavy use, defined as having five or more drinks in a row over the two weeks prior to the survey date, increased from 40% in 1996 to 46.6% in 1997. The trends in collegiate alcohol use reported in the most recent report from the Core Institute are shocking, and reveal a lack of progress toward the attainment of national goals.

#### The College Alcohol Study

The Harvard School of Public Health College Alcohol Study (CAS), supported by a grant from the Robert Wood Johnson Foundation, collected data on substance use and abuse from a nationally representative sample of 116 colleges located in 39 states. In 1993, 15,103 college students completed surveys and in 1997 14,521 students completed follow up surveys. Henry Wechsler, the CAS director, and his colleagues have published several articles in professional journals from the CAS data, and have been covered in press releases several times within the last year, enlightening government agencies on the disturbing increases in "binge drinking" and smoking on college campuses. For more information on CAS and related publications refer to their website at <http://www.hsph.harvard.edu/cas/>.

Information on alcohol and drug use among college students in the CAS is similar to the data revealed in the previously reviewed Monitoring the Future Study and the Core Alcohol and Drug Survey. A slight decrease in the percentage of “binge” drinking was reported from 44.1% in 1993 to 42.7% in 1997, but this data indicates an extremely unhealthy pattern of use despite the national push to deter alcohol consumption on college campuses. Responses to three other questions designed to evaluate drinking styles revealed increases. The percentage of students who reported drinking on ten or more occasions within the last thirty days increased from 17.6% in 1993 to 20.4% in 1997. In 1993, 22.9% of the students reported being drunk three or more times in the last month and by 1997 the amount increased to 27.9%. The percentage of students reporting that they drank to get drunk increased from 39.4% in 1993 to 52.3% in 1997 (Wechsler et al, 1998). All three of these increases in drinking styles were statistically significant (.001). The most recent results on collegiate alcohol use from the CAS reveal discouraging trends in the dangerous behavior of heavy alcohol use.

#### The National College Health Risk Behavior Survey

The Centers for Disease Control and Prevention (CDC) developed the Youth Risk Behavior Surveillance System (YRBSS) in 1990 to monitor the priority health risks among young persons. Initially focusing on a younger population, the YRBSS conducted biennial national, state, and local school-based surveys of high school students since 1991 and a household-based survey in 1992 of a national sample of youth aged 12-21 years.

Acknowledging a need to monitor health risk behaviors of college students, a third component of the YRBSS, the National College Health Risk Behavior Survey (NCHRBS) was conducted in 1995. The NCHRBS is published in CDC Surveillance Summary 1997, 46 (SS-6). The full report may be reviewed and downloaded from CDC's website at <http://www.cdc.gov>.

A random sample of 4,838 students from 136 colleges and universities completed the 96-question survey. Of the college students surveyed, 89.9% reported using alcohol at least once in their lifetime, and 68.2% reported having at least one drink during the thirty days preceding the survey (CDC, 1997). As for episodic heavy drinking, also referred to as "binge drinking" in the aforementioned studies, 34.5 % of the students surveyed reported having five or more drinks on at least one occasion in the thirty days preceding the survey. Current frequent use, using alcohol twenty or more of the thirty days preceding the study, was reported by 4.2% of the students surveyed. Alcohol use, as reported in the aforementioned database reviews, is greater than desired national health goals and is alarmingly high.

#### The National Household Survey on Drug Abuse

The fifth and final database reviewed in this "literature related in content" section is the National Household Survey on Drug Abuse (NHSDA). Since 1971, the Department of Health and Human Services has surveyed the United States population to obtain national estimates of drug use. The Substance Abuse and Mental Health Services

Administration (SAMHSA) began managing the survey in 1992. The NHSDA collects data by administering questionnaires to the civilian, non-institutionalized population of the United States ages 12 and older. The most recent survey consisted of 25,500 persons, and data was collected from January through December 1998. For more detailed information refer to the SAMHSA website at [http:// www.samhsa.gov](http://www.samhsa.gov) where the report may be accessed electronically.

For the purposes of this study, the 18-25 year old group reported in the NHSDA was reviewed. Like the aforementioned databases, the NHSDA reports lifetime, prior year, and prior month use. Among 18-25 year olds, 83.2% of the subjects reported using alcohol at least once in their lifetime. Also reported in 1998, 74.2% of the subjects reported using alcohol within the year prior to the study. Participants who reported using alcohol within thirty days prior to the study increased from 58.4% in 1997 to 60% in 1998. The most shocking increases occurred in "binge" drinking. In 1997, 28% of the 18-25 year olds reported "binge drinking" at least once in the thirty days prior to the study, in 1998 this value increased significantly (.05) to 31.7%. Heavy alcohol use, defined as "binge drinking" on five or more occasions in the thirty days prior to the study, increased significantly (.05) from 11.1% in 1997 to 13.8% in 1998. Again, due to the misfortunes related to these drinking behaviors, this report on alcohol use is very discouraging.



## Satisfaction with Life Among College Students

Satisfaction with life has been measured extensively in the college population. For the purposes of this investigation, studies administering the Satisfaction with Life Scale (Diener et al, 1985) to college students were reviewed. Subjects responded to the five items by choosing from a seven-point Likert scale. Scores ranged from 5 to 35, twenty being neutral. Most studies reported mean scores above neutral and in the low to mid twenties. The literature indicates that the high majority college students report being “slightly satisfied” with life.

In 1985, Diener et al measured satisfaction with life using 176 undergraduate students. Mean score was 23.5, with a standard deviation of 6.4. The results indicate an average for the subjects in the “slightly satisfied” range.

Allison, Alfonzo, and Dunn (1991) administered the SWLS to two independent samples of college students. The first consisted of 65 female and 41 male undergraduate students, and the second sample consisted of 102 doctoral students. A mean of 23.6, standard deviation 6.2 was reported for the undergraduates, and a mean of 24.3 standard deviation 6.2 was reported for the doctoral students. Both samples reported averaging in the “slightly satisfied” range.

Pavot et al (1991) repeatedly measured satisfaction with life three times at two-week intervals using a sample of 84 female and 46 male students. Mean scores were 23.4, 25.4, and 24.7 with standard deviations of 6.5, 6.0, and 6.3 for times 1,2, and 3 respectively. All three averages lie in the “slightly satisfied” range.

Hunt (1993) measured satisfaction with life of 159 undergraduate students, mean age 20.3 years. Average item score for the 72 males and 87 females was 4.8 with a standard deviation of 1.4, indicating the total average being in the “slightly satisfied” range.

Pavot and Diener (1993b) administered the SWLS to 741 students who participated to complete an assignment for an introductory psychology class. Forty-one percent or 305 of the subjects were male and 435 were women. A mean score of 23.7, standard deviation 6.4, was reported.

Crocker et al (1994) reported scores from 238 students by racial categories. The mean score for Caucasians was 22.5, African American 22.0, and Asians 17.4, with standard deviations 5.5, 5.9, and 5.6 respectively. Mean score for the Asians is considerably lower than other studies have reported and in the “slightly dissatisfied” with life range. The other participants reported being “slightly satisfied” with life.

Lewis et al (1995) administered the SWLS to 165 female and 48 male undergraduate students in Northern Ireland. A mean score of 21.6, standard deviation 6.6, was reported. Students reported being just above “neutral” into the “slightly satisfied” with life range.

Blane and Crocker (1995) reported a mean score of 22.4, standard deviation 5.6, for 146 undergraduate students. Means and standard deviations for the 59 white subjects and 66 black subjects were 23.1, 5.3 and 21.7, 5.9 respectively.

Diener and Diener (1996) reported that 78% of the 130 respondents scored above 20 or “neutral” and in another study reported 63% of the 222 participants scored above “neutral.” These scores agree with earlier reports on satisfaction with life among the college population.

Alfonso et al (1996) reported a mean score for 302 student participants of 23.9, standard deviation 6.1. As in the majority of previously mentioned studies, this mean corresponds with the “slightly satisfied” range.

Fahey et al (1996) reported a mean score for 157 undergraduate students of 23.4, standard deviation 6.36, corresponding with being “slightly satisfied” with life.

Seybolt and Wagner (1997) evaluated the relationship between gender and satisfaction with life of 184 undergraduate students, therefore reporting a breakdown of mean scores according to gender. Satisfaction with life scores were essentially equal for the 49 males, mean 23.5, and 135 females, mean 23.6, with standard deviations being 6.3 and 7.3 respectively.

Pilcher and Ott (1998) administered the SWLS on three separate occasions to the same 75 subjects, 54 females and 21 males. Mean scores and standard deviations for repetitions 1, 2, and 3 were 25.6 (6.0), 25.7 (5.1), and 26.2 (5.2) respectively. These scores lie in the “satisfied” with life range.

The thirteen studies reviewed for the purpose of ascertaining an estimate of satisfaction with life among college students included several thousand participants. The lowest mean score reported was 17.4, and was the only mean score below 20 or “neutral.”

The highest mean score reported was 26.2, corresponding with “satisfied.” In describing normative data Pavot and Diener (1993, page 165 ) indicate, “ the means on the SWLS which fall in the “slightly satisfied” to “satisfied” range for most groups appear to reflect the widely replicated finding that nonclinical samples are above the neutral point in SWB.” The high majority of studies reviewed above reflect the claim that most college students are “slightly satisfied” to “satisfied” with life.

### **Literature Related in Methodology**

#### **Self-report Studies Investigating Collegiate Drug Use**

An extensive amount of studies using self-report survey to examine alcohol use among college students have been published in the literature. Direct methods like urine, blood, and Breathalyzer tests are costly, not practical, and infringe on students’ rights, therefore self-report survey is by far the most common form of methodology used to monitor collegiate drug use. For the purpose of this investigation, self-report survey studies investigating the relationship of alcohol use and other variables were reviewed. The review of methodology used in these studies assisted in the development of methods and procedures included in Chapter III.

## National Database Publications Using Self-report Survey

Johnson and his associates at University of Michigan's Institute for Social Research have monitored collegiate drug use through a series of ongoing self-report surveys since 1975 (Johnson, O'Malley & Bachman, 1998). A multi-stage random sampling procedure selects a nationally representative sample of 2,400 subjects taken from 15,000 to 17,000 high school seniors attending 125 to 145 public and private schools. Local Institute for Social Research representatives administer the questionnaires in classrooms during normal class periods or when appropriate in larger group settings. The proctor followed procedures stated in a standardized manual. Participants were mailed questionnaires biennially for seven follow-up sessions. Starting at age 35, participants complete the self-report survey every five years.

In the most recent of a series of reports to college presidents, Presley et al (1998) indicate that the Core Alcohol and Drug Survey had been administered to over 800,000 students at 1,400 post-secondary institutions. A committee of grantee institutions from the United States Department of Education's Fund for the Improvement of Post-secondary Education developed the self-report survey to provide information on collegiate alcohol and drug use. The 1998 report to college presidents was based on data from a nationally representative sample of 93,679 students from 197 institutions, which were administered questionnaire surveys in 1995, 1996, and 1997. School representatives, following guidelines in a manual provided by the Core Survey Institute,

administered questionnaires in classrooms during normal class periods or when appropriate in larger group settings.

Wechsler et al (1998) reported 15,103 students in 1993 and 14,251 in 1997 completed a drug use survey questionnaire. Subjects were randomly selected from 140 nationally representative colleges. Participation was voluntary and subjects' responses were anonymous. Questionnaires were mailed out, and participation was encouraged by cash reward.

In 1995 the National College Health Risk Behavior Survey (Centers for Disease Control, CDC) was administered to 4,609 randomly sampled undergraduate college students from a nationally representative sample of 136 institutions. The CDC developed the survey to monitor priority health-risk behaviors, like drug use, among college students. The questionnaire was mailed out to the participants, and responses were voluntary and confidential. Upon receiving the questionnaires, corresponding names and addresses were deleted to assure confidentiality.

The Department of Health and Human Services administered the National Household Survey on Drug Abuse to obtain estimates of drug use in the United States. Since 1971, the survey has monitored drug use in the United States by having a national representative random sample of participants complete a questionnaire in their home. In 1998, 25,500 persons completed the survey. Due to funding and program expansion, the sample size was increased to 70,000 in 1999. The self-report questionnaire was mailed out and completed on a paper and pencil scan sheet.

## Self-report Survey Studies Investigating Relationships With Collegiate Drug Use

Kosson and Steuerwald (1994) administered a survey containing 47 questions to obtain demographic information, and to compare drug use, antisocial behavior, and family conflict. A sample of convenience consisting of 241 undergraduates enrolled in an introductory psychology class at Indiana University was selected for the study. Subjects received extra credit for participation in the study. Informed consent forms were completed prior to the survey and subjects remained anonymous.

For data analysis purposes, subjects were divided into low and high socialization groups by gender. Data were analyzed using Chi-square tests and statistical significance was set at .005. A statistically significant difference between low socialization and high socialization was reported for prior use of barbiturates, hallucinogens, and stimulants but not for prior alcohol or marijuana use.

Kosson and Steuerwald (1994) replicated the first study in a different geographic region using correlational statistical analysis rather than dichotomizing the data in low and high socialization groups. A self-report survey containing 27 questions was used to obtain demographic information, and to compare drug use, antisocial behavior, and family conflict. A sample of convenience consisting of 206 undergraduates enrolled in an introductory psychology class at University of North Carolina at Greensboro was selected for the study. Subjects received extra credit for participation in the study. Informed consent forms were completed prior to the survey and subjects remained anonymous.

Data were analyzed using Spearman rank-order correlations and statistical significance was set at .005. Statistically significant (.001) negative correlations were reported for relationships between antisocial behavior, and alcohol and marijuana use for both genders.

Moore et al (1996) administered a questionnaire that included drug use, self-esteem, and cultural norms surveys to a convenience sample of 1,226 freshmen enrolled in a general physical education class at a medium-sized state university located in the Midwest. A cover sheet explained the nature of the study, types of questions, and that responses were anonymous and completely voluntary. Questionnaires were completed in class during regularly scheduled class meetings.

Kashubeck and Mintz (1996) administered a demographic and drug use questionnaire, and instruments to measure eating and alcohol disorders to a convenience sample of 219 female students enrolled in an introductory psychology class. Subjects earned extra credit for participation. Questionnaires were completed in groups ranging from 30 to 60 students. Upon completion, participants were informed of the nature and purpose of the study.

Pearson product-moment correlation analysis was used to determine the relationship between eating disorder variables and problematic alcohol use. Only one of the eight correlations, problematic alcohol use and bulimia, was significant. A canonical correlation was used to determine the relationship between eating disorder symptomology and drug use. One of the seven possible canonical roots produced by the analysis was



significant therefore follow up regression analyses were conducted to predict drug use from eating disorders. The seven regression analyses were not significant.

Poulson et al (1998) administered a survey containing 88 questions pertaining to drug use, sexual behavior, and religious orientation. A sample of convenience consisting of 210 undergraduates at a large public university located in southeast United State was selected for the study. Volunteer student proctors administered the questionnaire to ten participants. Informed consent forms were completed prior to the survey. Participants were read a summary of the purpose of the study, and told the responses were anonymous. Participants were instructed to place the questionnaire in a sealed envelope and hand it to the student proctor.

Alcohol consumption was positively correlated with risky sexual behavior (.001), and negatively correlated with religious beliefs (.004). Differences in gender were reported for the relationships between variables. For males the relationship between alcohol consumption and risky sexual behavior was significant (.009). For females, alcohol consumption was negatively correlated (.001) with religious beliefs and positively correlated (.02) with risky sexual behavior.

Plucker and Dana (1998) examined the relationship between drug use and creative achievement of 176 undergraduate students attending a large public university in the northeastern United States. Fifty of the participants had committed a minor drug related offense, and the remaining 126 were enrolled in an introductory psychology class and received credit for participation.

Statistical analysis was calculated separately for both groups. Since no practical differences were noted, data were combined to enhance statistical power. The relationship between alcohol, marijuana, and tobacco use and creative achievement was not statistically different for the users and lifelong abstainers. A significant (.01) negative correlation between creativity and alcohol use frequency in the last week was reported, but frequency of marijuana use in the last month and year was directly correlated (.05) with creativity.

Alva (1998) compared the alcohol use patterns and beliefs of 1,901 "Greek" and "non-Greek" undergraduate students from four campuses of a large public university system in California. Participants were randomly selected. To measure alcohol use, trained proctors administered the Core Alcohol and Drug Survey (Presley et al, 1989) in general education classes.

A significant difference (.001) in weekly alcohol use was reported using t-tests, and Chi-square analysis revealed a significant difference (.0001) in monthly use. In both cases, fraternity and sorority members reported higher alcohol use than non-members. Fraternity members reported using significantly (.0001) higher levels of alcohol than sorority members did.

Simons et al (1998) investigated drug use motives using a convenience sample of 299 students enrolled in an introductory psychology class. Subjects earned extra credit for participation. Questionnaires were number coded, and participants were instructed to omit names to ensure confidentiality. Informed consent forms were completed prior to

the study. Upon completion, participants were informed of the nature and purpose of the study and were provided with a list of local resources for helping with substance abuse. Marijuana motives were significant predictors of marijuana use.

Staton et al (1999) investigated the relationship of adolescent substance use and HIV risk among 19-21 year olds. An initial sample of 2,071 sixth graders in the Lexington, Kentucky School system was administered a drug use questionnaire in sixth through tenth grade. Subjects within this cohort that participated in at least three of these testing periods were selected to participate in the study examining HIV risk and drug use, while attending college. These 1,429 college students were mailed questionnaires with a consent form. Respondents were paid fifteen dollars for participating. A total of 952 subjects were used for data analysis. Female frequent users engaged in sexual activity at age 14, experimenters at age 15, and abstainers at age 16. Male frequent users initiated sex earlier than abstainers, and had more sex partners and used drugs prior to sex more than experimenters.

Page et al (1999) investigated the relationship between estimation and participation of binge drinking among 725 students enrolled in an introductory English class. Trained graduate students administered the questionnaire during regularly scheduled class. Students were told that participation was voluntary and responses were confidential. The nature and purpose of the study was explained prior to handing out questionnaires.

The difference in perception and reporting of binge drinking was evaluated using t-tests. Reported binge drinking was 49.5% for males and 28.1% for females, but estimation of male binge drinking was reported at 65.5% and female at 54.8%. Participants overestimated the amount of binge drinking on campus, and therefore did not have an accurate perception of alcohol abuse.

### Self-report Studies Investigating Collegiate Satisfaction With Life

For the purposes of this investigation, self-report survey studies investigating the relationship of satisfaction with life and other variables were reviewed. The following is a review of the data collection and analysis used in these studies. Information reported in the following "literature related in methodology" review assisted in the development of methods and procedures included in Chapter III.

Hunt (1993) administered the SWLS to a convenience sample of 159, 72 male and 87 female, undergraduates attending the University of Pennsylvania. Mean age was 20.3 years. The Students were approached in classes and on campus, and were offered \$5 or the chance to enter a lottery if they volunteered for the study.

Signed consent was obtained from the subjects on a form indicating the purpose of the study. Participants were tested two ways, individually and in small groups. The questionnaire packet was handed out and subjects were directed to follow instructions listed on each page. As the packets were collected from each subject, the proctor thanked them and explained the hypotheses of the study.

A Pearson correlation matrix, one-way analysis of variance, and stepwise regression were used in the statistical analysis. The study investigated the relationship of instrumental and expressive traits on a composite score of well-being. Results indicate that expressive traits do predict well-being just as well as instrumental traits.

Crocker et al (1994) administered the SWLS to a convenience sample of 91 Black, 96 White, and 35 Asian students attending a large Northeastern university. Subjects were recruited from a list of students in a psychology department pool, and received credit in an introductory psychology course for participation. Other subjects responded to advertisements posted on campus, and were offered \$5 for participation in the study.

Signed consent was obtained, subjects were informed of the purpose of the survey and that they would be required to complete a questionnaire packet. Participants were informed of their rights to refuse to answer any question and/or withdraw from the study at any time. Subjects were told that responses were completely anonymous. Subjects completed the packets in groups of 4 to 12. The relationship between collective self-esteem and well-being was determined using analysis of variance. Results indicate the collective self-esteem was moderately correlated  $.37 (.01)$  with life satisfaction.

Blaine and Crocker (1995) administered the SWLS to a convenience sample of 66 Black, and 59 White undergraduate students attending State University of New York at Buffalo. Subjects were recruited from a list of students in a psychology department pool, and were given course credit for participation.

Signed consent was obtained, subjects were informed of the purpose of the survey and that they would be required to complete a questionnaire packet. Participants were informed of their rights to refuse to answer any question and/or withdraw from the study at any time. Subjects were told that responses were completely anonymous. Subjects completed a questionnaire packet consisting of background and demographic information survey and other instruments for measuring religiosity, collective self-esteem, and well-being.

Statistical analysis was completed using multivariate analysis of variance, and zero-order correlation. Among whites religiosity and satisfaction with life were unrelated. A statistically significant relationship between religious belief .33 (.01) and satisfaction with life, along with religious participation .29 (.05) and satisfaction with life was reported for the 66 black subjects.

Fahey et al (1996) administered the SWLS to a convenience sample of 157 undergraduates, 58 male and 99 female, attending Northern Kentucky University. Mean age was 20.8 years. Subjects were enrolled in either an introduction or an upper division psychology course, and received credit in the course for participation.

Signed consent was obtained from the subjects on a form indicating that all data would be kept strictly confidential. To ensure anonymity, sheets were identified by number only. The proctor explained the purpose of the study after the packet was completed.

Pearson correlation between SWL and age was  $-.20 (.05)$  and the Pearson correlation between SWL and health value was  $.10 (.05)$ . A 2x2 analysis of variance was conducted to examine the effects of health value and age on satisfaction with life. The interaction between age and rated health value was significantly associated with life satisfaction. A significant main effect was for health value ( $.001$ ), but not for age.

Seybolt and Wagner (1997) administered the SWLS to 182 undergraduates, 135 female and 49 male, mean age 19.5 years. A sample of convenience was selected from students enrolled in psychology classes who were awarded credit for participation in the study. Subjects completed the questionnaires in a group setting.

A multiple linear regression was performed using satisfaction with life as the dependent variable and self-reinforcement, gender role, and sex as independent variables. Significant main effects were found for gender role ( $.05$ ) and self-reinforcement ( $.001$ ). A bivariate correlation was performed, and the association between satisfaction with life and self-reinforcement was  $.47 (.001)$ .

Plicher and Ott (1998) administered the SWLS to 75 undergraduates, 54 female and 21 male, mean age 18.9 years. A sample of convenience was selected from students enrolled in two introductory psychology classes who were awarded extra credit for participation in the study. The procedure was described to the subjects at the beginning of the study, and the completed informed consent forms. Directions for the self-report surveys were read aloud to the participants.

The SAS program was used to carry out all statistical analysis. A Pearson correlation was performed to calculate the relationships between measure of sleep and satisfaction with life. Sleep quality and mood states were significantly related, but not sleep quality with satisfaction with life.

In summary, all studies used a convenience sample of undergraduates for participants, and most studies consisted of students enrolled in an introductory psychology class. Sample sizes ranged from 75 to 182 and mean age ranged from 18.9 to 20.5 years. In most occasions researchers reported awarding extra credit or money to entice participation.

Participants completed informed consent forms, and were informed of subjects' rights in most studies reviewed. Confidentiality was assured in some studies, and others it was not. On some occasions researchers intentionally waited until completion of the questionnaire packet to explain the purpose of the study. Analysis of variance, multiple analysis of variance, and Pearson correlation were common statistical analyses used to evaluate the relationship of satisfaction with life and other variables.

### **Literature Related in Content and Methodology**

#### **Drug Use and Satisfaction with Life Among College Students**

Clifford et al (1991) evaluated the relationship of drug use and life satisfaction among 683 college students attending a large university located in southwestern United



States. The mean age was 22.2 years, 417 were female, 252 were male, and 14 had missing data. A sample of convenience was used in the study. Participants were enrolled in an undergraduate health elective class.

Life satisfaction and drug use were measured using self-report survey.

Participants were informed that responses to survey items were completely anonymous.

A modified version of the National Institute on Drug Abuse Monitoring the Future Survey was used to measure drug use. Life satisfaction was measured by summing scores from responses to satisfaction with various life domains. Single phrases like “educational experiences” or “friends and associates” measured the degree of perceived satisfaction with life domains such as school and social life.

A polynomial multiple regression analysis was used to evaluate the relationship of drug use indices, independent variable, and the life satisfaction, the dependent variable. The regression procedure produced a significant curvilinear relationship.

Clifford et al (1991) suggest that this curvilinear relationship appears reasonable in that small amounts or “social use,” not misuse of drugs, may actually increase one’s reported life satisfaction because drug usage is often associated with socialization and having fun. Abstinence may be associated with a rigid lifestyle and/or a health problem that precludes drug use. Drug abusers may experience depression as a direct result their drug behavior, or may be using drugs to alleviate psychological or physiological pain.

Clifford et al (1991) recommend additional research focusing on the relationship between specific forms of drug use and life satisfaction. It is suggested that since drug-

taking behaviors and life satisfaction were significantly related it would be prudent for prevention strategies to address perceived life satisfaction among college students.

### Summary

Levels of collegiate alcohol use are alarmingly high, and fail to meet Healthy People 2000 and National Drug Control Strategy goals of reduction in use. The 1999 report, to congress by the Office of National Drug Control Policy states on pages 14 and 15, "there continues to be a serious problem with drug use among youth," and reports an increase in marijuana use, with alcohol and tobacco use being "statistically unchanged."

Increased trends in use have been reported throughout the literature review. "Binge drinking" increased from 38.3% in 1996 to 40.7% in 1997 (Johnson, O'Malley, and Bachman, 1998) and from 40% in 1996 to 46.6% in 1997 (Presley, Leichliter, and Meilman, 1998). Students reporting "drinking to get drunk" increased from 39.4% in 1993 to 52.5% (.001) in 1997 (Wechsler et al, 1998). The trends in alcohol use clearly indicate a need for more prevention and cessation research.

The review of satisfaction with life reported the lowest mean score as 17.4, the only one below a "neutral" score of 20. The highest mean score reported was 26.2, and most studies reported means between 20 and 25. Pavot and Diener (1993, page 165) indicate, "the means on the SWLS which fall in the slightly satisfied to satisfied range for most groups appear to reflect the widely replicated finding that nonclinical samples are

above the neutral point in SWB.” The high majority of studies reviewed in Chapter II reflect the claim that most college students are “slightly satisfied” to “satisfied” with life.

A sample of convenience, usually undergraduate students enrolled in an introductory psychology class that were receiving credit for participation, was the common method of sample selection. Self-report survey was the data collection method used to measure both drug use and life satisfaction. Procedures included completing consent forms, reading directions aloud, and explaining that participation is voluntary and responses were anonymous. Questionnaires were usually completed during regularly scheduled class meetings in small groups. If mailed, the questionnaire packet included a consent form, description of the study, subject’s rights, and directions.

An extensive data base literature search produced one study related in content and methodology, indicating a need for investigating satisfaction and drug use. Clifford et al (1991) used self-report survey to evaluate the relationship between drug use and life satisfaction among 683 college students enrolled in an undergraduate health elective class at a large university. A sample of convenience was used in the study. Informed consent was obtained and responses were anonymous. A significant curvilinear relationship was reported, indicating that “social use” was associated with higher levels of life satisfaction. The focus should be on diminishing drug misuse, and enhancing life satisfaction. Clifford et al (1991) recommend additional research focusing on the relationship between specific forms of drug use and life satisfaction.

## **CHAPTER III**

### **METHODOLOGY**

The purpose of the investigation was to determine the relationship between alcohol use and satisfaction with life among students attending a large, Land Grant University located in the southeastern United States. The following null hypotheses were developed to address the purpose of the study.

One: No relationship exists between satisfaction with life, and frequency of alcohol use.

Two: No difference in class standing exists for the relationship between satisfaction with life, and frequency of alcohol use.

Three: No difference in ethnicity exists for the relationship between satisfaction with life, and frequency of alcohol use.

Four: No difference in gender exists for the relationship between satisfaction with life, and frequency of alcohol use.

Five: No difference in living arrangement exists for the relationship between satisfaction with life, and frequency of alcohol use.

Six: No difference in social fraternity or social sorority membership exists for the relationship between satisfaction with life, and frequency of alcohol use.

Procedures used in the study to test the aforementioned hypotheses are identified in chapter three. The population is defined, and sample selection procedures are described. Data collection, including a description of instrumentation and survey administration, and data analysis are revealed.

### **Population**

The population was defined as students attending the University of Tennessee-Knoxville and enrolled during the spring 2000 semester.

### **Sample Selection**

A sample of convenience was selected from students enrolled in Health and Safety Sciences classes during the spring 2000 semester. Students enrolled in the general elective health courses were utilized in the investigation. Nine sections, consisting of 216 students completed the questionnaire packet. These sections were chosen because they were comprised of students from upper and lower division Introductory Health and CPR/First Aid elective classes. Given the time and financial constraints, this sample provided the most accurate representation of the population.

## Instrumentation

The Satisfaction with Life Scale (SWLS) (Diener and Pavot, 1985) and drug use survey, question #17 from the Short Form of the Core Alcohol and Drug Survey Questionnaire (Presley et al, 1998) were used to collect data for evaluating the relationship between satisfaction with life, and alcohol use among college students. The following information on the development of the survey, including reliability and validity, substantiate the usability of the SWLS and the drug use survey for a collegiate population.

### The Satisfaction with Life Scale

The Satisfaction with Life Scale (Diener and Pavot, 1985) (Appendix C) was used to measure subjects' satisfaction with life as a whole. The SWLS consists of five items. For each item the participant selects one of seven responses ranging from strongly disagree, a value of one point, to strongly agree, valued at seven points. Scores for the scale range from five to thirty-five, twenty being the neutral point on the scale. Composite scores for the five items between 5-9 are indicative of being extremely dissatisfied with life, 10-14 dissatisfied, 15-19 slightly dissatisfied, with corresponding descriptors for the satisfied or higher degrees of satisfied scores.

The SWLS was designed to measure global life satisfaction, therefore measuring the respondent's experience level of life satisfaction rather than measuring his/her life

satisfaction in terms of objective criteria such as health, wealth, familial and social status.

In choosing responses to the items, the participant could or was able to evaluate or weigh his/her satisfaction with life as a whole by using individualized criteria, past or present life experiences, and various feeling states. The SWLS measures the participant's cognitive judgement of his/her individual life satisfaction. Being a self-report survey with items addressing a global perception about satisfaction with life, the SWLS is appropriate for measuring the individual's experience level of life satisfaction.

#### Validity and Reliability of the SWLS

To establish the usability of the Satisfaction with Life Scale, studies designed to investigate the validity and reliability of the scale have been included in the following instrumentation review. The following studies indicate high reliability .82 to .90 coefficient alpha and test-retest, and statistically significant, moderate to high correlation values for convergent and discriminant validity. Factor analysis demonstrated that the SWLS measures a single construct, and that life satisfaction accounted for 85% of the variation between items.

In reporting the development and validation of the SWLS, Diener et al (1985, page 71) claim, "the SWLS is shown to have favorable psychometric properties including internal consistency and high temporal reliability." Data from 176 undergraduates at the University of Illinois enrolled in an introductory psychology class indicated test-retest correlation coefficient of .82 and a coefficient alpha of .87. These coefficients

demonstrate good internal consistency and reliability. Factor analysis revealed that a single factor accounted for 66% of the variance, indicating that the instrument leaned towards measuring a single construct.

To evaluate the relationship between the SWLS and other well being measures, a different sample of 163 college students (sample 2), along with the aforementioned 176 (sample 1), completed a battery of subjective well-being measures. Diener et al (1985, page 73) state, " in both samples there are moderately strong correlations with all the subjective well-being scales except the AIM, which is the measure of the intensity of emotional experience." Positive, statistically significant correlations between SWLS and subjective well-being measures include: Fordyce percent happiness scale .58 (sample 1) and .62 (sample 2), Campbell semantic differential .75 and .59, and the Andrew and Whitney's scale .68 and .62, all showing good concurrent validity. Using 53 elderly persons in a third study, Diener et al (1985) reported a statistically significant correlation of .43 between trained interviewers and the SWLS, and a significant correlation of .46 between the Life Satisfaction Index and the SWLS.

Pavot et al (1991) designed two studies to provide further validation of the SWLS. The first study included 39 older persons from the Champaign-Urbana, Illinois area. An average coefficient alpha of .83 was reported, showing high internal consistency. Factor analysis revealed that a single factor accounted for 66% of the variance, indicating that the instrument appears to be measuring a single construct. All correlations with other measures of life satisfaction were significant at the .01 level or beyond except for one



correlation being significant at the .05 level. Correlations for some of the relationships between SWLS and other life satisfaction measures include, Fordyce scale .68, and the Life satisfaction Index-A .81. Pavot et al (1991, page 155) summarize, "the SWLS demonstrated good convergent validity, not only when compared with relatively similar measures of satisfaction with life, but also when paired with daily satisfaction with life and with a peer measure."

A second validation study reported by Pavot et al (1991) included 136 college students where test-retest correlations were .84 after both two weeks and one month, and the average coefficient alpha was .85, showing good internal consistency and reliability. Factor analysis revealed that a single factor accounted for 74% of the variance, indicating that the instrument appears to be measuring a single construct. The correlation between self and family-reported life satisfaction was .57 (.001), indicating stability and that momentary feelings or events do not overly influence the participant's global view of life satisfaction.

Lucas, Diener, & Suh (1996) conducted three separate studies using 212, 109, and 172 college students as participants to examine both convergent and discriminant validity, and reliability of the SWLS. Participants completed a questionnaire packet consisting of personality and subjective well-being scales, and followed a test-retest procedure. Coefficient alphas for study one were .84 for time one and .87 for time two, for study two .82 and .82, and for study three .88 and .90, revealing high internal consistency and reliability. Lucas, Diener, & Suh (1996, page 120) report on the validity of the SWLS,

“all three studies convergent validity coefficients were significant (.01) and all but two were above .40.” Moderate to very good evidence of discriminant validity of two comparisons was also reported: life satisfaction from positive and negative affect, another subjective well-being measure, and life satisfaction from optimism and self-esteem. This indicates that the SWLS is a valid instrument, and tends to measure a single construct, satisfaction with life.

Pavot and Diener (1993b) administered the SWLS and other self-report measures of subjective well-being, to 741 college students at the University of Illinois. The results were compared to peer-report of life satisfaction to determine the effect of current mood on self-report of global life satisfaction. Internal reliabilities were computed and a Cronbach's Alpha of .85 was obtained for the SWLS. The measures between self and peer-report of satisfaction with life were significantly correlated in a positive direction, indicating convergent validity. The authors concluded that researchers should be confident that single-item measures of life satisfaction have good reliability and validity, but suggest using multiple measures because of increased reliability and less variability due to item placement.

Alfonso et al (1996) reported on the development and psychometric properties of the Extended Satisfaction with Life Scale (ESWLS). The ESWLS expands on the SWLS by adding seven additional sub-scales pertaining to specific domains. Reliability calculations for 301 college students who completed the SWLS portion of the ESWLS were coefficient alpha .89 and test-retest of .83. Significant correlations (.05), ranging

from .28 to .63 between the SWLS and all other sub-scales in the ESWLS, indicate good convergent validity. Factor analysis loadings for the SWLS ranged from .67 to .88 and were statistically significant (.05), indicating the measurement of a single construct.

Shevlin and Bunting(1994) assessed the dimensionality of the SWLS by using a single-factor confirmatory analysis, and Lewis et al (1995) replicated the previous study using a larger sample size of 213 college students. A single-factor model permitted a test of whether the variation in items can be explained by a single factor, global life satisfaction, rather than a specific domain. Using data from 96 college students, Shevlin and Bunting (1994, page 1317) reported, “almost 85% of the observed variation between the items can be accounted for by the ‘life-satisfaction’ factor.” Lewis et al (1995) refined the analysis and used a larger sample of 213. An equivalent coefficient of determination, also showing that life satisfaction accounted for 85% of the variance in the items, was reported. These two studies provide further evidence for the claim that the SWLS measures a single construct.

Diener and his associates designed the SWLS based on the belief that one must ask the individual for a global judgement of their life, not specific domains or objective measures, in order to evaluate the construct of satisfaction with life. Item #3 of the Satisfaction with Life Scale (Diener and Pavot, 1985) (Appendix C) states, “I am satisfied with life.” The five-item scale is succinct in asking about the subjects overall judgement of life satisfaction. Considering the aforementioned studies, face or content validity is evident. The SWLS’s brevity is another asset. Adding items and words would enhance

the tendency to evaluate specific domains like job, relationship, and economic satisfaction, and the short test duration encourages accuracy in self-report. The SWLS has been used extensively on college populations from its initial development to the recent past (Diener et al, 1985; Pavot et al, 1991; Hunt, 1993; Pavot and Diener, 1993; Shevlin and Bunting, 1994; Crocker et al, 1994; Blaine & Crocker, 1995; Lewis et al, 1995; Alfonzo et al, 1996; Lucas, Diener & Suh, 1996; Diener & Diener, 1996; Fahey et al, 1996; Seybolt & Wagner, 1997; and Pilcher and Ott, 1998), and normative data are available. Because of its demonstrated reliability and validity, and its frequency of use with college populations, the SWLS is usable and appropriate for this investigation.

#### The Drug Use Survey

Alcohol use was evaluated using question #17 from the Short Form of the Core Alcohol and Drug Survey Questionnaire (Presley et al, 1998). The question is, “within the last year how often have you used...”; alcohol, marijuana and tobacco complete the sentence, making three separate questions. Subjects choose from nine options ranging from “never” to “every day.” Subjects reported on alcohol, marijuana, and tobacco use but only alcohol use was used in the statistical analysis.

The Core Alcohol and Drug Survey Questionnaire (Presley et al, 1998) has been administered to over 800,000 college students at 1,400 schools. In establishing content-related validity for test construction, a panel reviewed each item and an inter-rater agreement threshold of .90 was reported. Using the Spearman rank correlation coefficient

and the phi correlation coefficient, the Core Survey has been shown to be a stable, reliable instrument (Presley et al, 1996). Question #17 from the survey was designed to measure collegiate drug use, is succinct and easily understood by the college population, and therefore appropriate for this study.

### **Data Collection**

Participants were given a packet of materials consisting of the demographic and drug use survey questionnaire (Appendix B), the Satisfaction with Life Scale (Appendix C) instrument, and an envelope. The packets were completed in one sitting, during a regularly scheduled health class. Due to the lack of need for identifying each participant and the sensitivity of the drug use questions, total anonymity was required. Participants were informed of subjects' rights and total anonymity by the proctor, and through written explanation in the Information Sheet (Appendix A). Directions were read aloud to the class. Students were informed that their participation was voluntary and they may choose to drop out at any time.

### **Data Analysis and Tabulation**

The questionnaires were visually inspected for adequate completion. Incomplete surveys and those including any reference to the identity of the respondent were

disregarded and not used in the statistical analysis. Surveys were numbered for identification and data were entered into a Microsoft Excel spreadsheet for statistical analysis.

### **Statistical Analysis**

A correlation was used to determine the overall, general relationship between alcohol use and satisfaction with life. Since interval and ordinal data were used in the analysis, Spearman's rho was used to determine the correlation (Champion, 1981; Garson, 2000). In both ordinal and interval levels of measurement, it is assumed that samples are independent and mutually exclusive of one another. The ordinal level of measurement contains the classification properties of the nominal scale, and also implies that a rank-order or graded classification according to a low to high arrangement exists. The interval level of measurement contains all classification properties of both the nominal and ordinal scales, and also provides equal spacing between numbers. Analysis of variance was used to evaluate differences in mean satisfaction with life scores between the levels of alcohol use. Analysis of variance was used to evaluate the relationship between alcohol use and satisfaction with life by class standing, ethnic origin, gender, living arrangement, and social fraternity or social sorority membership. The appropriate post-hoc analyses were used when statistical significance was found. The Statistical Package for Social Sciences Research (SPSS) was used for data analysis.

## **Summary**

The population was defined as students attending the University of Tennessee-Knoxville during the spring 2000 term. A sample of convenience, consisting of 216 students enrolled in general elective health classes during the spring 2000 semester was used in the study. Subjects completed a self-report, demographic and drug use survey questionnaire, and the SWLS during regularly scheduled classes. Now that the methodology for the study has been identified, the following chapter, Chapter Four reveals the analysis of the data. Characteristics of the sample, frequency of alcohol use, and satisfaction with life scores are presented. The results from the statistical analysis of the hypotheses are displayed in tables and revealed in text in the following chapter.

## **CHAPTER IV**

### **ANALYSIS OF THE DATA**

#### **Introduction**

The purpose of the study was to evaluate the relationship of alcohol use and satisfaction with life among college students. Data were collected by administering a paper-and-pencil survey to students enrolled in general elective health classes during the Spring 2000 semester. Two hundred and sixteen students were used in the analysis. Findings from the analysis of the data are presented in the following chapter. Characteristics of the sample are presented first, followed by descriptive statistics of alcohol use and satisfaction with life. Tests of significance in the relationship of alcohol use and satisfaction with life are presented next, and the chapter concludes with a summary.

#### **Characteristics of the Sample**

##### **Age**

As required by the Human Subjects review, only those students 18 years of age or older participated in the study. A high majority, 97% or 209 of the subjects were between 18 and 25 years of age. Only 6 participants were older than twenty-five. Table 4-1 presents a distribution of the sample by age.



**Table 4-1**

**Distribution of Sample by Age**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18	16	7.4	7.4	7.4
	19	52	24.1	24.2	31.6
	20	38	17.6	17.7	49.3
	21	42	19.4	19.5	68.8
	22	40	18.5	18.6	87.4
	23	16	7.4	7.4	94.9
	24	4	1.9	1.9	96.7
	25	1	.5	.5	97.2
	26	1	.5	.5	97.7
	30	1	.5	.5	98.1
	34	1	.5	.5	98.6
	35	2	.9	.9	99.5
	48	1	.5	.5	100.0
	Total	215	99.5	100.0	
Missing System		1	.5		
Total		216	100.0		

## Gender

The sample was comprised of 125 females or 57.8% of the total sample, and 91 males or 41.2% of the total sample of 216. The number of females participating in the study is higher than the number of males, however this difference in gender representation is not great enough to effect statistical analyses. Adequate observations for statistical analyses have been reported for each category.

## Ethnic Origin

Three of the 216 participants did not report on ethnicity, therefore a total of 213 subjects were reported. A high majority, 91.5% or 195 of the subjects reported being White. Twelve of the subjects or 5.6% reported being African American. Three of the subjects or 1.4% reported being Asian/Pacific Islander. Two of the subjects or .9% reported being Hispanic, and one subject reported other. Table 4-2 presents a distribution of the sample by ethnicity origin.

## Class Standing

Fifty-three or 24.5% of the subjects reported being freshmen. Forty-two or 19.4% of the subjects reported being sophomores. Forty-five or 20.8% of the subjects reported being juniors. Seventy-three or 33.8% of the subjects reported being seniors. Three subjects reported being other. This class standing distribution resembles the distribution for the population. The distribution of percentages for class standing in the Fall 1999

Term were approximately 30% freshmen, 20% sophomores, 20% juniors, and 28% seniors (Office of Institutional Research University of Tennessee, available online at [web.utk.edu/~oira](http://web.utk.edu/~oira)). Table 4-3 presents a distribution of the sample by class standing.

**Table 4-2**

**Distribution of the Sample by Ethnicity**

		Frequency	Percent	Valid Percent
Valid	African American	12	5.6	5.6
	Asian/Pacific Islander	3	1.4	1.4
	Hispanic	2	.9	.9
	White	195	90.3	91.5
	Other	1	.5	.5
	Total	213	98.6	100.0
Missing	System	3	1.4	
Total		216	100.0	

**Table 4-3**

**Distribution of the Sample by Class Standing**

		Frequency	Percent	Cumulative Percent
Valid	Freshman	53	24.5	24.5
	Sophomore	42	19.4	44.0
	Junior	45	20.8	64.8
	Senior	73	33.8	98.6
	Other	3	1.4	100.0
	Total	216	100.0	

### Living Arrangement

Two of the 216 participants did not report on living arrangement, therefore a total of 214 subjects were reported. A majority of the subjects, 58.5% or 125 reported living off campus. Eight-nine or 41.5% of the subjects reported living on campus.

### Social Fraternity of Sorority Membership

A majority of the subjects, 73.6% or 159 reported no membership in a social fraternity or sorority. Fifty-seven or 26.4% of the subjects reported being a member of a social fraternity or sorority. The number of subjects who are not a member of a social fraternity or sorority is higher than the members, however this difference in representation is not great enough to effect statistical analyses. Adequate observations for statistical analyses have been reported for each category.

### Alcohol Use

The 216 participants chose from nine options ranging from “never used” to “every day” when reporting on alcohol use within the year prior to completion of the survey. Thirty-one or 14.4% reported that they did not use alcohol, 17 or 7.9% reported using once in the year prior to completion of the survey, 15 or 6.9% reported using six times, 8 or 3.7% reported using once per month, 32 or 14.8% reported using twice per month, 47 or 21.8% reported using once per week, 54 or 25% reported using 3 times per week, 11 or

5.1% reported using five times per week, and one person reported using alcohol every day in the year prior to completion of the survey. Table 4-4 presents a distribution of alcohol use within the year prior to the survey.

**Table 4-4**

**Distribution of Alcohol Use Within the Year Prior to the Survey**

		Frequency	Percent	Cumulative Percent
Valid	Never used	31	14.4	14.4
	Once a year	17	7.9	22.2
	6 times a year	15	6.9	29.2
	Once a month	8	3.7	32.9
	Twice a month	32	14.8	47.7
	Once a week	47	21.8	69.4
	3 times a week	54	25.0	94.4
	5 times a week	11	5.1	99.5
	Every day	1	.5	100.0
	Total	216	100.0	

The distribution of the data warranted collapsing the nine levels of alcohol use into four levels for statistical analyses. The four levels contain sufficient observations for analyses. By collapsing, an analysis of variance could be calculated to test if a statistically significant difference existed between means of satisfaction with life scores for each of the four levels (Champion, 1981; Garson, 2000). This analysis would provide

more specific information about differences in satisfaction with life by level of use. The post-hoc group of four levels of alcohol use was used for evaluating hypotheses.

The four levels of alcohol use were operationally defined as follows. "No use," consisting of 14.4% or 31 subjects. "Low use," comprised of 18.5% or 40 subjects who reported using once in the last year, six times in the last year, and once per month in the last year. "Moderate use," comprised of 36.6% or 79 subjects who reported using twice a month, and once per week in the last year. "Heavy use," comprised of 30.6% or 66 subjects who reported using three times per week, five times per week, and every day in the last year. Table 4-5 presents a distribution of the four levels of alcohol use within the year prior to completion of the survey.

### **Satisfaction With Life**

A mean score of 27.5 for satisfaction with life was reported for the sample.

Scores ranged from 9 to 35, with a standard deviation of 4.9. Over 90% or 195 of the subjects scored above 20 or the "neutral" point on the scale. Lying between 26 and 30, a mean of 27.5 is considered "satisfied." Means for most non-clinical samples fall between 23 and 28 or "slightly satisfied" to "satisfied," (Pavot and Diener, 1993). A coefficient alpha of .82 was reported, showing strong internal reliability.

**Table 4-5**

**Distribution of Alcohol Use Modified Into Four Groups**

		Frequency	Percent	Cumulative Percent
Valid	No use	31	14.4	14.4
	Low use	40	18.5	32.9
	Moderate use	79	36.6	69.4
	Heavy use	66	30.6	100.0
	Total	216	100.0	

**The Relationship Between Alcohol Use and Satisfaction With Life**

The first null hypothesis, no significant relationship exists between satisfaction with life and frequency of alcohol use, was evaluated using the nonparametric correlation test Spearman's rho. Since the relationship of interval data and ordinal data was calculated, Spearman's rho was the appropriate correlation coefficient (Garson, 2000; Gay, 1996). Responses from the independent variable, alcohol use were analyzed together in one group. In analyzing the relationship by combining alcohol use data together, Spearman's rho correlation provided information about the general, overall relationship between alcohol use and satisfaction with life. A non-significant, inverse correlation of  $-.109$  ( $p = .11$ ) was reported. Table 4-6 presents the findings of the Spearman's rho correlation. The correlation of  $.109$  is weak and the  $p$  value of  $.11$  was greater than the  $.05$  level of confidence. Hence, the null hypothesis no relationship exists

between satisfaction with life and frequency of alcohol use was not rejected.

**Table 4-6**

**Spearman's rho Correlation Analysis of Satisfaction With Life by Alcohol Use**

		Satisfaction with Life	Alcohol Use
Spearman's rho	Satisfaction with Life	1.000	-.109
	Correlation Coefficient		
	Sig. (2-tailed)	.	.111
	N	216	216
Alcohol Use	Correlation Coefficient	-.109	1.000
	Sig. (2-tailed)	.111	.
	N	216	216

The first null hypothesis, no relationship exists between satisfaction with life and frequency of alcohol use, was evaluated again using analysis of variance. Using the aforementioned four levels of alcohol use listed in Table 4-5 for the analysis, differences in mean satisfaction with life scores were evaluated for statistical significance. This analysis would provide more information about differences in satisfaction with life by level of alcohol use.

Table 4-7 presents the mean satisfaction with life score for the four levels of alcohol use. The mean scores range from a low of 27.06 for "heavy use" to a high of 28.74 for "no use." A range of 1.68 indicates a tight grouping of mean satisfaction with life scores for the levels of alcohol use.



**Table 4-7**

**Mean Satisfaction With Life Scores by Level of Alcohol Use**

Alcohol Use	N	Mean	Std. Deviation
No use	31	28.74	5.06
Low use	40	27.93	4.15
Moderate use	79	27.10	4.97
Heavy use	66	27.06	5.16

The analysis of variance did not find significant differences in mean satisfaction with life scores for the four levels of alcohol use [ $F(3, 212) = 1.13, p = .345$ ]. Table 4-8 presents the analysis of variance for the relationship of alcohol use and satisfaction with life. Since the  $p$  value of .345 was greater than the .05 level of confidence, the null hypothesis that no relationship exists between satisfaction with life and frequency of alcohol use was not rejected.

Figure 4-1 presents mean satisfaction with life scores by level of alcohol use. The bar graph indicates nonsignificant differences in mean satisfaction with life scores for the four levels of alcohol use. Mean satisfaction with life scores range from a low of 27.1, the mean for both “moderate” and “heavy use,” to a high of 28.7 for the “no use” group.

**Table 4-8**

**Relationship of Alcohol Use and Satisfaction With Life Using ANOVA**

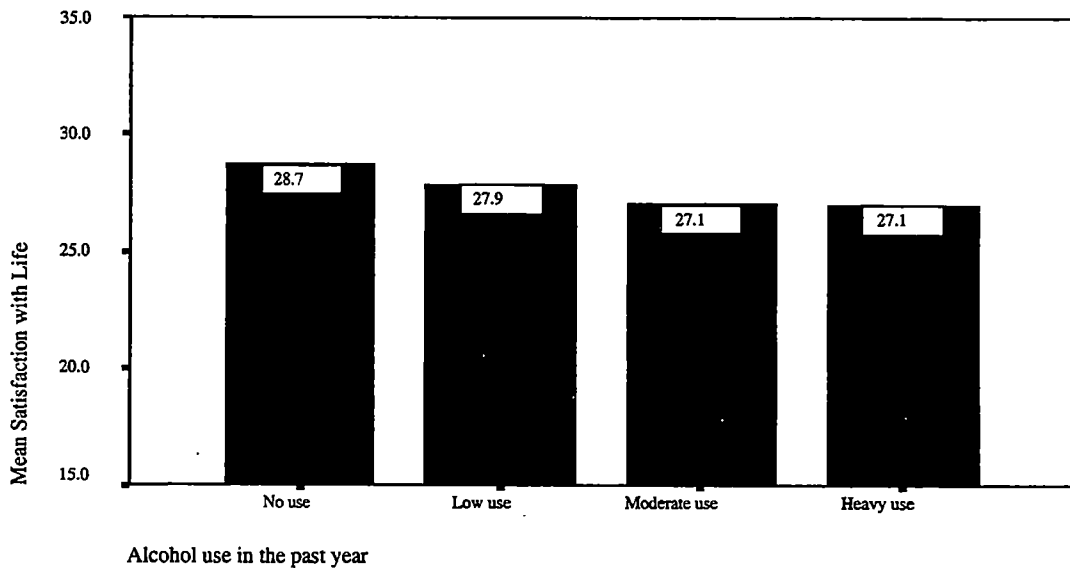
Dependent Variable: Satisfaction with Life

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	80.226 <sup>a</sup>	3	26.742	1.113	.345
Intercept	144390.985	1	144390.985	6007.250	.000
Alcohol Use	80.226	3	26.742	1.113	.345
Error	5095.658	212	24.036		
Total	168251.000	216			
Corrected Total	5175.884	215			

a. R Squared = .016 (Adjusted R Squared = .002)

**Figure 4-1**

**Mean Satisfaction With Life Scores by Level of Alcohol Use**



## **Alcohol Use and Satisfaction With Life by Class Standing, Ethnicity, Gender, Living Arrangement, and Social Fraternity or Sorority Membership**

The remaining analyses tested for differences in the relationship between alcohol use and satisfaction with life by class standing, ethnicity, gender, living arrangement, and social fraternity or sorority membership. Since 91.5% of the subjects reported being white, not enough observations were reported to analyze differences in the relationship of alcohol use and satisfaction with life by ethnicity. Analysis of variance was used to test the other four null hypotheses. The main effect, the relationship between alcohol use and satisfaction with life, was interacted with class standing, gender, living arrangement, and social fraternity or sorority membership for hypotheses testing.

### **Class Standing**

Analysis of variance was used to test hypothesis two, no difference in class standing exists for the relationship between satisfaction with life, and frequency of alcohol use. Table 4-9 presents the mean satisfaction with life scores by class standing.

The analysis of variance did not find significant differences in class standing for the relationship of alcohol use and satisfaction with life [ $F(9, 197) = .631, p = .770$ ]. Table 4-10 presents the analysis of variance for the relationship of alcohol use and satisfaction with life by class standing. Since the  $p$  value of .77 was greater than the .05 level of confidence, the null hypothesis that no difference in class standing exists for the

relationship between satisfaction with life and frequency of alcohol use was not rejected.

**Table 4-9**

**Mean Satisfaction With Life Scores by Class Standing**

Alcohol Use	Class	N	Mean	Std. Deviation
No use	Freshman	5	32.60	1.34
	Sophomore	7	26.43	5.83
	Junior	9	29.00	4.12
	Senior	9	29.33	4.87
Low use	Freshman	14	27.79	3.36
	Sophomore	10	27.00	5.16
	Junior	10	28.80	4.26
	Senior	5	30.00	2.24
Moderate use	Freshman	20	27.55	4.47
	Sophomore	20	25.55	4.97
	Junior	17	26.53	6.10
	Senior	22	28.55	4.26
Heavy use	Freshman	14	26.00	5.05
	Sophomore	5	27.60	4.16
	Junior	9	26.67	3.54
	Senior	37	27.38	5.75

**Table 4-10**

**Relationship of Alcohol Use and Satisfaction With Life by Class Standing**

**Using ANOVA**

Dependent Variable: Satisfaction with Life

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	394.547 <sup>a</sup>	15	26.303	1.121	.340
Intercept	120944.586	1	120944.586	5154.523	.000
Alcohol	149.879	3	49.960	2.129	.098
Class	99.471	3	33.157	1.413	.240
Alcohol Use * Class	133.244	9	14.805	.631	.770
Error	4622.364	197	23.464		
Total	166566.000	213			
Corrected Total	5016.911	212			

a. R Squared = .079 (Adjusted R Squared = .008)

**Ethnicity**

Since 91.5% of the subjects reported being white, not enough observations were reported in the other categories of ethnicity for analysis. Hypothesis three, no difference in ethnic origin exists for the relationship between satisfaction with life, and frequency of alcohol use was not evaluated.

**Gender**

Analysis of variance was used to test hypothesis four no difference in gender exists for the relationship between satisfaction with life, and frequency of alcohol use.

Table 4-11 presents the mean satisfaction with life scores by gender.

**Table 4-11**

**Mean Satisfaction With Life Scores by Gender**

Alcohol Use	Gender	N	Mean	Std. Deviation
No use	Male	14	29.07	5.61
	Female	17	28.47	4.72
Low use	Male	12	27.50	4.46
	Female	28	28.11	4.08
Moderate use	Male	28	25.36	5.58
	Female	51	28.06	4.37
Heavy use	Male	37	27.49	4.68
	Female	29	26.52	5.75

The analysis of variance did not find significant differences in gender for the relationship of alcohol use and satisfaction with life [ $F(3, 208) = 1.834, p = .142$ ]. Table 4-12 presents the analysis of variance for the relationship of alcohol use and satisfaction with life by gender. Since the p value of .14 was greater than the .05 level of confidence, the null hypothesis that no difference in gender exists for the relationship between satisfaction with life and frequency of alcohol use was not rejected.

#### Living Arrangement

Analysis of variance was used to test hypothesis five no difference in living arrangement exists for the relationship between satisfaction with life, and frequency of alcohol use. Table 4-13 presents the mean satisfaction with life scores by living arrangement.

**Table 4-12****Relationship of Alcohol Use and Satisfaction With Life by Gender****Using ANOVA**

Dependent Variable: Satisfaction with Life

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	233.305 <sup>a</sup>	7	33.329	1.403	.206
Intercept	132877.399	1	132877.399	5591.918	.000
Alcohol Use	106.094	3	35.365	1.488	.219
Gender	8.257	1	8.257	.347	.556
Alcohol Use * Gender	130.730	3	43.577	1.834	.142
Error	4942.579	208	23.762		
Total	168251.000	216			
Corrected Total	5175.884	215			

a. R Squared = .045 (Adjusted R Squared = .013)

**Table 4-13****Mean Satisfaction With Life Scores by Living Arrangement**

Alcohol Use	Living Arrangement	N	Mean	Std. Deviation
No use	On campus	11	30.55	3.50
	Off campus	20	27.75	5.57
Low use	On campus	18	28.22	4.02
	Off campus	22	27.68	4.32
Moderate use	On campus	37	27.00	4.73
	Off campus	42	27.19	5.24
Heavy use	On campus	23	26.43	5.25
	Off campus	41	27.41	5.14

The analysis of variance did not find significant differences in living arrangement for the relationship between alcohol use and satisfaction with life [ $F(3, 206) = .998, p = .395$ ]. Table 4-14 presents the analysis of variance for the relationship of alcohol use and satisfaction with life by living arrangement. Since the p value of .395 was greater than the .05 level of confidence, the null hypothesis that no significant difference in living arrangement exists for the relationship between satisfaction with life and frequency of alcohol use was not rejected.

#### Social Fraternity or Sorority Membership

Analysis of variance was used to test hypothesis six no difference in social fraternity or sorority membership exists for the relationship between satisfaction with life, and frequency of alcohol use. Table 4-15 presents the mean satisfaction with life scores by social fraternity or sorority membership.

The analysis of variance did not find differences in social fraternity or sorority membership for the relationship of alcohol use and satisfaction with life [ $F(3, 208) = 1.504, p = .215$ ]. Table 4-16 presents the analysis of variance for the relationship between alcohol use and satisfaction with life by social fraternity or sorority membership. Since the p value of .215 was greater than the .05 level of confidence, the null hypothesis that no difference in social fraternity or sorority membership exists for the relationship between satisfaction with life and frequency of alcohol use was not rejected.



**Table 4-14****Relationship of Alcohol Use and Satisfaction With Life by Living****Arrangement Using ANOVA**

Dependent Variable: Satisfaction with Life

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	152.985 <sup>a</sup>	7	21.855	.905	.503
Intercept	136957.916	1	136957.916	5673.940	.000
Alcohol Use	117.553	3	39.184	1.623	.185
Living Arrangement	13.004	1	13.004	.539	.464
Alcohol Use * Living Arrangemen	72.255	3	24.085	.998	.395
Error	4972.441	206	24.138		
Total	166743.000	214			
Corrected Total	5125.425	213			

a. R Squared = .030 (Adjusted R Squared = -.003)

**Table 4-15****Mean Satisfaction With Life Scores by Social Fraternity or Sorority Membership**

Alcohol Use	Fraternity or Sorority	N	Mean	Std. Deviation
No use	Yes	1	30.00	.
	No	30	28.70	5.14
Low use	Yes	5	29.00	5.15
	No	35	27.77	4.05
Moderate use	Yes	22	28.27	4.26
	No	57	26.65	5.19
Heavy use	Yes	29	26.00	6.45
	No	37	27.89	3.75

**Table 4-16****Relationship of Alcohol Use and Satisfaction With Life by Social Fraternity  
or Sorority Membership Using ANOVA**

Dependent Variable: Satisfaction with Life

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	188.499 <sup>a</sup>	7	26.928	1.123	.350
Intercept	36283.445	1	36283.445	1513.21	.000
Alcohol Use	45.361	3	15.120	.631	.596
Fraternity or Sorority	3.685	1	3.685	.154	.695
Alcohol Use * Fraternity or Sorority	108.200	3	36.067	1.504	.215
Error	4987.385	208	23.978		
Total	168251.000	216			
Corrected Total	5175.884	215			

a. R Squared = .036 (Adjusted R Squared = .004)

Chapter four presented the analysis of the data. The following chapter, chapter five provides a summary of the analysis of the data. Findings, conclusions, and recommendations based on the analysis and interpretation of the data are also presented.

**CHAPTER V**  
**SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS**

**Summary**

The purpose of the investigation was to determine the relationship between alcohol use and satisfaction with life among students attending a large Land Grant University located in the southeastern United States. The following null hypotheses were developed to address the purpose of the study.

One: No relationship exists between satisfaction with life, and frequency of alcohol use.

Two: No difference in class standing exists for the relationship between satisfaction with life, and frequency of alcohol use.

Three: No difference in ethnicity exists for the relationship between satisfaction with life, and frequency of alcohol use.

Four: No difference in gender exists for the relationship between satisfaction with life, and frequency of alcohol use.

Five: No difference in living arrangement exists for the relationship between satisfaction with life, and frequency of alcohol use.

Six: No difference in social fraternity or sorority membership exists for the relationship between satisfaction with life, and frequency of alcohol use.

Data were collected by administering a paper-and-pencil survey to students enrolled in general elective health classes during the Spring 2000 semester. Participants were given a packet of materials consisting of the demographic and drug use survey questionnaire (Appendix B), the Satisfaction with Life Scale (Appendix C) instrument, and an envelope. Packets were completed in one sitting during regularly scheduled health classes.

Results from surveys completed by 216 subjects were used in the analysis of the data. Over 97% or 209 of the participants were between 18 and 25 years of age. The age ranged from 18 to 48. The sample was comprised of 125 females or 58% and 91 males. A high majority, 92% or 195 of the subjects reported being White, 12 African American, 3 Asian/Pacific Islander, and 2 Hispanic. Approximately 25% reported being freshman, 20% sophomore, 21% junior, and 34% senior. One hundred and twenty-five or 57% of the subjects reported living off campus, and 26% reported being a member of a social fraternity or sorority.

Alcohol use in the year prior to completion of the survey was collapsed from the nine options included in the Drug Use Survey into four levels of use. The "no use" level consisted of 31 participants or 14%. "Low use" consisted of 40 participants or 19% who reported using one time, six times, or once per month. "Moderate use" consisted 79 or 37% who reported using twice per month, or once per week. "Heavy use" consisted of 66 or 31% who reported using three, or five times per week, or every day in the past year.

The mean score for satisfaction with life was 27.5, which is considered "satisfied" (Pavot and Diener, 1993). Scores ranged from 9 to 35, the maximum possible, with a standard deviation of 4.9. Over 90% of the subjects scored above "neutral."

The Spearman's rho correlation indicated a nonsignificant, indirect correlation of -.109 ( $p = .111$ ) for the overall, general relationship of alcohol use and satisfaction with life. An analysis of variance was calculated using the four levels of alcohol use as the independent variable, and mean satisfaction with life scores for each level as the dependent variable. The analysis of variance did not find significant differences [ $F(3,212) = 1.13, p = .345$ ] in mean satisfaction with life scores for the four levels of use.

An analysis of variance was used to determine differences in the relationship of alcohol use and satisfaction with life scores by class standing, ethnicity, gender, living arrangement, and social fraternity or sorority membership. The relationship of alcohol use and satisfaction with life was interacted by each of these variables. Only 8% of the participants reported being non-white, therefore not enough observations were reported to analyze the relationship of alcohol use and satisfaction with life by ethnicity. The analysis of variance did not find significant differences in class standing for the relationship of alcohol use and satisfaction with life [ $F(9, 197) = .631, p = .770$ ]. The analysis of variance did not find significant differences in gender for the relationship of alcohol use and satisfaction with life [ $F(3, 208) = 1.834, p = .142$ ]. The analysis of variance did not find significant differences in living arrangement for the relationship of alcohol use and satisfaction with life [ $F(3, 206) = .998, p = .395$ ]. The analysis of

variance did not find significant differences in social fraternity or sorority membership for the relationship of alcohol use and satisfaction with life [ $F(3, 208) = 1.504, p = .215$ ]

## Findings

The analysis of the data produced the following findings:

1. Thirty-one or 14.4% of the participants reported not using alcohol in the year prior to the survey. The “no use” level was comprised of these 31 respondents.
2. Forty or 18.5% of the participants reported a low level of alcohol use. The “low use” level was comprised of 40 respondents who reported using alcohol once, six times, or once per month in the year prior to the survey.
3. Seventy-nine or 36.6% of the participants reported a moderate level of alcohol use. The “moderate use” level was comprised of 79 respondents who reported using alcohol twice per month, or once per week in the year prior to the survey.
4. Sixty-six or 30.6% of the participants reported a heavy level of alcohol use. The “heavy use” level was comprised of 66 respondents who reported using alcohol three times per week, five times per week, or every day in the year prior to the survey.
5. Over 90% or 195 of the respondents scored above “neutral” or 20 on the Satisfaction With Life Scale, therefore 90% of the respondents are “slightly satisfied,” “satisfied,” or “extremely satisfied” with life (Pavot and Diener, 1993).

6. The mean for satisfaction with life was 27.5. Lying between 26 and 30, a score of 27.5 is considered in the "satisfied" range.
7. The Spearman's rho analysis indicated a nonsignificant indirect relationship  $-.109$  ( $p = .111$ ) exists between alcohol use and satisfaction with life.
8. An analysis of variance did not find significant differences in mean satisfaction with life scores between "no use," "low," "moderate," and "heavy" levels of alcohol use [ $F(3, 212) = 1.13, p = .345$ ].
9. An analysis of variance did not find significant differences in mean satisfaction with life scores between "no use," "low," "moderate," and "heavy" levels of alcohol use by class standing [ $F(9, 197) = .631, p = .770$ ].
10. An analysis of variance did not find significant differences in mean satisfaction with life scores between "no use," "low," "moderate," and "heavy" levels of alcohol use by gender [ $F(3, 208) = 1.834, p = .142$ ].
11. An analysis of variance did not find significant differences in mean satisfaction with life scores between "no use," "low," "moderate," and "heavy" levels of alcohol use by living arrangement [ $F(3, 206) = .998, p = .395$ ].
12. An analysis of variance did not find significant differences in mean satisfaction with life scores between "no use," "low," "moderate," and "heavy" levels of alcohol use by social fraternity or sorority membership [ $F(3, 208) = 1.504, p = .215$ ].

## **Conclusion**

The following conclusion is based on the analysis of the data and findings specific to this research investigation. No evidence was found of a definitive nature to associate alcohol use with satisfaction with life. Alcohol use does not influence or effect satisfaction with life.

## **Recommendations**

1. Investigate the level of underage alcohol use, and ascertain the common methods used by underage consumers for obtaining alcohol and identify where they consume alcohol.
2. Investigate the relationship between alcohol use and academic performance, violence, sexual assault and other adverse consequences. Educate students about the consequences of use.
3. Investigate the specific number of drinks consumed during consumption and "binge drinking" of students.
4. Evaluate existing community and campus programs designed to deter underage alcohol use, and alcohol misuse and abuse. Plan, implement, and evaluate new community programs and campus programs for preventing alcohol misuse and abuse.



5. Identify reasons for choosing to use alcohol among the student population.
6. Because of the high levels of alcohol use, continue to investigate correlates of use.
7. Investigate alcohol use and correlates of alcohol use with a large, random sample, and provide incentives for the subjects to participate. Administer the survey in a large classroom or auditorium not during regularly scheduled class time.
8. Prevention of alcohol abuse and misuse must start in elementary school years, prior to enrollment in higher education. Curricula should be designed and implemented starting in elementary school. Evaluate existing programs for efficacy.
9. Provide instructors, administrators, parents, law enforcement officials, and other community leaders with information about collegiate alcohol misuse and abuse, and adverse consequences associated with alcohol misuse and abuse.
10. Provide instructors, administrators, parents, law enforcement officials, and other community leaders with information and training for preventing alcohol misuse and abuse.

Chapter five presented the findings from the analysis of data, conclusions from the data analysis and subsequent findings, and recommendations. The following chapter, Chapter Six presents the study in retrospect, where observations about the study and suggestions for future research are made.

## **CHAPTER VI**

### **THE STUDY IN RETROSPECT**

#### **Introduction**

The purpose of the study was to evaluate the relationship between alcohol use and satisfaction with life among college students. Data were collected by administering a paper-and-pencil survey to college students enrolled in general elective health classes during the Spring 2000 semester. Two hundred and sixteen students participated in the study and were used in the analysis.

The following chapter consists of a review of the study in retrospect. A discussion of the results is presented initially. The chapter continues with observations about the study, where findings uncovered during the investigative process and procedural alternatives are provided. The chapter concludes with recommendations for future research.

#### **Discussion**

A high majority 85.6% of the participants reported using alcohol in the year prior to completion of the survey, indicating that results are consistent with national databases, 82.4% (Johnson, O'Malley, and Bachman, 1998) and 84.2% (Presley, Leichliter &

Meilman, 1998). The majority of the participants 53.3% used alcohol at least once a week in the year prior to completion of the survey. Over 30% of the participants reported "heavy use," drinking at least three times per week in the year prior to completion of the survey. The data reveal that, despite the fact that 49.3% of the participants in this study reported being under the legal drinking age, the majority of students are using alcohol on a regular basis, and nearly a third are heavy users. This study reveals, like national database indicators, that collegiate alcohol use is alarmingly high and students are engaging in unhealthy, high-risk alcohol use.

A high majority, 90% of the participants scored above "neutral" for satisfaction with life, and the mean score was 27.5%. Results from this study indicate that very few students are not satisfied with life. With mean scores for non-clinical samples averaging from 23 to 28 (Pavot and Diener, 1993), the level of satisfaction with life for the sample was on the high end but within the average range. An average of 27.5 indicates that students who participated in the study are "satisfied" with life, and close to the "extremely satisfied" with life range.

It would seem logical that most of the students enrolled in and succeeding at the "flagship" institution for the state of Tennessee would be "satisfied" with life. Since the majority of students are from East Tennessee, they are following a lifelong dream or goal to pursue a degree at the major state university. Parents and family encourage this goal and praise collegiate success, reinforcing perceived satisfaction with life. "Satisfied" students perceive the academic environment as one conducive to establishing economic

success and long-lasting, meaningful relationships. If a student is not experiencing thoughts, feelings, and behaviors associated with a "satisfied" life in academia, they will simply drop out, change schools, go home, or find a job. Therefore the majority of students having success in academia should be "satisfied."

A high level of satisfaction with life was reported for all four levels of alcohol use. The differences in mean satisfaction with life scores for the four levels of alcohol use were not significant. No significant relationship existed therefore changes in alcohol use did not correlate with changes in satisfaction with life. As indicated above, the majority of students are drinking alcohol regularly and heavily but still are "satisfied" with life.

If alcohol use is a component of the majority of college student's "satisfied" existence, should it be theorized that alcohol use has a positive influence on satisfaction with life for the majority of college students or should college students be encouraged to consume alcohol? Surely it would not be appropriate to encourage alcohol use, but the results of this study along with results from national databases stimulate inquiry about the rationale for or benefits of regular and heavy use. How do alcohol use, or merely planning for and anticipating alcohol use effect the students' perception about life? Regular or heavy alcohol use may enhance socialization, and be a form of escapism or simply provide euphoric feelings. From the results of this study, one may conclude that alcohol use is providing a service or fulfilling some need for the majority of students.

No significant differences in class standing were reported for the relationship of satisfaction with life and alcohol use. Mean satisfaction with life scores for the four levels of alcohol use were more similar than dissimilar for the classes. The frequency of alcohol use was different for some of the groups but with satisfaction with life consistently high, the relationship was not significant. Fifty-nine of the 73 seniors or 80% reported "moderate" or "heavy" alcohol use. Thirty-seven reported "heavy" use, therefore over 46% of the seniors reported consuming alcohol at least three times per week within the year prior to the survey. Frequency of alcohol use among the other three classes is more evenly dispersed with most students reporting "moderate use."

No significant differences in gender were reported for the relationship of satisfaction with life and alcohol use. Mean satisfaction with life scores for the four levels of alcohol use were more similar than dissimilar for males and females. Males used alcohol more frequently than females. Sixty-five or 71% of the males reported "moderate" or "heavy use." Seventy or 56% of the females reported "moderate" or "heavy use." Forty percent of the males reported using at least three times per week during the year prior to completion of the survey.

No significant differences in living arrangement were reported for the relationship of satisfaction with life and alcohol use. Mean satisfaction with life scores for the four levels of alcohol use were more similar than dissimilar for students who lived on and off campus. Frequency of alcohol use was nearly equal for students living on or off campus. Sixty-seven percent of the students living on campus reported "moderate" or

“high use,” and 66% of the students living off campus reported “moderate” or “high use.”

The results of this study indicate that living on or off campus does not influence frequency of alcohol use.

No significant differences in social fraternity or sorority membership were reported for the relationship of satisfaction with life and alcohol use. Mean satisfaction with life scores for the four levels of alcohol use were more similar than dissimilar for members and non-members. Social fraternity or sorority members reported using alcohol more frequently than non-members. Fifty-one of the 57 or 89% of the social fraternity or sorority members reported “moderate” or “heavy use.” Ninety-four or 56% of the non-members reported “moderate” or “heavy use.” The relationship between frequency of alcohol use, and social fraternity or sorority membership warrants investigation.

### **Observations of the Study**

Although it took a lot of time, effort, and planning to gain approval for administering the surveys to the students, the data collection process went very smooth. Instructor and student cooperation was a strong point of the study. The instructors graciously sacrificed 10-15 minutes of class time, and restructured lessons to accommodate the researcher. Although the students were asked to voluntarily report on illegal activities, the participation rate was extremely high. Students seemed excited about participating and often inquired about the possibility of reviewing the study’s

results. The congenial nature of the participants and willingness to volunteer despite lack of monetary or academic incentives speaks volumes about the student participants.

Although taxing, the data collection was a very positive experience.

The usability of the survey was a strong point of the study. A coefficient alpha of .82 was reported, indicating strong internal consistency for the Satisfaction with Life Scale. The drug use and demographic survey was legible and easily completed by the participants. The average time of completion was approximately five to eight minutes. Both instructors and students were impressed with the brevity of the survey. The questionnaire was appropriate for the subjects, and worked well for the study.

The methodology used in the study was well planned, highly scrutinized, and was appropriate for one researcher, given the time and financial constraints. However, the study would benefit from a few important methodological alterations. With proper funding, more personnel and time, sampling techniques, data collection, and instrumentation should be slightly altered to improve the study.

A stratified random method for sampling should be carried out. Obtain a list of students from registrars, or whatever office that maintains enrollment data. Select appropriate representation from each college within the university by determining the percentage of students enrolled in each college. Using a random table, select the predetermined number of students from each college. Sample more than recommended. This may combat unwillingness to participate, and students who simply do not respond to the offer.

Contact the students using electronic or conventional mail. Provide information about meeting times and locations where an orientation will take place. Emphasize that participants will earn money and be placed into a lottery and therefore have the potential to win the grand prize. Monetary incentives should enhance participation. Follow up by trying to contact students who did not attend an orientation.

Administer the surveys at a neutral site on campus. Provide several different meeting times for the participants to complete the survey. By choosing from several options, participants will know what to expect, manage their time accordingly, and hopefully be more focused. Results will reflect a more serious and concentrated effort than if students are asked to complete a survey while attending a regularly scheduled class.

### **Future Directions**

Although the results of the study reported no significant relationship between satisfaction with life and alcohol use, findings about alcohol consumption warrant further investigation into all aspects of alcohol use. The impact of alcohol use on the collegiate community needs to be investigated. Correlates of alcohol use must be identified. Prevention program efficacy must be enhanced. Existing campus and community wide programs must be evaluated, and altered to improve efficacy. Underage consumption of alcohol is prevalent. Law enforcement officials, legislators and community activists



should investigate the consequences and extent of the problem. “Healthy” activities and behaviors that enhance satisfaction with life among college students should be identified, and students should be “trained” to identify and practice alternatives to alcohol misuse and abuse. Help students find ways to lead a full and happy life without misuse and abuse of alcohol.

Adverse consequences associated with alcohol misuse and abuse among college students need to be identified. Academic repercussions are costly to both the individual and the community. The relationship between alcohol use, and grade point average, absenteeism, and study time are a few variables to investigate. Accidents, violence, and physical harm associated with the high levels of use need to be identified. Among other things, these consequences of alcohol use place a burden on campus and community health care systems. An investigation into the relationship between alcohol use and consequences like high-risk sexual behavior, sexual assault and rape is warranted.

At-risk populations for alcohol misuse and abuse along with correlates of alcohol use must be investigated. Factors that define an at-risk student must be ascertained. The demographic and psychosocial characteristics associated with alcohol misuse and abuse must be identified. These findings will provide a basis for prevention programs and initiatives.

Program planning, administration, and evaluation are vital to program efficacy. It will take the combined efforts of community and campus law enforcement officials, legislators, and health professionals to create effective prevention programs. Participants

should be trained to identify problems associated with alcohol use, and instructed on methods for confronting and arresting the problem. Personnel and program development may be the area of most need for research.

For many reasons other than preventing alcohol abuse and misuse, healthy means for enhancing satisfaction with life must be identified and introduced to the masses. Research pertaining to correlates of satisfaction with life is extremely important. Students and all human beings are constantly engaging in activities to satisfy needs. Beyond basic survival needs, human beings need to feel a sense of belonging, need to love and feel loved, and be challenged. These needs are often fulfilled in unhealthy ways. Research is needed to identify common, "healthy" methods for fulfilling needs and enhancing satisfaction with life. Students need to be taught, encouraged, and provided with the opportunity to discover and engage in "healthy" activities for the purpose of enhancing perceived satisfaction with life.

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## **APPENDICES**

**APPENDIX A**  
**CORRESPONDENCE WITH THE OFFICE OF RESEARCH COMPLIANCE**  
**SECTION**



Office of Research  
404 Andy Holt Tower  
Knoxville, Tennessee 37996-0140  
PHONE: (865) 974-3466  
FAX: (865) 974-2805  
URL: <http://www.ra.utk.edu/ora>

02/29/2000

IRB#: 5851 B

TITLE: An Investigation of the Relationship Between Alcohol, Marijuana, and Tobacco Use, and Satisfaction With Life Among College Students

Channell, Robert  
Health & Safety Sciences  
390 HPER Bldg.  
Campus

Wallace, Bill  
Health & Safety Sciences  
390 HPER Bldg.  
Campus

Your project listed above was reviewed. It qualified for expedited review and has been approved.

This approval is for a period ending one year from the date of this letter. Please make timely submission of renewal or prompt notification of project termination (see item #3 below).

Responsibilities of the investigator during the conduct of this project include the following:

1. To obtain prior approval from the Committee before instituting any changes in the project.
2. To retain signed consent forms from subjects for at least three years following completion of the project.
3. To submit a Form D to report changes in the project or to report termination at 12-month or less intervals.

The Committee wishes you every success in your research endeavor. This office will send you a renewal notice (Form R) on the anniversary of your approval date.

Sincerely,

A handwritten signature in cursive script that reads "Brenda Lawson".

Brenda Lawson  
Compliances

cc: Charles Hamilton

## INFORMATION SHEET

### An Investigation of the Relationship Between Alcohol, Marijuana, and Tobacco Use, and Satisfaction With Life Among College Students

#### INTRODUCTION

You are invited to participate in a research study. The purpose of the study is to investigate the relationship between alcohol, marijuana, and tobacco use, and perceived satisfaction with life.

#### INFORMATION ABOUT PARTICIPANTS' INVOLVEMENT IN THE STUDY

After reviewing the information sheet, a paper-and-pencil survey will be passed out for you to complete here in Health 310 class. The survey will take approximately ten minutes to complete. Whether you choose to complete the survey or not, place it in the envelope, seal it and turn the sealed envelope in to the researcher.

#### RISKS

By not requiring any identification or signatures on the survey, the risk of criminal or civil liability is eliminated. Your responses will remain anonymous and no attempt will be made to link your responses to your identity. No individual responses will be identified. Only group level data will be reported. The researcher will be the only individual to handle, visually inspect, and analyze the data. Completed surveys will be stored in a locked file cabinet on the University of Tennessee Campus.

#### BENEFITS

This research is beneficial in that it provides an understanding of the relationship between alcohol, marijuana, and tobacco use, and satisfaction with life. No benefit to the participants is expected. Information may provide a basis for possible solutions to the collegiate alcohol, marijuana, and tobacco use problem.

#### CONFIDENTIALITY

Information in the study records will be anonymous. Data will be stored securely and will be made available only to the researcher unless participants specifically give permission in writing to do otherwise. No reference will be made in oral or written reports which could link participants to the study.

#### CONTACT

If you have questions at any time about the study or the procedures, you may contact the researcher, Robert Channell, at University of Tennessee, Department of Health and Safety Sciences, 1914 Andy Holt Avenue Knoxville, TN 37996-2710, or (865) 974-5041. If you have questions about your rights as a participant, contact the Compliance Section at (865) 974-3466.

#### PARTICIPATION

Your participation in this study is voluntary, you may decline to participate without penalty. If you decide to participate, you may withdraw from the study at anytime without penalty and without loss of benefits to which you are otherwise entitled. You may refuse to answer any and all of the questions. Return of the completed survey constitutes your consent to participate.

APPROVED  
By Brenda Lawson  
3-14-00



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THE UNIVERSITY OF TENNESSEE  
KNOXVILLE



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Department of Health and Safety Sciences  
College of Human Ecology  
1914 Andy Holt Avenue  
Knoxville, TN 37996-2710  
(865) 974-5041  
FAX (865) 974-6439

March 15, 2000

Brenda Lawson  
Assistant Coordinator-Compliances  
Office of Research  
The University of Tennessee  
Knoxville, TN 37996-0140

Dear Ms Lawson,

The Department of Health and Safety Sciences grants Robert Channell permission to ask instructors within the department if a survey may be administered to students enrolled in health classes for completion during regularly scheduled class time.

Sincerely,

A handwritten signature in cursive script, appearing to read "Charles Hamilton".

Charles Hamilton  
Professor  
Department Head



Department of Health and Safety Sciences  
College of Human Ecology  
1914 Andy Holt Avenue  
Knoxville, TN 37996-2710  
(865) 974-5041  
FAX (865) 974-6439

March 16, 2000

Brenda Lawson, Assistant Coordinator-Compliances  
Office of Research  
The University of Tennessee-Knoxville  
Knoxville, TN 37996-0140

Dear Ms Lawson,

The following Instructors in the Department of Health and Safety Sciences, verified by signature below, do hereby grant Robert Channell permission to administer a survey during a regularly scheduled class to the students enrolled in Health 310 and/or Health 110 during the Spring 2000 semester. The time necessary for explaining the information sheet and completing the survey will be approximately 15 minutes.

Sincerely,

Robert Channell

Bobby Abdolrasulnia	<u>B. Abdolrasulnia</u>	Date	<u>3-16-00</u>
Precilia Belin	_____	Date	_____
Pam Driggers	<u>Pam Driggers</u>	Date	<u>3-30-00</u>
Laurie Goode	<u>Laurie Goode</u>	Date	<u>3-16-00</u>
Mildred Johnson	_____	Date	_____
Robert Kirk	_____	Date	_____
Karen Lowry	<u>Karen A Lowry</u>	Date	<u>3/16/00</u>
Jeff Oakley	<u>Jeff S. Oakley</u>	Date	<u>3/16/2000</u>
Jack Pursley	_____	Date	_____
Jude Tuma	<u>Jude Tuma</u>	Date	<u>3/31/2000</u>
Cecilia Watkins	<u>Cecilia Watkins</u>	Date	<u>3/29/2000</u>

**APPENDIX B**  
**DEMOGRAPHIC AND DRUG USE SURVEY**

**An Investigation of the Relationship Between Alcohol Use and Satisfaction With  
Life Among College Students**

PLEASE INDICATE YOUR AGE AND CHECK THE APPROPRIATE RESPONSE

1. Age: \_\_\_\_\_
2. Gender: M \_\_\_ F \_\_\_
3. Ethnic Origin:  
\_\_\_ African American (non-Hispanic)  
\_\_\_ American Indian/Alaskan Native  
\_\_\_ Asian/Pacific Islander  
\_\_\_ Hispanic  
\_\_\_ White (non-Hispanic)  
\_\_\_ Other
4. Classification:  
\_\_\_ Freshman  
\_\_\_ Sophomore  
\_\_\_ Junior  
\_\_\_ Senior  
\_\_\_ Other
5. College:  
\_\_\_ Agricultural Sciences and Natural Resource  
\_\_\_ Architecture and Planning  
\_\_\_ Arts and Sciences  
\_\_\_ Business Administration  
\_\_\_ Communications  
\_\_\_ Education  
\_\_\_ Engineering  
\_\_\_ Human Ecology  
\_\_\_ Nursing  
\_\_\_ Social Work  
\_\_\_ Other
6. Living Arrangement:  
On-Campus  
\_\_\_ Residence Hall  
\_\_\_ Fraternity Sorority  
\_\_\_ Other  
Off-Campus  
\_\_\_ Alone  
\_\_\_ Roommate(s)  
\_\_\_ Parent(s)  
\_\_\_ Spouse/Children  
\_\_\_ Other
7. Grade Point Average:  
\_\_\_ 3.5 - 4.0  
\_\_\_ 3.0 - 3.5  
\_\_\_ 2.5 - 3.0  
\_\_\_ 2.0 - 2.5  
\_\_\_ 1.5 - 2.0  
\_\_\_ < 1.5
8. Employment:  
\_\_\_ Non-Employed  
\_\_\_ 0 - 20 Hours/Week  
\_\_\_ 20 - 40 Hours/Week  
\_\_\_ 40+ Hours/Week
9. Are you a member of a Social Fraternity or Sorority?  
\_\_\_ Yes  
\_\_\_ No

CHECK ONE APPROPRIATE RESPONSE FOR EACH DRUG BELOW

Within the last year how often have you used . . .

	Alcohol	Marijuana	Tobacco
Never used	_____	_____	_____
Once a year	_____	_____	_____
6 times a year	_____	_____	_____
Once a month	_____	_____	_____
Twice a month	_____	_____	_____
Once a week	_____	_____	_____
3 times a week	_____	_____	_____
5 times a week	_____	_____	_____
Every day	_____	_____	_____

How often do you think the average student at the University of Tennessee uses...

	Alcohol	Marijuana	Tobacco
Never used	_____	_____	_____
Once a year	_____	_____	_____
6 times a year	_____	_____	_____
Once a month	_____	_____	_____
Twice a month	_____	_____	_____
Once a week	_____	_____	_____
3 times a week	_____	_____	_____
5 times a week	_____	_____	_____
Every day	_____	_____	_____

**APPENDIX C**  
**SATISFACTION WITH LIFE SCALE**

### Satisfaction with Life Scale (Diener et al, 1985)

Below are five statements with which you may agree or disagree. Using the 1-7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item.

- 1= strongly disagree
- 2= disagree
- 3= slightly disagree
- 4= neither agree nor disagree
- 5= slightly agree
- 6= agree
- 7= strongly agree

- \_\_\_ 1. In most ways my life is close to my ideal.
- \_\_\_ 2. The conditions of my life are excellent.
- \_\_\_ 3. I am satisfied with my life.
- \_\_\_ 4. So far I have gotten the important things I want in life.
- \_\_\_ 5. If I could live my life over, I would change almost nothing.

## VITA

Robert Channell, son of Albert and Elizabeth Channell, was born in Philadelphia, Pennsylvania in 1961 the youngest of six children. He attended Saint Cecilia Catholic School through the fifth grade. After the family moved to Key West, Florida he attended Glynn R. Archer Middle School and graduated from Key West High School in 1979.

He was awarded a football scholarship at the University of Louisiana-Lafayette, and in May 1984 received a Bachelor of Science degree in Health and Physical education with Math as a second teaching field. In August of 1984 he was accepted into the graduate school at Florida State University, and received a Master of Science degree in Exercise Physiology in 1988. While attending graduate school, he worked in cardiac rehabilitation as an exercise specialist, and co-taught an adult fitness class at Florida State University.

In 1987 he accepted a position with Monroe County Schools in Key West, Florida as a middle school math/science instructor and high school head soccer coach. He was an adjunct professor at Saint Leo College from 1993 to 1996 where he taught health science/wellness classes.

In August 1996 he was accepted into the University of Tennessee graduate school, and was awarded a graduate teaching associateship in the Department of Health and Safety Sciences. In August 2000 he received the Doctor of Philosophy degree in Human Ecology with an emphasis in Community Health Education.