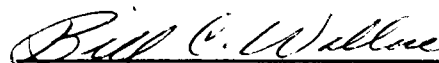


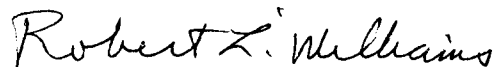
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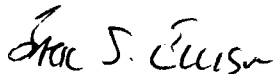
I am submitting herewith a dissertation written by Kevin Francis McKee entitled "The Relationship of Time Management and Lifestyle Organization to Problem Drinking in College Students." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education, with a major in Health Education.



Bill C. Wallace
Major Professor

We have read this dissertation
and recommend its acceptance.







Accepted for the Council:



Associate Vice Chancellor and
Dean of The Graduate School

THE RELATIONSHIP OF TIME MANAGEMENT AND
LIFESTYLE ORGANIZATION TO PROBLEM DRINKING
IN COLLEGE STUDENTS

A Dissertation
Presented for the
Doctor of Education
Degree
The University of Tennessee, Knoxville

Kevin Francis McKee

August, 1994

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DEDICATION

I dedicate this work to Susan, my wife, and to Kristofer and Matheau, my two children. Our stay in Knoxville had more than a few difficult moments, but together we have persevered.

ACKNOWLEDGEMENTS

The author wishes to thank the many people who contributed toward the completion of this work.

A special thanks goes to the members of my dissertation committee; Dr. Bill Wallace, Dr. Jack Ellison, Dr. Bob Kirk and Dr. Bob Williams. Their insight and recommendations assisted a great deal.

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Finally, many thanks go to family members and friends, who provided endless support and encouragement to complete this project.

ABSTRACT

The purpose of this study was to examine the relationship of time management and lifestyle organization to problem-drinking among college students at The University of Tennessee, Knoxville. Data were collected during the spring, 1994 semester. Two-hundred-eighty-six volunteers from Personal Health, General Sociology and Introduction to Nutrition classes completed the following three instruments: the Time Management Questionnaire (TMQ), the Lifestyle Approaches (LSA) inventory, and the Michigan Alcoholism Screening Test (MAST).

Answers were sought for the following research questions: (1) What is the relationship between the TMQ and the MAST?; (2) What is the relationship between the LSA and the MAST?; (3) Are there significant differences in overall TMQ scores among problem-drinkers and nonproblem-drinkers?; (4) Are there significant differences in overall LSA scores among problem-drinkers and nonproblem-drinkers?; (5) Do any factor scores of the TMQ [Short Range Planning (SRP), Time Attitudes (TA), Long Range Planning (LRP)] differ significantly between problem-drinkers and nonproblem-drinkers?; (6) Do any factor scores of the LSA [Performance Focus and Efficiency (PFE), Goal-Directedness (GD), Timeliness of Task Accomplishment (TTA), Organization of Physical Space (OPS)] differ significantly between problem-

drinkers and nonproblem-drinkers?.

Data analysis showed that 31% (n=90) of the participants were categorized as problem-drinkers, and 69% (n=196) as nonproblem-drinkers. The TMQ and LSA scores were inversely related to the MAST scores. Problem-drinkers and nonproblem-drinkers demonstrated significantly different overall TMQ and LSA scores, as well as significantly different scores on the following factors for those scales: TA, LRP, PFE, GD, TTA, and OPS. The following conclusions were drawn:

1. Self-reported skill in time management is inversely related to the presence of problem-drinking among college students.
2. Self-reported skill in lifestyle organization is inversely related to the presence of problem-drinking among college students.
3. Self-reported problem-drinkers are more likely to possess lower levels of proficiency in overall time management skills among college students.
4. Self-reported problem-drinkers are more likely to possess lower levels of proficiency in overall lifestyle organization skills among college students.
5. Self-reported problem-drinkers are more likely to possess lower levels of proficiency in maintaining

appropriate attitudes towards time, and in planning for the future.

6. Self-reported problem-drinkers are more likely to possess lower levels of proficiency in focusing on tasks, setting goals, completing tasks on time and in organizing their environments.

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CHAPTER I

INTRODUCTION

Alcohol is consumed by more Americans than any other drug (USDHHS, 1990). This affinity for alcohol usage is especially evident among our nation's college students, with statistics revealing an annual prevalence rate of 88% for this population (NIDA, 1991). It is estimated that college students spend 5.5 billion dollars on alcohol yearly (USDHHS, 1991). Unfortunately, student drinking has been associated with a variety of undesirable behaviors and negative consequences, a phenomenon referred to as problem-drinking. Researchers identify the following as common problems that college students become involved in after consuming alcohol: driving while under the influence (Hanson & Engs, 1988; Walfish et al., 1981); vandalism (Engs, 1977; Peterson & Allen, 1983; Walfish et al.) and other law-breaking behavior (Engs; Kozicki, 1982; Walfish et al.); accidents (Engs; Peterson & Allen); vomiting (Engs & Hanson, 1987; Hanson & Engs; Walfish et al.); missing classes and receiving lower grades (Engs; Hanson & Engs); and impaired social relationships (Engs; Kozicki).

Although not every student that drinks encounters such problems, Engs (1977) estimates that as many as one-half of those who do drink usually experience up to four alcohol-related problems during their collegiate years. The

manifestation of any problem resulting from alcohol intake threatens the health, quality of life and academic/career development of the student experiencing it. In addition, studies suggest that college problem-drinkers are more likely than college nonproblem-drinkers to manifest a significantly higher number of drinking problems 6 years (Donovan, Jessor & Jessor, 1983) and 20 years later (Filmore, 1974) in life. Clearly, the abatement of problem-drinking among college students is an important goal for health educators.

Any attempt to reduce the prevalence of college student problem-drinking, however, must begin by identifying the factors responsible for its occurrence. This study assessed the extent to which self-management was counter to problem-drinking among college students. Self-management refers to the self-directed utilization of cognitive and behavioral skills intended to facilitate productive, healthful living. Although a universally agreed upon model of self-management does not exist, most models ascribe to the theme of goal-directed behavior that is aided by such self-initiated strategies as self-statements, self-monitoring and self-rewarding (Williams, Moore, Pettibone & Thomas, 1992). Because self-management is not a unitary construct, a multitude of strategies is acceptably subsumed within this field. Self-management emphasizes that personal

responsibility for one's behavior is a key factor influencing the daily events one experiences (Williams & Long, 1991). For most persons, effective self-management would be accompanied by an enhanced quality of life.

Because maintenance of a healthy lifestyle requires planning and self-discipline, a logical assumption is that poor self-management skills might contribute to the development of problem-drinking. This investigation was designed to determine the extent to which the specific self-management strategies of time-management and lifestyle organization may be associated with problem-drinking in college students. Time-management refers to one's efficient use of time, and is characterized by competent short-term and long-term planning. Lifestyle organization alludes to goal-setting behavior. Individuals possessing good lifestyle organization skills are able to define, prioritize and attain established goals in an efficient, orderly manner.

Need for the Study

The National Institute on Alcohol Abuse and Alcoholism's (NIAAA) 7th Report to the U.S. Congress on Alcohol and Health (USDHHS, 1990) stressed that any drinking which results in problematic consequences should be the focus of extensive preventive efforts. That same report

stated that alcohol problems originate from several of different, complex, and as yet incompletely understood processes, with many more questions still to be answered. The need for further research exploring the factors that influence the risk of developing alcohol use problems was advocated, including individual factors that may affect risk. This study addresses that need by investigating the relationship of time-management and lifestyle organization to problem-drinking. Since this relationship has not yet been assessed, the results will expand the knowledge base of factors that are consistent with problem-drinking behavior in university students.

An additional need for this study lies in its potential to enhance the effectiveness of alcohol prevention programs. Such programs have historically been unsuccessful, evidenced by the fact that alcohol-related problems cost the United States an estimated \$120 billion a year in health costs, lost production in the workplace, accidents and crime (NIDA, 1991; USDHHS, 1990). Miller and Nirenberg (1984) attribute the ineffectiveness of preventive programs to the practice of implementing them in a "shotgun" fashion to widely diverse populations. These authors feel that effectiveness would be increased by designing specific intervention strategies for specific populations. It would stand to reason, then, that an alcohol prevention program

designed specifically for college students may be effective at curbing problem-drinking on U.S. campuses, thereby reducing the tremendous costs attributed to alcohol consumption as a whole. Prior to the development of an effective preventive program, however, one needs to identify the variables which contribute to the occurrence of the target behavior. The current investigation meets this need through empirically determining the relationship of variables believed to be related to problem-drinking. The end result will be knowledge as to whether or not strategies to promote time-management and lifestyle organization skills would be desirable components of an alcohol prevention program for college-students.

Purpose of the Study

The purpose of this study was to analyze the relationship of time management and lifestyle organization to problem drinking in college students at The University of Tennessee, Knoxville. A significant relationship between these variables would provide evidence for the need to incorporate training in time-management and lifestyle organization skills into alcohol prevention programs.

Statement of the Problem

The problem of this study was to determine if a significant difference existed in the time management and lifestyle organization skills of those students at The University of Tennessee, Knoxville, who admitted to problem-drinking as compared to those who did not.

The following research questions were developed to address the problem:

1. What is the relationship between time-management and problem-drinking?
2. What is the relationship between lifestyle-organization and problem-drinking?
3. Are there differences in the overall time management practices of problem-drinking students and nonproblem-drinking students?
4. Are there differences in the overall lifestyle organization practices of problem-drinking students and nonproblem-drinking students?
5. Are there differences in specific time-management practices of problem-drinking students and nonproblem-drinking students?
6. Are there differences in specific lifestyle organization practices of problem-drinking students and nonproblem-drinking students.?

Hypotheses

The following null hypotheses were tested:

1. There was no relationship between time management practices, as measured by the Time Management Questionnaire, and problem-drinking, as measured by the Michigan Alcoholism Screening Test, among college students.

2. There was no relationship between lifestyle organization practices, as measured by the Lifestyle Approaches inventory, and problem-drinking, as measured by the Michigan Alcoholism Screening Test, among college students.

3. There were no significant differences in time management practices, as measured by the Time Management Questionnaire, between problem-drinkers and nonproblem-drinkers, as measured by the Michigan Alcoholism Screening Test, among college students.

4. There were no significant differences in lifestyle organization practices, as measured by the Lifestyle Approaches inventory, between problem-drinkers and nonproblem-drinkers, as measured by the Michigan Alcoholism Screening Test, among college students.

5. There were no significant differences in specific time management practices, as measured by the Short Range Planning, Time Attitude and Long Range Planning subscales of the Time Management Questionnaire, between problem-drinkers

and nonproblem-drinkers, as measured by the Michigan Alcoholism Screening Test, among college students.

6. There were no significant differences in specific lifestyle organization practices, as measured by the Performance Focus and Efficiency, Goal Directedness, Timeliness of Task Accomplishment and Organization of Physical Space subscales of the Lifestyle Approaches inventory, between problem-drinkers and nonproblem-drinkers, as measured by the Michigan Alcoholism Screening Test, among college students.

Assumptions

The following assumptions were made regarding this study:

1. The responses to the instruments used in this study were honest and accurate.
2. Problem-drinking could be defined and measured.
3. The overall, and factor scores for the Time Management Questionnaire and Lifestyle Approaches inventory would be normally distributed among problem-drinkers and nonproblem-drinkers.

Limitations

The following limitations existed for this study:

1. Although specific instructions for completing each

instrument were provided, subjects may have committed errors during that process.

2. There was no control over the magnitude of a particular student's problem-drinking prior to participating in the study.

Delimitations

The following delimitations existed for this study:

1. The sample for this study was delimited to undergraduate volunteers enrolled in Personal Health and Wellness, Introduction to Nutrition and General Sociology classes at The University of Tennessee, Knoxville, during the spring semester of 1994. The results cannot be generalized beyond The University of Tennessee, Knoxville, students who enroll in courses of this type.

2. Measurement of self-management was delimited to self-report data for two variables - time management and lifestyle organization.

3. Measurement of problem-drinking was delimited to self-report data.

Definition of Terms

The following terms are defined as they pertain specifically to this study:

1. Lifestyle Organization. The self-management

strategy pertaining to goal-setting; defining, prioritizing and attaining goals in an efficient, orderly manner. This variable was measured by the score obtained on the Lifestyle Approaches inventory.

2. Problem Drinking (Alcohol Use Problems).

Consumption of alcohol that results in negative consequences. This variable was measured by the score obtained on the Michigan Alcoholism Screening Test.

3. Self-Management. Self-initiated cognitive and behavioral techniques intended to promote a productive, healthful life.

4. Time Management. The efficient use of time, characterized by effective short-term and long-term planning. This variable was measured by the score obtained on the Time Management Questionnaire.

Organization of the Study

The study was organized as follows:

Chapter I includes the introduction, need for the study, purpose of the study, statement of the problem, hypotheses, assumptions, limitations, delimitations, definitions of terms, and organization of the study.

Chapter II presents a review of the literature. The review is presented in the following order: studies related in content, studies related in methodology, and studies

related in content and methodology.

Chapter III consists of the research methods and procedures. Included are the sample selection, instrumentation, data collection and data analysis.

Chapter IV contains the results of the data analysis. The following sections are presented: relationship of time management to problem-drinking, relationship of lifestyle organization to problem-drinking, differences in overall time management practices of problem-drinkers and nonproblem-drinkers, differences in overall lifestyle organization practices of problem-drinkers and nonproblem-drinkers, differences in specific time management practices of problem-drinkers and nonproblem-drinkers, differences in specific lifestyle organization practices of problem-drinkers and nonproblem-drinkers, and summary.

Chapter V consists of the discussion. Within this chapter are the summary, findings, conclusions and recommendations.

Chapter VI is the epilogue. Presented are the author's insights as they pertain to the research experience. Included are the following sections: self-management, the issue of causality, demographics, and longitudinal analysis.

CHAPTER II

REVIEW OF THE LITERATURE

This study sought to determine the relationship of the self-management variables of time-management and lifestyle organization to problem-drinking in college students. A review of the relevant research and literature pertaining to time management, lifestyle organization and problem-drinking within the college student population is the focus of this chapter. Discussed are other studies related to this investigation in terms of content, methodology and content/methodology.

Prior to proceeding, however, it should be noted that a universally accepted criterion as to what specifically classifies one as a problem-drinker does not exist. A commonly expressed theme by the authors in the field, however, is the drinker's experiencing of intrapersonal, interpersonal or environmental problems as a result of alcohol intake. In this investigation problem-drinking is defined as the consumption of alcohol that results in negative consequences. In this chapter only studies that define or measure problem-drinking as a negative outcome resulting from alcohol intake among college students are included in the discussion.

Studies related to Content

This section summarizes descriptive research whose subject matter is related to this investigation but utilized different methodology. Two studies associating time-management with negative emotional states are presented first, followed by a review of studies suggesting that gender is a variable associated with problem-drinking in college students.

Time-management

College students often have a large number of tasks to accomplish; tasks of varying length, complexity, priority and deadlines. It is common to hear students complain of having more work to do than can be accomplished in the time available, a situation Lang (1992) describes as "quantitative role overload." Two descriptive studies outlined below provide evidence to support the contention that college students often experience negative emotions stemming from their time-management behaviors.

Strang (1981) developed the Time Management Anxiety Scale (TMAS) to measure the prevalence of time-management anxiety in college students. A sample of undergraduates at the University of Virginia volunteered to complete the TMAS. It was discovered that management of personal time was frequently associated with feelings of anxiety. The second

study associating time-management with negative emotions was conducted by Archer and Lamnin (1985). These researchers asked undergraduate students to describe the two most stressful situations or conditions experienced in their academic endeavors. One of the major stressors identified was "too many demands and not enough time." Not surprisingly, the authors explain that this stressor most likely indicated an inability to effectively manage time on the student's behalf.

Problem-drinking

Walfish, Wentz, Benzing, Brennan and Champ (1981) conducted a needs assessment at The University of South Florida in 1981. Utilizing The Student Alcohol Information Survey (Gonzalez, 1978), the frequency of physical, educational, legal and psychosocial consequences suffered during the previous year due to use of alcohol was assessed. Analysis of demographic variables revealed a higher prevalence of negative consequences for the male students.

In a study conducted at a midwestern university, Kozicki (1982) also suggested that males are more prone to exhibit problem-drinking. Kozicki administered a modified form of the Cahalan Scale of Problem Drinking (Cahalan, 1970), a National Interview Survey used to measure drinking problems. Based upon the overall scores, males

were categorized as problem-drinkers significantly more often than females. A breakdown into specific types of problems exhibited by the students revealed that males showed significantly more negative outcomes with friends, neighbors, the legal system, and personal finances, while no significant differences between the sexes existed regarding to family, school, employer, health and safety issues.

Studies Related to Methodology

This section summarizes studies that have assessed the relationship of time-management and lifestyle organization to other health-related variables.

Time-management

Based upon the descriptive studies already cited, it appears, that the student's ability to sufficiently cope with the demands of college is related to his or her time-management skills. Building upon that premise, it would reason that students possessing poor time-management skills would exhibit deficient scores on measures of selected health variables. Macon, Shahani, Dipboye and Phillips (1990) examined this presumed relationship. These researchers developed the Time-Management Behavior (TMB) scale. The relationship of scores on the TMB to measures of somatic tension and life satisfaction was investigated.

Significant correlations existed; high TMB scores were equated with less somatic tension and greater life satisfaction.

Lifestyle Organization

As with time-management, it is believed that differences in lifestyle organization would account for differences in measures on selected health variables among college students. The relationship of lifestyle organization to several psychological and physical health indicators was examined during psychometric development of the recently constructed Lifestyle Approaches (LSA) inventory (Williams, Moore, Pettibone & Thomas, 1992), a self-report instrument providing a measure of one's lifestyle organization. Outlined will be the relationship of lifestyle organization to the following variables, all of which were included in the psychometric development of the LSA: life satisfaction, dispositional optimism, purpose in life, self-efficacy, physical health, external locus of control and perceived stress. Of these variables, five are considered positive health indicators; life satisfaction, dispositional optimism, purpose in life, self-efficacy and physical health. The two remaining variables, external locus of control and perceived stress are referred to as negative health indicators.

Positive Health Indicators

Life Satisfaction. Life satisfaction refers to one's perceived quality of life. It was hypothesized that a positive relationship existed between lifestyle organization and life satisfaction. Correlating the LSA with the Life Satisfaction Scale-Z (Wood, Wylie & Sheafor, 1969) revealed that students with higher levels of lifestyle organization did possess higher levels of life satisfaction.

Dispositional Optimism. Because effective self-management would likely be associated with positive experiences and an optimistic perspective of life, the relationship of the LSA to the Life Orientation Test (Scheier & Carver, 1985) was assessed. The Life Orientation Test provides a measure of one's generalized expectancy that desirable experiences will occur in his or her life. The assumption that lifestyle organization would be positively related to an optimistic perspective was supported.

Purpose in Life. The relationship of lifestyle organization to psychological morale was also examined. Psychological morale was measured with the Modified Purpose in Life Scale (Chang & Dodder, 1983-84). Subjects with good lifestyle organization were expected to report higher levels of psychological morale than those with poor lifestyle organization skills. The results upheld the expected relationship.

Self-Efficacy. Self-efficacy represents another construct indicative of one's psychological state of health. Self-efficacy refers to one's belief in one's abilities to perform specific behaviors (Bandura, 1977). Good organizers should possess sufficient levels of self-efficacy. A generalized measure of self-efficacy was obtained using the Self-Efficacy Scale (Sherer et al., 1982). Associating the LSA to the Self-Efficacy Scale again disclosed a positive relationship.

Physical Health. In addition to the assessments of lifestyle organization to positive psychological measures, the psychometric development of the LSA included investigating its relationship to self-reported physical health measures as well. Inasmuch as persons with good lifestyle organization were expected to possess good psychological health, they were also expected to score high on measures of physical health. Two such assessments were undertaken. The first involved correlating the LSA to the Current Health Scale (Ware, 1976). This inventory provides a measure of one's current physical health status. As anticipated, the subjects who indicated good lifestyle organization also possessed higher scores of physical health status.

The second physical health measure included in the study was the Health Habits Scale (Williams, Thomas, Young,

Jozwiak & Hector, 1991). A measure of one's self-reported health behavior is provided from this scale. When the LSA was correlated with the Health Habits Scale a positive relationship was obtained.

Negative Health Indicators

The psychometric development of the LSA was concluded by investigating its relationship with two separate negative health indicators: external locus of control and perceived stress. The assumptions underlying this undertaking was that persons possessing good lifestyle organization skills would report low levels of these variables.

External Locus of Control. External locus of control refers to the belief that one's life is controlled by persons or forces outside of oneself. Persons possessing an external locus of control tend to exhibit fewer positive health habits (Abella & Hesliln, 1984). Subjects scoring high in lifestyle organization would not be expected to attribute a great deal of control for events in his or her life to outside sources. To test this hypothesis, the LSA was correlated to the Rotter Internal-External Scale (Rotter, 1966). The results supported the contention that an inverse relationship between the variables would be found.

Perceived Stress. The final variable examined was

perceived stress; one's perception that life is uncontrollable, unpredictable and overloaded. The instrument to assess this variable was the Perceived Stress Scale (Cohen, Karmarck & Mermelstein, 1983). The LSA revealed a negative relationship to this health indicator.

Studies Related to Content and Methodology

This section describes the studies that closely resemble this investigation in terms of subject area and research design employed. Each of the three studies included assessed the relationship of various predetermined independent variables to the dependent variable of college student problem-drinking.

Peterson and Allen (1983) examined the relationship between internal-external locus of control and drinking-related social complications in students at Southern Illinois University. The instrument utilized to assess negative consequences due to drinking was a 12-item checklist of drinking-related mishaps (accidents, damage to property) encountered within the previous year. The results indicated that no statistically significant differences in locus of control were found between problem/nonproblem-drinkers. It should be noted, however, that a demographic analysis indicated male students reported a significantly higher number of social complications than females.

Other researchers discovered specific personality characteristics as being predictive of problem-drinking. Brooks, Walfish, Stenmark and Canger (1981) investigated the extent to which anger, curiosity and anxiety would predict problem-drinking in a sample of undergraduates at the University of South Florida. The State-Trait Personality Inventory (Speilberger, 1974) and the Student Drinking Questionnaire (Gonzalez, 1978) were administered to measure the personality and problem-drinking variables, respectively. The results indicated a significant difference between problem and nonproblem-drinkers for the variables of trait anger and trait anxiety. The conclusion was that college students who exhibit high levels of trait anxiety and trait anger are more likely to experience undesirable behavioral consequences following the consumption of alcohol.

The last study in this section that dealt with predictors of problem-drinking in college students was conducted by Johnson (1991). Johnson investigated the impact of three variables on problem-drinking: frequency (of drinking), quantity (of alcohol consumed), and a frequency X quantity measure. Problem-drinking was assessed by using the Michigan Alcoholism Screening Test (Selzer, 1971), an instrument which assesses whether respondents have experienced a variety of negative outcomes as a result of

alcohol intake. It was revealed that all three indices yielded positive, significant relationships to problem drinking.

Summary

This review of literature summarized the known significant research in the fields of time-management, lifestyle organization and problem-drinking among college students. Time-management and lifestyle organization were associated with other health-related variables among college students, justifying their proposed relationship to problem-drinking. The variables of gender, personality characteristics and consumption patterns have been associated with the occurrence of problem-drinking in college students.

CHAPTER III

METHODS AND PROCEDURES

The purpose of this investigation was to assess the relationship of time-management and lifestyle organization to problem-drinking in college students at The University of Tennessee, Knoxville. A significant relationship between these variables would provide evidence for the need to incorporate training in time-management and lifestyle organization skills into alcohol use prevention programs. This chapter describes the methodology and procedural aspects of the study. The following sections are included: sample selection, instrumentation, data collection and data analysis.

Sample Selection

Subjects were recruited from Personal Health 110, General Sociology 100, and Introduction to Nutrition 100 classes at the University of Tennessee, Knoxville, during the spring semester, 1994. The choice to select volunteers from these particular courses was based on the assumption that various colleges of the university were represented within them, thereby increasing the likelihood that the sample characteristics reflected those of the population of all University of Tennessee, Knoxville, students.

It is recommended that survey research which subdivides the sample into distinct groups contain a minimum of 100 subjects, thus ensuring adequate size within each group for statistical analysis (Robinson & Neutens, 1987). This study subdivides participants into groups of problem-drinkers and nonproblem-drinkers, and would therefore need to meet the minimum requirement of 100 subjects. An attempt was made to secure 250-300 subjects, thereby ensuring adequate representation within each subgroup. The classes from which the participants were obtained typically enroll a large number of students, and the utilization of them would assist in attaining the desired amount of subjects.

Instrumentation

This section will provide background information pertaining to the instruments utilized in the study. Discussed will be the rationale for selecting each instrument, use of the instruments in other studies and presentation of reliability and validity data. The order of discussion will be as follows: the Time Management Questionnaire, the Lifestyle Approaches inventory, and the Michigan Alcoholism Screening Test.

Time-Management Questionnaire (TMQ)

The TMQ is a self-report measure of time-management

practices. Developed by Britton and Tesser (1991), the TMQ was included in this study because it represented a student-specific measure of time-management practices. In addition, this instrument can be completed by subjects within a relatively short period of time.

The TMQ possesses three factors: Short-Range Planning, Time Attitudes and Long-Range Planning. The current 18-item version of the questionnaire is composed solely of the items measuring these three factors. Each item is answered on a 5-point scale. Five (5) points are assigned to responses indicating good time-management practices, 1 point to those suggestive of poor time-management, with intermediate values given for the other responses. Higher scores on the TMQ are indicative of better time-management skills.

Britton and Tesser (1991) have established the predictive validity of the TMQ. Freshman and sophomores at the University of Georgia were asked to complete the TMQ. Four years later the grade point averages of these students were compared to their scores on the TMQ. Regression analysis showed that time-management was a significant predictor of cumulative GPA.

Lifestyle Approaches (LSA)

The LSA is a 16-item, self-report inventory that measures lifestyle organization (Williams, Moore, Pettibone

& Thomas, 1992). Several desirable features of the LSA warranted its inclusion in the present study. First of all, it is a time efficient way to measure one's lifestyle organization. Secondly, the LSA possesses extensive psychometric development. Finally, the instrument evolved directly from a text on self-management principals that is based on self-management research spanning the past 20 years.

This instrument is composed of four factors: Performance Focus and Efficiency, Goal-Directedness, Timeliness of Task Completion and Organization of Physical Space. When completing the LSA a subject indicates how different or similar he or she is to the organizational characteristic described by each item. Five possible responses to each item may be provided; very different, somewhat different, uncertain, somewhat similar, and very similar. Responses indicating good lifestyle organization are scored a 4, those indicating poor organization a 0. Intermediate responses are scored accordingly.

Test-retest reliability was reported to be .90, while a measure of internal consistency was determined to be .81. Convergent validity with the Self Control Scale and the Self-Control Questionnaire was measured at .68 and .68 respectively. Concurrent validity was established by correlating composite scores on the four LSA factors with

scores obtained on measures of self-efficacy, life satisfaction, purpose in life, optimistic orientation to living, health status, health habits, perceived stress and locus of control. As reported by Williams et al. (1992), all factors consistently correlated with the comparison variables.

Michigan Alcoholism Screening Test (MAST)

The Michigan Alcoholism Screening Test (MAST) is a 24-item instrument that assesses negative behavioral outcomes resulting from alcohol intake. Developed by Selzer (1971), the MAST provides a consistent, quantifiable measure of problem-drinking and can be administered by professional and nonprofessional personnel (Selzer uses the terms alcoholism and problem-drinking interchangeably). The MAST was included in this study because it is an easily completed yes/no instrument that has been demonstrated to be an effective screening device for detecting problem-drinking among college students.

Snowden, Nelson and Campbell (1986) reported the MAST consisted of the following factors: Hospitalization, Marital-Family Problems, Work-Social Problems, Problem-Recognition/Drinking Control and Help-Seeking. The scoring for the MAST was determined by comparing scores of hospitalized problem-drinkers to scores of a control group.

Based upon that comparison, "yes" responses to items that were highly discriminating were assigned a value of 2 points, while "yes" responses to all other items were awarded 1 point. Three items differed from this schemata: numbers 8, 19 and 20. A "yes" response to these items was considered diagnostic of problem-drinking and assigned a value of 5 points. A scale was subsequently formulated that yielded a minimum number of false positives (nonproblem-drinkers who scored above the established criterion level), and a minimum number of false negatives (problem-drinkers who score below the established criterion level). According to that criteria, Selzer determined that a score of more than 4 was indicative of problem-drinking.

Selzer, Vinokur and Van Rooyen (1975) assessed the reliability and validity of the MAST. Test-retest reliability yielded a coefficient of .95. Establishment of concurrent validity involved determining whether MAST scores could discriminate between hospitalized problem-drinkers and a group of citizens routinely renewing their drivers liscence. An acceptable validity coefficient of $r = .90$ indicated that the hospitalized problem-drinkers scored higher than those renewing their licenses.

One might suspect that research assessing problem-drinking would be hindered due to the tendency to deny the possession of socially undesirable characteristics. To

determine the extent to which subjects deny characteristics implied by MAST responses, Selzer, Vinokur and van Rooijen (1975) correlated MAST scores and scores on a Deny-Bad subscale of the Crowne-Marlowe Social Desirability Scale. Based on the results, the authors concluded that any tendency to deny undesirable characteristics does not affect the validity of the MAST as a screening instrument.

A number of studies assessing problem-drinking among college students have included use of the MAST (Favazza & Cannell, 1977; Johnson, 1991; Silber, Capon & Kuperschmit, 1985). From these studies it has been determined that as a screening device, the MAST is an easily administered and quickly scored instrument that is accepted by the students. The percentages of students categorized as problem drinkers in those studies ranged between 16% and 29%.

Data Collection

Data for the current investigation were collected during the regular meeting times of those courses previously mentioned. Before the students were asked to volunteer, the purpose of the study and the requirements for participation were explained to them. The potential subjects were informed that the objective was to determine if any relationships existed between selected self-management skills and the drinking behaviors of college students. It

was then explained that subjects would be asked to anonymously complete three questionnaires (TMQ, LSA, MAST). Those willing to participate were provided a packet which contained a consent form and the three instruments. The students were asked to read the consent form and decide if they were going to participate (the consent form was specifically designed so that signatures were not required--the subject's completion of the instruments verified his/her consent). Those who chose to participate were instructed to read the directions for completing all three instruments. If there were any questions pertaining to the stated task, they were answered at that time. Upon completion of the inventories the subjects returned the packets for data analysis.

A pilot study was conducted utilizing a sample of Personal Health and Wellness students at The University of Tennessee, Knoxville. The purpose of the pilot study was to administer the study instruments to identify potential problems and obtain an estimate of the time that would be needed to collect the data in each classroom. The format described in the previous paragraph was employed. The conclusions were as follows: the Time Management Questionnaire, Lifestyle Organization inventory and Michigan Alcoholism Screening Test were easy to read and to complete; the time needed to collect the data was 25 minutes.

Data Analysis

Each participant's responses were hand-scored first, with overall and factor scores derived for the TMQ and LSA. Total scores for the MAST were also calculated, and served as the basis for categorizing subjects as problem-drinkers (score of 5 or greater) and nonproblem-drinkers (score of 4 or less). These hand-scored datum were then entered into a SAS data set and analyzed through SAS procedures at The Computer Center, The University of Tennessee, Knoxville. The following statistical procedures were employed in this investigation:

1. To determine what relationship existed between overall TMQ scores and overall MAST scores, a Pearson product-moment correlation was calculated.
2. To determine what relationship existed between overall LSA scores and overall MAST scores, a Pearson product-moment correlation was calculated.
3. To determine if problem-drinkers and nonproblem drinkers possessed significantly different scores on the TMQ, a t-test was calculated to compare the mean TMQ scores of those groups.
4. To determine if problem-drinkers and nonproblem-drinkers possessed significantly different scores on the LSA, a t-test was calculated to compare the mean LSA scores of those groups.

5. To determine if problem-drinkers and nonproblem-drinkers possessed significantly different scores on any of the TMQ factors, t-tests were calculated to compare the mean factor scores of those groups.

6. To determine if problem-drinkers and nonproblem-drinkers possessed significantly different scores on any of the LSA factors, t-tests were calculated to compare the mean factor scores of those groups.

An underlying assumption for employment of the t-test was that the variables used for comparison of problem-drinkers to nonproblem-drinkers were normally distributed among these groups. To assess the presence/nonpresence of normality, Univariate procedures were conducted prior to the t-tests. In those instances where the assumption of normality did not exist, a nonparametric equivalent of the t-test (NPAR1WAY) was also conducted, and the findings reported in the Results chapter.

Summary

This study sought to determine the relationship of time-management and lifestyle organization to problem-drinking among college students. The sample consisted of students enrolled in Personal Health and Wellness, General Sociology and Introduction to Nutrition classes at The University of Tennessee, Knoxville, during the spring

semester of 1994. The following instruments were employed to determine scores for the variables of interest: the Time-Management Questionnaire, the Lifestyle Approaches inventory, and the Michigan Alcoholism Screening Test. Statistical procedures included correlations, univariate tests, t-tests and NPAR1WAY analyses. Data was collected and analyzed using the SAS program at The Computer Center, The University of Tennessee, Knoxville.

CHAPTER IV

RESULTS

This chapter presents the results of the data analysis. The following sections are included: sample description, relationship of time management to problem-drinking, relationship of lifestyle organization to problem-drinking, differences in overall time management practices of problem- and nonproblem-drinkers, differences in overall lifestyle organization practices of problem- and non-problem drinkers, differences in specific time management practices of problem- and nonproblem drinkers, differences in specific lifestyle organization practices of problem- and nonproblem-drinkers, and summary.

Sample Description

Three-hundred and one students from Personal Health and Wellness, General Sociology and Indroduction to Nutrition classes at The University of Tennessee, Knoxville, volunteered to participate during the spring, 1994 semester. Packets containing the consent form and research instruments were administered to each of these students. Of the 301 packets returned for initial scoring, the responses of 15 subjects were deemed unusable for further analysis due to the failure to respond to all of the items contained on the

instruments. The remaining 286 packets composed the data set subjected to statistical analysis.

Of the 286 students whose responses were included in the analysis, 31% (n=90) were categorized as problem-drinkers (score of 5 or greater on the MAST), with the remaining 69% (n=196) categorized as nonproblem-drinkers (score of 4 or less on the MAST).

Relationship of Time Management to Problem-Drinking

To assess the nature of the relationship between time management and problem-drinking, a Pearson product-moment correlation was calculated for the TMQ and MAST scores. The findings revealed a coefficient value of $r = -.18$, which indicated a slight, inverse relationship.

Relationship of Lifestyle Organization to Problem-Drinking

To determine the extent to which lifestyle organization was related to problem-drinking, a Pearson product-moment correlation was calculated for the LSA and MAST scores. The findings revealed a coefficient value of $r = -.24$, which indicated a definite, but small, inverse relationship.

Table 1 summarizes the results for the correlations of both the TMQ and LSA to the MAST.

TABLE 1

CORRELATIONS** OF TMQ AND LSA SCORES TO MAST SCORES

	MAST	
	r =	p> R
TMQ	-.18	.0029*
LSA	-.24	.0001*

* indicates significance at .05 level

** Pearson's r

Differences in Overall Time Management

Practices of Problem-Drinkers and Nonproblem-Drinkers

The analysis in this section would determine if a significant difference existed in the overall time management practices of problem-drinkers and nonproblem-drinkers. The t-test procedure was employed to compare the mean TMQ scores of problem- and nonproblem-drinkers, thereby indicating whether such a difference was present.

Before the t-test was carried out, however, the Univariate procedure was conducted to determine whether the TMQ scores were normally distributed among the problem- and nonproblem-drinkers. The Prob<W value of the Univariate procedure indicates whether or not normality exists. When this value is greater than .1, the variable of interest is normally distributed among the subgroup. The Univariate analysis indicated the TMQ scores were normally distributed among the problem-drinkers ($p=.42>.1$), but not among the nonproblem-drinkers ($p=.04<.1$). The results of these, and all subsequent Univariate analysis, are presented in Appendix E. Because normality did not exist within both subgroups, the mean TMQ scores of problem- and nonproblem-drinkers were compared through the nonparametric NPAR1WAY procedure in addition to the t-test.

The results of the t-test analysis for TMQ scores revealed a significant difference between the mean score of problem-drinkers (53.61) and the mean score for nonproblem-drinkers (56.67; $p=.006<.05$). The original output for all t-test procedures are contained in Appendix F. The results of the NPAR1WAY procedures concurred with those of the t-tests; a significant difference existed between the mean of the ranked-TMQ scores of problem-drinkers (123.16) and nonproblem-drinkers (152.84; $p=.005<.05$). The original output for all NPAR1WAY tests are contained in Appendix G.

Differences in Overall Lifestyle Organization
Practices of Problem-Drinkers and Nonproblem-Drinkers

Similar to the previous assessment, to determine if a significant difference existed between the lifestyle organization skills of problem-drinkers and nonproblem-drinkers, a t-test was calculated which compared the mean LSA scores of those groups. In addition, because the Univariate procedure indicated LSA scores were normally distributed among problem-drinkers ($p=.18>.1$), but not among nonproblem-drinkers ($p=.03<.1$), the NPAR1WAY analysis would again accompany the t-test.

The t-test analysis for LSA scores revealed a significant difference between the mean score of problem-drinkers (40.00) and the mean score of nonproblem-drinkers (44.60; $p=.0001<.05$). The findings of the NPAR1WAY analysis again concurred with those of the t-test, as the mean ranked-LSA scores of problem-drinkers (114.86) and nonproblem-drinkers (156.65) differed by a significant margin as well ($p=.0001<.05$).

Table 2 summarizes the results of the t-test procedures for comparisons of overall TMQ and LSA scores of problem- and nonproblem-drinkers, while Table 3 presents the results of the NPAR1WAY procedures for those same variables.

TABLE 2

t-TEST COMPARISON OF MEAN TMQ AND LSA SCORES

	Mean(P)*	Mean(N)*	Prob> t
TMQ	53.61	56.57	.006**
LSA	40.00	44.60	.0001**

* P = problem-drinker, N = nonproblem-drinker

** indicates significance at the .05 level

TABLE 3

NPAR1WAY COMPARISONS OF TMQ AND LSA SCORES

	Mean(P)*	Mean(N)*	Prob> Z
TMQ	123.16	152.84	.005**
LSA	114.86	156.65	.0001**

* P = problem-drinker, N = nonproblem-drinker

** indicates significance at the .05 level

Differences in Specific Time Management

Practices of Problem-Drinkers and Nonproblem Drinkers

This step of the data analysis determined whether significant differences existed between specific time management practices among problem- and nonproblem-drinkers. Differences in Short Range Planning (SRP), Time Attitudes (TA) and Long Range Planning (LRP) were measured. Scores for each of these subscales of the Time Management Questionnaire were compared through t-test calculations. Univariate analyses revealed the respective SRP and TA scores were normally distributed among problem-drinkers ($p=.40>.1$; $p=.18>.1$), but not among nonproblem-drinkers ($p=.0006<.1$; $p=.08<.1$), and would therefore be compared through the NPAR1WAY procedure following the t-test analyses. The LRP scores were normally distributed among both problem-drinkers ($p=.29>.1$) and nonproblem-drinkers ($p=.21>.1$), which warranted comparison through the t-test alone.

Short Range Planning (SRP)

The major finding of the t-test for SRP was a nonsignificant difference between the mean score of problem-drinkers (21.41) and nonproblem-drinkers (22.63; $p=.06>.05$). This finding was also uncovered through the NPAR1WAY test, which revealed a nonsignificant difference between the mean ranked-SRP score of problem-drinkers (130.56) and

nonproblem-drinkers (149.44; $p=.07>.05$).

Time Attitudes (TA)

The major finding of the t-test for TA was a significant difference between the mean score of problem-drinkers (18.7) and nonproblem-drinkers (19.67; $p=.02<.05$). Again, the NPAR1WAY test agreed, indicated by a significant difference between the mean ranked-TA score of problem-drinkers (126.87) and nonproblem-drinkers (151.14; $p=.02<.05$).

Longe Range Planning (LRP)

For this variable, only the t-test was required. The results of that test indicated a significant difference between the mean score of problem-drinkers (13.5) and nonproblem-drinkers (14.37; $p=.02<.05$).

Table 4 summarizes the results of the t-test comparisons for SRP, TA and LRP, with Table 5 summarizing the nonparametric comparison tests for those variables.

TABLE 4

t-TEST COMPARISONS OF SRP, TA AND LRP FACTORS

	Mean(P) *	Mean(N) *	Prob> t
SRP	21.41	22.63	.06
TA	18.7	19.67	.02**
LRP	13.5	14.37	.02**

* P = problem-drinker, N = nonproblem-drinker

** indicates significance at the .05 level

TABLE 5

NPARIWAY COMPARISONS OF SRP AND TA FACTORS

	Mean(P) *	Mean(N) *	Prob> Z
SRP	130.56	149.44	.07
TA	126.87	151.14	.02**

* P = problem-drinkers, N = nonproblem-drinkers

** indicates significance at the .05 level

Differences in Specific Lifestyle Organization
Practices of Problem-Drinkers and Nonproblem-Drinkers

This step of the data analysis determined whether significant differences existed between specific lifestyle organization practices among problem- and nonproblem-drinkers. Differences in Performance Focus and Efficiency (PFE), Goal Directedness (GD), Timeliness of Task Accomplishment (TTA) and Organization of Physical Space (OPS) were measured. Scores for each of these subscales of the Lifestyle Approaches inventory were compared through t-test calculations.

In following a consistent format, however, the Univariate procedure was first performed on the scores of the LSA subscales. The major findings were as follows: the PFE scores were non-normally distributed among problem-drinkers ($p=.09<.1$) and nonproblem-drinkers ($p=.008<.1$); the GD scores were non-normally distributed among problem-drinkers ($p=..0001<.1$) and nonproblem-drinkers ($p=0.0<.1$); the TTA scores were non-normally distributed among problem-drinkers ($p=.01<.1$) and nonproblem-drinkers ($p=.0001<.1$); and the OPS scores were also non-normally distributed among problem-drinkers ($p=.0001<.1$) and nonproblem-drinkers ($p=0.0<.1$). Based on these results, all four LSA factors were compared through the NPAR1WAY procedure following the t-test analyses.

Performance Focus and Efficiency (PFE)

The t-test for this variable indicated a significant difference existed between the mean PFE scores of problem-drinkers (9.94) and nonproblem-drinkers (11.88; $p=.0005<.05$). The NPAR1WAY procedure concurred, with a significant difference uncovered between the mean ranked-PFE score of problem-drinkers (119.78) and nonproblem-drinkers (154.39; $p=.001<.05$).

Goal Directedness (GD) The important finding from the t-test was another significant difference between the mean GD scores of problem-drinkers (12.19) and nonproblem-drinkers (13.18; $p=.0069<.05$). The NPAR1WAY test again concurred, as a significant difference was detected between the mean ranked-GD score of problem-drinkers (123.22) and nonproblem-drinkers (152.81; $p=.005<.05$).

Timeliness of Task Accomplishment (TTA) For the TTA variable, t-test results demonstrated a significant difference between the mean scores of problem-drinkers (10.53) and nonproblem-drinkers (11.36; $p=.02<.05$). The NPAR1WAY procedure was yet again consistent with it's parametric counterpart, with a significant difference revealed between the mean ranked-TTA score of problem-drinkers (126.26) and nonproblem-drinkers (151.42; $p=.02<.05$).

Organization of Physical Space (OPS)

The major finding for the final t-test was that a significant difference existed between the mean OPS score of problem-drinkers (7.33) and non-problem drinkers (8.17; $p=.04<.05$). The final NPAR1WAY procedure revealed similar results, as a significant difference was uncovered between the mean ranked-OPS score of problem-drinkers (129.06) and nonproblem-drinkers (150.13; $p=.04<.05$).

Table 6 summarizes the findings for the PFE, GD, TTA and OPS T-tests, with Table 7 presenting the results of the nonparametric comparisons of those variables.

TABLE 6

t-TEST COMPARISONS OF PFE, GD, TTA AND OPS FACTORS

	Mean(P) *	Mean(N) *	Prob> T
PFE	9.94	11.88	.0005**
GD	12.19	13.18	.007**
TTA	10.53	11.36	.02**
OPS	7.33	8.17	.04**

* P = problem-drinker, N = nonproblem-drinker

** indicates significance at the .05 level

TABLE 7

NPAR1WAY COMPARISONS OF PFE, GD, TTA AND OPS FACTORS

	Mean(P) *	Mean(N) *	Prob> Z
PFE	119.78	154.39	.001**
GD	123.22	152.81	.005**
TTA	126.26	151.42	.02**
OPS	129.06	150.13	.04**

* P = problem-drinkers, N = nonproblem-drinkers

** indicates significance at the .05 level

Discriminate Procedure

Because significant differences existed in the TA, LRP, PFE, GD, TTA and OPS scores of problem-drinkers and nonproblem-drinkers, an additional statistical analysis was employed at this point to investigate the possibility of ranking these variables in order of most-predictive to least-predictive of problem-drinking. A Logistic Discrimination procedure was conducted. Any factor which possessed a Prob>Chi-Square value of less than .05 would qualify for ranking. The Prob>Chi-Square values for the tested factors were as follows: TA=.99, LRP=.59, PFE=.07,

GD=.18, TTA=.78, and OPS=.50. Because none of these probabilities were less than .05, development of a rank order was not possible. The original output of the Logistic Discrimination procedure is contained in Appendix H.

Summary

This chapter presented the results of the statistical analysis. The major findings can be summarized as follows: there is a weak, inverse, but significant relationship between TMQ scores and MAST scores; there is a weak, inverse, but significant relationship between LSA scores and MAST scores; a significant difference existed between the overall TMQ scores of problem- and nonproblem-drinkers; a significant difference existed between the overall LSA scores of problem- and nonproblem-drinkers; a nonsignificant difference existed between the SRP scores of problem- and nonproblem-drinkers; and significant differences existed between the TA, LRP, PFE, GD, TTA and OPS scores of problem- and nonproblem-drinkers. In those instances in which the variable under investigation was not normally distributed among problem- and nonproblem-drinkers, both parametric (t-test) and nonparametric (NPAR1WAY) procedures were employed. In all such cases, the results of both analyses concurred.

CHAPTER V

DISCUSSION

The following sections are contained in this chapter: summary, results of hypothesis tests, conclusions and recommendations.

Summary

The purpose of this study was to examine the relationship of time management and lifestyle organization to problem-drinking in college students at The University of Tennessee, Knoxville. Students from Personal Health and Wellness, General Sociology and Introduction to Nutrition classes volunteered to participate during the spring, 1994 semester. The subjects were administered a packet containing three self-report instruments: the Time Management Questionnaire (TMQ), the Lifestyle Approaches (LSA) inventory, and the Michigan Alcoholism Screening Test (MAST). Relationships among the scores obtained on these instruments were assessed. Of the initial 301 returned packets, 286 were suitable for statistical analysis. Thirty-one percent ($n=90$) of the students were categorized as problem-drinkers based on their MAST scores. The results of the specific hypotheses presented in Chapter I are outlined below.

Results of Hypothesis Tests

1. The Null Hypothesis 1 stated there was no relationship between time management practices, as measured by the Time Management Questionnaire, and problem-drinking, as measured by the Michigan Alcoholism Screening Test, among college students. This hypothesis was rejected, as a slight, inverse relationship was revealed.

2. The Null Hypothesis 2 stated there was no relationship between lifestyle organization practices, as measured by the Lifestyle Approaches inventory, and problem-drinking, as measured by the Michigan Alcoholism Screening Test, among college students. This hypothesis was rejected, as a definite, but small, inverse relationship was revealed.

3. The Null Hypothesis 3 stated there was no significant differences in overall time management practices, as measured by the Time Management Questionnaire, between problem-drinkers and nonproblem-drinkers, as measured by the Michigan Alcoholism Screening Test, among college students. This hypothesis was rejected, as a statistically significant difference existed between the mean Time Management Questionnaire scores of problem- and nonproblem-drinkers.

4. The Null Hypothesis 4 stated there was no significant difference in overall lifestyle organization practices, as measured by the Lifestyle Approaches

inventory, between problem-drinkers and nonproblem-drinkers, as measured by the Michigan Alcoholism Screening Test, among college students. This hypothesis was rejected, as a statistically significant difference existed between the mean Lifestyle Approaches inventory scores of problem- and nonproblem-drinkers.

5. The Null Hypothesis 5 stated there were no significant differences in specific time management practices, as measured by the Short Range Planning, Time Attitudes and Long Range Planning subscales of the Time Management Questionnaire, between problem-drinkers and nonproblem-drinkers, as measured by the Michigan Alcoholism Screening Test, among college students. This hypothesis was partially supported. There was no statistically significant difference between the problem-and nonproblem-drinkers for the Short Range Planning score. However, significant differences did exist between problem- and nonproblem-drinkers for the Time Attitudes and Long Range Planning subscale scores.

6. The Null Hypothesis 6 stated there were no significant differences in specific lifestyle organization practices, as measured by the Performance Focus and Efficiency, Goal Directedness, Timeliness of Task Accomplishment and Organization of Physical Space subscales of the Lifestyle Approaches inventory, between problem-

drinkers and nonproblem-drinkers, as measured by the Michigan Alcoholism Screening Test, among college students. This hypothesis was rejected, as statistically significant differences existed between problem-drinkers and nonproblem-drinkers on the scores for all four of these subscales.

Additional Findings

The six subscales in which significant differences were revealed between problem-drinkers and nonproblem-drinkers could not be ranked in order of most-predictive to least-predictive of problem-drinking.

Conclusions

Based on the findings of this study, the following conclusions were made:

1. Self-reported skill in time management is inversely related to the presence of problem-drinking among college students.
2. Self-reported skill in lifestyle organization is inversely related to the presence of problem-drinking among college students.
3. Self-reported problem-drinkers are more likely to possess lower levels of proficiency in overall time management skills among college students.

4. Self-reported problem-drinkers are more likely to possess lower levels of proficiency in overall lifestyle organization skills among college students.

5. Self-reported problem-drinkers are more likely to possess lower levels of proficiency in maintaining appropriate attitudes towards time and in planning for the future.

6. Self-reported problem-drinkers are more likely to possess lower levels of proficiency in focusing on tasks, setting goals, completing tasks on time and in organizing their environments.

Recommendations

1. As time management and lifestyle organization practices do account for some of the variance between problem-drinkers and nonproblem-drinkers, developers of alcohol prevention programs should consider allotting a portion of their program to exercises designed to develop these skills.

2. Because time management and lifestyle organization accounted for only a small amount of the variance between problem- and nonproblem drinkers, further research assessing the relationships of other self-management variables to problem-drinking is needed.

3. Longitudinal studies that measure levels of self-

management variables and the presence/lack of negative health behaviors throughout the duration of a student's college career would be extremely informative.

4. Further research assessing problem-drinking among college students should include gender comparisons.

CHAPTER VI

EPILOGUE

This chapter is a less formal presentation of the author's insights pertaining to different aspects of the study not reported in the standard chapters. Several issues are discussed, including: self-management, the issue of causality, demographics, and longitudinal studies.

Self-Management

Self-management refers to the self-directed utilization of cognitive and behavioral skills to facilitate productive, healthful living. Since my introduction to the field, I have believed that a person lacking in self-management skills would be more likely to possess a poor health status, a premise which influenced the selection of the problem investigated in this study. The results of this study supported my contention, as those college students who reported less developed time management and lifestyle organization skills were more likely to report themselves as problem-drinkers. These findings also concur with the previously cited works that revealed associations between poor self-management and the presence of negative health indicators. As our nation debates health care reform, a frequently heard notion is that the overall state of health

of Americans will improve as individuals assume more responsibility for their health. This notion appears to have merit, for studies in the self-management area are indicating that those who take on the responsibility to effectively manage their lives possess more desirable states of health than those who do not.

The Issue of Causality

Often I am asked to explain the details of this dissertation to friends, family and peers. Without failure, upon the completion of my explanation I am asked, "How do you know if poor self-management caused problem-drinking, or if problem-drinking caused poor self-management?"

Obviously, the professional response is that my research does not prove the causality of anything; only that certain relationships may or may not be present.

This study provided evidence that problem-drinkers and nonproblem-drinkers do differ in their levels of time management and lifestyle organization skills. And although the relationships uncovered may not have explained a great deal of the variance between problem-drinkers and nonproblem-drinkers, they were nonetheless significant. As Brennan, Walfish and AuBuchon (1986) have stated, it is highly unlikely that any one trait or personality characteristic would account for a large portion of the

variance in college drinking behavior. Rather, some combination of characteristics will provide the best description for detected differences. I have explained one of those factors; future research will assist in uncovering others.

Demographics

Whether or not to collect any demographic information on the participants was a difficult issue for me when planning the project. Because problem-drinking is disapproved of socially, I sought to promote honest responses through enhancing the feeling of confidentiality by not obtaining any demographic data. My personal feeling was that even though the participants were not asked to provide their names or student ID numbers, a certain percentage would begin to feel skeptical if they were required to provide their race, age, year in school, gender etc. For my study to have any value, it was essential to have honest responses, and I chose to encourage this by eliminating any identifying characteristics on the study's instruments.

If I were to conduct the study again, however, I would gather one piece of demographic data- gender. As presented in Chapter II, males appear to have a higher propensity for being problem-drinkers. It will be interesting to see if

the gender differences in this phenomenon become less obvious as women's roles continue to change in today's society. Already the percentages of young women beginning to smoke cigarettes are greater than those of young men. Will this trend carry over to problem-drinking? I could have contributed to the answering of this question by asking the participants to indicate their gender. Placing a box for indicating gender on either the TMQ or LSA most likely would not have been perceived as a threatening item to the majority of the volunteers.

Longitudinal Studies

At various times throughout this project I found myself thinking about the tremendous destruction that occurs in our nation in which alcohol serves as a contributing factor. "What really causes such problem-drinking,?" I would ask myself. I realized that my study, and others like it, can contribute to the answering of this question, but what is really needed are many longitudinal studies that follow the development of drinking behaviors from early childhood throughout adulthood. Yes, the time, money and effort required would be enormous, but much more insight would be gained in such studies when compared to those which collect data at only one point in time of the college student's entire personal history.

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APPENDIXES

APPENDIX A
CONSENT FORM

INFORMED CONSENT

Dear Volunteer:

Prior to participating in this study, please read the following information very carefully.

This research is being conducted as part of Kevin McKee's doctoral dissertation within The Department of Health, Leisure and Safety at The University of Tennessee, Knoxville. The title of the study is, "The Relationship of Time Management and Lifestyle Organization to Drinking Behavior in College Students." The purpose of the research is to determine if a student's time management and lifestyle organization influences his or her drinking behavior. The subject will complete three questionnaires, a process requiring approximately 25 minutes.

The subject's participation in this study is strictly voluntary. There will be no penalty for refusing to participate, or for choosing to withdraw at any time during participation. Participation will involve minimal risk.

The subject will not be required to provide his or her name, ensuring the confidentiality of the responses to the questionnaires. The filling out of the questionnaires and returning them to the researcher will be considered verification of the subject's informed consent.

Any questions pertaining to this research should be directed to:

Kevin McKee
The University of Tennessee, Knoxville
The Department of Health, Leisure and Safety
1914 Andy Holt Ave
Knoxville, TN 37996-2700
(615) 974-5041

APPENDIX B
THE TIME MANAGEMENT QUESTIONNAIRE

TIME MANAGEMENT QUESTIONNAIRE

Instructions: For each of the items listed below, indicate how often you engage in that activity. As there are no right or wrong answers to the questions, please be as accurate as you can in estimating the frequency of your involvement in each activity. Simply put the number corresponding to your response in the space before each item. Use the following scale in responding to each item.

- (5) Always
- (4) Frequently
- (3) Sometimes
- (2) Infrequently
- (1) Never

- _____ 1. Do you make a list of the things you have to do each day?
- _____ 2. Do you often find yourself doing things which interfere with your schoolwork simply because you hate to say "No" to people?
- _____ 3. Do you usually keep your desk clear of everything other than what you are currently working on?
- _____ 4. Do you plan your day before you start it?
- _____ 5. Do you feel you are in charge of your own time, by and large?
- _____ 6. Do you have a set of goals for the entire semester?
- _____ 7. Do you make a schedule of the activities you have to do on school/work days?
- _____ 8. On an average class day do you spend more time with personal grooming than doing schoolwork?
- _____ 9. The night before a major assignment is due, are you usually still working on it?
- _____ 10. Do you write a set of goals for yourself each day?
- _____ 11. Do you believe there is room for improvement in the way you manage your time?
- _____ 12. When you have several things to do, do you think it is best to do a little bit of work on each one?
- _____ 13. Do you spend time each day planning?
- _____ 14. Do you make constructive use of your time?
- _____ 15. Do you regularly review your class notes, even when a test is not imminent?
- _____ 16. Do you have a clear idea of what you want to accomplish during the next week?
- _____ 17. Do you continue unprofitable routines or activities?
- _____ 18. Do you set and honor priorities?

APPENDIX C
THE LIFESTYLE APPROACHES INVENTORY

LIFESTYLE APPROACHES

Instructions: For each of the following items, indicate how different or similar that item is to the way you do things. Simply indicate your answer for each item by placing the appropriate letter in the blank before that item. There are no right or wrong answers. Use the following scale:

- (A) Very different from me
- (B) Somewhat different from me
- (C) Uncertain
- (D) Somewhat similar to me
- (E) Very similar to me

- _____ 1. In most situations, I know what I should and should not do.
- _____ 2. If I have a lot of different things to do, I have difficulty deciding what is most important to do.
- _____ 3. After deciding what is most important to do at any given time, I easily get sidetracked from that activity.
- _____ 4. Once I decide what is most important to do at any given time, I start on that task right away.
- _____ 5. I have difficulty judging how long it will take to complete a task.
- _____ 6. I keep my work and study space in good order.
- _____ 7. I know what I most want to experience in my life.
- _____ 8. I complete tasks by the time I'm supposed to complete them.
- _____ 9. I'm confused as to the kind of person I really want to be.
- _____ 10. I often find myself trying to do hard jobs when I'm very tired and easy jobs when I'm very rested
- _____ 11. I divide big tasks into a series of smaller tasks.
- _____ 12. I don't have much idea as to what I most want to achieve in my life.
- _____ 13. I try to make the place where I spend a lot of time more attractive.
- _____ 14. I complete school and work projects before the deadline.
- _____ 15. When I get sidetracked from what I need to be doing, I have a hard time getting back on track.
- _____ 16. The place where I spend most of my time at home is quite messy.

APPENDIX D
THE MICHIGAN ALCOHOLISM SCREENING TEST

MICHIGAN ALCOHOLISM SCREENING TEST

Instructions: Answer each item by placing an "X" in the appropriate column.

No	Question	Yes
1.	Do you enjoy a drink now and then?	1. ☐ ☐
2.	Do you feel you are a normal drinker? (By normal we mean do you drink less than or as much as most other people.)	2. ☐ ☐
3.	Do your friends or relatives think you are a normal drinker?	3. ☐ ☐
4.	Are you able to stop drinking when you want to?	4. ☐ ☐
5.	Can you stop drinking without a struggle after one or two drinks?	5. ☐ ☐
6.	Do you ever feel guilty about your drinking?	6. ☐ ☐
7.	Have you ever lost friends because of your drinking.	7. ☐ ☐
8.	Have you ever gotten into trouble at school or work due to drinking?	8. ☐ ☐
9.	Have you ever lost a job due to drinking?	9. ☐ ☐
10.	Have you ever gotten into physical fights when drinking?	10. ☐ ☐
11.	Have you ever awakened the morning after drinking and found that you could not remember part of the evening?	11. ☐ ☐
12.	Have you ever been arrested for drunk driving, driving while intoxicated, or driving under the influence of alcoholic beverages?	12. ☐ ☐
13.	Have you ever been arrested, or taken into custody, even for a few hours, because of other drunken behavior?	13. ☐ ☐
14.	Do you drink before noon fairly often?	14. ☐ ☐
15.	After heavy drinking, have you ever had severe shaking, or heard voices or seen things that weren't really there?	15. ☐ ☐
16.	Does a parent, your husband or wife, or other near relative ever worry or complain about your drinking?	16. ☐ ☐
17.	Has your drinking ever created a problem between you and a parent, your husband or wife, or other relative?	17. ☐ ☐
18.	Have you ever neglected your work, family, or other obligations for two or more days in a row because of your drinking?	18. ☐ ☐
19.	Have you ever gone to anyone for help about your drinking?	19. ☐ ☐
20.	Has any of your family members ever gone to anyone for help about your drinking?	20. ☐ ☐

21. Have you ever attended a meeting of Alcoholics Anonymous (AA)? 21. ____ ____
22. Have you ever been in a hospital for injuries caused by drinking? 22. ____ ____
23. Have you ever seen a clergyman, doctor, or mental health worker for help with an emotional problem, where drinking was part of the problem? 23. ____ ____
24. Have you ever been a patient in a psychiatric ward of a hospital where drinking was part of the reason for hospitalization? 24. ____ ____
25. Have you ever been told you have Cirrhosis or other liver trouble? 25. ____ ____

APPENDIX E
UNIVARIATE ANALYSES

UNIVARIATE TEST FOR NORMALITY OF TMQ SCORES

Group: Problem-Drinkers

N	90	Sum Wgts	90
Mean	53.61	Sum	4825
Std Dev	7.88	Variance	62.11
Skewness	-0.02	Kurtosis	-0.26
USS	264201	CSS	5527.39
CV	14.70	Std Mean	0.83
T:Mean=0	64.53	Prob> T	0.0001
Sgn Rank	2047.5	Prob> S	0.0001
Num $\hat{=}$ 0	90		
W:Normal	0.9771	<u>Prob<W</u>	0.4220*

Group: Nonproblem-Drinkers

N	196	Sum Wgts	196
Mean	56.67	Sum	11107
Std Dev	9.09	Variance	82.72
Skewness	-0.07	Kurtosis	-0.43
USS	645545	CSS	16129.44
CV	16.05	Std Mean	0.65
T:Mean=0	87.23	Prob> T	0.0001
Sgn Rank	9653	Prob> S	0.0001
Num $\hat{=}$ 0	196		
W:Norman	0.9721	<u>Prob<W</u>	0.0421

* p>.1 indicates variable is normally distributed

UNIVARIATE TEST OF NORMALITY FOR LSA SCORES

Group: Problem-Drinkers

N	90	Sum Wgts	90
Mean	40	Sum	3600
Std Dev	8.77	Variance	78.83
Skewness	-0.21	Kurtosis	-0.44
USS	150838	CSS	6838
CV	21.91	Std Mean	0.92
T:Mean=0	43.29	Prob> T	0.0001
Sgn Rank	2047.5	Prob> S	0.0001
Num $\hat{=}$ 0	90		
W:Normal	0.9701	<u>Prob<W</u>	0.1721*

Group: Nonproblem-Drinkers

N	196	Sum Wgts	196
Mean	44.59	Sum	8741
Std Dev	9.24	Variance	85.46
Skewness	-0.46	Kurtosis	0.12
USS	406487	CSS	16665.16
CV	20.72	Std Mean	0.66
T:Mean=0	67.53	Prob> T	0.0001
Sgn Rank	9563	Prob S	0.0001
Num $\hat{=}$ 0	196		
W:Normal	0.9708	<u>Prob<W</u>	0.0282

* p>.1 indicates variable is normally distributed

UNIVARIATE TEST OF NORMALITY FOR SRP SCORES

Group: Problem-Drinkers

N	90	Sum Wgts	90
Mean	21.41	Sum	1927
Std Dev	4.6781	Variance	21.8853
Skewness	-0.0601	Kurtosis	-0.2707
USS	43207	CSS	1947.79
CV	21.8493	Std Mean	0.49312
T:Mean=0	43.4194	Prob> T	0.0001
Sgn Rank	2047.50	Prob> S	0.0001
Num $\hat{=}$ 0	90		
W:Normal	0.97671	<u>Prob<W</u>	0.4004*

Group: Nonproblem-Drinkers

N	196	Sum Wgts	196
Mean	22.628	Sum	4435
Std Dev	5.301	Variance	28.102
Skewness	0.015	Kurtosis	-0.571
USS	105833	CSS	5479.81
CV	23.4276	Std Mean	0.37865
T:Mean=0	59.7585	Prob> T	0.0001
Sgn Rank	9653	Prob> S	0.0001
Num $\hat{=}$ 0	196		
W:Normal	0.96122	<u>Prob<W</u>	0.0006

* p>1 indicates variable is normally distributed

UNIVARIATE TEST FOR NORMALITY OF TA SCORES

Group: Problem-Drinkers

N	90	Sum Wgts	90
Mean	18.7	Sum	1683
Std Dev	3.12096	Variance	9.74044
Skewness	-0.3494	Kurtosis	-0.1493
USS	32339	CSS	866.9
CV	16.6896	Std Mean	0.32897
T:Mean=0	56.8425	Prob> T	0.0001
Sgn Rank	2047.5	Prob> S	0.0001
Num $\hat{=}$ 0	90		
W:Normal	0.9703	<u>Prob<W</u>	0.1760*

Group: Nonproblem-Drinkers

N	196	Sum Wgts	196
Mean	19.6734	Sum	3856
Std Dev	3.31824	Variance	11.0107
Skewness	-0.2671	Kurtosis	-0.1761
USS	78008	CSS	2147.10
CV	16.8666	Std Mean	0.23701
T:Mean=0	83.0041	Prob> T	0.0001
Sgn Rank	9653	Prob> S	0.0001
Num $\hat{=}$ 0	196		
W:Normal	0.97435	<u>Prob<W</u>	0.0841

* p>1 indicates variable is normally distributed

UNIVARIATE TEST FOR NORMALITY OF LRP SCORES

Group: Problem-Drinkers

N	90	Sum Wgts	90
Mean	13.5	Sum	1215
Std Dev	2.94614	Variance	8.67977
Skewness	-0.0013	Kurtosis	-0.0660
USS	17175	CSS	772.5
CV	21.8233	Std Mean	0.31055
T:Mean=0	43.4711	Prob> T	0.0001
Sgn Rank	2047.5	Prob> S	0.0001
Num $\hat{=}$ 0	90		
W:Normal	0.97407	<u>Prob<W</u>	0.2927*

Group: Nonproblem-Drinkers

N	196	Sum Wgts	196
Mean	14.36	Sum	2816
Std Dev	2.94178	Variance	8.65410
Skewness	0.00540	Kurtosis	0.03886
USS	42146	CSS	1687.55
CV	20.4755	Std Mean	0.21012
T:Mean=0	68.3743	Prob> T	0.0001
Sgn Rank	9653	Prob> S	0.0001
Num $\hat{=}$ 0	196		
W:Normal	0.97779	<u>Prob<W</u>	0.2056*

* p>1 indicates variable is normally distributed

UNIVARIATE TEST FOR NORMALITY OF PFE SCORES

Group: Problem-Drinkers

N	90	Sum Wgts	90
Mean	9.94	Sum	895
Std Dev	4.36111	Variance	19.0193
Skewness	-0.0729	Kurtosis	-0.6864
USS	10593	CSS	1692.72
CV	43.8548	Std Mean	0.45970
T:Mean=0	21.6323	Prob> T	0.0001
Sgn Rank	2002.5	Prob> S	0.0001
Num ^=0	89		
W:Normal	0.96602	<u>Prob<W</u>	0.0916

Group: Nonproblem-Drinkers

N	196	Sum Wgts	196
Mean	11.8775	Sum	2328
Std Dev	4.27458	Variance	18.2721
Skewness	-0.2033	Kurtosis	-0.3950
USS	31214	CSS	3563.06
CV	35.9888	Std Mean	0.30532
T:Mean=0	38.9009	Prob> T	0.0001
Sgn Rank	9555	Prob> S	0.0001
Num ^=0	195		
W:Normal	0.96763	<u>Prob<W</u>	0.0087

UNIVARIATE TEST FOR NORMALITY OF GD SCORES

Group: Problem-Drinkers

N	90	Sum wgt's	90
Mean	12.1888	Sum	1097
Std Dev	2.97893	Variance	8.87403
Skewness	-0.4586	Kurtosis	-0.6304
USS	14161	CSS	789.788
CV	24.4397	Std Mean	0.31400
T:Mean=0	38.8172	Prob> T	0.0001
Sgn Rank	2047.5	Prob> S	0.0001
Num $\hat{\rho}=0$	90		
W:Normal	0.92296	<u>Prob<W</u>	0.0001

Group: Nonproblem-Drinkers

N	196	Sum Wgts	196
Mean	13.1836	Sum	2584
Std Dev	2.81697	Variance	7.93532
Skewness	-1.0378	Kurtosis	0.61118
USS	35614	CSS	1547.38
CV	21.3671	Std Mean	0.20121
T:Mean=0	65.5212	Prob> T	0.0001
Sgn Rank	196		
W:Normal	0.86681	<u>Prob<W</u>	0.0000

UNIVARIATE TEST FOR NORMALITY OF TTA SCORES

Group: Problem-Drinkers

N	90	Sum Wgts	90
Mean	10.5333	Sum	948
Std Dev	2.86474	Variance	8.20674
Skewness	-0.5661	Kurtosis	-0.0319
USS	10716	CSS	730.4
CV	27.1969	Std Mean	0.30197
T:Mean=0	34.8820	Prob> T	0.0001
Sgn Ranks	2047.5	Prob> S	0.0001
Num $\hat{=}$ 0	90		
W:Normal	0.95538	<u>Prob<W</u>	0.0141

Group: Nonproblem-Drinkers

N	196	Sum Wgts	196
Mean	11.3622	Sum	2227
Std Dev	2.82777	Variance	7.99631
Skewness	-0.8484	Kurtosis	0.74226
USS	26863	CSS	1559.28
CV	24.8874	Std Mean	0.20198
T:Mean=0	56.2532	Prob> T	0.0001
Sgn Rank	9653	Prob> S	0.0001
Num $\hat{=}$ 0	196		
W:Normal	0.92892	<u>Prob<W</u>	0.0001

UNIVARIATE TEST FOR NORMALITY OF OPS SCORES

Group: Problem-Drinkers

N	90	Sum Wgts	90
Mean	7.33333	Sum	660
Std Dev	3.29453	Variance	10.8539
Skewness	-0.1341	Kurtosis	-1.1290
USS	5806	CSS	966
CV	44.9254	Std Mean	0.34727
T:Mean=0	21.1168	Prob> T	0.0001
Sgn Rank	2002.5	Prob> S	0.0001
Num $\hat{=}$ 0	89		
W:Normal	0.92167	<u>Prob<W</u>	0.0001

Group: Nonproblem-Drinkers

N	196	Sum Wgts	196
Mean	8.17346	Sum	1602
Std Dev	3.07521	Variance	9.45693
Skewness	-0.4259	Kurtosis	-0.8607
USS	14938	CSS	1844.10
CV	37.6243	Std Mean	0.21965
T:Mean=0	37.2090	Prob> T	0.0001
Sgn Rank	9653	Prob> S	0.0001
Num $\hat{=}$ 0	196		
W:Normal	0.90381	<u>Prob<W</u>	0.000

APPENDIX F

t-TESTS

t-TEST COMPARISON OF TMQ SCORES OF
PROBLEM-DRINKERS(P) AND NONPROBLEM-DRINKERS(N)

	<u>n=</u>	<u>Mean</u>	<u>Std Dev</u>	<u>Std Error</u>	<u>Min</u>	<u>Max</u>
P	90	53.61	7.88	0.83	36	71
N	196	56.67	9.09	0.65	36	80

<u>Variances</u>	<u>T</u>	<u>DF</u>	<u>Prob> T </u>
Unequal	2.8991	197.4	0.0024
Equal	2.7495	284.0	<u>0.0064</u>

For HO: Variances are equal, $F' = 1.33$

DF = (195,89) Prob>F' = 0.1263

t-TEST COMPARISON OF LSA SCORES OF
PROBLEM-DRINKERS(P) AND NONPROBLEM-DRINKERS(N)

	n=	Mean	Std Dev	Std Error	Min	Max
P	90	40.00	8.77	0.92	17	56
N	196	44.60	9.24	0.66	15	64

Variances	T	DF	Prob> T
Unequal	4.0478	181.5	0.0001
Equal	3.9685	284.0	0.0001

For HO: Variances are equal, $F' = 1.28$

DF = (195,89) Prob>F' = 0.1821

t-TEST COMPARISON OF SRP SCORES OF
PROBLEM-DRINKERS(P) AND NONPROBLEM-DRINKERS(N)

	n=	Mean	Std Dev	Std Error	Min	Max
P	90	21.41	4.68	0.49	11	34
N	196	22.63	5.30	0.38	12	35

Variances	T	DF	Prob> T
Unequal	1.9565	194.1	0.0518
Equal	1.8681	284.0	<u>0.0628</u>

For HO: Variances are equal, $F' = 1.28$

DF = (195,89) Prob F' = 0.1821

t-TEST COMPARISON OF TA SCORES OF
PROBLEM-DRINKERS(P) AND NONPROBLEM-DRINKERS(N)

	n=	Mean	Std Dev	Std Error	Min	Max
P	90	18.70	3.12	0.33	10	25
N	196	19.67	3.32	0.24	10	28

Variances	T	DF	Prob> T
Unequal	2.4009	182.9	0.0174
Equal	2.3468	284.0	<u>0.0196</u>

For HO: Variances are equal, $F' = 1.13$

DF = (195,89) Prob>F' = 0.5167

t-TEST COMPARISON OF LRP SCORES OF
PROBLEM-DRINKERS(P) AND NONPROBLEM-DRINKERS(N)

	n=	Mean	Std Dev	Std Error	Min	Max
P	90	13.50	2.95	0.31	6	21
N	196	14.37	2.94	0.21	7	24

<u>Variances</u>	<u>T</u>	<u>DF</u>	<u>Prob> T </u>
Unequal	2.3132	172.6	0.0219
Equal	2.3144	284.0	<u>0.0214</u>

For HO: Variances are equal, $F' = 1.00$

DF = (89,195) Prob>F' = 0.9690

t-TEST COMPARISON OF PFE SCORES OF
PROBLEM-DRINKERS(P) AND NONPROBLEM-DRINKERS(N)

	n=	Mean	Std Dev	Std Error	Min	Max
P	90	9.95	4.36	0.46	0	19
N	196	11.88	4.27	0.31	0	20

Variances	T	DF	Prob> T
Unequal	3.5029	169.8	0.0006
Equal	3.5291	284.0	<u>0.0005</u>

For HO: Variances are equal, $F' = 1.04$

DF = (89,195) Prob F' = 0.8071

t-TEST COMPARISON OF GD SCORES OF
PROBLEM-DRINKERS(P) AND NONPROBLEM-DRINKERS(N)

	n=	Mean	Std Dev	Std Error	Min	Max
P	90	12.19	2.97	0.20	4	16
N	196	13.18	2.82	0.31	4	17

Variances	T	DF	Prob> T
Unequal	2.6674	164.4	0.0084
Equal	2.7234	284.0	<u>0.0069</u>

For HO: Variances are equal, $F' = 1.12$

DF = (89,195) Prob>F' = 0.5199

t-TEST COMPARISON OF TTA SCORES OF
PROBLEM-DRINKERS(P) AND NONPROBLEM-DRINKERS(N)

	n=	Mean	Std Dev	Std Error	Min	Max
P	90	10.53	2.86	0.30	2	16
N	196	11.36	2.82	0.20	2	16

<u>Variances</u>	<u>T</u>	<u>DF</u>	<u>Prob> T </u>
Unequal	2.2816	170.8	0.0237
Equal	2.2927	284.0	<u>0.0226</u>

For HO: Variances are equal, $F' = 1.03$

DF = (89,195) Prob>F' = 0.8681

t-TEST COMPARISON OF OPS SCORES OF
PROBLEM-DRINKERS(P) AND NONPROBLEM-DRINKERS(N)

	n=	Mean	Std Dev	Std Error	Min	Max
P	90	7.33	3.29	0.34	0	12
N	196	8.17	3.08	0.22	1	12

Variances	T	DF	Prob> T
Unequal	2.0446	162.6	0.0425
Equal	2.0976	284.0	<u>0.0368</u>

For HO: Variances are equal, $F' = 1.15$

DF = (89,195) Prob F' = 0.4301

APPENDIX G
NPARIWAY ANALYSES

NPARIWAY COMPARISON OF TMQ SCORES OF
PROBLEM-DRINKERS(P) AND NONPROBLEM-DRINKERS(N)

	<u>n=</u>	<u>Sum of Scores</u>	<u>Expected Under HO</u>	<u>Std Dev Under HO</u>	<u>Mean Score</u>
P	90	11084.5	12915.0	649.09	123.16
N	196	29956.5	28126.0	649.09	152.84

S = 11084.5 Z = -2.81934 Prob>|Z| = 0.0048

NPARIWAY COMPARISON OF LSA SCORES OF
PROBLEM-DRINKERS(P) AND NONPROBLEM-DRINKERS(N)

	n=	Sum of Scores	Expected Under HO	Std Dev Under HO	Mean Score
P	90	10337.5	12915.0	649.08	114.86
N	196	30703.5	28126.0	649.08	156.65

S = 10337.5 Z = -3.97023 Prob>|Z| = 0.0001

NPARIWAY COMPARISON OF SRP SCORES OF
PROBLEM-DRINKERS(P) AND NONPROBLEM-DRINKERS(N)

	<u>n=</u>	<u>Sum of Scores</u>	<u>Expected Under HO</u>	<u>Std Dev Under HO</u>	<u>Mean Score</u>
P	90	1175.05	12915.0	648.23	130.56
N	196	29291.0	28126.0	648.23	149.44

S = 11750.0 Z = -1.79642 Prob>|Z| = 0.0724

NPAR1WAY COMPARISON OF TA SCORES OF
PROBLEM-DRINKERS(P) AND NONPROBLEM-DRINKERS(N)

	n=	Sum of Scores	Expected Under HO	Std Dev Under HO	Mean Score
P	90	11418.0	12915.0	646.70	126.87
N	196	29623.0	28126.0	646.70	151.14

S = 11414.0 Z = -2.31404 Prob>|Z| = 0.0207

NPARIWAY COMPARISON OF PFE SCORES OF
PROBLEM-DRINKERS(P) AND NONPROBLEM-DRINKERS(N)

	n=	Sum of Scores	Expected Under HO	Std Dev Under HO	Mean Score
P	90	10780.5	12915.0	648.05	119.78
N	196	30260.5	28126.0	648.05	154.39

S = 10780.5 Z = -3.29296 Prob>|Z| = 0.0011

NPARIWAY COMPARISON OF GD SCORES OF
PROBLEM-DRINKERS(P) AND NONPROBLEM-DRINKERS(N)

	<u>n=</u>	<u>Sum of Scores</u>	<u>Expected Under HO</u>	<u>Std Dev Under HO</u>	<u>Mean Score</u>
P	90	11089.5	12915.0	642.32	123.22
N	196	29951.5	28126.0	642.32	152.81

S = 11089.5 Z = -2.84127 Prob>|Z| = 0.0045

NPARIWAY COMPARISON OF TTA SCORES OF
PROBLEM-DRINKERS(P) AND NONPROBLEM-DRINKERS(N)

	<u>n=</u>	<u>Sum of</u> <u>Scores</u>	<u>Expected</u> <u>Under HO</u>	<u>Std Dev</u> <u>Under HO</u>	<u>Mean</u> <u>Score</u>
P	90	11363.5	12915.0	645.25	126.26
N	196	29677.5	28126.0	645.25	151.26

S = 11363.5 Z = -2.40372 Prob>|Z| = 0.0162

NPARIWAY COMPARISON OF OPS SCORES OF
PROBLEM-DRINKERS(P) AND NONPROBLEM-DRINKERS(N)

	<u>n=</u>	<u>Sum of Scores</u>	<u>Expected Under HO</u>	<u>Std Dev Under HO</u>	<u>Mean Score</u>
P	90	11615.0	12915.0	645.79	129.16
N	196	29426.0	28126.0	645.79	150.12

S = 11615.0

Z = -2.01228

Prob>|Z| = 0.0442

APPENDIX H
LOGISTIC DISCRIMINATION

LOGISTIC DISCRIMINATION
OF TA, LRP, PFE, GD, TTA AND OPS FACTORS

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Sq	Pr > Chi-Sq
Intercept	1	-1.6332	0.9544	2.9286	0.0870
TA	1	-0.00039	0.0502	0.0001	0.9938
LRP	1	0.0301	0.0554	0.2965	0.5861
PFE	1	0.0704	0.0389	3.2743	0.0704
GD	1	0.0642	0.0477	1.8100	0.1785
TTA	1	0.0156	0.0550	0.0809	0.7760
OPS	1	0.0313	0.0469	0.4462	0.5041

VITA

Kevin Francis McKee was born in Indiana, Pennsylvania on September 9, 1963. He attended elementary and secondary schools in the Indiana Area, graduating from Indiana Area High School in June, 1981. The following August he enrolled at Saint Francis College in Loretto, Pennsylvania, earning a Bachelor of Science degree in Psychology in May of 1985. In 1988 he re-entered higher education at Indiana University of Pennsylvania, located in Indiana, Pennsylvania. Majoring in Sport Sciences, with a concentration in Sport Psychology, a Master of Science degree was earned in May of 1989. In January of 1990 he entered The University of Tennessee, Knoxville, majoring in Health Education. In August of 1994 he earned the Doctor of Education degree from that university.

He is presently a faculty member within The Department of Exercise and Sport Science at Colorado State University, Fort Collins, Colorado.