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I am submitting herewith a dissertation written by Johnny Thomas Butler entitled "Self Concept, Social Class, and Knowledge of Alcohol and Alcohol Consumption among 12 and 13 Year Old Students." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education, with a major in Health Education.

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A

SELF CONCEPT, SOCIAL CLASS, AND KNOWLEDGE OF ALCOHOL AND ALCOHOL CONSUMPTION AMONG 12 AND 13 YEAR OLD STUDENTS

A Dissertation

Presented for the

Doctor of Education

Degree

The University of Tennessee, Knoxville

Johnny Thomas Butler

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DEDICATION

To my parents, Mr. and Mrs. Kenneth J. Butler, for their innumerable sacrifices and for their unselfish dedication to and support of the writer.

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ABSTRACT

The purpose of this study was to determine if relationships existed between the alcohol consumption of early adolescent students and their self concepts, social class, and knowledge regarding alcohol. For purposes of differentiation, the students were classified as abstainers from alcohol, infrequent users of alcohol, and frequent users of alcohol. The sample consisted of 388 seventh and eighth grade students in ten junior high schools in the Memphis City Schools during the fall semester of 1979. All of the students were 12 or 13 years of age. This group consisted of 115 male and 133 female abstainers from alcohol, 36 male and 34 female infrequent users of alcohol, and 32 male and 38 female frequent users of alcohol.

To gather the data, the following instruments were used: (1) the Tennessee Self Concept Scale, (2) an Alcohol Consumption Questionnaire which contained questions to establish social class, and (3) an Alcohol Knowledge Test. The statistical analysis of self concept consisted of analysis of variance and the Scheffé post hoc procedure for multiple comparisons. A chi-square test was also utilized in analysis of one scale of the Tennessee Self Concept Scale, Total Positive. Chi-square tests were also utilized to analyze the data on social class and knowledge of alcohol.

The frequent users of alcohol differed from the abstainers in self concept. The abstainers had more positive perceptions of their own behavior. They also had more positive views of their bodies, their

states of health, their physical appearances, their skills, and their sexuality. There was a significant difference in the alcohol consumption of females of high and low social class. There was a significantly high number of high social class female infrequent drinkers and a significantly high number of low social class female abstainers. There were no significant differences in the social class of male abstainers from alcohol, infrequent users of alcohol, and frequent users of alcohol. There were also no significant differences in knowledge regarding alcohol in the three alcohol consumption groups.

The conclusions drawn from this investigation were:

1. A majority of 12 and 13 year old students were abstainers from alcohol. The number of infrequent drinkers and frequent drinkers were about the same.

2. Slightly more males in this age group were infrequent drinkers than females. Slightly more females were frequent drinkers than males.

3. Abstainers from alcohol had more favorable overall self concepts than either infrequent drinkers or frequent drinkers. Infrequent drinkers had more favorable overall self concepts than frequent drinkers.

4. Abstainers of both sexes had higher levels of self concept than frequent drinkers. The abstainers had more favorable perceptions of the way they act or what they do. They also had a more positive view of their bodies, their states of health, their physical appearance, their skills, and their sexuality.

5. Twelve and 13 year old boys of high and low social class did not differ in their alcohol consumption.

6. Girls of high social class were more likely to be infrequent drinkers than girls of low social class, and girls of low social class were more likely to be abstainers from alcohol than girls of high social class.

7. Alcohol consumption in 12 and 13 year old students was not related to knowledge about alcohol.

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CHAPTER I

INTRODUCTION

Alcoholism is a major problem in the United States. Closely associated with it is the fact that there is a large number of people who drink heavily or at least to occasional excess, but who are not classified as alcoholics. Many of these people began drinking at a very early age. In fact, Weathers (170) stated that drinking is virtually a rite of passage for adolescents. According to McGee (126), alcoholism is second only to venereal disease as the most important health problem in the age group 12 to 20.

Numerous studies have demonstrated that a majority of teenagers drink at least occasionally (4, 12, 40, 106, 139). The number of junior and senior high students who have drunk alcohol has risen dramatically since 1970 and continues to rise (75:6). The consequences of this situation leave effects that can last throughout one's lifetime. For instance, in a recent ten year period, the number of arrests for drunkenness of girls 18 years of age and under tripled; arrests for boys increased two and one-half times (25:40). For the 16-24 year age group, alcohol is the cause of six out of ten automobile accident fatalities (110:150). In a recent year, 47,000 people were killed in automobile accidents. Approximately 19 percent of these deaths involved drunks under 20. With an estimated 3.3 million problem drinkers in junior and senior high schools, the number of conflicts with teachers and police is on the rise with this age group (170:44).

For many people, drinking which started at an early age is a practice which is continued into adulthood, often with disastrous results. Frequently the adult alcoholic began drinking at an early age. In fact, the number of teenage problem drinkers in high school is anywhere from 5 to 30 percent, depending on the group surveyed and the criteria used to identify problem drinking (100:177).

It is a widely accepted fact that one's perception of self has a profound effect upon his behavior. The self concept even affects the life goals of the individual and his thought processes. Even though they are aware of the risk, the desire to create a positive self-image is so significant that many people act in ways that risk life, health, and property. Those with poor self concepts often act in aberrant or anti-social ways. Alcoholism and heavy drinking have been found to be associated with low self concept and depression (18, 40, 72, 101, 165).

For years, the predominant image of the alcoholic was that of a skid row bum. However, the disease of alcoholism is present at all levels of the social strata (110:141). It is unknown if the consumption of alcohol at an early age varies in the social classes. Indeed, there is a need to determine if membership in a social class is associated with drinking in early adolescence. Such knowledge could be of great benefit to alcohol education programs.

Society has spent a great deal of time and money in efforts to eliminate adolescent drinking in the hope that it would reduce adult problems caused by alcohol consumption. Laws have been in effect for years prohibiting use of alcohol by minors. Parents and the clergy

have preached against imbibing strong drink. Society has also charged its schools with the responsibility of reducing the problem of adolescent drinking.

Most educational programs have centered around matters of a cognitive nature. While an increase in knowledge about alcohol may often occur as a result of such programs, its effect upon alcohol consumption is not necessarily positive. As Ungerleider and Brown (163) asserted, factual data have simply not proven to be a deterrent to drug use. Furthermore, Owen (134) found that alcoholism education has failed to reduce the incidence of the problem. It seems essential to examine the role of areas such as self concept and knowledge pertaining to alcohol as factors relating to drinking during early adolescence.

I. PURPOSE OF THE STUDY

The purpose of the study was to determine the relationship between alcohol consumption and the self concept, social class, and knowledge of alcohol in 12 and 13 year old students.

II. STATEMENT OF THE PROBLEM

1. Were there differences in self concepts among 12 and 13 year old male frequent users of alcohol, infrequent users of alcohol, and abstainers from alcohol?

2. Were there differences in self concepts among 12 and 13 year old female frequent users of alcohol, infrequent users of alcohol, and abstainers from alcohol?

3. Were there differences in social class among 12 and 13 year old male frequent users of alcohol, infrequent users of alcohol, and abstainers from alcohol?

4. Were there differences in social class among 12 and 13 year old female frequent users of alcohol, infrequent users of alcohol, and abstainers from alcohol?

5. Were there differences in knowledge about alcohol among 12 and 13 year old male frequent users of alcohol, infrequent users of alcohol, and abstainers from alcohol?

6. Were there differences in knowledge about alcohol among 12 and 13 year old female frequent users of alcohol, infrequent users of alcohol, and abstainers from alcohol?

III. HYPOTHESES

For the purposes of this investigation, the following null hypotheses were tested:

1. There were no significant differences among the self concepts of 12 and 13 year old male frequent users of alcohol, infrequent users of alcohol, and abstainers from alcohol.

2. There were no significant differences among the self concepts of 12 and 13 year old female frequent users of alcohol, infrequent users of alcohol, and abstainers from alcohol.

3. There were no significant differences in social class among 12 and 13 year old male frequent users of alcohol, infrequent users of alcohol, and abstainers from alcohol.

4. There were no significant differences in social class among 12 and 13 year old female frequent users of alcohol, infrequent users of alcohol, and abstainers from alcohol.

5. There were no significant differences in knowledge about alcohol among 12 and 13 year old male frequent users of alcohol, infrequent users of alcohol, and abstainers from alcohol.

6. There were no significant differences in knowledge about alcohol among 12 and 13 year old female frequent users of alcohol, infrequent users of alcohol, and abstainers from alcohol.

IV. NEED FOR THE STUDY

Historically, educational programs that have dealt with alcohol have done so primarily on a cognitive level and from an abstinence or prohibitionist ideology. This approach has been denounced by many researchers (70, 78, 85, 163). Dennison, Prevet, and Affleck (41) pointed out that to date there is no empirical evidence of the effectiveness of alcohol education on drinking behavior. Said Blum (9:58), "Alcoholism prevention efforts in school yield rather glum findings." Several studies have supported such a conclusion (122, 124, 156, 159). Crowson, an alcohol and drug abuse coordinator with the Memphis City Schools' Mental Health Center agreed with this conclusion by saying, "Just giving them the facts didn't do much good," (126:F4) in reference to the use of alcohol by Memphis teenage students. Indeed, the prevalence of alcoholism suggests that this approach has been less than successful. It is incumbent upon health

educators to determine if there are factors other than lack of knowledge which may be related to adolescent drinking.

Society has made the assumption that education can reduce the incidence of adolescent drinking. If education is to accomplish this goal, it must proceed from a knowledge of as many of the factors associated with adolescent drinking as possible. Educational programs must be based on a multiplicity of factors that lead to early onset of drinking.

Fitts (55:11) stated that we may learn about critical problems which face our society such as alcoholism and drug abuse by studying self concept. The information we gain must be applied to our educational programs. If, indeed, it can be shown conclusively that there is a relationship between consumption of wine, beer, and distilled spirits and the young person's self concept, then educators should incorporate the considerations of self concept into educational programs. If, on the other hand, no relationship can be found, elimination of this aspect would save time and money that can be directed to other areas. It is crucial that research be conducted to determine the role of such effective elements in alcohol consumption. This is particularly important during early adolescence, before lifelong drinking practices are established.

Our public educational systems deal with students of every level of the social strata. While it is evident that alcoholism pervades every social class (110:141), the amount of early adolescent drinking in the various social classes is not clear. This knowledge is important in

allowing generalization about the early onset of drinking and socioeconomic factors. Such generalizations would be useful in alcohol education programs. The possibility exists of applying information regarding alcohol consumption and social class to counseling programs.

Because of the fact that most alcohol educational programs are presently devoted to cognitive material, it is important to assess the impact of knowledge regarding alcohol upon the consumption of alcohol. As Denson (42:6) said, the ultimate answer to the problems relating to alcohol rest with the ability to make sound decisions regarding alcohol consumption. Indeed, it would appear that knowledge about alcohol would be a prerequisite to rational decision making about its consumption.

V. DELIMITATIONS OF THE STUDY

The major delimitations of this investigation were as follows:

1. The population was delimited to seventh and eighth grade students age 12 and 13 in ten junior high schools in the Memphis City Schools during the Fall Semester, 1979.

2. The study was delimited to measuring the variables, self concept, social class, knowledge relating to alcohol, and ethyl alcohol consumption.

VI. LIMITATIONS OF THE STUDY

The major limitations of the investigation were as follows:

1. The study was limited to the degree that the principals of the individual schools were willing to allow the gathering of the data in the schools.

2. The study was also limited to the degree that parents would allow their children to participate.

3. The study was also limited to the degree that subjects would voluntarily give information regarding the dependent and independent variables.

VII. BASIC ASSUMPTIONS

1. Self concept could be defined and measured.

2. The subjects would give truthful and accurate responses regarding their feelings in the measurement of self concept, their social class, their knowledge of alcohol, and their consumption of alcohol.

3. Uncontrolled variables (race, religion, and intelligence) affected each group equally.

4. The subjects could read and comprehend at the sixth grade level.

VIII. DEFINITIONS

1. Abstainer: a person who has not consumed ethyl alcohol in the past year.

2. Adolescence: the period of life from the onset of puberty until maturity.

3. Alcohol: ethyl alcohol in beverage form.

4. Alcoholic: a person who cannot control his intake of ethyl alcohol and/or has suffered damage to physical health or personal or social functioning as a result of using alcohol.

5. Drink of Distilled Spirits: at least one ounce of distilled spirits consumed by itself or mixed with another substance.

6. Drinker: a person who has consumed ethyl alcohol in the last year.

7. Early Adolescent: a person 12 or 13 years of age.

8. Frequent Drinker: one having two or more drinks of distilled spirits, glasses of wine, or glasses of beer or any combination of the three totalling two or more units per week.

9. Glass of Beer: a 12-ounce serving of beer.

10. Glass of Wine: a four-ounce serving of wine.

11. Infrequent Drinker: one having fewer than two drinks of distilled spirits, glasses of wine, or glasses of beer per week.

12. Memphis City Schools: the title of the public, tax-supported educational system in the city of Memphis, Tennessee.

13. Self Concept: the organization of qualities that the individual attributes to himself, which is reflected by one's separate scores on the following variables of the Tennessee Self Concept Scale: Self Criticism, Total P, Identity, Self-Satisfaction, Behavior, Physical Self, Moral-Ethical Self, Personal Self, Family Self, Social Self.

14. Social Class: the prestige, power, and duties accorded a person on the basis of his/her occupation and educational attainment.

15. Unit: a glass of beer, glass of wine, or a drink of distilled spirits.

IX. COLLECTION OF THE DATA

Data for this investigation were measures of alcohol consumption or abstinence, knowledge relating to alcohol, social class, and self concept. A questionnaire was developed and administered to measure the dependent variable, alcohol consumption. These data were used to stratify the sample into frequent drinker, infrequent drinker, and abstainer groups. Self concept was measured by use of the Counseling Form of the Tennessee Self Concept Scale, which was developed and standardized by William H. Fitts. An instrument utilized by Denson (42) and revised was utilized to determine knowledge relating to alcohol. In order to determine social class, the students were asked the occupation of the principal wage earner in their household and the highest level of education attained by that person. By use of the North-Hatt Scale of "Occupational Ratings" and an educational attainment scale developed by the U.S. Bureau of the Census, point values were assigned to each principal wage earner based on occupation and educational level, respectively. The total of the point values was used as the index of social class.

CHAPTER II

REVIEW OF THE RELATED LITERATURE

The literature regarding the subjects of ethyl alcohol use and the self concept, alcohol knowledge, and social class is quite voluminous. For the purpose of this study, the following areas were reviewed: general findings regarding self concept; extent of alcohol use by adolescents; the role of depression and self concept in alcohol use; social class; social class and drug and alcohol use; the validity and reliability of anonymous and self-report questionnaires of drug and alcohol use; classifying drinking behavior; alcohol education, knowledge and consumption; and related methodological research. Due to the developmental nature of self concept and social class and alcoholic behavior, literature including all stages of life was reported.

I. GENERAL FINDINGS REGARDING SELF CONCEPT

Kinch (102:481) has defined the self concept as "that organization of qualities that the individual attributes to himself." Those qualities may be attributes or roles. According to both Wylie (179) and Fitts et al. (59), there is a lack of longitudinal research upon which to base a description of the development of the self concept. However, since we must assume that man's behavior is at least mostly meaningful, we must try to understand the notion of self concept.

The self concept serves many functions. It is a summary of all that a person is. It is a supramoderator of his functioning. Most

theorists believe that the self concept supercedes all other things in importance to the individual. Self esteem, self confidence, and self image are integral parts of the self concept.

Self theory is based upon the principle that man reacts to his phenomenal world in terms of the way he perceives this world. The most conspicuous feature of each individual's world is the self as he sees, perceives, and experiences it. The self concept becomes the frame of reference through which the individual interacts with the world. At the same time, the self concept is learned from interactions and experiences with the world and people in it, including the self. It emerges from social interactions and serves to guide the person's behavior. Horrocks (90) said that along the developmental process of the self concept are many testing grounds, such as values development, self acceptance, peer relationships, and sexual relations. Positive self concept is learned or earned by achieving goals and measuring up to certain standards, whether externally or internally imposed. Other factors which influence the development of self concept are nicknames, intelligence, levels of aspiration, emotions, physical development, and cultural patterns.

As the core of the personality, the self concept is the most stable and salient portion of one's total world. According to Rogers (140) and Combs and Snygg (33), the self concept is a reflection of an individual's mental health at both ends of the continuum—mental illness and self actualization. As such, it can help predict an individual's behavior in relation to other people in his environment and to himself. In fact, the self concept functions to direct our behavior.

Combs and Snygg (33:126) depicted the phenomenology of the self as a circle consisting of three rings. The inside circle represented the self concept, the Gestalt of the concepts of self. The intermediate circle represented the self concept plus all of one's involvements and interaction—the phenomenal self. The outer circle represented the phenomenal field—the life space, the phenomenal self, plus all possible perceptions. The important concept of the phenomenology is that all behavior is motivated by an internal need to maintain or enhance the self.

Fitts et al. (59:28) pointed out that during the early months of life the self concept is based almost solely on the individual's perceptions of himself. As the person grows and matures, the view of self is based on values acquired from interactions with others (33:134). Most of the self concept is developed in the social framework of how the individual is treated and judged by others. Combs and Snygg (33:145) asserted that the family has the most important and far-reaching effects on the self concept of the child. However, examples of other social influences are not difficult to find. For instance, children often perceive themselves as the composite of the qualities bestowed upon them by nicknames. Wallace (167) and Mussen and Jones (131) described the predicament of the late maturing boy in junior high school and the adverse effects upon his personality that the social and psychological environment can have. Because of his spindly appearance, he may be accorded little status and accrue feelings of insecurity and inferiority. These children are also often less cooperative, warm, and responsible and feel less able to make an impression on others.

An early developing girl may experience a great deal of social success in junior high school because her company is in demand by older boys. As she grows into high school, her friends leave for college and she is left with a peer group which is experiencing for the first time, things which are "old hat" to her. What follows is often depression, loneliness, and a poor perception of self. It is not surprising that, as Thompson (161:21) pointed out, young people are often quite uncertain about their self concepts.

School offers a new set of roles, particularly in changing from elementary to junior high or junior high to high school. Cantwell and Svajian (23) pointed out that adults are often baffled by adolescents' naive and unrealistically immediate qualities and demands. Much of this grows out of shifting roles and a combination of freedom of responsibility coupled with pressing emotional needs for adulthood intensified by libidinal energy. It is difficult to realize that the adolescent is in the final stages of developing his self concept.

Cole and Hall (32), Hurlock (93), and Horrocks (90) dealt with the dichotomy of real or operational self versus ideal self. The real self concept is a mirror image of what the adolescent believes other people think of him. The ideal self concept is what he would like to be. In this framework, the individual uses peers to test his self perceptions and peers become an important influence on the matching of real and ideal self. The peers usually serve as an incentive for real self development because the adolescent most often sees them as more stable and socially at ease than he sees himself.

If there is a discrepancy between the real and ideal self the adolescent may become depressed and withdrawn and may resort to the unhealthy use of defense mechanisms. The larger the discrepancy, the greater the tension, frustration, and emotional maladjustment. This increases the possibility of the use of a variety of mechanisms, including alcohol. There is definitely a need to narrow the gap between the real self and ideal self in such a case so that the adolescent can be more accepting of himself and have a lesser need for defensive behavior.

Fitts et al. (59) described the self concept in terms of an identity self, a behavioral self, and a judging self. The identity self is the answer to the question, "Who am I?" It is a response to labels like golfer, teacher, cute and Fred. In order for a role to be a part of the identity self, it must be part of the behavior. A person will not sing unless he considers himself a singer.

The concept of the behavioral self places the identity self secondary and assumes that man is his behavior. A person does what he is caused to do by intrinsic or extrinsic rewards or consequences of behavior. Thus, the behavioral self provides material which defines teacher and singer to the identity self.

The judging self is the observer, evaluator, standard setter, and mediator between the identity self and behavioral self. This aspect of self establishes pride in a self-actualizing deed and disapproval at inability to function. The judging self is the evaluating element that is the primary component of self esteem and as such, it establishes and

enhances self esteem or a condition of disapproval with self and possible despair and depression.

According to Maslow (123), the level of self esteem is the last prerequisite for self-actualization. This implies that once a person has established a positive feeling about himself, he is free to behave in such a way as to actualize his potential. The converse of Maslow's implication is that without a positive level of self esteem, the individual may behave in ways that do not help him reach his potentialities and that may hamper him in these efforts.

The literature clearly indicates that self concept is a prominent force in the personality. It also suggests that low self concept can lead to emotional problems, one of these being depression. Therein lies the potential for defensive behavior which may not be positive in nature or in result.

II. EXTENT OF ALCOHOL USE IN ADOLESCENTS

According to the bulk of the literature, among adolescents alcohol is widely used and is the drug of preference. Eisenberg and Eisenberg (47:365) stated that alcohol, usually in the form of beer or sweet wines, is the most used drug among adolescents.

Data collected by the National Institute on Alcohol Abuse and Alcoholism (NIAAA) indicated that 5 percent of seventh grade boys and 4 percent of seventh grade girls were problem drinkers. Overall, in the 14 to 17 year age group, NIAAA estimated that 3.3 million students were problem drinkers. The report also stated that teenagers typically have

their first drink at age 13 (158:3). NIAAA also estimated that 40 percent of ten year old children have tasted alcohol (34:109).

According to information released by the Ark-Tex Council of Governments, a typical young drinker in an East Texas county takes his or her first drink at age ten. The typical drinker has consumed alcohol on at least eight occasions by age 15 (136:3).

These findings pointed out alcohol usage in adolescents are not unique to this generation's youth. Demone (39) stated in 1973 that the typical male adolescent was a moderate drinker. Fox (63) wrote that alcohol was becoming the drug of choice with adolescents in 1973. After a four year study of the effects of drug education, Blum (9:17) stated in 1976 that by the eleventh grade, most students have had a wealth of experience with drugs, including alcohol.

Hughes (91) found that the incidence of teenage drinking ranges from a high of 86 percent in New York State to a low of 33 percent in Mississippi. Barnes (4) asserted that the majority of teenagers use alcohol at least occasionally and that most of them do so responsibly and moderately. Straus and Bacon (155) found that 74 percent of college students drank to some extent and that 79 percent of the drinking men and 65 percent of the drinking women had their first drink before college.

In a four-year longitudinal study, Rouse and Ewing (144) found a more conservative figure of 38 percent of college students drinking at least once a week.

A number of studies have been undertaken to determine the extent of alcohol consumption in high school students. Most of these report that boys drink more often and in greater volume than girls. An exception to this is Blum's (12) finding that in an upper middle class sample, 88 percent of the high school girls drank compared with 84 percent of the boys.

In a study of 11,454 London, Ontario, high school students, Korcok (106) defined a drinker as one who used alcohol once in the past year. He found that 73 percent of the boys and 63 percent of the girls were drinkers. Further, 27 percent of the boys and 11 percent of the girls were described as frequent drinkers, and 20 percent of the boys and 7 percent of the girls were described as heavy drinkers.

Riester and Zucker (139) found that 91 percent of the high school population (N = 754) in a mid-Atlantic community drank before the legal age.

Two studies regarding conservative Protestant communities in Mississippi are worthy of note. Windham et al. (178) found in a sample of 516 high school students that 12 percent drank once a month or more, and that 25 percent drank less than once a month but more than two to four times a year. Overall, one-fourth of the sophomores and one-half of the juniors and seniors were drinkers. Globetti (69) reported that 54 percent of the seniors, 36 percent of the juniors, 25 percent of the sophomores, and 22 percent of the freshmen were either users or problem users of alcohol in the Mississippi communities he studied.

Perhaps a good indication of the changing drinking patterns of adolescents is the research by Demone and Wechsler (40). The study compared data from 1965 with that compiled in 1974. High school boys' and girls' drinking of beer increased from 77 percent to 86 percent and from 56 percent to 79 percent respectively. The use of distilled spirits also showed substantial increases in both sexes. Drunkenness increased significantly at all grade levels in both sexes ($p < .001$). For boys and girls in high school, the increase in drinking to intoxication was from 34 percent to 70 percent and 14 percent to 69 percent of the sample, respectively. In junior high school, the figures for boys and for girls were from 14 percent to 33 percent and from 8 percent to 27 percent, respectively, for drinking to intoxication.

Arthur et al. (3) used a sample of 918 Georgia high school students and reported that 79 percent had tried alcohol at least once. Further, 43 percent used it occasionally and 3 percent used it daily.

Adler and Lotecka (1) studied 1,600 students in grades 10-12. They found that 69 percent had used alcohol, 26 percent used it weekly, and 6 percent used it as many as three times per week.

Lewis and Trickett (117) studied 281 high school students and found that 58 percent used alcohol.

In a study of 551 middle class, urban, private high school students, Milman and Su (128) found that 52 percent drank occasionally or less than once per month. In addition, they found that 14 percent drank weekly.

In his research involving 3,388 junior and senior high school males in Boston, Demone (38) found that 90 percent of the sample drank to some extent.

Rachal et al. (138) did a national survey of 13,122 junior and senior high school students. The report showed that 5,617 of the sample drank at least once a month. Broken down into age groups of 12-13 year-olds, 14-15 year-olds, and 16-17 year-olds, 1,158 in the younger group drank at least once a month, 2,133 of the middle group, and 2,326 of the older group.

Seffrin and Seehafer (147) found that three-fourths of the 3,402 junior and senior high students they studied used alcohol.

Smart (150) studied students in grades 7-13 in Toronto. He found that in 1968, 46.3 percent of the students had used alcohol in the last six months. Smart also found that 12.5 percent, for all the grades studied, used alcohol as many as three times a month.

Calhoun (22) examined drug use in six suburban groups including junior and senior high school students. He found that 85 percent of the high school students and 81 percent of the junior high school students had used alcohol. He found that 78 percent of the high school students and 67 percent of the junior high school students used the drug at the time of the study.

Linder et al. (118) did research involving 776 suburban San Francisco junior high school students. In the seventh grade students, 76 percent of the boys and 66 percent of the girls had used beer and/or wine during the past year, and 44 percent of the boys and

40 percent of the girls had used hard liquor during that period of time. For eighth graders, the use of beer and/or wine during the year increased to 79.2 percent of the boys and 69.7 percent for the girls, and the use of the liquor increased to 68.5 percent and 47.1 percent for boys and girls, respectively.

Weathers (170) stated that youngsters are beginning to drink earlier and more are progressing to heavy drinking. More young people are drinking, more are drinking more frequently, and more are drinking more often to drunkenness. The average age at which children start to drink reduced from 13.6 years in 1965 to 12.9 years in 1975. By the age of ten years, 40 percent of the children have drunk alcohol.

From the foregoing citations, it is obvious that the drinking of alcohol is not an isolated occurrence among adolescents. The general findings of the research seem to suggest that alcohol use in amount and number of occasions of drinking increases with age through adolescence. In fact, Jessor and Jessor (98) concluded that becoming a drinker is an integral part of adolescent development.

III. THE ROLE OF SELF CONCEPT AND DEPRESSION IN ALCOHOL USE

It is obvious that the finished product that we all seek to avoid in the development of drug and alcohol use in adolescence is that of an addict or alcoholic. For this reason, it is worthwhile to examine the literature regarding the self concept and resultant personality effects such as depression in full-fledged alcoholics and those addicted to

other drugs before reviewing similar literature in regard to adolescents.

Kaplan and Meyerwitz (101:203) proposed a model for understanding addiction as a psychosocial phenomenon. They postulated that there is a need in all of us to develop or maintain positive attitudes about self and to avoid self-derogatory and self-devaluing attitudes. They further suggested that, in the presence of self-derogation, we often adopt patterns of drug use, including alcohol, as a result of a need to maintain positive self-attitudes. Indeed, Williams (176) found that moderate intoxication serves to relieve anxiety and depression. Kaplan and Meyerwitz hypothesized that the key to understanding the developmental processes of drug abuse patterns was to investigate the factors contributory to the development of self derogation and low self esteem. Their research (101:219) found addicts to be more likely to show dissatisfaction with self and lack of self respect and more likely to judge themselves negatively.

In an ongoing research program by Fitts on The Self Concept and Human Behavior, the Tennessee Self Concept Scale (TSCS) was administered to 1,754 psychiatric patients, 67 of whom were alcoholics. The overall picture was that the alcoholic does not like, respect, or value himself. His self concept often has many deviant factors indicative of maladjustment and poor personality integration. His self esteem is usually lowest in terms of moral-ethical standards and adequacy as a family member (57:87).

Vanderpool (165) hypothesized that alcoholics drank to improve their self concepts. He used the Tennessee Self Concept Scale and an Adjective Check List and found that alcoholics had a more negative self concept than did the normative population and that the self concept got lower as the alcoholic drank.

Gross and Adler (72) studied 140 male alcoholics in an Alcoholic Treatment Program and found a significant difference in several aspects of self concepts of alcoholics and a control group. The alcoholics perceived themselves significantly less favorably on identity, self-satisfaction, behavior, health, skills, sexuality, and personal worth and adequacy.

Charalampous (28) found alcoholics to have significantly lower self esteem than nonalcoholics in a study of 100 subjects who were convicted of driving while intoxicated.

Button (18), in a study of alcoholics utilizing the Minnesota Multiphasic Personality Inventory (MMPI), reported that alcoholics saw themselves as unhappy, tense, bitter people. The study indicated that alcoholics felt responsible for many evidences of aggression and hostility that they saw about them.

Fitts and Hamner (60) reviewed several studies regarding the self concept of delinquents. They concluded that delinquents see themselves as undesirable people who do not like, value, or respect themselves. Delinquents also were found to exhibit poor behavioral control, low personality integration, and evidence of psychopathology. In their own study of delinquents in which they used the TSCS, Fitts and Hamner studied

the sample on the basis of several sociopathic personalities, including alcoholism. They found little to distinguish the alcoholics from the other sociopathic or delinquent groups. All had lower self concepts than the norm group of the TSCS.

In a study of the self concepts of college women with behavioral problems (n = 150), Hamby (77:32) used the TSCS and found significantly lower self concepts among the experimental group. One subgroup of the experimental group was "Problem Drinker."

Chodorkoff (29) discovered a relationship between ego and body relationships. He found a poor capacity among alcoholics for sound relationships because of deficient ego functions. According to Chodorkoff, the alcoholic drinks to feel a physiological change so that personality disintegration and annihilation of the ego do not occur. Therefore, the alcoholic maintains a body-ego relationship through drinking.

Rosenberg (143) found support for the clinical impression that young alcoholics drink to relieve symptoms such as loneliness, inferiority, anxiety, and frustration. The study further suggested that the age at which addiction to alcohol occurred was partially dependent on the severity of the personality.

In a study dealing with self concepts of men and women alcoholics, Clarke (31) found no significant difference in self concept between the sexes.

A number of studies have linked drug use to depression. Hartman (80) found that eight out of ten drug users (excluding alcohol)

experienced depression before taking drugs. Hager (76) found that the ego strains of depression and affectual deprivation showed significant relationships with drug use. In a study of secondary school students involving both alcohol and illicit drugs, Milman and Su (128) found large, but not significant differences in drug use between "depressed" and "happy" youngsters.

In a study of American drinking practices, Cahalan et al. found that women heavy drinkers showed a higher tendency toward neurosis because of a greater need to find relief from anxieties and depression. The researchers found that 71 percent of the sample reported that drinking was helpful to the relief of depression and nervousness (21:149).

Rosecrans and Brignet (142) found depression, anxiety, and serious questions of self-worth and adequacy in drug (including alcohol) users. The researchers used the MMPI in the study of young drug users and nonusers aged 18-25.

Blum et al. (12) and Fulghum (64) reported similar findings. Drinking was often done to allay the pain of depression and boredom. Fulghum (64:26) also asserted that drinking is often done for pleasure and euphoria and that it may, indeed, provide a feeling of "super-pleasure" which may invert one's conscience so as to justify its use.

Braucht et al. (15) concluded from a review of the literature that adolescent problem drinkers possess the basic neurotic tendencies of relatively low self esteem, depression, anxiety, and a lack of success in attaining life goals.

MacKay (120) found in his study of adolescent problem drinkers that alcohol filled a need of belongingness. He also found that depression, self-destructiveness, and hostility were frequent traits.

Albas et al. (2) reported that middle class high school students were highest in anomie, absolute alcohol consumed, and frequency of being drunk.

Norem-Hebeisen found self esteem to be a predictor of adolescent drinking and drug abuse. Norem-Hebeisen wrote that, "Personality traits among adolescent drinkers include . . . low self esteem, . . . , depression, and a general lack of success in attainment of life goals" (133:195). The response pattern of the individual to various events or situations were found to be contributors to susceptibility to drug abuse. The stress of uncertain self esteem and its attending insecurity and dissatisfaction leave the adolescent vulnerable to peer pressure and peer support for drug abuse.

Ferguson et al. (53) were also able to predict alcohol use based on self concept. Using self-reported drug use scales in high school students in Ohio, they were able to predict use of beer and wine and use of distilled spirits.

Several studies have been done regarding the self perceptions of college drinkers. Segal et al. (148) studied 200 college women and found that those who used drugs, including alcohol, scored lowest in self concept. The users were also lowest in self confidence, self esteem, and satisfaction with physical self.

Williams (174) also found problem drinking to be associated with low self concept in college students. In his study of 17-24 year-old college fraternity men, he found that problem drinking was associated with self-criticality ($p < .0005$), low self acceptance ($p < .0005$), and lack of real self-ideal self correspondence ($p < .005$).

On the other hand, Stokes (154) found college freshmen alcohol users to score low ($p < .01$) on "dissatisfaction with and a desire to change oneself." Heavy alcohol users had a lower mean ideal self concept. Stokes concluded that the typical student drug user was not turning to drugs as a way to change himself and that personality instruments were not valuable as predictors of drug use.

DeMeritt (37) found little difference between the self concept of nonusers and abusers of narcotic and/or nonnarcotic drugs.

The immediate effects of drinking alcohol on the perception of self is a matter pursued by a goodly amount of research. Berg (6) found in a laboratory study that when alcoholics got drunk, the self image is improved but when a social drinker got drunk, the self image became less favorable. Schilder (145) determined that the alcoholic felt more accepted by others and his self confidence was increased when intoxicated.

The bulk of the literature indicates that there is at least some relationship between the self concept and depression, and the use of alcohol (and other drugs). Most research seems to suggest that drinkers possess less self esteem, self image, and self confidence than nondrinkers. This relationship appears to be stronger in heavy drinkers. Although the relationship is difficult to determine as causative, there are enough data at present to prompt suspicion and further research.

IV. SOCIAL CLASS

The Nature of Social Class

The problem of defining and describing the social order has been attacked by many researchers, philosophers, and social scientists. The results have been a plethora of strata, continua, categories, and classes and a wide range of definitions, concepts and purposes (172:3). None is satisfactory in every usage. Warner et al. (169:262) stated that the issue of an exact number of social classes is a false one. As Hodgkinson (86:88) pointed out, the major difficulty in determining social position is one of direct measurement; it is of necessity symbolic, inferential, and arbitrary. Indeed, it is so arbitrary that classifications range from a dichotomy to a list of 89 social positions identified by Warner and Lunt (168) in their study of a "Yankee City."

Wheeler (172) has described social classes as somewhat permanent groups based on social recognition of a hierarchial order of social relationships between groups. Similarly, Warner et al. (169:8) stated that when societies are complex and the people that inhabit them pursue diverse activities, then individual positions and behaviors are evaluated and ranked. The individual decisions and social actions are in large part determined by this ranking or social class.

Davis and Moore (36) set forth some basic principles of stratification. Certain positions in a society are functionally more important than others. Only a limited number of people have the talents which can be trained into the needed skills. The conversion of talent into skills involves a training period which necessitates some individual

sacrifice. In order to induce people to make these sacrifices, their future position must carry values in goods, services, and status which are desired and scarce. This differential access to rewards has a consequence of differentiation of prestige and esteem. Wheeler (172:6) further emphasized this notion by stating that "positional rank . . . is determined by . . . the amount of training or talent necessary for performing the functions." This results in a series of social classes and institutionalized social inequality. Thus, Davis and Moore (36) concluded that social inequality is both positively functional and inevitable in any society.

This inequality by way of division of labor is maintained, as Warner et al. (169:9) asserted, because families of similar position associate with each other both formally and informally. Children are born into their family's position. Hatt (81:82) emphasized this point by stating that ". . . differences apply to intergenerational as well as career movement, so that significance attaches to the position of the son vis-a-vis the father . . ."

The inequality of position is not particularly clear-cut. Cuber and Kenkel (35:25-27) wrote that in American society, "there are several privilege, power, and status ranges, more or less continuous from top to bottom, with no clear lines of demarcation" and that ". . . we are on more sound theoretical ground if we proceed on the assumption that the American ranking system is more accurately conceived of as a continuum than as a set of discrete categories." Davis and Moore (36:32) also rejected the idea of categorical

descriptions by referring to "ranked positions." In addition, Lasswell (112:258-9) stated, "The specific characteristic of the relation between social classes is hierarchy" and further, in reference to the term "social class,"

> The term should not be used as a synonym for related concepts which have assumed a universal meaning . . . races, interest groups, or other clearly definable grouping should not be called social classes.

Criteria for Determining Social Class

The basic characteristics of social classes in the United States are economic factors, socially approved behavior and possessions, and acceptance by members of a superior class, according to Warner et al. (169:22). Two specific bases, education and occupation, are presented by many authors including Hatt and Parsons (81:71), Warner et al. (169: 123), Landecker (109), Wheeler (172:6), Edwards (44), Shepard (149), Hauser (82:108), and Davis and Moore (36) as most significant indicators of social class.

Hauser (82:108-111) wrote that educational attainment (years of regular schooling completed) is most useful in studying stratification. He also stated that educational attainment is a powerful intervening variable in the stratification process and that education is a primary mechanism for social mobility.

Warner et al. (169:23) stated that education is a principal route to success and an aid to social mobility. These comments serve to reinforce the previously discussed claims of Davis and Moore (36) regarding training and position. Further, as Warner et al. (169:25)

asserted, education tends to maintain the social classes because children of those in higher levels go to college more often while children of those in lower levels tend to drop out of school earlier.

Occupation is also well documented as a strong indicator of social class. Tawney (160:41) asserted that class cannot be explained by economics alone; occupations are very significant. Davis and Moore (36) described position in terms of utilization of training and talent, thus, the importance of job. In fact, they said that some positions draw high income because of their prestige rather than the converse (36:374).

Warner et al. (169:123) stated that of all the symbols which are used to measure social class, occupation should be given the most weight. They also said that occupation is a category which cross-cuts economic institutions.

In a review of 16 studies of stratification among Negroes, occupation was a major criterion in 14, according to Siegel (150). Further, in the evaluation of occupational prestige, Negro income received a small (effectively zero) weight in Negroes' evaluation.

Haer (74:689-692) studied the classification techniques of Centers and found Centers to be particularly interested in the relationship between occupation and attitudes, especially political and economic. He found that the higher the occupational status, the more conservative the attitudes of the respondent. As one progressed up the educational status ladder, this attitude changed and formed a continuum again, rather than a discrete series of closed categories.

Warner (150:156) developed an index of social characteristics which is composed of four status characteristics. Of the four, occupation is given the most weight.

Because of a need to measure social class in college students where residential information was not readily available, Ellis, Lane, and Olesen (48) developed an index of class position utilizing occupation and subjective class identification. Six classes resulted from the index ranging from upper to lower-lower.

Hollingshead and Redlich (88) used the characteristics of residence, occupation, and education to determine class position. Occupation correlated ($r = .88$) highest with position as judged by independent evaluators.

Shepard (149) used occupational ratings, level of education, family income, and type of housing as indicators of social class.

According to Hollingshead and Redlich (88:394), the most widely used index of social class is occupation. Sociologists also have frequently emphasized the significance of occupation as a measure of social position (148:19). Hatt (81) explained this by asserting that this information is easy to obtain, easily quantifiable, and easily broken into status divisions.

As the literature has shown, many different indices have been implemented to measure social class utilizing several symbols. As Warner et al. (169:49) said:

> By measuring the symbols, we measure the relative worth of each by adding up their several "worths," reflecting diverse and complex economic and social values, we get a score which

> tells us what we think and feel about the worth of a man's social participation, meaning essentially that we are measuring his . . . social class.

In relation to the choice of symbols, Hodgkinson (86:88) indicated that the researcher is almost completely free to choose his own index of social class membership, with little opportunity to validate his choice.

V. SOCIAL CLASS AND DRUG AND ALCOHOL USE

A number of studies have been undertaken to determine the extent of drug and alcohol use in the various ranges of social class. The results of these research efforts are somewhat inconclusive.

Albas et al. (2) studied high school students in groupings described as urban middle class, rural farm, urban working class, and rural nonfarm. The urban middle class group was highest in absolute alcohol consumed, weekly consumption of alcohol, and frequency of being drunk.

Milman and Su (128) studied 551 urban middle class high school students and found that 52 percent used alcohol occasionally. They further reported that 14 percent used alcohol at least weekly.

Krug and Henry (107) used a broad socioeconomic distribution in their sample of 563 and reported no significant difference in usage of drugs among the social groups.

Schonfeld (146) found that socioeconomic affluence often plays an important preparatory and determining role in how youths cope with adolescent crises. Many young people turn to alcohol, other drugs, or suicide as an escape from the pressures of an affluent society and affluent parents.

In a study of high school seniors in 11 schools, Boggs et al. (13) found no socioeconomic pattern of drug and alcohol use. They further found no difference when considering urban-rural differences.

Fox (63) reported that underage drinkers tend to be at the upper and lower extremes of the class structure. The study also showed that the indices of adolescent drinking increases with size of the community.

After working with California high school students in the area of drug abuse, Ungerleider and Bowen (163) reported that variation in drug usage is dependent neither upon socioeconomic composition of the school nor whether it is a rural or urban area.

In a study of Vermont high school students, Leahy et al. (114:277) found that drug users tend to come from homes of slightly higher socioeconomic status than nonusers. They also found that the fathers of drug users had achieved more education.

Weathers (170) found that while the drinking behavior of youth in general is increasing, the highest proportion of heavy drinkers is in upper income families. The lowest proportion of heavy drinkers is among blacks.

A recent Gallop Poll found the most important factor in determining levels of alcohol consumption was formal education. According to the report, "College trained persons were twice as likely to be drinkers as were persons who did not go beyond grade school" (164:1).

Combs et al. (34:110) stated that people in the upper income levels were more apt to drink both moderately and heavily, than people in the lower levels. They also wrote that the highest proportion of

abstainers is found in those with less than eighth grade education. Additionally, they reported that the proportion of heavy drinkers goes up with educational attainment levels. However, 13 percent of people with postgraduate educations are heavy drinkers as opposed to 15 percent of people with college educations.

VI. THE VALIDITY AND RELIABILITY OF ANONYMOUS AND SELF-REPORT QUESTIONNAIRES OF DRUG AND ALCOHOL USE

In most research involving the study of illegal or culturally proscribed drug use, self-reported anonymous questionnaires have been employed. Examples of such questionnaire use are the studies done by Jessor and Jessor (98) on the onset of adolescent drinking, Jessor, Collins, and Jessor (96) on junior and senior high school students' drinking behaviors, Krug and Henry (107) on personality and motivational patterns of adolescent drug users, Holroyd and Kahn (89) on personality factors of university drug users, Wechsler and Thum (171) on alcohol and drug use among teenagers, Arthur et al. (3) in a follow-up drug survey of high school students, and Globetti (69) on problem and nonproblem drinking among high school students in abstinence communities.

King (103) administered both coded and anonymous questionnaires on drug use to college students. The anonymous questionnaires gave a higher percentage of return and admission of drug use. There was only one exception to this. The exception involved reported use of LSD and a coded questionnaire. The results prompted King to conclude that there was no significant difference between anonymous and coded self-report questionnaires.

Luetgert and Armstrong (119) found similar results that served to support King's conclusion. They used three methods, anonymous questionnaire, coded questionnaire, and interviews to determine extent of marijuana use in college students. There was no significant difference in the three methods of reporting frequency of marijuana use. Proclivity to report drug use is apparently not affected by the presence or absence of anonymity.

Pretzel et al. (137) were concerned with exaggerated reporting of drug use on a self-report drug survey. They included a nonexistent drug on their questionnaire and found that only 2.6 percent of the girls and 5.6 percent of the boys reported using the fictitious drug. The researchers reached the conclusion that the tendency to report the use of fictitious drugs does not invalidate the results of drug use surveys, especially when the researchers use large sample sizes.

Mott (129:43) gave additional credence to the use of self-report questionnaires by stating that, in general, they are the only feasible way of obtaining information regarding the prevalence of drug misuse.

On a more general level, Kulick (108) asserted that a self-report checklist of antisocial behavior has demonstrable utility for establishing types of persons.

VII. CLASSIFYING DRINKING BEHAVIOR

The classification of drinkers and drinking behavior is a problem attacked by many researchers in a variety of ways. There is no consensus as to what constitutes "light," "heavy," or "moderate" drinking although

drinking behavior is the most frequently used measure in studies of alcoholism treatment and drinking behavior. As Bowman et al. (14) pointed out, systems of classifying behavior are often either poorly constructed or insufficiently explained so that two sets of results cannot be usefully compared. However, many systems have been used and, depending upon the researcher's intentions, have met with some success.

Many researchers have used variations of a quantity-frequency (Q-F) index to describe the amount of alcoholic beverages consumed over a period of time. Initially developed by Straus and Bacon (155) and later adapted by Mulford and Miller (130), the Q-F index estimates the approximate amount a person drinks over a period of time. This estimate is derived by multiplying the amount he drinks on an average occasion by the reported frequency over a stated period of time. As Cahalan and Cisin (19) pointed out, the Q-F index is dependent upon the subjects' judgment of their "usual" behavior which may be limited by any number of factors. In addition, variability of quantity per occasion is not measured.

The Q-F index results in a set of five types of drinkers for males and two types of females. The male index types are grouped into the categories of "light," "moderate," and "heavy" drinkers (21). However, as Straus and Bacon (155:106) pointed out, type five, the heaviest male drinker, includes at its lowest limits, amounts of alcohol which would rarely be accompanied by manifest signs of effect. Knupfer (105:241) further pointed out that the Q-F index classifies people primarily in terms of their approximate aggregate consumption over time and combines groups of people who are actually quite different in their use of alcohol.

Miller et al. (127) used another quantity-frequency classification and defined six categories of drinking behavior. An "abstainer" had had no alcohol in the previous year. An "occasional drinker" drank less than once a month regardless of amount. The "infrequent light drinker" drank at least once a month but less than once a week and usually had less than seven drinks. The "frequent light drinker" drank at least once a week consuming up to four drinks. A "moderate drinker" had at least six drinks once monthly, drank weekly to monthly with a usual consumption of six to eleven drinks per occasion, drank weekly with a usual consumption of five to eleven drinks per occasion, or had five or six drinks at least weekly or more than eleven drinks per occasion weekly to monthly.

The second major system of measurement which incorporated a third component, variability, into the Q-F index was done by Cahalan et al. (21). The system of the Q-F-V index takes into account the quantity of alcohol in drinks per occasion, the frequency or number of occasions, and the variability or fluctuations in time and amount consumed. A quantity-variability classification is derived by asking the respondent to allocate all his drinking occasions for each beverage among three categories—1-2, 3-4, 5-6 or more. The modal and maximum number of drinks per occasion were then combined into a Q-V classification which was combined with the frequency dimension to yield the final Q-V-F index. The Q-V-F classification is based on the principle that those who drink larger amounts of alcoholic beverages per occasion should get a heavier drinking classification than those who consume about the same amount though drinking smaller quantities over a given period of time.

The third major step in measurement of drinking behavior was incorporated into the survey work of Cahalan and Cisin (20). This is the volume-variability index (V-V) and it is based on the principle that spacing or bunching drinks is more important than the aggregate volume alone in categorizing a person's pattern of drinking. The V-V index is derived by expressing aggregate volume as an average number of drinks per day and classifying each person as a "low-," "medium-," or "high-volume drinker." At this point, each of these groupings is divided according to whether the respondent's number of drinks per occasion is high or low (less than five).

All three methods take into account both quantity and frequency and define a classification on the basis of amount of alcohol consumed and pattern of consumption. It is interesting to note that while the basic assumptions behind the Q-F and Q-V-F indices differ markedly, these differences are masked since both yield an identically labeled classification: "light," "moderate," and "heavy."

Bowman et al. (14) developed the volume pattern (V-P) index which provided numerical indices to describe drinking behavior in terms of the total consumption or aggregate volume and the degree of "binginess." The V-P index discriminates continuously along each scale and avoids a priori judgments about their interrelationships, which the V-V index does not do. Thus, finer distinctions can be made at both high and low levels of drinking.

While these rather complicated means of classifying drinking behaviors have met with some success, other simpler methods have also

met the needs of the researchers. For instance, in a study of college drinking, Rouse and Ewing (144) classified on the basis of drinking alcohol once a week as the standard for being a "drinker" in a drinker-nondrinker dichotomy.

Globetti (69) dealt with a threefold classification of "nondrinker," "user," or "problem drinker." A "user" was one who drank alcohol at least once in the past year. In order to determine "problem drinking," five questions were asked regarding having ever drank in cars or alleys, sometimes drinking alone, drinking in order to get high or drunk, drinking whenever getting the chance, and worrying about drinking. A respondent who answered affirmately to at least two of the questions was classified as a problem drinker.

Linder et al. (118) used beer-wine and hard liquor distinctions in a study of junior high school drug users. "Users" of each type of beverage were defined by having used the beverage during the past year.

Einstein et al. (45) classified drinkers on the basis of number of drinks per week in a study of university students in England. Classifications were 1-10, 11-30, 31-60, and over 60 drinks per week.

Rootman and Oakley (141), in a study of alcohol use in Alberta, categorized drinking in relation to the last six months as having used alcohol not at all, once, two to four times, five to six times, and seven or more times.

Margulies et al. (121) also classified adolescent drinkers of distilled spirits on the basis of how often they used "hard liquor."

Jessor and Jessor (98) classified junior and senior high school students as "drinkers" or "abstainers." "Drinkers" were defined as having had a drink more than two or three times in their lives.

Wechsler and Thum (171), in a study of alcohol and drug use in teenagers, defined "abstainers" as those who had not used beer, wine, or hard liquor for the past year. They classified users as "beer or wine users," "hard liquor users who had not been drunk," "infrequent hard liquor users who had been drunk," and "relatively frequent hard liquor users who had been drunk." The period of time involved in each user classification was the past year.

Demone (39) proposed a typology of drinking behavior based on frequency of alcohol use, effects from drinking, and pathological behavior associated with drinking. He utilized a six-item classification in dealing with teenagers. "Abstainers" were those who had never used alcohol, "experimenters" were those with a single drinking experience, "light moderates" were the classical American social drinker, "heavy moderates" were subjects who used alcohol more or less frequently, but did not exhibit either marked effects or signs of pathology, "relief or kick drinkers" were usually frequent drinkers who manifested severe effects from the consumption of alcohol, but who exhibited little or no pathological drinking behavior, and "pathological drinkers" who, were they adults, would be described as heavy drinkers or alcoholics.

Seffrin and Seehafer (147) classified drinking behavior as having "tried it," "tried it but no longer use it," "use it three or more times a year," "use it three or more times a month," and "use it three

or more times a week." "Regular use" was defined as use of alcohol three or more times a month.

Korcok (106), in a study of London, Ontario, high school students, categorized the students into groups of "abstainers," who had less than one drink a year, "drinkers," those having at least one drink a year, and "frequent drinkers," those having two or more drinks per week.

None of these indices was designed to serve all analytic purposes. As Hartford and Mills (79) wrote, consumption is usually measured by the number of drinking occasions during a specified time or amount consumed during a specified time or both. The purposes of the individual study have historically determined the classification method.

VIII. ALCOHOL EDUCATION, KNOWLEDGE, AND CONSUMPTION

Whether or not one accepts the Jessor and Jessor (97) conclusion that becoming a drinker is an integral aspect of the process of adolescent development, it is difficult to deny that the majority of teenagers use alcohol occasionally, especially in light of the research by Barnes (4), Blum (12), Korcok (106), Riester and Zucker (139), Demone and Wechsler (40), and others. The question can be raised as to the role of the school in alcohol education. Certainly the social processes involved in learning about alcohol could have an effect on the adolescent's attitudes about drinking. Jessor (95:258) stated that the way in which socialization into alcohol use takes place may be an important influence on later drinking behavior.

A goodly amount of research has been done to determine the effects of alcohol education programs. In a study of 950 Michigan seventh and eighth grade students, Stuart (156) exposed the experimental group to a ten-week course of actual information about drugs. When compared with a control group which received no drug education, the experimental group showed a significant increase in the sale and use of marijuana, LSD, and alcohol. They also showed a significant increase in drug information.

Mason (124) measured attitude change as a result of a factual program on drugs with junior high school students. He found that the program led to increased curiosity about drugs and their effects and an increased statement of willingness to use drugs should the students feel mentally depressed.

Swisher and Hoffman (159) concluded that giving information about drugs is likely to be associated with increased use, increased curiosity, and increased liberalization of attitudes.

Mascoll (122) used a pretest-posttest design with a control group to evaluate the effect of alcohol education programs on eighth grade students. She found that alcohol programs were primarily knowledge oriented, that is, oriented toward acquisition of facts. She also found that while the programs did succeed in increasing knowledge about alcohol and its effects on the body, there was no significant change in behavioral intentions.

Owen (134) stated that alcoholism education in schools has failed to reduce the incidence of the problem. In fact, schools were seen as

instrumental in creating deviant behavior in a large number of students and furthering their negative self concepts.

Engs (50) asserted that most alcohol education programs have done little to change drinking habits. She observed that the programs of the early 1970's and late 1960's may have increased knowledge, but some may have increased experimental drug use.

Blum (9:56) said, "For the most part, drug education has induced no behavioral change, although knowledge, and to a lesser extent, values and attitudes are capable of change." This statement was made after a longitudinal study in four California cities using two methods of drug education. One group received drug information, another group was exposed to value clarification and norm setting, and a control group was only minimally exposed. In all cases, students moved to a higher level of drug use as they experienced drug education. The information group had the greatest rate of drug use expansion and the control group had the greatest stability.

A report of a group sponsored by the Finnish Foundation for Alcohol Studies and the European Regional Office of the World Health Organization concluded:

> With alcoholism the practical design of effective preventive policies has proved difficult. There is little evidence that traditional health education can do much to obviate such behavior . . . Patterns of drinking and the origins of abnormal drinking appear to be deeply rooted in culture and personality for persuasion or the provision of information to make more than a slight and passing impact . . . (9:54).

Pipher (135) found that a required junior high school health education class had only limited effect in knowledge and attitudes

about alcohol. The course made no change in drinking behavior. The course was even less effective with "high risk" groups.

Globetti (68:98) stated that nine out of ten junior and senior high school students expressed eagerness to learn about alcohol and felt that there was a need for instruction in school. The students felt that the school is responsible and should establish alcohol education programs.

There has been a lack of consensus about the objectives of alcohol education programs. This has led to an immobilization or virtual stoppage of most school alcohol programs, according to Globetti (70). He pointed out that most of the programs have been slanted toward a prohibitionist or abstinence ideology. They have used factual data as a deterrent to use. Ungerleider and Bowen (163) declared that factual data are simply not a good deterrent to drug use.

Owen (134) was even more critical. He stated that alcoholism education in schools has failed to reduce the problem. He further said that schools seem to be instrumental in creating deviant behavior and in furthering negative self concepts in a large number of students. As a possible solution, Owen suggested that teacher training curricula need to provide skills to raise self esteem and maintain the integrity of each student within the status system of the school.

Jessor (95) emphasized the need for research on the onset of drinking at the elementary level, the cultural and socioeconomic variables, personality variables, and the processes of learning to drink. Such research does seem to be a rational basis for an alcohol education program. In their study of adolescent development and the onset of

drinking, Jessor and Jessor (98) concluded that emphasis should be placed on drinking as a social and psychological phenomenon with associated cultural meanings rather than merely as a pharmacological phenomenon.

Globetti (70) suggested that instead of emphasizing abstinence, alcohol programs should emphasize moderate use and even encourage responsible drinking. The National Institute of Alcohol Abuse and Alcoholism (25:43) also recommended emphasis on successful drinking rather than abstinence. The basic philosophy of NIAAA toward alcohol education is to emphasize that it is not essential to drink, excessive drinking does not indicate adult status, virility, or masculinity, alcoholism is a disease, and safe drinking is possible and is dependent upon specific physiological and psychological factors.

Hochbaum (85) emphasized the instilling of values before adolescence. He denounced a one-sided, aggressive approach to alcohol education. Subtlety is a better tool than attack on one's attitudes and habits. This merely makes the youth defensive.

Blum (9:20) found that as children grow older they become increasingly antagonistic toward drug education. In a study of 580 eleventh graders and 376 sixth graders, he found that 53 percent of the older group were critical of drug education content while only 5 percent of the younger group were critical. This led Blum to conclude that drug education should be conducted with children who have not become too old to accept it.

Hames (83) suggested that it may be possible to teach adolescents to drink moderately and drive safely. He recommended the avoidance of myths, judgments, and moralizing.

Ungerleider and Bowen (163) suggested an ombudsman approach. This person could become a surrogate parent in the function of alcohol education without appearing "square" to the student.

IX. RELATED METHODOLOGICAL RESEARCH

A number of studies have been conducted which are related to the current one in terms of content, experimental design, statistical design and/or instrumentation.

Segal et al. (148) utilized the Drug/Alcohol Use Survey and the Tennessee Self Concept Scale to study the relationship between self concept and drug and alcohol use in female college students. The specific purposes of the study were to determine if different patterns of self concepts were evident among females grouped as drug users, alcohol users, and nonusers of either and to determine how distinctive the three groups were relative to self concept variables. A discriminant analysis was utilized with Rao's generalization of the Mahalonobis Distance Function Technique (D^2) as the statistical procedure.

Drug users were found to be low in self esteem and self confidence, and dissatisfied with their physical, moral-ethical, personal, and family selves. These findings contrasted sharply with the drug nonuser group. The profile for alcohol users was summed up as being generally positive and emotionally stable. This group was, however, comparable to the drug user group in self satisfaction. Self concept was not found to be an adequate predictor of drug or alcohol use or nonuse.

The research by Ellison (49) had as its purposes to study the differences in the self concepts and risk-taking attitudes of current regular marijuana users, previous users, and nonusers and to analyze the relationship between self concept and risk-taking attitudes for the three groups. A drug survey questionnaire was used to stratify the 804 subjects, all college undergraduates. Each participant was administered the TSCS and the Risk-Taking Attitudes-Values Inventory. Statistical instruments utilized were a 3 x 2 analysis of variance and Duncan's post hoc multiple comparisons, when the overall F ratio was found to be significant. Pearson product-moment correlation coefficients were used to analyze the relationship between self concept and risk-taking attitudes.

About 40 percent of the sample were found to be current regular marijuana users, 20 percent were previous users, and 40 percent were nonusers. Current regular marijuana users had somewhat poorer self concepts than the other groups. Previous marijuana users had significantly better self concepts than the other groups. Current regular users had significantly higher scores for socially disapproved, risk-taking behaviors than the nonusers and previous users.

Gross and Adler (72) used the TSCS to measure the important aspects of the personalities of alcoholics in an Alcoholic Treatment Program. It was hypothesized that the means of the alcoholic sample would be significantly lower than the control group on all scales of the Counseling Form of the TSCS except Self Criticism for which it was hypothesized that the means of the alcoholics would be significantly

higher than the standardized group. A between groups t-value was found for the nine subscales of the TSCS, taken in pairs. Hotelling's modification of the variance ratio for multivariate data was computed to see whether a significant difference between groups over all the aspects of self concept existed.

There was a significant difference in the ten aspects of self concept between the two groups. The overall self concept of the alcoholic sample was lower than that of the standardized group. Alcoholics were more open and self-critical and construed themselves significantly more negatively on Identity, Self-Satisfaction, Behavior, Physical Self, Moral-Ethical Self, Personal Self, Family Self, Social Self, and Total Positive ($p < .001$).

Ferguson et al. (53) conducted a study to determine if relationships existed between self concept and drug usage in adolescents. In order to assess self concept, an inventory containing paired adjectives was administered. The subject chose the adjective in each pair which best described him. Self report drug use scales were used. Self concept scores were categorized into three groups containing three stanines each. A user-nonuser dichotomy was established by scores on the usage scale. One-tailed chi-square tests were used to determine significance.

Significant relationships were found between use of beer and wine, hard liquor, cigarettes, marijuana, and LSD and below norm category of self concept in the males. Significant relationships were found between use of beer and wine, hard liquor, and cigarettes and below norm self concept in the females.

DeMeritt (37) investigated the difference in self concept and certain demographic variables between nondrug users, drug abusers, and former users. She used a sample of 60 with ages between 13 and 22. Ten perceptual continua were constructed to quantify the results of administration of a modified Thematic Apperception Test. Data were analyzed using the Kruskal-Wallis H-statistic and the Mann-Whitney U-statistic.

No significant differences were found in the groups regarding parents' education, employment, or income. Former users saw themselves as more acceptable by their peers, less threatened and more oriented toward people than the other two groups.

Charalampous et al. (28) studied the self esteems of convicted drunk drivers as compared to the self esteems of a control group. A ten-item scale for self esteem by Rosenberg and interviews by psychiatrists and counselors were utilized. A chi-square test was used to determine significant relationships.

Significantly more alcoholics (drunk drivers) scored at the lower levels of self esteem and more nonalcoholics scored at the higher levels ($p < .01$).

In a study of institutionalized alcoholics, Berg (6) used the Eysenck Personality Inventory to equate the alcoholic group with a control group in order to compare the groups' self concepts. The Chicago Q Sort and Gough's Adjective Check List were used to determine perception of self and ideal concepts. A t-test was utilized as the statistical tool.

The alcoholics exhibited a significantly larger differential in self and ideal concept ($p < .001$). A 2 x 2 chi-square analysis was performed to determine which items on the ideal sort were distributed differently by either group. No items were found to do so. Therefore, it was concluded that the differences lie in the self concepts. The results of the Adjective Check List indicated that the alcoholics expressed a greater degree of feelings of inferiority through social importance, guilt, and self criticism than did the controls.

Williams (175) studied the relationship between self concept and problem drinking in a sample of 68 male college students. Gough's 300-word Adjective Check List was utilized to determine self concept in conjunction with a 13-item problem drinking scale. The upper and lower thirds on the problem drinking distribution were used for analysis. Heibrun Need Scales were used to determine a need-press system. The raw scores from these scales were converted to T scores, with the total number of Gough adjectives checked taken into account. The Heibrun variables for problem and nonproblem drinkers were presented as means, and t-tests were computed for three samples. A two-tailed level of significance was computed by the Stouffer method.

Problem drinkers were found to be higher on autonomy, change, aggression, and exhibition. They were lower on deference, order, affiliation, interception, endurance, nurturance, achievement, dominance, and dependency.

Windham et al. (178) conducted a study of the drinking practices of Mississippi adolescents. The subjects (N = 516) were interviewed to

determine drinking behaviors and indices were designed to collect socioeconomic and sociability data. Socioeconomic status categories were determined on the basis of educational attainment and occupation of head of the family.

Several findings are relevant to the present study. There was a significant and positive relationship between age and use of alcohol ($p < .001$). An almost equal percentage of students in each socioeconomic category was classified as drinker.

Albas et al. (2) used a sample of 158 senior students from Manitoba schools classified as rural farm school, rural nonfarm school, urban school for working class, and urban school for middle class. Anomie was measured by agreement or disagreement with a set of normative statements adapted from Jessor. Results were categorized. A quantity-frequency index was used to measure average number of ounces of alcohol consumed per week. The null hypothesis was that no relationships existed among social class, anomie, and consumption.

The null hypothesis was rejected. There was a direct relationship between anomie and alcohol consumption ($r_s = 1.00$). Urban middle class students were highest in anomie, alcohol consumption, and frequency of being drunk the previous year. Additional analysis of the questionnaires revealed no consistent relationship between father's occupational status and student's anomie.

McAree et al. (125) surveyed 100 male drug users and 100 male nonusers in a study of sociodemographic variables and drug use in the University of Vermont. The Minnesota Multiphasic Personality Inventory

and a questionnaire consisting of social, demographic, and academic data were administered to the entire sample. The Barron-Walsh Figure Preference Test, the Allport-Vernon-Lindzay Study of Values and the Fromm-Maccoby Life Orientation Test were introduced into the study on a limited basis. Chi-square tests were utilized to examine relationships among the variables.

The experimental group's families were generally in a higher income bracket than the control group's families ($p < .0001$). Father's occupation was also significantly related to drug use with 85 percent of the experimental group fathers in one of the professional categories ($p < .001$). The college drug users' parents had higher educational backgrounds than those of the nonusers for both parents ($p < .001$).

Glassco (67) utilized a sample of 715 college seniors to test the null hypotheses that there were no relationships between any of the variables of demographic, educational, and environmental factors and the drinking habits of the students. A seven-page questionnaire was utilized to establish drinking habits. The results were reported in percentages.

Family income appeared to be related to drinking. The percentage of drinkers appeared to increase in direct proportion to the level of the parents' education. There also appeared to be an inverse relationship between level of drinking by the father and level of drinking by the student.

The purpose of a study by Mascoll (122) was to determine whether alcohol education programs in New York State effected change in students' knowledge, attitudes, and behavioral intentions regarding their use of

alcohol. A four-part instrument was administered to eighth grade students in three school districts. Control groups were utilized.

The results indicated that the programs significantly increased students' knowledge about alcohol and resulted in a significant change toward more positive attitudes. Behavioral intentions measures did not indicate any significant change. It was inferred that alcohol programs did not effect a change by generating more favorable behavioral intentions.

X. SUMMARY OF LITERATURE REVIEW

The literature generally regards self concept as the summary of the personality, superceding other things in importance. The self concept is a function of interactions with others as well as self and reciprocally influences these interactions. It can, therefore, help predict a person's behavior. The real versus ideal self concept can produce conflict and emotional problems in adolescence including depression, frustration, and the use of poor defense mechanisms, such as drinking to excess. The judging self can serve to produce pride or disapproval of self.

Alcohol use in adolescents is believed to be very common. A number of studies reported that use of alcohol appears to increase with age throughout adolescence and is increasing over time in the adolescent population.

In the presence of self-derogation or poor self concept, people appear more likely to use drugs, including alcohol. Alcoholics and

heavy drinkers often have low self concepts and drink to relieve depression. Similar relationships exist in so-called normal drinkers. Self concept has been used successfully to predict use of alcohol.

Despite a wide range of indicators of social class, two variables have emerged from the literature as consistently utilized measures. These variables are occupation and educational attainment. Several researchers and social scientists have singled out these variables as the most reliable indicators of social class.

The research regarding alcohol and drug use and social class is not conclusive. If anything, it appears that usage increases with social class. Anonymous and self-report questionnaires have been found to be valid and reliable in determining amount of drug use. They are also successful in determining type of drug used and frequency of use.

The literature clearly indicates that anonymous self-report questionnaires are a valid and reliable method of obtaining information regarding drug and alcohol use. In fact, such questionnaires appear to be the only valid means of determining extent of such usage.

Drinking behavior has been classified in a number of ways. The use of quantity-frequency, quantity-frequency-variability, volume-variability, and volume-pattern indices is well documented. Definition of terms like "abstainer," "drinker," and "problem drinker" have varied according to the needs of the researcher. Typologies have varied from very simple to very complex.

The alcohol education programs have, by and large, been directed toward abstinence. Many authorities now recommend emphasis on moderate

and responsible drinking with social and cultural implications. Knowledge does not appear to reduce drinking and may, in fact, result in an increase in alcohol use.

Many studies have been conducted to investigate a plethora of variables and their relationships to drug and alcohol use. The methodology of these studies varied greatly in terms of instrumentation, statistical analysis, and sample size. Among the variables tested for relationships to drug and alcohol use were self concept, risk-taking attitudes, demographic variables, anomie, academic performance, and attitudes and knowledge regarding drinking of alcohol. Some of the studies summarized provided methodological bases for the current study.

The literature clearly suggests that all behavior is related to the self concept. The behavior of imbibing ethyl alcohol has been shown by the research to be related to personality variables and at least by implication, to self concept. Thus, the literature provided a background for this study.

CHAPTER III

PROCEDURES

I. OVERVIEW

The purpose of this study was to determine the relationship between alcohol consumption and the self concepts, social class, and knowledge of alcohol of 12 and 13 year old boys and girls. The specific questions cited were: Were there differences in self concepts among 12 and 13 year old male frequent users of alcohol, infrequent users of alcohol, and abstainers from alcohol? Were there differences in self concepts among 12 and 13 year old female frequent users of alcohol, infrequent users of alcohol, and abstainers from alcohol? Were there differences in social class among 12 and 13 year old male frequent users of alcohol, infrequent users of alcohol, and abstainers from alcohol? Were there differences in social class among 12 and 13 year old female frequent users of alcohol, infrequent users of alcohol, and abstainers from alcohol? Were there differences in knowledge about alcohol among 12 and 13 year old male frequent users of alcohol, infrequent users of alcohol, and abstainers from alcohol? Were there differences in knowledge about alcohol among 12 and 13 year old female frequent users of alcohol, infrequent users of alcohol, and abstainers from alcohol?

To accomplish this purpose 388, 12 and 13 year old seventh and eighth grade students in the Memphis City Schools, the public school system, during the Fall Semester, 1979, responded to a questionnaire

designed to collect data on alcohol consumption and social class. The Tennessee Self Concept Scale (TSCS) was administered to measure the self concepts of the respondents. An alcohol knowledge test was administered to determine their degree of knowledge of alcohol.

II. SELECTION OF THE SAMPLE

Ten junior high schools in the Memphis City Schools were involved in the study. The 38 junior high schools in the system were selected using a table of random numbers. The Assistant Director of Research of the Memphis City Schools contacted the principals of the first twelve schools by mail to explain the study and to ask them to participate (see Appendix J). They were subsequently contacted by telephone by the researcher and again asked to participate. Ten of the twelve principals agreed to participate in the investigation.

Two classes of seventh and/or eighth grade students were selected from each school. Because most alcohol education was done in health education, principals were requested to select health education classes as participants. It was also felt that the teachers would be more likely to participate and could make greater use of the results than could teachers in other disciplines. In every case except one, health education classes were utilized. In the lone exception, scheduling prevented collecting data from a health education class and a home economics class was utilized. The principals were asked to provide a cross section of their seventh and eighth grade students to avoid providing only very intelligent or only less intelligent groups. Each teacher who was asked to participate did so.

Students in the selected classes took the Parental Informed Consent Form (see Appendix A) home to be signed by parents and returned. The children of those parents who did not sign the form or who did not return it were excluded from the study.

Students were asked to read and sign a Student Informed Consent Form (see Appendix B) which stated that they were participating in the study voluntarily and that all data would be anonymously reported. Those students who did not choose to participate were excluded from the study. Only those students who were 12 and 13 years of age and in the seventh or eighth grade were used in the study.

The total enrollment of the Memphis City Schools was 111,745 in September, 1979. Of this total, 83,198 or 74.5 percent were black and 28,547 or 25.5 percent were white. The ten schools involved in the study had a total student population of 9,442 of which 5,924 or 62.7 percent were black and 3,518 or 37.3 percent were white. Eight of the ten schools were majority black in student body (30:12).

Of the ten schools in the investigation, seven had a majority which were classified as low income students (see Appendix J). Overall, in the ten schools 57.5 percent of the students were classified as low income. The classification was based upon eligibility for the school lunch program.

III. INSTRUMENTATION

Alcohol Use and Social Class

The Alcohol Consumption Questionnaire was adapted from the Student Drug Use Questionnaire Test (SDUQT) developed by Smith (153) and

utilized by Fleisher (61), a private research survey utilized by Finnell (54) and an instrument utilized by Ellison (49) to measure marijuana consumption. The information that the instrument revealed were the following: (1) sex, (2) age, (3) grade level, (4) the occupation of the principal wage earner in the student's household, (5) the principal wage earner's educational level, (6) whether the student had consumed alcohol during the last year, and (7) the average consumption of alcohol per week. The last two items were used to stratify the students into abstainer, infrequent drinker, and frequent drinker classification.

The instrument obtained information regarding sex, age, and grade. In addition, the directions instructed the students to not affix their names to the questionnaire. It explained that individual answers were not of interest; only the combined answers were of interest.

The questionnaire was also designed to determine if the student had used beer, wine, or distilled spirits in the last year and how frequently usage had occurred. The subject had to check "YES" if he had used the product in the last year and "NO" if he had not. The products were listed in alphabetical order with a space marked "AVERAGE NUMBER PER WEEK." In this space the student was to place a number corresponding to the average number of units per week of each product that he consumed. "Unit" for each product was described as a 12-ounce can or bottle of beer, one-ounce drink of distilled spirits, and a four-ounce glass of wine (see Appendix C).

Responses to the questionnaire allowed for stratification of the sample along the operational definitions of frequent drinker, infrequent

drinker, and abstainer as defined by Korcok (106). Frequent drinker was operationally defined as one having two or more drinks of distilled spirits, glasses of wine, or glasses of beer or any combination of the three totalling two or more units per week. Infrequent drinker was operationally defined as one having fewer than two drinks of distilled spirits, glasses of wine, or glasses of beer per week. An abstainer was operationally defined as one who has not consumed any ethyl alcohol in the past year.

In regard to social class, the questionnaire asked the student to think of the person who earns most of the money in his/her home. It then asked how that person earns the money, or what is his/her job. The questionnaire then asked the student to check the highest level in school in a list of grades and years of college. This information was used to establish the level of social class of each student.

Social class scores were computed on the basis of points assigned to different occupations based on the Hatt-North Scale for "Occupational Ratings" (149:139) (see Appendix F) and points assigned for various numbers of years of schooling completed based on an educational attainment scale developed by the U.S. Bureau of the Census (149:40) (see Appendix G). Social class score was determined by the total points on the two scales. If an occupation was not included on the Scale, its value was assigned subjectively by the researcher (81:539; 149:40). The Scale was developed by Hatt and North and the National Opinion Research Center (81:538-539). A total of 2,930 people were interviewed on the subject of occupational prestige. A list of 88

occupations were rated on a prestige scale of one to six. It was a goal of the procedure to include the fullest practical range of prestige as possible while excluding all "antisocial" jobs. A few occupations were deleted and a few were added to the original list. Hatt (81:538) concluded that the prestige ratings of between two-thirds and three-fourths of the gainfully employed can be either identified exactly or estimated accurately.

The rankings of the respondents were transferred to prestige scores so that the possible range was 20-100; the actual range was 33-96. Of the 65 possible units, 49 were actually present. In Hatt's (81:538) words, "all sections of the continuum are fairly well represented."

It was felt that anonymity had to be maintained for reasons of obtaining valid results and cooperation from the participants. Because alcohol use is illegal for youth who are 12 and 13 years old, it was felt they would be less prone to hide their use of alcohol if anonymity was assured. In addition, federal guidelines require the maintenance of anonymity in conducting such research on human subjects. Before each data collection session, the participants were assured that their responses would remain anonymous and could not be identified.

Several studies (3, 68, 89, 96, 98, 107, 171) were cited in Chapter II as examples of the use of anonymous self-report drug use questionnaires. Other studies (104, 119, 137) supported the validity and reliability of such questionnaires. In these studies fictitious drugs were included in the questionnaires with a very small percentage of subjects reporting use of them. These studies also showed close

agreement in frequency of drug use as obtained from self-report methods and nonself-report methods. Good reliability was shown from short-term test-retest surveys on drug use (173). Mott (129) and Kulick (108) also affirmed the utility and necessity of self-report questionnaires when obtaining information regarding drug use or misuse.

The straightforward inquiry into alcohol consumption was utilized by Smith (153), Fleisher (61), and Finnell (54). Similarly, Ellison (49) utilized a direct approach with marijuana consumption. The wording of the question relating to use or nonuse of alcohol was similar to that on Smith's Student Drug Use Questionnaire Test (153). The structure of the inquiry into amount of consumption was patterned after those utilized by Ellison and Finnell.

The validity and reliability of the SDUQT was demonstrated by inserting the name of a fictitious drug into the questionnaire. In two samples, both of which contained over 14,000 subjects, 1.25 and 1.75 percent of the respondents reported use of the fictitious drug (61:53).

The private drug use survey utilized by Finnell was compared to results on a previously validated drug use questionnaire in order to determine validity. According to Fox (62:168), a high correlation between the performance of a previously validated instrument and the performance of a new instrument purported to measure the same characteristic demonstrates validity of the new instrument. The questions on the survey produced high correlation coefficients with the existing instruments (54).

Ellison (49) relied upon the large body of research confirming the reliability and validity of anonymous, self-report drug use questionnaires in relation to his instrument on marijuana consumption.

The Alcohol Consumption Questionnaire was a straightforward instrument, asking directly the alcohol consumption of the respondent and assuring the anonymity of his/her response. Thus, the questionnaire had a high degree of face validity.

The questionnaire, which consisted of one page, was included in the packet with the other instruments. The students were asked to complete the questionnaire immediately after signing the Student Informed Consent Form and immediately before responding to the other instruments.

Self Concept

The instrument that was used to measure self concept was the Tennessee Self Concept Scale which was developed by William H. Fitts with the Tennessee Department of Mental Health in 1955. The Scale was available in two forms, the Counseling Form and the Clinical and Research Form. The Counseling Form was used in this study.

The Scale consists of 100 self-descriptive items, 90 of which measure self concept and ten of which measure self criticism. For each item the subject could respond in one of five different ways: Completely False, Mostly False, Partly False and Partly True, Mostly True, and Completely True. The responses to the Counseling Form provide 15 profile scores. The scores are Self Criticism; nine scores of self esteem called the Positive Scores and reported as Total P, Identity, Self Satisfaction, Behavior, Physical Self, Moral-Ethical Self, Personal Self,

Family Self, and Social Self; three scores of Variability, or inconsistency from one area of self perception to another reported as variation across the entire record, variation across Identity, Self-Satisfaction, and Behavior, and variation across Physical Self, Moral-Ethical Self, Personal Self, Family Self, and Social Self; Distribution Score; and Time Score.

For the purposes of this study, the following scales were used: Self Criticism, Total Positive (Total P), Identity, Self Satisfaction, Behavior, Physical Self, Moral-Ethical Self, Personal Self, Family Self, and Social Self.

In the original development of the TSCS, Fitts (58:1) compiled a large pool of self descriptive items. The pool came from a number of other self concept measures and from written self descriptions of patients and nonpatients. A phenomenological system was developed which classified the items on the basis of what they themselves were saying. After editing, seven clinical psychologists were employed as judges to classify the items. They also judged each item for positive and negative content. The final 90 items were those which gained perfect agreement by the judges and were utilized in the Scale. The remaining ten items comprise the Self Criticism Scale.

According to Fitts (58:1), most subjects complete the Tennessee Self Concept Scale in 10 to 20 minutes with a mean time of about 13 minutes. The Scale is a self-administering instrument with its instructions printed on the inside of the test booklet. The answer sheet was enclosed in the test booklet. Subjects used a number two lead

pencil and darkened the appropriate response column on the answer sheet for each item on the instrument.

The validity and reliability of the TSCS were attested to by Bentler (5) and Suinn (157) in their reviews in The Seventh Mental Measurement Yearbook. The reviews stated that the TSCS was valid and reliable for measuring differences in self concept of heterogeneous groups and finding individual differences in homogeneous groups. Fitts (58) documented the validity and reliability of the Scale in the manual of the TSCS.

Content validity. Fitts (58:17) assumed content validity of each item based on the fact that each was retained only if it met perfect agreement from the seven judges regarding its classification. Thus, it was assumed that the categories, their scales, and their scores were logically meaningful and publicly communicable.

Discrimination between groups. Fitts (58:17) cited statistical analyses of scores of 369 psychiatric patients compared with 626 nonpatients which demonstrated significantly different scores between the groups. The Scale was also administered to people characterized as high in personality integration and it was found that this group differed from the norm group significantly in the other direction. Fitts (58:17) also demonstrated the effectiveness of the TSCS in differentiating type of disorder and degree of disorder.

Fitts (58:21-24) cited studies which demonstrated the ability of the TSCS to find differences in self concept between juvenile first offenders,

repeated offenders, and nondelinquents. The Scale was shown to differentiate between soldiers who could and could not weather stress. It was further shown to be capable of differentiating between alcoholics and nonpatients.

Correlation with other measures. Fitts (58:24) cited results of comparisons with the Minnesota Multiphasic Personality Inventory (MMPI) which demonstrates a high correlation. Bentler (5) also reported substantial correlations in the range of .50 to .60 with various scales of MMPI. Fitts (58:24) also reported a rather clear nonlinear relationship between scores on the TSCS and the Edwards Personal Preference Schedule. The TSCS was also shown to have a strong nonlinear relationship with the Inventory of Feelings (51:24), Izard's Self Rating Positive Affect Scale ($r = .60$), Taylor Manifest Anxiety Scale ($r = .70$), and the Cornell Medical Index ($r = .56$) (5).

Predictive validity. A research monograph (56) was devoted to the relationship of self concept and performance. Several studies were cited to support the notion that the higher the self concept, the more effectively the individual will function. Various groups were used in the studies including college students, school dropouts, severely handicapped students, and disadvantaged Negro women.

Predictive validity of the TSCS was also supported by studies assessing self concept and academic performance of students, teachers, counselors, and paraprofessional teachers. Self concept as measured by the Scale appeared to be a significant factor in the performance of

these groups. In regard to vocational choice and self esteem predictive validity was again supported. It was shown that students who made clear vocational choices had higher self concepts than those who had not.

Concurrent validity. Thompson (161) reported relationships of measures from other sources with measures from the TSCS when two sources were administered concurrently. Relationships were found between scores on the TSCS and other assessments of dogmatism, self-disclosure, physical fitness, and interpersonal relationships.

Construct validity. Fitts et al. (59:47) cited several pieces of evidence that supported a positive relationship between several scales of the "Who Am I" Test. Other evidence of construct validity was a drop in Self Criticism score and an equal rise in Defensive Positive score when subjects responded to test items in terms of how they would like to be, in contrast to their actual self concepts.

Reliability. The test-retest method was used to determine reliability. A sample of 60 college students was tested over a two-week period (58:14-15). Overall, the reliability coefficients ranged from .75 to .92. Further, a reliability coefficient of .88 was obtained for the Total Positive Score in a study of a group of psychiatric patients. Other evidence cited by Fitts (58:15) was the remarkable similarity of profile patterns found through repeated measures of the same persons over long periods of time.

Knowledge of Alcohol

The knowledge test in this research was adapted from an instrument utilized by Denson (42). Nine statements were added to the original 36. After adaptation and validation, the instrument consisted of 35 statements which are sometimes made about alcohol. The respondent could choose to answer "true" or "false" to each statement.

Validity. In order to ensure that the instrument was understandable, the researcher, in concert with a reading specialist, rewrote each statement. The intention was to assure that each statement was understandable at the sixth grade level.

After each statement was rewritten, the instrument was submitted to the students enrolled in The University of Tennessee, Knoxville, second 1979 summer session courses Educational Curriculum and Instruction 5390 titled Organization and Administration of Reading Programs, Educational Curriculum and Instruction 4280 titled Diagnosis and Correction of Classroom Reading Problems and Educational Curriculum and Instruction 3260 titled Teaching Language Arts. The first two courses were graduate reading courses and the third was an undergraduate reading class comprised of undergraduate students and elementary school classroom teachers. Each of the students had had previous reading courses and most were experienced teachers. The instructions were to rate each statement for understandability for fifth and sixth grade students when the statements were read aloud. A rating scale adapted from those used by Gilmore (66:160) and Brown (16:29-30) was utilized. The rating values were:

1 = not acceptable

2 = somewhat acceptable

3 = acceptable

4 = very acceptable

5 = indispensable

Those statements which had a mean rating of three or higher were accepted as understandable.

The instrument was also submitted to a national group of 46 experts on alcohol; 24 of the group responded and were designated as a national panel of experts (see Appendix H). The panel was instructed to evaluate each statement for its content. Specifically, they were to decide the degree to which a correct answer to the statement indicated knowledge about alcohol and the suitability of the statement for an instrument in measuring knowledge. The same rating scale was used as for understandability and a mean of three was the minimum for acceptability.

Only those statements which received mean scores of three or more from both groups were included in the instrument. The Alcohol Knowledge Test is presented in Appendix E.

IV. COLLECTION OF THE DATA

The data for this study were collected during the Fall Semester, 1979, in the Memphis City Schools. Permission to administer the instruments was received from the Director of Research of the Memphis City Schools (see Appendix J) and each principal of the selected participating schools. Names were not used and the only possible

identifying features were age, sex, and grade. Subjects were given the option of either participating or not participating in the study. All students who participated were required to sign a Student Informed Consent Form. All who agreed to complete the measurement instruments did so immediately. All data were collected by the investigator.

Once the classes were selected, the following procedures were used in the administration of the instruments:

1. A packet containing a Student Informed Consent Form, the Alcohol Consumption Questionnaire including questions regarding social class, the Alcohol Knowledge Test, the Tennessee Self Concept Scale, and a number two lead pencil was given to each student whose parent had signed a Parental Informed Consent Form.

2. The instructions were read and explained. It was emphasized not to put their names on the instruments. If questions arose, they were answered by the investigator to the extent that they did not reflect opinion on a test item. It was explained that it is possible to consume an average number of units per week which is a fraction, that is, their average number of units of alcohol consumed did not have to be a whole number. It was also explained that if the student did not know the occupation and educational attainment level of the principal wage earner in his home, he was not to respond to these questions.

Reliability. Denson (42:25) previously established reliability to be .65 when he administered the test to 87 workshop participants. He used a formula for Rationale Equivalence (Kuder-Richardson).

After revision, the instrument was also administered to a group of 30 students. The scores were used to compute test-retest reliability using the Pearson product-moment correlation formula. Reliability was found to be .72.

V. PILOT STUDY

A pilot study was done to test the feasibility of the procedures. Two seventh and eighth grade classes from a junior high school in the Memphis City Schools were utilized. Fifty-eight students took the Parental Informed Consent Form to their parents. Only nine of the signed forms were returned. It was determined by questioning the students that some parents thought that the students were being asked to drink alcohol. The form was revised so that this misunderstanding was corrected. The form was again sent out to the parents and 31 were returned with signatures.

The Student Informed Consent Form was given to the students whose parents signed the Parental Informed Consent Form. All of the students signed the form and it was accepted for use.

These students were administered the instruments in their classrooms in the absence of their teachers. In this situation, several problems with discipline arose. It was decided that the teachers should be present when the instruments were administered.

Each of the measurement instruments appeared to be generally understandable. The pattern of the answer sheet of the TSCS was drawn on the blackboard so that it could be explained. This was done because

the items on the TSCS do not appear in numerical order. This method of explanation was adapted for all subsequent administrations. No questions arose regarding either the Alcohol Consumption Questionnaire or the Alcohol Knowledge Test.

The mean time required to administer the instruments to the two classes was 52 minutes. This was well within the one hour class period allowed by the principals.

VI. STATISTICAL DESIGN

An analysis of variance (ANOVA) was used to determine if significant differences existed in the self concepts of frequent drinkers, infrequent drinkers, and abstainers from alcohol. A separate ANOVA was computed for each of the ten scales of the Tennessee Self Concept Scale. An alpha of .05 was utilized as the criterion for rejecting the null hypotheses.

The ten scales were treated as independent variables and conclusions regarding hypotheses numbers one and two were made in consideration of all these tests. The scales were Self Criticism, Total Positive, Identity, Self Satisfaction, Behavior, Physical Self, Moral-Ethical Self, Personal Self, Family Self, and Social Self.

The TSCS yields scores which are totals of values from one to five assigned to choices which are actually ordinal level, that is, Completely False, Mostly False, Partly False and Partly True, Mostly True and Completely True. However, because the TSCS contains a number of items for each scale, the effect is to provide an average of selections which would be very close to the scores which would have been obtained had an

interval level scale been utilized. Therefore, because of the total number of items, one can assume that cancellation would have occurred had an interval level scale been utilized and that the results of this cancellation would be very close to the scores which are actually yielded by the TSCS. For this reason, the scores from the TSCS were treated as interval level in the use of analysis of variance (105).

For those cases in which significant F ratios were computed, a Scheffé method was chosen for a number of reasons. First, it is useful when sample sizes are not equal (73:57), as was the case in the alcohol consumption classifications. Second, this method gives relatively long intervals for simple contrasts, finding fewer differences to be significant and thus, is more conservative (73:58). Third, the Scheffé post hoc method is known to be affected very little by the absence of normality and equal variances (73:58).

Because the scores yielded by the TSCS are not truly interval level, it was necessary to also treat the data as ordinal level by use of a chi-square test to determine the relationship between alcohol consumption and self concept. An alpha of .05 was selected to determine significance.

It was necessary to provide an operational definition of high and low self concept in order to implement the chi-square test. For purposes of this test, the upper and lower 27 percentile scores on Total Positive score were chosen as limits for high and low self concept. The Total P score was chosen based on Fitts' (58:2) statement that it "is the most important single score on the Counseling Form. It reflects the overall level of self esteem." The 27 percentile was chosen because it was

deemed by the Educational Testing Service (43:4) to be the optimum level to balance risk of Type I and Type II errors.

The data regarding social class and alcohol consumption were analyzed by the use of a chi-square test. The frequent drinker, infrequent drinker, and abstainer categories were used as was done before. The upper and lower 27 percentile were utilized as measures of upper and lower social class. An alpha of .05 was the criterion for rejecting the null hypotheses.

The data regarding knowledge of alcohol and alcohol consumption were analyzed through the use of a chi-square test. The frequent drinker, infrequent drinker, and abstainer categories were used. The upper and lower 27 percentile were utilized as measures of high and low knowledge of alcohol. An alpha of .05 was selected as the criterion for rejecting the null hypotheses.

VII. STATISTICAL ANALYSIS

The sorting of the results of all data gathering instruments was done by hand. The results were sorted separately for each sex. The two groups were further sorted based on the operational definitions of frequent drinker, infrequent drinker, and abstainer.

Answer sheets of the Tennessee Self Concept Scale were scored by hand. The decision was based on Fitts' (58:1) estimation that hand scoring takes six to seven minutes per each answer sheet.

All data were then transferred to code sheets from which computer cards were punched. Using the Statistical Package for the Social

Sciences, the Memphis State University Computer Center ran the final analysis of variance operations.

The data for the chi-square tables were computed and analyzed by hand.

VIII. SUMMARY

The data in this study were collected from 12 and 13 year old seventh and eighth grade students in ten junior high schools. All ten schools were part of the Memphis City Schools system. Data were collected during the Fall Semester, 1979.

Responses to an alcohol consumption questionnaire were used to stratify the students into three groups—frequent drinkers, infrequent drinkers, and abstainers—and to assign scores of social class. These groups were further subdivided on the basis of sex. The entire sample was also administered the Tennessee Self Concept Scale, from which ten scores were used for statistical analysis. A true-false test was administered to determine the knowledge of alcohol of each student.

An analysis of variance was computed for each scale of the TSCS to determine the relationship between alcohol consumption and self concept. Where significance was found Scheffé post hoc procedures were utilized. Chi-square tables were constructed to test relationships between alcohol consumption and Total Positive, a scale of the TSCS. An alpha level of .05 was utilized.

Two chi-square tables were used to test the relationship between high and low social class and level of alcohol consumption. A different

table was utilized for each sex classification. An alpha level of .05 was utilized.

Two chi-square tables were also used to test the relationship between high and low scores on the knowledge test and the level of alcohol consumption. Once again, separate tables were utilized for each sex and an alpha of .05 was utilized.

CHAPTER IV

ANALYSIS OF THE DATA

I. INTRODUCTION

For the purposes of analyzing the data, this chapter is divided into four sections. The first section deals with describing the sample in terms of various characteristics.

The second section deals with the first two null hypotheses which were:

1. There were no significant differences among the self concepts of 12 and 13 year old male frequent users of alcohol, infrequent users of alcohol, and abstainers from alcohol;

2. There were no significant differences among the self concepts of 12 and 13 year old female frequent users of alcohol, infrequent users of alcohol, and abstainers from alcohol.

Analysis of variance (ANOVA) of the results of each of ten scales of the Counseling Form of the Tennessee Self Concept Scale (TSCS), were utilized where significant F values appeared in the ANOVA. Chi-square tests were applied to data on one scale, Total Positive. Conclusions were made in consideration of all the tests.

The third section contains the analysis of data regarding the third and fourth null hypotheses. These hypotheses were:

3. There were no significant differences in social class among 12 and 13 year old male frequent users of alcohol, infrequent users of alcohol, and abstainers from alcohol;

4. There were no significant differences in social class among 12 and 13 year old female frequent users of alcohol, infrequent users of alcohol, and abstainers from alcohol.

Chi-square tests were utilized to test these hypotheses.

The fourth section deals with analysis of data regarding the fifth and sixth null hypotheses. These hypotheses were:

5. There were no significant differences in knowledge about alcohol among 12 and 13 year old male frequent users of alcohol, infrequent users of alcohol, and abstainers from alcohol;

6. There were no significant differences in knowledge about alcohol among 12 and 13 year old female frequent users of alcohol, infrequent users of alcohol, and abstainers from alcohol.

Chi-square tests were utilized to test these hypotheses.

The fifth section summarizes the analysis of the data.

II. DESCRIPTION OF THE SAMPLE

Sex

In the total sample of 388 students, 183 were males. This was 47.2 percent of the participants. There were 205 females which was 52.8 percent of the sample.

Age

One hundred, forty-four or 37.1 percent of the participants were 12 years of age. Two hundred, forty-four or 62.9 percent of the sample were 13 years of age. Of these totals, 70 or 48.6 percent of the 12 year old students were males and 74 or 51.4 percent were females. One hundred, thirteen or 46.3 percent of the 13 year old participants were male and 131 or 53.7 percent were female.

In the male group, 38.3 percent were 12 years of age and 61.7 percent were 13 years of age. Of the females 36.1 percent were 12 years of age and 63.9 percent were 13 years of age. Table I presents these data.

Grade Distribution

There was 224 or 57.7 percent of the sample in the seventh grade and 164 or 42.3 percent of the sample in the eighth grade. In the seventh grade group, 113 or 50.4 percent were males and 111 or 49.6 percent were females. Seventy or 42.7 percent of the eighth grade students were male and 94 or 57.3 percent were females.

In the male group, 61.7 percent were in the seventh grade and 38.3 percent were in the eighth grade. For females, 54.1 percent were in the seventh grade and 45.9 percent were in the eighth grade. Table I also presents these data.

Distribution on the Dependent Variables

There were 388 participants in the study. Data regarding alcohol consumption were reported by every participant.

TABLE I

DISTRIBUTION OF THE SAMPLE
BY AGE AND GRADE

	12 Year Old Students	13 Year Old Students	7th Grade Students	8th Grade Students
Number of Males	70	113	113	70
Number of Females	74	131	111	94
Percent* of Total Number of Males In the Sample Which Appeared In Each Age or Grade Group	38.3	61.7	61.7	38.3
Percent of Total Number of Females In the Sample Which Appeared In Each Age or Grade Group	36.1	63.9	54.1	45.9
Percent of Age or Grade Group Which Was Male	48.6	46.3	50.4	42.7
Percent of Age or Grade Group Which Was Female	51.4	53.7	49.6	57.3
Total	144	244	224	164
Percent of Entire Sample Which Was In Age or Grade Group	37.1	62.9	57.7	42.3

*Errors in percentages were due to rounding.

There were 248 abstainers from alcohol which comprised 63.9 percent of the sample. Seventy students or 18.0 percent of the sample reported being infrequent drinkers of alcohol. Seventy students also reported being frequent drinkers of alcohol.

There were 115 male abstainers which was 62.8 percent of the male sample. There were 133 female abstainers which was 64.9 percent of the female sample. Regarding the infrequent drinker group, there were 36 males which comprised 19.7 percent of the male sample and 34 females which comprised 16.6 percent of the female sample. Thirty-two or 17.5 percent of the male sample were frequent drinkers while 38 or 18.5 percent of the female sample were frequent drinkers.

One hundred, fifteen or 46.4 percent of the abstainers were male while 133 or 53.6 percent were females. In the infrequent drinker group, 36 or 51.4 percent were males and 34 or 48.6 percent were females. Thirty-two or 45.7 percent of the frequent drinkers were males and 38 or 54.3 percent were females. See Table II for these data.

III. SELF CONCEPT

The mean scores for each of the ten scales of the TSCS were calculated for each of the six groups—male abstainer, male infrequent drinker, male frequent drinker, female abstainer, female infrequent drinker, and female frequent drinker.

In the majority of the scales, excluding Self Criticism, the mean scores were higher for the abstainers than for the infrequent drinker

TABLE II

DISTRIBUTION OF THE SAMPLE BY DRINKING CATEGORIES

	Abstainer	Infrequent Drinker	Frequent Drinker	Drinker	Total
Number of Males	115	36	32	68	183
Percent* of Male Sample	62.8	19.7	17.5	37.2	100
Percent of Category Which Was Male	46.4	51.4	45.7	48.6	--
Number of Females	133	34	38	72	205
Percent of Female Sample	64.9	16.6	18.5	35.1	100
Percent of Category Which Was Female	53.6	48.6	54.3	51.4	--
Total	248	70	70	140	388
Percent of Sample	63.9	18.0	18.0	36.1	100

*Errors in percentages were due to rounding.

and frequent drinker groups. Further, in most cases the mean scores were higher for the infrequent drinker groups than for the frequent drinker groups. These data may be observed in Tables III and IV.

Analysis of variance tests were employed to test for significant differences in the self concepts among male abstainers, infrequent drinkers, and frequent drinkers and among female abstainers, infrequent drinkers, and frequent drinkers. In all cases, there were five and 382 degrees of freedom. In those cases where the overall ratio was found to be significant, Scheffe's multiple comparison post hoc procedure was used to determine which group means differed significantly. A chi-square table was constructed in addition to the ANOVA for one scale, Total Positive, because this scale is regarded as the most important scale on the TSCS and is a reflection of the overall level of self esteem (54:2) and because the TSCS does not, by strict definition, yield interval level data. The 27 percentiles were chosen as the demarcation lines for high and low self concept. The high Total Positive group for females was all scores greater than 346 and the low Total Positive group was all scores less than 306. For males the high and low ranges were scores greater than 344 and scores less than 309, respectively.

The analysis of variance for Self Criticism as shown in Table V, yielded an F ratio of 1.615 in the comparison of the three categories of drinking behavior. This was not a significant ratio at the .05 level. In addition, there were no significant interaction effects ($F = 1.02$) or difference in sex ($F = .205$). Thus, the null hypotheses could not

TABLE III

MEAN SCALE SCORES ON SELF CONCEPT BY DRINKING CATEGORY FOR MALES

	Abstainer	Infrequent Drinker	Frequent Drinker
Self Criticism	37.17	36.94	37.84
Total P	329.04	328.58	320.66
Identity	121.70	120.72	119.84
Self Satisfaction	102.07	102.75	101.50
Behavior	105.28	105.11	99.31
Physical Self	71.02	71.14	68.50
Moral-Ethical Self	62.69	62.70	60.41
Personal Self	65.74	65.69	64.16
Family Self	66.78	66.00	65.91
Social Self	62.84	63.06	61.69

TABLE IV

MEAN SCALE SCORES ON SELF CONCEPT BY DRINKING CATEGORY FOR FEMALES

	Abstainer	Infrequent Drinker	Frequent Drinker
Self Criticism	36.82	38.82	38.74
Total P	330.63	322.91	319.16
Identity	122.41	121.15	120.71
Self Satisfaction	102.98	100.82	98.58
Behavior	105.25	101.24	99.87
Physical Self	71.83	69.74	67.21
Moral-Ethical Self	64.05	62.41	61.39
Personal Self	65.30	63.03	63.11
Family Self	66.81	65.03	63.92
Social Self	62.64	62.71	63.47

TABLE V

ANALYSIS OF VARIANCE FOR SELF CRITICISM

Source	df	ss	ms	F	Significance of F
Main Effects					
Y Group	2	119.328	59.664	1.615	.20019
Sex	1	7.582	7.582	.205	.65077
2-Way Interaction (Y Group-Sex)	2	75.384	37.692	1.020	.36141
Explained	5	201.602	40.320	1.092	.36451
Residual	382	14109.949	36.937		

be rejected and it was inferred that no difference existed among the groups in Self Criticism.

Regarding Total Positive, the total of all scale scores except Self Criticism, the F ratio was 2.693. This ratio was not significant at the .05 level of confidence. Table VI displays this information. The null hypotheses could not be rejected and it was deduced that no difference existed among the groups for this scale. There were no significant interaction effects (F = .353) or difference in sex (F = .007).

The chi-square score for males was 1.0428; the chi-square score for females was 5.4955. These data are depicted in Tables VII and VIII. With two degrees of freedom, neither value reached the critical value of 5.99. These findings were in agreement with the findings of the ANOVA.

The F ratio for Identity was .621. This ratio was not significant at the .05 level of confidence. There were no significant two-way interactions (F = .006) or sex differences (F = .282). In this case, the null hypotheses could not be rejected. Therefore, it was inferred that no significant differences in Identity existed among the three categories of drinking behavior. These data are presented in Table IX.

An F ratio of .951 was obtained in the comparisons on the scale of Self Satisfaction. This ratio was not significant at the .05 level of confidence; neither were there significant two-way interactions (F = .673) nor a significant sex difference (F = .057) in the Self Satisfaction scale scores for abstainers, infrequent drinkers, and frequent drinkers. See Table X for a presentation of these data.

TABLE VI

ANALYSIS OF VARIANCE FOR TOTAL POSITIVE

Source	df	ss	ms	F	Significance of F
Main Effects					
Y Group	2	5714.602	2857.301	2.693	.06896
Sex	1	7.696	7.696	.007	.93217
2-Way Interaction (Y Group-Sex)	2	749.305	374.652	.353	.70272
Explained	5	6470.563	1294.112	1.220	.29907
Residual	282	405293.31	1060.9771		

TABLE VII

CHI-SQUARE TABLE FOR MALE TOTAL POSITIVE

	High Total Positive	Low Total Positive	Total
Frequent Drinker	o = 6 e = 7	o = 9 e = 8	15
Infrequent Drinker	o = 10 e = 11	o = 13 e = 12	23
Abstainer	o = 32 e = 29	o = 28 e = 31	60
Total	48	50	98

$\chi^2 = 1.0428$

df = 2

critical value = 5.99

low group: $x < 309$

high group: $x > 344$

TABLE VIII

CHI-SQUARE TABLE FOR FEMALE TOTAL POSITIVE

	High Total Positive	Low Total Positive	Total
Frequent Drinker	o = 6 e = 10	o = 14 e = 10	20
Infrequent Drinker	o = 8 e = 10	o = 12 e = 10	20
Abstainer	o = 37 e = 32	o = 30 e = 35	67
Total	51	56	107

$\chi^2 = 5.4955$

df = 2

critical value = 5.99

low group: $x < 307$

high group: $x > 346$

TABLE IX

ANALYSIS OF VARIANCE FOR IDENTITY

Source	df	ss	ms	F	Significance of F
Main Effects					
Y Groups	2	200.498	100.249	.621	.53781
Sex	1	45.532	45.532	.282	.59560
2-Way Interactions (Y Group-Sex)	2	1.797	.898	.006	.99445
Explained	5	250.027	50.005	.310	.90695
Residual	382	61641.949	161.366		

TABLE X

ANALYSIS OF VARIANCE FOR SELF SATISFACTION

Source	df	ss	ms	F	Significance of F
Main Effects					
Y Groups	2	386.375	193.188	.951	.38745
Sex	1	11.681	11.681	.057	.81066
2-Way Interactions					
(Y Group-Sex)	2	273.597	136.799	.673	.51074
Explained	5	671.688	134.337	.661	.65330
Residual	382	77638.812	203.243		

The analysis of variance for Behavior showed an overall F ratio of 6.127. This value was found to be significant at the .0025 level of confidence. There were neither significant interaction effects (F = .819) nor significant sex differences (F = .249). Thus, it was decided to reject the null hypotheses that no relationship existed among the self concepts of abstainers, frequent drinkers, and infrequent drinkers for both sexes. It was inferred that the self concept trait Behavior did affect the drinking behavior of the subjects in both sexes. Table XI presents these data.

A Scheffé post hoc procedure was conducted to determine which groups differed significantly on the Behavior scale. Table XII presents the results of this procedure. It was determined that at the .01 level of confidence, the abstainer groups had significantly higher scores than the frequent drinker groups. It was, therefore, concluded that abstainers had significantly higher self concepts regarding their behavior than did the frequent drinkers.

The analysis of variance for the Physical Self scale yielded an F ratio of 4.416 which was found to be significant at a level of confidence greater than .02. There were no significant F values for interaction effects (F = .539) or for sex differences (F = .016). See Table XIII for these data. Based on these findings, it was decided to reject the null hypotheses that no differences existed in Physical Self among the three categories of drinking behavior.

A Scheffé post hoc procedure was conducted in order to determine between which groups the significant differences existed for Physical

TABLE XI

ANALYSIS OF VARIANCE FOR BEHAVIOR

Source	df	ss	ms	F	Significance of F
Main Effects					
Y Groups	2	1752.218	876.109	6.127	.00240
Sex	1	35.576	35.576	.249	.61822
2-Way Interactions (Y Group-Sex)	2	234.151	117.076	.819	.44177
Explained	5	2021.434	404.287	2.827	.01603
Residual	382	54626.340	143.001		

TABLE XII

SCHEFFÉ POST-HOC PROCEDURE FOR BEHAVIOR

Subset 1		
Group	Frequent Drinker	Infrequent Drinker
Mean	99.6571	103.2286
Subset 2		
Group	Infrequent Drinker	Abstainer
Mean	103.2286	105.2621

Significantly Different Subsets ($p < .01$): subsets of groups depicted on different lines, which differed by more than the shortest significant range for a subset of that size.

TABLE XIII

ANALYSIS OF VARIANCE FOR PHYSICAL SELF

Source	df	ss	ms	F	Significance of F
Main Effects					
Y Groups	2	680.808	340.404	4.416	.01271
Sex	1	1.235	1.235	.016	.89935
2-Way Interactions (Y Group-Sex)	2	83.139	41.570	.539	.58364
Explained	5	765.414	153.083	1.986	.07989
Residual	382	29449.063	77.092		

Self. From this test, it was found that significant differences existed between the abstainer groups and the frequent drinker groups at the .05 level of confidence. There were no significant differences between either abstainer and infrequent drinker groups or infrequent drinker and frequent drinker groups. Thus, it was inferred that for both sexes, abstainers from alcohol had significantly higher concepts regarding the physical self than did frequent drinkers. Table XIV presents results of this post hoc procedure.

The analysis of variance on the Moral-Ethical Self scale produced an F ratio of 2.237 which was not significant. Table XV depicts the fact that significant F values were found in neither the two-way interactions (F = .204) nor the comparisons for sex (F = 1.031). It was, therefore, decided that for both sexes the null hypotheses could not be rejected and that the three groups did not differ significantly on the scale of Moral-Ethical Self.

An F ratio of 2.008 was computed for comparisons between the three groups on the Personal Self scale. Neither this ratio nor those for interaction effects (F = .632) and sex (F = .957) were significant at the .05 level of confidence. This information is presented in Table XVI. In this case, the null hypotheses were not rejected and it was inferred that the categories of drinking behavior did not differ significantly for either sex on the Personal Self scale.

The analysis of variance for the TSCS scale of Family Self yielded an F ratio of 1.885, which was not a significant value. The F values for interaction effects (.442) and for sex (.379) were not found to be

TABLE XIV

SCHEFFÉ POST-HOC PROCEDURE FOR PHYSICAL SELF

Subset 1		
Group	Frequent Drinker	Infrequent Drinker
Mean	67.8000	70.4571
Subset 2		
Group	Infrequent Drinker	Abstainer
Mean	70.4571	71.3306

Significantly Different Subsets ($p < .05$): subsets of groups depicted on different lines, which differed by more than the shortest significant range for a subset of that size.

TABLE XV

ANALYSIS OF VARIANCE FOR MORAL-ETHICAL SELF

Source	df	ss	ms	F	Significance of F
Main Effects					
Y Groups	2	306.168	153.084	2.237	.10822
Sex	1	70.582	70.582	1.031	.31052
2-Way Interactions					
(Y Group-Sex)	2	27.955	13.977	.204	.81538
Explained	5	404.285	80.857	1.181	.31763
Residual	382	26146.398	68.446		

TABLE XVI

ANALYSIS OF VARIANCE FOR PERSONAL SELF

Source	df	ss	ms	F	Significance of F
Main Effects					
Y Groups	2	264.218	132.109	2.008	.13573
Sex	1	62.998	62.998	.957	.32848
2-Way Interactions (Y Group-Sex)	2	83.174	41.587	.632	.53210
Explained	5	407.758	81.552	1.239	.28996
Residual	382	25137.734	65.806		

significant. Table XVII presents this information. It was decided that the null hypotheses could not be rejected based on Family Self and it was deduced that there was no significant relationship between drinking behavior and Family Self.

Regarding Social Self, an F value of .019 was computed, which was found to be nonsignificant. Similarly, the F ratios for two-way interaction effects (.520) and for sex (.028) were not significant. Table XVIII presents these computations. These findings led to the conclusion that the null hypotheses could not be rejected. This was interpreted to mean that there was no relationship between drinking behavior and Social Self.

Of the ten scales of the TSCS, significant differences were found in the self concept between frequent drinkers and abstainers from alcohol for both sexes on two of the scales, Behavior and Physical Self. Thus, null hypotheses numbers one and two were rejected and it was inferred that relationships existed between self concept and drinking behavior.

IV. SOCIAL CLASS

A chi-square table was constructed for each sex in order to determine if relationships existed between drinking behavior and social class. Drinking behavior was categorized into abstainer, infrequent drinker, and frequent drinker groups.

A total of 361 responses were capable of interpretation in terms of both the Hatt-North Scale for "Occupational Ratings" and the

TABLE XVII

ANALYSIS OF VARIANCE FOR FAMILY SELF

Source	df	ss	ms	F	Significance of F
Main Effects					
Y Groups	2	253.786	126.893	1.885	.15323
Sex	1	25.530	25.530	.379	.53837
2-Way Interactions (Y Group-Sex)	2	59.457	29.728	.442	.64331
Explained	5	336.930	67.386	1.001	.41683
Residual	382	25714.320	67.315		

TABLE XVIII

ANALYSIS OF VARIANCE FOR SOCIAL SELF

Source	df	ss	ms	F	Significance of F
Main Effects					
Y Groups	2	2.090	1.045	.019	.98161
Sex	1	1.570	1.570	.028	.86746
2-Way Interactions (Y Group-Sex)	2	58.567	29.284	.520	.59478
Explained	5	62.094	12.419	.221	.95358
Residual	382	21501.113	56.286		

educational attainment scale. If an occupation was not included in the Hatt-North Scale, the value was assigned subjectively by the researcher (75:539, 142:40). The total score on the two scales was the measure of social class. The 27 percentiles were utilized to stratify the sample in terms of social class. In both sexes, all total scores above 158 were considered in the high social class group and all total scores below 123 were considered in the low social class group.

There were two degrees of freedom for each chi-square test and the critical value was 5.99 at the .05 level of confidence. The chi-square value for males was 0.2892; the chi-square value for females was 6.2269.

The chi-square value for males was not significant at the .05 level of confidence. The null hypothesis could not be rejected in this case. The inference was that no relationship existed between social class and drinking behavior in 12 and 13 year old boys. Table XIX presents the chi-square table for males.

The chi-square for females was significant at the .05 level of confidence. It was concluded that the fourth null hypothesis could be rejected. The inference was that there was a relationship between social class and drinking behavior in 12 and 13 year old females.

In order to determine where the significant relationships existed, it was necessary to closely examine the table (see Table XX). In comparing the observed and expected frequencies, there appeared to be no difference in the frequent drinker groups. However, in the infrequent drinker groups, the high social class group displayed high observed frequencies in comparison to expected frequencies while the low social

TABLE XIX

CHI-SQUARE TABLE FOR SOCIAL CLASS AND DRINKING BEHAVIOR IN MALES

	High Social Class	Low Social Class	Total
Frequent Drinker	o = 10 e = 9	o = 8 e = 9	18
Infrequent Drinker	o = 8 e = 8	o = 9 e = 9	17
Abstainer	o = 27 e = 28	o = 33 e = 32	60
Total	45	50	95

$\chi^2 = 0.2892$

df = 2

critical value = 5.99

low group: $x < 123$

high group: $x > 158$

TABLE XX

CHI-SQUARE TABLE FOR SOCIAL CLASS AND DRINKING BEHAVIOR IN FEMALES

	High Social Class	Low Social Class	Total
Frequent Drinker	o = 6 e = 7	o = 8 e = 7	14
Infrequent Drinker	o = 15 e = 10	o = 5 e = 10	20
Abstainer	o = 30 e = 34	o = 38 e = 34	68
Total	51	51	102

$\chi^2 = 6.2269$ (significant at $p < .05$)

df = 2

critical value = 5.99

low group: $x < 123$

high group: $x > 158$

class group displayed low observed frequencies in comparison to expected frequencies. In the abstainer groups, the high social class group displayed a relatively low number in comparison to expected frequencies. The low social class group displayed a high number of abstainers in relation to the expected frequencies.

Based on examination of the chi-square table for females, it was inferred that high social class was positively related to infrequent drinking in early adolescent girls. Furthermore, it was inferred that low social class was related to abstaining from drinking in this age group for girls.

Regarding social class and alcohol consumption, it was found that the fourth null hypothesis was rejected. These findings led to the conclusion that alcohol consumption was related to social class in early adolescent girls, but not in boys.

V. KNOWLEDGE OF ALCOHOL

A chi-square table was constructed for each sex to determine if relationships existed between drinking behavior and knowledge regarding alcohol. Drinking behavior was categorized into abstainer, infrequent drinker, and frequent drinker groups.

All 388 of the knowledge test answer sheets were usable. The 27 percentiles were utilized to stratify the sample in terms of knowledge relating to alcohol. In both sexes, all scores above 23 (out of a possible 35) were considered in the high knowledge group and all scores below 19 were considered to be in the low knowledge group.

There were two degrees of freedom for each chi-square test. The critical value for each test was 5.99. The chi-square value for males was 2.150; the chi-square value for females was 1.648. Since neither of these values exceeded the critical value, it was concluded that the fifth and sixth null hypotheses could not be rejected. Therefore, it was deduced that, regardless of sex, there was no relationship between knowledge of alcohol and drinking behavior. The chi-square table for males is presented in Table XXI and that for females in Table XXII.

VI. SUMMARY

To summarize, three of the six null hypotheses were rejected based upon the analysis of the data. It was found that significant differences in self concept existed between frequent drinkers and abstainers from alcohol for both males and females. It was also found that for females, significant differences existed between infrequent drinkers and abstainers with high social class being related to infrequent drinking and low social class being related to abstaining. No significant differences were found in social class for males or knowledge of alcohol for either sex in the three drinking categories.

TABLE XXI

CHI-SQUARE TABLE FOR KNOWLEDGE OF ALCOHOL AND DRINKING BEHAVIOR IN MALES

	High Knowledge	Low Knowledge	Total
Frequent Drinker	o = 4 e = 6	o = 9 e = 7	13
Infrequent Drinker	o = 9 e = 10	o = 12 e = 11	21
Abstainer	o = 27 e = 24	o = 23 e = 26	50
Total	40	44	84

$\chi^2 = 2.150$

df = 2

critical value = 5.99

low group: $x < 19$

high group: $x > 23$

TABLE XXII

CHI-SQUARE TABLE FOR KNOWLEDGE OF ALCOHOL AND DRINKING BEHAVIOR IN FEMALES

	High Knowledge	Low Knowledge	Total
Frequent Drinker	o = 8 e = 8	o = 10 e = 9	18
Infrequent Drinker	o = 7 e = 5	o = 4 e = 6	11
Abstainer	o = 27 e = 28	o = 30 e = 29	57
Total	42	44	86

$\chi^2 = 1.648$

df = 2

critical value = 5.99

low group: $x < 19$

high group: $x > 23$

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

I. SUMMARY

This study was designed to determine if relationships existed between alcohol consumption of 12 and 13 year old students and their self concepts, social class, and knowledge regarding alcohol. The subjects were categorized into male and female frequent drinker, infrequent drinker, and abstainer from alcohol groups.

The subjects in the investigation were 12 and 13 years of age and enrolled in the seventh and eighth grades during the Fall Semester of 1979 in the Memphis City Schools, Memphis, Tennessee. Ten junior high schools were utilized in the study. All subjects were tested in their classrooms.

A total of 388 subjects participated in the study, 205 of which were females and 183 of which were males. One hundred, thirty females and 115 males were classified as abstainers. Thirty-four females and 36 males were classified as infrequent drinkers. Thirty-eight females and 32 males were classified as frequent drinkers.

The instrument to measure alcohol consumption was constructed by the researcher. It was an anonymous self report questionnaire in which the subject was asked whether or not he/she has drunk any beer, wine, or distilled spirits during the last year. If the subject answered in the affirmative for any of the beverages, he/she was asked how many units of

each he/she drinks during an average week. Included in the Alcohol Consumption Questionnaire were two questions which were used to determine social class. The occupation and highest level of educational attainment of the principal wage earner in the home were used to ascertain social class. Numerical values were assigned from the Hatt-North Scale for "Occupational Ratings" and an educational attainment scale developed by the U.S. Bureau of the Census. The Counseling Form of the Tennessee Self Concept Scale (TSCS) was utilized to determine self concept. The scale consisted of 100 statements to which the subject responded as each statement applied to him. The TSCS was comprised of ten different scales. Knowledge of alcohol was measured by a true-false test first utilized by Denson (42) and revised.

Analysis of variance (ANOVA) tests were applied to each of the ten scales of the TSCS to determine if differences existed in the self concepts of the three alcohol consumption groups. Where significant F ratios were obtained, Scheffé post hoc procedures were applied to ascertain wherein the differences existed. Chi-square tests were also employed to determine if differences existed in the Positive scale scores of the TSCS among the three alcohol consumption groups. In order to determine if differences existed in social class among the three alcohol consumption groups, chi-square tests were utilized. Chi-square tests were also used to determine if differences existed in the knowledge of alcohol among the three alcohol consumption groups. Differences were tested for both sexes for each independent variable. The .05 level of significance was employed as the requirement for rejecting the null hypotheses.

II. FINDINGS

The basis for reporting the findings was analysis of the data collected from 12 and 13 year old frequent users of alcohol, infrequent users of alcohol, and abstainers from alcohol. Some of the findings are based upon statistical significances while others are based upon consistencies in the data.

Frequent Users of Alcohol

It was found that frequent consumers of alcohol were in the minority in the 12 and 13 year old sample. Only 70 of the 388 students (18 percent) were frequent drinkers. On a percentage basis more females were frequent users of alcohol than males. Of the frequent drinker group, 54.3 percent were female and 45.7 percent were male. In the female sample, 18.5 percent were frequent drinkers while 17.5 percent of the males were frequent drinkers.

The male frequent drinkers scored higher than the abstainers and infrequent drinkers on the Self Criticism scale of the TSCS. The females scored higher than the abstainers but slightly lower than the infrequent drinkers on this scale.

In regards to the Total Positive scale, in both sexes the frequent drinkers scored lower than the other two groups. While these differences did not meet the criterion to reject the null hypotheses, differences were significant at an alpha level less than .07. Additionally, the chi-square value for females was significant at a level of confidence greater than .10. Of the 32 male frequent drinkers, only six scored in

the high Total Positive group while nine scored in the low Total Positive group. Six of the 38 female frequent drinkers were in the high Total Positive group while 14 were in the low Total Positive group. There were 48 males in the high Total Positive group. Six (12.5) were frequent drinkers. There were 50 males in the low Total Positive group of which nine (18 percent) were frequent drinkers. In the female high Total Positive group, six out of 51 (11.8 percent) were frequent drinkers. The percentage of low Total Positive female frequent drinkers was much higher (25 percent) with 14 frequent drinkers out of 56 low Total Positive girls.

Male frequent drinkers scored lower than either infrequent drinkers or abstainers on the eight remaining positive scales, Identity, Self Satisfaction, Behavior, Physical Self, Moral-Ethical Self, Personal Self, Family Self, and Social Self. Female frequent drinkers scored lower than abstainers on every positive scale except Social Self. They scored lower than infrequent drinkers on every positive scale except Personal Self and Social Self. Differences on two positive scales were statistically significant. These two scales were Behavior and Physical Self. In these two scales in both sexes frequent drinkers had significantly lower scores than abstainers. These findings led to the rejection of the first two null hypotheses and indicated that frequent drinkers of both sexes have a less favorable perception of their behavior or how they function and a less favorable view of their bodies, states of health, physical appearances, skills, and sexuality (54:3) than do abstainers from alcohol.

The differences in scores on the Moral-Ethical Self scale, a measure of how the individual describes his moral worth, his relationship to God, and his feelings of being a "good" or "bad" person (54:3), were not great enough to meet the criterion for rejection of the null hypotheses. However, the differences were significant at a level near .10.

Regarding social class, ten of the 45 males (22.2 percent) in the high social class group were frequent drinkers. Only eight of the 50 males (16 percent) in the low social class group were frequent users of alcohol. For females there were 51 persons in each of the high and low social class groups. Six (11.8 percent) of the high social class group were frequent drinkers. Eight (15.7 percent) of the low social class females were frequent drinkers.

In both sexes, there were higher percentages of students who drank frequently in low knowledge of alcohol groups than in the high knowledge groups. There were four frequent drinking males in the 40-member high knowledge group (10 percent) and nine males in the 44-member low knowledge group (20.5 percent). There were eight females who drank frequently in the high knowledge group (19 percent) and ten in the low knowledge group (22.7 percent). Neither of these differences was statistically significant, therefore the fifth and sixth null hypotheses could not be rejected on these grounds.

Infrequent Users of Alcohol

Infrequent users of alcohol were also in the minority. Seventy of the 388 participants (18 percent) were classified as infrequent users of

alcohol. On a percentage basis, more males were infrequent drinkers than females. Of the frequent drinker group 51.4 percent were males and 48.6 percent were females. Perhaps more revealing was the fact that 19.7 percent of the male sample were infrequent drinkers and 16.6 percent of the female sample were infrequent drinkers.

Male infrequent drinkers scored slightly lower than either abstainers or frequent drinkers on the Self Criticism portion of the TSCS. Female infrequent drinkers scored higher than abstainers or frequent drinkers and considerably higher than male infrequent drinkers on this scale.

The Total Positive scale produced some interesting findings. Infrequent male drinkers scored considerably higher than frequent male drinkers and only slightly lower than male abstainers. Infrequent female drinkers scored considerably lower than abstainers but slightly higher than frequent drinkers. Of the 36 male infrequent drinkers, ten were in the high Total Positive group while 13 were in the low Total Positive group. There were 34 infrequent drinking females of which eight scored in the high Total Positive group and 12 scored in the low group. Of the 48 males in the high group, ten (20.8 percent) were infrequent drinkers. In the male low Total Positive group (N = 50), there were 13 infrequent drinkers which was 26 percent of that group. There were 51 subjects classified as female low Total Positive. Eight (15.7 percent) of that group were infrequent drinkers. There were 56 females classified as low Total Positive of which 12 (21.4 percent) were infrequent drinkers.

Male infrequent drinkers scored slightly lower than abstainers on the scales of Identity, Behavior, Personal Self, and Family Self and slightly higher than the abstainers on the scales of Self Satisfaction, Physical Self, Moral-Ethical Self and Social Self. They scored slightly higher than frequent drinkers on all the positive TSCS scales with the exception of the Behavior scale upon which the difference was quite large.

Female infrequent drinkers scored slightly lower on all the positive scales than the abstainers with the exception of the Social Self scale. They scored slightly higher than the frequent drinkers on all but two scales, Personal Self and Social Self. Eight (17.8 percent) of the 45 males in the high social class group were infrequent drinkers while nine (18 percent) of the 50 in the low social class group were infrequent drinkers. The third null hypothesis was not rejected. Of the 51 girls in the high social class group, 15 (29.4 percent) were infrequent drinkers while five (9.8 percent) of the 51 females in the low social class group were infrequent drinkers. There was a statistically significant difference in these groups and therefore, the fourth null hypothesis was rejected.

The data regarding knowledge of alcohol revealed that nine (22.5 percent) of the 40 males with a high degree of knowledge were infrequent drinkers. Of the 44 males with low knowledge, 12 (27.3 percent) were infrequent drinkers. These trends were reversed for females. In the female high knowledge group, seven (16.7 percent) of the 42 were infrequent drinkers while four (9 percent) of the 44 in the

low knowledge group were infrequent drinkers. These differences were not significant and the fifth and sixth null hypotheses were not rejected on these grounds.

Abstainers from Alcohol

The majority of the participants were abstainers from alcohol. Of the 388 subjects, 248 (63.9 percent) were abstainers. There were 183 male participants, of which 115 (62.8 percent) were abstainers. There were 205 female participants, of which 133 (64.9 percent) were abstainers.

On the Self Criticism portion of the TSCS, the abstainer groups scored lower than the frequent drinker groups in both sexes. For males, the abstainer group scored slightly higher than the infrequent drinker group while the female abstainers scored lower in Self Criticism than did the female infrequent drinkers.

In both sexes, abstainers scored higher than the other two groups on the Total Positive scale. The differences were rather large between the abstainer and frequent drinker groups. Although it did not meet the criterion for rejecting the null hypotheses, the overall F value ($F = 2.693$) for Total Positive was significant at an alpha less than .07. There were 115 male abstainers in the sample. Thirty-two of these were in the high Total Positive group and 28 were in the low Total Positive group. There were 133 female abstainers of which 37 were classified as high Total Positive and 30 were classified as low Total Positive. Of the 48 males in the high group, 32 (66.7 percent) were abstainers. Of the 50 males in the low Total Positive group, 28

(56 percent) were abstainers. There were 51 females in the high Total Positive group of which 37 (72.5 percent) were abstainers. There were 56 girls in the low group; 30 (53.6 percent) of this group were abstainers.

Male abstainers scored higher on all other portions of the TSCS than did the frequent drinkers. They scored higher than infrequent drinkers on the scales of Identity, Behavior, Personal Self, and Family Self. There were significant differences in the scores of the abstainers and the frequent drinkers on the Behavior and Physical Self scales. Therefore, the first null hypothesis was rejected.

Female abstainers scored higher than frequent drinkers and infrequent drinkers on all except one of the positive scales. The lone exception was Social Self. There were statistically significant differences in the scores of female abstainers and frequent drinkers on both the Behavior and Physical Self scales. These findings were the basis for rejecting the second null hypothesis.

In the male high social class group, 27 (60 percent) of the 45 students were abstainers. In the low social class group, 33 (66 percent) of the 50 students were abstainers. There were no statistically significant differences, therefore the third null hypothesis was not rejected. There were 51 females in each of the high and low social class groups. Significantly more abstainers were in the low social class group. Thirty (58.8 percent) of the female high social class group were abstainers while 38 (74.5 percent) of the low social class group were abstainers. Examination of Table XX (p. 107) reveals that there

was a statistically significant difference in female abstinence based on social class. Therefore, the fourth null hypothesis was rejected.

Percentagewise, more boys with a high level of knowledge of alcohol were abstainers. Twenty-seven (67.5 percent) of the 40 high knowledge males were abstainers while 23 (52.3 percent) of the 44 low knowledge boys were abstainers. Although not as great, the difference for females was in the opposite direction. Twenty-seven (64.3 percent) of the 42 females in the high knowledge group were abstainers and 30 (68.2 percent) of the 44 low knowledge females were abstainers. The differences were not statistically significant for either sex and the fifth and sixth null hypotheses were not rejected.

III. CONCLUSIONS

As a result of the findings of this study, the following conclusions were drawn:

1. A majority of 12 and 13 year old students were abstainers from alcohol. The number of infrequent drinkers and frequent drinkers were about the same.

2. Slightly more males in this age group were infrequent drinkers than females. Slightly more females were frequent drinkers than males.

3. Abstainers from alcohol had more favorable overall self concepts than either infrequent drinkers or frequent drinkers. Infrequent drinkers had more favorable overall self concepts than frequent drinkers.

4. Abstainers of both sexes had higher levels of self concept than frequent drinkers. The abstainers had more favorable perceptions of the

way they act or what they do. They also had a more positive view of their bodies, their states of health, their physical appearance, their skills, and their sexuality.

5. Twelve and 13 year old boys of high and low social class did not differ in their alcohol consumption.

6. Girls of high social class were more likely to be infrequent drinkers than girls of low social class and girls of low social class were more likely to be abstainers from alcohol than girls of high social class.

7. Alcohol consumption in 12 and 13 year old students was not related to knowledge about alcohol.

IV. RECOMMENDATIONS

Based on the conclusions of this investigation, the following recommendations were made:

1. Teachers and counselors should recognize the role of self concept in early adolescents when dealing with their drinking behavior and not concentrate entirely upon cognitive material.

2. Since in over 80 percent of the classrooms utilized in the study, the teachers indicated that they were also physical educators and/or coaches, they should utilize their dual training as an opportunity to develop the student's view of his/her body, his/her skills, his/her state of health, his/her sexuality, and his/her physical appearance.

3. Teachers, principals, and counselors should endeavor to enhance the student's perception of his/her own behavior, perhaps by rewarding acceptable behavior.

4. The drinking behavior of high social class 12 and 13 year old students, especially girls, should be given serious attention by teachers, counselors, and parents. Parents should be cognizant of the fact that their affluence is related to drinking behavior in their children, especially girls.

5. Information from past studies indicated that many teenage students become problem drinkers. The current study indicated that over one-third of the 12 and 13 year old students in this study were already drinkers, and that knowledge about alcohol was not significantly related to drinking behavior. In light of these findings, alcohol education should teach moderation in drinking and successful drinking rather than exclusively abstinence, and should include affective material, attitude development, and values clarification rather than relying exclusively upon knowledge-based material.

6. Additional research should be conducted in order to further identify factors which are related to alcohol consumption in early adolescence. It is recommended that these studies be conducted in a number of geographic areas in a variety of school systems. For example, private schools, schools populated by different ethnic groups, and rural, inner-city, and suburban schools are fertile grounds for research.

CHAPTER VI

THE STUDY IN RETROSPECT

I. PROBLEMS OF METHODOLOGY

The conduct of any research involving human subjects is certain to encounter numerous problems which are soluble with varying degrees of success. When the study involves collecting data from children regarding illegal behavior, these problems are compounded. Regulations set forth by the United States Department of Health, Education, and Welfare are designed to ensure that the subjects are protected from harm and that their anonymity is not violated. While necessary and certainly welcomed by the writer, these encumberances are sure to affect the course of the research.

In the presence of federal regulations protecting human subjects, it is necessary to adopt a flexible concept of randomness. The concept becomes a relative one. In this study it was decided that both student subjects and their parents must have given written approval before data were collected. Obviously, any number of factors may have affected participation which may have affected the data. Further, the Memphis City Schools required that approval had to be obtained from each principal and from each teacher of each class. Twelve schools were chosen at random and the participation of each was solicited. Ten of the twelve principals accepted. The other two principals gave as their reason for refusal the fact that the number of projects being conducted

in their schools was too large to allow any further research. The principals' selection of classes for participation, while it was encouraged that they yield a cross-section of the students in the school, may have been made in light of factors unknown to the researcher. Each of the teachers who was asked to participate did so, therefore their effect upon randomization was nil.

The writer believes that with the high degree of acceptance by principals and teachers, the randomness of the sample selection was not severely affected by this aspect of the selection process. Furthermore, almost all of the students who returned the Parental Informed Consent Form took part in the study. This leaves only the parental approval as a factor in random selection. It is impossible to assess the effect of this factor. However, the rate of approval ranged from an estimated low of about 33 percent to a high of 100 percent. The writer believes that the sample was as representative as possible of the 12 and 13 year old seventh and eighth grade students in the Memphis City Schools given the constraints of federal regulations and the school system.

The study was conducted in a school system which was not racially balanced. The student population of the Memphis City Schools is 74.5 percent black. Further, the majority of the students in the schools surveyed came from low income homes. The writer acknowledges that the sample was not racially and socioeconomically typical of all American 12 and 13 year old seventh and eighth grade students and suggests that similar studies be conducted in urban and rural areas of various areas of the country in private and public school systems.

Every effort was made to ensure that the administrations of the instruments were uniform. The choice arose of having the teacher take nonparticipants from the room or have the teacher remain with the entire class. It was decided that even though nonparticipants would be somewhat distracting, this factor would be more than offset by the presence of the teacher. Therefore, the teachers were asked to remain in the classroom during the administration of the instruments.

No variation was made in the method of administering the instruments. All were read aloud by the researcher. All instructions were read aloud and were not changed unless questions arose. Outside of those pertaining to procedures of marking the answer sheets, very few questions arose. Although every effort was made to collect data in a thoroughly objective way, the possibility exists that factors such as voice inflections, hand motions, and facial expressions may have biased the data.

It was found in the administration of the Tennessee Self Concept Scale that occasionally the students lost their place on the answer sheet. This was caused by the fact that the statements were not in numerical order. This was probably not a factor since each time this was detected, the student was allowed time to catch up.

The Hatt-North Scale of "Occupational Ratings" presented some problems of analysis. A number of occupations listed by the students did not appear on the scale. This was particularly true of occupations held traditionally by females. In these cases, the values of these occupations were assigned subjectively by the researcher (81:539; 149:40). The possibility of biased perceptions may have existed.

II. IMPLICATIONS OF THE STUDY

Given the foregoing discussion of strengths and weaknesses of the study, the writer believes that the research revealed a number of factors relating to alcohol use in early adolescents. The writer believes that the self concept is related to all of our behavior. Alcohol consumption is a behavior that is related to the way in which we perceive ourselves. This is particularly true of early adolescence. The data in this study support the relationship between the early adolescent's perception of his own behavior, his health, his physical appearance, his sexuality, and his skills and his alcohol usage. The writer believes that this relationship may extend to other areas of the self concept.

There are a great many teenage and adult problem drinkers in our society. The possibility exists, though not supported in this research, that many of these people began drinking as early adolescents with low self concept. This makes it incumbent upon parents, teachers, clergy, and counselors to deal with the self concept of the early adolescent in an effort to raise that perception of self. Unfortunately, there is no widely accepted method of dealing with the self concept of others aside from the use of positive feedback.

The writer believes that since most junior high school health educators are also physical educators, they have an unusual opportunity to deal with this dilemma. They should structure the learning of physical skills in such a way that the maximum amount of success can be gained. The role of supervisor that some physical education teachers

take is inadequate. They must be involved in reassuring and rewarding and in scheduling so that the best performers are not always on the same team and the lesser developed students are not always chosen last. Finally, they must actually teach, so that students can develop skills and confidence in their abilities. This development cannot be left to chance.

The study demonstrated a relationship, though not a statistically significant one, between alcohol consumption and the adolescent's moral-ethical frame of reference—moral worth, relationship to God, feelings of being a "good" or "bad" person and satisfaction with one's religion or lack of it. In a geographical area where alcohol consumption is often addressed with moral overtones, the relationship deserves attention. It is, however, worth noting that in general where no moral overtones are attached to drinking, the incidence of alcoholism is low. Therefore, it seems appropriate to avoid attaching morality to alcohol consumption and instead to enhance the youngster's concept of himself as a "good" person.

The writer believes that consuming alcohol in early adolescence is not so much a problem as a symptom of a problem. Harsh treatment by parents, teachers, or peers, family problems, or inability to perform in school are only a few examples of these possible problems. Such problems can easily reduce the self concept of an early adolescent, producing unaccepted behavior such as drinking. Adults should endeavor to discover the problems that may result in adolescent drinking and deal with those problems. Actions like restricting the child or reducing his allowance

may temporarily stop him from drinking alcohol but probably will not deal with the reason the child feels a need to drink.

Another factor in the utilization of alcohol by early adolescents is membership in social class. From the data collected in this study, it appears that social class is more closely related to alcohol consumption in females than in males. The findings suggest that girls of high social class tend to be infrequent drinkers more often than girls of low social class and the low social class girls tend to be abstainers from alcohol more often than high social class girls. To date, there is no indication in other literature that these phenomena are restricted to females. This leads one to suspect that these relationships also hold for males even though the analysis of the data of the current study do not substantiate this.

It is necessary to put the social class dichotomy in perspective. It is not a true reflection of socioeconomic status in the traditional sense because data were not collected regarding income. To do this would have sacrificed anonymity and jeopardized the validity of the measurements taken from the subjects. Social class, as defined in this study, was a measure of the prestige, power, and duties accorded on the basis of occupation and educational attainment. While social class is related to socioeconomic status, the two are not equivalent; social class membership is not the same as the traditionally reported upper, middle, and lower class divisions. Indeed, the writer believes that the student population of the Memphis City Schools is almost exclusively lower middle class and below. Therefore, the social class dichotomy

utilized presents a relative picture within a group almost devoid of upper class and upper middle class members in the traditional sense.

It appears that, especially in girls, the affluence of higher levels of the social strata influences drinking behavior. The fact of greater affluence makes for greater opportunity to purchase alcoholic beverages. However, this relationship would also hold for males, a fact which is not substantiated by these findings. Nevertheless, the writer suspects that in light of other literature, males of higher social class do utilize their affluence to some degree to purchase alcoholic beverages.

One factor in this sexual-social class dilemma is the possibility that girls may find it easier to have alcohol purchased for them by older teenaged persons. Girls appear to be more often in dating or socializing situations with older males than are boys with older girls. This allows for more opportunity for purchase by others for girls than for boys of early adolescence.

The literature is replete with evidence that adults of higher social class consume more alcohol than those of lower social class. There is little doubt that adults present role models for children, particularly at the turning point of early adolescence. The evidence from this study supports the notion that alcohol consumption in high social class adults is modeled by early adolescent girls. This emphasizes the responsibility of adults to set models of moderation in their drinking practices.

The findings of this study suggest that knowledge of alcohol is not related to alcohol consumption in early adolescence. The writer believes that in general, this is true. Obviously, we make decisions as to our health-related behavior based on factors other than knowledge regarding a certain project. Attitudes, values, peer pressure, and self concept are variables which may color our decision to use or not use alcohol. The writer believes that these variables should be an inherent part of alcohol education. He further believes that the methodology of dealing with these variables is not at a level sufficient to successfully help a 12 or 13 year old child cope with pressure-laden decisions like the use of alcohol. More research into dealing with affective and subjective elements is indicated.

This does not demean the need for factual, research-based cognition regarding alcohol. In making the decisions regarding alcohol use, one should be aware of the physical, mental, emotional, and social effects of imbibing. These should be presented in a nonjudgmental manner. It is obvious that moralizing and abstinence approaches have not eradicated teenage alcohol problems. The use of objective, factual material and subjective, affective sharing is a suggested combination for effective decision making.

Before the data were collected for this investigation, the principals and teachers were given the informal opportunity to react. Of the total of 25 teachers and principals who took part in the study, 16 verbally indicated that they supported the research and would like to see more research of this type conducted.

After the research was finished, a copy of the abstract was sent to each principal. The principals were encouraged to provide feedback regarding the usefulness of the information. There was substantial agreement that the results would be useful in health education. Some individuals commented that they were not surprised by the results of the study, especially the findings regarding self concept. Although all replies were informal, the general response was favorable and the writer believes that the teachers and principals may implement the findings into their relationships with students.

III. UTILITY OF THE STUDY

Any research should have as its goal the production of results which are meaningful and useful to people holding specific positions. The current research had as its target groups, developers of alcohol curricula, teachers of alcohol education, and parents of early adolescents and younger children.

The findings which failed to demonstrate a relationship between knowledge of alcohol and alcohol consumption are important to those who design and implement alcohol education curricula. The traditional assumption that if one knows that a substance is harmful, he will avoid it, has not been substantiated. Indeed, the literature clearly indicates that despite the widespread use of factual material, the number of teenage problem drinkers has increased steadily over the years. Curriculum designers and health educators should begin to look at other, more imaginative tactics. The writer does not mean to suggest

that knowledge and factual material should be omitted, but that other material should be emphasized.

A great deal of the recent literature regarding alcohol education lacks the previous support for abstinence indoctrination. Presently, many authorities emphasize successful drinking and moderate drinking as goals for education. Indeed, there is no evidence to support that either the infrequent drinkers or the frequent drinkers in this study suffer any major consequences of their drinking that abstainers escape.

The findings inferred that a relationship exists between having positive feelings about one's own behavior and abstaining from alcohol. The findings also inferred that a lower degree of positive feelings about one's behavior is related to frequent drinking of alcohol. These inferences suggest a direction for parent and teacher behavior toward early adolescents. It seems to be important to help the adolescent develop positive attitudes about his/her own behavior. The writer suggests that reward and emphasis on desirable actions would be successful ways to approach this development. The use of values clarification techniques could establish the kinds of behaviors that the student sees as worthwhile. The writer also encourages research into ways of developing a person's concept of his/her own behavior.

Appearance, sense of skills, feelings about one's sexuality, attitude about one's body, and sense of health were found to be related to alcohol consumption. The utility of this finding is of great magnitude. It has implications for dress, grooming, and cosmetic usage of which parents should be aware. It further suggests that the

development of coordination, physical skills, and posture are related to alcohol consumption. The utility of this finding is of importance to coaches, physical educators, and parents. Emphasis should be placed upon a positive, healthy attitude towards one's own sexuality. Curriculum developers, teachers, and parents all have a responsibility to heed these findings and encourage a sense of comfort with one's sexuality and reduce the stress involved with discussions of sexuality and sex roles. Opportunities for open and honest discussions should be available at home as well as in school.

While alcohol education is certainly a valuable means of establishing the kinds of drinking patterns that we desire in our society, other areas of the educational and social systems are also important. The home, church, recreational activities, and the entire school setting have opportunities and responsibilities to contribute to the establishment of acceptable drinking patterns. Perhaps the most significant application of the findings of this project would be the cooperative efforts of many institutions in the development of a positive self concept in early adolescents.

The acceptance of the child by himself and others appears to be an alternative to the current methods. The writer believes that a sense of trust between adolescent and adult and a positive self concept will diminish the need of the adolescent to avail himself of the availability of beverage alcohol, regardless of affluence or social class.

An additional result of this project has been to generate more questions. It is hoped that research will be conducted to determine the

value of different methodologies in developing self concept. Research is necessary to determine optimal ways to combine cognitive education with affective education. More research is needed to further ascertain the role of social class in alcohol consumption and the reasons for that role. The writer believes that this research has clarified some of the research questions of the future and he hopes that others will undertake to resolve these questions.

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APPENDICES

APPENDIX A

PARENTAL INFORMED CONSENT FORM

IMPORTANT! PLEASE READ AND RETURN

PARENTAL INFORMED CONSENT FORM

Dear Parent:

We are engaged in gathering information regarding self concept, alcohol use, and knowledge of alcohol. Your child has been selected at random to take part in the study. Your child's participation in this activity will be short, voluntary, and confidential. No child will sign the questionnaires. NO CHILD WILL DRINK ALCOHOL OR BE EXPOSED TO ALCOHOL; ONLY QUESTIONNAIRES WILL BE USED. Whether or not your child uses alcohol, we need participation for comparison purposes.

Please sign the statement below and have your child return it to his or her teacher immediately. If you choose not to give permission, please return this letter anyway. Direct questions to Mr. Butler at 528-6754.

Neither yours nor your child's name will be linked to his/her answers to the questionnaires.

Sincerely,

(Signed) _____
J. Thomas Butler, Researcher

(Signed) _____
Principal

(Signed) _____
Robert H. Kirk, Chairman
Division of Health and Safety
University of Tennessee, Knoxville

I give consent for my child to participate in the study conducted by J. Thomas Butler.

_____ _____
Print Student's Name Here Signature of Parent or Guardian

APPENDIX B

STUDENT INFORMED CONSENT FORM

STUDENT INFORMED CONSENT FORM

I understand that I am participating in a study to determine knowledge of alcohol, use of alcohol, and self concept. I am participating voluntarily and confidentially and may withdraw at any time.

(If you have any questions, ask them before you sign.)

_____
Signature of student

(Signed) _____
J. Thomas Butler

Reseacher

P.O. Box 40568, Memphis

(Signed) _____
Robert H. Kirk, Chairman

Division of Health and Safety

University of Tennessee, Knoxville

APPENDIX C

ALCOHOL CONSUMPTION QUESTIONNAIRE

ALCOHOL CONSUMPTION QUESTIONNAIRE

INSTRUCTIONS: Do not place your name on this sheet. We are not interested in any single person's answers. We are interested in the combined answers of all junior high school students. No one will ever be identified.

SEX_____ AGE_____ GRADE_____

Have you drunk any of the following in the last year?

	No	Yes	Average Number Per Week
BEER	____	____	_____
DISTILLED SPIRITS (rum, vodka, whiskey, gin, bourbon, tequila)	____	____	_____
WINE	____	____	_____

For those who marked "YES" write down how many of each you drink in an average week. Use the following key:

Number of 12-ounce cans or bottles of beer;
Number of 1-ounce drinks of distilled spirits;
Number of 4-ounce glasses of wine.

Remember, show the <u>average</u> number of each that you drink per week.

Think of the person who earns most of the money in your home. How does this person make the money? What is his or her job?_____

_____

How far did that person go in school?

College:
- 5 years or more ____
- 4 years ____
- 3 years ____
- 2 years ____
- 1 year ____

- Graduated high school ____
- 11th Grade ____
- 10th Grade ____
- 9th Grade ____
- 8th Grade ____
- 7th Grade ____
- 5th or 6th Grade ____
- 3rd or 4th Grade ____
- 1st or 2nd Grade ____

APPENDIX D

TENNESSEE SELF CONCEPT SCALE

TENNESSEE SELF CONCEPT SCALE

by

William H. Fitts, PhD.

Instructions

The statements in this booklet are to help you describe yourself as you see yourself. Please respond to them as if you were describing yourself to yourself. Do not omit any item! Read each statement carefully; then select one of the five responses listed below. On your answer sheet, put a circle around the response you chose. If you want to change an answer after you have circled it, do not erase it but put an X mark through the response and then circle the response you want.

Remember, put a circle around the response number you have chosen for each statement.

	Completely false	Mostly false	Partly false and partly true	Mostly true	Completely true
Responses:	1	2	3	4	5

1. I have a healthy body.

3. I am an attractive person.

5. I consider myself a sloppy person.

19. I am a decent sort of person.

21. I am an honest person.

23. I am a bad person.

37. I am a cheerful person.

39. I am a calm and easy going person.

41. I am a nobody.

55. I have a family that would always help me in any kind of trouble.

57. I am a member of a happy family.

59. My friends have no confidence in me.

73. I am a friendly person.

75. I am popular with men.

77. I am not interested in what other people do.

91. I do not always tell the truth.

93. I get angry sometimes.

2. I like to look nice and neat all the time.

4. I am full of aches and pains.

6. I am a sick person.

20. I am a religious person.

22. I am a moral failure.

24. I am a morally weak person.

38. I have a lot of self-control.

40. I am a hateful person.

42. I am losing my mind.

56. I am an important person to my friends and family.

58. I am not loved by my family.

60. I feel that my family doesn't trust me.

74. I am popular with women.

76. I am mad at the whole world.

78. I am hard to be friendly with.

92. Once in a while I think of things too bad to talk about.

94. Sometimes, when I am not feeling well, I am cross.

7. I am neither too fat nor too thin.

9. I like my looks just the way they are.

11. I would like to change some parts of my body.

25. I am satisfied with my moral behavior.

27. I am satisfied with my relationship to God.

29. I ought to go to church more.

43. I am satisfied to be just what I am.

45. I am just as nice as I should be.

47. I despise myself.

61. I am satisfied with my family relationships.

63. I understand my family as well as I should.

65. I should trust my family more.

79. I am as sociable as I want to be.

81. I try to please others, but I don't overdo it.

83. I am no good at all from a social standpoint.

95. I do not like everyone I know.

97. Once in a while, I laugh at a dirty joke.

8. I am neither too tall nor too short.

10. I don't feel as well as I should.

12. I should have more sex appeal.

26. I am as religious as I want to be.

28. I wish I could be more trustworthy.

30. I shouldn't tell so many lies.

44. I am as smart as I want to be.

46. I am not the person I would like to be.

48. I wish I didn't give up as easily as I do.

62. I treat my parents as well as I should (Use past tense if parents are not living).

64. I am too sensitive to things my family say.

66. I should love my family more.

80. I am satisfied with the way I treat other people.

82. I should be more polite to others.

84. I ought to get along better with other people.

96. I gossip a little at times.

98. At times I feel like swearing.

13. I take good care of myself physically.

15. I try to be careful about my appearance.

17. I often act like I am "all thumbs."

31. I am true to my religion in my everyday life.

33. I try to change when I know I'm doing things that are wrong.

35. I sometimes do very bad things.

49. I can always take care of myself in any situation.

51. I take the blame for things without getting mad.

53. I do things without thinking about them first.

67. I try to play fair with my friends and family.

69. I take a real interest in my family.

71. I give in to my parents. (Use past tense if parents are not living).

85. I try to understand the other fellow's point of view.

87. I get along with other people.

89. I do not forgive others easily.

99. I would rather win than lose in a game.

14. I feel good most of the time.

18. I am a poor sleeper.

32. I do what is right most of the time.

34. I sometimes use unfair means to get ahead.

36. I have trouble doing the things that are right.

50. I solve my problems quite easily.

52. I change my mind a lot.

54. I try to run away from my problems.

68. I do my share of work at home.

70. I quarrel with my family.

72. I do not act like my family thinks I should.

86. I see good points in all the people I meet.

88. I do not feel at ease with other people.

90. I find it hard to talk with strangers.

100. Once in a while I put off until tomorrow what I ought to do today.

The Tennessee Self Concept Scale was developed by William H. Fitts and published by Counselor Recordings and Tests, Nashville, Tennessee.

APPENDIX E

ALCOHOL KNOWLEDGE TEST

ALCOHOL KNOWLEDGE TEST

PLEASE RESPOND TO THE FOLLOWING STATEMENTS BY CROSSING OUT THE "T" IF YOU THINK THE STATEMENT IS TRUE OR THE "F" IF YOU THINK THE STATEMENT IS FALSE.

T F 1. People who weigh more can usually drink more without getting drunk than people who weigh less.

T F 2. If you are very cold, a drink of wine will warm up your body.

T F 3. A can of beer and a drink of whiskey have the same amount of alcohol.

T F 4. There is no cure you can take for a hangover.

T F 5. Alcohol does not affect the way the brain works.

T F 6. Most alcoholics have jobs and live with their families.

T F 7. Getting drunk once a week is a sign of a drinking problem.

T F 8. More teenagers try marijuana than try alcohol.

T F 9. Most high school kids have tasted alcohol.

T F 10. Teenage drinkers usually drink small amounts.

T F 11. Gulping alcoholic beverages is commonly accepted.

T F 12. You can be legally drunk with only a tiny part of your blood being alcohol.

T F 13. In most people, the more alcohol you drink, the more active your body becomes.

T F 14. In less than 3 out of 10 highway accidents that cause death, someone has been drinking.

T F 15. Alcohol was used for hundreds of years as a medicine.

T F 16. Liquor mixed with soda pop will affect you faster than liquor by itself.

T F 17. A person cannot become an alcoholic by just drinking beer.

T F 18. Sipping slowly, eating and drinking fewer drinks will help prevent a hangover.

T F 19. If you eat when you drink, alcohol will get into your bloodstream quicker.

T F 20. A small amount of drinking is generally not harmful to the body.

T F 21. Taking a cold shower will cause the body to use up alcohol in a few minutes.

T F 22. It will take your body 3 hours to burn up the alcohol in 3 beers.

T F 23. A large number of young people drink in order to be accepted by others and to feel like adults.

T F 24. Only a few countries throughout history have used alcohol.

T F 25. Very few people agree about what "responsible drinking" means.

T F 26. When getting drunk is accepted among friends, most people become alcoholics.

T F 27. Alcoholism is not a disease.

T F 28. For hundreds of years people have drunk wines at religious ceremonies and family gatherings.

T F 29. Most crimes are committed by people who are drinking alcohol.

T F 30. Alcohol does not affect the heart.

T F 31. Drinking alcohol was once against the law for all Americans.

T F 32. Strong coffee will burn up alcohol in the blood in a few minutes.

T F 33. No one can drink enough alcohol to kill himself.

T F 34. Rubbing alcohol is the same as the alcohol in beer.

T F 35. Alcohol is a drug.

APPENDIX F

OCCUPATIONAL RATINGS

OCCUPATIONAL RATINGS

Occupation	
U.S. Supreme Court Justice	94
Physician	93
Scientist	92
Nuclear physicist	92
State Governor	91
Government scientist	91
Cabinet member in the federal government	90
College professor	90
United States Representative in Congress	90
Diplomat in the U.S. Foreign Service	89
Chemist	89
Lawyer	89
County judge	88
Architect	88
Dentist	88
Minister	87
Member of the board of directors of a large corporation	87
Psychologist	87
Mayor of a large city	87
Head of a department in a state govennment	86
Priest	86
Civil Engineer	86
Airline pilot	86
Banker	85
Biologist	85
Sociologist	83
Captain in the regular army	82
Instructor in the public schools	82
Accountant for a large business	81
Public school teacher	81
Owner of factory that employs about 100 people	80
Building contractor	80
Artist who paints pictures that are exhibited in galleries	78
Musician in a symphony orchestra	78
Author of novels	78
Economist	78
Official of an international labor union	77
County agricultural agent	76
Railroad engineer	76
Electrician	76
Owner-operator of a printing shop	75
Trained machinist	75
Farm owner and operator	74

Welfare worker for a city government	74
Undertaker	74
Newspaper columnist	73
Policeman	72
Reporter on a daily newspaper	71
Bookkeeper	70
Radio Announcer	70
Insurance agent	69
Tenant farmer—one who owns livestock and machinery and manages the farm	69
Carpenter	68
Manager of a small store in a city	67
Local official of a labor union	67
Traveling salesman for a wholesale concern	66
Railroad conductor	66
Mail carrier	66
Plumber	65
Automobile repairman	64
Playground director	63
Owner-operator of a lunch stand	63
Machine operator in a factory	63
Barber	63
Garage mechanic	62
Corporal in the regular army	62
Fisherman who owns his own boat	58
Streetcar motorman	56
Milk routeman	56
Clerk in a store	56
Restaurant cook	55
Lumberjack	55
Singer in a nightclub	54
Filling station attendant	51
Coal miner	50
Railroad section hand	50
Dock worker	50
Night watchman	50
Taxi driver	49
Restaurant waiter	49
Farmhand	48
Bartender	48
Janitor	48
Clothes presser in a laundry	45
Soda fountain clerk	44
Share cropper—one who owns no livestock or equipment and does not manage a farm	42
Garbage collector	39
Street sweeper	36
Shoe shiner	34
AVERAGE	71.0

APPENDIX G

EDUCATIONAL ATTAINMENT SCALE

EDUCATIONAL ATTAINMENT SCALE

Score	Category	
98	College:	5 or more
93		4
89		3
86		2
83		1
67	High School:	Graduated
49		11th Grade
42		10th Grade
34		9th Grade
23	Elementary:	8th Grade
13		7th Grade
08		5th or 6th Grade
04		3rd or 4th Grade
02		1st or 2nd Grade
01	None	

APPENDIX H

NATIONAL PANEL OF EXPERTS ON ALCOHOL

NATIONAL PANEL OF EXPERTS ON ALCOHOL*

Robert Banks
Addiction Specialist II
Licensed Addiction Counselor
State of North Carolina
Department of Mental Health
Charleston, North Carolina

Howard T. Blane
Tri-County Alcoholism Center
235 Franklin Street
Sandusky, Ohio 44870

William M. Campbell, Director
Drug and Alcohol Deferral Service
Suite 3 and 4 Court Building
123 N.W. Fourth Street
Evansville, Indiana 47708

Charles R. Carroll
Department of Physiology and Health Science
Ball State University
Muncie, Indiana 47306

Peter R. Chambers
Adolescent Substance Abuse Service
Care Manor Hospital
401 South Tustin Avenue
Orange, California 92666

William Foley
McIntosh Trail Personal Growth Center
Substance Abuse Center
141 West Solomon Street
Griffin, Georgia 30223

Martin E. Frank, President
National Training Institute
International Halfway House Association
P.O. Box 18258
Seattle, Washington 98118

---

*One rating scale was returned anonymously.

Ted Gwinn
PROJECT CHARLIE
5555 West 70th Street, Room 122
Edina, Minnesota 55435

Brent Q. Hafen
Department of Health Science
Brigham Young University
Provo, Utah 84601

Ellen Isley, Drug Resource Coordinator
Casimir Pulaski High School
2500 West Oklahoma Avenue
Milwaukee, Wisconsin 53215

Kenneth L. Jones
Department of Biological Sciences
Mt. San Antonio College
1100 North Grand Avenue
Walnut, California 91789

Dick L. Kessler, Executive Director
National Council on Alcoholism, Inc.
Mile High Area
2525 West Alameda, #214
Denver, Colorado 80219

Steven T. Knee, Medical Director
Crossroads Hospital
6323 Woodman Avenue
Van Nuys, California 91401

Wayne Lindstrom, Manager of Alcoholism Services
West Side Community Center
6406 Detroit Avenue
Cleveland, Ohio 44102

Robert E. Mack
National Council on Alcoholism, Inc.
New York City Affiliate
133 East 62nd Street
New York, New York 10021

James Nocks, Chief
Alcoholism Program
West Haven Veterans Administration Medical Center
West Spring Street
West Haven, Connecticut 06516

John L. Norris, Chairman Emeritus
General Services Board
Alcoholics Anonymous
468 Park Avenue
New York, New York 10016

Donald A. Phillips, Manager
Alcoholism and Drug Abuse Program
Office of Personnel Management
1900 E. Street, N.W.
Room 233K
Washington, D.C. 20415

Yvonne Pola, Project Director
Women Reaching Women
Wisconsin Association on Alcoholism and Other Drug Abuse
333 West Mifflin Street, Suite 4
Madison, Wisconsin 53703

Oakley Ray
Department of Psychology
Vanderbilt University
Nashville, Tennessee 37240

Clifford E. Reich, Director
Department of Liquor Control
State of Ohio
2323 West Fifth Avenue
Columbus, Ohio 43204

Edward J. Riordan, Executive Director
National Association of Alcoholism Counselors
951 South George Mason Drive
Arlington, Virginia 22204

Louis W. Shainberg
Department of Biological Sciences
Mt. San Antonio College
1100 North Grand Avenue
Walnut, California 91789

APPENDIX I

SCHOOLS WHICH PARTICIPATED IN THE STUDY

SCHOOLS WHICH PARTICIPATED IN THE STUDY*

Bellevue Junior High School
575 South Bellevue

Corry Junior High School
2230 Corry Road

Craigmont High School
3333 Covington Pike

Cypress Junior High School
2109 Howell

Fairview Junior High School
750 East Parkway South

Humes Junior High School
659 North Manassas

Ridgeway High School
2009 Ridgeway Road

Sherwood Junior High
3480 Rhodes Road

Snowden Junior High School
1870 North Parkway

Trezevant Junior High School
3350 Trezevant Street

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*Schools are listed in alphabetical order.

APPENDIX J

CORRESPONDENCE

BOARD OF EDUCATION

Memphis City Schools

2597 Avery Avenue, Memphis, Tennessee 38112

September 5, 1979

Mr. Johnny Thomas Butler
The University of Tennessee - Knoxville
Division of Health and Safety
1914 Andy Holt Avenue
Knoxville, Tennessee 37916

Dear Mr. Butler:

Your request to conduct a research study in the Memphis City Schools has been reviewed and recommended for approval by the Memphis City Schools Mental Health Center and the Division of Research Services.

There are several aspects of your study that I would like to discuss with you. Please contact me relative to when we can talk specifically about your proposal.

I received your recent letter concerning the sample technique and we can discuss this concern also.

Sincerely,

(Signed)
Joyce B. Weddington, Ed.D.

JBW:elr

BOARD OF EDUCATION

Memphis City Schools

2597 Avery Avenue, Memphis, Tennessee 38112

October 31, 1979

TO: Selected Junior High School Principals

FROM: Dr. Joyce B. Weddington

SUBJECT: Research Request for Mr. Johnny Butler

Mr. Johnny Butler, a doctoral student at the University of Tennessee, has requested and received approval to conduct a research study entitled, "A Study of the Relationship Between Self-Concept, Social Class, Knowledge of Alcohol, and Alcohol Consumption in 12 and 13 Year Old Students."

The Study was recommended for approval by the Memphis City Schools Mental Health Center and the Division of Research Services. Your school was selected for participation in the study. Participants in the study will be administered three instruments: the Tennessee Self-Concept Scale, a questionnaire designed to measure alcohol consumption and alcohol knowledge test. Administration of the test takes approximately 25 minutes. Data will be collected only on students with approved parental and student informed consent forms.

As principal of one of the selected schools, Mr. Butler will contact you concerning the involvement of your school in his study. As usual, your cooperation will be greatly appreciated.

If you have any questions regarding this request, please feel free to call me at 454-5450.

Thank you for your assistance.

JBW:elr

cc: Area Superintendents

Schools used: Bellevue, Corry, Cypress, Airways, Fairview, Humes, Sherwood, Snowden, Trezevant, Ridgeway, Vance and Craigmont Junior High Schools' Principals

THE UNIVERSITY OF TENNESSEE
KNOXVILLE 37916
COLLEGE OF EDUCATION

DEPARTMENT OF
CURRICULUM AND INSTRUCTION

Mr. Tom Butler
3578 Kendrick
Memphis, TN 38108

Dear Mr. Butler:

The following procedure was used in assisting you in your effort to develop a knowledge test on alcohol. During the summer school term (1979) at the University of Tennessee three different groups of graduate and undergraduate students voluntarily read and offered suggestions for further revision of the original rewritten knowledge test.

Group I: Eleven undergraduate students in Curriculum and Instruction 3260 - Teaching Language Arts - received the rewritten test. This group of students was comprised of eight experienced elementary school classroom teachers and three regular elementary school majors.

Group II: Seventeen graduate students in Curriculum and Instruction 5390 - Organization and Administration of the Reading Program - received the rewritten test. This group of students was comprised of experienced reading teachers, supervisors, administrators, and regular elementary school classroom teachers.

Group III: Twenty-eight graduate and undergraduate students in Curriculum and Instruction 4280 - Diagnostics and Correction of Classroom Reading Problems - received the rewritten test. This group of students was comprised of undergraduate students and experienced elementary school classroom teachers.

Mr. Tom Butler
Page 2
November 2, 1979

The rewritten knowledge test was distributed to the students in each course. They were asked to read the test and determine if the intended school recipients could understand the questions. After reading the test the students returned the test with their responses to each question as to its acceptance or need for improvement.

Sincerely,

(Signed)
Paul N. Terwilliger
Associate Professor

PNT:an

BOARD OF EDUCATION

Memphis City Schools

2597 Avery Avenue, Memphis, Tennessee 38112

December 11, 1979

Mr. Johnny Thomas Butler
3578 Kendrick Road
Memphis, Tennessee 38108

Dear Mr. Butler:

Listed below are the ten Junior High schools requested for your survey by number of low income students and school percentage from low income families:

School*	Number of children from low income families	Percent
A	910	93
B	1196	90
C	354	74
D	337	69
E	345	62
F	526	56
G	309	54
H	514	49
I	215	21
J	117	12

Sincerely,

(Signed)
E. C. Church, Supervisor
Federal and State Projects

ECC:nm

*The Memphis City Schools requested that the names of the schools be withheld.

COUNSELOR RECORDINGS AND TESTS

Box 6184 • Acklen Station
Nashville, Tennessee 37212

April 2, 1980

J. Thomas Butler
3578 Kendrick
Memphis, TN 38108

Dear J. Thomas Butler:

We are hereby granting our permission for you to make a copy of the Tennessee Self Concept Scale to put in the appendix of your dissertation.

Thank you,

(Signed) _____
Rosetta Mosley
Office Manager

APPENDIX K

APPLICATION FOR REVIEW OF RESEARCH

APPLICATION FOR REVIEW OF RESEARCH

FORM B

CRP#_____

Date Received_____

THE UNIVERSITY OF TENNESSEE, KNOXVILLE

Application for Review of Research Involving Human Subjects
In accordance with general institutional assurance G0124 dated July 15, 1975, as amended November 25, 1975.

Date: August 8, 1979

I. Identification of Project:

Project Director: Johnny Thomas Butler
Title of Project: The Relationship Between Self Concept, Social Class, Knowledge of Alcohol, and Alcohol Consumption in 12 and 13 Year Old Students
Department: Division of Health and Safety
Supporting Agency: None
Estimated Starting Date: September 1, 1979
Estimated Completion Date: December 1, 1979

II. Objectives of Project:

To determine if relationships exist between self concept, social class, and/or knowledge regarding alcohol and alcohol consumption in 12 and 13 year old junior high school students.

III. Description of Subjects:

Approximately 350 seventh and eighth grade students will participate in the study. The junior high schools in the Memphis City Schools system will be assigned ranks on a random basis. Principals will be contacted in order of rank until five principals give permission for the study to be conducted in their schools. Two seventh or eighth grade classes will be chosen at random from each school. Only those students whose parents sign a Parental Informed Consent Form and who themselves sign a Student Informed Consent Form will be included in the study. If, after the five schools have been utilized, the number of participants is less

than 350, additional schools will be contacted according to their random ranking. No payments or incentives will be made to participants.

IV. Methods of Procedure:

Each participant will respond to three instruments. All instruments will be read to the students in their classrooms in the presence of their teachers. The instruments are the Tennessee Self Concept Scale (a standardized, copyrighted instrument which was validated on sixth grade level readers), a true-false Alcohol Knowledge Test, and an Alcohol Consumption Questionnaire. Included in the Alcohol Consumption Questionnaire are two questions which will be utilized to stratify the group with regard to social class. The Alcohol Knowledge Test and the Alcohol Consumption Questionnaire are included in this document. All responses will be anonymous; results will not be reported with reference to any particular school.

V. Protection Measures:

Parents of each potential participant will be mailed a Parental Informed Consent Form. Only the children of those who return the form by mail will be asked to participate in the study. Before any instruments are administered, those children whose parents gave permission will be asked to sign a Student Informed Consent Form. The forms will be collected before administration of the instruments and stored separately. Subjects will be instructed not to place their name on any of the data-gathering materials. Any material which is signed will be destroyed and not utilized in the study. No parent, teacher, counselor, or administrator will have access to this material. Subjects may stop at any time.

VI. Method of Obtaining "Informed Consent" from Subjects:

Both parents and the subjects themselves will read and sign an informed consent form. The form will be read to the students. Any questions that they may have will be answered by the researcher. Parents will be invited to ask questions by phone. Informed consent forms will be retained by the researcher for a period of four years. Informed consent forms are included in this document.

(Signed) _____
Johnny Thomas Butler
Project Director

Date: August 8, 1979

VITA

Johnny Thomas Butler was born in Fort Smith, Arkansas, on February 6, 1949. He was graduated from Northside High School in 1967. In 1971 he received his Bachelor of Science degree from the University of Arkansas at Little Rock. In the fall of 1971 he was hired as a graduate assistant at Memphis State University and began study toward a Master of Education degree in physical education. The degree was awarded in August, 1972.

In September, 1973, he was hired as an instructor in the Department of Health, Physical Education, and Recreation at Shelby State Community College in Memphis, Tennessee. He has been employed by that institution since that date and has been granted tenure and promoted to assistant professor. He was employed as a graduate teaching assistant in the Division of Health and Safety in The University of Tennessee, Knoxville, from September, 1978, until June, 1979, while pursuing the Doctor of Education degree in health education.

He is married to the former Charlene Campbell of Bethlehem, Pennsylvania.