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**Martin, Gary Phillip**

**THE EXTENT OF DRUG USE AMONG HIGH SCHOOL SENIORS IN  
TENNESSEE, APRIL 1985**

*East Tennessee State University*

**Ed.D. 1986**

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THE EXTENT OF DRUG USE AMONG HIGH SCHOOL  
SENIORS IN TENNESSEE, APRIL 1985

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A Dissertation  
Presented to  
the Faculty of the Department of Supervision and Administration  
East Tennessee State University

---

In Partial Fulfillment  
of the Requirements for the Degree  
Doctor of Education

---

by  
Gary P. Martin  
December, 1986

APPROVAL

This is to certify that the Graduate Committee of

GARY P. MARTIN

met on the

5th day of August, 1986

The committee read and examined his dissertation, supervised his defense of it in an oral examination, and decided to recommend that his study be submitted to the Graduate Council and the Associate Vice-President for Research and Dean of Graduate School in partial fulfillment of the requirements for the degree Doctor of Education.

Glenn H. Edwards  
Chairman, Graduate Committee

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Signed on behalf of  
the Graduate Council

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Associate Vice-President for Research  
and Dean of Graduate School

## ABSTRACT

### THE EXTENT OF DRUG USE AMONG HIGH SCHOOL

SENIORS IN TENNESSEE, APRIL 1985

by

Gary P. Martin

The purpose of this study was to obtain information relative to the extent of drug use by high school seniors in Tennessee. Patterns of drug use were obtained by using a questionnaire/opinionnaire entitled Monitoring the Future: A Continuing Study of the Lifestyles and Values of Youth. The instrument was developed by Jerald G. Bachman, Lloyd D. Johnston, and Patrick O'Malley of the Institute for Social Research, Ann Arbor, Michigan. The review of literature focused on patterns of drug use by seniors throughout the nation using the same questionnaire/opinionnaire. The results of the national survey were compared with the findings in Tennessee.

The descriptive survey method of research was used to conduct the study. The survey instrument/questionnaire contained 60 questions pertaining to drug use by high school seniors. The questionnaire was administered to a stratified random sample of 450 seniors in 15 randomly selected high schools in West, Middle, and East Tennessee. The State Department of Education was utilized to select the 15 participating schools. Thirty students, 15 males and 15 females from each school, were selected by using a table of random numbers. A guidance counselor or other designated individual in each school was responsible for administering the questionnaire.

The three research questions and seven hypotheses of the study provided information regarding the extent of drug use by high school seniors in Tennessee. The study revealed that seniors in Tennessee use alcohol less on a lifetime and yearly basis compared with seniors throughout the nation. Monthly rates of alcohol utilization were practically the same. The study further showed that high school seniors in Tennessee were less likely to use marijuana on a lifetime, yearly and monthly basis than seniors in other high schools in the nation. It was also determined that Tennessee seniors were less likely to use stimulants on a lifetime basis than other seniors. The use of barbiturates, LSD, cocaine and heroin could not be statistically analyzed because of a lack of responses to the survey questions.

Additional conclusions drawn as a result of the study were summarized as follows:

1. The main reasons seniors in Tennessee used drugs were: to experiment, to relieve tension, to get high, and to have a good time with friends.

2. The situations in which seniors in Tennessee used drugs were: at home, or at a party, on a date, with one or two other people, and in a car.

3. The drugs most abused in Tennessee were alcohol and marijuana.



INSTITUTIONAL REVIEW BOARD APPROVAL

This is to certify that the following study has been filed and approved by the Institutional Review Board of East Tennessee State University.

Title of Grant or Project THE EXTENT OF DRUG USE AMONG HIGH SCHOOL SENIORS IN TENNESSEE, APRIL 1985

Principal Investigator Gary P. Martin

Department Supervision and Administration

Date Submitted April 9, 1985

Institutional Review Board, Chairman

Dr. Ernest L. Ligon

## DEDICATION

The writer dedicates this dissertation to his wife, Yvette, for her encouragement and inspiration in all his endeavors. The writer also dedicates the dissertation to his sons, Chris and Jim Ed, who have also been a source of inspiration.

## ACKNOWLEDGMENTS

The writer wishes to express his appreciation to Dr. Floyd H. Edwards, the Chairman of his doctoral committee, for his help and understanding during a time of personal family crisis. Gratitude is also expressed to the other members of the doctoral committee: Dr. J. Howard Bowers, Dr. Charles W. Burkett, Dr. George Johnson, and Dr. Robert Shepard for their assistance in preparing this dissertation.

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## CHAPTER 1

### Introduction

Perhaps no area is more clearly appropriate for the application of systematic research and reporting than the use of illicit drugs by young people, given its rapid rate of change, its importance for the well-being of the nation, and the amount of legislative and administrative intervention addressed to it. Young people are often at the leading edge of social change; and this has been particularly true in the case of drug use. The surge in illicit drug use during the last decade has proven to be primarily a youth phenomenon, with onset of use most likely to occur during adolescence. Particular drugs tend to rise and fall in popularity from year to year, and related problems occur for youth and society as a whole (NIDA, 1984).

The problem of illicit drug use and abuse in the United States is pervasive. In fact, it is widely thought that the levels of use and abuse of drugs in our society are equal to or higher than those found in any other industrialized country. The drug abuse problem is also exceedingly diverse. Virtually every community in every state has, at one time or another, felt its impact, some more acutely than others. Drug use rates vary from community to community and, within communities the rates often vary considerably from neighborhood to neighborhood. While there are some differences in degree to which drugs are used by sex, race-ethnicity, social class, and other personal and psychological characteristics, no segment of the population is immune to the problem.

Further, the drug use problem spreads and changes with remarkable speed (NIDA, 1984).

Simply stated, the problem of drug use in the United States is an extremely complex and almost constantly changing phenomenon. The more we learn about the problem, the more cognizant we are of the impact drug use has on individual lives, on the functioning of families and communities, and on the health and well-being of the entire society (U.S. News & World Report, March 25, 1985).

A reasonably accurate assessment of the basic size and contour of the problem of illicit drug use among young Americans is an important starting place for rational public debate and policymaking. In the absence of reliable prevalence data, substantial misconceptions can develop and resources can be misallocated. In the absence of reliable data on trends, early detection and localization of emerging problems are more difficult, and the assessment of the impact of major historical and policy-induced events much more suspect (Quindlen, 1981).

### The Problem

#### Statement of the Problem

The problem of this study was to determine the extent of illicit drug use by high school seniors in selected high schools in Tennessee.

#### Subproblem

The subproblem was to compare the incidence of illicit drug use by high school seniors in Tennessee with seniors throughout the nation.

### Significance of the Problem

Tennessee public schools, along with schools throughout the nation, have experienced problems with student drug use. Illicit drug use in the United States remains at a level probably exceeding any nation in the Western industrialized world (Bachman, Johnston, & O'Malley, 1983). Drug use clearly is a major health problem which demands continued priority and attention. So significant is the problem in Tennessee that Governor Lamar Alexander appointed a task force (Spring 1985) to determine the extent of drug abuse by adolescents. Data on the practices of drug use by teenagers would greatly assist both school personnel and social agencies in planning preventive programs to deter involvement with chemical substances which alter behavior.

### Purpose of the Study

The purpose of the study was to obtain information on illicit drug use practices by high school seniors in selected high schools in Tennessee public schools. The study was prompted by a lack of available information on such practices.

### Limitations

The study was limited in the following manner:

1. The study was limited to a stratified sample of 450 randomly selected seniors in West, Middle and East Tennessee.
2. The study was limited to 15 randomly selected high schools-- five each in West, Middle and East Tennessee.
3. The population survey was divided equally by sex--50% males and 50% females.

4. Random sampling was conducted by a selected representative from each school site.

Assumptions

The following assumptions were considered relevant to this study:

1. The survey instrument, Monitoring the Future--A Continuing Study of the Lifestyles and Values of Youth, was a valid tool for determining the patterns of drug use by high school seniors.

2. There was a need for a study to determine the extent of drug use practices of high school seniors in Tennessee.

3. The results of the study were representative of high school seniors throughout the state.

4. All respondents to the survey instrument/questionnaire responded with honesty, integrity, and knowledge to the questions contained therein.

5. Information from less than 1% of the sample was not valid enough to include in the study.

6. A representative from each school conducted sampling procedures correctly.

Research Questions

The research questions for this study were:

1. What is the frequency of drug use for each category of drugs?
2. What are the most important reasons for drug use?
3. What are the situations in which drugs are most likely to be used?

4. To what extent does the population surveyed think that current drug education programs are effective?

5. What are the most commonly used drugs?

#### Definitions of Terms

For the purpose of this study the following definitions of terms were utilized.

#### Contact Person

Contact people included the principal, assistant principal, or guidance counselor who administered the opinionnaire/questionnaire.

#### Use/Abuse

Use/abuse is the use of drugs for non-medical reasons (DHHS, 1981).

#### NIAAA

This is an acronym for the National Institute on Alcohol Abuse and Alcoholism (DHHS, 1981).

#### NIDA

NIDA is the acronym for National Institute of Drug Abuse (DHHS, 1981).

#### DHHS

This is the acronym for the U.S. Department of Health and Human Services (DHHS).

#### Illicit

Illicit refers to illegal use (DHHS, 1981).

### Lifetime

Lifetime refers to any time during a person's life (NIDA, 1984).

### Yearly

Yearly means during the last twelve months (NIDA, 1984).

### Monthly

Monthly means during the last thirty days (NIDA, 1984).

### Cigarettes (Nicotine)

Nicotine acts as a stimulant on the heart and central nervous system. When tobacco is inhaled, the immediate effects are a faster heart beat and elevated blood pressure (DHHS, 1981).

### Alcohol

Alcohol is the major chemical ingredient in beers, wines, and distilled beverages. Although there are many alcohols, the kind in alcoholic beverages is known scientifically as ethyl alcohol, a colorless, inflammable liquid which has an intoxicating effect (DHHS, 1981).

### Stimulants (Amphetamines)

Stimulants are drugs which increase alertness and activity. Stimulants are often called "uppers" or "pep pills" (DHHS, 1981).

### Cocaine

Cocaine is a drug derived from the coca bush found in some South American countries. Injected or inhaled, cocaine produces hyperstimulation that is indicated by overalertness, euphoria, and

feelings of great power. The only known medical use of cocaine is as a local anesthetic (DHHS, 1981).

### Sedatives (Tranquilizers)

Sedatives are drugs which may reduce anxiety and excitement. Taken in small doses, they can temporarily ease tension in people and induce sleep (DHHS, 1981).

### Sedatives (Barbiturates)

Barbiturates constitute the largest group of sedatives. They are primarily used to induce sleep (DHHS, 1981).

### Marijuana

Marijuana is a common plant with the biological name of cannabis sativa. The active (mind-affecting) ingredient is tetrahydrocannabinol (THC). The flowering tops of the plant contain the highest THC concentrate (DHHS, 1981).

### Hallucinogens

Hallucinogens are drugs which affect sensation, thinking, self-awareness, and emotions. Change in time and space perceptions, delusions (false beliefs) and hallucinations (experiencing nonexistent sensations) may be mild or overwhelming, depending on dose and quality of the drug. LSD is the most common hallucinogenic drug (DHHS, 1981).

### LSD

LSD is lysergic acid diethylamide. It is produced from a substance derived from the ergot fungus which grows on rye or lysergic acid



amide, a chemical found in morning glory seeds. LSD is a very powerful hallucinogen (DHHS, 1981).

### Heroin (Opiates)

Heroin is a powerful narcotic (any derivative of opium) that has been abused for many years in many countries. It is one of the most dangerous drugs on the illicit market (DHHS, 1981).

### Procedures

The descriptive survey method of research was used to conduct the study. The instrument utilized to collect the information for this study was a questionnaire/opinionnaire entitled Monitoring the Future - A Continuing Study of the Lifestyles and Values of Youth. The instrument was developed by Jerald G. Bachman, Lloyd D. Johnston, and Patrick O'Malley of the Institute for Social Research, Ann Arbor, Michigan.

The survey instrument/questionnaire contains 60 questions pertaining to drug use by high school seniors. The questionnaire was administered to a stratified random sample of 450 seniors in 15 randomly selected high schools in West, Middle, and East Tennessee. The State Department of Education was utilized to select the 15 participating schools. Thirty students, 15 males and 15 females, from each school were selected by using a table of random numbers. A guidance counselor or other designated individual in each school was responsible for administering the questionnaire.

The researcher made contact with each school to assure that no misunderstanding existed concerning the project and to emphasize confidentiality to all participants.

Participants were asked to "circle" the correct responses to the questionnaire. The responses were transferred from the questionnaire to coding sheets and then to key punch cards to be fed into a computer to calculate results.

An analysis of the data was made according to percentages of responses to each item on the questionnaire to determine extent, reasons, and frequency of drug use by seniors in Tennessee. A summary, conclusions, and recommendations were formulated.

#### Hypotheses

In order to test the hypotheses statistically, they will be stated in the null form in Chapter 4. They are stated here in the research form.

1. There will be a significant difference in the use of alcohol by high school seniors in Tennessee compared with seniors throughout the nation.

2. There will be a significant difference in the use of marijuana by high school seniors in Tennessee compared with seniors throughout the nation.

3. There will be a significant difference in the use of LSD by high school seniors in Tennessee compared with seniors throughout the nation.

4. There will be a significant difference in the use of stimulants by high school seniors in Tennessee compared with seniors throughout the nation.

5. There will be a significant difference in the use of barbiturates by high school seniors in Tennessee compared with seniors throughout the nation.

6. There will be a significant difference in the use of cocaine by high school seniors in Tennessee compared with seniors throughout the nation.

7. There will be a significant difference in the use of heroin by high school seniors in Tennessee compared with seniors throughout the nation.

#### Organization of the Study

The study was organized into five chapters. Chapter 1 contains an introduction of the study, the statement of the problem, sub-problem, significance of the problem, limitations, assumptions, research questions, definitions of terms, procedures, hypotheses, and the organization of the study.

Chapter 2 contains a review of literature related to drug use in high schools.

Chapter 3 describes the research methodology and procedures of the study.

Chapter 4 includes the analysis and summary of data.

In Chapter 5 the summary, findings, and recommendations are reported.

## CHAPTER 2

### Review of Related Literature

The researcher contacted organizations associated with the study of adolescent drug use in Alabama, California, Maryland, Michigan, and Tennessee to gather information relative to adolescent drug use practices. In all cases each agency strongly suggested two sources of information-- The National Institute for Drug Abuse (NIDA, 1984), and the Institute for Social Research in Ann Arbor, Michigan. NIDA was contacted by the researcher and was subsequently referred to the Institute for Social Research (ISR).

The review of literature was concerned mainly with obtaining information gathered from previous surveys conducted throughout the nation. For the purposes of this study only one current program offers valid information concerning the patterns of adolescent drug abuse: The Institute For Social Research. Each year since 1975 a questionnaire/opinionnaire has been administered by ISR to approximately 16,000 seniors in 140 public and private high schools, to represent all current high school seniors. Listed below and on the following pages are the findings of the study from 1975-1983. Each drug is listed and a summary of the results is included.

#### Cigarettes

Some important changes in smoking have occurred from 1975 to 1983 among adolescents. The graduating classes of 1976 and 1977 displayed peak levels of lifetime, thirty-day, and daily prevalence (See Tables

A-1 & 2). Cigarette use then declined steadily between 1977-1981. Daily use of cigarettes dropped over the same interval from 29% to 20%. This downward trend halted in 1981, with prevalence rates remaining stable (Johnston, Bachman & O'Malley, 1983).

Sex differences in smoking have shown two distinct patterns. Between 1975 and 1977, females increased their current smoking rates, and essentially closed the gap which previously existed. Between 1977 and 1981, there were sharp decreases for both males and females. No significant changes have occurred since 1981 (Johnston, 1982).

Of the 24% of seniors who ever smoked on a regular daily basis, nearly two-thirds first did so in the ninth grade or earlier. Less than 2% became regular smokers in their senior year (see Table A-3) (NIDA, 1984).

The prevalence of cigarette smoking in 1983 showed 71% of all seniors smoked sometime during their lives. However, nearly half of those (30% of the sample) reported doing so only once or twice. About one-sixth (17%) smoked on a regular basis. Another 7.2% said they smoked regularly in the past, but do not now (See Table A-2). One in every seven seniors (15%), smoked half a pack per day (Bachman, Johnston, & O'Malley, 1983).

The 1983 results indicated practically no difference in the proportion of males and females who smoke a half-a-pack of cigarettes or more per day (13.1% vs. 13.6% in the last 30 days). Somewhat more females said they were occasional but not regular smokers (18% vs. 15% for males), and more females identified themselves as current regular smokers (18% vs. 15% for males) (NIDA, 1984).

### Alcohol

Donovan and Jessor (1978) found that learning to drink was an integral part of growing up in American society, where drinking plays a significant role in adult social behavior. They found that most teenagers had tried alcohol by the time they graduated from high school. As adolescents approached early adulthood and became more independent of their families, their drinking increased both in frequency and quantity (Jessor & Jessor, 1975). Although chronic psychological or physical dependence was rare among adolescents, youth experimentation resulted in serious and widespread consequences, making alcohol the number one youth drug problem (Johnston, O'Malley & Evehand, 1975).

### Motivational and Contextual Factors

Adolescents' reasons for drinking vary. The National Institute on Alcohol Abuse and Alcoholism states that 56% of the adolescents who drink do so "to have a good time." Among other important reasons were "to be part of the group," "to help get my mind off my problems," and "to make things like doing well in school seem less important" (Johnston, O'Malley & Evehand, 1975).

The drinking behavior of peers and parents appeared to be a strong external influence on adolescent use of alcohol (Globetti, 1977). Hartford stated that peer use of alcohol was probably the strongest prediction of an individual's decision about alcohol use (Hartford, 1979). The reasons for the relation were unclear (NIAAA, 1980), but may be based on a group of friends' common view of alcohol's social function, not on a general need to conform (Johnston, Bachman & O'Malley, 1978). Parents' influence on adolescents' decisions

concerning alcohol use was evident in data collected in the 1978 NIAAA survey. The survey found that teenage alcohol users tend to have at least one drinking parent, while remarkably few users had an abstaining parent. On the other hand, a remarkably high number of abstaining teenagers had parents who both abstained (NIAAA, 1980). The adults' behavior appeared to be more important than their professed attitudes concerning drinking (NIAAA, 1980).

#### Problem Drinking

Alcohol misuse or problem drinking among adolescents was more often associated with episodic, heavy drinking than with alcoholism (Smart, 1979). Teenage problem drinkers usually did not suffer from the physical disabilities (such as liver damage) associated with alcoholism, but they did experience other severe, acute consequences (NIAAA, 1980). While driving under the influence of alcohol, they can be involved in fatal or otherwise serious traffic accidents. They can get into trouble with the police, school authorities, and teachers. Drinking can interfere with their school work, their relationships with dates and friends, and their ability to communicate with their families (Mayer & Filstead, 1979).

The NIAAA survey questioned teenagers concerning the extent of these problems. Only 1% of the respondents to the NIAAA 1978 survey stated that drinking had been a considerable or serious problem for them during the past year, but 23% had driven often after having a good bit to drink, 17% had experienced difficulties with friends, and 10% had been criticized by someone they were dating (NIAAA, 1980). These percentages may have been even higher if the survey had included high

school dropouts; studies have indicated that this population may include a higher proportion of problem drinkers (NIAAA, 1975). Although it may be that the drinking problems of adolescents may gradually disappear as they grow older (Blane, 1979), the acute alcohol-related problems that the adolescents suffer remain widespread and reach dangerously high levels in late adolescence (Wechsler, 1979).

Studies have indicated that adolescents are increasingly combining drinking and driving with the result that collision rates among very young drivers have risen substantially (Whitehead, 1975). Traffic accidents are the leading cause of death in the United States and play a prominent role in the death and injury of young people (NIAAA, 1978). A possible contributing factor for youth is that teenagers appear to have accidents at a lower blood alcohol concentration than older drivers (Hyman, 1968). Because most teenagers learn to drive when they are 16 to 17 years old and start drinking just a year or so before that, the combined inexperience seems to encourage greater risk taking (NIAAA, 1978).

At this point it is relevant to look at some statistics for Tennessee concerning alcohol related accidents. During the past four years in Tennessee:

- 2,257 people were killed in alcohol-related accidents  
(State of Tennessee Department of Safety)
  - 42,180 people were injured in alcohol-related accidents
  - an average of 50% of the fatal accidents were alcohol-related
- During 1983
- 583 people were killed in alcohol-related accidents



This was:

- more than eleven (11) each week  
almost two (2) each day;
- one (1) death every 15 hours

A total of 15,436 accidents were alcohol-related.

This was:

- 297 per week;
- 42 per day
- 1 every 34 minutes 3 seconds

More than ten thousand (10,354) people were injured in alcohol related accidents.

This was:

- more than 199 per week
- more than 28 per day
- one (1) every 50 minutes 46 seconds.

More than 28,000 of Tennessee's licensed drivers lost their driver's license in 1983 as a result of a D.U.I. conviction. This was 61% more than in 1982, and 87% more than in 1980. During the last three years (1981-83), only 176 (4.4%) of the drivers involved in fatal accidents in Tennessee had a prior D.U.I. conviction. Therefore, the multiple offenders were not the ones who killed people in alcohol-related accidents (Tennessee Department of Safety, 1983).

A closer examination of the statistics showed that 861 individuals under the age of twenty were involved in fatal accidents from 1981-1983. This represented 21% of the total number of individuals involved in fatal accidents in Tennessee (Tennessee Department of Safety, 1983).

Some authorities see a solution in raising the legal driving age (Smart, 1979), others in raising the legal purchasing age (Tennessee has already done this). While the debate rages, Congress is considering whether to impose a nation-wide ban on the sale of alcoholic drinks to youths under the age of 21. A bill approved by the House Energy and Commerce Committee would levy federal fines of up to \$5,000 on stores that permit persons under age 21 to purchase alcoholic beverages (U.S. News, June 4, 1984).

A different approach has been taken in a highway-safety bill awaiting Senate action. That measure would give more than 40 million dollars in annual incentive payments to states that establish a minimum drinking age of 21 and adopt other procedures to prevent automobile accidents. Twenty-two states, including Tennessee, already have set the legal drinking age at 21 (U.S. News, June 4, 1984).

#### Profile of the Problem Drinker

Donovan and Jessor analyzed the data gathered by the NIAAA (1974) survey to determine whether the characteristics that define problem behavior in adolescents also identified a proneness to problem drinking (Donovan & Jessor, 1978). In general, adolescents who exhibited problem behavior placed a greater emphasis on personal independence and had fewer personal controls against stereotypical delinquent behavior. More specifically, they did not value achievement and religious involvement as much as their peers did, and were more involved with other drugs. The researchers found that these characteristics were apparent in drinkers at all levels of use, but that the degree to which an individual drank was directly related to the degree of his or her

proneness to problem behavior, an hypothesis that was reinforced by the fact that marijuana use was associated with the same characteristics (Jessor, Chase & Donovan, 1980).

The 1978 NIAAA survey generally substantiated the conclusions concerning personality and behavior patterns proposed by Donovan and Jessor. The profile of the adolescent alcohol misuser that emerged from the survey was of an individual who started drinking early, got high more frequently than the infrequent user, was generally involved in more problem behavior, including marijuana smoking, and drank with peers (NIAAA, 1980).

Considerable evidence indicated that children of alcoholics were predisposed toward or are at high risk for developing problem drinking or alcoholism in adulthood. Some researchers suggested that early disruptions in emotional bonds between these children and their parents might be the cause of these problems (Barry, 1974). Children of alcoholics may be delinquent and hyperactive, and may suffer from an array of psychosomatic complaints (NIAAA, 1978). There was not, however, any proven explanation of why one child of an alcoholic develops a problem and another child does not. It was interesting to note that alcoholics, when recalling their childhood experiences, expressed similar feelings of rejection and mistreatment and conflicts over dependency that children of alcoholics expressed. This similarity suggested that there may be a definable group of children at high risk for developing problems with alcohol (NIAAA, 1980).

### Education and Prevention

Alcohol education is now a familiar subject in most American schools. According to a recent survey of secondary school principals conducted by the National Clearinghouse for alcohol information, more than 93% of high schools offered an alcohol curriculum of some type (NIAAA, 1980).

Over the years different philosophies of alcohol education have gained popularity. The scare approach, greatly popular 20 to 30 years ago with temperance groups, actually may encourage alcohol use if the students are at all interested in risk taking and experimentation. Efforts simply to transmit information about alcohol and its physical and psychological effects have not had longlasting effects on students' attitudes about alcohol use. Although research on the effectiveness of alcohol education in changing attitudes and behavior was limited, a combination of approaches and methods, including exercises to develop the skills needed for handling responsibility and decision making appeared to be the most effective (Globetti, 1972). Alcohol education may be at its best when oriented toward the role drinking plays in our society, not only the problems that can follow abuse of alcohol (Donovan & Jessor, 1978).

Increasingly, the target age groups for alcohol education have been lowered, so that now elementary school students are included (Blane, 1979). Current research has ascertained that children six to seven years old have already developed attitudes and a certain knowledge of alcohol and its use (Zucker, 1979). Because behaviors

are forming during these years, the elementary grades are a beneficial time for alcohol education (Mayer & Filstead, 1979).

Introducing skills that facilitate development of values and a sense of self-esteem may be particularly effective for both elementary school students and teenagers (Blane, 1979). These activities may encompass exercises that encourage recognition of one's feelings, the influence of others, and techniques of problem solving. One popular trend has been the use of peer leaders who can have a highly positive influence. Adolescents appeared to be more receptive to alcohol information from peer leaders than from adults who are often seen as authoritarian or unapproachable. The use of peer leaders was doubly effective because it helped both the leaders and the group as a whole develop their own values (NIAAA, 1980).

Programs that have proved the most effective have not remained isolated within the schools but have been comprehensive programs aimed at educating the entire community, making use of parents and community organizations and institutions (Globetti, 1977). A variety of approaches has been used including providing alternative activities, influencing through the media, and promoting community involvement (NIAAA, 1980). Adults involved in these programs who have examined their own attitudes regarding alcohol will be better able to exhibit mature drinking behavior to youth (North & Orange, 1980).

Alcohol was the most widely used of all drugs. The most common forms in this country are beer, wine and distilled spirits. The fact that availability was relatively easy and adolescent behavior is

inquisitive, makes alcohol the drug of choice among American youth. Other contributing factors may include drinking patterns of adults, and commercial saturation of alcoholic beverages. Whatever the reasons, alcohol in general and beer specifically, are the most commonly abused drugs in our society (Seventeen, 1983).

The data indicated some slight upward swing between 1975 and 1978 in the lifetime, annual, and 30-day prevalence trends for alcohol use among high school seniors (See Table A-4). Since 1978, however, there has been very little change in these prevalence rates, although 30-day prevalence rates have tapered off slightly between 1980 and 1983 (from 72% to 69%). The number of students reporting heavy drinking (defined as drinking 5 or more drinks per occasion over the prior two week interval) rose from 37% in 1975 to 41% in 1979, and has remained the same since (See Table A-5). Daily use rose from 5.7% in 1975 to a high of 6.9% in 1979 and then dropped to 5.5% in 1983. The figures for males and females have been moving in parallel (Johnston, Bachman & O'Malley, 1983).

Over half of all respondents (56%) had tried alcohol before reaching tenth grade--by far the highest figures for any of the drugs discussed. The median grade of first use remained ninth grade, in which 25% first tried it (Bachman, Johnston, & O'Malley, 1983).

The 1983 survey showed nearly all seniors (93%) had tried alcohol, and the majority (87%) had used it during the past year. Most seniors had used alcohol during the month prior to the survey. Nearly half (46%) indicated weekly use (i.e., three or more occasions during the past 30 days). Daily use (i.e., 20 or more occasions during the prior

30 days) was reported by 5.5% of the respondents. Another important fact should be noted here. Forty-one percent of the sample indicated consumption of five or more drinks on at least one occasion during the previous two-week interval, (See Table A-5) while 5.7% reported such heavy drinking on six or more occasions during that interval (NIDA, 1984).

Alcohol use was more common among males than females. During the prior 30 days, 74% of the males had used alcohol, compared with 64% of the females. Twice as many males (27% vs. 13%) reported using alcohol 40 or more times during the past year; daily use occurred almost three times as often among males as among females (7.7% vs. 2.8%). Over two-thirds of 1983 seniors (72%) expected to be using alcohol five years in the future (Bachman, Johnston, & O'Malley, 1983).

#### Marijuana

Marijuana consists of the dried upper leaves and flowering tops of cannabis sativa (Indian Hemp). The identification of the chemical constituents in marijuana has been partially completed. Some 421 separate chemical entities have been isolated (Turner, 1980), and it is expected that over a thousand will eventually be identified. Delta-9-tetrahydrocannabinol (THC) is the major psychoactive component, although over 60 other cannabinoids (chemicals related to THC) are known. Marijuana is by far the most frequently used illicit substance.

During the past 15 years a planned program of marijuana research by the National Institute on Drug Abuse (NIDA) has uncovered significant new insights about the drug and its contents. Some of the major

findings are listed below. The statements about marijuana are confirmed or have strong scientific support.

#### Chemistry

- Delta - 9 - tetrahydrocannabinol is the principal psychoactive ingredient in cannabis. It has been isolated, identified, and synthesized in pure form (Mechoulam & Gaoni, 1967).
- Although, in earlier years, confiscated marijuana rarely averaged above 0.5% THC, more recent samples grown in this country and abroad average about 4%, with some exceeding 10% (Jones, 1980).

#### Pharmacology

- The long half-life (the length of time required to reduce by half the amount in the blood) of THC and its metabolites (about 50 hours) can lead to accumulation in frequent users (Jones, 1980). It is lipophilic (an affinity for fatty tissues) and it binds strongly to plasma proteins, characteristics which contribute to its long residence in the body (Mechoulam & Gaoni, 1967).
- The two most regularly observed physiologic effects of smoked or eaten marijuana are a substantial increase in heart rate (up to 50% or more for a short time) and a dilation of the conjunctival vessels (red eye). The acceleration of the heart rate would place a burden on an impaired cardiovascular system and would reduce maximal exercise tolerance. Other physiologic



- changes sometimes encountered include postural hypotension, increased appetite, diarrhea, and drowsiness (Shapiro & Smith, 1976).
- Dilation of the bronchial tubes occurs with marijuana use. However, this effect is reversed on continued smoking, due to the irritant effect of the smoke, which results in bronchoconstriction (Tashkin & Cohen, 1981). When bits of animal lung tissue were exposed to condensed marijuana smoke, alterations in the structure and growth of cells were observed (Leuchtenburger & Leuchtenburger, 1973).
  - Tolerance to many of the effects of marijuana and THC, including euphoria and heart rate acceleration, occurs in chronic users (Nowlan & Cohen, 1977). A mild physical withdrawal syndrome has been documented (Ariff & Archibald, 1981).
  - Some cannabinoids or their metabolites enter the placenta and are secreted in human milk. They can also be found in the lipid tissues of most organs, including the brain and gonads (Bauman, Kolodny & Dornbush, 1979).

#### Acute Effects

- Several studies have shown that marijuana intoxication impairs driving, flying, and other complex skilled activities. Many elements of effective psychomotor performance are worsened by the drug because of decrements in recent memory, tracking performance, glare recovery, motor coordination, depth perception, time sense, and peripheral vision (Moskowitz & Peterson, 1982). Moskowitz (1981) reported that the impairment

of needed driving skills persists for 10 hours after smoking. The diminished ability to function at skilled tasks, therefore, would last long after the subjective "high" had waned (Moskowitz & Peterson, 1982).

- Learning ability while under the influence of marijuana was diminished because of the perceptual and memorial difficulties mentioned above (Moskowitz & Peterson, 1982).
- Euphoria was the most common mood state associated with marijuana use (Moskowitz & Peterson, 1982).
- The interaction between marijuana smoking and drinking alcoholic beverages is additive, that is, the effects of combined use, produce an incremental impairment on a series of psychomotor tasks (Moskowitz & Peterson, 1982).

#### Long-Term Effects

- Marijuana had a moderate depressant action on sperm production and motility in humans (Hembree et al., 1979). It has been shown to suppress ovulation in monkeys and to cause irregular menstrual cycles (Bachman, Johnston, & O'Malley, 1979). After several months, developing tolerance reverses these effects (Smith, Almirey, & Berenberg, 1983).
- Regular users of marijuana may experience bronchitis and other respiratory problems. Analyses of cannabis smoke revealed that irritants, carcinogens and co-carcinogens were present in amounts that often exceed cigarette smoke (Hoffman & Wynder, 1975).
- A chronic cannabis syndrome sometimes follows heavy daily use, particularly in adolescents and young adults. It consists of

a gradual loss of energy, apathy, loss of drive and motivation, some depression, and passive withdrawal from prior interests. Such lethargy and loss of goal directedness persisted during the interval between intoxications with marijuana and was generally reversible after months of abstinence (Marijuana and Youth, 1982).

### Therapeutic Potential

- Evidence exists to show that THC provides some protection against the nausea and vomiting of cancer chemotherapy (Ungerleider & Jamison, 1982).
- Neither THC or cannabis was recommended for the treatment of asthma despite its acute dilation of bronchial passages. The irritant effects of both may worsen the condition (Tashkin et al., 1977).
- Both marijuana and THC reduce eyeball pressure, which help in the treatment of glaucoma. Glaucoma treatment would require lifetime use, and the chronic adverse effects must be considered. Elderly patients and those with no prior marijuana experience tend to object to the intoxicating effects of marijuana and THC (Green, 1979).
- Early reports indicated that marijuana or THC may play a role in the treatment of muscle spasticity (Petro, 1980).
- Cannabidiol, a nonpsychoactive constituent of marijuana, has undergone animal and human testing as an anticonvulsant (Karler & Turkanis, 1976).

### Reproductive Effects

Second only to the issue of psychological changes produced by marijuana, the question about reproductive changes was a matter of considerable concern. Several studies have attempted to evaluate changes in plasma testosterone in humans and other species. In some recent investigations, (Balterio et al., 1981) and (Gilbeau et al., 1981), found that dose levels of THC relevant to human consumption produced an initial increase, then temporary depressions of testosterone in mice.

Smith (1981), found some inhibition of male and female hormones that control sexual development, fertility and sexual functioning. Much of this effect seems to be mediated via the pituitary gland, although direct effects on the ovaries and testes may occur. These effects were found to be reversible in sexually mature primates. During primary adolescence and puberty, the neuroendocrine mechanisms necessary for normal fertility may be vulnerable to marijuana's effects. In rhesus monkeys, THC has been reported to be associated with fetal deaths, stillbirths, and neonatal deaths. Birth weights of male infants of treated monkeys were significantly less than those of the controls (Sassenrath, 1979).

Significant decreases in the levels of the female sex hormones have also been reported. The probable cause for this decrease was the interference of THC with enzymes necessary for hormonal production (Smith, 1981).

Marijuana, the most frequently used illicit drug, has received sufficient scientific attention during the recent past to allow a

broad conclusion. In general, an analysis of the research findings indicated the persuasive evidence supported the statement that consistent heavy use of this drug posed hazards to personal and public health. In addition, acute intoxication impaired functioning to the point that operation of industrial machines and motor vehicles was hazardous.

A significant number of seniors used marijuana on a daily (or near daily) basis. Because of this fact, a supplementary table is included in the Appendix (See Table A-6) which shows trends in daily prevalence of marijuana. The only other drugs which compare favorably are alcohol and cigarettes (U.S. Government Dept. of Justice, 1980).

The years 1978 and 1979 marked the apex of a long rise in the use of marijuana by American high school students. Thirty-day and annual use of marijuana barely changed between 1978 and 1979, following a steady rise in the preceeding years. Beginning in 1980 both statistics dropped for the first time, and they have continued to drop each year since. Annual prevalence dropped by 9% from its all time high (i.e., down from 51% in 1979 to 42% in 1983; and monthly use has fallen 10% over the same time (from 37% to 27%) (NIDA, 1984) (See Table A-7).

The most important facet of marijuana use was the downward trend now occurring for daily marijuana use (NIDA, 1984). Between 1975 and 1978 there was an almost two-fold increase in daily use (See Table A-6) By 1978 one in every nine high school seniors (10.7%) indicated that he or she used the drug on a daily basis (defined as use on 20 or more

occasions during the last 30 days). By 1979 this increase had come to a halt (NIDA, 1984).

Much of the downward trend in marijuana use appeared to be due to increasing concerns about potential adverse effects from regular use, as well as the feeling that peers are more disapproving of marijuana use. These changes suggested that the downward trend in marijuana use was likely to continue (Parents, Peers and Pot, 1982).

Decline in marijuana use has occurred at about the same rate for males and females. A substantial increase in the prevalence of early use continued in the mid-seventies to early eighties. Early use (defined as use prior to tenth grade) climbed gradually from 17% in the class of 1975 to 35% in the class of 1982. In the class of 1983, this prevalence of use began to decline to 33.5%. One out of every five to six seniors (18%) indicated they "probably" or "definitely" will be using marijuana five years in the future (NIDA, 1984) (See Table A-7).

In response to the 1983 survey, over half of all seniors (57%) had tried marijuana and one-fourth (25%) had used it on 20 or more occasions in their lifetime. Forty-two percent reported using it in the prior year, while just over a quarter (27%) had used it in the last month (see Table A-7). Daily use (20 or more occasions in the last 30 days) was reported by 5.5% of the population surveyed (NIDA, 1984) (See Table A-6).

#### LSD and Other Psychedelics

Because there are various drugs which have hallucinogenic properties, it was generally accepted that the specific hallucinogenic drug a user takes was not always what he or she believes it to be. For

instance, LSD and PCP may be passed off as THC, peyote, or mescaline. As a result it was difficult for respondents to accurately assess which hallucinogens they actually used, which strengthened the case of grouping hallucinogens into a single category (Bachman, Johnston & O'Malley, 1980).

Hallucinogen use (for all hallucinogens) declined between 1975 and 1977, showed little consistent change in 1978 and 1979, but resumed a fairly steady drop since then (See Table A-8).

Questions about future use of hallucinogens asked specifically about LSD. Two and four-tenths percent of 1983 seniors expected to be using LSD in five years. The overwhelming majority (89%) said they "will not" use LSD. These figures have remained constant since 1975 (See Table A-9) (NIDA, 1984).

About 7% (7.2%) of the seniors in 1983 indicated they had used hallucinogens at some time (See Table A-8). More students had tried LSD than any other hallucinogenic drug (NIDA, 1984).

#### Stimulants (Amphetamines)

This section deals with the prevalence of stimulant abuse, specifically the class of drugs referred to as amphetamines. Stimulants accounted for more illicit drug use among high school seniors than any other class of drugs except marijuana (Johnston, Bachman, & O'Malley, 1983). Some of this illicit drug use could be instrumental rather than recreational. For instance, some students use amphetamines to stay awake for studying, to help them lose weight, to increase their energy for sports, and so forth. Others use stimulants to counteract the effects of other drugs, such as sedatives, which may leave them drowsy

or incoherent when they wanted to be alert. Additionally, some students use stimulants to attain a "high" (Abelson, Fishburn, & Cisin, 1977).

In responding to stimulant use, students were advised to exclude not only medically supervised use, but also over-the-counter (i.e., non-prescription) drugs. As will be discussed later, there was a substantial increase in reported stimulant use between 1979-1981. There was reason to believe that part of the increase was due to respondents including the use of the two general categories of stimulants--"look alike" placebos, usually sold by mail order) and over-the counter stimulants (primarily diet pills and stay-awake pills). The 1982 survey made adjustments not only to assess the use of amphetamines more accurately, but also to determine the use of over-the-counter and "look-alike" placebos. For this reason additional tables labeled "Stimulants, adjusted" will be included (NIDA, 1984) (see Table A-11).

From 1975 to 1978 amphetamine use was fairly stable. In 1979 the statistics began to show a rise which continued through 1981. In 1982 figures did not show any significant changes. The figures for 1983 were based on the "adjusted" version introduced in 1982. Both tables, "unadjusted" and adjusted were included (NIDA, 1984) (See Tables A-10 and A-11).

One in every four high school seniors (27%) reported using amphetamines without a medical prescription sometime during his/her life. This represented the highest rate of any illicit drug except marijuana. Only one-third of the "users" had used stimulants only



once or twice. Further investigations showed that one in six (17.9%) used these drugs during the past year, and one in eleven (8.9%) during the preceeding month. This represented the highest rate of any illicit drug except marijuana (See Table A-11). Similar prevalence rates were reported for males and females (Bachman, Johnston, & O'Malley, 1983).

The unadjusted figures were about one-third higher than the adjusted figures, which indicated that many students reported the use of non-prescription placebos as amphetamine use on the old questionnaire. Predicted use revealed that 7.6% of the 1983 seniors "probably" or "definitely" will be using stimulants five years in the future (Bachman, Johnston, & O'Malley, 1983) (See Table A-11).

Sedatives, Barbiturates, Methaqualone (Quaaludes)  
and Tranquilizers

Little change occurred in sedative use between 1976 and 1981, but a steady decline has been noted since, with a substantial decrease in 1983. This can be misleading, however, because research showed different trends for the three components of this class of drugs (barbiturates, methaqualone and tranquilizers (NIDA, 1984).

Use of barbiturates has shown a steady decline each year since 1975. The current prevalence of use is about one-half the 1975 level (See Table A-12) (NIDA, 1984).

Conversely, methaqualone use rose significantly between 1975 and 1981. Prevalence rates the last two years have dropped appreciably (NIDA, 1984).

The 1983 survey revealed one in every seven seniors (14%) reported using tranquilizers without medical supervision. About one-third of

these respondents had used tranquilizers only once or twice. About one in thirteen (7.0%) used tranquilizers in the last year, compared with 3.0% who used them in the last month. Tranquilizers were used by 0.2% of the respondents on a daily basis (Bachman, Johnston, & O'Malley, 1983) (See Table A-13).

Males reported a slightly greater use of sedatives than females. Significant early onset of sedative use by the class of 1983 was noted. A marked increase in the number of students reporting initiation in the seventh and eighth grades was observed. The percent of students (4.3%) who say they "probably" or "definitely" will be using sedatives in the future has not changed since 1975 (Bachman, Johnston & O'Malley, 1983).

#### Cocaine

Cocaine is a drug which has received extensive attention in recent years mainly because of its widespread use in the entertainment and sports worlds (U.S. News & World Report, 1984), which may well explain its growth and popularity among youth as a recreational drug. It is generally very expensive, which may account for the relatively low frequency with which it is used by high school students (Time, 1984).

From 1976 to 1979 cocaine exhibited a dramatic and accelerating increase in popularity, with annual prevalence rising from 6% in 1976 to 12% in the class of 1979--a two-fold increase in just three years. A turning point was reached in 1980, when prevalence rates for all three time intervals (lifetime, annual, and thirty-day) began to level out, and since then, there has been little overall change in cocaine use. In 1983, both annual and 30-day prevalence rates were slightly

lower than they were in 1980, and lifetime prevalence was a little higher (See Table A-14) (NIDA, 1984).

Daily use was less than 0.1% in 1975 and rose to 0.3% in 1980. The rate did not change in 1981 and declined to 0.2% in 1982 and 1983 (NIDA, 1984).

The initiation of cocaine use usually began at an older age than most other drugs. Of those who had used cocaine, most first users tried it in tenth, eleventh, or twelfth grade. Unlike most other drugs, cocaine use was not likely to decline by twelfth grade (Bachman, Johnston, & O'Malley, 1983).

The 1983 survey showed one in every six seniors using cocaine during their lives. However, only half had used it once or twice. Annual prevalence was 11.4% and 30-day prevalence was about 5% (See Table A-12). Daily use of cocaine was reported at only .2% (Bachman, Johnston, & O'Malley, 1983).

### Heroin

Heroin was the least widely used of all illicit drugs (Schappas, et al., 1981). Therefore, it was not surprising that it was perceived by high school students as carrying a great deal of risk (Fishburn, Abelson, & Cisin, 1979).

From 1975 to 1979 lifetime, annual, and monthly prevalence rates for heroin all dropped by one-half. The statistics have remained relatively unchanged since 1979 (See Table A-15) (NIDA, 1984).

The 1983 survey showed only 1.3% of all respondents having ever used heroin. Annual prevalence indicates 0.6% of the population using

it while monthly rates show only 0.1% of seniors having ever used heroin (See Table A-15) (NIDA, 1984).

#### Other Opiates

A slight increase in lifetime prevalence of opiates was noted from 1975 (9.0%) to 1977 (10.3%). Subsequent classes have shown fluctuations in ranges (See Table A-16)) (NIDA, 1984).

For 1983 about one in ten students (9.4%) had used some type of opiate. About half had used it once or twice. Very few respondents reported use of 20 or more times (1.1%). Practically no one (0.1%) reported daily use in the prior 30 days (NIDA, 1984).

#### Latest Findings (Nationally) 1984

The tenth annual senior survey for 1984 indicated significant progress against the evils of illicit drug use by adolescents (DHHS, 1985). The most recent study shows that more students are recognizing the dangers of drugs. More are saying they disapprove of drug use and still more are making the personal choice against drugs (Psychology Today, 1984).

Highlights from the new survey, which covered the class of 1984, included:

- Current use (once in the past 30 days) of illicit drugs among seniors dropped to 29% in 1984, down from 33% in 1983, and from a peak of 39% in 1978 and 1979. The 29% level was the lowest since the survey began (DHHS, 1985).

- Only 5% of seniors used marijuana daily, less than half the 11% found in the peak year of 1978. The 5% finding was also the lowest ever recorded by the survey (DHHS, 1985),
- Other prevalence rates of marijuana use also declined. Current use of marijuana dropped to 25% in 1984 from 27% in 1983. This was approximately one-third lower than the peak level of 37% in 1978. However, 55% of the 1984 senior class still reported having used marijuana at sometime in their lives (DHHS, 1985).
- Cigarette smoking by seniors also declined to the lowest level ever recorded by the survey, with less than 19% smoking half a pack or more a day (DHHS, 1985).
- The prevalence of "binge" drinking (five or more drinks in a row within two weeks prior to the survey) declined to 39% in 1984 from 41% in 1983. Daily use of alcohol among seniors declined to 5% in 1984, compared with the peak level of 7% in 1979 (DHHS, 1985).
- Current use of cocaine rose to 6% in 1984 from 5% in 1983. While statistically this increase did not represent a significant increase, it did show that cocaine use was still at the level it reached in 1981. The survey further showed moderate declines in cocaine use in the west and north central regions of the country, with a slight increase in the South and an increase in current use from 7% in 1983 to 11% in 1984 for the northeastern region (DHHS, 1985).

Although figures showed that significant progress was being made against drug abuse, illicit use among American youth was still too high

and continued efforts by parents, communities and schools should be maintained to ensure further declines for future years.

## CHAPTER 3

### Research Methodology and Procedures

The purpose of this chapter was to describe the research methodology and procedures employed in the study.

#### Population

The population of the study consisted of 450 high school seniors in Tennessee. The 450 seniors were randomly selected by use of a table of random numbers by the contact person in each participating high school. A copy of the letter of instructions can be found in Appendix B. The 15 high schools in the study were randomly selected by the Tennessee State Department of Education. Five high schools were chosen from each grand division of Tennessee (West, Middle, East). Thirty seniors (15 boys, 15 girls) were selected from each school. Responses were received from 360 seniors in the three grand divisions of the State.

#### Procedure for Collecting Data

The survey instrument, a questionnaire/opinionnaire, was utilized to collect data relevant to the research problem.

Officials in each of the 15 participating schools were contacted by phone to confirm willingness to be involved in the project. At that time the researcher talked with the contact person about procedures for administering the survey instrument. It was noted at this point that any student who did not want to participate, should not. It was further stated that any item on the questionnaire that was

objectionable to participants should be left blank, and all responses would be held in the strictest confidence.

The questionnaire/opinionnaire was packaged and mailed to contact persons in each of the 15 participating schools with explicit instructions for administering (See Appendix B). Return postage and packaging were provided.

#### Reasons for Focusing on High School Seniors

There were several reasons for choosing the senior year of high school for monitoring drug use by youth. One was that the completion of high school represents the end point in our system of universal public education, and thus reflects the cumulated impact of that educational system. A research project that examines the views of seniors reflects changes (or the lack thereof) in the impact of public education in the nation (Bachman & Johnston, 1978).

Also, the last year of high school was the latest point at which a sample of an age-specific group could be obtained using school sampling and in-school data collection.

#### Instrumentation

The instrument, Monitoring the Future: A Continuing Study of the Lifestyles and Values of Youth, was used as the survey instrument in the study. The questionnaire/opinionnaire was developed by Jerald C. Bachman, Lloyd D. Johnston, and Patrick O'Malley of The Institute for Social Research, Ann Arbor, Michigan, as part of a grant by the White House Special Action Office for Drug Abuse Prevention in 1974. Since 1975 funding has been provided by the National Institute of Drug Abuse.



As the title indicates, the project was designed to provide an ongoing assessment of the changing behaviors, styles and preferences of American high school seniors.

The questionnaire/opinionnaire consisted of 60 questions pertaining to patterns of drug use among high school seniors. Each question required the participant to "circle" the appropriate answer which sometimes included as many as 17 responses. Only those questions pertaining to the research questions and hypotheses were tabulated and analyzed (see instrument in Appendix B).

The measure of drug use and attitudes lay at the center of this instrument. Included were responses to such questions as (a) What are the frequencies of drug use for each category of drugs? (b) What were the most important reasons for drug use? (c) What are the situations in which drugs are most likely to be used? (d) Does the population surveyed feel that current drug education programs are effective? and (e) What are the most commonly used drugs?

Using this instrument, Bachman, Johnston and O'Malley (1983) conducted a national study and provided the first accurate assessment of drug practices of high school seniors. (Instrument included in Appendix B).

#### Representativeness and Validity

The sample for this study was intended to be representative of high school seniors throughout the state. However, it would be useful to consider the degree to which the obtained sample of schools and students are likely to be representative of all seniors, and the extent to which the data obtained are likely to be valid.

There are few direct, objective validations of present measures; however, the considerable amount of inferential evidence which exists strongly suggests that self-report questions produce largely valid data (Bachman, Johnston, & O'Malley, 1983).

The empirically based estimates of reliabilities of drug use measures have proven to be quite high, both in absolute values and relative to other psychometric measures. Reliability estimates for the instrument utilized in this study average between .76 and .90. The reliabilities ( $\geq .84$ ) are estimated to be fairly high for the annual measures of cigarettes, alcohol, and marijuana. The use of illicit drugs other than marijuana during the past 12 months varies from .70 to .87. The use of cigarettes during the past 30 days is quite reliably measured, with estimates between .86 and .91. Alcohol use for the same period measured .70. The reliability ranges for marijuana use are .78 to .84 (Bachman, Johnston, & O'Malley, 1983).

Recent studies of external validity on the research instrument revealed that "self-reports are sufficiently valid to warrant reliance on them as a primary source of data in social science research" (Rachal, et al., 1980). Also, several authors have demonstrated that self-reported drug use fits in well with theories of substance use. Jessor & Jessor (1975) and Kandel (1975) have extensive documentation relative to the role of marijuana use in an overall theory of problem behavior which is a good example of construct validity.

A strong argument was made for representativeness of sample size. Since the national survey of high school seniors included responses

from 16,000 seniors in 48 states (average 330 seniors per state), the survey in Tennessee involved responses from 360 seniors in the three grand divisions of the State.

Further documentation on the reliability and validity of the research instrument may be found in The International Journal of Addictions, 1983.

#### Treatment of the Data

The descriptive method of research was used to survey selected high school seniors in Tennessee relative to drug use practices. Each item pertaining to the research questions and hypotheses was classified according to the frequency or percentage of occurrence. Also, the number of responses for each item was compiled and comparisons (cross tabs) of the various responses were made.

The data from the completed instrument were transferred from coding sheets to key punch cards and entered into the computer at East Tennessee State University for statistical analysis.

For this study, the Mann-Whitney U test of significance was used to test for differences between responses by seniors in Tennessee compared with seniors in other states throughout the nation (See Appendix ).

The minimum acceptable level for determining significant difference was the .05 level of significance using a two-tailed test to either reject or fail to reject the null hypotheses. Data tabulated from the findings were analyzed and presented in appropriate tables and narrative.

## CHAPTER 4

### Analysis of Data

#### Presentation of Collected Data

The data for this study were collected through the responses to the survey instrument administered to a stratified randomly selected sample of seniors in high schools in West, Middle and East Tennessee. The primary purpose of this study was concerned with the prevalence of drug use among high school seniors in Tennessee.

Chapter 4 includes the restatement of the research questions and the null hypotheses, and an analysis and report of the findings relative to the research questions and hypotheses.

The first part of Chapter 4 examines the research questions: the last part of the chapter addresses the hypotheses relative to significant differences when compared with drug use among seniors throughout the nation. Results are listed in appropriate tables of data derived from the questionnaire/opinionnaire.

Before the research questions are analyzed, some basic demographic information relative to the population surveyed is presented below:

- The survey response was from 360 out of 450 seniors which resulted in an 80% return.
- The population was fairly evenly divided by sex--46.4% male and 53.6% female.

- The overwhelming majority of respondents were caucasian (86.1% or 309 seniors).
- Most of the respondents indicated that religion is important (75%) and they attend church once a week (48.3%).
- The population surveyed indicated they like school (79%) and that school work is important (86%). The average grade of the respondents was B (43%).
- Fifty-three percent of the population did not see a counselor last year. Of these 53%, a large percentage (46%) said they did not care to see a counselor more often. The 46% who did see a counselor said the sessions were helpful.
- About (60%) of the participants said drug education courses were not very helpful.

#### The First Research Question

What is the frequency of drug use for each category of drugs?

Cigarette smoking. The frequency of cigarette smoking among high school seniors in Tennessee is listed in Table 1. As shown, one in every 5.5 seniors (17.8%) was a regular cigarette smoker. Six and one-tenth percent of the students reported that they had smoked regularly in the past, but not now. As Table 1 shows, approximately 44% have used cigarettes once or twice but not regularly; percentage obtained by adding column two (26.9) and three (17.5) in Table 1; 31.7% indicated they had never used cigarettes. Slightly more females (18.6%) reported regular use than males (16.8%).

Because cigarette smokers tend to have more regularized patterns of use than users of other drugs and because the number of occasions of use tends to be so high for regular users, a somewhat different set of questions was used for measuring cigarette smoking than was used for the other drugs.

Table 1

Incidence of Cigarette Smoking Among High School

Seniors Class of 1985

	Frequency	Tennessee Percent	National Percent	Difference
1. Never	114	31.7	20.4	+ 2.3
2. Once or twice	97	26.9	30.1	- 3.2
3. Occasional - not regular	63	17.5	16.3	+ 1.2
4. Regularly in past	22	6.1	7.2	- 1.1
5. Regularly now	64	17.8	17.0	+ .8

+ Denotes greater use by Tennessee sample

- Denotes greater use by National sample

Alcohol. Practically all Tennessee seniors responding to the survey have tried alcohol, and the great majority continue to use it. Only 12.9% of Tennessee seniors indicated they had never used alcohol during their life.

From data gathered and analyzed, it can be concluded that seniors throughout the nation are likely to use alcohol on more occasions than seniors in Tennessee. Conversely, Tennessee seniors are more likely to

use alcohol on an infrequent basis. These statements reflect lifetime use of alcohol (See Table 2).

Alcohol use is slightly more prevalent among males than among females. About 89% of males reported lifetime use of alcohol compared with 85% of the females in Tennessee.

Use of alcohol during the last year showed the same trends as lifetime alcohol use. That is, Tennessee seniors showed a greater trend for occasional use (1-9 times) during the past year. Seniors in other states showed a greater inclination toward heavy drinking during the past twelve months, which implies that seniors throughout the nation used alcohol more (during the past year) than seniors in Tennessee (See Table 2).

Monthly trends in alcohol use showed a slight inconsistency. National figures reflected a greater tendency for alcohol use in all categories except 40 or more times during the last month. In this category, Tennessee was slightly higher than the national average (See Table 2).

From data collected, it can be concluded that seniors in Tennessee and seniors throughout the nation have similar monthly drinking rates. Males in Tennessee were more likely (66.2%) to use alcohol on a monthly basis than females (54.6%).

Marijuana. The data revealed that 49.4% of the surveyed population have never used marijuana. The remaining 50.5% indicated that they had used marijuana from 1-2 times to 40+ times (See Table 3). Seniors in Tennessee have a tendency to use marijuana on fewer occasions than other seniors in the United States who show a greater likelihood to be

Table 2

Incidence of Drug (Alcohol) Use Among High School Seniors Class of 1985

Use	Use During Lifetime				Use During Past Year				Use During Past Month			
	Frequency	Tennessee Percent	National Percent	Difference	Frequency	Tennessee Percent	National Percent	Difference	Frequency	Tennessee Percent	National Percent	Difference
1. No occasions	43	12.9	7.4	+ 5.5	66	20.7	12.7	+ 8.0	125	39.8	30.6	+ 9.2
2. 1-2	48	14.4	6.3	+ 8.1	59	18.5	13.6	+ 4.9	64	20.4	23.0	- 2.6
3. 3-5	25	7.5	8.4	- 0.9	37	11.6	12.6	- 1.0	49	15.6	18.1	- 2.5
4. 6-9	37	11.1	7.7	+ 3.4	42	13.2	11.1	+ 2.1	39	12.4	12.8	- .4
5. 10-19	36	10.8	11.9	- 1.1	35	11.0	15.7	- 4.7	23	7.3	10.0	- 2.7
6. 20-39	34	10.2	13.9	- 3.7	29	9.1	13.7	- 4.6	4	1.3	3.1	- 1.8
7. 40+	111	33.2	44.3	-11.1	51	16.0	20.4	- 4.4	10	3.2	2.4	+ .8

+ Denotes greater use by Tennessee sample

- Denotes greater use by National sample



Table 3

Incidence of Drug (Marijuana) Use Among High School Seniors Class of 1985

Use	Use During Lifetime				Use During Past Year				Use During Past Month			
	Frequency	Tennessee Percent	National Percent	Difference	Frequency	Tennessee Percent	National Percent	Difference	Frequency	Tennessee Percent	National Percent	Difference
1. No occasions	170	49.4	43.0	+ 6.4	196	60.0	57.7	+ 2.3	242	75.6	73.0	+ 2.6
2. 1-2	41	11.9	11.9	0.0	37	11.3	11.5	- 0.2	30	9.4	9.3	+ 0.1
3. 3-5	27	7.8	7.9	- 0.1	20	6.1	7.2	- 1.1	16	5.0	4.7	+ 0.3
4. 6-9	20	5.8	5.7	+ 0.1	23	7.1	4.6	+ 2.5	10	3.1	3.3	- 0.2
5. 10-19	20	5.8	6.8	- 1.0	19	5.8	5.3	+ 0.5	14	4.4	4.2	+ 0.2
6. 20-39	23	6.7	6.0	+ 0.7	9	2.5	4.1	- 1.6	5	1.6	2.8	- 1.2
7. 40+	43	12.5	18.8	- 6.3	22	6.7	9.6	- 2.9	3	0.9	2.6	- 1.7

+ Denotes greater use by Tennessee sample

- Denotes greater use by National Sample

heavier users of marijuana. (Forty or more times during their lifetime) (See Table 3). Males in Tennessee are more likely (54.7%) to use marijuana during their lifetime than females (46.7%).

Tennessee seniors and seniors throughout the country have similar rates of yearly marijuana use. No definitive statement can be made regarding differences in use by either group. It can be noted that while 60% of the respondents said they had not used marijuana last year, almost 40% of the surveyed population indicated they had used marijuana during the past 12 months. The national sample showed a similar percentage (See Table 3).

Sex differences show males using marijuana more on an annual basis (44.9%) compared with females (35.4%). There are no discernible differences in monthly marijuana use by either group. Seventy-five and six-tenths percent of the seniors surveyed indicated they had not used marijuana in the last thirty days. The remaining 24.4% revealed usage ranging from 1-2 times (9.4%) to 40+ times (.9%).

Barbiturates. Use of barbiturates among high school seniors in Tennessee is not very high. Eighty-eight percent of the population surveyed reported they had never used barbiturates (See Table 4) in their lifetime.

Ninety-one and two tenths percent of the population indicated no use of barbiturates during the past year (See Table 4), and 95.4% said they had not used barbiturates during the past month (See Table 4). More females (14.2%) than males (9.5%) indicated they had used

Table 4

Incidence of Drug (Barbiturates) Use Among High School Seniors Class of 1985

Use	Use During Lifetime				Use During Past Year				Use During Past Month			
	Frequency	Tennessee Percent	National Percent	Difference	Frequency	Tennessee Percent	National Percent	Difference <sup>b</sup>	Frequency	Tennessee Percent	National Percent	Difference
1. No occasions	286	88.0	90.1	- 2.1	380	91.2	94.8	- 3.6	293	95.4	97.9	- 2.5
2. 1-2	15	4.6	4.4	+ 0.2	10	3.3	2.5	+ 0.8	6	2.0	1.2	+ 0.8
3. 3-5	7	2.2	1.8	+ 0.4	6	2.0	1.0	+ 1.0	5	1.6	0.4	+ 1.2
4. 6-9	6	1.8	1.0	+ 0.8	9	2.9	0.6	+ 2.3	1	0.3	0.2	+ 0.1
5. 10-19	9	2.8	1.1	+ 1.7	1	0.3	0.6	- 0.3	1	0.3	0.2	+ 0.1
6. 20-39	1	0.3	0.6	- 0.3	1	0.3	0.2	+ 0.1	1	0.3	0.0	+ 0.3
7. 40+	1	0.3	0.9	- 0.6	0	0.0	0.2	- 0.2	1	0.3	0.0	+ 0.3

+ Denotes greater use by Tennessee sample

- Denotes greater use by National sample

barbiturates in their lifetime. Females (6.4%) also showed greater monthly use than males (2.2%).

Stimulants. Use of stimulants is higher than any other illicit drug except marijuana. While 71.3% of the seniors in Tennessee showed no use of stimulants, the remaining 28.7% indicated usage ranging from 1-2 times (10.4%) to 40+ times (3.6%) (See Table 5).

Yearly and monthly use of stimulants reveals less use. Seventy-nine and four-tenths percent of the surveyed population indicated no use of stimulants last year (See Table 5), while 89.2% said they had not used stimulants during the last month (See Table 5). Females (23.9%) showed a greater lifetime use of stimulants than males (16.5%).

LSD. A very small percentage of high school seniors in Tennessee indicated any use of LSD. Information relative to this category of drugs can be found in Table 6. Percentage of use is so small that the tables cannot reflect relevant data. No relevant data can be given regarding sex difference.

Cocaine. Cocaine use in Tennessee is still relatively low. Ninety-one and nine-tenths percent of the seniors surveyed said they had never used cocaine. Yearly use is even less with 95.2% of the population surveyed showing no use of cocaine. Ninety-seven and four-tenths percent of the population surveyed said they did not use cocaine last month (See Table 7).

Table 5

Incidence of Drug (Stimulants) Among High School Seniors Class of 1985

Use	Use During Lifetime				Use During Past Year				Use During Past Month			
	Frequency	Tennessee Percent	National Percent	Difference	Frequency	Tennessee Percent	National Percent	Difference	Frequency	Tennessee Percent	National Percent	Difference
1. No occasions	239	71.3	64.6	+ 6.7	250	79.4	75.4	+ 4.0	281	89.2	87.6	+ 1.6
2. 1-2	35	10.4	10.6	- .2	27	8.6	8.3	+ .3	19	6.0	5.1	+ 0.9
3. 3-5	10	3.0	5.7	- 2.7	14	4.4	5.1	- .7	5	1.6	2.7	- 1.1
4. 6-9	17	5.1	4.1	+ 1.0	10	3.2	3.1	+ .1	3	1.0	2.1	- 1.1
5. 10-19	17	5.1	4.5	+ .6	6	1.9	3.4	- 1.5	3	1.0	1.5	- 0.5
6. 20-39	5	1.5	3.8	- 2.3	2	.6	2.3	- 1.7	3	1.0	0.8	+ 0.2
7. 40+	12	3.6	6.6	- 3.0	6	1.9	2.5	- .6	1	0.3	0.3	0.0

+ Denotes greater use by Tennessee sample

- Denotes greater use by National sample

Table 6

Incidence of Drug (LSD) Use Among High School Seniors Class of 1985

Use	Use During Lifetime				Use During Past Year				Use During Past Month			
	Frequency	Tennessee Percent	National Percent	Difference	Frequency	Tennessee Percent	National Percent	Difference	Frequency	Tennessee Percent	National Percentage	Difference
1. No occasions	322	95.8	91.1	+ 4.7	305	97.8	94.6	+ 3.2	299	98.7	98.1	+ 0.6
2. 1-2	11	3.3	4.1	- 0.8	3	1.0	3.3	- 2.3	4	1.3	1.4	- 0.1
3. 3-5	2	0.6	1.9	- 1.3	2	0.6	1.1	- 0.5	0	0.0	0.4	- 0.4
4. 6-9	1	0.0	1.1	- 1.1	1	0.3	0.5	- 0.2	0	0.0	0.1	- 0.1
5. 10-19	1	0.3	0.9	- 0.6	0	0.0	0.3	- 0.3	0	0.0	0.0	0.0
6. 20-39	0	0.0	0.6	- 0.6	0	0.0	0.0	0.0	0	0.0	0.0	0.0
7. 40+	0	0.0	0.3	- 0.3	1	0.3	0.1	+ 0.2	0	0.0	0.0	0.0

† Denotes greater use by Tennessee sample

- Denotes greater use by National sample

Table 7

Incidence of Drug (Cocaine) Use Among High School Seniors Class of 1985

Use	Use During Lifetime				Use During Past Year				Use During Past Month			
	Frequency	Tennessee Percent	National Percent	Difference	Frequency	Tennessee Percent	National Percent	Difference	Frequency	Tennessee Percent	National Percent	Difference
1. No occasions	308	91.9	83.8	+ 8.1	297	95.2	88.6	+ 6.6	299	97.4	95.1	+ 2.3
2. 1-2	16	4.8	7.5	- 2.7	7	2.2	5.8	- 3.6	6	1.7	3.2	- 1.5
3. 3-5	7	1.9	3.0	- 1.1	5	1.6	2.4	- 0.8	0	0.0	0.9	- 0.9
4. 6-9	1	0.3	1.8	- 1.5	2	0.6	1.2	- 0.6	0	0.0	0.4	- 0.4
5. 10-19	1	0.3	1.7	- 1.4	0	0.0	1.1	- 1.1	1	0.3	0.2	+ 0.1
6. 20-39	1	0.0	1.2	- 1.2	0	0.0	0.5	- 0.5	1	0.3	0.1	+ 0.2
7. 40+	0	0.0	1.0	- 1.0	1	0.3	0.4	- 0.1	0	0.0	0.0	0.0

+ Denotes greater use by Tennessee sample

- Denotes greater use by National sample

Heroin. Ninety-eight and two-tenths percent of seniors surveyed said they had never used heroin in their lifetime. Yearly and monthly figures are so low no interpretation of the data can be made (See Table 8).

#### The Second Research Question

What are the most important reasons for drug abuse?

Reasons for drug use are as many and varied as the people who use them. In an effort to determine the reasons for drug use in Tennessee, the researcher collected surveys from 360 seniors. Table 9 lists reasons stated, frequencies, and percentages.

Given the natural curiosity of the adolescent, it is no surprise that 29.2% of the respondents listed experimentation as the number one reason for drug use. To feel good, or get high, was the second most common reason (28.3%). It is interesting to note that 25.3% of respondents listed "relax or relieve tension" as the third most common reason. This is particularly interesting and may represent some inconsistency since barbiturate use was so low. It is, however, consistent with high use of alcohol and marijuana, if these two drugs were used for the above stated reason. "Having a good time with friends" was listed by 23.9% of the population surveyed as the reason for drug use.

Some reasons listed that are worthy of discussion are the following: "To stay awake" (16.7%), "To get more energy" (18.9%), and "To lose weight" (13.6%). It is interesting that females showed higher use than males for drugs that would be used for these reasons (Stimulants). The remaining two reasons--"To stay awake" and "Get more energy" are more difficult to attribute to any particular sex.



Table 8

Incidence of Drug (Heroin) Use Among High School Seniors Class of 1985

Use	Use During Lifetime				Use During Past Year				Use During Past Month			
	Frequency	Tennessee Percent	National Percent	Difference	Frequency	Tennessee Percent	National Percent	Difference	Frequency	Tennessee Percent	National Percent	Difference
1. No occasions	328	98.2	98.8	- 0.6	309	99.0	99.4	- 0.4	309	99.0	99.8	- 0.8
2. 1-2	3	0.9	0.8	+ 0.1	1	0.3	0.4	- 0.1	1	0.3	0.1	+ 0.2
3. 3-5	2	0.6	0.2	+ 0.4	0	0.0	0.0	0.0	0	0.0	0.0	0.0
4. 6-9	1	0.3	0.1	+ 0.2	0	0.0	0.0	0.0	0	0.0	0.0	0.0
5. 10-19	0	0.0	0.1	- 0.1	2	0.6	0.0	+ 0.6	0	0.0	0.0	0.0
6. 20-39	0	0.0	0.0	0.0	0	0.0	0.0	0.0	1	0.3	0.0	+ 0.3
7. 40+	0	0.0	0.1	0.1	0	0.0	0.0	0.0	1	0.3	0.0	+ 0.3

+ Denotes greater use by Tennessee sample

- Denotes greater use by National sample

Table 9  
Reasons for Drug Use Among Seniors

Reason	Frequency	Valid Percent
1. Experiment	105	29.2
2. Relax or relieve tension	91	25.3
3. Feel good - get high	102	28.3
4. Deeper insights and understanding	17	4.7
5. Have good time with friends	86	23.9
6. Fit in with group	17	4.7
7. To get away from problems	61	16.9
8. Boredom	51	14.2
9. Anger or frustration	47	13.1
10. To get through the day	27	7.5
11. To increase effects of other drugs	10	3.8
12. To decrease effects of other drugs	6	1.7
13. To stay awake	60	16.7
14. To get more energy	68	18.9
15. Lose weight	49	13.6
16. Hooked	6	1.7
17. To get to sleep	52	14.4

Another interesting statistic shows that 31.1% of the respondents said they were either bored or were trying to get away from problems. These two reasons indicated a strong need for emotional support from school personnel and would be strong evidence of the need to improve guidance services in high schools. This coupled with the information stated earlier that many seniors said they did not wish to see a counselor more frequently, may be an even stronger argument for modifications to existing guidance programs.

#### The Third Research Question

What are the situations in which drugs are most likely to be used?

The data gathered revealed some very interesting information concerning situations in which drugs are used. Two categories of drugs, alcohol and marijuana, were analyzed for situational drug use and inferences were made concerning other classes of drugs.

Contrary to what many citizens believe, very few drugs are used at school (See Tables 10 and 11). Actually fewer drugs were reported used at school than any other situation. Conversely, the use of drugs at home revealed some startling information (Tables 10 & 11). About half the population survey indicated they used alcohol at home. Approximately 38% of the respondents who use marijuana, do so at home (obtained by adding columns 2-5 in Tables 10 & 11).

A few other situations in which drug use appeared somewhat high were at a party, on a date and with one or two people. These are not unusual and represent normal patterns of adolescent behavior (See Tables 10 & 11).

Table 10

Situations in Which Drugs Are Likely to Be Used - Alcohol

	School	Alone	Home	Car	During the Day	Date	Party	People Over 30	One or Two People
1. Not at All	(231) 90.9%	(179) 68.8%	(139) 53.5%	(65) 25.1%	(156) 60.5%	(79) 30.9%	(46) 17.4%	(132) 50.6%	(29) 11.2%
2. A Few of the Times	(17) 6.7%	(50) 19.2%	(79) 30.5%	(72) 27.8%	(71) 27.5%	(77) 30.1%	(59) 22.3%	(86) 33.0%	(69) 26.5%
3. Some Times	(2) .8%	(20) 7.7%	(24) 9.3%	(47) 18.1%	(20) 7.8%	(42) 16.4%	(42) 15.9%	(23) 8.8%	(61) 23.5%
4. Most of the Time	(2) .8%	(8) 3.1%	(12) 4.6%	(59) 22.8%	(8) 3.1%	(35) 13.7%	(64) 24.2%	(6) 2.3%	(71) 27.3%
5. Every Time	(2) .8%	(2) .8%	(5) 1.9%	(16) 6.2%	(3) 1.2%	(23) 9.0%	(53) 20.1%	(14) 5.4%	(30) 11.5%

Table 11

Situations in Which Drugs Are Likely to Be Used - Marijuana

	School	Alone	Home	Car	During the Day	Date	Party	People Over 30	One or Two People
1. Not at All	(105) 75.5%	(94) 68.1%	(85) 61.6%	(35) 25.2%	(65) 47.4%	(69) 50.0%	(34) 24.8%	(94) 68.6%	(17) 12.0%
2. A Few of the Times	(20) 14.4%	(26) 18.8%	(32) 23.2%	(24) 17.3%	(38) 27.7%	(30) 21.7%	(31) 22.6%	(27) 19.7%	(43) 30.3%
3. Some Times	(9) 6.5%	(13) 9.4%	(13) 9.4%	(28) 20.1%	(23) 16.8%	(13) 9.4%	(30) 21.9%	(9) 6.6%	(29) 20.4%
4. Most of the Time	(4) 2.9%	(3) 2.2%	(4) 2.9%	(35) 25.2%	(8) 5.8%	(17) 12.3%	(30) 21.9%	(3) 2.2%	(35) 24.6%
5. Every Time	(1) .7%	(2) 1.4%	(4) 2.9%	(17) 12.2%	(3) 2.2%	(9) 6.5%	(12) 8.8%	(4) 2.9%	(18) 12.7%

One particular area that deserves special discussion is the use of alcohol and marijuana while operating an automobile. Seventy-five percent of the respondents who use alcohol, do so in an automobile. This represents 3 out of every 4 seniors who use alcohol. The same percentage of students surveyed (75%) who use marijuana, do so in an automobile (Tables 10 & 11).

Again, it is important to note that the percentages represent only those individuals who use alcohol and marijuana. Tables 10 and 11 reflect a description of situations in which drugs are used.

#### The Fourth Research Question

Does the population surveyed feel that current drug education programs are effective?

More than 73% (73.2%) of the population surveyed indicated they had received instruction in the dangers of drug abuse. Fifty-two and two-tenths percent said that the instruction made them less interested in drugs, while 44% said the instruction did not influence their decision to use or not to use drugs. The majority (88.7%) of the surveyed population said the instruction they received consisted of special discussions or films related to drug use.

The issue of whether drug education courses are effective is made clear by seniors responding to the survey. Almost 60% (59.4%) indicated little or some value was gained from courses relative to drugs (Percentages obtained by adding columns 1 and 2 in Table 12). The remaining 41% (columns 3 and 4) said they had gained considerably from their educational experiences related to instruction on drugs (See Table 12).

Table 12

Perceived Value of Drug Education Program by  
High School Seniors Class of 1985

	Frequency	Tennessee Percent
1. Little or no Value	66	19.7
2. Some Value	133	39.7
3. Considerable Value	94	28.1
4. Great Value	42	12.5

The Fifth Research Question

What are the most commonly abused drugs?

Without question the most commonly abused drug among high school seniors in Tennessee is alcohol. The most abused illicit (illegal) drug is marijuana..

Alcohol, with 87.2% of the seniors in Tennessee reporting lifetime use, ranks far above any other drug of abuse. Heavy alcohol use (40 or more times during the last year) was reported by 16% of the population surveyed (See Table 2, page 47). Frequency of alcohol use is also high with 60.2% of the respondents reporting use during the last month.

Following alcohol in the category of most abused drugs is marijuana. Almost 51% (50.5%) of the seniors in Tennessee have used marijuana and 39.5% have used it during the last year. Twenty-four

and four-tenths percent of the population indicated they had used marijuana during the last month (See Table 3, page 48).

With the exceptions of alcohol and marijuana, drug use among Tennessee seniors is not very extensive. Stimulants, which rank third among popularity of use, show lifetime use at 28.7%. Ten and nine-tenths percent of the respondents said they used stimulants during the month prior to the survey (See Table 5, page 51).

The remaining categories of drugs (barbiturates, LSD, cocaine, and heroin) show very little use as indicated by the number of non-users. For example, 95.8% of the seniors said they had never tried LSD, and 91.9% indicated no exposure to cocaine. Ninety-eight and two-tenths percent said they had never tried heroin, while 88% indicated no use of barbiturates.

### Hypotheses

#### Test of Hypotheses

The Mann-Whitney U was the statistical measure utilized to test each of the seven hypotheses. The .05 level of significance was selected as the difference to be regarded as significant between the groups.

H<sub>0</sub>1 There will be no significant difference in the use of alcohol by high school seniors in Tennessee compared with seniors throughout the nation as measured by the Monitoring the Future survey instrument.

#### Results

The results relevant to Hypothesis 1 are presented in Table 13.



Table 13

Comparison of Lifetime, Yearly, and Monthly Use of Alcohol  
Between Seniors in Tennessee and Seniors Throughout the  
Nation

Alcohol	Tennessee Percent	National Percent	<u>U</u>	<u>z</u>	Significance Variable
Lifetime	87.2	92.6	2183650	5.9904*	.0001
Yearly	79.3	87.3	2126934	5.0166*	.0001
Monthly	60.2	69.4	2254462	1.7074	.0877

\* Significant at .05 level with the National Sample showing greater usage

Analysis of Findings

The survey instrument consisted of three questions related to alcohol. Each of the three questions had seven variables. Possible responses ranged from 0, indicating no use of alcohol, to 40+, which indicates high use. The national sample attained the higher scores, indicating greater use of alcohol on a lifetime basis by seniors throughout the nation compared with seniors in Tennessee.

A z score of 5.9904 was obtained for lifetime use of alcohol, while a z score of 1.96 or above was needed to indicate a significant difference. The 5.9904 z score represented a significance at the .0001 level for lifetime alcohol use. Therefore, that part of null hypothesis 1 was rejected and the research hypothesis was accepted for lifetime alcohol use. The data in Table 13 indicated a significance beyond the .05 level.

A  $\underline{z}$  score of 5.0166 was obtained for yearly use of alcohol. Since a  $\underline{z}$  score of 1.96 was needed to indicate a significant difference, the 5.0166  $\underline{z}$  score represented a significance at the .0001 level for yearly alcohol use. The national sample attained the higher score, indicating greater use of alcohol on a yearly basis by seniors throughout the nation compared with seniors in Tennessee. Since the  $\underline{z}$  score of 5.0166 represented a significance beyond the .05 level, that part of null hypothesis 1 was rejected and the research hypothesis was accepted for yearly alcohol use.

A  $\underline{z}$  score of 1.7074 was obtained for monthly use of alcohol. A  $\underline{z}$  score above 1.96 was needed to indicate a significant difference. The 1.7074  $\underline{z}$  score did not represent a significant difference at the .05 level. Therefore, the research findings failed to reject that part of null hypothesis 1 for monthly alcohol use.

H<sub>0</sub>2 There will be no significant difference in the use of marijuana by high school seniors in Tennessee compared with seniors throughout the nation on the Monitoring the Future survey instrument.

The results relevant to this hypothesis are presented in Table 14.

The survey instrument consisted of three questions related to marijuana. Each of the three questions had seven variables. Possible responses ranged from 0 indicating no use of marijuana, to 40+, which indicates high use. The national sample attained the higher scores, indicating greater use of marijuana on a lifetime basis by seniors throughout the nation compared with seniors in Tennessee.

Table 14

Comparison of Life, Yearly, and Monthly Use of Marijuana  
Between Seniors in Tennessee and Seniors Throughout the Nation

Marijuana	Tennessee Percent	National Percent	<u>U</u>	<u>z</u>	2-tail
Lifetime	50.6	57.0	2559046.0	2.9302*	.0034
Yearly	40.0	42.3	2609684.0	1.1711	.2416
Monthly	24.4	27.0	2563730.0	1.2606	.2074

\* Significant at the .05 level with the National Sample showing greater usage

A z score of 2.9302 was obtained for lifetime use of marijuana, while a z score of 1.96 or above was needed to indicate a significant difference. The 2.9302 z score represented a significance at the .0034 level for lifetime marijuana use. Therefore, that part of null hypothesis 2 was rejected and the research hypothesis was accepted for lifetime marijuana use. The data in Table 14 indicates a significance beyond the .05 level.

A z score of 1.1711 was obtained for yearly use of marijuana. A z score of 1.96 was required to show a significant difference. The 1.1711 z score did not represent a significant difference at the .05 level. The obtained score represented a significance at the .2416 level. The score reflected no significant difference in yearly marijuana use by seniors in Tennessee and seniors throughout the nation. The 1.1711 z score was not significant at the .05 level and null hypothesis 2 for yearly marijuana use was not rejected.

The use of marijuana on a monthly basis required a z score above 1.96 to show a significant difference. A z score of 1.2606 was obtained and did not reflect a significant difference at the .05 level. The data indicated no significant difference in monthly marijuana use by seniors in Tennessee and seniors throughout the nation, and null hypothesis 2 for monthly marijuana use was not rejected.

H<sub>0</sub>3 There will be no significant difference in the use of LSD by high school seniors in Tennessee compared with seniors throughout the nation as measured by the Monitoring the Future survey instrument.

Data collected did not result in adequate variance to allow statistical analysis for this hypothesis. Tables and discussion reflective of LSD use are presented in the first part of Chapter 4 in Table 6, page 53. The failure of enough variance in collected data did not allow the acceptance or rejection of the null hypothesis.

H<sub>0</sub>4 There will be no significant difference in the use of stimulants by high school seniors in Tennessee compared with seniors throughout the nation as measured by the Monitoring the Future survey instrument.

The survey instrument consisted of three questions related to the use of stimulants. Each of the three questions had seven variables. Possible responses ranged from 0, indicating no use of stimulants, to 40+ which indicates high use. The national sample attained the higher score, indicating greater use of stimulants on a lifetime basis by seniors throughout the nation compared with seniors in Tennessee.

Table 15

Comparison of Lifetime Use of Stimulants Between Seniors  
in Tennessee and Seniors Throughout the Nation Using the  
Mann-Whitney U Test of Significance

Stimulants	Tennessee Percent	National Percent	<u>U</u>	<u>z</u>	2-tail
Lifetime	28.7	35.4	1016193.0	2.7784*	.0055

\* Significant at the .05 level with the National Sample showing greater usage

A z score of 2.7784 was obtained for lifetime use of stimulants, while a z score above 1.96 was considered statistically significant. The 2.7784 z score represented a significance at the .0055 level for lifetime use of stimulants. Therefore, that part of null hypothesis 4 was rejected and the research hypothesis was accepted for lifetime stimulant use. The data in Table 15 indicated a significance beyond the .05 level.

Because of a lack of variance in yearly and monthly use of stimulants, only lifetime use could be statistically analyzed. Appropriate charts relating to yearly and monthly use are found in Table 5, on page 52 in the first part of chapter 4.

H<sub>0</sub>5. There will be no significant differences in the use of barbiturates by high school seniors in Tennessee compared with seniors throughout the nation as measured by the Monitoring the Future survey instrument.

Data collected did not result in adequate variance to allow statistical analysis for this hypothesis. Tables and discussion reflective of barbiturates are presented in the first part of Chapter 4 in Table 4, page 50. The failure of enough variance in collected data did not allow the acceptance or rejection of the null hypothesis.

$H_06$  There will be no significant difference in the use of cocaine by high school seniors in Tennessee compared with seniors throughout the nation as measured by the Monitoring the Future survey instrument.

Data collected did not result in adequate variance to allow statistical analysis for this hypothesis. A table and discussion reflective of cocaine are presented in the first part of Chapter 4 in Table 7, page 54. The failure of enough variance in collected data did not allow the acceptance or rejection of the null hypothesis.

$H_07$  There will be no significant difference in the use of heroin by high school seniors in Tennessee compared with seniors throughout the nation as measured by the Monitoring the Future survey instrument.

Data collected did not result in adequate variance to allow statistical analysis for this hypothesis. Tables and discussion reflective of heroin are presented in the first part of Chapter 4 in Table 8, page 56. The failure of enough variance in collected data did not allow the acceptance or rejection of the null hypothesis.

## CHAPTER 5

### Summary, Conclusions, and Recommendations

#### Summary

##### Purpose

The primary purpose of the study was to determine the extent of illicit drug use practices by seniors in Tennessee public schools. The information gathered was compared with similar data from seniors throughout the nation.

The descriptive survey method of research was used to conduct the study. The instrument utilized for this study was a questionnaire/opinionnaire developed for the express purpose of determining drug use practices by high school seniors. The Institute for Social Research, Ann Arbor, Michigan, was responsible for developing and validating the instrument utilized.

The survey instrument was mailed to 15 schools, five each in East, Middle, and West Tennessee. The schools were randomly selected with the help of the Tennessee State Department of Education. Each of the 15 participating schools administered the questionnaire/opinionnaire to 30 randomly selected male and female seniors. A total of 450 surveys were mailed to the selected schools. Three hundred sixty surveys were returned for an 80% participation rate.

The five research questions of the study provided general information relative to drug use characteristics of high school seniors. A statistical comparison of drug use practices of seniors in Tennessee

and seniors throughout the nation was made using the Mann-Whitney U Test of Significance. The minimum level for determining significant difference was the .05 level of significance using a two-tailed test to either reject or fail to reject the null hypothesis.

### Conclusions

#### Analysis and Results

The Mann-Whitney U was utilized as the statistical procedure to determine significant differences between groups. Differences were regarded as significant for  $P < .05$ .

The following results were obtained in this study:

(1) A significant difference ( $P < .0001$ ) in lifetime alcohol use was found between seniors in Tennessee and seniors throughout the nation. It was concluded that seniors in Tennessee use alcohol less on a lifetime basis than other seniors in the United States.

(2) There was also a significant difference in the use of alcohol on a yearly basis ( $P < .0001$ ) by the two groups. The national survey group of seniors showed greater use of alcohol on a yearly basis than seniors in Tennessee.

(3) The national survey group of seniors showed greater use of alcohol on a monthly basis, however, the difference (.08) was not considered to be statistically significant. Therefore, it was concluded that seniors in Tennessee and seniors throughout the nation have similar monthly alcohol utilization rates.

(4) A significant difference ( $P < .0034$ ) in lifetime use of marijuana was found between Tennessee seniors and seniors throughout



the nation. It was concluded that seniors in Tennessee use marijuana less on a lifetime basis than other seniors throughout the nation.

(5) The national survey group showed a slightly greater use of marijuana on a yearly basis than seniors in Tennessee. The difference (.2416) was not considered statistically significant. It was concluded that seniors in Tennessee and seniors throughout the nation have similar patterns of yearly marijuana use.

(6) Monthly rates of marijuana use also show slightly greater use by the national survey group of seniors. The difference ( $P < .20$ ) was not considered significant between the monthly use of marijuana by seniors in Tennessee and seniors through the nation.

(7) A significant difference ( $P < .0055$ ) in lifetime use of stimulants was found between seniors in Tennessee and seniors throughout the nation. It was concluded that seniors in Tennessee use stimulants less on a lifetime basis than other seniors in the United States. A lack of variance prevented the statistical analysis of yearly and monthly rates of stimulant use.

(8) The use of barbiturates, LSD, cocaine and heroin could not be statistically analyzed because of a lack of responses to the survey questions.

(9) There were differences in frequency of drug use by Tennessee seniors and seniors throughout the nation. Seniors in Tennessee showed a lower rate of drug use.

(10) The main reasons seniors in Tennessee used drugs were: to experiment, to relieve tension, to get high, and to have a good time with friends.

(11) The situations in which seniors in Tennessee used drugs the most were: at home, or a party, on a date, with one or two other people, and in a car.

(12) The drugs most abused in Tennessee were alcohol and marijuana.

(13) Sex differences and drug use revealed that females in Tennessee had higher utilization rates for cigarettes, barbiturates and stimulants, while males showed greater use of alcohol and marijuana.

(14) The drug problem in Tennessee is not as severe as it is in other parts of the country.

(15) Many high school seniors in Tennessee who use alcohol (75%), do so while riding in an automobile.

(16) About 60% of the respondents said drug education courses were not very helpful.

(17) Fifty-three percent of the surveyed population did not see a counselor last year. Of these 53%, a large percentage (46%) said they did not care to see a counselor more often. The students who did see a counselor said the sessions were helpful.

(18) The population surveyed indicated they like school (79%) and that school work is important (86%). The average grade of the respondents was B (43%).

#### Recommendations

Drug abuse has been a rapidly increasing problem among our nation's youth during the decade of the seventies. The early years

of the eighties reflect a turnaround in drug use and indicate a gradual decline during the last five years.

The data revealed that Tennessee high school seniors were, in some instances, not using drugs at the same rates as other seniors throughout the nation. However, illicit drug use (especially alcohol and marijuana) among Tennessee youth was still much too high.

As a result of the findings of this study, answers have been provided to several questions. There are, however, many other questions to be answered concerning drug use. On the basis of the findings of this study, the following recommendations were made:

1. The Tennessee State Department of Education should begin immediately to develop programs that show the dangers involved in abusing alcohol. Because of the utilization rates among seniors in Tennessee, top priority should be given to this problem.
2. A combined effort of all state and local agencies should be started to help educate the general public about the problem of drug abuse.
3. Although similar prevalence rates were noted for Tennessee seniors and seniors throughout the nation, it is somewhat alarming that Tennessee seniors have comparable rates of utilization for yearly and monthly use of marijuana as seniors in larger states. For this reason, it is important that enforcement authorities continue their efforts to curb the flow of illegal drugs into Tennessee.
4. Viable alternatives should be provided for teenagers to deter involvement with chemical substances. Many seniors indicated they used

drugs to experiment, to relieve tension, to get high, and to have a good time with friends. Further research and study should be conducted to explore ways for teenagers to have a good time without using drugs.

5. Further studies should be conducted to determine why females had high utilization rates for cigarettes, barbiturates and stimulants.

6. Efforts to curb the use of alcohol while operating motor vehicles should continue. All high school students should be exposed to an intensive program on the effects of driving and drinking.

7. Studies should begin immediately to determine why 60% of Tennessee seniors feel drug education courses are not helpful.

8. Further research is needed to determine why seniors in Tennessee do not see guidance counselors more often. Also, a study should be made to determine why many students do not want to see guidance counselors.

9. A follow-up survey should be administered within the next year to determine if changes in prevalence rates have occurred.

10. Since cocaine use has increased in other areas of the Southeast during the past 18 months, a more in-depth study should be made to explore the use of cocaine by seniors in Tennessee.

11. Based on the findings that many of the seniors in Tennessee who use drugs do so at home, it is recommended that parents become aware of the signs and symptoms of drug abuse.

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**APPENDICES**

**APPENDIX A**

**TABLES**

Table A-1

Cigarettes: Trends in Thirty-Day Prevalence ofDaily Use by Subgroups

	Percent who used daily in last thirty days									
	Class of 1973	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	'82-'83 change
All seniors	26.8	28.8	28.8	27.5	25.4	21.3	20.3	21.1	21.2	+0.1
Sex:										
Male	26.9	28.0	27.1	26.0	22.3	18.5	18.1	18.2	19.2	+1.0
Female	26.4	28.8	30.0	28.3	27.8	23.5	21.7	23.2	22.2	-1.0
College Plans:										
None or under 4 yrs	NA	36.3	37.2	35.2	33.8	29.7	29.3	29.3	29.3	+0.2
Complete 4 yrs	NA	19.8	19.3	18.3	17.0	13.8	12.9	13.2	13.8	+0.6
Regions:										
Northeast	31.4	32.31	33.8	32.5	28.6	24.1	23.3	23.4	26.1	+2.7
North Central	28.6	30.2	29.4	28.6	27.0	22.0	21.0	24.0	23.4	-0.6
South	26.2	29.1	28.7	26.4	25.8	22.6	19.1	20.2	19.4	-0.8
West	17.3	19.4	19.2	19.1	17.0	14.0	13.1	12.7	13.0	+0.3
Population Density:										
Large SMSA	30.8	30.4	30.9	29.2	24.5	21.6	21.9	23.3	22.1	-1.4
Other SMSA	25.6	27.1	27.2	25.7	25.0	21.3	19.0	19.3	20.2	+0.9
Non-SMSA	23.8	29.5	29.1	28.7	26.3	21.2	20.7	21.3	21.7	+0.4

NIDA, 1984

Table A-2

Cigarettes: Trends in Frequency of Use for Lifetime and Last Thirty Days and in Probability of Future Use

(Entries are percentages)

	Class of <u>1975</u>	Class of <u>1976</u>	Class of <u>1977</u>	Class of <u>1978</u>	Class of <u>1979</u>	Class of <u>1980</u>	Class of <u>1981</u>	Class of <u>1982</u>	Class of <u>1983</u>
<u>Lifetime use</u>									
Never	26.4	26.6	24.3	24.7	26.0	29.0	29.0	29.9	29.4
Once or twice	26.8	25.8	26.7	27.1	28.1	29.7	30.9	29.8	30.1
Occasionally but not regularly	16.4	16.9	16.4	16.2	16.3	15.3	16.1	15.7	16.3
Regularly in the past	8.6	9.2	8.8	9.1	9.2	8.4	7.7	7.6	7.2
Regularly now	21.9	23.5	23.8	22.8	20.3	17.4	16.4	17.0	17.0
	N = (10373)	(16107)	(17929)	(18461)	(16237)	(16078)	(17814)	(17899)	(16533)
<u>Use in last thirty days</u>									
Not at all	63.3	61.2	61.6	63.3	65.6	69.5	70.6	70.0	69.7
Under 1 per day	9.8	10.0	9.6	9.2	9.0	9.1	9.1	9.0	9.2
1-3 per day	9.0	9.3	9.4	8.8	8.9	7.0	6.7	6.9	7.0
About 1/2 pack/day	8.3	9.3	9.1	9.0	8.0	6.9	6.4	6.8	6.4
About 1 pack/day	7.3	7.9	8.1	7.7	6.7	5.9	5.6	5.8	5.8
About 1 1/2 pack/day	1.9	1.7	1.8	1.7	1.5	1.2	1.3	1.3	1.2
2 or more pack/day	0.4	0.3	0.4	0.3	0.2	0.3	0.3	0.3	0.3
	N = (10315)	(16079)	(17902)	(18429)	(16215)	(16056)	(17794)	(17865)	(16346)
<u>Probability of future use</u>									
Definitely will not	40.6	50.2	51.0	54.5	57.4	60.4	59.0	58.6	60.2
Probably will not	31.0	28.1	29.4	28.2	27.5	26.1	27.2	26.2	26.3
Probably will	27.4	20.5	18.2	16.6	14.4	12.8	13.1	14.1	12.1
Definitely will	1.0	1.2	1.4	0.6	0.6	0.7	0.7	1.0	1.4
	N = (2259)	(3262)	(3624)	(3717)	(3315)	(3263)	(3537)	(3630)	(3390)

Table A-3

Cigarettes: Trends in Grade in Which First Used

	Percent reporting first use in each grade								
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983
Sixth grade (or below)	2.0	2.4	2.7	3.5	3.5	3.0	2.9	3.0	3.3
Seventh or Eighth grade	3.7	6.7	9.1	9.3	8.9	7.2	6.9	7.1	6.3
Ninth grade	6.6	8.5	8.1	7.5	6.0	5.8	5.2	5.3	5.4
Tenth grade	7.8	6.5	6.2	5.6	4.7	4.7	4.3	4.2	3.9
Eleventh grade	3.3	6.0	4.8	4.3	3.9	3.4	3.1	3.2	3.6
Twelfth grade	2.8	2.3	2.2	1.8	2.3	1.7	1.5	1.7	1.6
Never smoked daily	69.6	67.3	67.4	68.0	70.6	74.2	75.9	75.6	75.8
	N <sup>a</sup> = (3085)	(2901)	(3926)	(5960)	(3428)	(3313)	(3993)	(6032)	(3336)

NIDA, 1984



Table A-4

Alcohol: Trends in Frequency of Use for Lifetime, Last Year,  
and Last Thirty Days and in Probability of Future Use

(Entries are percentages)

	Class of 1975 <sup>a</sup>	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983
<u>Lifetime use</u>									
No occasions	9.6	8.1	7.5	6.9	7.0	6.8	7.6	7.7	7.6
1-2 occasions	7.6	8.0	7.1	7.0	6.3	6.9	6.8	6.7	6.3
3-5 occasions	8.8	8.3	8.2	7.4	7.6	7.3	7.7	8.1	8.4
6-9 occasions	8.3	8.5	8.3	8.1	7.4	7.8	7.6	7.7	7.7
10-19 occasions	12.6	11.9	12.0	12.1	12.1	12.4	11.5	12.5	11.9
20-39 occasions	13.6	13.5	13.7	13.2	13.4	13.2	13.5	13.8	13.9
40 or more	39.6	41.7	43.2	43.2	46.1	45.6	43.7	43.9	44.3
N =	(9796)	(15355)	(17116)	(17615)	(15635)	(15472)	(17131)	(17192)	(16005)
<u>Use in last twelve months</u>									
No occasions	15.2	14.3	13.0	12.3	11.9	12.1	13.0	13.2	12.7
1-2 occasions	12.8	13.3	12.9	12.3	12.3	12.5	12.6	13.0	13.6
3-5 occasions	12.3	12.3	11.6	11.4	11.4	11.4	11.8	12.1	12.6
6-9 occasions	11.5	11.1	11.7	11.6	11.2	11.2	10.5	11.5	11.1
10-19 occasions	15.7	16.5	16.0	16.3	15.9	15.7	15.6	15.8	15.7
20-39 occasions	13.0	12.6	13.2	14.7	13.9	14.3	13.9	14.0	13.7
40 or more	19.3	19.9	21.6	21.3	23.3	22.8	22.5	20.4	20.4
N =	(9738)	(15345)	(17047)	(17547)	(15564)	(15412)	(17055)	(17101)	(15943)
<u>Use in last thirty days</u>									
No occasions	31.8	31.7	28.8	27.9	28.2	28.0	29.3	30.3	30.6
1-2 occasions	22.1	22.0	22.2	21.8	21.6	21.9	21.9	22.6	23.0
3-5 occasions	17.5	18.4	18.3	18.9	17.9	18.6	18.4	18.4	18.1
6-9 occasions	12.8	12.6	13.4	14.4	14.6	14.3	13.6	13.3	12.8
10-19 occasions	10.1	9.6	11.2	11.4	10.8	11.0	10.7	9.7	10.0
20-39 occasions	3.3	3.3	3.3	3.3	4.1	3.6	3.4	3.4	3.1
40 or more	2.2	2.3	2.6	2.3	2.8	2.4	2.6	2.4	2.4
N =	(9737)	(15377)	(17087)	(17601)	(15584)	(15437)	(17051)	(17171)	(15980)
<u>Probability of future use</u>									
Definitely will not	17.0	18.1	13.9	13.8	13.8	13.2	14.5	15.0	14.6
Probably will not	14.7	15.7	16.7	15.3	15.4	15.2	14.0	13.3	13.8
Probably will	54.4	53.3	54.8	55.8	55.6	55.3	53.7	55.1	54.7
Definitely will	13.9	12.9	14.6	15.0	15.1	16.3	15.8	16.4	17.0
N =	(3078)	(3263)	(3423)	(3732)	(3306)	(3265)	(3378)	(3426)	(3380)

Table A-5

Alcohol: Trends in Two-Week Prevalence of Heavy Drinking  
by Subgroups

	Percent reporting 3+ drinks on one or more occasions									
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	'82-'83 change
All seniors	36.8	37.1	39.4	40.3	41.2	41.2	41.4	40.5	40.8	+0.3
Sex:										
Male	49.0	47.9	50.0	51.4	51.9	52.1	51.6	49.8	50.4	+0.6
Female	26.4	23.9	29.3	29.6	30.9	30.5	30.8	31.1	31.0	-0.1
College Plans:										
None or under 4 yrs	NA	41.8	44.7	44.3	44.5	46.3	46.7	43.7	44.9	-0.8
Complete 4 yrs	NA	31.3	33.9	35.9	37.7	36.9	37.4	36.5	37.2	+0.7
Regions:										
Northeast	43.0	40.8	40.0	43.3	47.4	48.0	49.3	43.3	42.2	-1.1
North Central	40.6	42.8	44.5	45.3	44.8	45.4	44.9	47.9	47.2	-0.7
South	32.1	30.8	36.3	36.4	36.7	34.4	34.7	34.6	37.6	+3.0
West	29.0	32.8	34.2	33.3	34.0	36.0	33.6	32.5	33.3	+0.8
Population Density:										
Large SMSA	37.9	37.0	38.1	39.5	42.2	44.8	43.4	40.9	38.8	-2.1
Other SMSA	36.1	36.8	39.5	40.1	40.8	38.9	39.5	39.2	41.0	+1.3
Non-SMSA	36.9	38.0	40.5	41.3	40.9	41.4	42.2	41.5	42.0	+0.7

NIDA, 1984

Table A-6

Marijuana: Trends in Thirty-Day Prevalence of Daily Useby Subgroups

	Percent who used daily in last thirty days									
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	'82-'83 change
All seniors	6.0	8.2	9.1	10.7	10.3	9.1	7.0	6.3	5.5	-0.8
Sex:										
Male	8.1	10.8	12.4	14.2	12.7	11.9	9.6	8.2	7.3	-0.9
Female	4.0	5.0	5.6	7.1	7.3	6.0	4.2	4.0	3.2	-0.8
College Plans:										
None or under 4 yrs	NA	9.9	11.1	12.8	13.0	11.9	9.4	8.6	7.3	-1.3
Complete 4 yrs	NA	5.5	6.3	7.4	6.8	5.9	4.8	3.9	3.4	-0.5
Regions:										
Northeast	6.7	10.2	9.9	14.5	13.6	11.1	9.1	8.0	6.9	-1.1
North Central	6.2	8.1	8.8	11.4	11.3	9.3	8.2	6.8	5.5	-1.3
South	5.0	6.7	9.1	8.5	7.0	7.5	4.5	4.8	4.5	-0.3
West	6.5	8.0	8.1	8.2	9.3	8.6	6.4	5.4	5.1	-0.3
Population Density:										
Large SMSA	8.4	10.7	9.5	12.7	10.6	10.3	8.3	7.9	7.3	-0.6
Other SMSA	5.9	8.2	10.0	10.9	11.3	9.5	7.1	6.0	5.7	-0.3
Non-SMSA	4.5	6.3	7.6	9.0	8.6	7.7	6.0	5.3	5.8	-1.5

NIDA, 1984

Table A-7

Marijuana: Trends in Frequency of Use for Lifetime, Last Year,and Last Thirty Days and in Probability of Future Use

	(Entries are percentages)								
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983
<u>Lifetime use</u>									
No occasions	32.7	47.2	43.6	40.8	39.6	39.7	40.5	41.3	41.0
1-2 occasions	8.8	9.0	9.1	9.1	9.2	10.3	10.5	11.4	11.9
3-5 occasions	3.1	3.4	6.1	6.1	3.9	6.8	7.1	7.3	7.9
6-9 occasions	4.0	4.0	4.7	4.8	3.1	3.3	3.3	3.3	3.7
10-19 occasions	3.4	3.9	6.3	6.4	6.8	6.7	6.6	7.2	6.8
20-39 occasions	3.1	3.6	3.8	6.2	6.3	6.2	6.3	6.3	6.0
40 or more	13.9	22.9	24.3	26.6	27.0	24.8	23.7	21.3	18.8
N = (9841)	(15845)	(17555)	(18073)	(15992)	(13839)	(17540)	(17650)	(16297)	
<u>Use in last twelve months</u>									
No occasions	60.0	55.5	52.4	49.8	49.2	31.2	33.9	35.7	37.7
1-2 occasions	8.7	8.6	8.9	8.9	9.8	10.3	10.2	11.3	11.5
3-5 occasions	3.2	3.9	6.3	6.3	6.6	7.0	7.3	6.8	7.2
6-9 occasions	4.3	4.7	3.1	3.4	3.0	3.2	4.9	4.8	4.4
10-19 occasions	3.5	3.8	6.3	6.1	6.8	6.1	3.7	3.7	3.3
20-39 occasions	4.3	3.1	3.6	3.8	3.4	3.3	3.0	4.3	4.1
40 or more	11.7	14.3	15.1	17.3	17.2	14.9	12.9	11.2	9.6
N = (9792)	(15748)	(17490)	(18009)	(15931)	(15749)	(17455)	(17567)	(16294)	
<u>Use in last thirty days</u>									
No occasions	72.9	67.8	64.6	62.9	63.5	66.3	68.4	71.5	73.0
1-2 occasions	7.7	8.3	9.6	9.2	9.4	9.6	10.1	9.4	9.3
3-5 occasions	4.8	3.4	3.8	6.0	3.9	3.8	3.4	3.0	4.7
6-9 occasions	4.0	4.7	3.0	4.6	4.3	4.0	3.9	3.7	3.3
10-19 occasions	4.6	3.7	3.9	6.7	6.3	3.2	3.1	4.1	4.2
20-39 occasions	3.2	4.3	4.3	3.4	3.1	4.6	3.6	3.3	2.8
40 or more	2.8	3.9	4.6	3.3	3.2	4.3	3.4	3.0	2.4
N = (9796)	(15722)	(17473)	(18014)	(15915)	(15755)	(17453)	(17543)	(16238)	
<u>Probability of future use</u>									
Definitely will not	38.8	33.3	30.3	49.6	30.8	35.2	35.8	36.9	40.0
Probably will not	22.1	21.3	22.4	23.0	23.9	22.0	24.3	24.7	22.2
Probably will	14.3	20.4	20.7	21.0	19.0	18.7	16.4	15.1	14.6
Definitely will	4.8	3.1	4.4	6.3	6.3	4.1	3.3	3.4	3.1
N = (3063)	(3212)	(3572)	(3659)	(3274)	(3213)	(3336)	(3350)	(3306)	

Table A-4

Other characteristics: trends in frequency of use five lifetimes.

Last Year, and Last Thirty Days and in Probability of Future Use  
(figures are percentages)

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	
<u>Lifetime use</u>										
No occasions	83.9	87.9	88.8	88.6	89.1	90.7	90.9	92.0	92.7	
1-2 occasions	3.3	2.3	4.6	3.0	3.1	4.8	4.6	4.0	3.7	
3-5 occasions	2.6	2.3	2.7	2.5	2.7	1.5	1.7	1.6	1.6	
6-9 occasions	1.9	1.3	1.3	1.4	1.3	1.0	0.9	0.8	0.8	
10-19 occasions	1.9	1.3	1.4	1.2	1.0	0.7	0.7	0.8	0.7	
20-39 occasions	1.2	0.8	0.7	0.7	0.7	0.3	0.3	0.3	0.3	
40 or more	1.2	0.9	0.8	0.8	0.6	0.3	0.3	0.3	0.3	
N = (9382) (10503) (13266) (18287) (16090) (19935) (17603) (17797) (16470)										
<u>Use in last twelve months</u>										
No occasions	90.6	93.0	93.1	92.7	93.7	93.8	94.6	93.1	93.9	
1-2 occasions	4.4	3.7	3.4	3.9	3.8	3.3	3.2	3.7	2.4	
3-5 occasions	2.1	1.4	1.6	1.7	1.4	1.3	1.0	1.1	0.9	
6-9 occasions	1.3	0.9	0.9	0.8	0.7	0.6	0.6	0.6	0.4	
10-19 occasions	1.0	0.5	0.7	0.6	0.5	0.3	0.3	0.3	0.2	
20-39 occasions	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	
40 or more	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0	
N = (9382) (10493) (13228) (18264) (16071) (19916) (17681) (17783) (16430)										
<u>Use in last thirty days</u>										
No occasions	96.3	97.7	97.0	97.3	97.6	97.7	97.9	98.3	98.5	
1-2 occasions	2.4	1.5	1.9	1.9	1.7	1.7	1.4	1.3	1.0	
3-5 occasions	0.6	0.3	0.7	0.3	0.4	0.4	0.4	0.2	0.3	
6-9 occasions	0.3	0.2	0.3	0.2	0.2	0.1	0.2	0.1	0.1	
10-19 occasions	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
20-39 occasions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
40 or more	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
N = (9381) (10473) (13220) (18234) (16067) (19910) (17672) (17786) (16448)										
<u>Probability of future use<sup>a</sup></u>										
Definitely will not	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Probably will not	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Probably will	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Definitely will	NA	NA	NA	NA	NA	NA	NA	NA	NA	
N = (NA) (NA) (NA) (NA) (NA) (NA) (NA) (NA) (NA)										

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Table A-3

LSD: Trends in Frequency of Use for Lifetime, Last Year, andLast Thirty Days and in Probability of Future Use.

(Entries are percentages)

	Class of <u>1975</u>	Class of <u>1976</u>	Class of <u>1977</u>	Class of <u>1978</u>	Class of <u>1979</u>	Class of <u>1980</u>	Class of <u>1981</u>	Class of <u>1982</u>	Class of <u>1983</u>
<u>Lifetime use</u>									
No occasions	88.7	89.0	90.2	90.3	90.5	90.7	90.2	90.4	91.1
1-2 occasions	4.7	3.0	4.3	4.4	4.5	4.3	4.3	4.4	4.1
3-5 occasions	2.2	2.4	2.2	2.0	2.1	2.0	2.1	1.9	1.9
6-9 occasions	1.3	1.3	1.2	1.2	1.2	1.1	1.3	1.2	1.1
10-19 occasions	1.4	1.3	1.2	1.1	0.9	1.0	1.1	1.0	0.9
20-39 occasions	0.9	0.6	0.3	0.3	0.4	0.3	0.3	0.6	0.6
40 or more	0.9	0.6	0.3	0.3	0.4	0.4	0.3	0.3	0.3
N = (9620)	(14382)	(13320)	(13354)	(16191)	(16018)	(17771)	(17831)	(16499)	
<u>Use in last twelve months</u>									
No occasions	92.8	93.6	94.3	93.7	93.4	93.5	93.3	93.9	94.6
1-2 occasions	3.9	3.8	3.2	3.7	3.7	3.7	3.6	3.3	3.3
3-5 occasions	1.6	1.4	1.2	1.2	1.4	1.5	1.4	1.3	1.1
6-9 occasions	0.9	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.5
10-19 occasions	0.6	0.3	0.3	0.4	0.5	0.5	0.3	0.4	0.3
20-39 occasions	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.0
40 or more	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
N = (9614)	(14369)	(13307)	(13149)	(16179)	(16001)	(17760)	(17838)	(16479)	
<u>Use in last thirty days</u>									
No occasions	97.7	98.1	97.9	97.9	97.6	97.7	97.3	97.6	98.1
1-2 occasions	1.7	1.4	1.6	1.4	1.8	1.8	1.9	1.7	1.4
3-5 occasions	0.4	0.3	0.4	0.4	0.4	0.3	0.3	0.4	0.4
6-9 occasions	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1
10-19 occasions	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0
20-39 occasions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40 or more	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
N = (9609)	(14368)	(13310)	(13344)	(16180)	(16004)	(17760)	(17826)	(16487)	
<u>Probability of future use</u>									
Definitely will not	83.8	86.3	85.8	86.8	87.4	87.8	88.1	88.7	88.9
Probably will not	11.3	10.9	11.7	10.6	10.2	9.3	9.4	8.7	8.6
Probably will	2.0	2.0	1.8	1.7	1.5	1.8	1.5	1.7	1.6
Definitely will	0.8	0.6	0.7	0.9	1.0	1.2	1.0	0.9	0.8
N = (2936)	(3033)	(3446)	(3482)	(3130)	(3096)	(3382)	(3465)	(3246)	

Table A-10

Simultaneous Lead/overlay Trends in Frequency of Use for Lifetime Last Year, and Last Thirty Days in Probability of Future Use

(Entries are percentages)

	Class of 1973	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983
<u>Lifetime use</u>									
No occasions	77.7	77.4	77.0	77.1	73.8	73.6	67.8	66.4	66.6
1-2 occasions	6.7	7.1	7.0	7.1	7.8	8.2	8.3	9.9	10.6
3-5 occasions	3.6	3.8	3.8	4.1	4.3	4.4	3.0	4.9	5.1
6-9 occasions	2.4	2.8	2.8	2.8	2.8	3.1	3.6	4.6	4.1
10-19 occasions	3.3	3.2	3.1	3.0	3.4	3.4	4.7	4.9	4.3
20-39 occasions	2.3	2.0	2.4	2.4	2.4	2.9	3.7	4.0	3.8
40 or more	4.2	3.8	3.9	3.3	3.3	4.3	6.6	7.3	6.6
N = (9694) (13881) (17673) (18161) (16037) (13920) (17761) (7123) (6374)									
<u>Use in last twelve months</u>									
No occasions	33.8	84.2	33.7	82.9	81.7	79.2	74.0	73.9	73.4
1-2 occasions	3.3	3.7	3.7	6.3	6.3	7.0	7.7	7.9	8.1
3-5 occasions	2.8	2.9	3.2	3.4	3.6	3.8	4.5	3.1	3.1
6-9 occasions	2.4	2.3	2.3	2.3	2.9	2.9	3.4	3.6	3.1
10-19 occasions	2.4	2.2	2.3	2.2	2.6	3.3	4.3	3.5	3.6
20-39 occasions	1.6	1.3	1.5	1.3	1.4	2.0	2.8	2.8	2.3
40 or more	1.3	1.4	1.2	1.3	1.3	1.8	3.0	3.0	2.3
N = (9671) (13853) (17622) (18122) (16027) (13879) (17389) (7114) (6360)									
<u>Use in last thirty days</u>									
No occasions	91.3	92.3	91.2	91.3	90.1	87.9	84.2	86.3	87.6
1-2 occasions	4.1	3.9	4.3	4.3	4.7	5.1	6.6	6.0	5.1
3-5 occasions	1.7	1.6	1.9	1.9	2.1	2.8	3.6	2.9	2.7
6-9 occasions	1.1	1.0	1.3	1.2	1.3	1.9	2.3	2.0	2.1
10-19 occasions	1.1	0.7	0.8	0.8	1.1	1.3	2.1	1.7	1.3
20-39 occasions	0.3	0.3	0.3	0.3	0.4	0.3	0.9	0.8	0.8
40 or more	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3
N = (9660) (13834) (17624) (18107) (16017) (13876) (17383) (7114) (6360)									
<u>Probability of future use</u>									
Definitely will not	74.4	72.3	71.2	71.7	72.3	70.8	66.7	NA	NA
Probably will not	19.2	21.3	22.2	21.6	20.3	21.2	23.7	NA	NA
Probably will	3.4	3.4	3.3	3.9	6.1	7.0	8.3	NA	NA
Definitely will	1.1	0.8	1.1	0.8	0.9	1.0	1.1	NA	NA
N = (2973) (3090) (3169) (3183) (3142) (3103) (3039) (NA) <sup>b</sup> (NA) <sup>b</sup>									

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Table A-11

Stimulants, Adjusted: Trends in Frequency of Use for Lifetime,  
Last Year, and Last Thirty Days and in Probability of Future Use

(Entries are percentages)

	<u>Class of 1973</u>	<u>Class of 1976</u>	<u>Class of 1977</u>	<u>Class of 1978</u>	<u>Class of 1979</u>	<u>Class of 1980</u>	<u>Class of 1981</u>	<u>Class of 1982</u>	<u>Class of 1983</u>
<u>Lifetime use<sup>a</sup></u>									
No occasions								72.1	73.1
1-2 occasions								7.9	8.3
3-5 occasions								4.5	4.0
6-9 occasions								3.0	3.4
10-19 occasions								3.6	3.4
20-39 occasions								3.0	2.7
40 or more								3.7	3.1
N =								(10631)	(9842)
<u>Use in last twelve months<sup>a</sup></u>									
No occasions								79.7	82.1
1-2 occasions								6.8	6.3
3-5 occasions								3.4	3.4
6-9 occasions								3.0	2.4
10-19 occasions								3.1	2.3
20-39 occasions								2.0	1.8
40 or more								2.1	1.6
N =								(10611)	(9807)
<u>Use in last thirty days<sup>a</sup></u>									
No occasions								89.3	91.1
1-2 occasions								4.7	4.1
3-5 occasions								2.4	1.8
6-9 occasions								1.6	1.2
10-19 occasions								1.2	1.0
20-39 occasions								0.9	0.6
40 or more								0.2	0.2
N =								(10601)	(9803)
<u>Probability of future use</u>									
Definitely will not								69.4	71.1
Probably will not								23.5	21.3
Probably will								6.2	6.7
Definitely will								0.8	0.9
N =								(3223)	(3303)



Table A-17

Barbiturates: Trends in Frequency of Use for Lifetime, Last Year,  
and Last Thirty Days and in Probability of Future Use

(Entries are percentages)

	Class of <u>1975</u>	Class of <u>1976</u>	Class of <u>1977</u>	Class of <u>1978</u>	Class of <u>1979</u>	Class of <u>1980</u>	Class of <u>1981</u>	Class of <u>1982</u>	Class of <u>1983</u>
<u>Lifetime use</u>									
No occasions	83.1	83.8	84.4	86.3	88.2	89.0	88.7	89.7	90.1
1-2 occasions	4.2	4.3	3.9	3.3	4.8	4.7	3.0	4.3	4.4
3-5 occasions	3.4	2.9	2.9	2.9	2.3	2.0	2.7	2.0	1.8
6-9 occasions	1.9	2.1	1.9	1.7	1.3	1.4	1.3	1.1	1.0
10-19 occasions	2.0	1.9	1.9	1.5	1.6	1.2	1.1	1.1	1.1
20-39 occasions	1.3	1.3	1.4	1.1	0.8	0.7	0.8	0.6	0.6
40 or more	2.0	1.6	1.6	1.2	0.9	1.0	0.9	0.9	0.9
N = (9297)	(14469)	(15146)	(18141)	(16078)	(15880)	(17425)	(17738)	(16359)	
<u>Use in last twelve months</u>									
No occasions	89.3	90.4	90.7	91.9	92.5	93.2	93.4	94.3	94.8
1-2 occasions	4.3	4.6	3.9	3.8	3.3	3.2	3.2	2.7	2.3
3-5 occasions	2.4	2.0	1.8	1.8	1.8	1.3	1.3	1.1	1.0
6-9 occasions	1.3	1.3	1.3	1.1	1.0	0.8	0.9	0.8	0.6
10-19 occasions	1.4	1.0	1.2	0.8	0.9	0.7	0.6	0.3	0.4
20-39 occasions	0.3	0.3	0.3	0.4	0.3	0.4	0.3	0.2	0.2
40 or more	0.3	0.4	0.4	0.3	0.2	0.3	0.2	0.3	0.2
N = (9282)	(14404)	(15118)	(18116)	(16017)	(15868)	(17613)	(17723)	(16334)	
<u>Use in last thirty days</u>									
No occasions	93.3	96.1	93.7	96.8	96.8	97.1	97.4	98.0	97.9
1-2 occasions	2.6	2.2	2.4	1.8	1.9	1.3	1.6	1.0	1.2
3-5 occasions	1.0	0.8	0.9	0.7	0.7	0.7	0.6	0.3	0.4
6-9 occasions	0.6	0.4	0.3	0.4	0.4	0.3	0.2	0.3	0.2
10-19 occasions	0.4	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2
20-39 occasions	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0
40 or more	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
N = (9286)	(14404)	(15103)	(18111)	(16012)	(15861)	(17610)	(17711)	(16343)	
<u>Probability of future use</u>									
Definitely will not	77.3	77.1	75.2	75.7	78.8	79.0	78.0	79.1	79.4
Probably will not	19.0	19.2	20.3	20.8	18.3	17.9	18.7	18.3	17.5
Probably will	3.1	3.1	4.0	2.9	2.3	2.3	2.6	1.9	2.0
Definitely will	0.6	0.3	0.6	0.6	0.6	0.7	0.7	0.6	1.0
N = (2893)	(3055)	(3443)	(3481)	(3102)	(3062)	(3349)	(3490)	(3272)	

Table A-1]

Tranquillizers: Trends in Frequency of Use for Lifetime, Last Year, and Last Thirty Days and in Probability of Future Use

(Entries are percentages)

	Class of <u>1975</u>	Class of <u>1976</u>	Class of <u>1977</u>	Class of <u>1978</u>	Class of <u>1979</u>	Class of <u>1980</u>	Class of <u>1981</u>	Class of <u>1982</u>	Class of <u>1983</u>
<u>Lifetime use</u>									
No occasions	83.0	83.2	82.0	83.0	83.7	84.8	85.3	86.0	86.7
1-2 occasions	7.8	7.5	7.8	7.7	7.7	7.4	7.5	7.2	6.6
3-5 occasions	3.1	3.4	3.3	3.7	3.2	3.0	2.8	2.8	2.7
6-9 occasions	2.1	2.0	2.1	1.9	1.7	1.5	1.4	1.3	1.3
10-19 occasions	1.6	1.7	2.1	1.7	1.6	1.4	1.4	1.2	1.2
20-39 occasions	1.0	1.0	1.2	0.9	0.9	0.8	0.8	0.6	0.7
40 or more	1.4	1.2	1.5	1.1	1.2	1.1	0.9	0.8	0.8
N =	(9523)	(15832)	(17574)	(18097)	(16029)	(15902)	(17676)	(17747)	(16401)
<u>Use in last twelve months</u>									
No occasions	89.4	89.7	89.2	90.1	90.4	91.3	92.0	93.0	93.1
1-2 occasions	5.4	5.2	5.1	5.3	4.9	4.8	4.4	4.0	3.8
3-5 occasions	2.2	2.2	1.9	2.1	2.1	1.6	1.5	1.4	1.4
6-9 occasions	1.2	1.3	1.4	1.0	1.1	1.0	1.0	0.6	0.7
10-19 occasions	0.9	0.8	1.1	0.8	0.9	0.7	0.6	0.6	0.5
20-39 occasions	0.3	0.4	0.3	0.4	0.4	0.4	0.3	0.3	0.3
40 or more	0.4	0.4	0.5	0.3	0.2	0.3	0.1	0.2	0.2
N =	(9518)	(15788)	(17538)	(18068)	(15994)	(15844)	(17598)	(17732)	(16383)
<u>Use in last thirty days</u>									
No occasions	95.9	96.0	95.4	96.6	96.3	96.9	97.3	97.6	97.5
1-2 occasions	2.4	2.3	2.5	2.1	2.2	1.8	1.6	1.5	1.5
3-5 occasions	0.9	0.8	1.0	0.7	0.8	0.7	0.6	0.4	0.5
6-9 occasions	0.5	0.4	0.5	0.4	0.3	0.3	0.3	0.2	0.3
10-19 occasions	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.2
20-39 occasions	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.1
40 or more	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1
N =	(9507)	(15782)	(17520)	(18053)	(15981)	(15857)	(17585)	(17723)	(16382)
<u>Probability of future use</u>									
Definitely will not	70.7	69.8	67.1	67.0	69.8	70.8	68.5	71.1	71.4
Probably will not	25.5	25.9	27.5	28.8	26.1	23.3	27.4	25.4	24.3
Probably will	3.4	3.8	4.7	3.7	3.4	3.5	3.5	2.8	3.5
Definitely will	0.6	0.5	0.8	0.5	0.7	0.4	0.6	0.6	0.8
N =	(2911)	(3031)	(3375)	(3436)	(3058)	(3010)	(3349)	(3450)	(3248)

Table A-14

Children: Trends in Frequency of Use for Lifetime, Last Year, and Last Thirty Days and in Probability of Future Use

	(Entries are percentages)									
	Class of 1973	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984
<u>Lifetime use</u>										
No occasions	91.0	90.3	89.2	87.1	84.6	80.3	81.3	84.0	81.1	81.4
1-2 occasions	4.3	3.1	3.4	6.7	7.0	6.3	7.2	6.9	7.3	7.3
3-5 occasions	2.0	2.0	1.9	2.5	2.8	2.9	3.1	3.0	3.0	3.0
6-9 occasions	0.9	1.0	1.2	1.4	1.7	2.0	1.8	2.1	1.8	1.8
10-19 occasions	0.8	0.7	1.1	1.0	1.6	1.9	1.8	1.7	1.7	1.7
20-39 occasions	0.3	0.3	0.3	0.6	0.9	1.1	1.1	1.0	1.1	1.2
40 or more	0.4	0.4	0.6	0.7	1.3	1.3	1.6	1.6	1.6	1.7
N = (9824)	(13930)	(17689)	(18203)	(16092)	(13963)	(17678)	(17791)	(16444)		
<u>Use in last twelve months</u>										
No occasions	94.4	94.0	92.8	91.0	88.0	87.7	87.6	88.3	88.4	88.4
1-2 occasions	3.3	3.3	4.0	3.1	3.9	3.9	3.8	3.4	3.8	3.8
3-5 occasions	1.0	1.2	1.3	1.7	2.3	2.6	2.6	2.3	2.4	2.4
6-9 occasions	0.6	0.6	0.9	0.9	1.6	1.6	1.3	1.4	1.2	1.2
10-19 occasions	0.4	0.4	0.5	0.7	1.1	1.2	1.3	1.2	1.1	1.1
20-39 occasions	0.2	0.2	0.2	0.3	0.5	0.5	0.6	0.5	0.3	0.3
40 or more	0.2	0.1	0.2	0.3	0.6	0.3	0.6	0.3	0.4	0.4
N = (9866)	(13910)	(17674)	(18178)	(16069)	(13922)	(17642)	(17776)	(16437)		
<u>Use in last thirty days</u>										
No occasions	98.1	98.0	97.1	96.1	94.3	94.8	94.2	93.0	93.1	93.1
1-2 occasions	1.2	1.4	1.9	2.3	3.5	3.2	3.3	3.1	3.2	3.2
3-5 occasions	0.4	0.3	0.6	0.8	1.1	1.0	1.1	0.9	0.9	0.9
6-9 occasions	0.1	0.2	0.3	0.4	0.3	0.3	0.7	0.3	0.3	0.3
10-19 occasions	0.0	0.1	0.1	0.2	0.3	0.3	0.4	0.3	0.2	0.2
20-39 occasions	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
40 or more	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.1
N = (9861)	(13904)	(17669)	(18173)	(16067)	(13927)	(17643)	(17764)	(16438)		
<u>Probability of future use</u>										
Definitely will not	81.2	79.3	77.1	74.6	73.9	73.9	73.3	73.6	72.5	72.5
Probably will not	13.1	13.7	14.7	17.6	16.2	16.9	17.3	16.0	13.0	13.0
Probably will	3.0	3.9	4.9	6.3	8.1	7.1	7.0	6.7	6.2	6.2
Definitely will	0.8	1.1	1.2	1.3	1.8	2.0	2.3	1.7	1.3	1.3
N = (2894)	(3071)	(3033)	(3313)	(3130)	(3106)	(3429)	(3056)	(3231)		

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Table A-15

Heading: Trends in Frequency of Use for Lifetime, Last Year, and Last Twelve Months and in Probability of Future Use

	(Entries are percentages)									
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984
<u>Lifetime use</u>										
No occasions	97.8	98.2	98.2	98.4	98.9	98.9	98.9	98.9	98.8	98.8
1-2 occasions	1.4	1.2	1.1	1.1	0.7	0.7	0.6	0.7	0.7	0.8
3-5 occasions	0.2	0.2	0.2	0.3	0.8	0.7	0.2	0.2	0.2	0.2
6-9 occasions	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1
10-19 occasions	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1
20-39 occasions	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
40 or more	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
N = (9494) (15893) (17609) (18161) (16033) (13893) (17639) (17733) (17764) (16378) (16378)										
<u>Use in last twelve months</u>										
No occasions	94.0	94.2	94.2	94.2	94.3	94.3	94.3	94.5	94.4	94.4
1-2 occasions	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3
3-5 occasions	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1
6-9 occasions	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1
10-19 occasions	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
20-39 occasions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40 or more	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1
N = (9323) (15893) (17602) (18162) (16033) (13896) (17633) (17764) (17764) (16376) (16376)										
<u>Use in last thirty days</u>										
No occasions	99.6	99.8	99.7	99.7	99.8	99.8	99.8	99.8	99.8	99.8
1-2 occasions	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
3-5 occasions	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
6-9 occasions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10-19 occasions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20-39 occasions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40 or more	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
N = (9327) (15894) (17601) (18162) (16033) (13891) (17633) (17764) (17764) (16377) (16377)										
<u>Probability of future use</u>										
Definitely will not	90.9	91.8	90.3	91.6	91.2	91.8	91.7	NA	NA	NA
Probably will not	8.2	7.4	8.6	7.5	8.0	6.9	7.3	NA	NA	NA
Probably will	0.3	0.3	0.3	0.4	0.3	0.6	0.4	NA	NA	NA
Definitely will	0.6	0.5	0.6	0.6	0.5	0.7	0.6	NA	NA	NA
N = (2847) (2780) (3370) (3416) (3063) (3023) (3343) (3343) (NA) (NA) (NA)										

NIDA, 1984

Table A-16  
 Other Opinions: Trends in Frequency of Use for Lifetime, Last Year,  
 and Last Thirty Days and in Probability of Future Use

(Entries are percentages)

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983
<b>Lifetime use</b>									
No occasions	91.0	90.4	89.7	90.1	89.9	90.2	89.9	90.4	90.6
1-2 occasions	3.7	4.6	4.3	4.7	4.7	4.3	4.7	4.9	4.6
3-5 occasions	1.7	2.0	2.0	2.1	2.3	2.0	2.3	1.9	1.8
6-9 occasions	0.9	0.9	1.3	1.1	1.1	1.3	1.0	1.0	1.1
10-19 occasions	1.2	0.9	0.9	0.9	1.0	1.1	0.9	0.9	0.8
20-39 occasions	0.5	0.4	0.7	0.5	0.5	0.4	0.4	0.3	0.3
40 or more	1.0	0.8	1.1	0.7	0.6	0.8	0.7	0.6	0.6
N = (9408) (13741) (17483) (17996) (15967) (13791) (17368) (17660) (16299)									
<b>Use in last twelve months</b>									
No occasions	96.3	94.3	93.6	94.0	93.8	93.7	94.1	94.7	94.9
1-2 occasions	2.6	3.2	3.1	3.2	3.3	3.0	3.2	3.0	2.9
3-5 occasions	1.1	1.1	1.3	1.2	1.3	1.3	1.3	1.0	0.9
6-9 occasions	0.8	0.6	0.6	0.7	0.8	0.8	0.7	0.5	0.6
10-19 occasions	0.6	0.4	0.7	0.6	0.5	0.6	0.4	0.3	0.4
20-39 occasions	0.2	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.1
40 or more	0.3	0.2	0.4	0.2	0.1	0.2	0.2	0.2	0.1
N = (9410) (13741) (17468) (17984) (15937) (13789) (17359) (17633) (16282)									
<b>Use in last thirty days</b>									
No occasions	97.3	98.0	97.2	97.9	97.6	97.6	97.9	98.2	98.2
1-2 occasions	1.0	1.2	1.6	1.2	1.4	1.4	1.2	1.1	1.0
3-5 occasions	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.5	0.4
6-9 occasions	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1
10-19 occasions	0.2	0.1	0.3	0.1	0.1	0.2	0.1	0.1	0.1
20-39 occasions	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1
40 or more	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0
N = (9404) (13738) (17460) (17973) (15946) (13774) (17320) (17446) (16281)									
<b>Probability of future use</b>									
Definitely will not	81.0	79.2	79.2	79.0	80.8	81.1	81.1	82.4	82.6
Probably will not	16.6	17.3	17.3	17.8	16.5	16.0	15.4	13.4	14.6
Probably will	1.9	2.9	2.9	2.7	2.2	2.3	2.6	1.7	2.0
Definitely will	0.6	0.5	0.6	0.5	0.6	0.7	0.7	0.6	0.7
N = (2888) (3044) (3419) (3492) (3119) (3072) (3414) (3463) (3287)									

APPENDIX B  
QUESTIONNAIRE  
MONITORING THE FUTURE

**To Whom It May Concern:**

This questionnaire is part of a statewide study of high school seniors in Tennessee. The questions asks specific questions about drug use practices.

If this study is to be helpful, it is important that you answer each question as thoughtfully and frankly as possible. All your answers will be kept strictly confidential, and will never be seen by anyone who knows you.

This study is completely voluntary. If there is any question that you or your parents would find objectionable for any reason, just leave it blank.

Other seniors have said that these questionnaires are very interesting and that they enjoy filling them out. We hope you will too. Be sure to read the instructions on the questionnaire before you begin to answer. Thank you very much for being an important part of this project.

Administer to 30 seniors (15 boys & 15 girls - randomly selected)

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Please Read Carefully to all Participants

This questionnaire is part of a statewide study of high school seniors. The questions ask for responses on a number of questions, particularly about drugs.

If this study is to be helpful, it is important that you answer each question as thoughtfully and frankly as possible. All your answers will be kept strictly confidential, and will never be seen by anyone who knows you.

Other seniors have said that this questionnaire is very interesting and that they enjoyed filling it out. I hope you will too. Be sure to read the instructions before you begin to answer. Thank you very much for being an important part of this project.

Directions To Follow

1. Read the statement above
2. Distribute questionnaire
3. Tell participants to circle the appropriate response
4. Emphasize confidentiality again
5. Tell participants to put questionnaires in box or on a table as they exit the room.



**PLEASE NOTE:**

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**These consist of pages:**

<u>Questionnaire</u>	<u>104-111</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

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VITA

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