DRUG USAGE AMONG COMMUNITY COLLEGE
STUDENTS: THEIR KNOWLEDGE,
ATTITUDES, AND PRACTICES

DISSERTATION

Presented to the Graduate Council of the
University of North Texas in Partial
Fulfillment of the Requirements

DOCTOR OF PHILOSOPHY

By

Sandra S. Reid, B.A., M.B.A.

Denton, Texas

August, 1998

The problem of this study concerned illicit psychoactive drug use among community college students. A non-experimental design methodology, a survey, was used in this study. The population consisted of 149 students at 14 randomly selected public community college institutions throughout the United States. Three waves of mailings took place to increase response rate.

Chapter 1 provides an introduction to the topic of illicit psychoactive drug usage by community college students. The statement of the problem, the purposes of the study, and the research questions are presented. The significance of the study, as well as the theoretical framework of the study are discussed. Also included are the assumptions and limitations of the study. In addition, the variables and key concepts of the study are defined. Chapter 2 contains a review of the literature on the use of illicit psychoactive drugs by students. Definitions of illicit psychoactive drugs are discussed, along with an examination of two theoretical perspectives--individual and structural--on the impact upon academic achievement of that drug usage by community college students. Chapter 3 contains a description of the study. The research design and research questions are presented. The selection of the population and the sample are also discussed. The instrument is described, along with the procedures for data collection and the statistical
treatment of the data. The analysis of the data is discussed in Chapter 4. Chapter 5 includes a summary of the research and a discussion of major findings. It ends with conclusions and recommendations for future research and practice.

Community college students appear to be knowledgeable regarding the deleterious physical and mental impact upon those who use drugs. Community college students appear to have a negative attitude toward drug use and toward those who use them. Community college students have an aversion to actual drug use. The illicit psychoactive drug of choice among community college students is marijuana.
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# TABLE OF CONTENTS

**LIST OF TABLES** ........................................... v

**Chapter**

1. **INTRODUCTION** ........................................... 1

   - Overview
   - Statement of the Problem
   - Purposes of the Study
   - Research Questions
   - Significance of the Study
   - Assumptions
   - Limitations
   - Definition of Terms
   - Summary and Organization of the Study

2. **REVIEW OF LITERATURE** ................................. 9

   - Drug Control Legislation
   - Trends in Drug Use
   - Summary

3. **PROCEDURES FOR THE COLLECTION AND ANALYSIS OF DATA** ........................................... 23

   - Introduction
   - Research Questions
   - Research Design
   - The Population
   - Selection of the Sample
   - Instrumentation
     - Drug Knowledge
     - Drug Attitudes
     - Drug Usage
Chapter Page

Miscellaneous
Procedures for Collection of Data
Data Analysis
Summary

4. PRESENTATION AND ANALYSIS OF DATA 33

Introduction
Demographic Characteristics of the Respondents
Statements Regarding Demographic Characteristics
Drug Education School Evaluation Instrument (DESEI)
Drug Knowledge of Community College Students
Drug Knowledge Statements
Attitudes of Community College Students Concerning Drug Usage
Drug Attitude Statements
Illicit Psychoactive Drug Use by Community College Students
Drug Use Statements

5. SUMMARY OF FINDINGS, CONCLUSIONS,
AND RECOMMENDATIONS 68

Summary of Major Findings
Statement of Purpose
Summary of Procedures
Major Findings
Discussion
Conclusions
Recommendations

APPENDIX A: QUESTIONNAIRE 82

APPENDIX B: INITIAL POSTCARD MAILING 90

APPENDIX C: COVER LETTER: INITIAL MAILING 92

APPENDIX D: POSTCARD FOR FOLLOW-UP MAILING 95
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPENDIX E: COVER LETTER FOR FINAL MAILING</td>
<td>97</td>
</tr>
<tr>
<td>APPENDIX F: COMMUNITY COLLEGES INCLUDED IN THE STUDY</td>
<td>99</td>
</tr>
<tr>
<td>APPENDIX G: FACULTY RANDOMLY SELECTED FOR MAILING OF SURVEY</td>
<td>102</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>106</td>
</tr>
</tbody>
</table>
LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Demographic Characteristics of the Respondents</td>
<td>34</td>
</tr>
<tr>
<td>2. Responses of Community College Students Indicating Knowledge of Illicit Psychoactive Drug Use and Summary of Chi-Square Goodness-of-Fit Tests</td>
<td>39</td>
</tr>
<tr>
<td>3. Responses of Community College Students Indicating Attitudes Toward Illicit Psychoactive Drug Use and Summary of Chi-Square Goodness-of-Fit Tests</td>
<td>51</td>
</tr>
<tr>
<td>4. Responses of Community College Students Indicating Drug Use and Summary of Chi-Square Goodness-of-Fit Tests</td>
<td>64</td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION

Overview

The use of junior college and university students and the related academic problems associated with that use have been, and continue to be, studied by researchers. The use of illicit psychoactive drugs is suspected but not confirmed to be a widespread problem among community college and university students. A time series study conducted by Johnston, O'Malley, and Bachman (1989) from 1975 to 1988 revealed the use of illicit psychoactive drugs among college students in general. However, the study did not differentiate between community college and university students.

The impact of the use of illicit psychoactive drugs may extend beyond simply the health of the individual community college student. Students may fall below their academic achievement potential; they may drop out before their graduation; or they may adversely affect the academic activities of other students. The specific impact may be influenced by the community college student’s actual use, knowledge, and attitude toward the use of illicit psychoactive drugs.

Faculty members are facing three difficulties in relation to students’ academic achievement to the extent that it is influenced by student use of illicit psychoactive drugs. The first difficulty is that many faculty members are unfamiliar with the impact of drug usage upon people in general and upon their students in particular. Secondly, faculty may
be untrained in the detection of the symptoms which may indicate that students are under
the influence of illicit psychoactive drugs. The third concern is the lack of administrative
opportunity to assist students who may need help. This inadequate opportunity is
associated with the commuter aspect of the community college environment and the ever-
increasing size of classes. The use of illicit psychoactive drugs by community college
students merits examination due to the potential effects upon the ability of faculty to
educate their students.

Statement of the Problem

The problem of this study concerned illicit psychoactive drug use among
community college students.

Purposes of the Study

The following were the purposes of this study: (a) to determine the knowledge of
community college students regarding illicit psychoactive drugs; (b) to determine the
attitudes of community college students toward illicit psychoactive drugs and their use;
(c) to determine the extent to which community college students use illicit psychoactive
drugs; and (d) to determine which illicit psychoactive drugs are used by community
college students.

Research Questions

The following questions were addressed in order to achieve the purposes of the
study:
1. What is the knowledge of community college students about illicit psychoactive drug usage?

2. What are the attitudes of community college students toward illicit psychoactive drugs?

3. To what extent do community college students use illicit psychoactive drugs?

4. Which, if any, illicit psychoactive drugs are used by community college students?

Significance of the Study

This study did not emerge as an isolated idea. The groundwork from which the research questions developed was based on research in higher education into problems associated with the overall student use of alcohol, cigarettes, and illicit and licit drugs. Previous research, however, did not differentiate between community college, university, or college student populations.

A time series study conducted by Johnston et al. (1989) from 1975 to 1988 revealed the use of illicit psychoactive drugs among college students. Two broad perspectives guided their research on the use of illicit psychoactive drugs: (a) individual approaches and (b) structural approaches. Individual approaches emphasize the particular needs, values, and dispositions that individuals bring into the classroom which shape their attitudes or ability to succeed academically and personally. The structural approach accentuates the academic environment and the way in which students learn. It assumes that the conditions of the academic setting have a significant impact on individuals,
thereby affecting academic achievement. The variables associated with the impact of illicit psychoactive drug usage upon the academic achievement of community college students included age, gender, grade point average, ethnic origin, and major in college. The structural sources of the impact of illicit psychoactive drug usage upon the academic achievement of community college students included drug knowledge, drug attitudes, and drug usage. The inclusion of the individual and structural influences noted above is discussed in chapter 2 and provides a conceptual framework for this study.

Many major societal benefits have accrued as a result of the study of alcohol use among university students. These benefits may include increased levels of student understanding regarding long-range side effects upon one’s health; student awareness as to the potential danger to other members of society as one drives or performs other movements while under the influence of alcohol; student awareness regarding the potential negative impact upon academic achievement; student employment marketability while in the academic setting as well as after leaving it; productivity level sustainability; student confidence in overall ability; and student awareness of the potential negative impact upon the ability to sustain relationships. Movement toward the eradication of the use of illicit psychoactive drugs may occur if understanding and awareness can be achieved.

Assumptions

This study was conducted on the basis of the following assumptions:

1. Illicit psychoactive drug usage can be reliably and accurately measured.
2. Respondents will report honestly and accurately when anonymously completing instruments that solicit information about their knowledge, attitudes, and use of illicit psychoactive drugs.

Limitations

The following limitations may have had an impact on the accuracy, validity, or generalizability of the study:

1. The study was subject to all the limitations inherent in survey research using a mailed questionnaire.

2. The fact that illicit psychoactive drug usage is illegal may have caused respondents to report dishonestly because of their fear of possible negative consequences.

3. The fact that the use of illicit psychoactive drugs is illegal may have caused some students not to respond at all to the survey.

Definition of Terms

The variables measured and related key concepts were defined as follows:

**Illicit psychoactive drugs**: All forms of illegal drugs such as cocaine, heroin, marijuana, crack, LSD, and other opiates.

**Community college**: Public and private institutions as classified by the 1994 Carnegie Classification of college and universities in the United States to the 2-year institutions of higher education.

**Drug abuse**: The nonmedical use of any drug in such a way that it adversely affects some aspect of the user's life (Hafen & Peterson, 1978).
Drug problem: The total effect on society of the adverse effects of nonmedical use of drugs (drug abuse)—not the physical effect on the individual (Hafen & Peterson, 1978).

Addiction: Dependence upon an illicit psychoactive drug, whether physical, social, or psychological (Wells, 1973).

Cross-dependence: The ability of one drug to suppress the manifestations of physical dependence produced by another to maintain the physically dependent state (Goodman & Gilman, 1970).

Summary and Organization of the Study

Chapter 1 provides an introduction to the topic of illicit psychoactive drug usage by community college students and the impact upon academic achievement. The statement of the problem, the purposes of the study, and the research questions are presented. The significance of the study, as well as the theoretical framework of the study, are discussed. Also included are the assumptions and limitations of the study. In addition, the variables and key concepts of the study are defined.

Chapter 2 contains a review of the literature on the use of illicit psychoactive drugs by students and the related impact upon academic achievement. Definitions of illicit psychoactive drugs are discussed, along with an examination of the two theoretical perspectives—an individual approach and a structural approach—on the impact upon academic achievement of that drug usage by community college students.
In chapter 3, the methodology of the study is described. The research design and research questions are presented. The selection of the population and the sample are also discussed. The instrument is described, along with the procedures for data collection and the statistical treatment of the data.

The analysis of data is discussed in chapter 4. Chapter 5 includes a summary of the research and a discussion of major findings. It ends with conclusions and recommendations for future research and practice.
CHAPTER 1 REFERENCES


CHAPTER 2

REVIEW OF LITERATURE

Drug Control Legislation

Extensive reviews of the literature reveal two definitive, and different, patterns of licit and illicit drug usage during the 19th and 20th centuries. The two distinct periods could be categorized as predrug control legislation and postdrug control legislation.

Until 1906 and the passage of the initial drug control legislation, the United States was a place for obtaining opium, morphine, and heroin easily (Brecher, 1972). Anyone could obtain unlimited quantities from a multitude of distributors such as physicians, drug stores, grocery and general stores, and mail order houses.

Early drug usage primarily involved pain killers, cough mixtures, consumption cures, and tranquilizers as treatments for what were described as female problems and for other forms of physical pain (Brecher, 1972). Opiates were used to treat physical illnesses (Musto, Kellcher, MacMurray, & Shapiro, 1983) and were not thought to cause deleterious effects any more than other environmental factors (Brecher, 1972). According to Brecher, up to and immediately after the Civil War, opiates were used to ease physical pain, and they were later used to relieve psychological pain. Prior to the early drug control legislation, physicians could also prescribe drugs to control addiction.
In the early 1800s, federal control over drug usage was thought to be unconstitutional (Musto et al., 1983). It was not until much later that evidence of the consequences—drug addiction and dependence—began to surface. Treatment for relief from anxiety, depression, and various mental disturbances and from the craving itself became common place (Brecher, 1972). As turmoil, civil unrest, and anxiety grew, the United States evolved ever closer to what was to become the Civil War (Cohen, 1981).

The profile of an addict in the 1800s was that of an aristocrat, one who was well educated, White, and most likely female (Brecher, 1972). It was during this time that only men could drink alcohol, so women would have been more inclined to resort to drug usage than would have men. The average age of an addict was 45 years or older. Brecher stated that, although opiate usage was considered to be immoral, users were not cut off from respectable society without a way back to respectability. Cocaine, for instance, was used as a means to break an opiate addiction. However, it was merely the exchange of one drug, or habit, for another (Erickson, Adlaf, Murray, & Smart, 1987). The emphasis of early reformers was, and continues to be, on drug usage itself, which is the fruit of the problem, not the root of the problem.

Most early reformers targeted the users out of fear of what they might do while under the influence of the drug. The South, for instance, feared the Blacks, and Westerners feared the Chinese (Musto et al., 1983). Rather than address the issues surrounding drug usage such as anxiety and depression, many reformers believed in total drug restriction (other than for medicinal purposes) but modified that position to allow for
the cravings of addicts. This position assumed that supply and demand could not be eliminated (Musto et al., 1983).

Bishop Charles Brent, during the early 1900s, played an important role as a reformer in the movement for drug control. He took the first moral approach to the problem of drug addiction and believed that any use other than medicinal was immoral and should be strictly prohibited (Musto et al., 1983). Closely aligned with Bishop Brent’s view was the opinion of reformer Samuel Hopkins Adams, who alleged in 1905 that there was great danger in the indiscriminate use of patent medicines. Adams argued that regulatory laws should be aimed at suppliers. Although the target for legislation and regulation was the suppliers, the focus was not on the actual usage itself (Musto et al., 1983).

Early state laws varied among the respective states and made actual control impossible. In every state there were loopholes, which prompted widespread abuse (Musto et al., 1983).

Hamilton Wright and Alexander Lambert are considered to be the founding fathers of American drug policy. They believed that those who wanted to be cured could be. Wright and Lambert (1928) believed that a distinction in social class was expressed in terms of personality differences. Those personality differences were determinants of who would become drug addicts; for example, an individual who was a nonconformist to societal norms would be more likely to use drugs than someone who was a conformist.
Wright and Lambert supported the belief that it was a person's right to choose whatever drug he or she wanted and for whatever purpose he or she chose.

The first law to control drugs, The Pure Food and Drug Act, was passed in 1906. The legislation required labeling to identify drug type and quantity; the act did not address actual drug usage. The law created higher profits in the pharmaceutical business because of the implied reduced supply and control of a particular drug (Helmer, Kellcher, MacMurray, & Shapiro, 1983).

Another act passed to target the control of drugs was the 1909 Act to Prohibit Importation and Use of Opium (Helmer et al., 1983). Opiates were already known to be addictive, and it was believed that there were no identified long-term cures. Many communities were established to form new ways of life, but the success rate was slow (Brecher, 1972).

The Harrison Narcotics Act of 1914 was a law aimed at prohibition. It began as a means of collecting taxes on anything to do with the distribution of drugs. The Harrison Act was strongly opposed because it was seen as a federal police function (Brecher, 1972).

Another historic and important outcome of the passage of the Harrison Act was that it interdicted the supply of legal opiates to addicts. Unfortunately, again there was no attempt to address the causes of drug usage. This opened the door for the black market, with contaminated products and unsafe conditions, yet no control (Brecher, 1972). The existence of the black market made it impossible to control, let alone eliminate, drug
addiction. Brecher stated that the reduction in use of one drug caused an increase in the use of another, not the elimination of either.

The next major piece of drug control legislation came in 1937 with the passage of the Marijuana Tax Act. This act was kept separate from the Harison Act of 1914 so that it could be used to control drug use without being a police function, which was considered to be unconstitutional (Musto et al., 1983).

The last major legislation regarding drug usage was the Comprehensive Drug Abuse Prevention and Control Act of 1970. This act deals with the prevention and treatment of drug abuse by appropriating funds for expanding the role of community mental health centers and public health service hospitals, institutions that develop programs for the treatment and rehabilitation of those in need (Ray, 1972).

These laws, however, have failed because they continue to ignore or not adequately address actual addiction and the reasons underlying it (Brecher, 1972). National drug policy has contributed to a rise in drug usage among young people and a shift away from the previously profiled user as a White, aristocratic female over the age of 45. Young people's widespread knowledge of drugs and their relative ease of access has lured them to the use of illicit psychoactive drugs (Brecher, 1972).

Passage of the initial drug control legislation in the United States, the Pure Food and Drug Act of 1906, marked the beginning of a national effort to legislate away the problem of drug addiction. The act reshaped public opinion from one of the sympathetic understanding toward the addict to one that was primarily concerned with merely labeling
types and quantities of drugs; it was the beginning of the dehumanization of the problems associated with any type of drug addiction. This period marked the definite shift toward where we are today in terms of drug use and abuse. The modern view is that drugs are taken in an attempt to cope with emotional disturbances (Jaffe, Goodman, & Gilman, 1970).

Trends in Drug Use

According to court, hospital, and prison records, a noticeable increase in the number of adolescent drug users occurred between 1910 and 1915. As many as 19 percent of the drug-related cases in New York were males under 21 years of age. To be admitted to an institution, users had to have started using at a much earlier age (Helmer et al., 1983). This trend or shift in the profile of the drug user was also present in other parts of the United States. These young men carried their addictions with them into the armed forces in World War I. The problem continued to spread so that of the total population in the armed services, it was estimated that 1 percent were addicted (Helmer et al., 1983).

By 1951, drug usage among adolescent had increased to epidemic proportions (Helmer et al., 1983). By this time, male addicts were believed to outnumber women five to one (Brecher, 1972), and drug use was common among American college students. Many reasons for taking illicit psychoactive drugs were documented, which included avoidance of interpersonal relationships, the creation of feelings of well-being, rebellion, religiosity, heightened insight, peer pressure, imitation of parents, curiosity, recreation, relaxation, and attempts to alter one's reality (Hafen & Peterson, 1978). It was also
thought that a major factor contributing to drug abuse was the availability of more types of drugs, as well as an increased supply (Ray, 1972). The commonality among illicit psychoactive drug users was an inability to tolerate frustration, anxiety, tension, mild depression, or other psychological discomforts (Dohner, 1972).

Since the late 1960s, there has been a gradual trend in drug use from college campuses to secondary to elementary schools (Seffrin & Seehafer, 1976). There has been a steady increase over the past decade, and a sizable portion of the teenage population has tried or has used drugs regularly. Many studies have been conducted as researchers have continued to try to understand the reasons behind drug addiction. In a study of four high schools and four junior high schools in the Midwest during 1975, out of a total of 3,402 subjects, a large proportion reported using drugs for fun and recreation with their peers and for social-recreational purposes (Seffrin & Seehafer, 1976).

Gleaton and Smith (1976), in a study conducted in rural and urban Georgia, found that one third of the 1,897 students they surveyed had used illicit psychoactive drugs. The respondents reported using drugs for recreational purposes. Further, in a 1975 national survey of high school students, it was found that up to 35 percent of those surveyed had used illicit psychoactive drugs as a proof of group membership (Gleaton & Smith, 1976).

Abelson and Fishburne (1976), in a national survey of adolescents in the United States, reported that evidence indicated that illicit psychoactive drug use was widespread among nearly one third of youth surveyed between the ages of 12 and 17. As many as
one half of those surveyed between the ages of 18 and 25 also reported using illicit psychoactive drugs. The study indicated that youth were more likely to experiment with drugs than had been prior generations. The national study by Kandel, Single, and Kessler (1976) corroborated the study by Abelson and Fishburne, also reporting that illicit psychoactive drug usage increased with age during adolescence. Kandel et al. found that a large portion of high school seniors had experimented with, or regularly used, illicit psychoactive drugs, with the peak age for use in their early 20s. However, the average age of first use was declining (Beschner & Friedman, 1979).

A study was conducted in 1979 by Kim and Newman (1982) at the Charlotte, North Carolina, Drug Education Center, which involved all public and private school students in Grades 5 through 12 in Mecklenburg County, North Carolina. Approximately 83,900 students were enrolled in the 113 public and private schools in the county. The sample of 14,594 students was drawn on the basis of cluster sampling. The survey questionnaire was completely anonymous, and random selection procedures were utilized as appropriate. Kim and Newman found that student drug involvement was associated with the students’ perception of lack of family cohesiveness; their perception of low self-esteem; their feelings of dissatisfaction with themselves and their life-styles; parental drug involvement; poor student-teacher relationships; the lack of value or importance that they ascribed to school; an increasing level of school absenteeism; their decreasing levels of positive social attitudes; an increasing level of peer drug involvement; and an attitudinal disposition which, in their opinion, is favorable toward drug use. The authors
also concluded from their study that adolescent drug involvement is largely a product of a multitude of social, psychological, physiological, and environmental factors.

Another study, conducted among 619 freshmen-level psychology students at Southwest Texas State University in 1980-1981, resulted in 17.7 percent of the students reporting that they perceived themselves to have drug abuse problems. The reasons for the use of illicit psychoactive drugs included parental emotional problems, parental rejection, angry parents, and physical abuse by parents. The students also reported feeling unappreciated, dependent, unstable, and dissatisfied (Wright & Moore, 1982).

The time series study conducted by Johnston et al. (1989) from 1975 to 1988 revealed the use of illicit psychoactive drugs among college students. The study did not differentiate between community college and university students. However, it was found that 54 percent of graduating high school seniors surveyed reported having used illicit psychoactive drugs.

Although it may seem obvious that the use of illicit psychoactive drugs has a negative impact upon academic achievement in the form of lower grades, lower academic aspirations, more school absences, more boredom, and lower feelings of importance, only one small local study was found in the literature that addressed the issue of academic achievement among those who use illicit psychoactive drugs. Paulson, Coombs, and Richardson (1990) conducted a study of 446 nine to seventeen-year-old students in towns in Ventura County, California. More research must be done on a national level before the results can be considered conclusive. However, the indication was that academic
aspirations were indeed lower among those tested than among those who did not use illicit psychoactive drugs.

Illicit psychoactive drug use research has tended to take an individual approach to understanding why one turns to drug use as a means of coping with emotional disturbances. This approach emphasizes the particular needs, values, and the dispositions that individuals bring to the classroom which shape their attitudes or ability to succeed academically and personally.

After an extensive review of the literature, it may be concluded that the structural approach, while it accentuates the academic environment and the way in which students learn, has not been addressed by those in academic research as it relates to the use of illicit psychoactive drug use by American community college students.

Summary

This chapter presents a review of the literature relating to the use of illicit psychoactive drug use in general and the use of illicit psychoactive drugs by American community college students in particular. Two theoretical perspectives on illicit psychoactive drug use were discussed—the individual approach and the structural approach. The individual influences include age, gender, grade point average, ethnic origin, and major in college. The structural influences include drug knowledge, drug attitudes, and drug usage. Major categorized motives for the use of illicit psychoactive drugs by adolescents and adults are curiosity, imitation or the desire to be like someone
else, peer pressure, well-being, instant achievement, relaxation, recreation, psychological support (escape or release), rebellion, insight or identity, aesthetics, or religiosity.
CHAPTER 2 REFERENCES


CHAPTER 3

PROCEDURES FOR THE COLLECTION AND ANALYSIS OF DATA

Introduction

The purpose of the study was to examine illicit psychoactive drug use among community college students at selected community colleges across the United States. A questionnaire was used to determine: (a) the knowledge of community college students regarding drugs, (b) the attitudes of community college students toward illicit psychoactive drugs and their use, (c) the extent to which community college students used illicit psychoactive drugs, (d) which illicit psychoactive drugs are used by community college students, (e) the gender of community college students who more often use illicit psychoactive drugs, and (f) the ages of community college students who use illicit psychoactive drugs.

This chapter is a discussion of the questionnaire used for data collection, along with the following topics: (a) the research questions that guided the study, (b) the research design, (c) selection of the population, (d) selection of the sample and the sampling method, (e) collection of the data, and (f) procedures for the analysis of the data.

Research Questions

The study was directed by the following research questions:

1. What is the knowledge of community college students about illicit psychoactive drug usage?
2. What are the attitudes of community college students toward illicit psychoactive drugs?

3. To what extent do community college students use illicit psychoactive drugs?

4. Which, if any, illicit psychoactive drugs are used by community college students?

Research Design

The research design employed in this study made use of a mailed survey and was exploratory and descriptive in nature. The questionnaire was used to collect data regarding illicit psychoactive drug use among community college students at selected community colleges across the United States. The mailed questionnaire was chosen for the following reasons: There were no geographic limitations; it was sent to educators at community colleges across the United States (see Appendixes F & G). The greater coverage offered by the mailed questionnaire yields greater external validity. It is also free from interviewer bias. When compared to the interview, this method is relatively inexpensive, and data can be collected in a shorter period of time. In addition, mailed questionnaires can offer greater reliability than personal or telephone interviews because respondents can take more time to think through their responses (Clover & Balsey, 1974).

There are, however, some disadvantages associated with the mailed questionnaire, the major one being the problem of nonresponse. To cope with this problem, El-Badry (1956) suggested that successive waves of questionnaires be sent to survey participants in an effort to achieve a higher response rate. This procedure was followed in the present.
Two groups of variables or variable sets were used in the design of the study. The two variable sets included (a) individual sources of illicit psychoactive drug usage among community college students and (b) structural sources of illicit psychoactive drug usage among community college students.

The Population

The population consisted of all students in community colleges throughout the United States. The first task was to identify community colleges to be included in the study. The ideal situation would have been to include all community colleges in the study. However, selection of the total population would be prohibitively expensive because there is, according to the 1996 edition of Peterson's 1997 Two-Year Colleges, a total of 1,414 public community colleges in the United States. The number of community colleges to be included in the study was set initially at 25, or 2 percent of the total possible 1,414, because it allowed for 1 college to be randomly selected for every two states within the United States. According to the principles of random sampling, selecting the colleges randomly increased the likelihood of obtaining a nonbiased sample that was representative of the population of community colleges throughout the United States. H. Burke Horton's (1949) Random Decimal Digits, a reference including a table of random numbers, was used to select the initial list of community colleges to be included in the study. There are 1,414 public community colleges in the United States. The first four digits of the numbers within the random number table were included if they fell within the numbers 1 to 1,414; otherwise, the number was passed until an appropriate
number was found. This process was continued until all 25 random numbers were selected.

The 1996 edition of Peterson's 1997 Two-Year Colleges, which lists all 1,414 public community colleges in the United States, was used to identify the specific 25 community colleges initially to be included in the study. Each community college was selected based upon the respective random numbers identified in the process above.

The next step was to send a postcard requesting a current catalog from each of the 25 institutions to be included in the study for the purpose of assimilating a listing of the current faculty members from which random faculty selections could be made. Random selection of the faculty was critical to increase the likelihood of obtaining a nonbiased sample of students (from within their respective classes) to be included in the study, which was representative of the student population in the community colleges throughout the United States. The initial wave of postcards was mailed out on January 2, 1997 (see Appendix B). In addition, each community college president of those institutions selected for inclusion in the study was sent a letter of formal request for permission to include the respective institution in the study prior to contacting any faculty members. An example of the letter sent to each of the initial group of presidents on January 17, 1997, is included as Appendix C. In 15 cases, no catalog was received. The random number table was again used to select more institutions for inclusion in the study. A total of 14 available institutions, 1 percent of the total possible 1,414 public community college in the United States, comprised the final convenience sample.
Selection of the Sample

The population of faculty members at each of the randomly selected institutions consisted of all faculty members who were currently teaching at least one course during the spring semester, 1997. The first step in the selection of the sample was to determine the faculty sample size. Two professors were randomly selected from each of the 14 community colleges, which had themselves been selected according to random selection procedures. A typical class size was assumed to consist of approximately 25 students. A maximum total of 50 students per institution was selected to be included in the study. The next step in the selection of the sample was to ensure adequate representation of all community college students. The number needed was based upon an alpha level of .05, power of .80, and an effect size of .50, all of which were established a priori. The total estimated sample size was calculated at 700 (14 institutions x 2 faculty members per institution) x 25 students per class.

Instrumentation

The design of the questionnaire was related to the conceptual framework of the study discussed in chapter 1. The solicited information related to individual and structural sources of illicit psychoactive drug usage among community college students. The questionnaire, which was adapted from the Drug Education School Evaluation (DESEI) Instrument developed by Sehwan Kim at the Charlotte Drug Center in Charlotte, North Carolina (Kim, 1981), is included as Appendix A. The following discussion describes the instrument.
The DESEI was developed in 1979 by Sehwan Kim for use among high schools in Mecklenburg County, North Carolina. The instrument consists of 70 items designed to elicit information pertaining to student knowledge and attitudes toward illicit psychoactive drugs. Part 3 of the instrument addresses actual drug usage among students (Kim, 1990).

**Drug Knowledge**

This section of the questionnaire contains 25 true-false questions pertaining to the overall knowledge of the individual regarding illicit psychoactive drugs and the effects upon one’s health.

**Drug Attitudes**

This section of the questionnaire contains questions pertaining to the attitudes of individuals regarding those who use illicit psychoactive drugs. Thirty questions are in the section of the questionnaire. A 5-point Likert scale was used for each of the 30 questions, with the response options ranging from **strongly agree** to **strongly disagree**.

**Drug Usage**

This section of the questionnaire contains 10 questions relating to the impact of illicit psychoactive drug usage upon academic achievement. The questions address the actual usage of specific illicit psychoactive drugs, such as cocaine and marijuana, by the community college students surveyed.
Miscellaneous

This final section of the questionnaire contains questions pertaining to the demographic variables of gender, grade point average, age, ethnic origin, and major in colleges.

The reported reliability of the Drug Education School Evaluation Instrument used was 0.83 (Kim, 1981). Validity of the instrument has been determined via panels of experts representing high schools and institutions of higher education.

Procedures for Collection of Data

Before the data were collected, approval was obtained from the University of North Texas for the investigation involving the use of human subjects. El-Badry (1956) has suggested that successive waves of questionnaires be sent to survey participants in an effort to achieve a higher response rate. Three waves of mailings were employed in this study. The waves occurred in 2-week intervals.

The first wave was the initial mailing on April 14, 1997. A packet including a cover letter (Appendix C), the questionnaire (Appendix A), and a postage-paid return envelope was mailed to 28 randomly selected community college faculty included in the sample. This date was chosen in an effort to increase the response rate. It was with the anticipation that the survey could be administered prior to the end of the semester. The cover letter requested that responses be returned by no later than May 2, 1997.

Twenty-three postcards (Appendix D) were mailed on April 27, 1997, to those faculty members who were included in the initial mailing but who had not responded with
returned questionnaires. The postcards were brief, reminding the professors that they had received a questionnaire and asking for a response.

During the period of April 27 through May 2, 1997, notice was received from four of the initial mailings that the faculty member either was not currently teaching or did not have time to administer the survey. A table of random numbers was used to select four replacement faculty members from those specific institutions to be included in the study. This mailing included the same cover letter, the same questionnaire, and a postage-paid return envelope.

The final mailing was sent to the 18 nonrespondents on May 11, 1997, two weeks after the postcards were mailed. It included a cover letter (Appendix E), the questionnaire, and a postage-paid return envelope.

A total of 149 questionnaires was returned, yielding a 21 percent return rate. The response rate was much lower than desired. However, a low response rate was not completely unanticipated due to the illegality of psychoactive drug usage. This was despite the fact that everyone receiving the questionnaire was assured of anonymity throughout the research and dissemination process.

Information on single-item questions and scores from the measurement instrument noted above were then entered into a DOS-based computer system at the University of North Texas Computing Center, Denton, so that statistical data analyses could be performed.
Data Analysis

The analyses of data were performed using the Statistical Package for the Social Sciences (SPSS). Data were analyzed for descriptive and exploratory purposes. Chi-square goodness-of-fit tests using specified expected frequencies were performed on each statement and each corresponding distribution of responses. Against the hypothetical and statistical model of expected responses, the actual observed percentage distributions were tested for goodness of fit at the .05 probability level. These comparisons and tests made it possible to determine whether the observed frequencies reported were statistically significant or were attributable to chance. Demographic data were analyzed in terms of frequencies and percentages to give a portrait of community college students who comprised the sample.

Summary

A non-experimental design methodology, survey, was used in this study. The population consisted of 149 students at 14 randomly selected public community college institutions throughout the United States. A random sample was selected of two faculty members at each institution for mailing of the questionnaires for actual administration. A total of 700 questionnaires was sent. To increase response rate, the mailings took place in three waves. A total of 149 completed questionnaires was returned (21% response rate).
CHAPTER 3 REFERENCES


CHAPTER 4

PRESENTATION AND ANALYSIS OF DATA

Introduction

The intent of this study was to investigate illicit psychoactive drug use among community college students. A mailed questionnaire was used to collect data from a sample of 700 community college students throughout the United States. A total of 149 completed questionnaires was returned.

This chapter reports the data and the results of the statistical analyses conducted according to the four research questions specified in chapter 1. The results are presented under four main sections: (a) demographic characteristics of the respondents; (b) drug knowledge; (c) drug attitudes; and (d) drug usage.

Demographic Characteristics of the Respondents

In an effort accurately to depict community college students data related to demographics were collected. The characteristics of the respondents are summarized in Table 1.

Statements Regarding Demographic Characteristics

Five statements comprised the demographic characteristics section. The data for each statement are discussed in the following subsections (see Table 1).
Table 1

Demographic Characteristics of the Respondents

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>52</td>
<td>38.0</td>
</tr>
<tr>
<td>Female</td>
<td>85</td>
<td>62.0</td>
</tr>
<tr>
<td><strong>Total respondents</strong></td>
<td>137</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Grade point average (GPA)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.5 to 4.0</td>
<td>46</td>
<td>34.3</td>
</tr>
<tr>
<td>3.0 to 3.5</td>
<td>50</td>
<td>37.3</td>
</tr>
<tr>
<td>2.5 to 3.0</td>
<td>36</td>
<td>26.9</td>
</tr>
<tr>
<td>2.0 to 2.5</td>
<td>2</td>
<td>1.5</td>
</tr>
<tr>
<td><strong>Total respondents</strong></td>
<td>134</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>to 21</td>
<td>56</td>
<td>40.6</td>
</tr>
<tr>
<td>to 25</td>
<td>30</td>
<td>21.7</td>
</tr>
<tr>
<td>to 30</td>
<td>23</td>
<td>16.7</td>
</tr>
<tr>
<td>to 35</td>
<td>11</td>
<td>8.0</td>
</tr>
<tr>
<td>to 40</td>
<td>9</td>
<td>6.5</td>
</tr>
<tr>
<td>to 45</td>
<td>6</td>
<td>4.3</td>
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</table>

(table continues)
Table 1 (continued)

Demographic Characteristics of the Respondents

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>over 45</td>
<td>3</td>
<td>2.2</td>
</tr>
<tr>
<td><strong>Total respondents</strong></td>
<td>138</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Race

<table>
<thead>
<tr>
<th>Race</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian/Alaskan Native</td>
<td>3</td>
<td>2.2</td>
</tr>
<tr>
<td>Black/African American</td>
<td>32</td>
<td>23.5</td>
</tr>
<tr>
<td>White/Caucasian</td>
<td>98</td>
<td>72.1</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Hispanic</td>
<td>3</td>
<td>2.2</td>
</tr>
<tr>
<td><strong>Total respondents</strong></td>
<td>136</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Major in college

<table>
<thead>
<tr>
<th>Major in college</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing</td>
<td>8</td>
<td>5.8</td>
</tr>
<tr>
<td>Education</td>
<td>29</td>
<td>21.0</td>
</tr>
<tr>
<td>Social Work</td>
<td>8</td>
<td>5.8</td>
</tr>
<tr>
<td>Medical</td>
<td>10</td>
<td>7.2</td>
</tr>
<tr>
<td>Law enforcement</td>
<td>24</td>
<td>17.4</td>
</tr>
<tr>
<td>Business</td>
<td>23</td>
<td>16.7</td>
</tr>
<tr>
<td>Graphic Design</td>
<td>2</td>
<td>1.4</td>
</tr>
<tr>
<td>Engineering</td>
<td>5</td>
<td>3.6</td>
</tr>
</tbody>
</table>

(table continues)
Table 1 (continued)

Demographic Characteristics of the Respondents

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel industry</td>
<td>2</td>
<td>1.4</td>
</tr>
<tr>
<td>Computer science</td>
<td>10</td>
<td>7.2</td>
</tr>
<tr>
<td>Applied science</td>
<td>3</td>
<td>2.2</td>
</tr>
<tr>
<td>Legal secretary</td>
<td>1</td>
<td>0.7</td>
</tr>
<tr>
<td>Environmental</td>
<td>2</td>
<td>1.4</td>
</tr>
<tr>
<td>Economics</td>
<td>1</td>
<td>0.7</td>
</tr>
<tr>
<td>Liberal arts</td>
<td>4</td>
<td>2.9</td>
</tr>
<tr>
<td>Communications</td>
<td>2</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Total respondents</strong></td>
<td><strong>138</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Of the 137 students responding to the gender question, only 38.0 percent were male, with females representing 62.0 percent. The expected distribution was one-half male and one-half female.

The next questionnaire item concerned responding students' grade point average. While the expected distribution of the four designated categories (3.5 to 4.0, 3.0 to 3.5, 2.5 to 3.0, and 2.0 to 2.5) was 25.0 percent, respectively, only the 2.5 to 3.0 range approximated that amount, at 26.9 percent of the respondents. In the 3.5 to 4.0 category were 34.3 percent of the respondents. The 3.0 to 3.5 included 37.3 percent of the students responding, and only 1.5 percent admitted to a grade point average of 2.0 to 2.5.
The ages of those responding to this item ranged from 21 years to over 45 years. Of the total 138 respondents, 40.6 percent were up to 21 years old; 21.7 percent were aged 22 to 25; 16.7 percent were 26 to 30; 8.0 percent were 31 to 35; 6.5 percent were 36 to 40; 4.3 percent were 41 to 45; and those over 45 included only 2.2 percent of the total responding students.

Only 2.2 percent of the total 136 responding community college students were from American Indian/Alaskan Native origins. The greatest percentage of respondents were African American (23.5%) and Caucasian (72.1%). There were no reported respondents from the Asian/Pacific Islander ethnic groups, and only 2.2 percent were from Hispanics.

There was a total of 16 declared majors from the 138 community college respondents and also a group that was undecided. Education majors made up the majority at 21.0 percent, with law enforcement at 17.4 percent, and business at 16.7 percent of the total responding to this item. Nursing and social work majors were each at 5.8 percent; medical and computer science each at 7.2 percent; undecided, travel industry, environmental, and graphic design all at 1.4 percent; economics and legal secretary both at 0.7 percent; and liberal arts and communication majors at 2.9 percent, respectively, of the total respondents.

Drug Education School Evaluation Instrument (DESEI)

The first research question concerned the depth of knowledge of community college students regarding illicit psychoactive drugs and their use. The first section of the
survey instrument included 25 questions concerning how extensive their knowledge was of the short- and long-term physical impact upon someone who uses drugs.

Drug Knowledge of Community College Students

The data in Table 2 represent the percentages of responses from community college students to each of the 25 questionnaire statements pertaining to their knowledge about the use of illicit psychoactive drugs. The data in Table 2 provide the percentages of community college students who responded in certain ways to each drug knowledge statement. For this reason, chi-square goodness-of-fit tests using specified expected frequencies were applied to each statement and each corresponding distribution of responses.

The following part of the analysis was in response to Research Question 1: "What is the knowledge of community college students about illicit psychoactive drug usage?" A statistical procedure recommended by Snedecor and Cochran (1980) was used in the calculation of chi-square goodness-of-fit tests.

The response categories for each drug knowledge statement were 1 (true), 2 (false), and 3 (don't know). According to chance, it would be expected that each of the three response categories would contain one third (33.3%) of all community college student responses per drug knowledge statement.
### Table 2

**Responses of Community College Students Indicating Knowledge of Illicit Psychoactive Drug Use and Summary of Chi-square Goodness-of-Fit Tests**

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Number of responses</th>
<th>Distribution of responses</th>
<th>Chi-square with 2 D. F.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>147</td>
<td>46.9% 5.4% 47.6%</td>
<td>51.47*</td>
</tr>
<tr>
<td>2</td>
<td>149</td>
<td>68.5% 21.5% 10.1%</td>
<td>85.62*</td>
</tr>
<tr>
<td>3</td>
<td>148</td>
<td>8.1% 79.1% 12.8%</td>
<td>139.72*</td>
</tr>
<tr>
<td>4</td>
<td>149</td>
<td>7.4% 53.0% 39.6%</td>
<td>49.18*</td>
</tr>
<tr>
<td>5</td>
<td>148</td>
<td>3.4% 66.9% 29.7%</td>
<td>90.42*</td>
</tr>
<tr>
<td>6</td>
<td>149</td>
<td>40.3% 31.5% 28.2%</td>
<td>3.48</td>
</tr>
<tr>
<td>7</td>
<td>148</td>
<td>45.9% 16.9% 37.2%</td>
<td>19.72*</td>
</tr>
<tr>
<td>8</td>
<td>149</td>
<td>56.4% 8.7% 34.9%</td>
<td>50.91*</td>
</tr>
<tr>
<td>9</td>
<td>149</td>
<td>47.0% 8.1% 45.0%</td>
<td>42.94*</td>
</tr>
<tr>
<td>10</td>
<td>149</td>
<td>78.5% 0.7% 20.8%</td>
<td>145.99*</td>
</tr>
<tr>
<td>11</td>
<td>149</td>
<td>55.7% 10.1% 34.2%</td>
<td>46.60*</td>
</tr>
<tr>
<td>12</td>
<td>149</td>
<td>77.9% 2.7% 19.5%</td>
<td>139.18*</td>
</tr>
<tr>
<td>13</td>
<td>149</td>
<td>48.3% 35.6% 16.1%</td>
<td>23.53*</td>
</tr>
<tr>
<td>14</td>
<td>149</td>
<td>8.1% 83.2% 8.7%</td>
<td>166.89*</td>
</tr>
<tr>
<td>15</td>
<td>149</td>
<td>66.4% 5.4% 28.2%</td>
<td>85.14*</td>
</tr>
</tbody>
</table>

*(table continues)*
Table 2 (continued)

**Responses of Community College Students Indicating Knowledge of Illicit Psychoactive Drug Use and Summary of Chi-square Goodness-of-Fit Tests**

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Number of responses</th>
<th>Distribution of responses</th>
<th>Chi-square with 2 D. F.</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>149</td>
<td>76.5% 8.1% 15.4%</td>
<td>126.22*</td>
</tr>
<tr>
<td>17</td>
<td>149</td>
<td>55.0% 7.4% 37.6%</td>
<td>51.96*</td>
</tr>
<tr>
<td>18</td>
<td>149</td>
<td>77.9% 6.0% 16.1%</td>
<td>135.15*</td>
</tr>
<tr>
<td>19</td>
<td>147</td>
<td>23.1% 66.7% 10.2%</td>
<td>77.18*</td>
</tr>
<tr>
<td>20</td>
<td>147</td>
<td>73.5% 9.5% 17.0%</td>
<td>107.80*</td>
</tr>
<tr>
<td>21</td>
<td>147</td>
<td>68.7% 18.4% 12.9%</td>
<td>83.43*</td>
</tr>
<tr>
<td>22</td>
<td>147</td>
<td>7.5% 63.3% 29.3%</td>
<td>69.71*</td>
</tr>
<tr>
<td>23</td>
<td>144</td>
<td>34.0% 43.1% 22.9%</td>
<td>8.79*</td>
</tr>
<tr>
<td>24</td>
<td>144</td>
<td>8.3% 84.0% 7.6%</td>
<td>166.54*</td>
</tr>
<tr>
<td>25</td>
<td>144</td>
<td>6.9% 75.7% 17.4%</td>
<td>118.63*</td>
</tr>
</tbody>
</table>

*Significant at p = .05.

In the calculations of chi-square goodness-of-fit tests reported in Table 2, the specified frequencies of 33.3 percent for each response category for each drug knowledge statement was the statistical model for comparing observed responses of community college students. Against this hypothetical and statistical model of expected responses,
the actual observed percentage distributions were tested for goodness of fit at the .05 probability level. These comparisons and tests made it possible to determine whether the observed frequencies reported in Table 2 were statistically significant or attributable to chance. The same procedure was followed when analyzing data concerning community college students' knowledge of illicit psychoactive drug use. With two degrees of freedom (\(N - 1\), where \(N\) equals the total number of response categories per statement), a minimum calculated chi-square value of 5.99 was required for significance at the .05 probability level (Snedecor & Cochran, 1980).

Drug Knowledge Statements

Twenty-five statements comprised the drug knowledge section. The data for each statement are discussed in the following subsections (see Table 2).

**Item 1**—Approximately one half of the responding students (46.9%) believed that heroin is an opiate. Almost one half of the responding students (47.6%) did not know whether or not heroin is an opiate. The percentage of students who believed that heroin is not an opiate (5.4%) was considerably lower than what would be expected under a null hypothesis (33.3%). The calculated chi-square of 51.47 is significant at the .05 probability level.

Of the responding students, 68.5 percent believed that it is possible to become physically addicted to marijuana. Slightly more than 20 percent (21.5%) of the responding students believed that it is not possible to become physically addicted to marijuana. The percentage who did not know whether marijuana is physically addictive
or not was 10.1. The calculated chi-square of 85.62 indicates the significant departure of
the observed from the expected distribution of responses.

Slightly more than three fourths (79.1%) of the responding students did not agree
that marijuana can improve short-term memory. However, 8.1 percent of the respondents
did believe that marijuana can improve short-term memory. The remaining 12.8 percent
did not know whether marijuana can improve short-term memory. The calculated chi-

square of 139.72 indicates the significant lack of goodness of fit between observed and
expected distributions.

Item 4--The percentage of responding community college students who believed
that a barbiturate overdose is relatively easy to handle medically (7.4%) was far less than
the 33.3 percent expected according to chance. A total of 53.0 percent of the respondents
believed that a barbiturate overdose is not relatively easy to handle medically. Those who
did not know whether a barbiturate overdose is relatively easy to handle medically
(39.6%) approximated the percentages that would be expected under the null hypothesis
(33.3%). The calculated chi-square of 48.18 illustrates the significant departure of the
observed from the expected distribution of responses.

Item 5--This item asked whether or not it is safe to encourage a barbiturate addict
to quit “cold turkey” without medical supervision. Of the 148 responding students, two
thirds (66.9%) believed that it is not safe to encourage a barbiturate addict to quit “cold
turkey” without medical supervision. The percentage of who did not have knowledge
regarding the safety of quitting a barbiturate addiction “cold turkey” without medical
supervision (29.7%) was slightly less than the percentage that would be expected under the null hypothesis (33.3%). The percentage of those who believed it is safe to encourage a barbiturate addict to quit "cold turkey" without medical supervision (3.4%) was significantly below the expected null hypothesis (33.3%). The calculated chi-square of 90.42 is significant at the .05 probability level.

Item 6--According to the null hypothesis of no difference between and among community college students in their responses as to whether or not marijuana makes the pupils in the user's eyes larger, 33.3 percent of those who were surveyed should have believed the statement to be true, while one third should have believed the statement to be untrue, and one third should not have known whether the statement was true or false. The actual percentage was 40.3 percent of those who responded true to this question. Almost one third (31.5%) of the responding students believed the statement to be false. The proportion of students who did not know if the statement was true or false was 28.2 percent, slightly below the expected 33.3%. The calculated chi-square of 3.48 is not significant at the .05 probability level.

Item 7--Almost one half (45.9%) of the responding students believed that stimulants make the pupils in the user's eyes larger, whereas 37.2 percent of the respondents did not know. Only 16.9 percent of the respondents believed that stimulants do not make the pupils in the user's eyes larger. The calculated chi-square 19.72 indicates a significant departure of the observed from the expected distribution of responses.
Item 8--More than one half (56.4%) of the responding students believed that all psychoactive drugs have the potential to produce psychological dependence. The proportion of students who did not know (34.9%) whether or not all psychoactive drugs have the potential to produce psychological dependence was slightly above the 33.3 percent expected. Only 8.7 percent believed all psychoactive drugs do not have the potential to produce psychological dependence. The departure of the observed distribution from the distribution expected is significant (chi-square = 50.91).

Item 9--Of the 149 students who completed this drug knowledge statement, the distribution of those who believed that, when two depressant drugs are taken in combination, each one increases the depressant effect of the other one (47.0%) was almost identical to the percentage of those who did not know (45.0%). Only 8.1 percent believed the statement to be false. The calculated chi-square of 42.94 is significant at the .05 probability level.

Item 10--Can heavy long-term use of cocaine or amphetamines cause extreme anxiety and paranoia? The majority of the responding students (78.3%) believed that it can. Fewer students (20.8%) than expected (33.3%) did not know. Only 0.7% believed the statement to be untrue. The lack of goodness of fit (145.99) between the observed distribution of responses and the expected distribution is significant.

Item 11--This item asked whether or not withdrawal from a depressant is characterized by anxiety. Slightly over one half (55.7%) of the responding students believed that withdrawal from a depressant is characterized by anxiety. Whereas slightly
more than the expected proportion (33.3%) did not know (34.2%). Only 10.1 percent of
the respondents believed the statement to be false. The calculated chi-square of 46.60
indicates the significant lack of goodness of fit between observed and expected
distributions.

**Item 12**—More than three fourths (77.9%) of the responding community college
students believed that it is possible to become physically addicted to Valium. The
proportion of those who did not know (19.5%) was 13.8 percentage points below the 33.3
percent expected. Only 2.7 percent believed that it is not possible to become physically
addicted to Valium. The calculated chi-square of 139.18 is significant at the .05
probability level.

**Item 13**—Of the 149 student respondents, 48.3 percent believed that a person
usually has no warning before becoming an addict. While 35.6 percent of those
responding believed that a person usually does have a warning before becoming an
addict, 16.1 percent responded that they did not know. The departure of the observed
distribution from the distribution expected is significant (chi-square = 23.53).

**Item 14**—A majority (83.2%) of the responding students believed that marijuana is
harmful. The percentage of students who believed marijuana is harmless (8.1%) was
considerably lower than what would be expected under the null hypothesis (33.3%).
Fewer than 10 percent (8.7%) did not know whether marijuana is harmful. The
calculated chi-square of 166.89 is highly significant at the .05 probability level.
Item 15--This item tested the respondents' knowledge concerning whether or not hallucinogens are more likely to cause dream images than stimulants. The percentage of responding students who believed the statement to be true was 66.4, which was double the expected 33.3 percent. The percentage of those who did not know (28.2%) was slightly below that expected (33.3%). Only 5.4 percent believed that hallucinogens are not more likely to cause dream images than are stimulants. The calculated chi-square of 85.14 indicates the significant lack of goodness of fit between observed and expected distributions.

Item 16--The majority (76.5%) of student respondents believed that when the body becomes used to drugs, tolerance is developed. The percentage of students who believed that the body does not develop a tolerance to drug usage (8.1%) was considerably lower than what would be expected under a null hypothesis (33.3%). The percentage of students who responded that they did not know whether the body builds up a tolerance to drug usage (15.4%) was also significantly below the expected 33.3 percent. The calculated chi-square of 126.22 indicates the significance of the observed distribution of responses in their departure from distribution expected.

Item 17--when asked whether or not a person who has taken an amphetamine is likely to be talkative and restless, 55.0 percent of the responding students believed it to be true. The percentage of those responding that they did not know was 37.6, and only 7.4 percent believed that a person who has taken an amphetamine is not likely to be talkative and restless. The calculated chi-square of 51.96 is significant at the .05 probability level.
**Item 18**—A majority (77.9%) of the responding students believed that cocaine causes physical dependence. The percentage of students who believed that cocaine does not cause physical dependence (6.0%) was considerably lower than what would be expected under a null hypotheses (33.3%). The percentage of students who did not know whether cocaine causes physical dependence (16.1%) was also lower than expected (33.3%). The calculated chi-square of 135.15 indicates the significant departure of the observed from the expected distribution of responses.

**Item 19**—The percentage of responding students who believed the statement “If someone is drunk, giving them coffee will help them get better” to be false was 66.7%, which was 100 percent greater than the expected (33.3%), whereas only 23.1 percent believed the statement to be true. Only 10.2 percent of the respondents did not know whether giving coffee to someone who is drunk helps them get better. The calculated chi-square of 7.18 indicates the significance of the observed distribution of responses in their departure from the distribution expected.

**Item 20**—The proportion of responding students who believed that brain damage can result from drinking too much alcohol was 73.5 percent. Fewer than the 33.3 percent expected (9.5%) did not believe that brain damage can result from drinking too much alcohol, and 17.0 percent of the responding students stated that they did not know. The calculated chi-square of 107.80 is significant.

**Item 21**—A majority (68.7%) of the 147 student respondents believed that, next to marijuana, alcohol is the most abused drug in the United States. Fewer than the 33.3
percent expected (18.4%) did not believe the statement. Only 12.9 percent of those responding stated that they did not know whether or not, next to marijuana, alcohol is the most abused drug in the United States. The calculated chi-square of 83.43 is significant at $p = .05$.

**Item 22**—A small minority of the responding students (7.5%) believed that barbiturate addicts need no medical help to overcome their addiction. Almost two thirds (63.3%) of the respondents believed that barbiturate addicts do need medical help to overcome their addiction. Slightly fewer than one third (29.3%) of the 147 responding students did not know whether medical assistance would be needed. The calculated chi-square of 69.71 is significant.

**Item 23**—Slightly more than one third (34.0%) of those responding believed that stimulants slow down the activity of the central nervous system. Almost one half (43.1%) of the respondents did not believe that stimulants slow down the activity of the central nervous system. Of the 144 responding students, 22.9 percent did not know whether stimulants slow down the activity of the central nervous system. The calculated chi-square of 8.79 indicates the significant departure of the observed distribution of responses from the expected distribution.

**Item 24**—A majority (84.0%) of those responding believed the statement “Those who have will power can take almost any drug and stop when they want to” to be false. Only 8.3 percent of the respondents believed the statement to be true, whereas 7.6 percent
responded that they did not know. The calculated chi-square of 166.54 is significant at the .05 probability level.

**Item 25**—Are people who use stimulants such as "pep pills" or "speed" able to stop any time they want to? A majority of the responding community college students (75.7%) do not believe people who use stimulants can stop any time they want to, whereas 6.9 percent believe they can. Fewer students (17.4%) than expected (33.3%) did not know whether it is possible to stop at any time. The departure of the observed distribution from the distribution expected is significant (chi-square = 118.63).

**Attitudes of Community College Students Concerning Drug Usage**

The second major research question concerned the attitudes of community college students toward illicit psychoactive drugs. The statistical procedures for analyzing the data were precisely those used for analyzing the data in the previous section on drug knowledge, with one exception. With four degrees of freedom (N - 1), where N equals the total number of response categories per statement), a minimum calculated chi-square value of 9.49 was required for significance at the .05 probability level (Snedecor & Cochran, 1980).

The response categories for each drug attitude statement were 1 (strongly agree), 2 (agree), 3 (not sure), 4 (disagree), and 5 (strongly disagree). According to chance, it would be expected that each of the five response categories would contain one fifth (20.0%) of all community college student responses per drug attitude statement.
Drug Attitude Statements

Thirty statements comprised the drug attitude section. The data for each statement are discussed in the following subsections (see Table 3).

**Item 26**—The proportion of the responding students who strongly agreed (10.9%) that students who use illegal drugs give other students a bad name was considerably below the expected 20.0 percent. Whereas 28.6 percent agreed that students who use illegal drugs give other students a bad name, 18.4 percent were unsure. Almost one third (32.7%) disagreed with the statement, and 9.5 percent of the respondents strongly disagreed. The calculated chi-square of 31.54 is significant.

**Item 27**—Does using illegal drugs cause serious physical harm? A majority (93.9%) of the responding community college students agreed or strongly agreed that the use of illegal drugs causes serious physical harm. The percentage of students who were undecided (4.1%) was considerably lower than what would be expected under a null hypothesis (20.0%). Only 2.1 percent of the respondents either disagreed or strongly disagreed that using illegal drugs causes serious physical harm. The calculated chi-square of 208.27 is significant at the .05 probability level.

**Item 28**—The combined percentage of the responding students who either strongly agree or agree (60.5%) that students who use illegal drugs give the school a bad name far exceeded the combined expected 40.0 percent. Fewer than the 20.0 percent expected (9.5%) responded that they were unsure. Slightly fewer than one third of the respondents
Table 3

Responses of Community College Students Indicating Attitudes Toward Illicit Psychoactive Drug Use
and Summary of Chi-Square Goodness-of-Fit Tests

<table>
<thead>
<tr>
<th>Item number</th>
<th>Number of responses</th>
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<th>Distribution of responses</th>
<th>Strongly disagree</th>
<th>Chi-square with 4 D.F.</th>
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Table 3 (continued)

Responses of Community College Students Indicating Attitudes Toward Illicit Psychoactive Drug Use

and Summary of Chi-Square Goodness-of-Fit Tests

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<th>Strongly disagree</th>
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Table 3 (continued)

Responses of Community College Students Indicating Attitudes Toward Illicit Psychoactive Drug Use

and Summary of Chi-Square Goodness-of-Fit Tests

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<th>Strongly disagree</th>
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Table 3 (continued)

Responses of Community College Students Indicating Attitudes Toward Illicit Psychoactive Drug Use

and Summary of Chi-Square Goodness-of-Fit Tests

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<th>Item number</th>
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<th>Chi-square with 4 D.F.</th>
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<tr>
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<tr>
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<td>12.9%</td>
<td>19.0%</td>
<td>22.4%</td>
<td>34.7%</td>
</tr>
</tbody>
</table>

*Significant at p = .05.
(29.9%) either disagreed or strongly disagreed with the statement. The calculated chi-square of 53.10 is significant.

**Item 29**—This item states that most marijuana users seem to be good people. Whereas more than one third (40.4%) of the responding students either agreed or strongly agreed that most marijuana users seem to be good people, 39.7 percent were undecided about the item, and 19.8 percent disagreed or strongly disagreed. The calculated chi-square of 72.84 indicates significant lack of goodness of fit between observed and expected distributions.

**Item 30**—A majority of the 146 student respondents (86.3%) agreed or strongly agreed that it is foolish to risk the illegal use of drugs. The combined percentage of students who were undecided or either disagreed or strongly disagree with the statement (13.7%) was significantly below the combined expected 60.0 percent. The calculated chi-square of 170.99 indicates the significance of the observed distribution of responses in their departure from the distribution expected.

**Item 31**—When asked to judge the statement that people who use illegal drugs frequently are emotionally sick, 22.4 percent of the responding students strongly agreed, and 23.1 percent agreed. The undecided percentage of 35.4 was significantly higher than expected (20.0%). Those who disagreed or strongly disagreed with the statement represented 19.0 percent of the student respondents. The calculated chi-square of 37.12 is significant at the .05 probability level.
item 32--A small minority of the responding students (7.4%) strongly agreed with the statement "I have no bad feelings about people who use illegal drugs." Those who agreed (19.5%) and those who were undecided (18.8%) approximated the percentage that would be expected under a null hypothesis (20.0%). Whereas it was expected that 20.0 percent of those responding would have disagreed with the statement, 40.3 percent actually disagreed. The proportion of those responding who strongly disagreed (14.1%) was 5.9 percentage points below what would be expected. The calculated chi-square of 45.20 is significant.

Item 33--A small minority of the respondents (8.7%) agreed or strongly agreed that some drugs make one a better person. The proportion who were undecided (10.7%) was well below the 20.0 percent expected. More than three fourths (80.5%) of the responding students disagreed or strongly disagreed that some drugs make one a better person. The lack of goodness of fit (106.13) between the observed distribution of responses and the expected distribution is significant.

Item 34--Almost three fourths (74.7%) of the responding community college students either agreed or strongly agreed that they were in favor of laws against using illegal drugs. Those who were undecided (11.6%) were almost 50 percent below what would be expected under the null hypothesis (20.0%). The percentage who either disagreed or strongly disagreed with the statement was 13.7 percent. The calculated chi-square of 103.25 indicates the significant departure of the observed from the expected distribution of responses.
Item 35—When asked to respond to the statement “There is nothing wrong with me except that I use illegal drugs,” a majority of the respondents (83.8%) disagreed or strongly disagreed. Only 8.4 percent agreed or strongly agreed, and 7.7 percent were undecided. The calculated chi-square of 180.25 is significant at the .05 probability level.

Item 36—Almost three fourths (74.8%) of the responding students either agreed or strongly agreed that we need stricter laws to control drugs. Those who were not sure (12.2%) were 7.8 percentage points below what would be expected under a null hypothesis (20.0%). The percentage who either disagreed or strongly disagreed with the statement was 12.9 percent, significantly below the combined expected 40.0 percent. The calculated chi-square of 90.11 is significant.

Item 37—When asked to judge the statement that a drug addict is a sick person, of the 149 responding students, 38.9 percent strongly agreed, and 34.2 percent agreed. Whereas only 8.7 percent of the responding students were undecided about the statement, 18.2 percent disagreed or strongly disagreed with it. The calculated chi-square of 73.92 is significant at the .05 probability level.

Item 38—A majority (91.9%) of the responding students agreed or strongly agreed that people who sell drugs to children should be punished. The percentage of respondents who were undecided in the matter (4.7%) was considerably lower than would be expected under a null hypothesis (20.0%). Fewer than 4 percent of the responding students either disagreed or strongly disagreed that people who sell drugs to children should be punished.
The calculated chi-square of 346.13 indicates the significant departure of the observed from the expected distribution of responses.

**Item 39**—Slightly more than three fourths (75.7%) of the respondents either disagreed or strongly disagreed with the statement that it is fun to get high by using drugs. Only 12.2 percent of those responding agreed or strongly agreed with the statement, whereas 12.2 percent were undecided. The calculated chi-square of 130.65 is significant.

**Item 40**—A majority (72.3%) of the responding community college students agreed or strongly agreed that it is wrong to take drugs to pep one up. The percentage of students who were undecided (11.5%) was below the 20.0 percent expected. The percentage of respondents who either disagreed or strongly disagreed with the statement (16.2%) was considerably lower than the combined expected 40.0 percent. The calculated chi-square of 72.34 indicates the significant lack of goodness of fit between observed and expected distributions.

**Item 41**—A significant number of the 149 student respondents (85.9%) agreed or strongly agreed that using illegal drugs is a foolish thing to do. Only 7.4 percent of those responding were undecided. A small minority (6.7%) either disagreed or strongly disagreed with the statement. The calculated chi-square of 209.29 is significant at the .05 probability level.

**Item 42**—The proportion of responding students who believed that using any kind of illegal drug is “pretty dumb” was 81.8 percent when the agreed and strongly agreed categories were combined. Undecided respondents accounted for only 8.8 percent of the
total number of responding students, and 9.5 percent of the responding students either disagreed or strongly disagreed with the statement. The chi-square of 155.85 is significant.

Item 43—Only 7.5 percent of the respondents either agreed or strongly agreed that they like to get high on drugs. Whereas 20.0 percent of the students responding were expected to be undecided, only 10.2 percent were undecided. Over three fourths (82.3%) of the responding students either disagreed or strongly disagreed with the statement. The calculated chi-square of 192.83 is significant at the .05 probability level.

Item 44—This item states that “those who use drugs illegally ought to go to jail.” Of the 148 respondents, 28.4 percent strongly agreed, and 18.2 percent agreed. The actual number of students who responded, that they were undecided (29.7%) was 48.9 percent above the 20.0 percent expected. The percentage of those who responded that they disagreed with the statement (16.2%) was less than expected, and 7.4 percent strongly disagreed, also less than expected. The calculated chi-square of 25.18 is significant.

Item 45—Only 6.8 percent of the responding students strongly agreed or agreed that it is okay to use drugs for kicks. Whereas 20.0 percent of the responding students were expected to be undecided, only 12.9 percent were undecided. Over three fourths (80.2%) of the respondents either disagreed or strongly disagreed with the statement. The difference between the expected and observed responses of the responding students is significant at the .05 level (chi-square = 149.84).
Item 45—Almost one half (49.3%) of the responding students strongly agreed or agreed that people who use illegal drugs are stupid. Fewer than expected (14.2%) were undecided about the statement. Whereas 29.7 percent disagreed that people who use illegal drugs are stupid, only 6.8 percent strongly disagreed, significantly below the 20.0 percent expected. The calculated chi-square of 27.74 is significant at the .05 probability level.

Item 47—More than two thirds (68.0%) of the student respondents agreed or strongly agreed with the statement that “illegal drugs should never be used.” Those who were undecided (18.4%) approximated the percentage that would be expected under a null hypothesis (20.0%). Only 13.6 percent of the 147 who responded either disagreed or strongly disagreed with the statement. The calculated chi-square of 71.06 is significant.

Item 48—More than one half (53.1%) of the student respondents agreed or strongly agreed that taking illegal drugs is a sign of weakness. Those who were undecided (19.7%) approximated the percentage that would be expected under the null hypothesis (20.0%). A total of 27.2 percent of those responding either disagreed or strongly disagreed that taking illegal drugs is a sign of weakness. The calculated chi-square of 22.15 is significant at the .05 probability level.

Item 49—A majority (86.4%) of the student respondents either agreed or strongly agreed that illegal drugs hurt more people than they help. Only 8.8 percent of the 147 students responding were undecided, whereas 4.7 percent disagreed or strongly disagreed with the statement. The calculated chi-square of 144.53 is significant.
**Item 50**—Over one half (57.1%) of the respondents strongly agreed people should not use illegal drugs, and more than one fourth (26.5%) agreed with the statement. Fewer than expected (10.2%) were undecided. A total of 6.1 percent disagreed or strongly disagreed with the statement that people should not use illegal drugs. The calculated chi-square of 153.78 indicates the significant departure of the observed from the expected distribution of responses.

**Item 51**—A small minority (3.4%) of the students responding strongly agreed that there is nothing wrong with drug use except that it is illegal. Only 9.5 percent agreed with the statement, whereas 12.2 percent of those responding were undecided. Almost three fourths (74.8%) disagreed or strongly disagreed when asked to judge the statement that “there is nothing wrong with drug use, outside being illegal.” The calculated chi-square of 82.83 is significant at the .05 probability level.

**Item 52**—A small minority (4.7%) of the 147 responding students agreed or strongly agreed with the statement that “a drug addict is more respectable than an alcoholic.” Those who were undecided (19.0%) approximated the percentage that would be expected under a null hypothesis (20.0%). Over three fourths (76.2%) of the respondents, 90.5 percent more than the 40.0 percent expected, either disagreed or disagreed with the statement. The difference between the expected and observed responses of the responding students is significant at the .05 level (chi-square = 94.94).

**Item 53**—This item states that people who are “hooked” on drugs are sick. Almost three fourths (74.3%) of the responding community college students either agreed or
strongly agreed; 14.9 percent were undecided; and 10.9 percent disagreed or strongly disagreed that people who are “hooked” on drugs are sick. The calculated chi-square of 79.77 indicates the significant lack of goodness of fit between observed and expected distributions.

**Item 54**—When asked to respond to the statement “I don’t want to associate with drug addicts,” 61.5 percent of the responding students agreed or strongly agreed. The percentage of undecided students was 17.6, only 2.4 percentage points lower than what would be expected according to chance. A total of 20.9 percent of the 148 respondents disagreed or strongly disagreed with the statement. The difference between the actual observed percentage distribution and the distribution of responses expected is significant (chi-square = 34.91).

**Item 55**—Of the 147 community college students who responded to the survey, 12.9 percent strongly agreed that the average drug addict is “not much of a person,” and 19.0 percent agreed. Of the respondents, 22.4 percent were undecided, slightly more than expected (20.0%). Almost one half (45.6%) of the responding students disagreed or strongly disagreed that the average drug addict “is not much of a person.” The calculated chi-square of 26.16 is significant at the .05 probability level.

**Illicit Psychoactive Drug Use by Community College Students**

The following part of the analysis was in response to Research Questions 3 and 4, which asked, “To what extent do community college students use illicit psychoactive drugs?” and “Which, if any, illicit psychoactive drugs are used by community college
students?" The statistical procedures for analyzing the data were precisely those used for analyzing the data in the previous sections on drug knowledge and attitudes toward drug usage. With 2 degrees of freedom \((N - 1)\), where \(N\) equals the total number of response categories per statement, a minimum calculated chi-square value of 5.99 was required for significance at the .05 probability level (Snedecor & Cochran, 1980).

The response categories for each drug use statement were 1 (I use it) 2 (I have used it) and 3 (I don't use it). According to chance, it was expected that each of the three response categories would contain one third (33.3\%) of all community college student responses per drug use statement.

**Drug Use Statements**

Ten statements comprised the drug use section. The data in Table 4 for each statement are discussed in the following subsections.

**Item 56**--Of the 137 community college students who responded, only 3.6\% significantly lower than the 33.3\% expected, reported that they use amphetamines. Whereas 21.2\% of the respondents have used amphetamines, slightly more than three fourths (75.2\%) do not use them. The observed percentage distribution departed significantly from what may be expected according to chance (calculated chi-square = 114.28).
### Table 4

**Responses of Community College Students Indicating Drug Use and Summary of Chi-Square Goodness-of-Fit Tests**

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</tr>
<tr>
<td>63</td>
<td>134</td>
<td>2.2%</td>
<td>4.5%</td>
</tr>
<tr>
<td>64</td>
<td>133</td>
<td>2.3%</td>
<td>6.0%</td>
</tr>
<tr>
<td>65</td>
<td>134</td>
<td>1.5%</td>
<td>11.2%</td>
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</table>

*Significant at $p = .05$.

**Item 57**—Are community college students using barbiturates? The overwhelming majority of the respondents (89.7%) reported that they do not use barbiturates. Fewer responding students (1.5%) than expected (33.3%) have used barbiturates, and 8.8 percent have used them although they do not currently. The lack of goodness of fit (195.59)
between the observed distribution of responses and the expected distribution is significant.

**Item 58**—This item asks whether or not the community college students included in the survey use cocaine. Most responding students (84.7%) reported that they do not use cocaine. Whereas it was expected that 33.3 percent of those surveyed have used cocaine, 11.7 percent said they have used it. Only 3.6 percent of the 137 respondents reported that they use cocaine. The calculated chi-square of 163.81 is significant.

**Item 59**—A small minority of the responding students (2.2%) admitted to using hallucinogens. The proportion who have used hallucinogens (11.8%) was 21.5 percentage points lower than expected (33.3%). Most respondents (86.0%) do not use hallucinogens. The calculated chi-square of 171.81 is significant.

**Item 60**—Concerning the use of inhalants, 87.6 percent of the respondents indicated that they do not use them. A small proportion (2.2%) reported that they do use inhalants, and only 10.2 percent admitted to using them previously. The calculated chi-square of 182.82 is significant at the .05 probability level.

**Item 61**—Slightly more than one half (54.0%) of the 137 responding community college students reported that they do not use marijuana. More than one third (36.5%) admitted to having tried marijuana, whereas 9.5 percent indicated they use it. The calculated chi-square of 41.36 is significant at $p = .05$.

**Item 62**—Almost all (95.5%) of the 132 students who responded to this particular questionnaire item said that they do not use methaqualone. A very small percentage
(1.5%) of the respondents admitted to using methaqualone, and only 3.0 percent have tried it. The calculated chi-square of 229.27 is significant.

**Item 63**—Do community college students use opiates? Of the 134 students who responded, only 2.2 percent admitted to using opiates. The proportion of respondents who have used opiates was small (4.5%). The vast majority, 93.3 percent, of the respondents do not use opiates. The departure of the observed distribution from the distribution expected is significant (chi-square = 216.82).

**Item 64**—Is PCP used by community college students? Significantly more responding students than the 33.3 percent expected (91.7%) do not use PCP. However, 2.3 percent said that they use it, and 6.0 percent of those responding admitted that they have used PCP previously. The lack of goodness of fit between the observed percentage distribution of responses and the distribution expected is significant (chi-square = 208.38).

**Item 65**—Regarding the use of legal tranquilizers obtained illegally, 87.3 percent of the 134 responding community college students said that they do not use them. Slightly more than one tenth (11.2%) of those responding admitted that they have used illegally obtained tranquilizers. Only a small percentage, 1.5 of those responding to this particular item in the survey questionnaire, said that they use legal tranquilizers that have been obtained illegally. The calculated chi-square of 177.60 is significant at the .05 probability level.
CHAPTER 4 REFERENCES

This study was a non-experimental research project investigating illicit psychoactive drug use among community college students. It was the intent of the study to determine (a) the specific gender of the responding community college students who use illicit psychoactive drugs, (b) the ages of community college students who use illicit psychoactive drugs, (c) the knowledge of community college students regarding drugs, (d) the attitudes of community college students toward illicit psychoactive drugs and their use, (e) the extent to which community college students use illicit psychoactive drugs, and (f) which illicit psychoactive drugs are used by community college students. The structural sources of the impact of illicit psychoactive drug usage upon the academic achievement of community college students investigated in the study were (a) drug knowledge, (b) drug attitude, and (c) drug usage.

This chapter concludes the study in four parts. The first part summarizes the major findings of the study, and the second part contains a discussion of these results. The third section includes general conclusions drawn from the investigation and their relationship to the literature on illicit psychoactive drug use. The final section advances recommendations regarding illicit psychoactive drug use in general and among community college students in particular.
Summary of Major Findings

Statement of Purpose

The study was directed by four major questions arising out of previous research on illicit psychoactive drug use. The following questions were explored to accomplish the objectives of the study and stated in a general sense:

1. What is the knowledge of community college students about illicit psychoactive drug usage?
2. What are the attitudes of community college students toward illicit psychoactive drugs?
3. To what extent do community college students use illicit psychoactive drugs?
4. Which, if any, illicit psychoactive drugs are used by community college students?

Summary of Procedures

A non-experimental design methodology, a survey, was used in this study. The population consisted of 149 students at 14 randomly selected public community college institutions throughout the United States. A random sample was selected of two faculty members at each institution for mailing of the questionnaires for actual administration. A total of 700 questionnaires was sent. To increase response rate, the mailings took place in three waves. A total of 149 completed questionnaires was returned (21% response rate). The questionnaire consisted of four sections designed to gather the following information: (a) Drug Knowledge—measured the overall knowledge of the individual
regarding illicit psychoactive drugs and the effects upon one’s health; (b) Drug Attitudes—measured the attitudes of individuals regarding those who use illicit psychoactive drugs; (c) Drug Usage—addressed the actual usage of specific illicit psychoactive drugs, such as cocaine and marijuana, by the community college students surveyed; and (d) Miscellaneous—identified the demographic variables of gender, grade point average, age, ethnic origin, and major in college. Sections 1, 2, and 3 of the questionnaire related to structural sources of illicit psychoactive drug use among community college students, whereas section 4 dealt with individual sources of illicit psychoactive drug use among student respondents.

Major Findings

The demographic characteristics of the respondents were represented by five questions pertaining to gender, grade point average (GPA), age, race, and major in college. A majority of the respondents were female and in the 3.5 to 4.0 GPA category. Most were up to age 21 and of Caucasian ethnic origin. The greatest number were declared majors in education, law enforcement, and business majors.

Level of drug knowledge by community college students was measured using the Drug Education School Evaluation Instrument (DESEI). Of the 25 questions asked regarding drug knowledge, the majority of the responding students believed drugs to be harmful to the user. The respondents overwhelmingly believed that drug use causes physical and/or emotional dependency. Students demonstrated at least general knowledge
of heroin, cocaine, barbiturates, marijuana, hallucinogens, stimulants, tranquilizers, and inhalants by responding true or false to the questionnaire items the majority of the time.

A total of 30 questions made up the drug attitudes section of the DESEI. A majority of those responding to the questionnaire items believed that using illicit psychoactive drugs is a foolish thing to do. Most also believed that there should be stricter laws to control drugs. While over two thirds of the respondents would not choose to associate with someone who is a drug addict, an equal number believed someone who is a drug addict is sick.

Ten questions were included in the drug use portion of the DESEI. The great majority of respondents did not use drugs. However, over one third (36.5%) of the responding community college students admitted to having at least used marijuana. Slightly fewer than one fourth (24.8%) of the respondents either had used amphetamines or were current users.

Discussion

Almost one half of the responding community college students (46.9%) believed that heroin is an opiate, which indicated that drug education programs currently in place are at least moderately successful in advancing drug knowledge. Approximately one half (47.6%) of those responding did not know whether heroin is an opiate, which did not necessarily imply lack of drug knowledge in general but possibly a lack of knowledge regarding opiates specifically. Only 5.4 percent of the respondents believed that heroin is not an opiate.
A total of 68.5 percent of the responding students believed that it is possible to become physically addicted to marijuana. Slightly more than 20 percent (21.5%) believed that it is not possible to become physically addicted to marijuana. The high percentage of those with an opinion regarding the physical impact of the use of marijuana indicated the extensive exposure to and/or the use of marijuana by community college students. This conclusion was supported by the findings in a national survey by Abelson and Fishburne (1976) in which they found that as many as one half of those surveyed between the ages of 18 and 25 had used illicit psychoactive drugs.

Slightly more than three fourths (79.1%) of the students who responded to this questionnaire item did not agree that marijuana can improve short-term memory. This finding indicates a high level of knowledge among community college regarding marijuana and the impact upon the individual who uses it. However, 8.1 percent of the respondents did believe that marijuana can improve short-term memory, and the remaining 12.8 percent did not know whether marijuana can improve short-term memory which indicates the continued need for drug education programs.

Only 7.4 percent of the responding community college students believed that a barbiturate overdose is relatively easy to handle medically. A total of 53.0 percent of the respondents believed that a barbiturate overdose is not relatively easy to handle medically. However, 39.6 percent of those responding students did not know whether a barbiturate overdose is relatively easy to handle medically. The relatively high percentage (47.0%) of responding community college students who either do not know or
who have inaccurate understanding regarding how to medically handle a barbiturate overdose indicates the need for expanding drug education programs to include specifics regarding possible treatments.

More than one half (56.4%) of the respondents believed that all psychoactive drugs have the potential to produce psychological dependence. Although determining the reasons why community college students use illicit psychoactive drugs was outside the scope of this study, many reasons have been documented, including avoidance of interpersonal relationships, the creation of feelings of well-being, rebellion, religiosity, heightened insight, peer pressure, imitation of parents, curiosity, recreation, relaxation, and attempts to alter one’s reality (Hafen & Peterson, 1978). It was also thought that a major factor contributing to drug abuse is the availability of more types and increasing supplies of drugs (Ray, 1972). However, it appears to this researcher that the psychological dependence associated with drug use is an indication of an emotional disturbance and should be investigated further, specifically at the community college level.

The majority of the responding students (78.5%) believed that heavy long-term use of cocaine or amphetamines can cause extreme anxiety and paranoia. A majority (77.9%) of the responding students believed cocaine causes physical dependence. In addition, a majority (83.2%) of the responding students believed that marijuana is harmful. Although the negative effects were known, students have continued to use cocaine, amphetamines, and marijuana, which indicates the need to establish alternate
forms of prevention mechanisms and perhaps at a much earlier age than is common today.

Of the 149 student respondents, 48.3 percent believed that a person usually has no warning before becoming an addict. Although 35.6 percent of those responding believed a person usually does have a warning before becoming an addict, 16.1 percent responded that they did not know. However, this investigator concludes that it is relevant to stress the dangers associated with taking drugs and that everyone has the potential, if not the certainty, of becoming an addict, regardless of whether there were warning signs or not. Further, it would seem that by the time the warning signs are detected, it is too late for prevention.

A majority (93.9%) of the responding community college students agreed or strongly agreed that the use of illegal drugs causes serious harm. However, the use of illicit psychoactive drugs dates to before the Civil War (Brecher, 1972). In the opinion of the investigator, the reasons behind the use must be determined and addressed before any significant progress can be made toward elimination of the use of illicit psychoactive drugs.

Almost three fourths (74.7%) of the responding community college students either agreed or strongly agreed that they were in favor of laws against using illegal drugs. Further, almost three fourths (74.8%) of the responding students either agreed or strongly agreed that we need stricter laws to control drugs. In fact, 46.6 percent of the responding students strongly agreed or agreed that those who use drugs illegally should go to jail. In
addition, the majority (91.9%) of the respondents agreed or strongly agreed that people who sell drugs to children should be punished. Because legislation designed to reduce or to control drug use has been ineffective (Brecher, 1972; Helmer et al., 1983; Musto et al., 1983; Ray, 1972), it is not logical to conclude that we need more laws and that the problem of drug use will be solved. A more prudent approach might be to expand drug education programs to include students at a much younger age and to initiate mandatory education of parents as well. Clearly, it is not likely that more of the same in the form of laws, whether more severe in consequences or not, will be effective in the fight against the use of illicit psychoactive drugs by community college students in America.

The proportion of responding students who believed that using any kind of illegal drug is foolish was 81.8 percent when the agreed and strongly agreed categories were combined. Almost one half (49.3%) of the respondents agreed that people who use illegal drugs are “stupid.” Further, a high majority (86.4%) of the student respondents either agreed or strongly agreed that illegal drugs hurt more people than they help.

However, the use of illicit psychoactive drugs has continued to increase over time since before the Civil War (Helmer et al., 1983) and has moved from the adult user down to the elementary school user (Seffrin & Seehafer, 1976). This investigator concludes that there has not been enough progress toward the diagnosis of and the remedies made available to users to eliminate the reasons behind the actual use of drugs.

Of the respondents, 61.5 percent said that they did not want to associate with drug addicts. Of the 147 community college students who responded to the survey, 31.9
percent, almost one third, agreed that the average drug addict is not “much of a person.” However, 11.7 percent of those responding said that they have used cocaine, and more than one third (36.5%) admitted to having tried marijuana. The investigator intuits that there are compelling reasons why community college students choose to use illicit psychoactive drugs—reasons such as an inability to tolerate frustration, anxiety, tension, mild depression, or other psychological discomforts, which cannot be eliminated simply by legislation or more severe penalties. This conclusion was supported by the 1972 research of Dohner.

Conclusions

As a result of this study, the following tentative conclusions may be drawn:

1. Community college students appear to be knowledgeable regarding the deleterious physical and mental impact upon those who use drugs.

2. Community college students appear to have negative attitudes toward drug use and toward those who use them.

3. Community college students have an aversion to actual drug use.

4. The illicit psychoactive drug of choice among community college students is marijuana.

Recommendations

Based on the data reported in this study and a review of the literature, the following recommendations are made:
1. Continuing research needs to be conducted to determine the effectiveness of existing drug education programs. It is important to determine how existing education programs can be changed to increase their overall effectiveness.

2. The reasons behind drug use by community college students need to be researched on an ongoing basis. Social programs for prevention should be financially funded, developed, and supported by individual state governments as a means for eliminating the reasons behind drug use.

3. The scope of the investigation should be expanded to include the study of the differences in drug knowledge, attitudes toward drug use, and the actual use of illicit psychoactive drugs by community college students due to age, gender, ethnic origin, grade point average, and major in college and the resulting impact upon academic achievement.

4. Future research should include the study of the positive or negative effects due to interaction with the faculty upon students who use illicit psychoactive drugs.

5. Additional research should focus upon law enforcement activities and their effectiveness in controlling and/or eliminating drug use among community college students.

6. Whereas this study focused on drug knowledge, drug attitudes, and drug use among community college students, it would be interesting to investigate differences in knowledge, attitudes, and use as compared to 4-year-university students.
7. Counselors at community colleges and universities should be prepared to recognize the symptoms associated with the use of illicit psychoactive drugs by students. The counselors should be well trained enough to be able to offer assistance and recommendations for help to students as appropriate.

8. Counselors at middle and high schools should be prepared to recognize the symptoms associated with the use of illicit psychoactive drugs by students. The counselors should be well trained enough to be able to offer assistance and recommendations to students and parents for help as appropriate.

9. Drug education and prevention programs should be a mandatory part of all kindergarten through college (community college and university) curricula.

10. Parents should be required to attend drug education and prevention programs with their kindergarten through high school students to promote awareness.

11. High school students should be required to fulfill a minimum number of community service hours served at drug rehabilitation facilities prior to graduation from high school to promote awareness.

12. Legislators should be promoting among their voters support for more severe consequences to be levied upon those who use illicit psychoactive drugs, but also upon those who sell, manufacture, or otherwise make available for sale illicit psychoactive drugs.
13. Legislators and policy makers should work closely with the experts to find better ways for the drug addict to return to society without fear of negative social sanctions.

14. It is recommended that random drug testing among kindergarten through college students be legalized. Those testing positive would be required to attend drug rehabilitation programs paid for by the state.

15. Faculty at universities and community colleges should be trained to recognize the symptoms associated with the use of illicit psychoactive drugs by students. The faculty should be well trained enough to be able to offer assistance and recommendations for help to students as appropriate.

16. Educators at kindergarten through high schools should be trained to recognize the symptoms associated with the use of illicit psychoactive drugs by students. The educators should be well trained enough to be able to offer assistance and recommendations for help to students as appropriate.

17. The unique problems associated with addressing drug use by community college students who commute and who are not actively involved in community college life should be addressed by the governing political bodies where community colleges are located.

18. The idea of the time series study conducted by Johnston, et al. (1989) during 1975-1988 should be expanded to differentiate among community college students. In
their study among college students, it was revealed that 54 percent of graduating high school seniors surveyed reported having used illicit psychoactive drugs.

19. General programs to promote community awareness of the symptoms and problems associated with drug use should be implemented and maintained.
CHAPTER 5 REFERENCES


APPENDIX A

QUESTIONNAIRE
Part IV: MISCELLANEOUS

For each of the following statements, please circle one answer for each question.
This is not a test. No attempt will be made to identify individual participants.

66 I am:
1. Male
2. Female

67 My grade point average is:
1. 3.5 to 4.0
2. 3.0 to 3.5
3. 2.5 to 3.0
4. 2.0 to 2.5

68 My age is:
1. up to 21 years old
2. up to 25 years old
3. up to 30 years old
4. up to 35 years old
5. up to 40 years old
6. up to 45 years old
7. over 45 years old

69 My ethnic origin is:
1. American Indian / Alaskan Native
2. Black / African American
3. White / Caucasian
4. Asian / Pacific Islander
5. Hispanic
6. Other (specify)

70 My major in college is ____________________________
example: business, economics, chemical engineering, etc.
Part III: Drug Usage

Please check ( ) one answer for each drug question.

<table>
<thead>
<tr>
<th>Drugs</th>
<th>I use it</th>
<th>I have used it</th>
<th>I don't use it</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amphetamines</td>
<td></td>
<td></td>
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<tr>
<td>&quot;pep pills,&quot; &quot;ups,&quot;</td>
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<tr>
<td>Methadone, Dexedrine, &quot;speed,&quot;</td>
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<tr>
<td>&quot;bennies&quot;</td>
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<tr>
<td>Barbiturates</td>
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<tr>
<td>phenobarbital, &quot;digits,&quot;</td>
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<tr>
<td>&quot;rods,&quot;</td>
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<td>Nembutal, Seconal, &quot;downs&quot;</td>
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<td>Cocaine</td>
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<td>&quot;snow,&quot; &quot;coke&quot;</td>
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<td>Hallucinogens</td>
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<td>LSD, Mescaline, MDA, Psilocybin</td>
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<tr>
<td>&quot;acid&quot;</td>
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<tr>
<td>Inhalants</td>
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<tr>
<td>glue, gasoline, aerosols</td>
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<td>Marijuana</td>
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<td>&quot;pot,&quot; &quot;grass,&quot; &quot;weed,&quot; &quot;reefer&quot;</td>
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<td>Methaqualone</td>
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<td>sopors, Quaalude</td>
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<tr>
<td>Opiates</td>
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<td>Morphine, heroin, methadone,</td>
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<td>demerol, dilaudid</td>
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<td>PCP</td>
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<tr>
<td>&quot;Angel Dust,&quot; &quot;Hog,&quot; &quot;dust,&quot;</td>
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<tr>
<td>&quot;KJ&quot;</td>
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<td>Legal tranquilizers obtained illegally</td>
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<tr>
<td>Valium, Librium, Milfontan, Serax, Tranzene, Dalmane, Azane</td>
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</tbody>
</table>
52 A drug addict is more respectable than an alcoholic.
   1. strongly agree
   2. agree
   3. not sure
   4. disagree
   5. strongly disagree

53 People who are "hooked" on drugs are sick.
   1. strongly agree
   2. agree
   3. not sure
   4. disagree
   5. strongly disagree

54 I don't want to associate with drug addicts.
   1. strongly agree
   2. agree
   3. not sure
   4. disagree
   5. strongly disagree

55 The average drug addict is not much of a person.
   1. strongly agree
   2. agree
   3. not sure
   4. disagree
   5. strongly disagree
42 Using any kind of illegal drug is pretty dumb.
   1. strongly agree
   2. agree
   3. not sure
   4. disagree
   5. strongly disagree
43 I like to get high on drugs.
   1. strongly agree
   2. agree
   3. not sure
   4. disagree
   5. strongly disagree
44 Those who use drugs illegally ought to go to jail.
   1. strongly agree
   2. agree
   3. not sure
   4. disagree
   5. strongly disagree
45 It is okay to use drugs for kicks.
   1. strongly agree
   2. agree
   3. not sure
   4. disagree
   5. strongly disagree
46 People who use illegal drugs are stupid.
   1. strongly agree
   2. agree
   3. not sure
47 Illegal drugs should never be used.
   1. strongly agree
   2. agree
   3. not sure
   4. disagree
   5. strongly disagree
48 Taking illegal drugs is a sign of weakness.
   1. strongly agree
   2. agree
   3. not sure
   4. disagree
   5. strongly disagree
49 Illegal drugs hurt more people than they help.
   1. strongly agree
   2. agree
   3. not sure
   4. disagree
   5. strongly disagree
50 People should not use illegal drugs.
   1. strongly agree
   2. agree
   3. not sure
   4. disagree
   5. strongly disagree
51 There is nothing wrong with drug use, outside being illegal.
   1. strongly agree
   2. agree
   3. not sure
   4. disagree
32 I have no bad feelings about people who use illegal drugs.
   1. strongly agree
   2. agree
   3. not sure
   4. disagree
   5. strongly disagree

33 Some drugs make you a better person.
   1. strongly agree
   2. agree
   3. not sure
   4. disagree
   5. strongly disagree

34 I'm in favor of laws against using illegal drugs.
   1. strongly agree
   2. agree
   3. not sure
   4. disagree
   5. strongly disagree

35 There is nothing wrong with me except that I use illegal drugs.
   1. strongly agree
   2. agree
   3. not sure
   4. disagree
   5. strongly disagree

36 We need stricter laws to control drugs.
   1. strongly agree
   2. agree
   3. not sure
   4. disagree
   5. strongly disagree

37 A drug addict is a sick person.
   1. strongly agree
   2. agree
   3. not sure
   4. disagree
   5. strongly disagree

38 People who sell drugs to kids ought to be punished.
   1. strongly agree
   2. agree
   3. not sure
   4. disagree
   5. strongly disagree

39 It is fun to get high by using drugs.
   1. strongly agree
   2. agree
   3. not sure
   4. disagree
   5. strongly disagree

40 It is wrong to take drugs to pep me up.
   1. strongly agree
   2. agree
   3. not sure
   4. disagree
   5. strongly disagree

41 Using illegal drugs is a foolish thing to do.
   1. strongly agree
   2. agree
   3. not sure
   4. disagree
   5. strongly disagree
19 If someone is drunk, giving them coffee will help them get better.
   1. true  2. false  3. don't know
20 Brain damage can result from drinking too much alcohol.
   1. true  2. false  3. don't know
21 Next to marijuana, alcohol is the most abused drug in the U. S.
   1. true  2. false  3. don't know
22 Barbiturate addicts need no medical help to get off their addiction.
   1. true  2. false  3. don't know

Part II: Drug Attitude
For each of the following statements, please circle one answer for each question. There are no right or wrong answers.
We are simply asking your opinion.

26 Students who use illegal drugs give other students a bad name.
   1. strongly agree  
   2. agree  
   3. not sure  
   4. disagree  
   5. strongly disagree
27 Using illegal drugs can cause serious physical harm.
   1. strongly agree  
   2. agree  
   3. not sure  
   4. disagree  
   5. strongly disagree
28 Students who use illegal drugs give the school a bad name.
   1. strongly agree  
   2. agree  
   3. not sure  
   4. disagree  
   5. strongly disagree

23 Stimulants slow down the activity of the central nervous system.
   1. true  2. false  3. don't know
24 Those who have will power can take almost any drug and stop when they want to.
   1. true  2. false  3. don't know
25 People who use stimulants like "pep pills" or "speed" are able to stop any time they want to.
   1. true  2. false  3. don't know
29 Most marijuana users seem to be good people.
   1. strongly agree  
   2. agree  
   3. not sure  
   4. disagree  
   5. strongly disagree
30 It is foolish to risk illegal use of drugs.
   1. strongly agree  
   2. agree  
   3. not sure  
   4. disagree  
   5. strongly disagree
31 People who use illegal drugs frequently are emotionally sick.
   1. strongly agree  
   2. agree  
   3. not sure  
   4. disagree  
   5. strongly disagree
Drug Education School Evaluation Instrument

Part I: Drug Knowledge

For each of the following statements, please circle one answer for each question. This is not a test.

No attempt will be made to identify anyone.

1. Heroin is an opiate.
   1. true  2. false  3. don't know
2. It is possible to become physically addicted to marijuana.
   1. true  2. false  3. don't know
3. Marijuana can improve short-term memory.
   1. true  2. false  3. don't know
4. A barbiturate overdose is relatively easy to handle medically.
   1. true  2. false  3. don't know
5. It is safe to encourage a barbiturate addict to quit "cold turkey" without medical supervision.
   1. true  2. false  3. don't know
6. Marijuana makes the pupils in the user's eyes larger.
   1. true  2. false  3. don't know
7. Stimulants make the pupils in the user's eyes larger.
   1. true  2. false  3. don't know
8. All psychoactive drugs have the potential to produce psychological dependence.
   1. true  2. false  3. don't know
9. When two depressant drugs are taken in combination, each one increases the depressant effect of the other one.
   1. true  2. false  3. don't know
10. Heavy long-term use of cocaine or amphetamines can cause extreme anxiety and paranoia.
    1. true  2. false  3. don't know
11. Withdrawal from a depressant is characterized by anxiety.
    1. true  2. false  3. don't know
12. It is possible to become physically addicted to Valium.
    1. true  2. false  3. don't know
13. A person usually has no warning before becoming an addict.
    1. true  2. false  3. don't know
14. Marijuana is harmless.
    1. true  2. false  3. don't know
15. Hallucinogens are more likely to cause dream images than stimulants.
    1. true  2. false  3. don't know
16. When the body gets used to drugs, tolerance is developed.
    1. true  2. false  3. don't know
17. A person who has taken an amphetamine is likely to be talkative and restless.
    1. true  2. false  3. don't know
18. Cocaine causes physical dependence.
    1. true  2. false  3. don't know
APPENDIX B

INITIAL POSTCARD MAILING
January 2, 1997

Dear Director of Admissions,

Please send a copy of the latest school catalog including the name of your President, current faculty and course listings to me as soon as possible. Thank you for your assistance.

Sandra S. Reid
1004 Bentley Gate
Fort Worth, TX 76155
January 17, 1997

Dear <TITLE> <LAST_NAME>:

Here at the University of North Texas we have underway a national study of the use of illicit psycho-active drugs among community college students. And your institution has been randomly selected for inclusion in our research. Your actual participation is, of course, voluntary. But we hope you will agree to team up with us in this important endeavor.

All we ask today is whether you are agreeable to having us send to a random sample of your faculty a questionnaire for distribution among their students. If you wish to review the questionnaire, simply let us know and we will put a copy into the mail right away.

Completed questionnaires will be treated confidentially and students will not be asked to identify themselves on the questionnaires they complete.

Our hope is to nationally administer the questionnaire in February of the new year. With this in mind, we hope to hear from you before the end of January. In the meantime, please do not hesitate to call or write us with whatever questions you may have. Without the friendly cooperation of people such as you, the research we are doing cannot be completed.

Sincerely,

D. Barry Lumsden
Associate Director and
Professor of Higher Education
(940) 565-4074

Sandra S. Reid
Research Associate
(817) 457-5409

This project has been reviewed and approved by the UNT Committee for the Protection of Human Subjects.
April 14, 1997

Dear <TITLE> <LAST_NAME>:

Here at the University of North Texas we currently have underway a national study of the use of illicit psycho-active drugs among community college students. And your institution, as well as you specifically, have been randomly selected for inclusion in our research. The study is being conducted in conjunction with Sandra Reid’s doctoral dissertation. Your actual participation is, of course, voluntary. But we hope you will agree to team up with us in this important endeavor.

Enclosed is the questionnaire which we ask be administered to the students in one of the sections of your classes. It is designed to be administered to at least 25 students. Completed questionnaires will be treated confidentially and students will not be asked to identify themselves; no attempt will be made to identify anyone. The questionnaire can be completed in approximately 30 minutes. The responses will be used only in combination with those of others in the sample.

Please use the enclosed postage-paid envelope to mail the completed questionnaires by Friday, May 2, 1997. In appreciation of your cooperation, we will be glad to send you a complimentary 1-page summary of our findings. Just add a note on the front page of the questionnaire to indicate your interest in receiving the report.

If you have any questions, please call or fax the numbers noted below. Please know that your assistance is greatly appreciated.

Sincerely,

D. Barry Lumsden  Sandra S. Reid 
Associate Director and Research Associate 
Professor of Higher Education 9817)0963-7149 
(fax) (817) 931-3816

This project has been reviewed and approved by the UNT Committee for the Protection of Human Subjects.

Enclosures
Dear <TITLE> <LAST_NAME>

You recently received a questionnaire regarding Drug Education School Evaluation Instrument. If you have already returned the questionnaire, Thank You.

If you have not had a chance to do so, please take a few minutes during your next class session to administer the survey to your students. Please return the questionnaires in the postage-paid envelope supplied. Your students’ responses are important to us and all will be kept in the strictest confidence.

Sincerely,

D. Barry Lumsden
Associate Director and
Professor of Higher
Education

Sandra S. Reid
Research Associate
APPENDIX E

COVER LETTER FOR FINAL MAILING
May 11, 1997

Dear <TITLE> <LAST_NAME>

We recently sent you a questionnaire regarding Drug Education School Evaluation to be administered immediately to your students. The responses of your students are very important to us, so we are making a final appeal for your assistance. Another set of questionnaires is enclosed in case you have misplaced the original one.

The responses will be kept in strict confidence and will be used only in combination with those of others in the sample. The information gained in this research will not be associated with you or any student in any way. So please instruct your students to be candid.

Please use the enclosed postage-paid envelope to mail the completed questionnaires by May 25, 1997. In appreciation for your cooperation, we will be glad to send you a complimentary 1-page summary of our research. Just write a note on the front page of the questionnaires to indicate your interest in receiving the report.

Your assistance is greatly appreciated. Without the cooperation of professionals such as you, the completion of our research will not be possible.

Sincerely,

D. Barry Lumsden
Associate Director and Professor of Higher Education
(817) 963-7149
(fax) (817) 931-3816

Sandra S. Reid
Research Associate
(817) 963-7149

This project has been reviewed and approved by the UNT Committee for the Protection of Human Subjects.

Enclosures
APPENDIX F

COMMUNITY COLLEGES INCLUDED IN THE STUDY
Community Colleges Included in Study

1. Cloud County Community College
Concordia, Kansas 66901-1002

2. Beal College
Bangor, Maine 04401-6896

3. Lake Michigan College
Benton Harbor, MI 79022-1899

4. Erie Community College
South Campus
Main Street and Youngs Road
Orchard Park, NY 14221

5. James Sprunt Community College
Kenansville, South Carolina 28349-0398

6. Davis College
4747 Monroe Street
Toledo, Ohio 43623-4307

7. Keystone College
LaPlume, PA 18440-0200

8. Horry-Georgetown Technical College
Conway, South Carolina 29526

9. Jacksonville College
105 B. J. Albritton Drive
Jacksonville, TX 75766-4759

10. Columbia Basin College
Pasco, Washington 99301-3397

11. Westpark Community College
Fort Smith, Arkansas 72913-3649

12. Navajo Community College
Tsaile, AZ 86556
13. Norwalk Community - Technical College
188 Richards Ave.
Norwalk, Connecticut 06854-1655

14. Vincennes University
Vincennes, Indiana 47591 - 5202
APPENDIX G

FACULTY RANDOMLY SELECTED FOR MAILING OF SURVEY
Faculty Randomly Selected for Mailing of Survey

1. Professor 1 A  
Cloud County Community College  
Concordia, Kansas  66901-1002

2. Professor 2 A  
Columbia Basin College  
Pasco, Washington  99301-3397

3. Professor 1 B  
Erie Community College  
South Campus  
Main Street and Youngs Road  
Orchard Park, NY  14221

4. Professor 2 B  
Columbia Basin College Pasco, Washington  99301-3397

5. Professor 3 A  
Lake Michigan College  
Benton Harbor, MI  49022-1899

6. Professor 3 B  
Erie Community College  
South Campus  
Main Street and Youngs Road  
Orchard Park, NY  14221

7. Professor 4 A  
Beal College  
Bangor, Maine  04401-6896

8. Professor 4 B  
Horry-Georgetown Technical College  
Conway, South Carolina  29526

9. Professor 5 A  
Horry-Georgetown Technical College  
Conway, South Carolina  29526

10. Professor 5 B  
Westpark Community College  
Fort Smith, Arkansas  72913-3649
11. Professor 6 A
Westpark Community College
Fort Smith, Arkansas  72913-3649

12. Professor 6 B
Beal College
Bangor, Maine  104401-6896

13. Professor 7 A
Keystone College
LaPlume, PA  18440-0200

14. Professor 7 B
Cloud County Community College
Concordia, Kansas  6901-1002

15. Professor 8 A
Vincennes University
Vincennes, Indiana  47591-5202

16. Professor 8 B
Vincennes University
Vincennes, Indiana  47591-5202

17. Professor 9 A
James Sprunt Community College
PO Box 398
Kenansville, North Carolina  28349

18. Professor 9 B
Norwalk Community - Technical College
188 Richards Ave.
Norwalk, Connecticut  06854-1655

19. Professor 10 A
Navajo Community College
Tsaile, AZ  86556

20. Professor 10 B
Keystone College
LaPlume, PA  18440-0200

21. Professor 11 A
Lake Michigan College
Benton Harbor, MI  49022-1899
22. Professor 11 B
James Sprunt Community College
PO Box 398
Kenansville, North Carolina 28349

23. Professor 12 A
Jacksonville College
105 B. J. Albritton Drive
Jacksonville, TX 75766-4759

24. Professor 12 B
Davis College
4747 Monroe Street
Toledo, Ohio 43623-4307

25. Professor 13 A
Norwalk Community - Technical College
188 Richards Ave.
Norwalk, Connecticut 06854-1655

26. Professor 13 B
Navajo Community College
Tsaile, AZ 86556

27. Professor 14 A
Jacksonville College
105 B. J. Albritton Drive
Jacksonville, TX 75766-4759

28. Professor 14 B
Davis College
4747 Monroe Street
Toledo, Ohio 43623-4307
REFERENCE


