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ABSTRACT

Results of a survey of student perceptions of drugs and drug use that was conducted at Bowie State College are presented. Studies that have been conducted on college students' use of alcohol, marijuana, and cocaine in the last five years are reviewed, along with additional studies relating to the general population and the following drugs: marijuana, "crack," cocaine, and heroin. The survey population consisted of three sections of students enrolled in the Orientation to College class in the fall 1986 semester. The 57 respondents consisted of 35 females and 22 males, and of the total 25 were 18 years old or younger, and 32 were 19 years old or older. Specific research concerns included: students' perceptions of the extent of drug usage by their friends, their perceptions of the least and most harmful drugs, their perceptions of drug usage on the campus, and their knowledge of the signs or symptoms of drug abuse and appropriate services for drug abusers. The survey findings indicate that the majority of students in the sample agreed on the least and most harmful drugs: marijuana and "crack"/cocaine, respectively. About 90% of the students stated that their friends had experimented with drugs. The 10 survey questions are included.
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DRUG SURVEY

by

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I. THE BACKGROUND OF THE SURVEY

The drug survey of three sections of students enrolled in the Orientation to College class in the Fall 1986 semester was conducted to ascertain students' perceptions of drugs and drug usage. The following section presents a brief rationale for conducting a drug survey, a brief description of the Orientation to College course, a brief description of Bowie State College, a statement of the problem, the research design and methodology findings, conclusions and implications.

Rationale

Drug dependency is increasingly perceived as a major health problem in the United States. In a 1984 publication, Nicholi estimates that nine (9) million college students use cocaine and thirty (30) million college students reported to have taken cocaine.¹ These statistics speak to on-going cocaine usage and experimentation among college students.

In an October 5, 1986 article "Campus Cocaine" in The Washington Post Magazine, Dr. Lloyd D. Johnson of the University of Michigan's Institute for Social Research conducted a survey financed by the National Institute of Drug Abuse. He found that approximately five (5) million people use cocaine, twenty (20) million people use marijuana and 500,000 people use heroin. By the age of twenty (20), as many as 80% of young adults have tried an illicit drug other than marijuana.²

¹A. Nicholi, "Cocaine Use Among the College Age Group: Biological: Psychological Effects: Clinical: Lab Research Findings." Journal of American College Health, 1984 (Jan.) Volume 32 (6), pp. 258-261.

²Lloyd D. Johnson, "Campus Cocaine", The Washington Post Magazine, October 5, 1986, p. 27.

In Prince Georges County, Maryland, with the death of Len Bias of the University of Maryland basketball team, came an awareness of the extent of the problem. On college campuses, statewide, students began to reassess and reaffirm their beliefs about drugs. For some, the belief that the limited use of the drug cocaine would not be harmful, the Len Bias death was a rude awakening. For others, the belief that athletes who are health conscious, don't take drugs, was shaken. For still others, the belief that drugs, in any form, are harmful, was reaffirmed.

In the state of Maryland, Governor Harry Hughes circulated a policy to all campuses promising the dismissal of students, faculty or staff connected, in any way, with the use or distribution of drugs. It is in such a climate that a previously expressed concern for a need to identify student perceptions on drugs led to the drug survey.

The Orientation to College Course

The Orientation to College course at Bowie State College is a one credit one semester course designed to acquaint students with the campus services, policies and procedures. The responsibility for designing and implementing the course falls on the college Counseling Center. The course is developed and taught by Counseling Center staff, Special Services Project staff, Student Affairs staff, Financial Aid office staff and interested faculty. The course consists of in class instruction and a required number of optional workshops and assemblies. The instructional class meets one hour per week for sixteen weeks. In addition to the

class session, students attend a minimum of three workshops, a computerized career search (SIGI) session and an interview with the instructor.

I. Description of Bowie State College

Bowie State College began in 1865 as the Baltimore Normal School. In 1908, the state legislature, at the request of the Baltimore Normal School, authorized the Board of Education to assume control of the school. The institution thereby became a public school. The school was relocated on a 187 acre tract of land in Prince Georges County, Maryland, its current location. After several name changes, the school was called Bowie State College in 1963 with the advent of the liberal arts program.¹

Today, Bowie State College has a Graduate College, College of Continuing Education and a Week-end College. Today, the institution offers two undergraduate degree programs (B.S., B.A.) with concentrations in twenty-seven (27) areas and Masters degrees in education (M.Ed.), counseling (M.A.), and science (M.S.) in ten (10) areas of concentration. The College is accredited by the Middle States Association of Colleges and Secondary Schools, the Maryland State Department of Education, the National Council for the Accreditation of Teacher Education and the Council on Social Work Education.

In the fall of 1986, at the time the data was collected, the student enrollment by head count was approximately 3,000.² This represents an approximate 8% increase in enrollment from the 1985-1986 school year.

¹Bowie State College Catalog 1985-86, p. 7.

²Telephone Conversation, Director of Institutional Research, Bowie State College, November 1986.

II. LITERATURE SEARCH

There have been a number of studies on college students' use of drugs in the past five years. The studies have primarily included alcohol, marijuana, cocaine and crack. This section presents the research findings according to the drug. In addition, a short section is included on studies relating to the general population and on studies relating to structured rehabilitative programs.

Alcohol

In a 1984 study of college students' attitudes toward drinking, Hanson and Engs (1984) found that there was little change in attitude towards drinking from 1970-1982¹ with respect to uneasiness about the acknowledgment of drinking to someone who did not approve. However, there were some changes in attitudes. More students believed that God would be displeased if they drank (29.1% in 1982 compared to 16.3% in 1970). This belief was strongly related to sex and to gender and to college classification. 27.3% of women in 1982 compared to 13.4% of women in 1970 believed God would be displeased. There was a significant increase in the number of Catholics who held this belief in 1982 versus 1970. 48.2% of freshmen held this belief compared to 19.1% in 1970.

¹David Hanson and Ruth Engs, "College Students' Drinking Attitudes 1970-1982". Psychological Reports. 1984 (Feb.) 54 (1), pp. 300-302.

Other significant changes in 1982 from the 1970 study are the following:

- More students would still drink alcoholic beverages, even if there were no pressure to do so;
- More students had their first drink with friends;
- Fewer students had their first drink on a date;
- More students had their first drink with either parent.

Hanson and Engs' study appears to indicate more tolerance for drinking coupled with attitudes of uneasiness in the acknowledgement of drinking to a disapproving other.

In another 1984 study, Lapp found alcohol use higher in male subjects than in female subjects. In the French speaking population, Lapp found alcohol use related to female sex roles and higher self-esteem levels.¹

Ratliff and Burkhart identified differences between the sexes in expectations of drinking. They found an increase in aggressive arousal and social deviance in males compared to an enhancement of social pleasure in females.² They also found that heavy drinkers were analyzed as having strong sensation-seeking needs.

¹ Janet J. Lapp. "Psychotropic Drugs: Alcohol Use by Montreal College Students: Sex, Ethnic: Personality Correlates." Journal of Alcohol: Drug Education. 1984 (Fall) 30 (1), pp. 18-26.

² Katherine Ratliff and Barry Burkhart, "Sex Differences in Motivations for and Effects of Drinking Among College Students." Journal of Studies on Alcoholism. 1984 (January) 45 (1), pp. 26-32.

Marijuana

Janet Lapp, in a 1984 study, found that mostly males use marijuana. She also found a relationship between marijuana usage and the individual's internal locus of control.¹

In regard to young adults and marijuana, Yamaguchi and Kandel (1985) conducted a follow-up study of 1,325 students (current mean age 24.7 years) who participated in a high school survey nine (9) years earlier. The results indicated that marijuana use was related to role selection in such areas as marital vs. single status (marriages were postponed) and parenthood vs. non-parenthood (parenthood was postponed). Also concluded by the conclusion of this study was that marijuana users had a greater risk of marital dissolution than non-users.²

¹ Janet Lapp, "Psychotropic Drugs: Alcohol Use by Montreal College Students: Sex, Ethnic: Personality Correlates." Journal of Alcohol: Drug Education. 1984 (Fall) 30 (1), pp. 18-26.

² Kazuo Yamaguchi and Denise Kandel, "On the Resolution of Role Incompatibility: A Life Event History Analysis of Family Roles and Marijuana Use," American Journal of Sociology. 1985 (May), 90 (6), pp. 1284-1325.

Cocaine

Armand Nicholi researched cocaine use among the college age group.¹

He found the following biological changes from cocaine use:

- constriction of blood vessels;
- pupil dilation;
- increased heart rate;
- increased blood rate;
- increased alertness or drowsiness, depending on the individual;
- decrease in sleep;
- decrease in appetite;
- impaired cognitive/affective functioning with increasing doses over a long period of time.

Nicholi also found that strong cravings developed with cocaine

use.

In another 1984 study, Nicholi found that the increase of cocaine use among college students was greater than the increased rate of marijuana use during the past 10 years.²

In an October 5, 1986 article on "Campus Cocaine" in The Washington Post Magazine,³ Dr. Lloyd D. Johnson reports the findings of a survey financed by the National Institute on Drug Abuse. They found that:

¹ Armand Nicholi, "Cocaine Use Among the College Age Groups: Biological: Psychological Effects: Clinical: Lab Research Findings." Journal of American College Health. 1984 (January) v.32 (6), pp. 258-261.

² Armand Nicholi, "Cocaine Use Among the College Age Group: Historical Perspective-The Long: Colorful History of Erythoxylon Coca". Journal of American College Health. 1984 (June) 32 (6), pp. 252-257.

³ Lloyd D. Johnson, "Campus Cocaine", The Washington Post Magazine, October 5, 1986, p. 27.

- approximately 30% of all college students will use cocaine at least once before they graduate;
- students say that cocaine is readily available;
- until now, students felt there was little risk in trying cocaine;
- men are more likely to use illicit drugs than women.

The author concluded that for drug prevention programs to be effective, they must be directed towards young children before they start to use drugs and before older children introduce drugs to younger children.

Studies Relating To The General Population

Marijuana

Because marijuana (cannabis) was considered a killer weed causing violence and insanity years ago without scientific support of these accusations, scientists have been careful in drawing conclusions about marijuana. However, according to Madelaine Maykut of Health and Welfare Canada in Ottawa (1985), marijuana has been argued to cause metabolic alterations affecting chromosomes, immunity, brain pathology, the cardio-pulmonary system, and reproductive system affecting hormonal status. It has also been argued that marijuana facilitates manifestations of behavior that affect society. Such manifestations include psychopathology, aggressive behavior, psychomotor impairment and the drug dependency itself. These responses to marijuana usage may lead to pseudodiabetic states and endorphin release via the adrenocorticotrophic hormone.¹ It is suggested that the release of these endorphins may explain the drug dependency effect of marijuana and other psychotomimetic substances.² Studies on the effect of marijuana are as important as the studies on other illicit substances due to the fact that over twenty (20) millions Americans use marijuana at least once a month.³

¹ Madelaine Maykut, "Health Consequences of Acute and Chronic Marijuana Use: Progress in Neuro-Psychopharmacology and Biological Psychiatry, 1985, 9 (3), pp. 209-238.

² Ibid.

³ . "DEA Seeks To Expand Herbicide Use." The Washington Post, Statistics from Environmental Impact Study, 1985, January 17, 1986, pp. All.

Crack

Dody Tsiantar, in a 1986 article in the Washington Post,¹ indicates that crack, a cheap, pure, highly addictive form of cocaine, is readily accessible and extremely dangerous. The Coke (Cocaine) Hotline estimates that as of June 1986, one million Americans in 25 states have tried crack. According to Detroit Police, 90% of the cocaine sold there is in the form of crack. In Dallas, it is estimated that 68% of the coke sold is in the form of crack. In San Francisco, it is estimated that 30% of the coke sold is in the form of crack. In the District of Columbia, the "drug of choice" was PCP or "Angel Dust" in 1986.

Crack was practically unheard of on the east coast before October of 1985. Crack is found in rich and poor neighborhoods and among the very young (8 year olds). First time users quickly become addicted. They will steal, prostitute themselves and kill for the next fix. By June of 1986, more than half of all cocaine arrests involved crack. Between October 1985 and June 1986, approximately 50% of federally prosecuted drug rings involved crack. Indeed, marijuana arrests dropped 92% from January - April 1986. Heroin arrests dropped 88% during the same time period.²

Crack is extremely dangerous. The user experiences a euphoric rush within ten (10) seconds. A few minutes later, there is a "sharp let-down".

¹ Dody Tsiantar. "'Crack' Making Violent Presence Felt in New York", The Washington Post. June 13, 1986, p. A3a.

² Ibid.

The user always craves more drugs. Physiologically, the user will experience chronic chest congestion, irreversible lung damage and brain seizures. Psychologically, the user will experience a total shift in priorities. The user's life revolves around getting the next crack fix. People with no previous police record begin to commit crimes to feed the habit. Drug enforcement officials like Robert Stutman, Head of the New York Field Division of the Drug Enforcement Administration fear that crack "... will become the drug of choice in the United States, and that will be devastating."¹

Cocaine

Cocaine has been perceived as the drug of the upper class. This perception was reinforced by a study conducted by Ronald Siegel (1984).² According to Siegel, cocaine use is considered "glamorous" and without serious health risk problems. This belief was dispelled in a study by Khantzian and Khantzian (1984).³ These authors found a psychological predisposition towards cocaine addiction. Their study suggests that drug dependence is explained by "major" problems in adapting to painful emotions and external "unmanageable realities" like depression, impulsivity and self esteem disturbances. The authors state that there is

¹ Dody Tsiantar, "'Crack' Making Violent Presence Felt in New York", The Washington Post, June 13, 1986, p. A3a.

² Ronald Siegel, "Cocaine: The Privileged Class. A Review of Historical and Contemporary Images". Advances in Alcohol and Substance Abuse, 1984 (WIN), 4(2), pp. 37-49.

³ E.J. Khantzian and N.J. Khantzian, "Cocaine Addiction: Is There A Psychological Predisposition?" Psychiatric Annals. 1984 October 14 (10), pp. 753-754.

little evidence in support of pleasure seeking or self-destruction as motives for cocaine addiction.

Another researcher, Wise, was interested in neural mechanisms that reinforce cocaine use. Wise found that dopaminergic synapses are responsible for the "rewarding property" leading to the abuse of cocaine. Cocaine prolongs the activity of dopamine in this synapse by blocking the "dopamine re up take mechanism". Cocaine can dominate behavior by reducing other behaviors; specifically, sleeping and eating. Cocaine also reduces the user's physical resistance to life threatening levels.¹

Heroin

In a 1983 study,² A. Charles-Nicolas found a relationship between heroin use and adolescence in the framework of the belief that by deliberately breaking a sacred taboo, great power is conferred on the transgressor. Heroin use is considered a three (3) step rite: 1) leaving the family; 2) becoming "marginalized"; and, 3) becoming reintegrated. This process is rarely completed.

¹Roy Wise, "Neural Mechanisms of the Reinforcing Action of Cocaine". National Institute on Drug Abuse: Research Monograph Series, 1984, Monograph 50, pp. 15-33.

²A. Charles-Nicolas, "L'interdit, le faire, l'heroine et l' adolescent." Neuropsychiatrie de l'Enfance et de l'Adolescence. 1983 (Aug. - Sept.), 3 (8-9), pp. 416-423.

Studies on Structured Rehabilitative Programs

Alcohol

Lenhart and Wodarski describe a program for student alcohol abuse.¹

The Self Management of Alcohol Consumption of Students (SMACS) is a comprehensive program based on the development of skills to control alcohol intake, alcohol education and the maintenance of altered behavior via a reward structure. Participants learn to isolate factors that produce stress and to use relaxation techniques when faced with stress. Participants are also taught problem solving and self management skills. The program includes a peer support component that enables participants to develop and use appropriate assertiveness techniques. The follow-up program includes sessions on maintenance and the generalization of the behavioral change.

In studying effective components in alcohol misuse prevention programs, Kleinot and Rogers found alcohol abusers sensitive to the severity of the consequences of drinking generally, the specific individual's personal vulnerability to the consequences of drinking and the effectiveness of moderate and responsible drinking in preventing the problems associated with alcoholism.²

¹Swanhenhart and John Wodarski, "Comprehensive Program for Student Alcohol Abuse: A Group Approach". Journal of Alcohol: Drug Abuse, 1984 (fall), 30 (1), pp. 36-44.

²Michael Kleinot and Ronald Rogers, "Identifying Effective Components of Alcohol Misuse Prevention Programs". Journal of Studies of Alcohol. 1982 (July), 43 (7), pp. 802-811.

Heroin

Harlow and Douglas studied a methadone maintenance intervention program. They used a time series design to see how effective the program was. Participation in the methadone maintenance program was characterized by a decrease in early heroin use, a slight increase in daily marijuana use and an increase in regular employment.¹

¹ Lisa Harlow and Douglas Anglin, "Time Series Design to Evaluate the Effectiveness of Methadone Maintenance Intervention." Journal of Drug Education. 1984 (March), 1 (3), pp. 241-254.

III. RESEARCH DESIGN AND METHODOLOGY

This investigation was a type of applied research. The primary data collection methodology was a survey of three sections of Orientation to College classes during the Fall 1986 semester. The survey examined students' perceptions of drugs, drug usage and resources for help. The personal statement was intended as an indicator of an attitude towards drugs. The following section includes the survey form questions, a description of the research population, a description of the data collection procedures, a description of the treatment of the data and a summary.

Introduction

In the fall of 1986, the researchers pilot tested the drug survey questions for clarity on eight (8) work-study students working for the Special Services Project. The questions were pilot tested and revised in October of 1986. The survey was administered in November of 1986. Data was compiled from December 1986 - January 1987. The analysis was completed between February and March 1987.

Development of the Survey

The purpose of this survey was to identify the perceptions of students at Bowie State College of the prevalence of drug usage. Specifically, the survey is designed to indicate the students' perceptions of the extent of usage by their friends, the students' perceptions of least and most harmful drugs, the students' perceptions of drug usage on the campus, the students' knowledge of the signs or symptoms of drug abuse and the

students' knowledge of appropriate services for drug abusers. Specifically, the survey included items on ranking drugs from least to most dangerous, indicating the number or percentage of students on campus who use drugs, indicating the number or percentage of students with a serious drug problem and indicating the student's knowledge of referral sources for students who abuse drugs. To do this, there was:

1. a review of the literature on student's knowledge of drug abuse and campus programs dealing with substance abuse.
2. a discussion with support personnel on the perceived need for such a survey.

The survey forms were constructed and field tested. As a result of the field testing, the following items were omitted from the survey instrument:

1. items related to the race and gender of the drug user.
2. items related to other physical attributes of the drug user.
3. items related to the marital status of the parents of the drug user.

The survey forms were field tested using eight (8) work-study students assigned to the Special Services Project at Bowie State College. All field testing occurred in October of 1986.

Description of the Survey Form

Each survey form included a section for the student's gender and age. There were a total of ten (10) questions. The questions required a written response from the student. For the reader's convenience, the survey is reproduced on the following page.

DRUG SURVEY QUESTIONS

Indicate your gender and age only.

1. Estimate the number of your friends who've experimented with drugs.
2. Rank the drugs you know of from least to most dangerous.
3. Indicate the least harmful drug.
4. Indicate the most harmful drug.
5. Where do you live?
6. Estimate the number or percent (%) of students on campus who use drugs.
7. Estimate the number or percent (%) of students with serious drug problems.
8. What are the symptoms of drug abuse?
9. Where would you send someone for help?
10. Please make a personal statement on drug abuse.

Description of the Research Population

The research population consisted of fifty-seven (57) students enrolled in three sections of the Orientation to College class during the fall 1986 semester. There were thirty-five (35) females and twenty-two (22) males. Twenty-five (25) students were eighteen (18) years old or younger. Thirty-two (32) students were nineteen years old or older. Twenty- 1) students were commuters and thirty-six (36) students lived on s.

Description of the Data Collection Procedures

All data were collected by Orientation to College class instructors. The specific steps of data collection are indicated below.

1. Survey forms and instructors were distributed by the researcher to the Orientation to College class instructors in November 1986.
2. Survey forms were returned by the instructors immediately following the class.
3. Frequencies of responses were compiled from December 1986 - January 1987.
4. 100% of all students surveyed returned forms.

Description of the Treatment of the Data

Survey form returns were analyzed to:

1. Compare the response of younger students with older students.
2. Compare the responses of males with females.
3. Examine the perceptions of all students who completed the survey questions.

Frequency counts, percentages, chi squares and significance levels were tallied for each survey item.

The following research questions were posed.

Research Question 1

What are the perceptions of Bowie State College Orientation to College class students of the drug problem?

Research Question 2

What are the perceptions of the Bowie State College Orientation to College class students of the availability of support services designed to assist students who abuse drugs?

Research Question 3

What are the differences in perceptions of drug usage based on age and gender?

IV. FINDINGS

Demographic Data

Seventy-nine (79) students (100%) were administered the drug survey. Demographically speaking, thirty-two (32) or 40.5% were males, forty-six (46) or 58.2% were females and one (1) or 1.3% did not specify gender. Forty-nine (49) students or 62% were residents, twenty-nine (29) students or 36.7% were commuters, and one (1) student or 1.3% did not identify housing status. The age of students ranged from 17-47 with the following divisions: three (3) or 3.8% of the students were 17 years old; thirty (30) or 38% were 18 years old; twenty-seven (27) or 34.2% were 19 years old; five (5) or 6.3% were 20 years old; two (2) or 2.5% were 21 years old; two (2) or 2.5% were 22 years old; one (1) or 1.3% represented each of the ages 25, 29, 33, 35, and 47; and five (5) students did not identify age.

The Research Question Data

Number of Friends Experimenting With Drugs

The students were asked to estimate the percentage or actual number of their friends who have experimented with drugs. The ranges representing 1-20 friends as experimenters possess the highest number of responses. Twenty-nine (29) students or 36.7% stated that 1-10 of their friends experimented with drugs. Thirteen (13) students (16.5%) stated that 11-20 of their friends experimented with drugs. The remaining responses are divided into percentage and actual number responses in descending order: Six (6) students (7.6%) stated that 81-99% of their friends experimented with drugs; three (3) students (3.8%) indicated that 61-80%

of their friends experimented with drugs; two (2) students (2.5%) identified 1-20% of their friends as having experimented with drugs; two (2) students (1.3% each) each identified friends who experimented with drugs by indicating the range 21-40% or 41-60%; six (6) students (7.6%) stated that the actual number of their friends experimenting with drugs was between 21-30; five (5) students (6.3%) identified 40 or more of their friends as having experimented with drugs; three (3) students (3.8%) stated that 31-40 of their friends experimented with drugs; and three (3) students (3.8%) also stated that all of their friends had experimented with drugs. Conversely, five (5) students (6.3%) stated that none of their friends experimented with drugs. Two (2) students (2.5%) did not respond to the question.

Drugs Perceived As Least Harmful

The drug considered the least harmful by over half the sample was marijuana. Forty-two (42) students or 53.2% of the student sample stated that marijuana was the least harmful as opposed to the next least harmful drug, alcohol, which was supported by eleven (11) or 14% of the students. The next choice was aspirin, as indicated by eight (8) or 10.1% of the students in the sample. Following aspirin, caffeine was identified by six (6) students or 7.6%. Four (4) students or 5.1% stated that there were no drugs that were less harmful than others (i.e. all drugs are equally harmful); two (2) students or 2.5% stated that over-the-counter drugs were least harmful; three (3) students responded singularly (1.3% each) to the remaining categories: loveboat (marijuana dipped in PCP), speed, and nicotine. Three (3) students or 3.8% did not respond to the question.

The responses were regrouped by sex, age and housing status. When alcohol and marijuana were crosstabulated by sex, the results indicated that more male than female students (21.9% vs 10.9%) thought that alcohol was least harmful. Most of the females (63.1% vs 37.5%) believed that marijuana was the least harmful. Approximately half of the two major age groups surveyed, 18 and 19 year olds, also indicated that marijuana was least harmful (63.1% and 37.5% respectively). More residents than commuters thought that alcohol (16.3% vs 10.3%) was least harmful whereas more commuters than residents (13.8% vs 4.1%) thought that caffeine was least harmful.

Drugs Perceived As Most Harmful

The drug considered most harmful was "crack," a cocaine derivative. Thirty-one (31) students or 39.2% of the sample supported this choice. Following crack closely as a drug of severity was cocaine, supported by twenty-two (22) students or 27.8%. Heroin obtained support from thirteen (13) students or 16.5% followed by PCP, supported by four (4) students (5.1%); "loveboat," supported by two (2) students (2.5%); alcohol, supported by two (2) students (2.5%); "all drugs are equally harmful," supported by two (2) students (2.5%); freebasing [drugs], supported by one (1) student (1.3%) and LSD, supported by one (1) student (1.3%). There was no reply to this question by one (1) student (1.3%).

When these responses were regrouped by sex, housing status and age, the highest percentages of males vs females reported that the following drugs were the most harmful: crack (37.5% vs 41.3%), cocaine (31.3% vs 26.15%), and heroin (16.8% vs 15.2%). The top three drugs perceived as

most harmful were also tallied for residents and commuters: crack (40% vs 37%), cocaine (30% vs 24%), and heroin (14% vs 20%). The major age groups, 18 and 19 year olds, also considered crack (56.7% vs 33.3%), cocaine (10% vs 33.3%), and heroin (16.7% vs 14.8%), the top three most harmful drugs. It should be noted that, although age and perceived most harmful drug did not obtain an acceptable significance level to be considered related, a significance level of .067 was obtained. This was the most statistically significant statistic. (see Table 1 on page 30).

Estimated Number of Drug Users On-Campus

These responses were in the form of actual numbers or percentages and the highest estimates were attained by the use of percentages. Students who responded with percentages to this question were basically divided equally in support. Sixteen (16) students or 20.3% estimated that 21-40% of the students on campus used drugs and, still, another sixteen (16) students estimated that 81-99% of the students on campus used drugs. The next highest frequency of students reporting their estimates of the number of campus drug users was twelve (12) or 15.2%. These students indicated that 41-60% of the students on campus used drugs. The lowest percentage range of users, 1-20%, was supported by nine (9) or 11.7% of the students. In actual numbers, the highest support, four (4) students or 5.1%, was given to the range "121 or more" students on campus use drugs. Three (3) students indicated that they didn't know (could not estimate the number of campus users), one (1) student or 1.3% also stated that 41-70 students on campus used drugs. One

(1) student (1.3%) did not respond to the question.

The sample was regrouped by housing status (resident vs commuter) for this question also. The results were that 20.4% vs 20.7% thought 21-40% of the students on campus used drugs; 16.3% vs 27.6% thought 61-80% of the students used drugs; 24.5% vs 13.8% believed that 81-99% of the students used drugs; 6.1% vs 3.4% believed that 121 students or more used drugs; and 2.0% vs 6.9% didn't know (could not provide an estimate of) how many students on campus used drugs.

Estimated Number Of Campus Drug Users With Serious Drug Problems

The sample was asked to estimate the number of campus drug users with serious drug problems. Again, responses to this question could be reported in actual numbers or percentages. Those students responding with percentages indicated foremost that 1-20% of the campus drug users had serious drug problems; thirty-five (35) students (44.3%) supported this range. Thirteen (13) students or 16.5% supported the next most frequently reported range, indicating that 21-40% of the campus drug users had serious drug problems. Eight (8) students or 10.1% stated that none of the campus drug users had serious problems; six (6) students or 7.6% indicated 41-60% of the campus drug users had serious drug problems; and three (3) students or 3.8% stated that 61-80% of the campus drug users had serious problems. The actual number ranges obtained support from one to five students. Five (5) students or 6.5% indicated that 1-40 campus drug users had serious drug problems and one (1) student or 1.3% each indicated one of the following ranges of the number of campus

drug users with serious problems: 41-70 students, 91-120 students, or 121 students or more. In addition to these responses, one (1) student (1.3%) stated that the question was not applicable, three (3) students (3.8%) stated that they didn't know (could not give an estimate), and two (2) students (2.5%) did not respond.

When the sample was regrouped by resident versus commuter status, similar results were obtained: forty and eight-tenths percent (40.8%) vs fifty-one and seven-tenths percent (51.7%) stated that 1-20% of campus users had serious drug problems; 18.4% vs 13.8% believed that 21-40% of the users had serious drug problems; 10.2% vs 10.3% believed that none of the users had serious drug problems; and 4.1% vs 3.4% stated that 1-40 campus drug users had serious drug problems.

Symptoms

The first symptom listed by the students in the sample as characteristics of a drug abuser were tallied. The symptom indicated most frequently was "eye redness." Twelve (12) students or 15.2% supported this characteristic. Two groups of five (5) students, or 6.3% per group, indicated "Behavioral changes" and "loss of weight/appetite," making those characteristics the next most popular answer. Four groups of four (4) students, or 5.1% per group, indicated "addiction," "laziness," "restlessness/nervousness," and "needle marks" as symptoms of drug abuse. Three groups of three (3) students, or 3.8% per group, stated that "sleepiness," "missing classes," and "craziness" were symptoms whereas seven pairs of students, or 2.5% per pair, stated that either "withdrawal,"

"confusion," "lack of concern," "slow/no responses," "slurred speech," "pupil dilation/constriction," or "everyday [drug] use" was a symptom of drug abuse. The remainder of students each (1.3%) singularly indicated the symptoms "excessive hunger," "depression," "hallucinations," "aggression," "it kills," "dizziness," "change in appearance," "frequent asking for drugs," "sniffing," "glassy eyes," "dazed," "trembling," or "lack of coordination". There were no recorded responses for five students (6.3%).

Help Services

The students' first choices of help services for drug abusers were tallied. Thirty-six (36) students or 45.6% stated that users should be sent to drug rehabilitation centers. The next most popular help service indicated was counselors/counseling center supported by sixteen (16) students or 20.3%. It should be noted that one (1) additional student (1.3%) supported referral to a counseling center, but specified that it should be located off-campus. The other responses varied considerably. Four (4) students (5.1%) would send the user to a doctor; three (3) students (3.8%) would give the user a drug hotline number; four pairs of students (2.5% per pair) would send the user to a caring teacher, friend, infirmary, or hospital; and four students (1.3% each) singularly indicated that they would send a drug user to bible class, alcoholics anonymous, a social worker, or a previous drug abuser. Also singularly, three students (1.3% each) stated that they either didn't know where to send the abuser, would report the abuser to the police, or didn't care

(wouldn't send/refer the user anywhere). Four (4) students (5.1%) did not respond to the question.

V. CONCLUSIONS AND IMPLICATIONS

This survey indicates that the majority of students in the sample were in agreement in regard to the drugs perceived as least and most harmful, marijuana and crack/cocaine respectively. Interestingly, more male students perceived alcohol as the least harmful drug as opposed to female students, who overwhelmingly chose marijuana. Overall, however, more than half of the total sample believed that marijuana was least harmful, irrespective of the long-term effects of this controlled substance. "Crack," a cocaine derivative, became popular on the east coast in 1986 and was perceived by the sample as most harmful followed by cocaine and heroin. Among the other drugs that were mentioned was "loveboat," marijuana saturated with phencyclidine (PCP). It should be noted that some respondents proclaiming knowledge of the combination of controlled substances resulting in loveboat were inaccurate in their beliefs as to what the marijuana was saturated in.

The overall estimates of drug users were moderate to high. Approximately ninety percent (90%) of the students in the sample stated that their friends had experimented with drugs. Most students indicated that the campus possessed a relatively high number of illicit drug users; none of the students in the sample indicated that there were no drug users on campus or that there was less than twenty percent (20%) of the students on campus who used drugs. Most commuters' estimates of campus drug usage were lower than residents' estimates except when the sample was asked to estimate the number of campus drug users with serious drug problems.

The residents, then, had lower estimates than the commuters.

A variety of symptoms of and help services for illicit drug abusers were listed by the students in the sample. The students stated a number of physiological, psychological, and appearance-oriented changes as well as behavioral changes that were considered to be symptoms such as missing classes. Most students stated that a drug user should be referred to a drug rehabilitation center; and, the next most popular place of referral was a counseling center or counselor. Very few students indicated an infirmary, doctor, or hospital. Just as in the questions concerning the harmfulness of certain drugs and the estimates regarding drug users, the frequency of responses indicated that the students were generally thinking similarly.

The following recommendations are made based on the findings of this survey:

- More surveys on drug abuse should be conducted with a larger sample to determine students' beliefs and trends.
- A survey of drug abuse beliefs and trends should be administered to faculty and staff.
- Drug education at the college level should be increased to update students, staff, and faculty on types and effects of controlled substances and current findings regarding controlled substances.
- A pre and post survey of drug abuse beliefs and trends should be administered to students receiving drug education at the college level.
- A listing of help services on and off campus for drug abusers should be compiled and disseminated to students, staff, and faculty.

TABLE 1

CHI-SQUARES

Variables	Chi-square	df	significance
Gender			
Drug considered least harmful	15.589	13	.272
Drug considered most harmful	5.503	8	.702
Age			
Drug considered least harmful	89.089	143	.999
Drug considered most harmful	108.549	88	.067
Housing Status			
Drug considered least harmful	8.309	13	.822
Drug considered most harmful	5.855	8	.663

$p < .05 \rightarrow$

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