

ALIENATION, GROUP DEPENDENCY AND REASONS FOR ABSTINENCE
AMONG FEMALE COLLEGE STUDENT MARIJUANA USERS AND NONUSERS

A THESIS

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We hereby recommend that the thesis prepared under

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Dedication

This thesis is dedicated to Mr. and Mrs. Kenneth Miller Armstrong, my parents, who have given me the opportunity to further my education and find happiness and fulfillment through the attainment of knowledge. I am grateful to them for my feeling that the more I learn, the more I have to learn.

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Abstract

The present study compared marijuana users and nonusers with regard to demographic and personality variables, including alienation and group dependency. The nonusers' reasons for abstaining from marijuana were also investigated. The subjects were 316 students enrolled at Texas Woman's University. A three-part questionnaire eliciting background information and drug data, and containing Dean's Alienation Scale and the Q2 Scale from the Sixteen Personality Factor Test, was administered to the subjects. Marijuana users were characterized as being more likely to live with their parents, to participate in protests and demonstrations, to feel bored and depressed frequently, to have parents who smoke cigarettes frequently, to smoke cigarettes and drink alcoholic beverages frequently themselves, to use drugs for nonmedical reasons, to obtain their drug information from friends, and to have more friends who also smoke marijuana.

Results indicated that nonusers abstained from marijuana because: (a) they believed that they did not need marijuana

in order to enjoy life, (b) they did not want to live a life distorted by the use of marijuana, and (c) they did not believe that marijuana would solve their problems. Marijuana users were more likely to be alienated than nonusers. Users and nonusers were not significantly different with regard to group dependency; however, principled nonusers were found to be more group dependent than users.

Introduction

Much has been written about the types of individuals who smoke marijuana and why they smoke it. Marijuana users have been described as alienated (Miller, 1969; The Council on Mental Health and Committee on Alcoholism and Drug Dependence, 1967; Harris, 1971; Milman, 1969, Blum, 1970), nonconformist (Suchman, 1968), rebellious (Suchman, 1968; Allen and West, 1968; Hogan, Conway, and Fox, 1969), antiestablishment (Anheimer, 1969; Suchman, 1968), apathetic (Kolansky and Moore, 1971; Grinspoon, 1971), passive (McGlothlin, 1968; Milman, 1969), unproductive (Grinspoon, 1971), anxious (Zinberg, 1970; Keeler, 1968; Kolansky and Moore, 1971), and hostile (Mirin, Shapiro, Meyer, Pillard, and Fisher, 1971). Little research effort, however, has been devoted to a description of the non-marijuana user and a determination of his reasons for not using the drug. This lack of research is significant because an analysis of the motives of individuals for not smoking marijuana is important in developing educational programs. For a better understanding of the basis of this study, some of the previous

studies concerning marijuana users and nonusers will be reviewed.

Demographic Variables

Sex. Suchman (1968) administered a questionnaire concerning drug use and various aspects of college life, educational and political values, and current social issues to 600 randomly selected students at a West Coast university. He found that males were almost three times as likely as females to use drugs at least once a week. Marijuana was the recreational drug of choice in Suchman's study. Similarly, Harris (1971) administered a questionnaire to 1380 health students at Southern Illinois University and she concluded that males were more likely to smoke marijuana than females. On the other hand, Greenwald and Luetgert (1971) administered a 66-item, multiple-choice questionnaire to 591 students during their classes at an urban commuter campus and found no significant differences between drug users and nonusers with regard to sex. The President's Commission (1972) likewise concluded that the sex differential regarding marijuana usage

appeared to be diminishing. Use was almost equally distributed between males and females in many youthful populations.

Age. The President's Commission (1972) found that age was one of the most significant correlates of marijuana use. Those who had tried or used marijuana at least once were heavily concentrated in the 16-25 year age bracket. Twenty-seven per cent of the 16-17 year olds, 40% of the 18-21 year olds, and 38% of the 22-25 year olds had tried marijuana; whereas only 6% of the 12-13 year olds and 6% of the over-50 generation had used the drug.

Marital status. Suchman (1969) discovered that single students were four times as likely to use marijuana as married students. Tart (1971), after studying 150 experienced marijuana users, similarly found that 71% of these users were single, whereas only 19% were married or living with a semi-permanent mate. Manheimer (1969), after interviewing 1104 men and women, discovered that two-fifths of the single women who did not live with their parents were likely to have used marijuana, whereas only 8% of the married women with children reported having ever used marijuana.

Religion. Greenwald and Luetgert (1971) demonstrated that the use of drugs was significantly related to religious affiliation. Among those students who described their current religious affiliation as "agnostic," "atheist," or "none," there was significantly more drug use.

Manheimer (1969), Blum (1969), and Tart (1971) established that lack of religious affiliation was a good predictor of marijuana use. Fifty-six per cent of the men and 63% of the women who were without a religious affiliation reported having tried marijuana (Manheimer, 1969). Blum (1969) found that the marijuana user's religion was more likely to differ from that of his parents. Sixty per cent of the experienced marijuana users in Tart's study (1971) indicated that they had no religious affiliation.

Race. Greenwald and Luetgert (1971) found no significant difference between drug users and nonusers with regard to race. The President's Commission (1972) also found that the use of marijuana did not vary significantly with race.

Academic classification. Goode (1972) administered a questionnaire inquiring about sexual activity and drug use to 564 undergraduates at an eastern suburban state university.

It was concluded that seniors were more likely to have experimented with drugs than freshmen. The reason suggested for this finding was that the seniors had lived in a permissive environment, the university, for a longer period of time.

According to the President's Commission (1972), 25% of those who completed some college have used marijuana and 21% of those who graduated from college have used it. The use of marijuana among students seems to rise with increasing school level. Harris (1971) likewise found that upper classmen were more likely to use marijuana. Contrary to the findings of Goode (1972), Harris (1971), and the President's Commission (1972), Sadava (1971) concluded that there were no significant differences between users and nonusers with respect to year in school at the University of Colorado.

Academic major. Greenwald and Luetgert (1971) found that there was significantly more use of drugs among liberal arts, sciences, art and architecture students. Drug use appears to be heaviest among students majoring in the behavioral sciences, art, speech and drama. This finding is in agreement with Blum's findings (1969) that marijuana users were likely to be arts and humanities or social-science majors.

Sledjesky (1971) administered a questionnaire to 118 students from the University of Florida. He concluded that students in health related areas were the most likely users of marijuana. In the fields of arts and sciences and education twice as many students did not smoke marijuana as those who did smoke it.

Grade point average. Greenwald and Luetgert (1971) discovered no significant difference between drug users and nonusers with regard to grade point average. On the other hand, Harris (1971) found that grade point average was significantly correlated with marijuana use. Marijuana users had a higher than average grade point.

Living arrangements. In Greenwald and Luetgert's study (1971) there was significantly more drug use among those students not presently living with their parents. There was also significantly more drug use among those who left home before the age of 19, and those who were currently living in an apartment with one or more roommates. The President's Commission (1972) also stated that marijuana smoking was significantly correlated with separate residences from parents.

Personality Variables

Psychotherapy. Keniston (1969) described the "head," or the regular user, as having a continual struggle for "meaningful relationships"--direct, honest, open encounters with others. Along with drug use, psychotherapy, "encounter groups" and "sensitivity training" are used in the pursuit of meaning.

Cross and Davis (1972) surveyed 178 college students about their drug use and administered the Rotter Incomplete Sentences Blank Test. They found that drug users were more likely to have been in psychotherapy than nonusers.

Athletics. Shibuya (1972) studied social and personality traits of 20 marijuana users and 20 nonusers who were students at Purdue University between the ages of 18 and 30. She concluded that "interest in active participation in athletic activities" was one of the variables that discriminated highly between the marijuana user and nonuser groups. This finding is similar to Blum's finding (1969) that marijuana users did not consider athletics to be of any importance.

Social activities. Keniston (1969) stated that drug use was most common at unusually "high pressure" colleges

where play and social life were generally downgraded. Those colleges with the least amount of drug use were noted for the presence of strong anti-intellectual student subcultures centered around technical training and/or social activities like sports and fraternities.

Protest. Harris (1971) administered a questionnaire to 1380 health students at Southern Illinois University. She found that protest movement activity and protest movement sympathy were significantly related to marijuana use.

The Engineer Strategic Studies Group (1972) stated that drugs have become a symbol of protest. It is a protest against the establishment, its policies, pleasures, and hypocrisies.

Optimism vs. pessimism. Blum (1969) and the President's Commission (1972) described marijuana users as pessimistic. Suchman (1968) similarly concluded that marijuana users were cynical.

Boredom. Keniston (1969) described "seekers," or the occasional users, as students who seek in drug use some way of intensifying experience, expanding awareness, breaking out of deadness or flatness. Their beginning or increasing drug

use is often associated with feelings of flatness, boredom, and stagnation.

According to Girdano and Girdano (1972), boredom may be a significant factor in the use of drugs. The problems created by affluence and the resulting lack of meaningful activity and apathy are also important factors in the use of drugs. The Engineer Strategic Studies Group (1972) stated that drugs can provide relief from boredom.

Depression. Robbins (1970) gave 287 students in advanced psychology courses a self-rating questionnaire and found that the marijuana smokers more often described themselves as moody, depressed, and dissatisfied with school. The nonusers did not feel as helpless, hopeless, lonely, useless, or worthless as the marijuana smokers.

Present vs. future. Keniston (1969) wrote that central to the drug subculture is a focus on the present, on today, on the here and now. The student drug users emphasize immediate pleasure and experience. Keniston explained that such future-oriented qualities as control, planning, waiting, saving and postponing are little honored in the student subculture. The students see the past as irrelevant and since the future

seems profoundly uncertain, the real meaning of life must be found within present experience.

Use of Alcohol, Cigarettes, and Drugs

The Commission-sponsored National Survey (1972) established the fact that the most significant behavior correlated with marijuana use was the use of legal drugs, especially alcohol and tobacco. Only 3% of all the nonsmokers in the sample had ever tried marijuana, compared with 50% of all the current cigarette smokers. Similarly, only 2% of all the non-drinkers had tried marijuana, as compared to 27% of all the drinkers.

Manheimer (1969) discovered that those men and women who had used prescription-type psychotherapeutic drugs and had obtained them from a nonmedical source, or those who would be willing to take a tranquilizer even if it were not prescribed by a physician were more likely to use marijuana. Among those who had obtained prescription-type psychotherapeutic drugs from nonmedical sources, the proportions who had used marijuana were very high: 73% of the men and 57% of the women.

Parental Life Style

The President's Commission (1972) said that studies have shown that the decision to use marijuana was related to parental life style. It has been demonstrated that marijuana users frequently have medicine-taking, cigarette-smoking, or liquor-drinking parents.

Lombillo (1972) administered a questionnaire to 1,676 high school students in southwestern Florida. He found that the student's use of their parents' cigarettes was associated with the student's use of marijuana.

Smart and Fejer (1972) studied the relationship between adolescent and parental drug use among 8,865 Toronto students. They found a positive relationship between parental use of psychoactive drugs, alcohol, and tobacco and student drug use. They suggested that drug taking, as a form of mood modification, could be learned within the family environment.

Source of Information About Drugs

Lorentz (1972) tested 18 undergraduates and 18 professional businessmen on Rokeach's Dogmatism Scale and a scale which measured attitudes toward marijuana. The attitudes

of the businessmen toward marijuana were more unfavorable than those of the students. Lorentz explained this difference in attitudes by the different source of information available to each group. For the college students, discussions of marijuana have been incorporated into formal course work and the school libraries have current research reports available. The professional businessmen's main source of information was mass media, which generally conforms to the official negative position.

Reasons for Abstinence

La Driere (1972) administered a semantic differential rating scale and a questionnaire regarding the meaning and motivation of marijuana use to 100 college students. He discovered that nonusers abstained from using marijuana for reasons of danger to personal health and for practical reasons associated with use. Nonusers saw marijuana not so much as unpleasant or immoral, but rather as unintelligent and bad. The outstanding reason for abstinence was possible physiological harmfulness. La Driere found that nonusers saw marijuana as fantasy-related, involving aspects of escape, dependence, and withdrawal from reality. Nonusers did not condemn or

reject others for using marijuana. They saw marijuana use as morally indifferent, and expressed accepting, often positive attitudes toward users. They viewed the drug and its use as an existing social fact. Many nonusers remained open to possible future use themselves.

Cohen (1971) wrote that most nonusers abstain from using drugs because they have found an alternative so positive that there is no felt need for drugs. The nonuser may have so much going for him that he avoids drugs because they threaten his present satisfactory life.

Alienation

Marijuana smokers have been described by many authors as alienated (Salisbury and Fertig, 1970; Halleck, 1967; The Council on Mental Health and Committee on Alcoholism and Drug Dependence, 1967; Milman, 1969; Blum, 1970). Farnsworth (1967) wrote that young people tend to suffer feelings of intense isolation and vulnerability. Institutions are becoming larger and more impersonal; and the individual's feelings of insignificance and helplessness are increasing.

Keniston (1969) stated that "seekers," or occasional users are not in any systematic way "alienated" from American

society, but they have not really made their minds up whether it is worth joining or not. Keniston described the "head," or the regular user, as genuinely alienated from American society. "Heads" reject the prevalent American values and say that society is trashy, cheap, and commercial; it dehumanizes its members. They are profoundly hostile to the careerist, materialistic and success-oriented goals of middle-class American society. For the "head," drug use occupies a central place in his life and is almost always accompanied by disengagement from ordinary social expectations. Rejecting middle-class values, "heads" repudiate as well those conventional values and rules that deem experimentation with drugs illicit. Arguments based on traditional American values carry little weight for "heads"; for they take great pleasure in violating the middle-class norms. For "heads," the goal is to find a way out of American society.

Keniston (1969) described alienated students as feeling unusually separated from both self and others. They also seem to have a fantasy of fusion with nature which motivates them to seek out chemical instruments to increase this "oneness."

For the student who is young, alienated and anticonventional, drug use is primarily a way of searching for meaning.

Miller (1969) stated that alienated persons question the relevance of major societal values and institutions. The alienated are seen as separate from society. For some, this leads to efforts to change established institutions, using methods ranging from traditional political activity to active resistance to the system. Others respond to the society with feelings of helplessness either to accommodate to or to change an unacceptable world. The solution for the latter group may be to alter their perception through the use of drugs. These people decide that if they have no control over external circumstances, then, at least, they can directly control their subjective state by chemical means.

Harris (1971) studied the degree of alienation among college student marijuana users and nonusers. She administered a three-part questionnaire containing Dean's Alienation Scale to 1380 health students. Marijuana use was found to be significant in predicting alienation and alienation was found to be significant in predicting marijuana use.

Girdano and Girdano (1972) concluded that alienation was one of the reasons for drug use. Many young people have formed a subculture, which increases social alienation. Those individuals who were alienated from the subculture and from their own goals and life's meaning were likely to be chronic drug users.

Chipman (1971) and Kadushin (1971) agree that drug users are more likely to be from an alienated family. The youth is alienated from his parents (particularly the father) and the mother and father are alienated from each other.

Heavy marijuana users may aggravate a total alienation and disaffiliation from American society and its institutions, according to the President's Commission (1972). They often express feelings of loneliness and isolation.

Group Dependency

Becker (1953) found that almost all marijuana users began to use marijuana through the personal influence of a friend who was already a marijuana user. Marijuana smoking was reported to take place at night as a social activity with other people.

Goode (1970) discovered that marijuana use was a group activity. Marijuana was usually smoked in a group setting with intimates. One generally has long-term continuing social relations with the others. The smoking of marijuana maintains the groups' cohesion and reaffirms its social bonds. Marijuana users are more likely to identify and interact with other users than with someone who does not smoke marijuana. Users form a kind of subcommunity. Marijuana smoking has strong elements of a tribal ritual; it establishes a kind of brotherhood among the users.

Farnsworth (1967) concluded that in some circles the use of drugs was a source of status and esteem. Drug use provided short-range satisfaction as a result of peer group approval.

Marijuana smoking is "in" (The Federal Source Book, 1971). Those individuals who use marijuana may be conforming to, rather than deviating from, what is expected of them (Rhodes, 1970). The drug subculture reinforces the use of drugs (Sadava, 1971; Sadava, 1972).

Girdano and Girdano (1972) found group dependency to be one of the reasons for the use of marijuana. Knowing marijuana users and having marijuana-using friends motivates

an individual to use marijuana (The President's Commission, 1972). Leech and Jordan (1967) agree that social pressure is a typical situation for the onset of drug use.

The Engineer Strategic Studies Group (1972) discovered that one of the most frequently stated reasons for using marijuana was social pressure from friends. Typically, an individual is confronted with a situation in which drugs are readily available and a group of his peers is urging him to try them. The almost immediate social acceptance of individuals by no criterion other than the use of drugs is inviting to those people who find acceptance in groups difficult on other terms.

Contrary to the findings that social acceptance is an important reason for using marijuana, Scherer, Ettinger, and Mudrick (1972) found that the soft-drug-users had a significantly lower need for social approval than the non-drug-users. Scherer, et al. (1972) administered the Marlowe-Crowne Social Desirability Scale and a drug data sheet to 66 undergraduates.

Purpose

The purpose of the present study was to determine whether certain demographic variables, personality variables,

including alienation and group dependency, use of other drugs, source of information about drugs, and parental life style were significantly related to the use of marijuana. The present research was also undertaken to determine whether there was a significant difference between "regular" nonusers and "principled" nonusers with regard to their reasons for abstaining from marijuana use.

Method

Subjects

The subjects were female volunteers enrolled in undergraduate and graduate classes at Texas Woman's University. Ten respondents who were not citizens of the United States were not included in the study. Two respondents who were "multi-drug users," defined as those who use methamphetamine, LSD, or heroin once a week, once a day, or more, were excluded from the study because it was believed that, for these multi-drug users, the use of marijuana has a different meaning. One respondent was eliminated from the study because she reported using opium once a day or more and another was rejected because she reported using LSD once a week. Another respondent was excluded because it could not be determined whether she was a regular or principled nonuser. Two respondents were not included in the study because they failed to complete both the alienation scale and the group dependency scale.

Instrument

A three-part questionnaire measuring demographic and personality variables, alienation, and group dependency was administered to the subjects. A copy of this questionnaire appears in Appendix I. The first part of the questionnaire elicited background information and drug data. The specific background items concerned age, sex, religion, classification in school, school major, marital status, ethnic background, grade point average, living arrangements, psychiatric help, social activities, personal feelings, parental life style, source of drug information, and use of cigarettes, alcohol, methamphetamine, LSD, heroin, and other drugs. In addition, the subjects were asked to report whether or not they had ever used marijuana. If they had not used it or if they had used it a few times but were not presently using it, they were asked to rate the importance of 26 statements in their decision not to use marijuana. The subjects were asked to place a "1" beside those statements of little or no importance, a "2" beside those statements of moderate importance, and a "3" beside those statements considered very important.

Part II of the questionnaire, Dean's Alienation Scale (Dean, 1961), was administered to the subjects to measure the degree of alienation of female college student marijuana users and nonusers. Alienation was defined and measured through three separate components; powerlessness, normlessness, and social isolation. The scale consists of nine items for powerlessness, six for normlessness, and nine for social isolation. All 24 items were presented in the 5-point Likert format from 4 (strongly agree) to 0 (strongly disagree). Total scale scores could vary between 0 (lowest alienation) and 96 (highest alienation). The split-half reliability coefficients of the subscales are as follows: powerlessness, .78; normlessness, .73; and social isolation, .84. The total alienation scale has a split-half reliability of .78. Alienation is highly correlated with powerlessness (.90), normlessness (.80), and social isolation (.75) (Robinson and Shaver, 1970).

According to Dean (1961), powerlessness deals with the worker's separation from effective control over his economic destiny; of his being used for purposes other than his own. Normlessness is a painful uneasiness or anxiety, a feeling of separation from group standards, a feeling of pointlessness

or that no certain goals exist. Normlessness may be divided into two distinct subtypes: purposelessness and conflict of norms (Dean, 1961). Social isolation may be defined as a feeling of isolation from group standards or of separation from the group (Dean, 1961).

The third part of the questionnaire, the Q2 scale of the Sixteen Personality Factor Test, was utilized to measure group dependency. It consists of 12 multiple-choice questions. The highest possible score is 24 and the lowest possible score is zero. A low score on the Q2 factor indicates that the individual is one who goes with the group, depends on social approval more, and is conventional and fashionable. A high Q2 score reveals that the person is resolute and accustomed to making his own decisions, alone (Cattell, Eber, Tatsuoka, 1970).

Procedure

The questionnaire was administered to the subjects during a regular class period. The between subjects counterbalancing technique was used to control the progressive error. The presentation sequence of the parts of the questionnaire varied as follows: Part I, Part II, Part III; Part III, Part I, Part II; Part II, Part III, and Part I.

The subjects were told that the purpose of the questionnaire was to determine the relationship between certain personality variables and the use of drugs. They were informed that answering the questionnaire was on a voluntary basis and that it had nothing to do with their grade in the course. The subjects were asked not to put their name or any other identifying mark on the questionnaire. The subjects were assured that their answers would be held in strictest confidence and would not be available to any persons of authority either at TWU or in the community. They were told that it was very important for them to be honest in answering the questions, and were asked not to discuss the questionnaire with any of their friends. The subjects were also encouraged to make comments concerning the questionnaire. The author stressed the fact that there were three parts to the questionnaire and that the subject should answer all three parts, regardless of which part was first, second, or third.

Results

The subjects were divided into three groups, "principled" nonusers, "regular" nonusers, and users. Users were defined as those subjects who reported smoking marijuana once a month or more. There were 36 subjects who fell into this group. Nonusers were defined as those subjects who reported either using marijuana a few times, but not presently using it, or never using it. There were 280 subjects in this group. The term "principled" nonusers referred to those subjects who reported never using marijuana, never wanting to use it, and not planning to use it in the future. There were 182 subjects in the "principled" nonuser group. The "regular" nonusers were those nonusers who reported either that they have wanted to try marijuana or that they might try it in the future, or both. The "regular" nonuser may have either used marijuana a few times or never used it. There were 98 subjects in this group.

For Part I of the questionnaire, chi-square was computed to determine whether there was a significant difference between the marijuana user and nonuser groups with regard to

the demographic variables, personality variables, parental life style, use of cigarettes, alcohol, and other drugs, and whether there was a significant difference between "regular" nonusers and "principled" nonusers with regard to the importance of 26 statements in their decision not to use marijuana. If more than 20% of the expected frequencies were less than five, cells were combined until at least 80% of the cells had expected frequencies of five or more (McNemar, 1949). When the groups were found to be significantly different a contingency coefficient was computed to measure the degree of the relationship between the variables.

Demographic Variables

No significant difference was found between the marijuana user and nonuser groups with regard to age, marital status, ethnic background, classification in school, religion, school major, or grade point average. Table I gives the percentages computed for these nonsignificant demographic variables.

Eighty-four per cent of the subjects were between the ages of 17 and 22. The majority of the subjects were single. A large percentage of the subjects were of the Protestant

TABLE 1

Percentage of Users and Nonusers Responding to Categories
of Nonsignificant Demographic Variables

Variables	Group		
	Users	Nonusers	Total
Age			
17-19	47	43	43
20-22	50	40	41
23+	<u>3</u>	<u>17</u>	<u>16</u>
Total	100	100	100
Marital Status			
Single	72	74	74
Engaged	11	7	8
Other	<u>17</u>	<u>19</u>	<u>18</u>
Total	100	100	100
Religion			
Catholic	18	25	24
Protestant	76	67	68
Other	<u>6</u>	<u>8</u>	<u>8</u>
Total	100	100	100
Ethnic Background			
Anglo-American	75	73	73.5
Afro-American	19	15	15.5
Other	<u>6</u>	<u>12</u>	<u>11.0</u>
Total	100	100	100.0

TABLE 1--Continued

Variables	Group		
	Users	Nonusers	Total
Classification			
Freshmen	34	33	33.0
Sophomores	29	20	21.5
Juniors	26	21	21.5
Seniors or Graduate Students	<u>11</u>	<u>26</u>	<u>24.0</u>
Total	100	100	100.0
Major			
Psychology & Sociology	20	13	13.2
Nursing	49	39	40.2
Education	11	15	14.2
Occupational Therapy & Physical Therapy	11	19	18.2
Others	<u>9</u>	<u>14</u>	<u>14.2</u>
Total	100	100	100.0
Grade Point Average			
"A"	6	5.0	5.5
"B"	60	52.5	53.0
"C" or "D"	<u>34</u>	<u>42.5</u>	<u>41.5</u>
Total	100	100.0	100.0

religion. The academic classification of the subjects was fairly equally distributed. Most of the subjects were Anglo-Americans. There were more subjects majoring in nursing than in any other field and the majority of the subjects reported that they had a grade point average of either a "B" or a "C."

There was a significant difference between marijuana users and nonusers with regard to their living arrangements ($\chi^2 = 7.52$; $p < .05$). More marijuana users were living with their parents than were expected. Sixty-one per cent of the marijuana users were living in the residence halls, 19.5% were living with their parents, and 19.5% were living either in an apartment or with their husbands. Seventy-four per cent of the nonusers were living in the residence halls, 6% were living with their parents, and 20% had other living arrangements.

Personality Variables

Almost all of the subjects reported that they had never been to a psychiatrist or been in psychotherapy. Only eight per cent of the marijuana users and six per cent of the nonusers answered that they had been to a psychiatrist ($\chi^2 = .19$).

For this variable it was necessary to violate the assumption of chi-square which says that 80% of the expected frequencies must have a value of five or more.

Participation in or attendance of school athletic events was related to abstinence of marijuana use ($\chi^2 = 9.73$; $p < .05$). More nonusers reported that they participated in or attended school athletic events either very frequently or frequently; whereas more marijuana users reported never participating in or attending them (see Table 2).

Those subjects who reported participating in clubs either very frequently or frequently were more likely to be nonusers. More marijuana users reported that they seldom or never participated in clubs ($\chi^2 = 18.99$; $p < .001$).

The categories "very frequently" and "frequently" were combined in order to compute the chi-square for the question concerning petitions. The difference between marijuana users and nonusers with regard to signing petitions was not significant ($\chi^2 = 5.31$).

A significant difference was found between users and nonusers with regard to being involved in protests or demonstrations ($\chi^2 = 13.80$; $p < .001$). More nonusers than were expected reported that they never became involved in protests; whereas

more users reported that they very frequently or frequently were involved in protests. The categories "very frequently" and "frequently" were combined; and the categories "occasionally" and "seldom" were combined.

The person who reported that she was very frequently or frequently bored was more likely to use marijuana. More nonusers answered that they seldom or never felt bored ($\chi^2 = 9.87$; $p < .025$). Again, the categories "very frequently" and "frequently" were combined in order to compute the chi-square.

Nonusers were more likely to feel optimistic about the future. More marijuana users than were expected reported that they seldom or never felt optimistic about their future. There was a significant difference between users and nonusers with regard to their feelings about the future ($\chi^2 = 14.59$; $p < .005$). The categories "seldom" and "never" were collapsed for this analysis.

Regarding the variable "church attendance," a significant difference was found between marijuana users and nonusers ($\chi^2 = 14.90$; $p < .005$). Nonusers were more likely to attend church very frequently; whereas more users reported that they never attended church.

TABLE 2

Chi-Square Analysis of Personality Variables

Variables	df	χ^2	C	G	Responses				
					VF	F	O	S	N
Athletic Events	4	9.73 ^a	.17	MS	2.5	2.5	17	36	42
				NS	8	16	21	32	23
Clubs	4	18.99 ^e	.24	MS	0	3	28	44	25
				NS	10	24	28	22	16
Petitions	3	5.31		MS	3	25	39	28	5
				NS	3.5	17.5	45	25	9
Protests	2	13.80 ^e	.17	MS	3	8	14	36	39
				NS	3.5	2.3	16.5	22.3	55.3
Boredom	3	9.87 ^b	.17	MS	17	19	44	17	3
				NS	9	16	37	26	12
Optimism	3	14.59 ^d	.20	MS	28	28	22	8	14
				NS	44	36	14	6	0
Church	4	14.90 ^d	.22	MS	19	14	33	17	17
				NS	40.5	22.5	19	13	5
Depression	3	15.77 ^d	.22	MS	14	19	53	11	3
				NS	7	13	45	31	4
Lonesome	3	5.63		MS	0	16.5	28	41.5	14
				NS	4	9	27	30	30
Present vs. Future	4	1.21		MS	15	32	26	24	3
				NS	17	31	26	19	7
Encounter Groups	2	3.00		MS	0	0	11	19.5	69.5
				NS	3.5	5	8.5	19	64

Note.--df = degrees of freedom, χ^2 = chi-square, C =

contingency coefficient, G = group, MS = marijuana smokers, NS = non-smokers, VF = very frequently, F = frequently, O = occasionally, S = seldom, N = never. Responses given in percentage.

^a $p < .05$ ^b $p < .025$ ^d $p < .005$ ^e $p < .001$

Depression was one of the variables which discriminated between users and nonusers ($\chi^2 = 15.77$; $p < .005$). More users than were expected reported feeling depressed very frequently or frequently; whereas more nonusers reported feeling depressed seldom. The categories "very frequently" and "frequently" were combined for the question concerning depression.

Marijuana users and nonusers did not differ significantly with regard to feeling that the world is a pretty lonesome place ($\chi^2 = 5.63$), believing that the present is more important than the future ($\chi^2 = 1.21$), and participating in encounter groups ($\chi^2 = 3.00$). Most of the subjects answered that they felt the world was a lonesome place either occasionally or seldom. The categories "very frequently" and "frequently" were combined for the variable "lonesome" in order to make the computations. Most of the subjects reported that they believed the present was more important than the future. Almost none of the subjects reported very frequently or frequently participating in encounter groups or sensitivity training groups. The majority of subjects reported that they never participated in these types of groups. The categories "very frequently" and

"frequently," and the categories "seldom" and "never" were collapsed for the variable "encounter groups."

Parental Life Style

As may be noted in Table 3, a significant difference was established between users and nonusers with regard to their parents' use of cigarettes ($\chi^2 = 22.17$: $p < .001$). Users were characterized by their report that their parents very frequently smoked cigarettes. More nonusers than were expected reported that their parents never smoke cigarettes.

The difference between users and nonusers with regard to parental use of alcohol was not significant ($\chi^2 = 5.21$). The answers were fairly equally distributed among the response categories (see Table 3).

In order to compute chi-square for the question concerning parental use of drugs for nonmedical reasons, the categories "very frequently," "frequently," and occasionally," and the categories "seldom" and "never" were combined. The assumption that 80% of the cells in the contingency table have a value of five or more was violated. Users and nonusers did not differ significantly with regard to their parents' use of drugs for nonmedical reasons ($\chi^2 = 2.03$). Ninety-four per cent of the

TABLE 3

Chi-Square Analysis of the Variable "Parental Life Style"

Variable	<u>df</u>	χ^2	<u>C</u>	G	Responses				
					VF	F	O	S	N
Use of Cigarettes	3	22.17 ^e	.26	MS	56	11	5.5	5.5	22
				NS	31	22	3.5	3.5	40
Use of Alcohol	4	5.21		MS	23	20	17	14	26
				NS	11	18	27	19	25

Note.--df = degrees of freedom, χ^2 = chi-square, C = contingency coefficient, G = group, MS = marijuana smokers, NS = non-smokers, VF = very frequently, F = frequently, O = occasionally, S = seldom, N = never. Responses given in percentage. ^e $p < .001$.

marijuana users and 98% of the nonusers reported that they either seldom or never knew of their parents using drugs for nonmedical reasons.

Use of Cigarettes, Alcohol, and Drugs

The categories "very frequently" and "frequently," and the categories "seldom" and "ocasionally" were combined for the variable "use of cigarettes." The use of cigarettes was predictive of marijuana use ($\chi^2 = 34.04$; $p < .001$). More marijuana smokers than were expected reported that they smoke cigarettes either very frequently or frequently. Fewer users than were expected answered that they never smoke cigarettes (see Table 4).

The variable "use of alcohol" discriminated between users and nonusers ($\chi^2 = 35.26$; $p < .001$). Users were characterized by their reply that they either very frequently or frequently drink alcoholic beverages. More nonusers than were expected reported that they either seldom or never use alcohol.

The subjects were asked to respond to the question "How frequently do you use methamphetamine, or 'speed,' to get high?" The majority of the subjects replied that they had never used methamphetamine to get high. However, there were

TABLE 4

Chi-Square Analysis of the Variable "Use of
Cigarettes" and the "Use of Alcohol"

Variables	<u>df</u>	<u>X</u> ²	<u>C</u>	G	Responses				
					VF	F	O	S	N
Use of Cigarettes	2	34.04 ^e	.31	MS	33	14	8	11	33
				NS	14	7	10	13	56
Use of Alcohol	4	35.26 ^e	.31	MS	14	26	54	3	3
				NS	2	10	38	22	28

Note.--df = degrees of freedom, X² = chi-square, C = contingency coefficient, G = group, MS = marijuana smokers, NS = nonsmokers, VF = very frequently, F = frequently, O = occasionally, S = seldom, N = never. Responses given in percentage. ^ep < .001.

significantly more users who reported that they had used methamphetamine either once or twice only or monthly (see Table 5). The use of methamphetamine was highly related to the use of marijuana ($\chi^2 = 89.45$; $p < .001$).

The majority of the subjects reported that they had never used LSD. However, more users and fewer nonusers than were expected had used LSD ($\chi^2 = 48.66$; $p < .001$).

Almost all of the subjects reported that they had never used heroin; however, there was a significant difference between users and nonusers with regard to the use of heroin ($\chi^2 = 15.48$; $p < .001$). More marijuana users and fewer nonusers than were expected had used the drug.

The subjects were asked to list any other drugs that they were presently using for nonmedical reasons. One marijuana user reported using darvon, one reported using opium, two reported using qualudes, two reported using cocaine, two reported using hashish, and four reported using mescaline. The frequency of their use of these drugs was either once or twice only or monthly.

The most significant difference between users and nonusers was the frequency of their drug use ($\chi^2 = 138.70$; $p < .001$).

TABLE 5

Chi-Square Analysis of the Variable "Use of Drugs"

Variables	<u>df</u>	<u>X</u> ²	<u>C</u>	G	Responses	
					Never	Other
Use of Methamphetamine	1	89.45 ^e	.47	MS	61	39
				NS	99	1
Use of LSD	1	48.66 ^e	.36	MS	80	20
				NS	100	0
Use of Heroin	1	15.48 ^e	.22	MS	95	5
				NS	100	0

Note.--Responses are given in percentage; df = degrees of freedom, X² = chi-square, C = contingency coefficient, S = subjects, MS = marijuana smokers, NS = non-marijuana smokers, Other = once or twice only or monthly. The assumption that 80% of the cells have an expected frequency of five or more was violated. ^ep<.001.

Users were characterized as using drugs for nonmedical reasons either once or twice only, monthly, weekly, or daily. Fewer users and more nonusers than were expected reported never using drugs for nonmedical reasons. A contingency coefficient of .55 indicated that there was a moderately high relationship between the use of marijuana and the frequency of drug use for nonmedical reasons.

Regarding marijuana use, 28% of the users reported using marijuana once a day or more, 31% reported using it once a week, and 41% reported using the drug once a month. Fifty-three per cent of the regular nonusers replied that they had used marijuana a few times but did not presently use it. Forty-seven per cent of the regular nonusers answered that they had never used marijuana. Eighty-eight per cent of the regular nonusers reported that they had wanted to try marijuana and 8% reported that they had never wanted to try it. Three per cent did not reply. The nonusers were asked the question "Do you think that you might try marijuana in the future?" Forty-four per cent replied that they might use the drug in the future and 54% replied that they would not use marijuana in the future. Two per cent did not reply.

Source of Information

Marijuana users were more likely to report that they obtain most of their information concerning drugs from friends ($\chi^2 = 29.10$; $p < .001$). Eleven per cent of the users and 37% of the nonusers reported that they obtain most of their drug information from magazines or newspapers. Eleven per cent of the users and 23% of the nonusers indicated obtaining their drug information either from books, movies, or television. Fifty per cent of the users and 15% of the nonusers replied that they received most of their information concerning drugs from friends. Eleven per cent of the marijuana smokers and 12% of the nonsmokers reported that they obtain most of their information about drugs from other sources including teachers, classes, and physicians. Some of the subjects circled more than one of the answers for the question concerning their source of drug information. As a result of this, an additional category was developed for those subjects who responded that they obtained their information from several sources. Seventeen per cent of the users and 13% of the nonusers fell in this new category of obtaining their drug information from several sources.

Friends

The number of friends a person has who smoke marijuana was predictive of marijuana use ($\chi^2 = 86.78$; $p < .002$). The person who reported that either half or almost all of her friends smoked marijuana was more likely to be a user. Zero per cent of the users and 36.5% of the nonusers replied that none of their friends smoke marijuana. Six per cent of the users and 28% of the nonusers reported that one out of every twenty of their friends use marijuana. Eight per cent of the users and 15.5% of the nonusers answered that one out of every ten of their friends smoke marijuana. Twenty-two per cent of the users and 11% of the nonusers reported that one out of every five of their friends use marijuana. Sixty-four per cent of the users and 9% of the nonusers replied that either one out of every two or all or almost all of their friends smoked marijuana. The contingency coefficient was .48, which indicated that there was a moderate relationship between the use of marijuana and the number of friends who use marijuana.

Reasons for Abstinence from Marijuana

The nonusers were asked to rate each of twenty-six statements according to how important the statement was to

them to their decision not to use marijuana. Chi-square was computed to determine whether there was a significant difference between the regular nonusers and the principled nonusers (see Table 6).

The regular and principled nonusers did not differ significantly with regard to the importance of the following statements in their decisions not to use marijuana:

1. The use of marijuana is illegal ($\chi^2 = 1.50$).
2. I am afraid of becoming psychologically dependent ($\chi^2 = 2.53$).
3. I have a lack of information concerning its effects ($\chi^2 = 2.07$).
4. I am afraid that it will cause birth defects ($\chi^2 = 2.20$).
5. It costs too much money, or it is a waste of money ($\chi^2 = 2.11$).
6. It is not socially acceptable ($\chi^2 = 3.82$).
7. I have a lack of knowledge concerning how to smoke it ($\chi^2 = .33$).
8. It is not available to me ($\chi^2 = 1.29$).
9. It would displease my parents ($\chi^2 = 1.70$).

TABLE 6

Chi-Square Analysis for Reasons for Abstinence

Variable	<u>df</u>	<u>X</u> ²	<u>C</u>	G	Responses		
					LI	MI	VI
Illegal	2	1.50		RN	14	24	62
				PN	16	29	55
Leads to the Use of Harder Drugs	2	15.13 ^e	.22	RN	47	21	32
				PN	26	19	55
Afraid of Psychological Dependency	2	2.53		RN	46	22	32
				PN	39	30.5	30.5
Afraid of Becoming Addicted	2	11.52 ^d	.20	RN	63	12	25
				PN	43	26	31
Physically Harmful	2	31.79 ^e	.31	RN	54	27	19
				PN	25	22	53
Mentally Harmful	2	28.15 ^e	.30	RN	40	31	29
				PN	17	21	62
Immoral	2	11.60 ^d	.20	RN	77.5	9	13.5
				PN	57	16	27
Will Not Solve Problems	2	24.60 ^e	.28	RN	23.5	16.5	60
				PN	8	13	79
Lack of Information	2	2.07		RN	56	28	16
				PN	49	27.5	23.5

TABLE 6--Continued

Variable	<u>df</u>	<u>χ^2</u>	<u>C</u>	G	Responses		
					LI	MI	VI
Afraid of Birth Defects	2	2.20		RN	50.5	18.5	31
				PN	43	17	40
Waste of Money	2	2.11		RN	32	18.5	49.5
				PN	40	19	41
Not Socially Acceptable	2	3.82		RN	77.5	14.5	8
				PN	67	18	15
Lack of Knowledge	2	.33		RN	84	13	3
				PN	83	13	4
Not Available	2	1.29		RN	82	11	7
				PN	86	7	7
Leads to Criminal Acts	2	13.92 ^e	.22	RN	62	20	18
				PN	39	28	33
Leads to Sex	2	10.57 ^c	.20	RN	70	14.5	15.5
				PN	49	26	25
Undistorted Life	2	28.34 ^e	.30	RN	16.3	17.3	66.4
				PN	3	5	92
Would Displease Parents	2	1.70		RN	32	20	48
				PN	31	26	43
Afraid of Losing Job	2	4.53		RN	39	16	45
				PN	48	20	32

TABLE 6--Continued

Variable	<u>df</u>	<u>X</u> ²	<u>C</u>	G	Responses		
					LI	MI	VI
Irresponsible	2	7.71 ^b	.17	RN	58	26	16
				PN	43	27	30
Friends	2	2.47		RN	78.5	14.5	7
				PN	72.5	14	13.5
Afraid of Death	2	7.21 ^a	.14	RN	85	7	8
				PN	71	9.5	19.5
Psychomotor Precision	2	14.42 ^e	.22	RN	45	34	21
				PN	32	24	44
Goals	2	18.35 ^e	.24	RN	41	21	38
				PN	18	21	61
No Opportunity	2	.73		RN	84	10	6
				PN	79	13.5	7.5
No Need	2	24.39 ^e	.28	RN	20.5	8	71.5
				PN	5	2	93

Note.-- LI = little or no importance, MI = moderately important, VI = very important, RN = regular nonusers, PN = principled nonusers, df = degrees of freedom, X² = chi-square, C = contingency coefficient, G = group. Responses given in percent. ^a $p < .05$ ^b $p < .025$ ^c $p < .01$ ^d $p < .005$ ^e $p < .001$

10. I am afraid I would lose my job or get kicked out of school ($\chi^2 = 4.53$).

11. None of my friends smoke it ($\chi^2 = 2.47$).

12. I have never had the opportunity to smoke it ($\chi^2 = .73$).

There was a significant difference between the regular and principled nonusers with regard to the importance of the following statements in their decision to abstain from the use of marijuana:

1. The use of marijuana leads to the use of harder drugs ($\chi^2 = 15.13$; $p < .001$). Most of the regular nonusers reported that the use of harder drugs had little importance in their decision not to use marijuana; whereas most of the principled nonusers replied that it was very important to them.

2. I am afraid of becoming addicted ($\chi^2 = 11.52$; $p < .005$). The regular nonusers were characterized as seeing the problem of addiction as an insignificant factor in their decision to abstain from marijuana use.

3. It is physically harmful ($\chi^2 = 31.79$; $p < .001$). The regular nonuser considered physical harm as having little or no importance in her decision not to use marijuana; whereas

the principled nonuser tended to consider it as very important.

4. It is mentally harmful ($\chi^2 = 28.15$; $p < .001$). More regular nonusers regarded mental harm as an insignificant reason for not using marijuana. Principled nonusers were characterized as seeing mental harm as a very important reason for their abstinence.

5. It is immoral ($\chi^2 = 11.60$; $p < .005$). More regular nonusers replied that the question of morality was not an important issue in their decision not to use marijuana, although most of the principled nonusers also considered the statement to be insignificant.

6. It will not solve my problems ($\chi^2 = 24.60$; $p < .001$). More regular nonusers considered this statement to be of little importance, although the majority of both groups considered it to be very important.

7. It leads to criminal acts ($\chi^2 = 13.92$; $p < .001$). Regular nonusers were characterized as believing this statement to be of little importance in their abstinence.

8. It leads to sexual misbehavior ($\chi^2 = 10.57$; $p < .01$). More regular nonusers regarded this statement as insignificant,

although the majority of both groups considered it to be unimportant

9. I want to live life as it really is, undistorted by the use of drugs ($\chi^2 = 28.34$; $p < .001$). More principled nonusers than were expected considered this statement to be very crucial in their decision not to use marijuana; although the majority of regular nonusers also believed this statement to be very important.

10. It would make me irresponsible ($\chi^2 = 7.71$; $p < .025$). Regular nonusers were characterized as believing that this statement was insignificant in their motivation not to use marijuana.

11. I am afraid that it would kill me ($\chi^2 = 7.21$; $p < .05$). More regular nonusers reported that this statement was unimportant in their decision for abstinence, although the majority of principled nonusers also considered it to be unimportant.

12. I am afraid of undesirable consequences due to a loss of psychomotor precision (such as having a car wreck) ($\chi^2 = 14.42$; $p < .001$). More principled nonusers reported that this statement was very important in their decision not to

use marijuana, whereas more regular nonusers considered it insignificant.

13. It will keep me from reaching my goals ($\chi^2 = 18.35$; $p < .001$). More principled nonusers reported that this statement was very important to them in their abstinence from marijuana, whereas more regular nonusers believed it to be of little importance.

14. I don't need to use marijuana in order to enjoy life ($\chi^2 = 24.39$; $p < .001$). More regular nonusers than were expected saw this statement as having little or no importance, although the majority of both groups considered it very important.

The statements considered to be the most important ones for both groups of nonusers were: (a) "I don't need marijuana in order to enjoy life," (b) "I want to live life as it really is, undistorted by the use of drugs," and (c) "It will not solve my problems." Those statements which were considered to be the least important ones in the nonusers' decisions not to use marijuana were: (a) "I have a lack of knowledge concerning how to smoke it," (b) "It is not available to me," and (c) "I have never had the opportunity to smoke it."

Alienation and Group Dependency

For the second and third parts of the questionnaire, including the alienation scale and the group dependency scale, the hypothesis that the median alienation and group dependency scores for the marijuana users and nonusers were equal was tested by computing Mann-Whitney U s. There was a significant difference between the median alienation scores for the marijuana users and nonusers ($U = 3051.5$; $z = -3.19$; $p < .01$). Marijuana users were more likely to have high alienation scores; whereas nonusers were more likely to have low alienation scores. A post-hoc analysis was done to test the hypothesis that the median alienation scores for the marijuana users and principled nonusers were equal and a significant difference was found ($U = 1029.5$; $z = 8.23$; $p < .001$).

No significant difference was established between the median group dependency scores for the marijuana users and nonusers. An unplanned comparison was made and it was discovered that a significant difference existed between the median group dependency scores for the user and principled nonuser

groups ($\underline{U} = 2494.5$; $\underline{z} = -2.26$; $\underline{p} < .05$). Principled nonusers were more group dependent than users, whereas users were more independent than principled nonusers.

Discussion

Demographic and Personality Variables

One surprising finding of the present study was that only 88 of the 316 subjects had used marijuana at least once. Those subjects who had tried marijuana constituted 28% of the total sample. This figure is smaller than that found in most other previous studies. The percentages of marijuana users in previous studies are: 40% (The President's Commission, 1972), 40% (Hogan, Mankin, Conway, and Fox, 1970), 32% (Tec, 1971), 43% (Robbins, Tanck, and Meyersburg, 1971), 56% (Cross and Davis, 1972), and 72% (Goode, 1972). Toohey (1971) found that the percentage of marijuana users ranged from 28% at New York State University to 49% at Arizona State University. The reason for the lower percentage of marijuana users found in the present study may be that all of the subjects were females. Manheimer (1969) found that twice as many males as females in his study had used marijuana. Also, the sample did not represent the art and drama departments. More marijuana users may have been found among students majoring in the liberal arts (Greenwald and Luetgert, 1971).

The finding that the majority of marijuana users were between the ages of 17 and 22 was similar to the findings of the President's Commission (1972). The present data support that of Suchman (1969) and Tart (1971) that single people are more likely to use marijuana. It was surprising to find that so few marijuana users described themselves as agnostic or without any religious affiliation. The finding that most of the marijuana users in the present study described themselves as protestants is in opposition to the findings of Greenwald and Luetgert (1971), Manheimer (1969), Blum (1969), and Tart (1971) that marijuana users are either agnostic, atheist, or without any religious affiliation.

The data of the present study did not support the findings of previous studies (Goode, 1972; Harris, 1971; The President's Commission, 1972) that the use of marijuana among students rises with increasing school level. The data concerning classification in school closely paralleled Sadava's finding (1971) that there was no significant difference between users and nonusers with respect to year in school.

A very unexpected finding of the present study was that significantly more marijuana users than nonusers were

living with their parents. This finding is in opposition to the findings of Greenwald and Luetgert (1971) and the President's Commission (1972) that marijuana users were more likely to be living separately from their parents.

The present data does not support the discovery of Cross and Davis (1972) that drug users were more likely to have been in psychotherapy than nonusers. The findings of the present study were similar to Shibuya's finding (1972) that participation in athletic events discriminated between marijuana users and nonusers. The finding that marijuana users were less likely to participate in clubs corroborates Keniston's (1969) belief. The present data strengthens Harris's (1971) finding that marijuana users were more likely to participate in protests or demonstrations.

The finding that marijuana users feel bored more frequently than nonusers conforms to previous findings (Keniston, 1969; Girdano and Girdano, 1972; and the Engineer Strategic Studies Group, 1972). Marijuana users were less likely to feel optimistic about their future than nonusers. This supports the conclusions of Blum (1969) and the President's Commission (1972) that marijuana users are pessimistic. Marijuana users

reported feeling depressed more frequently than nonusers. This finding is in agreement with Robbin's (1970) finding that marijuana smokers described themselves as depressed.

No significant difference was found between users and nonusers with regard to the factor "present versus future." This finding is contrary to Keniston's (1969) belief that drug users emphasize immediate pleasure and experience.

Most of the subjects had never participated in an encounter group. This finding does not support Keniston's (1969) belief that regular marijuana users use encounter groups in their pursuit of meaning.

Most of the marijuana smokers reported that they seldom felt lonely. This finding conflicts with that of the President's Commission (1972) that heavy marijuana users often express feelings of loneliness. The inconsistency of these studies could be due to the fact that the present study consisted mostly of individuals using marijuana once a month (41%). Only 28% of the users in the present study reported using marijuana once a day or more. Also, a lack of significant differences between the users and the nonusers could be due to the fact

fact that 53% of the nonusers in the study had tried marijuana a few times.

There was significantly more use of marijuana among those subjects whose parents smoke cigarettes very frequently. This finding corroborates the findings of the President's Commission (1972), Lombillo (1972), and Smart and Fejer (1972).

It was expected that more marijuana users would have liquor-drinking parents; however, no significant difference was found between users and nonusers with regard to their parents' use of liquor. This finding was in disagreement with the previous findings of the President's Commission (1972) and Smart and Fejer (1972) that marijuana use is highly correlated with parental use of alcohol.

The use of cigarettes was one of the variables which discriminated between marijuana users and nonusers. This finding is comparable to the finding of the President's Commission (1972) that 50% of all the current cigarette smokers had used marijuana. The present data is also similar to the finding of the President's Commission (1972) that more of the drinkers than nondrinkers had used marijuana.

Fewer marijuana users reported obtaining their drug information from the mass media, including magazines, newspapers

books, movies, and television, than nonusers. This finding strengthens Lorentz's (1972) idea that when the main source of information is mass media, the attitudes toward marijuana are more unfavorable. Most of the marijuana users obtained their drug information from friends. This data corroborates the idea that drug users form a subculture (Rhodes, 1970; Sadava, 1971). Marijuana users were more likely to have friends who used marijuana than nonusers. This finding is in agreement with the findings of Goode (1970) and Girdano and Girdano (1972) that marijuana users are more likely to interact with other marijuana users than with nonusers. This finding is also in agreement with the President's Commission (1972) that marijuana-using friends motivates one to use marijuana.

In the present study it was attempted to keep the use of all drugs other than marijuana at a minimum. Those respondents who were frequent users of other drugs were eliminated from the study. This was an improvement over many of the previous studies which either dealt with multi-drug users or with marijuana users who were also heavy users of other drugs.

The subjects were asked to report their use of other drugs and the frequency of their use. A significant relationship

between the use of marijuana and the use of methamphetamine, LSD, and heroin was found. This adds to the evidence that if one uses marijuana, one is likely to experiment with other more powerful drugs (Carlin and Post, 1971). Hogan, Mankin, Conway and Fox (1970) found that 30% of those students who had tried marijuana had also used amphetamines, 25% had used LSD, and 16% had used heroin.

Reasons for Abstinence

The convictions that one does not want to live life undistorted by the use of drugs, one does not need marijuana in order to enjoy life, and the use of marijuana does not solve one's problems were the outstanding reasons for abstinence from marijuana. These results add to the validity of La Driere's (1972) finding that nonusers saw marijuana as involving aspects of escape, fantasy, and withdrawal from reality.

The study by La Driere (1972) is the only previous study concerned with the nonuser's motivations for not using marijuana with which the author is familiar. The results of La Driere's study are in vague and general terms. The present study was needed to obtain a more complete and more specific analysis of the nonuser's reasons for abstinence.

Some of the major deterrents for the use of marijuana were possible mental harm, use of harder drugs, and physical harm. This finding strengthens La Driere's (1972) finding that nonusers abstained from using marijuana for reasons of danger to personal health.

Potential arrest, loss of psychomotor precision, loss of job, and cost of marijuana were related to the subjects' decisions to abstain from marijuana use. This data is in agreement with La Driere's (1972) conclusion that nonusers abstain for practical reasons associated with use.

The findings of the present study help verify the findings of La Driere (1972) that nonusers saw marijuana use as morally indifferent and as a social fact. Consistent motivations for abstinence in the present study were the possibilities that marijuana might keep a person from reaching her goal and it might displease her parents.

The students in the present study seemed to be misinformed on several widely accepted beliefs concerning marijuana. The nonuser's belief that mental harm, physical harm, and the use of harder drugs are caused by the use of marijuana is in opposition to previous findings (Mayor La Guardia, 1944; The

Federal Sourcebook, 1971; Grinspoon, 1971; and The President's Commission, 1972).

Alienation and Group Dependency

The finding that marijuana smokers were significantly more alienated than nonusers helps establish Harris's (1971) finding that alienation is a good predictor of marijuana use. The principled nonusers and users had the largest difference in alienation.

It was surprising to find that principled nonusers were more likely to be group dependent than users; and users were more likely to be independent than nonusers. This data is in opposition to the findings of Girdano and Girdano (1972), Leech and Jordan (1967), and the Engineer Strategic Studies Group (1972) which state that social pressure or group dependency are important reasons for using marijuana. A related finding of the present study is that only 9% of the nonusers reported that one-half or more of their friends used marijuana. Nonusers may be under group pressure not to use marijuana.

The only study done with which the author is familiar which used a standardized scale for group dependency was

Scherer et al. (1972). It seems important to continue the investigation of group dependency using other standardized tests.

Limitations

One limitation of the present study derives from the sample used, a sample drawn from students enrolled at Texas Woman's University. The fact that TWU is a girls school may be important. It cannot be claimed that these findings are representative of female college students in general.

It is questionable whether the subjects who responded that they had smoked marijuana a few times, but were not presently smoking it, should be in the nonuser group. They may be more similar to the marijuana users than to the nonusers.

There were also limitations intrinsic to the questionnaire. Some questions need to be reworded. Question 25 concerning the parents' use of drugs for nonmedical reasons should either be omitted or reworded. It appears that this question was misunderstood by most of the subjects and accurate answers were not obtained. A specific example such as tranquilizers or sleeping pills may have been helpful in obtaining a better understanding of the question. The word psychoactive may be

added before the word drug to facilitate more accurate responses.

The part of the questionnaire concerned with reasons for abstaining from marijuana may have measured the subject's belief in the accuracy of the statement rather than the statement's power to motivate abstinence from marijuana. It might be interesting to have the subjects, both users and nonusers, mark each statement either "true" or "false."

Summary

The present study compared marijuana users and non-users with regard to demographic variables, alienation and group dependency. The nonusers' motivations for abstaining from the use of marijuana were also investigated.

Most of the subjects were between the ages of 17 and 22, were single, Protestant, Anglo-American, nursing majors, and had a grade point average of "B" or "C." Twenty-eight per cent of the subjects reported that they used marijuana once a month or more. Twenty-eight per cent of the users used marijuana once a day or more, 31% used it once a week, and 41% used it once a month. Fifty-three per cent of the regular nonusers reported that they had used marijuana a few times but did not presently use it. Eighty-eight per cent reported that they had wanted to try marijuana and 44% replied that they might use marijuana in the future.

Marijuana users were more likely to live with their parents, to participate in protests or demonstrations, and were bored and felt depressed more frequently. Nonusers were

more likely to participate in athletic events and clubs, attend church, and feel optimistic about their future. No significant differences were found between users and nonusers for the variables "signing petitions," "feeling lonesome," "believing that the present is more important than the future," "visiting psychiatrists," and "participating in encounter groups."

Users, who were characterized by their reports that their parents very frequently smoked cigarettes, very frequently smoke cigarettes and drink alcoholic beverages. The users and nonusers did not differ significantly with regard to their parents' use of alcohol. Marijuana users were more likely to use drugs for nonmedical reasons, such as methamphetamine, LSD, heroin, mescaline, hashish, qualudes, and cocaine.

Marijuana users obtained most of their drug information from their friends. Half or almost all of their friends were likely to smoke marijuana.

Results indicated that principled nonusers abstained for reasons of fear that marijuana would lead to the use of other drugs, fear of physical harm, fear of mental harm, and

fear that it would keep them from reaching their goals. The outstanding motivations for abstinence for both marijuana nonuser groups were: (a) they believed that they did not need marijuana in order to enjoy life, (b) they did not want to live a life undistorted by the use of marijuana, and (c) they did not believe that marijuana would solve their problems. The fact that marijuana is illegal was also a major deterrent.

Marijuana users were more likely to be alienated than nonusers. No significant difference was found between users and nonusers for group dependency; however, principled non-users were more group dependent than users.

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APPENDIX I

QUESTIONNAIRE

Instructions

The purpose of this questionnaire is to determine the relationship between certain personality variables and the use of drugs. The answering of this questionnaire is on a voluntary basis and has nothing to do with your grade in this course. Do not write your name or any other identifying mark on any part of this questionnaire; we want you to remain anonymous. It is very important that you be honest in answering all of the questions. Your answers will be held in strictest confidence. Your answers will not be available to any persons of authority either at Texas Woman's University or in the community.

Do not discuss this questionnaire with any of your friends. It will be administered to other psychology students in the future and their lack of information concerning this questionnaire is very important.

If you feel that this questionnaire has not allowed you to give information, opinions, attitudes or feelings which might be important, please comment below.

QUESTIONNAIRE - PART I

DIRECTIONS: Circle the most appropriate answer or fill in the blank.

1. Are you a citizen of the United States? Yes No
2. Age: 17-19 20-22 23-25 26-28 29 and over
3. Sex: Male Female
4. Marital Status: Single Separated
 Engaged Divorced
 Married Widowed
5. Religion: Catholic Protestant Jewish Agnostic
 None Other (specify) _____
6. Ethnic Background: Anglo-American Mexican-American
 Latin-American Afro-American Other (specify) _____
7. Classification in school: Freshman Junior Graduate
 Sophomore Senior
8. Major: _____
9. Grade Point Average: 3.00 or "A" 1.0-1.9 or "C"
 (If you don't know 2.0-2.9 or "B" 0.9 or lower
 please approximate.)
10. Have you ever been to a psychiatrist or been in psycho-
therapy? Yes No

11. What are your present living arrangements:

- (a) with parents or relatives (b) apartment alone
 (c) apartment with roommate(s) (d) rented room
 (e) residence halls (f) other (specify) _____

DIRECTIONS: Check the appropriate box at the right of each question below. VF = very frequently; F = frequently; O = occasionally; S = seldom; and N = never.

	VF	F	O	S	N
12. Do you participate in or attend school athletic events?					
13. Do you participate in any social club or special interest club?					
14. Do you sign petitions?					
15. Are you involved in protests or demonstrations?					
16. Do you feel bored?					
17. Are you optimistic about your future?					
18. Do you attend church?					
19. Do you feel depressed?					
20. Do you feel that the world is a pretty lonesome place?					

	VF	F	O	S	N
21. Do you believe that the present is more important than the future?					
22. Do you participate in "encounter groups" or "sensitivity-training" groups?					
23. Do either of your parents smoke cigarettes?					
24. Do either of your parents drink alcoholic beverages?					
25. Do either of your parents use drugs for nonmedical reasons?					
26. Do you smoke cigarettes?					
27. Do you drink alcoholic beverages?					

DIRECTIONS: Circle the most appropriate answer or fill in the blank.

28. Where do you obtain most of your information concerning drugs? (a) magazines or newspapers (b) books
(c) movies or television (d) friends (e) parents
(f) teachers (g) physician (h) other (specify) _____
29. How frequently do you use methamphetamine, or "speed," to get high? (a) never (b) only once or twice (c) once a month (d) once a week (e) once a day or more

30. How frequently do you use LSD to get high? (a) never
(b) only once or twice (c) once a month
(d) once a week (e) once a day or more
31. How frequently do you use heroin to get high? (a) never
(b) only once or twice (c) once a month
(d) once a week (e) once a day or more
32. Name any other drugs that you presently use for nonmedical reasons: _____
- How frequently do you use the drugs listed above?
- (a) only once or twice (b) once a month (c) once a week
(d) once a day or more
33. How many of your friends smoke marijuana? (a) none
(b) one out of every twenty (c) one out of every ten
(d) one out of every five (e) one out of every two
(f) all or almost all
34. Select the one statement that best describes you at the present time.
- (a) I smoke marijuana once a day or more.
(b) I smoke marijuana once a week.
(c) I smoke marijuana once a month.

(d) I have smoked marijuana a few times, but I don't smoke it now.

(e) I have never smoked marijuana.

DIRECTIONS: If you marked a, b, or c of question 34 skip the rest of Part I. If you marked d or e of question 34, continue with question 35 (Part I).

35. Have you ever wanted to try marijuana? Yes No

36. Do you think that you might try marijuana in the future?

Yes No

DIRECTIONS: The statements below are reasons why some people do not use marijuana. Please mark each statement according to how important the statement is in your decision not to use marijuana. If the statement is very important to you, write 3 in the left margin. If the statement is moderately important to you, write 2 in the left margin. If the statement has little or no importance for you, write 1 in the left margin.

37.

_____ (a) It is illegal.

_____ (b) It leads to the use of harder drugs.

- _____ (c) I am afraid of becoming psychologically dependent.
- _____ (d) I am afraid of becoming addicted.
- _____ (e) It is physically harmful.
- _____ (f) It is mentally harmful.
- _____ (g) It is immoral.
- _____ (h) It will not solve my problems.
- _____ (i) I have a lack of information concerning its effects.
- _____ (j) I am afraid that it will cause birth defects.
- _____ (k) It costs too much money, or it is a waste of money.
- _____ (l) It is not socially acceptable.
- _____ (m) I have a lack of knowledge concerning how to smoke it.
- _____ (n) It is not available to me.
- _____ (o) It leads to criminal acts.
- _____ (p) It leads to sexual misbehavior.
- _____ (q) I want to live life as it really is, undistorted by the use of drugs.
- _____ (r) It would displease my parents.
- _____ (s) I am afraid I would lose my job or get kicked out of school.
- _____ (t) It would make me irresponsible.

- _____ (u) None of my friends smoke it.
- _____ (v) I am afraid that it would kill me.
- _____ (w) I am afraid of undesirable consequences due to a loss of psychomotor precision (such as having a car wreck).
- _____ (x) It will keep me from reaching my goals.
- _____ (y) I have never had the opportunity to smoke it.
- _____ (z) I don't need to use marijuana in order to enjoy life.

QUESTIONNAIRE - PART II

Below are some statements regarding public issues, with which some people agree and others disagree. Please give us your own opinion about these items, i.e., whether you agree or disagree with the items as they stand.

Please check in the appropriate blank, as follows:

- _____ A (Strongly Agree)
- _____ a (Agree)
- _____ U (Uncertain)
- _____ d (Disagree)
- _____ D (Strongly Disagree)

1. Sometimes I feel all alone in the world.

_____ A _____ a _____ U _____ d _____ D

2. I worry about the future facing today's children.

_____ A _____ a _____ U _____ d _____ D

3. I don't get invited out by friends as often as I'd really like.

_____ A _____ a _____ U _____ d _____ D

4. The end often justifies the means.

_____ A _____ a _____ U _____ d _____ D

5. Most people today seldom feel lonely.

___A ___a ___U ___d ___D

6. Sometimes I have the feeling that other people are using me.

___A ___a ___U ___d ___D

7. People's ideas change so much that I wonder if we'll ever have anything to depend on.

___A ___a ___U ___d ___D

8. Real friends are as easy as ever to find.

___A ___a ___U ___d ___D

9. It is frightening to be responsible for the development of a little child.

___A ___a ___U ___d ___D

10. Everything is relative, and there just aren't any definite rules to live by.

___A ___a ___U ___d ___D

11. One can always find friends if he shows himself friendly.

___A ___a ___U ___d ___D

12. I often wonder what the meaning of life really is.

___A ___a ___U ___d ___D

13. There is little or nothing I can do towards preventing a major "shooting" war.

___A ___a ___U ___d ___D

14. The world in which we live is basically a friendly place.

___A___a___U___d___D

15. There are so many decisions that have to be made today that sometimes I could just "blow up."

___A___a___U___d___D

16. The only thing one can be sure of today is that he can be sure of nothing.

___A___a___U___d___D

17. There are few dependable ties between people any more.

___A___a___U___d___D

18. There is little chance for promotion on the job unless a man gets a break.

___A___a___U___d___D

19. With so many religions abroad, one doesn't really know which to believe.

___A___a___U___d___D

20. We're so regimented today that there's not much room for choice even in personal matters.

___A___a___U___d___D

21. We are just so many cogs in the machinery of life.

___A___a___U___d___D

22. People are just naturally friendly and helpful.

___A___a___U___d___D

23. The future looks very dismal.

___A ___a ___U ___d ___D

24. I don't get to visit friends as often as I'd really like.

___A ___a ___U ___d ___D

QUESTIONNAIRE - PART III

DIRECTIONS: Here are some questions to see what attitudes and interests you have. There are no "right" or "wrong" answers because everyone has the right to his own views. There are three possible answers to each question. Give the first, natural answer as it comes to you. Do not spend time pondering. Try not to fall back on the middle, "uncertain" answers except when the answer at either end is really impossible for you. Be sure not to skip anything; answer every question. Answer as honestly as possible what is true of you. Do not merely mark what seems the "right thing to say." Please circle your answer.

1. A seaside beach would be more appealing to me if there were:
 - a. no people around,
 - b. in between,
 - c. lots of families at play.
2. I prefer to eat lunch:
 - a. with lots of other people,
 - b. in between,
 - c. by myself.

3. There are times, every day, when I want to enjoy my own thoughts, uninterrupted by other people.
 - a. yes,
 - b. in between,
 - c. no.
4. I would rather spend a free evening:
 - a. with a good book,
 - b. uncertain,
 - c. working on a hobby with friends.
5. I enjoy being considered part of the group when my neighbors do anything.
 - a. true,
 - b. in between,
 - c. false.
6. I like to keep track, at least roughly, of where my money is spent.
 - a. yes,
 - b. sometimes,
 - c. no.
7. When I plan something, I like to do so quite alone without any outside help.
 - a. yes,
 - b. occasionally,
 - c. no.

8. I like to join with people who show lively group enthusiasm.
 - a. yes,
 - b. in between,
 - c. no.
9. I would rather spend two weeks in the summer:
 - a. bird-watching and walking in the country with a friend,
 - b. uncertain,
 - c. being a leader of a group in a camp.
10. I avoid getting involved in social responsibilities and organizations.
 - a. true,
 - b. sometimes,
 - c. false.
11. I greatly enjoy talking to people about local problems.
 - a. yes,
 - b. sometimes,
 - c. no.
12. I prefer games where:
 - a. you're on a team or have a partner,
 - b. uncertain,
 - c. each person is on his own.

Vita

Pamela Jane Armstrong Bledsoe was born in Duncan, Oklahoma on October 9, 1950. She is the daughter of Mr. and Mrs. Kenneth Miller Armstrong. She graduated from Duncan High School in May, 1968. In the summer of 1968 she attended the University of Oklahoma. From September, 1968, to May, 1969, she attended Gulf Park College in Long Beach, Mississippi. In June, 1969, she entered Oklahoma College of Liberal Arts, Chickasha, Oklahoma, where she received her Bachelor of Science degree in psychology in April, 1971. In the summer of 1970 she went on a tour of Germany with Oklahoma State University. In September, 1971, she entered Texas Woman's University in Denton, Texas. On June 1, 1973, she was married to Patrick Ray Bledsoe of Union, Missouri. They now reside at 4103 B Faith Road, Wichita Falls, Texas.