

Characteristics and Attitudes of College Students in Relation to Marijuana

Stephen S. Sledjesky
Santa Fe Junior College

Wilson H. Guertin
University of Florida

The dual purpose of this study was (1) to examine attitudes of college students in relation to marijuana to discover interrelations of opinions regarding its use, and (2) to determine differences between smokers of marijuana and non-smokers on demographic data. Factor analysis and item tallies were used, respectively, in analyzing the degree of agreement with opinion items on a questionnaire designed by the senior author. The demographic data suggested few differences between smokers of marijuana and non-smokers of marijuana on the eight categories investigated. The differences that were found were in the categories of cigarette smoking and planned major field of study. Regarding the factor analysis of attitudes, nine factors were formed which expressed varied degrees of knowledge and acceptance of marijuana plus caution at its use and society's erroneous interpretation of its effects.

Introduction

Marijuana use by the younger generation is being given extensive coverage by the communication media while few researchers studies are being conducted to collect data which will elicit accurate information in the understanding of attitudes toward the drug. The study of Weil et. al. (1968) at Boston University received wide attention in the literature although its emphasis was mainly clinical. Eells' survey at the California Institute of Technology (1969) analyzed attitudes but only in regards to degrees of agreement or disagreement. Up to this point, there has been little attempt to study the factor structure of interrelationships of opinions toward marijuana.

The present study attempts to discover these factors, if any, in the hopes of determining interrelations which will be useful in understanding college students' attitudes regarding marijuana's use and knowledge of its effects. Just how broad a spectrum of thought these attitudes encompass never has been shown. Secondly, an attempt was made to determine differing characteristics between smokers and non-smokers of marijuana from demographic information supplied by these college students.

Procedure

A self-designed two-page questionnaire* was prepared which was purposely anonymous in order to provide students with as much freedom as possible in answering. This questionnaire was distributed to a sample of convenience which consisted of student classes in education, sociology and health related professions at the University of Florida. In each classroom, the purpose of the study was explained and the directions given for completing the questionnaire. The anonymity of the questionnaire was emphasized to the student as was the fact that only the researcher would have access to the completed questionnaire. Of the 127 students asked to participate, 93% were willing to complete the questionnaire thereby showing the high degree of student interest in this area.

The questionnaire, itself, consisted of two parts. The first part requested the following demographic data: sex, race, religion in which raised, geographic area in which raised, college level, planned major field of study, political liberalism, and parents' occupation and educational level. The last two categories were included to facilitate social class classification according to the methods described by Warner in *Social Class In America* (1960).

Part two has 53 statements to evaluate attitudes towards marijuana employing a Likert-type scale with the numbers 1 through 7, respectively, representing the following degrees of agreement: Strongly Disagree, Disagree, Slightly Disagree, Do Not Agree or Disagree, Slightly Agree, Agree, and Strongly Agree.

In the analysis of the data, item tallies were utilized on part one of the questionnaire, and factor analysis on the second part. The factor analysis was performed using a principal axes solution which was rotated according to the oblique procedure of Jennrich and Sampson (1966) called Simple Loadings. All factor analyses employed the computer programs of Guertin and Bailey (1970) as they are represented in the Educational Evaluation Program Library at the University of Florida.

*The questionnaire was partially comprised of ideas obtained from the following bibliographical sources: Anon, (1969), Austin (1968), Ballante (1968), Burbridge (1968), Guertin and Bailey (1970), Rector (1967), Toohey (1968).

A copy of the questionnaire can be obtained upon request from the senior author.

Results

Table 1 presents the results of the questionnaire item tallies on the demographic data. Chi-squares were performed on the first eight categories of the table with differences below the 1% level being found in category 1 (cigarette smoking) with a chi-square of 37.89 with one degree of freedom and category 6

Table 1
Demographic Data

Descriptive Characteristics	Non-Users (N = 73)		Users (N = 45)	
	Freq.	%	Freq.	%
1. Cigarettes:				
Smoker	15	20.6	36	80.0
Non-Smoker	58	79.4	9	20.0
2. Sex:				
Male	18	24.6	10	22.2
Female	55	75.4	35	77.8
3. Religion in which raised:				
Protestant	44	60.3	29	64.5
Catholic	23	31.5	9	20.0
Jewish	6	8.2	7	15.5
4. Area in which raised:				
Rural	9	12.3	5	11.1
Suburban	52	71.3	32	71.1
Urban	12	16.4	8	17.8
5. College level:				
Freshman or sophomore	6	8.2	4	8.8
Junior or senior	45	61.6	29	64.5
Graduate	22	30.2	12	26.7
6. Planned field of study:				
Arts and sciences	27	23.3	9	20.0
Education	38	52.1	17	37.8
Health related	8	10.9	19	42.2
7. Political liberalism:				
Radically liberal	0	0.0	3	6.7
Liberal	31	42.5	24	53.4
Middle-of-the-road	28	38.3	14	31.1
Conservative	14	19.2	4	8.8
8. Social class:				
Upper middle	22	30.2	19	42.2
Middle middle	24	32.8	18	40.0
Lower middle	20	27.4	8	17.8
Upper lower	7	9.6	0	0.0
9. Frequency of smoking marijuana:				
Once a week or more			12	26.7
Once a month or more			14	31.1
Once a year or more			19	42.2
10. Length of time smoked:				
One year or less			17	37.8
Two years or less			12	26.7
Four years or less			6	13.3
More than four years			2	4.4
Used once or twice but not again			8	17.8

The oblique primary factor matrix appears as Table 2. Factor A represents a totally rejecting attitude towards marijuana which incorporates the usual cliches about drugs. It includes the view and beliefs that anti-marijuana laws should be retained; that it would not be more prudent to save the money spent on the detection of marijuana crimes and instead to tax its legal use; and that marijuana is physiologically addictive, harmful, causes physical disorders, does not stretch time, and offers a worse hangover than liquor.

The second factor, B, displays an open minded approach to marijuana accompanied by some knowledge of the information presently available on the subject. The variables with heavy loadings on this factor present marijuana as not being sinful, not encouraging the use of stronger drugs, being dissimilar to LSD, not causing the past to disappear, and effecting no hallucinations after the high. The difficulty of doing research in this area is also included in this factor.

Factor C seems based upon the belief that society's misunderstanding and mishandling of marijuana use promotes high use and the association of crime with its use. Because society has passed unjust laws, persons have been led to commit crimes, and to form a subculture. Society exaggerates the dangers of actions under the influence of marijuana since the effect is mostly on thought and perceptions. Criminal and sexual acts are not directly attributable to the effects of marijuana according to this viewpoint.

Factor D also is rejecting of marijuana as is factor A but reflects a more knowledgeable yet misinformed approach to the subject. Variables loading on it are: marijuana is worse than alcohol, leads to a slowness in thought processes, causes the past to disappear, is required in large amounts for a long high, and is not worse than hashhish.

Reasons for marijuana useage make up factor E. This list of reasons for its use includes the following: to revolt against authority, for braveness, to be one of the crowd, to enhance the pleasure of sexual acts, to gain attention from adults, to be more socially conscious and politically active, to avoid the dangers of alcohol, and to revolt against the depersonalized world.

The sixth factor, F, presents the attitude that marijuana is here now, and probably will persist because of the needs of society.

Factor G is a socially conscious factor (imprisonment for 10 years is too severe a penalty for a first offender of the anti-marijuana law) although lacking in knowledge of present information available on marijuana (it causes pupil dilation).

A close scrutiny of the collected data revealed that the variables of the eighth factor, H, were seen by both smokers and non-smokers of marijuana as describing the psychophysiological condition of withdrawal and retardation. They consist of the following: smoking marijuana does not cause a marked increase in heart beat, and regular users obtain a contracted consciousness and become absorbed in themselves when high.

The ninth and final factor, I, represents an attitude of acceptance regarding marijuana being a collection of variables which lists favorable reasons for its use. They include the following: marijuana does not breed a subculture; it is smoked in groups and thus, is relevant to social interaction; as the use of marijuana increases heroin use remains the same or decreases; and it is used in medicine to treat illnesses.

The variance accounted for by nine factors is 28.15 which is 53.12% of the total variance. The principal axes common variance was 84.73% of the total variance.

Table 3
Intercorrelations of the Oblique Primary Factors

	A	B	C	D	E	F	G	H	I
A	1.00	0.06	-0.06	-0.26	-0.27	-0.03	0.32	0.17	0.27
B	0.06	1.00	0.04	-0.04	0.02	0.05	0.08	-0.06	0.07
C	0.06	0.04	1.00	-0.01	0.04	0.03	-0.04	-0.02	0.05
D	-0.26	-0.04	-0.01	1.00	0.17	0.04	-0.24	0.03	0.21
E	-0.27	0.02	0.04	0.17	1.00	0.05	-0.08	0.02	0.09
F	0.03	0.05	0.03	0.04	0.05	1.00	0.03	0.03	0.01
G	0.32	0.08	-0.04	-0.24	-0.08	0.03	1.00	0.09	0.19
H	0.17	-0.06	-0.02	0.03	0.02	0.03	-0.09	1.00	0.05
I	-0.27	-0.07	0.05	0.21	0.09	-0.01	0.19	0.05	1.00

Table 3 clearly shows the independence of each of the oblique factors. All correlations are below 0.30 except for the correlation (0.32) between factors A and G.

Discussion

The demographic data showed that the planned major field of study differed significantly for smokers of marijuana and non-smokers of marijuana. From an examination of Table 1, it can be seen that students in health related areas comprised the largest portion of smokers of marijuana. In addition, they are the only group within the category of "planned major field of study" whose frequency of smoking marijuana was greater than the frequency of not smoking marijuana. The number of students in health related areas who smoked marijuana was more than twice the number who did not. In the fields of arts and sciences and education the opposite was true; the number of students who smoked marijuana was less than half the number who did not smoke marijuana.

The reasons why more students in the health related sample smoked marijuana than did those in the other areas of this investigation can only be guessed at. It seems reasonable to assume, though, that students in health related areas have a greater opportunity to be involved with medicines and drugs than do students in other areas. Thus, it is highly possible that this acquaintance allows them a greater feeling of comfort and freedom with drugs and in turn, a greater willingness to use drugs. Then again, it is possible that since health related students have this opportunity to be involved with drugs, they also possess more knowledge about drugs. This knowledge may have led them to believe that the smoking of marijuana is not dangerous.

Turning our attention to the nine factors, they revealed that there is a highly differentiated basis for opinions about marijuana. These opinions involved acceptance and rejection and both knowledge and ignorance. This lack of knowledge was particularly interesting and explored further.

An examination of the statements on the attitude section of the questionnaire disclosed that a large number of subjects marked the category Do Not Agree Or Disagree for the 53 statements. The range was from 3.4% to 70.3%; 58% of the statements had 30% (or more) of the students marking the non-knowledge point of the scale. This points out that many students were very apathetic to the questionnaire, lacked the assurance of anonymity, or were uninformed about marijuana.

If the latter is true, and a lack of knowledge about marijuana does exist among college students it could explain the use of marijuana on college campuses estimated by various sources to range from 15% to 50% (Anon. 1968). If students are not aware of the facts which are needed to discriminate, then a higher degree of willingness to try marijuana may exist. Not being aware of the dangers which marijuana smoking involves, a student would be more likely to experiment for any of a number of reasons (including those listed in factor E) or merely for the thrill involved. This, of course, would be invalid if it were also true that once college students were in complete knowledge of presently known facts regarding marijuana, they would use it to an even greater extent (as mentioned above regarding students in health related area). This possibility cannot be discarded since clinical findings serving to disfavor marijuana have not yet been revealed by reliable studies (Burbridge, 1968; Weil et al, 1968). Thus, in this era of the student protester, an attitude as expressed in factor C regarding the misunderstandings of society is likely to persist (even though factor C, itself, might be based in misconception) not only because students are furnished with another facet of our suppressive society, but also because of a lack of knowledge regarding marijuana by both research sources and students, themselves.

Summary

While the study showed college students who are smokers of marijuana and non-smokers of marijuana to differ in relation to cigarette smoking and planned major field of study, the majority of the demographic categories investigated revealed few differences between smokers of marijuana and non-smokers of marijuana. The greater percentages of those students who had smoked marijuana (82.2%) did not categorize themselves as having smoked marijuana once or twice.

The factor analysis of the attitude section of the instrument revealed nine factors which reflected the extensive range of opinions among college students regarding marijuana thereby revealing the complex nature of these attitudes. Remedial approaches to society's problems relating to use of marijuana should take cognizance of this complexity of attitudes.

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