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ABSTRACT

Data focused on illegal alcohol and marijuana use were collected in 1981 from 4,859 high school students living in two rural counties in southern Georgia. The sample consisted of over 85% of all students in grades 8 through 12 within the two counties. The data were used to test a facilitative-constraint model developed from selected components of differential association, differential indentification, and social control theories. Discriminant analysis was used to compare "users," "experimenters," and "non-users" on the basis of factors chosen to represent each dimension of the theory. The findings demonstrated that the theoretical model was useful in correctly classifying students into appropriate categories for both drugs assessed, but was particularly useful for predicting marijuana use. The most important empirical finding was identification of two variables which were demonstrated to be good discriminators of drug use: "access to drugs" and "identification with pot-head groups." Facilitative indicators were the best in predictive variables, while constraint factors were shown to be much less important in differentiating among the various drug user groups. Programs designed to increase identification with conventional groups while simultaneously reducing identification with drug-oriented groups will probably be effective in reducing illegal drug use. (Author/BRR)

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ALCOHOL AND MARIJUANA USE AMONG RURAL HIGH SCHOOL STUDENTS: A TEST OF A FACILITATIVE-CONSTRAINT MODEL

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ABSTRACT

Data focused on illegal alcohol and marijuana use were collected in 1981 from 4,859 high school students living in two counties in southern Georgia. The data were used to test a facilitative-constraint model developed from selected components of differential association, differential identification, and social control theories. Discriminant analysis was used to compare "users", "experimenters", and "non-users" on the basis of factors chosen to represent each demension of the theory. The findings demonstrated that the theoretical model was useful in correctly classifying students into appropriate categories for both drugs assessed but was particularily useful for predicting marijuana use.

INTRODUCTION

Drug abuse has been and continues to be a pervasive social problem within the United States. Examination of research focused on illegal drug use over the last two decades, for example, reveals that abuse has expanded in terms of participation by various groups within the society.

In the late 1960s, the majority of illicit drug use was thought to be primarily confined to urban ghetto youth, college students, and members of the "hippie" counter-culture. Moreover, drug abuse was viewed as being predominantly a lower-class phenomenon. Recent examinations of drug abuse, however, have demonstrated that it has permeated every segment of the society. The mass media have played a significant role in destroying preconceived perceptions about individuals who use drugs because it has been shown that politicians, movie and television personalities, and even professional athletes have become actively engaged in illegal drug use. Such revelations have produced considerable concern because these people have traditionally served as role models for young people in the society.

Participation of young people in drug abuse closely mirrors the changes which have occurred in the society as a whole. Teenagers of all spcial classes and backgrounds have become active participants in illegal drug use. In fact, evidence suggests that a subculture has emerged among adolescents that provides a social environment in which pro-drug attitudes are developed and the use of illicit drugs is accepted and reinforced (Cockerham, et al., 1976; Kandel, et al., 1976; Thomas, et al., 1975; Thomas and Zingraff, 1972).

Misconceptions about illegal drug use have also been perpetuated in the context of spatial distribution. Drug abuse was

once thought to be primarily confined to urban areas (Forslund, 1977-78; Heiligman, 1973; National Commission on Marijuana and Drug Abuse, 1972 Report; National Commission on Marijuana and Drug Abuse, 1973 Report; Tolone and Dermott, 1975), but recent research indicates that teenage drug abuse is quite common among rural populations (Bowker, 1976; Kirk, 1979; Napier, Bachtel and Carter, 1983; Napier, Bachtel and Goe, 1984; Napier, Carter and Pratt, 1981; Napier and Pratt, 1982).

While the awareness of illegal drug use has created considerable concern among people living in the U.S., programs designed to reduce the incidence of drug abuse have not been very successful. One of the reasons why such programs have enjoyed such marginal success is the incompleteness of existing research focused on the identification of explanatory models for predicting drug abuse. Additional research is needed to identify the social conditions which facilitate and impede illegal drug use. Progress toward the goal of good predictive models has been made in recent years through the application and testing of general sociological theories of deviance. Prior to this emerging interest in model development, drug research tended to be primarily focused on the identification of the nature and extent of drug abuse with minor attention given to socio-demographic and socio-psychological correlates of illicit drug use (Abelson, et al., 1973; Block, et al., 1974; Blum, 1969; Goode, 1970; Johnson, 1973; Johnson, et al., 1972; Judd, et al., 1973; Lombrillo and Hain, 1972; National Commission on Marijuana and Drug Abuse, 1st report, 1972; National Commission on Marijuana and Drug Abuse, 2nd report, 1973). Relatively little attention was given to the development of comprehensie theory for predicting participation in illegal drug use.

The recent emphasis on the application of sociological theories of deviance to illicit drug use has not only contributed to the identification of additional correlates of drug abuse, but has also provided preliminary theoretical explanations of why particular variables covary with measures of illegal drug use.

Several theoretical perspectives are presently being applied to the examination of illegal drug use. Hirschi's social control theory (1969), for example, has been used to investigate the incidence of drug abuse (Ginsberg and Greenley, 1978). Sutherland's (1939) differential association theory has been employed to evaluate the covariates of illegal drug use (Burkett and Jensen, 1975; Jacquith, 1981; Krohn, 1974; Napier, Bachtel and Goe, 1984). The Sutherland perspective has also been combined with Glaser's (1956) differential identification theory to predict the frequency of participation in illegal drug use (Napier, Bachtel and Goe, 1984). Moreover, social learning theory (Akers, 1973; Akers, et al., 1979; Akers, et al., 1968; Burgess and Akers, 1966) which incorporates principles of differential association theory and general behavioral reinforcement theory (Bandura, 1969; 1977; Bandura and Walters, 1963; Skinner, 1953; 1959; Staats, 1975) has been applied and tested relative to teenage alcohol and marijuana use (Akers, et al., 1979; Winfree and Griffiths, 1983).

The basic theoretical underpinnings of these perspectives strongly suggest that two types of factors contribute to participation in deviant behavior. The differential association, differential identifacation, and social learning theories suggest that some factors facilitate participation in deviant behavior. Central to these perspectives are the roles that peer groups play in influencing

participation in deviant behavior and the formation of individual and peer group definitions (norms, attitudes, and values) which legitimize participation in deviant behavior. Social learning theory contributes another dimension to the eclectic model by suggesting that deviant behavior is learned through imitation and reinforcement.

Social control theory, on the other hand, emphasizes factors which constrain participation in deviant behavior. Central to this theory is the concept of social bonding to conventional institutions, groups and behaviors. If people are bonded to existing social conventions of behavior and to traditional groups, they will tend to enact those behaviors which are consistent with the bonds they have established. In essence, the model suggests that as bonding to conventional institutions, groups, and behaviors increase there will be a corresponding decrease in the probability that deviant behavior will be enacted.

Unlike previous theoretical modeling which emphasize a single theoretical orientation, it is the authors' contention that both facilitative and constraint factors affect participation in deviant behavior. Such eclectic modeling has some support in the existing literature. Conger (1976), for example, combined elements of social control and social learning theories into a synthesis model to explain deviant behavior. Wilson, et al., (1979) examined teenage delinquency in the context of social control theory and concluded that associations which encourage and discourage participation were both significant in understanding involvement in delinquent behavior. Akers et al. (1979) also contributed to this orientation by noting that elements of social control theory could be subsumed under principles of social learning theory.

The purpose of this paper is to present a facilitative-constraint model developed from selected components of differential association, differential identification, and social control theories to explain participation in alcohol and marijuana use. The model is tested with data collected from a large sample of high school students living in southern Georgia. The findings are discussed in the context of the theoretical model and applied programs to reduce the incidence of illegal drug use.

THE APPLICATION OF DIFFERENTIAL ASSOCIATION AND DIFFERENTIAL IDENTIFICATION CONCEPTS TO ILLICIT DRUG USE

Sutherland and Cressy (1955) summarized the theory of differential association by noting that a person is influenced to participate in deviant behavior by definitions which he/she has internalized. The concept "definition" has been interpreted to mean values or beliefs. If definitions held by the individual tend to support deviant acts, the person holding such definitions will have a higher probability of participating in deviant behavior. In essence, it is argued that the more an individual associates with persons who have accepted delinquent definitions, the greater the probability he/she will internalize similar definitions. Subsequently, the individual will be more inclined to engage in deviant behaviors which are consistent wih the definitions internalized. Another important concept in the perspective is "association" which has become synonymous with actual contact or interaction (Glaser, 1956). This component of the model suggests that association with deviants will contribute to participation in deviant acts as a result of imitation and reinforcement. Individuals learn to engage in deviant acts by being in contact with individuals who actually participate in the deviant activities. Application of these concepts to illegal drug use

suggests that the more an adolescent interacts with persons who are engaged in the use of illicit drugs and who have internalized value orientations supportive of drug use, the greater will be the probabilty the individual will engage in illegal drug use.

Differential association theory is limited in its predictive utility because not all individuals who have contact with deviants become deviant. Conversely, many persons who engage in deviant a[illegible] have had little or no direct contact with people engaged in similar activities. Glaser (1956) addressed this issue by elaborating the associational model to include "differential identification". Differential identification theory posits that actual interaction with deviants is not essential and is probably not the most influential factor contributing to participation in deviant behavior. The model asserts that it is psycho-social identification with deviant individuals, groups, or lifestyles, whether real or imaginary which is most important. Glaser (1956) argued that people will enact deviant behavior to the extent they identify with real or imagined individuals from whose perspective the deviant acts would be deemed acceptable. The application of this concept to adolescent drug use suggests that the more an adolescent psychologically identifies with other individuals, groups, or lifestyles that are supportive of the use of illicit drugs, the more frequently the adolescent will engage in drug abuse.

THE APPLICATION OF SOCIAL CONTROL CONCEPTS TO ILLICIT DRUG USE

Hirschi's social control theory (1969) posits that participation in delinquency is determined by the degree to which an individual is socially bonded to conventional cultural definitions and behaviors of the society. The probability of engaging in delinquent

behavior is increased as the individual's bond to conventional society weakens. The social bond consists of four dimensions termed attachment, commitment, involvement and belief.

The attachment dimension of the social bond refers to affection for conventional others. Central to the attachment dimension is the degree to which a person is attached to his/her parents. Closely aligned with this concept is parental communication. Hirschi (1969) argues the sharing of life experiences with parents establishes a bond that retards participation in deviant acts. The model argues that communication between parents and offspring establishes relationships which are considered in the decision-making process concerning participation in deviant acts. If a strong bond exists between parents and offspring, the youngster would be less likely to participate in actions which are negatively sanctioned by parents. Youngsters holding strong attachment for parents would not wish to embarrass or inconvenience their parents by engaging in deviant behavior.

The application of the attachment dimension of social control theory to adolescent use of illicit drugs suggests that the greater the parent/adolescent attachment, the greater will be the degree of communication between parent/adolescent which in turn will make the bonding greater. As the degree of attachment increases, participation in illegal drug use should decrease because such action would be a source of embarrassment for the parents.

The commitment dimension refers to the degree to which a person is committed to achieving life goals via conventional means. Hirschi posits that aspirations for conventional goals (attending college or occupational goals) will constrain an adolescent from

participating in delinquency because deviance from conventional means of goal accomplishment may jeopardize opportunities to achieve desired goals and attain status positions as an adult. Central to the commitment dimension is the value placed on education because it is an important conventional means of achieving desired goals. The application of this concept to adolescent drug use suggests that the less a person is committed to education, the more likely he/she will be committed to less conventional avenues for goal accomplishment. Such an orienation would imply that such a person would be more willing to engage in deviant acts since they would not be strongly constrained by existing conventions. This suggests that people who are less committed to education will be more inclined to use illegl drugs.

The <u>involvement dimension</u> of the social bond refers to physical participation in conventional activities such as school organizations and attending church. Social control theory posits that involvement in conventional activities constrains participation in delinquency by ensuring that a larger proportion of leisure time is spent in activities which demand conventional behavior. Participation in conventional activities would function to establish certain patterns of behavior that would be defined as being acceptable to the members of the conventional organizations. These patterns of behavior would tend to be exhibited in other situations once they are established. Applying this concept to adolescent drug use suggests that the greater the participation in conventional activities, the lower the probability will be that the person will use illicit drugs.

The <u>belief dimension</u> refers to individual acceptance of conventional norms governing a particular delinquent behavior.

Acceptance of or belief in the validity of conventional norms will tend to constrain participation in deviant acts because the individual will perceive the behavior as being illegal and inappropriate. People would find it difficult, for example, to enact behavior they believe to be wrong or if they fear being punished for their involvement in the deviant acts by control agencies which are enforcing legitimate laws. The application of this concept to adolescent drug use suggests that if young people perceive the use of illicit drugs as being contrary to the existing normative system, they will be less likely to engage in illegal drug use.

Research Expectations Derived From the Eclectic Model

The theoretical perspective outlined above basically argues that the facilitative-constraint factors will differentially affect participation in illegal drug use among young people. The model posits that users of illegal drugs will be governed more by facilitative factors discussed in the differential association and identification components of the model and less by the constraint factors representative of the social control portion of the theory. Non-users will be governed more by social control factors and less by facilitative factors. Individuals who have engaged in experimentation with illegal drugs should be influenced by both types of variables.

STUDY METHODS

Study Sample

Data were collected in 1981 from 4,859 high school students living within two counties in southern Georgia. The sample consists of over 85% of all students in grades 8 through 12 within the two

study counties. Only students who were absent from school at the time of data collection and students attending a small, private school which elected not to participate in the study were excluded from the sample.

It is recognized that findings from such a sample are not generalizable beyond the study area. However, given the large sample size and the heterogeneity of the student respondents, it is argued the data are quite adequate to test the utility of the facilitative-constraint model on a preliminary basis. Descriptive characteristics of the sample are presented in Table 1 to provide insight to the type of students composing the sample.

(Table 1 here)

The two counties are primarily rural as defined by the U.S. Bureau of Census. Agriculture is of primary importance in both study counties even though diversification of the economies within the counties is occurring through small scale industrialization. Thus, the study counties would be classified as rural counties which are in a state of transition.

Data Collection Techniques

Data were collected during regularly scheduled school hours using trained field staff to conduct group interviews. Field staff with children in high school were not permitted to conduct interviews in the schools in which their children were enrolled. The field staffperson read each question to the group and each student entered his/her responses on a questionnaire. The students were cautioned not to enter any response until the questions were read by the interviewer.

The students were not permitted to interact during the interview sessions. No names or codes were used on the questionnaires which assured the participants of complete anonymity. When the interview sessions were completed, the students placed their questionnaires in an envelope on the interviewer's desk. These procedures were used in all interviewing sessions to prevent biasing of the responses by peer pressure. The self-reporting technique was selected since research has shown that it is a valid and reliable method for collecting drug use information from young people (Akers, et al., 1979; Hardt and Peterson-Hardt, 1977; Single, et al., 1975).

Data Analysis

Data were analyzed using discriminant analysis (Klecka, 1980; Lachenbruch, 1975) which is a statistical technique designed to assess how well two or more mutually exclusive groups can be differentiated in terms of a set of characteristics or discriminant variables. This technique was selected because it permits a comparison of means of the groups on all discriminating variables and also provides a test of significance for the relationships between facilitative and constraint variables and illicit drug use. Moreover, the classification procedures used in discriminant analysis provides a means of assessing the utility of the model in correctly classifying study cases on the basis of the facilitative and constraint variables included in the model.

Measurement of the Partitioning Variable

Respondents were assigned to one of three groups based on reported frequency of alcohol and marijuana use. Alcohol and

marijuana were selected for investigation because they are the drugs most often abused by adolescents (National Commission on Marijuana and Drug Abuse, 1973) and have been shown to be the drugs most frequently used in the antecedent stages of more extensive drug involvement (Kandel, 1975; Kandel and Faust, 1975).

Respondents were asked how often they used alcohol and marijuana without a prescription. The response categories used to collect the drug use data are as follows: (1) almost every day; (2) several times a week; (3) a few times a month; (4) a few times a year; (5) only once or twice ever; (6) never have tried. The students selecting categories 1,2, and 3 were defined as "users." The students selecting categories 4 and 5 were defined as "experimenters," and those selecting category 6 were defined as "non-users." This technique for grouping the sample produced the following results:

Alcohol Use			Marijuana Use		
Group	N	%	Group	N	%
Users	1,619	33.3	Users	874	18.0
Experimenters	1,862	38.3	Experimenters	935	19.2
Non-Users	1,378	28.4	Non-Users	3,050	62.8
	4,859	100.0		4,859	100.0

The group frequencies indicate that use and experimentation with alcohol is much more prevalent than comparable use of marijuana.

Measurement of Discriminant Variables

The following facilitative variables were chosen to represent differential association and identification elements of the model:

Access to Drugs: This variable was measured by asking the students to give a response to the following question: "How easy is

it for you to obtain the drugs that you usually use?" Responses ranged from 1 (never use drugs) to 6 (very easy). It is argued that a response of easy access to drugs indicates association with peers who use drugs and have positive value orientations toward their use. Easy access also indicates the individual has been accepted into the marketing system for illegal drugs and such acceptance is contingent on peer evaluations by persons engaged in deviant acts (using and/or selling drugs).

Peer Influence in Drug Use: Students were given a checklist of possible reasons for using drugs and asked to check all that were appropriate to them. Included in the list were the following reasons: (1) "All of my friends use drugs, so I use them too."; and (2) "Drugs help me be accepted into the group I run around with." Responses to both reasons were treated as "dummy" variables with a positive response receiving a value of 1 and a negative response receiving a value of 0.

Psychosocial Identification with Drug Oriented Group: Students were asked to indicate to what degree they shared common interests and concerns with "pot-head groups." Responses ranged from 3 (a lot) to 1 (none). A response of 3 indicated high psychosocial identification with a drug oriented group and lifestyle.

The following measures of social control theory concepts were used as constraint variables:

Attachment Dimension

Parental Attachment: Students were asked, "How well do you and your parents, parent, or guardian usually get along?" Responses ranged from 1 (very poorly) to 5 (very well).

Parental Communication: was measured by asking students if

they talked with their parents or parent about drug use and abuse. The responses ranged from 0 (no, never) to 3 (yes, frequently).

Commitment Dimension

Commitment to education was measured by two indicators termed educational group identification and perceived academic ability.

Educational Group Identification: Students were asked to indicate to what degree they shared common interests and concerns with college-bound groups. Responses ranged from 1 (none) to 3 (a lot). A response of 3 indicates high educational aspirations.

Perceived Academic Ability: The students were asked to indicate how well their school grades compared with those of other students. Responses ranged from 1 (much worse) to 5 (much better).

Involvement Dimension

Number of School Activities: The students were asked to indicate the number of school activities in which they participated.

Church Attendance: Students were asked if they attended church. The possible responses were; no; yes, sometimes; and yes, regularly. The "no" response received a value of 1, while a "yes, regularily" response received a value of 3.

Belief Dimension

Attitude Toward Alcohol Use: The students were asked if they perceived the use of alcohol as being a problem. The possible responses ranged from "no, definitely not a problem" to "yes, definitely a serious problem". The "no" response received a value of 0, while the "yes, definitely" response received a value of 4.

Attitude Toward Drug Use: The students were asked to indicate if they perceived the use of drugs as being a problem. The possible responses were the same as those noted in the previous variable and

were coded in the same manner.

Measurement Assumptions

It is recognized that not all of the variables included in the study meet the interval level assumption of discriminant analysis. However, it has been observed that cases can be classified correctly in situations where ordered categorical data or "dummy" variables are used (Lachenbruch, 1975). Additionally, Lachenbruch (1975) has shown that discriminant analyses is not particularly sensitive to minor violations in the assumptions of a multivariate normal distribution or equal group covariance matrices. Therefore, it is argued that the "robustness" of the statistical technique will adequately compensate for any measurement error due to using categorical or ranked data.

Missing values were assigned the variable mean and retained for use in all analyses. Chan and Dunn (1972) observe that mean substitution is an "acceptable" practice in discriminant analyses when a large number of variables are used and when the sample size is large. These criteria are met since the amount of missing data within the data set is miniscule (the highest percentage of missing data for any variable was 4%). It is argued that the use of mean substitution does not affect the outcome of the analysis.

FINDINGS

The mean values of the facilitative and the constraint variables for the alcohol use groups are presented in Table 2.

(Table 2 here)

The group means reveal that users, experimenters, and non-users of alcohol with few exceptions are influenced by the facilitative and constraint variables in the hypothesized manner.

Users tended to perceive access to illegal drugs as being much easier than experimenters and non-users. Users also indicated that illegal drug use and acceptance of drug use by friends were stronger motivating factors for their own use than experimenters and non-users. Users revealed they had a significantly higher identification with pot-head groups than the members of the other two groups.

The constraint variables were also basically consistant with the research expectations. Non-users indicated stronger attachment for parents, reported higher levels of perceived educational achievement, attended church more often, and perceived that alcohol and drug use pose problems. Experimenters were intermediate on each of these variables, while users tended to be less attached to parents, reported the lowest educational achievement, attended church less frequently and did not perceive alcohol abuse and illegal drug use as posing serious problems. The three groups were not much different in terms of parental communication, educational group identification and the number of school activities. In fact, experimenters tended to be more communicative with parents in terms of drug use, identified more closely with college-bound people and were more active in school activities. None of the study groups was highly identified with the college-bound group.

The facilitative and the constraint variable means for marijuana use are presented in Table 3.

(Table 3 here)

The group means for <u>all</u> facilitative and <u>all</u> constraint variables are consistent with the research expectations. Marijuana users tended to be the most influenced by facilitative factors and the least influenced by constraint factors. Non-users tended to be least

influenced by the facilitative factors and most strongly influenced by the constraint variables. Moreover, the marijuana experimenter tended to fall in between the user and non-user in terms of influence from both types of factors as expected.

The data were examined in the context of stepwise discriminant analysis to ascertain how useful the factors are in correctly classifying the study participants. These data are presented in Table 4.

(Table 4 here)

The discriminant analyses for alcohol use revealed that all facilitative and constraint variables are significantly related to alcohol abuse except "attitude toward drug use" and "use of drugs because friends use them." The reduction in the Wilks' lambda for each entering variable indicates that access to drugs and identification with pot-head groups are the major discriminating variables. The remaining variables, although significantly related to alcohol use, contributed relatively little to differentiating the study groups.

The cannonical correlations reveal that the group variable has a strong relationship with the first linear discriminant function but a relatively weak relationship with the second. The first discriminant function provides 97% of the discriminatory power in the total model. Thus, the second function contributes little to discriminating the groups and is of little consequence. The squared cannonical correlation for each function indicates that the group variable explained 35% of the variation in the first discrimihant function and 2% in the second. This means that the facilitative and constraint variables considered simultaneously provide a moderate

amount of explanatory power relative to alcohol use.

The results of the stepwise discriminant analysis for marijuana use is presented in Table 5.

(Table 5 here)

The findings reveal that 3 of the 4-facilitative variables and 5 of the 8 constraint variables are significantly related with marijuana use. It was observed that parental communication, educational group identity, number of school activities, and use of drugs to be accepted by peer group were not significantly related to marijuana use. The reduction in Wilk's lambda for each entering variable revealed that access to drugs and identification with pot-head groups are the major discriminating variables.

The cannonical correlations indicate that the group variable has a strong relationshhip with the first linear discriminant function and a weak relationship with the second. The first function provided 95% of the total discriminatory power. The second function contributed little in separating the groups. The squared cannonical correlations indicate that the group variable explained 58% of the variation in the first discriminant function and 7% in the second function. This finding indicates that both the facilitative and the constraint variables considered simultaneously provide a relatively high degree of discriminatory power relative to marijuana use.

Classification Results

The probabilities of being classified into appropriate groups were established prior to the classification of the study respondents on the basis of the distribution of the sample in terms of the use of drugs (users, experimenters and non-users). The discriminant analysis was used to classify the study respondents and the results are

presented in Table 6.

(Table 6 here)

The classification procedure revealed that 55.8% of all cases could be classified into the correct alcohol use group based on their discriminant scores on both discriminant functions. Non-users had the lowest percentage of cases correctly classified and the errors were predominantly classification of non-users as being experimenters. This finding suggests that adolescents who do not use alcohol are not easily distinguished from adolescents who engage in experimentation with alcohol on the basis of the variables included in this study.

The classification analysis of marijuana use revealed that 76.7% of all cases could be correctly classified. Experimenters had the lowest percentage of correctly classified cases and tended to be misclassified as non-users. This indicates that adolescents who experiment with marijuana tend to be somewhat similar to non-users in terms of the influence of the facilitative and constraint factors included in this study. While the analysis indicates that some experimenters were also misclassified as users, it can be seen that users and non-users tend to be clearly distinguishable.

DISCUSSION OF FINDINGS AND CONCLUSIONS

The findings clearly demonstrate that the theoretical perspective as stated has considerable utility for predicting participation in illegal drug use. While the facilitative-constraint model was shown to be quite useful for predicting participation in the use of both illegal drugs assessed, it was particularly good in predicting participation in the frequency of marijuana use. A possible explanation of these findings is the degree of negative

sanction associated with the use of each drug. Illegal use of alcohol among teenagers, for example, is not perceived in the same manner as comparable frequency of marijuana use. In fact, experimentation and moderate use of alcohol by young adults under certain circumstances would be defined as being acceptable although not encouraged. Such is not the case for marijuana which is defined as an illegal drug and its nonprescription use is not socially acceptable under any circumstances.

Both marijuana and alcohol are illegal substances for consumption by teenagers but the negative sanctions associated with the use of each drug vary considerably. Alcohol use by teenagers is perceived to be much less offensive than comparable uses of marijuana and the sanctions applied to illegal alcohol use are much less severe. The social consequences and personal stigma attached to apprehension and conviction of alcohol use violations are much less severe and short-lived than those for marijuana use. Family relationships, status positions in conventional groups, future goals and career aspirations of teenage alcohol users are often not affected to any great extent by moderate consumption (this assumes that the illegal alcohol use violation is not compounded by such things as assault or homicide while under the influence of alcohol). Detection and conviction for possession and/or use of marijuana, however, can result in the fragmentation of family relationships, loss of status positions in social groups, and potential destruction of future careers.

This line of discussion suggests that the theoretical model probably is most appropriate for predicting deviant behaviors which have more severe sanctions attached to them. As the severity of the sanction increases, access to opportunities to participate in the

deviant acts decrease because such behaviors are more carefully monitored and must be enacted in a covert manner to avoid detection and prosecution. This suggests that individuals with the easiest access to opportunity to participate will be more inclined to do so. This position was supported in the study findings because access to drugs was shown to be the most important discriminating variable in the use of both drugs evaluated.

As the sanctions associated with deviant behaviors increase, the costs of participation in the deviant acts also increase proportionately. This implies that greater social pressure would have to be applied to influence individuals to engage in more severely sanctioned deviant acts. This position was supported by the study findings because the social pressure variables (both facilitative and constraint) were significantly related to use of illegal drugs.

Psychosocial identification was shown to be a very important variable in the prediction of drug use. It was particularly important for the use of marijuana. This suggests that individuals do not perceive themselves to be like members of very deviant groups unless they are engaged in the deviant acts themselves. A person who does not use drugs of any type may identify with a group whose members consume alcohol because there is little social stigma attached to the use of alcohol. The same person would be more reluctant to identify with a marijuana user group (pot-head group) because the consequences of being socially linked to such a group would be very high.

The most important empirical finding of the study is the identification of two variables which were demonstrated to be good discriminators of drug use. The two factors are "access to [illegible]" and "identification with pot-head groups." These two variables accounted

for the greatest amount of predictive power in both models. The findings indicate that as access to illegal drugs becomes easier and identification with drug oriented groups becomes greater, there is a concomitant increase in the use of alcohol and marijuana.

It is interesting to note that the best predictive variables are facilitative indicators. The constraint factors were shown to be much less important in differentiating among the various drug user groups. This suggests that relatively few but strong facilitative factors can negate the influence of multiple constraint factors which are weak.

The action implications of the study findings are that primary emphasis of drug use prevention programs should be focused on access to drugs and identification with drug oriented groups. If access to drugs can be made very difficult, it is highly likely the use of illegal drugs will be substantially less. Attention should also be directed toward group identifications held by young people. Programs designed to increase identification with conventional groups while simultaneously reducing identification with drug oriented groups will probably be effective in reducing illegal drug use.

Table 1: Characteristics of the Study Sample (N=4,859)

Characteristic		Descriptive Data* Frequency	Percentage
Age	12 years	3	0.0%
	13 years	436	9.0%
	14 years	837	17.2%
	15 years	1,076	22.1%
	16 years	1,009	20.8%
	17 years	973	20.0%
	18 years	427	8.8%
	19 and older	81	1.7%
	No data	17	0.3%
Sex	Male	2,419	49.8%
	Female	2,433	50.1%
	No data	7	0.1%
Race	White	2,969	61.1%
	Nonwhite	1,878	38.6%
	No data	12	0.2%
Grade	8th	1,027	21.1%
	9th	1,078	22.2%
	10th	1,039	21.4%
	11th	932	19.2%
	12th	779	16.0%
	No data	4	0.1%
Parents' Marital Status	Married	3,448	71.0%
	Not married	1,385	28.5%
	No data	25	0.5%
Migrant Status	Nonmigrant	3,232	66.5%
	Migrant	1,455	29.9%
	No data	172	3.6%
Perceived Family Income	Very poor	49	1.0%
	Poor	98	2.0%
	Less than average	512	10.5%
	About average	2,103	43.3%
	More than average	1,498	30.8%
	Wealthy	460	9.5%
	Very wealthy	112	2.3%
	No data	27	0.6%
Family Receives Public Assistance	Yes	777	16.0%
	No	3,803	78.3%
	Don't Know	255	5.2%
	No data	24	0.5%

*Percentages may not sum to 100.0 due to rounding error.

Table 2: Group Means for Facilitative and Constraint Variables Associated With Alcohol Use (N=4,859)

	Users	Experimenters	Non-Users
Facilitative Variables			
Access to drugs	3.52	1.94	1.20
Use drugs because friends do	0.16	0.06	0.00
Use drugs to be accepted	0.11	0.03	0.08
Identification with pot-head groups	1.67	1.17	1.08
Constraint Variables			
Parental attachment	3.75	3.94	4.20
Parental communication	1.35	1.46	1.33
Educational group identity	1.73	1.77	1.73
Perceived academic ability	3.05	3.29	3.33
Number of school activities	1.47	1.64	1.54
Church attendance	2.04	2.32	2.46
Attitude toward alcohol use	1.75	2.25	2.45
Attitude toward drug use	2.10	2.46	2.54

Table 3: Group Means for Facilitative and Constraint Variables Associated With Marijuana Use (N=4,859)-

	Users	Experimenters	Non-Users
Facilitative Variables			
Access to drugs	4.35	3.23	1.36
Use drugs because friends do	0.25	0.12	0.02
Use drugs to be accepted	0.16	0.07	0.00
Identification with pot-head groups	2.09	1.32	1.08
Constraint Variables			
Parental attachment	3.65	3.80	4.08
Parental communication	1.32	1.36	1.41
Educational group identity	1.61	1.72	1.79
Perceived academic ability	2.94	3.15	3.32
Number of school activities	1.23	1.56	1.65
Church attendance	1.87	2.19	2.40
Attitude toward alcohol use	1.65	2.00	2.33
Attitude toward drug use	1.86	2.38	2.51

Table 4: Stepwise Discriminant Analysis for Users, Experimenters, and Non-Users of Alcohol (N=4,859)

	Order of Entry	Stepwise Multiple F	Wilks' Lambda
Facilitative Variables			
Access to drugs	1	980.45	.712
Use drugs because friends do	-	0.95*	-
Use drugs to be accepted	9	5.94	.642
Identification with pot-head groups	2	120.96	.678
Constraint Variables			
Parental attachment	5	19.15	.654
Parental communication	6	14.43	.650
Educational group identity	7	12.21	.647
Perceived academic ability	8	11.85	.644
Number of school activities	10	4.86	.641
Church attendance	4	22.92	.659
Attitude toward alcohol use	3	47.02	.666
Attitude toward drug use	-	0.44*	-

Linear Discriminant Function	Eigenvalue	% of Discriminatory Power	Cannonical Correlation	(Cannonical)2 (Correlation)
1	.534	.97	.590	.348
2	.017	.03	.129	.017

*Not significant at the .05 level.

Table 5: Stepwise Discriminant Analysis for Users, Experimenters, and Non-Users of Marijuana (N=4,859)

	Order of Entry	Stepwise Multiple F	Wilks' Lambda
Facilitative Variables			
Access to drugs	1	2229.98	.521
Use drugs because friends do	7	10.22	.396
Use drugs to be accepted	-	1.48*	-
Identification with pot-head groups	2	642.85	.412
Constraint Variables			
Parental attachment	8	5.24	.395
Parental communigation	-	0.07*	-
Educational group identity	-	0.96*	-
Perceived academic ability	5	16.39	.399
Number of school activities	-	2.24*	-
Church attendance	3	39.15	.406
Attitude toward alcohol use	4	20.73	.402
Attitude toward drug use	6	10.73	.398

Linear Discriminant Function	Eigenvalue	% of Discriminatory Power	Cannohical Correlation	(Cannonical)2 (Correlation)
1	1.36	.95	.759	.576
2	0.07	.05	.263	.069

*Not significant at the .05 level.

Table 6: Classification Results for Alcohol and Marijuana Use Groups

Alcohol Use

Group	% cases Classified Correctly	Classified as: Users	Experimenters	Non-Users
Users	65.1	1,054	442	123
Experimenters	54.1	395	1,008	459
Non-Users	45.8	56	691	631
Total	55.8	1,505	2,141	1,213

Marijuana Use

Group	% cases Classified Correctly	Classified as: Users	Experimenters	Non-Users
Users	70.4	615	163	96
Experimenters	35.0	202	327	406
Non-Users	91.4	62	201	2,787
Total	76.7	879	691	3,289

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