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VALUE DIFFERENCES  
IN  
ADOLESCENT DRUG ABUSERS AND NON-DRUG USERS

by  
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A Dissertation Presented in Partial Fulfillment  
of the Requirements for the Degree  
Doctor of Philosophy

ARIZONA STATE UNIVERSITY

January 1975

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has been approved  
December 1972

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## ABSTRACT

The purpose of this study was to identify the value characteristics of adolescent drug abusers in Tempe, Arizona. There were 1,873 subjects in the seventh and ninth grades for the school year 1972-73. Drug abusers were identified by self-report, where they had indicated use of drugs six times or more. The study design was basically a multivariate naturalistic-sequential design, with the variables being the subjects freely occurring responses.

The criterion instrument was the Rokeach Value Survey, containing 36 value terms rank ordered by the respondent. The data was run through a MANOVA program to determine if there was a difference between the values of adolescent drug abusers and non-drug abusers. The results indicated a difference in the ninth grade at the .001 level of significance for both males and females. As a result of this finding, it was deemed worthwhile to do a post hoc analysis of the data to identify those clusters of values that best distinguish between adolescent drug abusers and non-drug abusers. Since the majority of the results were significant beyond the .05 level, the data was run through a Factor Analysis and Discriminative Function for seventh and ninth grades combined and each grade separately.

The resultant clusters of value terms that best distin-

guished adolescent drug abusers from non-drug abusers seemed to describe characteristics of drug abusers as represented in the Review of the Literature. The factored clusters characterized seventh and ninth grade drug abusers as having affection and security needs, especially for the ninth grade males, at the .001 level of significance. The seventh grade females were less distinctive in their characteristics, but in the ninth grade the female significant difference was at the .001 level, also. Female drug abusers were found to be dependent and consider forgiveness and honesty important. Ninth grade males seem to feel an inner disharmony. But the value terms that most clearly identify both male and female drug abusers in the ninth grade were mature love and exciting life.

The conclusion of this researcher from the results of this study is that adolescent drug abusers have affection and security needs and seek excitement, since they consider mature love, family security, and exciting life as being much more important to them than do non-drug abusers. This conclusion was based on the results of the Terminal Values page of the Rokeach Value Survey, which seems to provide the stronger predictor variables for male drug abusers.

The Instrumental Values page indicates adolescent drug abusers are narrow-minded, fearful, unimaginative, and dependent. Such a lack of assertiveness suggests insecurity that would perhaps increase affection and security needs.

The Instrumental Values page appears to provide the stronger predictor variables for female drug abusers.

The extent of value deprivation and associated personality problems characterized by adolescent drug abusers suggests prevention, diagnosis, and treatment programs related to drug abuse could benefit from further research in the area of adolescent values.

## PREFACE

"The material in this project was prepared under Grant No. NI-74-99-1001, NI-73-99-1021 from the Law Enforcement Assistance Administration, U. S. Department of Justice. Researchers undertaking such projects under Government sponsorship are encouraged to express freely their professional judgement. Therefore, points of view or opinions stated on this document do not necessarily represent the official position or policy of the U. S. Department of Justice."

## ACKNOWLEDGEMENTS

One's accomplishments are not entirely of his own efforts, they are a reflection of the quality of his experiences with others. Many people have contributed to the development and completion of this study. It would be impossible for me to acknowledge every person by name who has contributed in making this possible. However, I would like to express special thanks to my Chairman and good friend, Dr. S. David Mazen, who provided continual positive support throughout my doctoral program. A special thanks also goes to Dr. Ethel Anderson, Internship Supervisor and colleague. I would like to express gratitude and appreciation for the unique contributions from each of the other committee members: Drs. Garth Blackham, Robert Armstrong, and J. Jeffries McWhirter.

Appreciation is also expressed to Mr. Sam Fees, Superintendent of Tempe Elementary District No. 3, for his cooperation and assistance in providing a population from which to collect the data, to the teachers and counselors who administered the instruments, and to the students who participated as subjects. Assistance in the statistical treatment of the data was graciously provided by Dr. Robert Armstrong and Mr. Garry Estes.

To my diligent and patient wife, Barbara, I give my love for her total support and direct assistance. And to Brent and Kathy, because they assumed extra chores and responsibilities, I want to say I'm rightfully proud.

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## Chapter 1

### INTRODUCTION

Given the social and cultural factors of frustration and changing values, as well as the stress and strain of adolescence, the questions arises, "Why doesn't every adolescent abuse drugs?" Many variables could be suggested as being operative in determining which adolescents turn to drugs, but value characteristics of the adolescent drug abuser appears to be a relatively new consideration. Since the etiology of drug abuse is highly complex, it is not suggested that values are the only determining variable, but they could become an important variable. Efforts to identify causes for drug abuse are necessary to add to the fund of basic knowledge about human beings, but also to better understand the adolescent drug abuser. If the causes of the behavior can become known, then strategies of prevention and treatment can be developed.

A variety of theories have been suggested as to the causes of drug abuse among adolescents. Personality characteristics and social factors constitute major areas of current research. Both areas of study interrelate as apparent contributing factors related to drug abuse. As Willinger (1970) found, adolescent abusers tended to reject conventional social roles and were more involved in sensation seeking behavior. His study seems to support what professionals working in the field have stated: The more involvement in drugs, the more alienation

and rebellion is apparent in the adolescent; and concomitantly, the more involvement in drugs, the more emotionally disturbed the adolescent appears.

Louria (1968, 1971), in his medical practice, found family discord to be characteristic of the drug abusing adolescent. He further described the adolescent drug abuser as alienated from society, distrustful, torn by anxieties, caught in a chronic identity crisis, and has an inability to respect himself or give and receive love.

Communities of all sizes across America today are faced with the youth drug problem. It seems to be a part of the complexity of modern living. It has been considered a health problem, a family problem, a task for the public schools, a concern of the church, and a law enforcement problem. It is not any one of these--it is all of them. Unlike many other problems, the abuse of drugs has aroused the public, including government officials, because it has become a problem for every area of community life. The causes are numerous and, therefore, the opportunities for working on the causes are multiple. Every institution within the community feels that the problem involves them, and it does.

#### PURPOSE OF THE STUDY

The primary purpose of this study was to identify and describe the value characteristics of adolescent drug abusers.

Vadimski (1974), using single stage cluster sampling with 356 students in Tempe, Arizona, high schools, found marijuana smokers were less socialized, less involved, less committed, and less attached than non-marijuana smokers. Drug abusers' values differed from middle class values in that they were nonutilitarian, negativistic, and experienced short-run hedonistic acts. Healy (1969); Cohen (1966); Sykes (1957); Miller (1958); Vadimski (1974); and Holloran (1972) found the adolescent drug abuser to be impulsive, withdrawn, and unable to anticipate the consequences of his behavior.

If an adolescent is down on himself, his value system is probably not serving his needs, and out of self-dissatisfaction he may turn to drugs (Bramel, 1968; Rokeach, 1964).

#### STATEMENT OF THE PROBLEM

This study was designed to compare the values of adolescent drug abusers and non-drug users in Tempe, Arizona, schools in grades seven and nine, according to the Rokeach Value Survey. This descriptive analysis was intended to result in a description of the value system of seventh and ninth grade drug abusers. Another objective, through statistical analysis of the data, was to identify clusters of values that may be used to better describe the personality of the adolescent drug abuser and perhaps be used as an aid in prediction of potential drug abusers through a value survey instrument.

The purpose of the study was twofold: to test the hypotheses to note the differences between adolescent drug abusers and non-drug users, and to identify those factors that indicate such differences between adolescent drug abusers and non-drug users. This second result, through statistical analysis of the data, was designed to identify clusters of values that may be used to better describe the characteristics of the adolescent drug abusers and perhaps be used to approximately predict potential drug abusers.

In the past, the family, church, school, and community presented a homogeneous environment with an established set of values. Today, life styles differ in every neighborhood and almost in every family. Parents are more aware of the younger generation's apparent difference in values, their seemingly aimless attitude, and difficulty in making commitments. Such an aimless drifting can create a frightening state of meaningless existence devoid of a sense of self-worth or dignity.

These factors indicate that when young people lose confidence and self-respect they develop feelings of inadequacy, or vice versa, which may well cause them to turn to responses of antisocial behavior such as drug abuse. The deviant child thereby becomes a social problem when he turns to self-destructive behavior like drug abuse.

A Gallup Poll in 1971 showed drug addiction had risen from seventh to third place on the public's list of most

important national problems (Newsweek, 1971). The Gallup Poll in January, 1972, indicated close to fifty percent of college students had used marijuana. Such news was indeed a social shock, for up to that time drug abuse had been labeled as a problem identified with long haired "hippie types." Following news reports suggested drug abuse moved not only into the college age, but also into the high school and elementary school age groups. The specific extent of drug abuse among adolescents is unknown, but few would deny the seriousness of the problem and the need for research into its causes and a search for some possible solutions.

Through the mass media, and advertising in particular, Americans have been overexposed to promises of instant cures through drugs. Carl Rogers (1971) has suggested that one of the most disturbing effects of psychoactive drugs is that they convince the drug user psychological problems have chemical solutions, that relief is just a swallow away, that better living can come through chemistry rather than by more effective coping behaviors. Hopefully, this analysis of the value characteristics of adolescent drug abusers will be a contribution in aiding treatment and prevention of drug abuse.

#### STATEMENT OF THE HYPOTHESES

In order to better understand the problem of drug abuse and to fulfill the purpose of this study, which was to iden-

tify and describe the value characteristics of adolescent drug abusers, the following hypotheses were constructed:

Research Hypothesis

The values of drug abusers differ from non-drug users in Tempe, according to the Rokeach Value Survey.

Null Hypotheses

The following null hypotheses were constructed to test the above research hypothesis:

Hypothesis 1 There is no difference between the Terminal Values (end goals) of drug abusers and non-drug users, according to the Rokeach Value Survey:

- (a) between seventh grade male drug abusers and non-drug users.
- (b) between seventh grade female drug abusers and non-drug users.
- (c) between ninth grade male drug abusers and non-drug users.
- (d) between ninth grade female drug abusers and non-drug users.

Hypothesis 2 There is no difference between the Instrumental Values (behavioral values) of drug abusers and non-drug users, according to the Rokeach Value Survey:

- (a) between seventh grade male drug abusers and non-drug users.
- (b) between seventh grade female drug abusers and non-drug users.

- (c) between ninth grade male drug abusers and non-drug users.
- (d) between ninth grade female drug abusers and non-drug users.

#### LIMITATIONS OF THE STUDY

In any study concerning values there are at least two factors which may limit the study. First, there are no established references to which newer measures of values can be compared and, second, there are no hypothetical constructs to give direction to the establishment of construct validity for tests in the area of values.

In addition, this particular study was limited to the values in the Rokeach Value Survey. This instrument was designed to elicit information about values that the respondent would be willing to admit he had, which means the terms could not be negative (e.g. cowardly, irresponsible) nor so positive as to give the impression of boastfulness (e.g. brilliant, clever) (Rokeach, 1973).

There is very little knowledge base in the literature with reference to value characteristics of adolescents. The other instrument used for surveying the frequency of drug use, the Risk Taking Attitude Values Inventory, also contains a survey of values, but the reliability and validity are still being established. Therefore, as an instrument it may have

limitations. Another limitation, which is less obvious, is due to the nature of ordinal data, which restricts generalizations to the establishment of norms. Each individual has a system of values that does change. Therefore, this study involved the identification of group characteristics, not the establishment of norm.

The population of adolescents used perhaps would limit the generalizability of the results, but the population would be a cross section of adolescents in Tempe, Arizona, and Tempe is a community composing middle income families from across America. It should further be noted that the school population in Tempe includes 18% Spanish-American surnames and approximately 5% other minority groups.

#### DELIMITATIONS

The surveys were limited to the seventh and ninth grade students in Tempe, Arizona, during February of the 1972-73 academic school year. Furthermore, the survey was limited to students in attendance during one period, on one day, in any particular school when the surveys were administered.

#### ASSUMPTIONS UNDERLYING HYPOTHESES

1. Self-admission of drug use on the Risk Taking Attitude Values Inventory is considered tantamount to drug use, even though in some cases abusers may not have actually used drugs. It is assumed that if a child records drug use at six times or more, his values will be more like drug users than non-drug users. There is no way to verify the truth of the

self-admission statements on the frequency of drug use due to the school district's policy of anonymity.

2. Alcohol was classified as a drug.

3. It was assumed that adolescent values are identifiable in hierarchical order using the Rokeach Value Survey.

4. It was assumed that drug use behavior among adolescents is the result of many factors, including a weak value system, and, therefore, values can possibly provide a measurable key to the difference between the values of adolescent drug abusers and non-drug abusers.

5. It was assumed that students responded honestly. To help assure truthful responses, anonymity was assured.

#### DEFINITION OF TERMS

The terms used in this study which needed definition were:

Adolescent--those persons between the ages of 12 and 18 years of age.

Attitude--predisposition to behave in a particular way that results from the organization of interrelated beliefs focused on a specific object or situation. "Attitudes depend on pre-existing values (Allport, 1961, p. 802)."

Belief--a state of mind in which trust is placed.

Behavior--a response represented by an act of doing.

Drugs--narcotics, hallucinogens, amphetamines, and alcohol.

Drug Abuse--the use of drugs without medical or legal

sanction.

Drug Abuser--a person who, according to self-admission, has used drugs without legal or medical sanction six times or more.

Instrumental Values--idealized modes of behavior.

Need--a lack of something vital, desirable, or useful.  
An expression of an unstable equilibrium in behavior.

Non-Drug User--a person who, according to self-report, has not indiscriminately used drugs without legal or medical sanction.

RTAVI--the Risk Taking Attitude Values Inventory for elementary and secondary school children developed by Dr. Richard Carney.

Seventh and Ninth Graders--those adolescents in the Tempe Elementary School District No. 3 and Tempe High School system who were classified in those grades in the school year 1972-73.

Terminal Values--idealized end-states of existence.

Values--the fundamental components within a person's make-up that are determinants of attitude and behavior. The term value specifically refers to either an end-state (Terminal Value) or a means-state (Instrumental Value) idealized mode of behavior. A value is an enduring belief that a specific mode of behavior or end-state of existence is personally or socially preferable to an opposite mode of behavior or end-state of existence.

Value Survey--the rank ordering of selected values from the most important to the least important, as on the Rokeach Value Survey.

Value System--an enduring organization of beliefs concerning preferable modes of behavior or end-states of existence along a continuum of relative importance.

Weak Value System--a person's internalized value system that is inadequate to meet personal or social needs. A deprived value system.

#### SUMMARY

Value characteristics of the adolescent drug abuser could become an important key to understanding the personality of adolescent drug abuse. There are a variety of suggested causes of drug abuse, but personality characteristics and social factors constitute the major areas of present research. Values are an important variable that links social influences with personal problems. As Willinger (1971) found, adolescent abusers reject conventional social roles and values, and the more the adolescent is involved in drugs, the more alienated, rebellious, and emotionally disturbed the adolescent appears.

Communities across America today face the ever rising drug problem. It seems to involve all areas of community life. The causes are numerous and, therefore, the opportunities for working on the causes are multiple.

The purpose of the study was to identify and describe the value characteristics of adolescent drug abusers in Tempe, Arizona, using the Rokeach Value Survey. Through statistical analysis of the data, the researcher attempted to identify clusters of values that may be used to better describe the personality of the adolescent drug abuser and perhaps aid in the prediction of the propensity for potential drug abuse in groups of adolescents through a value survey instrument. This possibility was considered after strong characteristics were noted in the basic needs of adolescent drug abusers involved in the Tempe Elementary District Title III drug prevention project.

## Chapter 2

## SELECTED REVIEW OF THE LITERATURE

## INTRODUCTION

One of the primary reasons for a desire to use drugs among some youth is that the law, society, and parents forbid it. Dr. Stanley F. Yolles, former director of the National Institute of Mental Health, describes the attitudes of these youth as "alienated" from the conventional values of society. This means they have become detached from traditional values and attitudes, sometimes to the point of rejection, or even hostility. This is a more evident problem for the adolescent today as value standards differ in every neighborhood, every block, and within many homes.

But youthful rebellion has been a continual part of history, possibly from the beginning of man. An Egyptian priest carved in stone 6,000 years ago, "Kids don't obey their parents." Socrates once expressed concern about the young men of Athens, their long hair, and their disdain for adult values. A part of the development in the life of an adolescent is to have him seek, explore, discover and reach out for independence and freedom. These can all be expressed via some form of rebellion against the authority, middle-class American value system.

Numerous investigators who have been reviewed have seen the necessity of distinguishing between multiple regular users and the occasional experimenters. Most researchers (McAree, 1969; Blum, 1970; Cohen, 1969; Kleckner, 1968) have maintained that the person who used a number of different drugs, and used them in any frequent fashion, had serious personality problems. The presence of depression among abusers, which could be seen as anger directed inward, had been substantiated by a number of studies.

Those who used marijuana on a regular basis, more than twice a week, had many of the characteristics of the multiple user. They were alienated and separated from the values of society and expressed the "hang loose" ethic. They had problems of self-esteem and identity (Holloran, 1972).

The research on adolescent drug abuse has been quite small, yet a number of findings have been suggested. Scott (1970) contended that the unfulfilled desire for happiness strongly influenced the adolescent to try drugs. Stienem (1969) saw drug abuse as the accepted form of delinquency.

The increasing national concern with the widespread abuse of depressants, stimulants, and hallucinogens resulted in the Drug Abuse Control Amendments to the Federal Food, Drug, and Cosmetic Act of 1965. The law enables the Bureau of Drug Abuse Control to detect and eliminate the illegal sources of dangerous drugs (Horman and Fox, 1970).

The Vietnam War opened a new era of marijuana and heroin abuse. The United States Command in Saigon estimated that more than 65,000 soldiers in Vietnam were involved in use of marijuana and heroin and other drugs during 1970 (Harth and Bernstein, 1971).

Youthful drug use in many respects duplicates the pattern of the older American's drug use with alcohol, nicotine, and marijuana. The reasons given for the popularity of drugs are: disillusionment with the United States' leaders and the Vietnam War, rejection of traditional American values, quest for identity, and the feeling that the system cannot be changed (Fort, 1969 a).

Drug abuse among adolescents has become a heavy legal question. The adult established morality in America seems to be pressing for stronger legal action to control drug abuse, while they misuse their own equally dangerous legal drugs. As Wrenn (1973) points out,

legality is synonymous with morality. Such a conflict with values is of considerable social significance, if for no other reason than that such a large proportion of both youth and adults are involved (p. 76).

He goes on to show how this morality conflict appears to be a case of the pot calling the kettle black because many adults who label the younger drug users "abusers," themselves overuse alcohol and/or prescription drugs for the same reasons the younger generation does. Wrenn suggests, however, that the problem is really indicative of the shallowness or quality of

life in the era in which we live.

All of us are coping with the problem of discovering meaning in our lives, of creating meaning for ourselves, of questioning the validity of current social institutions. It is the drug user's choice of coping mechanism that seems atypical, not the problem he is struggling with. Old and young alike use various inadequate problem-solving methods (p.85).

The question of legality and the search for meaning in life involves values. Becoming aware of adolescent values and valuing influences may aid in an understanding of, and treatment of, this national problem of drug abuse.

Due to the quantity of literature in the field of drug abuse, and conflicting data and opinions, this researcher decided to limit the review of the literature according to how the material directly concerned drug abuse as a social and personal problem, or values characteristic of adolescent drug abusers. The so called "hard research material" will be dealt with in somewhat greater detail.

#### DRUG ABUSE AS A SOCIAL PROBLEM

There are a number of social factors which provide the context for the upsurge in adolescent drug abuse. Many professionals in the field of sociology have suggested that our drug oriented society provides a ready climate for the drug epidemic with which our society is now faced. A drug oriented culture, which tends to increase the intolerance of

stress and promote a desire for immediate satisfaction, contributes to a climate conducive to adolescent drug abuse. It may be helpful to review a few social factors involving the problem of drug abuse, such as social class characteristics that inherently impose value conflicts and rebellion, such as delinquency.

A survey by the Food and Drug Administration revealed that at least 8 billion amphetamine tablets were produced in 1970, enough for 40 tablets per person. (Van Dyke, 1970) Speaking to a Congressional committee investigating drug abuse, Dr. John Griffith, of the Oklahoma State Medical Department, reported that ". . .every other prescription written in this country is written for a drug which affects the mind (Van Dyke, 1970 p. 5)."

A study of police views regarding the connection between marijuana and aggression found that the main evil and danger, which police officers felt was represented by widespread use of marijuana, was not violation, but rather the creation and perpetuation of a life-style and set of attitudes and actions which was contrary to the values of the society as a whole (Kaplan, 1970).

Sykes and Matza (1957) suggest that delinquency is not the complete avoidance of middle-class values, but that the delinquent must ultimately neutralize or rationalize much of his unconventional behavior. Specifically, they argue that "delinquency is based on an unrecognized extension of defenses

to crimes, in the form of justifications for deviance that are seen as valid by the delinquent, but not by . . . the society at large." Social controls that serve to check deviant motivational patterns are rendered inoperant, and the individual is freed to engage in delinquency without damage to his self-image.

Miller (1958) stated that the lower class has different values or moral rules, which are distinct from middle-class values. The result is that certain lower-class values may well automatically result in violations of the law. This would occur when a behavior that is acceptable to the values of lower class groups clashes with the middle class. The middle class will have had more influence in writing the laws, hence the values of the lower class would be in conflict with the law and the values of the middle class. Miller, therefore, concludes law-violating behavior is a normal consequence of socialization in the lower class. He views delinquency among lower-class youth as the outcome of an external clash of cultural codes. He asserts that delinquents have internalized only the distinctive code of the lower class, but the larger, more powerful middle class enforces the law, that is, their law. The instinct of lower-class youth to conform to their own lower-class values may well be bringing them into conflict with the agents of middle-class values enforcement. The middle-class code may well, also, be enforced through such institutions as the schools.

Wubben (1965) tested 186 seniors in selected public high schools in Colorado, and found the school was influencing the students to accept "essentially middle-class values," including the tendency to exclude critical thought.

According to Cohen (1966), social class is a significant variable. Lower-class boys resent the dominant middle-class values, largely because middle-class values have not been a part of their own world. Thus, they resent middle-class people who regard them as having lower status because they do not have such middle-class values. Status is distributed according to access in attacking the symbols of middle-class respectability. Nonutilitarian, malicious, egativistic, and short-run hedonistic acts point out how the drug abusers differ from middle-class values. The delinquent's conduct is right by the standards of his subculture, because it is wrong by the larger culture. According to Cohen, reaction formation takes the form of "irrational" hostility to the values of middle-class society.

In investigating the personal characteristics of high school marijuana users, Shetterly (1970) used taped interviews, the Mooney Problem Checklist, a personality questionnaire, and past school records to examine 40 male teenagers. He discovered that marijuana users had been reared in a permissive home atmosphere, with loose, inconsistent discipline. Communication between them and their parents was considered ineffective. Although users expressed a higher

scholastic aptitude, they performed well below the level of expectancy. He concluded that the marijuana users were expressing a pattern of delinquent behavior.

Healy and Bronner (1969), using psychological interviews with 104 delinquents and their brothers and sisters, found delinquents had less self-control, when compared with non-delinquents. The delinquents were found to be generally unhappy with life. They showed neurotic tendencies, under tension, anxious, bite nails, sucked thumbs, smoked, had poor school attendance, and were unpopular with schoolmates. Their disturbed emotions were feelings of being rejected, deprived, insecure, and feeling not understood, unloved or love withdrawn. They expressed a rather thwarted self-expression with inadequate feelings about participation in sports. The family represented discomfort and disharmony. They were jealous of siblings, generally felt confused unhappiness and guilt.

Delinquent's parents appeared to be less affectionate, more indifferent, with the fathers being overly strict, using physical punishment and ridicule. The control group showed a family environment with reason being expressed as part of discipline, and the family was seen sharing close ties.

Little is actually known about the potential delinquent, but it is generally agreed it would be most important to develop a realistic knowledge of self, wherein the delinquent

could tolerate tension and anxiety.

Brigance (1970) identified certain cultural and social factors related to drug abuse among adolescents in a Mississippi community. Using interviews of 448 students, he found that drug behavior is related to the process of socialization that occurs in "primary type" groups. When the students identified with such groups as the family and church, they tended to accept the values and expectations pertaining to drug use of those groups. Drug using students tended to be more oriented toward the values and expectations of the peer group.

One purpose of the study by Hager (1970) was to provide an analysis of differential drug use in relation to four classes of variables: participation in other forms of deviant behavior, traditional value orientation, the socio-economic status of the individual, and ego strains of alienation, affectional deprivation, depression and lack of peer involvement. To measure these variables, twenty-three indices and several single items were developed. Using chi square tests and correlational analysis, data from 4,230 students' questionnaires were analyzed. Three different socio-economic levels were investigated (upper middle class, lower middle class, and working class), and it was found that marijuana, hallucinogen, and amphetamine use was positively correlated to the higher socio-economic school system milieu.

In terms of the main etiological findings, a number of important factors were discovered. Negative orientations toward "traditional" values such as college plans, ability to defer immediate gratification, school grades, peer orientation, political views, religious orientations, and status aspirations were related to the use of drugs. This value orientation was seen as similar to one described as the "hang loose" ethic, and its existence among teenage abusers was substantiated. The ego strains of depression and affectional deprivation showed significant relationships to drug use. Alienation, and lack of peer involvement were not significantly associated with drug use.

However, Vadimski (1974), using single stage cluster sampling with 356 students in Tempe, Arizona, high schools, found marijuana smokers were less socialized, less involved, less committed, and less attached than non-smokers.

The affluent nature of our American society provides the high potential for drug abuse. Americans are known for an intolerance of stress and promote drugs for immediate relief. We should, therefore, not be surprised to learn the stress and strain of adolescent years creates a situation conducive to adolescent drug abuse in American society. As economical and environmental concerns intensify inside America, the future seems dim, and an overwhelming sense of futility can set in. Youth, living in such a culture are often overwhelmed with little assurance offered for visible

solutions. Hence, youth may find drugs a "security" amid the confusion of values today.

The futility of youth is intensified by the apparent depersonalized nature of society. The youth are constantly heard to be asking, "Why doesn't anybody care?" They internalize the depersonalization, as though nobody cares about them, as they begin to feel unimportant, and used with little apparent control over their destinies.

#### DRUG ABUSE AS A PERSONAL PROBLEM

Recent studies have indicated that drug abusers are experiencing personal problems that are an indication of a weak value system that is inadequate to meet the abuser's needs. They are, therefore, easily frustrated, depressed, withdrawn, and become emotionally isolated. Their behavior is frequently impulsive and unpredictable. They tend to be elated but unstable in their moods, and can't anticipate the consequences of their behavior.

Some psychiatrists feel that when an individual becomes "mixed-up" emotionally, has difficulty in his personal relationships, and feels frustrated in his inability to solve his everyday problems, he may be tempted to use drugs as a mental crutch. Some have labeled this type person "drug prone."

Doctors of the Columbia University School of Public

Health found in a study of a group of teenage drug abusers that nearly half could not identify with a stable significant male adult, such as a father, whose strength and example they could absorb. In a recent study, *The Road to Narcotics, Delinquency and Social Problems*, this conclusion was reached:

They are not able to enter prolonged, close, friendly relations with either peers or adults; they have difficulty assuming a masculine role; they are frequently overcome by a sense of futility, expectation of failure and general depression; they are easily frustrated and made anxious; and they find frustrations and anxiety intolerable (Chern, 1964).

Investigations by Dr. Leon Hekimian and Samuel Gershon into the backgrounds of drug abusers admitted into Bellevue Psychiatric Hospital, in New York City, revealed that in a random sample of more than a hundred patients studied, half were found to have had pre-drug signs of schizophrenia.

In a psychodynamic way, Wickler (1952) asserted that narcotics satisfied the addict's primary needs, which he considered to be the needs connected with hunger, sex, and fear of pain. The common characteristic of all addicts was that their chief source of anxiety was related to the inability to satisfy their primary needs. In a like manner, Krystal and Raskin (1970) suggested that the drug-dependent person was seeking relief, modification, or avoidance of pain. In drugs, the person has found something he knows will put an end to unbearable tension and pain. In other words, for these professionals, drug addiction was the ego functioning to maintain itself. The values of a drug abuser should

be different than the non-abusers, if this tension is so obvious.

The research of Gerard and Kornetsky (1955) emphasized internal psychic factors and maintained that juvenile addicts were disturbed individuals. Comparing a group of young hospitalized addicts with a matched control group of non-addicts, and using Rorschach responses and human figure drawings, the researchers discriminated the two groups to a significant degree. The Rorschach responses of the addicts were meager and constricted, indicating minimal ability to respond with fantasy or emotionally determined material. This suggested a lack of the richness and variety of resources necessary to function in new or stressful situations. The human drawings done by the addicts expressed a body image which was arrested or regressed to a childlike level. They, also, seemed more rigid than animated, when compared to the control group.

Holloran (1972) used 50 adolescent in-patients at a Mental Health Unit of a general hospital, having abused drugs on a regular basis. The comparison group was 50 adolescents who, by self-report, had not abused drugs. Both groups had 25 males and 25 females. He investigated whether there were identifiable personality characteristics that distinguish drug abusing adolescents from non-abusing adolescents in the middle and upper-middle classes. The personality characteristics of concern in Holloran's study were the ones mani-

festated by an elevation on the Hysteria, Psychopathic Deviate, Schizophrenia, Hypomania, and Social-Introversion scales of the MMPI.

Holloran used T scores on the selected scales for data analysis. The Psychopathic Deviate Scale showed significance well beyond the .01 level of confidence, indicating abusers had a higher mean, 79.48 as compared to the non-abusers with 62.3. The drug abusers' T score being above 70 suggests they indicated a manifestation of nonconformity and rejection of normal social conventions. Drug abusers, also, expressed an inability to form satisfactory emotional relationships, or to anticipate the consequences of their behavior. Non-abusers were within the "normal" range, below 70.

Drug abusers differed significantly on the Schizophrenia Scale at the .01 level. Having an elevation above 70 indicates abusers tended to be emotionally withdrawn and isolated, with many internal conflicts. It further seemed to represent more aloofness from relationships.

The F ratio for the abuser and non-abuser groups was significantly different at the .01 level for the Hypomania Scale. Characteristics manifested by drug abusers on this scale are hyperactivity, impulsivity, and unpredictability, elated but unstable mood, restless and easily distractible.

The Social Introversion Scale showed significant difference at the .05 level for sex, but no difference was

indicated for groups or interaction. The sex difference was accounted for by the females of the non-drug user group. Otherwise, there was no difference.

Holloran concluded that adolescent drug abusers represent a group that is non-conforming, compared to non-drug users. Abusers tended to lack the ability to form satisfactory emotional relationships. Further, the abusers tended to differ from the non-drug users by their tendency to withdraw and become emotionally isolated. Finally, the abusers were characterized as being more hyperactive, impulsive, and unpredictable. The abusers tended to be elated but unstable in moods, restless, easily distracted, and unable to anticipate the consequences of their behavior.

If these findings are true, a values survey should indicate some specific value differences between adolescent drug abusers and non-drug users characterizing abusers as impulsive and unpredictable, with withdrawing patterns of thought and behavior. This researcher would interpret such findings to be an indication of a weak value system that is inadequate to meet the abuser's needs.

Scott (in Blachy, 1970) investigated the difference between non-drug using and drug using teenagers in terms of the level of experienced happiness. The non-using population consisted of 120 students, while the drug users made up 60 subjects. The conclusion reached was that the non-using teenagers appeared to have a sense of growth in the self and

did not seem to need drugs as an aid to gain happiness. Scott hypothesized that drugs might be used as a means to feel and experience happiness.

If drug abusing adolescents are attempting to gain a feeling of happiness, compared to non-abusers who feel a sense of growth in self, a values survey should indicate factors characteristic of such difference.

Suchman (1966) obtained a random selection of 600 students from a population of 12,200 graduates and undergraduates. A questionnaire dealing with drug use, various aspects of college life, educational and political values, and current social issues was administered in two parts: a personal interview, and completion of questions on sex and drug behavior. Drug use was found among 21.8 per cent of the college students.

#### Findings concerning behavior patterns.

1. Among those who participate in happenings frequently, 34.2 per cent were drug users.
2. Among those who read underground newspapers frequently, 42 per cent were drug users.
3. Of those who had participated in more than two mass protests, 45.9 per cent were drug users.
4. Among students with a grade point average of 3.0 or higher, only 15.3 per cent reported the use of drugs, whereas, among those with GPA's lower than 2.5, drug use was reported by 31 per cent.

#### Findings concerning self-image.

1. Positive associations were found between marijuana smoking and rebellious, cynical, anti-

establishment, "hippie," and apathetic self-images.

2. The more a student described himself as conformist, well-behaved, moral, and "square," the less marijuana use.

In another study, Blum (1969) selected four ideological positions to contrast in relation to drug use. Samples were obtained by asking students to nominate other students whom they thought would fall into the classifications of: (1) illicit-exotic drug users, (2) religious students, (3) left-political students, and (4) right-political students. A questionnaire was given and the data for 105 college students analyzed. The major findings were:

1. Drug users were much less interested in religion.
2. Students without a religion fell more frequently into the drug-using and left-political ideological groups.
3. "No religion" students were more frequently drug users, while Protestants, Catholics, and Jews were more often non-users.
4. Drug users said their parents did not emphasize religion as a life orientation, whereas non-users reported their parents did emphasize religion.
5. Drug users, as compared with non-users, said their parents did not value tradition or the status quo.
6. Drug users were politically more left, whereas non-users were more right-wing.
7. Drug users, compared with non-users, showed less involvement in formal clubs, associations, and teams.
8. Drug users more than non-users reported that more of their friends were also drug-users.
9. Family congruence on politics was found for non-drug students, while drug users appeared set

against the politics of mother and father.

10. Drug users scored lower on family homogeneity.
11. Drug users more than non-users reported perceiving crises in family relationships as having influenced their lives.
12. For non-users, goals seemed clear and parents approved of them, whereas for users, uncertainty and parental disapproval obtained.
13. On the Allport-Vernon-Lindsey Scale of Values, the users, as compared with non-users, ranked lower on political and religious values.
14. Drug users, as compared with non-users, indicated lower satisfaction with school.
15. On the Rokeach Dogmatism Scale, the non-users revealed higher dogmatism than users (Blum, 1969 pp. 205-226).

Blum concluded that drug users are typically: artistic, tolerant, spontaneous, interested in insights of the mind, less interested in convention and reality, superficially sympathetic, unable to withstand tension, opposed to order or structure, flamboyant, untrustworthy, and having feelings of inadequacy. He further concluded that the drug user feels distance from his parents and most of his peers, is pessimistic and dissatisfied, and lacks close ties to others.

Salopek (1973) summarizes in his review of the literature by saying earlier studies indicate:

1. Home climate was indicative of drug abuse.
2. Users show low church attendance, and low family and school involvements.
3. Suburban high schools had high user rates.
4. Problems at home and pressure at school are reasons

for use given by abusers.

5. Drug abuse increased with age.
6. Children of professional people show highest rate of usage.
7. Males are more frequently users than females in the middle class, but no difference in upper-lower class.
8. The theoretical foundation for drug abuse has been described most frequently with deviant behavior theory.

A values survey of adolescent drug abusers should, therefore, indicate they experience a cynical and apathetic self-image, as well as an inability to cope at home and school. According to Salopek, frequency increased with age, therefore, the values difference between drug abusers and non-drug abusers should be more pronounced in the ninth than the seventh grade.

Characteristics of the home situation are a most important part of understanding drug abuse, according to Cohen (1969). Based on clinical observations, he found young people using LSD have strong feelings of loneliness, problems associated with intimacy, and feel a sense of hopelessness about themselves and life generally.

Louria (1968), in his medical practice, sees family discord and a lack of communication with parents to be characteristic of the drug abuser and other alienated adolescents. He further described the drug abuser and alienated adolescent as one who hates society, rejects his family,

distrusts everyone, is torn by anxieties, has chronic identity crisis, is unable to respect himself, and is incapable of giving or accepting love. Such personal and social stress indicates a weak value system and weak ego defenses that would otherwise aid in positive relationships or ego enhancing experiences.

Bloomquist (1968) provides clinical data describing the marijuana user as hedonistic, coming from a disturbed home environment, including frequently a morally lax father and mother with high, exacting standards. Other symptoms include nightmares, enuresis, and other indications of severe internal emotional stress.

Since the etiology of drug abuse is highly complex, we can assume many variables interrelate to explain it. Hence, the values of the drug abusing adolescent, as influenced by social and personal needs and problems, suggests virgin, but fertile, research possibilities. For there appears to be no research directly related to the specific values of adolescent drug abusers. There are several studies, however, that take a tangential look at the values of adolescents.

#### THE VALUES OF ADOLESCENTS

As the adolescent is seeking an identity, he is also developing a hierarchy of values to meet his needs and avoid

undue anxiety. Parents, and particularly mothers, apparently have a strong valuing influence on children and adolescents, until peer influence replaces parent influence. This shift represents a tough period of strain and stress as past values are tested, reordered, and, perhaps, rejected.

Direct research on the values of drug abusing adolescents is virtually non-existent, but it is helpful to review studies related to the values of adolescents. Quest (1972), in a descriptive survey with 1,100 students in 12 schools in a Northeast city, evaluated the differences in value patterns among sixth, eighth, and eleventh graders. He found the traditional values of work success, individualism, Puritan morality, and future time orientation were more prominent in all three grades than the emergent values of sociability, conformity, moral relativism, and present time orientation. Although the traditional values were more prominent, the total traditional value score progressively declined with the largest decline occurring between grades six and eight. The emergent values neither increased nor decreased. When comparisons were made between opposite scales, that is, puritan morality vs. moral relativism, individualism vs. conformity, and present time vs. future time, the data indicates that students became more individualistic and less conforming, less concerned with absolutes in right and wrong and more open to a moral relativism point of view, less future time oriented and more present time oriented as they

progressed through the grades.

Moore (1964), in his historical review of the values of adolescents, found that early adolescence does not appear to be a period in which new basic values are internalized. Early adolescence appears to be more a period of reorganization and integration of valuational patterns already learned. He goes on to say there is need for more study of early adolescence as a distinct phase of personality development in American culture. To do this, he sees the need for new instruments to study the values of early adolescence.

Moore suggests early adolescence is a time of integration where he is developing a hierarchy of values through his search for identity as a defense against anxiety conflicts. With the integration of values and identity through a search for identity, the young adolescent experiences a hierarchy of values with which he arbitrates his conflicts. A viable hierarchy of values enables him to cope with the anxiety present in those conflicts. Those values highest in the hierarchy are "ego-values." They integrate and organize the valuations of the adolescent toward fulfillment and actualization.

Adolescence is a difficult period of development due to the strain and stress associated with it. Douvan (1966) defined adolescence as a search for identity, a time for great change, physically, emotionally, and socially. This search involves a growing awareness and appraisal of skills

and aptitudes as the adolescent searches for a place in the network of social roles and values that refer to work, marriage, and style of life.

The adolescent needs to come to some sense of what his life means, what will guide his behavior. This part of his search for identity involves the acquisition of values which will give him end goals to work for and a sense of intrinsic worth to assure confidence during the search and struggle. One critical factor in this search for identity, according to Erickson (1968), is the adolescent's conflict and struggle with time. Erickson observed adolescents feel every delay appears to be a deceit, every wait an experience of importance, every hope a dagger, every plan a catastrophe. The result is a desire for immediate pleasure. As the world seems to have turned against him, the adolescent may well decide to turn to drugs as a handy antidote, since he knows there is no waiting before the drugs bring a pleasurable solution to his problems.

Leonard (1962), using the Allport-Vernon Lindsey values survey, plus a "Personality Sketch" instrument of his design, found the values of boys and girls differ significantly (according to his instrument) beginning in the high school years. His sample consisted of 180 equally divided sophomores and seniors, boys and girls. They were also equally divided as to religious affiliation, and indicated the dif-

ference in the values measured do not seem to be affected by religious affiliation. According to the results of Leonard, mothers seem to play a more important role in the formation of their daughters' values than their fathers. The influence of the father seems to decline from the sophomore to the senior years, while the mother's influence increased.

Holloran (1972) believes adolescent personality characteristics and values do not differ significantly on the variable of sex. For example, Morris (1958) noted only slight sex difference based on his review of the literature and in the Summerville study. Thompson (1961) found no difference between the sexes in his study of emergent vs. traditional values in California high schools. Likewise, Crissman (1942), Goertzen (1959), and Gollin (1958) found no significant difference between the sexes in the way pre-adolescents and adolescents judge various types of behavior. Lockhard (1930) found these same results in regard to attitudes toward law, as did Fleming, Digaria, and Newth (1960) in analyzing interest patterns. Even studies of overt behavior showed no consistent sex differences (Ugurel-Semin, 1952).

The adolescent loosens his bonds of dependence on the family and enlarges his frame of reference beyond home and his immediate neighborhood. The intergroup values established by peer involvement during this crucial adolescent period may set the basic framework for the rest of his life. The

ranking of importance of social values occurs during adolescence, as first established by family example and re-ordered through peer influence (Fredrickson, 1967).

Fredrickson (1967) summarizes his study of 415 adolescents saying that studies in the value patterns of individuals have shown that values are clearly related to behavior; and group decision is effective in influencing behavior. He indicates a child's morality changes as he matures from strict and specific moral rules, deriving force from parental authority, to more general principles supported by groups of equals; and the child's changing concept of his ideal self shows the decreasing importance of family figures with increasing age (Fredrickson, 1967; Havighurst, Robinson, and Dorr, 1946).

Mitchell (1967) found there is little difference between the values systems of low and high creative students. He used the California Test of Mental Maturity and, for a measure of values, he chose the Meaning of Words Inventory. Mitchell surveyed 280 equally divided high and low creative subjects from five Los Angeles junior high schools. High creative students were found to hold a more positive regard for moral and social values, perceiving of the utility of school experiences, goal direction, and self-concept than do low creative students.

A longitudinal study covering the 5th through the 12th

grades, from 1963-1970, by Dyer (1972), showed the youngest children changed the least in their expressed values, as represented in three written compositions three years apart. It was also noted that the 5th grade values were predominantly traditional, but by the 12th grade they were expressing values representative of the entire continuum. All students in the school on the same day were asked to write a composition in class on the same topic. Ten compositions were chosen at random from each group, making a total of 50 for the 1963 sample.

Only 20 per cent of the students expressed constant or static values over the seven year period, and 46 per cent of the students made extensive changes. The changes could be interpreted as showing increased peer influence and decreasing family influences. This attempt to empirically test value development longitudinally included many uncontrolled variables, and is, therefore, generalizable or representative in a limited way.

Mussen (1958) also suggests that peers replace the family as the influence the adolescent turns to for values and acceptance. He sees this period as critical because the adolescent is never sure of who he is, or what he values. They are told to renounce childhood, but not to assume to be an adult. He describes adolescence as the storm and stress period of human development. Mussen says the adolescent is in stress because he grows in spurts, sex hormones stimulate,

and society encourages, but controls sexual experiences. The adolescent's values are usually in conflict over marriage, vocation, education, and personal adjustment. Parents push the traditional values of their generation, creating much of the conflict the adolescent is feeling because he is giving in to peer pressure to satisfy his needs. Therefore, depending on the social condition, adolescence is a time of growth and fulfillment, or a time of upheaval and regression, which may include drug abuse. The adolescent can experience a minimum of conflict, but it depends upon the strength and endurance of the individual adolescent's value system.

Rath (1957), a prolific writer on the valuing process, characterizes the young person who lacks values as under-achieving, apathetic, dissenting, and uncertain. He hypothesizes that if youngsters are introduced and led through the process of valuing, these inadequate behaviors will improve.

Willinger (1971) compared drug users to non-drug users in an adolescent population in terms of the "Antinomian personality"--namely one who rejects conventional social roles and values. He specifically tested three hypotheses:

1. Users were more inclined toward rejecting conventional roles.
2. They were less able to distinguish the self from the environment.
3. They were more involved in sensation seeking behavior.

The students were white, middle-class students who had basi-

cally used marijuana. He found that users were more inclined to reject conventional values and they were involved in sensation seeking behavior. The study supports what professionals working in the field have stated; the more adolescents become involved in drugs, the more alienated, rebellious, and disturbed they appear. The apparent difference indicated by Willinger between drug using adolescents and non-users, concerning their rejection of social roles and values, should become evident in a values survey. If the adolescent drug user is a sensation seeker, this, too, should show up in their values, differentiating them from non-drug users. On the Rokeach Value Survey, the value term "exciting life" could become one of the terms to so distinguish adolescent drug users from non-users, if, indeed, the Antinomian personality is characteristic of adolescent drug users.

#### PHILOSOPHY OF VALUES AND VALUE DEVELOPMENT

As a child grows older, his value pattern is either strengthened or weakened according to how he handles the choice points along the way. This development process moves through various stages that are influenced by significant others, especially the family. Finally, his value system is internalized and rules of behavior, called values, reach a stature of maturation characterized by mutual respect, justice, and trust in relation to others. Such a value system indicates

a self-concept that influences actions, judgements, and attitudes that serve the individual's life needs at a level called a principled autonomy.

The person with an inadequate or negative value system also has a weak, insecure self-concept, lacking the values and judgement to assist him in adequate ego defenses, or to assist in the formation of positive interpersonal relationships. Values are universal, but peculiar to an individual. But values change as the individual's needs change. Higgins defines values as representing:

the ideals or goals that people in a society strive to achieve and also regulate and determine the means that are utilized to achieve those goals, the development of an appropriate value system is a major concern (Higgins, 1968, p. 16).

All over the world value changes have created anxiety and fear as people constantly deal with conflicting value systems. Konopka asserts that the outstanding change for modern man is the

assertion of the individual's or group's right to change his, her, or its own fate has not only become desirable but has taken the form of an injunction-- a duty (Konopka, 1973, p. 87).

She, also, maintains two basic absolute values: the importance of the dignity of each individual and the responsibility of men for each other (Konopka, 1973).

For the dignity of the individual to be maintained, Maslow (1959) suggests that there are basic needs (values) which must be affirmed and fulfilled. Maslow suggests that

basic needs and basic values are the same. His personality theory lists six levels of needs: physiological needs, safety needs, belongingness, love needs, self-esteem needs, and self-actualization needs. Each builds upon the other. Maslow would also contend that while a child's needs must be fulfilled, he also learns to recognize the limitations the physical world puts upon his gratification, and this requires control, delay, limits, frustration, and disciplines.

The adolescent appears to be moved by whichever need in the hierarchy the adolescent is dominated by during a given period. As the individual moves up the hierarchical scale, he is rewarded by what Maslow called "peak experiences." These little moments of being nudge growth toward self-actualization or psychological health. Man then moves forward toward what most people call good values: courage, love, honesty, kindness, unselfishness.

Maslow claimed man can learn a great deal about values by studying the most mature, psychologically healthy individuals and their peak experiences. These healthy individuals can be identified by the following characteristics:

1. Clearer perception of reality.
2. More openness to experience.
3. Increased spontaneity.
4. A firm identity--uniqueness.
5. Increased objectivity.
6. Increased integration of the person.

7. Democratic character structure.

8. Ability to love (Maslow, 1959, p. 127).

Frankl (1963) has described the "existential vacuum" as that inner emptiness of an individual who lacks any awareness of what he ought to do. This void is the gap the drug abuser must feel, being between what he is and what he should become. He is caught in the neurotic emptiness of not having a goal or purpose in life.

Frankl was in direct conflict with Maslow, however, by saying,

The real aim of human existence cannot be found in what is called self-actualization. Human existence is essentially self-transcendence rather than self-actualization. Self-actualization is not an aim at all . . . . It is only to the extent that man commits himself to the fulfillment of his life's meaning, to this extent he also actualizes himself (Frankl, 1963, p. 175).

According to Frankl, life's meaning can be discovered in three ways: (1) by doing a deed, (2) by experiencing a value, and (3) by suffering.

Combs (1964), in agreement with Frankl, concludes that adolescents are wandering aimlessly looking for a purpose, a commitment, saying:

finding a commitment and involvement has become almost a causality of our way of life . . . what I mean by commitment and involvement is the ability to enter into meaningful relationships. It is a question of the discovery of purpose and point in life and finding of fulfillment in the things that one is doing . . . . One thing we know about commitment is that it comes through relationships with significant people, especially people who care (p. 167).

Throughout history, values have been thought of as a dichotomy between the real and ideal world. If the distance between an individual's real and ideal set of values is too great, he can live with great uncertainty and emotional distress, possibly including drug abuse. Rogers, in his effort to free people to be themselves, said:

I believe that when the human being is inwardly free to choose whatever he deeply values, he tends to value those objects, experiences, and goals which make for his own survival, growth and development and for the survival and development of others. I hypothesize that it is characteristic of the human organism to prefer such actualizing and socialized goals when he is exposed to a growth promoting climate.

In any culture, given a climate of respect and freedom in which he is valued as a person, the mature individual would tend to choose and prefer these same value directions (Rogers, 1964, p. 166).

John Dewey postulated that the real and ideal world of values must be reconciled. The actual world, according to Dewey, is full of chance and change, imperfect, unpredictable, and full of doing and coping. The ideal world, on the other side of the coin, is perfect, orderly, certain, and immortal and never shall the two meet. Freedom, with values reconciled for Dewey, is expressed in this way:

Freedom is an actuality when the recognition of relations, the stable element, is combined with the uncertain element, in the knowledge which makes foresight possible and secure intentional preparation for probable consequences. We are free in the degree in which we act knowing what we are about (Ackerknecht, 1964, p. 11).

The adolescent's struggle for identity and efforts to meet his developmental needs are directly related to his

freedom to make decisions and foresee consequences. This involves the development of values. Dyer (1972), in interpreting Piaget, suggests that until a child is seven or eight years of age he reflects the moral values of his parents. At this time, the home is in a position to exert the most influence in the formation of moral values. However, as the child continues to grow, he has this basic moral value pattern which is either strengthened or weakened throughout the child's life as environmental influences pose decision making situations. After the child moves beyond the immediate home environment, he no longer obeys the commands given him by the adult, but obeys the rule itself, generalized and applied in an original way. He begins to feel from within the desire to treat others as he himself would wish to be treated. As the child enters adolescence, peer groups exert more pressure which continues to challenge and change value patterns.

This moral development, Piaget holds, parallels the intellectual development. In a certain sense neither logical nor moral norms are innate in the individual mind (Ackerknecht, 1964, p. 16).

Kohlberg's (1969) stages of moral development are also built upon Piaget's developmental theory. Below, Kohlberg's stage sequence points toward a goal of mature decision making found at level five.

TABLE 1

## DEVELOPMENT AND DECISION MAKING

Richard L. Gorsuch

## Kohlberg's Stage Sequence

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Preschool	<p>0. AMORAL. Child responds in terms of specific conditioning in specific situations. He does not appear to comprehend the ethical question.</p> <p>1. FEARFUL-DEPENDENT. The child's major concern is with the possible punishment following any transgression. He considers issues only from his point of view and defers to superior power or prestige.</p> <p>2. OPPORTUNISTIC. This is the naively egoistic orientation of the unenlightened hedonist. Right action is that which benefits the actor. He responds to sanctions in situations, but not to moral principles.</p> <p>3. CONFORMIST: PERSON-ORIENTED. The person's concern is with approval, and with pleasing and helping others. The concern is often generalized so that conformity to stereotypical images of the majority's opinion occurs.</p> <p>4. CONFORMIST: RULE-ORIENTED. Essentially, the "other person" of stage 3 is replaced by an authoritative source of rules and regulations. These are often interpreted legalistically.</p> <p>5. PRINCIPLED AUTONOMY. Recognizing the relativity of authority systems, the stage 3 person has a social contract/social utility approach to ethical issues. The stage 5 person appeals to principles of choice stressing logical universality and consistency, with values of justice, mutual respect, and trust dominating his decisions. (Kohlberg, 1969)</p>
Mature Young Adult	

Major research in the area of the development of maturity in ethical decision making has generally agreed that stages of development could be identified across the years in the Western culture (Piaget, 1932; Havighurst, 1960; Kohlberg, 1969; and Bull, 1969).

The child typically proceeds from a self-centered, amoral state to an expedient, situationally oriented state, then to an other person orientation, and, finally, to an autonomous position. However, the exact decision reached is not the determinant of the stage of moral judgement.

An examination of stage five indicates that person treasures each individual person and insists that all people be accorded the respect that is their inalienable right. Since each person is of equal value, one person's rights do not exceed those of another. Every person must be treated equally, that is, with justice.

It has been found by Haan, Smith, and Block (1968) that youth at stage two, "opportunistic and hedonistic," come from families that did not seem to encourage their children to develop a sense of responsibility and autonomy. Youth at both conformity stages, three and four, describe their parents as relating to them in a manner consistent with the strategies generally recommended by social learning theory for the development of morality. The highest stage, principled autonomy, number five, viewed their parents as entering into moral dilemmas in a more involved way; decisions were

less black and white, and differences of view were obvious. It would seem teachers could help pupils progress through these stages by encouraging decision making appropriate to their age.

When a child is presented with a moral choice, he will tend to choose in the direction of a slightly more mature level than his previous level, according to studies by Truriel (1966) and LeFurgy and Woloshin (1969). This may indicate that open discussion of a moral issue by a peer group tends to shift the less mature person towards the more mature, next stage of moral development.

The adolescent drug abuser may be found to be caught at the opportunistic stage two, being naively egoistical and hedonistic.

Konopka (1973) observed the following phenomena in relation to developing values. She speaks of the developmental process as the forming of values as the individual interacts with his culture. These developing never-ending value formations peak in the adolescent period. She sees these forming values as an emotional as well as an intellectual process. Value development could, therefore, be seen as a fluid developing process.

Hence, values develop from the family environment, are modified by peer influence, expand and develop into a system that serves the individual's needs through everyday decision making.

The child who enters school at the age of six has had thousands of experiences which have contributed to the shaping of his personality. He has enjoyed indulgencies and has suffered deprivations during the formation of his personality. He has been indulged and deprived by his parents and his environment with many of the things he needs and wants (values).

The consequences of these experiences have probably been both favorable and unfavorable. He has accepted, in varying degrees, the practice of mutually sharing values with those about him. He has become accustomed to giving respect to those who have achieved goals that he has learned to consider valuable. He returns the love of those who love him. He participates in the give and take of making choices in his actions which have their origin in his innate drives in the form of desires, wishes, and needs (the id) which have contributed to his happiness and well-being (Rucker, 1969, p. 253).

However, he has probably come to realize that many drives have to be controlled if he is to be accepted as a productive citizen. The process of being judged by his associates contributes powerfully to the formation of his conscience (superego). By the time he enters school, this conscience conditions his behavior in all his relations with his environment. He has had many cravings, which, because of his conscience, he would never undertake to satisfy. This produced conflicts within him, which manifested themselves in

many ways; some quite painful, while some produced tensions which he accepts as natural, and, perhaps, will continue to do so all his life. On the other hand, his conscience often rewards him with feelings of self-adulation following behavior that conforms with what he has learned to be right and proper.

The child's conscience has contributed to the structure of his own internalized predispositions to behave as he has been urged to behave by precept and example of people in his environment, beginning with his parents, and later with others. The "blocking" or "approval" effect of the conscience, depending upon the behavior stimulation involved, often operates regardless of the conscious desires of the child. When it prevents his acting in ways that would provide satisfaction, he is faced with a conflict that threatens his well-being.

Still another aspect of the personality, referred to usually as the ego, performs mainly the function of consciously weighing the probable consequences of the individual's actions, and influences the development of his value system. He is thereby enabled to determine whether the dictates of his conscience are justified in the light of the reality of the situation.

By the time he starts to school, his ego has contributed to his ability to appraise reality and to question the validity of some of the things he has been taught. He has acquired

a great deal of self-knowledge. There are many things he knows from experience that he can and cannot do. He, therefore, has a self-concept or an inner picture of himself and a value system.

Quite apart from the child's self-concept of what he is, stands the ideal image of himself, the concept of what he ought to be. This ego ideal, as it is technically referred to, may influence the individual toward the achievement of his goals. These, depending upon his individual preferences, may be classified under one or more values, according to how they meet his needs.

A systematic inventory of the personality of the child would reveal not only the value assets to which he has aspired, and thus his ego ideal, but, also, it would, through an analysis of what he has actually achieved, provide a picture of what he is. Further analysis would reveal actual or threatened value deprivations which have contributed to his fears and/or anxieties with their accompanying tensions that seriously block his progress toward becoming a creative and productive person (Rucker, 1969, p. 254).

In 1949, Laswell developed a representative list of eight values which has been quite widely accepted and subjected to empirical study around the world. These eight values have provided a framework for many of the recent authors of the valuing process (Rath, 1957; Rucker, 1969;

Carnye, 1971; Higgins, 1968). They have all used these eight values as a way of classifying universal human needs, wants, and goals; namely, what men value. Lasswell's eight values are:

Power	Well-being
Respect	Enlightenment
Affection	Skill
Rectitude	Wealth

Lasswell's eight values are indicative of the attempt to identify what values may be common to all cultures. Many cultures in the world appear to be attempting to come together and share common concerns for peace, trade, education, athletics, the arts, and other general interests people around the world seem to have in common. It, therefore, may appear that there are more common values that have brought people of the world together, compared to differences that divide. Otherwise, the world cultures would be growing further apart, not together.

If there are such common values among the cultures of the world, Lasswell's eight values may well be a first step toward understanding that which is desirable for mankind to function optimally (Solomon, 1970).

Rogers (1964) says much the same and applies it to the enhancement of individuals.

. . . in persons relatively open to their experiences there is an important commonalty or universality of value directions; that these directions make for the constructive enhancement of the individual and his community, and for the survival and evolution of his species (pp. 160-167).

If individuals can be enhanced by an understanding of a commonalty of value directions, the adolescent drug abuser would probably be helped if his values were indeed very far out of step with the established direction . . . as Solomon (1970) may have suggested when he indicated that it was important to distinguish between the "desired" values of society, which science can enumerate in purely descriptive studies, and the "desirable," which science may be able to promulgate through its prescriptive activities.

Rokeach, in turn, took thousands of value terms and, through testing and sorting, developed a two page instrument with 18 Terminal Values (page one) and 18 Instrumental Values (page two). To Rokeach, a value system was defined as:

. . . a hierarchial arrangement of values, rank-ordering of values along a continuum of importance  
. . . the function of a person's value system is to help him choose between alternatives and to resolve conflicts between alternatives in everyday life (Rokeach, 1968-69, p. 551).

Terminal Values for Rokeach are long range goals or end-states of existence. Instrumental Values are thought of as behavioral goals which can be compared with long range goals to see if a respondent's behavioral value hierarchy is complimentary to achieving those goals.

Rokeach (1968-69) defined values as transcending: . . . specific objects and specific situations having to do with modes of conduct and end-states of existence basic to life.

Defined in this way, attitudes and values differ from one another in three important respects. First, a

value transcends specific objects and situations, while an attitude focuses directly on specific objects and situations; second, a value, unlike an attitude, is a standard or yardstick guiding not only attitudes, but also actions, comparisons, evaluations, and justifications of self and other; third, a value, unlike an attitude, is a distinct preference for a specified mode of behavior or for a specified end-state of existence (Rokeach, 1968, pp. 550-551).

When it was assumed that values and attitudes were related, an interconnected value-attitude system was conceived.

Any change in any part of the value-attitude system will affect other parts; also, any change in the value-attitude system should lead to behavioral change (Rokeach, 1968-69, p. 552).

Rokeach (1973) later writes:

Conceptual differences have been drawn between beliefs and attitudes, attitudes and values, and Instrumental and Terminal Values. All these conceptually distinct components--the countless beliefs, their organization into thousands of attitudes, the several dozens of hierarchically arranged Instrumental Values, and the several handfuls of hierarchically arranged Terminal Values--are organized to form a single, functionally interconnected belief system. In this system Terminal Values are more central than attitudes. The reason it is a functionally interconnected system is that the objects and situations around which a person organizes his attitudes arouse various Instrumental Values (Katz and Braly, 1933; Gilbert, 1951; Scott, 1965) (Rokeach, 1973, p. 215).

Another area of personal beliefs is even more central to a person than his values, but it is directly related to his values, and that involves his cognitions about himself. In other words, what Mead (1949), Cooley (1956), Rogers (1959), and Hillgard (1949), and many others have identified as the self or self-concept. Self-conceptions include the whole

gamut of one's cognitions: about one's physical image, intellectual and moral abilities, social role, ethnic, religious, racial identity, age, sexual, marital, and parental roles. All such self-cognitions can reasonably be represented at the innermost core of the total belief system, and all remaining beliefs, attitudes, and values can be conceived of as functionally organized around this innermost core (Rokeach, 1973).

The person's values then provide a comprehensive set of standards to guide actions, justifications, judgments, and comparisons of self to others, and to serve needs for adjustment, ego defense, and self-actualization. These all serve to help maintain and enhance one's total self-concept. This conception may not be positive, however. If an adolescent is heavily involved in drug abuse, it may be speculated that his value system and other "self-concept" influences would register a degree of feeling "not OK" and being down on oneself. This negative measure of self-concept should, therefore, be apparent in a value's survey of adolescent drug abusers.

Bramel (1968) has suggested that feelings of self-dissatisfaction arise mainly over issues concerning morality and competence, or as Rokeach (1964) identified, as strivings for goodness and greatness.

A person defines himself as incompetent in a given situation to the extent that he sees his performance to be deficient in skill, ability, intelligence, or his inability to meet his needs. He may even define himself as immoral,

to the extent that he sees himself as harming himself or others, or as deficient in exercising impulse control over his thoughts or feelings. A contradiction within one's cognitive system engages self-conceptions and thus leads to self-dissatisfaction to the extent that it implies that one is incompetent in meeting needs or immoral, in harmful behavior such as drug abuse.

#### SUMMARY

Adolescents experience internal strain and stress. They are never sure of who they are, or what they stand for--values. The peer group replaces family as a value's influence. For any adolescent, it can be a time of growth and fulfillment, or a time of upheaval and regression. Drugs may well be what some adolescents see as the answer to their strain and stress (Wikler, 1952; Raskin, 1970).

Drug abuse appears to be both an individual and a social problem. Since 1965, drug abuse among adolescents has rapidly increased. Vadimski (1974) found marijuana smokers to be unattached, uncommitted, uninvolved, and less socialized than non-smokers. Lower-class social values were associated with delinquency and drug abuse. Drug abusers' values differed from middle class in that they were nonutilitarian, negativistic, and experienced short-run hedonistic acts. They felt rejected, deprived, insecure, not understood, and unloved

(Healy, 1969; Cohen, 1966; Sykes, 1957; Miller, 1958; Vadimski, 1974). It seems logical, therefore, to find the strain and stress of adolescence conducive to drug abuse in American society today.

Values as a decision making process are continually shifting and developing in an individual's life. They serve to help maintain and enhance one's self-concept. If an adolescent is down on himself, his value system may not be serving his needs, and out of self-dissatisfaction he may turn to drugs (Bramel, 1968; Rokeach, 1964).

As Scott (1970) said, "Adolescents need drugs as an aid to gain happiness." Salopek (1973) indicated drug abuse and internal problems increased with age. Therefore, the difference between drug abusers and non-drug abusers should be more pronounced in the ninth than in the seventh grade.

The adolescent drug abuser was found to be impulsive, withdrawn, and unable to anticipate the consequences of his behavior. (Holloran, 1972) Such weak ego strength should be evident in a weak value system, and measurable by the Rokeach Value Survey. The specific value terms on the Rokeach Survey that may characterize the social and personal problems of the adolescent drug abuser would be exciting life, happiness, pleasure, and inner harmony, and any others depicting a person trapped in a sense of loneliness, impulsiveness, and negativistic.

### Chapter 3

#### PROCEDURES AND METHODS

This chapter will detail the procedures and methods used in this study, statements will also be included about the population and subject groups, the study design, the instruments used, and the data collection procedures. The Rokeach Value Survey, the instrument used to evaluate the value characteristics of adolescent drug abusers, will be described, reasons for the instrument's use will be discussed, and its reliability and validity briefly analyzed.

#### Purpose of the Study

The purpose of this study was to determine whether adolescents who have abused drugs differ in what they value as compared to adolescents who have not used drugs. If such a difference was indicated, at a significance level of .05, then those value characteristics of adolescent drug abusers were identified.

The frequency of drug use was determined by the Risk Taking Attitude Values Inventory administered in late November, 1972, by self-report. The value hierarchy was identified by the Rokeach Value Survey, which was administered in early February, 1973. There were 1,873 subjects in the seventh and ninth grades in Tempe, Arizona, who responded to one or both of the surveys.

## POPULATION

The Total Population

The total population, from which the sample groups were drawn, consisted of seventh and ninth graders in Tempe, Arizona, in the school year 1972-73. Tempe is a university community of 75,000 residents with middle to upper middle incomes. The economy is based on light industry and typical suburban small businesses. Tempe is one of the most rapidly growing cities in the country, with new residents coming from every state in the Union. There were 1,873 subjects who responded to one or both of the surveys. They had, also, previously been administered the RTAVI three times in a drug prevention Title III project for the Tempe Elementary School District. Parent permission was required for the RTAVI and Rokeach survey testings. Some parents had written or phoned the individual schools to excuse their children from the testing program. The number of excused children was never clearly recorded. Some of these excused students were known drug abusers, according to school principals.

The Sample Population

The drug abusers groups were sorted out of the population according to their self-reported frequency of drug use on the RTAVI survey. Drug abusers were defined as those who had used the following drugs six times or more: pills, LSD or other hallucinogenic drugs, alcohol, marijuana, heroin or other

"hard" narcotic for other than legal or medical reasons. The non-drug user groups were identified as those individuals who had reported they had never used drugs. Those who indicated they had used drugs from one to five times were considered light users and were not included in the study. Both extreme groups, the drug abusing groups, and the non-drug user groups, were grouped according to sex and grade.

The sampling process proceeded as follows: There were 1,873 subjects who responded to one or both of the surveys. These subjects' IBM cards were sorted and matched by an alphabetic and numeric code of initials and birth date to eliminate those subjects who had not taken both surveys. The remaining group, composed of those who had completed both surveys, was divided into a drug abuser group (those having used drugs six times or more), a drug user group (those having used drugs up to five times), and a group that had never used drugs. The process provided the following breakdown of groups:

Seventh Grade

	<u>Male</u>	<u>Female</u>
Drug Abuser Group	57	33
Light Drug Group	54	53
Non-Drug User Group	<u>231</u>	<u>266</u>
	342	352

Ninth Grade

	<u>Male</u>	<u>Female</u>
Drug Abuser Group	86	89
Light Drug Group	83	97
Non-Drug User Group	<u>177</u>	<u>198</u>
	346	384

The final sample population was drawn by taking the drug groups intact, to maximize the highest possible number of drug abusers available. The non-drug user groups were randomly selected, without replacement, to approach the approximate number in the drug groups. The randomization process involved pulling the IBM cards of the non-drug user group according to a random table of numbers until the maximum number was reached. The final sample population was as follows:

TABLE 2  
CHARACTERISTICS OF SAMPLE POPULATION

	MALE	FEMALE
<u>Seventh Grade</u>		
Drug Abusers	57	33
Non-Drug Users	58	58
<u>Ninth Grade</u>		
Drug Abusers	86	89
Non-Drug Users	86	89

The remainder of subjects were either not matchable or turned in incompleting survey instruments. Of these, there were 173 males and 129 females in the seventh grade, and 68 males and 78 females in the ninth grade.

#### DESIGN OF THE STUDY

The study design utilized both the descriptive survey and the correlational survey approach. The purpose of a

descriptive survey is to " . . . describe a specific set of phenomena in and of themselves (Fox, 1969, p. 423)." The purpose of a correlational survey is to " . . . estimate the extent to which different variables are related to each other in the population of interest (Fox, 1969, p. 428)." The research design provided a comparison of the drug abusers with the non-drug users, using both the Terminal Values and Instrumental Values pages of the Rokeach Value Survey.

TABLE 3  
RESEARCH DESIGN

	Hyp 1 Terminal Values	Hyp 2 Instrumental Values
Drug Abusers (six times or more)	265	265
Non-Drug Users (no use)	291	291

Relationships between variables were shown by statistical analysis using MANOVA, due to there being more than one criterion variable. Factor Analysis and Discriminant Function were also used. In effect, this is the correlational aspect of the study because measures of association resulted from these statistical analyses. Each computed MANOVA program was tested for significance at the .05 level.

#### Design

This descriptive study basically utilized what could be called a multivariate naturalistic-sequential design, as

pictured in the following visual profile by Cattell. The Xs represent data application from this study.

TABLE 4  
CONTINUA TO GRAPHICALLY PICTURE DESIGN

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1. Multivariate	-	<u>X</u>	-	-	-	-	-	-	-	-	-	Bivariate
2. Interfering	-	-	-	-	-	-	-	-	-	-	-	<u>X</u> Free, Natural
3. Dated	-	-	-	<u>X</u>	-	-	-	-	-	-	-	Simultaneous
4. Controlled	-	-	-	-	-	-	-	-	-	<u>X</u>	-	Uncontrolled Background
5. Abstractive	-	<u>X</u>	-	-	-	-	-	-	-	-	-	Representative on Variables
6. Biased Pop.	-	-	-	<u>X</u>	-	-	-	-	-	-	-	Normal Population

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To further delineate Cattell's continua, the following statements explain how the design was applied to indicate why the X was placed where it was. The first continua involved multivariate statistics, including MANOVA and Factor Analysis on 36 variables. The second continua shows the variables were freely occurring, rather than being manipulated. On three, the two surveys were given two months apart. Number four showed the instruments were not forced choice, as surveys there was virtually no control over the subjects. With five, Factor Analysis was considered abstractive in nature, and in six the sample was drawn from intact classes and formed intact groups by definition.

### Instrumentation

The Risk Taking Attitude Value Inventory was selected for its wide field of information needed for a federally funded Title III drug prevention program. The only information taken from this survey (RTAVI) was the drug frequency. The Rokeach Value Survey was selected for its broad list of value terms.

The theory of the Rokeach Value Survey rests on the assumptions that:

1. . . . men do not differ from one another so much in whether or not they possess certain values, but rather in how they rank them in order of importance.
2. . . . variations in value systems are, broadly speaking, a function of antecedent, cultural and social experience, on the one hand, and personality factors on the other.
3. . . . a person's values have social consequences.

The Rokeach Value Survey consists of two sets of 18 Terminal and 18 Instrumental values, each set arranged in alphabetical order. Each value, along with its defining phrase, is printed on a separate gummed label that can be easily moved about from one position to another. The respondent's task is to rearrange each set of 18 values in order of importance as guiding principles in daily life by moving the 18 alphabetically arranged values from the right-hand side of the page to boxes numbered 1 to 18 on the left-hand side of the page. The average time necessary to complete the ranking is about 15 minutes (Rokeach, 1968, pp. 98-99).

### Reliability

Form D of the Value Survey has been successfully used with respondents from 11 to 80 years of age. Reliability of the total value system for each subject in testing reliability

was obtained by correlating the rankings obtained from test and retest data. In one instance, the test was administered to students in introductory psychology courses, with the interval from test to retest anywhere from three to seven weeks. The median reliabilities were from .70 to .72 for the Instrumental values (Rokeach, 1971).

Reliability is still being established for the RTAVI. The Tempe study is a part of that reliability testing.

#### Validity

The 18 Terminal Values in the Rokeach Survey were selected by Rokeach because scales containing fewer than 18 omitted too many important values, and ". . . it was felt to be too burdensome for respondents to rank order more than 18 (Rokeach, 1971, p. 23)."

Rokeach stated:

A somewhat different procedure was employed in selecting the 18 instrumental values. Our point of departure was a list of 555 personality trait words from which positive and negative evaluative ratings have been made available by Anderson. This list was taken from a larger list of about 18,000 trait names originally compiled by Allport and Odbert. Since we were interested only in values that were, generally speaking, positively evaluated so that they would be suitable for self-descriptive purposes, we were immediately able to reduce Anderson's list to about 200 positively evaluated trait names (Rokeach, 1971, pp. 23-24).

The final scale of Instrumental Values was selected from the list of 200 by selecting a representative value from a group of synonyms grouped from the 200 terms.

Rokeach also said:

We find that various combinations of these terminal and instrumental values significantly differentiate men from women, hippies from non-hippies, hawks from doves, policemen from unemployed Negroes, good students from poor students, fifth-graders from seventh-, ninth-, and sales clerks from retail merchants, Jews from Catholics, Democrats from Republicans, and so forth (Rokeach, 1967, p. 555).

### Objectivity

Objectivity was achieved by requesting teachers and counselors who administered the surveys to read the instructions verbatim (Appendix A) to the students, adding no instructions or remarks. No other directions were offered. The researcher was not present at any of the organization, training, or testing events. This procedure eliminated the influence of the researcher from biasing the student responses.

### Sensitivity

Sensitivity, the ability of an instrument to make the discriminations required for answering the questions (Fox, 1969), was assured by the procedures used in formulating the surveys, and in the other uses of the instruments to date, as per noted in the Review of the Literature.

### Appropriateness

The Rokeach Value Survey was selected after a review of the literature directly related to values and adolescents. The research indicates the Rokeach Survey significantly discriminates between groups. Rokeach goes on to point out:

It is perhaps appropriate to suggest that values serving adjustive, ego-defensive, knowledge, and

self-actualization functions may well be ordered ranking, as suggested by Maslow's well-known hierarchical theory of motivation (1959). Different subsets of values may differentially serve Maslow's safety, security, love, self-esteem, and self-actualization needs (Rokeach, 1973, p. 16).

If it is true, as the current research suggests, that the personality characteristics and behavior of adolescent drug abusers is different than non-drug abusers, such difference should be significant on the Rokeach Value Survey.

#### Administration and Scoring

Psychologists in the Tempe Elementary District trained the teachers and counselors in the administration of the surveys involved in this study. This researcher was not involved in these training procedures or in the administration of the surveys. The data from the two surveys were key punched and verified onto IBM computer cards. The cards were matched by alphabetic and numeric code and sorted according to frequency of drug use, sex, and grade. Data on frequency of drug use was transferred to the Rokeach data card for each subject. The drug abuser was identified according to his self-reported frequency of drug use (if he had used drugs six times or more, he was identified as an abuser). The non-drug abuser was identified according to his self-report that he had never used drugs. Those who had used drugs from one to five times were not included in the study.

#### Coding and Scoring

All responses on the Rokeach Value Survey were made

directly on the test booklet by removing the gummer labels from the alphabetized list and placing them on the opposite page according to the respondent's own order of importance. The tests were collected and key punched on IBM cards from the booklets, according to prearranged code. The code identifications of each individual were checked to correspond with each instrument used. The specific values were identified with two and three letter codes and transferred to a numeric system.

The RTAVI (Risk Taking Attitude Values Inventory) is a paper/pencil survey, with all responses by the respondent being made directly on the survey booklet. Data from both surveys were transferred to one IBM card for each subject. Each subject was then matched from the RTAVI to the Rokeach by the identifying code (1. the first letter of the first name; 2. last letter of the last name; 3. date of birth). The respondents were also requested to circle their grade and sex on a separate cover sheet.

The MANOVA program for group significant difference was run on the UNIVAC 1110 computer in the computer center at Arizona State University. To identify clusters of value characteristics of drug abusers and non-drug abusers, a program FACTOR was run on the same computer. A special program was written to compute the mean scores for each cluster (factor) for each subject to reduce the number of variables. New cards were punched with those new mean scores and program-

med into a DISCRIMINATIVE FUNCTION to identify those clusters that best characterized drug abusers.

#### SUMMARY OF PROCEDURES

Two surveys, one including self-reported frequency of drug use (RTAVI) and the Rokeach Value Survey, a rank ordering of Terminal and Instrumental Values, were administered to 1,873 seventh and ninth grade students in Tempe, Arizona, during the school year 1972-73. The surveys were selected for their reliability and validity, objectivity, sensitivity, and appropriateness after a review of the research. There were very few other surveys to consider, however. The data was transferred to one IBM computer card for each subject and processed on the UNIVAC 1110 computer in the computer center at Arizona State University. MANOVA, Factor, and Discriminative Analysis programs were run to test for significance level and identify clusters of values characteristic of adolescent drug abusers.

## Chapter 4

### ANALYSIS OF DATA

This chapter includes the presentation of the statistical results derived from the analysis of the data. A brief statement of the problem and a brief description of the instrument used to obtain the data is presented. Each hypothesis is included, followed by the results of the statistical analysis and a brief discussion of the results presented by grade level.

#### Statement of the Problem

The purpose of this study was to identify and describe the value characteristics of adolescent drug abusers. The purpose was achieved by comparing seventh and ninth grade drug abusers with non-drug abusers. The research hypothesis was: The values of drug abusers differ from the values of non-drug abusers in Tempe, Arizona, according to the Rokeach Value Survey. It was predicted that if there was a significant difference between adolescent drug abusers and non-drug abusers, this researcher intended to do post hoc analysis of the data to identify those factors that indicate such differences.

#### Description of the Samples

The seventh and ninth grade samples were sorted from the population of seventh and ninth graders in Tempe by matching those who had taken both the RTAVI and the Rokeach Value Survey.

The drug abusers were sorted according to their self-reported frequency of drug use on the RTAVI. Those who indicated they had used any drugs six times or more were included in the drug abuser samples, and those who reported they had never used any drugs were considered in the non-drug abuser samples. Both the drug abuser and the non-drug abuser samples were sorted according to sex and grade.

#### Description of Instrument Used

The values of interest in this study were those ranked significantly different by adolescent drug abusers compared to non-drug abusers on the Rokeach Value Survey. This standardized survey calls for a rank ordering of 18 Terminal Values (end goals) and 18 Instrumental Values (idealized modes of behavior).

#### Design

The research design utilized both a descriptive and correlational survey to describe the value differences and estimate those differences between drug abusers and non-drug abusers in their ranking of 36 value terms. The relationships between variables were shown by statistical analysis using MANOVA, Factor Analysis, and a Discriminative Function. The MANOVA tested the correlational aspect of the study by testing the measures of association between the samples by the value rankings. The characteristics of the value differences were determined by factoring first with sex and grades all combined together, then by separate grades, and finally by separating

on sex. The resulting factored clusters of values were run through a Discriminant Function program to note which value clusters discriminated most between drug abusers and non-drug abusers.

Hypothesis 1a Based on the data, the hypothesis was rejected. There was significant difference between the Terminal Values of seventh grade male drug abusers and seventh grade male non-drug abusers, according to the Rokeach Value Survey.

The analysis of variance (MANOVA), using the Wilks Lambda Criterion, showed there was a significant difference between the Terminal Values of seventh grade male drug abusers and seventh grade male non-drug abusers at the p.01 level of significance, as is noted in Table 5 . The specific value terms showing significance were: Pleasure p.005; Mature Love p.02; Sense of Accomplishment p.03; Comfortable Life p.03; and Family Security p.04.

TABLE 5

## Significance Table for 7th Grade

Male

Terminal Values

Drug Abusers N-57

Non-Drug Abusers N-58

Multivariate Tests of Significance  
Using Wilks Lambda Criterion

Test of Roots	F	DFHYP	DFERR	p	R
1 Through 1	2.089	18.000	95.000	.012	.533

## Univariate F Tests

Variable	F	Mean Sq	p	Stand. Discr. Coef.
A Comfortable Life	4.673	116.009	.033	.561
An Exciting Life	3.294	82.535	.072	.270
Sense of Accomplishment	4.886	112.009	.029	-.366
A World at Peace	3.034	77.509	.084	-.225
A World of Beauty	.052	1.263	.820	.271
Equality	.815	21.061	.369	.568
Family Security	4.467	118.035	.037	-.126
Freedom	.287	4.640	.593	.186
Happiness	.079	1.482	.779	-.018
Inner Harmony	.027	.561	.869	.213
Mature Love	5.829	194.746	.017	.509
National Security	2.740	58.982	.101	-.142
Pleasure	8.242	164.640	.005	.461
Salvation	.689	18.561	.408	.100
Self-Respect	.071	1.263	.790	.181
Social Recognition	.039	.561	.844	.364
True Friendship	.000	.000	1.000	.056
Wisdom	1.580	30.535	.211	-.308

Hypothesis 1<sub>b</sub> Based on the data, the hypothesis was accepted. There was no significant difference between the Terminal Values of seventh grade female drug abusers and female non-drug abusers, using the Rokeach Value Survey.

The analysis of variance (MANOVA), using the Wilks Lambda Criterion, showed there was no significant difference between the Terminal Values of seventh grade female drug abusers and seventh grade female non-drug abusers at the p.43 level of significance, as noted in Table 6 .

TABLE 6

## Significance Table for 7th Grade

Female

Terminal Values

Drug Abusers N-33

Non-Drug Abusers N-77

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Multivariate Tests of Significance Using Wilks Lambda Criterion					
Test of Roots	F	DFHYP	DFERR	p	R
1 Through 1	1.038	18.000	91.000	.427	.413

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Univariate F Tests				
Variable	F	Mean Sq	p	Stand. Discr. Coef.
A Comfortable Life	.163	3.585	.687	-.282
An Exciting Life	.051	1.358	.822	-.318
Sense of Accomplishment	3.747	61.855	.056	.137
A World at Peace	.163	3.352	.687	-.244
A World of Beauty	2.960	71.358	.088	-.942
Equality	.421	11.361	.518	-.386
Family Security	2.481	54.864	.118	-.079
Freedom	.408	8.125	.524	-.267
Happiness	.173	3.202	.679	-.436
Inner Harmony	.160	3.202	.690	-.709
Mature Love	.108	3.429	.743	-.478
National Security	1.668	34.671	.199	-.170
Pleasure	2.376	42.140	.126	-.817
Salvation	.042	1.262	.839	-.793
Self-Respect	.111	2.244	.740	-.474
Social Recognition	.961	17.664	.329	-.812
True Friendship	.381	5.430	.538	-.232
Wisdom	1.854	36.658	.176	-.770

Hypothesis 1<sub>c</sub> Based on the data, the hypothesis was rejected. There was significant difference between the Terminal Values of ninth grade male drug abusers and ninth grade male non-drug abusers, using the Rokeach Value Survey.

The analysis of variance (MANOVA), using the Wilks Lambda Criterion, showed there was a significant difference between the Terminal Values of ninth grade male drug abusers and ninth grade male non-drug abusers at the p.001 level of significance, as noted in Table 7 . The specific value terms showing significance were: Mature Love p.001; National Security p.003; Sense of Accomplishment p.005; Exciting Life p.009; Pleasure p.013; and Inner Harmony p.05.

TABLE 7

## Significance Table for 9th Grade

Male

Terminal Values

Drug Abusers N-86

Non-Drug Abusers N-145

Multivariate Tests of Significance Using Wilks Lambda Criterion					
Test of Roots	F	DFHYP	DFERR	p	R
1 Through 1	2.418	18.000	212.000	.001	.413
Univariate F Tests					
Variable	F	Mean Sq	p	Stand. Discr. Coef.	
A Comfortable Life	2.253	56.975	.135	-.380	
An Exciting Life	7.007	198.663	.009	-.377	
Sense of Accomplishment	8.130	179.074	.005	-.982	
A World at Peace	.595	15.640	.441	-.515	
A World of Beauty	.884	21.246	.348	-.703	
Equality	1.046	25.598	.308	-.652	
Family Security	.058	1.455	.810	-.477	
Freedom	.000	.002	.992	-.395	
Happiness	.169	3.077	.682	-.630	
Inner Harmony	4.078	78.548	.045	-.708	
Mature Love	17.866	435.654	.001	-.055	
National Security	9.086	202.166	.003	-.965	
Pleasure	6.229	141.596	.013	-.461	
Salvation	.259	9.667	.612	-.619	
Self-Respect	.037	.793	.848	-.553	
Social Recognition	1.103	21.529	.295	-.675	
True Friendship	3.613	66.390	.059	-.338	
Wisdom	1.071	23.354	.302	-.581	

Hypothesis 1d Based on the data, the hypothesis was rejected. There was significant difference between the Terminal Values of ninth grade female drug abusers and ninth grade female non-drug abusers, using the Rokeach Value Survey.

The analysis of variance (MANOVA), using the Wilks Lambda Criterion, showed there was a significant difference between the Terminal Values of ninth grade female drug abusers and ninth grade female non-drug abusers at the p.001 level of significance, as noted in Table 8. The specific value terms showing significance were: Mature Love p.001; Salvation p.001; An Exciting Life p.02; and Family Security p.04.

TABLE 8

## Significance Table for 9th Grade

Female

Terminal Values

Drug Abusers N-89

Non-Drug Abusers N-166

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Multivariate Tests of Significance  
Using Wilks Lambda Criterion

Test of Roots	F	DFHYP	DFERR	p	R
1 Through 1	2.624	18.000	236.000	.001	.408

## Univariate F Tests

Variable	F	Mean Sq	p	Stand. Discr. Coef.
A Comfortable Life	.339	6.980	.561	.609
An Exciting Life	5.555	132.734	.019	.273
Sense of Accomplishment	1.558	24.539	.213	.540
A World at Peace	.060	1.473	.807	.571
A World of Beauty	1.556	32.994	.213	.373
Equality	.492	13.006	.484	.433
Family Security	4.299	88.243	.039	.537
Freedom	4.035	69.558	.046	.113
Happiness	.848	14.512	.358	.568
Inner Harmony	1.646	38.561	.201	.667
Mature Love	10.458	296.253	.001	.085
National Security	.002	.041	.967	.454
Pleasure	.890	16.549	.346	.443
Salvation	19.437	749.360	.001	1.216
Self-Respect	3.110	56.588	.079	.619
Social Recognition	2.561	42.698	.111	.156
True Friendship	.041	.639	.840	.414
Wisdom	.161	3.503	.688	.175

Hypothesis 2<sub>a</sub> Based on the data, the hypothesis was accepted. There was no significant difference between the Instrumental Values of seventh grade male drug abusers and seventh grade male non-drug abusers, according to the Rokeach Value Survey.

The analysis of variance (MANOVA), using the Wilks Lambda Criterion, showed there was no significant difference between the Instrumental Values of seventh grade male drug abusers and seventh grade male non-drug abusers at the p.13 level of significance, as noted in Table 9 .

TABLE 9  
Significance Table for 7th Grade  
Male  
Instrumental Values  
Drug Abusers N-57  
Non-Drug Abusers N-58

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Multivariate Tests of Significance  
Using Wilks Lambda Criterion

Test of Roots	F	DFHYP	DFERR	p	R
1 Through 1	1.442	18.000	96.000	.130	.461

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Univariate F Tests

Variable	F	Mean Sq	p	Stand. Discr. Coef.
Ambitious	.003	.084	.957	-.532
Broadminded	.393	10.270	.532	-.380
Capable	.238	5.266	.627	-.669
Cheerful	.330	8.157	.567	-.570
Clean	.706	19.906	.403	-.717
Courageous	.612	14.011	.436	-.298
Forgiving	1.704	44.496	.194	-.266
Helpful	.131	2.737	.718	-.726
Honest	4.356	100.847	.039	-.010
Imaginative	3.452	62.921	.066	-.865
Independent	.438	12.147	.510	-.771
Intellectual	5.946	142.635	.016	.031
Logical	1.202	25.293	.275	-.861
Loving	2.547	87.205	.113	-.988
Obedient	.012	.240	.914	-.555
Polite	.026	.626	.872	-.812
Responsible	1.326	29.149	.252	-.382
Self-Controlled	.153	4.116	.697	-.779

**CONTINUED**

**1 OF 2**

Hypothesis 2<sub>b</sub> Based on the data, the hypothesis was accepted. There was no significant difference between the Instrumental Values of seventh grade female drug abusers and seventh grade female non-drug abusers, using the Rokeach Value Survey.

The analysis of variance (MANOVA), using the Wilks Lambda Criterion, showed there was no significant difference between the Instrumental Values of seventh grade female drug abusers and seventh grade female non-drug abusers at the p.19 level of significance, as noted in Table 10 .

TABLE 10  
Significance Table for 7th Grade

Female

Instrumental Values

Drug Abusers N-33

Non-Drug Abusers N-77

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Multivariate Tests of Significance  
Using Wilks Lambda Criterion

Test of Roots	F	DFHYP	DFERR	p	R
1 Through 1	1.323	18.000	91.000	.193	.455

Univariate F Tests

Variables	F	Mean Sq	p	Stand. Discr. Coef.
Ambitious	.801	14.182	.373	.518
Broadminded	.642	14.977	.425	.412
Capable	1.321	24.521	.253	.048
Cheerful	.623	13.410	.432	.549
Clean	.049	1.358	.826	.184
Courageous	.114	2.567	.736	.577
Forgiving	2.009	42.955	.159	.441
Helpful	.002	.035	.961	-.185
Honest	.015	.339	.902	.052
Imaginative	5.725	127.171	.018	-.312
Independent	.003	.073	.956	.457
Intellectual	8.758	119.773	.004	-.467
Logical	3.255	41.602	.074	-.026
Loving	.563	15.300	.455	.449
Obedient	2.630	50.930	.108	.618
Polite	2.237	46.573	.138	.195
Responsible	.164	3.352	.686	.328
Self-Controlled	.209	5.049	.648	.242

Hypothesis 2<sub>c</sub> Based on the data, the hypothesis was rejected. There was significant difference between the Instrumental Values of ninth grade male drug abusers and ninth grade male non-drug abusers, using the Rokeach Value Survey.

The analysis of variance (MANOVA), using the Wilks Lambda Criterion, showed there was a significant difference between the Instrumental Values of ninth grade male drug abusers and ninth grade male non-drug abusers at the p.001 level of significance, as noted in Table 11. The specific value terms showing significance were: Intellectual p.001; Loving p.001; and Obedient p.006.

TABLE 11

## Significance Table for 9th Grade

Male

Instrumental Values

Drug Abusers N-86

Non-Drug Abusers N-145

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Multivariate Tests of Significance Using Wilks Lambda Criterion					
Test of Roots	F	DFHYP	DFERR	p	R
1 Through 1	2.716	18.000	212.000	.001	.433

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Univariate F Tests				
Variable	F	Mean Sq	p	Stand. Discr. Coef.
Ambitious	3.138	66.938	.078	-.079
Broadminded	.495	12.439	.482	-.157
Capable	.003	.089	.953	-.415
Cheerful	2.357	55.333	.126	-.337
Clean	1.090	31.841	.298	-.332
Courageous	3.084	74.823	.080	-.569
Forgiving	.889	20.754	.347	-.201
Helpful	.000	.010	.984	-.115
Honest	.406	8.015	.525	-.200
Imaginative	.068	1.654	.794	-.131
Independent	.012	.342	.914	-.427
Intellectual	12.774	286.346	.001	.320
Logical	2.505	59.339	.115	-.228
Loving	15.049	405.807	.001	-.804
Obedient	7.567	143.05	.006	.200
Polite	.082	2.017	.775	-.166
Responsible	.002	.049	.962	-.215
Self-Controlled	2.753	59.366	.098	-.698

Hypothesis 2<sub>d</sub> Based on the data, the hypothesis was rejected. There was significant difference between the Instrumental Values of ninth grade female drug abusers and ninth grade female non-drug abusers, using the Rokeach Value Survey.

The analysis of variance (MANOVA), using the Wilks Lambda Criterion, showed there was a significant difference between the Instrumental Values of ninth grade female drug abusers and ninth grade female non-drug abusers at the p.001 level of significance, as noted in Table 12. The specific value terms showing significant difference below .05 were: Honest p.001; Imaginative p.001; Independent p.002; Polite p.002; Obedient p.007; Forgiving p.009; and Broadminded p.02.

TABLE 12

## Significance Table for 9th Grade

Female

Instrumental Values

Drug Abusers N-89

Non-Drug Abusers N-166

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Multivariate Tests of Significance Using Wilks Lambda Criterion					
Test of Roots	F	DFHYP	DFERR	p	R
1 Through 1	2.451	18.000	248.000	.001	.389

  

Univariate F Tests				
Variable	F	Mean Sq	p	Stand. Discr. Coef.
Ambitious	.069	1.468	.794	.621
Broadminded	5.787	139.567	.017	.710
Capable	.453	7.433	.501	.432
Cheerful	1.442	30.682	.231	.692
Clean	.076	2.165	.784	.709
Courageous	3.612	80.242	.058	.778
Forgiving	6.942	130.517	.009	.037
Helpful	2.325	45.573	.128	.540
Honest	13.421	212.676	.001	.189
Imaginative	11.787	238.669	.001	.756
Independent	9.414	236.002	.002	.834
Intellectual	.005	.092	.944	.298
Logical	2.375	37.230	.124	.770
Loving	1.390	28.331	.240	.841
Obedient	7.341	148.921	.007	.380
Polite	9.547	194.165	.002	.348
Responsible	3.352	50.983	.068	.349
Self-Controlled	.674	16.197	.413	.496

### Seventh and Ninth Grade Terminal Values

A Factor Analysis was computed on the Terminal Values of seventh and ninth grade males and females to reduce the number of dependent variables. The factoring (varimax rotation) identified clusters of value terms or subscores that were computed in a Discriminative Analysis to identify those clusters of value terms that most clearly discriminate between drug abusers and non-drug abusers in the seventh and ninth grades.

The greatest mean difference between drug abusers and non-drug abusers in the seventh and ninth graders' Terminal Values appeared in Factors One, Two, and Three, as noted in Table 13, Seventh and Ninth Grade Group Mean Differences on Terminal Values. Significance of the discriminative function, not included in the table, showed 100 percent of the variance was accounted for in the one root, with a Chi-square of 36.47, a probability of .0000, with 6 degrees of freedom. As noted in the univariate analysis of variance, Factors One and Two had probabilities of .0002, with Factor Three's probability being .004. This suggests these three factors best discriminated between drug abusers and non-drug abusers in the seventh and ninth grade Terminal Values. These factors included the value terms Mature Love and True Friendship for Factor One, Family Security, National Security, and Salvation for Factor Two, and Factor Three included A Comfortable Life, An Exciting Life, and Pleasure as ranked to characterize drug abusers in the seventh and ninth grades.

TABLE 13

7th and 9th Grade Terminal Values Ranked  
Highest by Drug Abusers in Factoring Clusters

	Varimax Analysis % Var. Communality	Varimax Loadings
Factor One		
Mature Love	49	.66
True Friendship	41	.59
Factor Two		
Family Security	37	.58
National Security	48	.59
Salvation	56	.54
Factor Three		
Comfortable Life	60	.73
An Exciting Life	57	.68
Pleasure	60	.68
Factor Four		
Happiness	54	.64
Inner Harmony	49	.65
Factor Five		
Sense of Accomplishment	47	.66
Self-Respect	53	.71
Social Recognition	41	.63
Wisdom	39	.45
Factor Six		
World at Peace	61	.73
World of Beauty	47	.50
Equality	55	.67
Freedom	43	.46

TABLE 14  
7th and 9th Grade Univariate Analysis of Variance  
Terminal Values

Factors	F - Ratio	Prob.
One	15.96	.0002
Two	16.04	.0002
Three	8.80	.004
Four	3.39	.063
Five	3.11	.075
Six	.48	.505

TABLE 15  
7th and 9th Grade Group Mean Differences  
Terminal Values

Factors	Abusers	Non-Abusers
One	5.88	6.81
Two	8.95	8.06
Three	7.72	8.47
Four	7.21	6.81
Five	9.20	8.86
Six	6.56	6.71

### Seventh and Ninth Grade Instrumental Values

A Factor Analysis was computed on the Instrumental Values of seventh and ninth grade males and females to reduce the number of dependent variables. The factoring (varimax rotation) identified clusters of value terms or subscores that were computed in a Discriminative Analysis to identify those clusters of value terms that most clearly discriminate between drug abusers and non-drug abusers in the seventh and ninth grades.

The greatest mean difference between drug abusers and non-drug abusers in the seventh and ninth graders' Instrumental Values appeared in Factor One, as noted in Table 16, Seventh and Ninth Grade Group Mean Differences. Significance of the discriminative function, not included in the table, showed 100 percent of the variance was accounted for in the one root, with a Chi-square of 15.43, a probability of .009, with 5 degrees of freedom. As noted in the univariate analysis of variance, Factor One had a probability of .0006. This suggests Factor One best discriminated between drug abusers and non-drug abusers in the seventh and ninth grade Instrumental Values. Factor One included the value terms Broadminded, Courageous, Imaginative, and Independent, all negative or unimportant values according to drug abusers in the seventh and ninth grades.

TABLE 16

7th and 9th Grade Instrumental Values Ranked  
Highest by Drug Abusers in Factoring Clusters

	Varimax Analysis % Var. Communality	Varimax Loadings
Factor One		
-Broadminded	41	-.57
-Courageous	23	-.46
-Imaginative	52	-.69
-Independent	44	-.45
Factor Two		
Intellectual	38	.43
Logical	42	.45
Obedient	48	.41
Responsible	38	.60
Self-Controlled	37	.59
Factor Three		
Forgiving	64	.75
Helpful	46	.65
Honest	48	.59
Loving	43	.37
Factor Four		
Cheerful	55	.59
Clean	59	.74
Polite	43	.59
Factor Five		
-Ambitious	63	-.78
-Capable	39	-.43

TABLE 17  
7th and 9th Grade Univariate Analysis of Variance  
Instrumental Values

Factors	F - Ratio	Prob.
One	13.01	.0006
Two	3.44	.061
Three	2.32	.124
Four	.41	.529
Five	.54	.532

TABLE 18  
7th and 9th Grade Group Mean Differences  
Instrumental Values

Factors	Abusers	Non-Abusers
One	8.11	8.87
Two	9.44	9.12
Three	6.24	5.91
Four	7.86	7.70
Five	7.17	7.35

### Seventh Grade Terminal Values

A Factor Analysis was computed on Terminal Values of seventh grade males and females to reduce the number of dependent variables. The factoring (varimax rotation) identified clusters of value terms or subscores that were computed in a Discriminative Analysis to identify those clusters of value terms that most clearly discriminate between seventh grade drug abusers and seventh grade non-drug abusers.

The greatest mean difference between drug abusers and non-drug abusers in the seventh graders' Terminal Values appeared in Factors One and Two between male drug abusers and male non-drug abusers, as noted in Table 19, Seventh Grade Group Mean Differences. Significance of the discriminative function, not included in the table, showed 91 percent of the variance was accounted for in the first root, with a Chi-square of 14.93, a probability of .021, with 6 degrees of freedom. As noted in the univariate analysis of variance factors, One and Two had probabilities of .010 and .052 respectively. This suggests these two factors best discriminated between drug abusers and non-drug abusers in the seventh grade Terminal Values. These factors included the value terms A Comfortable Life, An Exciting Life, Happiness, Mature Love, Pleasure, and True Friendship for Factor One, while Factor Two included Family Security, National Security, Salvation, and Wisdom as ranked to characterize drug abusers in the seventh grade.

TABLE 19  
7th Grade Terminal Values Ranked Highest  
by Drug Abusers in Factoring Clusters

	Varimax Analysis % Var. Communality	Varimax Loadings
Factor One		
Comfortable Life	39	.62
An Exciting Life	58	.69
Happiness	23	.40
Mature Love	34	.43
Pleasure	52	.71
True Friendship	21	.29
Factor Two		
Family Security	36	.56
National Security	27	.45
Salvation	53	.72
Wisdom	55	.46
Factor Three		
Sense of Accomplishment	46	.66
Inner Harmony	27	.31
Self-Respect	47	.67
Social Recognition	44	.64
Factor Four		
A World at Peace	51	.71
A World of Beauty	51	.65
Equality	44	.64
Freedom	27	.44

TABLE 20

7th Grade Univariate Analysis of Variance  
Terminal Values

Factors	F - Ratio	Prob.
One	3.87	.010
Two	2.59	.052
Three	.92	.564
Four	.06	.979

TABLE 21

7th Grade Group Mean Differences  
Terminal Values

Factors	Male Abusers	Male Non-Abusers	Female Abusers	Female Non-Abusers
One	7.70	9.00	8.06	8.49
Two	10.05	8.74	9.72	9.27
Three	11.75	11.12	11.84	11.41
Four	7.54	7.38	7.34	7.52

### Seventh Grade Instrumental Values

A Factor Analysis was computed on Instrumental Values of seventh grade males and females to reduce the number of dependent variables. The factoring (varimax rotation) identified clusters of value terms or subscores that were computed in a Discriminative Analysis to identify those clusters of value terms that most clearly discriminate between seventh grade drug abusers and non-drug abusers.

The greatest mean difference between drug abusers and non-drug abusers in the seventh graders' Instrumental Values appeared in Factors One and Two between female drug abusers and female non-drug abusers, as noted in Table 22 , Seventh Grade Group Mean Differences. Significance of the discriminative function, not included in the table, showed 93 percent of the variance was accounted for in the first root, with a Chi-square of 27.79, a probability of .0003, with 6 degrees of freedom. As noted in the univariate analysis of variance, Factors One and Two had probabilities of .0000 and .003 respectively. This suggests these two factors best discriminated between drug abusers and non-drug abusers in the seventh grade Instrumental Values. These factors included the value terms Cheerful, Clean, Forgiving, and Loving for Factor One, and Factor Two included Capable, Courageous, Imaginative, Independent, Intellectual, Logical, Responsible, and Self-Controlled as ranked to characterize drug abusers in the seventh grade.

TABLE 22

7th Grade Instrumental Values Ranked Highest  
by Drug Abusers in Factoring Clusters

	Varimax Analysis % Var. Communality	Varimax Loadings
Factor One		
Cheerful	45	.63
Clean	41	.49
Forgiving	42	.51
Loving	49	.65
Factor Two		
Capable	40	.55
Courageous	33	.52
Imaginative	45	.46
Independent	45	.64
Intellectual	40	.60
Logical	44	.55
Responsible	49	.46
Self-Controlled	28	.41
Factor Three		
-Ambitious	50	-.69
-Broadminded	55	-.65
Factor Four		
Helpful	40	.46
Honest	52	.64
Obedient	54	.71
Polite	56	.66

TABLE 23

7th Grade Univariate Analysis of Variance  
Instrumental Values

Factors	F - Ratio	Prob.
One	9.50	.0000
Two	4.87	.003
Three	.64	.601
Four	.57	.638

TABLE 24

7th Grade Group Mean Differences  
Instrumental Values

Factors	Male Abusers	Male Non-Abusers	Female Abusers	Female Non-Abusers
One	8.63	9.05	7.21	6.58
Two	9.65	9.57	10.15	10.80
Three	8.95	9.19	9.88	9.74
Four	7.46	7.09	7.48	6.94

### Ninth Grade Terminal Values

A Factor Analysis was computed on Terminal Values of ninth grade males and females to reduce the number of dependent variables. The factoring (varimax rotation) identified clusters of value terms or subscores that were computed in a Discriminative Analysis to identify those clusters of value terms that most clearly discriminate between ninth grade drug abusers and non-drug abusers.

The greatest mean difference between drug abusers and non-drug abusers in the ninth graders' Terminal Values appeared in Factors One and Two between male drug abusers and male non-drug abusers, as noted in Table 25, Ninth Grade Group Mean Differences on Terminal Values. Significance of the discriminative function, not included in the table, showed 84 percent of the variance was accounted for in the first root, with a Chi-square of 32.06, a probability of .0002, with 8 degrees of freedom. As noted in the univariate analysis of variance, Factors One and Two had probabilities of .003 and .004 respectively. This suggests these two factors best discriminated between drug abusers and non-drug abusers in the ninth grade Terminal Values. These factors included the value terms Family Security (neg.) and Mature Love in Factor One, and Inner Harmony (neg.) in Factor Two as ranked to characterize drug abusers.

TABLE 25

9th Grade Terminal Values Ranked Highest  
by Drug Abusers in Factoring Clusters

	Varimax Analysis % Var. Communality	Varimax Loadings
Factor One		
-Family Security	53	-.69
Mature Love	55	.72
Factor Two		
-Inner Harmony	57	-.74
Factor Three		
A Comfortable Life	65	.71
An Exciting Life	54	.55
-Equality	53	-.50
Happiness	57	.43
Pleasure	59	.65
Factor Four		
Sense of Accomplishment	40	.56
-World of Beauty	47	-.44
Self-Respect	53	.70
Social Recognition	58	.58
Factor Five		
World at Peace	61	.44
Freedom	59	.58
Salvation	55	-.63
Wisdom	42	.48
Factor Six		
-National Security	44	-.61
True Friendship	46	.66

TABLE 26  
9th Grade Univariate Analysis of Variance  
Terminal Values

Factors	F - Ratio	Prob.
One	4.76	.003
Two	4.70	.004
Three	2.36	.07
Four	1.45	.22
Five	.91	.56
Six	.34	.80

TABLE 27  
9th Grade Group Mean Differences  
Terminal Values

Factors	Male Abusers	Male Non-Abusers	Female Abusers	Female Non-Abusers
One	5.97	7.01	6.53	7.24
Two	8.23	7.30	6.88	6.58
Three	7.42	8.07	8.12	8.11
Four	9.44	8.84	9.19	6.56
Five	7.09	6.87	6.79	6.56
Six	7.69	7.38	7.38	7.42

### Ninth Grade Instrumental Values

A Factor Analysis was computed on the Instrumental Values of ninth grade males and females to reduce the number of dependent variables. The factoring (varimax rotation) identified clusters of value terms or subscores that were computed in a Discriminative Analysis to identify those clusters of value terms that most clearly discriminate between ninth grade drug abusers and non-drug abusers.

The greatest mean difference between drug abusers and non-drug abusers in the ninth graders' Instrumental Values appeared in Factors One and Two between female drug abusers and female non-drug abusers, as noted in Table 28, Ninth Grade Group Mean Differences on Instrumental Values. Significance of the discriminative function, not included in the table, showed 92 percent of the variance was accounted for in the first root, with a Chi-square of 31.02, a probability of .0001, with 6 degrees of freedom. As noted in the univariate analysis of variance factors, One and Two had probabilities of .0000 and .02 respectively. This suggests these two factors best discriminated between drug abusers and non-drug abusers in the ninth grade Instrumental Values. These factors included the value terms Forgiving, Helpful, Honest, Independent (neg.), and Responsible in Factor One, and Ambitious, Capable, and Loving (neg.) in Factor Two as ranked to characterize drug abusers.

TABLE 28

9th Grade Instrumental Values Ranked Highest  
by Drug Abusers in Factoring Clusters

	Varimax Analysis % Var. Communality	Varimax Loadings
Factor One		
Forgiving	59	.53
Helpful	35	.53
Honest	44	.63
-Independent	28	-.31
Responsible	28	.35
Factor Two		
Ambitious	55	.71
Capable	36	.54
-Loving	39	-.47
Factor Three		
-Cheerful	44	-.58
-Clean	52	-.50
Intellectual	32	.46
Logical	48	.65
Self-Controlled	36	.53
Factor Four		
-Broadminded	39	-.56
-Courageous	20	-.38
-Imaginative	46	-.52
Obedient	43	.61
Polite	57	.71

TABLE 29

9th Grade Univariate Analysis of Variance  
Instrumental Values

Factors	F - Ratio	Prob.
One	9.19	.0000
Two	3.19	.02
Three	2.23	.08
Four	.25	.86

TABLE 30

9th Grade Group Mean Differences  
Instrumental Values

Factors	Male Abusers	Male Non-Abusers	Female Abusers	Female Non-Abusers
One	7.83	8.07	7.46	6.63
Two	7.72	8.10	8.17	8.85
Three	9.88	9.71	10.19	10.38
Four	10.41	10.21	10.25	10.21

## Chapter 5

## SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

## SUMMARY

Problem

The problem this study confronted was to identify value characteristics of adolescent drug abusers. Specifically, the study was concerned with finding clusters of value terms that would be characteristic of drug abusers in the seventh and ninth grades in Tempe, Arizona, as measured by the Rokeach Value Survey.

Sample

The population was defined as all seventh and ninth grade students attending Tempe public schools during the testing periods in the school year 1972-73. From this population a sample of drug abusers and a sample of non-drug abusers was drawn for each grade and sex according to their self-reported frequency of drug use.

Instrument

The Rokeach Value Survey was the instrument used in this study to evaluate the value characteristics of the comparison groups. The Rokeach Value Survey includes a page of 18 Terminal Values and a page of 18 Instrumental Values, listed in alphabetical order, to be ranked by the respondent in order of importance.

### Statistical Analysis

The analysis of data was descriptive in nature, using what could be called a multivariate naturalistic-sequential design. MANOVA and Factor Analysis were used on 36 freely occurring variables. The MANOVA program for group significant difference was run on the UNIVAC 1110 computer in the computer center at Arizona State University. To identify clusters of values characteristic of drug abusers and non-drug abusers, a Factor program was run on the UNIVAC 1110. A Discriminative Function was run on the factor clusters to identify those clusters that best characterize drug abusers.

### Results

Significant difference was found between adolescent drug abusers and non-drug abusers in five out of the eight hypotheses. The Terminal Values page of the Rokeach Value Survey showed three out of the four groups were significantly different. That is, males in the seventh and ninth grades and females in the ninth grade showed drug abusers' Terminal Values were significantly different than non-drug abusers at the .001 level of significance. Seventh grade female drug abusers' Terminal Values were not significantly different than female non-drug abusers. On the Instrumental Values page of the Rokeach Value Survey, the ninth grade male and female drug abusers' values were significantly different than the ninth grade male and female non-drug abusers at the .001 level. The seventh grade male and female Instrumental Values of drug

abusers were not significantly different than the seventh grade male and female non-drug abusers.

The ninth grade male and ninth grade female Terminal and Instrumental Values difference was at the .01 level of significance. With the majority of the hypotheses resulting in significant differences, it was most appropriate for this researcher to do post hoc analysis of the data through factoring and Discriminative Analysis.

Seventh and Ninth Grade Value Clusters Combined

The resulting clusters of Terminal Values for seventh and ninth grade male and female drug abusers identified by the factoring and Discriminative Analysis included the value terms:

<u>Factor One</u>	<u>Factor Two</u>	<u>Factor Three</u>
Mature Love	Family Security	Comfortable Life
True Friendship	National Security	Exciting Life
	Salvation	Pleasure

Factor One was interpreted by this researcher as an expression of affection needs, while Factor Two was interpreted as the need for security. The pleasuring principle was interpreted to represent Factor Three. These would then be definitive characteristics of seventh and ninth grade drug abusers, as representative of their value system.

The resulting clusters of Instrumental Values for seventh and ninth grade male and female drug abusers identified by the factoring and Discriminative Analysis included the value terms:

Factor One

- Broadminded
- Courageous
- Imaginative
- Independent

Factor One was interpreted by this researcher as a rejection or flaunting of the values of the Protestant ethic, indicating seventh and ninth grade drug abusers are decadent and lack assertiveness.

Seventh Grade Value Clusters

The resulting clusters of Terminal Values for seventh grade male and female drug abusers identified by the factoring and Discriminative Analysis included the value terms:

Factor One

<u>Value Terms</u>	MANOVA p	
	<u>Males</u>	<u>Females</u>
Mature Love	.017	.743
Comfortable Life	.033	.687
Exciting Life	.072	.822
Pleasure	.005	.126
Happiness	.779	.679
True Friendship	1.000	.538

It was concluded that Factor One for seventh grade Terminal Values represents an expression of affection and pleasure need, especially for males at the .005, .02, and .03 levels of significance. Which indicates seventh grade males may have been denied Pleasure and Mature Love, or at least didn't experience enough.

Factor Two

<u>Value Terms</u>	MANOVA p	
	<u>Males</u>	<u>Females</u>
Salvation	.408	.839
Family Security	.037	.118

(Factor Two, continued)

<u>Value Terms</u>	MANOVA p	
	<u>Males</u>	<u>Females</u>
National Security	.101	.199
Wisdom	.211	.176

It was concluded that Factor Two represents a security need for both males and females in the seventh grade, with the males indicating a significant difference in Family Security. Indicating the males hold Family Security and perhaps National Security important because such security has not been present in their lives, compared to seventh grade non-drug abusers.

The resulting clusters of Instrumental Values for seventh graders, male and female, included the following:

Factor One

<u>Value Terms</u>	MANOVA p	
	<u>Males</u>	<u>Females</u>
Cheerful	.567	.432
Clean	.403	.826
Forgiving	.194	.159
-Loving	.113	.455

Factor Two

<u>Value Terms</u>	MANOVA p	
	<u>Males</u>	<u>Females</u>
Capable	.627	.253
Courageous	.436	.736
Imaginative	.066	.018
-Independent	.510	.956
Intellectual	.016	.004
Logical	.275	.074
Responsible	.252	.686
Self-Controlled	.697	.648

Factors One and Two combined for seventh grade male and female Instrumental Values were interpreted as an expression of interest in the Intellectual side of the Protestant ethic, or

a "Sir Galahad" ideal. Therefore, it was concluded that seventh grade male and female drug abusers consider being Intellectual more important, or see themselves as more Intellectual than do seventh grade non-drug abusers.

#### Ninth Grade Value Clusters

The resulting clusters of Terminal Values for ninth grade male and female drug abusers identified by factoring and Discriminative Analysis included the value terms:

#### Factor One

<u>Value Terms</u>	MANOVA p	
	<u>Males</u>	<u>Females</u>
-Family Security	.810	.039
Mature Love	.001	.001

Factor One for Terminal Values was interpreted as the drug abuser seeking Mature Love (.001 level for both males and females) and wanting affection, but not wanting Family Security, especially for females (.04 level of significance).

#### Factor Two

<u>Value Terms</u>	MANOVA p	
	<u>Males</u>	<u>Females</u>
-Inner Harmony	.045	.201

It was concluded that Factor Two represents an inner disharmony or anxiety, and that Inner Harmony is unimportant to ninth grade male drug abusers.

#### Factor Three

<u>Value Terms</u>	MANOVA p	
	<u>Males</u>	<u>Females</u>
Comfortable Life	.135	.561
Exciting Life	.009	.019
-Equality	.308	.484

## (Factor Three, continued)

<u>Value Terms</u>	MANOVA p	
	<u>Males</u>	<u>Females</u>
Happiness	.682	.358
Pleasure	.013	.346

Factor Three represents a trend because the significant difference between the drug abuser group and the non-drug abuser group was at the .07 level. It is also included since many of the value terms were shown to be significant below the .05 level in other groups. Factor Three indicates a broader representation of the pleasure need, with an emphasis on the need for excitement (.009 and .02 for male and female). This was also significant for the seventh and ninth grades combined, as reported previously.

The resulting clusters of Instrumental Values for ninth grade male and female drug abusers identified by factoring and Discriminative Analysis included the value terms:

Factor One

<u>Value Terms</u>	MANOVA p	
	<u>Males</u>	<u>Females</u>
Forgiving	.347	.009
Helpful	.984	.128
Honest	.525	.001
-Independent	.914	.002
Responsible	.962	.068

Factor One for Instrumental Values was interpreted as an attempt at living or wanting some values of the Protestant ethic, especially for females. Indicating ninth grade female drug abusers either want, or see themselves as, Forgiving and Honest, but not to be seen as Independent when compared to ninth grade female non-drug abusers.

Factor Two

<u>Value Terms</u>	MANOVA p	
	<u>Males</u>	<u>Females</u>
Ambitious	.078	.794
Capable	.953	.501
-Loving	.001	.240

It was concluded that Factor Two was representative of an outgoing, unloving adolescent, and was especially significant for males.

Factor Three was included because it indicates a trend with a significance of .08, including the following:

Factor Three

<u>Value Terms</u>	MANOVA p	
	<u>Males</u>	<u>Females</u>
-Cheerful	.126	.231
-Clean	.298	.784
Intellectual	.001	.994
Logical	.115	.124
Self-Controlled	.098	.413

Factor Three shows that ninth grade drug abusers see themselves as sad, unkempt intellectuals, especially the males.

## CONCLUSIONS

The results of this study indicate the value characteristics of ninth grade male and female drug abusers are significantly different than the ninth grade male and female non-drug abusers at the .001 level. Seventh grade male drug abusers' Terminal Values are also significantly different when compared with seventh grade non-drug abusers at the .01 level. Clusters of value terms that are characteristic of seventh and ninth grade drug abusers suggest adolescent drug abusers have affection

and security needs, they experience internal anxiety, and seek pleasuring activities.

These conclusions characterize adolescent drug abusers in much the same way as do previous studies reported in the Review of the Literature. As Louria (1968) concluded, drug abusers hate society, reject family, can't accept or give love, were torn by anxiety, and can't respect themselves. Blum (1969), in quoting drug abusing students, reported their parents did not value tradition or the status quo, they felt distance from parents, were pessimistic and dissatisfied. Scott (1970) hypothesized that drugs might be used to feel and experience happiness. Holloran (1972) found adolescent drug abusers faced problems of self-esteem and problems of identity, being alienated and separated from the values of society.

According to these results, adolescent drug abusers, represented in this study by a group of seventh and ninth graders, were saying love and friendship were most important to them, and family, personal, and national security were next in importance for both seventh and ninth grade male and female drug abusers. It was, therefore, concluded that adolescent drug abusers have affection and security needs and they seek pleasuring activities, according to the Terminal Value page of the Rokeach Value Survey.

The Instrumental Value page indicates adolescent drug abusers are narrow-minded, fearful, unimaginative, and dependent. Such a lack of assertiveness suggests insecurity that would increase affection and security needs identified in the

Terminal Value results.

The results for the ninth grade drug abusers showed a significant difference at the .001 level for both male and female Terminal and Instrumental Values. But the seventh grade indicated only the male Terminal Values were significantly different. The Instrumental Values for both males and females showed no significant difference, as did the Terminal Value page for females. This value difference between seventh and ninth graders emphasizes a significant potential increase in use of drugs between the seventh and ninth grade.

The Terminal Value page of the Rokeach Value Survey seems to provide the strongest predictor variables to identify the propensity of a group of male seventh and ninth graders use of drugs. This researcher concludes the Instrumental Value page was the best predictor for ninth grade females in this study. The results of the study show that males in the seventh and ninth grades who abuse drugs rank the value terms Mature Love, Comfortable Life, Exciting Life, and Pleasure, on the Terminal Value page, significantly higher than do non-drug abusers, as reported in Factor One for males, grade seven, and Factor One for males, grade nine. Drug abusers also rank the value term Inner Harmony significantly lower than do non-drug abusers, as reported in Factor One for males, grade nine.

Ninth grade female drug abusers rank the value terms, on the Terminal Value page, Forgiving, Honest, and Responsible

significantly higher than do non-drug abusers. As reported for females in Factor One, grade nine. On the Instrumental Value page, female drug abusers rank the value term Independent significantly lower than do non-drug abusers.

These conclusions are based on the results of the MANOVA, Factor, and Discriminative Function programs run on the data from the seventh and ninth grade subjects tested in Tempe, Arizona, schools during the school year 1972-73.

These conclusions indicate these value terms showed the highest level of significant difference individually in a MANOVA program, and collectively by clusters through factoring and a Discriminative Function. Male drug abusers, therefore, seem to have stronger similarities in their value systems in the seventh and ninth grades, compared to the females. The female drug abusers are not significantly different than non-drug abusers in the seventh grade.

#### IMPLICATIONS

The conclusions of this study suggest adolescent drug abusers see themselves as needful of more affection and security than do non-drug abusers. They also seek pleasure and excitement, while feeling insecure, fearful, and dependent.

In comparing the conclusions of this study with characteristics of adolescent drug abusers, as reported in the Review of the Literature, it is concluded that the Rokeach Value

Survey could be used as a predictive instrument to identify the propensity of a given group of adolescents for being or becoming drug abusers in the seventh and, especially, the ninth grade. However, due to the ordinal nature of the data, it would not be advisable to use the Rokeach Survey for individual prediction of drug abuse. There is a serious question as to the advisability of trying to predict an individual adolescent's propensity for drug abuse. The characteristics of adolescent drug abusers identified in the results of this study are in themselves a significant contribution toward the understanding of adolescents with propensity for becoming drug abusers. In that the results support previous studies that have identified other characteristics of adolescent drug abusers similar to the results in this study. Whereby the counselor or therapist can get a rough measure of a client's propensity to drug abuse.

In the field of education, it is significant to note that value differences increase from the seventh to the ninth grade for those who abuse drugs. Implications for such an understanding would suggest a special effort in the seventh and eighth grades to enhance students' values that would support and serve their affection and security needs. Programs should also be instituted to meet the potential adolescent drug abuser's desire for pleasure. The same would hold for the drug abuser's rejection of those values indicative of the Protestant

ethic. Some of those Instrumental Values indicative of the Protestant ethic are apparently still valid, according to the adolescent drug abusers in this study.

Family Security is evidently important to the seventh grade drug abuser, but by the ninth grade they have given up on Family Security. Family support, therefore, could be enhanced through junior high years to perhaps prevent the ninth grader from giving up on family.

Previous studies have not identified specific value differences in adolescent drug abusers. But the clusters of value terms identified in this study support many of the results of studies reported in the Review of the Literature that depict the adolescent drug abuser as caught in a sense of futility, unhappiness, pessimism, and defiance.

More specifically, the significant differences found in this study for both males and females, on both Terminal Values and Instrumental Values, for ninth graders, indicates a value difference that could possibly be generalizable to other communities like Tempe, Arizona. Thus, these value clusters could be used to possibly detect the potential drug abuser among groups of classes within a school or other institution.

A number of states across the country have enacted legislation that requires schools to teach drug information classes

as a deterrent to drug abuse. Those who work with adolescents, and drug abusers in particular, have found that drug abusers, and adolescents generally, are more knowledgeable about drugs than are the instructors. In some cases, it has been suggested that drug information has actually provided the incentive to try drugs.

The conclusions reached in this study indicate there are significant differences in the value systems of adolescent drug abusers as compared to non-drug abusers. Assuming these characterizations are valid, an educational program, if it is to be effective, needs to take the value characteristics of adolescent drug abusers into consideration. For an educational system to be effective in the prevention of drug abuse by adolescents, it needs to go beyond the traditional program of providing drug information. In addition, prevention programs need to provide approaches that will enhance the students' values, such as affection and family security.

Educational programs involved in drug prevention or treatment could be designed around particular values as diagnostic indicators. Diagnostic results would enable teachers or therapists to prescribe certain valuing activities that would be designed to enhance those values that are inadequate to support desired behavior. Other prescriptions could be developed to clarify values that are in conflict, such as when an idealized value isn't being behaviorally expressed to satisfy the idealized expectation.

Drug abuse is regarded by this researcher as symptomatic of an inadequate personality. Therefore, trying to change drug abuse without diagnosing possible personality disturbances is questionable. It would be helpful to consider the development of a diagnostic battery of instruments to be used, especially in group work, to identify specific valuing and personality needs represented in the group.

If a diagnosis indicated a group of adolescents lacked affection, they could be homogeneously grouped to enhance that value need. Homogeneous groups, giving support for new behavior to enhance that need, would assist in the development of a stronger value system to help participants better meet life needs and life goals. Success in this one area could perhaps be transferable to other group activities involved in other areas of value enhancement to enlarge the person's value development. Kolberg (1969) suggests that exposure to new decision making experiences helps the individual to develop in a positive direction. Group support in values clarification would aid in this ego development by encouraging new decision making experiences and reinforcing positive value development.

Counseling emphasis with drug abusers or potential drug abusers should consider valuing activities that would positively enhance those values the individual has working for him. The results indicated there were some behavioral values typical of the Protestant ethic, like being Forgiving, Responsible, and Capable, that are important values to adolescent drug abusers

in both seventh and ninth grades. On the other hand, loving and being independent are less important to drug abusers when compared with adolescent non-drug users. Favorable values in the Protestant ethic, as held by drug abusers, could be supported in counseling, where applicable, to encourage the possibility of some transference to the abusers' negative values about the Protestant ethic, such as the drug abusers' negative connotation to loving and being independent. It could be hypothesized that drug abusers have given up on loving and independence because they have been denied both, even though they wanted both.

Counseling to enhance such value development could facilitate deeper interpersonal relationships that would give the adolescent drug abuser more hope for affection, security, and independence.

Adolescents who are light users of drugs appear to have less radical value differences, compared to heavy abusers. This study did not deal with the differences between light and heavy abusers, but the differences between seventh and ninth graders, as indicated in this study. Holloran (1972) noted personality differences were apparent between light and heavy drug abusing adolescents. Other researchers have suggested the occasional drug user represents a rather normal adolescent rebellion, while the regular abuser has been seen as experiencing numerous personality problems (Cohen, 1969; Willinger, 1970; Brill, 1971; and Louria, 1971).

Therefore, the extent of value deprivation and the associated personality problems become significant when screening adolescent drug abusers. Treatment may be enhanced when the diagnosis is improved. Specific areas of value deprivation can possibly be identified, along with some indication of the intensity of potential drug use, through value surveys, when used with other possible diagnostic instruments.

For the most part, it can be said that hard-core addicts suffer from certain types of emotional instability. Heavy users have also been observed to have an inherent inability to develop meaningful interpersonal relationships.

#### RECOMMENDATIONS FOR FURTHER RESEARCH

Research in the area of adolescent drug abuse is lacking, but research in the area of adolescent values is lacking even more. Therefore, continued research in both areas is needed. At present, longitudinal studies in the area of value development with adolescents would be vital. At the same time, longitudinal studies relative to the characteristics of adolescent drug abusers would be equally vital. Such understanding would give insight into the pre-drug abusing adolescent as well.

If this study were to be replicated, it might be helpful to try it with a known group of drug abusers rather than depending on the self-reported frequency of drug abuse, as represented

in this study. If the results were the same with adolescents in another community, it would be possible to generalize beyond Tempe, Arizona, regarding the value characteristics of adolescent drug abusers. In such a study it might also be possible to look at the value differences between light users of drugs, those who have used drugs from one to five times, and heavy abusers who have used drugs six times or more, as tested in this study.

If diagnostic efforts are to become a reality, it would be necessary to administer a battery of several instruments to adolescent drug abusers and non-drug users. Such a battery of diagnostic and predictive instruments should include the Rokeach Value Survey and the MMPI, as studied by Holloran (1972).

Diagnostic studies and longitudinal studies preclude the need to investigate the effects of maturation on value development and personality development. The difference between female seventh grade drug abusers and female ninth drug abusers, as found in this study, suggests the possibility of normal maturation. But it would also be of interest to see why the males did not indicate such a difference. The drug abuser males in this study were generally the same in the ninth grade as they were in the seventh grade. Then the question of how drug use affects value development or maturation comes into view.

Once value characteristics and personality characteristics of adolescent drug abusers are better understood, it would be

a logical next step to study the most effective educational and treatment programs to deal with the problem of adolescent drug abuse. Prevention programs might benefit the most from an investigation. But improved diagnostic instruments would be essential to be able to more adequately measure change for prevention or treatment.

The results of this study, as well as previous studies, indicate there are significant differences between male and female adolescent drug abusers. Further investigation into the value differences between male and female adolescents would also be essential to get a proper perspective on the differences between male and female drug abusers.

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## Frequencies of Drug Use

9th Grade

Male

Behavior	N	Never	A Few Times	One to Five Times	Six Times or More	Regular + %
Amphet.	394	345	18	8	16	7 (1.7%)
Alcohol	396	152	70	29	105	40 (10%)
LSD	393	355	16	3	7	12 (3%)
Pot	394	281	24	20	30	39 (10%)
Hard Narc.	393	362	7	6	8	10 (2%)
Barbit.	394	347	14	13	11	9 (2%)
						<u>117 (28%)</u>

## Frequencies of Drug Use

9th Grade

Female

Behavior	N	Never	A Few Times	One to Five Times	Six Times or More	Regular + %
Amphet.	433	363	22	8	29	11 (2%)
Alcohol	439	175	88	25	123	28 (6%)
LSD	436	384	20	3	21	8 (2%)
Pot	437	302	35	11	36	53 (12%)
Hard Narc.	438	404	17	1	12	4 (1%)
Barbit.	437	380	19	8	21	9 (2%)
						<u>113 (25%)</u>

APPENDIX B  
7th Grade  
Male  
Terminal Values  
Drug N-57

	M	SD
1. Freedom	5.75	4.41
2. A World of Peace	6.67	5.39
3. An Exciting Life	7.02	5.01
4. True Friendship	7.33	4.65
5. A Comfortable Life	7.63	5.00
6. Family Security	7.95	5.41
7. Happiness	8.07	4.32
8. Mature Love	8.90	5.76
9. Equality	9.18	5.21
10. Pleasure	9.63	4.43
11. Wisdom	9.79	4.32
12. A World of Beauty	10.12	4.99
13. Self-Respect	11.18	4.13
14. National Security	11.95	4.70
15. Inner Harmony	11.98	4.60
16. Salvation	12.18	4.48
17. Social Recognition	12.56	3.75
18. A Sense of Accomplishment	12.74	4.56

## 7th Grade

## Male

## Terminal Values

No Drug N-58

	M	SD
1. A World at Peace	5.02	4.69
2. Freedom	5.35	3.60
3. Family Security	5.91	4.85
4. True Friendship	7.33	3.81
5. Happiness	7.84	4.35
6. Wisdom	8.75	4.47
7. An Exciting Life	8.72	5.00
8. A Comfortable Life	9.65	4.96
9. Equality	10.04	4.96
10. A World of Beauty	10.33	4.85
11. National Security	10.51	4.58
12. A Sense of Accomplishment	10.75	5.01
13. Self-Respect	10.97	4.29
14. Salvation	11.37	5.81
15. Mature Love	11.51	5.80
16. Pleasure	12.04	4.51
17. Inner Harmony	12.12	4.43
18. Social Recognition	12.42	3.86

7th Grade  
Male  
Instrumental Values  
Drugs N-57

	M	SD
1. Loving	6.98	5.52
2. Honest	7.63	5.09
3. Helpful	8.11	4.33
4. Cheerful	8.11	4.84
5. Ambitious	8.14	5.41
6. Responsible	8.40	4.72
7. Courageous	8.49	4.97
8. Self-Controlled	9.05	5.09
9. Capable	9.18	4.79
10. Independent	9.30	5.21
11. Polite	9.56	5.40
12. Clean	9.74	5.37
13. Obedient	10.30	4.56
14. Broadminded	10.33	5.54
15. Forgiving	11.16	4.99
16. Imaginative	11.19	4.51
17. Intellectual	12.19	4.65
18. Logical	12.60	4.61

7th Grade  
Male  
Instrumental Values  
No Drugs N-58

	M	SD
1. Honest	5.76	4.52
2. Responsible	7.40	4.66
3. Courageous	7.79	4.60
4. Ambitious	8.09	5.36
5. Helpful	8.41	4.79
6. Cheerful	8.64	5.10
7. Loving	8.72	6.16
8. Polite	9.41	4.37
9. Self-Controlled	9.43	5.29
10. Capable	9.60	4.62
11. Forgiving	9.91	5.22
12. Independent	9.95	5.33
13. Intellectual	9.97	5.13
14. Obedient	10.21	4.48
15. Clean	10.57	5.25
16. Broadminded	10.93	4.65
17. Imaginative	12.67	4.02
18. Logical	13.53	4.56

9th Grade  
Female  
Terminal Values  
Drugs N-89

	M	SD
1. Freedom	5.16	3.60
2. A World at Peace	5.54	5.23
3. True Friendship	6.79	3.98
4. Happiness	6.91	4.14
5. Equality	7.89	5.03
6. Family Security	8.01	4.77
7. Wisdom	8.65	4.79
8. Mature Love	9.28	5.27
9. An Exciting Life	9.44	5.26
10. A World of Beauty	10.02	4.32
11. Self-Respect	10.08	4.39
12. Inner Harmony	10.80	4.86
13. A Sense of Accomplishment	11.25	4.07
14. Pleasure	11.39	4.50
15. A Comfortable Life	11.87	4.25
16. Social Recognition	12.29	4.24
17. National Security	12.80	4.94
18. Salvation	13.00	5.58

## 9th Grade

## Female

## Terminal Values

No Drugs N-166

	M	SD
1. A World at Peace	5.70	4.82
2. Freedom	5.16	3.60
3. Happiness	6.41	4.14
4. Family Security	6.78	4.40
5. True Friendship	6.79	3.98
6. Equality	8.36	5.20
7. Wisdom	8.90	4.59
8. Self-Respect	9.09	4.20
9. Salvation	9.40	6.52
10. Inner Harmony	9.98	4.83
11. A Sense of Accomplishment	10.60	3.92
12. A World of Beauty	10.78	4.75
13. An Exciting Life	10.95	4.68
14. A Comfortable Life	11.52	4.68
15. Mature Love	11.54	5.35
16. Pleasure	11.93	4.21
17. National Security	12.77	4.77
18. Social Recognition	13.15	4.00

7th Grade  
Female  
Instrumental Values  
Drugs N-33

	M	SD
1. Loving	5.88	5.77
2. Honest	5.94	4.36
3. Cheerful	6.97	4.84
4. Helpful	7.09	4.31
5. Responsible	8.39	4.87
6. Forgiving	8.64	4.48
7. Clean	8.76	5.24
8. Courageous	8.88	5.24
9. Ambitious	9.76	4.63
10. Independent	9.79	4.97
11. Capable	10.33	4.61
12. Broadminded	10.55	4.97
13. Polite	10.58	5.15
14. Self-Controlled	10.64	5.27
15. Imaginative	11.03	5.09
16. Intellectual	11.52	4.24
17. Obedient	12.12	4.54
18. Logical	13.79	3.83

7th Grade  
Female  
Instrumental Values  
No Drugs N-77

	M	SD
1. Loving	5.07	4.96
2. Honest	5.82	4.84
3. Cheerful	6.21	4.56
4. Helpful	7.05	3.66
5. Forgiving	7.27	4.68
6. Responsible	8.01	4.36
7. Courageous	8.55	4.52
8. Ambitious	8.97	4.02
9. Clean	9.00	5.31
10. Polite	9.16	4.29
11. Independent	9.84	4.86
12. Self-Controlled	10.17	4.76
13. Obedient	10.64	4.34
14. Broadminded	11.35	4.77
15. Capable	11.36	4.18
16. Imaginative	13.38	4.55
17. Intellectual	13.79	3.45
18. Logical	15.13	3.46

9th Grade  
Male  
Terminal Values  
Drug N-89

	M	SD
1. Freedom	5.70	4.16
2. True Friendship	6.92	4.08
3. An Exciting Life	7.30	5.11
4. Happiness	7.43	4.14
5. A World at Peace	7.63	5.35
6. Mature Love	7.85	5.16
7. Family Security	8.08	4.88
8. Self-Respect	8.94	4.50
9. Wisdom	9.02	4.56
10. A Comfortable Life	9.22	4.87
11. Pleasure	9.70	4.57
12. Equality	9.71	5.22
13. A Sense of Accomplishment	11.26	4.66
14. Salvation	11.62	5.75
15. A World of Beauty	11.78	5.04
16. Inner Harmony	12.74	4.17
17. Social Recognition	12.94	3.79
18. National Security	13.16	4.50

## 9th Grade

Male

## Terminal Values

No Drug N-145

	M	SD
1. Freedom	5.70	4.48
2. A World at Peace	7.09	5.00
3. Happiness	7.67	4.34
4. Family Security	7.92	5.09
5. True Friendship	8.03	4.41
6. Wisdom	8.37	4.73
7. Self-Respect	8.82	4.70
8. Equality	9.02	4.78
9. An Exciting Life	9.22	5.45
10. A Sense of Accomplishment	9.43	4.71
11. A Comfortable Life	10.25	5.12
12. Mature Love	10.69	4.80
13. A World of Beauty	11.15	4.82
14. Salvation	11.19	6.32
15. National Security	11.23	4.84
16. Pleasure	11.32	4.88
17. Inner Harmony	11.54	4.52
18. Social Recognition	12.31	4.75

9th Grade  
Male  
Instrumental Values  
Drug N-86

	M	SD
1. Loving	6.47	4.75
2. Honest	6.52	4.62
3. Self-Controlled	6.97	4.57
4. Courageous	7.17	4.68
5. Responsible	7.62	4.74
6. Ambitious	8.28	4.80
7. Helpful	8.63	4.72
8. Cheerful	8.92	4.66
9. Forgiving	9.26	4.54
10. Independent	9.28	5.44
11. Capable	9.48	4.94
12. Broadminded	10.16	5.20
13. Clean	10.38	5.43
14. Polite	11.14	5.18
15. Intellectual	12.37	4.29
16. Imaginative	12.43	4.89
17. Logical	12.81	4.49
18. Obedient	13.05	3.45

## 9th Grade

## Male

## Instrumental Values

No Drug N-145

	M	SD
1. Honest	6.14	4.34
2. Ambitious	7.17	4.51
3. Responsible	7.59	4.55
4. Self-Controlled	8.01	4.69
5. Courageous	8.35	5.07
6. Helpful	8.64	4.86
7. Loving	9.21	5.44
8. Independent	9.36	5.42
9. Capable	9.52	5.08
10. Broadminded	9.68	4.90
11. Forgiving	9.88	4.99
12. Cheerful	9.93	4.95
13. Intellectual	10.07	4.98
14. Polite	10.95	4.90
15. Clean	11.15	5.39
16. Obedient	11.41	4.82
17. Logical	11.77	5.08
18. Imaginative	12.26	4.93

9th Grade  
Female  
Terminal Values  
Drug N-33

	M	SD
1. Happiness	6.03	4.41
2. A World at Peace	6.12	4.64
3. True Friendship	6.24	3.68
4. Freedom	6.61	5.01
5. Family Security	6.79	5.15
6. A World of Beauty	8.88	5.17
7. An Exciting Life	9.15	5.06
8. Wisdom	9.18	4.55
9. Equality	9.73	5.44
10. Mature Love	9.85	5.69
11. Pleasure	10.00	4.41
12. A Comfortable Life	10.39	4.34
13. Salvation	10.46	4.74
14. Self-Respect	10.91	4.71
15. Inner Harmony	11.76	3.90
16. Social Recognition	12.06	4.39
17. A Sense of Accomplishment	13.36	4.75
18. National Security	13.49	4.33

## 9th Grade

## Female

## Terminal Values

## No Drug N-77

	M	SD
1. Family Security	5.25	4.50
2. A World at Peace	5.74	4.49
3. Freedom	6.01	4.21
4. Happiness	6.40	4.27
5. True Friendship	6.73	3.81
6. An Exciting Life	8.91	5.19
7. Equality	9.03	5.09
8. A Comfortable Life	10.00	4.82
9. Mature Love	10.23	5.60
10. Wisdom	10.44	4.41
11. Self-Respect	10.50	4.41
12. A World of Beauty	10.64	4.80
13. Salvation	10.69	5.80
14. Pleasure	11.35	4.13
15. A Sense of Accomplishment	11.73	3.74
16. Inner Harmony	12.13	4.70
17. National Security	12.26	4.65
18. Social Recognition	12.94	4.24

9th Grade  
Female  
Instrumental Values  
Drug N-89

	M	SD
1. Loving	4.67	4.47
2. Cheerful	6.45	4.81
3. Honest	6.48	4.46
4. Responsible	7.64	3.90
5. Courageous	8.08	4.25
6. Forgiving	8.11	4.48
7. Helpful	8.44	4.23
8. Independent	8.57	5.24
9. Broadminded	8.75	4.77
10. Self-Controlled	9.37	4.94
11. Ambitious	9.44	5.03
12. Capable	11.19	3.95
13. Imaginative	11.32	4.88
14. Clean	11.34	5.68
15. Polite	11.84	4.55
16. Logical	12.83	4.47
17. Intellectual	13.09	4.49
18. Obedient	13.38	4.04

9th Grade  
Female  
Instrumental Values  
No Drug N-178

	M	SD
1. Honest	4.59	3.72
2. Loving	5.37	4.54
3. Forgiving	6.63	4.26
4. Responsible	6.71	3.90
5. Cheerful	7.17	4.51
6. Helpful	7.56	4.52
7. Self-Controlled	8.85	4.88
8. Courageous	9.24	4.93
9. Ambitious	9.60	4.41
10. Polite	10.03	4.49
11. Broadminded	10.29	4.98
12. Independent	10.57	4.89
13. Clean	11.15	5.18
14. Capable	11.55	4.10
15. Obedient	11.80	4.72
16. Intellectual	13.13	4.24
17. Imaginative	13.32	4.30
18. Logical	13.62	3.68

## BIOGRAPHICAL SKETCH

Charles Gray Jenkins was born in Pontiac, Michigan, on February 18, 1933. He attended elementary school and high school in Phoenix, Arizona. He received a Bachelor of Arts degree from Lewis and Clark College in Portland, Oregon, in 1956. Mr. Jenkins graduated from San Francisco Theological Seminary in 1959, receiving a Master of Divinity degree, and was ordained as a Presbyterian minister. He was married to the former Barbara Alice Faber in September of 1955, and they have two children, Brent, age 13, and Kathy, age 11. Mr. Jenkins has served churches in Alaska, West Pakistan, and Tempe, Arizona, since 1959. He began his counseling psychology studies at Arizona State University in 1967, receiving a Master of Arts degree in 1970. In September, 1971, he began his doctoral studies at Arizona State University, while serving as the senior pastor of the University Presbyterian Church in Tempe, Arizona. Presently, he is on the counseling staff at the Interfaith Counseling Service, a center he helped organize.