THE EFFECTS OF WORKSHOP TRAINING ON THE ATTITUDE-BEHAVIORS OF PHYSICIANS AND NURSES TOWARD ILLEGAL DRUG USERS: A GUTTMAN FACET ANALYSIS

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This is to certify that the

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ABSTRACT

THE EFFECTS OF WORKSHOP TRAINING ON THE ATTITUDE-BEHAVIORS OF PHYSICIANS AND NURSES TOWARD ILLEGAL DRUG USERS: A GUTTMAN FACET ANALYSIS

By

Charles B. Maclean

Statement of the Problem

Primary responsibility for the prevention, diagnosis, and treatment of substance abuse in the United States has fallen to physicians and nurses. Their own personal misuse of drugs and their complicity in the drug abuse of their patients, when combined with the general ineffectiveness of the drug treatment programs they operate, raises serious questions as to the nature of attitude-behaviors held by these "helping professionals" toward drug users.

The attitude-behaviors of nurses and physicians currently responsible for rendering emergency treatment of drug reactions in Michigan college and university student health centers were the concern of this study. Participants were selected on the basis of their exposure to a high risk student population and their self-expressed need for training in the area of drug treatment.

This study is part of a comprehensive effort¹ to research attitude-behaviors toward illegal drug users and to search for causes, determinants, and/or correlates of attitude-behaviors held by "helping professionals" dealing with the drug dependent. This study is the first to attempt to measure the ability of short term training to change attitude-behaviors toward illegal drug users and to compare changes between nurses and physicians.

Methodology

The <u>Attitude Behavior Scale: Drug Users</u> (ABS:DU) was developed by Jordan, Kaple, and Nicholson (Kaple, 1971; Nicholson, 1972). It was administered to and completed by 29 physicians and nurses both before and after a three day workshop. Attitude was operationally defined as "a delimited totality of behavior with respect to something" (Guttman, 1950).

The scale itself was constructed according to Guttman facet theory of attitude-behavior structure. It specified that the universe of attitude-behavior toward an object (illegal drug users) can be substructured into attitude-behavior Levels which are systematically related according to the number of identical conceptual elements they hold in common.

The expanded Guttman-Jordan (1968) paradigm of a five facet-six Level structure measured the following Levels of attitude-behavior: (a) what society is perceived as believing about illegal drug users (Societal Stereotype), (b) how society is generally perceived as acting toward illegal drug users (Societal Norm), (c) what one considers others believe to be right or wrong behavior concerning illegal drug users (Personal Moral Evaluation), (d) how the person believes he would act toward illegal drug users (Personal Hypothetical Action), (e) how the person reports he actually feels toward illegal drug users (Personal Feeling), and (f) how the person reports he has overtly acted toward illegal drug users (Personal Action).

The content of the questions repeated at each of the six levels was chosen from five facets: (a) causes of illegal drug use, (b) characteristics of illegal drug use, (c) reasons for treatment, (d) types of treatment, and (e) consequences of illegal drug use.

The scale consisted of 120 items plus a "Personal Data Questionnaire" of 41 items to gather data in five areas: (a) demographic, (b) change orientation, (c) efficacy, (d) legality-treatment-care, and (e) contact with illegal drug users.

The ABS:DU scales according to a "simplex" statistical structure which provides not only multidimensional measurement, but also a means of assessing construct validity.

The experimental treatment occurring between administrations of the ABS:DU was a three day training session dealing with emergency diagnosis and treatment of drug reactions. It emphasized examination of one's personal attitude-behaviors, treatment of simulated drug patients; followed by videotape feedback, multi-media and street theater stimulus, and the experiencing of alternative life styles. The training format was designed and implemented by the author and sponsored by the Michigan Governor's Office of Drug Abuse in October 1971. Replication of the complete workshop and testing is possible with a training package available from the author.

Results

The results indicate that the ABS:DU does provide six measures as hypothesized; i.e., simplex approximation. Statistically significant differences between pre- and post-test scores were found at Level 2 for physicians. At all six Levels, nurses as compared to physicians, appeared (though not with statistical significance) to become more favorable, or at least less unfavorable, in their attitude-behaviors toward illegal drug users. This observation challenges previous studies which characterize the attitudes of physicians as being more "enlightened" and "less judgemental" than those of nurses.

Items in the "Personal Data Questionnaire" were analyzed to ascertain varied uses of the ABS:DU and to provide evidence for needed change in the medical education of physicians and nurses. It was found that before the workshop training only 55 per cent of the participants "strongly disagreed" with the belief that "Most bad trips should be handled by administering antagonists" while afterward 86 per cent strongly disagreed" with the statement. On the pre-test 69 per cent of the participants "strongly agreed" that "Considering the medical need for amphetamines, pharmaceutical houses overproduce these drugs" and on the post-test 90 per cent "strongly agreed." Following the workshop 93 per cent of the participants "strongly agreed" that "Emergency drug treatment should be a part of medical and nursing school curricula" whereas before the workshop only 76 per cent "strongly agreed." It is encouraging that 97 per cent of the physicians and nurses came to value the "trained paraprofessional as a resource in the college health center for drug crisis intervention." This reflects a major change in attitude between tests for both groups and the possibility of trained paraprofessionals being invited to work with "health care professionals" in emergency and diagnosis treatment of drug reactions.

Specific explanations were advanced to identify the source of the relatively negative attitude-behaviors of physicians and nurses toward illegal drug users. A "Prediction Model" was developed to explain the psychosocial factors operating in the doctor-drug patient relationship.

¹The larger international study of attitude-behaviors toward drug use and drug users is under the direction of Dr. John E. Jordan, College of Education, Michigan State University, East Lansing, Michigan, 48823.

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A GUTTMAN FACET ANALYSIS

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A THESIS

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Department of Administration and Higher Education

College of Education



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"He who understands the situation is not fully informed."

patient to his psychiatrist

(in H. L. Lennard, <u>Mystification and Drug Misuse</u>, 1971, p. 69.)

DEDICATION

To Edward B. Blackman, a warm uncommon human being and model.

PREFACE

This study is one in a series, jointly designed by several investigators, as an example of the "project" approach to graduate research. A common use of instrumentation, theoretical material, as well as technical and analysis procedures were both necessary and desirable.

The authors, therefore, collaborated in many aspects although the data were different in each study (Kaple, 1971; Nicholson, 1972) as were certain design, procedural, and analysis methods. The interpretations of the data in each study are those of the author.

ACKNOWLEDGMENTS

This thesis is the outcome of a cooperative effort by many people. The nurses and physicians who were willing to disclose their attitude-behaviors and participate in the uncertainty of an open learning situation are very special people. They are putting the "caring" back in the "health care professions."

Dr. Laurine Fitzgerald has stood by me in my errors and helped turn them into insights. As committee chairperson and advisor she pushed when I couldn't and left me freedom when I needed it.

Dr. John Jordan held the carrot of Israel before me as an incentive. His researchmanship and conservative-radicalism mark him as a person of impact. The tradition of "project research" that he fostered has removed many of the hurdles to productive graduate research.

Dr. Thomas Stachnik and Michael Gieszer believed that a nonphysician could teach medical professionals. They funded the training and made the research possible. Their openness to untried teaching techniques helped make the workshop an innovative and fruitful experience.

As a change agent, Dr. Everett Rogers has provided a viable role model. Creative cynicism was aptly taught by Dr. Samuel Moore. Dr. Ronald Richards was empathic yet realistic in conveying the constraints of graduate student status.

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To Virginia Wiseman, the power behind the Dean, go special thoughts for her help in running the maze. Both Sue Thrash and Kowit Pravalpruk were most patient in helping the statistically indigent. Dan Seyb is remembered for his part in the computer conspiracy. Grace Rutherford typed to meet deadlines and took pride in her work. Roland Bouffard with his negative reinforcement unknowingly sparked me to try harder.

Dr. Bill Nicholson shared a great deal of his intellectual wealth and understanding. He continues to be a valued friend.

And to Sara G. B., . . .

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CHAPTER I

INTRODUCTION

Substance abuse looms as the "Achilles Heel" of U.S. society. The role of the medical profession in prevention, diagnosis, and treatment of the abuser of drugs, has been "inglorious" to date; it has too much been involved in creating the dilemma (Ungerlieder, 1972). Drug abuse, as a symptom of other things gone wrong in a person's life, has not been alleviated by the medical model. Even the definition of "cure" and the incidence of "success" have been subject to heated debate.

Drug misuse promises to be a continuing malady facing the country. Each citizen, as well as every nurse and physician, must begin to ask probing questions about his role in this pandemic. What is drug abuse for me? How do I contribute to the abuse of drugs by my family, patients, or friends? What are my attitudes toward individuals who use drugs other than those I choose to use? How are my attitudes reflected in the way I relate to those whom I define as drug abusers?

The present study is concerned with the determination of the predominant attitude-behaviors that physicians and nurses have toward their patients who use illegal drugs. In addition, it will compare the attitude-behaviors between the two groups and determine whether the attitude-behaviors once identified can be changed in a more favorable direction as a result of a specific type of short term intensive training.

Extent of Drug Abuse

Drug abuse is defined as that form of drug taking that "interferes with an individual's interpsychic or internal equilibrium, his social effectiveness in his daily life, his job, or in his relations with other people" (Ungerleider, 1972, p. 505). A drug is any substance that "by its chemical nature, alters structure or function in the living organism" (Cannabis, 1972, p. 382). Thus coffee, alcohol, diet pills, tobacco, aspirin, as well as heroin and marijuana are included. These definitions do not include "food addiction," "television addiction," and "work addiction" as self-destructive drug related behaviors, but the reader may well substitute these actions in place of "shooting up"; "getting high"; "snorting"; and "having one for the road" in examining one's own, and one's physician's attitudes toward drug taking.

It has been suggested that changes in states of consciousness and varied forms of stimulation are innate organismic needs (Weil, 1972a). Drugs may fill those needs immediately, inexpensively, and effortlessly. It is important to note that historically and crossculturally the predominant uses of drugs have been for social and religious purposes. The use of drugs as an escape mechanism from reality constitutes the smallest portion of such use (Blum, 1970, p. 22). A thorough review of historical data suggests, however, that as cultures become more complex and diversified, or subject to rapid and often disruptive social change, the incidence of substance abuse increases (Wilson, 1972). Relative to the present:

Drugs are defined as a problem in the U.S. society for all the well-chronicled reasons: puritanism, functionalism, bewilderment, etc. Once a drug is categorized as prohibited (for any reason), its use is always considered abuse (Kopkind, 1971, p. 40).

Researchers have too long focused on "Who uses what, when?" Statistics on incidence and prevalence have been contradictory and self serving (Einstein, 1972). Worth stating is the observation that in the United States the only "deviant" is the person who <u>doesn't</u> use drugs. The distinction between drug use and drug abuse is an individual specific state; one that cannot alone be delimited by moral suasion, legislative dictate, or medical mandate.

The Historical Role of the Medical Profession in Treatment of Drug Abuse

At a recent meeting of the American Medical Association, President Nixon assured the group that "the best way to end drug abuse is to prevent it, and America's doctors are indispensable front-line soldiers in this all-important battle" (Wykert, 1972, p. 54).

In looking to other areas under the aegis of the medical expert; venereal disease is seen to be out of control and alcoholism treatment is scarce and inconsistent (Wykert, 1972). As with other ills our society has been unable or unwilling to cope with, drug abuse has too often been labeled a "medical problem" and relegated to the traditional "healers" for their attention (Szasz, 1972, 1965). The medical professional has been placed in an "all knowing" capacity by patients, politicians, other professionals and sometimes by his own doing. Voltaire overstates the historical role of the medical profession in saying: "Doctors pour in drugs about which they know little, to treat diseases of which they know less, in human beings of whom they know nothing" (Zarafonetis, 1972, p. 7). He is tempered by Sir William Osler who lends perspective in stating: "The desire to take medicine is perhaps the greatest feature which distinguishes man from animals. . . ." The task of the medical profession, "was educating the masses not to take medicine" (Gravel, 1972, p. 212).

The early muddling of the medical and psychiatry professions in drug use and treatment is painfully exemplified by Sigmund Freud's discovery of the unanticipated and hidden consequences of the psychoactive drug cocaine. After personal use, Freud recommended that cocaine be used to cure morphine addiction in his friend Ernst Flesichl-Marxow. The unwittingly induced suffering which it produced led Freud to refuse to use or prescribe any drugs, even to relieve pain. Fearing a clouding of consciousness, abstinence was his resolution of the conflict between the benefits and the costs of drug use (King, 1972, p. 16; Lennard, 1971, pp. 3-5). Excerpts from three historical reviews of the physicians role in the drug scene provide a cohesive background for further discussion.

Under representative case experience is likely to be overemphasized by the profession, just as law-enforcement officials and other moral entrepreneurs are likely to report "crime waves" on the basis of under representative and biased statistics, so are physicians likely to report "epidemics." Such reporting behavior is especially likely to occur when some new and rather dramatic practice or behavior excites the public morality (Becker, 1967).

When marijuana first attracted public attention in the 1920's and early 1930's physicians began reporting psychoses associated with its use, reports which disappeared by the 1940's but which seem to have been renewed in the late 1960's when marijuana became prominent in the public eye. It stresses the patient as the source of such reports but it is just as possible that it is the physicians aroused moral interest (Goode, 1969).

. . . The quantitative weight of medical opinion (advanced in spite of the fact that the physician is in a very poor position to come into knowing contact with a fair crosssection of users) seems in the face of the evidence available, to bend over backward to be conservative and to overestimate the potential dangers of (marijuana) use (Mechanic, 1968, p. 275).

The application of the medical model to drug abuse assumes a psychiatrically diseased person in whom drug abuse is symptomatic. This approach is basically chemotherapeutic, with the greatest attention paid to the assumed symptom of this disease, the drug itself. The traditional problem solving response of prescribing a drug remedy for every malady neglects the sociologic and anthropologic context (Meyers, 1972; Milstein et al., 1972; Rohrs, 1972).

Many laymen and some doctors as well will use the concept of disease to discuss aspects of people and situations they find repulsive, threatening, or in need of remedy, these, however, are social judgements and not medical ones. Similarly, doctors often use such metaphors when they are really rendering social judgements, and because doctors are experts in disease we often assume the correctness of such labels without careful scrutiny (Mechanic, 1968, pp. 110-111).

In the course of obtaining monopoly over its work, medicine has also obtained well-neigh exclusive jurisdiction over determining what is illness and therefore how people must act in order to be treated as ill. In the sense that medicine has the authority to label one person's complaint an illness and another's complaint not, medicine may be engaged in the creation of illness as a social state which a human being may assume (Freidson, 1970, p. 210). The jurisdiction that medicine has established extends far wider than its demonstrable capacity to "cure." Nonetheless success at gaining general acceptance of the use of "illness" to label a disapproved form of behavior carried with it the assumption that the behavior is properly managed only by the physician (Freidson, 1970, p. 251).

Each of these related quotations is uniquely descriptive of the plight of social deviants (drug abusers); indiscriminate medicalization. They have become wedded to an obsolete medical model of human behavior; one that is based on the concept that all psychological problems have physiologic causes (Rogers, 1971). Medical supremacy has been supported by the pharmaceutical industry as well. They too are interested in defining more problems as medical ones in order to justify both a medical model and the intervention with drugs which they produce (Lennard, 1972).

The outcomes of continuing in this direction are predominantly negative. Writing pharmacological prescriptions provides an easy out for the M.D. trying to combat use of self-prescribed street drugs. Regardless of the adage, "fight fire with fire," drug solutions prevent the person from learning how to cope with his problems. They may reduce the persons willingness to interact with others and impair the body's self-regulating physiological and psychological functions. Thus the traditional image of the physician as expert, and benign, begins to evaporate. The doctor has isolated himself by not considering more relevant non-medical approaches. In addition, it has forced him to function inefficiently outside the area of his competence (Rogers, 1972; Wykert, 1972). It is suggested that referral to other community resources be encouraged. The preventative role is a health care problem; not a medical problem. Donald Aronti, M.D., sums up the crux of the conflict: "I think that if those of us as physicians and as other professionals could get over the hangup of preserving our roles and learn how to share responsibility and power, the rest of it would come along" (Aronti, 1972, p. 40). The role of the physician at present seems to be one of either non-involvement through avoidance, or sole involvement. Unless the medical profession becomes involved in a community based multi-disciplinary effort, decision-making power will be taken out of their hands. Such has been the case with restriction of amphetamine production by the Food and Drug Administration (Smith, 1972). Good health care is now being viewed as a right, not a privilege. The Black and Puerto Rican communities have charged that present "acceptable" treatment modes have been designed by white physicians alone, and have little applicability to black and brown addicts. They argue that the "self-proclaimed" drug experts have raised false expectations, drained the energy of community people and funneled federal money into pet programs. The exploitation by the professional program "pushers" has played on the paranoia of communities riddent by drug related street crime (Who Benefits, 1970, p. 2; Einstein, 1972). A line from a street theater presentation paraphrases the fears of some militants: "I think it's a credit to the community that since the use of heroin became widespread in the Ghetto we haven't had a single riot or expression of discontent" (Drug, 1971). It has been argued that programs such as methadone and heroine maintenance and civil commitment proceedings are political manipulations aimed at body and mind control akin to the SOMA of Brave New World (Huxley, 1932).

Since its [medicine's] focus is on the practical solution of concrete problems, it is obliged to carry on even when it lacks a scientific foundation for its activities; it is oriented toward intervention irrespective of the existence of reliable knowledge. The practitioner is more comfortable in doing something, and so is led to use drugs and other procedures more than might be indicated--inclined to fear doing nothing (Freidson, 1970, p. 163).

In asking how well the medical model has worked in the treatment of the illicit drug user, Donald B. Louria, M.D., concluded that the success rate has been non-existent (1972). In many minds medical competence in the area of drug abuse is a myth. Increasingly, consumers of medical services are calling for "citizen review," no longer being willing to entrust their welfare solely to physicians (Rogers, 1971). The time has come for the medical profession to redefine its areas of competence, become less territorial, and become accountable for its interventions in the realm of human behavior called drug abuse.

Prosecution of Physicians Under the Harrison Act

The hesitation with which the medical profession approaches the area of drug abuse can in large measure be attributed to persecution and harassment by U.S. Treasury agents, beginning in the 1920's and continuing under the direction of Commissioner Harry Anslinger, of the Bureau of Narcotics and Dangerous Drugs, until 1965 (King, 1972). In this era the medical profession in the United States relinquished, under pressure, its role in dealing with addiction (King, 1972; Lindesmith, 1962; Schur, 1964).

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:) ; The Harrison Act (1914) originated as a "mild regulatory measure consisting of registration and record-keeping requirements to which a moderate federal tax was added in 1919"(King, 1972, p. 21). For the next fifty-six years this statute was continually misconstrued and arbitrarily enforced. Its intended purpose was to bring domestic drug traffic to an observable level.

In the early 1900's the user of opiates was not viewed as a major social or medical problem. In fact the alcohol abuser received much greater moral indignation and some physicians even advocated the use of opiates as a cure for the alcoholic. In a period of 20 years, public and law enforcement attitudes had changed so drastically that both opiate addicts, and physicians who attempted to treat them by administering small amounts of the drug, were classified criminals. This repressive attitude, which failed to cure the addict, has changed little during the ensuing years and the medical ethic today remains basically the same (Boyd, 1972, p. 40; Jaffee, 1972, p. 14). It should be noted that ". . . from the year of the Harrison Act to 1938 it is estimated that 25,000 physicians were arraigned and 3,000 served penitentiary sentences on narcotic charges. About 20,000 were said to have made a financial settlement. . . For most it should be reiterated that they were following the then accepted medical precepts" (Report, 1963, p. 433).

The provisions of the Harrison Act were not meant to restrict the dispensing or distribution of controlled drugs by legitimate practitioners. A series of court decisions, later overturned, confused the questions of what constituted legitimate practice in dispensing

drugs, and what was acceptable withdrawal regimen. The U.S. Supreme Court, in the Linder Case, 1926, removed the restrictions on treating addicts but it had no effect on restraining the Treasury Department's war on physicians. Thus this federal police bureau continued to dictate the terms under which a doctor could prescribe a narcotic drug for a patient. The smuggler and peddler population to which the act was originally addressed was extended through the efforts of the Treasury Department to create a larger criminal class to be policed. It included the doctor-patient-addict-peddler community and narcotic agents who became involved in bribery and peddling themselves (King, 1972; Kolb, 1962; Report, 1963; Stokes, 1963). As if this attack were not enough, the Prohibition Commissioner of the Treasury Department closed the 44 narcotics dispensing clinics which had been established in 1919 by the federal government. King summarized the results in saying: "Thus cops and pushers found themselves identically interested in squeezing the addict by cutting him off from possible help as a patient, and have maintained a de facto partnership ever since" (King, 1972, p. 40).

The circle had been completed; addict patients had been abandoned forcing them into illicit traffic and crime; physicians had been detered from addressing the addicts' needs by imprisonment and oppression; the public attitude toward the addict had been altered to view the addict as a dangerous criminal or moral degenerate.

Organized medicine, through the American Medical Association (A.M.A.), was less than valiant in fighting for the rights of its physician members and for the health and welfare of addicts. By not making a definite statement on the precise circumstances under which

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narcotics could be properly administered to addicts the A.M.A. left it physicians in an ambiguous position. The physician "could in good faith, treat an addict with opiates, but he could not be certain that in the event of prosecution, his position would be supported by his medical colleagues" (Jaffe, 1965, p. 93). Acquiescing to the Treasury Department, the A.M.A. wholeheartedly endorsed the closing of the government drug clinics. "Until the late 1950's, the A.M.A. consistently and vehemently opposed all 'ambulatory' methods of treatment of drug addiction, whether practiced by the private physician or by the so-called narcotics clinic or dispensary" (Who Benefits, 1970, p. 6). Only the Federal Public Health Service did not opt out on its responsibility to treat the addict. Their meager attempts to lend medical respectability to addiction were witnessed in the facilities at Fort Worth, Texas and Lexington, Kentucky.

The damage has been done. Doctors avoid addicts and the risk of court cases, reasoning that whether they win or lose, bad publicity could cost them their careers. Worse yet "forty years valuable time has been lost; what new and better methods of treatment might have been found by research will never be known" (Report, 1963, p. 466).

This fear of the law and awaiting of trial cases before operating under liberalized drug treatment codes is prevalent among physicians and nurses in Michigan today. Public Act 241 which allows treatment of minors for drug dependence without parental consent is seldom being invoked (Legal, 1971).

Failure of Medical Schools

In terms of preparing medical professionals to deal with drug abuse, designers of nursing and medical school curricula have been slow to respond. A survey of Michigan nursing and medical schools revealed that, at the time that this attitude research was begun, August, 1971, none of these institutions had a formalized course offering in the area of drug abuse. Since that time at least two of the four medical schools in Michigan have begun partial course offerings patterned after a workshop approach of which this scene and attitude survey was a part. Medical students and professionals attending the National Free Clinic Conference in Washington, D.C. in January, 1972, indicated that in many instances where such training programs do exist they were initiated only at student request.

An eminent medical sociologist has observed that:

Doctors trained in a traditional medical school with its emphasis on the very sick patient often fail to develop an appreciation for the prevention and social aspects of the medical role. When he is called upon to perform these functions he approaches them from a traditional hospital perspective and thus they may seem to be unimportant and trivial chores. He becomes frustrated and bored which does little to insure the quality of medical care. Moreover as the doctor feels more isolated from the type of practice which his training emphasized, he frequently feels less incentive to acquire new medical knowledge and maintain his skills (Mechanic, 1968, pp. 353-354).

This sequence of events would appear to be applicable to both physicians and nurses as they are confronted by the illegal drug users.

David Smith, M.D., founder of the Haight-Ashbury Free Clinic observes that "except in a few major medical centers nothing is taught about drug abuse in medical school. The average physician has little

exposure to the illegal drug scene and when he is challenged with management problems in the area of drugs, he is usually poorly prepared to respond to the needs of those who come to him for help and consultation in a crisis of this kind" (Smith, 1972, p. 272). Members of the Michigan State Medical Society Committee on Alcohol and Drug Dependence noted that "the attitude of physicians gets in the way of [drug] treatment . . . the State Society could help to change attitudes. The family physician is expected to give guidance to parents to help them cope with their own problems in their own lives but he gets little training for the role of counselor" (Committee, 1970, p. 4). The Medical Manpower Director of the President's Special Action Office for Drug Abuse Prevention concurs, saying "the practicing physician has little practical experience in this [drug] area. His formal medical education usually does not include course work on prevention, treatment, and rehabilitation of the drug users, and little experience is gained through the usual intern and resident programs" (DeAngelis, 1971, p. 1). Underscoring this concern, C. D. J. Zarafonetis, M.D., speaking at the International Symposium on Drug Abuse said, "Unfortunately medical education and post-graduate training in recent years have emphasized disease and system-specialization which, while meeting important clinical objectives, has left many ill prepared to deal with drug abuse as a medical entity" (Zarafonetis, 1972, p. 7). John A. Gronvall, M.D., Dean of the University of Michigan Medical School, supported Dr. Zarafonetis saying, "we as physicians do not have the kind of broad base information that will allow us to deal effectively with the drug abuse problem" (Gronvall, 1972, p. 3). Even the American Medical

Association after repeatedly admonishing medical schools to revise their curriculums to teach students how to cope with alcoholism and other drug abuse, admitted that despite growing public concern and enabling Federal and state legislation, medical schools had taken little action to expand their educational programs in these areas (A.M.A., 1972; Medical School, 1972; Medical Schools, 1972). Recognizing this void, the Student American Medical Association has begun a series of drug treatment workshops on a voluntary unaccredited basis. In planning new curricula it should be remembered that teaching pharmacology of street drugs is not enough. Alfred Koumans, M.D., observes that "doctors who would not hesitate to treat a belladonna delirium, an alcoholic hallucinosis, a stupor induced by barbiturates, or a manic excitement often have difficulty treating not very dissimilar clinical conditions when the patient is young, long-haired and toxic from a drug. . . . Behind the patient stands a culture strange and often frightening to him. The newness of the situation is not medical but social" (Koumans, 1972, p. 381).

Hilliard Jason, M.D., Ed.D., former director of the Michigan State University Office of Medical Education Research and Development, broadens the scope of concern with regard to the slow change in medical education:

Medical education has been like religion: we have had no objective basis for our activities, but we have developed firm rules to guide our behavior. Frequently, the less justification people have for certitude, the more definitive they become in their beliefs (Jason, 1970, p. 1).

The plight of the practicing physician when faced with his continuing medical education overshadows the problems encountered by medical students. Floyd C. Mann, Ph.D., of the Center of Research on
Utilization of Scientific Knowledge at the University of Michigan, completed a massive assessment of the continuing medical education needs of a sample of 1,102 medical doctors and osteopaths in Michigan. Results characterize the general practitioners as most worried about how good a job they were doing and fearing that they were not keeping up to date in medical education. They expressed a need for practical training as opposed to the overly academic continuing medical education programs that they had seen sponsored by the state's medical schools and medical societies; they cited the medical journal as a most important source of information but devoted only 5 per cent of their work week to reading. A later section of this thesis will deal with the quality and bias of these journals. The general practitioners sampled were older and although they were aware of their deficiencies, they were less motivated to overcome them. The physician in practice, even more than the medical student, appears isolated from the mainstream of medical information (Mann, 1972).

Avoidance of Hospitals by Drug Abusers

The youth culture has perceived and perhaps accurately the tacit position of hospital staff toward drug abusing patients, "If they choose that sort of life, let them suffer the consequences of it" (Matzger, 1971, p. 59). The confidentiality question arises because ". . . alienated young people who use drugs fear public hospitals and health clinics as institutions which not only cooperate with the police, but scorn and abuse the long-hair patient and pose judgements on him" (Schwartz, 1971, p. 154). Those staff members who do show some

compassion and competence in the area of emergency treatment of drug reactions often do so only as long as the patient follows their orders without question. The physical setting of the emergency room itself with its strange smells, bright lights, and white clad figures tends to aggravate and accelerate the reactions and fears, of the hallucinogen user that he is going crazy. "There are too many hospital emergency rooms where people with long hair and different dress are treated with hostility and contempt" (Ungerleider, 1972, p. 508).

Some physicians believe that if they turn every "trip" into a "bad one" the patient will be deterred from using drugs again (Bates, 1969; 1970, p. 871; 1972). This conception raises the largely unresolved question of whether attitudes toward illegal or legal drug abusers can be too "favorable" or too "positive" rendering the helping person unable to confront the client or help him to change his behavior. The preponderance of evidence suggests that physicians and nurses err most often in being too "negative," "authoritarian," and "judgemental" early in their relationships with the drug patient. Thus the doctor or nurse never develops a relationship of trust and concern. Without this basis of emphathic honesty, the relationship cannot reach a point where open confrontation and values clarification, if needed, can be fruitful.

When a system fails to meet the needs of a large enough audience, an alternative system is developed to replace the original unresponsive one. This has been the genesis of the "Free Clinic" in the United States. Paul Brenner, M.D., describes free clinic patients as wanting "a banner to rally under and an experience to share; a place to feel

wanted; a place away from home; not only a clinic to be treated in, but a clinic in which they can serve and offer volunteer services as lay nurses and even as lay physicians. They want a place where their ethics and politics are not questioned but serve as their I.D. card" (Bloomfield, 1972; Free Clinics, 1972, p. 8).

Physicians and nurses cannot be ordered to change their style of behavior toward drug abusers. It is a human tendency to avoid situations and persons who make one uncomfortable. Likewise if one feels unprepared to deal with a situation it will be avoided. Unless a state of readiness to function is felt by the helper, he will sabotage the system that expects him to do things he is unready to do. It would appear that the only way to change the health care provided to the abusers of drugs is to:

. . . change the kinds of people who are doing the providing. And, the only way that can be done, I think, is through the educational process. It seems to me that what we need if we want a new health <u>care</u> system is new health <u>careers</u>-people who can not only live with, but understand the importance of, ambiguity and uncertainty, who can relate to people in a way that demands of them the kind of behavior that we do not typically see; namely, the kind of professional behavior involved in extending oneself on behalf of others, and in establishing a substantial relationship with one's patients (Jason, 1971, p. 4).

Perceptions of Drug Users

Two polar descriptions of the typical physician and nurse tend to be verbalized by drug abusers. The first, pictures the physician like many parents, as being frightened and anxious about the drug problem and often overburdened by mythology and prejudice. These fears and ignorance make the doctor reluctant to even mention drug abuse to teenagers, thus investing the whole idea of experimentation with street drugs with an aura of forbidden secrecy. The youth reasons that if even discussion is taboo, then it must be very exciting and pleasurable indeed (Ungerleider, 1972, p. 504).

The other stream of thought and experience pictures the medical professional as an authority figure who will "fink" on the youthful drug user either to his parents or to the police. This attitude leads the individual to either avoid all contact or to attempt to "con" the doctor of prescriptions (Boyd, 1972).

Physicians often introduce kids to a pattern of psychotropic drug use to cope with everyday problems. Paradoxically such drug use at a later date, for the same purpose, but without a physician's prescription, is deplored by the physician and the community (Lennard, 1972). Lack of credibility and charges of hypocracy from youth should not be surprising.

When youth continually see the medical profession employing scare tactics and spreading misinformation about street drugs like marijuana, such drug education efforts become a hoax (Halleck, 1970). Thus when the physician warns of the dangers of heroin or amphatemines he is not believed. Information, whether accurate or not, falls far short of the need.

Often volunteers at crisis centers hear youth describe physicians and nurses as expecting reverence and gratefulness from them as patients. Even access to a physician is difficult. David Bearman, M.D., director of a Free Clinic in California, charges that "medical

centers and physicians often select their clients by putting up subtle barriers to those who are not acceptable for either ethnic, political, or social reasons" (Bearman, 1971, p. 99). In fairness to the medical professional it should be noted that "the emotional impact . . . of a confrontation with a sick youth is hard to face with equanimity. Nobody likes to see 'wasted' that which he himself has lost--youth" (Koumans, 1972, p. 382). Perhaps equally frightening is the ever present thought that this patient could just as well have been his son or daughter.

While this may be a valid explanation for the adversarial or avoidance behavior of the medical profession, it does not justify or erase the placing of personal biases above client needs.

It cannot be denied that whether accurate or inaccurate the perceptions of youth toward the traditional healers determine their role. There is no treatment unless there is a willing patient.

The Pharmaceutical Industry's Alliance with the Medical Profession

The magnitude of the pill pipeline between the pharmaceutical industry, the medical industry, and finally to the patient is dramatically illustrated by the following statistics:

- "60 per cent of the doctor's offices don't need to be there"
- "66 per cent of those who visit a doctor receive a prescription"
- "60 per cent of prescriptions written are not medically justified"
- "50 per cent of prescriptions written are filled by the patient"

• "10 per cent of prescriptions filled are taken as directed" (Burack, 1970; Jason, 1972; Lennard, 1972; Lynn, 1972; Torrey, 1972).

Testimony before a subcommittee of Senator Gaylord Nelson's Small Business Committee revealed that general practitioners, who prescribe 70 percent of the psychotropics, know little or nothing about pharmacology. Further, they are almost helpless in weighing the scientific basis for the claims made in ads by the pharmaceutical industry (Gravel, 1972, p. 210). John N. Kotre, Ph.D., in a study of Michigan physicians (1971), showed that the general practitioner spends less time than three other groups of physicians in contact with other doctors and more time in contact with detail men, the corporate pushers of the drug industry. The general practitioners reported that they found more value in their contacts with "detail men" (drug salesmen). Consider that the drug industry spends more than three-quarters of a billion dollars each year on advertising directed solely at physicians. Because they depend on the country's 180,000 physicians to sell their prescription drugs, \$4,200 is spent on each of them to remind, cajole, and pamper (Burack, 1970; Gravel, 1972; Rogers, 1971, p. 18).

Patients are being exploited by some well-known corporations with astonishingly disreputable records, including federal convictions for criminal offenses. This is happening only because the medical profession, the group entrusted with defending the patients, has fallen under the spell of men who claim to be ethical but who, like many businessmen, are governed by market-place morality (Burack, 1970, p. 7).

In his opening statement before the Subcommittee on Monopoly of the Select Committee on Small Business, July 30, 1969, Senator Gaylord Nelson said, "There is a growing concern . . . that the increasingly

close financial relationship between the drug industry and the medical profession may be contrary to the best interests of the profession and the public" (Nelson, 1969, p. 5480). Henry L. Lennard, Ph.D., in <u>Mystification and Drug Misuse</u> concludes that:

One result of this relationship seems to be an increase in the prescription of all drugs. We are concerned that the contemporary trend of increasing prescription of psychoactive drugs is contributing to the recruitment of more and more persons into a way of life in which the regulation of personal and interpersonal processes is accomplished through the ingestion of drugs. Thus, when a physician prescribes a drug for the control or solution or both of personal problems of living, he does more than merely relieve the discomfort caused by the problem. He simultaneously communicates a model for an acceptable and useful way of dealing with personal and interpersonal problems. The implications attaching to this model and its long-term effects are what concern us (Lennard, 1971, pp. 23-24).

These concerns are not new. In evaluating the medical industry's claims or disclaimers for todays drugs it might be judicious to recall that following World War I, a cigarette advertisement included the implied warranty "more doctors smoke brand X than any other cigarette." Once again the image of the physician as universal healer and source of wisdom had been exploited with little resistance from the profession (Steinfeld, 1971). Television, the "electronic hypochondriac," tells us that "four out of five doctors recommend aspirin." Children watching the morning kiddie shows are told they too can pop a pill--a vitamin pill--and feel better fast. In 1970 three drug companies spent \$19,000,000 to convince kids to be like their parents. Recent studies show positive association between parental use of psychoactive drugs, alcohol, and tobacco as reported by students and student psychoactive and hallucinogenic drug use.

Children raised by parents who regularly take their medicine in capsules are three to ten times more likely to become drug abusers, than are children whose parents do not (Gravel, 1972, p. 142; Smart, 1972, p. 153). The point being made is that drug advertising has become by itself "a major public health problem," one in which the supposed protectors of public health, the medical profession has not seen fit to intervene.

Another seeming partner to the alliance has been the federal government. The Comprehensive Drug Abuse Prevention and Control Act of 1970 bears witness to the Nixon Administration's national policy which declares an all-out war on drugs which are not a source of corporate income. Senator Thomas Dodd and Congressman Claude Pepper led a fight against this bill which protected the profits of the drug industry and whitewashed the dangers of amphetamines (Graham, 1972). Returning to the role of advertising, Senator Dodd declared that:

Multihundred million dollar advertising budgets, frequently the most costly ingredient in the price of a pill, have, pill by pill led, coaxed, and seduced post-World War II generations into the 'freakedout' drug culture. . . . Detail men employed by drug companies propagandize harried and harassed doctors into pushing their special brand of palliative. Free samples in the doctor's office are as common nowadays as inflated fees (Graham, 1972, p. 16).

Senator Dodd also recognized that the source of resistance to control of drug manufacture was not based on sound medical practice but on unethical profits, corporate earning placed above the public good.

It becomes clear that the drug industry, not the medical school, "educates" the physician about drugs but not about the economics of prescribing generic drugs. Misuse of licit drugs like stimulants,

tranquilizers, and antidepressants has made even heroin traffic a minor problem in terms of suffering and economics (Wykert, 1972, p. 54). Recalling that Michigan general practitioners reported the medical journal as their primary source of keeping up to date, the nature of these journals deserves examination (Kotre, 1971, p. 16).

More than a million dollars annually is spent to break down the physicians' resistance to drug use. Most medical journals are supported in part by drug company advertising; some were founded and are delivered without subscription charge and paid for entirely by the advertising of drugs. "The pages are laced with ads designed to persuade the physician to prescribe psychotropics for almost every imaginable ailment, anxiety, and depression. The idea seems to be that if the doctor's diagnosis does not definitely indicate a specific treatment other than psychotropics, then that must be the treatment" (Gravel, 1972, p. 142). This financial dependence, coupled with the physicians inability to weigh the scientific basis for claims of ads, leads to a costly if not deadly outcome for the patient.

The profession, especially its supposed leading organization, the American Medical Association, deserves ethical and moral blame for developing a severe drug dependence problem of its own. Apparently for no better reason than money, the A.M.A. publishes even the most aggressively exploitive ads, including those that are patently in violation of the associations own stated policy on drug advertising. There has been no major effort undertaken to unite the profession against the pharmaceutical industry, and anyone suggesting to the A.M.A. that doctors should receive their information on drugs solely from unbiased scientific sources is likely to receive the answer that such a step would mean higher subscription rates for the journal (Gravel, 1972, pp. 211-212).

It is somewhat ironic that one of the country's wealthiest professions should be so dependent on drug company money for their journals, doctors' bags, and continuing medical education programs. Considering that 50 per cent of the American Medical Association's (A.M.A.) operating budget comes directly or indirectly from the drug industry, the hesitation to break the alliance becomes one of expediency (Lennard, 1972). The drug industry is not giving "gifts," it is making "investments."

In a very recent communique the A.M.A. deplored the quality of scientific reports about the benefits and risks of drugs that had been published, not only in its own journal, but also in other medical publications. This was followed by a warning of the dangerous implications for patients whose doctors prescribed better psychological living through chemistry (Medical School, 1972; Medical Schools, 1972). Still the messages of the drug advertisements remain one sided with no opposing arguments presented; little critical debate takes place among physicians themselves.

It should not be surprising that it is ". . . the usual policy of the A.M.A. Journal not to print opinions of disagreement with the position of the House of Delegates or Board of Trustees, a fairly united front is presented to the outside world by the association when it acts as the official spokesman for the profession" (Freidson, 1970, p. 28).

Doctors As Addicts

The largest hidden drug dependent population may be the medical profession itself. S. Garb, M.D., estimates that drug dependence among

physicians alone may be 10 to 20 times more frequent than in other classes of American adults (Garb, 1969, pp. 129-133). Other studies in the United States reveal that from 1 to 2 per cent of all physicians will become addicted, usually to meperdine (Demerol) or barbiturates at some time during their practice. Alcohol continues to contribute most to physician drug dependence (Halliday, 1970; Lynn, 1972). These percentages are based on known and reported cases of addiction among the ranks of the profession. The known incidence of drug dependence among physicians in British Columbia, Canada, is .35 percent. Across Canada the toll adds up to two full medical school graduating classes each year. Relative to the total known addict population in a country; doctors make up 15 per cent in German, Holland, and France, and a questionably low 2 per cent in Great Britain (Halliday, 1972).

A paradox presents itself. This is a population that is supposedly knowledgeable in the pharmacological effects of drugs and one that has observed and treated patients with drug abuse problems. Given this cognitive understanding, strong mediating forces must be operating to negate the impact of experience and training in the psychological and physiological dangers of drug misuse. Factors of availability, feelings of inadequacy, self medication, denial ("Drug dependence can't happen to me"), and dramatic rationalization ("I need drugs to counter overwork and fatigue so I can live up to my responsibilities to my patients"), mirror the confounding nature of attitudebehaviors (Little, 1971). There is a tendency among physicians to ignore their own psychiatric symptoms and a reluctance to seek or act on advice of fellow physicians. They fail to take medication as

prescribed and often discontinue treatment prematurely. In this study 17.2 per cent of physicians' illnesses were due to drug dependence. Dr. Robert Halliday suggests that "drug dependence is probably the most universally denied illness among physicians" (Halliday, 1972, p. 8).

The time-honored medical profession has been questioned little as to the prevalence of drug abuse among its ranks (Polakoff, 1972). The A.M.A. itself is beginning to stress that physicians are particularly vulnerable to self-induced drub abuse (A.M.A., 1972; Medical School, 1972). Jerome H. Jaffe, M.D., director of the President's Special Action Office of Drug Abuse Prevention, has in <u>The Pharmacological Basis of Therapeutics</u> underscored this high susceptibility:

The high percentage of physicians, dentists, and nurses who become addicted to opiates and the vast number of alcoholics attest to the relationship between access, self-medication, and the later development of compulsive drug abuse. . . Undoubtedly, it is self-administration of drugs and self induced changes in mood that are the critical factors in the development of compulsive drug abuse. The physician would do well to remember this, not only in his treatment of patients but also when he considers treating himself (Jaffe, 1965, p. 94).

In a 1969 study of a national sample of 325 medical students, 47 per cent admitted that they had used drugs for non-medical purposes. Marijuana was the most common drug of use but amphetamines, LSD, mescaline, opium, cocaine and heroin were also cited (Lipp <u>et al.</u>, 1972; Polakoff, 1971). A similar study funded in 1971 by the A.M.A. among 1,314 practicing physicians, showed that 25 per cent of physicians had used marijuana once, 7 per cent used it currently, 92 per cent said they used alcohol currently, and 21 per cent admitted that they smoked tobacco currently. The researchers warned that "physicians must come to grips with the fact of cannabis use and cease talking about marijuana use as something that happened only to patients and adolescents. . . . If medical authorities cannot convince physicians to refrain from trying or using marijuana, convincing the public at large seems unlikely" (Lipp and Benson, 1972). This warning might be extended to other street and licit drugs as well. The failure of knowledge to impact on behavior, presents further questions regarding the way in which the medical professional views his own drug use and the light in which he casts illicit drug use of his patients.

The Physicians' Needs and the Patients' Demands

As previously alluded to, the role of the medical professional is a taxing one given unusual stress situations, feelings of inadequacy, the myriad uncertainties of dealing with disease and death. The act of writing a prescription can be viewed as a symptom of an underlying and sometimes overwhelming malady called uncertainty.

Typically physicians in this country dispense far more drugs than can scientifically be justified. I infer that one of the primary reasons for this excessive utilization of drugs is the physician's need for certainty. When he can write a prescription he has resolved <u>his</u> problem, which in some ways, is more important to <u>him</u> than the patient's problem. His problem is, "I need to do something. I need to act." The writing of the prescription is a definitive action, even if the prescription happens to provide a drug that is ineffective, may even be harmful, or as has been well documented, is frequently not taken by the patient after it has been prescribed (Jason, 1971, p. 2).

The writing of a prescription becomes a nonverbal act that signals the end of a doctor-patient interaction, a legitimation of

contact, and a reducer of anxiety for both the patient and physician. "Some adults feel cheated if they leave the doctor's office without a prescription and many busy doctors find it more difficult to talk a patient out of taking a drug than to give him one. I think that these and a variety of other factors contribute to a pro-chemical attitude in children entering into the period of adolescence (Smith, 1972, p. 273). Out of this mystification come the responses: "If one [pill] is good, two are better," "I feel the same way I did the last time the doc gave me these pills, I'll use them again," "Your symptoms sound exactly like mine, try these," and "I've got something that will fix you up quick."

At the heart of these attitudes is a need to teach both the physician and the patient to deal with ambiguity with minimal chemical intervention.

The Role of Attitudes

The preceding description of prevalent attitudes and their antecedents, has revealed a predominantly negative picture of the medical profession. Illegal drug users are often perceived as "bad" patients; they are sometimes irreverent and disrespectful; they don't follow doctors' orders; they use drugs without prescription; and they are not noted for paying their bills. It is not surprising that medical professionals are turned off by drug abusers for they are the antithesis of the "good patients" one is conditioned to expect.

Inherent in this recognition is the assumption that human behavior results from both internal and external motivations. There is ample evidence that the actions of individuals, including medical

professionals, are governed to a large extent by their attitudes (Krech, Crutchfield, and Ballancy, 1967, p. 14). The urgency of becoming more aware of the relationship between "pro-or-anti-drug attitudes" of individuals and their own drug use has been stressed (O'Donnel, 1966; Russo, 1968). The finding that "attitudes of medical students toward drug use were heavily influenced by their own drug experience" supports this contention (Polakoff, 1972). A number of other researchers--Blum, 1966; Borgotta, 1966; Brehm and Back, 1968; Glick, 1968; Jones, 1969; Keneston, 1966; Middendorf, 1969; Nowlis, 1966; Pattison, 1968)--have similarly looked only at the significance of attitudes as predictors of an individual's pattern of drug use. In like manner the President's Commission on Law Enforcement and Administration of Justice (1967), the President's Advisory Commission on Narcotics and Drug Abuse (1963), the Michigan House Special Committee on Narcotics (1969), the Michigan Department of Education (1970), the Office of Criminal Justice (1970), the LeDain Commission of Inquiry into the Non-Medical Use of Drugs (1970), and the National Commission on Marijuana and Drug Abuse (1972) have all noted the importance of attitude and its relationship to drug abuse. Unfortunately they have all been preoccupied with the drugs themselves and have failed to be concerned with how societal attitudes and those of the medical profession influence the quality and quantity of care the drug user who is in need of help receives.

Patrick Philbin, a social worker in a Minnesota drug detoxification program has noted that ". . . negative attitues--among physicians, hospital administrators, personnel, and even other patients--are proving

to be major problems in developing hospital based drug-treatment programs." "It is important, if not imperative, that the predominant negative attitude toward these people [drug abusers in treatment] be modified or eliminated, if the project is to be successful." He said that it was "especially important for the physician to think positively, because of his major role in the treatment process. If he thinks negatively, it can outweigh positive attitudes on the part of other members of the staff" (McCann, 1973, p. 6).

Representative Dale Warner, Chairman of the Michigan House Special Committee on Narcotics (1969) has stated quite clearly that ". . . the attitude of society and the governmental agencies through which society acts may be fairly characterized as one of venegeance and vindictiveness toward the drug dependent person who is treated as an evil person. In an editorial in the <u>Detroit Medical Times</u>, Thomas Carlyle, M.D., acts as a gadfly in calling for an examination of the medical professional's attitudes toward illegal drug users.

The attitudes we physicians hold toward addiction contributes little toward solving the problem. . . There is need for the development of a decent approach to the treatment of drug abuse. Evidence is beginning to emerge that the things we are doing now are of questionable value if not more harmful than the conditions we are attempting to treat. Part of this originates in the character of the patient, part in the attitudes, and part in the nature of the man (the physician) (Carlyle, 1971, p. 4).

Jerome Jaffe, M.D., underscores the concern for the role of attitudes in patient treatment:

Social attitudes and legal regulations have profound effects on both the patterns and the consequences of drug abuse and on the treatment of compulsive drug users. It is now obvious that every measure taken to regulate drug use has its social cost as well as its potential benefit (Jaffe, 1970, p. 276).

The materials presented thus far by experts in the area of medical education and drug treatment have exposed the inadequacy of the medical profession to deal with the area of drug abuse. The repugnance of many medical professionals toward the illegal drug user, coupled with their lack of training presents a major impasse to effective medical intervention. Medical researchers have focused solely on the attitudes of the abusers of non-prescription drugs. Perhaps self-defensively they have ignored a much needed study of <u>physician and nurse attitudes</u> toward their drug abusing patients.

Attitude Measurement

The attitude scale has been the most widely used technique of social psychologists to measure attitude toward an attitude object. Even the careful design, exhaustive testing, and widespread use of the technique, there appears to be no complete agreement about the definition of the concept of attitude.

There is consensus, however, that attitudes are relatively permanent, referential, shared, reflect evaluations, and that social environment is instrumental and decisive in their development (Duijker, 1955; Nicholson, 1972). In the previously-cited attitude studies there is no agreement as to definition of attitude, thus comparisons of scales and generalizations of results are severely limited. The common definition of attitude is that it is only a "predisposition" to behavior. In this research the orientation of Guttman (1950) will be accepted and adopted. He has defined attitude as a "delimited totality of behavior with respect to something." By placing attitude in a category of behavior itself, Guttman makes it more easily operationalized and amenable to facet theory analysis.¹

Central to an understanding of the instrument used is the concept of Levels. Guttman (1959) elaborated on four types or "Levels" of interaction with a cognitive object that were proposed by Bastide and van den Berghe (1957). He expanded them into a structural theory of belief and action based on and defined by, elements to produce each Level. The four Levels or sub-universes that Guttman defined are: (a) Stereotypes, (b) Norms, (c) Hypothetical Interaction, and (d) Personal Interaction. On this continuum attitude-behaviors range from the stereotypic attitude level to the subject's actual reported behavior.

In reviewing the literature on attitude studies, Jordan (1968) concluded that four classes of variables seemed to be important determinants, correlates, and/or predictors of attitude: (a) demographic factors such as age, sex, and income; (b) socio-psychological factors such as one's value orientation; (c) contact factors such as amount, nature, perceived degree of voluntariness, and enjoyment of the contact; and (d) knowledge factors such as the amount of factual information the subject has about the attitude object.

¹Refer to glossary of terms in Appendix I.

Jordan found that most of the research studies were inconclusive or highly contradictory about the predictor variables and suggested that the reason might well be that the attitude scales were composed of items seemingly stemming from different structures or Levels as defined in the Guttman sub-universe. It is reasonable to assume that until other researchers control for the attitudinal Levels being measured, findings will continue to be inconsistent, contradictory, and non-comparable (Nicholson, 1972).

Jordan (1969) expanded Guttman's (1959) original three facetfour Level paradigm and developed a more inclusive set of five facets six Levels to delimit the totality of behavior further. A number of types of attitude-behavior scales have been developed utilizing Jordan's six Level adaptation of the Guttman facet theory. The most recent is the <u>Attitude-Behavior Scale: Drug Users</u> (Kaple, 1971; Nicholson, 1972). Others include: <u>Attitude-Behavior Scale: Mental Illness</u> (Whitman, 1970); <u>Attitude-Behavior Scale: Mental Retardation</u> (Jordan, 1970); and <u>Attitude-Behavior Scale: Black-White Racial (Hamersma, 1969).</u>

Statement of the Problem

The present study is part of a comprehensive attempt to research attitude-behaviors toward the illegal drug user and to see if these attitude-behaviors, once identified, can be altered in a "favorable" direction as defined by Kaple (1971). In this research it was through intensive workshop training that this change was to be induced. The research is concerned with health professionals, nurses and physicians

presently treating student patients in Michigan colleges and universities (Appendix III).

The study was concerned with the following propositions:

- To determine predominant attitude-behaviors that physicians and nurses had toward their patients who use illegal drugs.
- To determine whether these attitude-behaviors could be made more favorable as a result of a specific type of short term training.

Attitude-behaviors toward illegal drug users were measured with the <u>Attitude-Behavior Scale: Drug Users</u> (ABS:DU). This scale was developed by Jordan (1971a, 1971b); Kaple (1971); and Nicholson (1972). The ABS:DU was developed via the facet theory of the Jordan-Guttman paradigm (Table 6). Measurement of attitude-behaviors was done on six Levels of interaction with the attitude-behavior object (see Chapter III and Appendix IV).

Given the very recent development of the ABS:DU, the results of this investigation have been added to the results of Kaple's and Nicholson's studies for the purpose of further establishing normative data.

CHAPTER II

REVIEW OF RESEARCH AND THEORY

As concern over the spread of drug abuse has increased, so too has there been a parallel increase in interest in drug-related attitudes. Three central questions have not been adequately addressed. What is the medical professional's attitude toward the illegal drug user? How do the attitudes of the medical profession influence those of the general public? Can attitudes which are assumed to be relatively fixed be changed as a result of intensive short term training? In beginning to examine these questions a survey of specific drug attitude research, attitude measurement instruments, and the development of Guttman scaling methods has been done.

Misdirection and Dangers of Past Research

The panic reaction to the "drug problem" to date has focused on control through law enforcement, treatment programs, and drug education. Research efforts have dealt too often with survey's of students. Factors of expediency rather than documented need have directed many of these studies. Students provide the publication-pressured researcher with a captive audience, one that can be easily manipulated into participation by "concerned" principals and deans. Such studies focus attention away from adult abuse of prescription drugs. To call attention to these

foibles, an International Conference on Student Drug Surveys was held in Newark, New Jersey, in October 1971. Participants were warned of the dangers of focusing research efforts and financial resources on the substances abused and incidence of use by "young" offenders. Stanley Einstein, Ph.D., further alerted conferees that "drug surveys of students and others are examples of how an activity can go on with little relation to what is happening in the world. A major myth is that so long as surveys are being carried out, something is being done" (How Good, 1971). He further chided drug researchers for blatantly using survey instruments to grab power in communities and to control the anti-drug scene without doing much to reduce drug abuse. Jules Kolodny, M.D., pointed to a related motivation in stating that "there is money in this ball game, . . . surveys tend to polarize--and lead to damaging results" (How Good, 1971).

Rights of the student, school, and community have not been protected. Students are treated as inert research material with no involvement in policies derived from the data. Attitudes of the "user" have been exploited to the exclusion of attitudes of the "non-user." Little has been reported of student attitudes toward drug counseling, drug education, and treatment personnel in their community. There has been no evidence that student surveys have resulted in getting data that has been shown to reduce drug use (How Good, 1971).

Limitations of Previous Attitude Research

To date little research has been done in the area of attitudes of helping professionals toward their clients who use or abuse illegal drugs. Those few studies of attitudes have been concerned with the drug user or with the attitudes of the general population toward the drug user: Blum (1966); Borgatta (1966); Brehm and Back (1968); Glick (1968); Jones (1969); Keneston (1966); King (1970); Middendorf (1969); Nowlis (1967); O'Donnell (1966); Pattison (1968); Robbins (1970); Russo (1968); and Schur (1964). Another category of major investigation has been that of drug abuse among college students. Questionnaires typically have not been developed according to any theoretical framework and replication has been virtually impossible. Examples of specific studies that fall into this category and do not adhere to any scaling may be found in Bogg (1969); Groscia (1969); Klein and Phillips (1968); Murphy, Leventhal, and Balter (1969); Pattison, Bishop, and Linsky (1968); Pearlman (1968); Rosenberg (1968); and Suchman (1968). By far the majority of these studies describe typical characteristics of the marijuana user and continue to ignore the attitudes of the helping professional who may be called upon for treatment.

Searches of medical and related literature failed to reveal a significant research base directly related to the area being studied here. The facilities of the National Medical Library MEDLARS retrieval system (request #123248); the Student Association for the Study of Hallucinogens; the National Clearinghouse for Drug Information; the Institute for the Study of Drug Dependence, London; and Medline Computer

Access through Michigan State University Library were used. In addition international experts in drug abuse were personally contacted for references as was the Freedom of Information Center, University of Missouri; the Addiction Research Foundation, Toronto, Canada; and the Do-It-Now Foundation in California. This void in research activity further indicated the need for the present study. Major support for the present approach comes from the dissertations of two other individuals who were partners in this "project" approach to graduate research. Nicholson (1972) and Kaple (1971) developed and utilized the Guttman-Jordan scaling instrument which was modified for this study. They did not however deal with the issue of change in attitudes or with the same target population. Their work will be discussed later.

In the following sections each of the major attitude scale theories will be summarized and where possible elaborated via studies whose results or populations studied are directly related to the present study of physician and nurse attitudes toward their drug using patients. Three generic classifications of scaling methods, reflecting particular attitude theories, have traditionally been employed: differential scales, summated scales, and cumulative scales (Selltiz, Deutsch, and Cook, 1966). Each will be discussed in some detail.

Differential Scales

L. L. Thurstone's (1928) differential scale technique consists of items whose position on the scale have been determined by the ratings of experts. Of the several methods employed, the paired comparison

method, the successive interval method, and the equal appearing interval method; the last, is most commonly used.

A subject taking a Thurstone type differential attitude scale is instructed to check those statements with which he agrees or disagrees. The median of the scale values of the items checked by that individual is reported to indicate his position of favorable-unfavorable attitude toward a given attitude object in question. Thurstone or differential type scales have received widespread criticism on several counts. Selltiz et al. indicate that these scales are laborious and cumbersome to construct and score. Since an individual's score is the median of the scale values of several items, similar scores may express different attitudinal patterns. Clearly identical scores do not necessarily mean identical patterns of attitude response. Kaple (1971) notes that "although Thurstone asserts that scales constructed by his method yield true interval data, and are subject to appropriate statistical analysis, studies by Gramneberg (1965) and Kelley et al. (1955) cast serious doubts on this assumption. Their studies suggest that Thurstone type scales more closely approximate ordinal data" (Kapel, 1971, p. 18). Attitude bias of judges may skew their judgments of items.

The only differential type scale found which purported to measure drug related attitudes dealt only with high school students' attitudes toward smoking marijuana (Vincent, 1970). The twenty item scale consists exclusively of items which would correspond with the "Personal Feeling" Level of the Guttman-Jordan paradigm to be discussed later.

Summated Scales

Likert (1932) developed an attitude measurement technique which is referred to as the summated scale. Items (selected by intuition) are employed which are felt to be "definitely favorable" or "definitely unfavorable" to the attitude object. Unlike Thurstone scale construction, items that are neutral or slightly favorable or unfavorable are excluded from the Likert scale. Remaining items are administered to subjects representative of the population chosen to receive the questionnaire. The respondent, rather than checking only the items with which he agrees, as in a Thurstone scale, indicates his degree of agreement or disagreement with every statement, i.e., (a) strongly agree, (b) agree, (c) undecided, (d) disagree, (e) strongly disagree. Scoring involves only the summation of the scores of the individual responses made to each item. The result is a total score which is interpreted as the individual's position on a scale of favorable-unfavorable attitude toward the object in question. Individual responses are then analyzed to determine which items best discriminate between high and low total scores. Often the responses of the upper and lower quartile (total score) are used as criterion groups. Those items which do not show substantial correlation with the total scores, or those that do not elicit different responses from the criterion groups are eliminated. The procedures insure "internal consistency."

An advantage of the Likert type scale over the Thurstone type scale is that the former is likely to be more reliable due to the greater number of choices (Selltiz et al., 1966).

A disadvantage of the Likert technique is that the total score of a given individual often has little clear meaning, since many patterns of response to the various items may produce the same score. Likert scales yield ordinal data and can provide rank ordering at best (Jahoda and Warren, 1966).

Using the "Alcoholism Questionnaire," a Likert type scale developed by Marcus (1963), Ferneau and Gertler studied the effect of the first year of a psychiatry residency on the attitudes of physicians regarding alcoholism. They concluded that:

These first-year residents in psychiatry were viewed as they began their training, as primarily positive and therapeutic in their view of alcoholism and the alcoholic, but nevertheless, somewhat prone to see the malady as a character defect, and to be, to a degree, conflicted and ambivalent in this attitudinal sphere. . . The gap appears to widen between the attitude on one hand that alcoholism is a personal fault and recognized therapeutic and professional views on the other. It would seem then that this first residency year has heightened the conflict in these physicians with regard to this area of psychopathology (Ferneau, 1971, p. 260).

The separation of attitude and behavior in this study and the very selective nature of the sample make generalizations difficult. The use of a pre-post testing technique is identical to that of the present study and addresses the issue of accountability in terms of training outcomes. Lack of an "operational" definition of attitude and a sample size of five medical residents are shortcomings of this study. The judgemental-negative attitudes toward the abuser of the socially approved drug alcohol, would tend to support the observation that attitudes of medical professionals toward users of illicit "street drugs" are even more negative and judgemental-moralistic. In another study using the same instrument Ferneau compared the attitudes regarding alcoholism among two groups of first-year psychiatric residents. He concluded that "there is little doubt that the attitudes of mental health personnel play a very significant role in the treatment of alcoholism--as well as the fact that negative attitudes in this group and area are wide-spread" (Ferneau, 1973).

With another group of first-year psychiatric residents Ferneau found that they were "more negative than not in the area of drug abuse," believed "that the drug-abuser is able to control his addictive behavior," think "that most abusers recover, and can be helped to recover" but that "they also exhibit much unsurety and ambivalence which <u>can</u> and <u>must</u> be exploited by us from our position as teachers" (Ferneau and Gertler, 1973).

These findings are confirmed in part by Freidson.

The physicians' attitudes are marked by a profound ambivalence. On the one side he has a more than ordinary sense of uncertainty and vulnerability; on the other he has a sense of virtue and pride, if not superiority. This ambivalence is expressed by sensitivity to criticism by others. In most cases he is prone to feel that he is above reproach, that he did his best and cannot be held responsible for untoward results (Freidson, 1970, p. 176).

Schur (1964) conducted a small scale study of student attitudes on various controversial issues including drug addiction. He too used a Likert type instrument. Thirty-eight items ranging from addiction to abortion were included. Respondents were to determine whether the behavior in question: (a) should not be publicly condemned; (b) should be condemned but not punished; (c) undecided; (d) should be punished but not severely; or (e) should be severely punished. Appropriate to the present study, Schur noted that professional attitudes toward addicts constitute important elements in the total addiction picture. These attitudes were seen as having considerable bearing on the formulation and implementation of public policies. He felt that in the absence of significant attitude research in the area, attitudes tend to be inferred from the public policy measures that prevail. The selective inattention given to the attitudinal dimension of drug abuse was attributed to its juxtaposition with other deviant behaviors in the shadow of uncertainty among disease, vice, and crime.

Schur questioned whether doctors really want to take the responsibility of treating addicts in accordance with medical standards. **Relative to their** British counterparts, North American doctors were viewed as being somewhat overly preoccupied with the idea of achieving lasting cures for individual addicts. He noted the enhancement of treatment programs when they occur in a nonpunitive and nonmoralizing atmosphere. Many doctors were viewed as being unprepared for and unfavorably disposed to actually dealing with addicts. Schur cited Freedman's support for this notion in referring to: "negative and rejecting attitudes on the part of some members of the medical and nursing staffs of other departments within the very same hospital which treats addicts" (Freedman, 1962, p. 25). In further discussion of his study and related factors Schur quoted Lindesmith (1962) as stressing "that a genuine medical program would necessarily entail a substantial surrender of power on the part of the police and prosecutors to physicians. It is unreasonable to expect that a plan sponsored primarily by the former would do this." Continuing his far-flung discussion Schur

concluded with pessimism that no overall shifts in attitudes toward the addict and his problems were envisioned. Schur ended his discussion of attitudes in conflict, with the philosophy of George C. Mead (1918, p. 592), "the two attitudes, that of control of crime by the hostile procedure of the law and that of control through comprehension of social and psychological conditions, cannot be combined." These far reaching comments are presented to demonstrate the tendency of attitude researchers to use data as a base for experiential and subjective discussion. This does not discount the accuracy of the observations presented but does question the academic honesty of presenting them under the heading of the article "Attitudes Toward Addicts: Some General Observations and Comparative Findings."

King (1970) employed a Likert type (7 points) scale and a survey of behavior to compare users and non-users of marijuana. No reliability or validity data are presented and the study lacks an explicit definition of attitude.

Brehm and Back (1968) studied attitudes toward taking medication, typical response to illness, and concern with such factors as personal control. They developed a 34 item Likert type scale to evaluate usage of specific drugs from "definitely" to "not at all" for ten substances from aspirin to opiates. The attitude items were divided into five groups: insecurity, fear of loss of control, sick role, denial of effects, and curiosity. The authors concluded that the combination of doubt about and wish to change the self plus a general confidence in the effectiveness of drugs is related to using any type of physical agent. A combination of curiosity about one's potentialities and an

absence of fear of loss of control relate more specifically to using that complex of substances known as "releasers." Although Brehm and Back do not identify it as such, they have employed an aspect of Guttman facet theory in four of the questionnaire items. They have used what would be comparable to the Stereotypic and Hypothetical Action levels to measure what they labeled as "resistance to drug effects" and "relative curiosity." No definition of attitude was included. Reliability and validity data were not presented.

Single Use Scales for Special Studies

Two other scaling techniques are briefly mentioned by Kretch <u>et al</u>. (1962). They are the social distance scale associated with Bogardus (1947) and the scale discrimination method of Edwards (1967). The social distance scale was designed specifically for measuring attitudes toward different nationalities and thus has not been employed in the measurement of attitudes toward drug use. The scale discrimination technique "attempts to synthesize" (Krech <u>et al</u>., 1962) the methods developed by Thurstone, Likert, and Guttman. Its strengths and weaknesses have not been sufficiently evaluated and as a result it is seldom employed (Kaple, 1971).

In a Swedish study by Anna-Ma Toll (1970) 50 addicts were given structured interviews concerning their reaction to treatment. The study is characteristic of many which purport to use a scale but under examination reveal that subjectivity and <u>ex post facto</u> ordering of responses is the basis of conclusions. Summary comments include: "the morale of those involved in treatment is more important than the treatment method,"

"negative attitudes are encountered from the medical staff," and "an attitude of acceptance and belief in treatment is crucial" (Toll, 1970, pp. 139-158). While the word "attitude" is often mentioned in this study the definition remains known only to the author. The case study method employed is extremely inefficient in terms of time and money expended by both the interviewer and addict. Reliability is solely dependent on interviewer trust and technique. This kind of well intended case study of attitudes abounds in medical literature.

Patterson, Bishop, and Linsky (1968) focused on changes in public attitude toward drug addiction through an analysis of popular magazine articles dealing with the topic over a period covering seven decades. They assumed that magazine content is related to, although not identical with, general public attitudes of the period studied. Content analysis of articles was conducted in two areas: attitudes and beliefs about narcotic addiction and recommendations for coping with narcotic addiction. Attitudes toward the addiction problem were rated on three separate dimensions: the moral blame ascribed to the addict for his addiction; the moral blame ascribed to drug supplied for the addiction problem; and the locus of causal factors in the etiology of drug addiction. They concluded that in the first three decades of the twentieth century moral blame ascribed to the individual addict shifted from an attitude of high moral blame to one of low moral blame. This low level of moral blame has supposedly remained constant since then. Until the 1960's the illegal drug supplier was consistently held in high moral blame, a marked shift to low moral blame after that point in time. In the third area, etiology of addiction, they concluded that there was a

shift from the 1920's to the present from the attitude that drug traffic and supply was the cause of addiction, to the attitude that individual personality factors are causative.

It may be questioned whether the same analysis procedure applied to articles written since 1965 would find the same trends evident. In the discussion of the article insightful observations are offered concerning the role of medical professionals' attitudes in treatment.

Public recommendations for coping with narcotic addiction lag at least a decade behind the recommendations for coping with alcoholism and, we may estimate, perhaps two decades behind public recommendations about mental illness in general. It is pertinent to note that for both narcotic addiction and alcoholism there is reasonable public support for medical and psychiatric treatment but little support for socially oriented treatment.

Public views about behavior seem to lag several decades behind changes in professional views produced by research. Thus, psychodynamic explorations into the meaning of mental illness conducted in the 1930's resulted in changes in public attitudes in the 1940s. Research on alcoholism in the 1940s led to changes in public attitude in the 1950s. With research on addiction leading to meaningful explanations of addictive behavior in the 1960s we may anticipate changes in the public view of the narcotic addict in the 1970s.

Yet the fact that there has been a fair degree of public support for medical-psychiatric treatment of addicts while there has been little public support for socially oriented modes of treatment may indicate continuing "moralistic" attitudes in both public and professional attitudes . . . medical-psychiatric treatment recommendations may not actually reflect a basic change in moral attitudes but merely the <u>cloaking of social rejection and</u> <u>punishment under the guise of medical-psychiatric treatment</u>.

Psychiatrists have given up moralistic judgemental attitudes toward most psychotic and neurotic behavior. But when we look at the character disorders, such as the sociopath, homosexual, alcoholic, and drug addict, we find that psychiatrists no less than the general public, have retained a much more judgemental moralistic attitude. It is not uncommon to hear psychiatrists speak of "worthless sociopaths," "filthy alcoholics," and "no-account addicts." As David Shapiro (1965) has recently noted in his book, <u>Neurotic Styles</u>, the moralistic attitudes of psychotherapists have profoundly influenced their interpretation of characterological behavior. It is paradoxical that psychotherapists, along with the general public, ascribe a high capacity of choice and self-determination to character disorders. Yet such persons are exactly those who often feel most "driven" to their behavior--the alcoholic who "can't stop," the sociopath who "just felt like it," the addict who "had to have a fix."

Predictably, then, we find that psychotherapists tend to ascribe moral blame to persons with character disorders and recommend their isolation or punishment rather than recommending rehabilitative measures. Public attitudes can be seen to follow the images which psychiatry has presented to the public. Or perhaps more accurately, public views of the character disorders will not change until psychiatry changes its professional view (Pattison, 1968, p. 60).

Doctor and Sieveking (1970) developed a 35 item bipolar questionnaire with a five point (agreement-neutrality-nonagreement) semantic differential format to assess public attitudes about drug addiction, addicts, and treatment. Law enforcement personnel, college student nonusers, student users of marijuana, and post-withdrawal narcotic addicts were sampled throughout the country. The potential value to addicts of different classes of "helpers" was explored through additional descriptive statements. Factors of etiology, treatment, trust building, and personal reaction to drug associated groups were examined.

While this study does not adhere to Guttman facet theory it does clearly address the issue of attitudes of helping professionals and those of drug addicts toward illegal drug users. Its poignant findings directly related to the present study merit some detail.

In general, <u>Ss</u> tended to view the drug addict as socially distant and interpersonally aversive. The addict was characterized by respondents as responsible for his condition, potentially harmful and frightening, provoking, somewhat repulsive, untrustworthy, and unpredictable. This combination of attitudes would seem to match stereotypes of the antisocial or ciminal individual (Sieveking and Doctor, 1969).

In part, these reactions probably reflect a publicly held stereotype of addicts that is reinforced by criminal role expectancy and hostile police attitudes (Schur, 1964; Grennan, 1962) rather than representing impressions gained from direct personal contact with addicted individuals. For example, it is well documented that addicts, if forced to resort to criminal activities, are typically nonviolent and nonassaultive (Task Force Report, 1967) and that interpersonally they appear quite nonaggressive, passive, dependent, conservative, inhibited, fearful and tend to rely on fantasy as an adjustive technique (Campbell, 1962; Ausabel, 1958). Furthermore, field studies find the social and physical communities of addicts are not transient and ill-formed, as might be expected with strictly criminal individuals, but have a high degree of structure, interdependence, and residential stability (Schumann, Caffrey, & Hughes, 1970).

While respondents tended to identify and react to addicts as criminals, they also expressed the view that the crucial determinants of addiction were socio-psychological (rather than medical, physical or hereditary) and that through long-term direction by a mental health professional, the addict had potential for improvement. This emphasis on "psychological" determinants and the clearly non-punitive view of appropriate treatment is congruent with current campaigns to educate professionals and to temper public opinion (Schur, 1964; Pattison, Bishop and Linksy, 1968). While the necessity for a lengthy and intensive program of reshaping behavior has been recognized by self-help lay groups such as Synanon (Yablonsky, 1965) and Addicts Anonymous, most state and federal programs still adhere to essentially a detention model. In this regard, it is interesting to note that addicts themselves tended to minimize the seriousness of their problem in terms of duration and extent of treatment required. This tendency to deny illness and to adopt unrealistic and unwarranted optimism has also been noted by Blachly et al. (1961), in their survey of addict attitudes after three months of hospitalization. Undoubtedly, the conflict of addict and professional views hampers if not undermines treatment efforts.

Psychologists, psychiatrists and physicians were rated as most helpful to the addict followed by friends, family members, and ministers. Policemen and politicians were uniformly seen as not very helpful in spite of the fact that these two organizations have had the greatest effect on public and professional attitudes about addicts and treatment for addiction. While American medical opinion has come to view the physician in an ancillary treatment role (Chapman, 1962), medical personnel have been very successful as prime treatment agents in Britain (Schur, 1964) and most informed professionals agree that physicians and mental health workers should have prime **responsibility** and complete freedom in treating problems of addiction. Likewise, while there is recognition of the potential helpfulness of ministers, family members, and friends, public support has favored medical and psychiatric intervention rather than more socially broadbased programs. If the history of treatment models for alcoholism and mental illness is indicative of where public policy and support will be directed and strengthened (Pattison, Bishop and Linsky, 1968), the role of the nonprofessional in the treatment of drug addiction should become more prominent.

Cumulative Scales

Cumulative scales are composed of a series of items to which the respondent indicates agreement or disagreement. Primary work with the technique of cumulative scaling has been done by Guttman. His analysis is unique in that it ascertains whether a set of attitudes is unidimensional; whether they measure one attitude. Guttman defines the unidimensional scale as one that has a coefficient of reproducability of at least .90. The ideal Guttman scale would enable the prediction of an individual's responses to each of the scale items from knowledge of his total score alone. Kaple (1971) uses the following example to illustrate the concept: the items on a perfect Guttman scale might be concerned with height. They would read: (a) I am more than four feet tall, (b) I am more than five feet tall, (c) I am more than six feet tall, etc., and each "yes" is assigned a weight of 1 and we know a person's total score is 2; we can reproduce his individual responses and state that he answered "yes" to items a and b and "no" to item c (Kaple, 1971, p. 24).
Guttman's scaling procedures allow for the establishment of a neutral region of the scale by employing an intensity function. This procedure enables the researcher to more clearly distinguish favorable from unfavorable attitude (Guttman and Suchman, 1947).

Guttman's unidimensional scalogram analysis, like most other scales surveyed, has been criticized for its neglect of the problem of representativeness in selecting the initial set of statements. Kretch, Crutchfield, and Ballachey (1962) point out that since statements selected for such scales are a matter of intuition and experience, it is impossible to estimate their content validity. Jahoda and Warren (1966) warn that Guttman's unidimensional scales may not be appropriate for measuring complex attitudes and that such a scale may be unidimensional for one group of respondents but not for another.

The actual creation of the <u>Attitude-Behavior Scale Toward Drug</u> <u>Users</u> (ABS:DU) was done by Jordan, Kaple, and Nicholson (Kaple, 1971; Nicholson, 1972). Guttman facet design and analysis are used in the construction of the instrument. In Kaple's pilot study six populations having contact with drug users were employed: incarcerated drug users, police, a fundamentalist religious sect, high school students, college students, and drug users in treatment. It was felt that these groups represented a continuum of unfavorable to favorable attitude toward drug users. Within each population several groups were selected from various geographic locations throughout the United States. The initial scale of 240 items was uniformly group administered to 17 different samples during the spring of 1971.

Kaple constructed the scale according to facet theory and accepted Guttman's (1950) operational definition of attitude as "a delimited totality of behavior with respect to something." Kaple employed Jordan's (1968) expansion of the original Guttman paradigm (Tables 1-4 and Figure 1). The five facets hence six Levels were: Societal Stereotype, Societal Norm, Personal Moral Evaluation, Personal Hypothetical Action, Personal Feeling, and Personal Action. The five categories or facets of content chosen according to facet theory were: causes, characteristics, and consequences of illegal drug use, treatment type, and treatment reason. A "Personal Data Questionnaire" was also administered in an effort to determine the relationship of specified variables with different Levels of attitude (Appendix IV, Questions 121-161).

The results indicate that the attitude-behavior toward drug users instrument did scale as hypothesized. Predictive and construct validity were supported and content validity was assumed due to the item selection procedures employed. Internal consistency reliability figures continually exceeded .80 and frequently .90 for the groups and categories identified.

The final scale was reduced to 120 items through item to facet, item to Level, and item to item scale correlation. Four items from each of the five facets were carried across the six Levels. The final scale has been demonstrated to possess internal consistency, reliability, content validity, and construct validity. It does scale as hypothesized (Kaple, 1971).

After assisting in the development of ABS:DU, Nicholson (1972) extended testing to a total of 254 subjects: heroin addicts incarcerated with no treatment, heroin addicts on methadone maintenance, heroin addicts convicted of crime and committed to treatment in prison (NARA II), heroin addicts who have civilly committed themselves in lieu of prosecution (NARA I), heroin addicts who have civilly committed themselves for treatment but are not charged with any criminal offense (NARA III), professional therapists, and paraprofessional therapists. Subjects were obtained from county jails, methadone maintenance clinics, a federal prison, and the National Institute of Mental Health Clinical Research Center at Lexington, Kentucky.

Scaling hypotheses, internal consistency reliability, and validity figures were almost identical to those found by Kaple (1971). Taken independently, the five predictor variables: demographic, sociopsychological, political activism, and contact were not found to be related to the six measures of attitude-behavior. Both Nicholson and Kaple suggest that perhaps groups of variables rather than individual ones are operative in determining attitude-behaviors toward illegal drug users.

Incarcerated heroin addicts who were not receiving treatment consistently differed from the other addict categories on all six Levels, while addicts in the NARA programs had very similar attitude-behaviors to those of their therapists. Paraprofessional therapists' scores were very similar to those of professionals when they were working together, but closer to those of the addicts when they were not associated with professionals.

One finding of interest to the present study is that 72-90 per cent of the addicts reported that ex-addict therapists were the best help for the addict, while only 51 per cent of the professionals agreed with this, and a surprising 35 per cent of the paraprofessionals, many of whom were ex-addicts, agreed. While no cause and effect conclusions can be drawn from examination of individual content items, they serve as clues to further research needs and as guides to policy formulation. Relative to the present study, Nicholson (1972) concluded that:

Social attitudes have profound effects on both the patterns and the consequences of drug abuse and on the treatment of compulsive drug users. A public concern which focuses on social drug dangers or drug abuse without also focusing on the drug user himself is incomplete if not misdirected. The attitudes of society and particularly of the psychotherapists committed to treating drug dependent persons have profound effects on the direction and quality of drug abuse treatment programs (Nicholson, 1972, p. 147).

<u>Summary of the Theory and Methodology of</u> <u>Scales Used in the Measurement of</u> <u>Drug Related Attitudes</u>

Allport, Thurstone, Likert, and Guttman stand out as the leaders in the development of attitude measurement. The classic discussion of the nature of attitudes was provided in 1935 by Allport. In the measurement of "attitudes," "opinions," and "beliefs" the Likert technique (1932) is the most widely used. Specific scale construction techniques were suggested very early by Thurstone (1928). The work of Guttman, as expanded by Jordan, has the potential for considerable social impact in the future.

Theory and measurement techniques are undergoing continual reexamination and revision. A lack of precision characterizes the definition of "attitude." In 1928 Symonds noted that the term could have a range of meanings from drive, muscular adjustment, feelings, or verbal responses. The definition has slowly become more precise. By 1966 most attitude theorists agreed with the Kerlinger notion of attitude as a "predisposition" to perceive, think, feel, and behave (Kerlinger, 1966). Only the work of Guttman has gone beyond this definition. His work, upon which the present study is based, will be presented in a section to follow.

As witnessed in earlier sections most drug related attitude studies are assessed by instruments specifically designed for "oneshot" administration with student populations or solely about illicit drugs. Conflicts regarding determinants and/or correlates of attitudes toward illegal drug users are all too evident in the literature. Neglect of a theoretical base and lack of an operational definition are almost universal. Current studies which purport to measure attitudes toward drug use seldom employ the scaling techniques outlined and none have adopted Guttman facet theory techniques. Reliability and validity data are usually absent. Subjective opinions are frequently the basis for authors' discussions of results. Some so-called attitude tests really assessed superficial factual knowledge and incidence data. Questionnaires employed are seldom reproduced in the literature. Only vague reference is made to methodological descriptions. Thus replication becomes virtually impossible. Generalizations drawn from such studies are extremely hazardous at best.

One of the major limitations of the Guttman-Jordan facet theory instruments and analysis is its semantic complexity. The terminology

employed necessitates a lengthy and detailed explanation. In the course of developing and interpreting the <u>Attitude-Behavior Scale: Drug Users</u> (ABS:DU), Kaple (1971) and Nicholson (1972) oriented a number of professional and paraprofessional audiences to the essence of Guttman-Jordan theories and methodologies. The clarity and explicitness of Nicholson's exposition (1972, pp. 50-64) developed under Jordan's supervision, is of such utility that it will be presented in its entirety.

Guttman's Four Level Theory

Guttman has defined attitude as "a delimited totality of behavior with respect to something" (1950). Within the limits of such a definition, both verbal responses and overt behaviors can be construed as attitudes.

This provides a conceptual framework which forms a continuum from the common definition of attitude (predisposition to perceive, think, feel, and behave) to the common definition of behavior (overt behavior). Attitudes and behaviors are, thus, not dichotomized but are viewed together as the totality of human behavior. All attitude is behavior. With the range of human behavior being this inclusive, it is possible then to think of points along this continuum which could then be measured. The points along the continuum become the "Levels" in the Guttman-Jordan paradigm of attitude-behaviors (Table 1).

TABLE 1

Continuum of Attitude-Behaviors

predisposition to perceive, think, feel, and behave

overt behavior

range of human behavior
(attitude-behavior universe)

Once attitude or attitude-behavior is viewed as a continuum from a verbal-cognitive orientation to overt action, then significant points can be determined as measurement points and a method of measurement developed. The significant points at which measurement should take place are called "Levels" and measurement points are based on "facets" and "elements."

Commenting on the work of Bastide and van den Berghe, Guttman (1959) distinguished three "facets" involved in a particular attitude response: the subject's behavior (belief or overt action), the referent (the subject's group or the subject himself), and the referent's intergroup behavior (comparative or interactive). Jordan has defined it in this manner:

Facet design makes it possible to construct items by a systematic <u>a priori</u> method instead of by the method of intuition or by the use of judges. Facet theory (Guttman, 1959, 1961, 1970) specifies that the attitude universe represented by the content can be substructed into semantic profiles which are systematically related according to the number of identical conceptual elements they hold in common. The substructuring of an attitude universe into profiles facilitates a sampling of items

within each of the derived profiles, and also enables the prediction of relationships between various profiles of the attitude universe (Jordan, 1970).

What is sought then by facet design and analysis according to Harrelson (1969), is to be able to construct the content of a scale by a semantic, logical <u>a priori</u> technique and to be able to predict the order structure which would result from the empirical data. What would happen then would be the reverse of what in reality factor analysis accomplishes. Factor analysis tries to make sense out of what already has been done by a mathematical process of forming correlational clusters and then naming them, i.e., calling them factors. As opposed to this approach, facet design, in essence, names the facets before one begins.

The three facets (Table 2) proposed by Guttman are combined according to definite procedures to determine the semantic component structure of four important sub-universes or Levels of the attitudebehavior universe.

TA	BL	Ε	2
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	Attitude-	Attitude-Benavior Universe			
Facets	(A) Subject's Behavior	(B) Referent	(C) Referent's Intergroup Behavior		
Florento	a _l belief	b _l subject's group	c _ן comparative		
Elements	a ₂ overt action	b ₂ subject himself	c ₂ interactive		

Basic Facets Used to Determine Component Structure of an Attitude-Behavior Universe

One element from each and every facet must be represented in any given statement. These statements can be grouped into profiles of the attitude-behavior universe by multiplication of the facets A x B x C, yielding a 2 x 2 x 2 combination of elements or eight semantic profiles in all, i.e., (1) $a_1b_1c_1$, (2) $a_1b_1c_2$, . . . (8) $a_2b_2c_2$. It can be seen that combinations 1 and 2 have two elements in common (a_1b_1) and one different (c_1 and c_2), whereas profiles 1 and 8 have no elements in common.

Guttman facetized the semantic structure of the attitudebehavior items into the four sub-universes or Levels as shown in Table 3. He reasoned that if an attitude-behavior item can be distinguished semantically by the three facets ABC outlined in Table 2, then an individual item could have one, two, or three subscript "2" elements for a total of four attitude-behavior Levels. Logically, if the elements are correctly ordered within facets, and if the facets are correctly ordered with respect to each other, a semantic analysis of attitude-behavior items will reveal n +1 types or Levels of attitudebehavior items. While a total of eight combinations are possible on the four Levels (one each on Levels 1 and 4 and three each on Levels 2 and 3) only the four combinations shown in Table 3 were studied by Bastide and van den Bergh (1957).

The model in Table 3 depicts the attitude-behavior Levels and the descriptive labels for each Level defined by Guttman (1959). An attitude-behavior item corresponding to Level 1 would deal with the belief of the subject (a_1) that his group (b_1) compared itself (c_1) favorably or unfavorably with the object in question, in this case

	T	Ά	B	L	E	3
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Facet Profiles and Descriptive Labels of Attitude-Behavior Levels

Level	Profile	Descriptive Label
1	a _l plcl	Stereotype
2	alplc2	Norm
3	a ₁ b ₂ c ₂	Hypothetical Interaction
4	a2b2c2	Personal Interaction

members of a different racial group. Similarly, an item corresponding to Level 4 would deal with the subject's own (b_2) reported overt behavior (a_2) in interacting (c_2) with the object.

A common meaning for the orderings was suggested by Guttman, i.e., they show in each case a progression from a <u>weak</u> to a <u>strong</u> form of behavior of the subject toward the object. That is, the more subscript "2" elements a set contains, the greater the strength of the attitude-behavior.

Facet analysis of the semantic structure of attitude items provides a social psychological theoretical basis for predicting the structure of the empirical intercorrelation matrix of Guttman's four Levels: if items are written to correspond to each of the four Levels, then Levels closest to each other should be more similar and thus should correlate more highly with each other than with more distant Levels. One cannot propose to predict the exact size of each correlation coefficient from knowledge only of the semantics of universe ABC, but we do propose to predict a <u>pattern</u> or structure for <u>relative</u> sizes of the statistical coefficients from purely semantic considerations (Guttman, 1959, p. 324).

Guttman (1959) referred to this as the contiguity hypothesis which states that sub-universes or Levels closer to each other in the semantic scale of their definitions will also be closer statistically. In other words, the responses at any given Level would be most closely related to the most similar Levels--the Levels having the largest number of common facets--and less related to less-similar Levels. Thus Level 1 responses would be more similar to Level 2 responses than to responses of any other level. If such similarities were expressed in correlation ratios, the matrix of Level-by-Level correlations would have a distinctive appearance. Table 4 indicates what such a hypothetical matrix might approximate. Such a matrix Guttman labeled a "simplex."

TABLE 4

Level	l	2	3	4
1	1.00			
2	. 90	1.00		
3	.80	.90	1.00	
4	.70	.80	.90	1.00

Hypothetical Matrix of Level-by-Level Correlations Illustrating Simplex Characteristics

It is important to point out that one does not attempt to predict the magnitudes of each correlation coefficient. The simplex requirement does not necessitate either identical correlations in diagonals or identical differences between diagonals: the case given is sometimes called a "perfect simplex." The fundamental requirement in any simplex is that correlations decrease or "order" as they are farther from the main diagonal.

Slight reversals in the ascending or descending order are not considered a contradiction to the contiguity hypothesis, since sampling bias or other idiosyncracies in selection or administration might be the cause of such reversals.

Jordan (1968) employed Kaiser's (1962) procedure to sort and rearrange all possible arrangements of adjacent pairs of correlation coefficients so as to generate the best empirically possible simplex approximation and assign a descriptive statistic, Q^2 , to the original and rearranged matrices. Q^2 is a descriptive statistic with a range of 0.00 to 1.00. Hamersma (1969) found a value of at least .70 should optimally be used to accept a matrix of attitude-behavior Level correlations as having approximated a simplex and a Q^2 of .60 to be considered a minimal criteria. These figures were obtained by applying practices followed by Jordan for ascertaining the "goodness of fit" of an obtained simplex (Hamersma, 1969).

According to Guttman, if attitude-behavior items are correctly written, i.e., to correspond to each of the hypothesized levels, then the matrix of Level-by-Level correlations should approximate the simplex.

If, on the other hand, a simplex did not appear, the items were incorrectly or ambiguously assigned to Levels.

Jordan's Six Level Adaption

Guttman's (1959) paradigm of facet design and analysis for attitude-behavior items allows for three facets and hence four Levels of attitude-behaviors. Theorizing that there might be other pertinent facets, but accepting those identified by Guttman as appropriate, Jordan (1968) expanded facet analysis for attitude items dealing with specific groups to include five facets and hence six Levels. This expanded and more inclusive set of facets and their elements is shown in Table 5. A comparison of Guttman's facets and Jordan's facets are illustrated in Table 6.

TABLE 5

Jordan's Expanded Facets Used to Determine Joint^a Struction of an Attitude-Behavior Universe

(A) Referent	(B) Referent Behavior	(C) Actor	(D) Actor's Intergroup Behavior	(E) Domain of Actor's Behavior
a _l others	b _l belief	c _l others	d _ا comparison	e _l hypothetical
^a 2 self (I)	b ₂ experience (overt behavior)	c ₂ self (mine/my)	d ₂ interaction	e ₂ operational

^aJoint struction is operationally defined as the ordered sets of the five facets from low to high (subscript l's are low) across all five facets simultaneously.

9	
Ц	
8	
F	

Designation ^a
Facet
Jordan
and
Guttman
of
Comparison

			acets in Jordan A	daption	
Author	A	B	U	D	ш
Jordan	Referent	Referent Behavior	Actor	Actor's Intergroup Behavior	Domain of Actor's Behavior
	a _l others	b _l belief	c ₁ others	d ₁ comparison	e _l hypothetical
	a ₂ self (I)	b ₂ experience (overt behavior)	c ₂ self (mine/my)	d ₂ interaction	e ₂ operational
Guttman		Subject's Behavior	Referent	Referent's Intergroup Behavior	
		b ₁ belief	c _l subject's group	d _l comparative	
		b ₂ overt action	c ₂ subject himself	d ₂ interactive	
g.					

^dTable adapted from Jordan (1970, p. 10).

Joint Struction

Guttman's three facets and two elements resulted in eight possible combinations or profiles. Jordan's five facets and two elements results in 32 combinations. Jordan (1968) states that not all combinations are logical due to semantic considerations. However, the selection of a "best" set of profiles from the 32 possible combinations was still made partly as a matter of judgment. Maierle (1969) later extended research in this area by providing a set of logical rules for the selection of combinations and found that 12 of the possible 32 combinations were semantically consistent. The six profiles were chosen as psychologically relevant and potentially capable of instrumentation (see Table 7).

TABLE	7
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Joint Level, Profile Composition,^a and Labels for Six Types of Attitude Struction

Subscale	Struction	
Type-Level	Profile	Descriptive Joint Term
1	alpiciqie	Societal Stereotype
2	alplclq5	Societal Norm
3	a2 ^b 1 ^c 1 ^d 2 ^e 1	Personal Moral Evaluation
4	a2b1c2d2e1	Personal Hypothetical Action
5	a2b2c2d2e1	Personal Feeling
6	$a_2b_2c_2d_2e_2$	Personal Action

 $\ensuremath{^a\text{See}}$ Table 8 for rationale by which these six profiles were chosen.

Maierle's research showed that only 12 of these profiles (Table 8) were logically and semantically consistent--Jordan's six and an additional six.

Table 9 presents the definitional statements of the twelve possible profiles and Table 10 depicts the set of combinations corresponding to Jordan's (1968) paradigm. This semantic path (Table 10) corresponds to the underlined facet profiles in Table 9. The definitional statements facilitate the writing of appropriate attitude-behavior items for each Level member while the listing of profiles by facet change (Table 10) makes possible a clearer graphic representation of the successive changes from weak to strong elements.

Summary

The four-Level system of attitude-behavior items was first proposed by Guttman. Within his system, Levels were hypothesized to be related to each other according to the principal of contiguity, so that a matrix of Level-by-Level correlations would approximate a simplex. From this Jordan proposed a five facet, six Level adaption of the system and has data within and across cultures to support both the data and the research instrument (Jordan, 1970; Nicholson, 1972).

	Combinatio	ns	Fac	ets a	nd Su	bscri	pts				
No. ^b	In Table 3	In Table ^c 4	A	В	C _	D	E	E1	Bas ⁻ imi	is (nat	of ion
No. ^D 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	3 1 2 3 4 5 6 7 8 10 -	4 Level 1 Level 2 Level 3 Level 4 Level 5 -	A 0 0 1 1 0 0 0 1 1 0 0 0 0 1 1 0 0 0 0 1 1 0 0 0 0 1 1 0 0 0 0 1 1 0 0 0 0 1 1 0 0 0 0 1 1 0 0 0 0 1 1 0	B bbbbbbeeeeeeebbbbbbbbbbbbbbbbbbbbbbbb	C	D c i c i c i c i c i c i c i c i c i c i	E	E1	imi 2 2 2	3 3 3 3	4 4 4 4 4 4 4 4 4 4 4 4
25 26 27 28	11 	 	0 0 i	e e e	0 0 0	C i C i	p p p	1	2 2	3 3	
29 30 31 32	 12	 Level 6	0 0 1 1	e e e	m m m m	c i c i	р р р р	i 1	2 2	3 3	

Combinations of Five Two-Element Facets^a and Basis of Elimination

TABLE 8

^aSee Table 1 for facets. ^bNumbering arbitrary, for identification only. ^cLogical semantic analysis as follows: <u>Basis 1</u>: an "e" in facet B must be preceded and followed by equivalent elements, both "o" or "i" in facet A or "m" in facet C. <u>Basis 2</u>: a "c" in facet D cannot be preceded by an "e" in facet B. <u>Basis 3</u>: a "c" in facet D cannot be followed by a "p" in facet E. <u>Basis 4</u>: a "p" in facet E cannot be preceded by a "b" in facet B.

Level	Facet Profile	No. in Table 8	ko. b	Definitional Statement ^c	Descriptive Name ^d
-	<mark>e b o c h</mark>	-	0	Others believe others' comparisons hypothetically **	Societal stereotype (group assigned group status)
2	1 b o c h o b o 1 h albicidzei o b m c h	ณ พม	-	I believe others' comparisons hypothetically Others believe others' interactions hypothetically Others believe my comparisons hypothetically	Personally-assigned group status Societal norm Group-assigned personal status
m	1 b o 1 h a 2 b 1 c 1 d e 1 b m c h o b m 1 h o e o 1 h	~90	~	<pre>I believe others' interactions hypothetically ** I believe my comparisons hypothatically Others believe my interactions hypothetically Others experience others' interactions hypothetically</pre>	Personal moral evaluation (perceived values) Self-concept (personally assigned personal status) Proclaimed laws (group expectations) Group identity (actual group feelings)
4	<u>1 b m 1 h</u> a ₂ b ₁ c ₂ d ₂ e ₁ o e o 1 p	° =	e	<pre><u>I believe my interactions hypothetically</u> At Others experience others comparisons hypothetically</pre>	Personal hypothetical action Actual group action
ŝ	<u>i e m i h</u> a ₂ b ₂ c ₂ d ₂ e ₁	10	4	<u>I</u> experience my <u>i</u> nteractions (feelings) <u>hypothetically</u> **	Personal feeling
و	<u> </u>	12	ß	<u>I experience my interactions (overt behavior)</u>	Personal action
	thrachinations used	in the ARC.	E	åre Tablar 6 and 7	

Five-Facet Six-Level System of Attitude Verbalizations:^a Levels. Facet Profiles. and Definitional Statements for Twelve Combinations

TABLE 9

combinations used in the ABS:DU.

"Cf. Tables 6 and 7.

^bNo.--number of strong elements in Level.

Glords in parentheses are part of redundant but consistent statements.

^dAlternate names in parentheses indicate relationships of various level members.

TABLE 10

Joint Level, Profile Composition, and Labels for Six Types of Attitude Struction^a

Subscale Type- Level	Profile by Notational ^b System in Table 8	Profile by Definitional ^C System in Table 9	Attitude Level Descriptive Term
1	oboch	a _l b _l c _l d _l e _l	Societal Stereotype
2	oboih	a _l b _l c _l d ₂ e _l	Societal Norm
3	iboih	a ₂ b ₁ c ₁ d ₂ e ₁	Personal Moral Evaluation
4	ibmih	a ₂ b ₁ c ₂ d ₂ e ₁	Personal Hypothetical Action
5	iemih	a ₂ b ₂ c ₂ d ₂ e ₁	Personal Feeling
6	iemip	$a_2 b_2 c_2 d_2 e_2$	Personal Action

^aBased on facets of Table 6.

^bSee Table 8 for facets and subscript profiles.

^CSee Table 9 for definitional statements.

CHAPTER III

INSTRUMENTATION AND METHODOLOGY

Previous research has elicited inconsistent results with regard to the correlates and structure of attitudes toward illegal drug users. The lack of a theoretical base for scale construction and the "one-shot" design and administration of instruments have severely handicapped the development of a body of valid knowledge in the area. Facet theory and analysis offer not only a theoretical basis for understanding the relationship of attitude-behavior, but it is buttressed by a system of instrumentation and measurement that specifies which attitude-behaviors are being measured.

<u>The Attitude-Behavior Scale:</u> Drug Users (ABS:DU)¹ (Kaple, 1971; Nicholson, 1972) was developed in accord with the Guttman-Jordan paradigm of facet theory (multidimensional scaling) to measure the continuum of attitude-behaviors toward illegal drug users across six Levels. The present study used this scale with a limited sample of physicians and nurses, analyzing group differences and differences resulting from intensive short term training preceded and followed by administration of the scale.

¹Hereafter referred to as the ABS:DU.

The Attitude-Behavior Scale: Drug Users

The present form of the ABS:DU is the result of five inputs: (a) the Guttman-Jordan paradigm of facet theory and analysis, (b) written research on illegal drug users; (c) personal interviews with illegal drug users, therapists, law enforcement agencies, clergy, students, and parents; (d) changes recommended following administration by Kaple (1971) and Nicholson (1972); (e) adaptations made by the present author calculated to elicit pre-post test differences from the specific physician and nurse sample.

Through the use of facet theory both "joint" and "liberal" struction evolved. Joint struction refers to the object-subject relationship: the six different Levels. The items were developed from current knowledge gained from and about drug users. "Lateral struction" connotes item content and its arrangement.

<u>Joint Struction (Object-Subject</u> <u>Relationship</u>)

The development of ABS:DU was based on Jordan's five facettwo element-six Level design. The following definitions of the six-Level paradigm (Table 7) were employed (see also Appendix IV):

- <u>Societal Stereotype</u>--what society is perceived as believing about illegal drug users.
- <u>Societal Norm</u>--how society is generally perceived as acting toward illegal drug users.
- Personal Moral Evaluation--what one considers others believe to be right or wrong behavior concerning illegal drug users.

- 4. <u>Personal Hypothetical Action</u>how the person believes he would act toward illegal drug users.
- <u>Personal Feeling</u>-how the person reports he actually feels toward illegal drug users.
- Personal Action--how the person reports he has overtly acted toward illegal drug users.

These six profiles (Table 7) are ordered such that Level 1 < 2 < 3 < 4 < 5 < 6 or Societal Stereotype < Societal Norm < Personal Moral Evaluation < Personal Hypothetical Action < Personal Feeling < Personal Action. Guttman (1959, p. 320) states that "according to scale theory, ordering the profiles (these six subscales) also implies a formal ordering of the categories within each facet." Thus the ordering of Level 1 < 2 < 3 < 4 < 5 < 6 determines likewise the following simultaneous orderings: $a_1 < a_2$, $< b_1 < b_2$... $x_1 < x_2$.

Guttman suggests a common semantic meaning toward the attitudebehavior object (illegal drug users) progressing from a weak to a strong form of behavior of the subject. A rationale for the following ordering system is to be found in Table 5:

- Facet A--the referent "other" is weaker than "self--I" in being less personal.
- <u>Facet B</u>--"belief" is weaker than "action" in being "passive" rather than "active."
- <u>Facet C</u>--referring to the behavior of one's "self" rather than that of "others" is stronger in that it implies personal involvement.

- Facet D--"comparative" behavior is weaker than "interactive"
 behavior since it does not imply social contact; a comparison
 is more passive than interaction.
- Facet E-- "hypothetical" behavior is weaker than "operational" in that it does not imply acting out behavior.

There are three justifications for choosing the semantic path (Table 10) utilized in the development of the drug scale: (a) psychological rationale and/or usefulness in the six subscales, (b) the simplex order between the six subscales, and (c) they were judged by the designers to be potentially capable of instrumentation (Nicholson, 1972).

In summary, the six Levels or subscales of the ABS:DU were constructed to correspond to the facet design depicted in Tables 3, 7, 9, and 10.

Lateral Struction (Item Content)

To differentiate item content within Levels, six additional facets--F through J--were added. Figure 1 presents the complete mapping sentence for the composite of scales constructed, or to be constructed, on this <u>a priori</u> basis. Application of this mapping is illustrated specific to the attitude-behavior object, illegal drug users, in Figure 2. Every item on each of the six Levels of the ABS:DU corresponds to a combination of elements of each and every facet A through J of Figure 1. Facet theory rationale enables the specification of objectsubject relationships (joint dimension) as well as situation content (lateral dimension) in each attitude scale item.









Jordan and Hamersma (1969) were the first to create an instrument based on Guttman facet theory in which the content of each item was repeated across all six Levels or profiles; the only difference from Level to Level being the alternation of the specified item content to fit the structure (joint struction) of the different Levels. This procedure affords easier assessment of item content and was followed in construction of the ABS:DU by Kaple (1971) and Nicholson (1972).

The usual approach to scale construction has employed only "item analysis, reliability, and validity." Through Guttman facet theory the mapping sentence pictured in Figure 1 imposes a semantic meaning on the content of the items, while the paradigms in Tables 5, 7, and 10 specifically impose a structured ordered meaning system for the relationships among the six scale Levels.

Kaple (1971) and Nicholson (1972) repeatedly identify the five content facets (F, G, H, I, and J) in Figure 2 as pertinent aspects (facets) of attitude-behaviors toward illegal drug users. Kaple (1971) clarifying the efficacy of the five facets of cause, characteristics, treatment reason, treatment type, and consequences of treatment, states:

The specific content for items used in each of the five attitude content areas was taken from various sources, including previous research, personal interviews with addicts and other specific interest groups, books on attitudes, clinical judgement of individuals who have experience with drug users, and past attitude scales (Kaple, 1971, p. 67).

From the complete facet design depicted in Figure 2, forty content items were selected for each of the six Levels of the ABS:DU so that the scale consisted of 240 items in the original instrument.

TABLE 11

Item in the ABS:DU, Illustrating the Six Level Structure Including Directions and Foils

Level 1	Directions:	Others believe the following things about <u>illegal</u> <u>drug users</u> as compared to non-drug users.
	Item:	Others believe drug users can be trusted (1) less than others, (2) same as others, (3) more than others.
Level 2	Directions:	Most people generally believe the following about interacting with illegal drug users.
	Item:	People generally believe that others would find that drug users can be trusted: (1) less than others, (2) same as others, (3) more than others.
Level 3	Directions:	In respect to illegal drug users, what do <u>you</u> , <u>yourself</u> believe others think is right or wrong?
	Item:	For others to expect drug users to be trustworthy is: (1) usually wrong, (2) undecided, (3) usually right.
Level 4	Directions:	In respect to <u>illegal</u> drug users would <u>you</u> , yourself.
	Item:	I believe I would trust drug users: (1) disagree, (2) uncertain, (3) agree.
Level 5	Directions:	How do you feel toward illegal drug users:
	Item:	I feel I can trust drug users: (1) disagree, (2) uncertain, (3) agree.
Level 6	Directions:	Experiences or contacts with drug users:
	Item:	I have trusted drug users: (1) No, (2) Uncertain, (3) Yes.

Through pilot testing procedures, repetitive or non-essential items were deleted leaving the twenty content items per Level or 120 total items utilized in the present study. Forty-one additional items of a demographic, sociopsychological, change orientation, legality-treatment-care, and contact nature were added in a "Personal Data Questionnaire" which was included as a part of the ABS:DU instrument administered in this study (Appendix IV, Questions 121-161). These items were designed specifically by the present author to investigate characteristics, professional functioning, and hesitations of the physician and nurse sample.

Validity

Anastasi (1968, p. 545) states that "the validation of attitude measures presents a difficult problem." Harrelson (1969) responds that since Anastasi's comment the problem has not significantly been resolved. An ever present confounding variable is the possible difference in one's "public" and "private" attitudes. Opinions expressed in the company of intimate friends, fellow professionals, or those quoted in the press may differ from those expressed to an outside researcher or on a questionnaire. A complete solution to this dilemma is impossible but the present research did minimize this contaminant by assuring complete anonymity of response. Mail administration, omission of "identifier" questions, and separation of coding and analysis functions were employed.

Anastasi (1961) identified another validity problem concerning the relationship between verbal and non-verbal behavior. He points out that discrepancies between the two expressions have been noted in several studies.

Harrelson, a researcher who utilized Guttman-Jordan facet theory analysis procedures regarding the mental retardation scale, replied:

The attitude items in the ABS:MR scale, as in all attitude scales, are verbalizations of behavior; the advantage inherent in an attitude scale based on facet theory, however, is that the verbalizations refer to different Levels of behavior and go beyond hypothetical levels of most attitude scales to verbalizations about affective experiences and concrete, overt behavior. If the relationship between verbal attitudes and overt behavior is ever to be further specified, it may well be through a facet theory approach (Harrelson, 1969).

Anastasi (1961) points out still another problem in that many attitude studies are conducted for the stated purpose of systematically exploring verbally reported attitudes. It is her feeling that the criterion itself in these cases should be defined in terms of verbally expressed attitudes.

Harrelson (1969) again replies:

Given that this is a legitimate assumption, what too often happens is a resort to a superficial kind of content validity based upon a cursory examination and classification of topics to be covered. It would appear that the method of selecting item content on a systematic basis through the use of facet theory and a mapping sentence . . . is far superior to previous methods in assuring that a representative sample of the desired behavior domains is selected. Through this method it becomes a relatively simple matter to plot out the elements and facets one wished to include and to construct scale items to meet this criterion thus assuring that all desired elements are represented (Harrelson, 1969).

Commenting on the content validity of the ABS:DU, Kaple states, "Content validity will be assumed since facet theory will be employed . . . and since the content will be evolved through consultation with drug users, drug therapists, and law enforcement agencies, as well as a comprehensive review of the literature" (Kaple, 1971, p. 74). Evaluation of the postulated simplex will ascertain the construct validity of the ABS:DU administered to the physician and nurse sample. Kaple (1971) states that ". . . there will be a positive (correlational) relationship between the conceptual theory (facet design) and the statistical structure; the size of the correlation coefficient will increase with the increase in the number of contiguous facets in the variables" (Kaple, 1971, p. 74).

As in the normative study by Kaple (1971) concurrent or predictive validity will be inferred by the "known group" method. His developmental work identified five groups "known" as possessing a continuum of favorable to unfavorable attitude-behaviors toward illegal drug users at the personal action Level 6 of the Guttman-Jordan paradigm. The validity of this assumption about Level 6 attitude-behavior can be ascertained via the self reported behavior obtained in his "Personal Data Questionnaire."

In the present study the differences between the physician and nurse behavior, if any exist, on the Level 6 provide more of an empirical question than a known quantity. It is hypothesized that individuals with a greater degree of "professionalization" of training and experience will have more positive attitude-behaviors toward illegal drug users; the rationale being that the physician as compared to the nurse will have had longer academic and clinical training. As a result the physician will be more likely to characterize and treat drug abusing patients as "diseased" rather than "evil, degenerate, or immoral." Table 12 presents this postulated rank ordering.

TABLE 12

Postulated Rank Order Position of Categories at Level 6 of the ABS:DU

	Postulated Position of Categories at Level 6		
<u>Unfavorable</u>		Favorable	
	A = Physicians pre-test		
	B = Physicians post-test		
	C = Nurses pre-test		

- D = Nurses post-test
- E = Combined physicians and nurses pre-test
- F = Combined physicians and nurses post-test

Reliability

The method of estimating reliability of the ABS:DU was to compute a Kuder-Richardson type reliability coefficient for each scale Level. Hoyt (1967) has described a formula for estimating test reliability based on analysis of variance which gives precisely the same result as the formula described by Kuder and Richardson.

It is postulated that the reliability of the present administration of the ABS:DU will compare favorably with the reliability results obtained on the mental retardation scale (ABS:MR) and will closely approximate the high reliability reported for the scale by Kaple (1971) and Nicholson (1972). The reliability figures reported by Jordan and his project researchers have consistently compared favorably with those of tests used for individual diagnosis, evaluation, and selection as described by Anastasi (1961).

Independent Variables

A "Personal Data Questionnaire" consisting of 41 items was designed to measure independent variables that the literature suggested to be correlates and/or predictors of attitude-behaviors toward drug users.

Jordan (1968) identified four classes of variables that seem to be important determinants, correlates, and/or predictors of variables: (a) demographic (e.g., age, sex, and education), (b) sociopsychological (e.g., value orientation), (c) contact amount, voluntariness, and enjoyment, and (d) knowledge about the attitude object. The knowledge variable was not well documented and is difficult to instrument. It was omitted from the present study as was the political activism set of variables since they did not apply directly to the medical professional sample and had limited demonstrated value in the studies of Kaple (1971) and Nicholson (1972). The "Personal Data Questionnaire" was revised to measure the following five types of variables: (a) demographic, (b) change orientation, (c) efficacy, (d) legality-treatment-care, and (e) contact.

Demographic Variables

Three demographic variables were included in the questionnaire as possible correlates and/or predictors of attitude-behaviors toward illegal drug users: (a) sex, (b) age, and (c) profession (nurse or physician).

Change Orientation

These psychosocial variables concerned with a person's concept of changes and the relationship between man and his self perceived control over his life. The concept of change is assessed in the following areas: (a) self change, (b) child rearing methods, and (c) birth control.

Efficacy

A bloc of nine items dealing with life situations was included to measure attitudes toward man's control over his environment. These were adapted from a scale by Wolf.

The continuum underlying this scale range from a view that man is at the mercy of his environment and could only hope to secure some measure of adjustment to forces outside of himself, to a view that man could gain complete mastery of his physical and social environment and use it for his own purpose (Wolf, 1967, p. 113).

Legality-Treatment-Care

This combination of related variables addresses the areas of reaction to treatment modalities, socio-legal controls, professional adequacy, and issues specific to the abuse of licit and illicit drugs in Michigan.

Contact with Illegal Drug Users

The contact variables were designed to measure: (a) the kinds of experiences the respondent has had with illegal drugs, (b) the amount of contact with illegal drug users, (c) ease of avoidance of contact, (d) possibility of future contact with illegal drug users, (e) reaction to prior contact, (f) medical malpractice reporting, and (g) reasons for personal use of illegal drugs.

Design and Administration Procedures

A comprehensive international study of attitude-behaviors toward illegal drug users is being developed by Jordan to investigate the attitude-behaviors of known groups in different societies. The purpose is to search for causes, determinates, and/or correlates of drug abuse and addiction in the United States and elsewhere, as well as to investigate the attitude-behaviors of the significant groups who either come into contact with abusers and addicts or have a vested concern for them.

Despite the increase in popularity of weekend seminars in continuing medical education, Donnelly <u>et al</u>. (1972) in reviewing them could find none that included evaluation of effectiveness for physicians. In lieu of this evaluation, the "satisfaction" often verbally expressed by physicians after such workshops is more likely to mean that participants had "enjoyed" themselves rather than as an indication that learning took place. Donnelly <u>et al</u>. (1972) and Browning (1970) indicate that attitude change could take place during such workshops if they were carefully planned.

The present study focuses on two groups, nurses and physicians, who are currently rendering emergency treatment of drug reactions to students at college health centers in Michigan. They have been selected because they have daily contact with a youthful population known to use illegal drugs. In addition they represent the body of the medical professionals who have been away from medical and nursing school for some time and have need for continuing medical education.

With few exceptions, attitude measurement has been conducted at a given point in time. To assess the impact of a particular format of short term intensive workshop training (Appendix V), this study is based on the administration of the attitude-behavior measurement instrument ABS:DU, both before and after training.

Sampling Procedure

Sample size was determined by the behavioral objectives to be achieved as a result of workshop training and the instructional methods chosen to meet these objectives (Appendix V). For clinical simulation, groupings of six participants with two additional group co-leaders (one physician and one non-physician) were deemed optimal based on similar training experiences with other professional groups. Limitations of funding, conference facilities, and staff established the number of possible groups at seven. Thus a minimum sample size of 42 evolved. Of that number, a total of 37 physicians and nurses did complete the three-day training program (see Table 13).

TABLE	1	3
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Sample Size and Return Rate

Total number ^a of physicians and nurses completing the three day training	= <u>37</u>
Number of nurses completing both pre- and post-test	
Number of physicians completing both pre- and post-test	
Total number of completed test pairs $\underline{29}$	
Return rate	<u>79%</u>

^aThe loss of 5 participants from the possible 42 was due to last minute cancellations and the deletion of 3 non-physician, non-nurse questionnaires completed by participants from colleges that had neither a nurse nor physician. One questionnaire from a nurse was discarded due to its incompleteness but it was included in calculating the total sample size.

In April of 1971 a contact letter was sent to the president or health center director of every Michigan college, junior college, and university. Listings were compiled from the 1971-72 <u>Directory of</u> <u>Institutions of Higher Education</u> published by the Michigan Department of Education. An opinionnaire was included to assess the specific training interests, needs, and availability of potential participants (Appendix VII). A high return rate of opinionnaires was encouraged by promising that those individuals who returned the instrument would be given priority in selection for the limited attendance workshop.

Analysis of the opinionnaires revealed a much greater interest in the workshop than anticipated. Because group size and the number of
groups could not be expanded a set of selection criteria was established and communicated to interested individuals to insure predictability and to avoid charges of favoritism. Preference was given to individuals who fell into the following priority categories:

- Physicians or nurses dealing with drug related problems in college health centers in Michigan;
- Geographical representation from two and four year colleges in Michigan (one participant from each institution);
- 3. Applicants who returned the opinionnaire;
- 4. Return date on the reservation form;
- 5. Membership in one of the sponsoring organizations.

The intent of this selection procedure was to assure representation from all institutions of higher education in Michigan. Upper peninsula schools were given special consideration. Both Osteopaths and Alleopaths were encouraged by their professional organizations to attend. Nurses were likewise contacted on campuses where no physician was available. Many of the colleges had no physician and a Registered Nurse was sent. In all cases, preference was given to those medical staff who were actively delivering health care to students, rather than to staff who were involved only in teaching.

In July of 1971 all interested persons were sent a copy of the workshop format and the results of the opinionnaire (Appendix VII). A formal program and reservation form were sent the first week of September, 1971. As reservations were returned, letters of acceptance or rejection were mailed to each applicant. Selection decisions were based on the stated criteria. Phone requests for reservation forms revealed that the mailing had been unreliable so personal telephone calls were made to every college in Michigan that had not responded. Three weeks prior to the workshop all participants selected received the ABS:DU in the mail.

Pre-Test Administration Procedure

Mail distribution of the ABS:DU scale was decided upon because time limitations at the workshop site did not permit additional time to be spent on pre-testing. A detailed cover letter and follow-up phone call attempted to insure clarity and uniformity of testing directions. The cover page of the ABS:DU included written directions and a sample response. It was decided that computer scored answer sheets would not be used because the participants were not sophisticated in this technique. Later use of the answer sheets for other research during the workshop reinforced this assumption.

Each participant received a return addressed and pre-stamped envelope to return the completed scale. All responses to the scale were recorded on the scale itself. This assured that the participant would not be able to visually refer to his pre-test responses when completing the same scale on the post-test administration.

Complete anonymity of response was guaranteed. Motivation to complete the lengthy ABS:DU was given by promising to send each participant written feedback on the results. The scale respondent was asked to

place the last four digits of his Social Security number on the top of the first page of both the pre- and post-test booklets.

Post-Test Administration Procedure

In late November of 1971 each of the 37 nurses and physicians that attended and completed the workshop experience received a packet of follow-up information which included:

- Results of their written pre-post test drug knowledge test and the correct answers.
- 2. Results of the evaluations that participants submitted after the final session (Appendix VII).
- A certificate of successful completion of the workshop experience.
- Information about loan of the audio and video tapes of the sessions.
- The post-test ABS:DU instrument, cover letter, directions, and return envelope.

Follow-up telephone calls were made to each participant beginning a few days later. Feedback on ABS:DU results was again assured. The same procedure of scoring and anonomity was followed as on the pre-test.

Major Research Hypotheses

The primary emphasis of this study is substantive, regarding the attitude-behaviors of physicians and nurses toward illegal drug users. The secondary emphasis of this study is to lend further reality testing to the methodological study conducted by Kaple (1971) on the development of ABS:DU and to expand Nicholson's (1972) normative data base.

Theoretical Hypotheses

- H-1: The six Levels of the ABS:DU will form a simplex for each of the two research groups, i.e., the obtained Q^2 values for each group shall equal or exceed .70.
- H-2: The six research categories will rank order at Level six, as hypothesized in Table 12.

Substantive Hypotheses

H-3: Nurses will have more unfavorable attitude-behaviors toward illegal drug users on Levels 1 and 2 of the post-test than on the pre-test.

<u>Rationale</u>.--Workshop training utilizing drug knowledgeable

paraprofessionals from the youth culture as simulated patients and group

co-leaders will focus attention on society's moralistic and negative attitude-behaviors toward illegal drug users.

H-4: Physicians will have more unfavorable attitude-behaviors toward illegal drug users on Levels 1 and 2 of the posttest than on the pre-test.

Rationale.--Same as for Hypothesis 3.

H-5: Nurses will have more favorable attitude-behaviors toward illegal drug users on Levels 3, 4, 5, and 6 of the post-test than on the pre-test.

<u>Rationale</u>.--The workshop focus on drug abuse as a symptom

of other things gone wrong in a person's life and the dramatic presentation of illegal and legal drugs as both having potential for use and abuse will de-stigmatize the user of illegal drugs. The teaching of medical intervention techniques through patient simulation, peer feedback, and self critique will build confidence in the participants' self-perceived ability to deal effectively with the illegal drug user in need of help. As fear of the patient and personal uncertainty are reduced, the tendency to avoid contact or to treat him in a punishing way will be reduced.

H-6: Physicians will have more favorable attitude-behaviors toward illegal drug users on Levels 3, 4, 5, and 6 of the post-test than on the pre-test.

Rationale.--Same as for Hypothesis 5.

H-7: On both pre- and post-tests, physicians as compared to nurses will have more favorable attitude-behaviors toward illegal drug users on the Action Levels 4, 5, and 6.

Rationale.--The more lengthy pre-clinical and clinical

training of the physician, as compared to that of the nurse, will make him more likely to view illegal drug dependency as a medical-psychosocial concern rather than as a character or moral defect to be punished. Likewise the greater "professionalization" of the physician, compared to that of the nurse, will make him less judgemental and less likely to avoid contact with illegal drug users.

Analysis Procedures

The Control Data Corporation computers (CDC 3600 and 6500) at Michigan State University were used to analyze the data.

Correlation Statistics

The advantage of using the CDC MD-STAT program (Ruble, Paulson, and Rafter, 1966) is that a great amount of data can be employed in one analysis. For any total category and for any number of sub-groups or partitionings of the data, separate analysis can be done. For each specified group, i.e., total pre, total post, nurses pre, nurses post, physicians pre, and physicians post a number of statistics can be ordered. Means and standard deviations for each variable and the matrix of simple correlations between all variables have been used for each partitioning of this research.

Analysis of Variance and Multiple Means Statistics

To calculate the one-way analysis of variance statistics, the UNEQ1 routine (Ruble, Kiel, and Rafter, 1966b) has been utilized as it is designed to handle unequal frequencies occurring in various categories.

To analyze group-item interaction a two-way analysis of variance design for unequal N's has been employed (Ruble, Paulson, and Rafter, 1966). This procedure assures that scores of the unequal numbers of physicians and nurses in both the pre- and post-test will be weighted to eliminate disproportionate statistical outcomes.

Multivariate Analysis of Variance

In calculating multivariate analysis of variance the Finn (1970) Univeriate and Multivariate Analysis of Variance and Covariance: A FORTRAN IV Program has been utilized. "The multivariate program will perform univariate and multivariate linear estimation and tests of hypotheses for any crossed and/or nested design, with or without concomitant variables. The number of observations in the subclasses may be equal, proportional, or disproportionate" (Nicholson, 1971, p. 93). Consultation with statisticians has assured that the following assumptions inherent in the utilization of the Finn technique and its

multivariate multiple regression analysis have been satisfied:

(a) multivariate normality of variables and (b) homogeneity of error variance and covariance matrices.

Simplex Approximation

Kaiser (1962) has suggested a procedure for testing a simplex approximation. Kaiser's approach may be viewed as performing two functions: (a) the "sorting" and rearranging of all possible arrangements of adjacent pairs of correlation coefficients so as to generate the best empirically possible simplex approximation from adjacent pairs, and (b) the assignment of a statistic, Q^2 , to the original and rearranged matrices. The index Q^2 is a descriptive one, with a range of 0.00 to 1.00.

A computer program has been developed at Michigan State University which will (a) reorder the obtained Level member correlations of each ABS:DU matrix by Kaiser's¹ procedure to generate the "best" empirically possible simplex approximation, and (b) will calculate the Q^2 for both the obtained and the empirically best ordering of each matrix (Nicholson, 1972, pp. 93-94).

Level of Significance

In this study the .05 level is proposed as indicating significance beyond chance for both correlational and analysis of variance statistics.

¹As documented elsewhere by Jordan (Harrelson, Jordan, Horn, 1972) Guttman has pointed out that the Kaiser procedure is limited to a simplex of the form $r_{jk} = a_j/a_k$ (j < k), and alternate methods of simplex analysis are being explored by Jordan and Guttman.

CHAPTER IV

DATA ANALYSIS

It is the intent of this author to investigate the attitudebehaviors of physicians and nurses toward illegal drug users. Differences between the two groups are compared both before and after a short term intensive training program. This chapter presents the statistical analysis of the research hypotheses stated in Chapter III. Chapter IV contains a discussion of additional findings and implications for future research.

Research Population

The 120 item <u>Attitude Behavior Scale: Drug Users</u> (ABS:DU), plus the 41 item "Personal Data Questionnaire" were administered to those groups indicated in Table 13. It should be noted that only those participants who completed both the pre- and post-test were included in the analysis. While the size of the training population was 37 medical professionals who completed training, 32 of them completed the pre-test and 35 completed the post-test. Of these individuals the coding indicated that 79 per cent completed training and both test administrations, legitimating their inclusion in the statistical analysis. Thus a sample size of 29 physicians and nurses from 29 different colleges and universities in Michigan completed the three day training

and the pre- and post-testing. Of the 29 persons included, one nurse was a male and two of the physicians were female. No attempt was made to analyze their ABS:DU scores separately. Tables 12 and 13 depict the sample category designations, category identification, and category size referred to in this and the next chapter. Appendix III identifies the institutions of higher education in Michigan from which participants were drawn to comprise the training population of 37. Because individual and institutional anonymity were assured it was inappropriate and impossible to identify those institutions represented in the sample of 29 whose scores were analyzed.

Data Analysis

For the purpose of reader clarity, none of the hypotheses in this study are stated in the null form. However, in the statistical analysis it is the null form which is used. As stated previously, the .05 level of statistical significance was established as necessary for an hypotheses to be accepted.

ABS: DU Reliability and Validity

Reliability estimates for the six groups were obtained at each of the six Levels of the ABS:DU by the Hoyt (1941) method as described by Winer (1962). This technique utilizes analysis of variance to produce a reliability coefficient equivalent to the Kuder Richardson formula 20 (Mehrens and Ebel, 1967), measure of internal consistency. These results are contained in Table 14. Reference to Table 14 reveals that the reliabilities ranged from .55 to .98. Of the 36 separate

TABL	E	4
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Category^a Reliability Coefficients for ABS:DU by Level

Category	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
<u>A</u> (Physicians pre-test)	.94	. 94	.96	.82	.86	.97
<u>B</u> (Physicians post-test)	.72	.82	. 92	.92	.91	.85
<u>C</u> (Nurses pre- test)	.76	.85	.78	.76	.55	.98
<u>D</u> (Nurses post-test)	.78	.90	.68	.80	.79	. 98
<u>E</u> (Combined Nurses & Physicians pre-test)	.89	.91	.92	.78	.77	. 98
<u>F</u> (Combined Nurses & Physicians post-test)	.76	.88	.84	.88	.87	.97

^aSee Table 13, Chapter III, for sample size and return rate.

reliability coefficients only two fell below the recommended .70 level. The low .55 reliability for Level 5, Category C (nurses pre-test) and the marginal .68 reliability for Level 3, Category D (nurses post-test) remain unexplained. It is interesting and reassuring to note that Level 6, Actual Action had the highest reliability across all six categories. The ABS:DU appears to be reliable in terms of internal consistency on the basis of the data obtained.

Validity of the ABS:DU was assessed by the "known group" method and by the results of the simplex test described in Hypothesis 1. Examination of the data in Table 15 indicates that all categories scored higher than the required Q^2 value of .70 for the simplex matrix.

Research Hypotheses

H-1: The six levels of the ABS:DU will form a simplex for each of the two research groups, i.e., the obtained Q² values for physicians and nurses in each of the six categories shall equal or exceed .70.

Hypothesis 1 was tested by using the CDC MD-STAT computer program at Michigan State University Computer Center to produce Level to Level correlations for all categories. The Level to Level correlations were then subjected to Kaiser's (1962) simplex approximation test as described in Chapter III. The obtained simplex was submitted to a procedure that "evaluates" the obtained correlation matrix, resulting in a Q^2 value. The program in addition rearranged adjacent pairs of coefficients into the "best" possible simplex order and computed a "best approximation" of Q^2 . Table 15 presents the correlation matrices and Q^2 values for both the "original matrix" and for the "best approximation"

TABLE	15
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Correlation Matrices and Q^2 Values for Original and Best Simplex Approximations

	Original	Simp1	ex Matrices	Best Sin	plex Matrices
<u>Category A</u> : Physicians pre-test	.62 .33 .81 .60 .83 .66 .88 .70 .85	 8 .86 8 .89 5 .71	Q ² = .77 .95 .89 .91	.70 .62 .85 .66 .91 .60 .89 .33 .71	Q ² = .92 .88 .83 .95 .81 .89 .86
<u>Category B</u> : Physicians post-test	.93 .48 .69 .50 .69 .57 .77 .56 .75	.97 .97 .92	Q ² = .88 .94 .94 .94	.93 .56 .75 .57 .77 .50 .69 .48 .69	Q ² = .98 .94 .94 .94 .92 .97 .97
<u>Category C</u> : Nurses pre- test	.74 .27 .07 .28 .15 .03 .20 .03 .22	.54 .37 .61	$Q^2 = .88$.44 .64 .77	.74 .28 .15 .27 .07 .03 .22 .03 .20	Q ² = .89 .54 .64 .61 .44 .37 .77
<u>Category D</u> : Nurses post- test	.63 .16 .15 .28 .33 .25 .16 .07 .16	 3.28 .45 .15	Q ² = .91 .88 .39 .36	.63 .16 .15 .28 .33 .25 .16 .07 .16	Q ² = .91 .28 .45 .88 .15 .39 .36
Category E: Combined Physicians & Nurses pre-test	 .68 .00 .30 .06 .23 .26 .32 .30 .22	 3.71 .69 .67	Q ² = .71 .73 .79 .85	.68 .26 .32 .30 .22 .06 .23 .00 .30	Q ² = .78 .85 .73 .80 .69 .67 .71
<u>Category F</u> : Combined Physicians & Nurses post-test	.72 .16 .37 .14 .16 .16 .26 .18 .13	.75 .80 .49	Q ² = .98 .92 .58 .57	.72 .16 .37 .16 .26 .14 .16 .18 .13	Q ² = .98 .80 .75 .92 .49 .57 .58

for every category. Kaiser's (1962) simplex test does not take into account the occurrence of negative correlations but this presented no difficulty since all of the correlations were positive.

Chapter III stated that a Q^2 value of .70 is accepted as reflecting a satisfactory simplex approximation according to the Jordan-Hamersma six reversal criteria (Hamersma, 1969). Each of the "original simplex" and "best simplex" matrices exceeded this criteria ranging from .77 to .97.

The data of Table 15 therefore support Hypothesis 1: that the ABS:DU does form a simplex. The simplex structure obtained here is also viewed as a measure of construct validity.

H-2: The six research categories will rank order at Level six as hypothesized in Table 12.

Hypothesis 2 was analyzed by rank ordering the means of the six Levels for the six categories. Table 12 rank ordered the categories so that C < E < A < D < F < B, or in other words Category C (nurses pre-test) was hypothesized to have the least favorable attitude-behavior and Category B (physicians post-test) was hypothesized to have the most favorable attitude-behavior toward illegal drug users. Inspection of Table 16 indicates that this is not the way the six categories rank ordered at the Actual Action Level 6. Rather they rank ordered D < F < A < E < C < B. Only one category, B (physicians post-test) rank ordered as hypothesized. Thus the rationale forwarded to support Hypothesis 2 must be questioned and the hypothesis itself must be rejected.

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Category and Rank Ordered Mean Scores^a by Level

			Category	Means		
	A (Physicians Pre-Test)	B (Physicians Post-Test)	C (Nurses Pre-Test)	D (Nurses Post-Test)	E (Combined Pre-Tests)	F (Combined Post-Tests)
Level 1 Stereotypic	34.18	29.00	32.18	31.00	32.96	30.17
Level 2 Normative	31.09	30.08	31.71	32.00	31.46	31.21
Level 3 Moral	40.18	39.25	39.71	41.82	39.89	40.76
Level 4 Hypothetical	40.25	38.92	40.35	44.00	40.31	41.90
Level 5 Actual Feeling	39.33	40.33	40.77	43.94	40.17	42.45
Level 6 Actual Action	40.30	41.17	40.83	39.25	40.59	40.21
20 Unfavorabl	a		Rank Ordered M	lean Scores	Favorab	le 60
Level 1 Level 2 Level 3 Level 4 Level 5 Level 6	29.00 (B) ^b 30.08 (B) 39.25 (B) 38.92 (B) 39.33 (A) 39.25 (D)	30.17 (F) 31.09 (A) 39.71 (C) 40.25 (A) 40.27 (F)	31.00 (D) 31.21 (F) 39.89 (E) 40.31 (E) 40.33 (B)	32.18 (C) 31.46 (E) 40.18 (A) 40.35 (C) 40.77 (C) 40.59 (E)	32.96 (E) 31.71 (C) 40.76 (F) 41.90 (F) 42.45 (F) 40.83 (C)	34.18 (A) 32.00 (D) 41.82 (D) 44.00 (D) 43.94 (D) 41.17 (B)
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mean scores computed for this table were derived from a computer program (Kaiser, 1962) that reduced the sample size when respondents omitted questions on any Level. The Finn 1970 multivariate analysis of variance program used to test Hypotheses 3-8 computed zeros for question omits and kept the sample size constant in computing mean scores.

^bDesignates category identification.

It should be noted that in computing the mean scores for Levels utilized in Hypothesis 2 the computer program (Kaiser, 1962) automatically reduced the sample size in cases where respondents failed to complete questions on a given Level. Thus question omits resulted in mean scores that are approximations. This same procedure was followed in computing the Q^2 and Hoyt reliability statistics. Due to inconsistencies between programs, the Finn (1970) program did not follow the same procedure. In dealing with "question omits" the multivariate analysis of variance program as utilized in Hypotheses 3 through 8, calculated zeros where omits occurred but did not decrease the sample size in computing mean scores. A result is that on Levels where a large number of omits occurred such as on Level 6, the sample mean scores used in **calculation** of multivariate analysis of variance were reduced lending an **overall** more "unfavorable" profile. Possible effects of lowered mean scores will be discussed in Chapter V.

H-3: Nurses will have more unfavorable attitude-behaviors toward illegal drug users on Levels 1 and 2 of the post-test than on the pre-test.

Hypothesis 3 was analyzed by the multivariate analysis of variance program (Finn, 1970), a FORTRAN IV program. This program provides a multivariate analysis of variance on both categories and both Levels as well as a univariate analysis of variance between selected categories. The multivariate test was not significant at the required P<.05, as shown in Table 21. Hence examination of the univariate analysis of variance was not completed. On Level 2 nurses moved in a slightly more favorable direction between tests (Tables 16 and 17),

	Unfavoi	rable		Σ	ean Scores			Favor	able
	20	25	30	35	40	45	50	55	60
							Mean [ifference S	core
Level 1 Stereotypic			31.00 \	32.18				-1.18	
Level 2 Normative			31.71	32.00				+0.29	
Level 3 Moral					4	1.82		+2.11	
Level 4 Hypothetical				40	. 35	44.00		+3.65	
Level 5 Actual Feeling	-	c		7	10.77	43.94		+3.17	
Level 6 Actual Action	. alon	Pre	, ب	ŝ	0.25 40	. 83		-1.58	

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TABLE 17

"Mean scores computed for this table were derived from a computer program (Kaiser, 1962) that reduced the sample size when respondents omitted questions on any Lvel. The Finn 1970 multivariate analysis of variance program used to test Hypotheses 3-8 computed zeros for question omits and kept the sample size constant in computing mean scores.

the direction being opposite of that hypothesized and the difference not being significant. On Level 1 nurses moved in a slightly more unfavorable direction between tests, as hypothesized but the movement was not statistically significant (Tables 16 and 17).

H-4: Physicians will have more unfavorable attitude-behaviors toward illegal drug users on Levels 1 and 2 of the posttest than on the pre-test.

The overall test by the multivariate analysis of variance program (Finn, 1970) was significant at P < .02 for Hypothesis 4 (Table 21). This indicated that either Level 1 or Level 2 or both Levels were statistically different on the post-test compared to mean scores on the pre-test. Univariate analysis of variance established that only Level 2 with P < .009 (Table 22) met the required significance level and thus accounted for the statistically significant difference found by the overall multivariate analysis of variance test. Movement between tests was in the negative (less favorable) direction hypothesized (Tables 16 and 18). Hypothesis 4 is however rejected because only at Level 2 was the change significant.

H-5: Nurses will have more favorable attitude-behaviors toward illegal drug users on Levels 3, 4, 5, and 6 of the post-test than on the pre-test.

Once again the Finn (1970) multivariate analysis of variance program was used with Hypothesis 5. The overall P < .099 (Table 21) did not meet the established P < .05 level of significance. Because visual inspection of the mean difference scores for nurses Hypothetical Level 4 (Table 17) was higher than for all other Levels, univariate analysis of variance was scanned revealing P < .02 for this Level (Table 22). While

	Unfav	orable		Me	an Scores			Favorab	Je
	20	25	30	35	40	45	50	55	60
							Mean D	ifference Sco	bre
Level l Stereotypic		29.	~ 00	, 34.18				-5.8	
Level 2 Normative		ñ	0.08	31.09				-1.01	
Level 3 Moral				39.25	1 40.18	Ø		-0.93	
Level 4 Hypothetical				38.92	40.25			-1.33	
Level 5 Actual Feeling		C		39.3	3 . 40.3	ю		+1.00	
Level 6 Actual Action	Note:	Pre Post		40	.30 1 41.	17		+0.87	

TABLE 18

reduced the sample size when respondents omitted questions on any Level. The Finn 1970 multivariate analysis of variance program used to test Hypotheses 3-8 computed zeros for question omits and kept the sample size constant in computing mean scores.

the unacceptable overall P < .099 for Hypothesis 5 makes it impossible to accept the univariate test for Level 4, it is interesting to note that at this Level there are some indications that considerable movement in a favorable direction did take place for nurses (Tables 16 and 17). Hypothesis 5 is none the less rejected.

H-6: Physicians will have more favorable attitude-behaviors toward illegal drug users on Levels 3, 4, 5, and 6 of the post-test than on the pre-test.

Hypothesis 6 was tested using the multivariate analysis of variance program (Finn, 1970). The overall test was not significant at the required P < .05 (Table 21). Table 18 reveals that the mean difference score for the Actual Feeling Level 5 and for the Actual Action Level 6 were positive indicating a movement toward more favorable attitude-behavior toward illegal drug users. At the Moral Level 3 and the Hypothetical Level 4 physicians moved in a negative or more unfavorable direction (Table 18). Hypothesis 6 is rejected.

> H-7: On both pre- and post-tests, physicians as compared to nurses will have more favorable attitude-behaviors toward illegal drug users on the Action Levels 4, 5, and 6.

Hypothesis 7 was analyzed by the multivariate analysis of variance program (Finn, 1970). The program provided a multivariate analysis of variance for the combined Levels 4, 5, and 6 of both preand post-tests. On the pre-test overall analysis, the P < .73 did not meet the required P < .05 significance, therefore univariate analysis of variance of the individual Levels 4, 5, and 6 was not completed (Table 21). Multivariate analysis of variance for the overall post-test of Levels 4, 5, and 6 yielded P < .04 (Table 21). This justified univariate analysis of variance of the three individual levels. Only the Actual Action Level 6 of the post-test analysis yielded P < .05 (Table 22). In terms of directionality of change (Tables 19 and 20), physicians contrary to Hypothesis 7, had less favorable attitude-behaviors toward illegal drug users than did nurses on the pre-test Levels 4, 5, and 6 and also on post-test Levels 4 and 5. Thus only at the Actual Action Level 6 on the post-test did physicians appear to have more favorable attitude-behaviors toward illegal drug users than did nurses. Even at Level 6 post-test (Table 20), the mean difference score between physicians and nurses was only +1.92, slightly favoring physicians. The meaning of this minimal difference score is further diminished in light of the observation that at Level 6 on both pre- and post-tests, some physicians and many nurses refused to complete the questions dealing with their Actual Action toward illegal drug users. Further analysis of the effect of omits at Level 6 will be discussed in Chapter V. Hypothesis 7 is rejected.

	Unfa	vorable		Me	an Scores			Favoi	rable
	20	25	30	35	40	45	50	55	60
							Physician Nurse	Mean Score Mean Scori	Minus
Level l Stereotypic			32.18	`, ,•34.18				+2.00	
Level 2 Normative			31.09 2	31.71				-0.62	
Level 3 Moral				39.7	1 40.18			+0.47	
Level 4 Hypothetical				40.	25 40.3	ų		-0.10	
Level 5 Actual Feeling		Ż	C	39.3	3 / 40.7	2		-1.44	
Level 6 Actual Action	Note:	Pnys1	Pre	40.	30 1 40.	83		-0.53	

Profile Across Levels of Physician Pre-Test and Nurse Pre-Tect Mean Scoree^a

TABLE 19

"Mean scores computed for this table were derived from a computer program (Kaiser, 1962) that reduced the sample size when respondents omitted questions on any Level. The Finn 1970 multivariate analysis of variance program used to test Hypotheses 3-8 computed zeros for question omits and kept the sample size constant in computing mean scores.

	Unfavo	rable		¥	ean Scores			Favo	rable
	20	25	30	35	40	45	50	55	60
							<u>Physician</u> Nurse	Mean Score Mean Scor	Minus
Level l Stereotypic		29	.00 1 31	00.				-2.00	
Level 2 Normative		30	. 08	2.00				-1.92	
Level 3 Moral				39.25	/	41.82		-2.57	
Level 4 Hypothetical				38.92		44.00		-5.08	
Level 5 Actual Feeling		ā		40.3	 8	43.94		-3.61	
Level 6 Actual Action	Note: -	Phys	Iclan Post Post	39.2	5 41	.17		+1.92	
^a Mean sc reduced the samp analysis of vari the sample size	ores compu le size wh ance progr constant i	ited for tl en respond am used to n computi	ris table we dents omitte o test Hypot ng mean scor	re derived d question heses 3-8 es.	d from a c is on any computed	omputer p level. T zeros for	rogram (Kai ne Finn 197 question c	iser, 1962) 0 multivar 0 mits and k	that iate ept

TABLE 20

TA	BL	_E	2	I

Multivariate Analysis of Variance (Finn, 1970)--Overall Test

Н	Multivariate F	Degrees of Freedom	P Less Than	Significance at P<.05
3	0.8245	2/15	.4558	
4	5.8384	2/12	.0209	*
5	2.4437	4/13	.0991	
6	2.2506	4/8	.1529	
7 p re- test	0.4269	3/25	.7355	
7 post-test	3.3177	3/25	.0362	*

	Level	Between Mean Square	Univariate F	P Less Than	Step Down F	P Less Than
4		32.67	0.7450	.4065	0.7450	.4065
	2	15.0417	0.5115	.4894	10.3019	.0094*
5	2	113.0588	8.0418	.0120	6.2974	.0241**
7 post-test	4	181.7730	2.6232	.1170	2.6232	.1170
	ß	91.5646	1.7173	.2011	0.1826	.6727
	9	1274.5970	4.4664	.0440	6.6357	.0163*

TABLE 22

Univariate Analysis of Variance (Finn, 1970)

******Indicates strong pre-post movement but no statistical significance. *Indicates significance for Levels at the acceptable P < .05.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This study was designed to test impact accountability for a

three day workshop on emergency treatment of drug reactions, conducted

by the Michigan Governor's Office of Drug Abuse, October 24-26, 1971.

The behavioral objective associated with the use of the Attitude

Behavior Scale: Drug Users (ABS:DU) follows:

Given pre and post tests of physician-nurse attitudes and values toward drug use, drug abuse, the drug culture, alternative life styles, and their relationship to the community, the participant will be able to:

• Recognize and discuss his current biases and their potential effect on helping relationships with drug using patients.

• Consistently display nonjudgemental attitudes and behavior styles in treating drug abusers, as evidenced via discussion and treatment of simulated patients, and relationships with paraprofessionals (Maclean, 1972, p. 5).

Chapter V contains a brief summary of the study, an expansion of the results of the data as they pertain to physicians and nurses in general, recommendations for future research, a presentation of the author's perceptions of need for change, and an outline of a model for anticipating and understanding the attitude behaviors of medical Professionals.

Summary

The increasing tendency of society to shift the responsibility for dealing with illegal drug users from law enforcement to the medical professions, signals a need for examination of the attitude-behaviors of the medical elite. The role of physicians and nurses as "legitimaters of illness" and controllers of "deviants," exists within a tradition of freedom from outside evaluation and control. Civil rights considerations of "involuntary hospitalization" and the restriction of private consensual drug taking behavior, make examination of the physician and nurse attitude-behaviors toward the illegal drug user even more crucial.

The present study was part of a comprehensive effort to research attitude-behaviors toward the illegal drug user and to search for causes, determinants, and/or correlates of these attitude-behaviors. Studies focusing on physician and nurse attitude-behaviors toward illegal drug users are almost non-existant and those few conducted have not generally employed measurement scales based on a testable theoretical framework.

This particular study was concerned with two principal groups, physicians and nurses presently rendering emergency treatment of drug reactions occurring among a high risk population, students in Michigan colleges and universities. These medical professionals were selected for training and testing because they had demonstrated a readiness, interest, and need for training (Appendix VI).

The Guttman-Jordan facet theory and scaling method employed offers the most comprehensive approach to measurement of attitudebehaviors known. Guttman's definition of attitude as "a delimited

totality of behavior with respect to something" (Guttman, 1950) extends the common definition of attitude as a "predisposition to behavior," thus making it possible to measure a continuum of behavior. The continuum extends from a verbal-cognitive orientation to overt action. Attitudes and behaviors are therefore not dichotomized but are viewed together as a unified human behavior complex (Nicholson, 1972, pp. 148-149).

Using the Guttman-Jordan paradigm of a five facet-six Level structure, the <u>Attitude Behavior Scale: Drug Users</u> (ABS:DU) was developed to measure six Levels of attitude-behavior: (a) what society is perceived as believing about illegal drug users (Societal Stereotype), (b) how society is generally perceived as acting toward illegal drug users (Societal Norm), (c) what one considers others believe to be right or wrong behavior concerning illegal drug users (Personal Moral Evaluation), (d) how the person believes he would act toward illegal drug users (Personal Hypothetical Action), (e) how the person reports he actually feels toward illegal drug users (Personal Feeling), and (f) how the person reports he has overtly acted toward illegal drug users (Personal Action). The ABS:DU scales according to a specific statistical structure (i.e., simplex joint struction) which provides not only multidimensional measurement, but also a means of assessing construct validity.

The content of the ABS:DU was designed around five content facets: (a) causes of illegal drug use, (b) characteristics of illegal drug users, (c) reasons for treatment, (d) types of treatment, and (e) consequences of illegal drug use. In addition there was a "Personal

Data Questionnaire" which gathered information in five areas: (a) demographic, (b) change orientation, (c) efficacy, (d) legalitytreatment-care, and (e) contact (Appendix IV).

The ABS:DU was administered by mail to a total of 37 physicians and nurses of whom 29 returned both the completed pre- and post-tests. Physicians and nurses were selected on the basis of the established interest and need criterion (Chapter III, Sampling Procedure).

Various statistical measures were applied to the data which indicated a high degree of construct validity and reliability of the scale.

Interpretation of the Results

The following results of the research study are outlined according to each of the six Levels of the ABS:DU with reference to the major categories identified. This provides a framework for understanding the total results as well as the specific research hypotheses that were tested. For clarification in summarizing, one of the tables presented in Chapter IV will be duplicated in this chapter. Additional data from analysis of particular items of the "Personal Data Questionnaire" will be included in Appendis VII.

Since the ABS:DU measured attitude-behaviors on six Levels, the most appropriate means of analyzing differences among categories was multivariate analysis (Finn, 1970) of all categories as well as univariate analysis of variance between selected categories.

Societal Stereotype (Level 1)

The purpose of the first Level is to provide a measure of how each category views society's stereotypes toward illegal drug users. The higher the score, the more favorable the attitude-behavior, the lower the score the more unfavorable the attitude-behavior.

According to Table 23 physicians on the post-test (Category B) rate society's stereotypes as being much more unfavorable than they did on the pre-test (Category A). Nurses, meanwhile, viewed society's stereotypes to be somewhat more negative than physicians did to begin with, and on the post-test nurses moved in a slightly more negative direction, but less so than did physicians.

Hypothesis 4 stated that physicians would have more unfavorable attitude-behaviors at Level 1 on the post-test than on the pre-test. The directionality of the hypothesis was established but the change was not great enough to be significant at the .05 level. Likewise, for Hypothesis 3, nurses moved in a more unfavorable direction on the posttest than on the pre-test but the degree of change was not significant.

It appears that during the course of training both physicians and nurses came to view society's opposition to illegal drug users as being more unfavorable than they had originally believed. In light of Pattison's (1968) observation that professionals tend to lead the public in formulation of attitudes, the importance of alerting physicians and nurses to the role and impact of their attitude-behaviors and those expounded by professional associations is underscored. Thus public attitude-behaviors toward illegal drug users may mirror in a more conservative way the predominant attitude-behaviors of the health care professions.

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Category and Rank Ordered Mean Scores by Level

			Category	Means		
	A (Physicians Pre-Test)	B (Physicians Post-Test)	C (Nurses Pre-Test)	D (Nurses Post-Test)	E (Combined Pre-Tests)	F (Combined Post-Tests)
Level 1 Stereotypic	34.18	29.00	32.18	31.00	32.96	30.17
Level 2 Normative	31.09	30.08	31.71	32.00	31.46	31.21
Level 3 Moral	40.18	39.25	39.71	41.82	39.89	40.76
L evel 4 Hypothetical	40.25	38.92	40.35	44.00	40.31	41.90
Level 5 Actual Feeling	39.33	40.33	40.77	43.94	40.17	42.45
Level 6 Actual Action	40.30	41.17	40.83	39.25	40.59	40.21
20 Unfavorable			Rank Ordered	Mean Scores	Favora	ole 60
Level 1 Level 2 Level 3 Level 4 Level 5 Level 6	29.00 (B) ^a 30.08 (B) 39.25 (B) 39.33 (A) 39.25 (D)	30.17 (F) 31.09 (A) 39.71 (C) 40.25 (A) 40.21 (F)	31.00 (D) 31.21 (F) 39.89 (E) 40.31 (E) 40.33 (B) 40.30 (A)	32.18 (C) 31.46 (E) 40.18 (A) 40.35 (C) 40.77 (C) 40.59 (E)	32.96 (E) 31.71 (C) 40.76 (F) 41.90 (F) 42.45 (F) 40.83 (C)	34.18 (A) 32.00 (D) 41.82 (D) 44.00 (D) 43.94 (D) 41.17 (B)

^aDesignates category identification.

Societal Norm (Level 2)

Level 2 provided a measure of how nurses and physicians view society as generally acting toward the illegal drug user, i.e., society's normative behavior. Table 23 indicates that physicians on Level 2 post-test rated society's actions toward illegal drug users as being more unfavorable than on the pre-test. At Level 2 the direction and extent of change are statistically significant (Tables 21 and 22) and consistent with Hypotheses 4. Nurses at Level 2, however, came to view society's actions toward illegal drug users as being slighly more favorable on the post-test (Table 23). This change was not significant (Table 22) and occurred in the direction opposite that stated in Hypothesis 3.

In the course of training both physicians and nurses were in intimate contact with trained paraprofessionals having "street" contact and who had observed and perhaps experienced society's actions toward illegal drug users. It appears that this exposure may have reinforced and indeed strengthened the physicians' perception that society does exhibit unfavorable actions toward the illegal drug user. Nurses before training were nearly identical (Table 23) to physicians in the degree to which they perceived society as acting unfavorably but for some unexplained reason nurses moved slightly toward a less unfavorable perception on the post-test.

On the post-test both physicians and nurses saw society's norms as being slightly less unfavorable than society's stereotypes. Thus both categories see a discrepancy between what society believes (Level 1) and how society generally acts (Level 2). This finding is consistent

with that of Nicholson (1972) that professional drug therapists noted a gap between the public's beliefs and acts. This dichotomy has implications for health care professionals seeking strategies to establish drug treatment programs in community settings. As a viable model for the public, the health care professions would do well to re-examine their own procedures in treatment of minors and confidentiality, moving toward less punitive and more preventive actions.

Personal Moral Evaluation (Level 3)

The moral evaluation level is a measure of how physicians and nurses view society's perception of right or wrong behavior toward the illegal drug user. Each of the six categories (Table 23, A through F) made sizeable shifts from their views of society's norms (Level 2) to their views of society's moral evaluation (Level 3), to a more favorable relationship with illegal drug users. In effect, this indicated that the nurses and physicians tested, see society's moral stance toward illegal drug users as being much more positive than they see either society's stereotypes or society's normative behaviors. This pattern is parallel to that established in previous attitude-behavior research using Guttman-Jordan scaling. Persons who had contact with the object under study saw society's moral evaluation as being more positive than its stereotypes and norms. Between no other Levels in this study was the extent of the shift as great as between Level 2 and Level 3.

The moral evaluation Level 3 continues to be a transitional Level between the negative view of society's stereotypes (Level 1) and society's norms (Level 2) and the more positive relationship indicated

in personal hypothetical behavior (Level 4), personal feeling (Level 5), and personal actual actions (Level 6). This would imply that the nurses and physicians tested, regard society as being more conservative (negative) in comparison to their own "enlightened" positions of what society "ought" to do, implying that the personal feelings and personal overt behavior of physicians and nurses are a little more liberal (positive) than their own moral stance (Nicholson, 1972, pp. 157-8).

This finding reinforces the stance of medical sociologists in that they view the medical profession as having the established role of preserving traditional values and behaviors, acting as a gatekeeper (Freidson, 1970; Mechanic, 1968). This sanctioned role then "molds" the nurse or physician to become particularly sensitive to their public "stance" with regard to illegal drug users while often exhibiting quite different private behavior and feelings toward the illegal drug user.

Hypotheses 5 and 6 examined whether or not there were statistically significant differences between the pre- and post-test scores of nurses and physicians on the moral evaluation Level 3. Multivariate analysis of variance (Table 21) and univariate analysis of variance (Table 22) revealed that at Level 3 neither physicians nor nurses had statistically significant differences between their pre- and post-test scores. Table 23 does indicate that physicians and nurses moved slightly in opposite directions on the post-test compared to the pretest. Physicians became slightly more negative (Table 18), moving in a direction opposite of that hypothesized. Nurses came to view society's moral evaluation as more favorable on the post-test (Table 17) relative to their pre-test perceptions. This finding in turn establishes a need

to compare the perceptions of drug patients and those of health care professionals with regard to how each perceives society's moral evaluation. There is a need for further research examining the most "effective attitude-behavior constellations" of both health care professionals and drug patients relative to treatment outcomes in terms of staff and patient selection and matching. The potential of the ABS:DU as a predictive tool is largely untapped.

Personal Hypothetical Action (Level 4)

Level 4 provides a measure of how physicians and nurses say they would act toward the illegal drug users; an indicator of future behavior. There are indications (Table 23) that nurses, relative to physicians, would act much more favorably toward illegal drug users following their training experience than before it. While neither Hypothesis 5 nor 6 could be accepted on the basis of the multivariate test, an "observational" univariate analysis of variance for Level 4 (Table 22) gives some indication that nurses became more positive toward potential future contact with illegal drug users while physicians became somewhat more negative when they projected how they might act toward the illegal drug user.

This more favorable hypothetical action toward their drug patients on the part of nurses may indicate a need to have nurses become the primary contact with illegal drug users and have physicians become consultant members of the treatment team but not necessarily the leaders of the team with respect to the psychosocial aspects of habilitation.

Personal Feeling (Level 5)

Level 5 measures how physicians and nurses report they "actually feel" toward the illegal drug user. Physicians, on both the pre- and post-tests, had very similar scores for both Level 4, their hypothetical action, and Level 5, their actual feeling toward illegal drug users (Table 23). This would indicate consistency between the way physicians say they would act and the way they say they feel toward illegal drug users.

Also when scores for Levels 4 and 5 are compared for nurses on the pre-test, there is consistency. Nurses, however, became more favorable in their actual feeling and hypothetical action toward illegal drug users as a result of training (Table 23).

As none of these differences were significant at Level 5, Hypotheses 5 and 6 were rejected. Nurses again, appear to have become more positive in attitude-behaviors than physicians, this time in Actual Feeling (Level 5) toward illegal drug users (Table 17). This generalized trend for nurses is directly contradictory to the findings of Ferneau, 1968, 1969; Marcus, 1963; and Pittman, 1963. In their studies they found that moralistic, authoritarian, and judgemental attitudes toward illegal drug users and alcoholics were inversely related to one's "professionalization" or degree of education. They found that with advanced training one's attitudes toward drug abusers became more "enlightened" and less negative. Thus physicians as a group with their longer formal training period would be expected to have less negative attitudes than nurses. The above cited studies used a one dimensional instrument which defined attitude as merely a "predisposition to behavior."

Given the limited sample of the present study, the "professionalization" and accompanying positive attitude hypothesis of Ferneau and others cannot be refuted but it is substantially challenged.

Personal Action (Level 6)

Level 6 proposes to measure how the physicians and nurses report they have actually acted toward illegal drug users. It should be noted that on the pre-test 5 (29.4%) of the nurses and 2 (17%) of the physicians refused to answer questions revealing their actual actions toward illegal drug users. On the post-test 6 (35.3%) of the nurses and none (0%) of the physicians refused to answer questions at Level 6. The same nurses who omitted Level 6 on the pre-test also omitted it on the posttest. As previously stated, the Finn (1970) multivariate analysis of variance program used in analyzing Hypotheses 3 through 7, computed omits on any Level as zeros and did not reduce the sample size in computing mean scores used in testing differences among categories on the pre- and post-test. As a result, mean scores and mean difference scores for nurses at Level 6 were greatly reduced, skewing the results in a negative or unfavorable direction. It can be assumed that at least on the post-test the actual actions of nurses who omitted questions at Level 6 would have made a difference when added to the responses of the rest of the nurses who did complete questions at Level 6. Specifically, at Level 6 there were 20 questions with foil values of either 1, 2, or 3 points. Foils with a value of 1 point are the most unfavorable choice of actual action toward illegal drug users while those with a value of 3 points reflect the most favorable attitude-behavior (Appendix IV).
Thus if the 6 nurses who omitted questions on the post-test Level 6 had chosen even the most unfavorable foils for each of the 20 questions, a total of 120 points would have been added to the group score for nurses in the calculation of mean scores and multivariate analysis of variance between nurses and physicians at Level 6.

To explore the impact due to omits by nurses at Level 6, two t-tests were performed. The t-test was chosen because it employs mean scores of only those participants who completed all questions thus adjusting for omits at Level 6 which the Finn (1970) program was incapable of doing. Results in Table 24 indicate that on both the pre- and post-tests there were no statistically significant differences between physicians and nurses at Level 6. This would indicate that the Finn (1970) test of the univariate analysis of variance function for Level 6 is the error due to its inability to adjust sample size for omits. Hypothesis 7 is therefore rejected in total.

TABLE 24

		Mean	Standard Deviation	Sample Size	Degrees of Freedom	t (.05)	t Computed
Pre- test	Physicians Nurses	40.30 40.83	8.58 6.51	10 12	20	<u>+</u> 2.086	<u>+</u> .0955
Post- test	Physicians Nurses	41.17 39.25	8.35 11.68	12 12	22	<u>+</u> 2.074	<u>+</u> .0770

Multiple t-Tests by Category at Level 6

Overall Comparison of Physicians to Nurses

By comparing the mean difference scores for physicians and nurses across each of the 6 Levels (Table 25) the change between and within categories can more easily be visualized. It is interesting to note that at every Level nurses became more positive or at least less negative than physicians in stating their perceptions of attitudebehavior toward illegal drug users. Clearly the three day training in emergency treatment of drug reactions had more impact on nurses than physicians.

In deference to the conclusions of Ferneau stated earlier, research data recently reported, tends to support the conclusion of the present study, that nurses are more open than physicians to change in attitude-behavior toward illegal drug users. In the study of the development of physician attitudes toward their patients it has been found that medical students' attitudes of cynicism increase and their attitudes of idealism and humanitarianism decrease during medical school training (Becker, 1958; Reinhardt, 1972; Reissman, 1960). One study indicates that a sizeable portion of new doctors after beginning practice, show little or no reduction in their levels of cynicism (Gray, 1965). Eron (1955) reports that this change is not true of students who graduate in nursing and law.

While it is true that attitudes of cynicism among medical students may be modified later, once they are in practice and that they are in part situational responses rather than highly stable traits, the finding that "attitudes of cynicism among medical specialists are less prominent in social settings where a premium is placed upon affective



Post-Test Minus Pre-Test Mean Difference Scores Compared for Physicians and Nurses



----- Indicates physician post-test mean score minus physician pre-test mean score.

Indicates nurse post-test mean score minus nurse pre-test mean score.

^aExamination of the raw data revealed that at Level 6 for nurses post test, one nurse completed the first three items but omitted the remaining seventeen items. In computing the means pictured in Table 23, zeros were added for each of the omitted items artificially lowering the group mean for nurses post-test. In arriving at the nurse mean difference score of ± 1.47 , the pre-test mean score for nurses (Table 23, 40.83) was subtracted from the adjusted post-test nurse group mean score of 42.30. mutual response between physician and patient" (Reinhardt, 1972, p. 116) is particularly burdensome for the patient seeking treatment for abuse or use of illegal drugs. Chapter 1 clearly establishes that the usual doctor-illegal drug user relationship can be fairly characterized as the antipathy of the "affective mutual response."

While a moderate amount of cynicism is functually useful in aiding a student to successfully progress through medical or nursing school as it now exists with all its destructive competitive stresses, changes in the training process would be more "healthy" and productive for the health care professional in training and for patients, be they illegal drug users or not.

The three day training program (Appendix V) based on expressed needs, behavioral objectives, participant involvement, treatment of simulated patients, pre- and post-testing, and constant feedback is a model worth further application and research.

Direct observation of physician and nurse interactions during the three day training revealed interesting attitude-behavior patterns. When nurses were taking part in treatment of simulated drug patients, physicians often were very condescending in their negative feedback. Even as co-learners, physician participants were authoritarian in mixed, small groups, seldom giving positive reinforcement to nurses. This physician dominance and nurse submissiveness is consistent with traditional hospital behavior where the physician gives the orders and the nurse follows them, each having carefully defined role expectations for the other. In fairness to participants, it should be noted that some paraprofessionals leading small groups exploited the opportunity (Appendix VII) to control physicians and nurses; at times not recognizing adequate performance or being overly critical. This behavior reflects the frustrations and hostility held by many paraprofessionals in the drug field who seldom have opportunities to relate to health care professionals as equals, much less as instructors, even when their expertise more than warrants it.

When feedback, both positive and negative, was given to nurses they appeared much more open to hearing it and were more likely to respond non-defensively than were physicians. This may be due in part to the physician's need to appear sure of his actions and beliefs even when they were not certain.

Overall Impact

In addition to accomplishing Objective 5 (Appendix V.), use of the ABS:DU prompted an intensive self-examination of attitude-behaviors toward illegal drug users on the part of participants in the workshop training. While none of the hypotheses regarding directionality or relativity of change could be accepted in total, the process of examination of attitude-behaviors reflected a guarded willingness to question one's role in relation to interactions with patients. Even though unmatched questionnaires were not tabulated, the fact that many more post-tests were returned than pre-tests reflects a greater commitment to the idea of attitude-behavior scrutiny. This act of examination is even more significant considering that participants prior to the

workshop rank ordered the topic, "attitudes and values toward drug users and drug abuse" as tenth of 13 items they felt were crucial to include in training (Appendix VI). It is possible that many attitude-behaviors held by participants were evaluated during the course of training and reinforced. Thus even though major shifts were not indicated, the strength of commitment to given attitude-behaviors may have been increased.

General reaction to the training workshop can be gleaned from the results of the semantic differential and open ended evaluations completed by participants after the final session (Appendix VII). A number of personal letters from participants commenting favorably on the workshop were received by the author. They have not been reproduced to safeguard personal identity and because the evaluations are adequately represented by the data and comments in Appendix VII.

Limitations of This Study and the ABS:DU Instrument

In terms of its impact, this study may be limited by the fact that it was conducted by a non-physician. Defensive reaction by the medical elite is to be expected in that up to this point, society has given medicine legitimate autonomy with complete control over the evaluation of its work and accountability for it. Evaluations by "outsiders" such as this study, have been decried and labeled as illegitimate and intolerable. This selective perception is most dangerous in groups that regard themselves as being free from preconceptions.

The selective nature of the small sample of Michigan college health center physicians and nurses used in this study makes data generalization to the nursing and medical professions elsewhere tenuous.

The pre- and post-test design of the study necessitated mail administration of the ABS:DU instrument one month prior to and following the workshop. The possible effect of drug patient contact, colleague influence, additional reading, and personal drug use during this two month interval cannot be totally ruled out although its occurrence is expected to have been minimal. Future research using pre- and post-test design should include specific questions in the "Personal Data Questionnaire" to account for these and other intervening variables.

A number of complications arise with the ABS:DU instrument itself. The complexity of the design and the laborious paper and pencil administration introduce the possibility of subject confusion or frustration. If the number of questions per Level could be reduced to ten or fifteen, the administration time and subject tedium would be greatly diminished.

The cost factor in terms of computer time, postage, follow-up telephone calls, printing, and consultation make replication of this study difficult. The time gap between administration and analysis of results makes prompt feedback to participants impossible. A hand calculation and analysis technique should be found. The Finn (1970) multivariate analysis of variance program should be revised or another computer program substituted to handle question or entire Level omits.

Each of the limitations cited can be resolved. It is hoped that other investigators sharing in the "project" approach to graduate

research will focus their attention and energy on some of these difficulties. Only in this way will the use of the ABS:DU Guttman-Jordan facet theory instrument become widespread, resulting in benefit for a society confronted by massive misuse of both legal and illegal drugs.

Specific Recommendations for Further Research and Application

 It is imperative that future research attempt to correlate observed actions of those tested with scores on the six Levels of the ABS:DU. The rating of observed actions previous to or following testing with the Carkhuff (1969) empathy scales is suggested.

2. Once relationships are established between rated observed actions and score profiles on the ABS:DU, it is suggested that the instrument be used as a tool in selecting and matching therapists, clients, and various drug treatment modalities.

3. Law enforcement officers, judges, and corrections staff should be selected and trained in terms of desired attitude-behavior profiles toward illegal drug users using the ABS:DU in much the same way that some police are now being screened on the basis of racial bias attitude-behaviors.

4. The attitude-behavior profiles of physicians known to be "over-prescribers" should be researched and compared to profiles of known "rational-prescribers."

5. The attitude-behavior profiles of both youth and adults identified as non-drug users should be compared with those of persons known to be addicted or habituated to legal and illegal drugs.

6. The attitude-behavior profiles of pharmaceutical industry boards of directors, marketing departments, and advertising departments should be compared with those of known illegal drug "pushers."

7. The attitude-behaviors of nursing and medical students in their last year of training should be compared with profiles of nurses and physicians who have been practicing twenty years.

8. Comparison of attitude-behaviors of nurses and physicians in college health centers with those of health care professionals in private practice, community hospitals, or clinics should be conducted. A cherished bit of folklore among students has been that nurses and physicians in college health centers are "quacks," "misfits," and paternal-maternal types who come to campus to retire. Attitude-behavior profile comparisons by size of institution, income, and degree of exposure to drug users would be enlightening.

In all research the caution of Schein (1971, p. 111) should be recalled:

All too often, the attitude surveyor fathers his data and gives the feedback only to top management, thereby producing at best no change and at worst a negative change. The reporting of data to the respondents themselves as material for them to work with is a far more effective way to improve organization and to validate whether the written responses correspond to the people's actual feelings. . .

Epilogue

The following observations and comments go beyond the strict confines of the data generated by the ABS:DU. Inclusion in this thesis does not necessarily reflect the agreement of the author's doctoral committee. This section is intended to provide the author's perspective of how the attitude-behaviors studied fit into the broader question of health care definition and delivery.

The attitude-behaviors of physicians and nurses appear to be less than favorable toward the illegal drug user. While their attitudebehaviors appear to need change, they are not alone in their negativism and should not become scapegoats. Helping professionals in general, be they social workers, law enforcement officers, psychologists, or teachers have a similar need for attitude-behavior examination and change. In many ways the attitude-behaviors of illegal drug users toward helping professionals are obstructive, self-defeating, and likely to elicit negative response.

The previously documented personal misuse of drugs by physicians and nurses, compounded by their complicity in the drug abuse of their patients should preclude their reign as undisputed prevention-treatmenthabilitation experts. The admonition "physician heal thyself" might well be a prerequisite to any further direction of non-medical aspects of drug treatment by physicians.

In the minds of many medical professionals and the public, the "use" of any illegal drug is abuse, defining the person as sick, while the use of any prescription drug is therapeutic. The sick role demands

that one avoid obligations which may exacerbate his condition; accept the idea that he needs help; that he desires to get well; and that he seek and accept unquestioningly all medical ministrations in getting well. Even if he complies with these conditions and becomes drug free (often despite the treatment) he is stigmatized as an "ex-addict" or "ex-drug abuser" and is deprived of many rights accorded "good normal" people. This irreversible fate does not accrue to the asthmatic (exasthmatic), the bone fractured patient (ex-fracturee), or dysentery sufferer (ex-dysenteree).

Behind the aegis of a service profession, organized medicine has become a closed system. Health care needs are being determined not by the community to be served but by the profession self-served. Many of the prerogatives of the church, the law, the family, and the individual have been abandoned and usurped as medicine dictates its conception of morality through professional action or inaction. This perspective applies not only to attitude-behaviors toward illegal drug users but to the full range of physician defined human deviance.

. . . The professionals' role in a free society should be limited to contributing the technical information men need to make their own decisions on the basis of their own values. When he preempts the authority to direct, even constrain men's decisions on the basis of his own values the (medical) professional is no longer an expert but rather a member of a new privileged class disguised as expert (Mechanic, 1968, p. 382).

Prediction Model

The following conceptual framework is an attempt to assist health care professionals, paraprofessionals, and other helping persons to anticipate and modify the quality and quantity of care given during

treatment of drug reactions. Equally important is its potential impact on drug users who may find themselves interacting with physicians and nurses.

The model itself is the outcome of an exhaustive research of health care delivery relevant to drug related behaviors. The model is supported by the results of the ABS:DU testing of this study. The experience of various free clinics, drug education centers, and countless reports by illegal drug users lend further immediacy to the category designations and probability estimations. The reports of the Victimless Crime Study (1972) conducted by the Michigan Office of Drug Abuse and Alcoholism dealing with private consensual drug taking behaviors and their disposition by the medical profession and law enforcement authorities provide a broad base reality check on the model. Lastly, intensive personal and professional involvement by the author in many facets of the drug prevention-habilitation scene has provided the genesis for the model.

It is hoped that reactions, both positive and negative, to the model will be openly communicated to the author so that it can be made more applicable and comprehensive. The model is not to be construed as an attack on the activities of the health care professions, but rather a critical analysis of the multifaceted psychosocial forces contributing to the formation of unfavorable attitude-behaviors among nurses and physicians.

TABLE 26

Prediction Model^a for Understanding Physician and Nurse Attitude-Behaviors Toward Drug Taking

Imputation	Imputation of Responsibility							
Seriousness	Individual Held Responsible	Individual Not Held Responsible						
	Unsanctioned Intoxication	Therapeutic Cost						
Minor Deviation	"patient presents with marijuana high" A	"patient experiences side effects due to prescribed B tranquilizers"						
Serious Deviation	<u>Self-Induced Addiction</u> C "patient becomes addicted to 'street drugs'"	D <u>Iatrogenic Addiction</u> "patient becomes addicted to prescribed analgesic during the course of treatment for disease"						

^aModel adapted from Freidson (1970, p. 231).

	Situation	<u>Hy</u>	ype <u>C</u>	ot	ur	sizec renc	<u>i Pro</u> e by	babi Cat	i] eg	ity or	<u>/_(</u> y	<u>of</u> ah
1.	Likelihood of unfavorable attitude- behaviors displayed by health care professionals to patients in this category	D	B	•	•	•		•	A	 •	<u>.</u>	<u>с</u>
2.	Degree of responsibility for the condition carried by the health care professional.	С	A	•	•			В	•	•	•	D
3.	Likelihood of economic benefit accruing to the health care professional by hav- ing his patients appear in this category	A	С	•	•	•		D	•	•	•	В
4.	Willingness of health care professionals to treat patients appearing in each category.	С	•	A	•	•		В	•	D	•	•
5.	Likelihood of legal penalties accruing to the patient for appearing in this category.	D	В	•	•			•	•	A	•	С
6.	Likelihood of legal penalties accruing to the health care professional for causing patients to appear in this category.		D			B				Δ		C
7.	Incidence of health care professionals finding themselves in this category.	•	C	•	•	A		•	•	•	D	B

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APPENDICES

APPENDIX I

GLOSSARY

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GLOSSARY¹

Approximation--see "simplex approximation."

- Attitude--"Delimited totality of behavior with respect to something" (Guttman, 1950, p. 51).
- Attitude-behavior--The hyphenated term denotes that attitude is a subclass of behavior rather than an intervening variable or a "predisposition" to behavior.
- Bad trip--a drug induced psychological and/or physiological experience that the drug user does not expect or enjoy.
- Content--situation (action, feeling, comparison, circumstances) indicated in an attitude item; generally corresponds to "lateral struction."
- Definitional statement--specification of characteristics proper to an item of a given Level member, typically stated in phrase or clause form.
- Definitional system--ordered group of definitional statements or of the corresponding Level members; typically either the group constituting a "semantic path" or the complete group of 12 Level members in the "semantic map."
- Directionality--characteristic of an item, sometimes called positive or negative, determining agreement with the item as indicating favorableness or unfavorableness toward the attitude object.
- Element--one of two or more ways in which a facet may be expressed; in the present system, all joint facets are dichotomous, expressed in one of two ordered elements.
- Facet--one of several semantic units distinguishable in the verbal expression of an attitude; in the present system, five dichotomous facets are noted within the joint struction.

Facet profile--see "struction profile."

Joint struction--see also "struction," "lateral struction"--"operationally defined as the ordered sets of . . . five facets from low to high across all five facets simultaneously" (Jordan, 1968, p. 76); that part of the semantic structure of attitude items which can be determined independently of specific response situations.

- Lateral struction--see also "struction," "joint struction"--that part of the semantic structure of attitude items which is directly dependent on specification of situation and object; a more precise term than "content."
- Level--degree of attitude strength specified by the number of strong and weak facets in the member(s) of that Level; in the present system, six ordered Levels are identified: Level 1 is characterized by the unique member having five weak facets; Level 2, by members having four weak and one strong facet . . . Level 6, by the unique member having five strong facets.
- Level member--one of one or more permutation(s) of strong and weak facets which are common to a given Level; in the present system, 12 Level members have been identified: three on Level 2, four on Level 3, two on Level 4, and one each on Levels 1, 5, and 6.
- Map--see "semantic map."
- Member--see "Level member."
- Path--see "semantic path."
- Profile--see "struction profile."
- Reversal--change in a specified order of Levels or of correlations, involving only the two indicated Levels or correlations.
- Semantic--pertaining to or arising from the varying meanings, grammatical forms, or stylistic emphasis of words, phrases, or clauses.
- Semantic map--two-dimensional representation of hypothesized relationships among six Levels and among 12 Level members.
- Semantic path--ordered set of Level members, typically six, such that each member has one more strong facet than the immediately preceding member and one less strong facet than the immediately following member.
- Semantic possibility analysis--liguistic discussion of the implications of the five dichotomous joint facets identified in the present system; of 32 permutations, only 12 are considered logically consistent.

Simplex--specific form of (correlation) matrix, diagonally dominated and decreasing in magnitude away from the main diagonal.

- Simplex approximation--matrix which approaches more or less perfectly the simplex form; existing tests (Kaiser, 1962) reflect both ordering of individual entries and sizes of differences between entries and between diagonals.
- Street drugs--drugs found in use for non-medical purposes outside the circulation channels of prescription or over the counter drugs; may be pure or adulterated; diverted from normal channels or made in underground laboratories; often these drugs are mis-represented and possession without prescription is likely to be illegal.
- Strong(er)--opposite of weak(er)--term functionally assigned to one or two elements, to a facet expressed by its strong element, or to a Level member characterized by more strong facets than another Level member; the strong-weak continuum is presently examined as unidimensional.
- Struction--see also "joint struction," "lateral struction"--semantic pattern identifiable in any attitude item, or the system of such identifications.
- Struction profile--specification, typically indicated by small letters and numerical subscripts, of the permutation(s) of weak and strong elements or facets in a Level member or a set of Level members; or of permutations of lateral elements or facets.
- Transposition--change in a specified order of Levels or of correlations involving a change in position of one Level or correlation and corresponding one-place shift in the position of following or preceding Levels or correlations.

Weak--opposite of "strong" (which see).

¹Credit is given to Maierle (1969) and Nicholson (1972) for most of the work in developing this glossary.

APPENDIX II

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VARIABLE LIST--CODE BOOK

Туре		Variable	Range of Means	Card	Column	Page	Item
ATTITUDE CONTENT	1 2 3 4 5 6	Stereotypic Normative Moral Hypothetical Actual Feeling Actual Action	20-60 20-60 20-60 20-60 20-60 20-60	1 2 3 4 5 6	11-30 11-30 11-30 11-30 11-30 11-30	2-4 5-8 9-12 13-15 16-18 19-21	1-20 21-40 41-60 61-80 81-100 101-120
OHEIO	7 8 9 ^a	Sex Age Profession	1-2 1-5 1-3	1-6 1-6 1-6	32 33 34	22 22 22	121 122 123
CHANGE ORIENT	10 11 12	Self-Change Child Rearing Birth Control	1-4 1-4 1-4	1-6 1-6 1-6	35 36 37	22 22 22	124 125 126
LEGAL ITY-TREATNENT-CARE	13 14 15 16 17 18 19 20 21 22 23 24 25 26 27	Att Effect on Care Trt Bad Trips Paraprofessionals Pre-Competency Suicidal User Med Sch Curr Fines-Jail MJ Diet Pills Wt Methadone \$ Enforcement MJ Viet Nam Release Diet Pills Prod MJ Legalization MJ Dangers Drug Program Coord	1-4 1-4 1-4 1-4 1-4 1-4 1-4 1-4 1-4 1-4	1-6 1-6 1-6 1-6 1-6 1-6 1-6 1-6 1-6 1-6	38 39 40 41 42 43 44 45 46 47 48 49 50 51 52	23 23 23 23 23 23 23 23 23 24 24 24 24 24 24 24 24 25	127 128 129 130 131 132 133 134 135 136 137 138 139 140 141
CONTACT	28 29 30 31 32 33 34 35 36 37	Type Drug Contact # Contacts Type User Contact Self Use Type Self Use Amt Avoidance Rock Concert Aid Enjoyment of Trt Prof Ethics Self Use Reason	1-5 1-5 1-5 1-5 1-5 1-5 1-5 1-2 1-5	1-6 1-6 1-6 1-6 1-6 1-6 1-6 1-6 1-6	53 54 55 56 57 58 59 60 61 62	25 25 26 26 26 26 26 26 26 26	142 143 144 145 146 147 148 149 150 151
	38	Efficacy	9-36	1-6	63-71	27-28	152-160
	39	Drug Illegality	1-5	1-6	72	28	161
IDENTITY	40 41 ^b 42 43 ^c 44 ^d	Soc. Sec. # Subject # Card # Trial # Pre and Post	 	1-6 1-6 1-6 1-6 1-6	1-4 5-6 7 8 9	 	

ABS:DU BASIC VARIABLE LIST BY IBM CARD AND COLUMN

^aProfession: 1 = physician; 2 = nurse; 3 = other.

^bSubject #: numbered consecutively by professional membership (Column 34).

^CTrial #: 1 = pre-test; 2 = post-test.

 d_{Pre} and Post: 3 = both pre- and post-tests; 0 = either pre- or post-test.

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APPEND1X III

LIST OF PARTICIPATING INSTITUTIONS

MICHIGAN INSTITUTIONS PARTICIPATING IN THE 3-DAY TRAINING

Andrews University Berrien Springs

Alma College Alma

Aquinas College Grand Rapids

Bay De Noc Community College Escanaba

Concordia Lutheran Jr. College Ann Arbor

Cranbrook Institute Bloomfield Hills

Eastern Michigan University Ypsilanti

Ferris State College Big Rapids

Genesee Community College Flint

Hope College Holland

Hillsdale College Hillsdale

Kalamazoo College Portage

Macomb County Community College Grosse Pointe Woods

Macomb County Community College Warren

Mercy College Detroit

Merrill-Palmer Institute Detroit Marygrove College Detroit

Michigan State University East Lansing

Nazareth College Kalamazoo

Northwood Institute Midland

Oakland University Rochester

Oakland Community College Auburn Heights

Owosso Junior College Owosso

Schoolcraft Junior College Livonia

Saginaw Valley College University Center

Spring Arbor College Spring Arbor

St. Clair Community College Port Huron

University of Detroit Detroit

University of Michigan Ann Arbor

Wayne State University Detroit

Washtenaw Community College Ann Arbor

Western Michigan University Kalamazoo
APPENDIX IV

ABS:DU AND PERSONAL DATA QUESTIONNAIRE WITH RESULTS

The last 4 digits of my Social Security number are:

ATTITUDE BEHAVIOR SCALE DU

Directions

This booklet contains statements of how people behave in certain situations or feel about certain things. You, yourself, or other persons often behave in the same way toward <u>illegal</u> <u>drug</u> <u>users</u>. You also have some general ideas about yourself, about other persons like you and about <u>illegal</u> <u>drug</u> <u>users</u>. Sometimes you feel or behave the same way toward everyone and sometimes you feel or behave differently toward <u>illegal</u> <u>drug</u> <u>users</u>.

This questionnaire has statements about ideas and about behavior. Each statement in this questionnaire is different from every other statement, although some of the statements in each section are similar. Your answers in one section, therefore, may be the same as answers in another section, or your answers may differ from section to section. Here is a sample statement:

Sample I

- 1. Chance of drug users being sick more often
 - (1). less chance
 - 2. about the same
 - 3. more chance

If others believe that illegal drug users have less chance to be sick more often, you should circle the number 1 as shown above (definition of "others": people in general, users or not).

****** DO NOT PUT YOUR NAME ON THE BOOKLET *****

c) Copyright, 1973, by: John E. Jordan, Ph.D. James M. Kaple, Ph.D. William Nicholson, Ph.D. College of Education Michigan State University

ABS-I-DU

Directions: Section I

This section contains statements about ideas which others have about illegal drug users. Circle or fill in the answer sheet number that indicates how others compare drug users with non drug users.

Others believe the following things about illegal drug users as compared to non-drug users:

- 1. Drug users usually come from homes that are:
 - 1. less happy than others
 - 2. same as others
 - 3. happier than others
- 2. As compared to others drug users deal with anxiety or worry:
 - 1. less well
 - 2. same
 - 3. better than non drug users
- 3. Others believe that minority racial groups are more likely to be drug users than whites.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 4. Others believe that people who use drugs are:
 - 1. physically weaker than others
 - 2. same
 - 3. physically stronger than others
- 5. As compared to non-drug users others believe that drug users plan for the future.
 - 1. less often
 - 2. same
 - 3. more often
- 6. With regard to work, others believe that drug users are:
 - 1. less dependable than others
 - 2. same as others
 - 3. more dependable than others

Others believe the following things about <u>illegal</u> drug users as compared to non-drug users:

- 7. As compared to others, drug users act immature.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 8. Others believe that drug users are antisocial.
 - 1. more often than non-drug users
 - 2. same as non-drug users
 - 3. less often than non-drug users
- 9. Others believe drug users are an economic threat to society.
 - 1. agree
 - 2. undecided
 - 3. disagree
- 10. As compared to non-drug users, others believe that drug users are:
 - 1. less fun to date
 - 2. the same
 - 3. more fun to date
- 11. Others believe drug use leads to permanent physical damage to the user.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 12. Others believe that drug users are a threat to society.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 13. Others believe that drug users are beyond medical help.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 14. Others believe that drug users should be isolated from the rest of society in jails.
 - 1. agree
 - 2. uncertain
 - 3. disagree

Others believe the following things about <u>illegal</u> drug users as compared to non-drug users:

- 15. Others believe that drug users can best be helped by ex-drug addicts.
 - 1. disagree
 - 2. uncertain
 - 3. agree
- 16. Others believe that drug users are beyond help by psychologists.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 17. Others believe that most drug users usually seek treatment only to <u>lower</u> the amount of daily drug intake.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 18. Others believe drug users need a permanent drug substitute, like methadone, to permanently "kick the habit."
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 19. Others believe drug users usually desire treatment because they are in legal difficulty.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 20. Drug users usually seek treatment to permanently "kick the habit."
 - 1. disagree
 - 2. uncertain
 - 3. agree

ABS-II-DU

Directions: Section II

This section contains statements which people generally believe others would experience when interacting with <u>illegal</u> drug users. Please choose the answer that indicates what you think most others believe about <u>illegal</u> drug users.

- 21. People generally believe that others would find that drug users come from homes that are:
 - 1. less happy than others
 - 2. same as others
 - 3. more happy than others
- 22. People generally believe that others would find drug users deal with anxiety or worry:
 - 1. less well than others
 - 2. same as others
 - 3. better than others
- 23. People generally believe that others would find that minority racial groups are more likely to be drug users than whites.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 24. People generally believe that others would find drug users to be:
 - 1. physically weaker
 - 2. same
 - 3. physically stronger
- 25. People generally believe that others would find that drug users plan for the future:
 - 1. less often than others
 - 2. same as others
 - 3. more often than others

- 26. With regard to work, people generally believe that others would find drug users to be:
 - 1. less dependable than others
 - 2. same as others
 - 3. more dependable than others
- 27. People generally believe that others would find that drug users act:
 - 1. less mature than others
 - 2. same as others
 - 3. more mature than others
- 28. People generally believe that others would find that drug users are antisocial.
 - 1. agree
 - 2. undecided
 - 3. disagree
- 29. People generally believe others would find drug users to be an economic threat to society:
 - 1. more than others
 - 2. same as others
 - 3. less than others
- 30. People generally believe that others would find that drug users are:
 - 1. less fun to date than non-drug users
 - 2. the same as non-drug users
 - 3. more fun than non-drug users
- 31. People generally believe that others find that drug use leads to permanent physical damage to the user.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 32. People generally believe that others would find drug users to be:
 - 1. more of a threat to society than non-drug users
 - 2. same threat to society
 - 3. less of a threat to society than non-drug users

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- 33. People generally believe others would find that drug users are beyond medical help.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 34. People generally believe that others would find that drug users should be isolated from the rest of society in jail.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 35. People generally believe others would find drug users can best be helped by ex-drug addicts.
 - 1. disagree
 - 2. uncertain
 - 3. agree
- 36. People generally believe others would find that drug users are beyond help by psychologists.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 37. People generally believe that others would find that drug users usually seek treatment only to <u>lower</u> the amount of daily drug intake.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 38. People generally believe that others would find that drug users need a permanent drug substitute, like methadone, to permanently "kick the habit."
 - 1. agree
 - 2. uncertain
 - 3. disagree

- 39. People generally believe that others would find drug users usually desire treatment because they are in legal difficulty.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 40. People generally believe that others would find drug users seek treatment to permanently "kick the habit."
 - 1. disagree
 - 2. uncertain
 - 3. agree

ABS-III-DU

Directions: Section III

This section contains statements of the right or wrong way of behaving or acting toward <u>illegal</u> drug users. You are asked to indicate what you yourself believe others think should be done with respect to <u>illegal</u> drug users.

In respect to illegal drug users, what do you, yourself, believe others think is right or wrong:

- 41. For others to believe that drug users come from unhappy homes is:
 - 1. usually right
 - 2. undecided
 - 3. usually wrong
- 42. For others to believe that drug users deal with anxiety well is:
 - 1. usually wrong
 - 2. undecided
 - 3. usually right
- 43. For others to expect most drug users to be from a minority racial group is:
 - 1. usually right
 - 2. uncertain
 - 3. usually wrong
- 44. For others to believe that drug users are physically weak is:
 - 1. usually right
 - 2. undecided
 - 3. usually wrong
- 45. For others to expect drug users to plan for the future is:
 - 1. usually wrong
 - 2. undecided
 - 3. usually right

In respect to illegal drug users, what do you, yourself, believe others think is right or wrong:

- 46. For others to believe that drug users are less dependable workers is:
 - 1. usually right
 - 2. undecided
 - 3. usually wrong
- 47. For others to expect drug users to be immature is:
 - 1. usually right
 - 2. uncertain
 - 3. usually wrong
- 48. For others to expect drug users to be antisocial is:
 - 1. usually right
 - 2. undecided
 - 3. usually wrong
- 49. For others to expect drug users to be an economic threat to society is:
 - 1. usually right
 - 2. uncertain
 - 3. usually wrong
- 50. For others to expect drug users to be fun on a date is:
 - 1. usually wrong
 - 2. undecided
 - 3. usually right
- 51. For others to think that drug use leads to physical damage to the user is:
 - 1. usually right
 - 2. uncertain
 - 3. usually wrong
- 52. For others to expect drug users to be a threat to society is:
 - 1. usually right
 - 2. uncertain
 - 3. usually wrong

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in respect to <u>illegal</u> <u>drug</u> <u>users</u>, what do <u>you</u>, <u>yourself</u>, <u>believe</u> others think is <u>right</u> or <u>wrong</u>:

- 53. For others to expect that drug users are beyond medical help is:
 - 1. usually right
 - 2. uncertain
 - 3. usually wrong
- 54. For others to expect drug users to be isolated from society by jail is:
 - 1. usually right
 - 2. uncertain
 - 3. usually wrong
- 55. For others to expect drug users to best be helped by ex-drug addicts is:
 - 1. usually wrong
 - 2. uncertain
 - 3. usually right
- 56. For others to expect that drug users are beyond help by psychologists is:
 - 1. usually right
 - 2. uncertain
 - 3. usually wrong
- 57. For others to think drug users seek treatment only to lower the amount of daily drug intake is:
 - 1. usually right
 - 2. uncertain
 - 3. usually wrong
- 58. For others to think that drug users need a permanent drug substitute, like methadone, to permanently "kick the habit" is:
 - 1. usually right
 - 2. uncertain
 - 3. usually wrong

In respect to <u>illegal</u> drug users, what do you, yourself, <u>believe</u> others think is <u>right</u> or wrong:

- 59. For others to believe that drug users usually desire treatment because they are in legal difficulty is:
 - 1. usually right
 - 2. undecided
 - 3. usually wrong
- 60. For others to believe that drug users seek treatment to permanently "kick the habit" is:
 - 1. usually wrong
 - 2. uncertain
 - 3. usually right

ABS-IV-DU

Directions: Section IV

This section contains statements about how you think you would act toward illegal drug users. Choose the answer that indicates how you think you would act.

In respect to illegal drug users would you yourself:

- 61. I would expect that drug users come from:
 - 1. unhappy homes
 - 2. undecided
 - 3. happy homes
- 62. I would expect that drug users deal with anxiety:
 - 1. poorly
 - 2. uncertain
 - 3. well
- 63. I would usually expect drug users to be from a minority racial group.
 - 1. agree
 - 2. uncertain
 - 3. disagree

64. I would expect that drug users are:

- 1. physically weak
- 2. undecided
- 3. physically strong
- 65. I would expect that drug users plan for the future.
 - 1. disagree
 - 2. uncertain
 - 3. agree

66. With regard to work, I would expect drug users to be:

- 1. less dependable than others
- 2. same
- 3. more dependable than others

In respect to illegal drug users would you yourself:

- 67. I would expect drug users to be immature.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 68. I would expect drug users to be antisocial.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 69. I would expect drug users to be an economic threat to society.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 70. I would expect that drug users are fun on a date.
 - 1. disagree
 - 2. undecided
 - 3. agree
- 71. I would expect that drug use leads to physical damage to the user.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 72. I would expect drug users to be a threat to society.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 73. I would expect that drug users are beyond medical help.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 74. I would expect drug users to be isolated from society by jail.
 - 1. agree
 - 2. uncertain
 - 3. disagree

in respect to illegal drug users would you yourself:

- 75. I would expect that drug users can best be helped by ex-drug addicts.
 - 1. disagree
 - 2. uncertain
 - 3. agree
- 76. I would expect that drug users are beyond help by psychologists.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 77. I would expect drug users usually seek treatment only to lower the amount of daily intake.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 78. I would expect that drug users need a permanent drug substitute like methadone to permanently "kick the habit."
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 79. I would expect that drug users usually desire treatment because they are in legal difficulty.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 80. I would expect drug users to seek treatment primarily to "kick the habit."
 - 1. disagree
 - 2. uncertain
 - 3. agree

ABS-V-DU

Directions: Section V

This section concerns actual feelings that you yourself have about illegal drug users. You are asked to indicate how you feel about the following

How do you feel toward illegal drug users:

- 81. I feel drug users come from:
 - 1. unhappy homes
 - 2. undecided
 - 3. happy homes

82. I feel drug users deal with anxiety:

- 1. poorly
- 2. uncertain
- 3. well
- 83. I feel drug users usually belong to minority racial groups.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 84. I feel drug users are:
 - 1. physically weak
 - 2. undecided
 - 3. physically strong
- 85. I feel drug users plan for the future:
 - 1. less than others
 - 2. same as others
 - 3. more than others
- 86. With regard to work, I feel drug users are:
 - 1. undependable
 - 2. undecided
 - 3. dependable

How do you feel toward illegal drug users:

- 87. I feel drug users are immature.
 - 1. agree
 - 2. uncertain
 - 3. disagree

88. I feel drug users are antisocial.

- 1. agree
- 2. uncertain
- 3. disagree
- 89. I feel drug users are an economic burden.
 - 1. agree
 - 2. uncertain
 - 3. disagree

90. I feel that drug users are fun on a date.

- 1. disagree
- 2. uncertain
- 3. agree

91. I feel drug use leads to physical damage to the user.

- 1. agree
- 2. uncertain
- 3. disagree

92. I feel drug users are a threat to society.

- 1. agree
- 2. uncertain
- 3. disagree

93. I feel drug users are beyond medical help.

- 1. agree
- 2. uncertain
- 3. disagree
- 94. I feel drug users need to be isclated from society by being put in jail.
 - 1. agree
 - 2. uncertain
 - 3. disagree

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llow do you feel toward illegal drug users:

95. I feel drug users can best be helped by ex-drug addicts.

- 1. disagree
- 2. uncertain
- 3. agree

96. I feel drug users are beyond help by psychologists.

- 1. agree
- 2. uncertain
- 3. disagree
- 97. I feel drug users usually seek treatment only to <u>lower</u> the amount of daily intake.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 98. I feel drug users need a permanent drug substitute like methadone to permanently "kick the habit."
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 99. I feel drug users desire treatment primarily because they are in legal difficulty.
 - 1. agree
 - 2. uncertain
 - 3. disagree
- 100. I feel that drug users seek treatment primarily to "kick the habit."
 - 1. disagree
 - 2. uncertain
 - 3. agree

ABS-VI-DU

Directions: Section VI

This section concerns actual experiences you have had with illegal drug users. Try to answer the following questions from the knowledge of your own experiences. If you have had no experience or contact with illegal drug users, omit questions 101-120 and begin again at question 121 on page 20. If you have had any experience or contact with illegal drug users answer all questions to the best of your ability.

Experiences or contacts with illegal drug users:

- 101. I have found that drug users come from:
 - 1. unhappy homes
 - 2. undecided
 - 3. happy homes
- 102. I have seen drug users deal well with anxiety.
 - 1. no
 - 2. uncertain
 - 3. yes
- 103. I have seen that drug users usually belong to a minority racial group.
 - 1. yes
 - 2. uncertain
 - 3. no
- 104. I have experienced that drug users are:
 - 1. physically weak
 - 2. undecided
 - 3. physically strong

105. I have experienced that drug users plan for the future.

- l. no
- 2. undecided
- 3. yes

Experiences or contacts with illegal drug users: I have found drug users to be: 106. 1. undependable in work 2. undecided 3. dependable in work I have seen that drug users are immature. 107. 1. yes 2. uncertain 3. no 108. I have seen that drug users are antisocial. 1. yes uncertain 2. 3. no I have seen that drug users are an economic threat 109. to society. 1. yes 2. uncertain 3. no 110. I have had fun dating drug users. 1. no 2. uncertain 3. yes I have seen that drug use leads to physical damage 111. to the user. 1. yes 2. undecided 3. no 112. I have seen that drug users are a threat to society. 1. yes 2. uncertain 3. no 113. I have seen that drug users are beyond medical help. 1. yes 2. uncertain 3. no

173

Experiences or contacts with illegal drug users:

- 114. I have seen that drug users need to be isolated from society by jail.
 - 1. yes
 - 2. uncertain
 - 3. no
- 115. I have seen that drug users can best be helped by ex-drug addicts.
 - 1. no
 - 2. uncertain
 - 3. yes
- 116. I have seen that drug users are beyond help by psychologists.
 - 1. yes
 - 2. uncertain
 - 3. no
- 117. I have seen that drug users usually seek treatment only to lower their daily intake.
 - 1. yes
 - 2. uncertain
 - 3. no
- 118. I have seen that drug users need a permanent drug substitute like methadone to permanently "kick the habit."
 - 1. yes
 - 2. uncertain
 - 3. no
- 119. I have experienced that drug users desire treatment primarily because they are in legal difficulty.
 - 1. yes
 - 2. uncertain
 - 3. no
- 120. I have experienced that drug users seek treatment primarily to "kick the habit."
 - 1. no
 - 2. uncertain
 - 3. yes

			RESULTS			
QUEST	101	Physicians N = 12 Pre Post Chg	Nurses N = 17 Pre Post Ch	E	Combi N = N	bed a
Pleas	e indicate your set. Biblis Biblis	x x 17 17 83 83	2 94 94 94 94	-1 -0 -	862 8	-
20-0040 20-0040	e indicate your spe as follows: Marco 20 years of dea 1.50 1.51 1.51 1.51 1.51 1.51	50 50 17 17 8 8	29 29 12 12 18 29 -1 18 29 +1		23848	97
101-5im	ts yeur profession? Mats Parten Marse Unten	00 100	100 100	40	1 41	
Sol triat	people are more set in their ways than others. How would you rate yourself? Miss if the way difficult to change. This is simply difficult to change.	58 33 -25 42 67 +25	24 6 -1 12 35 +2 47 35 -1 18 24 +	80.04	4 - 50 6 8 8 0	÷** *

PERSONAL DATA QUESTIONNAIRE^a AND RESULTS^b

This part of the booklet deals with many things. For the purpose of this study, the answers for all persons are important.

Part of the questionnaire has to do with personal information about you. Since this questionnaire is <u>completely anonymous and confidential</u>, you may answer all of the questions freely without any concern about being identified. It is important to the study to obtain your answer to every question.

Please read each question carefully and do not omit any questions. Please answer by circling the response which best reflects how you feel.

⁴The directions and questions in the "Personal Data Questionnaire" are reproduced here exactly as the respondents received them. The results are in justaposition to insure ease of analysis.

^bresults are reported by question response for nurses and physicians and the combination of both categories. Defits are reported for each question, as an expension in the pre- and post-testican categories and pre-manage and pre-matic and the change in the meta- and post-testican categories that not a category response greater than 706 or a change in the pre-

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Post Chg

Pre

Combined N = 29

RESULTS Nurses N = 17

	0. Omits 1. Strongly disagree	8 58 33 4 2 8 17	+9 +2 -2 -2 -2 -2 -2 -2 -2 -2 -2 -2 -2 -2 -2	9868	8 12	233
126.	Family planning on birth control has been discussed by many people. What is your feeling about a married couple practicing birth control? Do you think they are doing something good or bad? If you had to decide, would you say that they are doing wrong, or that they are doing right? 0. Omits			v	9	0
	2. It is usually wrong 3. It is probably all right	25 17 75 83	φ. φ.	53	S S	φφ
127.	Ny attitudes toward drug users do <u>not</u> effect the kind of medical care I give them. 0. Omits	25 25 50 42 8 33	-8 +25 -17	80 80 9	+ · · · ·	55 29
128.	Nost bad trips should be handled by administering antagonists. 0. Omits 1. Strongly agree	25 25 8 50 92	±	28282	¥ ۱۱ هظم	23 23
129.	Traimed paraprofessionals have very limited value in health centers for drug crisis intervention. 0. Omits			9		ę
	. Slightly agree	33 67 100		28	++ • 1	922

I feel my pre-workshop skills for handling drug problems are/were adequate. 0. Omits 1. Strongly agree 2. Slightly agree 3. Slightly disagree 4. Strongly disagree 130.

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		Physicians	Nurses	3	tned	
	QUESTION	Pre Post Chg	Pre Post Chg	Pre Po	st st st	
131	 Drug abusers can often be viewed as having suicidal tendencies. 0. Omits	17 +17 50 33 -17 33 42 +9 17 8 -9	6 6 6 6 6 6 12 +6 24 18 -6 12 35 47 +12 29 18 -11	24 5 7 1 5 7 8 5 7 1 5 7 8 7 7		
132	Emergency drug treatment should be a part of medical and nursing school curricula. 0. Omits 1. Strongly disagree	8 8 25 17 -8 58 83 -25	6 6 88 100 +12 +12		3 +17 1	
133	Fines and jail sentences for marijuana use should be reduced. 0. Omits 1. Strongly disagree	8 8 17 +9 83 83	18 +18 18 -18 29 12 -17 53 71 +18	14 1 21 1 66 7	0 +10 4 -21 6 +10	
134	 I would recommend diet pills as an effective, safe means of weight control. 0. Omits 1. Strongly agree 2. Slightly agree 3. Slightly disagree 4. Strongly disagree 	25 17 25 25 -8 50 58 +8	6 12 82 100 +18	114 117 12 8	2 + 4 +	
135	 Controlled methadone treatment programs in Michigan are one valid approach to the heroin problem. 0. Omits 1. Strongly disagree 2. Slightly disagree 3. Slightly agree 4. Strongly agree 	33 33 61	47 35 -12 53 65 +12	63 64 61	5 - 7 5 - 7	
136	 Nore tax dollars should be put into Michigan drug law enforcement. 0. Omits	25 17 -8 42 33 -9 8 17 +9 8 17 +9	12 12 35 35 29 24 -5 6 6 6 18 24 6	1138 37	2882-	

Physicians Nurses Combi N = 12 N = 17 N = Pre Post Chg Pre Post Chg Pre Post	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	tical houses overproduce these drugs. 6 -6 3	1 on age of user). 25 25 47 35 -12 38 31	the user, much more research will need to 33 17 -16 88 71 -17 66 48 58 58 12 6 -6 31 28 58 58 12 12 412 3 77 12 412 7 72 12 412 3 77 12 412 12 412 7 72 12 412 3 77 12 412 12 412 7 72 412 12 412 7 72 72 7 72 7	Wild come from: 6 6 6 3 3
QUESTION	137. Marijuana is a better release for Viet Nam soldiers than 0. Omits	138. Considering the medical need for amphetamines, pharmaceu 0. Omits 1. Strongly disagree	139. Marijuana should be legalized (with just some restrictio 0. Omits 1. Strongly disagree	<pre>140. Before we can say that marijuana is of little danger to be done. 0. Omits *1. Strongly agree</pre>	141. Coordination of all drug related programs in Michigan sh 0. Omits

RESULTS

QUESTIONNAIRE: PC

This part of the questionnaire deals with your experiences or contacts with illegal drug users. Perhaps you have had much contact with illegal drug users, or you may have read or studied about them. On the other hand, you may have had little or no contact with illegal drug users and may have never thought much about them at all.

RESULTS Physicians Nurses Combined N = 12 N = 17 N = 29 Pre Post Chg Pre Post Chg	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	8 -8 12 6 -6 10 3 -7 8 -8 12 6 -6 10 3 -7 8 -8 12 9 +11 14 17 +3 50 67 +17 18 24 +6 31 41 +0 33 25 -8 12 12 12 21 17 -4	If 18 -8 18 18 14 10 -4 17 8 -9 35 35 28 24 -4 17 17 24 29 45 21 17 -4 17 8 -9 24 29 45 31 34 +3 17 8 -9 10 10 10 10	u 8 8 6 6 7 7 7 25 25 8 18 12 -6 21 17 -4
QUESTION	142. Some types of drug users are listed below. Indicate the type you have had the most contact with. Hark only one. 0. Omits	143. How many times have you talked with, worked with, or had personal contact with illegal drug users: 0. Omits 1. No contact 2. Between five and 15 4. Between 15 and 50 5. More than 50	144. The following question deals with the kinds of experiences you have had with illegal drug users. more than one category applies, plass <u>choose the answer with the highest number</u> . 0. Omits	145. Which of the following drug substances have you used for non-medical purposes (circle all those yr have used)? 0. Omits

LIFE SITUATIONS

This section of the booklet deals with how people feel about several aspects of life or life situations. Please indicate how you feel about each by marking the appropriate number on the answer sheet.

RESULTS	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	75 +8 47 47 55 59 +4 25 -8 18 18 24 23 10 +7 25 -8 47 47 25 59 +4 25 -8 18 18 24 21 -3 29 18 -11 17 10 -7	25 +8 12 +12 17 7 -10 58 -17 71 47 -24 72 24 -48 17 +9 12 18 +6 3 17 +14	8 12 6 +6 3 +3 58 12 6 -6 10 7 -3 58 41 29 -12 48 41 -7 25 -8 47 59 +12 41 45 +4 8 +8 3 +3 3 +3	17 +17 12 12 7 14 +7 50 -25 71 65 -6 72 59 -13 33 +8 12 18 +6 17 24 +7 6 6 6 3 3 3	8 +8 6 -6 3 3 50 -8 18 12 -6 3 23 -6 33 65 82 +7 52 62 +10 12 6 -6 10 7 -3
	QUESTION 152. It should be possible to eliminate war once and for all.	0. Outs 1. Strongly disagree	153. Success depends to a large part on luck and fate. 0. Omits 1. Strongly agree *2. Agree *3. Disagree 4. Strongly disagree	154. Some day most of the mysteries of the world will be revealed by science. 0. Omits	155. By improving industrial and agricultural methods, poverty can be eliminated in the world. 0. Omits 1. Strongly disagree *2. Disagree 3. Agree 4. Strongly agree	156. With increased medical knowledge it should be possible to lengthen the average life span to 100 years or more. On more. 1. Strongly disagree

	QUESTION	Physicians M = 12 Pre Post Chg	Nurses N = 17 Pre Post Chg	S≖ a	= 29 sost	P P
157.	Some day the deserts will be converted into good familing land by the application of engineering and constants constan	* * * 33 25 -8 58 75 -17 8 75 -8	29 18 -11 65 76 +11 6 6 6	4 E83	321	544
158.	Education can only help people develop their natural abilities: it cannot change people in any control of the second seco	25 33 +8 17 17 -8	18 16 6 53 47 -6 29 29	10 10 24 24	24 54 3 24 58 3	545
159.	With hard werk anyone can succeed. 1. Detty 2. Detty 2. Jages 3. Ages 4. Strongly agree	67 75 +8 33 25 -8	12 24 +12 65 47 -12 12 29 +17 12 -12	21221	28 28	5757
160.	Almost every present hauen problem will be solved in the future. 1. Strongly disapree 2. Strongly disapree 3. Agree 4. Strongly genee	8 25 +17 92 75 -17	24 18 -6 76 59 -17 24 +24	17 83	23	***
161.	Mich of the following substances do you consider to be illegal drogs? 1. Merch 2. Merch 2. Mercha. Costne 150 3. Mercha. Costne 150 4. Mercha. Costne 150 5. All of the above and Marijaana					

DID YOU PUT THE LAST 4 DIGITS OF YOUR SOCIAL SECURITY NUMBER ON PAGE ONE?

Thanks for making the effort to complete this questionnaire. You will be able to get written feedback.

RESULTS

APPENDIX V

TRAINING WORKSHOP FORMAT AND BEHAVIORAL OBJECTIVES

WORKSHOP FOR EMERGENCY TREATMENT OF DRUG REACTIONS October 24-26, 1971 Kellogg Biological Station Conference Center Gull Lake Hickory Corners, Michigan Sponsor and Coordinator: Office of Drug Abuse--State of Michigan **Co-Sponsors:** American College of Clinical Toxicology American College of Emergency Medicine, Michigan Chapter American College of Surgeons--Michigan Committee on Trauma Michigan Academy of General Practitioners Michigan Association of Osteopathic Physicians and Surgeons, Inc. Michigan College Health Association Michigan Emergency Services Health Council Michigan State Medical Society Michigan Nurses Association University of Michigan School of Medicine Wayne State University School of Medicine Michigan State University College of Human Medicine College of Osteopathic Medicine Continuing Education Service Special Assistance by: Drug Education Center, East Lansing Instructional Media Center, MSU Listening Ear, East Lansing Ozone House--Drug Help, Ann Arbor Student International Mediation Society



October 24, Sunday

- Center, Michigan State University, East Lansing Buses depart for Gull Lake from The Kellogg 10:30 a.m.
- (microbiotic lunch optional) Lunch and Registration 1:00 p.m. Noon
- Welcome and Orientation 1:15
 - Pre-testing in large group

The Drug Scene: What Med School Never Taught Cohesion Exercise

College of Human Medicine, MSU Ed Lynn, M.D. Jeek The Freeks Look at Our Drug Hypocritical Society The Street Corner Society Mime Troupe

Dinner and Multi-Media presentation Small group discussion 5:30

Any Drug Program That Talka Just About Drugs is at Best a Warta Robert Kruger Office of Drug Abuse

sis and Treatment of Drug Reaction: Detroit General Hospital and Wayne State School of Medicine ocal Point Address ton Krome, M.D. 7:30

Break

ionstration of diagnosis and treatment of physiological reactions

Discussion and informal chats with experts 10:30

October 25, Monday

Breakfast 7:30 a.m. 8:30

Falking Down a Bad Tripper Drug Education Center Staff East Lansing

Break

Small groups video taping of participants with simulated patients utilizing interpersonal process recall techniques and feedback

Lunch 12:30

Continuation of small group video tape sessions What Did You Take-film from Beth Israel Hospital in New York City 1:30 p.m.

Dinner 800 2:30

Evening of Choice

Mazag-film

You Can't Grow Green Plants in a Closet-film Pump the Pros-informal contact

esus Rock, the Jesus Freak Movement-video tape by Jim Cash, MSU

Darkness Darkness-film

Integer Films for Health-film shorts designed to hit close to home

Affect Stimulation film and small group erception Exploring Transcendental Meditation-an Iternative to drugs-Rick and Max Raines

October 26, Tuesday

Nature hike or meditation for those interested 7:00 a.m.

- Breakfast . .
- Michigan Department of Licensing and Regulation Legal Implications of Drug Treatment Five-minute presentation by panel members from Michigan State Medical Society Attorney General's Office Office of Drug Abuse

Duestions from the floor

Post-testing in large group Break

- Lunch and video tape of David Smith, M.D., of the 11:30
 - Haight-Ashbury Medical Clinic in San Francisco threat Medicine vs. the Security of the Office 1:00 p.m.
 - **Dwen Haig, M.D.** Kalamazoo, and Free Clinic Staff
 - Post-test results 3:00
- John Pollard Memorial Lecture 5:30
- Drugs, Values, and Decision Making: thow Me Something Better Steve Schwartz, PhD., and Steve Wilson, M.D. **Jniversity of Michigan**
 - **Slosing Exercise** 4:30

BEHAVIORAL OBJECTIVES

 Given a simulated patient or movie of simulated emergency room patients, the participant will be able to correctly identify, verbally or in writing, the presence or absence of 90 per cent of the symptomatology of adverse drug reactions presented in the <u>Desk Reference on Drug Abuse</u>, mini lectures, handouts and demonstrations for the following categories of drugs:

> CNS depressants CNS stimulants Narcotic analgesics Hallucinogens Cannabis Over-the-counter prescriptions, nonprescriptions, alcohol, bromides, nutmeg and solvents.

2. Given a simulated patient, assuming the participant is in his home office environment, the participant will be able to:

Demonstrate the recommended treatment for symptomatology outlined in objective 1 as found in the <u>Desk Reference on</u> Drug Abuse, mini lectures, handouts and demonstrations.

List the additional treatment techniques and facilities available in his area as listed in the treatment and referral handouts.

- 3. Given a simulated patient "on a bad trip," the participant will be able to respond consistently to the client on level two or above as defined by the Carkhuff-Traux Empathy Scale. Determination of the proficiency is to be based on the evaluation and feedback of the small group members and their trainer.
- 4. Following a mini lecture and panel discussion on "Forensic Medicine and Its Implications for Treatment of Acute Drug Problems," the participant will be able to answer correctly 90 per cent of the problem and policy oriented questions following a series of written paper cases.
- 5. Given pre and post tests of physician attitudes and values toward drug use, drug abuse, the drug culture, alternative life styles, and their relationship to the community, the participant will be able to:

Recognize and discuss his current biases and their potential effect on helping relationships with drug using patients.

Consistently display nonjudgmental attitudes and behavior styles in treating drug abusers, as evidenced via discussion and treatment of simulated patients and relationships with paraprofessionals. APPENDIX VI

TRAINING OPINIONNAIRE AND RESULTS

YOUR FEEDBACK PLEASE

For a workshop to be of value to <u>you</u>, it must begin where your interests and needs lie. We need your inputs to design content and skill sessions which will be worthy of your time and effort. Please review the following possible content-skill areas. Read each item and indicate the degree of your professional interest and need to know.

Be sure to ADD ANY OTHER AREAS OR CONCERNS OF IMPORTANCE TO YOU.

Rank as 1st, 2nd, 3rd, 4th the four items you feel are of highest priority to you.

Priority Ranking 1st 2nd 3rd 4th

1.	Physician attitudes and values toward drug users, drug abuse.																	
2.	Psychosocial aspects of drug abuse and treatment.																	
3.	The pharmacology of drugs commonly abused.																	
4.	Diagnosis of acute drug reactions.																	
5.	Drug analysis procedures and facilities.																	
6.	Physical drug related problems; e.g., hepatitis and strychnine poisoning.																	
7.	Suicidal intent as part of drug overdose.																	
8.	Detoxification withdrawal procedures.	<u> </u>																
9.	Treatment of adverse physiological drug reactions.																	
10.	Methods of managing adverse, psychological reactions to drugs.																	
11.	Use of paraprofessionals in health centers for drug crisis intervention.																	
12.	Location of local and statewide treatment facilities and referral sources.																	
13.	Legal implications of drug treatment for minors and adults.																	
	<u>Others</u>																	
14.																		
15.																		
16.																		
17.																		
	Topics	 Physician attitudes and values toward drug users, drug abuse. 	2. Psycho-social aspects of drug abuse	and treatment.	3. The pharmacology of drugs commonly abused.	4. Diagnosis of acute drug reactions.	 Drug analysis procedures and faci- lities. 	 Physical drug related problems, e.g. hepatitis and strychnine poisoning. 	7. Suicidal intent as part of drug overdose.	8. Detoxification withdrawal procedures.	9. Treatment of adverse physiological drug reactions.	 Methods of managing adverse, psy- chological reactions to drugs. 	 Use of para professionals in health centers for drug crisis intervention. 	12. Location of local and statewide treatment facilities and referral	sources. 13 Taxai Amnifrations of Arus Frastmant	for minors and adults.	Thank you for your feedback.	
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			Groups		Total of All Groups ss=129	*College Health Center	Physicians and Nurses ss=32 in Michigan	##Experts Nationwide 88-22	*College Deans and Counselors in Michigan ss=26	**Volunteers at Crisis Center	ss=ll **Addicts on Methadone	ag≖l4 *lst Yr. Med	Students of MSU ss=18	ss=18 *These groups were asked "Which topics would you m	**These groups were asked th "Which topics would you mos	Topic added by participants:	ss=Sample Size	Rank order is approximate-Co bear most significance

APPENDIX VII

WORKSHOP EVALUATION FEEDBACK

FEEDBACK RESULTS

Workshop for Emergency Treatment of Drug Reactions

			5 = high 1 = low Average Score	Number of Sheets Returned
The	Man	ner of Presentation was:		
	1.	stimulating dull	4.7	32
	2.	confident anxious	4.3	
	3.	organized disorganized	3.9	
	4.	respectful condescending	4.1	
The	Con	itent was:		
	5.	new information repetitive	4.3	
	6.	objective nonobjective	4.1	
	7.	interesting boring	4.6	
	8.	clear ambiguous	4.1	
	9.	comprehensive sketchy	4.3	

Would you use this resource or resource person with your group:

- This was much more than I expected. The whole time was very worthwhile--it probably could be expanded to another day to give you a chance to reflect more and re-evaluate what you'd heard. I would have liked more background on the individuals who spoke. I think the most important thing gained was in a broader, wider perspective rather than in factual information--this is vital. Excellent workshop. Hope it will be repeated soon.
- I certainly would recommend others attending workshop.
- I feel we should have had more small group sessions where we could have discussed how to handle what actually happens and how's and why's of dealing with the drug abuser.
- Good program. What few inconveniences arose from changes in planned program were well within the limits of tolerance. Good relaxed atmosphere for meeting. Lack of obvious frustration by leaders "rubbed off" on the participants.

- Because of the general current need.
- Need for more communication and need for alternative life styles and acceptance of individual differences in this close, tight world of the future.
- I really benefited from this workshop. It has been a great experience.
- I got a different point of view by participation. Also liked being treated as a human with his own limitations and fallibilities--although some lacked insight and empathy with doctors.
- Overall effect worthwhile. Could be greatly improved.
- Good overall potential. Emphasis needs shifting more to stated purposes.
- We "tend" to ignore a problem unless it has reached proportions. In a smaller school I'm sure much help can be given <u>if</u> we <u>offer</u> it!
- Various persons in the conference--possibly.
- Felt ideas and manner provoked good debate and (self) reflection regarding attitudes about drugs and drug users.
- The format, content, organization was excellently well done; lecturers could have been rather more specific, I feel. Also, there was such a volume of material it did become somewhat wearisome in the evening. However, in general, an excellent conference. My congratulations to all those involved in its conception!

Of most Value to me was:

- The obviously tremendous amount of planning and organization that went into making this possible.
- Video tape sessions.
- Small group sessions.
- Lecture with doctor from Detroit General Hospital and small group participation.

- General new information.
- Learning the current treatment for drug abuse patients as seen in an emergency situation.

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- New information, application, source for future study, and availability of material and film, tapes to be used.
- The simulation.
- Small group interaction, contact with other experts.
- Liked being included in participation (more value).
- Drug effects and personal relationship.
- Those sessions directly related to the stated purpose of the conference.
- Orientation to drug culture viewpoint. Confidence in approaching drug crisis.
- Drug information. Role play.
- Legal information, being more familiar with the drug scene and being able to diagnose each type of drug user and right treatment.
- Total format--especially simulated experience with feedback.
- This whole workshop was so much more than I expected. I think your resource people were brilliant. No one will know the time and organization and effort you all put into this fantastic presentation, but I want you to know how much it was appreciated. Thanks a heap.
- Relating with and having exposure to persons with a life style different from my own. The group leaders and role players were just great. They were helpful and graceful in critiques and did not make the participants feel threatened or stupid. I'm sure a lot of planning and work went into the workshop, and I think all are to be commended.
- General information from Dr. Lynn, role playing group, opportunity to discuss issues informally with others and "pick and choose" related information, i.e., movies, etc.
- The entire workshop was of value to me. It is one of the most important learning experiences of my life.

• Legal.

Of Least Value to me was:

- The session--panel Tues. AM--but maybe it was just my sore ass.
- Artificial respiration.
- Constant intensity of the workshop should have been a little less and more time for open discussion and questions.
- The acting group on Sunday and Skezag movie--language offensive--turned me off-unnecessary.
- Old style, dry type condescending movie.
- Factual information.
- Transcendental mediation.
- Those sessions directly related to other peripheral or political issues.
- Street medicine and other political issues.
- Hard to say; even material that was repetitive was of value in reinforcement.
- General lecture material on drug society--repetitive for me.
- "How to Talk Down" someone from a high. Person was poorly organized and by then was repetitious.

One thing missing was:

- Would have liked more interchange with individuals, but maybe that was only a function of my own temerity.
- Closer and more precise scheduling, promptness, improved audiovisual function, coordinating of speakers on speech.
- More time for rapping with panelists and other participants.
- Importance of influence of family relationships in developing open, loving people for accepting differences and uniqueness in individuals.
- Too bad equipment did not all work well.
- Street people awareness of our feelings too. Have polarized us.

- A dedication to the stated purpose. I felt that the organized group was trying to impose upon the participants a new (i.e., their) value system. I felt that you were telling me--Drugs aren't really that bad after all.
- Enough time to teach how to evaluate the drug crisis patient's need for medical vs. empathic Rx. The heavy involvement of people either involved in or identified with the drug culture was good but they are a very intolerant group. Their bias and their intolerance was very objectionable to me.
- More feedback concerning pre- and post-testing, role plays.
- More structured interaction between street people and health professionals.
- Not enough time!

Additional Comments:

- Generally outstanding. Monday night choice activities were poor, boring, and not too informative.
- Need more chance for individual feedback and group discussion.
- Thanks to you Charlie Maclean and your "staff."
- Felt it would have been helpful to tie together learning in small groups to large groups; discussion on the difficulty of changing some basis values; and how professional people return to their conservative groups with changed attitudes. It seemed to me that the discussion following the movie early Saturday evening with Ed Pierce <u>et al</u>. should not have been shut off by Mike G. with "Isn't this too bad" but rather picked up on as an example of how our (former) attitudes hang-in. I think we have trouble being helpful to people with drug problems because we fear giving help will encourage drug use, abuse, etc. for which we have strong values against. People needed to ventilate their role-playing anxieties somewhat related to their own awareness that they hold attitudes and beliefs that are detrimental towards helping.
- On the whole it was a worthwhile experience. Found diagnosis and treatment of drug reactions and the drug scene useful and entertaining. I feel it would have been better if there could have been some breaks because 14 hours a day was a good bit to digest. Small groups were quite helpful, but some difficulty with one of the co-leaders. Seemed to be some basic hostility from some of the kids because we did not completely believe in their viewpoints. People who ran the conference tried to be very helpful and pleasurable.

- As usual, much was covered that I cover in my own classes-but again, as usual, new perspectives and new ideas were presented in ways I will most likely use in lectures and build on. Total conference format was the most exciting thing for me. I'm leaving with a feeling that I want to rush right back and set up a similar session with my own people.
- I learned many new and essential facts concerning drugs, but more important, it gave me an opportunity to re-evaluate my own attitudes and feelings in relation to those who use drugs. I feel that now I can be more helpful both in emotional support and medical support in the treatment of drug reactions.
- I'm still overwhelmed by everyone's kindness and willingness to change things around so we could see, hear and absorb as much as possible. I also had a feeling of trust that I had not experienced since I was a small girl on a farm. . . .
- You are a group of truly beautiful human beings and I hope in some small way I can pass on the feelings and experience I gained to the people I come in contact with. Thanks for touching my life.

APPENDIX VIII

CONTENT ANALYSIS OF SPECIFIC ITEMS FROM THE PERSONAL DATA QUESTIONNAIRE

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One of the more important aspects of the "Personal Data Questionnaire" is that it offers a good deal of background information that is pertinent to understanding specific attitude-behaviors occurring among physicians and nurses. A number of the more relevant items from this section have been selected by the author for special focus. It should be noted that the sample size for the nurse and physician categories is relatively small and that percentage data should be viewed in that light.

The items in the "Personal Data Questionnaire" were selected on the basis of an extensive review of the literature on drug abuse, as well as through personal consultation with drug abusers, paraprofessionals in drug clinics, national experts in drug treatment, law enforcement officers and other resource people.

The demographic questions 121-123 reveal that there were few female physicians or male nurses who attended training. This underrepresentation is characteristic of both professions in general. It is open to question whether persons who have crossed traditional sex dominated professional roles would have the status necessary to be permitted to attend limited access workshops such as this one.

It is interesting to note that 25 per cent of the physicians came to view themselves as "less set in their ways" (Question 124) on the post-test. It should be remembered that on the Attitude-Behavior

<u>Scale: Drug Users</u> (ABS:DU) physicians, as compared to nurses on the Action Levels 4, 5, and 6, appeared to change less than nurses.

The block of three questions (124-126) dealing with personal change orientation appear to elicit inconsistent responses from both nurses and physicians. It is suspected that "self-evaluated openness to change," "child raising methods," and "birth control for the married" are not highly related items.

By far the majority of nurses on the pre- and post-tests believed that their "personal attitudes toward illegal drug users had no effect on the care they gave these patients" (Question 127). On the post-test 25 per cent of the nurses did come to see the relationship between their attitudes and the medical care given. Physicians on both tests were very split in their responses.

It is significant to note that both physicians and nurses came to see the danger involved in administering antagonists to patients having "bad trips" with drugs (Question 128). Major changes took place on this question for both categories. Research indicates that aborting "bad trips" with more drugs leads to later complications, reinforces drug taking as a solution to every problem, and may induce dangerous drug interactions.

A major finding is that both physicians and nurses came to value the "trained paraprofessional as a resource in the health center for drug crisis intervention (Question 129). This new openness reflects a climate of receptivity for medical teams treating drug patients to be comprised of specially trained professionals and paraprofessionals.

The impact of the paraprofessionals who served as able co-trainers during the workshop is evident.

Question 130 dealing with self-perceived adequacy of skills for handling drug problems had to be omitted due to confusion caused by the wording of the question and the failure of the computer program to give results. It is suggested that the format of this question be revised.

Nearly all of the participants came to see the need for "emergency drug treatment" to become part of medical and nursing school curricula (Question 132). Since the workshop the author has assisted two of the four Michigan medical schools to implement such training but it is not known whether any of the nursing schools have initiated training in this area.

After the workshop more than 70 per cent of the participants "strongly agreed" that "fines and jail sentences for marijuana use should be reduced" (Question 133). Nurses became much more convinced of this need for social policy change while physicians remained the same. In contrast on the post-test for Question 139, 50 per cent of the physicians and 36 per cent of the nurses "slightly" or "strongly agreed" that marijuana should be legalized. Nurses were much more prone on the post-test than physicians to see the need for more research before marijuana could be seen as having little danger for the user (Question 140). Slightly more than half of the nurses and physicians on the post-test came to view "marijuana as a better release for Viet Nam soldiers than is alcohol" (Question 137). With regard to marijuana the participants appeared to abandon a "hard law and order stance" but

were unwilling to accept the research data which characterized the drug as a relatively safe one. The addictive potential, behavior disturbances, and organ damage linked with alcohol appear to have been largely ignored in comparing its "safety" to that of marijuana.

With respect to amphetamines (Question 134), only half of the prescribing physicians "slightly" or "strongly disagreed" after workshop training that "diet pills are an effective, safe means of weight control" even though several physician experts presented authoritive evidence to the contrary during training. Non-prescribing nurses, however, without exception "strongly disagreed" that "diet pills are an effective, safe means of weight control." Both physicians (83%) and nurses (94%) as a result of training moved to "strong agreement" with the statement that "considering the medical need for amphetamines, pharmaceutical houses overproduce these drugs" (Question 138). It is not known why physicians see the drugs as being overproduced yet still blindly claim them to be effective in weight control. The potential economic benefit accruing to physicians who overprescribe amphetamines does not alone explain the dichotomy between "physician opinion" and "established medical practice" with respect to diet pills and weight control.

The block of legality-treatment-care questions (127-141) appear to elicit information valuable in training and social policy design.

Contact with marijuana users was most often reported by nurses and physicians (Question 142) with both groups claiming somewhat more contact with illegal drug users after the workshop than before (Question 143).

Even though current research (Garb, 1969; Little, 1970) indicates that physicians may be 10 to 20 times more likely to become addicted than other groups of American adults and that 2 per cent of all physicians actually do become addicted, this group of physicians and nurses stated that they had almost never used any drugs "for nonmedical purposes" (Question 145). Perhaps this reflects the often used rationalization that it is acceptable to self prescribe barbiturates, amphetamines or even opiates "to help keep up with the demands of patients." They stated that if they ever used illegal drugs in the future, it would only be to "release tension," but never to "escape" or "because it was the thing to do" (Question 151).

While the majority of physicians and nurses say they "would turn in to a standards-ethics committee a fellow medical professional whom they knew was contributing to the drug abuse of his patients" (Question 150) few complaints are filed and even fewer acted upon. Knowledgeable persons from the Michigan State Police and Board of Licensing and Regulation have intimated that "over-prescribing" is common though most often it goes unreported by the medical community.

The "efficacy" and "life situation" questions (152-160) proved to be of very limited value when included in this pre- and post-testing format. They will not be discussed.

Question 161 which asked participants which drugs they considered to be illegal, had to be omitted. The wording of the question and the non-exclusive foil choices invalidated the data collected. It is suggested that this question become an open ended one rather than a

forced choice. Respondents should be able to define the word "illegal" and specify those drugs they considered "illegal" in completing the ABS:DU.

In summary, it appears that both nurses and physicians have become more aware of their role in the treatment and causation of drug abuse. Physicians more than nurses, appear reluctant to actively alter their role involvement with illegal drug users.

