

**A PROFILE OF THE MILITARY ADDICT:
A TEST-RETEST ANALYSIS OF EFFECTS OF DRUG
REHABILITATION TRAINING ON SCORES
OBTAINED ON THE TAYLOR-JOHNSON
TEMPERAMENT ANALYSIS**

PATRICK WARD WEASE

A PROFILE OF THE MILITARY ADDICT: A TEST-RETEST ANALYSIS OF EFFECTS
OF DRUG REHABILITATION TRAINING ON SCORES OBTAINED ON THE
TAYLOR-JOHNSON TEMPERAMENT ANALYSIS

An Abstract
Presented to
the Graduate Council of
Austin Peay State University

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in Psychology

by
Patrick Ward Wease

June 1976

ABSTRACT

The Taylor-Johnson Temperament Analysis (T-JTA) was developed in 1941, revised in 1967, and standardized for male populations, female populations and college student populations. It was devised primarily for use in marital counseling. In the mid-1960's an Army chaplain attempted to use the T-JTA to predict for and isolate an AWOL-tendency syndrome (absent without leave) among soldiers at Fort Bliss, Texas. The instrument under discussion did, in fact, isolate those individuals who exhibited symptoms which might predispose them toward nonconformity regarding rules and regulations. The T-JTA was expanded into use as a test-retest indicator of the success of various programs to include correctional confinement and drug abuse programs.

A sizable body of literature exists which concerns itself with the military addict, his environment, his attitudes, and his behavior. A smaller amount of data deals more specifically with the T-JTA and drug abuse in the military. The present study is concerned with the T-JTA in a test-retest evaluation of drug addicts and abusers admitted to the local military drug abuse rehabilitation program and the scores they obtained on the T-JTA upon entrance to the program and again after 60 days. In addition to the data derived from the above analysis, a questionnaire was distributed among a sample of 25 personnel admitted to the program. Statistical analysis indicates that the military drug abuser tends to be the younger, lower-ranking soldier, less educated, generally single or divorced, less motivated to perform, and demonstrating less aptitude.

Results of the test-retest experiment with the T-JTA show most subjects exhibiting general improvement on the retest profile: less nervous and depressed; more objective and tolerant; less impulsive. These results support the hypothesis that rehabilitation efforts improve function, attitudes, and behavior. Responses on the retest measure showed movement toward the normative response pattern for all traits with one exception. The supportive data has a logical basis in that on the initial measure (T-JTA test #1), the individual had just been apprehended by his unit commander, the military police, or had finally worked up the courage to turn himself in because of his problem. As any one of these would rate as an anxiety-producing situation and the T-JTA tends to reflect immediate as well as long-term attitudinal changes, it was hypothesized that after a period of two months, when the individual had had a chance to adapt to a new environment, new friends, and the counseling situation, impressive changes would be evident in the latter test.

For a matched-group analysis of variance on the nine traits, the following T scores were derived: 2.101, 5.095, 2.439, 2.984, .177, 7.448, 2.024, 1.776, 3.249. All scores were significant except one.

In addition to the test-retest data taken on the T-JTA, statistics were compiled on the sample in terms of age, type of drug problem, source of referral, marital status, race, education, and length of time in service.

A PROFILE OF THE MILITARY ADDICT: A TEST-RETEST ANALYSIS OF EFFECTS
OF DRUG REHABILITATION TRAINING ON SCORES OBTAINED ON THE
TAYLOR-JOHNSON TEMPERAMENT ANALYSIS

A Thesis
Presented to
the Graduate Council of
Austin Peay State University

In Partial Fulfillment
of the Requirement for the Degree
Master of Arts
in Psychology

by
Patrick Ward Wease

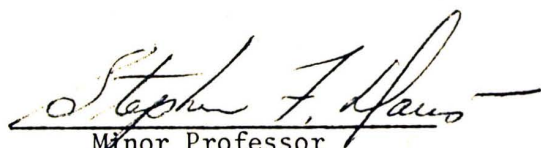
June 1976

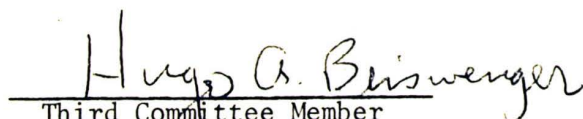
To the Graduate Council:

I am submitting herewith a Thesis written by Patrick Ward Wease entitled "A Profile of the Military Addict: A Test-Retest Analysis of Effects of Drug Rehabilitation Training on Scores Obtained on the Taylor-Johnson Temperament Analysis." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts, with a major in Psychology.

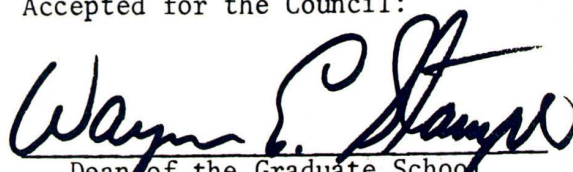

Major Professor

We have read this thesis and
recommend its acceptance:


Minor Professor
or
Second Committee Member


Third Committee Member

Accepted for the Council:


Dean of the Graduate School

ACKNOWLEDGEMENTS

The author wishes to express deep appreciation to Dr. John D. Martin, Professor of Psychology, Austin Peay State University, whose assistance in terms of suggestions and counseling during the developmental stages of this thesis was of immeasurable importance; to Dr. Stephen F. Davis and Dr. Hugo A. Beiswenger, Department of Psychology, for their constructive criticisms of the manuscripts and other helpful suggestions.

The author wishes to thank Major Wayne A. St. Pierre, Chief, Social Work Service, for his assistance and permission to research the clinical records maintained on all personnel processed through the Drug Control Program. Gratefulness is extended to the staff and the counselors of the Fort Campbell Drug Abuse Control Program for their contributions toward the collection of research data on the Taylor-Johnson Temperament Analysis and the Research Data Questionnaire; to Mr. Tommy Noel for his administrative assistance and exemplary records-keeping ability, and special thanks to Alva for her exceptional secretarial skills and services.

Lastly, the author wishes to thank his wife for her understanding nature in this endeavor which sharply curtailed her social life for the past three months, and her helpfulness in maintaining a quiet and peaceful atmosphere in which to work.

TABLE OF CONTENTS

	Page
LIST OF FIGURES	v
LIST OF TABLES.	vi
CHAPTER	
I. INTRODUCTION.	1
Review of the Literature.	1
Purpose of the Study.	8
Outline of the Study.	9
II. METHOD AND RESULTS: PART ONE	
A Profile of the Military Drug Abuser	10
Subjects.	10
Apparatus	11
Procedure	11
Results and Conclusions	12
III. METHOD AND RESULTS: PART TWO	
A Test-Retest Analysis of Effects of Drug Rehabilitation Training on Scores Obtained on the Taylor-Johnson Temperament Analysis.	16
Subjects.	16
Apparatus	18
Procedure	18
Results	19
IV. DISCUSSION.	22
APPENDIX: Tables 1-6	25
REFERENCES.	31

LIST OF FIGURES

FIGURE	PAGE
1. Taylor-Johnson Temperament Analysis Test-Retest	
Data Mean Scores Within Traits.	19.1

LIST OF TABLES

TABLE	PAGE
I. Demographic Information on Survey Sample	25
II. Family, Personal, and Pre-Service Data of Survey Sample.	26
III. Drug Usage Data on Survey Sample	27
IV. U.S. Army Rank Structure	28
V. Demographic Data On T-JTA Test-Retest Sample	29
VI. Percentile Data On T-JTA Test-Retest Sample.	30

Chapter 1

Introduction

In order to more accurately determine the effects of drug rehabilitation training on military drug users and addicts, the present study was undertaken. These effects were measured by a test-retest analysis of scores obtained on the Taylor-Johnson Temperament Analysis (T-JTA) upon entry to, and release from, the Fort Campbell Drug Control Program.

Having worked with the Fort Campbell Drug Control Program for a period of fifteen months, the author became interested in the manner in which they assessed improvement over the course of the program, if indeed there was a degree of noted improvement. Previously such assessment depended primarily upon the judgment of the counselor involved with the client and the opinion of the individual's unit commander. Increased ability to function and interact positively with others were the basic criteria. With the introduction of the T-JTA during the latter part of the present author's association with the drug program, there was available a more objective measure of changed attitudes, behaviors, and traits. The T-JTA was administered upon entry into and release from the 60-day program which consisted of an intake interview, individual and group counseling, physical training, films, occupational therapy, and initial detoxification, if warranted.

A review of the literature indicates that several studies (Berbiglia, 1965 and Fraas, 1973) using the T-JTA have previously been conducted with changes in scores on the T-JTA of soldiers

2

incarcerated for correctional training and as a predictor of AWOL (absent without leave) tendency. No references were found which related solely to the use of the T-JTA and drug rehabilitation programs. A larger body of data (Greden, 1975; Nail, Gunderson, and Kolb, 1974; Joseph, 1974; and Saunders, 1974), deals with Navy, Army, and Air Force drug addicts as related to the Viet Nam era and the concomitant increase in the use of hard drugs and alcohol, and the resulting proliferation of rehabilitation programs and VA treatment centers. Mr. Joel Cantor (1974), of the VA Central Office, outlined a profile of the typical addict from 1968 to 1974 and noted the changes in drugs of preference throughout this period. He stated that until 1968 the drug most often abused was alcohol, and this almost exclusively. During the Viet Nam conflict the use of opiates and opium derivatives rocketed to all time highs, replacing alcohol as the drug of choice. Since the end of the conflict he predicted a decrease in the use of opiates, but an increase in polydrug abuse.

In one study (Greden, Frenkel, and Morgan, 1975), a questionnaire was administered to 1873 U.S. Army soldiers in the United States and Viet Nam concerning alcohol consumption and associated behaviors. Seven percent of the samples were classified as alcoholics, five percent as borderline alcoholics, and twenty-four percent as potential alcoholics. Consistent with the present writer's research, and contrary to the popular stereotype, a disproportionate number of those categorized as above were the younger, lower-ranking soldiers. Although no attempt was made to tie the later use of drugs to the previous use of alcohol, a positive relationship exists between the use of alcohol and polydrug abuse.

Mullins, Vitola, Bart, and Abellera (1974), compared 2,842 Air Force trainees who had used grass (cannibus) only with 1,843 trainees who had used grass with other drugs, with a control sample of 9,368 trainees on whom no drug information was available. The control group performed most effectively on five measures of aptitude, educational level, and three Air Force measures of performance. The cannibus-only group performed less effectively, and the cannibus-plus-other-drugs performed least effectively. Another study which had similar findings (Saunders, Vitola, Bart, and Mullins, 1974) compared a group of 448 soldiers who had used barbiturates prior to entering service with a control sample of 9,378 airmen with no record of drug use. Results indicated that the majority of barbiturate users come from the north-northeast and the Pacific West Coast enlistment areas. Too, there was a significant correlation between the degree of use and lowered aptitude, less education, and an inverse relationship with other measures of success in the Air Force.

The reasons for the use of various drugs differ depending on which group is questioned. Nail, Gunderson, and Kolb (1974), issuing questionnaires to 997 users, investigated the motives given for the abuse of six categories of drugs (marijuana, opiates, hallucinogens, amphetamines, barbiturates, and cocaine). Primary reasons were hedonistic and therapeutic. Users of hallucinogens reported heightened sexual pleasure. Users of opiates, amphetamines, and barbiturates stated that the effects of these drugs were basically therapeutic. They improved functioning, relieved depression, relieved anxiety, provided an escape from reality, promoted a feeling of well-being, and improved coping ability. Users of

marijuana indicated a desire for intoxicification, relaxation, social belongingness, and heightened sensory awareness.

Attempts to rehabilitate drug users have been somewhat successful relative to the duration of use and the degree of addiction. Zinburg's research (1972) isolated three categories of abusers: "a) the urban type with a criminal record; b) the middle class person with a record of troubles in school; and c) the small town dweller in good physical condition." He defined five approaches to rehabilitation of heroin users in Viet Nam, namely: a) initiation of a counterculture; b) a program in which troops go through the motions of rehabilitation; c) a medical program; d) an out-patient program; and e) a penal approach. Some of the problems encountered were poor morale of patients, the fact that users of heroin maintained very small groups, and the fact that addicts tended to do all things in excess. Zinburg's research showed that the occasional and moderate user generally recovers, but the heavy, committed abuser does not benefit from such programs. In another attempt (Joseph, 1974) to treat heroin users in Viet Nam, a three-week program was initiated by two psychiatric workers and a Chaplain, but the program failed because the stable users performed adequately and went undetected while the unstable, significantly disturbed addicts were coerced into the program. The heroin users were either too committed to their habit, or emotionally disturbed and difficult to reach, and were generally seen as being beyond help.

Two researchers (Rohrbaugh & Eads, 1974) examined the effects of having served in Viet Nam on the subsequent use of drugs by military

personnel. Three groups of enlisted personnel totaling 1,743 were surveyed at a midwestern military installation upon their re-entry to the United States from South Viet Nam. These data provided only limited evidence that service in Southeast Asia affected subsequent drug use. The reported incidence of opiate use in the pre-survey month was higher for Viet Nam returnees than for non-returnee controls from the same units on only one of these surveys, although this may have been due to the reluctance of respondents to report such use, and the sharply decreased availability of drugs, especially heroin, as was indicated by the study by Gunderson and Nail (1973). Rohrbaugh and Eads constructed a scale for classification of abusers in terms of drug involvement. The scale was tested on a group of 590 U.S. Navy and Marine Corps enlisted men who entered into a rehabilitation program during the period July-December, 1971. The researchers discovered that the pattern of abuse of heroin was typical of similar samples, since 54 percent of them had started heavy use of heroin while in Viet Nam where the drug is cheap and easy to get.

It appears (Kolb, Gunderson, and Nail, 1974) that the hard drug and polydrug abuser are very much aware of the potential hazards inherent in drug abuse. In this study, (Kolb, et al) dealing with 998 U.S. Navy enlisted men enrolled in a drug rehabilitation center, a list of 39 possible social, psychiatric, and medical risks was presented to each subject. Subjects were typically 20-23 years old, white, and were multiple drug users of two to four years duration. The drugs seen as high risk were opiates, hallucinogens, amphetamines, and barbiturates. The responses of the heavy users in particular were strikingly consistent with views derived through professional

investigation. Although the evidence indicates that the heavy user was usually familiar with the risks involved, he continually abused substances which he knew could kill him. A related study by Kolb and his associates (July, 1974) illustrated a significant correlation between heavy use of drugs and predisposing factors which developed out of the pre-service environment. A personal history and a drug-use questionnaire were administered to 903 enlisted men. The use of six types of drugs (marijuana, hallucinogens, opiates, stimulants, hypnotics, and cocaine) were categorized into four levels - low, low-average, high-average, and heavy. All questions were directed toward pre-service drug abuse. The drug user's sample was compared to a control group of 468 non-users. Results showed that: a) heavy use was associated with disturbed family relationships (i.e., running away from home, a negative relationship with the father, and leaving home early); b) heavy use was also positively correlated with anti-social behavior in the community and poor school adjustment; c) financial irresponsibility; and d) a history of emotional and psychiatric treatment. No correlation was found between heavy use of drugs and health problems or sibling emotional disorders. Socioeconomic status was not found to be a major factor. Yet another study was discovered which tended to support the above-stated correlations. The authors (Earles, et al., 1974) compared a sample of 985 airmen who were admitted amphetamine users to a sample of 9,378 airmen with no drug usage records. They concluded that: a) amphetamine users are also likely to abuse other drugs; b) there was a significant correlation between the use of amphetamines and geographical area of enlistment, religious preference, aptitude scores, and age at time

of enlistment; and c) amphetamine use was also related to the increased likelihood of an undesirable discharge and to lower efficiency reports (Airman Proficiency Report). Saunders, Vitola, and Mullins (1974) found almost identical correlations among barbiturate users for the above factors.

Only one study was found which compared drug abusers in terms of race. The study was one of a series of measures taken on a single population of Navy enlisted personnel. Nail, Gunderson, and Arthur (1974) studied a group of 833 men (764 white and 69 black) in terms of black-white differences in social background and military drug abuse patterns. The black subjects admitted to the rehabilitation program reported better school adjustment, less delinquency, and fewer difficulties in home lives than the Caucasian subjects. The blacks were found to use heroin more frequently than all hallucinogenic drugs, which was attributed to a large difference in development cultural patterns. Whites appear to be expressing new varieties of delinquent or anti-social behavior while the blacks follow long-established subcultural patterns of drug use. These interpretations may be affected somewhat by the size of the samples and the fact the black subjects appear to be a more highly motivated group than their white contemporaries, which tends to support the hypothesis that the sample of black subjects might be a much more select group than that found in the normal population.

In summary, the structure and function of the Fort Campbell Drug Abuse Program have been briefly outlined, the direction of this thesis noted, and a review of the literature cited, little of which relates directly to the use of the T-JTA in a military setting.

The main purposes of the present study were: first; to outline a profile of the traits, characteristics, and other variables which serve to describe the military drug addict by means of the development of a Research Data Questionnaire, and, second; to determine if there are significant differences on a retest of the T-JTA after the initial 60-day period in the Fort Campbell Drug Rehabilitation Program.

Experimental verification of the following hypotheses was expected:

- 1) the military addict or drug user is young, usually between the ages of 17-25; 2) he is usually the lower-ranking enlisted soldier between the grades E1- E5; 3) he is generally single, and has been in service for less than three years; 4) he uses a variety of drugs rather than any individual category of drugs to the exclusion of all others; and 5) he usually has received some military nonjudicial punishment while in service.

For the T-JTA test-retest analysis, it is expected that responses on the retest portion will generally move toward the response pattern of the normative population for each trait. It is felt that the T-JTA reflects present attitudes and feelings and that positive changes in scores will occur as a result of a decrease in tension, familiarity with the counselor and the rehabilitation environment, and the development of friendly relationships with one's peers in the program. Medical agents (antibuse, etc.) and the supportive environment provided the inpatient are expected to minimize the discomforts normally associated with the withdrawal from a drug. An increased understanding of oneself and one's motivation within the framework of the rehabilitation program would also

aid in tension-reduction, again promoting changes in the retest T-JTA. Factors which would negate any improvement on the retest would include the attitude of the individual who was apprehended and referred, but does not want to terminate his experimentation with drugs and thus has no interest in the program or its goals, and the hopelessly addicted soldier who cannot break his habit and views the program as a threat to him. Current Army regulations allow for expulsion from the service with an Undesirable Discharge those individuals who fail to successfully rehabilitate themselves from drug usage or who are repeatedly apprehended for possession of controlled substances. While some view this as a personal threat to their livelihood, others see it as a goal, and a means to gain release from the strictures and confines of military life.

The present study was divided into two parts. Part one, The Profile Survey, concerned itself solely with a descriptive analysis of a sample of personnel admitted to the Fort Campbell Drug Rehabilitation Program during the period March 1 - May 1, 1976 (N=25). The basic demographic characteristics summary was derived through the administration of the Research Data Questionnaire. It was designed to give the reader an in-depth understanding of the background and present environment of the military drug abuser. Part two was devoted to the administration and retest phase of the T-JTA.

Chapter 2

Method and Results: Part OneSurvey: A Profile of the Military Drug Abuser

During the period March 1 through May 1, 1976, the Research Data Questionnaire was distributed to the thirteen counselors employed at the Fort Campbell Drug Rehabilitation Program with the request to administer it to their clients as they were interviewed. These questionnaires were collected on an average of once a week during the above period.

Subjects. The sample consisted of 25 respondents. All subjects were actively enrolled in the Rehabilitation Program during the above period and answered items as listed on the Research Data Questionnaire. The subjects ranged in age from 18 to 29 with a mean age of 21.1. The entire sample was confined to the pay grades of PV2 to SGT (E5), with the average rank being E3 (3.33 mean). For the rank structure of the U.S. Army, see Table 4 in the Appendix. Over 60 percent of the sample had been punished at one time or another while in service, with a portion of this number being reduced in grade. In terms of race, 65 percent of the subjects were white, 16 percent were black, 8 percent Indian, 4 percent Japanese-American, and the remainder designated as "other." Education levels ranged from eight years to 13 years, with about half graduating from high school, and an additional 25 percent receiving a GED diploma. Eighty percent of the sample were either single or separated, and of the 20 percent who were married, one individual had been married three times. The period of time spent in service ranged from seven months to seven

and one-half years with a mean of 28 months, although almost 50 percent had spent less than two years in service. Indicated religious preference included Baptist, Presbyterian, other Protestants, and Catholic. It was interesting to note that approximately 40 percent indicated no religious preference. (See Table 1 for demographic data on the survey sample.)

Apparatus. The instrument used, as noted above, was the Research Data Questionnaire constructed by the author of the present study. The instrument was a 36-item questionnaire designed to elicit basic demographic information about the individual, his experience in the military, general family background, his particular drug problem, and additional personal information.

Procedure. The author reviewed over 600 clinical records of drug abusers admitted to the Drug Rehabilitation Program since January 1975, looking for data which would describe a profile of the typical military drug user, abuser, or addict. The Research Data Questionnaire was based upon the study of social histories, life script questionnaires, and intake interviews. The goal was to gain as much information as possible with as few questions as possible, since interviewees tended to delete large portions of the form if it were three or more pages in length.

Copies of the Research Data Questionnaire were distributed to the 13 drug counselors in the program. They were asked to have their clients fill out the questionnaire as a part of the intake interview. Since this was a slow process for collecting the data, the present writer requested to meet with the various therapy groups for the first 15 minutes of the session for more rapid collection of data. Of

approximately 40 questionnaires originally distributed, only 25 were usable in the present study.

Subjects were informed that the writer was only interested in the data on the forms for statistical analysis and that their rights to privacy would be protected. A statement to this effect was included as an introductory paragraph on the Request Data Questionnaire. Questions were answered concerning who would see the forms and their disposition.

Statistics were computed from the data accumulated and were summarized in Tables 1, 2, and 3 of the Appendix.

Results and Conclusions. The results strongly support the original hypotheses. The military drug abuser tended to be the younger soldier and the lower-ranking enlisted soldier. He had been in service an average of slightly better than two years and during this period had received some form of punishment (e.g., Article 15 or a court-martial, Uniformed Code of Military Justice), or had been absent without leave (AWOL), punished or not punished. He was generally single, white, and had no strong religious ties, although about one half of the sample claimed a Baptist religious affiliation, most probably due to the geographical background of the sample.

The first sexual encounter tended to occur at the inception of puberty, and the first experience with drugs about four years later. About 84 percent of the sample smoked cigarettes and drank prior to entering service, and started these practices at approximately the ages of 14 and 17 respectively.

These individuals saw themselves as friendly, easy-going, and "nice", but having minor problems. They typically saw others as viewing

them in the same manner. Their goals in life centered around getting a good job, receiving a good education, getting married, and being happy. This sample exhibited a wide range of hobbies and interests--from active, physical sports to motorcycle riding, fishing, hunting, boating, music, reading, and women. One factor not adequately discussed was sex. The individuals randomly selected for the survey and the T-JTA test-retest portion of the present study have been exclusively male. During the 17-month period of employment in the Drug Control Office, the present writer only had one occasion to see a female in the program. Researching the files for the past 18-month period revealed no record of officer personnel being enrolled in the program. Does this mean that female military members, officers, and senior enlisted members do not abuse drugs? From the experience and knowledge gained from teaching drug classes to large numbers of military personnel, the present author feels that the incidence of drug use for the above groups is, in fact, considerably less than that of the subject population. Furthermore, these groups are generally married, do not live in barracks where one may be more easily apprehended, and are somewhat more isolated from the day-to-day social life of the majority of soldiers. Rank is also a factor. Excessive drinking by senior NCOs and officers is either ignored or tolerated unless it begins to radically affect ones daily job performance.

It appears that drug use (including alcohol as a drug) among young enlisted troops is a means of group identification and results from peer pressure, availability, and a combination of boredom, desire to experiment, and a desire to escape from the harsh realities of military life. The move away from the use of drugs appears to be

a result of a psychosocial process involving the recognition of the social-legal-psychological ramifications of one's behavior, an increase in education and knowledge, marriage, and increased responsibility.

The hypothesis concerning the rank parameters of the military drug user was well supported. Those who are identified, apprehended, or turn themselves in for drug abuse were the five lowest ranking enlisted grades. (See Table 4 for the military rank structure of the U.S. Army.) The number of personnel above the grade of E5 (SGT) comprises less than two percent, by current estimates, of all referrals to the Drug Rehabilitation Program.

It is estimated by the present author that the incidence of hard drug abuse (heroin, cocaine, morphine, etc.) is less than seven percent at Fort Campbell, and that most drug use and abuse is confined to the "soft" drugs of marijuana, hashish, alcohol, THC, glue, etc.

One hypothesis which was not well supported was that the abuser is oriented to a variety of drugs rather than any single category. Statistical analysis of the subjects' responses concerning the drugs used showed 40 percent indicating problems with alcohol only, and no experience with other drugs. This response pattern was not restricted to the older subjects in the sample.

Additional research needs to be conducted in this area. Comparison studies might be made between several military drug rehabilitation programs or between military and civilian drug abuser populations. If the problem of drug abuse in the armed services is to be properly addressed, careful notice must be taken of who abuses drugs, what drugs are abused, and situational variables. The present study

was conducted with this aim as its primary goal, and it is hoped that this study will serve as a basis for new research.

Chapter 3

Method and Results: Part TwoA Test-Retest Analysis of Effects of Drug
Rehabilitation Training on Scores Obtained on the
Taylor-Johnson Temperament Analysis

The T-JTA was being used as a screening device in marital and individual counseling, yielding rapid and fairly reliable information about the individual. The T-JTA was also being employed as a means of measuring improvement over the first 60 days of the Fort Campbell drug program by test-retest. The present writer selected the T-JTA test-retest analysis as the basis of the present study because of the lack of information on comparisons of first test and retest scores. It was expected that there would be general improvement on the retest portion in terms of movement on each of the nine traits towards the response pattern of the normative sample. This improvement was expected as a function.

Subjects. The subjects for the present study were selected by reviewing the records of approximately 600 persons maintained on file for the year 1975. The selection process was based solely on the completeness of data in the file, and although all records were screened, only the number selected were complete enough for inclusion in the present study. The final sample total subjected to statistical analysis was 45. Geographic representation of subjects was generally limited to the eastern half of the United States, but there were four subjects from California, Texas, and Jamaica. Subjects were found to represent cities and towns of every possible size. The rank structure ranged from E1 to E7, with a mean rank of PFC (E3). Females and officers were not represented, most probably due to the factors

outlined in Part 1 of the present study. Caucasians represented almost 70 percent of the sample, blacks a little over 25 percent, and Spanish-Americans about 5 percent. No other racial or ethnic background was represented. Ages ranged from 18 to 45 years with a mean age of 23.66. Practically all military occupational specialties are included in the sample; from combat arms, clerks, supply, mechanics, medics, cooks, military police, to specialists in communications, machinery repairmen, and recruiting.

The amount of time spent in service ranges from four months to 19½ years, with a mean of four years, although this average is not really representative of the distribution of ages. For example, the total combined time in service of this sample is 180 years, but the four highest ranking individuals account for 57 of those years. If these four subjects were deleted from the sample, the mean would drop to 2.73 years. (See Table 5 for demographic data)

Thirty-six percent of the sample were married, 58 percent single, four percent divorced, and two percent separated. Educational levels ranged from nine years to 15 years, with a mean of 11.27 years. Six individuals had received the GED diploma and five others had some college experience. Two-thirds of the subjects had received some administrative or judicial punishment while in service.

Referrals to the Drug Rehabilitation Program came from four primary sources: 1) command referrals, where someone in the individual's chain of command caught him taking drugs or had good reason to suspect him; 2) apprehension, where the individual was caught driving while intoxicated or exhibiting erratic, drug-induced behavior (determined by medical personnel); 3) urinalysis, where an individual was

identified as having taken some narcotic substance within the past 72 hours (accomplished by collection of urine samples of all individuals in a company-sized unit on a random-sampling basis); and 4) self-referral. About 32 percent of the subjects had problems with alcohol only, eight percent had some experience with heroin, and the remainder were polydrug users. The range in time of usage of the various drugs was six months to 25 years. Of this sample a little over half were returned to duty, 12 received administrative discharges, one received a medical discharge, and the remaining nine either got out of service or were transferred to other military posts.

Apparatus. The T-JTA is a five-page, 180-item questionnaire dealing with one's attitudes, feelings, behaviors, emotions, and activities. Each question has a blank in it so that it may be applied to oneself or another person. The answers to these questions are recorded on an answer sheet arranged so that it may be scored through the use of stencil overlays. There are six stencils which yield scores on nine traits, and an attitude scale which tests for consistency, self-deception, and defensiveness. The K scale of the MMPI was used as the criterion for the construction of the T-JTA attitude scale. The T-JTA was originally devised by Roswell H. Johnson in 1941 and was revised and standardized by Robert M. Taylor in 1967.

Procedure. The subjects were referred to the Drug Rehabilitation Program via one of the methods outlined above. Each new cycle began on a Monday morning when referred personnel arrived at the Halfway House, baggage in hand. They went through an initial screening process and an intake interview and were assigned to a counselor and a therapy group. The first two weeks of the program were spent in a

residency status where patients lived in the Halfway House, and participated in group and individual counseling. The T-JTA was administered on the first or second day after entrance into the program, and again after completion of the six-week outpatient period which followed the two weeks residency.

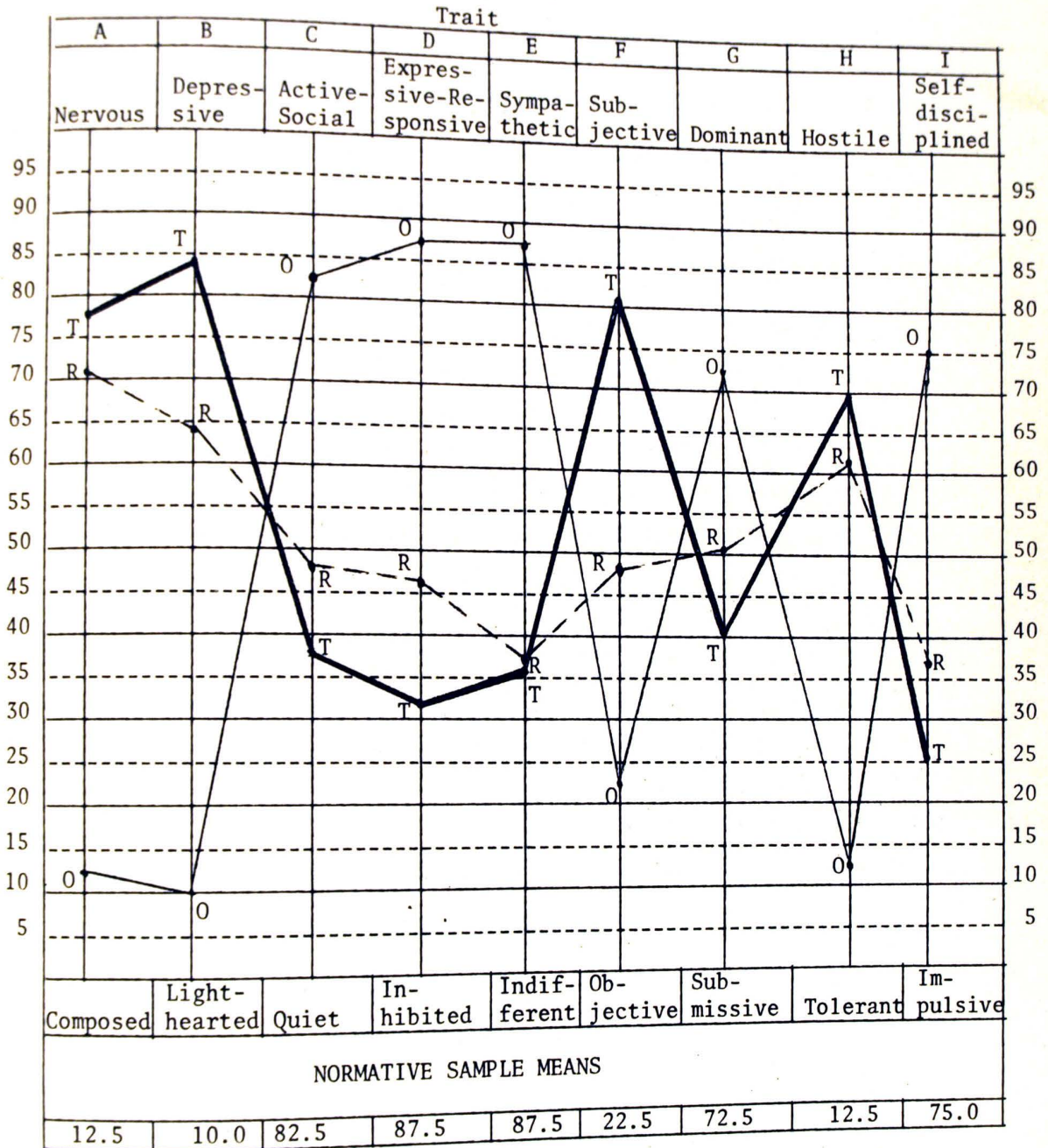
The T-JTA test-retest data were collected during a period in 1975 when the T-JTA was widely used as a diagnostic tool in the Drug Rehabilitation Program. Although single-test information was available on a much larger sample, usable test-retest data were present in only 45 cases of over 600 files studied. Demographic data (Table 5) was tabulated on this sample along with the mid scores (indecisive answers), raw scores, and sten conversions for the initial test and the retest of the T-JTA. Feedback on one's performance is shown on a graph where the scores on an axis between paired, opposite traits (e.g., Nervous-Composed, Depressive-Lighthearted, Active/Social-Quiet, Expressive/Responsive-Inhibited, Sympathetic-Indifferent, Subjective-Objective, Dominant-Submissive, Hostile-Tolerant, and Self-disciplined-Impulsive) are expressed in percentages, and he was shown where his responses differed from the norm. (See Figure 1.)

No special instructions were given to the subjects except as necessitated by the administrative requirements of giving the test. All identifying information had been deleted in keeping with APA Principles and the Privacy Act of 1974.

Results. The scores on retest indicated movement toward the normative data as compared with the initial test, yielding positive information on all nine traits with significance at .05 level on

Figure 1

Taylor-Johnson Temperament Analysis Test-Retest Data
Mean Scores Within Traits



O = Normative sample mean scores

T = Initial test mean scores

R = Retest mean scores

	A	B	C	D	E	F	G	H	I
Test Mean	77.33	84.55	37.33	32.00	35.62	80.67	40.18	69.56	25.69
Retest Mean	70.51	64.40	47.84	46.71	36.43	48.36	50.27	62.00	37.84

eight of nine traits. Trait A (Nervous vs. Composed) shows a mean movement of 10.56 percentage points toward the norm with 71.1 percent of subjects improving, 26.7 percent doing worse, and 2.2 percent unchanged. On Trait B (Depressive vs. Lighthearted) an average of 18.91 points change toward the norm was achieved on retest, with 82.3 percent of subjects showing improvement, 13.3 percent showing negative scores and 4.4 percent unchanged. Scores on the other seven traits indicated general improvement with a mean shift toward the norm of 12.6, 12.69, 21.33, 9.87, 10.42, 2.18, and 9.8 percentage points for Traits C through I, respectively. Norms, using the mean score achieved by the normative group expressed in percentage points for Traits A through I are, respectively, 12.5, 10, 82.5, 87.5, 87.5, 22.5, 72.5, 12.5, and 75.0. The least amount of sten improvement was shown on Trait I (Self-disciplined vs. Impulsive) where only 51.1 percent improved, 46.7 percent showed negative results, and 2.2 percent remained unchanged. (See Table 6 for a more detailed breakdown of these data)

Within-subjects statistics (across traits) indicated that 75.33 percent of all subjects in the sample improved, with an average improvement of 84.69 points per subject over nine traits. There was a mean increase of 5.8 points in the mid score for all subjects. Scores on the Attitude Scale shifted generally from the low range (0-17 points raw score) to the neutral range (18-33 points raw score) with 84.4 percent of the sample improving, 11.1 percent with negative scores, and 4.4 percent remaining unchanged. The average initial T-JTA attitude score was 2.49, a sten conversion which places it in the low range at about 13 points.

The test-retest scores were analyzed at the .05 significance level with the following results: Trait A ($t=2.101$), Trait B ($t=5.095$), Trait C ($t=2.439$), Trait D ($t=2.984$), Trait E ($t=.1769$), Trait F ($t=7.448$), Trait G ($t=2.024$), Trait H ($t=1.776$), and Trait I ($t=3.249$). The degrees of freedom was 44. Only Trait E showed no significant change. All other traits were significant at the .05 level, although none reached the range of the norm group.

Chapter 4

Discussion

The results of the T-JTA test-retest tend to support the hypothesis that there was a significant degree of improvement on the T-JTA retest due to the establishment of rapport, familiarity, motivation, and decreased anxiety levels. Although the direction of the effect was as expected and the results of eight of nine traits were significant, the possibility of external factors affecting the results was not excluded. A number of persons who have administered the T-JTA claim that results are pertinent only at the time the test is taken. As attitudes and moods change, so do scores on the T-JTA. These claims are somewhat substantiated by the information found in Table 6.

One factor which is seen to be inconsistent with the overall results is the mean increase of 5.8 points in the mids recorded. It appears that a decrease would be expected as an increase indicates a larger degree of indecision and less self-assurance.

Although subject variables may have slightly influenced the results of the present study, it is felt that the major impetus toward improvement on the T-JTA was the therapeutic environment provided by the counselors of the Drug Rehabilitation Program, although there is not much data with which to compare these results.

The sample of subjects was seen as being representative of the drug-using population in military service. The vast majority of the users deal mainly with alcohol, marijuana, and a few pills. The truly hardened addict appears to constitute less than five percent

of those who are referred to the Drug Rehabilitation Program. From teaching drug classes and tabulating responses pertaining to levels of use of different categories of drugs, the author estimates that between 10 percent and 15 percent of enlisted personnel in pay grades E1 to E5 are habitual or frequent users of marijuana and hashish, with an additional 10 or 15 percent who use it for experimentation or infrequently.

The survey portion of this study was intended to supplement the demographic and individual data provided by the T-JTA test-retest analysis. The goal of both part of the present study was to render a more accurate and unbiased picture of the military drug abuser within the background of the military drug abuse program.

This study is meant to contribute to the existent body of information on the military drug abuser and provide some insight into what factors in service and prior to service may make him more susceptible to the pressures to engage in the illicit use of drugs. Additionally, this study is intended to add to the growing literature on the various uses of the T-JTA. The use of the T-JTA in the present study has provided a basis for determining progress of patients in military drug rehabilitation programs, but whether or not such programs actually curb or reduce drug usage after release from the program is as yet undetermined. It is suggested that more research be conducted in this area.

APPENDIX

Table 1

Demographic Information on Survey Sample
(N=25)

Means=21.8 S.D.=7.43

Ages		Rank Structure ^a		Time in Service	
Age	Frequency	Rank	Frequency	Time(months)	Frequency
17-18	2	PV1	0	0-12	4
19-20	10	PV2	5	13-24	8
21-22	8	PFC	7	25-36	7
23-24	2	CPL	12	37-48	2
25-26	1	SGT	1	49-60	2
27-28	1	SSG	0	61-72	0
29-30	1			73-84	0
				85-96	1

Mean=11 years S.D.=85.24

Races		Religious Preference		Education	
Race	Frequency	Religion	Frequency	Grade level	Frequency
Caucasion	17	Baptist	9	8 years	1
Black	4	Catholic	3	9 years	5
Am. Indian	2	Protestant	3	10 years	3
Jap. Amer.	1	Presbyterian	1	11 years	2
Other	1	No Preference	9	12 years	12
				13 years	2

Marital Status		Administrative or Judicial Punishment	
Status	Frequency	Rank	Frequency
Single	19	PV1	0
Married	5	PV2	2
Separated	1	PFC	6
		CPL	7
		SGT	0
		SSG	0

^aSee Table 4 for U.S. Army Rank Structure

Table 2

Family, Personal, and Pre-Service Data
of Survey Sample
(N=25)

Parent's Marital Status		Parent's Education	
Status	Frequency	Parent	Years (mean)
Married	18	Mother	11.6
Divorced	5	Father	11.1
Separated	2		

Siblings in Family			Hobbies	Goals
Number	Frequency	Older		
1-2	8	6	Music, reading, women, bowling, boating, scuba fishing, hunting, guns, guitar, basketball, pool, horses, motorcycle, hike, dance, mechanics, surf, building things with hands, landscaping, photography, electronics, writing, CB.	Center around getting a good job, getting married, getting an education, and being happy.
3-4	9	5		
5-6	5	3		
7-8	2	2		
9-10	1	1		

View of Self	How self is viewed by others
Generally friendly, easy going, kind, and understanding	Consistent with view of self; friendly, nice guy, easygoing, and likeable.

Table 3

Drug Usage Data on Profile Sample
(Experiment 1)
N=25

Subject	Habit Behavior	Drug Usage	
	Age Initiated (Mean)	Drug	Percentile
Cigarettes	13.8 years	Alcohol (only)	36
Alcohol	16.8 years	Marijuana and	
Drugs	15.9 years	derivatives	32
		Polydrug users	32

Initiation of Drug Usage	
Situation	Rationale

Most make reference to a party or experi- menting with friends	To be like everyone else, experiment, for the experience, to get high, escape reality
---	--

Table 4

U.S. Army Rank Structure
 E=Enlisted WO=Warrant Officer O=Officer

Pay Grade	Rank	Rank Name
E-1	PVT	Private
E-2	PVT	Private
E-3	PFC	Private First Class
E-4	CPL/SP4	Corporal/Specialist Fourth Class
E-5	SGT/SP5	Sergeant/Specialist Fifth Class
E-6	SSG/SP6	Staff Sergeant/ " Sixth Class
E-7	SFC/PSG	Sergeant First Class/Platoon SGT
E-8	MSG/1SG	Master Sergeant/First Sergeant
E-9	SGM/CSM	Sergeant Major/Command SGT MAJ
WO-1	WO-1	Warrant Officer (Mister)
WO-2	CW-2	Chief Warrant-2 (Mister)
WO-3	CW-3	Chief Warrant-3 (Mister)
WO-4	CW-4	Chief Warrant-4 (Mister)
O-1	2LT	Second Lieutenant
O-2	1LT	First Lieutenant
O-3	CPT	Captain
O-4	MAJ	Major
O-5	LTC	Lieutenant Colonel
O-6	COL	Colonel
O-7	BG	Brigadier General
O-8	MG	Major General
O-9	LTG	Lieutenant General
O-10	GEN	General

Demographic Data On T-JTA Test-Retest Sample
(N=45)

R=E1-E7 $\bar{X}=3.33$ (PFC)			R= 18-45 yrs $\bar{X}=23.33$		
Rank Structure			Age Grouping		
Rank	Frequency	%	Range	Frequency	%
PV1	3	6.7	18-21	25	55.6
PV2	15	33.3	22-25	7	15.6
PFC	8	17.8	26-29	7	15.6
SP4	9	20.0	30-33	2	4.4
SGT	6	13.3	34-37	1	2.2
SSG	3	6.7	38-41	1	2.2
SFC	1	2.2	42-45	2	4.4

R=4 mo.-19½ yrs. $\bar{X}=4$ yrs					
Time in Service			Religious Preference		
Range	Frequency	%	Religion	Frequency	%
0-3 (yrs)	28	62.2	Catholic	12	26.7
3-6	7	15.6	Protestant*	9	20.0
6-9	6	13.3	Baptist	13	28.8
9-12	1	2.2	Mormon	1	2.2
12-15	1	2.2	Methodist	1	2.2
15-18	0	-0-	No Preference	9	20.0
18-21	2	2.1			

Racial Structure		Marital Status		
Race	Frequency	Status	Frequency	%
Caucasian	31	Married	16	35.5
Negro	12	Single	26	57.8
Spanish-Amer.	2	Divorced	2	4.4
		Separated	1	2.2

R=9-15 yrs $\bar{X}=11.27$ yrs				
Education		Referral		
Years	Frequency	How Referred	Frequency	%
9	1	Command (unit)	9	20.0
10	17	Medical ID	3	6.7
11	4	Self	27	60.0
12	18	Apprehension	6	13.3
GED(HS equi)	6			
13	3			
14	1			
15	1			

* Term selected by respondent

Table 6

Percentile Data On T-JTA Test-Retest Sample
(N=45)

	TRAIT								
	A	B	C	D	E	F	G	H	I
Measure									
Initial test									
mean sten									
score across									
subjects	77.33	84.55	37.33	32.00	35.62	80.66	40.18	69.71	25.69
Retest mean									
sten score									
across subjects	66.80	65.64	49.93	44.69	56.95	70.79	50.60	67.53	35.49
Net sten									
score change									
across subjects	-10.56	-18.91	12.6	12.69	21.33	-9.87	10.42	-2.18	9.80
Percentile									
point improvement									
across subjects	668	934	836	887	572	675	735	506	629
Total percentile									
point negative									
scored on retest	193	83	269	316	476	231	266	408	188
Number of subjects									
scores unchanged									
on retest	1	2	4	2	3	1	3	1	4
Total mean percentile									
point change toward									
normative data	10.56	18.91	12.60	12.69	21.33	9.87	10.42	2.18	9.80
Percent subjects									
improved scores	71.1	82.1	68.9	62.2	55.5	66.7	62.2	51.1	53.3
Percent subjects									
worse scores	26.7	13.3	22.2	57.8	37.8	31.1	31.1	46.7	37.6
Percent subjects									
unchanged scores	2.2	4.4	8.9	4.4	6.7	2.2	6.7	2.2	8.9

- Cantor, Joel M. (V.A. Central Office, Alcohol and Drug Dependence Service, Washington, D.C.); The Alcohol and Drug Dependence Program of the Veteran's Administration; Journal of Drug Issues, 1974 (Winter) Vol. 4(1), 44-51.
- Earles, James A; Mullins, Cecil J; and Vitola, Bart M. (Lackland AFB); Viarables related to amphetamine use. Catalogue of Selected Documents in Psychology, 1974 (Fall), Vol 4, 135.
- Earles, James A. et al; Variables related to barbiturate use. US AFHRL Technical Report, 1974 (March), No. 74-22, 22pp.
- Edwards, Joseph D. and Dill, James E; (U.S. Army Community Service, Fort Sam Houston); Alcoholism clinic in a military setting: A combined disulfiram and group therapy outpatient program. Military Medicine, 1974 (March), Vol 139 (3) 206-209.
- Fraas, Louis A. Effects of incarceration as measured by the Taylor-Johnson Temperament Analysis. Psychological Reports, 1973 (June), Vol. 32 (3, part 2), 1033-1034.
- Frances, Allen (Fort Jackson); a comprehensive military drug and alcohol program. International Journal of the Addictions, 1974, Vol. 9(1), 137-144.
- Greden, John F., Frenkel, Sinai I.; and Morgan, Donald W. Alcohol use in the Army; Pattern and associated behaviors. American Journal of Psychiatry, 1975 (January), Vol. 132(1), 11-16.
- Gunderson, Eric and Nail, Richard L. A drug involvement scale for classification of drug abusers. Journal of Community Psychology, 1973 (October), Vol. 1(4), 399-403.

- Joseph, Brian S. Lessons on heroin abuse from treating users in Viet Nam. Hospital and Community Psychiatry, 1974 (November), Vol. 25(11), 742-44.
- Knox, Wilma J. (V.A. Center, Biloxi, MS). Attitudes of psychology graduate students toward drug abuse. Professional Psychology, 1974 (May), Vol. 5(2), 185-190.
- Kolb, Douglas, Gunderson, E.K.; and Nail, Richard L. (U.S. Naval Medical Neuropsychiatric Research Unit, San Diego, California). Perceptions of drug abuse risks in relation to type of drug used and level of experience. Journal of Community Psychology, 1974 (October), Vol. 2(4), 380-389.
- Kolb, Douglas; Gunderson, E.K.; & Nail, Richard L. (U.S. Naval Medical Neuropsychiatric Research Unit, San Diego, California). Pre-service drug abuse: Family and social history characteristics. Journal of Community Psychology, 1974 (July), Vol. 2(3), 278-282.
- Mullins, Cecil J; Vitola, Bart M.; Abellera, James W. Users of cannabis only. U.S. AFHRL Technical Report, 1974 (April), No. 74-41, 12pp.
- Nail, Richard L; Gunderson, Eric, & Arthur, Ransom J. (U.S. Naval Medical Neuropsychiatric Research Unit, San Diego, California). Black-white differences in social background and military drug abuse patterns. American Journal of Psychiatry, 1974 (October) Vol. 131 (10) 1097-1102.
- Nail, Richard L.; Gunderson, E.K.; & Kolb, Douglas (U.S. Naval Medical Neuropsychiatric Research Unit, San Diego, California). Motives for drug use among light and heavy users. Journal of Nervous and Mental Disease, 1974 (August), Vol. 159(2), 131-136.

Rohrbaugh, Michael; & Eads, Gerald. Effects of the Viet Nam experience on subsequent drug use among servicemen. International Journal of the Addictions, 1974, Vol. 9(1), 25-40.

Sanders, Jacquelyn R.; Vitola, Bart, M.; & Mullins, Cecil J. Correlates of barbiturate use. US AFHRL Technical Report, 1974 (March) No. 74-21, 22pp.

Taylor, Robert M. & Morrison, Lucile Phillips. Taylor-Johnson Temperament Analysis (T-JTA); Psychological Publications, Inc., 5300 Hollywood Boulevard, Los Angeles, California 90027, 1966-74.

Van Stone, William W. (Stanford University) Treating the drug-dependent veteran: Respective from a Veteran's Administration Hospital. International Journal of the Addictions, 1974, Vol. 9(4) 592-604.

Zinburg, Norman E. Rehabilitation of heroin users in Viet Nam. Contemporary Drug Problems, 1972 (Spring), Vol. 1(2), 263-274.