

NAVY PERSONNEL RESEARCH AND DEVELOPMENT CENTER SAN DIEGO, CALIFORNIA



ADA 030598

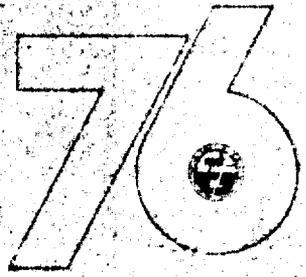
NPRDC TR 76TQ-45

SEPTEMBER 1976

PRESERVICE DRUG ABUSE AMONG NAVAL RECRUITS:
A 5-YEAR TREND ANALYSIS

D D C
RECORDED
OCT 12 1976
REGISTRY
D

APPROVED FOR PUBLIC RELEASE:
DISTRIBUTION UNLIMITED



ACCESSION for	
NTIS	White Section <input checked="" type="checkbox"/>
DDC	Ball Section <input type="checkbox"/>
UNANNOUNCED	<input type="checkbox"/>
JUSTIFICATION	
BY	
DISTRIBUTION	
Dist.	
A	

**PRESERVICE DRUG USAGE AMONG NAVAL RECRUITS:
A 5-YEAR TREND ANALYSIS**

Kent S. Crawford
Patricia J. Thomas
Edmund D. Thomas

Reviewed by
Robert Penn

Approved by
James J. Regan
Technical Director

RECEIVED
OCT 12 1976

Navy Personnel Research and Development Center
San Diego, California 92152

DISTRIBUTION STATEMENT
Approved for public release
Distribution Unlimited

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER NPRDC-TR-76TQ-45	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) PRESERVICE DRUG USAGE AMONG NAVAL RECRUITS: A 5-YEAR TREND ANALYSIS		5. YEAR OF REPORT & PERIOD COVERED <i>Sept. 70</i> 1 July 1971 to 30 June 1976
7. AUTHOR(s) Kent S. Crawford Patricia J. Thomas Edmund D. Thomas		6. PERFORMING ORG. REPORT NUMBER
9. PERFORMING ORGANIZATION NAME AND ADDRESS Navy Personnel Research and Development Center San Diego, California 92152		8. CONTRACT OR GRANT NUMBER(s)
11. CONTROLLING OFFICE NAME AND ADDRESS Navy Personnel Research and Development Center San Diego, California 92152		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS N0002276P069001
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		12. REPORT DATE September 1976
		13. NUMBER OF PAGES 61
		15. SECURITY CLASS. (of this report) UNCLASSIFIED
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
Drugs	Heroin	Amphetamines
Drug Usage	Illicit	Barbiturates
Trends	Opiates	Cocaine
Marijuana	Hallucinogens	Codeine
Recruits	Enliteses	
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)		
<p>Illicit drug usage has been on the increase throughout society, with the largest increment within the 18-25 age category. The implications for the Navy are apparent since this age group is the primary target for recruiting efforts. The present effort addressed preservice drug use among naval recruits. A specially designed Drug Experiences Questionnaire (DEQ) was developed and administered under anonymous conditions to recruits in training at the Recruit Training Command, San Diego. This instrument was given on an annual basis from</p>		

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

1971 to 1975 to over 9000 recruits. The DEQ contained nine items assessing preservice drug involvement. Other items focused on background characteristics, preservice delinquency, and rates of alcohol and tobacco usage. Trends were assessed for both specific drugs and for individuals classified on the basis of drug experiences.

It was noted that the percentage of preservice nondrug users decreased each year from a high of 58 percent in 1971 to a low of 47 percent in 1975. Marijuana was the most commonly used drug over the 5 years, with 51 percent of the recruits in 1975 reporting some use during the previous 6 months. Over the 5 years, significant increases in the rates of usage were found for marijuana, amphetamines and barbiturates. Overall, most preservice users of drugs other than marijuana could be classified as experimenters. Strong relationships were also found between drug involvement and various demographic factors and, in general, supported the contention that drug users possess other characteristics that predispose them to lower rates of military effectiveness.

It was recommended that further research be initiated to determine the extent of drug usage aboard ships and among more senior personnel. Such a study should also focus on the efficacy of current programs oriented toward reducing drug abuse, e.g., drug education, drug waivers, urinalysis, etc. Finally, consideration needs to be given to determining the actual effects of drug experimentation and/or usage upon job performance as well as the impact of leadership/organizational practices on drug use rates.

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

FOREWORD

This study was performed in support of the Navy Human Resource Management Support System. It was directed toward meeting the needs of the Assistant Deputy Chief of Naval Operations (Human Resource Management) in monitoring and assessing trends in the values, background characteristics, and drug/alcohol patterns of naval personnel.

Appreciation is expressed to Doug Generoli, Wil Young, and Jerry Bowers for their assistance in data analysis.

J. J. CLARKIN
Commanding Officer

SUMMARY

Problem

Illicit drug usage has been on the increase throughout society, with the largest increment within the 18-25 age category. The implications for the Navy are apparent since this age group is the primary target for recruiting efforts. Moreover, individuals below 25 years of age account for more than 60 percent of enlisted personnel. If the Navy is to effectively address problems associated with drug use, it must be aware of changing drug usage patterns among its personnel.

Objective

The objective of the present effort was to assess the magnitude of, and trends in, self-reported preservice drug use among naval recruits during the 1971-1975 time frame. Previous research has suggested that preservice drug usage provides the most valid indication of subsequent involvement with drugs while in the service.

Approach

A specially designed Drug Experience Questionnaire (DEQ) was developed and administered under anonymous conditions to recruits at the Recruit Training Command, San Diego. The instrument was given on an annual basis from 1971 to 1975 during September-October of each year. A total of 9076 recruits participated in this investigation. The DEQ contained nine items assessing preservice illicit drug involvement. Other items focused on background characteristics, preservice delinquent experiences, and rates of alcohol and tobacco usage.

Each yearly sample was divided into one of three groups, based upon the degree of reported preservice involvement with drugs: (1) Nondrug Users, (2) Marijuana-only Users, and (3) Other Drug Users. Trends in the use of specific drugs and in drug use by demographic interactions were determined for the period 1971-1975.

Findings

1. The percentage of preservice Nondrug Users decreased each year from a high of 58 percent in 1971 to a low of 47 percent in 1975. This change was largely the result of increases in percentages of Marijuana-only Users.
2. Marijuana was the most commonly used drug over the 5 years, with 51 percent of the recruits in 1975 reporting some use in the previous 6 months.

3. Among specific drugs, marijuana, amphetamines, and barbiturates all had significant increases in the percentage of preservice users between 1971 and 1975. However, marijuana usage showed the largest increases in both the percentage of users and in the intensity of involvement. Overall, most Other Drug Users can be considered to be experimenters.

4. Strong relationships between drug involvement and various demographic factors were found. Demographic items indicated that drug users possess characteristics, other than drug usage per se, which predispose them toward lower rates of military effectiveness.

Conclusions

Marijuana use is steadily increasing within the male population enlisting in the Navy--not only in terms of the number of individuals involved but also in frequency of usage. Likewise, use of other drugs remains at a level high enough to warrant attention. If preservice drug usage can be viewed as an indicator of future drug use in the fleet, it appears that the Navy will continue to face drug abuse as an important issue.

Recommendations

It is recommended that the Navy determine the extent of drug use aboard ships and among more senior personnel. The focus of such a study would be to provide information as to the efficacy of current Navy programs aimed at reducing drug abuse. Such an expanded effort should also address the following issues: (1) the performance level of Non-drug Users as compared to that of Marijuana and/or Other Drug Users, (2) the impact of leadership/organizational practices on drug use rates, (3) the proportion of current drug users who initiated usage prior to entering the Navy but did not enlist with a drug waiver, and (4) the proportion of enlistees who sign drug rejection statements and abstain from later use of drugs.

CONTENTS

	Page
INTRODUCTION	1
Problem	1
Background	1
Drug Use by High School Students	1
Drug Use in the Military/Navy	2
Preservice and In-Service Drug Use	3
Background Characteristics of Military Drug Users	3
Purpose	4
PROCEDURE	5
Research Design	5
Drug Experiences Questionnaire (DEQ)	5
Samples	6
Methodological Issues	7
Analysis of Data	7
RESULTS AND DISCUSSION	9
General Trends	9
Preservice Involvement with Specific Drugs	10
Demographic Characteristics	14
Race	14
Age	15
School Grades	16
Geographical Area	17
Urban-Rural Area	18
Education Level	19
Preservice Delinquency	20
Legal Drugs	22
Cigarette Smoking	22
Alcohol	24
Additional Items	26
CONCLUSIONS	27
RECOMMENDATIONS	29
REFERENCES	31
APPENDIX A - DRUG EXPERIENCES QUESTIONNAIRE	A-0
APPENDIX B - FREQUENCY OF PRESERVICE USE OF SPECIFIC DRUGS DURING TIME PERIOD 1971-1975	B-0
APPENDIX C - DRUG USAGE CATEGORIES BY DEMOGRAPHIC AND BACKGROUND QUESTIONS 1971-1975	C-0
APPENDIX D - DRUG USAGE CATEGORIES BY USE OF LEGAL DRUGS 1971-1975	D-0
DISTRIBUTION LIST	

LIST OF TABLES

	Page
1. Sample Size and Questionnaire Length for 1971 through 1975 . .	6
2. Preservice Drug Use of Recruits by User Category 1971-1975 . .	9
3. Percentage of Preservice Drug Users Involved with Marijuana Only or with Other Drugs 1971-1975	10
4. Specific Drugs Used by Recruits in Previous 6 Months 1971-1975	11
5. Frequency of Marijuana Usage in Previous 6 Months 1971-1975 .	13
6. Preservice Drug Involvement by Racial/Ethnic Group Averaged Across 5 Years	15
7. Preservice Drug Involvement by Age Group Averaged Across 5 Years	16
8. Preservice Drug Involvement by Grade Category in High School Averaged Across 5 Years	17
9. Drug Involvement in Previous 6 Months by Preservice Geographical Area (1975 only)	18
10. Preservice Drug Involvement by Size of Area Averaged Across 5 Years	19
11. Preservice Drug Involvement by Educational Level (1975 only).	20
12. Preservice Drug Involvement by Preservice Delinquency Averaged Across 5 Years	21
13. Preservice Drug Involvement by Cigarette Smoking Averaged Across 5 Years	22
14. Preservice Rates of Cigarette Usage 1971-1975	23
15. Preservice Drug Involvement by Alcohol Consumption Averaged Across 5 Years	24
16. Preservice Consumption Rates by Type of Alcohol 1973-1975 . .	25
17. Incidence of Drunkenness in Previous Year 1973-1975	26

INTRODUCTION

Problem

During the past decade the use of illicit drugs has become an issue of increasing concern to the military services. As a consequence, policy-makers and managers have been forced to address such issues as the direct and indirect costs attributable to drug usage, the trade-off between maintaining selection standards that prohibit preservice drug use or increasing the applicant pool by granting drug waivers, and the possibility that any relaxing of existing military standards would be interpreted as sanctioning the use of illicit drugs.

Although drug usage has been on the increase throughout society, the magnitude of this increase appears to be highest within the 18-25 age category (National Commission, 1973; National Institute on Drug Abuse (NIDA), 1975). This finding has obvious implications for the Navy since most recruits come from this age group. Indeed, individuals under 25 account for somewhat more than 60 percent of all enlisted personnel (Navy Military Personnel Statistics, 1975). Thus, if the Navy is to effectively address problems associated with drug use, it must become aware of both the changing drug scene within society at large and the use of drugs by incoming and active duty personnel. This study responds in part to this need by focusing on trends in preservice drug usage among Navy recruits.

Background

Since most Navy recruits recently attended high school, it is relevant to note drug¹ trends within this population. Concomitantly, studies within military settings can provide information concerning service-specific factors associated with drug usage. Finally, demographic characteristics believed to be related to drug usage need to be identified in order to better understand the problem.

Drug Use by High School Students

While drug use has been a part of the American culture for well over a century, it was not until the 1960s that it emerged as a significant problem (Brecher, 1972; National Commission, 1973). During the 1965-1970 time frame, almost every drug survey reported increasing rates of drug usage among high school and college students (Pearlman, 1968; Berg, 1970; Blum, 1970; DeFleur and Garrett, 1970).

¹For the purpose of this report, drug use is defined as the use of illegal drugs. The two traditionally accepted drugs, alcohol and tobacco, have been treated separately. Also, no attempt has been made to distinguish between drug use and drug abuse.

Between 1970 and 1976, the trend was not quite as clear. Some studies (Josephson, 1974; San Mateo County, 1974) suggested that drug incidence rates had begun to stabilize. Other research, however, indicated that drug use, especially of marijuana, continued to increase. The National Institute on Drug Abuse (NIDA) recently released information based on four independent national surveys concerned with trends in drug usage (NIDA, 1975). These surveys revealed that the use of legal and illegal drugs was rising. For example, between 1969 and 1974, use of marijuana among high school seniors tripled from 13.4 to 44.9 percent; use of barbiturates increased from 3.4 to 12.5 percent; and use of amphetamines increased from 5.5 to 15.6 percent. Likewise, a recent report to Congress (U. S. Department of Health, Education, and Welfare, 1976) indicated that marijuana usage was increasing among those under 25 years of age.

Drug Use in the Military/Navy

Drug use did not become a potent issue for the services until the early 1970s. Recognition of the problem led to lengthy hearings conducted by Congressional Subcommittees (Drug and alcohol abuse in the military, 1971; Alleged drug abuse in the armed services, 1971). Most of the early military research focused on our forces in Vietnam where high drug usage was reported by both the popular media and the research community (Postel, 1968; Sapol & Roffman, 1969; Treanor & Skripol, 1970; Zinberg, 1972).

More recently, Fisher (1972) surveyed a representative sample of 36,510 men in the four military services, stratified by geographical location and pay grade. For the Navy sample, he found that 22 percent of the respondents reported having used marijuana during the previous 12 months. Navy figures for other drugs were: 12 percent used psychedelics, 12 percent used stimulants, 7 percent used depressants, and 6 percent used narcotics. Fisher noted wide differences among the services, with Army and Marine Corps personnel reporting nearly twice as much drug involvement as those in the Navy and Air Force. He also found that enlisted men in the lower pay grades had the highest proportion of users although few of these men reported frequent or extensive use.

The most recent Navywide survey data were provided by a Department of Defense study (1975), based on data collected between October 1973 and March 1974. The findings of this investigation closely paralleled those of Fisher. However, apparent trends in drug use were also reported. Marijuana usage appeared to be increasing while rates for other drugs were decreasing slightly. Approximately 35 percent of the Navy respondents in pay grade E-1 to E-5 reported they were currently using marijuana. In summary, most military drug surveys suggest that usage has remained relatively stable over the past 5 years with the possible exception of marijuana, which may be on the increase.

Official Navy statistics support the contention that drug use has stabilized and may even be on the decrease. For example a recent Chief of Naval Operations newsgram (1975) stated that between 1974 and 1975 the number of personnel requesting drug exemption status² was decreasing. Also, decreases in the number of drug users identified through formal disciplinary actions were noted. However, as Helms (1975) has stated, such statistics may be poor indicators of actual drug use because: (1) many drug users have become experts at avoiding detection and therefore will not seek exemption, (2) there may be a general tolerance for drug users among the petty officers and junior officers, and (3) there may be a lack of sufficient investigative expertise available to expose the problem. Whatever the exact Navywide rates may be, the number of personnel involved with drugs appears to be large enough to warrant attention.

Preservice and In-Service Drug Use

A consistent finding of most studies is that military drug users were involved with drugs prior to entering the service (Treanor & Skripol, 1970; Kolb, Nail, & Gunderson, 1975). Fisher (1972) concluded that, "...it appears safe to assume that civilian drug use is one of the most powerful predictors of the use of nontherapeutic drugs in the Services" (p. 54). Supporting evidence for this conclusion was provided in the 1975 report by DoD, which indicated that about 65 percent of military drug users had initiated use before entering the service. Whether or not drug use is more prevalent among young military personnel than their civilian counterparts is difficult to assess. There have been no large-scale concurrent surveys given to representative samples of both populations. A few studies suggest that drug use may be slightly higher in the military (Johnston, 1974; DoD, 1975). However, the issue of whether the military environment itself enhances an individual's likelihood of using drugs has not been resolved.

Background Characteristics of Military Drug Users

Considerable research has focused on demographic and background correlates of drug use in the civilian sector (see, for example, Braucht, Brakarsh, Follingstad, & Berry, 1973). Since the findings from most civilian and military studies are largely parallel, this section addresses characteristics of military drug users.

Rates of overall drug usage among black and white military personnel appear to be similar, although most studies report that blacks have a greater involvement with narcotics than whites (Fisher, 1972; Greden & Morgan, 1972; Callan & Patterson, 1973; Nail, Gunderson, & Arthur, 1974).

²Drug exemption status is the result of a confession of previous drug use and a promise of future abstinence in return for exemption from disciplinary actions and opportunities for rehabilitation programs.

Drug use also has been found to be (1) positively related to cigarette and alcohol use, (2) negatively related to age and education, and (3) less likely among those men who grow up in rural areas as compared to more densely populated regions (Fisher, 1972; Greden & Morgan, 1972; Gilbert & Mazzuchi, 1973; Prendergast & Preble, 1973; Weybrew & Noddin, 1973; U. S. Department of Health, Education, and Welfare, 1974).

Also of significance is the general conclusion that drug use is associated with antisocial and antimilitary behaviors. Plag and Goffman (1972) investigated background characteristics of naval recruits having histories of drug use. They reported that, compared to nondrug users, drug users were less likely to have completed high school and more likely to have been sent to a reform school, jail, or detention home. Among Army personnel, drug use has been found to be associated with traffic citations, being booked in jail, and having a history of disciplinary actions and adjustment difficulties (Greden & Morgan, 1972; Reinstein, 1972). Plag and Goffman (1972) sum up the demographic characteristics of drug users by stating that, "... drug abusers as a group possess personal history characteristics, other than excessive drug usage, which predispose them toward lower rates of military effectiveness than are typical for nondrug users" (p. 358).

Purpose

The purpose of the present effort was to assess the magnitude of and trends in self-reported, preservice drug use among naval recruits during the 1971-1975 time frame. The respondents were asked to report on the 6-month period prior to their entering the service because it was believed that preservice involvement would provide a more valid indication of future drug use than involvement during the very constrained conditions of recruit training. The monitoring of such data should provide valuable information, forecasting increases or decreases in drug problems in the fleet. The relationships between various demographic variables and drug use were also investigated, as well as information concerning usage of the traditional drugs, tobacco and alcohol.

PROCEDURE

Research Design

The design for this study involved the development of an instrument to assess the use of the most common illicit drugs and the administration of this questionnaire to successive samples of recruits on an annual basis. These administrations were conducted under anonymous conditions at the Recruit Training Command, San Diego. Although not controlled for in the strictest sense, cyclical variations in recruit characteristics were considered by administering the questionnaire during the fall of each year.

Drug Experiences Questionnaire (DEQ)

In early 1971, several pilot studies were conducted in preparation for this effort, leading to modifications of the original research design and the survey instrument. For example, it was found that when questions regarding drug use were asked under identified versus anonymous conditions, reported drug usage dropped markedly. Since reporting use of any illegal drugs prior to entering the Navy necessarily implies that the recruit had entered under fraudulent conditions (except for the recruits who had received a drug waiver), such results were not unexpected but nevertheless required verification.

Another decision based on a pilot study was not to include the term "illegal" when questioning drug usage. Since many of the drugs, such as LSD, peyote, and hashish, could not be obtained through a prescription, omission of the word "illegal" could differentially influence only the rates for prescription drugs (i.e., barbiturates, amphetamines, opium, etc.). It was felt that very few 18- to 21-year-old recruits could have legally obtained these drugs and, if they had, such drug use would still be of concern to the Navy. Thus, on the basis of these pilot studies, a Drug Experiences Questionnaire (DEQ) (see Appendix A) was developed for administration under anonymous conditions.

As presently used, the DEQ contains nine items assessing preservice drug involvement. Other items focus on background characteristics, preservice delinquent experiences, and rates of alcohol and tobacco usage. Included among the nine drug items is a question concerning use of ADP and ATP, abbreviations created for fictitious drugs. This item was used to provide an estimate of invalid responses. Respondents who reported using these pseudodrugs were excluded from subsequent analyses.

The DEQ was modified several times over the 5 years included in this study. New items were added while others which didn't seem to provide useful information were dropped. For example, in 1971-1972, there was only one item addressing the consumption of alcohol. By 1973, however,

it was apparent that alcohol usage was becoming the Navy's (and society's) prime drug problem (Cahalan & Cisin, 1973). As a result, four new items on preservice alcohol usage were added to the DEQ. Other minor changes were also made to the demographic items.

Samples

Over the 5-year period, the DEQ was administered to 9426 recruits in their 5th week of basic training during September and October. Table 1 presents the size of the samples for each year. It should be noted that the numbers in the total analyzed column represent the maximum Ns. Because of missing data, the Ns appearing in other tables are usually smaller. From 3 to 6 percent of those tested were eliminated from the analyses because they professed using fictitious drugs. Other researchers have reported similar percentages of subjects admitting involvement with bogus drugs (Petzel, Johnson, & McKillip, 1973). In addition, those recruits who failed to answer the drug questions (approximately 1 percent each year) were not included in the data base. Thus, the analyses were based on annual samples ranging in size from 878 to 4539 recruits, and totaling 9076 for the 5-year period.

Table 1
Sample Size and Questionnaire Length
for 1971 through 1975

Year	Recruits Tested			Questionnaire Items	
	Total <u>N</u>	Total Analyzed	% Fake ^a	Number of Items	Items Common With 1975 Form
1971	4694	4539	3.2	28	15
1972	915	878	4.0	31	19
1973	1218	1148	5.7	32	22
1974	1306	1259	3.7	34	25
1975	1291	1252	3.0	34	--
Total	9426	9076	3.7		15 ^b

^aPercentage of recruits claiming to have used a pseudodrug.

^bNumber of items common to all five forms.

Methodological Issues

Because the use of drugs is illegal, with the possible exception of alcohol, tobacco and prescription drugs, there are certain methodological problems that arise in attempting to assess usage rates. The most commonly employed method is the self-report questionnaire, administered under anonymous conditions, which was the procedure used in the present study. While one may question the validity of self-report data on such a sensitive topic, two recent studies suggest that the anonymous questionnaire may be the best method available for military samples. Brown and Harding (1973) obtained very similar results for first-term enlisted men using either the randomized inquiry technique (Warner, 1965) or a self-report questionnaire. Likewise, Hurst, Cook, and Ramsey (1975) found self-report data to be a better indicator of drug use patterns in the Army than urinalysis methods.

A second issue concerns the difficulty of attempting to assess trends in drug usage. The most common method has been to utilize various independent surveys given to similar populations during different years. Use of such data to assess trends may not be valid. As Berg (1970) has pointed out, interpretations of most drug questionnaires are hampered by geographical selectivity, variability in format of questions, inappropriate sampling techniques, and variations in reliability and validity of instruments. The design employed in the current effort largely controlled for these limitations; that is, a similar instrument was given each year, comparable geographic samples were obtained, and administration conditions were standardized over the 5 years used to assess trends.

Finally, one must consider the time frame within which respondents report their drug usage. According to Parry, Balter, and Cisin (1970), the validity of self-report data on drugs which were used more than 1 year prior to the time of questionnaire administration must be viewed with caution. For this reason, a more conservative 6-month time frame was chosen for the present questionnaire.

Analysis of Data

The reporting of questionnaire-based data typically is limited to descriptive statistics. For the present study, percentages, means, and standard deviations were computed and are presented in the results section. Because of the large amount of data, not all of the items were analyzed.

In order to avoid weighting the overall averages more heavily by the year in which the sample size was very large (e.g., 1971), mean percentages were generated. That is, the sum of the percentages for each of the 5 years was divided by 5. This procedure was utilized whenever overall data are reported in the tables. In those instances in which statistical significance was of concern, z ratios were determined to assess the difference between the two proportions (see Guilford, 1965).

For most analyses, the samples were divided into three groups, based upon their degree of reported involvement with drugs. The following labels were applied to these groups and will be used throughout this report.

1. Nondrug Users--Individuals reporting no drug usage during the prior 6-month period. Note that use of drugs during an earlier time frame would be considered equivalent to nonusage, as defined by this categorization.
2. Marijuana-only Users--Respondents who indicated use of marijuana but no other drug listed in the questionnaire, during the 6-month time frame.
3. Other Drug Users--Individuals reporting using any drug other than or in addition to marijuana. Only a small percentage of the respondents, ranging from 4 to 10 percent of the yearly samples, who used other drugs did not use marijuana.

RESULTS AND DISCUSSION

All subjects were categorized into one of the three previously described groups: (1) Nondrug Users, (2) Marijuana-only Users, and (3) Other Drug Users. Table 2 presents the percentages of recruits, from 1971 to 1975, whose responses to the DEQ resulted in assignment to one of these three classifications.

Table 2
Preservice Drug Use of Recruits by User Category
1971-1975

Year	Total <u>N</u>	Drug Usage Category					
		Nondrug Users		Marijuana-only Users		Other Drug Users	
		<u>N</u>	%	<u>N</u>	%	<u>N</u>	%
1971	4539	2654	58.5	795	17.5	1090	24.0
1972	878	482	54.9	160	18.2	236	26.9
1973	1148	618	53.8	227	19.8	303	26.4
1974	1259	617	49.0	290	23.0	352	28.0
1975	1252	588	47.0	323	25.8	341	27.2
Percent Change 1971-1975		-11.5		+8.3		+3.2	
<u>z</u> ratio		7.19**		6.92**		2.29*	

* $p < .05$

** $p < .001$

General Trends

Two clear trends over the 5 years seem noteworthy. First, the percentage of Nondrug Users decreased every year from a high of 58 percent in 1971 to a low of 47 percent in 1975. Thus, by 1974, slightly more than half of all recruits in the sample admitted having some involvement with drugs. Second, the percentage of Marijuana-only Users increased from a low of about 18 percent in 1971 to nearly 26 percent

in 1975. Comparisons of the differences between the percentages in 1971 and 1975 for both of these groups are significant beyond the .001 level. There is also a significant increase from 1971 to 1975 among those reporting use of other drugs ($z = 2.29, p < .05$), despite the small decrease between 1974 and 1975.

Table 3 presents the yearly data for drug users only, i.e., Nondrug Users were eliminated from the samples before computing the percentages. As can be seen, between 1972 and 1975 there is a consistent upward trend in the percentage of Marijuana-only Users. Nevertheless, the percentage of Other Drug Users exceeded those of Marijuana-only Users in all 5 years.

Table 3
Percentage of Preservice Drug Users Involved
with Marijuana Only or with Other Drugs
1971-1975

Year	Total N for Drug Users	Percentage Within Drug Usage Category	
		Marijuana-only Users	Other Drug Users
1971	1885	42.2	57.8
1972	396	40.4	59.6
1973	530	42.8	57.2
1974	642	45.2	54.8
1975	664	48.6	51.4

Preservice Involvement with Specific Drugs

While the previous section focused on general categories of drug use, it is also important to examine involvement with specific drugs. These data are presented in Table 4. Marijuana was the most commonly used drug over the 5 years, with 51 percent of the recruits in 1975 reporting some use during the previous 6 months. Amphetamines ranked as the second most frequently used drug, although the percentage of marijuana users was approximately 2-1/2 times as great as those reporting use of amphetamines.

Table 4
 Specific Drugs Used by Recruits
 in Previous 6 Months
 1971-1975

Drug	Percentage of Recruits					z ratio for comparison of % change between 1971 and 1975 ^b
	1971 (N=4539)	1972 (N=878)	1973 (N=1148)	1974 (N=1259)	1975 (N=1252)	
Marijuana	39.8	44.2	43.6	49.6	51.0	7.47***
Amphetamines	16.7	18.0	18.3	20.3	19.1	2.00*
Barbiturates	11.9	13.7	14.6	14.8	14.0	2.10*
LSD, STP, DMT	11.7	12.1	10.9	11.4	11.4	.30
Peyote, Psilocygin, Mescaline	15.8	14.6	15.1	14.7	10.6	4.73***
Cocaine	a	a	10.5	11.8	8.9	1.33
Opium, Codeine	a	a	8.6	5.6	5.5	2.58**
Heroin	a	3.2	3.3	2.3	2.1	.50

*p < .05 **p < .01 ***p < .001

^aItems for these drugs did not appear on the questionnaire in this year.

^bComparisons for Cocaine and Opium/Codeine are for 1973-1975; comparisons for heroin are for 1972-1975.

Marijuana had the greatest significant increase between 1971 and 1975 in the percentage of users (p < .001). Likewise, use of both amphetamines and barbiturates showed a significant increase (p < .05) between 1971 and 1975, although there were slight decreases for these drugs between 1974 and 1975. Determination of whether or not the use of these drugs peaked in 1974 awaits further data collections. The drop of 4 percentage points reported in the use of peyote, psilocybin, and mescaline between 1971 and 1975 resulted in a significant overall decrease although very similar statistics were obtained for these drugs during the first 4 years of the study. No changes were noted in the use of LSD, STP, and DMT between 1971 and 1975.

The percentage of opium/codeine users significantly decreased between 1973 and 1975; however, use of the other narcotic drug, heroin, remained relatively stable. Cocaine rates varied over the 3 years in which usage was measured and it appears that the percentage of users is on the decrease.

The data in Table 4 substantiate earlier findings (DoD, 1975; NIDA, 1975) that marijuana use is on the increase while the use of other drugs may be leveling off or even decreasing. One caution that should be noted is that several changes in policies pertaining to the enlistment of those admitting to specific types of preservice drug usage were initiated between 1971 and 1975. Currently, some Navy enlistees are granted drug waivers in exchange for a commitment not to use illicit drugs. The extent to which these waivers resulted in the observed increase in reported preservice drug usage rates between 1971 and 1975 cannot be determined from the present data sets.

Frequency of drug use is also an important consideration. As Kolb, Nail, and Gunderson (1975) noted, personnel who report heavy drug use before entering the service are more likely to continue using drugs and to get into difficulty for drug use early in their naval careers.

The data concerning frequency of drug use are presented in Appendix B. Except for marijuana, the most common usage rate was once or twice in the last 6 months. Thus, the largest proportion of recruits using other drugs can be classified as drug experimenters, a finding commonly reported in the drug literature.

By contrast, marijuana usage shows a different pattern. The data in Table 5 are dichotomized into Marijuana-only and Other Drug Users. As can be seen, a shift in the frequency of marijuana use occurred between 1971 and 1974, with a much larger percentage of recruits reporting heavy use (e.g., over 20 times in the previous 6 months). In 1971, only 13 percent of the respondents reported using marijuana at this high level. By 1974, the rate had increased to over 26 percent. Also, Other Drug Users reported much more use of marijuana than did the Marijuana-only group. Focusing on the use of marijuana independent of these categories of drug use, the above trends emerge even more dramatically. Figure 1 graphically portrays this trend toward increased involvement with marijuana. While all other marijuana usage levels remain fairly stable, the 20-times-or-more level increased significantly from 33 percent in 1971 to over 51 percent in 1975 ($z = 8.45, p < .001$). In summary, not only has the preservice use of marijuana shown consistent increases over the past 5 years, but there also has been an increased intensity of involvement with this drug.

Table 5

Frequency of Marijuana Usage
in Previous 6 Months
1971-1975

Year	Group	Percentage within Frequency Category				
		Never	1 or 2 times	3 to 9 times	10 to 20 times	20+ times
1971	All Recruits (N=4539)	60.2	13.4	8.5	5.0	13.0
	Marijuana-only Users (N=795)	----	57.2	24.2	8.7	9.1
	Other Drug Users (N=1090)	7.0	14.0	17.8	14.3	46.9
1972	All Recruits (N=878)	55.8	11.4	7.1	5.5	20.3
	Marijuana-only Users (N=160)	----	45.0	23.1	11.9	20.0
	Other Drug Users (N=236)	3.8	11.9	10.1	12.3	61.9
1973	All Recruits (N=1148)	56.5	10.0	7.4	5.3	20.8
	Marijuana-only Users (N=227)	----	39.2	26.7	13.7	20.3
	Other Drug Users (N=303)	9.9	8.6	7.9	9.9	63.7
1974	All Recruits (N=1259)	57.4	11.0	7.0	5.2	26.4
	Marijuana-only Users (N=290)	----	40.0	20.3	12.8	26.9
	Other Drug Users (N=352)	4.8	6.5	8.2	8.2	72.2
1975	All Recruits (N=1252)	49.0	12.5	7.2	5.3	26.1
	Marijuana-only Users (N=323)	----	40.2	21.4	12.1	26.3
	Other Drug Users (N=341)	7.3	7.6	6.2	7.9	71.0

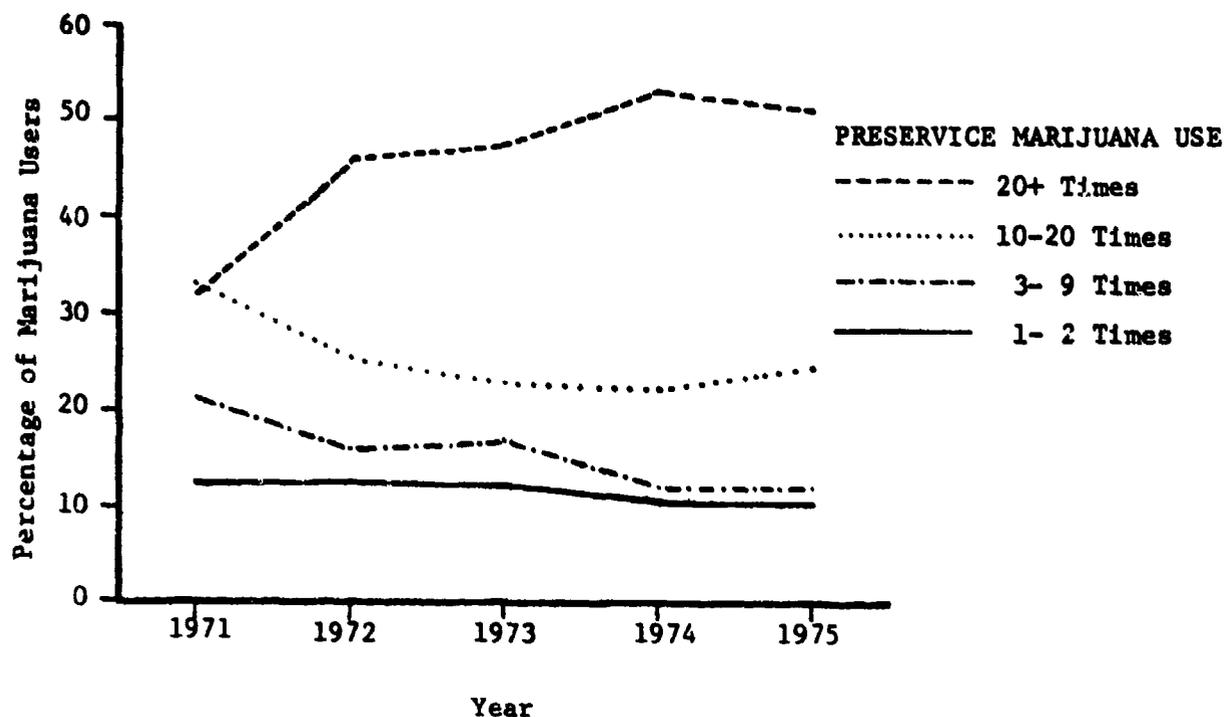


Figure 1. Percentage of preservice marijuana users by amount of use in past 6 months (1971-1975).

Demographic Characteristics

Several background factors, reported in the literature to be related to drug use, were investigated in this study. For example, race, age, performance in high school, and urban-rural background, among other factors, have been noted to be correlates of drug usage. Pertinent results for each of these potential moderators are given in the following sections.

Race

Table 6 provides average percentages of drug use for racial/ethnic affiliation. The major finding of this analysis is that the overall percentage of users of any type of drug is approximately equivalent for the white, black, and chicano subgroups, whereas orientals have a strikingly lower rate of involvement. This finding supports the research by Callan and Patterson (1973) in regard to black and white personnel; however, a considerably lower drug usage rate among Spanish-American (chicano) servicemen was found in their study.

Table 6

Preservice Drug Involvement by Racial/Ethnic
Group Averaged Across 5 Years

Racial/Ethnic Group	% of Sample	Percentage Within Drug Usage Category		
		Nondrug Users	Marijuana-only Users	Other Drug Users
White	78.8	50.5	21.5	28.0
Black	6.8	52.6	21.4	26.0
Mexican American/ Chicano	6.0	52.4	22.1	25.5
Oriental	3.8	82.8	9.5	7.7
Other	4.6	58.9	14.6	26.5

Data by race/ethnic group for each of the 5 years, augmenting Table 6, are presented in Table C-1 in Appendix C. Although the sample sizes in any given year are relatively small for the nonwhite groups, Table C-1 reveals that drug involvement increased for whites, blacks, and chicanos between 1971 and 1975. Interestingly, blacks were the only group to report a consistent decrease in use of drugs other than marijuana. All three groups show increases in the number of Marijuana-only Users.

Age

A summarization of the age and drug use data for 1971 to 1975 is provided in Table 7. Consistent with earlier research (DoD, 1975), younger recruits report the greatest involvement with drugs. Approximately 56 percent of all recruits 17 or under used some drug in the previous 6 months, whereas the corresponding figure for the 21 or older group is only 36 percent. The percentage of users of any drugs is almost equal among 18-, 19-, and 20-year olds. The data show that the higher overall drug usage rate in the 17 or under group vs. 18 to 20-year-olds is largely a result of greater involvement with drugs other than marijuana. The interaction of drug use by age group for all 5 years is shown in Table C-2 in Appendix C. All age groups, with the exception of those 21 or older, increased their overall use of drugs between 1971 and 1975. Among recruits 17 years of age or under, the increase appears to be linked to greater use of marijuana alone, since there was no increase in the proportion of Other Drug Users.

Table 7
 Preservice Drug Involvement by Age Group
 Averaged Across 5 Years

Age Group	% of Sample	Percentage Within Drug Usage Category		
		Nondrug Users	Marijuana-only Users	Other Drug Users
17 or under	14.2	43.7	22.2	34.1
18	42.4	51.9	21.6	26.5
19	22.8	53.5	21.2	25.3
20	10.3	51.0	20.7	28.3
21 or older	10.3	63.7	14.7	21.6

The preceding results raise the question of whether the age of the samples has remained stable over the 5-year period of this research. That is, if the Navy is consistently recruiting younger personnel, this could influence drug usage rates and may explain the increases noted between 1971 and 1975. Investigation of this question revealed that the mean age of recruits was between 18 and 19 years during all 5 years and showed only minor fluctuations.³ Thus, the increases in drug usage noted earlier cannot be explained as a manifestation of decreasing recruit maturity.

School Grades

Table 8 presents the results of the analysis of high school grades for the categories of drug involvement. In general, there appears to be a fairly consistent negative relationship between grades and drug involvement, indicating that as grades get lower, the percentages of both Marijuana-only and Other Drug Users increase.

³However, as shown in Table C-2, the proportion of 17 years or under increased from 6.6% in 1971 to an average of 16% for 1972-1975.

Table 8

Preservice Drug Involvement by Grade Category
in High School Averaged Across 5 Years

Grade ^a Category	% of Sample	Percentage Within Drug Usage Category		
		Nondrug Users	Marijuana-only Users	Other Drug Users
A's and B's	23.6	57.7	19.0	23.3
B's and C's	56.7	52.7	21.2	26.1
C's and D's and below	19.7	46.0	23.0	31.0

^aResponse categories were collapsed from five to three options for presentation of the data in this table.

The data on drug use and school grades for each of the 5 years are shown in Table C-3 of Appendix C. The most notable trend is the annually increasing drug involvement of individuals earning mostly C's and D's and below in high school. In 1971, the rate of those in the lowest grade category using any drugs was 44 percent; by 1975, this figure had increased to 66 percent. For the A's and B's group and the B's and C's group, the increase was considerably smaller. It appears that greater involvement with drugs is permeating all levels of high school achievement but is most rapid among those earning low grades.

Geographical Area

In the 1975 revision of the DEQ, an item was added to tap the geographical area in which the recruit grew up. Fisher (1972) found a larger proportion of drug users among servicemen from the New England states. However, a recent NIDA press release (1975) indicated higher levels of illicit drug use among people living in the western United States. Geographical data for the drug use categories are shown in Table 9.

Table 9

Drug Involvement in Previous 6 Months by Preservice
Geographical Area (1975 only)

Geographical Area ^a	% of Sample (N=1252)	Percentage Within Drug Usage Category		
		Nondrug Users	Marijuana-only Users	Other Drug Users
West	53.3	44.4	27.2	28.4
Northeast	4.2	42.3	32.7	25.0
South	18.4	44.1	23.6	32.3
Midwest	17.1	45.8	28.5	25.7
Other	7.0	80.5	9.2	10.3

^aSee Appendix A, item 4, for specific states listed under each geographical area.

Over 53 percent of the recruits came from the western states, as was expected since the data were gathered at the Recruit Training Center in San Diego, California. Except for the group from "other" (Alaska, Hawaii, the Philippines and other overseas areas), the percentages of personnel in each drug usage category by regions are quite similar. The higher proportion of Nondrug Users in this "other" group is probably due to a large number of Filipino recruits.⁴ The highest percentage of Other Drug Users was found among Southerners.

Urban-Rural Area

The research literature on drug usage suggests greater involvement in urban than in rural areas, possibly because of the increased availability of drugs. Since a large proportion of the enlisted applicant pool lives in urban areas, the Navy necessarily draws heavily upon this population. Thus, drug use by urban-rural area was considered relevant to the study. The overall results of the analysis of the relationship of this variable with drug use are presented in Table 10.

⁴A separate research effort during 1973 involved the administration of the DEQ along with other instruments under identified conditions. At this time it was noted that Filipino recruits report much less drug usage than do other racial or ethnic groups.

Table 10

Preservice Drug Involvement by Size of
Area Averaged Across 5 Years

Area Size	% of Sample	Percentage Within Drug Usage Category		
		Nondrug Users	Marijuana-only Users	Other Drug Users
Ranch, farm	15.9	58.8	18.6	22.6
Town: less than 25,000	28.7	54.9	20.4	24.7
City: 25,000 to 100,000	24.0	51.1	21.4	27.5
City: 100,000 to 500,000	16.4	46.0	23.0	31.0
City: greater than 500,000	15.0	51.2	21.2	27.6

The data show an increasing involvement with drugs as size of place of origin varies from rural areas to cities of 100,000 to 500,000. Large urban areas with populations above 500,000 don't fit this pattern, possibly because of the socioeconomic heterogeneity of metropolitan areas. That is, samples which include recruits from the inner city to the suburbs may present a mixed pattern of drug usage.

The positive relationship between size of area and drug involvement was consistent over the 5 years (see Table C-4 of Appendix C). Likewise, all yearly samples were about equally distributed on the urban-rural variable, with no evidence of changes over the 1971-1975 time frame.

Education Level

The 1975 version of the DEQ included a question on the highest level of education attained. Results of the analysis of the relationship between education and drug use appear in Table 11.

Table 11
 Preservice Drug Involvement by Educational
 Level (1975 only)

Educational Level	% of Sample (N=1247)	Percentage Within Drug Usage Category		
		Nondrug Users	Marijuana-only Users	Other Drug Users
Some High School ^a	11.4	45.1	21.1	33.8
High School Grad	71.8	45.5	28.4	26.1
Some College or Junior College Grad	14.9	53.2	20.4	26.3
College Grad or Higher	1.9	69.6	4.3	26.1

^aFive recruits reported an educational level of 8th grade or less and were not included in this analysis.

Interpretation of the table reveals that as the level of education goes up, the percentage of users of any type of drug decreases. There is little difference between the percentage of Nondrug Users in the "some high school" vs. the high school graduates, but there were considerably more Other Drug Users in the former group. As noted earlier, other researchers (Fisher, 1972; Gilbert and Mazzuchi, 1973) have also reported a relationship between educational level and drug use among military samples. This relationship is undoubtedly confounded by the age factor, since those recruits who have attended college tend to be older than their less educated cohorts.

Preservice Delinquency

Three items on the DEQ tapped various facets of delinquent behavior. The relationship between drug involvement and being booked, shoplifting, and getting traffic tickets is shown in Table 12.

Table 12

Preservice Drug Involvement by Preservice
Delinquency Averaged Across 5 Years

Offense	% of Sample	Percentage Within Drug Usage Category		
		Nondrug Users	Marijuana-only Users	Other Drug Users
Booked:				
Yes	19.8	33.9	20.2	45.9
No	80.2	57.3	21.1	21.6
Shoplifting:				
Yes	59.1	41.8	23.8	34.4
No	40.9	68.3	16.7	15.0
Traffic Tickets^a in Previous 2 Years:				
Don't drive	7.6	63.6	15.8	20.6
None	44.2	57.8	20.1	22.1
1 or 2	34.3	46.2	25.1	28.7
3 to 5	10.6	37.2	21.2	41.6
Over 5	3.3	24.0	25.1	50.9

^aThe data for traffic tickets represents responses from 1972 through 1975 since this question was not included on the 1971 DEQ.

Previous studies have noted that drug users tend to display anti-social behaviors (Plag and Goffman, 1972), a contention supported by the data in Table 12. Recruits who report that they have been booked, have shoplifted, or have had traffic tickets also were more apt to have used drugs than their nondelinquent peers. For example, 46 percent of the recruits who were booked also report use of other drugs, whereas only 22 percent of the nonbooked group use drugs other than marijuana. However, there is very little difference between the proportion of Marijuana-only Users in the booked and nonbooked groups.

It may be hypothesized that the greater enforcement of laws controlling other drugs accounts for the difference between the booked vs. nonbooked groups, particularly since marijuana has been decriminalized in several states. However, the 1975 version of the DEQ included both drug and nondrug reasons for being booked. Ten percent of the Marijuana-only group report being booked solely for a drug offense as opposed to 17 percent of the Other Drug Users. Hence, it appears that the high percentage of Other Drug Users in the booked group is the result of committing offenses that are in addition to direct violations of drug laws.

Thus, the responses to the three items support the contention of Plag and Goffman (1972), cited earlier, that drug users as a group possess characteristics which predispose them toward lower rates of military effectiveness.

The data for each of the three items for all 5 years are presented in Tables C-5 and C-6 of Appendix C. No notable interactions emerge from the analysis. Of interest to the Navy, however, is the consistent increase in the number of recruits who report having been booked. In 1971, the percentage was 15.4 percent but by 1972 the figure increased to 20.5 percent. Increases between 1972 and 1975 are slight but still are climbing.

Legal Drugs

Nicotine and alcohol are among the most frequently used addictive agents in our culture. Brecher (1972), speaking of tobacco and noting its pattern of hourly usage, stated, "No other substance known to man is used with such remarkable frequency. Even caffeine ranks a poor second" (p. 223). Undoubtedly, the popularity of these drugs partially may be attributed to the ease with which they may be used. That is, indulgence causes no social difficulty, unless one is underage or abuses the substances.

Cigarette Smoking

Researchers have reported that drugs and cigarettes frequently are used by the same individuals. For this reason, an item was included in the DEQ to tap smoking behavior. Average percentages of those choosing each response option to this item are given in Table 13.

Table 13
Preservice Drug Involvement by Cigarette
Smoking Averaged Across 5 Years

Weekly Cigarette Usage	% of Sample	Percentage Within Drug Usage Category		
		Nondrug Users	Marijuana-only Users	Other Drug Users
None	41.2	69.2	17.1	13.7
Less than 1 pack	7.9	56.4	21.6	22.0
1 to 3 packs	15.6	47.6	22.0	30.4
4 to 7 packs	24.1	35.9	26.1	38.0
8 or more packs	11.2	31.6	21.0	47.4

A strong association between cigarette smoking and drug involvement is evident from the data. The largest percentage of Nondrug Users (69.2 percent) is among those recruits who do not smoke cigarettes. Conversely, the greater the number of packs of cigarettes a recruit smokes per week, the greater the probability that he also reports using drugs. Cigarette usage appears to be most strongly linked to using drugs other than marijuana. For example, of those recruits who report smoking less than one pack a week, 21.6 percent are classified as Marijuana-only Users and 22 percent as Other Drug Users. However, for the most extreme group, eight or more packs per week, the parallel figures are 21 percent for Marijuana-only Users and 47.4 percent for Other Drug Users.

Because cigarette usage has been linked to subsequent health problems, it is also of interest to determine if there are any trends in smoking behavior between 1971 and 1975. Results of this analysis are shown in Table 14. There is no evidence of a systematic change in cigarette usage. Indeed, there are almost identical percentages (44 percent) of nonsmokers in 1971 and 1975 with a slight increase in usage in the intervening years. Whether the possible decreasing trend in reported smoking between 1974 and 1975 will continue remains to be determined by future data. It should be noted that other researchers (NIDA, 1975) have reported that cigarette usage may be on the increase among youth aged 12 to 17. The augmented data for cigarette usage by drug category are presented in Table D-1 of Appendix D.

Table 14
Preservice Rates of Cigarette Usage
1971-1975

Amount of Usage ^a Per Week	Percentage of Recruits				
	1971 (N=4538)	1972 (N=878)	1973 (N=1145)	1974 (N=1259)	1975 (N=1248)
None	43.4	38.9	40.1	39.4	44.2
Less than 1 pack to 3 packs	21.8	26.0	22.4	27.6	19.8
4 or more packs	34.8	35.1	37.5	33.0	36.0

^aResponse categories were collapsed from 5 to 3 categories for presentation of the data in this table.

Alcohol

The average percentages for drug involvement by alcohol consumption are presented in Table 15. Although the response categories are not large enough to examine heavy alcohol consumption, the data in the table, nevertheless, reveal a strong relationship between alcohol intake and drug use. Among those recruits reporting use of alcohol over 20 times in the last 6 months (about once a week), the percentage of Marijuana-only Users is approximately 26 percent and of Other Drug Users, almost twice that level (46 percent). Among nondrinkers, the comparable percentages for the two drug usage categories are only 10 and 8 percent respectively. However, use of drugs is a better predictor of alcohol use than vice versa. For example, in 1975, of those recruits who reported any type of drug use, 94 percent also indicated some consumption of alcohol in the previous 6 months. On the other hand, of those recruits who drank any alcohol, only 59 percent reported use of some type of drugs. See Table D-2 in Appendix D for the 1971 and 1975 alcohol-by-drug category data.

Table 15

Preservice Drug Involvement by Alcohol Consumption Averaged Across 5 Years

Amount Use in Last 6 Months	% of Sample	Percentage Within Drug Usage Category		
		Nondrug Users	Marijuana-only Users	Other Drug Users
Never or not in last 6 months	18.6	82.6	9.8	7.6
1 or 2 times	11.3	77.5	11.8	10.7
3 to 9 times	15.1	66.0	20.2	13.8
10 to 20 times	13.8	51.6	29.0	19.4
Over 20 times	41.2	27.8	25.8	46.4

There can be little doubt that alcohol usage has a far more significant impact on society and the military than drug usage. Also, recent research indicates that alcohol usage is on the increase among the nations' youth (U. S. Department of Health, Education, and Welfare, 1974). For these reasons, trends in alcohol usage among survey respondents are of interest. While alcohol consumption, per se, is only one of many indicators of alcohol abuse or problem drinking (Cahalan and Cisin, 1973), upward changes in recruit drinking patterns may be potent indicators of future problems within the fleet.

The data on preservice consumption rates by type of alcohol are presented in Table 16 and show no consistent trends. Overall, alcohol consumption shows a decrease between 1973 and 1974 and an increase between 1974 and 1975. Among the specific types of alcohol, beer is the most popular alcoholic beverage, probably because of its overall availability and its legality for 18-year-olds in more than half the states.

Another question in the DEQ assesses incidence of being drunk in the previous year. The results for this item are shown in Table 17. As can be seen, the data for this item largely mirror the consumption figures in Table 16. There was a decrease between 1973 and 1974 in the number of times recruits reported being drunk in the previous year, and a slight increase between 1974 and 1975.

Table 16
Preservice Consumption Rates by Type of Alcohol
1973-1975

Type of Alcohol	Amount of Usage ^a in Previous Year	N =	Percentage of Recruits		
			1973	1974	1975
			1145	1235	1247
Beer	Never or seldom		25.1	25.5	20.1
	1 to 7 cans per week		49.1	43.6	49.4
	2 to 4 or more cans per day		25.8	30.9	30.5
Wine	Never or seldom		61.9	68.5	66.2
	1 to 7 glasses per week		33.2	27.0	31.3
	2 to 4 or more glasses per day		4.9	4.5	2.5
Hard Liquor	Never or seldom		48.6	51.9	46.0
	1 to 7 drinks per week		47.0	42.7	50.4
	2 to 4 or more drinks per day		4.4	5.4	3.6

^aResponse categories were collapsed from 5 to 3 options for presentation of the data in this table.

Table 17
Incidence of Drunkenness in Previous Year
1973-1975

Times Drunk in Previous Years	N =	Percentage of Recruits		
		1973	1974	1975
Never drank		7.8	11.4	7.2
Drank but not enough to get drunk		19.6	24.8	21.4
A few times		28.2	25.9	26.2
Once or twice a month		20.0	16.7	22.5
Once a week or more often		24.4	21.2	22.7

Additional Items

Because of the extensive amount of data presented in this report, results from 10 questions (items 21 to 26 and 31 to 34) are not discussed. Many of these items were administered only in 1975. Data from these items are available upon request.

CONCLUSIONS

Several cautionary statements need to be mentioned before drawing conclusions from this study. For example, the data were gathered at the Recruit Training Command located in San Diego. Also, during recent years, but not at the beginning of the study, stringent restrictions on military travel have been in effect. The result of such restrictions is that enlistees from the various states are sent to the nearest training center in California, Illinois or Florida. If, as some of the research literature indicates, there are geographic differences in patterns of drug usage, the samples during the latter years of the study would be biased with a disproportionate number of young men from the western states. Unfortunately, comparisons among the yearly samples for area of origin cannot be made because these data are available for 1975 only.

A second consideration is the possible change in quality of recruit input during this 5-year time frame. Between 1970 and 1975, the American economy experienced a major recession, resulting in high unemployment. In addition, the All Volunteer Force was initiated during this time period. Both of these events may have affected the demographic and aptitude makeup of the applicant pool.

A third factor which should be brought to the reader's attention is Navywide policy changes. In 1970 the military services were attempting to screen out young men having any experience with illicit drugs and to discharge active duty personnel who were found to be using drugs. During the subsequent 4 years, there have been changes in policies concerning drugs. Today, young men who admit to previous drug use can enlist under a drug waiver and the drug exemption program is in effect for active duty personnel. Therefore, there is no way of knowing how much of the observed preservice increase in marijuana usage reflects increased use among the applicant pool or results from changing enlistment policies.

Despite these cautionary statements, the findings represent an assessment of the degree of preservice drug involvement of recruits in training at San Diego during these 5 years. It matters little that Navy policy, the economy, and the law were in a state of flux during this period and had an unknown effect on these statistics. Each respondent to the DEQ had already entered the Navy. If preservice drug usage is to be viewed as an indicator of future drug use problems in the fleet, all personnel admitting to such use attest to the extent of the problem, regardless of the factors that led to their enlistment.

The most significant finding of this study is that marijuana use is steadily increasing in the male population joining the Navy--not only in terms of the number of people involved but also in frequency of usage. By 1975, slightly over half of all recruits had used marijuana in the previous 6 months and the most common pattern among users was over 20 times.

While these findings refer to preservice experiences, the implication is clear. The typical recruit of 1975 had used marijuana and, if previous research is to be believed, will continue to use marijuana while in the Navy.

The trend for other drugs is less clear. The data indicate a significant increase in usage of amphetamines and barbiturates, a significant decrease in peyote/psilocybin/mescaline and opium/codeine and no change in heroin, cocaine and LSD/STP/DMT. The greater number of experimental Users (once or twice in 6 months) appears to account for the increase noted for barbiturates, whereas the higher rate for amphetamines is due to a trend toward more frequent usage. However, overall, most Other Drug users can be considered to be experimenters.

Analysis of the demographic characteristics support the findings of previous research that the younger, less educated recruit who comes from a large city and has a history of minor brushes with the law is more apt to use drugs. A conclusion unique to this study, however, is that pre-service use of other drugs is declining among blacks and "others" to the point where it is now below the rising rate for whites and chicanos.

RECOMMENDATIONS

By focusing on the preservice experiences of recruits, this study represented the first step toward defining drug abuse in the Navy. It is strongly recommended that the second step be taken. The extent of drug use aboard ships, and among more senior personnel needs to be determined before the magnitude of the problem and the effectiveness of current directives and programs to curtail it can be evaluated.

The Navy is expending considerable resources in drug prevention education. Whether this effort is having the desired impact on the target population needs to be investigated. In addition, the question of the efficacy of the drug waiver policy should be answered. Although some of the marijuana users in this study undoubtedly signed drug rejection statements in order to enlist in the Navy, it is hard to believe that all of the self-reported drug users in the 1975 sample signed such statements.

Thus, an expanded study of drug abuse in the Navy is recommended to address the following questions:

1. How does the performance of nondrug users compare with that of marijuana or other drug users?
2. What is the impact of leadership/organizational practices on drug use rates?
3. What percentage of active duty personnel use marijuana or other drugs?
4. What proportion of current drug users initiated such usage prior to entering the Navy but did not enlist with a drug waiver?
5. What percentage of enlistees who sign drug rejection statements abstain from using drugs?

Only by answering such questions can the Navy realistically evaluate the course it has set on this issue as well as develop new initiatives to more effectively address drug abuse in the Navy.

REFERENCES

- Alleged drug abuse in the armed services. Hearing before the Special Subcommittee on Alleged Drug Abuse in the Armed Services of the Committee on Armed Services, House of Representatives. Washington, D.C.: U.S. Government Printing Office, 1971.
- Berg, D. F. Illicit use of dangerous drugs in the United states: A Compilation of studies, surveys, and polls. Washington, D.C.: Drug Sciences Division, Bureau of Narcotics and Dangerous Drugs, United States Department of Justice, 1970.
- Blum, R. H., & Associates. Students and drugs. San Francisco: Jossey-Bass, 1970.
- Braucht, G. N., Brakarsh, D., Follingstad, D., & Berry, K. L. Deviant drug use in adolescence: A review of psychosocial correlates. Psychological Bulletin, 1973, 79, 92-106.
- Brecher, E. M. Licit and illicit drugs. New York: Consumers Union, 1972.
- Brown, G. H., & Harding, F. D. A comparison of methods of studying illicit drug usage. Alexandria: Human Resources Research Organization, April 1973. (TR 73-9)
- Cahalan, D., & Cisin, I. H. Report of a pilot study of the attitudes and behavior of naval personnel concerning alcohol and problem drinking. Washington, D.C.: Bureau of Social Science Research, Inc., February 1973.
- Callan, J. P., & Patterson, C. D. Patterns of drug abuse among military inductees. American Journal of Psychiatry, 1973, 130 (3), 260-264.
- Chief of Naval Operations. Weekly newsgram (10-75) from CHINFO. Washington, D.C., March 1975.
- DeFleur, L. B., & Garrett, G. R. Dimensions of marijuana usage in a land-grant university. Journal of Counseling Psychology, 1970, 17, 468-476.
- Department of Defense. A study of department of defense drug abuse prevention and control programs. Washington, D. C., 1975.
- Drug and alcohol abuse in the military. Hearing before the Special Subcommittee on Alcoholism and Narcotics of the Department Committee on Labor and Public Welfare, United States Senate. Washington, D.C.: U.S. Government Printing Office, 1971.
- Fisher, A. H., Jr. Preliminary finding from the 1971 DoD Survey of drug use. Alexandria: Human Resources Research Organization, March 1972. (TR 72-8)

- Gilbert, A. C. F., & Mazzuchi, J. F. A multivariate comparison of drug users and non-users. Washington, D.C.: Naval Personnel Research and Development Laboratory, April 1973. (WTR 73-22)
- Greden, J. F., & Morgan, D. W. Patterns of drug use and attitudes toward treatment in a military population. Archives of General Psychiatry, 1972, 26, 113-117.
- Guilford, J. P. Fundamental statistics in psychology and education. New York: McGraw-Hill, 1965.
- Helms, R. E. Shipboard drug abuse. United States Naval Institute, 1975, 101, 41-45.
- Hurst, P., Cook, R. F., & Ramsay, D. A. Assessing the prevalence of illicit drug use in the Army. Arlington: U.S. Army Research Institute, July 1975. (Technical Paper 264)
- Johnston, L. Drug use during and after high school. Results of a national longitudinal study. American Journal of Public Health, 1974, 64, (supplement), 29-37.
- Josephson, E. Adolescent marijuana use. 1971-1972: Findings from two national surveys. Addictive Diseases, 1:1, 1974.
- Kolb, D., Nail, R. L., & Gunderson, E. K. E. Pre-service drug abuse as a predictor of in-service drug abuse and military performance. Military Medicine, 1975, 140 (2), 104-107.
- Nail, R. L., Gunderson, E. K. E., & Arthur, R. J. Black-white differences in social background and military drug abuse patterns. American Journal of Psychiatry, 1974, 131 (10), 1097-1102.
- National Commission on Marijuana and Drug Abuse. Drug use in America: Problems in perspective. Washington, D.C.: U.S. Government Printing Office, 1973.
- National Institute on Drug Abuse (NIDA) Press Release. Washington, D.C.: U.S. Department of Health, Education, and Welfare, October 1, 1975.
- Navy Military Personnel Statistics. Washington, D.C.: Bureau of Naval Personnel, NAVPERS 15658(A), June 1975.
- Parry, H. J., Balter, M. B., & Cisin, I. H. Primary levels of under-reporting psychotropic drug use. Public Opinion Quarterly, 1970, 34, 582-592.
- Pearlman, S. Drug use and experience in an urban college population. American Journal of Orthopsychiatry, 1968, 37, 297-299.

- Petzel, T. P., Johnson, J. E., & McKillip, J. Response bias in drug surveys. Journal of Consulting and Clinical Psychology, 1973, 40 (3), 437-439.
- Plag, J. A., & Goffman, J. M. Characteristics of naval recruits with histories of drug abuse. Military Medicine, 1972, 138, 354-359.
- Postel, W. B. Marijuana use in Vietnam: A preliminary report. USARV Medical Bulletin, 1968, 56-59.
- Prendergast, T. J., & Preble, M. R. Drug use and its relation to alcohol and cigarette consumption in the military community of West Germany. International Journal of the Addictions, 1973, 10 (5), 741-754.
- Reinstein, M. Drugs and the military physician. Military Medicine, 1972, 137 (3), 122-125.
- San Mateo County, California. Student drug use surveys. San Mateo, CA: County Department of Public Health and Welfare, 1974.
- Sapol, E., & Roffman, R. A. Marijuana in Vietnam. Journal of the American Pharmacological Association, 1969, 9, 615-619.
- Treanor, J. J., & Skripol, J. N. Marijuana in a tactical unit in Vietnam. USARV Medical Bulletin, 1970, 29-37.
- U.S. Department of Health, Education, and Welfare. Second special report to the U.S. Congress on alcohol and health from the Secretary of Health, Education, and Welfare. Washington, D.C.: U.S. Government Printing Office, Preprint Edition, June 1974.
- U.S. Department of Health, Education, and Welfare. Marijuana and health. Fifth annual report to the U.S. Congress from the Secretary of Health, Education, and Welfare. Washington, D.C.: U. S. Government Printing Office, 1976.
- Warner, S. L. Randomized response: A survey technique for eliminating evasive answer bias. Journal of the American Statistical Association, 1965, 60, 63-69.
- Weybrew, B. B., & Noddin, E. M. Factors related to drug abuse in the submarine service. Groton: Naval Submarine Medical Research Laboratory, September 1973.
- Zinberg, N. E. Heroin use in Vietnam and the United States. Archives of General Psychiatry, 1972, 26, 486-488.

APPENDIX A
DRUG EXPERIENCES QUESTIONNAIRE

BUPERS 5314-38
5314-40

DRUG EXPERIENCES QUESTIONNAIRE

PRIVACY ACT STATEMENT

Under the authority of 57SC301, as reflected in OPNAV Notice 5450 of 17 April 1975, information is requested regarding your experiences and feelings about using drugs. The information will be used for research purposes only. In no case will an individual's response be used in making decisions affecting him personally. You are not required to provide this information; your participation is voluntary.

DIRECTIONS

Place your answers to this questionnaire in Section A of the answer sheet. Please do not write on this form. There are no right or wrong answers. Answer each question honestly.

THIS QUESTIONNAIRE IS ANONYMOUS. THERE IS NO WAY THAT YOU CAN BE IDENTIFIED BECAUSE YOU ARE NOT TO PUT YOUR NAME OR SOCIAL SECURITY NUMBER ON EITHER THE ANSWER SHEET OR THIS BOOKLET.

DRUG EXPERIENCES QUESTIONNAIRE
Form P-6

BUPERS 5314-40

1. To which of these groups do you belong?
 - A. White
 - B. Black
 - C. Chicano or Mexican-American
 - D. Oriental
 - E. Other
 2. How old are you?
 - A. 17 or under
 - B. 18
 - C. 19
 - D. 20
 - E. 21 or older
 3. What was your average grade in school?
 - A. Straight A's or mostly A's
 - B. A's and B's
 - C. B's and C's
 - D. C's and D's
 - E. D's or below
 4. While you were growing up, what part of the U.S. did you primarily live in?
 - A. Washington, Oregon, California, Idaho, Nevada, Montana, Wyoming, Utah, Arizona, Colorado, New Mexico
 - B. Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Delaware
 - C. Texas, Oklahoma, Arkansas, Louisiana, Mississippi, Alabama, Kentucky, Tennessee, Florida, Georgia, N. Carolina, S. Carolina, Virginia, W. Virginia, Maryland
 - D. N. Dakota, S. Dakota, Nebraska, Kansas, Minnesota, Iowa, Missouri, Wisconsin, Illinois, Indiana, Ohio, Michigan
 - E. None of the above
 5. What kind of area did you live in just before you entered the service?
 - A. Ranch, farm, or in the country
 - B. Town or small city, less than 25,000
 - C. City of 25,000 to 100,000 people
 - D. City of 100,000 to 500,000 people
 - E. City of over 500,000 people
 6. Have you ever shoplifted or stolen something from a store?
 - A. No
 - B. Yes
 7. Which of the following best describes your educational level?
 - A. 8th grade or lower
 - B. Some high school
 - C. High school graduate
 - D. Some college or junior college graduate
 - E. College graduate or higher
 8. Have you ever been booked in a police station or jail?
 - A. No
 - B. Yes, but only for a drug related offense
 - C. Yes, but only for a drinking offense
 - D. Yes, but not for drugs or drinking
 - E. Yes, for more than one of the above reasons
 9. How many driving tickets (moving violations) have you received in the past two years?
 - A. Don't drive
 - B. None
 - C. 1 or 2
 - D. 3 to 5
 - E. Over 5
 10. How many packs of cigarettes do you usually smoke in a week?
 - A. None--I don't smoke
 - B. Less than a pack
 - C. 1 to 3 packs
 - D. 4 to 7 packs
 - E. 8 or more packs
- The following items are about using drugs during the past six months. For each item, fill in the appropriate circle using this code:
- A - Never used or not used in last 6 months
 - B - 1 or 2 times in last 6 months
 - C - 3 to 9 times in last 6 months
 - D - 10 to 20 times in last 6 months
 - E - Over 20 times in last 6 months
11. Marijuana or hashish
 12. Opium, codeine
 13. LSD, STP, DMT
 14. Barbiturates, "downers," "reds"
 15. ADP, ATP
 16. Amphetamines, pep pills, "uppers," bennies
 17. Peyote, psilocybin, mescaline
 18. Alcohol--beer, wine, hard liquors
 19. Heroin
 20. Cocaine

21. Have you ever used amphetamines (uppers), barbituates (downers), or opium/codeine on a doctor's prescription or orders?
- A. No
 - B. Yes, in the last six months
 - C. Yes, but not in the last six months
 - D. I don't remember
22. Do you think that the use of marijuana should be legalized?
- A. Yes
 - B. No
23. I feel that the present penalties against the personal use of marijuana should:
- A. be made more strict.
 - B. not be changed.
 - C. be the same as a minor driving ticket.
 - D. be eliminated for private use only.
 - E. be eliminated entirely.
24. How many persons do you know here in boot camp who are using marijuana?
- A. None that I know of
 - B. I've heard some are but don't know for sure
 - C. 1 or 2
 - D. 3 to 5
 - E. Over 5
25. How many persons do you know here in boot camp who would sell you marijuana?
- A. None that I know of
 - B. 1 or 2
 - C. 3 to 5
 - D. Over 5
26. How many persons do you know here in boot camp who are using nonprescription drugs other than marijuana?
- A. None that I know of
 - B. I've heard some are but don't know for sure
 - C. 1 or 2
 - D. 3 to 5
 - E. Over 5
27. In the year before you joined the Navy how much beer did you usually drink?
- A. I never or seldom drank beer
 - B. One or less cans per week
 - C. Two to seven cans per week
 - D. Two to three cans per day
 - E. Four or more cans per day
28. In the year before you joined the Navy how much wine did you drink?
- A. I never or very seldom drank wine
 - B. One or less glasses per week
 - C. Two to seven glasses per week
 - D. Two to three glasses per day
 - E. Four or more glasses per day
29. In the year before you joined the Navy how many mixed/straight drinks did you drink (made with hard liquor)?
- A. I never or very seldom drink hard liquor
 - B. One or less drinks per week
 - C. Two or seven drinks per week
 - D. Two or three drinks per day
 - E. Four or more drinks per day
30. In the past year how many times did you get drunk?
- A. I never drank alcohol
 - B. I drank a few times but not enough to get drunk
 - C. I got drunk a few times over the year
 - D. I got drunk once or twice a month
 - E. I got drunk once a week or more often
31. Have you ever been drunk while at school or on a job?
- A. No
 - B. Yes
32. Have you ever been high (from drugs) while at school or on a job?
- A. No
 - B. Yes
33. Do you need help with a drinking problem?
- A. No
 - B. Yes, but I have not tried to get help
 - C. Yes, and I have tried to get help
34. Do you need help with a drug problem?
- A. No
 - B. Yes, but I have not tried to get help
 - C. Yes, and I have tried to get help

APPENDIX B

**FREQUENCY OF PRESERVICE USE OF SPECIFIC DRUGS
DURING TIME PERIOD 1971-1975**

Frequency of Use for Specific
Drugs Used in Previous 6 Months
1971-1975

Drug	Year	Percentage Within Frequency Category					Any Use
		Never	1 or 2 times	3 to 9 times	10 to 20 times	20+ times	
Marijuana	1971	60.2	13.4	8.5	5.0	13.0	39.8
	1972	55.8	11.4	7.1	5.5	20.3	44.2
	1973	56.4	10.0	7.4	5.3	20.8	43.6
	1974	50.4	11.0	7.0	5.2	26.4	49.6
	1975	49.0	12.5	7.2	5.3	26.1	51.0
Amphetamines	1971	83.3	6.9	4.1	2.6	3.2	16.7
	1972	82.0	6.5	4.7	2.9	4.0	18.0
	1973	81.7	7.2	5.2	1.9	3.9	18.3
	1974	79.7	7.6	4.4	4.4	3.9	20.3
	1975	80.9	6.7	5.8	3.1	3.5	19.1
Barbiturates	1971	88.1	6.1	3.1	1.3	1.4	11.9
	1972	86.3	6.5	3.6	1.5	2.1	13.7
	1973	85.4	7.2	3.8	2.0	1.7	14.6
	1974	85.2	5.9	5.0	1.7	2.2	14.8
	1975	86.0	7.1	3.9	1.6	1.4	14.0
LSD, STP, DMT	1971	88.3	5.8	3.3	1.5	1.1	11.7
	1972	87.9	5.7	4.7	1.1	.6	12.1
	1973	89.1	4.7	3.4	1.6	1.2	10.9
	1974	88.6	5.6	2.7	1.7	1.4	11.4
	1975	88.6	6.4	3.5	.9	.6	11.4

Frequency of Use for Specific
Drugs Used in Previous 6 Months
1971-1975 (cont.)

Drug	Year	Percentage Within Frequency Category					Any Use
		Never	1 or 2 times	3 to 9 times	10 to 20 times	20+ times	
Peyote, Mescaline, Psilocybin	1971	84.2	7.0	5.0	2.2	1.7	15.8
	1972	85.4	7.5	3.3	2.1	1.7	14.6
	1973	84.9	6.6	4.7	2.0	1.7	15.1
	1974	85.3	7.2	3.9	1.9	1.8	14.7
	1975	89.4	5.2	3.2	1.1	1.1	10.6
Cocaine	1971 ^a	----	---	---	---	---	----
	1972 ^a	----	---	---	---	---	----
	1973	89.5	5.6	2.4	1.4	1.1	10.5
	1974	88.2	7.6	2.7	.5	1.0	11.8
	1975	91.1	4.7	2.5	1.2	.5	8.9
Opium, Codeine	1971 ^a	----	---	---	---	---	----
	1972 ^a	----	---	---	---	---	----
	1973	91.4	5.8	1.2	.8	.9	8.6
	1974	94.4	3.7	1.1	.4	.3	5.6
	1975	94.5	3.4	1.2	.6	.3	5.5
Heroin	1971 ^a	----	---	---	---	---	----
	1972	96.7	1.5	1.4	.3	.1	3.3
	1973	96.7	1.4	.8	.5	.6	3.3
	1974	97.7	1.0	.4	.3	.5	2.3
	1975	97.9	1.3	.6	.1	.2	2.1

^aItems on the use of this drug did not appear on the DEQ in this year.

APPENDIX C

DRUG USAGE CATEGORIES BY DEMOGRAPHIC
AND BACKGROUND QUESTIONS 1971-1975

Table C-1
 Preservice Drug Involvement by Racial/Ethnic Group
 1971 - 1975

Racial/Ethnic Group	Drug Use Category	Percentage				
		1971	1972	1973	1974	1975
WHITE	Nondrug Users	58.5	54.1	51.6	44.2	44.0
	Marijuana-only Users	17.7	19.6	20.8	22.7	26.7
	Other Drug Users	<u>23.8</u>	<u>26.3</u>	<u>27.6</u>	<u>33.1</u>	<u>29.3</u>
	<u>N</u>	3976	714	888	876	976
	<u>% of Yearly Sample</u>	<u>19.2</u>	<u>81.6</u>	<u>77.6</u>	<u>69.2</u>	<u>78.1</u>
BLACK	Nondrug Users	54.7	51.5	61.6	44.6	50.6
	Marijuana-only Users	16.3	19.7	9.6	32.7	28.7
	Other Drug Users	<u>29.0</u>	<u>28.8</u>	<u>28.8</u>	<u>22.7</u>	<u>20.7</u>
	<u>N</u>	190	66	73	110	87
	<u>% of Yearly Sample</u>	<u>2.5</u>	<u>7.5</u>	<u>6.4</u>	<u>8.7</u>	<u>7.0</u>
CHICANO	Nondrug Users	55.6	61.5	54.3	42.7	48.1
	Marijuana-only Users	17.8	11.5	22.9	36.0	22.1
	Other Drug Users	<u>26.7</u>	<u>26.9</u>	<u>22.9</u>	<u>21.4</u>	<u>29.9</u>
	<u>N</u>	180	52	70	89	77
	<u>% of Yearly Sample</u>	<u>4.0</u>	<u>5.9</u>	<u>6.1</u>	<u>7.0</u>	<u>6.2</u>
ORIENTAL	Nondrug Users	74.2	87.5	80.5	87.4	84.5
	Marijuana-only Users	13.6	0.0	14.6	10.5	8.6
	Other Drug Users	<u>12.1</u>	<u>12.5</u>	<u>4.9</u>	<u>2.1</u>	<u>6.9</u>
	<u>N</u>	66	16	41	95	58
	<u>% of Yearly Sample</u>	<u>1.5</u>	<u>1.8</u>	<u>3.6</u>	<u>7.5</u>	<u>4.6</u>
OTHER	Nondrug Users	56.1	55.6	57.5	68.6	56.9
	Marijuana-only Users	15.5	3.7	16.4	14.0	23.5
	Other Drug Users	<u>28.5</u>	<u>40.7</u>	<u>26.0</u>	<u>17.4</u>	<u>19.6</u>
	<u>N</u>	123	27	73	86	51
	<u>% of Yearly Sample</u>	<u>2.8</u>	<u>3.1</u>	<u>6.4</u>	<u>7.5</u>	<u>4.1</u>
<u>TOTAL N FOR YEAR</u>		4535	875	1145	1256	1249

Table C-2
 Preservice Drug Involvement by Age Group
 1971 - 1975

Age Group	Drug Use Category	Percentage				
		1971	1972	1973	1974	1975
17 or under	Nondrug Users	56.4	46.0	43.9	35.9	36.4
	Marijuana-only Users	10.1	21.0	20.3	29.8	29.7
	Other Drug Users	<u>33.6</u>	<u>33.1</u>	<u>35.9</u>	<u>34.3</u>	<u>33.9</u>
	<u>N</u>	298	148	212	198	165
	<u>% of Yearly Sample</u>	6.6	16.9	18.5	15.7	13.2
18	Nondrug Users	58.9	57.7	56.9	48.4	45.5
	Marijuana-only Users	18.0	17.5	19.9	21.2	29.7
	Other Drug Users	<u>23.1</u>	<u>24.9</u>	<u>23.2</u>	<u>30.4</u>	<u>24.8</u>
	<u>N</u>	1850	366	522	490	572
	<u>% of Yearly Sample</u>	40.8	41.7	45.5	38.9	45.8
19	Nondrug Users	57.7	53.6	56.4	43.9	48.1
	Marijuana-only Users	18.2	19.3	20.6	29.1	20.6
	Other Drug Users	<u>24.1</u>	<u>27.1</u>	<u>23.1</u>	<u>27.1</u>	<u>31.3</u>
	<u>N</u>	1411	207	243	244	233
	<u>% of Yearly Sample</u>	31.1	23.6	21.2	19.4	18.6
20	Nondrug Users	54.8	61.4	46.8	50.4	41.7
	Marijuana-only Users	19.6	14.8	21.3	23.7	24.3
	Other Drug Users	<u>25.6</u>	<u>23.9</u>	<u>31.9</u>	<u>25.9</u>	<u>33.9</u>
	<u>N</u>	591	88	94	135	115
	<u>% of Yearly Sample</u>	13.0	10.0	8.2	10.7	9.2
21 or older	Nondrug Users	66.1	54.4	62.7	69.8	65.5
	Marijuana-only Users	15.4	17.7	12.0	12.5	15.8
	Other Drug Users	<u>18.5</u>	<u>27.9</u>	<u>25.3</u>	<u>17.7</u>	<u>18.8</u>
	<u>N</u>	389	68	75	192	165
	<u>% of Yearly Sample</u>	8.6	7.8	6.5	15.3	13.2
<u>TOTAL N FOR YEAR</u>		4539	877	1146	1259	1250

Table C-3

Preservice Drug Involvement by Grade Category in High School
1971-1975

Grade Category	Drug Use Category	Percentage				
		1971	1972	1973	1974	1975
A's and B's	Nondrug Users	59.1	59.2	57.1	60.3	52.9
	Marijuana-only Users	18.1	16.7	16.6	21.0	22.3
	Other Drug Users	<u>22.8</u>	<u>24.1</u>	<u>26.4</u>	<u>18.6</u>	<u>24.8</u>
	<u>N</u>	789	174	296	290	367
	<u>% of Yearly Sample</u>	17.4	19.9	25.8	23.1	29.3
B's and C's	Nondrug Users	59.5	54.2	54.6	47.4	47.7
	Marijuana-only Users	17.6	19.7	20.0	23.8	25.0
	Other Drug Users	<u>23.0</u>	<u>26.2</u>	<u>25.4</u>	<u>28.8</u>	<u>27.3</u>
	<u>N</u>	2540	478	615	713	688
	<u>% of Yearly Sample</u>	56.0	54.6	53.6	56.8	55.0
C's and D's and below	Nondrug Users	56.0	53.1	47.5	39.9	33.7
	Marijuana-only Users	17.1	16.5	23.3	23.3	34.7
	Other Drug Users	<u>26.9</u>	<u>30.4</u>	<u>29.2</u>	<u>36.8</u>	<u>31.6</u>
	<u>N</u>	1207	224	236	253	196
	<u>% of Yearly Sample</u>	26.6	25.6	20.6	20.1	15.7
	<u>TOTAL N FOR YEAR</u>	4536	876	1147	1256	1251

Table C-4
 Preservice Drug Involvement by Size of Area
 1971 - 1975

Size of Area	Drug Use Category	Percentage				
		1971	1972	1973	1974	1975
Ranch or Farm	Nondrug User	66.6	57.4	62.9	56.7	50.3
	Marijuana-only Users	15.9	21.7	14.6	18.9	22.1
	Other Drug Users	<u>17.5</u>	<u>20.9</u>	<u>22.5</u>	<u>24.4</u>	<u>27.7</u>
	<u>N</u>	725	129	213	180	199
	<u>% of Yearly Sample</u>	<u>16.0</u>	<u>14.8</u>	<u>18.6</u>	<u>14.3</u>	<u>15.9</u>
Small town less than 100,000	Nondrug Users	59.6	55.6	56.3	51.9	51.1
	Marijuana-only Users	18.4	16.2	20.0	21.7	26.0
	Other Drug Users	<u>22.0</u>	<u>28.2</u>	<u>23.7</u>	<u>26.5</u>	<u>22.9</u>
	<u>N</u>	1321	241	355	378	323
	<u>% of Yearly Sample</u>	<u>29.1</u>	<u>27.6</u>	<u>31.0</u>	<u>30.0</u>	<u>25.9</u>
City 25,000 to 100,000	Nondrug Users	56.9	55.3	51.5	45.9	46.1
	Marijuana-only Users	17.6	16.4	20.9	25.9	26.2
	Other Drug Users	<u>25.5</u>	<u>28.3</u>	<u>27.7</u>	<u>28.2</u>	<u>27.7</u>
	<u>N</u>	1065	219	235	305	336
	<u>% of Yearly Sample</u>	<u>23.5</u>	<u>25.1</u>	<u>20.5</u>	<u>24.2</u>	<u>26.9</u>
City 100,000 to 500,000	Nondrug Users	55.0	49.3	45.3	41.4	39.2
	Marijuana-only Users	18.3	23.3	19.9	23.2	30.1
	Other Drug Users	<u>26.7</u>	<u>27.3</u>	<u>34.8</u>	<u>35.4</u>	<u>30.6</u>
	<u>N</u>	748	150	181	198	209
	<u>% of Yearly Sample</u>	<u>16.5</u>	<u>17.2</u>	<u>15.8</u>	<u>15.7</u>	<u>16.7</u>
City over 500,000	Nondrug Users	53.7	57.0	49.7	48.7	46.7
	Marijuana-only Users	17.0	16.3	24.5	24.9	23.6
	Other Drug Users	<u>29.4</u>	<u>26.7</u>	<u>25.8</u>	<u>26.4</u>	<u>29.7</u>
	<u>N</u>	678	135	163	197	182
	<u>% of Yearly Sample</u>	<u>14.9</u>	<u>15.4</u>	<u>14.2</u>	<u>15.7</u>	<u>14.6</u>
<u>TOTAL N FOR YEAR</u>		4537	874	1147	1258	1249

Table C-5
Drug Involvement in Previous 6 Months by Preservice Delinquency
1971 - 1975

Offense	Drug Use Category	Percentage				
		1971	1972	1973	1974	1975
Booked by Police (Yes)	Nondrug Users	38.9	36.3	36.7	28.9	28.5
	Marijuana-only Users	17.4	18.4	16.9	22.1	26.2
	Other Drug Users	<u>43.7</u>	<u>45.3</u>	<u>46.4</u>	<u>49.1</u>	<u>45.3</u>
	N	696	179	237	263	267
	% of Yearly Sample	<u>15.4</u>	<u>20.5</u>	<u>20.8</u>	<u>21.0</u>	<u>21.4</u>
Booked by Police (No)	Nondrug Users	62.0	59.6	58.4	54.4	52.0
	Marijuana-only Users	17.6	18.3	20.7	23.4	25.6
	Other Drug Users	<u>20.4</u>	<u>22.1</u>	<u>20.8</u>	<u>22.2</u>	<u>22.4</u>
	N	3826	696	902	992	983
	% of Yearly Sample	84.6	79.5	79.2	79.0	78.6
TOTAL N FOR YEAR		4522	875	1139	1255	1250
Shoplifting (Yes)	Nondrug Users	49.5	45.2	42.8	34.3	37.2
	Marijuana-only Users	20.2	20.4	22.3	26.0	30.1
	Other Drug Users	<u>30.3</u>	<u>34.4</u>	<u>34.9</u>	<u>39.7</u>	<u>32.7</u>
	N	2788	555	685	676	712
	% of Yearly Sample	<u>61.5</u>	<u>63.3</u>	<u>60.0</u>	<u>53.7</u>	<u>57.3</u>
Shoplifting (No)	Nondrug Users	72.7	71.7	70.7	66.2	60.4
	Marijuana-only Users	13.3	14.6	15.9	19.6	20.0
	Other Drug Users	<u>14.0</u>	<u>13.7</u>	<u>13.3</u>	<u>14.3</u>	<u>19.6</u>
	N	1746	322	458	582	530
	% of Yearly Sample	<u>38.5</u>	<u>36.7</u>	<u>40.0</u>	<u>46.3</u>	<u>42.7</u>
TOTAL N FOR YEAR		4534	877	1143	1258	1242

Table C-6

Preservice Drug Involvement by Number of Driving Tickets
1972 - 1975

Number of Driving Tickets in Last 2 Years	Drug Use Category	Percentage			
		1972	1973	1974	1975
Don't Drive	Nondrug Users	66.0	62.5	70.7	55.3
	Marijuana-only Users	7.6	15.3	14.0	26.3
	Other Drug Users	<u>26.4</u>	<u>22.2</u>	<u>15.3</u>	<u>18.4</u>
	<u>N</u>	53	72	150	76
	<u>% of Yearly Sample</u>	<u>6.1</u>	<u>6.3</u>	<u>11.9</u>	<u>6.1</u>
None	Nondrug Users	61.7	63.0	54.1	52.3
	Marijuana-only Users	15.6	16.9	23.6	24.5
	Other Drug Users	<u>22.7</u>	<u>20.0</u>	<u>22.3</u>	<u>23.2</u>
	<u>N</u>	392	514	573	522
	<u>% of Yearly Sample</u>	<u>44.9</u>	<u>44.9</u>	<u>45.5</u>	<u>41.7</u>
1 or 2	Nondrug Users	49.5	47.9	43.2	44.1
	Marijuana-only Users	23.5	23.1	26.9	26.8
	Other Drug Users	<u>27.0</u>	<u>29.1</u>	<u>29.9</u>	<u>29.0</u>
	<u>N</u>	307	420	368	451
	<u>% of Yearly Sample</u>	<u>35.1</u>	<u>36.7</u>	<u>29.3</u>	<u>36.1</u>
3 to 5	Nondrug Users	46.5	38.0	27.3	37.2
	Marijuana-only Users	14.9	21.0	21.9	27.0
	Other Drug Users	<u>38.6</u>	<u>41.0</u>	<u>50.8</u>	<u>35.8</u>
	<u>N</u>	101	100	128	148
	<u>% of Yearly Sample</u>	<u>11.6</u>	<u>8.7</u>	<u>10.2</u>	<u>11.8</u>
Over 5	Nondrug Users	19.1	25.6	18.0	33.3
	Marijuana-only Users	33.3	23.1	18.0	25.9
	Other Drug Users	<u>47.6</u>	<u>51.3</u>	<u>64.1</u>	<u>40.8</u>
	<u>N</u>	21	39	39	54
	<u>% of Yearly Sample</u>	<u>2.4</u>	<u>3.4</u>	<u>3.1</u>	<u>4.3</u>
<u>TOTAL N FOR YEAR</u>		874	1145	1258	1251

APPENDIX D

DRUG USAGE CATEGORIES BY USE
OF LEGAL DRUGS 1971-1975

Table D-1
 Preservice Drug Involvement by Cigarette Smoking
 1971 - 1975

Weekly Cigarette Usage	Drug Use Category	Percentage				
		1971	1972	1973	1974	1975
None	Nondrug Users	73.7	70.5	74.1	64.3	63.4
	Marijuana-only Users	13.8	13.5	14.6	20.0	23.9
	Other Drug Users	<u>12.5</u>	<u>16.1</u>	<u>11.3</u>	<u>15.7</u>	<u>12.7</u>
	<u>N</u>	1969	342	459	496	552
	<u>% of Yearly Sample</u>	<u>43.4</u>	<u>39.0</u>	<u>40.1</u>	<u>39.4</u>	<u>44.2</u>
Less than a pack	Nondrug Users	61.0	56.5	53.3	58.0	53.4
	Marijuana-only Users	18.3	20.0	20.0	22.3	27.4
	Other Drug Users	<u>20.7</u>	<u>23.5</u>	<u>26.7</u>	<u>19.6</u>	<u>19.2</u>
	<u>N</u>	338	85	90	112	73
	<u>% of Yearly Sample</u>	<u>7.4</u>	<u>9.7</u>	<u>7.9</u>	<u>8.9</u>	<u>5.8</u>
1 to 3 packs	Nondrug Users	50.7	51.1	50.9	46.0	39.7
	Marijuana-only Users	19.8	18.2	21.0	25.5	25.3
	Other Drug Users	<u>29.5</u>	<u>30.8</u>	<u>28.1</u>	<u>28.5</u>	<u>35.1</u>
	<u>N</u>	651	143	167	235	174
	<u>% of Yearly Sample</u>	<u>14.3</u>	<u>16.3</u>	<u>14.6</u>	<u>18.7</u>	<u>13.9</u>
4 to 7 packs	Nondrug Users	45.3	38.6	34.6	31.2	29.8
	Marijuana-only Users	20.9	24.6	27.9	26.6	30.4
	Other Drug Users	<u>33.8</u>	<u>36.9</u>	<u>37.5</u>	<u>42.3</u>	<u>39.8</u>
	<u>N</u>	1077	179	301	305	322
	<u>% of Yearly Sample</u>	<u>23.8</u>	<u>20.4</u>	<u>26.3</u>	<u>24.2</u>	<u>25.8</u>
8 or more packs	Nondrug Users	35.0	39.5	30.5	27.0	26.0
	Marijuana-only Users	21.7	20.9	18.0	22.5	22.0
	Other Drug Users	<u>43.3</u>	<u>39.5</u>	<u>51.6</u>	<u>50.5</u>	<u>52.0</u>
	<u>N</u>	503	129	128	111	127
	<u>% of Yearly Sample</u>	<u>11.1</u>	<u>14.7</u>	<u>11.2</u>	<u>8.8</u>	<u>10.2</u>
TOTAL <u>N</u> FOR YEAR		4538	878	1145	1259	1248

Table D-2

Preservice Drug Involvement by Alcohol
Consumption: 1971 - 1975

Number of times Used in Last 6 Months	Drug Usage Category	Percentage				
		1971	1972	1973	1974	1975
Never	Non User	87.1	86.0	79.9	81.0	79.1
	Marijuana-only Users	6.0	7.6	11.5	9.3	14.6
	Other Drug Users	<u>6.9</u>	<u>6.4</u>	<u>8.6</u>	<u>9.7</u>	<u>6.3</u>
	TOTAL N	843	171	234	226	206
		18.6	19.5	20.4	18.0	16.5
1 or 2	Non User	81.7	76.9	79.0	73.0	76.7
	Marijuana-only Users	9.8	6.4	12.1	15.8	14.7
	Other Drug Users	<u>8.5</u>	<u>16.7</u>	<u>8.9</u>	<u>11.2</u>	<u>8.5</u>
	TOTAL N	649	78	124	152	129
		14.3	8.9	10.8	12.1	10.3
3 to 9	Non User	63.8	66.1	66.9	63.6	69.5
	Marijuana-only Users	19.0	17.7	17.5	27.2	19.8
	Other Drug Users	<u>17.2</u>	<u>16.1</u>	<u>15.7</u>	<u>9.2</u>	<u>10.7</u>
	TOTAL N	744	124	166	206	177
		16.4	14.1	14.5	16.4	14.1
10 to 20	Non User	54.8	55.7	53.3	46.8	47.6
	Marijuana-only Users	20.9	24.5	27.2	35.9	36.5
	Other Drug Users	<u>24.3</u>	<u>19.8</u>	<u>19.5</u>	<u>17.3</u>	<u>15.9</u>
	TOTAL N	675	106	169	156	189
		14.9	12.1	14.7	12.4	15.1
Over 20	Non User	33.3	33.6	29.0	22.7	20.5
	Marijuana-only Users	24.5	23.6	24.2	25.6	30.9
	Other Drug Users	<u>42.3</u>	<u>42.9</u>	<u>46.8</u>	<u>51.7</u>	<u>48.5</u>
	TOTAL N	1626	399	455	516	550
		35.8	45.4	39.6	41.1	44.0
		4537	878	1148	1256	1251

DISTRIBUTION LIST

Office of Assistant Secretary of Defense (M&RA), Washington, D. C.
Assistant Secretary of the Navy (Manpower and Reserve Affairs) (2)
Assistant Secretary of the Navy (Research and Development)
Chief of Naval Operations (OP-007), (OP-008), (OP-01P) (1), (OP-098T),
(OP-099), (OP-914), (OP-964), (OP-987), (OP-987P10), (OP-992E)
Chief of Naval Personnel (Pers-1), (Pers-10c), (Pers-2), (Pers-63),
(Pers-64) (20), (Pers-65) (20), (Pers-8)
Chief of Naval Research (Code 450) (4), (Code 452) (2), (Code 458) (2)
Chief of Naval Material (NMAT 035)
Chief of Naval Technical Training
Chief of Naval Technical Training (Code 016), (Code N45)
Chief of Naval Education and Training (CNET N-5), (CNET 003)
Chief of Naval Education and Training Support
Chief of Naval Education and Training Support (01A)
Chief of Bureau of Medicine and Surgery (NM&S-713)
Chief of Information (OI-2252)
Commandant of the Marine Corps (A01), (A01B), (MPS-30)
Commandant, U. S. Coast Guard (G-P-1/62)
Commander in Chief, U. S. Atlantic Fleet
Commander in Chief U. S. Pacific Fleet
Science Advisor, ACOS for Tactical Development, Commander Second Fleet
Commander Third Fleet
Commander Sixth Fleet
Commander Seventh Fleet
Commander Submarine Force, U. S. Atlantic Fleet
Commander Submarine Force, U. S. Pacific Fleet
Commander Surface Force, U. S. Atlantic Fleet
Commander Surface Force, U. S. Pacific Fleet
Commander Air Force, U. S. Atlantic Fleet
Commander Air Force, U. S. Pacific Fleet
Commander Training Command, U. S. Atlantic Fleet (Code N3A)
Commander Training Command, U. S. Pacific Fleet
Commander, Navy Recruiting Command (01), (22), (33)
Commander, Naval Training Center, Great Lakes (4)
Commander, Naval Training Center, Orlando (4)
Commander, Naval Training Center, San Diego (4)
Commander, Naval Electronics Laboratory Center, San Diego (2)
Commanding Officer, Manpower and Material Analysis Center, Atlantic
Commanding Officer, Manpower and Material Analysis Center, Pacific
Commanding Officer, Naval Health Research Center (3)
Commanding Officer, Naval Aerospace Medical Institute, (Library Code 12) (2)
Commanding Officer, Naval Submarine Medical Center (2)
Commanding Officer, Naval Medical Research Institute, National Naval
Medical Center
Commanding Officer, Naval Medical Research and Development Command
Commanding Officer, Naval Alcohol Recovery Center, Great Lakes
Commanding Officer, Naval Alcohol Recovery Center, Jacksonville

Commanding Officer, Naval Alcohol Recovery Center, Norfolk
Commanding Officer, Naval Alcohol Recovery and Training Center, San Diego
Commanding Officer, Alcohol Recovery Service, Long Beach
Commanding Officer, Naval Drug Rehabilitation Center, Miramar (3)
Commanding Officer, Human Resource Management School (5)
Commanding Officer, Naval Education and Training Program Development Center
Commanding Officer, Naval Development and Training Center (Code 0120)
Commanding Officer, Naval Education and Training Support Center, Pacific
Commanding Officer, Human Resource Management Center, London
Commanding Officer, Human Resource Management Center, Norfolk
Commanding Officer, Human Resource Management Center, Pearl Harbor
Commanding Officer, Human Resource Management Center, San Diego
Commanding Officer, Human Resource Management Center, Washington, D. C.
Commanding Officer, Fleet Combat Direction Systems Training Center,
Pacific (Code 00E)
Officer in Charge, Human Resource Management Detachment, Alameda
Officer in Charge, Human Resource Management Detachment, Charleston
Officer in Charge, Human Resource Management Detachment, Guam
Officer in Charge, Human Resource Management Detachment, Jacksonville
Officer in Charge, Human Resource Management Detachment, Naples
Officer in Charge, Human Resource Management Detachment, Rota
Officer in Charge, Human Resource Management Detachment, Subic Bay
Officer in Charge, Human Resource Management Detachment, Yokosuka
Officer in Charge, Navy Environmental Health Center
Director, Training Analysis and Evaluation Group (TAEG)
Center for Naval Analyses
Superintendent, U. S. Naval Academy
Superintendent, U. S. Military Academy
Superintendent, U. S. Air Force Academy
Superintendent, U. S. Coast Guard Academy
Superintendent, Naval Postgraduate School
Navy War College
Human Goals Office, Naval Education and Training Center, Newport
Technical Training Division, AF Human Resources Laboratory, Lowry AFB
Flying Training Division, AF Human Resources Laboratory, Williams AFB
Advanced Systems Division, AF Human Resources Laboratory, Wright-Patterson AFB
Technical Library, AF Human Resources Laboratory (AFSC), Lackland AFB
Personnel Research Division, AF Human Resources Laboratory (AFSC),
Lackland AFB (2)
Occupational and Manpower Research Division, AF Human Resources
Laboratory (AFSC), Lackland AFB
Program Manager, Life Sciences Directorate, Air Force Office of Scientific
Research (AFSC)
Headquarters, U. S. Air Force (AFMPC/DPMYAR), Randolph AFB
Human Resources Development Division, U. S. Army Personnel and Administration
Combat Developments Activity
Army Research Institute for Behavioral and Social Sciences
National Research Council, Division of Anthropology and Psychology
National Science Foundation

National Clearinghouse for Alcohol Information (NIAAA)
National Clearinghouse for Drug Abuse Information
National Institute for Drug Abuse (NIDA) (3)
Science and Technology Division, Library of Congress
Director, Defense Documentation Center (ATTN: DDC TC) (12)