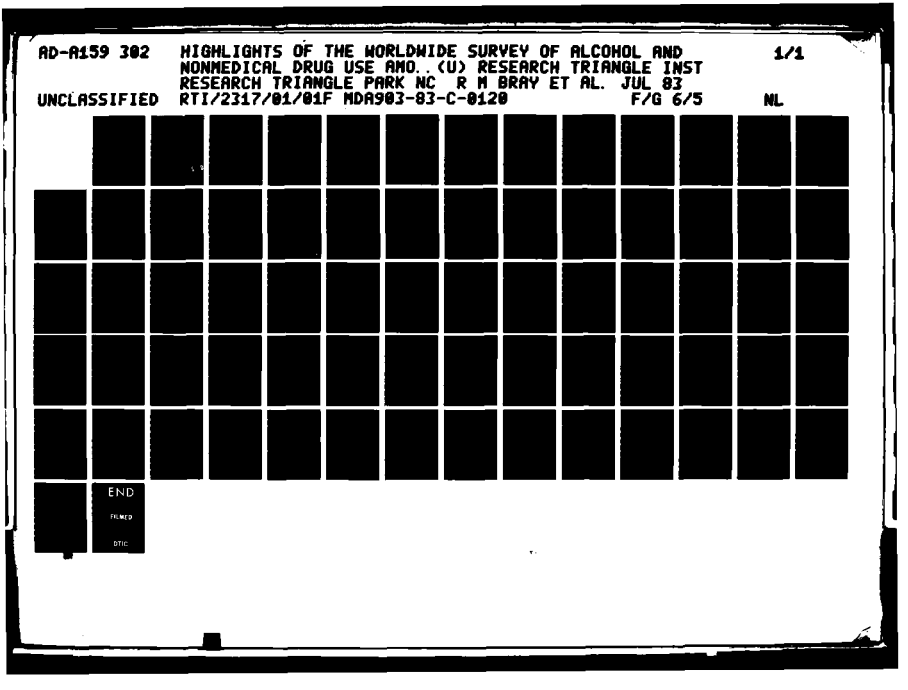
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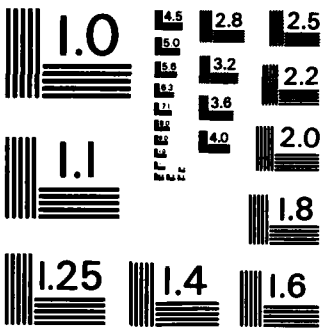
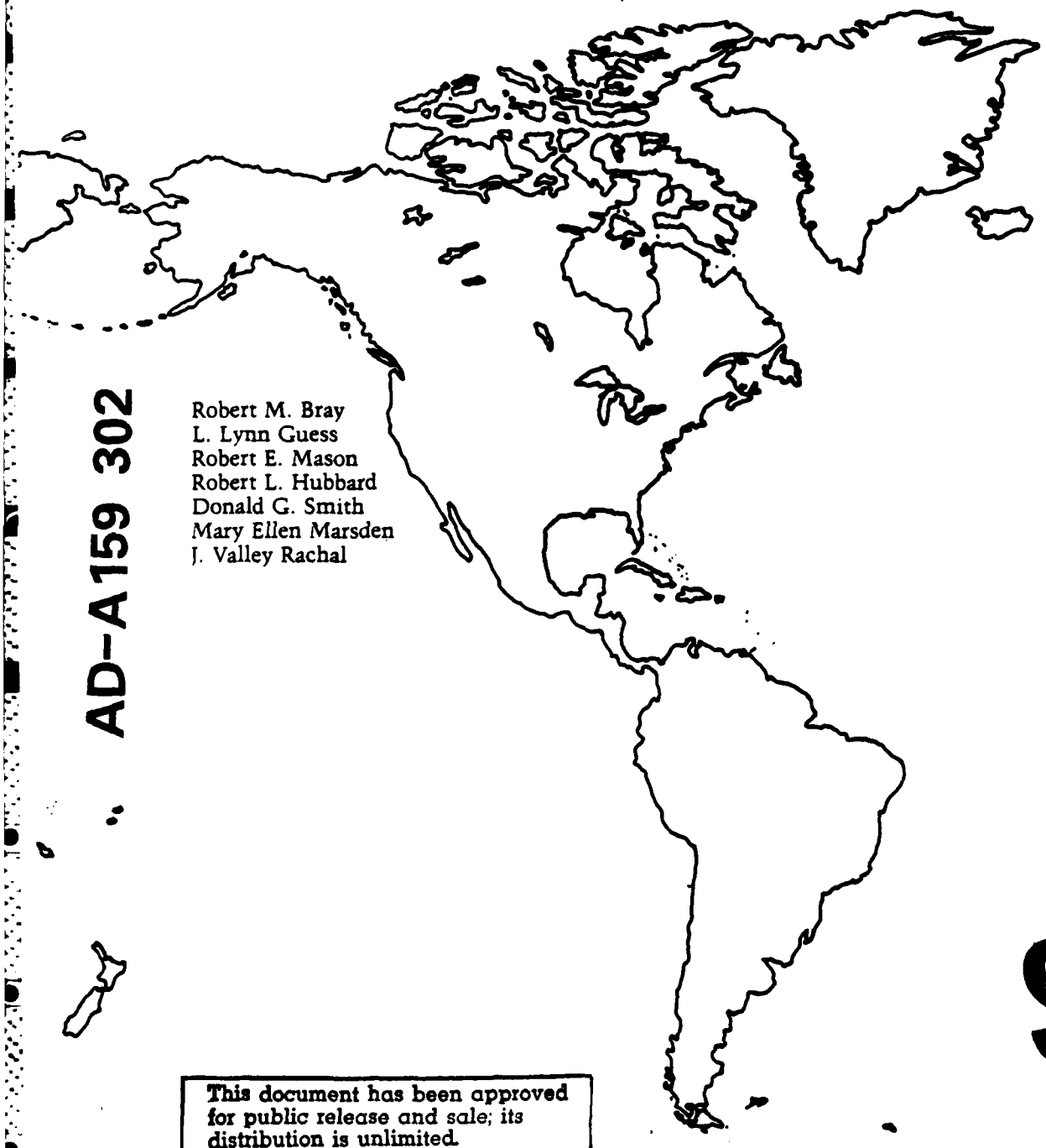


Highlights

1982 Worldwide Survey of Alcohol and Nonmedical Drug Use Among Military Personnel



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Highlights of the

1982 Worldwide Survey of Alcohol and Nonmedical Drug Use Among Military Personnel

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1. INTRODUCTION

In the Armed Forces the misuse of alcohol and the use of drugs for nonmedical purposes are recognized problems that impact on the state of military readiness essential to preserve the national security. Approaches to effective prevention, intervention and treatment, however, cannot be developed and executed without a clear understanding of the nature and extent of these problems. This suggests the need for comprehensive, broad based data about the prevalence of alcohol and nonmedical drug use and the adverse consequences resulting from such use.

A systematic effort to obtain data that can be used to guide and evaluate program policies was begun in 1980 under the direction of the Assistant Secretary of Defense (Health Affairs). A series of recurrent surveys was instituted to study drug and alcohol abuse in the military. Results from these surveys will be used to assess various aspects of the drug and alcohol abuse prevention program, to determine the appropriateness of the emphasis placed on the program elements, to examine the impact of current and future program policies, and to extend knowledge and understanding of drug and alcohol use and problems in the military.

Overview

This report provides highlights of the 1982 Worldwide Survey of alcohol and nonmedical drug use in the military. Additional details of the research which was conducted by the Research Triangle Institute (RTI) are presented in the main report (Bray, Guess, Mason, Hubbard, Smith, Marsden, and Rachal, 1983).

The data were obtained through a survey that was administered to a representative sample of all active duty military personnel below pay grade 07. A two-stage sampling design was used that resulted in the selection of 58 first stage units (installations) and 26,964 sample individuals. Data collection from the four Services was achieved in two phases. At phase I, two-person RTI field teams traveled to 58 major installations and administered surveys in group sessions during a two-day period. At phase II, following the field team visit, the Military Liaison Officer (MLO) at each installation obtained additional questionnaires from personnel selected for the survey who did not participate during phase I.

The focus of the report is on understanding the nature and extent of alcohol and nonmedical drug use and the resulting consequences of that use in the military services. In the remainder of this chapter, the methodology of the study is described. Chapter 2 presents data on the prevalence of alcohol use, and chapter 3 provides data on the prevalence of nonmedical drug use. In chapter 4 negative effects and consequences that result from alcohol and drug use are examined. Comparisons are made in chapter 5 of our current data to those of the military in the 1980 Worldwide Survey and to those of civilians in the general population from a recent national survey. Following this, chapter 6 reports multivariate analyses that examine the joint effects of demographic and psychological/behavioral variables that are important in explaining for alcohol and drug use and the consequences of that use.

Research Design and Procedures

The methodology of the 1982 Worldwide Survey consisted of a complex array of activities. The present section describes the procedures used to orchestrate the data collection in a representative sample of active duty military personnel below pay grade 07.

Survey Questionnaire. The primary data collection instrument was the survey questionnaire. Using the 1980 questionnaire (Burt and Biegel, 1980) as a foundation, a refined instrument was developed for the 1982 Worldwide Survey. Items in the questionnaire were arrayed into several broad areas. The most basic information asked about respondents' use of alcohol and non-medical drugs during 30 day and 12 month periods. Consequences of use, along with measures of work impairment and dependence were included. Reports of attitudes and behaviors of theoretical and applied interest were asked. Reasons for use and nonuse also were obtained along with information about the context of use. Finally, basic demographic indicators were included as were questions about alcohol and drug treatment.

Sampling Design. The sampling design for the 1982 Worldwide Survey can be summarized as a deeply stratified, two stage design. First stage sampling units were constructed by combining Service level organizational units that were geographically proximal. These organizational units for the Services were: Army--Army Location Code (ARLOC); Navy--Unit Identification Code (UIC); Marine Corps--Monitor Command Codes (MCC) and Reporting Unit Codes (RUC); and Air Force--Consolidated Base Personnel Office (CBPO).

The first stage sampling frame was stratified by Service (Army, Navy, Marine Corps, Air Force) within four broadly stratified geographic regions of the world. The geographic regions and the areas they encompassed were:

- Americas -- Alaska, Canada, Continental United States (CONUS), Greenland, Iceland, Antigua, Bermuda, Cuba, Diego Garcia, Panama, Puerto Rico
- North Pacific -- Republic of Korea, mainland Japan, Okinawa
- Other Pacific -- Australia, Canton Enderbury, Gilbert Ellice, Guam, Hawaii, Johnston Atoll, Midway, Pacific Trust, Philippines, Wake
- Europe -- Belgium, West Germany, Greece, Italy, Netherlands, Portugal, Spain, Turkey, United Kingdom

A total of fifteen first stage strata were defined (one for each Service in each region except for Marines in Europe which were sampled in conjunction with the Navy in Europe). The first stage sample was selected with probability proportional to size and with minimum replacement. Composite size measures were constructed to provide an equal probability selection of personnel within each pay grade grouping within each of the first stage strata.

Second stage sampling units were lines on the personnel rosters of the organizational units selected at the first stage of sampling. The second stage frame was stratified into five pay grade groups (E1-E5's, E6-E9's, W1-W4's, O1-O3's, and O4-O6's) within each first stage unit, except for the Air Force which does not have warrant officer grades. The second stage sample was selected with equal probability and without replacement from within second stage strata.

Table 1 shows the distribution of the first stage sampling units, and the first and second stage sample sizes for the 1982 Worldwide Survey. Installations selected for the sample were located in the following countries for each region.

- Americas -- CONUS
- North Pacific -- Republic of Korea, mainland Japan, Okinawa
- Other Pacific -- Hawaii, Republic of the Philippines, Guam
- Europe -- West Germany, Italy, Greece, United Kingdom

Demographic characteristics of the sample and Total DoD appear in Table 2. As shown, the sample generally provides a good representation of the military on the characteristics that are displayed. Educational background of the sample varied most notably from that of the DoD population. The major discrepancy was that people in the sample indicated a somewhat higher level of educational training (particularly those beyond high school with no formal degree) than that reported by official DoD records of educational attainment. This difference is probably explained by the way the educational data are gathered. DoD asked for highest year of school completed. The survey asked respondents to indicate whether they had some college, but not a four year degree. Thus, survey respondents who attended college for one term but did not complete the year were counted in the survey as beyond high school, but by DoD as having a high school education.

Field Procedures. Detailed field procedures were developed to collect questionnaire data from the personnel selected to participate in the study. Coordination of survey activities among participating installations was achieved by the appointment of a Headquarters Liaison Officer (HLO) in Washington for each Service and a Military Liaison Officer (MLO) at each participating installation.

Data collection was conducted in two phases. During Phase I (September through November, 1982), MLOs were sent lists of personnel that had been selected to participate in the survey at their installations. MLOs planned and coordinated two-day, in-person visits by RTI field teams who administered questionnaires in group sessions. Participants' responses were given anonymously.

Phase II data collection (September through January, 1983) consisted of MLOs obtaining completed survey questionnaires from personnel who did not attend any scheduled session during the on-site visit. They did this by conducting sessions with personnel at their installation (using procedures

Table 1. Allocation of the Sample

Region	Service	First Stage Sampling Units	First Stage Sample Size	Second Stage Sample Size
Americas	Army	98	7	3081
	Navy	78	6	3230
	Marine Corps	39	2	859
	Air Force	92	6	2711
	Total	307	21	9881
North Pacific	Army	19	4	1716
	Navy	3	2	1101
	Marine Corps	3	3	1245
	Air Force	5	3	1397
	Total	30	12	5459
Other Pacific	Army	4	2	789
	Navy	8	5	2568
	Marine Corps	3	2	821
	Air Force	3	2	909
	Total	18	11	5087
Europe	Army	92	9	4071
	Navy	6	2	1023
	Marine Corps[a]	0	0	63
	Air Force	22	3	1380
	Total	120	14	6537
Total Worldwide	Army	213	22	9657
	Navy	95	15	7922
	Marine Corps	45	7	2988
	Air Force	122	14	6397
	Total	475	58	26,964

[a]Marine Corps personnel in Europe were classified into Navy first stage units.

3. PREVALENCE OF NONMEDICAL DRUG USE

A substantial number of military personnel report use of drugs for nonmedical purposes. The amount and type of such drug use is of concern to Congressional, defense, and Service leaders since it has important implications for performance and safety within the military. The present chapter describes the prevalence and incidence of nonmedical drug use as reported by respondents for the periods of 30 days and 12 months prior to taking the survey.

Respondents to the present survey were asked to indicate their level of nonmedical use of each of the following drugs.

- Marijuana or Hashish
- PCP
- LSD and Other Hallucinogens
- Cocaine
- Amphetamines and Other Stimulants
- Tranquilizers
- Barbiturates and Other Sedatives
- Heroin
- Opiates Other than Heroin
- Other Drugs (e.g., any not included above such as over-the-counter drugs and inhalants).

Basic Patterns of Drug Use

- Overall, 42 percent of DoD personnel have used one or more drugs for nonmedical purposes, including 27 percent who have used within the past 12 months and 19 percent within the past 30 days (Table 12).
- Marijuana is the single drug most frequently used for nonmedical purposes. Of all military personnel, 40 percent have used during their lifetimes, 24 percent have used within the past 12 months, and 17 percent have used within the past 30 days (Table 12).
- For any drug besides marijuana, use is reported by 22 percent during their lifetimes, by 14 percent within the past 12 months, and by 9 percent within the past 30 days (Table 12).
- Among the Services (Table 12), the Air Force consistently shows lowest levels of any drug use during lifetime (32 percent), past 12 months (16 percent) or past 30 days (12 percent).

Table 11. Drinking Levels by Socio-Demographic Characteristics - Total DoD

Socio-Demographic Characteristics	Drinking Levels: Abstainer	Infrequent Light	Moderate	Moderate-Heavy	Heavy	Total DoD
Male	11.4	17.9	29.4	26.6	14.7	90.6
Female	15.4	28.3	33.9	14.7	7.7	9.4
Race/Ethnicity						
White	11.0	18.4	29.4	26.3	14.9	71.2
Black	13.9	19.9	33.1	21.7	11.4	16.7
Hispanic	11.9	19.1	26.0	28.4	14.6	6.9
Other	14.7	22.4	29.7	22.7	10.6	5.2
Education						
Less than high school graduate	7.2	15.7	18.8	27.8	30.5	3.7
High school graduate or GED	11.3	18.3	26.5	26.6	17.3	48.2
Beyond High School, no 4 year degree	13.3	19.2	31.0	24.7	11.9	33.1
College graduate or higher	11.1	20.8	40.5	23.3	4.3	15.0
Age						
17-20	10.2	18.8	24.7	27.4	18.9	23.0
21-24	10.0	17.6	27.3	26.7	18.4	30.6
25-30	12.8	19.7	33.1	23.6	10.9	23.2
31 or older	14.6	19.8	35.0	23.8	6.7	23.2
Marital/Accompaniment Status						
Not married	9.1	16.8	26.1	28.2	19.7	49.1
Married, spouse not present at duty station	9.2	18.7	29.0	27.4	15.7	6.9
Married, spouse present at duty station	15.1	21.2	34.1	22.2	7.4	44.0
Pay Grade						
E1-E5	11.3	18.2	26.9	26.0	17.5	69.8
E6-E9	14.9	20.5	32.3	24.3	8.0	17.2
W1-W4	17.2	15.2	38.5	24.4	4.7	1.0
O1-O3	9.8	22.7	42.9	21.3	3.3	8.1
O4-O6	8.3	16.2	42.7	29.8	3.0	3.9
Time on Active Duty						
1 year or less	11.0	22.7	27.8	25.5	13.0	16.4
>1-2 years	9.8	16.6	25.6	27.0	21.0	15.5
>2-3 years	10.1	15.9	25.1	17.6	21.3	12.1
>3-4 years	11.8	17.9	26.6	27.1	16.5	8.1
>4-9 years	11.5	19.1	32.8	24.5	12.1	25.3
10 years or more	14.8	19.4	34.4	23.9	7.5	22.6
Time at Present Duty Station						
6 months or less	11.4	20.7	29.3	25.5	13.1	29.6
7-12 months	11.0	16.9	30.3	25.8	15.9	21.8
>1 to 2 years	11.7	18.0	29.1	25.7	15.5	26.0
>2 to 3 years	11.8	18.2	30.3	26.6	13.1	13.7
More than 3 years	15.0	21.2	31.4	22.4	10.0	8.9
Region						
Americas	12.3	20.0	29.9	24.9	12.9	75.9
North Pacific	10.5	15.4	27.8	28.7	17.6	4.7
Other Pacific	9.3	14.9	30.8	29.0	16.0	3.9
Europe	9.9	15.5	30.0	26.6	18.0	15.5
Service						
Army	11.6	18.0	29.8	25.1	15.5	33.6
Navy	10.5	21.6	25.4	26.4	16.1	29.0
Marine Corps	13.5	13.4	27.3	29.4	16.4	10.9
Air Force	12.6	19.1	34.8	23.9	9.5	26.5
Total DoD	11.8	18.9	29.8	25.5	14.0	100.0

Note: Drinking Level values are row percentages. Total DoD values are column percentages. Drinking levels are based quantity and frequency data during the past 30 days for the respondents' primary beverage. Abstainers drink once a ar or less. Those in the Infrequent-Light category drink once/month at most and 1-4 drinks/occasion. Those in the derate category drink (a) at least once/week and 1 drink/occasion, (b) 3-4 times/month and 2-4 drinks/occasion, or) once/month or less and ≥5 drinks/occasion. Those in the Moderate-Heavy category drink at least once/week and 2-4 inks/occasion or 3-4 times/month and ≥5 drinks/occasion. Those in the Heavy category drink at least once/week and drinks/occasion.

Table 9. Frequency of Consuming Eight or More Cans, Bottles or Glasses of Beer, Wine or Hard Liquor in a Single Day During the Past 12 Months for E1-E5's

Beverage/Frequency	Service									
	Army		Navy		Marine Corps		Air Force		Total DoD	
Beer										
Never	34.9	(2.1)	26.5	(0.9)	30.9	(0.9)	46.7	(1.3)	35.1	(0.9)
Less than monthly	21.5	(0.7)	21.7	(0.4)	23.9	(0.8)	22.1	(1.0)	22.0	(0.4)
1-3 days a month	15.3	(0.8)	16.3	(0.6)	16.6	(0.3)	15.8	(1.1)	15.9	(0.4)
1-2 days a week	11.6	(0.5)	15.7	(0.6)	13.7	(0.4)	8.2	(0.5)	12.1	(0.3)
3-4 days a week	8.7	(0.8)	12.6	(0.7)	10.2	(1.4)	5.0	(0.3)	9.1	(0.4)
5-7 days a week	7.9	(0.7)	7.0	(0.6)	4.8	(0.2)	2.1	(0.2)	5.9	(0.3)
Wine										
Never	64.3	(0.8)	62.7	(0.7)	67.9	(3.6)	72.2	(1.2)	66.2	(0.6)
Less than monthly	20.8	(1.0)	24.6	(0.6)	23.0	(4.1)	19.8	(0.4)	21.9	(0.6)
1-3 days a month	9.2	(0.5)	9.1	(1.0)	6.6	(0.3)	5.8	(0.7)	8.0	(0.4)
1-2 days a week	2.9	(0.3)	1.9	(0.3)	1.6	(0.4)	1.7	(0.3)	2.2	(0.2)
3-4 days a week	1.9	(0.4)	1.3	(0.2)	0.5	(0.1)	0.4	(0.1)	1.2	(0.2)
5-7 days a week	1.0	(0.2)	0.5	(0.1)	0.3	(0.2)	0.1	(0.1)	0.6	(0.1)
Hard Liquor										
Never	49.7	(1.3)	40.3	(1.4)	47.8	(1.5)	59.7	(1.3)	49.3	(0.7)
Less than monthly	22.1	(0.9)	24.7	(0.7)	29.5	(2.6)	22.8	(0.6)	23.8	(0.5)
1-3 days a month	15.7	(1.0)	19.4	(0.8)	13.6	(0.3)	10.9	(0.8)	15.4	(0.5)
1-2 days a week	7.0	(0.6)	8.6	(0.5)	5.8	(0.2)	4.3	(0.4)	6.7	(0.3)
3-4 days a week	3.4	(0.5)	4.6	(0.6)	1.8	(0.7)	1.8	(0.3)	3.2	(0.3)
5-7 days a week	2.1	(0.2)	2.4	(0.3)	1.5	(0.7)	0.5	(0.1)	1.7	(0.1)

Note: Tabled values are percentages and represent prevalence estimates with standard errors in parentheses.

Demographic Characteristics of Drinking Levels

- There are notable differences in the distribution of drinking levels by demographic characteristics (Table 11).
- Heavy patterns of drinking (Table 11) for Total DoD occurred more often among males, whites and Hispanics, non-high school graduates, personnel aged 24 and below, personnel unmarried or married with spouse not present, personnel of pay grade E1-E5, and those who had spent 1-3 years on active duty or 7 months to 2 years at their present duty station.
- Overall analyses of alcohol prevalence have shown that most military personnel are low to moderate drinkers, but substantial proportions are frequent, heavy drinkers.

Table 8. Quantity of Hard Liquor Consumed on a Typical Drinking Day During the Past 30 Days

Pay Grade/ Number of Drinks	Service									
	Army		Navy		Marine Corps		Air Force		Total DoD	
E1-E5										
None	46.4	(2.2)	44.0	(2.8)	47.2	(1.2)	48.2	(1.9)	46.3	(1.2)
1 Drink	7.9	(0.8)	7.2	(0.7)	9.5	(0.9)	8.7	(0.7)	8.0	(0.4)
2-3 Drinks	20.5	(1.2)	19.0	(1.2)	17.4	(0.8)	22.6	(1.3)	20.3	(0.6)
4-7 Drinks	16.4	(0.7)	18.7	(1.3)	17.4	(1.3)	16.2	(1.5)	17.1	(0.6)
8-11 Drinks	5.4	(0.6)	7.3	(0.2)	5.4	(0.4)	2.9	(0.4)	5.3	(0.2)
12 or more	3.4	(0.4)	3.8	(0.4)	3.1	(0.2)	1.3	(0.2)	3.0	(0.2)
E6-E9										
None	53.0	(1.7)	52.3	(1.4)	66.0	(3.8)	51.7	(2.6)	53.3	(1.1)
1 Drink	7.9	(0.9)	7.4	(0.5)	6.3	(1.1)	9.1	(0.6)	8.0	(0.4)
2-3 Drinks	23.6	(1.5)	22.3	(1.9)	18.4	(3.3)	25.1	(2.4)	23.3	(1.1)
4-7 Drinks	12.0	(1.4)	12.8	(1.8)	6.7	(1.8)	12.4	(1.6)	12.0	(0.8)
8-11 Drinks	2.5	(0.5)	4.4	(1.6)	2.4	(0.2)	1.4	(0.4)	2.7	(0.5)
12 or more	1.1	(0.3)	0.8	(0.2)	0.2	(0.2)	0.2	(0.1)	0.7	(0.1)
W1-W4[a]										
None	54.0	(8.6)	47.7	(15.3)	+	(+)	*	(*)	53.0	(7.6)
1 Drink	7.0	(1.4)	19.0	(12.5)	+	(+)	*	(*)	10.0	(2.9)
2-3 Drinks	31.1	(7.1)	20.2	(11.1)	+	(+)	*	(*)	28.8	(6.7)
4-7 Drinks	6.1	(2.4)	12.1	(10.2)	+	(+)	*	(*)	6.5	(2.2)
8-11 Drinks	1.6	(1.4)	1.0	(1.0)	+	(+)	*	(*)	1.6	(1.2)
12 or more	0.1	(0.2)	0.0	(**)	+	(+)	*	(*)	0.1	(0.1)
01-03										
None	43.4	(3.6)	41.6	(5.4)	50.5	(1.1)	41.4	(1.9)	42.7	(1.7)
1 Drink	21.2	(2.8)	17.4	(2.7)	13.5	(5.4)	22.5	(1.8)	20.6	(1.5)
2-3 Drinks	28.2	(2.3)	30.8	(5.2)	27.4	(1.5)	29.2	(1.7)	29.0	(1.4)
4-7 Drinks	6.3	(1.0)	9.0	(0.9)	7.8	(4.4)	6.8	(1.8)	7.1	(0.9)
8-11 Drinks	0.6	(0.3)	1.1	(0.7)	0.8	(0.3)	0.1	(-)	0.5	(0.2)
12 or more	0.3	(0.4)	0.2	(0.3)	0.0	(**)	0.0	(**)	0.2	(0.1)
04-06										
None	39.1	(6.7)	29.8	(5.1)	42.4	(23.0)	28.0	(1.9)	31.4	(2.3)
1 Drink	19.1	(3.5)	22.0	(6.2)	14.8	(3.5)	27.5	(2.7)	24.0	(2.3)
2-3 Drinks	32.8	(5.4)	36.3	(2.8)	42.3	(20.4)	38.9	(3.1)	37.2	(2.4)
4-7 Drinks	8.7	(4.6)	11.9	(5.1)	0.5	(0.5)	5.1	(2.9)	7.0	(2.3)
8-11 Drinks	0.0	(**)	0.0	(**)	0.0	(**)	0.4	(0.4)	0.2	(0.2)
12 or more	0.3	(0.3)	0.0	(**)	0.0	(**)	0.1	(0.1)	0.1	(0.1)
Total										
None	47.3	(1.8)	45.0	(2.2)	49.7	(0.6)	46.5	(1.2)	46.7	(0.9)
1 Drink	9.1	(0.5)	8.2	(0.5)	9.6	(1.3)	11.9	(1.4)	9.7	(0.5)
2-3 Drinks	22.1	(1.2)	20.7	(1.3)	18.6	(1.8)	25.1	(1.3)	22.3	(0.7)
4-7 Drinks	14.5	(0.5)	16.9	(1.0)	15.0	(1.0)	13.5	(1.4)	14.9	(0.5)
8-11 Drinks	4.3	(0.5)	6.2	(0.2)	4.6	(0.2)	2.1	(0.3)	4.2	(0.2)
12 or more	2.6	(0.3)	3.0	(0.3)	2.5	(0.1)	0.9	(0.1)	2.2	(0.1)

Note: Tabled values are percentages and represent prevalence estimates with standard errors in parentheses.

[a]Estimates of use for Navy warrant officers are accompanied by rather large standard errors indicating the data have low reliability and should be interpreted with caution.

-Estimate rounds to zero.

*Not applicable.

**Informative standard error not available.

+Fewer than 20 respondents.

Table 7. Quantity of Wine Consumed on a Typical Drinking Day During the Past 30 Days

Pay Grade/ Number of Drinks[a]	Service									
	Army		Navy		Marine Corps		Air Force		Total DoD	
E1-E5										
None	61.9	(2.5)	71.7	(3.3)	68.2	(2.4)	60.5	(1.5)	65.0	(1.5)
1 Drink	8.7	(0.7)	6.2	(0.9)	6.3	(1.7)	9.2	(0.5)	7.9	(0.5)
2-3 Drinks	18.6	(1.6)	14.7	(2.1)	15.1	(0.3)	21.8	(0.9)	17.9	(0.9)
4-7 Drinks	7.7	(0.6)	5.5	(0.8)	8.0	(1.3)	7.1	(0.5)	7.0	(0.4)
8-11 Drinks	1.3	(0.2)	0.8	(0.2)	1.3	(0.1)	0.6	(0.2)	1.0	(0.1)
12 or more	1.6	(0.2)	1.1	(0.2)	1.2	(0.4)	0.9	(0.3)	1.3	(0.1)
E6-E9										
None	69.6	(3.9)	73.4	(1.3)	71.6	(2.0)	63.9	(2.4)	69.1	(1.7)
1 Drink	7.9	(1.0)	8.9	(0.6)	10.4	(1.3)	12.8	(1.7)	9.8	(0.7)
2-3 Drinks	17.9	(2.8)	13.6	(1.0)	15.9	(4.3)	18.9	(1.3)	16.9	(1.2)
4-7 Drinks	3.7	(0.4)	3.4	(0.6)	1.9	(1.0)	3.3	(0.5)	3.4	(0.3)
8-11 Drinks	0.4	(0.2)	0.2	(0.2)	0.0	(**)	0.8	(0.4)	0.5	(0.2)
12 or more	0.6	(0.3)	0.5	(0.3)	0.2	(0.1)	0.2	(0.2)	0.5	(0.2)
W1-W4[b]										
None	59.2	(5.6)	59.6	(21.5)	+	(+)	*	(*)	61.0	(5.0)
1 Drink	16.7	(2.9	16.9	(10.8)	+	(+)	*	(*)	15.8	(2.6)
2-3 Drinks	21.6	(3.4)	21.4	(10.8)	+	(+)	*	(*)	20.8	(3.1)
4-7 Drinks	2.5	(1.4)	2.2	(1.7)	+	(+)	*	(*)	2.3	(1.2)
8-11 Drinks	0.0	(**)	0.0	(**)	+	(+)	*	(*)	0.0	(**)
12 or more	0.0	(**)	0.0	(**)	+	(+)	*	(*)	0.0	(**)
01-03										
None	41.4	(3.7)	32.4	(5.5)	49.2	(6.0)	32.8	(2.9)	36.7	(2.1)
1 Drink	16.6	(1.7)	26.1	(1.4)	9.5	(2.8)	21.9	(2.1)	20.1	(1.2)
2-3 Drinks	36.9	(3.1)	32.3	(3.0)	29.1	(1.9)	41.6	(2.3)	37.5	(1.5)
4-7 Drinks	4.9	(1.3)	8.1	(2.8)	12.3	(4.8)	3.8	(1.3)	5.5	(0.9)
8-11 Drinks	0.1	(0.1)	1.1	(0.7)	0.0	(**)	0.0	(**)	0.2	(0.2)
12 or more	0.1	(0.1)	0.0	(**)	0.0	(**)	0.0	(**)	0.0	(**)
04-06										
None	21.5	(2.4)	16.0	(6.3)	14.7	(8.8)	21.6	(1.6)	20.2	(1.5)
1 Drink	29.3	(3.0)	14.9	(5.8)	18.9	(17.0)	19.6	(2.4)	20.8	(2.0)
2-3 Drinks	43.6	(3.8)	63.8	(4.9)	62.2	(9.5)	56.2	(2.6)	55.1	(1.9)
4-7 Drinks	3.9	(1.8)	5.3	(1.9)	4.2	(3.0)	2.6	(0.8)	3.5	(0.7)
8-11 Drinks	1.7	(1.2)	0.0	(**)	0.0	(**)	0.0	(**)	0.4	(0.3)
12 or more	0.0	(**)	0.0	(**)	0.0	(**)	0.1	(0.1)	0.0	(**)
Total										
None	60.7	(2.7)	68.3	(3.0)	66.6	(2.4)	54.7	(1.6)	61.6	(1.4)
1 Drink	9.8	(0.7)	8.0	(0.9)	7.2	(0.8)	12.2	(0.9)	9.8	(0.4)
2-3 Drinks	20.5	(2.0)	16.8	(1.9)	16.9	(1.4)	26.3	(1.0)	20.8	(0.9)
4-7 Drinks	6.6	(0.5)	5.3	(0.7)	7.3	(0.6)	5.6	(0.5)	6.0	(0.3)
8-11 Drinks	1.1	(0.1)	0.7	(0.2)	1.0	(0.1)	0.5	(0.1)	0.8	(0.1)
12 or more	1.3	(0.1)	0.9	(0.2)	1.0	(0.3)	0.6	(0.2)	1.0	(0.1)

Note: Tabled values are percentages and represent prevalence estimates with standard errors in parentheses.

[a]A drink is defined as one glass of wine.

[b]Estimates of use for Navy warrant officers are accompanied by rather large standard errors indicating the data have low reliability and should be interpreted with caution.

*Not applicable.

**Informative standard error not available.

+Fewer than 20 respondents.

Table 6. Quantity of Beer Consumed on a Typical Drinking Day During the Past 30 Days

Pay Grade/Number of Drinks[a]	Service								Total DoD	
	Army		Navy		Marine Corps		Air Force			
E1-E5										
None	19.2	(1.4)	25.8	(3.6)	19.5	(1.2)	24.4	(1.1)	22.4	(1.2)
1 Drink	9.0	(0.8)	4.9	(0.5)	6.2	(0.3)	10.3	(0.7)	7.9	(0.4)
2-3 Drinks	29.3	(0.7)	22.6	(1.2)	23.7	(0.7)	31.5	(0.8)	27.4	(0.5)
4-7 Drinks	25.7	(1.0)	26.4	(1.2)	28.8	(0.8)	25.0	(0.9)	26.0	(0.6)
8-11 Drinks	9.5	(0.9)	11.4	(0.9)	13.3	(0.8)	5.6	(0.5)	9.5	(0.4)
12 or more	7.3	(1.0)	8.9	(1.1)	8.5	(0.9)	3.2	(0.4)	6.9	(0.5)
E6-E9										
None	24.3	(1.8)	26.5	(1.8)	24.8	(1.7)	25.7	(2.4)	25.4	(1.1)
1 Drink	13.2	(1.4)	11.5	(0.8)	6.7	(3.0)	14.8	(1.4)	12.8	(0.7)
2-3 Drinks	37.5	(1.3)	31.6	(1.8)	36.4	(0.6)	37.1	(1.3)	35.7	(0.8)
4-7 Drinks	20.0	(0.8)	23.8	(0.8)	28.3	(5.0)	18.2	(2.1)	21.0	(0.8)
8-11 Drinks	3.5	(0.5)	4.5	(0.7)	3.3	(0.5)	3.1	(0.5)	3.6	(0.3)
12 or more	1.5	(0.5)	2.1	(0.7)	0.5	(0.2)	1.2	(0.5)	1.5	(0.3)
W1-W4[b]										
None	33.4	(4.2)	25.5	(18.0)	+	(+)	*	(*)	30.9	(3.9)
1 Drink	14.2	(3.9)	3.1	(2.2)	+	(+)	*	(*)	12.5	(3.2)
2-3 Drinks	35.2	(4.0)	32.8	(20.5)	+	(+)	*	(*)	35.8	(4.4)
4-7 Drinks	16.7	(3.0)	37.7	(24.9)	+	(+)	*	(*)	20.1	(4.4)
8-11 Drinks	0.5	(0.3)	0.0	(**)	+	(+)	*	(*)	0.6	(0.3)
12 or more	0.0	(**)	1.0	(1.0)	+	(+)	*	(*)	0.1	(0.1)
01-03										
None	20.3	(1.9)	26.8	(7.3)	17.2	(1.8)	21.8	(1.3)	21.9	(1.5)
1 Drink	20.8	(2.4)	13.3	(2.5)	9.3	(3.9)	25.9	(2.6)	20.9	(1.4)
2-3 Drinks	41.9	(3.0)	39.2	(5.9)	56.2	(2.5)	42.4	(1.6)	42.6	(1.6)
4-7 Drinks	13.9	(3.3)	17.0	(3.2)	16.6	(2.8)	9.1	(1.2)	12.6	(1.5)
8-11 Drinks	2.4	(1.0)	2.8	(1.3)	0.3	(0.1)	0.8	(0.4)	1.7	(0.4)
12 or more	0.8	(0.4)	0.9	(0.7)	0.4	(0.3)	0.0	(**)	0.4	(0.2)
04-06										
None	21.1	(4.5)	13.4	(3.4)	9.3	(4.2)	20.8	(2.5)	19.0	(1.7)
1 Drink	25.0	(1.9)	22.6	(4.1)	17.8	(8.4)	27.6	(4.3)	25.6	(2.7)
2-3 Drinks	41.9	(6.8)	57.4	(4.4)	64.1	(16.0)	46.7	(3.3)	48.4	(2.5)
4-7 Drinks	8.4	(2.6)	6.5	(1.7)	8.8	(4.2)	4.5	(1.5)	5.9	(1.1)
8-11 Drinks	3.3	(1.6)	0.0	(**)	0.0	(**)	0.4	(0.4)	0.9	(0.4)
12 or more	0.3	(0.3)	0.1	(0.1)	0.0	(**)	0.1	(0.1)	0.1	(0.1)
Total										
None	20.5	(0.8)	25.7	(3.0)	19.7	(1.0)	24.0	(0.6)	22.8	(0.9)
1 Drink	11.1	(0.6)	7.0	(0.6)	6.7	(0.2)	14.4	(1.1)	10.5	(0.4)
2-3 Drinks	32.1	(0.7)	26.0	(1.4)	28.3	(1.0)	35.0	(0.6)	30.9	(0.5)
4-7 Drinks	23.2	(0.8)	24.9	(1.1)	27.7	(1.0)	20.2	(1.1)	23.2	(0.5)
8-11 Drinks	7.6	(0.7)	9.4	(0.8)	10.9	(0.2)	4.1	(0.5)	7.4	(0.4)
12 or more	5.5	(0.7)	7.0	(1.0)	6.7	(1.1)	2.2	(0.3)	5.1	(0.4)

Note: Tabled values are percentages and represent prevalence estimates with standard errors in parentheses.

[a]A drink is defined as one beer.

[b]Estimates of use for Navy warrant officers are accompanied by rather large standard errors indicating the data have low reliability and should be interpreted with caution.

*Not applicable.

**Informative standard error not available.

+Fewer than 20 respondents.

- For all beverages (Tables 6-8) heavy consumption, 8 or more drinks on a typical drinking day during the past 30 days, occurs most often among E1-E5 personnel (16 percent beer, 2 percent wine, 8 percent hard liquor). For E6-E9's, 01-03's and 04-06's, it occurs substantially less often (1-5 percent beer, 0-1 percent wine, 0-3 percent hard liquor).

Frequency of Heavy Drinking

- Frequent heavy drinking (the rate that 8 or more drinks per day were consumed during the past 12 months) of beer is more common than similar consumption of hard liquor or wine. Across all pay grades frequent heavy drinking, on 3 or more days a week, ranges from 11 percent for beer to 4 percent for hard liquor and 1 percent for wine.

- Frequent heavy drinking of all beverages occurs most often among E1-E5's. Consumption of 8 or more drinks on 3 or more days a week was reported by 15 percent of the respondents for beer, by 2 percent for wine, and by 5 percent for hard liquor (Table 9).

Quantity/Frequency Classifications

- The combined quantity and frequency of alcohol use is represented by two measures: the average daily ounces of ethanol consumed and the typology of drinking levels (abstainer, infrequent-light, moderate, moderate-heavy, heavy).

- The average daily consumption of ethanol tends to be low (Table 10). For Total DoD, 78 percent consume less than 2 ounces of ethanol a day on the average.

- Heavy ethanol consumption of 5 or more ounces per day occurs for 7 percent of all personnel (Table 10). Among pay grades it is most likely among E1-E5 personnel (9 percent). Among Services it is most likely in the Army and Navy (8-9 percent).

- The classification of personnel by drinking levels shows the modal category to be moderate drinkers, followed by moderate-heavy (Table 11). Thirty percent of DoD personnel are moderate drinkers (drink about once a week and small to moderate amounts per occasion), and 26 percent are moderate-heavy drinkers (drink at least once a week and medium to large amounts per occasion).

- The drinking level typology defines 14 percent of personnel as heavy drinkers (Table 11). Among pay grades 18 percent of E1-E5's are heavy drinkers compared with 3 to 8 percent of other pay grades. Among the Services, the Army, Navy, and Marine Corps have more heavy drinkers (each 16 percent) than the Air Force (10 percent).

Table 5. Frequency of Use of Primary Beverage During the Past 30 Days

Pay Grade/Days of Use	Service								Total DoD	
	Army		Navy		Marine Corps		Air Force			
E1-E5										
None	13.3	(0.8)	20.4	(3.8)	17.4	(1.3)	15.3	(1.3)	16.2	(1.2)
1-3 days	31.3	(1.5)	29.0	(1.3)	26.2	(1.4)	32.6	(0.8)	30.5	(0.7)
4-10 days	24.2	(0.9)	23.1	(1.2)	28.8	(0.5)	27.8	(0.7)	25.2	(0.5)
11-19 days	16.2	(0.7)	14.2	(1.6)	17.1	(1.0)	14.3	(0.9)	15.3	(0.6)
20-30 days	15.0	(0.9)	13.3	(2.1)	10.5	(0.9)	10.0	(1.0)	12.8	(0.7)
E6-E9										
None	16.7	(1.6)	19.0	(1.1)	17.9	(3.4)	15.1	(1.8)	16.9	(0.9)
1-3 days	34.1	(1.9)	38.6	(3.2)	33.7	(1.9)	37.3	(1.3)	36.2	(1.2)
4-10 days	26.6	(2.2)	23.7	(1.6)	21.7	(0.7)	25.1	(1.2)	25.0	(1.0)
11-19 days	10.9	(0.9)	10.8	(0.7)	10.4	(0.4)	12.0	(1.8)	11.1	(0.7)
20-30 days	11.8	(1.6)	7.9	(1.0)	16.3	(1.5)	10.6	(1.3)	10.7	(0.8)
W1-W4[a]										
None	17.9	(5.3)	21.5	(17.6)	+	(+)	*	(*)	17.3	(4.7)
1-3 days	40.0	(7.4)	23.3	(11.2)	+	(+)	*	(*)	38.8	(7.1)
4-10 days	19.8	(2.9)	37.7	(24.8)	+	(+)	*	(*)	23.0	(4.2)
11-19 days	11.8	(7.2)	15.4	(10.4)	+	(+)	*	(*)	11.6	(6.1)
20-30 days	10.5	(2.5)	2.2	(1.7)	+	(+)	*	(*)	9.3	(2.2)
O1-O3										
None	10.4	(1.2)	11.4	(2.5)	16.1	(2.2)	9.2	(1.6)	10.4	(1.0)
1-3 days	32.3	(3.7)	31.7	(4.9)	33.1	(7.5)	39.3	(2.6)	35.2	(2.1)
4-10 days	32.7	(4.1)	37.4	(4.3)	28.9	(6.5)	31.8	(2.6)	32.9	(2.0)
11-19 days	14.5	(2.3)	16.2	(3.4)	15.7	(2.3)	12.3	(1.2)	14.0	(1.1)
20-30 days	10.2	(1.4)	3.2	(2.0)	6.2	(3.4)	7.4	(2.1)	7.5	(1.2)
O4-O6										
None	8.1	(2.9)	5.8	(3.2)	0.5	(0.5)	10.4	(1.8)	8.6	(1.2)
1-3 days	25.5	(3.9)	25.8	(3.5)	24.4	(12.5)	26.6	(2.8)	26.1	(2.0)
4-10 days	28.5	(4.3)	35.4	(3.9)	28.0	(11.6)	24.5	(0.6)	27.6	(1.4)
11-19 days	13.0	(3.3)	17.1	(4.9)	21.0	(11.4)	20.1	(2.1)	18.0	(1.6)
20-30 days	24.9	(4.0)	15.9	(3.8)	26.0	(12.8)	18.5	(3.0)	19.7	(2.1)
Total										
None	13.7	(0.5)	19.2	(3.0)	16.9	(1.4)	14.1	(0.9)	15.6	(0.9)
1-3 days	31.9	(1.3)	30.7	(1.6)	27.7	(1.1)	33.8	(0.7)	31.7	(0.7)
4-10 days	25.2	(0.9)	24.4	(0.8)	28.0	(0.8)	27.6	(0.2)	25.9	(0.4)
11-19 days	15.0	(0.7)	13.8	(1.4)	16.1	(0.7)	14.1	(0.7)	14.5	(0.5)
20-30 days	14.2	(0.5)	11.8	(1.7)	11.2	(0.9)	10.5	(0.8)	12.3	(0.6)

Note: Tabled values are percentages and represent prevalence estimates with standard errors in parentheses. The term "Primary Beverage" represents the beverage (beer, wine, hard liquor) that respondents reported using most often.

*Not applicable.

+Fewer than 20 respondents.

[a]Estimates of use for Navy warrant officers are accompanied by rather large standard errors indicating the data have low reliability and should be interpreted with caution.

Table 4. Alcoholic Beverage Use During the Past 30 Days

Beverage/Pay Grade	Service								Total DoD	
	Army		Navy		Marine Corps		Air Force			
Beer										
E1-E5	80.8	(1.4)	74.2	(3.6)	80.5	(1.2)	75.6	(1.1)	77.6	(1.2)
E6-E9	75.7	(1.8)	73.5	(1.8)	75.2	(1.7)	74.3	(2.4)	74.6	(1.1)
W1-W4	66.6	(4.2)	74.5	(18.0)	+	(+)	*	(*)	69.1	(3.9)
01-03	79.7	(1.9)	73.2	(7.3)	82.8	(1.8)	78.2	(1.3)	78.1	(1.5)
04-06	78.9	(4.5)	86.6	(3.4)	90.7	(4.2)	79.2	(2.5)	81.0	(1.7)
Total	79.5	(0.8)	74.3	(3.0)	80.3	(1.0)	76.0	(0.6)	77.2	(0.9)
Wine										
E1-E5	38.0	(2.5)	28.3	(3.3)	31.8	(2.4)	39.5	(1.5)	35.0	(1.5)
E6-E9	30.4	(3.9)	26.6	(1.3)	28.4	(2.0)	36.1	(2.4)	30.9	(1.7)
W1-W4	40.8	(5.6)	40.4	(21.5)	+	(+)	*	(*)	39.0	(5.0)
01-03	58.6	(3.7)	67.6	(5.5)	50.8	(6.0)	67.2	(2.9)	63.3	(2.1)
04-06	78.5	(2.4)	84.0	(6.3)	85.3	(8.8)	78.4	(1.6)	79.8	(1.5)
Total	39.2	(2.7)	31.7	(3.0)	33.4	(2.4)	45.3	(1.6)	38.4	(1.4)
Hard Liquor										
E1-E5	53.6	(2.2)	56.0	(2.8)	52.8	(1.2)	51.8	(1.9)	53.7	(1.2)
E6-E9	47.0	(1.7)	47.7	(1.4)	34.0	(3.8)	48.3	(2.6)	46.7	(1.1)
W1-W4	46.0	(8.6)	52.3	(15.3)	+	(+)	*	(*)	47.0	(7.6)
01-03	56.6	(3.6)	58.4	(5.4)	49.5	(1.1)	58.6	(1.9)	57.3	(1.7)
04-06	60.9	(6.7)	70.2	(5.1)	57.6	(23.0)	72.0	(1.9)	68.6	(2.3)
Total	52.7	(1.8)	55.0	(2.2)	50.3	(0.6)	53.5	(1.2)	53.3	(0.9)
Primary Beverage										
E1-E5	86.7	(0.8)	79.6	(3.8)	82.6	(1.3)	84.7	(1.3)	83.8	(1.2)
E6-E9	83.3	(1.6)	81.0	(1.1)	82.1	(3.4)	84.9	(1.8)	83.1	(0.9)
W1-W4	82.1	(5.3)	78.5	(17.6)	+	(+)	*	(*)	82.7	(4.7)
01-03	89.6	(1.2)	88.6	(2.5)	83.9	(2.2)	90.8	(1.6)	89.6	(1.0)
04-06	91.9	(2.9)	94.2	(3.2)	99.5	(0.5)	89.6	(1.8)	91.4	(1.2)
Total	86.3	(0.5)	80.8	(3.0)	83.1	(1.4)	85.9	(0.9)	84.4	(0.9)

Note: Tabled values are percentages and represent prevalence estimates with standard errors in parentheses. Some individuals prefer the term "prevalence rate" when referring to percentages and the term "prevalence" when referring to frequencies of an event. That distinction is not made in the present report. Generally the term "prevalence" has been used when referring to percentages. The category of "Primary Beverage" represents the beverage (beer, wine, or hard liquor) each individual reported using most often during the past 30 days.

* Not applicable.

+Fewer than 20 respondents.

2. PREVALENCE OF ALCOHOL USE

Military personnel in the four Services around the world consume considerable amounts of beer, wine, and hard liquor. This chapter reports past and current use of these three alcoholic beverages. For each beverage, respondents were asked to report for the past 30 days: 1) the number of days they drank that beverage, 2) the size of the usual drink, and 3) the number of drinks consumed on a typical day when they drank the beverage. In addition they were also asked to report for the past 12 months the number of days per week or month they typically consumed 8 or more drinks of each type beverage in a single day.

From these items, measures of alcohol use were constructed that included frequency and quantity of beverage use including primary beverage (i.e., the beverage consumed most often during the past 30 days); a quantity/frequency index of average daily ounces of ethanol; and a typology of drinking levels.

Alcohol Use During the Past 30 Days

- The use of alcohol among military personnel is almost universal (Table 4). Of all military personnel, 77 percent drank beer, 38 percent drank wine and 53 percent drank hard liquor during the past 30 days. Overall, 84 percent of all military personnel drank their "primary beverage" during the past 30 days.

- The use of alcoholic beverages is highest among 04-06 personnel (Table 4). Levels of use range from 69 percent for hard liquor (compared to 47 to 57 percent for other pay grades), 80 percent for wine (versus 31 to 63 percent), 81 percent for beer (versus 69 to 78 percent); and 91 percent primary beverage (versus 83 to 90 percent).

- Few differences exist in the proportion of drinkers across regions. The highest is the Other Pacific (89 percent) and Europe (89 percent), followed by the North Pacific (86 percent) and the Americas (83 percent).

- Nearly all military personnel drink alcoholic beverages, but the frequency with which they drink is generally low (Table 5). For Total DoD, 32 percent consumed their primary beverage 1-3 days a month and 26 percent 4-10 days a month.

- The frequent use of primary beverage 20-30 days a month (Table 5) occurs more often among 04-06's (20 percent) than among E1-E5's (13 percent), E6-E9's (11 percent) or 01-03's (8 percent).

- The modal quantity of any type of alcohol consumed in a typical drinking day is low, 2-3 drinks, and is the same for all Services and pay grades (Tables 6-8).

Table 3. Distribution of 1982 Worldwide Survey Respondents

Region/Pay Grade	Service				
	Army	Navy	Marine Corps	Air Force	Total DoD
Americas					
E1-E5	1363	1826	472	1487	5148
E6-E9	437	464	83	434	1418
W1-W4	57	11	2	*	70
01-03	202	105	41	330	678
04-06	63	61	10	202	336
Total	2122	2467	608	2453	7650
North Pacific					
E1-E5	998	666	749	923	3336
E6-E9	271	192	165	244	872
W1-W4	31	6	5	*	42
01-03	92	59	48	76	275
04-06	36	37	19	41	133
Total	1428	960	986	1284	4658
Other Pacific					
E1-E5	392	1280	627	527	2826
E6-E9	133	551	72	192	948
W1-W4	12	11	1	*	24
01-03	22	116	33	78	249
04-06	32	101	7	65	205
Total	591	2059	740	862	4252
Europe					
E1-E5	2459	477	36	829	3801
E6-E9	564	230	8	251	1053
W1-W4	31	6	1	*	38
01-03	151	55	5	88	299
04-06	34	95	5	51	185
Total	3239	863	55	1219	5376
Total Worldwide					
E1-E5	5212	4249	1884	3766	15111
E6-E9	1405	1437	328	1121	4291
W1-W4	131	34	9	*	174
01-03	467	335	127	572	1501
04-06	165	294	41	359	859
Total	7380	6349	2389	5818	21936

Note: Table entries are numbers of respondents who completed a usable questionnaire.

*Not applicable.

that preserved the respondents' anonymity) or by mailing questionnaires to individuals no longer present.

Usable questionnaires were obtained from 21,936 personnel for an overall response rate of 84.3 percent. The response rate for each Service was Army -- 80.0 percent; Navy -- 83.4 percent; Marine Corps -- 83.1 percent; and Air Force -- 92.6 percent.*

Table 3 displays the distribution of survey respondents across the stratification variables of Service, region, and pay grade. Many tables of the report present data in the form or some slight variation of the pattern shown in Table 3. Because of the large number of different sample n's, they are not presented in the individual tables of the analyses. It will be necessary to refer to this table to determine the sample sizes used.

Standard Errors. Most of the tables that follow present two numbers in each cell. The first number is an estimate of the proportion of the population with the characteristics that define the cell. The second number, in parentheses, is the standard error of the estimate. Standard errors represent the degree of variation associated with taking observations on a sample rather than on every member of the population. Confidence intervals, or ranges that are very likely to include the true population value, can be constructed using the standard errors. The 95 percent confidence interval is computed by adding to and subtracting from the estimated proportion the result of multiplying 1.96 times the standard error for that cell. (Obviously, for very small or very large estimates, the respective smallest or largest value in the confidence interval range will be zero or 100 percent.) The interpretation of the confidence interval range is that, if the study were to be repeated with 100 identically-drawn samples, 95 of the sample estimates would fall within the confidence interval range; thus, we are 95 percent certain that the true population value also lies within that range. Clearly, for a given confidence level (e.g., 95 percent), smaller standard errors indicate that the cell proportions estimate the true population value more precisely and larger standard errors indicate that the true population value is estimated less precisely. In tables where standard errors do not appear, a reasonable rule-of-thumb is that the sampling error associated with any point estimate is equal to or slightly larger than the standard error presented with an equal-sized estimated proportion in table cells defined by similar characteristics (i.e., service, pay grade, etc.). A more detailed explanation of sampling errors appears in the main report (Bray et al., 1983).

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* A complete discussion of response rate computations appears in the main report (Bray et al., 1983). Response rate was computed in a different manner than in the 1980 survey by Burt and Biegel (1980). The rate analogous to the 1980 "Response Rate" was termed a completion rate. The respective values for the 1980 and 1982 surveys were: Army -- 91%, 94%; Navy -- 95%, 98%; Marine Corps -- 91%, 97%; Air Force -- 96%, 99%; and Total DoD -- 93%, 97%.

Table 2. Selected Demographic Characteristics of Survey Respondents and Total DoD Personnel

Characteristics	Service									
	Army		Navy		Marine Corps		Air Force		Total DoD	
	Sample	Population	Sample	Population	Sample	Population	Sample	Population	Sample	Population
Sex										
Male	88.0	90.4	94.3	92.0	96.1	95.6	88.9	88.8	90.6	90.9
Female	12.0	9.6	5.7	8.0	3.9	4.4	11.1	11.1	9.4	9.1
Race/Ethnicity										
White	60.9	63.0	77.6	80.0	72.5	73.5	78.2	78.2	71.2	72.7
Black	24.6	29.3	10.6	11.4	14.5	19.6	12.8	14.8	16.7	19.7
Hispanic	9.1	4.0	5.5	2.9	9.1	4.5	4.8	3.6	6.9	3.6
Other	5.4	3.7	6.3	5.6	3.9	2.4	4.1	3.4	5.2	4.0
Education										
Less than high school	5.2	9.2	4.3	9.0	5.0	8.2	0.7	0.9	3.7	6.8
High School Grad/GED	51.1	67.8	56.3	70.3	58.0	77.3	33.6	64.6	48.2	68.4
Beyond HS, No Degree	30.1	10.0	29.2	9.4	27.4	5.7	42.5	15.5	33.1	11.0
College Degree or Beyond	13.6	13.0	10.2	11.3	9.7	8.8	23.2	19.0	15.0	13.8
Age										
17-20	23.3	20.9	31.0	21.1	30.8	32.4	12.3	15.6	23.0	20.6
21-24	31.6	30.1	29.5	31.2	39.6	35.1	27.6	27.7	30.6	30.2
25-30	25.2	24.8	19.6	26.3	18.3	18.9	25.5	24.8	23.2	23.9
31 or older	20.0	24.2	19.9	21.4	11.3	13.6	34.6	31.9	23.2	25.3
Marital Status										
Not married	49.6	47.4	59.0	54.1	57.1	60.7	36.4	38.0	49.1	47.8
Married	50.4	52.6	41.0	45.9	42.9	39.3	63.6	61.9	50.9	52.2
Pay Grade										
E1-E5	70.7	67.4	74.0	68.2	78.5	75.8	61.8	64.5	69.8	67.5
E6-E9	17.4	19.3	17.5	19.7	12.9	14.5	18.3	17.9	17.2	18.6
W1-W4	2.2	1.9	0.4	0.5	0.6	0.8	*	*	1.0	0.9
01-03	7.3	7.3	5.3	7.1	6.1	6.3	12.3	11.3	8.1	8.3
04-06	2.4	4.1	2.8	4.5	1.9	2.6	7.7	6.3	3.9	4.7
Total Personnel	33.6	36.7	28.9	26.3	10.9	9.3	26.5	27.6	-	-

Note: Tabled values are column percentages. Population data for December 1982 for all DoD personnel were provided by the Defense Manpower Data Center.

*Not applicable.

Table 12. Nonmedical Drug Use During the Past 30 Days, the Past 12 Months, and Ever During Lifetime

Drug/Period of Use	Service									
	Army		Navy		Marine Corps		Air Force		Total DoD	
Marijuana										
Past 30 Days	23.9	(1.7)	13.4	(2.0)	17.1	(2.0)	9.6	(1.1)	16.5	(0.9)
Past 12 Months	30.5	(1.7)	25.6	(1.6)	26.4	(2.4)	14.3	(1.5)	24.3	(0.9)
Ever Used	43.7	(0.8)	44.1	(1.9)	44.3	(3.2)	30.6	(2.0)	40.2	(0.9)
PCP										
Past 30 Days	0.9	(0.2)	0.8	(0.3)	0.7	(0.2)	0.2	(-)	0.6	(0.1)
Past 12 Months	1.9	(0.3)	1.5	(0.4)	1.4	(0.1)	0.3	(0.1)	1.3	(0.1)
Ever Used	6.1	(0.5)	7.1	(0.9)	8.3	(0.4)	3.1	(0.4)	5.7	(0.3)
LSD/Hallucinogens										
Past 30 Days	2.5	(0.4)	2.5	(0.5)	4.3	(0.6)	0.6	(0.2)	2.1	(0.2)
Past 12 Months	5.6	(0.6)	6.5	(0.7)	7.1	(0.9)	1.5	(0.2)	4.8	(0.3)
Ever Used	11.1	(0.6)	13.4	(1.3)	15.1	(1.4)	5.6	(0.5)	10.5	(0.4)
Cocaine										
Past 30 Days	3.7	(0.5)	3.3	(0.8)	3.9	(0.8)	1.3	(0.4)	2.9	(0.3)
Past 12 Months	7.3	(0.8)	9.7	(1.3)	7.7	(0.3)	3.0	(0.5)	6.8	(0.5)
Ever Used	14.0	(0.6)	17.5	(1.7)	17.3	(0.6)	8.7	(0.7)	13.7	(0.5)
Amphetamines/Stimulants										
Past 30 Days	5.5	(0.7)	5.3	(1.0)	6.5	(0.2)	1.8	(0.2)	4.5	(0.4)
Past 12 Months	8.4	(0.7)	10.2	(1.4)	9.3	(0.4)	3.2	(0.4)	7.6	(0.5)
Ever Used	14.2	(0.7)	18.2	(1.7)	19.4	(1.5)	9.1	(0.7)	14.3	(0.6)
Tranquilizers										
Past 30 Days	1.6	(0.3)	1.2	(0.2)	1.4	(0.2)	0.6	(0.2)	1.2	(0.1)
Past 12 Months	3.0	(0.4)	3.4	(0.4)	2.9	(0.7)	0.9	(0.2)	2.5	(0.2)
Ever Used	7.5	(0.4)	9.3	(0.9)	8.7	(0.3)	4.5	(0.6)	7.2	(0.3)
Barbiturates/Sedatives										
Past 30 Days	1.6	(0.2)	1.1	(0.1)	1.4	(0.1)	0.7	(0.2)	1.2	(0.1)
Past 12 Months	3.2	(0.4)	3.5	(0.3)	2.8	(0.4)	1.1	(0.3)	2.7	(0.2)
Ever Used	7.8	(0.4)	10.0	(0.9)	10.1	(0.7)	4.8	(0.6)	7.8	(0.3)
Heroin										
Past 30 Days	0.8	(0.1)	0.5	(0.1)	0.9	(0.2)	0.1	(-)	0.5	(0.1)
Past 12 Months	1.3	(0.2)	0.9	(0.2)	1.2	(0.3)	0.1	(-)	0.8	(0.1)
Ever Used	3.5	(0.3)	2.7	(0.3)	3.1	(0.9)	1.0	(0.2)	2.6	(0.2)
Other Opiates										
Past 30 Days	1.1	(0.2)	0.6	(0.1)	1.0	(0.1)	0.2	(0.1)	0.7	(0.1)
Past 12 Months	1.8	(0.3)	1.7	(0.2)	1.7	(0.2)	0.5	(0.1)	1.4	(0.1)
Ever Used	5.2	(0.4)	6.1	(0.7)	6.2	(0.6)	2.6	(0.4)	4.8	(0.2)
Other Drugs										
Past 30 Days	3.9	(0.3)	2.8	(0.3)	4.4	(0.9)	2.4	(0.5)	3.2	(0.2)
Past 12 Months	5.1	(0.4)	5.3	(0.2)	6.0	(1.0)	3.0	(0.6)	4.6	(0.3)
Ever Used	9.0	(0.5)	10.3	(0.8)	12.0	(2.0)	6.0	(0.6)	8.8	(0.4)
Any Drug										
Past 30 Days	26.2	(1.8)	16.2	(2.2)	20.6	(2.0)	11.9	(1.5)	19.0	(1.0)
Past 12 Months	32.4	(1.8)	28.1	(1.7)	29.9	(3.2)	16.4	(1.8)	26.6	(1.0)
Ever Used	45.1	(0.8)	45.6	(1.9)	46.1	(3.8)	32.4	(2.3)	41.8	(0.9)
Any Drug Except Marijuana										
Past 30 Days	10.6	(1.0)	9.6	(1.6)	12.0	(1.3)	5.1	(0.8)	8.9	(0.6)
Past 12 Months	15.5	(1.2)	17.0	(1.7)	17.2	(2.0)	7.3	(1.0)	13.8	(0.7)
Ever Used	22.4	(0.8)	26.0	(1.9)	27.7	(3.3)	15.5	(1.3)	21.9	(0.7)

Note: Tabled values are percentages and represent prevalence estimates with standard errors in parentheses.

- Estimate rounds to zero.

- The Army, Navy and Marine Corps personnel (Table 12) show similar lifetime use of any drug (45-46 percent).

- The Army shows highest use of any drug during the past 12 months (32 percent) with the Marine Corps (30 percent) and Navy (28 percent) only slightly lower (Table 12).

- The Army (Table 12) shows highest use of any drug during the past 30 days (26 percent) followed by the Marine Corps (21 percent) and Navy (16 percent).

- Military personnel in pay grades E1-E5 are at least five times more likely to use drugs than personnel in other pay grades. During the past 12 months, 36 percent used one or more drugs compared to 7 percent or less for other pay grades; during the past 30 days, 26 percent used one or more drugs compared to 5 percent or less for other pay grades (Table 13).

- Patterns of use among E1-E5's (Table 14) are similar to those observed for Total DoD (Table 12) although levels of use are higher.

- Different use patterns exist among the Services for E1-E5s for the various time periods (Table 14). For "any drug," lifetime use is similar in the Army, Navy, and Marine Corps (54-55 percent) and lower in the Air Force (45 percent). However, 12-month and 30-day use are highest in the Army (42 and 34 percent, respectively), about the same in the Navy and Marine Corps, and lowest in the Air Force.

- Among E1-E5's the use pattern for marijuana across time periods is the same as that observed for any drug (Table 14). Levels of use are particularly high in the Army. Notably, 40 percent indicate use during the past 12 months and 32 percent during the past 30 days.

Use of Any Drug: Region and Pay Grade Comparisons

- Regional comparisons show overall drug use for the past 30 days is greatest in Europe (27 percent), followed by Other Pacific (20 percent), Americas (18 percent) and North Pacific (16 percent).

- Among the Services, greatest use of any drug during the past 30 days occurs in Europe for the Army (34 percent) and in the Other Pacific for the Navy (18 percent), the Marines (26 percent), and the Air Force (15 percent).

- Among E1-E5's, use of any drug during the past 30 days (Table 15) is greatest in Europe for the Army (42 percent), and in the Other Pacific for the Navy (25 percent), Marine Corps (31 percent), and Air Force (23 percent).

- Data for 12 months generally follow the pattern of the data for 30 days. Most frequent use of any drug occurs among E1-E5's in Europe for the Army (47 percent), in the Americas for the Navy (37 percent), and in the Other Pacific for the Marine Corps (41 percent) and Air Force (29 percent).

Table 13. Nonmedical Drug Use During the Past 30 Days and the Past 12 Months by Pay Grade

Drug/Period of Use	Pay Grade										Total DoD	
	E1-E5		E6-E9		W1-W4		O1-O3		O4-O6			
Marijuana												
Past 30 Days	22.5	(1.2)	3.6	(0.3)	3.1	(1.3)	1.6	(0.5)	0.4	(0.3)	16.5	(0.9)
Past 12 Months	32.9	(0.9)	5.5	(0.6)	4.8	(1.6)	4.3	(0.8)	0.9	(0.8)	24.3	(0.9)
PCP												
Past 30 Days	0.9	(0.1)	0.2	(0.1)	0.0	(**)	0.2	(0.1)	0.1	(0.1)	0.6	(0.1)
Past 12 Months	1.8	(0.2)	0.2	(0.1)	0.0	(**)	0.2	(0.1)	0.2	(0.1)	1.3	(0.1)
LSD/Hallucinogens												
Past 30 Days	3.0	(0.3)	0.2	(0.1)	0.0	(**)	0.2	(0.2)	0.1	(0.1)	2.1	(0.2)
Past 12 Months	6.7	(0.4)	0.2	(0.2)	0.0	(**)	0.7	(0.3)	0.1	(0.1)	4.8	(0.3)
Cocaine												
Past 30 Days	4.0	(0.4)	0.4	(0.1)	0.0	(**)	0.6	(0.2)	0.1	(0.1)	2.9	(0.3)
Past 12 Months	9.4	(0.6)	0.6	(0.1)	0.1	(0.1)	1.4	(0.4)	0.4	(0.3)	6.8	(0.5)
Amphetamines/Stimulants												
Past 30 Days	6.2	(0.5)	0.6	(0.1)	0.7	(0.7)	0.8	(0.3)	0.1	(0.1)	4.5	(0.4)
Past 12 Months	10.4	(0.6)	1.1	(0.2)	0.7	(0.7)	1.3	(0.5)	0.2	(0.1)	7.6	(0.5)
Tranquilizers												
Past 30 Days	1.6	(0.2)	0.2	(0.1)	0.0	(**)	0.3	(0.2)	0.2	(0.1)	1.2	(0.1)
Past 12 Months	3.4	(0.2)	0.4	(0.1)	0.0	(**)	0.7	(0.3)	0.2	(0.1)	2.5	(0.2)
Barbiturates/Sedatives												
Past 30 Days	1.6	(0.1)	0.2	(0.1)	0.0	(**)	0.2	(0.1)	0.1	(0.1)	1.2	(0.1)
Past 12 Months	3.7	(0.2)	0.4	(0.2)	0.0	(**)	0.4	(0.2)	0.1	(0.1)	2.7	(0.2)
Heroin												
Past 30 Days	0.7	(0.1)	0.1	(0.1)	0.0	(**)	0.2	(0.1)	0.1	(0.1)	0.5	(0.1)
Past 12 Months	1.1	(0.1)	0.1	(0.1)	0.0	(**)	0.2	(0.1)	0.1	(0.1)	0.8	(0.1)
Other Opiates												
Past 30 Days	1.0	(0.1)	0.0	(**)	0.0	(**)	0.2	(0.1)	0.1	(0.1)	0.7	(0.1)
Past 12 Months	1.9	(0.2)	0.1	(0.1)	0.0	(**)	0.4	(0.2)	0.1	(0.1)	1.4	(0.1)
Other Drugs												
Past 30 Days	4.2	(0.3)	1.1	(0.2)	0.3	(0.3)	1.3	(0.4)	0.5	(0.3)	3.2	(0.2)
Past 12 Months	6.0	(0.3)	1.4	(0.2)	0.4	(0.4)	1.8	(0.4)	0.5	(0.3)	4.6	(0.3)
Any Drug												
Past 30 Days	25.6	(1.3)	4.8	(0.4)	3.5	(1.3)	2.9	(0.5)	0.8	(0.4)	19.0	(1.0)
Past 12 Months	35.5	(1.0)	7.2	(0.5)	5.1	(1.5)	5.6	(0.8)	1.6	(0.5)	26.6	(1.0)
Any Drug Except Marijuana												
Past 30 Days	12.0	(0.8)	2.1	(0.3)	1.0	(0.8)	2.0	(0.5)	0.5	(0.3)	8.9	(0.6)
Past 12 Months	18.5	(0.8)	3.1	(0.3)	1.2	(0.8)	3.4	(0.7)	0.8	(0.4)	13.8	(0.7)

Note: Tabled values are percentages and represent estimates with standard errors in parentheses.

**Informative standard error not available.

Table 14. Nonmedical Drug Use During the Past 30 Days, the Past 12 Months, and Ever During Lifetime for E1-E5's

Drug/Period of Use	Service								Total DoD	
	Army		Navy		Marine Corps		Air Force			
Marijuana										
Past 30 Days	31.7	(2.1)	17.5	(2.8)	21.3	(1.2)	15.0	(1.1)	22.5	(1.2)
Past 12 Months	39.7	(2.0)	33.4	(1.5)	33.0	(1.3)	22.0	(1.2)	32.9	(0.9)
Ever Used	52.3	(0.8)	53.5	(1.6)	52.8	(0.8)	42.6	(1.3)	50.3	(0.6)
PCP										
Past 30 Days	1.2	(0.2)	1.0	(0.4)	0.9	(0.3)	0.3	(0.1)	0.9	(0.1)
Past 12 Months	2.5	(0.4)	2.0	(0.5)	1.7	(0.2)	0.4	(0.1)	1.8	(0.2)
Ever Used	8.3	(0.6)	9.1	(1.4)	10.0	(0.2)	4.7	(0.4)	7.8	(0.4)
LSD/Hallucinogens										
Past 30 Days	3.4	(0.5)	3.2	(0.6)	5.4	(0.6)	1.0	(0.3)	3.0	(0.3)
Past 12 Months	7.7	(0.8)	8.6	(0.9)	8.9	(0.8)	2.3	(0.3)	6.7	(0.4)
Ever Used	14.1	(0.8)	16.8	(1.9)	18.7	(1.0)	8.3	(0.4)	13.9	(0.6)
Cocaine										
Past 30 Days	5.0	(0.6)	4.3	(1.1)	4.8	(0.7)	2.0	(0.6)	4.0	(0.4)
Past 12 Months	9.9	(1.0)	12.8	(1.6)	9.6	(0.6)	4.7	(0.7)	9.4	(0.6)
Ever Used	17.8	(0.8)	21.9	(2.5)	21.6	(1.6)	13.2	(0.5)	18.2	(0.8)
Amphetamines/Stimulants										
Past 30 Days	7.3	(0.9)	7.0	(1.3)	8.2	(0.6)	2.8	(0.3)	6.2	(0.5)
Past 12 Months	11.1	(0.9)	13.5	(1.6)	11.8	(0.3)	5.0	(0.5)	10.4	(0.6)
Ever Used	17.6	(0.9)	22.5	(2.4)	24.0	(1.0)	13.4	(0.5)	18.6	(0.7)
Tranquilizers										
Past 30 Days	2.1	(0.3)	1.6	(0.3)	1.6	(0.2)	0.8	(0.2)	1.6	(0.2)
Past 12 Months	3.9	(0.6)	4.5	(0.4)	3.5	(0.8)	1.4	(0.2)	3.4	(0.2)
Ever Used	9.5	(0.6)	11.3	(1.3)	10.5	(0.7)	6.5	(0.6)	9.4	(0.4)
Barbiturates/Sedatives										
Past 30 Days	2.1	(0.3)	1.5	(0.1)	1.7	(0.3)	1.0	(0.3)	1.6	(0.1)
Past 12 Months	4.2	(0.6)	4.7	(0.2)	3.5	(0.7)	1.7	(0.3)	3.7	(0.2)
Ever Used	9.9	(0.6)	12.5	(1.4)	12.3	(0.6)	7.0	(0.6)	10.1	(0.4)
Heroin										
Past 30 Days	1.1	(0.2)	0.7	(0.1)	1.1	(0.2)	0.1	(-)	0.7	(0.1)
Past 12 Months	1.7	(0.2)	1.1	(0.2)	1.5	(0.3)	0.1	(-)	1.1	(0.1)
Ever Used	4.6	(0.4)	3.4	(0.4)	3.9	(0.9)	1.4	(0.1)	3.4	(0.2)
Other Opiates										
Past 30 Days	1.5	(0.3)	0.8	(0.2)	1.2	(0.1)	0.3	(0.1)	1.0	(0.1)
Past 12 Months	2.4	(0.4)	2.3	(0.2)	2.1	(0.4)	0.7	(0.2)	1.9	(0.2)
Ever Used	6.8	(0.5)	7.6	(1.2)	7.5	(0.4)	3.9	(0.4)	6.4	(0.4)
Other Drugs										
Past 30 Days	5.0	(0.5)	3.5	(0.4)	5.3	(1.1)	3.4	(0.6)	4.2	(0.3)
Past 12 Months	6.5	(0.6)	6.6	(0.4)	7.1	(1.1)	4.2	(0.8)	6.0	(0.3)
Ever Used	11.2	(0.7)	12.6	(1.4)	14.2	(2.0)	8.3	(0.6)	11.2	(0.5)
Any Drug										
Past 30 Days	34.3	(2.2)	20.9	(3.1)	25.3	(1.5)	18.1	(1.4)	25.6	(1.3)
Past 12 Months	41.7	(2.1)	36.3	(1.7)	36.8	(2.4)	24.7	(1.6)	35.5	(1.0)
Ever Used	53.7	(0.7)	54.9	(1.7)	54.6	(1.7)	44.5	(1.5)	51.9	(0.6)
Any Drug Except Marijuana										
Past 30 Days	13.9	(1.2)	12.5	(2.0)	14.6	(1.2)	7.6	(1.0)	12.0	(0.8)
Past 12 Months	20.3	(1.4)	22.1	(1.9)	21.0	(1.7)	10.9	(1.2)	18.5	(0.8)
Ever Used	27.3	(1.1)	32.0	(2.6)	33.5	(2.5)	21.9	(0.9)	27.9	(0.9)

Note: Tabled values are percentages and represent prevalence estimates with standard errors in parentheses.

- Estimate rounds to zero.

Table 15. Any Drug Use Among Regions During the Past 30 Days for E1-E5's

Region	Service								Total DoD	
	Army		Navy		Marine Corps		Air Force			
Americas	30.4	(3.4)	20.9	(3.4)	25.6	(1.9)	19.0	(1.8)	23.8	(1.6)
North Pacific	29.9	(0.4)	16.7	(1.1)	20.9	(2.0)	12.8	(0.8)	21.0	(0.6)
Other Pacific	40.0	(10.6)	24.7	(2.9)	31.0	(2.0)	22.8	(2.6)	28.4	(2.9)
Europe	41.8	(1.5)	14.5	(0.2)	25.1	(1.3)	14.6	(1.9)	34.6	(1.2)
Total Worldwide	34.3	(2.2)	20.9	(3.1)	25.3	(1.5)	18.1	(1.4)	25.6	(1.3)

Note: Tabled values are percentages and represent prevalence estimates with standard errors in parentheses.

Use of Marijuana/Hashish: Region and Pay Grade Comparisons

- Use of marijuana/hashish during the past 30 days and past 12 months follows the same pattern noted for any drug use. During these time periods, respectively, use is highest among E1-E5 Army personnel in Europe (39 and 45 percent); among Navy personnel in the Other Pacific (20 percent--30 day use) and Americas (34 percent--12 month use); and among Marine Corps personnel (29 and 39 percent) and Air Force personnel (19 and 26 percent) in the Other Pacific.

- Among all E1-E5's 10 percent used marijuana/hashish 1-3 days during the past 30 days, 4 percent 4-10 days, 3 percent 11-19 days, and 5 percent 20-30 days (Table 16).

- E1-E5's using marijuana 11 or more of the past 30 days occurs most often for the Army (17 percent) both in Europe and in the Other Pacific. For the Navy (9 percent), the Marine Corps (12 percent) and the Air Force (6 percent), it occurs most often in the Other Pacific (Table 16).

Use of Any Drug Except Marijuana: Region and Pay Grade Comparisons

- Use of any drug except marijuana/hashish follows a pattern similar to that of marijuana use. During the past 30 days and past 12 months, respectively, for E1-E5's the highest frequency of use occurred for the Army in Europe (16 and 22 percent) and the Other Pacific (15 and 22 percent); for the Navy in the Americas (13 and 23 percent); for the Marine Corps in the Americas (16 percent--30 day use) and North Pacific (22 percent--12 month use); and for the Air Force in the Other Pacific (9 and 13 percent).

Table 16. Frequency of Marijuana/Hashish Use During the Past 30 Days for E1-E5's

Region/Days of Use	Service								Total DoD	
	Army		Navy		Marine Corps		Air Force			
Americas										
None	72.0	(3.3)	82.5	(3.1)	78.5	(1.4)	84.1	(1.3)	79.3	(1.5)
1-3	11.6	(1.4)	8.4	(1.3)	8.6	(0.6)	8.1	(1.4)	9.3	(0.7)
4-10	5.8	(0.9)	3.7	(0.8)	3.9	(0.7)	2.9	(0.6)	4.1	(0.4)
11-19	3.7	(0.7)	1.6	(0.5)	3.6	(1.4)	2.2	(0.5)	2.6	(0.4)
20-30	6.8	(1.5)	3.9	(0.8)	5.4	(1.6)	2.7	(0.6)	4.6	(0.6)
North Pacific										
None	73.7	(0.3)	85.3	(0.6)	84.0	(3.2)	89.1	(0.3)	82.3	(0.8)
1-3	12.0	(1.1)	7.4	(1.1)	8.2	(1.1)	6.4	(0.7)	8.8	(0.5)
4-10	6.3	(1.2)	4.4	(0.4)	3.7	(1.0)	2.2	(0.1)	4.2	(0.5)
11-19	4.5	(0.6)	1.2	(-)	1.6	(0.5)	1.1	(0.1)	2.3	(0.2)
20-30	3.5	(1.1)	1.8	(-)	2.4	(0.7)	1.2	(0.3)	2.3	(0.4)
Other Pacific										
None	63.4	(9.7)	79.6	(2.8)	71.2	(1.9)	80.7	(1.7)	75.2	(2.7)
1-3	14.1	(1.6)	8.7	(0.9)	13.8	(1.4)	9.4	(0.1)	10.8	(0.7)
4-10	5.3	(1.4)	3.2	(0.5)	3.4	(1.3)	3.5	(0.3)	3.7	(0.5)
11-19	4.0	(2.0)	2.0	(0.4)	4.2	(0.6)	1.2	(0.6)	2.6	(0.5)
20-30	13.2	(4.7)	6.6	(1.4)	7.4	(1.4)	5.2	(0.7)	7.7	(1.3)
Europe										
None	60.8	(1.5)	87.4	(0.6)	74.9	(1.3)	88.9	(1.1)	68.1	(1.2)
1-3	13.8	(1.0)	7.0	(0.9)	19.6	(4.0)	4.9	(1.0)	11.6	(0.8)
4-10	8.0	(0.6)	2.4	(0.8)	0.0	(**)	2.9	(0.4)	6.6	(0.4)
11-19	6.2	(0.3)	1.3	(0.7)	0.0	(**)	1.2	(0.3)	4.9	(0.2)
20-30	11.2	(0.7)	1.9	(-)	5.4	(2.7)	2.1	(0.8)	8.8	(0.5)
Total Worldwide										
None	68.3	(2.1)	82.5	(2.8)	78.7	(1.2)	85.0	(1.1)	77.5	(1.2)
1-3	12.4	(0.9)	8.3	(1.2)	9.0	(0.5)	7.6	(1.1)	9.7	(0.5)
4-10	6.5	(0.6)	3.6	(0.7)	3.8	(0.6)	2.9	(0.4)	4.5	(0.3)
11-19	4.5	(0.5)	1.6	(0.4)	3.4	(1.1)	2.0	(0.4)	3.0	(0.3)
20-30	8.2	(1.0)	3.9	(0.7)	5.1	(1.3)	2.6	(0.5)	5.3	(0.5)

Note: Tabled values are percentages and represent prevalence estimates with standard errors in parentheses.

- Estimate rounds to zero.

** Informative standard error not available.

Table 17. Frequency of Any Drug Use Except Marijuana/Hashish During the Past 30 Days for E1-E5's

Region/Days of Use	Service								Total DoD	
	Army		Navy		Marine Corps		Air Force			
Americas										
None	87.3	(1.9)	87.3	(2.3)	84.5	(1.4)	92.1	(1.2)	88.2	(1.0)
1-3	7.4	(1.0)	8.1	(1.6)	9.4	(0.6)	5.0	(1.2)	7.2	(0.7)
4-10	2.8	(0.4)	2.6	(0.8)	3.2	(0.4)	1.7	(0.2)	2.5	(0.3)
11-19	1.0	(0.2)	1.0	(0.3)	1.2	(0.7)	0.3	(0.2)	0.9	(0.1)
20-30	1.5	(0.4)	1.1	(0.1)	1.7	(0.3)	0.9	(0.3)	1.2	(0.2)
North Pacific										
None	87.2	(1.2)	90.8	(0.5)	88.3	(1.6)	94.2	(1.1)	89.9	(0.7)
1-3	6.4	(0.5)	5.9	(0.8)	7.5	(0.8)	4.0	(1.0)	5.9	(0.4)
4-10	3.1	(0.9)	1.8	(0.3)	2.4	(1.1)	1.2	(0.7)	2.2	(0.5)
11-19	1.3	(0.3)	0.3	(-)	0.8	(0.2)	0.5	(0.2)	0.8	(0.1)
20-30	2.0	(0.5)	1.2	(-)	0.9	(0.3)	0.1	(0.1)	1.1	(0.2)
Other Pacific										
None	84.7	(3.7)	88.2	(2.1)	88.7	(1.6)	91.4	(1.4)	88.3	(1.3)
1-3	8.7	(2.3)	7.9	(1.6)	7.8	(2.0)	5.6	(1.0)	7.5	(0.9)
4-10	2.3	(0.7)	2.1	(0.4)	1.9	(1.2)	1.3	(0.4)	1.9	(0.3)
11-19	2.0	(1.0)	0.9	(0.4)	0.3	(0.3)	1.3	(0.8)	1.1	(0.4)
20-30	2.3	(0.4)	0.9	(0.2)	1.3	(0.4)	0.4	(-)	1.1	(0.1)
Europe										
None	83.8	(1.3)	93.6	(0.6)	100.0	(0.0)	93.9	(0.8)	86.5	(1.0)
1-3	9.1	(0.7)	4.9	(0.7)	0.0	(**)	4.0	(0.8)	7.7	(0.6)
4-10	3.3	(0.5)	0.9	(0.1)	0.0	(**)	0.9	(0.2)	2.6	(0.3)
11-19	1.4	(0.3)	0.6	(0.1)	0.0	(**)	0.5	(0.1)	1.1	(0.2)
20-30	2.5	(0.4)	0.0	(**)	0.0	(**)	0.7	(0.2)	2.0	(0.3)
Total Worldwide										
None	86.1	(1.2)	87.5	(2.0)	85.4	(1.2)	92.4	(1.0)	88.0	(0.8)
1-3	7.9	(0.7)	8.0	(1.5)	9.0	(0.5)	4.8	(0.9)	7.3	(0.5)
4-10	3.0	(0.3)	2.5	(0.7)	3.0	(0.4)	1.5	(0.2)	2.5	(0.2)
11-19	1.2	(0.2)	1.0	(0.2)	1.1	(0.6)	0.4	(0.1)	0.9	(0.1)
20-30	1.8	(0.3)	1.0	(0.1)	1.5	(0.2)	0.8	(0.2)	1.3	(0.1)

Note: Tabled values are percentages and represent prevalence estimates with standard errors in parentheses.

- Estimate rounds to zero.

** Informative standard error not available.

- During the past 30 days, 7 percent of E1-E5's used any drug except marijuana/hashish on 1-3 days; 2 percent on 4-10 days; 1 percent on 11-19 days; and 1 percent on 20-30 days (Table 17).

- E1-E5's using drugs on 11 or more of the past 30 days occurs most often for the Army (4 percent) in Europe and the Other Pacific. The other Services all show less than 3 percent use, with minor regional differences (Table 17).

Drugs Used Most Often Excluding Marijuana

- Amphetamines, cocaine, and LSD/hallucinogens are the most frequently used drugs other than marijuana.

- Levels of use of these drugs for E1-E5 personnel during the past 12 months are 10 percent for amphetamines, 9 percent for cocaine, 7 percent for LSD/hallucinogens, and 6 percent for other drugs; comparable figures for 30 days are 6 percent, 4 percent, 3 percent, and 4 percent.

Multiple Drug Use

- Single drug use is the most frequent pattern of drug use, although multiple drug use is substantial. During the past 30 days, 16 percent of E1-E5's used one drug and 9 percent used two or more (Table 18); during the past 12 months, 19 percent used one drug and 16 percent two or more.

- Multiple drug use during the past 30 days (i.e. 2 or more drugs) is somewhat more common in Europe than in other regions (11 percent versus 8 to 9 percent) and less common among Air Force personnel than other branches of the Service (Table 18); for multiple drug use during the past 12 months, there is little difference among regions (15-16 percent).

Combined Use of Drugs and Alcohol

- Individuals who use drugs may use alcohol at the same time. Overall 26 percent of E1-E5's reported using drugs and alcohol together; 25 percent combined marijuana and alcohol use, and 10 percent combined drugs other than marijuana with alcohol. The information on combined use was not placed in a time context, so it cannot be readily compared with prevalence data in Table 14.

- There is a clear relationship between the use of drugs during the past 12 months and use of larger amounts of alcohol. For E1-E5's, use of one or more drugs occurred for 8 percent of abstainers, 25 percent of infrequent-light drinkers, 30 percent of moderate drinkers, 43 percent of moderate-heavy drinkers and 60 percent of heavy drinkers.

Table 18. Number of Drugs Used During the Past 30 Days by E1-E5's

Region/Number of Drugs	Service								Total DoD	
	Army		Navy		Marine Corps		Air Force			
Americas										
1 Drug	19.8	(1.9)	11.1	(1.6)	13.5	(0.7)	13.8	(1.3)	14.7	(0.9)
2 Drugs	5.6	(1.2)	5.1	(1.2)	5.6	(0.4)	3.2	(0.5)	4.8	(0.6)
3 Drugs	2.0	(0.5)	2.1	(0.5)	3.3	(0.8)	1.2	(0.2)	2.0	(0.3)
4 or More Drugs	3.1	(0.7)	2.6	(0.4)	3.2	(-)	0.8	(0.3)	2.4	(0.3)
Total	30.4	(3.4)	20.9	(3.4)	25.6	(1.9)	19.0	(1.8)	23.8	(1.6)
North Pacific										
1 Drug	19.7	(0.4)	9.3	(1.2)	13.3	(1.5)	8.5	(0.3)	13.5	(0.4)
2 Drugs	4.9	(0.6)	4.1	(0.2)	3.9	(0.5)	2.3	(1.0)	3.8	(0.4)
3 Drugs	2.1	(0.6)	1.8	(0.3)	1.4	(0.4)	1.1	(0.2)	1.6	(0.2)
4 or More Drugs	3.2	(1.0)	1.5	(-)	2.4	(0.9)	1.0	(0.5)	2.1	(0.4)
Total	29.9	(0.4)	16.7	(1.1)	20.9	(2.0)	12.8	(0.8)	21.0	(0.6)
Other Pacific										
1 Drug	27.5	(8.1)	17.2	(1.3)	21.5	(0.6)	17.2	(2.0)	20.0	(2.0)
2 Drugs	4.8	(1.5)	4.1	(1.3)	4.3	(0.1)	3.3	(0.9)	4.1	(0.6)
3 Drugs	3.1	(0.7)	1.7	(0.5)	2.3	(0.5)	1.0	(0.7)	1.9	(0.4)
4 or More Drugs	4.6	(0.3)	1.7	(0.4)	2.9	(0.8)	1.3	(0.4)	2.4	(0.3)
Total	40.0	(10.6)	24.7	(2.9)	31.0	(2.0)	22.8	(2.6)	28.4	(2.9)
Europe										
1 Drug	27.7	(1.0)	9.8	(0.6)	25.1	(1.3)	11.2	(1.9)	23.4	(0.8)
2 Drugs	7.7	(0.8)	2.5	(0.7)	0.0	(**)	2.1	(0.2)	6.2	(0.6)
3 Drugs	2.8	(0.4)	1.3	(0.3)	0.0	(**)	0.7	(0.2)	2.2	(0.3)
4 or More Drugs	3.7	(0.6)	0.9	(0.8)	0.0	(**)	0.6	(0.1)	2.9	(0.4)
Total	41.8	(1.5)	14.5	(0.2)	25.1	(1.3)	14.6	(1.9)	34.6	(1.2)
Total Worldwide										
1 Drug	22.5	(1.2)	11.4	(1.5)	14.1	(0.5)	13.3	(1.1)	16.2	(0.7)
2 Drugs	6.2	(0.8)	5.0	(1.0)	5.2	(0.3)	3.0	(0.4)	5.0	(0.4)
3 Drugs	2.3	(0.4)	2.0	(0.5)	3.0	(0.7)	1.1	(0.2)	2.0	(0.2)
4 or More Drugs	3.3	(0.4)	2.5	(0.4)	3.0	(0.1)	0.8	(0.2)	2.4	(0.2)
Total	34.3	(2.2)	20.9	(3.1)	25.3	(1.5)	18.1	(1.4)	25.6	(1.3)

Note: Tabled values are percentages and represent prevalence estimates with standard errors in parentheses.

-Estimate rounds to zero.

**Informative standard error not available.

Demographic Characteristics of Drug Users

- The likelihood of drug use (Table 19) is greatest among those with less than a high school education (48 percent), those aged 17-20 (43 percent), those not married (37 percent), those of pay grade E1-E5 (36 percent), those on active duty 4 years or less (about 37 percent), those stationed in Europe (31 percent), and those at their present duty station 2 years or less (about 27 percent).

Table 19. Any Drug Use During Past 12 Months by Socio-Demographic Characteristics

Socio-Demographic Characteristics	Service/Drug Use Past 12 Months									
	Army		Navy		Marine Corps		Air Force		Total DoD	
	Users	Total	Users	Total	Users	Total	Users	Total	Users	Total
Sex										
Male	32.2	87.7	28.5	94.2	29.5	96.0	16.2	88.9	26.6	90.5
Female	33.2	12.3	22.6	5.8	39.3	4.0	18.4	11.1	26.7	9.5
Race/Ethnicity										
White	32.3	60.4	28.6	77.4	30.2	72.3	15.8	78.2	25.9	71.0
Black	33.4	24.9	30.0	10.7	27.8	14.7	17.7	12.8	29.0	16.8
Hispanic	32.3	9.2	29.3	5.5	30.6	9.1	21.9	4.9	29.5	7.0
Other	27.1	5.5	18.2	6.4	29.8	3.9	17.9	4.1	22.3	5.2
Education										
Less than high school graduate	50.9	5.3	41.4	4.3	55.5	4.8	42.3	0.7	48.0	3.7
High school graduate or GED	39.4	50.4	31.6	56.0	30.5	58.0	24.4	33.3	33.0	47.8
Beyond high school, no 4 year degree	26.3	30.5	26.7	29.5	29.4	27.4	17.0	42.6	23.3	33.3
College graduate or higher	12.8	13.8	2.9	10.3	14.7	9.8	3.1	23.4	7.9	15.2
Age										
17-20	51.6	23.4	38.2	31.3	38.9	30.8	36.1	12.2	42.9	23.0
21-24	40.5	31.4	37.8	29.3	36.9	39.4	26.8	27.6	35.9	30.5
25-30	23.9	25.3	21.3	19.6	16.4	18.5	12.6	25.4	19.3	23.2
31 or older	7.6	19.9	4.7	19.8	2.8	11.4	4.0	34.7	5.2	23.3
Marital/Accompaniment Status										
Not married	43.9	49.6	37.4	59.0	36.8	56.8	26.4	36.3	37.4	49.0
Married, spouse not present at duty station	26.8	9.1	22.5	7.4	28.8	6.0	16.5	3.7	24.2	6.9
Married, spouse present at duty station	19.7	41.3	13.1	33.6	19.5	37.2	10.3	60.0	14.8	44.1
Pay Grade										
E1-E5	41.7	70.5	36.3	74.1	36.8	78.3	24.7	61.5	35.5	69.6
E6-E9	12.2	17.4	5.3	17.3	4.5	13.0	3.5	18.3	7.2	17.2
W1-W4	5.9	2.3	0.0	0.4	+	+	*	*	5.1	1.0
O1-O3	8.3	7.4	5.3	5.4	6.9	6.2	3.4	12.4	5.6	8.2
O4-O6	2.3	2.4	1.3	2.8	0.7	1.9	1.5	7.7	1.6	4.0
Time on Active Duty										
1 year or less	40.3	16.6	32.8	28.0	36.7	12.9	25.4	6.9	34.9	16.6
>1 to 2 years	48.2	16.8	45.4	12.2	38.8	20.2	29.5	12.7	41.9	14.7
>2 to 3 years	43.7	13.4	37.6	11.1	34.0	16.5	28.8	10.4	37.5	12.2
>3 to 4 years	36.8	7.2	37.3	7.4	40.5	13.0	24.9	8.5	34.0	8.2
>4 to 9 years	27.0	27.9	26.1	22.3	23.1	23.1	15.4	26.3	23.1	25.5
10 years or more	8.4	18.1	3.5	19.0	7.6	14.3	4.9	35.2	5.7	22.8

(continued)

Table 19 (continued)

Socio-Demographic Characteristics	Service/Drug Use Past 12 Months									
	Army		Navy		Marine Corps		Air Force		Total DoD	
	Users	Total	Users	Total	Users	Total	Users	Total	Users	Total
Region										
Americas	29.9	63.5	29.1	88.8	29.7	79.6	16.4	78.3	25.7	75.9
North Pacific	28.9	4.3	21.5	2.7	29.7	12.8	16.0	4.6	24.4	4.7
Other Pacific	31.8	2.3	23.0	6.0	34.6	6.4	19.7	3.4	25.7	4.0
Europe	38.0	29.9	14.4	2.4	20.2	1.2	15.6	13.7	31.3	15.4
Time at Present Duty Station										
6 months or less	32.8	30.0	28.2	40.7	32.6	23.8	17.7	20.2	28.2	29.6
7 to 12 months	35.8	27.4	31.3	17.7	30.0	27.7	21.4	16.5	31.1	21.8
>1 to 2 years	34.0	25.4	29.8	24.6	30.0	26.3	17.5	28.5	27.5	26.1
>2 to 3 years	26.6	12.1	21.7	12.6	27.5	13.3	16.8	16.9	22.1	13.7
More than 3 years	15.9	5.1	24.4	4.4	25.2	8.9	8.3	17.9	13.5	8.8
Total	32.3	-	28.1	-	29.9	-	16.4	-	26.5	100.0

Note: For each Service, values under the "Total" heading are column percentages showing the distribution across each characteristic within that Service. The values under the "Users" heading are row percentages showing the proportion of persons with each row's characteristic who also used drugs during the past 12 months.

+Less than 20 respondents.

*Not applicable.

4. NEGATIVE EFFECTS OF ALCOHOL AND NONMEDICAL DRUG USE

The use of alcohol and drugs by military personnel results in varying degrees of negative consequences. These include work impairment, physical damage, the disruption of social relationships, and other consequences such as participation in detoxification, rehabilitation, or treatment programs. These negative effects may arise from dependence on alcohol and drugs or may be experienced without such dependence. In either case these negative effects are highly disruptive of the health, social life, and work performance of military personnel. Measures of negative effects are of three types: serious consequences arising from incidents associated with alcohol use and drug use; dependence on alcohol or drugs; and alcohol use problems.

Alcohol Use

Negative effects associated with alcohol use are evident among all Services and are closely associated with the level of alcohol consumption.

Serious Consequences of Alcohol Use.

- During the past 12 months, 18 percent of all military personnel experienced one or more serious consequences of alcohol use (Table 20). Prevalence rates are higher among the Marine Corps (23 percent), Navy (21 percent), and Army (19 percent) than among the Air Force (11 percent).

- There was little difference in the percentages of incidents involving social disruption (11 percent), physical damage (10 percent), and work impairment (9 percent). "Other consequences" (7 percent) occurred least often (Table 20).

- Loss of productivity associated with alcohol use during the past year was 34 percent for Total DoD (Table 21).

- Lowered performance (30 percent) is the most frequently mentioned indicator of productivity loss (Table 21).

- Among pay grades, productivity loss due to alcohol (Table 21) is highest among E1-E5's (40 percent) but is also reported by substantial segments of other pay grades (19 to 22 percent). Among Services, the loss is highest in the Navy (42 percent) and Marines (38 percent) and lowest in the Army (33 percent) and Air Force (28 percent).

- The occurrence of serious consequences is positively related to the average daily consumption of ethanol. The percentage who experience one or more consequences increases as average daily ethanol volume increases (Table 22).

Table 20. Serious Consequences of Alcohol Use During the Past 12 Months

Consequences	Service								Total DoD	
	Army		Navy		Marine Corps		Air Force			
Work Impairment										
Received UCMJ punishment[b]	3.7	(0.5)	3.3	(0.6)	4.2	(1.0)	1.8	(0.4)	3.1	(0.3)
Lower performance rating[b]	2.7	(0.3)	2.8	(0.4)	4.6	(0.7)	1.3	(0.3)	2.5	(0.2)
Loss of 3 or more working days	7.2	(0.6)	8.5	(0.8)	6.9	(2.0)	3.4	(0.4)	6.4	(0.4)
Total with any work impairment	10.2	(0.8)	10.6	(0.9)	11.2	(2.0)	5.0	(0.6)	8.9	(0.4)
Physical Damage										
Illness kept from duty 1 week or longer	1.9	(0.3)	0.9	(0.1)	1.2	(0.5)	0.5	(0.1)	1.2	(0.1)
Hospitalized for 2 or more days	0.7	(0.1)	0.7	(0.2)	1.1	(0.1)	0.4	(0.1)	0.7	(0.1)
Visited physician 2 or more times	0.7	(0.2)	1.1	(0.1)	0.5	(0.3)	0.4	(0.1)	0.7	(0.1)
Hurt in accident[b]	2.9	(0.2)	3.5	(0.4)	3.4	(0.1)	1.5	(0.3)	2.7	(0.2)
Had accident causing injury to others or property damage[b]	2.7	(0.3)	3.0	(0.2)	1.7	(0.3)	1.3	(0.3)	2.3	(0.1)
Total with any physical damage	11.7	(0.9)	12.9	(1.3)	9.6	(0.9)	5.5	(0.5)	10.1	(0.5)
Social Disruption										
Spouse left[b]	1.4	(0.2)	0.7	(0.1)	0.8	(0.1)	0.5	(0.1)	0.9	(0.1)
Spouse threatened to leave[b]	3.1	(0.3)	1.9	(0.4)	2.0	(0.5)	1.8	(0.2)	2.3	(0.2)
Arrested for driving under the influence[b]	3.7	(0.4)	3.1	(0.5)	4.9	(1.0)	2.2	(0.3)	3.2	(0.2)
Arrested for nondriving drinking incident[b]	1.9	(0.5)	3.0	(0.3)	3.2	(0.5)	1.4	(0.2)	2.6	(0.2)
Incarcerated[b]	3.3	(0.4)	3.3	(0.5)	4.3	(0.2)	1.5	(0.1)	2.9	(0.2)
Fights	5.5	(0.6)	7.0	(0.6)	7.3	(0.6)	2.1	(0.2)	5.1	(0.3)
Total with any social disruption	11.6	(1.1)	12.6	(1.1)	14.3	(1.1)	6.3	(0.6)	10.6	(0.5)
Total with one or more of above consequences[a]	18.1	(1.1)	20.4	(1.5)	21.5	(1.0)	10.0	(1.0)	16.8	(0.6)
Other Consequences										
Did not get promoted[b]	2.5	(0.3)	1.3	(0.2)	2.9	(0.3)	0.7	(0.2)	1.7	(0.1)
Detoxified	1.2	(0.2)	1.4	(0.1)	0.6	(-)	0.4	(0.1)	1.0	(0.1)
Hit spouse or children[b]	3.8	(0.4)	2.7	(0.4)	2.3	(0.2)	1.8	(0.3)	2.8	(0.2)
Entered rehabilitation or treatment program[b]	3.9	(0.4)	4.0	(0.4)	6.0	(0.8)	2.4	(0.5)	3.7	(0.2)
Total with any "other consequences"	8.1	(0.7)	7.2	(0.9)	9.6	(1.1)	4.3	(0.6)	6.9	(0.4)
Total with one or more of any consequences listed above	19.3	(1.1)	21.3	(1.5)	23.2	(0.8)	10.6	(1.0)	17.7	(0.6)
Total with one or more of consequences listed included in Burt and Biegel (1980)[c]	15.2	(1.1)	15.3	(1.5)	17.6	(1.8)	8.7	(1.1)	13.6	(0.6)

Note: Tabled values are percentages and represent prevalence estimates with standard errors in parentheses.

[a]All items were included in the Rand Air Force Study (Polich and Orvis, 1979).

[b]Items included in 1980 DoD study (Burt and Biegel, 1980).

[c]All items are from the 1980 study. "I attended a special training or education program because of a problem related to my drinking" was excluded from the 1982 study. Because those who might respond positively to this "special training or education" item are highly likely to have responded positively to other items, the effect on the total scores for the 1980 and 1982 surveys is probably insignificant.

-Estimate rounds to zero.

Table 21. Loss of Productivity Because of Alcohol Use During the Past 12 Months

Productivity Item/ Pay Grade	Service								Total DoD	
	Army		Navy		Marine Corps		Air Force			
Lowered Performance										
E1-E5	31.9	(1.1)	41.8	(2.7)	35.9	(2.0)	28.4	(1.8)	34.2	(0.9)
E6-E9	16.3	(1.3)	23.4	(0.7)	16.7	(3.4)	17.6	(1.4)	18.6	(0.7)
W1-W4	14.4	(3.4)	19.3	(11.0)	+	(+)	*	(*)	16.5	(3.9)
O1-O3	18.8	(3.6)	26.5	(4.4)	20.2	(4.0)	20.6	(2.9)	21.0	(1.9)
O4-O6	19.0	(2.7)	23.1	(3.3)	31.8	(8.0)	16.6	(1.7)	19.1	(1.4)
Total	27.5	(0.8)	37.2	(2.1)	32.5	(1.3)	24.5	(1.6)	29.7	(0.7)
Late for Work or Left Work Early										
E1-E5	18.8	(1.3)	20.7	(2.2)	18.5	(1.6)	16.3	(1.0)	18.7	(0.8)
E6-E9	10.1	(1.0)	8.5	(1.1)	8.5	(1.6)	8.0	(1.1)	9.0	(0.6)
W1-W4	4.1	(1.1)	1.6	(1.4)	+	(+)	*	(*)	3.8	(0.9)
O1-O3	9.0	(1.4)	6.3	(2.2)	11.2	(6.2)	7.7	(1.0)	8.1	(0.8)
O4-O6	6.6	(3.6)	4.0	(1.2)	2.5	(2.0)	2.9	(0.7)	3.9	(1.0)
Total	15.9	(1.0)	17.2	(1.4)	16.4	(0.7)	12.7	(1.0)	15.4	(0.6)
Did Not Come to Work										
E1-E5	7.3	(0.6)	6.1	(0.7)	4.3	(0.9)	3.5	(0.5)	5.7	(0.3)
E6-E9	2.8	(0.8)	1.1	(0.5)	2.5	(0.3)	0.9	(0.3)	1.7	(0.4)
W1-W4	0.4	(0.4)	0.0	(**)	+	(+)	*	(*)	0.4	(0.4)
O1-O3	1.0	(0.6)	0.3	(0.2)	3.0	(4.0)	1.4	(0.4)	1.2	(0.3)
O4-O6	2.2	(1.3)	0.7	(0.4)	0.0	(**)	0.1	(0.1)	0.6	(0.3)
Total	5.8	(0.5)	4.7	(0.7)	3.9	(1.0)	2.4	(0.4)	4.4	(0.3)
Drunk or High While Working										
E1-E5	16.0	(1.1)	18.2	(1.6)	14.4	(1.6)	8.4	(1.1)	14.6	(0.6)
E6-E9	4.9	(0.9)	4.3	(1.2)	5.3	(0.5)	3.1	(0.6)	4.2	(0.5)
W1-W4	0.9	(0.7)	1.2	(1.2)	+	(+)	*	(*)	0.9	(0.6)
O1-O3	1.6	(0.7)	2.7	(0.9)	0.7	(0.4)	3.0	(0.8)	2.3	(0.4)
O4-O6	3.0	(1.5)	3.9	(2.5)	2.0	(1.9)	0.5	(0.3)	1.8	(0.6)
Total	12.4	(0.9)	14.5	(1.3)	12.1	(1.8)	6.2	(0.9)	11.2	(0.5)
Total With Any Productivity Loss										
E1-E5	38.6	(1.1)	47.4	(2.5)	41.6	(2.4)	33.2	(1.7)	40.1	(0.9)
E6-E9	20.3	(1.7)	25.3	(0.8)	20.8	(2.3)	19.3	(1.7)	21.4	(0.8)
W1-W4	16.6	(3.6)	19.3	(11.0)	+	(+)	*	(*)	18.5	(3.9)
O1-O3	19.9	(3.7)	27.7	(4.3)	23.4	(8.0)	21.5	(2.8)	22.2	(1.9)
O4-O6	19.3	(2.7)	23.3	(3.3)	31.8	(8.0)	16.9	(1.7)	19.3	(1.4)
Total	33.1	(0.8)	41.7	(1.8)	37.6	(1.2)	28.0	(1.7)	34.4	(0.7)

Note: Tabled values are percentages and represent prevalence estimates with standard errors in parentheses.

+Less than 20 respondents.

*Not applicable.

**Informative standard error not available.

Table 30. Comparison of Diminished Work Performance Because of Alcohol Use During the Past 12 Months for 1980 and 1982 Worldwide Surveys

Pay Grade/Survey	Service				
	Army	Navy	Marine Corps	Air Force	Total DoD
E1-E5					
1980 Survey	29	40	38	24	31
1982 Survey	38.6 (1.1)	47.4 (2.5)	41.6 (2.4)	33.2 (1.7)	40.1 (0.9)
t_q	5.65[a]	1.95	0.99	3.69[a]	6.70[a]
E6-E9					
1980 Survey	16	25	25	16	19
1982 Survey	20.3 (1.7)	25.3 (0.8)	20.8 (2.3)	19.3 (1.7)	21.4 (0.8)
t_q	1.66	0.24	-1.16	1.31	1.97
W1-W4					
1980 Survey	4	12	+	*	9
1982 Survey	16.6 (3.6)	19.3 (11.0)	+ (+)	* (*)	18.5 (3.9)
t_q	2.91[a]	0.48	*	*	1.83
O1-O3					
1980 Survey	15	29	21	12	17
1982 Survey	19.9 (3.7)	27.7 (4.3)	23.4 (8.0)	21.5 (2.8)	22.2 (1.9)
t_q	0.88	-0.20	0.20	2.48[a]	1.86
O4-O6					
1980 Survey	7	14	15	15	12
1982 Survey	19.3 (2.7)	23.3 (3.3)	31.8 (8.0)	16.9 (1.7)	19.3 (1.4)
t_q	3.53[a]	2.04[a]	1.58	0.74	3.71[a]
Total					
1980 Survey	24	35	34	20	27
1982 Survey	33.1 (0.8)	41.7 (1.8)	37.6 (1.2)	28.0 (1.7)	34.4 (0.7)
t_q	7.48[a]	2.47[a]	2.00[a]	3.24[a]	7.04[a]

Note: Data are percentages who report one or more occurrences due to alcohol of lowered work performance, coming late to work or leaving early, not coming to work, or being drunk or high at work. Tabled values represent prevalence estimates with standard errors in parentheses. The 1980 data are taken from Burt and Biegel (1980), Tables IV-87 - IV-92. Statistical significance is evaluated by a quasi t statistic, t_q. Details of the computation of this t test are contained in the main report.

[a] $p < .05$

* Not applicable.

+ Less than 20 respondents

Table 29. Comparison of Alcohol Use Events, Alcohol Dependence, and Alcohol Use Consequences Among E1-E5's for 1980 and 1982 Worldwide Surveys

Item/Survey	Service				
	Army	Navy	Marine Corps	Air Force	Total DoD
Became Drunk Without Planning To					
1980 Survey	16	25	23	18	20
1982 Survey	35.9 (0.9)	44.8 (1.4)	40.9 (0.6)	33.4 (1.7)	38.0 (0.7)
t_q	15.65[a]	9.95[a]	20.98[a]	6.46[a]	18.13[a]
Drunk More than One Day at a Time					
1980 Survey	10	16	16	6	11
1982 Survey	16.1 (1.2)	17.8 (1.3)	18.5 (0.9)	8.3 (0.8)	14.6 (0.6)
t_q	3.48[a]	0.93	1.85	1.99[a]	4.07[a]
Alcohol Dependence[b]					
1980 Survey	8	9	11	4	7
1982 Survey	10.5 (0.8)	11.6 (1.0)	10.3 (1.8)	4.0 (0.7)	9.0 (0.5)
t_q	2.05[a]	1.81	- .25	0.0	2.71[a]
One or More Consequences of Alcohol Use					
1980 Survey	11	14	17	6	11
1982 Survey	15.2 (1.1)	15.3 (1.5)	17.6 (1.8)	8.7 (1.1)	13.6 (0.6)
t_q	2.52[a]	0.58	0.22	1.72	2.90[a]

Note: Tabled values for the surveys are percentages and represent prevalence estimates. Standard errors for the 1982 survey are shown in parentheses. The 1980 data were taken from Burt and Biegel (1980), Tables II-12, II-13, II-14. Statistical significance is evaluated by a quasi t statistic t_q. Details of the computation of this test are contained in the main report.

[a] $p<.05$

[b] The computation of alcohol dependence may have differed slightly between 1980 and 1982. The 1982 computation followed that of Polich and Orvis (1979) in using five items as indicators of symptoms of blackouts, tremors (shakes), impaired control, and morning drinking. For the 1980 computation, Burt and Biegel (1980, p. 248) indicate that they followed the Polich and Orvis definition, but they only mention four items in their discussion of the dependence measure. The unmentioned item deals with tremors. If the omission occurred, its effect would be a slight underestimate of dependence in 1980.

- There were highly significant increases in 1982 of the percentage of personnel who reported becoming drunk without planning to during the past 12 months. The pattern held for Total DoD (20 to 38 percent) and for each of the Services (Table 29).

- There was a significant increase in the percentages who reported staying drunk more than one day at a time (11 to 15 percent for Total DoD). The pattern was in the same direction for all of the Services although only the Army and the Air Force showed significant increases over 1980 (Table 29).

- There was an apparent significant increase from 7 percent to 9 percent in the occurrence of alcohol dependence. A possible item omission in the computation of dependence may have produced slight underestimates of the problem in 1980 (Table 29).

- The percentage experiencing serious consequences due to alcohol use increased significantly (11 to 14 percent for Total DoD). There was a pattern of more consequences for all Services (Table 29), but only the Army showed a significant increase (11 to 15 percent).

- Overall military personnel in 1982 were significantly more likely to have become drunk, to have stayed drunk, or to have experienced one or more consequences of their drinking.

- There was a significant increase in the percentage of personnel who experienced diminished work performance because of alcohol use in 1982. The pattern was consistent for Total DoD (27 to 34 percent) and for each of the Services (Table 30). Pay grades E1-E5's (31 to 40 percent) and 04-06's (12 to 19 percent) both showed significant increases over 1980.

Drug Use

- Overall drug use had declined significantly in 1982. For Total DoD, the percentage using any drug changed from 27 percent in 1980 to 19 percent.

- The decline in drug use is primarily attributable to the decline in use among E1-E5 personnel (38 to 26 percent). In this pay grade group, all Services showed a decreasing pattern of use, although only the Navy and Marine Corps achieved statistically significant reductions (Table 31).

- Although the general pattern of drug use was lower in 1982 than in 1980, E6-E9's in the Army experienced a significant increase in 1982 from 6 percent to 9 percent (Table 31).

- There was a significant decline in marijuana use during the past 30 days for all military personnel from 26 percent to 16 percent. Much of the decrease seems to be accounted for by the significant decrease in use observed among E1-E5 personnel from 37 percent to 22 percent (Table 32).

Table 28. Comparison of Mean Daily Consumption of Ethanol During the Past 12 Months for 1980 and 1982 Worldwide Surveys

Ounces of Ethanol/Survey	Service								Total DoD	
	Army		Navy		Marine Corps		Air Force			
None										
1980 Survey	15		10		10		15		13	
1982 Survey	11.4	(0.5)	10.3	(1.4)	13.4	(2.1)	12.5	(0.6)	11.6	(0.5)
t_q	-4.15[a]		0.14		1.14		-2.57[a]		-1.74	
>0.0-0.4										
1980 Survey	35		34		31		44		37	
1982 Survey	35.6	(1.1)	32.2	(1.1)	31.9	(1.6)	42.5	(1.5)	36.3	(0.7)
t_q	0.34		-1.06		0.37		-0.64		-0.64	
0.5-1.9										
1980 Survey	25		29		28		26		26	
1982 Survey	28.9	(0.6)	30.0	(0.8)	30.9	(0.2)	30.2	(0.5)	29.7	(0.3)
t_q	4.15[a]		0.82		9.69[a]		5.57[a]		8.09[a]	
2.0-3.4										
1980 Survey	9		12		12		7		10	
1982 Survey	10.2	(0.5)	12.2	(0.6)	11.8	(1.2)	8.2	(0.7)	10.3	(0.3)
t_q	1.54		0.22		-0.11		1.15		0.65	
3.5-4.9										
1980 Survey	6		5		7		4		5	
1982 Survey	5.8	(0.3)	6.8	(0.7)	6.2	(0.6)	3.5	(0.4)	5.5	(0.3)
t_q	-0.41		1.81		-0.85		-0.78		1.10	
5.0 or More										
1980 Survey	10		10		12		4		9	
1982 Survey	8.2	(0.8)	8.5	(1.1)	5.8	(1.4)	3.2	(0.4)	6.7	(0.4)
t_q	-1.32		-0.85		-2.35[a]		-1.21		-3.39[a]	

Note: Tabled values for the surveys are percentages and represent prevalence estimates. Standard errors for the 1982 survey are shown in parentheses. 1980 data are taken from Burt and Biegel (1980), Table IV-70. Statistical significance is evaluated by a quasi t statistic, t_q. Details of the computation of this t test are contained in the main report.

[a] $p<.05$

5. SELECTED COMPARISONS WITH MILITARY AND CIVILIAN POPULATIONS

Understanding the extent of drug and alcohol use in the military requires comparison of the current survey to other studies of military and civilian populations. This chapter makes selected comparisons to two other surveys. The first is the 1980 Worldwide Survey (Burt and Biegel, 1980) on which this study is based. The second is the national civilian household survey conducted by the National Institute on Drug Abuse in 1982 (Miller, Cisin, Gardner-Keaton, Harrell, Wirtz, Abelson, and Fishburne, 1983).

Selected Comparisons with the 1980 Worldwide Survey

Estimates of drug and alcohol use are available for both 1980 and 1982 Worldwide Surveys. However, methodological differences between the surveys (in the questionnaires, the sampling methodology and the field procedures) suggest that caution must be exercised in drawing inferences between the two studies. Despite differences, they are not so serious as to preclude comparisons. The large numbers of personnel surveyed in 1980 and 1982 combined with the similarities of the questionnaire, sample design and procedures offer some measure of robustness to the estimates and suggest that tentative conclusions about levels of use in 1980 and 1982 can be drawn. However, much less can be stated about the reasons for any observed changes. They may be due to a broad range of factors such as shifts in drug enforcement policies, availability, or changes in the level of commitment to use.

Alcohol Use.

- Changes in alcohol use between 1980 and 1982 are apparent by comparing average daily ounces of ethanol consumed during the past 12 months.

- The percentage of total military personnel using .5-1.9 ounces a day increased significantly from 26 to 30 percent (Table 28).

- The percentage of total military personnel using 5 or more ounces a day decreased significantly from 9 percent to 7 percent (Table 28).

- For the Army and the Air Force, the percentage of abstainers decreased significantly (15 to 11 percent, 15 to 13 percent), and the percentage of personnel using .5 to 1.9 ounces increased significantly (25 to 29 percent, 26 to 30 percent). For the Marine Corps the percentage using .5 to 1.9 ounces increased significantly (28 to 31 percent), and the percentage using 5 or more ounces decreased significantly (12 to 6 percent). The Navy showed no significant differences for any of the levels of consumption (Table 28).

- Overall the trend is for an increase in the proportion of more moderate drinkers and a decrease in the proportion of the heaviest drinkers (Table 28).

Table 27. Loss of Productivity Because of Drug Use During the Past 12 Months for E1-E5's

Productivity Item	Service								Total DoD	
	Army		Navy		Marine Corps		Air Force			
Lowered Performance	8.3	(0.9)	7.9	(0.5)	5.9	(0.2)	3.1	(0.4)	6.7	(0.4)
Late for Work/Left Work Early	5.2	(0.5)	4.0	(0.5)	3.4	(0.5)	2.0	(0.2)	3.9	(0.2)
Did Not Come to Work	2.3	(0.3)	1.8	(0.5)	1.4	(0.4)	0.4	(0.1)	1.6	(0.2)
High While Working	15.2	(1.4)	12.9	(0.9)	10.3	(0.5)	5.9	(0.3)	11.8	(0.6)
Total With Any Productivity Loss	17.8	(1.5)	15.1	(0.8)	11.3	(0.6)	7.0	(0.4)	13.7	(0.6)

Note: Tabled values are percentages and represent prevalence estimates with standard errors in parentheses.

Table 26. Serious Consequences of Drug Use During the Past 12 Months for E1-E5's

Consequences	Service								Total DoD	
	Army		Navy		Marine Corps		Air Force			
Work Impairment										
Received UCMJ punishment[b]	3.4	(0.4)	3.6	(0.9)	3.2	(0.8)	1.5	(0.2)	2.9	(0.3)
Lower performance rating[b]	1.8	(0.3)	2.4	(0.4)	3.5	(0.5)	0.8	(0.1)	1.9	(0.2)
Loss of 3 or more working days	7.4	(0.7)	6.2	(0.5)	5.2	(0.9)	1.9	(0.4)	5.5	(0.3)
Total with any work impairment	9.7	(0.9)	9.0	(1.1)	8.0	(1.3)	3.3	(0.4)	7.7	(0.5)
Physical Damage										
Illness kept from duty 1 week or longer	1.4	(0.3)	0.8	(0.1)	0.7	(0.2)	0.2	(0.1)	0.9	(0.1)
Hospitalized for 2 or more days	0.6	(0.2)	0.4	(0.1)	0.7	(0.2)	0.1	(0.1)	0.4	(0.1)
Visited physician 2 or more times	0.7	(0.1)	0.4	(0.2)	0.4	(0.3)	0.1	(**)	(0.4	(0.1)
Hurt in accident[b]	1.3	(0.2)	0.8	(0.2)	0.6	(0.4)	0.3	(0.1)	0.9	(0.1)
Had accident causing injury to others or property damage[b]	1.3	(0.3)	0.9	(0.2)	0.6	(0.4)	0.3	(0.1)	0.9	(0.1)
Total with any physical damage	2.8	(0.4)	2.1	(0.2)	1.8	(0.4)	0.5	(0.1)	1.9	(0.2)
Social Disruption										
Spouse left[b]	0.9	(0.1)	0.6	(0.1)	0.4	(0.2)	0.1	(0.1)	0.6	(0.1)
Spouse threatened to leave[b]	1.5	(0.2)	0.8	(0.1)	0.6	(0.3)	0.2	(0.1)	0.9	(0.1)
Arrested for driving under the influence[b]	1.1	(0.2)	0.3	(0.1)	0.4	(0.2)	0.1	(0.1)	0.6	(0.1)
Arrested for nondriving drinking incident[b]	2.2	(0.4)	1.3	(0.2)	1.3	(0.3)	0.6	(0.1)	1.5	(0.2)
Incarcerated[b]	1.6	(0.2)	0.7	(0.2)	0.9	(0.2)	0.2	(0.1)	0.9	(0.1)
Fights	0.0	(**)	0.0	(**)	0.0	(**)	0.0	(**)	0.0	(**)
Total with any social disruption	3.9	(0.4)	2.5	(0.3)	3.1	(0.6)	1.1	(0.1)	2.7	(0.2)
Total with one or more of above consequences[a]	11.2	(1.1)	10.5	(1.0)	10.0	(0.9)	3.7	(0.4)	9.0	(0.5)
Other Consequences										
Did not get promoted[b]	2.8	(0.3)	2.2	(0.6)	2.5	(0.6)	0.8	(0.2)	2.1	(0.2)
Detoxified	1.0	(0.1)	0.7	(0.2)	0.4	(0.2)	0.1	(0.1)	0.6	(0.1)
Hit spouse or children[b]	1.7	(0.2)	1.0	(0.3)	0.8	(0.5)	0.3	(0.1)	1.1	(0.1)
Entered rehabilitation or treatment program[b]	3.4	(0.5)	2.4	(0.6)	1.9	(0.8)	1.5	(0.2)	2.5	(0.3)
Total with any "other consequences"	5.8	(0.6)	4.7	(0.9)	4.4	(0.5)	2.1	(0.2)	4.4	(0.4)
Total with one or more of any consequences listed above	12.5	(1.0)	11.5	(0.9)	10.8	(1.0)	4.3	(0.3)	9.9	(0.5)
Total with one or more of consequences listed included in Burt and Biegel (1980)[c]	9.5	(1.0)	9.3	(1.4)	8.5	(0.3)	4.3	(0.6)	8.1	(0.6)

Note: Tabled values are percentages and represent prevalence estimates with standard errors in parentheses.

[a]All items were included in the Rand Air Force Study (Polich and Orvis, 1979).

[b]Items included in 1980 DoD study (Burt and Biegel, 1980).

[c]All items are from the 1980 study. "I attended a special training or education program because of my use of drugs" was excluded from the 1982 study. Because those who might respond positively to this "special training or education" item are highly likely to have responded positively to other items, the effect on the total scores for the 1980 and 1982 surveys is probably insignificant.

**Informative standard error not available.

Serious Consequences of Drug Use

- During the past 12 months, 10 percent of E1-E5 personnel experienced one or more serious consequences of drug use (Table 26). Prevalence is higher in the Army (13 percent), the Navy (12 percent) and Marine Corps (11 percent) than in the Air Force (4 percent).

- The prevalence of serious consequences (Table 26) of drug use is higher for work impairment (8 percent) than for physical damage (2 percent), social disruption (3 percent) or other consequences (4 percent).

- Loss of productivity associated with drug use among E1-E5 personnel during the past year was 14 percent. High while working (12 percent) is the most frequently mentioned indicator of productivity loss (Table 27).

- The occurrence of serious consequences of drug use for E1-E5's is positively related to the number of drugs used. The percentage who experience one or more consequences increases as the number of drugs used increases.

- Increases in the frequency of use of marijuana by E1-E5's during the past 30 days are accompanied by increasing numbers who experience serious consequences.

Drug Dependence.

- The prevalence of drug dependence among E1-E5 personnel is 2 percent overall. The Army, Navy, and Marine Corps report 2 percent dependence and the Air Force reports 1 percent. Drug dependence was defined as the occurrence of any of the following: use of heroin, other opiates, barbiturates or other sedatives 5 or more times/week; detoxified because of drug use; experienced withdrawal type symptoms (nausea, stomach cramps) after stopping use of drugs.

- Drug dependence among E1-E5 personnel is positively related to the number of serious consequences. The percentage who experience serious consequences increases as the number of drugs used increases.

Table 25 (continued)

Socio-Demographic Characteristic	Service/Alcohol Use Problems									
	Army		Navy		Marine Corps		Air Force		Total DoD	
	Adverse Effects or Dependent	Total	Adverse Effects or Dependent	Total	Adverse Effects or Dependent	Total	Adverse Effects or Dependent	Total	Adverse Effects or Dependent	Total
Region										
Americas	20.8	63.7	27.5	88.8	25.9	79.4	12.8	78.3	21.1	75.9
North Pacific	31.1	4.3	29.0	2.7	34.1	12.8	19.9	4.6	28.4	4.7
Other Pacific	21.8	2.2	23.7	6.0	36.4	6.5	14.9	3.4	23.0	4.0
Europe	31.9	29.8	19.1	2.5	27.5	1.2	15.5	13.7	27.2	15.4
Time at Present Duty Station										
6 months or less	22.5	30.0	26.8	40.7	26.5	23.9	13.9	20.2	22.7	29.6
7 to 12 months	28.1	27.4	26.6	17.5	28.3	28.2	16.6	16.5	25.3	21.8
>1 to 2 years	25.7	25.3	28.0	24.6	29.7	26.0	15.9	28.4	23.6	26.0
>2 to 3 years	22.9	12.2	27.8	12.7	25.1	13.2	11.0	16.9	20.2	13.7
More than 3 years	17.1	5.2	24.5	4.5	26.6	8.7	9.2	17.9	14.5	8.9
Total	24.6	-	27.1	-	27.7	-	13.6	-	22.5	100.0

Note: For each Service, values under the "Total" heading are column percentages showing the distribution across each characteristic within that Service. Values under the "Adverse Effects or Dependent" heading are row percentages showing the proportion of persons with each row's characteristic who also have experienced problems due to alcohol use.

*Not applicable.

Table 25. Alcohol Use Problems by Socio-Demographic Characteristics

Socio-Demographic Characteristic	Service/Alcohol Use Problems									
	Army		Navy		Marine Corps		Air Force		Total DoD	
	Adverse Effects or Dependent	Total	Adverse Effects or Dependent	Total	Adverse Effects or Dependent	Total	Adverse Effects or Dependent	Total	Adverse Effects or Dependent	Total
Sex										
Male	26.3	87.9	27.8	94.3	27.8	96.1	14.4	88.9	23.6	90.6
Female	12.6	12.1	15.0	5.7	25.6	3.9	7.1	11.1	11.6	9.4
Race/Ethnicity										
White	25.3	60.8	28.4	77.6	30.6	72.3	13.0	78.3	22.9	71.2
Black	21.7	24.6	22.7	10.5	16.8	14.6	15.5	12.7	20.2	16.6
Hispanic	26.5	9.1	29.2	5.5	20.2	9.1	17.8	4.9	24.6	6.9
Other	27.2	5.5	16.4	6.4	31.3	3.9	14.0	4.1	21.0	5.2
Education										
Less than high school graduate	46.4	5.2	47.4	4.3	53.5	5.0	35.0	0.7	47.0	3.7
High school graduate or GED	31.4	50.9	31.1	56.3	28.9	57.9	19.5	33.6	28.7	48.1
Beyond high school, no 4 year degree	17.0	30.3	22.5	29.3	24.6	27.5	13.8	42.5	17.7	33.2
College graduate or higher	7.9	13.7	9.7	10.2	15.6	9.6	4.0	23.3	7.0	15.0
Age										
17-20	35.1	23.3	35.4	31.0	33.5	30.9	25.4	12.3	33.6	23.0
21-24	27.5	31.4	34.8	29.5	12.7	39.6	19.8	27.6	27.9	30.6
25-30	21.4	25.2	19.6	19.7	18.7	18.1	9.8	25.5	17.2	23.2
31 or older	12.0	20.1	10.2	19.8	10.9	11.3	7.2	34.6	9.6	23.3
Marital/Accompaniment Status										
Not married	32.6	49.5	34.7	58.9	36.0	57.0	22.6	36.4	31.6	49.0
Married, spouse not present at duty station	25.3	9.2	26.0	7.4	31.0	6.0	18.8	3.7	25.0	6.9
Married, spouse present at duty station	14.8	41.3	14.0	33.7	14.2	36.9	7.8	59.9	11.9	44.1
Pay Grade										
E1-E5	29.9	70.5	33.1	74.0	32.3	78.5	18.3	61.7	28.2	69.7
E6-E9	16.9	17.4	12.1	17.5	12.9	13.0	8.1	18.2	12.7	17.3
W1-W4	3.9	2.3	1.0	0.4	5.1	0.6	*	*	3.7	1.0
O1-O3	4.6	7.4	6.6	5.4	8.9	6.0	4.5	12.3	5.2	8.1
O4-O6	4.4	2.4	5.6	2.7	2.6	1.9	2.8	7.7	3.7	3.9
Time on Active Duty										
1 year or less	25.4	16.3	30.2	27.7	28.2	13.1	17.8	7.0	26.9	16.5
>1 to 2 years	33.1	17.7	38.4	12.8	35.7	20.4	23.5	13.1	32.3	15.3
>2 to 3 years	31.3	13.2	38.2	11.0	30.9	16.4	20.5	10.3	30.4	12.1
>3 to 4 years	25.7	7.1	35.1	7.3	35.7	13.0	17.9	8.4	27.1	8.1
>4 to 9 years	21.2	27.7	23.1	22.2	21.1	22.8	10.6	26.2	18.5	25.4
10 years or more	15.4	18.0	10.1	18.9	15.0	14.3	8.2	35.0	11.1	22.7

(continued)

Table 24. Drinking Characteristics Within Alcohol Use Problem Categories - Total DoD

Drinking Characteristics	Alcohol Use Problem Category*		
	Not Affected	Adverse Effects Not Dependent	Dependent
General Drinking Characteristics			
Average Daily Consumption of Ethanol (mean ounces)	0.7	3.1	5.3
Drinking Levels: Abstainer (percent)	14.5	1.6	0.5
Infrequent/Light (percent)	21.3	11.2	9.7
Moderate (percent)	34.6	17.9	7.5
Moderate/Heavy (percent)	23.7	35.2	27.7
Heavy (percent)	5.9	34.1	54.6
"Frequent" Drinkers, past 30 days (percent who drank an alcoholic beverage 11 or more days)	18.5	49.8	64.2
"Heavy" Drinkers, past 30 days (percent who had 8 or more drinks of an alcoholic beverage on typical drinking day)	7.3	35.5	60.3
Consumed 8 or more drinks a day at least once a week, past 12 months (percent)	11.2	53.8	84.2
Heavy Drinking Days, past 12 months (number of days consumed 8 or more drinks, median)	1.5	82.5	213.5
Work-Related Characteristics			
Agreed with "there are times at work when I need a drink" (percent)	7.5	20.4	41.9
Used alcohol before or during work on at least one work day, past 30 days (percent)	11.8	30.7	47.2
Days used alcohol before or during work, past 30 days (mean)	0.4	1.8	4.3
Days lost from work because of drinking, past 12 months (mean)	0.2	1.8	5.5
Days hospitalized because of drinking, past 12 months (mean)	0.0	0.3	1.2
Drinking-Related Serious Consequences, Past 12 Months			
Reported 2 or more serious consequences (percent)	0.0	33.2	44.5
Involved in accident because of drinking (percent)	0.0	16.4	20.8
Spouse left or threatened to leave because of drinking (percent)	0.0	9.7	12.4
Hit spouse or children because of drinking (percent)	0.0	7.2	13.9
Arrested for drinking (percent)	0.0	22.6	21.2
Involved in fights while drinking (percent)	0.0	25.7	18.6
Drug-Related Characteristics			
Number of kinds of drugs used, past 30 days (mean)	0.3	1.1	2.0
"Frequent" Marijuana Users, past 30 days (percent using 11 or more days)	3.0	12.0	21.2

*See Table 23 for description of categories.

Table 23. Alcohol Use Problem Categories

Pay Grade/Problem Category	Service									
	Army		Navy		Marine Corps		Air Force		Total DoD	
E1-E5										
Not Affected[a]	70.0	(1.9)	66.9	(1.6)	67.6	(0.8)	81.7	(0.9)	71.8	(0.8)
Adverse Effects, Not Dependent[b]	16.4	(0.9)	18.4	(0.9)	20.1	(1.2)	12.9	(0.6)	16.5	(0.4)
Dependent[c]	13.6	(1.1)	14.7	(1.0)	12.3	(1.7)	5.4	(0.9)	11.7	(0.5)
E6-E9										
Not Affected	83.1	(1.8)	88.0	(1.3)	87.1	(1.6)	91.8	(0.9)	87.3	(0.8)
Adverse Effects, Not Dependent	12.5	(1.5)	8.3	(0.6)	9.2	(2.6)	6.0	(0.5)	9.2	(0.6)
Dependent	4.4	(0.9)	3.7	(0.9)	3.7	(1.1)	2.2	(0.6)	3.5	(0.5)
W1-W4										
Not Affected	96.0	(1.8)	99.0	(1.0)	+	(+)	*	(*)	96.3	(1.5)
Adverse Effects, Not Dependent	3.5	(1.7)	1.0	(1.0)	+	(+)	*	(*)	3.3	(1.4)
Dependent	0.5	(0.3)	0.0	(**)	+	(+)	*	(*)	0.4	(0.3)
O1-O3										
Not Affected	95.4	(1.2)	93.4	(2.5)	91.1	(7.2)	95.5	(0.8)	94.8	(0.8)
Adverse Effects, Not Dependent	3.3	(1.1)	4.5	(1.8)	6.5	(8.2)	3.0	(0.4)	3.6	(0.7)
Dependent	1.3	(0.6)	2.1	(0.9)	2.4	(1.0)	1.5	(0.6)	1.6	(0.4)
O4-O6										
Not Affected	95.6	(1.7)	94.4	(5.3)	97.4	(2.0)	97.2	(1.6)	96.3	(1.4)
Adverse Effects, Not Dependent	1.3	(1.4)	5.1	(5.2)	2.6	(2.0)	2.5	(1.5)	2.7	(1.3)
Dependent	3.1	(1.4)	0.5	(0.4)	0.0	(**)	0.3	(0.2)	1.0	(0.4)
Total										
Not Affected	75.4	(1.4)	72.9	(1.6)	72.3	(1.7)	86.4	(1.1)	77.6	(0.7)
Adverse Effects, Not Dependent	14.1	(0.7)	15.5	(0.7)	17.4	(0.5)	9.6	(0.7)	13.5	(0.4)
Dependent	10.5	(0.8)	11.6	(1.0)	10.3	(1.8)	4.0	(0.7)	9.0	(0.5)

Note: Tabled values are column percentages for each pay grade group and represent prevalence estimates with standard errors in parentheses.

[a]Experienced no serious consequences, had average ethanol consumption in range 0-4.9 ounces/day (mean value of .7 ounces) and were not dependent.

[b]Experienced one or more serious consequences (problems) but were not dependent, or consumed 5 or more ethanol ounces but were not dependent.

[c]Experienced any of four symptoms due to drinking: blackouts, tremors (shakes), impaired control (couldn't stop drinking until drunk) or morning drinking.

*Not applicable.

**Informative standard error not available.

+Fewer than 20 respondents.

Alcohol Dependence

- The prevalence of alcohol dependence is 9 percent overall (Table 23). Among pay grades it is highest for E1-E5 personnel (12 percent versus 1-4 percent for other pay grades). Among Services, the Army (11 percent), Navy (12 percent) and Marines (10 percent) report similar levels that exceed those among Air Force personnel (4 percent).

- Alcohol dependence is positively related to average daily consumption of alcohol. The percentage who are alcohol dependent increases as ethanol consumption increases. Nearly all dependence occurs at average ethanol levels over 2.17 ounces or 5 drinks/day (Table 22).

- Alcohol intoxication during the past 12 months occurred for 53 percent of DoD personnel. Intoxication occurred more often among E1-E5 personnel (60 percent) than within other pay grades (E6-E9, 37 percent; W1-W4, 29 percent; 01-03, 40 percent; 04-06, 31 percent). Intoxication was more common among Navy (60 percent) and Marine Corps (58 percent) personnel than among Army (51 percent) or Air Force (46 percent) personnel.

Alcohol Problems

- Alcohol use problem categories indicate that 78 percent of all personnel are not affected by alcohol use (i.e., they do not experience adverse consequences or become dependent from drinking). Nearly all officers (95-96 percent) fit this category (Table 23).

- Problems resulting from alcohol use (i.e., either adverse effects and not dependent, or dependent) occur more often among E1-E5's (28 percent) and E6-E9's (13 percent) than among officers (3-5 percent). Among Services, the Army (25 percent), Navy (27 percent) and Marine Corps (28 percent) personnel report more problems than Air Force (14 percent) personnel (Table 23).

- Personnel classified as alcohol dependent experience more negative effects than those not affected or than those affected but not dependent. They show more negative effects in work and social relationships, drink more heavily, and are more involved in the use of drugs (Table 24).

- Personnel with alcohol problems tend to be males, less educated, younger, single, of rank E1-E5, on active duty 4 years or less, stationed in the North Pacific or Europe, and at the present duty station 3 years or less (Table 25).

Drug Use

Negative effects associated with drug use are apparent among the Services and are closely associated with the level of drug consumption.

Table 22. Relationship of Serious Consequences and Alcohol Dependence to Average Daily Consumption of Ethanol

Service/Item	Average Daily Ounces of Ethanol Consumed						
	None[a] (No Drinks)	0.01-0.40 (<1 Drink)	0.41-2.16 (1-4 Drinks)	2.17-3.60 (5-7 Drinks)	3.61-6.00 (8-12 Drinks)	More than 6.0 ounces (>12 Drinks)	5.0 ounces or more (>10 Drinks)[b]
Army							
Any serious consequences	1.1	4.7	17.3	36.2	46.4	63.6	59.1
Alcohol dependent	0.8	0.4	6.3	20.9	37.8	61.5	57.6
Navy							
Any serious consequences	0.4	5.5	18.3	39.2	49.6	62.3	61.6
Alcohol dependent	0.4	0.9	6.0	24.9	38.9	58.4	54.2
Marine Corps							
Any serious consequences	1.3	7.5	19.3	46.4	55.1	68.8	62.5
Alcohol dependent	0.0	0.0	7.3	24.6	35.0	61.9	56.6
Air Force							
Any serious consequences	0.6	2.4	12.5	33.2	35.8	37.8	38.6
Alcohol Dependent	0.0	0.5	2.6	16.7	25.2	35.6	34.4
Total DoD							
Any serious consequences	0.8	4.3	16.4	37.6	46.3	60.8	57.5
Alcohol dependent	0.4	0.5	5.3	21.7	35.5	57.7	53.2

Note: Values in the table are percentages.

[a]That those drinking "none" could experience any serious consequences is possible for at least two reasons. First, someone who drank on only a few occasions during the past year could be characterized by an average daily consumption level of "none;" he thus could have legitimately experienced one or more serious consequences associated with episodic drinking. Second, the experiencing of serious consequences could be an instance of misattribution of a nonalcohol-related event to alcohol (e.g. lowered performance ratings, fights).

[b]This column is presented separately since an average daily consumption of 5.0 or more ounces of ethanol represents a commonly accepted threshold of presumptive medical harm (e.g., cirrhosis, organic brain damage).

Table 31. Comparison of Any Nonmedical Drug Use During the Past 30 Days for 1980 and 1982 Worldwide Surveys

Pay Grade/Survey	Service								Total DoD	
	Army		Navy		Marine Corps		Air Force			
E1-E5										
1980 Survey	41		48		48		21		38	
1982 Survey	34.3	(2.2)	20.9	(3.1)	25.3	(1.5)	18.1	(1.4)	25.6	(1.3)
t_q	-1.81		-5.02[a]		-8.98[a]		-1.28		-5.66[a]	
E6-E9										
1980 Survey	6		6		5		2		5	
1982 Survey	8.5	(0.8)	3.1	(0.7)	3.1	(1.0)	2.2	(0.4)	4.8	(0.4)
t_q	2.23[a]		-2.21[a]		-1.13		0.33		-0.32	
W1-W4										
1980 Survey	5		0		+		*		3	
1982 Survey	4.1	(1.6)	0.0	(**)	+	(+)	*	(*)	3.5	(1.3)
t_q	-0.31		*		*		*		0.26	
O1-O3										
1980 Survey	5		3		5		2		4	
1982 Survey	4.4	(1.1)	2.8	(1.1)	4.7	(1.9)	1.6	(0.4)	2.9	(0.5)
t_q	-0.32		-0.12		-0.10		-0.61		-1.28	
O4-O6										
1980 Survey	0		0		2		1		1	
1982 Survey	2.0	(1.3)	0.1	(0.1)	0.0	(**)	0.7	(0.5)	0.8	(0.4)
t_q	1.54		1.00		*		-0.38		-0.31	
Total										
1980 Survey	29		33		37		14		27	
1982 Survey	26.2	(1.8)	16.2	(2.2)	20.6	(2.0)	11.9	(1.5)	19.0	(1.0)
t_q	-0.95		-4.26[a]		-4.84[a]		-0.87		-4.75[a]	

Note: Tabled values for the surveys are percentages and represent prevalence estimates. Standard errors for the 1982 survey are shown in parentheses. 1980 data are taken from Burt and Biegel (1980), Table III-82. Statistical significance is evaluated by a quasi t statistic, t_q. Details of the computation of this t test are contained in the main report.

[a] $p<.05$.

* Not applicable.

+ Less than 20 respondents.

** Informative standard error not available.

Table 32. Comparison of Marijuana/Hashish Use During the Past 30 Days for 1980 and 1982 Worldwide Surveys

Pay Grade/Survey	Service								Total DoD	
	Army		Navy		Marine Corps		Air Force			
E1-E5										
1980 Survey	40		47		47		20		37	
1982 Survey	31.7	(2.1)	17.5	(2.8)	21.3	(1.2)	15.0	(1.1)	22.5	(1.2)
t_q	-2.33[a]		-5.78[a]		-12.22[a]		-2.74[a]		-6.99[a]	
E6-E9										
1980 Survey	5		6		5		2		4	
1982 Survey	6.6[a]	(0.5)	2.4[a]	(0.6)	2.2	(2.0)	1.3	(0.5)	3.6	(0.3)
t_q	2.25[a]		-2.92[a]		-0.74		-0.80		-0.85	
W1-W4										
1980 Survey	5		0		+		*		3	
1982 Survey	3.7	(1.6)	0.0	(**)	+	(+)	*	(*)	3.1	(1.3)
t_q	-0.44		*		*		*		0.05	
01-03										
1980 Survey	5		2		5		2		3	
1982 Survey	3.5	(1.2)	0.8	(0.8)	0.3	(0.3)	0.7	(0.3)	1.6	(0.5)
t_q	-0.69		-0.73		-3.34[a]		-1.97		-1.47	
04-06										
1980 Survey	0		0		2		1		1	
1982 Survey	1.7	(1.2)	0.1	(0.1)	0.0	(**)	0.0	(**)	0.4	(0.3)
t_q	1.42		1.00		*		*		-0.99	
Total										
1980 Survey	28		32		36		14		26	
1982 Survey	23.9	(1.7)	13.4	(2.0)	17.1	(2.0)	9.6	(1.1)	16.5	(0.9)
t_q	-1.45		-4.94[a]		-5.34[a]		-2.33[a]		-6.09[a]	

Note: Tabled values for the surveys are percentages and represent prevalence estimates. Standard errors for the 1982 survey are shown in parentheses. 1980 data are taken from Burt and Biegel (1980), Table III-1. Statistical significance is evaluated by a quasi t statistic, t_q. Details of the computation of this test are contained in the main report.

[a] $p < .05$.

* Not applicable.

+ Less than 20 respondents.

** Informative standard error not available.

- In general, changes in marijuana use were similar to the changes observed for use of any drugs. This is explained by the fact that marijuana is the drug used most frequently and accounts to a large extent for the general pattern of overall drug use.

- Significant decreases in marijuana use were observed between 1980 and 1982 for the Navy, Marine Corps, and Air Force, but not the Army, although even here there was a trend toward a reduction (Table 32).

- In the Army, E6-E9's showed a significant increase in marijuana use from 5 to 7 percent (Table 32).

- Comparison of 1980 and 1982 levels of use among E1-E5's for individual drugs showed an overall pattern of reductions for each drug. Significant decreases in use occurred for all the drugs except PCP and heroin (Table 33).

- There was a significant decline in the percentage using more drugs than they had planned from 10 percent to 7 percent (Table 34).

- There was a corresponding reduction in the percentage of personnel reporting that they had been high more than one day at a time from 17 percent to 9 percent (Table 34).

- The percentage indicating drug dependence declined from 4 percent to 2 percent (Table 34).

- There was no significant difference in the percentage who experienced one or more consequences due to drug use for Total DoD. A significant decrease was observed for the Marine Corps, however, from 15 percent to 9 percent (Table 34).

- Reports of diminished work performance due to drug use decreased significantly for Total DoD from 21 to 14 percent. Each of the indicators of diminished performance showed a significant reduction at the Total DoD level and each Service showed a corresponding significant reduction (Table 35).

Comparisons with Civilian Population

Table 36 presents data from the 1982 Worldwide survey and 1982 NIDA survey of the general population. Data were for males aged 18-25 in both surveys, the population most at risk for nonmedical drug use. The civilian sample was standardized on the basis of the joint probability distribution of the military with respect to age, marital status, and education. In the two surveys, comparable data on use in the past 30 days were available for alcohol, marijuana, hallucinogens, cocaine, stimulants, tranquilizers, and heroin.

Table 33. Comparison of Nonmedical Drug Use During the Past 30 Days Among E1-E5's for 1980 and 1982 Worldwide Surveys

Drug	1980 Survey	1982 Survey	Percentage Change	t_q	Significance Level
Marijuana	37	22.5 (1.2)	14.5	-6.99	.001
PCP	1	0.9 (0.1)	0.1	-.61	NS
LSD/Hallucinogens	5	3.0 (0.3)	2.0	-3.60	.002
Cocaine	7	4.0 (0.4)	3.0	-4.00	.002
Amphetamines/Stimulants	9	6.2 (0.5)	2.8	-3.18	.01
Tranquilizers	3	1.6 (0.2)	1.4	-3.61	.002
Barbiturates/Sedatives	3	1.6 (0.1)	1.4	-7.23	.001
Heroin	1	0.7 (0.1)	0.3	-1.70	NS
Any Drug	38	25.6 (1.3)	12.4	-5.66	.001

Note: Tabled values for the 1980 and 1982 Surveys are percentages and represent prevalence estimates. Standard errors for the 1982 survey appear in parentheses. Statistical significance is evaluated by a quasi t statistic, t_q. Details of the computation of this t test are contained in the main report.

NS = Not significant.

Table 34. Comparison of Drug Use Events, Drug Dependence, and Drug Use Consequences Among E1-E5's for 1980 and 1982 Worldwide Surveys

	Service				
Item/Survey	Army	Navy	Marine Corps	Air Force	Total DoD
Used More Drugs Than Planned					
1980 Survey	9	13	14	6	10
1982 Survey	8.6 (0.8)	8.3 (0.5)	7.4 (0.3)	3.5 (0.5)	7.1 (0.4)
t_q	-0.30	-5.43[a]	-11.84[a]	-2.70[a]	-4.16[a]
High More than One Day at a Time					
1980 Survey	16	22	24	9	17
1982 Survey	11.3 (1.1)	10.0 (1.0)	9.3 (0.5)	4.4 (0.3)	9.0 (0.5)
t_q	-2.36[a]	-6.36[a]	-14.67[a]	-7.83[a]	-8.48[a]
Drug Dependence					
1980 Survey	5	4	5	1	4
1982 Survey	2.2 (0.3)	2.1 (0.4)	1.5 (0.1)	0.5 (0.2)	1.6 (0.2)
t_q	-4.28[a]	-2.54[a]	-14.95[a]	-1.27	-5.58[a]
One or More Consequences of Drug Use					
1980 Survey	11	13	15	5	10
1982 Survey	9.5 (1.0)	9.3 (1.4)	8.5 (0.3)	4.3 (0.6)	8.1 (0.6)
t_q	-0.87	-1.58	-11.95[a]	-0.71	-1.89

Note: Tabled values for the surveys are percentages and represent prevalence estimates. Standard errors for the 1982 survey are shown in parentheses. The 1980 data are taken from Burt and Biegel (1980), Tables II-4, II-5, and II-6. Statistical significance is evaluated by a quasi t statistic, t_q. Details of the computation of this t test are contained in the main report.

[a] $p < .05$

Table 35. Comparison of Diminished Work Performance Because of Drug Use During the Past 12 Months Among E1-E5's for 1980 and 1982 Worldwide Surveys

Type of Impairment/Survey	Service				
	Army	Navy	Marine Corps	Air Force	Total DoD
Lowered Peformance					
1980 Survey	12	15	13	3	10
1982 Survey	8.3[a] (0.9)	7.9[a] (0.5)	5.9[a] (0.2)	3.1 (0.4)	6.7[a] (0.4)
t_q	-2.24[a]	-7.75[a]	-18.11[a]	0.16	-4.65[a]
Late for Work/ Left Work Early					
1980 Survey	8	8	8	2	6
1982 Survey	5.2[a] (0.5)	4.0[a] (0.5)	3.4[a] (0.5)	2.0 (0.2)	3.9[a] (0.2)
t_q	-2.97[a]	-4.23[a]	-4.53[a]	0.00	5.83[a]
Did Not Come to Work					
1980 Survey	6	4	5	1	4
1982 Survey	2.3[a] (0.3)	1.8[a] (0.5)	1.4[a] (0.4)	0.4[a] (0.1)	1.6[a] (0.2)
t_q	5.37[a]	-2.22[a]	-3.74[a]	-2.79[a]	-5.58[a]
High While Working					
1980 Survey	21	26	25	8	19
1982 Survey	15.2[a] (1.4)	12.9[a] (0.9)	10.3[a] (0.5)	5.9[a] (0.3)	11.8[a] (0.6)
t_q	-2.32[a]	-8.01[a]	-15.02[a]	-4.09[a]	-6.71[a]
Total With Any Diminution					
1980 Survey	22	28	28	9	21
1982 Survey	17.8[a] (1.5)	15.1[a] (0.8)	11.3[a] (0.6)	7.0[a] (0.4)	13.7[a] (0.6)
t_q	-1.62[a]	-9.14[a]	-14.27[a]	-2.97[a]	-6.92[a]

Note: Tabled values for the surveys are percentages and represent prevalence estimates. Standard errors for the 1982 survey are shown in parentheses. The 1980 data are taken from Burt and Biegel (1980), Table III-93. Statistical significance is evaluated by the quasi t statistic, t_q. Details of the computation of this t test are contained in the main report.

[a] $p < .05$

Table 36. 1982 Prevalence of Nonmedical Alcohol and Drug Use in the Past 30 Days Among Military and Civilian Men Aged 18-25

Drug	Military		Civilians		t_q
Alcohol	85.6	(0.5)	75.7	(3.9)	2.52[a]
Marijuana	25.1	(0.6)	34.7	(4.4)	-2.16[a]
LSD/Hallucinogens	3.8	(0.3)	2.4	(1.0)	1.36
Cocaine	4.6	(0.3)	9.4	(1.9)	-2.48[a]
Stimulants	6.9	(0.3)	4.9	(1.5)	1.30
Tranquilizers	1.7	(0.2)	1.7	(0.9)	0
Heroin	0.7	(0.1)	0.0[b]	-	-

Note: Data are for male personnel (n = 10,868) in the 1982 Worldwide Survey and civilian males (n = 468) in the 1982 National Survey on Drug Abuse (Miller et al., 1983). Table values are percentages and represent prevalence estimates. Standard errors are shown in parentheses. Statistical significance is evaluated by a quasi t statistic, t_q. Details of the computation of this test are contained in the main report.

[a]Significant at .05 level.

[b]There were no heroin users in the civilian sampling, therefore, no standard error and corresponding t statistic were computed.

- Alcohol use in the past 30 days is significantly higher in the military population (85.6 percent) than in the comparable civilian population (75.7 percent). Unfortunately, because the civilian survey focused on drug use, more detailed data on the quantity and frequency of alcohol use were not collected. Thus, the meaning of a higher prevalence in the military is not clear.

- Marijuana use in the past 30 days in the military (25.1 percent) is significantly lower than in the civilian population (34.7 percent). In 1980, Burt and Biegel showed that rates in military and civilian populations were similar. Though both rates have dropped since 1980, the reduction found for marijuana was much greater than that found for the civilian population.

- Cocaine use in the past 30 days is significantly lower in the military (4.6 percent) than in the civilian population (9.4 percent). The prevalence of the other types of drugs in the past 30 days is low, and there are no significant differences between the populations. These results are similar to those reported by Burt and Biegel (1980).

6. MULTIVARIATE ANALYSES OF ALCOHOL AND DRUG USE AND THEIR CONSEQUENCES

Analyses presented earlier in this report have examined a variety of aspects of alcohol and drug use behavior and explored the effects of numerous variables associated with them. These analyses provide useful and important information about the effects of alcohol and drug use. However, they are limited by the fact that they have examined the effects of one or two variables (e.g., Service, region, pay grade) but have not controlled for effects of other relevant variables (e.g., demographic variables like age, education, marital status or attitudinal and behavioral variables).

The investigation of the effects on drug and alcohol use of several variables simultaneously is achieved most easily by the use of sophisticated multivariate statistical techniques. One such technique that is applicable to this task is multiple regression analysis. In multiple regression analysis a set of independent variables is examined to determine how well they can jointly account for or explain the variation that occurs in the criterion variable of interest. Collectively the set of variables tested in the analysis is referred to as the regression model. Thus, for example, regression analysis could be used to examine the question of how much drug use behavior can be explained by demographic characteristics of military personnel. The strength of a multiple regression analysis is that each variable is adjusted for the effects of all other variables that appear in the model. Thus it is possible to determine how well the set of variables tested accounts for the variance of the criterion measure and, further, to identify which variables in the set are important in explaining the criterion behavior.

Several exploratory analyses were performed using multiple regression analysis for the 1982 Worldwide Survey. All of these analyses were limited to enlisted personnel (E1-E9) for both theoretical (e.g., officers and enlisted personnel have different motivations for being in the military) and practical reasons (e.g., the highest incidences of drug use and drinking problems occur among enlisted individuals).

The criterion variables to be explained that were examined were: mean number of ounces of ethanol consumed daily; consequences of alcohol use; drug use during the past 30 days; and consequences of drug use. The independent variables used to explain the criterion measures were of two broad types: demographic variables and psychological/behavioral variables. The demographic variables that were included were Service, race, sex, education, marital status, region, pay grade, and age. The psychological/behavioral variables that were examined consisted of a series of indexes (comprised of several items from the questionnaire) along with selected individual items. More specifically the psychological/behavioral indexes included a Problem Behavior Index, Drugs Impair Health/Work Index, Drug Social Support Index, Drug Treatment Climate Index, Alcohol Social Support Index, Alcohol Treatment Climate Index, Drinking Motivation Index, Reasons for Not Drinking Index. The development of these indexes is described in detail in the main report by Bray et al. (1983). Other selected items included church attendance, smoking level, need a drink at work, need an upper at work, ethanol use and drug use patterns.

Table 37. Summary of Regression Models for Enlisted Personnel

Independent Variables	Criterion Variables: Ethanol Consumption (N = 18,284)	Alcohol Use Consequences (N = 16,326)	Drug Use Past 30 Days (N = 18,304)	Drug Use Consequences (N = 5,205)
Demographic Variables				
Service				
Army versus Air Force	.032	-.015	.054**	.077
Navy versus Air Force	.144	-.019	-.033*	.094
Marines versus Air Force	.011	.058	.011	.083
Race				
Hispanic versus White	.265*	.129*	-.010	.169
Black versus White	.139	-.111*	-.014	.175
Other versus White	-.105	.010	-.031	.199
Sex (Female versus Male)	-.481**	-.067	.016	.001
Education (High School or beyond versus less than High School or GED)	-.025	-.073	-.036**	-.005
Marital Status (Single or married, spouse not present versus married, spouse present)	.391**	.039	.031**	-.012
Region				
Americas versus Europe	-.455**	-.003	.001	-.144
North Pacific versus Europe	-.261	.070	-.066**	-.008
Other Pacific versus Europe	-.251	-.024	.032	-.092
Pay Grade (E1-E5 versus E6-E9)	.115	.052	.037*	.268
Age (Years)	.004	.006	.004**	-.003
Psychological/Behavioral Variables				
Problem Behavior Index[a]	.420**	.456**	.029**	.239**
Drugs Impair Health/Work Index[a]	-	-	.103**	.081*
Drug Social Support Index[a]	-	-	.040**	.051
Drug Treatment Climate Index[a]	-	-	-.026**	.035
Need an Upper at Work[a]	-	-	.023**	.128**
Drug Use Pattern				
Non Use vs. Marijuana only	-.421**	-.036	-	-
Other Use vs. Marijuana only	.737**	.276**	-	.277**
Alcohol Social Support Index[a]	.136**	.032	.012*	-
Alcohol Treatment Climate Index[a]	.020	-.041*	-.022**	-
Reasons for Not Drinking Index[a]	-.309**	.051**	-	-
Drinking Motivation Index[a]	.453**	.176**	.021**	-
Church Attendance[a]	-.103**	-.007	-.013**	.041
Smoking Level[a]	.267**	.075**	-	.110**
Need a Drink at Work[a]	.297**	.046*	-	-
Ethanol (ounces)	-	.081**	.019**	.052**
R^2 for Complete Model	.238	.290	.273	.131
R^2 for Demographic Variables Only	.057	.036	.089	.020
Addition to R^2 of Psychological/ Behavioral Variables	.181	.254	.184	.111

Note: Tabled values are regression parameters (beta values). Analyses used weighted data. Criterion variables for the four regressions were: Average daily ounces of ethanol consumed during the past 12 months; total number of serious consequences experienced as a result of alcohol use (analysis excluded alcohol abstainers); any drug use (yes, no) during the past 30 days; and total number of serious consequences experienced (based on drug users only). Construction of these measures are described in the main report (Bray et al., 1983).

Values of the regression parameters indicate the change in the criterion variable that is produced by each independent variable after that variable has been adjusted for all other variables appearing in the model. For example, males consume .481 more ounces of ethanol/day than females; males experience .067 more consequences than females from alcohol use; males are .016 more likely to use drugs in the past 30 days than females; and males experience virtually no more consequences (.001) than females from drug use.

[a]Standardized to unit variance.

-Variable not included in regression model.

*p< .01

**p< .001

The regression analyses that were conducted used all of the demographic variables noted above and relevant subsets of the psychological/behavioral variables. For each analysis, a weighted least squares approach was followed in which all variables that were being examined in a particular model were included simultaneously in the model analyses. Thus these analyses did not use a stepwise approach in which statistical criteria are used to select which variables enter the model and the order in which they enter a regression. However, since the demographic variables were listed in the model before the psychological variables, it is possible to examine the explanatory effects (indicated by R^2) of the demographic variables by themselves as well as that of the total set of variables. Further, by subtracting the R^2 of these two, the contribution of the psychological/behavioral to the total variance explained variables can be assessed.

Average Ethanol Consumption

- The regression model of average daily ounces of ethanol for enlisted personnel examined 17 variables (8 demographic, 9 psychological/behavioral) and explained 24 percent (R^2 for complete model) of the variation of the ethanol index (Table 37).

- Overall demographic variables performed rather poorly in explaining ethanol consumption. By themselves, they explained only 6 percent of the variation in ethanol consumption.

- Demographic variables that showed significant differences were the Hispanic/white racial contrast, sex, marital status and the Americas/Europe regional contrast (Table 37). Hispanics consume .265 ounces/day more ethanol than whites. Males consume nearly half an ounce/day (.481) more ethanol than females. Single personnel or those married with their spouses not present consume .391 ounces/day more than those who are married with a spouse present.

- In contrast to demographic variables, psychological/behavioral variables in the model explain most of the variation in ethanol consumption. The explained variance increases by 18 percent over that with the demographic variables alone.

- All but one of the psychological/behavioral variables are highly significant (Table 37). Problem behaviors and drinking motivation are important indicators of ethanol consumption. A change in one standard deviation on either scale is associated with a change of about four-tenths of an ounce (approximately one drink) of daily ethanol consumption (.420 and .453, respectively). Drug Use Patterns also contribute to an understanding of ethanol consumption. Marijuana only users consume approximately four-tenths of an ounce/day more alcohol than nonusers. Any other use of drugs either singly or in combination is accompanied by an increase of nearly three-fourths of an ounce/day (.737) over that consumed by marijuana only users.

Table 38. Effects of Adjusting for Regression Model Variables on Criterion Variables in the Services

Criterion Variable	Service			
	Army	Navy	Marine Corps	Air Force
Average Daily Ounces of Ethanol				
Unadjusted Means	1.97	1.60	1.81	1.18
Adjusted Means	1.73	1.84	1.71	1.70
Number of Alcohol Use Consequences				
Unadjusted Means	.62	.50	.75	.31
Adjusted Means	.57	.56	.64	.58
Probability of 30 Day Drug Use				
Unadjusted Means	.30	.16	.22	.13
Adjusted Means	.25	.16	.21	.20
Number of Drug Use Consequences				
Unadjusted Means	.73	.51	.65	.27
Adjusted Means	.56	.58	.57	.48

Note: Parameters appearing in the regression models are shown in Table 37. Unadjusted means show the values for the Services without controlling for any other variables. All tables in prior chapters of this report that are displayed by Service contain unadjusted values. Statistical tests for each criterion variable on the unadjusted means show a highly significant difference ($p < .001$) among the Services.

Adjusted means show the values for the Services after controlling for all other variables in the regression models. After the adjustment, significant differences occur only for the drug use criterion. The adjusted means do not differ significantly among the Services for ethanol consumption, alcohol use consequences or drug use consequences (see Table 37).

- There were no significant differences among the Services in ethanol consumption after controlling for all other variables in the regression model (Table 37). In contrast, without controlling for any variables, highly significant differences do occur among the Services (Table 38). This suggests that existing Service differences in ethanol consumption can be explained by differences in demographic and psychological/behavioral characteristics.

Alcohol Use Consequences

- The regression model for the number of alcohol use consequences during the past 12 months among enlisted personnel examined 18 variables (8 demographic, 10 psychological/behavioral) and explained 29 percent of the variation (R^2 for complete model) in the number of consequences experienced (Table 37).

- Demographic variables were relatively unimportant in accounting for alcohol consequences, explaining only 4 percent of the variation. Race was the only significant demographic variable. Hispanics experience .129 more consequences than whites, and whites experience .111 more consequences than blacks.

- Psychological/behavioral variables were clearly the important ones in explaining alcohol use consequences. Together they accounted for 25 percent of additional variation beyond that of the demographic variables.

- Among the psychological/behavioral variables, all but two were statistically significant (Table 37). The most salient variables from this set are problem behaviors, drug use patterns and drinking motivation. An increase in one standard deviation in the problem behavior index is associated with an increase of .456 consequences on the average. Drug use that encompasses more than marijuana only use is accompanied by an increase of .276 consequences, and an increase of one standard deviation on the drinking motivation index is expected to produce an increase of .176 consequences.

- No significant Service differences occurred after adjusting for all other parameters in the regression model. This contrasts with notable differences among Services prior to controlling for other variables (Table 38).

Drug Use During the Past 30 Days

- The regression model for 30 day drug use examined 18 variables (8 demographic, 10 psychological/behavioral) and explained 27 percent (R^2 for complete model) of the variation in drug use behavior (Table 37).

- Demographic variables were less important than psychological/behavioral variables in explaining drug use behavior. They accounted for 9 percent of the total variation. Significant differences occurred for Service, education, marital status, region, pay grade,

and age, but even among these, regression parameters were quite small. Probabilities of greater drug use were associated with being in the Army compared to the Air Force, and in the Air Force compared to the Navy. Additionally, there is a significantly increased probability of drug use for those who are less educated, single or married with spouse not present, younger, of E1-E5 pay grade, and serving in Europe compared to the North Pacific.

- Psychological/behavioral variables explained most of the variation of drug use behavior in the regression model, contributing an additional 18 percent of the total 27 percent of explained variance. All of the psychological/behavioral variables were significant. The most important variables were the Drugs Impair Work/Health Index, Drug Social Support Index, and the Problem Behavior Index (Table 37). For example, change of one standard deviation among beliefs that drug use is not harmful to health and work performance is associated with an increase of .10 in the probability of drug use.

- Before adjusting for any other variables, large differences exist among the Services in the level of drug use. After controlling for all other variables in the regression model, some significant differences remain between Services although they are relatively small. Notable among the adjusted means is the finding that the Navy replaces the Air Force as the Service with the lowest probability of drug use. The Air Force actually has the lowest unadjusted level of drug use, but the regression analyses suggest that this would probably not be the case if the demographic and psychological/behavioral variables were roughly comparable among the Services (Table 38).

- Drug use behavior appears to be more a function of psychological (e.g., beliefs and attitudes) and behavioral (e.g., problem behavior) characteristics than of demographic characteristics.

Drug Use Consequences

- The regression model for the number of drug use consequences during the past 12 months among enlisted personnel examined 17 variables (8 demographic, 9 psychological/behavioral) and explained 13 percent of the total variability (Table 37).

- Demographic variables were very weak in explaining consequences of drug use, accounting for only 2 percent of the variance. None of the demographic variables was significant.

- Psychological/behavioral variables explained nearly all of the variation of drug use consequences in the regression model. They accounted for an additional 11 percent of the variation, increasing the total variation accounted for to 13 percent.

- Several of the psychological/behavioral variables are significant, but the problem behavior index and drug use pattern stand out as the most important variables. An increase in the problem behavior index of one standard deviation is associated with an increase of .239 consequences. Similarly, use of drugs besides marijuana only is accompanied by an increase of .277 consequences.

- No significant differences appear among Services in the number of adverse drug use consequences after adjusting for all other variables in the regression model. This contrasts with significant differences among Services prior to adjusting for these variables (Table 38).

- Taken together, all regressions of drug and alcohol use and the consequences of that use are better explained by psychological/behavioral variables than by demographic variables.

- In general there was a lack of significant adjusted differences among Services and among regions. These findings suggest that differences in drug and alcohol use and consequences are partly a function of the differing demographic and psychological/behavioral composition among the Services.

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