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HIGHLIGHTS FROM THE WORLDWIDE SURVEY OF NONMEDICAL DRUG USE AND--ETC(U)  
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HIGHLIGHTS FROM THE WORLDWIDE  
SURVEY OF NONMEDICAL DRUG USE  
AND ALCOHOL USE AMONG  
MILITARY PERSONNEL: 1980

by:

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November 14, 1980

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Bethesda, Maryland 20014

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| 19. KEY WORDS (Continue on reverse side if necessary and identify by block number)<br>Drug use                      Amphetamines              Tranquilizers              Phencyclidine<br>Alcohol abuse              Cocaine                      Barbiturates              Heroin<br>Cannabis                      Hallucinogens              Opiates   |                                      |  |
| 20. ABSTRACT (Continue on reverse side if necessary and identify by block number)<br>This survey report provides a comprehensive, detailed and accurate estimate of the prevalence of drug and alcohol use among the active duty military population as well as information on the physical, social and work-related consequences of drug and alcohol use in the subject population. It was found that abuse correlates generally with: (1) younger age, (2) being unmarried, (3) lower educational attainment, and (4) being male. The drug most commonly used is |                                      |  |

alcohol followed by cannabis, amphetamines, cocaine, and hallucinogens. Phencyclidine and heroin were found to be the least used drugs. Nineteen percent of the junior enlisted men reported being high on drugs while working at some time during the previous year while 15% said they have been drunk while working sometime during the year. However, overall and with the exception of cannabis use, drug use in the military population has shown a decline since 1974, the year of the last worldwide survey.

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ERRATA SHEET

The following corrections should be made to the report, "HIGHLIGHTS FROM THE WORLDWIDE SURVEY OF NONMEDICAL DRUG USE AND ALCOHOL USE AMONG MILITARY PERSONNEL: 1980" by Burt Associates, Inc., dated 14 November 1980 (Contract No. MDA 903-79-C-0667).

1. Page 18, Table 15. Change third CONSEQUENCE to read:

TOTAL WITH EITHER OF THE 2 CONSEQUENCES

2. Page 22, Table 19. Change the BEVERAGE/FREQUENCY category to read:

BEVERAGE 1 QUANTITY

3. Page 25, Table 23. Delete PAYGRADE.

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## Section 1: INTRODUCTION

This report is intended primarily to provide highlights of the results of a 1980 survey of nonmedical drug use and alcohol use among military personnel. Estimates are provided of the prevalence and consequences of nonmedical drug use and alcohol use among the active duty military population. The prevalence rates are compared with those obtained on a comparable civilian subpopulation. The findings are reported in statistical terms and can serve as an empirical basis for the formulation of policies and programs for the prevention and treatment of drug and alcohol abuse in the Military Services. More detailed findings are presented in the main report.<sup>1</sup>

The survey is focused on nonmedical use of nine types of drugs and on use of three types of alcoholic beverages. Samples of 81 installations, worldwide, and 19,582 active duty personnel at these installations were randomly selected. The selection was made from all personnel in pay grades E1 through O6 in each of the four Services. Ninety-three percent of the eligible sample completed the multiple choice format questionnaire in group sessions proctored solely by the study team of Burt Associates, Incorporated. Additional details on the sampling design, population characteristics, number of respondents, and confidence intervals are summarized in the Technical Note at the end of this report.

In Section 2, summary findings are presented on current (past 30 days) and annual (past 12 months) nonmedical use of drugs and on the physical, social and work-related consequences of drug use. Similar information on alcohol use is highlighted in Section 3. The data are often presented for the total respondent group, by Service, and pay grade group.

Comparisons between prevalence data in this survey and the most recent survey of the civilian population are summarized in Section 4.

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<sup>1</sup>Marvin R. Burt and Mark M. Biegel, Worldwide Survey of Nonmedical Drug Use and Alcohol Use Among Military Personnel: 1980 (Bethesda, Maryland: Burt Associates, Incorporated), 1980.

Section 2: NONMEDICAL DRUG USE - PREVALENCE  
AND CONSEQUENCES AMONG MILITARY PERSONNEL

"Nonmedical drug use" is defined, for the purpose of this survey, as the use of drugs for nonmedical purposes, that is, for highs, for thrills, to relax, to give insight, or for pleasure. The nonmedical use of drugs is common throughout broad segments of American society. Concern has been expressed about the extent to which military personnel engage in nonmedical drug use and the consequence of such use in terms of their individual well-being and their work performance. The survey results address these concerns.

Prevalence

The nine drug types used for prevalence estimates are listed below, together with verbatim examples from the questionnaire:

| <u>DRUG</u>              | <u>EXAMPLE</u>   |
|--------------------------|--|
| Marijuana.....           | "Pot," "Grass"   |
| Hashish.....             | "Hash"   |
| PCP.....                 | "Angel Dust"   |
| Other Hallucinogens..... | LSD, Mescaline, Peyote, STP, DOM,<br>DMT, Psilocybin           |
| Cocaine.....             | "Coke," "Snow"   |
| Amphetamines.....        | Benzedrine, "Bennies," Methadrine,<br>Dexedrine, "Speed"       |
| Other Uppers.....        | Preludin, Ritalin, Sandrex                                     |
| Tranquilizers.....       | Valium, Librium, Miltown                                       |
| Barbiturates.....        | Seconal (reds), Nembutal (yellows),<br>Amytal (blues)          |
| Other Downers.....       | Quaalude (Sopors), Optimil, Doriden,<br>Placidyl, Methaqualone |
| Heroin.....              | "Smack," "Scag," "Horse"                                       |
| Other Opiates.....       | Morphine, Opium, Demerol, Codeine,<br>Methadone                |



Table 1 shows that over one-fourth (27 percent) of the military personnel reported they had used some type of drug or drugs nonmedically in the past 30 days; over one-third (36 percent) reported such use within the past 12 months. The figures for marijuana or hashish use are much the same as those for "any drug use," indicating that nearly all users of nonmedical drugs used at least marijuana or hashish. None of the other eight drug types (listed in rank order of prevalence of use) approaches marijuana or hashish in popularity.

The percentages of military personnel reporting use of each drug weekly or more frequently than weekly during the past 30 days are shown in Table 2. Clearly, there are substantially fewer regular users (i.e., persons using weekly or more frequently) than occasional users. For example, while 36 percent reported use of marijuana or hashish during the past year, 27 percent reported use during the past 30 days and 19 percent reported use at least once a week during the past 30 days. This pattern generally holds for all the drug types (except that there is no difference between non-medical use of barbiturates during the past 30 days and at least once a week). Thus, it can be concluded that the overwhelming majority of nonmedical drug use in the military is occasional or experimental in nature.

Prevalence rates vary by Service and region. It has not been established to what extent some or all of these variations are attributable to the different composition of the personnel in the four Services.<sup>1</sup>

Nonmedical drug use is limited primarily to personnel in the E1-E5 pay grade group (Tables 3 and 4), a phenomenon that may be attributable to the comparatively younger age of junior enlisted personnel. Patterns of use by drug and Service among E1-E5's are similar to those noted for the total respondent group.

Tables 5 through 13 depict the current prevalence for each of the nine drug types by Service, pay grade group, and geographical region. In general, current prevalence rates for each drug type are as high or higher in CONUS than in other regions.

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<sup>1</sup>Drug prevalence correlates strongly with lower adult age, being unmarried, being male, and lower educational attainment. To the extent that a Service has a higher proportion of personnel with these characteristics, it can be expected to have a higher prevalence of nonmedical drug use.

TABLE 1  
POPULATION USING EACH DRUG  
(PERCENTAGE)

| DRUG TYPE/<br>USE PERIOD       | TOTAL<br>DOD | SERVICE |      |                 |              |
|--------------------------------|--------------|---------|------|-----------------|--------------|
|                                |              | ARMY    | NAVY | MARINE<br>CORPS | AIR<br>FORCE |
| ANY DRUG USE                   |              |         |      |                 |              |
| PAST 30 DAYS                   | 27           | 29      | 33   | 37              | 14           |
| PAST 12 MONTHS                 | 36           | 38      | 43   | 47              | 23           |
| MARIJUANA, HASHISH             |              |         |      |                 |              |
| PAST 30 DAYS                   | 26           | 28      | 32   | 36              | 14           |
| PAST 12 MONTHS                 | 35           | 37      | 42   | 47              | 22           |
| AMPHETAMINES OR OTHER UPPERS   |              |         |      |                 |              |
| PAST 30 DAYS                   | 6            | 6       | 10   | 8               | 3            |
| PAST 12 MONTHS                 | 13           | 12      | 19   | 19              | 6            |
| COCAINE                        |              |         |      |                 |              |
| PAST 30 DAYS                   | 4            | 4       | 7    | 8               | 1            |
| PAST 12 MONTHS                 | 11           | 10      | 17   | 19              | 5            |
| HALLUCINOGENS (OTHER THAN PCP) |              |         |      |                 |              |
| PAST 30 DAYS                   | 3            | 2       | 5    | 7               | 1            |
| PAST 12 MONTHS                 | 8            | 7       | 12   | 15              | 3            |
| TRANQUILIZERS                  |              |         |      |                 |              |
| PAST 30 DAYS                   | 2            | 2       | 3    | 2               | 1            |
| PAST 12 MONTHS                 | 6            | 5       | 9    | 7               | 2            |
| BARBITURATES OR OTHER DOWNERS  |              |         |      |                 |              |
| PAST 30 DAYS                   | 2            | 3       | 3    | 3               | 1            |
| PAST 12 MONTHS                 | 6            | 6       | 8    | 9               | 3            |
| OPIATES (OTHER THAN HEROIN)    |              |         |      |                 |              |
| PAST 30 DAYS                   | 1            | 2       | 2    | 2               | +            |
| PAST 12 MONTHS                 | 4            | 4       | 5    | 6               | 1            |
| PCP                            |              |         |      |                 |              |
| PAST 30 DAYS                   | 1            | 1       | 1    | 3               | +            |
| PAST 12 MONTHS                 | 4            | 4       | 5    | 10              | 1            |
| HEROIN                         |              |         |      |                 |              |
| PAST 30 DAYS                   | 1            | 1       | 1    | +               | +            |
| PAST 12 MONTHS                 | 2            | 3       | 1    | 1               | +            |

+ LESS THAN HALF OF ONE PERCENT.

TABLE 2  
 FREQUENCY OF USING DRUG NONMEDICALLY AT  
 LEAST ONCE A WEEK DURING THE PAST 30 DAYS--TOTAL DOD  
 (PERCENTAGE OF POPULATION)

| DRUG TYPES                     | TOTAL<br>DOD | SERVICE |      |                 |              |
|--------------------------------|--------------|---------|------|-----------------|--------------|
|                                |              | ARMY    | NAVY | MARINE<br>CORPS | AIR<br>FORCE |
| MARIJUANA/HASHISH              | 19           | 23      | 24   | 29              | 10           |
| AMPHETAMINES OR OTHER UPPERS   | 3            | 3       | 5    | 4               | 1            |
| COCAINE                        | 2            | 1       | 3    | 3               | +            |
| BARBITURATES OR OTHER DOWNERS  | 1            | 2       | 1    | 1               | +            |
| HALLUCINOGENS (OTHER THAN PCP) | 1            | 1       | 2    | 2               | +            |
| TRANQUILIZERS                  | 1            | 1       | 1    | 2               | 1            |
| OPIATES (OTHER THAN HEROIN)    | +            | 1       | 1    | 1               | +            |
| PCP                            | +            | +       | +    | 1               | +            |
| HEROIN                         | +            | +       | +    | +               | +            |

+ LESS THAN HALF OF ONE PERCENT.

TABLE 3

POPULATION USING EACH DRUG--BY PAY GRADE GROUP  
(PERCENTAGE)

| DRUG TYPE/<br>USE PERIOD       | TOTAL<br>DOD | PAY GRADES |       |       |       |       |
|--------------------------------|--------------|------------|-------|-------|-------|-------|
|                                |              | E1-E5      | E6-E9 | W1-W4 | 01-03 | 04-06 |
| ANY DRUG USE                   |              |            |       |       |       |       |
| PAST 30 DAYS                   | 27           | 38         | 5     | 3     | 4     | 1     |
| PAST 12 MONTHS                 | 36           | 50         | 9     | 4     | 9     | 2     |
| MARIJUANA/HASHISH              |              |            |       |       |       |       |
| PAST 30 DAYS                   | 26           | 37         | 4     | 3     | 3     | 1     |
| PAST 12 MONTHS                 | 35           | 49         | 9     | 3     | 8     | 1     |
| AMPHETAMINES OR OTHER UPPERS   |              |            |       |       |       |       |
| PAST 30 DAYS                   | 6            | 9          | 1     | 0     | +     | +     |
| PAST 12 MONTHS                 | 13           | 19         | 2     | 0     | 1     | +     |
| COCAINE                        |              |            |       |       |       |       |
| PAST 30 DAYS                   | 4            | 7          | +     | 0     | +     | 0     |
| PAST 12 MONTHS                 | 11           | 17         | 1     | 2     | +     | +     |
| HALLUCINOGENS (OTHER THAN PCP) |              |            |       |       |       |       |
| PAST 30 DAYS                   | 3            | 5          | +     | 0     | +     | 0     |
| PAST 12 MONTHS                 | 8            | 12         | 1     | 0     | +     | +     |
| TRANQUILIZERS                  |              |            |       |       |       |       |
| PAST 30 DAYS                   | 2            | 3          | +     | 0     | +     | 0     |
| PAST 12 MONTHS                 | 6            | 8          | 1     | +     | 1     | +     |
| BARBITURATES OR OTHER DOWNERS  |              |            |       |       |       |       |
| PAST 30 DAYS                   | 2            | 3          | +     | 0     | +     | 0     |
| PAST 12 MONTHS                 | 6            | 8          | 1     | 0     | 1     | 0     |
| OPIATES (OTHER THAN HEROIN)    |              |            |       |       |       |       |
| PAST 30 DAYS                   | 1            | 2          | +     | 0     | +     | 0     |
| PAST 12 MONTHS                 | 4            | 5          | +     | 0     | +     | +     |
| PCP                            |              |            |       |       |       |       |
| PAST 30 DAYS                   | 1            | 1          | +     | 0     | 0     | 0     |
| PAST 12 MONTHS                 | 4            | 6          | +     | 0     | +     | 0     |
| HEROIN                         |              |            |       |       |       |       |
| PAST 30 DAYS                   | 1            | 1          | +     | 0     | 0     | 0     |
| PAST 12 MONTHS                 | 2            | 2          | +     | 0     | 0     | +     |

+ LESS THAN HALF OF ONE PERCENT.

TABLE 4  
 POPULATION OF E1-E5'S USING EACH DRUG BY SERVICE  
 (PERCENTAGE)

| DRUG TYPE/<br>USE PERIOD       | TOTAL<br>DOD | SERVICE |      |                 |              |
|--------------------------------|--------------|---------|------|-----------------|--------------|
|                                |              | ARMY    | NAVY | MARINE<br>CORPS | AIR<br>FORCE |
| ANY DRUG USE                   |              |         |      |                 |              |
| PAST 30 DAYS                   | 38           | 41      | 48   | 48              | 21           |
| PAST 12 MONTHS                 | 50           | 53      | 59   | 61              | 33           |
| MARIJUANA/HASHISH              |              |         |      |                 |              |
| PAST 30 DAYS                   | 37           | 40      | 47   | 47              | 20           |
| PAST 12 MONTHS                 | 49           | 52      | 58   | 60              | 32           |
| AMPHETAMINES OR OTHER UPPERS   |              |         |      |                 |              |
| PAST 30 DAYS                   | 9            | 8       | 15   | 10              | 4            |
| PAST 12 MONTHS                 | 19           | 17      | 28   | 25              | 9            |
| COCAINE                        |              |         |      |                 |              |
| PAST 30 DAYS                   | 7            | 6       | 11   | 10              | 2            |
| PAST 12 MONTHS                 | 17           | 15      | 25   | 26              | 8            |
| HALLUCINOGENS (OTHER THAN PCP) |              |         |      |                 |              |
| PAST 30 DAYS                   | 5            | 3       | 7    | 10              | 2            |
| PAST 12 MONTHS                 | 12           | 10      | 18   | 21              | 5            |
| TRANQUILIZERS                  |              |         |      |                 |              |
| PAST 30 DAYS                   | 3            | 3       | 4    | 3               | 1            |
| PAST 12 MONTHS                 | 8            | 8       | 13   | 9               | 3            |
| BARBITURATES OR OTHER DOWNERS  |              |         |      |                 |              |
| PAST 30 DAYS                   | 3            | 4       | 5    | 4               | 1            |
| PAST 12 MONTHS                 | 8            | 8       | 12   | 11              | 4            |
| OPIATES (OTHER THAN HEROIN)    |              |         |      |                 |              |
| PAST 30 DAYS                   | 2            | 2       | 2    | 2               | 1            |
| PAST 12 MONTHS                 | 5            | 6       | 7    | 7               | 2            |
| PCP                            |              |         |      |                 |              |
| PAST 30 DAYS                   | 1            | 2       | 2    | 4               | +            |
| PAST 12 MONTHS                 | 6            | 6       | 7    | 13              | 1            |
| HEROIN                         |              |         |      |                 |              |
| PAST 30 DAYS                   | 1            | 2       | 1    | +               | +            |
| PAST 12 MONTHS                 | 2            | 4       | 2    | 1               | 1            |

+ LESS THAN HALF OF ONE PERCENT.

TABLE 5

POPULATION USING MARIJUANA/HASHISH  
DURING PAST 30 DAYS  
(PERCENTAGE)

| GEOGRAPHICAL<br>REGION/PAY GRADE | TOTAL<br>DOD | SERVICE |      |                 |              |
|----------------------------------|--------------|---------|------|-----------------|--------------|
|                                  |              | ARMY    | NAVY | MARINE<br>CORPS | AIR<br>FORCE |
| <b>CONUS</b>                     |              |         |      |                 |              |
| TOTAL.....                       | 27           | 29      | 34   | 39              | 14           |
| E1-E5.....                       | 39           | 41      | 48   | 51              | 21           |
| E6-E9.....                       | 5            | 6       | 6    | 5               | 3            |
| O1-O3.....                       | 3            | 5       | 2    | 6               | 2            |
| O4-O6.....                       | 1            | 0       | 0    | 0               | 1            |
| <b>EUROPE</b>                    |              |         |      |                 |              |
| TOTAL.....                       | 23           | 28      | 18   | *               | 13           |
| E1-E5.....                       | 33           | 39      | 27   | *               | 20           |
| E6-E9.....                       | 2            | 3       | 3    | *               | 1            |
| O1-O3.....                       | 3            | 6       | 0    | *               | 0            |
| O4-O6.....                       | 0            | -       | 0    | *               | 0            |
| <b>PACIFIC</b>                   |              |         |      |                 |              |
| TOTAL.....                       | 21           | 20      | 24   | 28              | 14           |
| E1-E5.....                       | 32           | 36      | 42   | 36              | 19           |
| E6-E9.....                       | 4            | 3       | 5    | 5               | 3            |
| O1-O3.....                       | 4            | 5       | 6    | -               | 4            |
| O4-O6.....                       | 2            | 0       | -    | -               | 4            |
| <b>OTHER LOCATIONS</b>           |              |         |      |                 |              |
| TOTAL.....                       | 22           | 29      | 21   | *               | 13           |
| E1-E5.....                       | 32           | 38      | 33   | *               | 19           |
| E6-E9.....                       | 4            | 8       | 3    | *               | 0            |
| O1-O3.....                       | 4            | -       | -    | *               | -            |
| O4-O6.....                       | 0            | -       | -    | *               | -            |
| <b>TOTAL WORLDWIDE</b>           |              |         |      |                 |              |
| TOTAL.....                       | 26           | 28      | 32   | 36              | 14           |
| E1-E5.....                       | 37           | 40      | 47   | 47              | 20           |
| E6-E9.....                       | 4            | 5       | 6    | 5               | 2            |
| W1-W4.....                       | 3            | 5       | 0    | -               | *            |
| O1-O3.....                       | 3            | 5       | 2    | 5               | 2            |
| O4-O6.....                       | 1            | 0       | 0    | 2               | 1            |

- LESS THAN 30 RESPONDENTS.

\* NOT APPLICABLE.

NOTE: REGIONAL TOTALS INCLUDE W1-W4'S.

TABLE 6

POPULATION USING PCP  
DURING PAST 30 DAYS  
(PERCENTAGE)

| GEOGRAPHICAL<br>REGION/PAY GRADE | TOTAL<br>OOD | SERVICE |      |                 |              |
|----------------------------------|--------------|---------|------|-----------------|--------------|
|                                  |              | ARMY    | NAVY | MARINE<br>CORPS | AIR<br>FORCE |
| CONUS                            |              |         |      |                 |              |
| TOTAL.....                       | 1            | 1       | 1    | 3               | +            |
| E1-E5.....                       | 2            | 2       | 2    | 4               | +            |
| E6-E9.....                       | +            | +       | +    | 0               | 0            |
| O1-O3.....                       | 0            | 0       | 0    | 0               | 0            |
| O4-O6.....                       | 0            | 0       | 0    | 0               | 0            |
| EUROPE                           |              |         |      |                 |              |
| TOTAL.....                       | 1            | 1       | +    | *               | +            |
| E1-E5.....                       | 1            | 1       | +    | *               | +            |
| E6-E9.....                       | 0            | 0       | 0    | *               | 0            |
| O1-O3.....                       | 0            | 0       | 0    | *               | 0            |
| O4-O6.....                       | 0            | 0       | 0    | *               | 0            |
| PACIFIC                          |              |         |      |                 |              |
| TOTAL.....                       | 1            | 1       | 1    | 1               | 0            |
| E1-E5.....                       | 1            | 1       | 1    | 2               | 0            |
| E6-E9.....                       | 0            | 0       | 0    | 0               | 0            |
| O1-O3.....                       | 0            | 0       | 0    | 0               | 0            |
| O4-O6.....                       | 0            | 0       | 0    | 0               | 0            |
| OTHER LOCATIONS                  |              |         |      |                 |              |
| TOTAL.....                       | +            | +       | 0    | *               | 0            |
| E1-E5.....                       | 0            | 0       | 0    | *               | 0            |
| E6-E9.....                       | +            | 1       | 0    | *               | 0            |
| O1-O3.....                       | 0            | -       | -    | *               | -            |
| O4-O6.....                       | 0            | -       | -    | *               | -            |
| TOTAL WORLDWIDE                  |              |         |      |                 |              |
| TOTAL.....                       | 1            | 1       | 1    | 3               | +            |
| E1-E5.....                       | 1            | 2       | 2    | 4               | +            |
| E6-E9.....                       | +            | +       | +    | 0               | 0            |
| W1-W4.....                       | 0            | 0       | 0    | 0               | 0            |
| O1-O3.....                       | 0            | 0       | 0    | 0               | 0            |
| O4-O6.....                       | 0            | 0       | 0    | 0               | 0            |

+ LESS THAN HALF OF ONE PERCENT.  
- LESS THAN 30 RESPONDENTS.  
\* NOT APPLICABLE.

NOTE: REGIONAL TOTALS INCLUDE W1-W4'S.

TABLE 7  
 POPULATION USING HALLUCINOGENS (OTHER THAN PCP)  
 DURING PAST 30 DAYS  
 (PERCENTAGE)

| GEOGRAPHICAL<br>REGION/PAY GRADE | TOTAL<br>DOD | SERVICE |      |                 |              |
|----------------------------------|--------------|---------|------|-----------------|--------------|
|                                  |              | ARMY    | NAVY | MARINE<br>CORPS | AIR<br>FORCE |
| COMUS                            |              |         |      |                 |              |
| TOTAL                            | 4            | 2       | 6    | 8               | 1            |
| E1-E5                            | 5            | 4       | 8    | 11              | 2            |
| E6-E9                            | +            | 0       | 1    | 0               | 0            |
| O1-O3                            | +            | 0       | 0    | 1               | 0            |
| O4-O6                            | 0            | 0       | 0    | 0               | 0            |
| EUROPE                           |              |         |      |                 |              |
| TOTAL                            | 2            | 2       | +    | *               | 1            |
| E1-E5                            | 2            | 3       | +    | *               | 1            |
| E6-E9                            | 0            | 0       | 0    | *               | 0            |
| O1-O3                            | 0            | 0       | 0    | *               | 0            |
| O4-O6                            | 0            | -       | 0    | *               | 0            |
| PACIFIC                          |              |         |      |                 |              |
| TOTAL                            | 2            | 2       | 2    | 5               | 1            |
| E1-E5                            | 4            | 3       | 5    | 7               | 1            |
| E6-E9                            | +            | 0       | 0    | 1               | 0            |
| O1-O3                            | +            | 0       | 1    | -               | 0            |
| O4-O6                            | 0            | 0       | -    | -               | 0            |
| OTHER LOCATIONS                  |              |         |      |                 |              |
| TOTAL                            | 1            | 3       | 1    | *               | 0            |
| E1-E5                            | 2            | 4       | 1    | *               | 0            |
| E6-E9                            | 0            | 0       | 0    | *               | 0            |
| O1-O3                            | 0            | -       | -    | *               | -            |
| O4-O6                            | 0            | -       | -    | *               | -            |
| TOTAL WORLDWIDE                  |              |         |      |                 |              |
| TOTAL                            | 3            | 2       | 5    | 7               | 1            |
| E1-E5                            | 5            | 3       | 7    | 10              | 2            |
| E6-E9                            | +            | 0       | 1    | +               | 0            |
| W1-W4                            | 0            | 0       | 0    | -               | 0            |
| O1-O3                            | +            | 0       | +    | 1               | 0            |
| O4-O6                            | 0            | 0       | 0    | 0               | 0            |

+ LESS THAN HALF OF ONE PERCENT.  
 - LESS THAN 30 RESPONDENTS.  
 \* NOT APPLICABLE.

NOTE: REGIONAL TOTALS INCLUDE W1-W4'S.



TABLE 8  
POPULATION USING COCAINE  
DURING PAST 30 DAYS  
(PERCENTAGE)

| GEOGRAPHICAL<br>REGION/PAY GRADE | TOTAL<br>DOD | SERVICE |      |                 |              |
|----------------------------------|--------------|---------|------|-----------------|--------------|
|                                  |              | ARMY    | NAVY | MARINE<br>CORPS | AIR<br>FORCE |
| CONUS                            |              |         |      |                 |              |
| TOTAL.....                       | 5            | 4       | 8    | 8               | 1            |
| E1-E5.....                       | 7            | 6       | 11   | 11              | 2            |
| E6-E9.....                       | +            | +       | 1    | 0               | 0            |
| O1-O3.....                       | +            | 0       | +    | 1               | 0            |
| O4-O6.....                       | 0            | 0       | 0    | 0               | 0            |
| EUROPE                           |              |         |      |                 |              |
| TOTAL.....                       | 3            | 4       | +    | *               | 2            |
| E1-E5.....                       | 4            | 5       | 1    | *               | 2            |
| E6-E9.....                       | +            | +       | 0    | *               | 0            |
| O1-O3.....                       | 0            | 0       | 0    | *               | 0            |
| O4-O6.....                       | C            | -       | 0    | *               | 0            |
| PACIFIC                          |              |         |      |                 |              |
| TOTAL.....                       | 4            | 3       | 6    | 6               | +            |
| E1-E5.....                       | 6            | 5       | 10   | 8               | +            |
| E6-E9.....                       | 1            | 1       | 1    | 0               | 1            |
| O1-O3.....                       | 0            | 0       | 0    | -               | 0            |
| O4-O6.....                       | 0            | 0       | -    | -               | 0            |
| OTHER LOCATIONS                  |              |         |      |                 |              |
| TOTAL.....                       | 4            | 6       | 2    | *               | 2            |
| E1-E5.....                       | 6            | 8       | 4    | *               | 3            |
| E6-E9.....                       | +            | 1       | 0    | *               | 0            |
| O1-O3.....                       | 0            | -       | -    | *               | -            |
| O4-O6.....                       | 0            | -       | -    | *               | -            |
| TOTAL WORLDWIDE                  |              |         |      |                 |              |
| TOTAL.....                       | 4            | 4       | 7    | 8               | 1            |
| E1-E5.....                       | 7            | 6       | 11   | 10              | 2            |
| E6-E9.....                       | +            | +       | 1    | 0               | +            |
| W1-W4.....                       | 0            | 0       | 0    | 1               | *            |
| O1-O3.....                       | +            | 0       | 0    | -               | 0            |
| O4-O6.....                       | 0            | 0       | 0    | 0               | 0            |

+ LESS THAN HALF OF ONE PERCENT.  
- LESS THAN 30 RESPONDENTS.  
\* NOT APPLICABLE.

NOTE: REGIONAL TOTALS INCLUDE W1-W4'S.

TABLE 9  
 POPULATION USING AMPHETAMINES OR OTHER UPPERS  
 DURING PAST 30 DAYS  
 (PERCENTAGE)

| GEOGRAPHICAL<br>REGION/PAY GRADE | TOTAL<br>DOD | SERVICE |      |                 |              |
|----------------------------------|--------------|---------|------|-----------------|--------------|
|                                  |              | ARMY    | NAVY | MARINE<br>CORPS | AIR<br>FORCE |
| CONUS                            |              |         |      |                 |              |
| TOTAL.....                       | 7            | 6       | 12   | 9               | 3            |
| E1-E5.....                       | 10           | 8       | 17   | 11              | 4            |
| E6-E9.....                       | 1            | 1       | 1    | 1               | 1            |
| O1-O3.....                       | 0            | 0       | 0    | 0               | 0            |
| O4-O6.....                       | 0            | 0       | 0    | 0               | 0            |
| EUROPE                           |              |         |      |                 |              |
| TOTAL.....                       | 5            | 6       | 3    | *               | 2            |
| E1-E5.....                       | 7            | 9       | 5    | *               | 3            |
| E6-E9.....                       | 1            | 1       | 0    | *               | 0            |
| O1-O3.....                       | +            | 0       | 3    | *               | 0            |
| O4-O6.....                       | 0            | -       | 0    | *               | 0            |
| PACIFIC                          |              |         |      |                 |              |
| TOTAL.....                       | 4            | 3       | 4    | 4               | 3            |
| E1-E5.....                       | 6            | 6       | 7    | 6               | 4            |
| E6-E9.....                       | +            | 0       | 0    | 1               | 1            |
| O1-O3.....                       | 1            | 2       | 1    | -               | 1            |
| O4-O6.....                       | +            | 0       | -    | -               | 2            |
| OTHER LOCATIONS                  |              |         |      |                 |              |
| TOTAL.....                       | 4            | 6       | 4    | *               | 2            |
| E1-E5.....                       | 6            | 7       | 7    | *               | 2            |
| E6-E9.....                       | +            | 1       | 0    | *               | 0            |
| O1-O3.....                       | 0            | -       | -    | *               | -            |
| O4-O6.....                       | 0            | -       | -    | *               | -            |
| TOTAL WORLDWIDE                  |              |         |      |                 |              |
| TOTAL.....                       | 6            | 6       | 10   | 8               | 3            |
| E1-E5.....                       | 9            | 8       | 15   | 10              | 4            |
| E6-E9.....                       | 1            | 1       | 1    | 1               | 1            |
| W1-W4.....                       | 0            | 0       | 0    | -               | *            |
| O1-O3.....                       | +            | +       | +    | 0               | +            |
| O4-O6.....                       | +            | 0       | 0    | 0               | +            |

+ LESS THAN HALF OF ONE PERCENT.  
 - LESS THAN 30 RESPONDENTS.  
 \* NOT APPLICABLE.

NOTE: REGIONAL TOTALS INCLUDE W1-W4'S.

TABLE 10  
POPULATION USING TRANQUILIZERS  
DURING PAST 30 DAYS  
(PERCENTAGE)

| GEOGRAPHICAL<br>REGION/PAY GRADE | TOTAL<br>DOD | SERVICE |      |                 |              |
|----------------------------------|--------------|---------|------|-----------------|--------------|
|                                  |              | ARMY    | NAVY | MARINE<br>CORPS | AIR<br>FORCE |
| CONUS                            |              |         |      |                 |              |
| TOTAL                            | 2            | 2       | 3    | 2               | 1            |
| E1-E5                            | 3            | 3       | 4    | 3               | 1            |
| E6-E9                            | 1            | +       | 2    | 0               | 0            |
| O1-O3                            | +            | +       | 0    | 0               | 0            |
| O4-O6                            | 0            | 0       | 0    | 0               | 0            |
| EUROPE                           |              |         |      |                 |              |
| TOTAL                            | 2            | 3       | 3    | *               | 1            |
| E1-E5                            | 3            | 4       | 5    | *               | 2            |
| E6-E9                            | +            | 0       | 0    | *               | 1            |
| O1-O3                            | 0            | 0       | 0    | *               | 0            |
| O4-O6                            | +            | -       | 0    | *               | 1            |
| PACIFIC                          |              |         |      |                 |              |
| TOTAL                            | 2            | 2       | 2    | 3               | 1            |
| E1-E5                            | 3            | 4       | 4    | 3               | 1            |
| E6-E9                            | +            | 0       | 0    | 1               | 0            |
| O1-O3                            | 0            | 0       | 0    | -               | 0            |
| O4-O6                            | 0            | 0       | -    | -               | 0            |
| OTHER LOCATIONS                  |              |         |      |                 |              |
| TOTAL                            | 2            | 3       | 3    | *               | 0            |
| E1-E5                            | 3            | 4       | 4    | *               | 0            |
| E6-E9                            | 1            | 2       | 0    | *               | 0            |
| O1-O3                            | 3            | -       | -    | *               | -            |
| O4-O6                            | 0            | -       | -    | *               | -            |
| TOTAL WORLDWIDE                  |              |         |      |                 |              |
| TOTAL                            | 2            | 2       | 3    | 2               | 1            |
| E1-E5                            | 3            | 3       | 4    | 3               | 1            |
| E6-E9                            | +            | +       | 1    | -               | +            |
| W1-W4                            | 0            | 0       | 0    | -               | 0            |
| O1-O3                            | +            | +       | +    | 0               | 0            |
| O4-O6                            | 0            | 0       | 0    | 0               | 0            |

+ LESS THAN HALF OF ONE PERCENT.  
- LESS THAN 30 RESPONDENTS.  
\* NOT APPLICABLE.

NOTE: REGIONAL TOTALS INCLUDE W1-W4'S.

TABLE II  
 POPULATION USING BARBITURATES OR OTHER DOWNERS  
 DURING PAST 30 DAYS  
 (PERCENTAGE)

| GEOGRAPHICAL<br>REGION/PAY GRADE | TOTAL<br>DOD | SERVICE |      |                 |              |
|----------------------------------|--------------|---------|------|-----------------|--------------|
|                                  |              | ARMY    | NAVY | MARINE<br>CORPS | AIR<br>FORCE |
| CONUS                            |              |         |      |                 |              |
| TOTAL                            | 2            | 2       | 3    | 3               | 1            |
| E1-E5                            | 3            | 3       | 5    | 4               | 1            |
| E6-E9                            | +            | 0       | 1    | 0               | 0            |
| O1-O3                            | 1            | 1       | 0    | 1               | 0            |
| O4-O6                            | 0            | 0       | 0    | 0               | 0            |
| EUROPE                           |              |         |      |                 |              |
| TOTAL                            | 2            | 3       | 2    | *               | 1            |
| E1-E5                            | 3            | 4       | 2    | *               | 1            |
| E6-E9                            | 0            | 0       | 0    | *               | 0            |
| O1-O3                            | 0            | 0       | 0    | *               | 0            |
| O4-O6                            | 0            | -       | 0    | *               | 0            |
| PACIFIC                          |              |         |      |                 |              |
| TOTAL                            | 3            | 2       | 2    | 3               | 1            |
| E1-E5                            | 3            | 4       | 4    | 4               | 1            |
| E6-E9                            | 0            | 0       | 0    | 0               | 0            |
| O1-O3                            | 0            | 0       | 0    | -               | 0            |
| O4-O6                            | 0            | 0       | -    | -               | 0            |
| OTHER LOCATIONS                  |              |         |      |                 |              |
| TOTAL                            | 2            | 2       | 3    | *               | 1            |
| E1-E5                            | 3            | 3       | 6    | *               | 1            |
| E6-E9                            | 0            | 0       | 0    | *               | 0            |
| O1-O3                            | 0            | -       | -    | *               | -            |
| O4-O6                            | 0            | -       | -    | *               | -            |
| TOTAL WORLDWIDE                  |              |         |      |                 |              |
| TOTAL                            | 2            | 3       | 3    | 3               | 1            |
| E1-E5                            | 3            | 4       | 5    | 4               | 1            |
| E6-E9                            | +            | 0       | 1    | 0               | 0            |
| W1-W4                            | 0            | 0       | 0    | -               | 0            |
| O1-O3                            | +            | 1       | 0    | 1               | 0            |
| O4-O6                            | 0            | 0       | 0    | 0               | 0            |

+ LESS THAN HALF OF ONE PERCENT.  
 - LESS THAN 30 RESPONDENTS.  
 \* NOT APPLICABLE.

NOTE: REGIONAL TOTALS INCLUDE W1-W4'S.

TABLE 12  
POPULATION USING HEROIN  
DURING PAST 30 DAYS  
(PERCENTAGE)

| GEOGRAPHICAL<br>REGION/PAY GRADE | TOTAL<br>DOD | SERVICE |      |                 |              |
|----------------------------------|--------------|---------|------|-----------------|--------------|
|                                  |              | ARMY    | NAVY | MARINE<br>CORPS | AIR<br>FORCE |
| CONUS                            |              |         |      |                 |              |
| TOTAL                            | 1            | 1       | 1    | +               | +            |
| E1-E5                            | 1            | 1       | 1    | +               | +            |
| E6-E9                            | +            | 0       | +    | 0               | 0            |
| O1-O3                            | 0            | 0       | 0    | 0               | 0            |
| O4-O6                            | 0            | 0       | 0    | 0               | 0            |
| EUROPE                           |              |         |      |                 |              |
| TOTAL                            | 2            | 3       | 0    | *               | 1            |
| E1-E5                            | 3            | 4       | 0    | *               | 1            |
| E6-E9                            | 0            | 0       | 0    | *               | 0            |
| O1-O3                            | 0            | 0       | 0    | *               | 0            |
| O4-O6                            | 0            | 0       | 0    | *               | 0            |
| PACIFIC                          |              |         |      |                 |              |
| TOTAL                            | +            | 1       | 1    | +               | +            |
| E1-E5                            | 1            | 1       | 1    | +               | +            |
| E6-E9                            | 0            | 0       | 0    | 0               | 0            |
| O1-O3                            | 0            | 0       | 0    | 0               | 0            |
| O4-O6                            | 0            | 0       | 0    | 0               | 0            |
| OTHER LOCATIONS                  |              |         |      |                 |              |
| TOTAL                            | +            | 0       | 0    | *               | +            |
| E1-E5                            | +            | 0       | 0    | *               | +            |
| E6-E9                            | 0            | 0       | 0    | *               | 0            |
| O1-O3                            | 0            | 0       | 0    | *               | 0            |
| O4-O6                            | 0            | 0       | 0    | *               | 0            |
| TOTAL WORLDWIDE                  |              |         |      |                 |              |
| TOTAL                            | 1            | 1       | 1    | +               | +            |
| E1-E5                            | 1            | 2       | 1    | +               | +            |
| E6-E9                            | +            | 0       | +    | 0               | 0            |
| W1-W4                            | 0            | 0       | 0    | 0               | 0            |
| O1-O3                            | 0            | 0       | 0    | 0               | 0            |
| O4-O6                            | 0            | 0       | 0    | 0               | 0            |

+ LESS THAN HALF OF ONE PERCENT.  
- LESS THAN 30 RESPONDENTS.  
\* NOT APPLICABLE.

NOTE: REGIONAL TOTALS INCLUDE W1-W4'S.

TABLE 13  
 POPULATION USING OPIATES (OTHER THAN HEROIN)  
 DURING PAST 30 DAYS  
 (PERCENTAGE)

| GEOGRAPHICAL<br>REGION/PAY GRADE | TOTAL<br>DOD | SERVICE |      |                 |              |
|----------------------------------|--------------|---------|------|-----------------|--------------|
|                                  |              | ARMY    | NAVY | MARINE<br>CORPS | AIR<br>FORCE |
| COMUS                            |              |         |      |                 |              |
| TOTAL                            | 1            | 1       | 2    | 2               | +            |
| E1-E5                            | 2            | 2       | 2    | 2               | 1            |
| E6-E9                            | +            | +       | +    | +               | 0            |
| O1-O3                            | +            | +       | 0    | 1               | 0            |
| O4-O6                            | 0            | 0       | 0    | 0               | 0            |
| EUROPE                           |              |         |      |                 |              |
| TOTAL                            | 2            | 2       | 1    | *               | +            |
| E1-E5                            | 2            | 3       | 2    | *               | 1            |
| E6-E9                            | 1            | 2       | 0    | *               | 0            |
| O1-O3                            | 0            | 0       | 0    | *               | 0            |
| O4-O6                            | 0            | 0       | 0    | *               | 0            |
| PACIFIC                          |              |         |      |                 |              |
| TOTAL                            | 1            | 2       | 2    | 2               | 1            |
| E1-E5                            | 2            | 3       | 3    | 2               | 1            |
| E6-E9                            | 0            | 0       | 0    | 0               | 0            |
| O1-O3                            | +            | 1       | 0    | -               | 0            |
| O4-O6                            | 0            | 0       | -    | -               | 0            |
| OTHER LOCATIONS                  |              |         |      |                 |              |
| TOTAL                            | 1            | 1       | +    | *               | +            |
| E1-E5                            | 1            | 1       | 1    | *               | 0            |
| E6-E9                            | 0            | 0       | 0    | *               | 0            |
| O1-O3                            | 0            | -       | -    | *               | -            |
| O4-O6                            | 0            | -       | -    | *               | -            |
| TOTAL WORLDWIDE                  |              |         |      |                 |              |
| TOTAL                            | 1            | 2       | 2    | 2               | +            |
| E1-E5                            | 2            | 2       | 2    | 2               | 1            |
| E6-E9                            | +            | +       | +    | +               | 0            |
| W1-W4                            | 0            | 0       | 0    | 1               | 0            |
| O1-O3                            | +            | 1       | 0    | 1               | 0            |
| O4-O6                            | 0            | 0       | 0    | 0               | 0            |

+ LESS THAN HALF OF ONE PERCENT.  
 - LESS THAN 30 RESPONDENTS.  
 \* NOT APPLICABLE.

NOTE: REGIONAL TOTALS INCLUDE W1-W4'S.

### Drug Dependence

For the purpose of this analysis, a person is defined as having been physiologically drug dependent during the past 12 months if he or she falls in one or more of the following categories:

1. Used one of the following drugs nonmedically at least five times per week during the past 30 days: barbiturates/other downers, heroin, or other opiates.
2. Experienced sickness (i.e., withdrawal symptoms) because use of addictive drugs was stopped; symptoms include: "runny nose or eyes," "flushed or sweaty," "chills," "nausea or vomiting," "stomach cramps," "diarrhea," "muscle pains," etc.
3. Was detoxified because of drug use.

For the purpose of this analysis, a person is classified as psychologically drug dependent who experiences sickness (i.e., withdrawal symptoms) because he or she stopped use of one or more non-addictive drugs; the symptoms are the same as defined earlier for physiological addiction.

From the results obtained, it is estimated that 3 percent of DOD junior enlisted personnel were physiologically drug dependent and that a total of 4 percent were physiologically or psychologically drug dependent at some time during the preceding 12 months. The percentage of E1-E5's who were drug dependent is depicted in Table 14.

TABLE 14

#### DRUG DEPENDENCE (PERCENTAGE OF E1-E5 POPULATION)

| TYPE OF DEPENDENCE                 | TOTAL DOD | SERVICE |      |              |           |
|------------------------------------|-----------|---------|------|--------------|-----------|
|                                    |           | ARMY    | NAVY | MARINE CORPS | AIR FORCE |
| PHYSIOLOGICAL                      | 3         | 4       | 3    | 4            | 1         |
| PHYSIOLOGICAL AND/OR PSYCHOLOGICAL | 4         | 5       | 4    | 5            | 1         |

Consequences of Drug Use

The respondents were asked to indicate whether each of two consequences of nonmedical drug use had occurred during the past 12 months. Table 15 shows that 19 percent of the junior enlisted respondents reported suffering at least one of the consequences during the preceding 12 months.

TABLE 15

SELECTED CONSEQUENCES OF DRUG USE  
(PERCENTAGE OF E1-E5 POPULATION)

| CONSEQUENCE                                 | TOTAL<br>DOD | SERVICE |      |                 |              |
|---|--------------|---------|------|-----------------|--------------|
|   |              | ARMY    | NAVY | MARINE<br>CORPS | AIR<br>FORCE |
| USED MORE DRUGS<br>THAN PLANNED             | 10           | 9       | 13   | 14              | 6            |
| HIGH MORE THAN 1<br>DAY AT A TIME           | 17           | 16      | 22   | 24              | 9            |
| TOTAL WITH ANY<br>OF THE 17<br>CONSEQUENCES | 19           | 18      | 25   | 27              | 11           |

The respondents were also asked to indicate whether each of 15 physical, social or work consequences had occurred because of their use of drugs during the past 12 months. Ten percent of the junior enlisted personnel reported suffering at least one of the 15 consequences during that period (Table 16).

Junior enlisted personnel who reported one or more of the 17 consequences<sup>1</sup> experienced them a median of three times.<sup>2</sup>

<sup>1</sup>This analysis combines both groups of consequences.

<sup>2</sup>A person experiencing consequences (say) three times could have experienced one consequence three times, three different consequences one time each, or another combination.



TABLE 16  
 SPECIFIC CONSEQUENCES OF DRUG USE DURING PAST  
 12 MONTHS  
 (PERCENTAGE OF E1-E5 POPULATION)

| CONSEQUENCES   | TOTAL<br>DOD | SERVICE |      |                 |              |
|--|--------------|---------|------|-----------------|--------------|
|  |              | ARMY    | NAVY | MARINE<br>CORPS | AIR<br>FORCE |
| ILLNESS KEPT FROM DUTY 1 WEEK<br>OR LONGER                           | 2            | 3       | 1    | 2               | +            |
| DIDN'T GET PROMOTED  | 3            | 4       | 3    | 5               | 1            |
| GOT LOWER SCORE ON EFFICIENCY<br>OR PERFORMANCE REPORT               | 3            | 3       | 3    | 5               | 1            |
| RECEIVED JUDICIAL OR<br>ARTICLE 15 PUNISHMENT                        | 4            | 5       | 4    | 5               | 2            |
| ARRESTED FOR DRIVING AFTER<br>USING DRUGS                            | 1            | 2       | 1    | 2               | 1            |
| ARRESTED FOR NON-DRIVING<br>DRUG INCIDENT                            | 4            | 4       | 4    | 6               | 2            |
| INCARCERATED DUE TO DRUG USE   | 2            | 1       | 2    | 3               | 1            |
| HURT IN ACCIDENT CONNECTED<br>WITH DRUG USE                          | 2            | 2       | 2    | 2               | +            |
| DRUG USE CAUSED ACCIDENT<br>WHERE OTHERS HURT OR PROPERTY<br>DAMAGED | 1            | 1       | 2    | 2               | 1            |
| SPOUSE THREATENED TO LEAVE   | 2            | 2       | 2    | 2               | 1            |
| HIT SPOUSE OR CHILDREN   | 1            | 1       | 1    | 1               | +            |
| SPOUSE LEFT  | 1            | 1       | 1    | 1               | +            |
| ENTERED REHABILITATION OR<br>TREATMENT PROGRAM                       | 2            | 2       | 1    | 2               | 2            |
| ATTENDED TRAINING OR EDUCATION<br>PROGRAM                            | 2            | 3       | 1    | 3               | 1            |
| DETOXIFIED   | 1            | 1       | 1    | 1               | +            |
| TOTAL WITH ANY CONSEQUENCES <sup>a</sup>                             | 10           | 11      | 13   | 15              | 5            |

<sup>a</sup>PERCENTAGE OF POPULATION REPORTING AT LEAST ONE OF THE CONSEQUENCES DURING THE PAST 12 MONTHS.

+ LESS THAN ONE-HALF OF ONE PERCENT.

Work Impairment

Turning now to a more specific focus on work impairment because of drug use, four types of work impairment are considered: (1) "lowered performance," (2) "late for work or left early," (3) "did not come to work," and (4) "high while working."

The type of work impairment most frequently reported by junior enlisted personnel was "high while working" (19 percent); nearly one-half of the E1-E5 respondents indicating this had occurred reported experiencing this on 40 or more days during the preceding 12 months. Substantially lower proportions of E1-E5 respondents reported other work impairments, as shown in Table 17, and nearly all of them also reported being "high while working."

TABLE 17

WORK IMPAIRMENT BECAUSE OF DRUG USE  
(PERCENTAGE OF E1-E5 POPULATION)

| TYPE OF IMPAIRMENT              | TOTAL<br>DOD | SERVICE |      |                 |              |
|---------------------------------|--------------|---------|------|-----------------|--------------|
|                                 |              | ARMY    | NAVY | MARINE<br>CORPS | AIR<br>FORCE |
| LOWERED PERFORMANCE             | 10           | 12      | 15   | 13              | 3            |
| LATE FOR WORK/LEFT<br>EARLY     | 6            | 8       | 8    | 8               | 2            |
| DID NOT COME TO<br>WORK         | 4            | 6       | 4    | 5               | 1            |
| HIGH WHILE WORKING              | 19           | 21      | 26   | 25              | 8            |
| TOTAL WITH<br>ANY<br>IMPAIRMENT | 21           | 22      | 28   | 28              | 9            |

Section 3: ALCOHOL USE--PREVALENCE AND  
CONSEQUENCES AMONG MILITARY PERSONNEL

Prevalence of Alcohol Use

The percentage of the population that drank any alcohol during the past 30 days is depicted in Table 18.

TABLE 18  
POPULATION USING ALCOHOL DURING PAST 30 DAYS  
(PERCENTAGE)

| PAY GRADE<br>GROUP | TOTAL<br>DOD | SERVICE |      |                 |              |
|--------------------|--------------|---------|------|-----------------|--------------|
|                    |              | ARMY    | NAVY | MARINE<br>CORPS | AIR<br>FORCE |
| TOTAL WORLDWIDE    | 83           | 80      | 86   | 86              | 82           |
| E1-E5              | 83           | 81      | 88   | 86              | 82           |
| E6-E9              | 77           | 75      | 78   | 83              | 78           |
| W1-W4              | 76           | 76      | 80   | -               | *            |
| O1-O3              | 83           | 80      | 88   | 91              | 82           |
| O4-O6              | 91           | 92      | 94   | 84              | 90           |

- LESS THAN 30 RESPONDENTS.

\* NOT APPLICABLE.

The principal point derived from these data is that most military personnel (83 percent) drank at least occasionally. In general, the highest prevalence of drinking any alcohol was recorded by senior officers, followed by junior officers and junior enlisted personnel, senior enlisted personnel and, warrant officers.

For all respondents worldwide, beer was the most commonly consumed beverage; it was drunk by 73 percent of all military personnel at least once within the past 30 days, and by about one-fourth (26 percent) at least three times a week. Hard liquor (including mixed drinks) was consumed by about one-half of the respondents (51 percent) within the past 30 days, but only 8 percent drank hard liquor as often as three times a week. Wine was the least frequently consumed beverage: only 35 percent of the military personnel had drunk any wine during the past 30 days, and only 4 percent had done so as often as three times a week.

Regional differences in drinking patterns are generally slight with the exception that consumption of wine is more prevalent in Europe than in other regions.

### Heavy Drinking

We define "heavy drinking" as consumption of eight or more drinks in a single day. Table 19 shows that beer was the beverage that was heavily consumed by the most respondents. On a typical day in which beer was consumed, 8 percent drank eight or more "drinks" (a "drink" is one 12 ounce can, bottle or glass). Heavy drinking of wine was rarely reported, (a "drink" is one four ounce glass), but heavy drinking of hard liquor was reportedly nearly as common as heavy drinking of beer; 6 percent of all respondents reported consuming eight or more drinks of hard liquor on a typical drinking day during the past 30 days.

TABLE 19

QUANTITY CONSUMED ON A TYPICAL DRINKING DAY  
DURING PAST 30 DAYS--WORLDWIDE TOTAL  
(PERCENTAGE OF POPULATION)

| BEVERAGE/<br>FREQUENCY | TOTAL<br>DOD | SERVICE |      |                 |              |
|------------------------|--------------|---------|------|-----------------|--------------|
|                        |              | ARMY    | NAVY | MARINE<br>CORPS | AIR<br>FORCE |
| <b>BEER</b>            |              |         |      |                 |              |
| 8-11 DRINKS            | 5            | 5       | 7    | 7               | 3            |
| 12 OR MORE DRINKS      | 3            | 3       | 5    | 4               | 1            |
| <b>WINE</b>            |              |         |      |                 |              |
| 8-11 DRINKS            | +            | +       | +    | +               | +            |
| 12 OR MORE DRINKS      | 1            | 1       | 1    | 1               | 1            |
| <b>HARD LIQUOR</b>     |              |         |      |                 |              |
| 8-11 DRINKS            | 4            | 3       | 5    | 6               | 2            |
| 12 OR MORE DRINKS      | 2            | 2       | 3    | 2               | 1            |

+ LESS THAN HALF OF ONE PERCENT

Heavy drinking was reported almost exclusively by enlisted personnel. Twelve percent of E1-E5's and 4 percent of E6-E9's worldwide reported heavy drinking of beer; only 1 percent of each enlisted group reported heavy drinking of wine. The comparable figures for hard liquor were: E1-E5's, 8 percent;

E6-E9's, 3 percent. Only about 1 percent or less of each officer or warrant officer group worldwide reported heavy drinking of any beverage.

The preceding discussion was concerned with typical drinking during the past 30 days. Now we focus on the frequency that a person engaged in heavy drinking during the past 12 months. Table 20 shows that 21 percent of all respondents reported they had engaged in heavy drinking of beer at least one a week during the past 12 months; the comparable figures for wine and hard liquor were about 5 percent and 11 percent, respectively.

TABLE 20

HEAVY DRINKERS<sup>1</sup>--WORLDWIDE TOTAL  
(PERCENTAGE OF POPULATION)

| BEVERAGE    | TOTAL<br>DOD | SERVICE |      |                 |              |
|-------------|--------------|---------|------|-----------------|--------------|
|             |              | ARMY    | NAVY | MARINE<br>CORPS | AIR<br>FORCE |
| BEER        | 21           | 22      | 25   | 28              | 13-14        |
| WINE        | 5-6          | 8       | 5-6  | 7               | 3-4          |
| HARD LIQUOR | 11           | 12      | 14   | 13              | 7-8          |

<sup>1</sup>DEFINED AS A PERSON WHO DRANK EIGHT OR MORE 12 OUNCE CANS, GLASSES, OR BOTTLES OF BEER; EIGHT OR MORE FOUR OUNCE GLASSES OF WINE; OR EIGHT OR MORE DRINKS OF HARD LIQUOR IN A SINGLE DAY AT LEAST ONCE A MONTH DURING THE PAST 12 MONTHS.

The worldwide patterns of heavy drinking by pay grade group are as described previously for typical drinking, but the rates are higher. Heavy drinking was rarely reported by officers or warrant officers. Twenty-eight percent of E1-E5's and about 10 percent of E6-E9's reported heavy drinking of beer; the comparable figures for wine were 8 percent and about 1 percent of the E1-E5's and E6-E9's, respectively. Fourteen percent of the E1-E5's and about 5 percent of E6-E9's reported heavy drinking of hard liquor.

Adverse Physiological Effects

There is compelling evidence that a person consuming a daily average of five ounces or more of ethanol during a year is at high risk of developing severe medical problems (e.g., cirrhotic or precirrhotic conditions).<sup>1</sup> Based on this threshold of presumptive harm, 7.9 percent of all DOD respondents are at high risk. Table 21 depicts the data by Service and pay grade group.

TABLE 21

POPULATION AT HIGH RISK FOR SEVERE MEDICAL PROBLEMS  
(PERCENTAGE)

| PAY GRADE GROUP | TOTAL DOD | SERVICE |      |              |           |
|-----------------|-----------|---------|------|--------------|-----------|
|                 |           | ARMY    | NAVY | MARINE CORPS | AIR FORCE |
| TOTAL           | 7.9       | 9.2     | 9.9  | 10.1         | 3.6       |
| E1-E5           | 10.9      | 12.2    | 13.9 | 12.9         | 5.3       |
| E6-E9           | 3.1       | 4.9     | 2.7  | 2.6          | 1.3       |
| W1-W4           | 0.2       | 0       | 1.0  | -            | *         |
| O1-O3           | 0.7       | 1.5     | 0.1  | 0.9          | 0.4       |
| O4-O6           | 0.6       | 0       | 0    | 2.4          | 1.0       |

- LESS THAN 30 RESPONDENTS.

\* NOT APPLICABLE.

Alcohol Dependence

For the purpose of this analysis, a person is defined as "alcohol dependent" who, during the preceding 12 month period, experienced one or more of the following symptoms during at least 48 of the 52 weeks: (1) tremors (shakes), (2) morning drinking, (3) impaired control, and (4) blackouts.

It is estimated that 7 percent of the military personnel worldwide were alcohol dependent during the preceding 12 months (Table 22). Alcohol dependency occurred predominantly among junior enlisted personnel (10 percent) and senior enlisted personnel (3 percent); it was rare among warrant officers and commissioned officers.

<sup>1</sup> Five ounces of ethanol is equivalent to approximately ten 12 ounce cans of beer, ten four ounce glasses of wine, or seven drinks of hard liquor (at 1.7 ounces of hard liquor per drink).

TABLE 22  
ALCOHOL DEPENDENCE DURING PAST 12 MONTHS  
(PERCENTAGE OF POPULATION)

| PAY GRADE GROUP | TOTAL DOD | SERVICE |      |              |           |
|-----------------|-----------|---------|------|--------------|-----------|
|                 |           | ARMY    | NAVY | MARINE CORPS | AIR FORCE |
| TOTAL           | 7         | 8       | 9    | 11           | 4         |
| E1-E5           | 10        | 11      | 12   | 14           | 5         |
| E6-E9           | 3         | 3       | 5    | 4            | 2         |
| W1-W4           | +         | 0       | 0    | -            | *         |
| O1-O3           | 1         | 1       | +    | 5            | +         |
| O4-O6           | +         | 0       | 1    | 1            | 1         |

+ LESS THAN HALF OF ONE PERCENT.

\* NOT APPLICABLE.

- LESS THAN 30 RESPONDENTS.

The patterns shown are quite consistent with the heavy drinking patterns discussed previously. This is to be expected because of the substantial correlation between heavy drinking and alcohol dependency.

Consequences of Alcohol Use

The respondents were asked to indicate whether each of two consequences of alcohol use had occurred during the past 12 months. Table 23 shows that 23 percent of all respondents reported suffering at least one of the consequences.

TABLE 23  
SELECTED CONSEQUENCES OF ALCOHOL USE DURING  
PAST 12 MONTHS  
(PERCENTAGE OF POPULATION)

| CONSEQUENCE/<br>PAY GRADE         | TOTAL DOD | SERVICE |      |              |           |
|-----------------------------------|-----------|---------|------|--------------|-----------|
|                                   |           | ARMY    | NAVY | MARINE CORPS | AIR FORCE |
| BECAME DRUNK WITHOUT PLANNING TO  | 20        | 16      | 25   | 23           | 18        |
| DRUNK MORE THAN ONE DAY AT A TIME | 11        | 10      | 16   | 16           | 6         |
| TOTAL WITH EITHER CONSEQUENCE     | 23        | 19      | 31   | 29           | 20        |

Junior enlisted personnel were the most likely to suffer at least one consequence, followed in turn by senior enlisted personnel, junior officers, senior officers, and warrant officers.

The respondents were also asked to indicate whether each of 15 physical, social, or work consequences had occurred because of their alcohol use during the past 12 months. Eleven percent reported suffering at least one of the 15 consequences during that period (Table 24).

Among those who reported that any of the 17 consequences<sup>1</sup> had occurred, they had occurred a median of three times.

#### Work Impairment

The percentage of the population reporting work impairment because of their alcohol use during the preceding 12 months is shown in Table 25. "Lowered performance" was the type of work impairment most frequently reported; it was reported by 22 percent of the total respondents and by 26 percent of E1-E5's and this occurred a median of two to three times. The figures on "total with any impairment" generally follow the patterns of heavy drinking discussed earlier. The patterns of impairment by pay grade group are in the following rank order by percentage suffering impairment: E1-E5's, E6-E9's, O1-O3's, O4-O6's, and W1-W4's.

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<sup>1</sup>This analysis combines the two groups of consequences.



TABLE 24

CONSEQUENCES OF ALCOHOL USE DURING PAST 12 MONTHS--TOTAL DOD  
(PERCENTAGE OF POPULATION)

| CONSEQUENCE                       | TOTAL DOD | SERVICE |      |              |           |
|-----------------------------------|-----------|---------|------|--------------|-----------|
|                                   |           | ARMY    | NAVY | MARINE CORPS | AIR FORCE |
| ILLNESS KEPT FROM DUTY            | 2         | 2       | 2    | 2            | 1         |
| 1 WEEK OR LONGER.....             | 2         | 2       | 1    | 3            | 1         |
| DID NOT GET PROMOTED.....         | 2         | 2       | 3    | 4            | 1         |
| GOT LOWER SCORE ON EFFICIENCY     | 2         | 2       | 3    | 3            | 1         |
| OR PERFORMANCE REPORT.....        | 2         | 3       | 2    | 3            | 1         |
| RECEIVED JUDICIAL OR              | 2         | 3       | 3    | 5            | 2         |
| ARTICLE 15 PUNISHMENT.....        | 3         | 3       | 3    | 4            | 1         |
| ARRESTED FOR DRIVING              | 2         | 3       | 4    | 5            | 1         |
| AFTER DRINKING.....               | 3         | 2       | 4    | 4            | 1         |
| ARRESTED FOR NON DRIVING          | 2         | 2       | 3    | 3            | 1         |
| DRINKING INCIDENT.....            | 3         | 2       | 4    | 5            | 1         |
| INCARCERATED DUE TO DRINKING..... | 3         | 2       | 4    | 4            | 1         |
| HURT IN ACCIDENT                  | 2         | 2       | 3    | 3            | 1         |
| CONNECTED WITH DRINKING.....      | 2         | 2       | 2    | 2            | 1         |
| DRINKING CAUSED ACCIDENT          | 2         | 2       | 2    | 2            | 1         |
| WHERE OTHERS HURT OR              | 2         | 2       | 2    | 2            | 1         |
| PROPERTY DAMAGED.....             | 2         | 2       | 2    | 2            | 1         |
| SPOUSE THREATENED TO LEAVE.....   | 1         | 1       | 1    | 1            | 1         |
| HIT SPOUSE OR CHILDREN.....       | 1         | 1       | 1    | 1            | 1         |
| SPOUSE LEFT.....                  | 1         | 1       | 1    | 1            | 1         |
| ENTERED REHABILITATION            | 2         | 2       | 2    | 2            | 1         |
| OR TREATMENT PROGRAM.....         | 2         | 2       | 2    | 2            | 1         |
| ATTENDED TRAINING                 | 2         | 2       | 2    | 2            | 1         |
| OR EDUCATION PROGRAM.....         | 1         | 1       | 1    | 1            | 1         |
| DETOXIFIED.....                   | 11        | 11      | 14   | 17           | 6         |
| TOTAL WITH ANY                    |           |         |      |              |           |
| CONSEQUENCE 1/.....               | 11        | 11      | 14   | 17           | 6         |

1/ PERCENTAGE OF POPULATION WITH AT LEAST ONE OF  
THE CONSEQUENCES DURING THE PAST 12 MONTHS.  
+ LESS THAN HALF OF ONE PERCENT.

TABLE 25

WORK IMPAIRMENT BECAUSE OF ALCOHOL USE DURING  
PAST 12 MONTHS

(PERCENTAGE OF POPULATION)

| IMPAIRMENT/<br>PAY GRADE               | TOTAL<br>DOD | SERVICE |      |                 |              |
|--|--------------|---------|------|-----------------|--------------|
|  |              | ARMY    | NAVY | MARINE<br>CORPS | AIR<br>FORCE |
| <b>LOWERED PERFORMANCE</b>             |              |         |      |                 |              |
| TOTAL                                  | 22           | 19      | 30   | 29              | 17           |
| E1-E5                                  | 26           | 23      | 34   | 32              | 19           |
| E6-E9                                  | 17           | 13      | 22   | 22              | 14           |
| W1-W4                                  | 9            | 4       | 12   | -               | *            |
| O1-O3                                  | 15           | 12      | 28   | 20              | 10           |
| O4-O6                                  | 10           | 7       | 8    | 14              | 14           |
| <b>LATE FOR WORK OR<br/>LEFT EARLY</b> |              |         |      |                 |              |
| TOTAL                                  | 13           | 13      | 17   | 16              | 10           |
| E1-E5                                  | 16           | 15      | 21   | 17              | 12           |
| E6-E9                                  | 9            | 9       | 10   | 15              | 7            |
| W1-W4                                  | 2            | 2       | 0    | -               | *            |
| O1-O3                                  | 7            | 8       | 9    | 5               | 5            |
| O4-O6                                  | 4            | 1       | 7    | 8               | 5            |
| <b>DID NOT COME TO WORK</b>            |              |         |      |                 |              |
| TOTAL                                  | 5            | 6       | 5    | 5               | 2            |
| E1-E5                                  | 6            | 8       | 7    | 6               | 2            |
| E6-E9                                  | 2            | 2       | 3    | 3               | 2            |
| W1-W4                                  | 1            | 1       | 0    | -               | *            |
| O1-O3                                  | 0            | 0       | 0    | 2               | 0            |
| O4-O6                                  | 1            | 0       | 0    | 0               | 2            |
| <b>DRUNK/HIGH WHILE<br/>WORKING</b>    |              |         |      |                 |              |
| TOTAL                                  | 11           | 11      | 16   | 15              | 6            |
| E1-E5                                  | 15           | 16      | 21   | 19              | 7            |
| E6-E9                                  | 5            | 4       | 7    | 7               | 3            |
| W1-W4                                  | 1            | 1       | 0    | -               | *            |
| O1-O3                                  | 3            | 2       | 6    | 1               | 2            |
| O4-O6                                  | 3            | 0       | 7    | 0               | 3            |
| <b>TOTAL WITH ANY<br/>IMPAIRMENT</b>   |              |         |      |                 |              |
| TOTAL                                  | 27           | 24      | 35   | 34              | 20           |
| E1-E5                                  | 31           | 29      | 40   | 38              | 24           |
| E6-E9                                  | 19           | 16      | 25   | 25              | 16           |
| W1-W4                                  | 9            | 4       | 12   | -               | *            |
| O1-O3                                  | 17           | 15      | 29   | 21              | 12           |
| O4-O6                                  | 12           | 7       | 14   | 15              | 15           |

- LESS THAN 30 RESPONDENTS.

\* NOT APPLICABLE.

+ LESS THAN HALF OF ONE PERCENT.

Section 4: COMPARISON OF DRUG AND ALCOHOL PREVALENCE  
AMONG MILITARY AND CIVILIAN POPULATIONS

This analysis is restricted to the subpopulation at highest risk for nonmedical drug use in both military and civilian populations: persons 18 through 25 years of age. The data have been standardized with respect to the variables that are most closely correlated with nonmedical drug use: sex, age, marital status, and education. Standardization with respect to these variables serves to provide prevalence rates that are not biased by the differences in occurrence of these characteristics in the two populations. The specific procedures employed to standardize the data and the limitations in the analysis are described in the main report.

Table 26 shows the prevalence of nonmedical drug use among military personnel and comparable civilians, ages 18 through 25. Prevalence of current nonmedical drug use for military personnel is slightly lower or equal to civilian use for all drug types analyzed, with the exception of amphetamines or other uppers. Prevalence of annual use is lower for military personnel than civilians with respect to four drug types and higher than civilians for three drug types. There is, thus, no general pattern of nonmedical drug use being more prevalent for military personnel than civilians.

Regarding alcohol use, slightly higher proportions of military personnel than civilians drank at all during the past 30 days and the past year.

TABLE 26

PREVALENCE OF NONMEDICAL DRUG USE  
AND ALCOHOL USE AMONG MILITARY PERSONNEL  
AND COMPARABLE CIVILIANS--AGES 18-25  
(PERCENTAGE OF 18-25 YEAR OLD POPULATION)

| TYPE                          | MILITARY<br>(n= 8224) | COMPARABLE<br>CIVILIANS <sup>1</sup><br>(n= 2022) |
|-------------------------------|-----------------------|---|
| MARIJUANA/HASHISH             |                       |   |
| PAST 30 DAYS                  | 40                    | 42  |
| PAST 12 MONTHS                | 52                    | 54  |
| AMPHETAMINES OR OTHER UPPERS  |                       |   |
| PAST 30 DAYS                  | 10                    | 4   |
| PAST 12 MONTHS                | 21                    | 12  |
| COCAINE                       |                       |   |
| PAST 30 DAYS                  | 7                     | 10  |
| PAST 12 MONTHS                | 18                    | 23  |
| HALLUCINOGENS                 |                       |   |
| PAST 30 DAYS                  | 5                     | 5   |
| PAST 12 MONTHS                | 13                    | 12  |
| BARBITURATES OR OTHER DOWNERS |                       |   |
| PAST 30 DAYS                  | 4                     | 4   |
| PAST 12 MONTHS                | 9                     | 10  |
| TRANQUILIZERS                 |                       |   |
| PAST 30 DAYS                  | 3                     | 3   |
| PAST 12 MONTHS                | 9                     | 12  |
| HEROIN                        |                       |   |
| PAST 30 DAYS                  | 1                     | 1   |
| PAST 12 MONTHS                | 3                     | 1   |
| ALCOHOL                       |                       |   |
| PAST 30 DAYS                  | 84                    | 82  |
| PAST 12 MONTHS                | 93                    | 90  |

<sup>1</sup>DATA STANDARDIZED WITH RESPECT TO SEX, AGE, MARITAL STATUS, AND EDUCATION. BASED ON SPECIAL TABULATIONS FROM THE 1979 NATIONAL SURVEY ON DRUG ABUSE.

## TECHNICAL NOTE

This technical note contains a description of the sample design, the confidence limits, and the number of respondents.

Sample Design

The DOD stipulated that a sample be drawn of all active duty military personnel throughout the world from which reliable estimates of drug and alcohol use could be made with known degrees of error for each of the Military Services, for five pay grade groupings, and for three main geographical regions and "Other Locations." It was further stipulated that the response rate among sampled personnel be 80 percent or higher, without replacements.

Because of budgetary and time constraints, it was not possible to survey every servicemember in each of the more than 300 locations throughout the world. These considerations dictated a design that sampled both personnel and locations by probability means. A stratified multistage probability sample was subsequently developed and implemented. Both sites and personnel were randomly selected. Differential personnel sampling rates were used to obtain sufficient sample sizes in the various respondent subgroups. Sample weighting procedures were applied to put the complete respondent sample into balance; these are described in the main report.

The final sample size required for each Service by geographical region is shown in Table 27. The sample was composed of 19,582 military personnel stationed at 81 installations.<sup>1</sup> As shown in Table 28, the survey respondents were predominately male, white and between the ages of 18 through 25. As indicated also, the sample was very representative of all DOD personnel, worldwide, with respect to the characteristics shown. The population represented by the sample is depicted in Tables 29 and 30.

At each survey site, a random sample was drawn from the most current listing of all personnel assigned to the installation.<sup>2</sup> The random selection was made from all personnel

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<sup>1</sup>An installation was composed of all permanent parent and tenant units at a base, post, camp, station or ships in a designated location.

<sup>2</sup>The detailed sample selection procedures were designed to accommodate unique Service personnel accounting systems and local capabilities to produce the random sample.

TABLE 27  
SAMPLE ALLOCATION

| <u>REGION</u>       | <u>NO. SITES</u> | <u>SAMPLE</u> |
|---------------------|------------------|---------------|
| <u>ARMY</u>         | (19)             | (6,239)       |
| CONUS               | 8                | 3,026         |
| EUROPE              | 4                | 1,320         |
| PACIFIC             | 5                | 1,548         |
| OTHER               | 2                | 345           |
| <u>NAVY</u>         | (30)             | (5,202)       |
| CONUS               | 17               | 3,202         |
| EUROPE              | 5                | 600           |
| PACIFIC             | 7                | 1,174         |
| OTHER               | 1                | 226           |
| <u>MARINE CORPS</u> | (10)             | (2,861)       |
| CONUS               | 7                | 1,917         |
| PACIFIC             | 3                | 944           |
| <u>AIR FORCE</u>    | (22)             | (5,280)       |
| CONUS               | 11               | 2,464         |
| EUROPE              | 5                | 1,066         |
| PACIFIC             | 5                | 1,284         |
| OTHER               | 1                | 466           |
| <u>TOTAL</u>        | (81)             | (19,582)      |
| CONUS               | 43               | 10,609        |
| EUROPE              | 14               | 2,986         |
| PACIFIC             | 20               | 4,950         |
| OTHER               | 4                | 1,037         |

TABLE 28

DEMOGRAPHIC CHARACTERISTICS OF SURVEY RESPONDENTS AND ALL DOD  
MILITARY PERSONNEL

(PERCENTAGE OF POPULATION)

| <u>CHARACTERISTIC</u>           | <u>TOTAL SURVEY</u> | <u>DOD ACTUAL</u> <sup>1</sup> |
|---------------------------------|---------------------|--------------------------------|
| <u>SEX</u>                      |                     |                                |
| MALE                            | 91                  | 92                             |
| FEMALE                          | 9                   | 8                              |
| <u>RACE/ETHNIC</u>              |                     |                                |
| WHITE/CAUCASIAN                 | 71                  | 73                             |
| AFRO AMERICAN/BLACK             | 18                  | 19                             |
| HISPANIC                        | 5                   | 4                              |
| ORIENTAL/ASIAN/PACIFIC ISLANDER | 3                   | 1                              |
| AMERICAN INDIAN/ALASKAN NATIVE  | 1                   | 2                              |
| OTHER                           | 2                   | 1                              |
| <u>MARITAL STATUS</u>           |                     |                                |
| MARRIED                         | 53                  | 52                             |
| NOT MARRIED                     | 47                  | 48                             |
| <u>AGE</u>                      |                     |                                |
| 17 OR UNDER                     | 1                   | 1                              |
| 18-25                           | 55                  | 56                             |
| 26-29                           | 15                  | 14                             |
| 30-34                           | 13                  | 13                             |
| 35-39                           | 10                  | 10                             |
| 40 OR OVER                      | 6                   | 6                              |

<sup>1</sup>MARCH 1980: DEFENSE MANPOWER DATA CENTER.

TABLE 29  
POPULATION REPRESENTED BY THE SAMPLE

| GEOGRAPHICAL<br>REGION/PAY GRADE | TOTAL<br>DOD | SERVICE |         |              |           |
|----------------------------------|--------------|---------|---------|--------------|-----------|
|                                  |              | ARMY    | NAVY    | MARINE CORPS | AIR FORCE |
| <b>CONUS</b>                     |              |         |         |              |           |
| TOTAL.....                       | 1,393,269    | 454,158 | 416,283 | 128,951      | 393,878   |
| E1-E5.....                       | 924,659      | 304,537 | 282,565 | 95,412       | 242,146   |
| E6-E9.....                       | 251,356      | 77,221  | 85,085  | 18,951       | 70,099    |
| W1-W4.....                       | 14,498       | 9,066   | 3,091   | 2,341        | *         |
| O1-O3.....                       | 126,085      | 39,207  | 28,121  | 8,243        | 50,514    |
| O4-O6.....                       | 76,671       | 24,127  | 17,421  | 4,004        | 31,115    |
| <b>EUROPE</b>                    |              |         |         |              |           |
| TOTAL.....                       | 287,004      | 190,205 | 21,625  | *            | 75,174    |
| E1-E5.....                       | 194,521      | 131,295 | 13,485  | *            | 49,741    |
| E6-E9.....                       | 63,700       | 42,299  | 4,467   | *            | 16,934    |
| W1-W4.....                       | 2,879        | 2,713   | 267     | *            | *         |
| O1-O3.....                       | 16,879       | 9,407   | 1,976   | *            | 5,497     |
| O4-O6.....                       | 8,924        | 4,491   | 1,431   | *            | 3,002     |
| <b>PACIFIC</b>                   |              |         |         |              |           |
| TOTAL.....                       | 165,471      | 36,263  | 45,596  | 39,388       | 44,224    |
| E1-E5.....                       | 103,543      | 19,225  | 24,553  | 29,281       | 30,484    |
| E6-E9.....                       | 40,275       | 11,252  | 13,211  | 6,531        | 9,281     |
| W1-W4.....                       | 2,000        | 802     | 851     | 347          | *         |
| O1-O3.....                       | 11,668       | 2,692   | 3,464   | 2,425        | 3,086     |
| O4-O6.....                       | 7,984        | 2,291   | 3,517   | 803          | 1,374     |
| <b>OTHER LOCATIONS</b>           |              |         |         |              |           |
| TOTAL.....                       | 44,023       | 18,388  | 14,892  | *            | 10,744    |
| E1-E5.....                       | 29,170       | 13,159  | 8,667   | *            | 7,344     |
| E6-E9.....                       | 9,595        | 3,093   | 4,250   | *            | 2,251     |
| W1-W4.....                       | 625          | 352     | 273     | *            | *         |
| O1-O3.....                       | 2,881        | 1,160   | 911     | *            | 810       |
| O4-O6.....                       | 1,753        | 624     | 790     | *            | 339       |
| <b>TOTAL WORLDWIDE</b>           |              |         |         |              |           |
| TOTAL.....                       | 1,889,766    | 699,013 | 498,395 | 168,338      | 524,020   |
| E1-E5.....                       | 1,251,893    | 468,216 | 329,269 | 124,693      | 329,715   |
| E6-E9.....                       | 364,926      | 133,866 | 107,013 | 25,482       | 98,564    |
| W1-W4.....                       | 20,103       | 12,933  | 4,482   | *            | *         |
| O1-O3.....                       | 157,512      | 52,465  | 34,472  | 10,668       | 59,907    |
| O4-O6.....                       | 95,332       | 31,533  | 23,159  | 4,808        | 35,833    |

\* NOT APPLICABLE.



TABLE J  
POPULATION OF E1-E5'S REPRESENTED BY SAMPLE

| GEOGRAPHICAL REGION | TOTAL DOD | SERVICE |         |              |           |
|---------------------|-----------|---------|---------|--------------|-----------|
|                     |           | ARMY    | NAVY    | MARINE CORPS | AIR FORCE |
| CONUS               |           |         |         |              |           |
| TOTAL               | 924,659   | 304,537 | 282,565 | 95,412       | 242,146   |
| EAST                | 608,118   | 234,696 | 217,530 | 39,228       | 116,664   |
| WEST                | 316,542   | 69,841  | 65,035  | 56,184       | 125,422   |
| EUROPE              |           |         |         |              |           |
| TOTAL               | 194,521   | 131,295 | 13,485  | *            | 49,741    |
| GERMANY             | 155,380   | 131,295 | *       | *            | 24,085    |
| ITALY               | 7,477     | *       | 7,477   | *            | *         |
| ENGLAND             | 14,282    | *       | 653     | *            | 13,629    |
| SPAIN               | 17,382    | *       | 5,355   | *            | 12,028    |
| PACIFIC             |           |         |         |              |           |
| TOTAL               | 103,543   | 19,225  | 24,553  | 29,281       | 30,484    |
| HAWAII              | 29,426    | 5,628   | 10,135  | 10,477       | 3,186     |
| JAPAN               | 40,576    | 3,590   | 5,994   | 18,805       | 12,187    |
| KOREA               | 18,943    | 10,007  | *       | *            | 8,936     |
| PHILIPPINES         | 10,170    | *       | 3,995   | *            | 6,175     |
| GUAM                | 4,429     | *       | 4,429   | *            | *         |
| OTHER LOCATIONS     |           |         |         |              |           |
| TOTAL               | 29,170    | 13,159  | 8,667   | *            | 7,344     |
| PANAMA CANAL        | 5,976     | 5,976   | *       | *            | *         |
| ALASKA              | 14,527    | 7,183   | *       | *            | 7,344     |
| GUANTANAMO BAY      | 8,667     | *       | 8,667   | *            | *         |
| TOTAL WORLDWIDE     | 1,251,893 | 468,216 | 329,269 | 124,693      | 329,715   |

\* NOT APPLICABLE.

in pay grades E1 through O6 of the one designated Service permanently assigned to organizations included in the specified installation. The last two digits of the individual's Social Security Account Number were used as the device for random selection of the respondents. Not included in the population base from which a sample was drawn were those personnel in recruit or basic training and those personnel in units known or expected to be at sea or deployed away from the installation at the time of the questionnaire administration. Personnel selected for the sample could be excused from questionnaire administration only for the following authorized reasons:

- . on leave from the parent organization
- . on temporary duty away from the installation
- . absent without leave
- . assigned a permanent change of station
- . separated from the Service

Absences for any other reason were designated as "no-shows."

It is well known that a survey based on samples of a population can only approximate the level of accuracy that would be obtained if it were possible for the entire population to participate in the survey. Because of this, there is a need to know the precision of the estimates from a particular sample survey. The 95 percent confidence limits for any percentage estimate reported in this volume are provided later in this Technical Note. These confidence limits are particularly important where estimates are given for subgroups of the population. The reader should be aware that those subgroups with relatively few cases will have relatively greater margins of error than those subgroups with a larger number of respondents. This notably includes subgroups of officers and warrant officers. Regional data on officers should be viewed with particular caution, because of the small number of respondents in those subgroups. The number of respondents in each subgroup is depicted in Tables 31 and 32.

#### Confidence Limits and Significance of Differences

An important issue in all prevalence surveys based on data obtained from samples of a population is the extent to which one can be confident that the prevalence estimates obtained accurately reflect the true prevalence for the entire population. That is, if every servicemember responded to the questionnaire, would the prevalence rate be substantially different from that obtained from the sample of personnel surveyed?

For any particular percentage given in the prevalence

TABLE 31  
NUMBER OF RESPONDENTS

| GEOGRAPHICAL<br>REGION/PAY GRADE | TOTAL<br>OOD | SERVICE |       |                 |              |
|----------------------------------|--------------|---------|-------|-----------------|--------------|
|                                  |              | ARMY    | NAVY  | MARINE<br>CORPS | AIR<br>FORCE |
| <b>CONUS</b>                     |              |         |       |                 |              |
| TOTAL                            | 8,286        | 2,345   | 2,802 | 1,194           | 1,945        |
| E1-E5                            | 5,475        | 1,927   | 1,927 | 873             | 1,130        |
| E6-E9                            | 1,717        | 527     | 635   | 188             | 367          |
| W1-W4                            | 74           | 35      | 23    | 16              | *            |
| O1-O3                            | 624          | 165     | 152   | 67              | 240          |
| O4-O6                            | 396          | 73      | 65    | 50              | 208          |
| <b>EUROPE</b>                    |              |         |       |                 |              |
| TOTAL                            | 2,329        | 923     | 557   | *               | 849          |
| E1-E5                            | 1,547        | 660     | 361   | *               | 526          |
| E6-E9                            | 476          | 175     | 128   | *               | 173          |
| W1-W4                            | 18           | 14      | 4     | *               | *            |
| O1-O3                            | 163          | 46      | 32    | *               | 85           |
| O4-O6                            | 125          | 28      | 32    | *               | 65           |
| <b>PACIFIC</b>                   |              |         |       |                 |              |
| TOTAL                            | 3,766        | 1,076   | 1,084 | 624             | 982          |
| E1-E5                            | 2,531        | 659     | 738   | 478             | 656          |
| E6-E9                            | 836          | 283     | 245   | 94              | 214          |
| W1-W4                            | 37           | 19      | 13    | 5               | *            |
| O1-O3                            | 223          | 69      | 59    | 29              | 66           |
| O4-O6                            | 139          | 46      | 29    | 18              | 46           |
| <b>OTHER LOCATIONS</b>           |              |         |       |                 |              |
| TOTAL                            | 887          | 279     | 228   | *               | 380          |
| E1-E5                            | 601          | 195     | 135   | *               | 271          |
| E6-E9                            | 202          | 65      | 69    | *               | 68           |
| W1-W4                            | 6            | 3       | 3     | *               | *            |
| O1-O3                            | 47           | 10      | 10    | *               | 27           |
| O4-O6                            | 31           | 6       | 11    | *               | 14           |
| <b>TOTAL WORLDWIDE</b>           |              |         |       |                 |              |
| TOTAL                            | 15,268       | 4,623   | 4,671 | 1,818           | 4,156        |
| E1-E5                            | 10,154       | 3,059   | 3,161 | 1,351           | 2,583        |
| E6-E9                            | 3,231        | 1,050   | 1,077 | 282             | 822          |
| W1-W4                            | 135          | 71      | 43    | 21              | *            |
| O1-O3                            | 1,057        | 290     | 253   | 96              | 418          |
| O4-O6                            | 691          | 153     | 137   | 68              | 333          |

\* NOT APPLICABLE

TABLE 32

## NUMBER OF E1-E5 RESPONDENTS

| GEOGRAPHICAL<br>REGION | TOTAL<br>DOD | SERVICE |       |                 |              |
|------------------------|--------------|---------|-------|-----------------|--------------|
|                        |              | ARMY    | NAVY  | MARINE<br>CORPS | AIR<br>FORCE |
| CONJUS                 |              |         |       |                 |              |
| TOTAL.....             | 5,475        | 1,545   | 1,927 | 873             | 1,130        |
| EAST.....              | 3,612        | 1,236   | 1,379 | 492             | 505          |
| WEST.....              | 1,863        | 309     | 548   | 381             | 625          |
| EUROPE                 |              |         |       |                 |              |
| TOTAL.....             | 1,547        | 660     | 361   | *               | 526          |
| GERMANY.....           | 859          | 660     | *     | *               | 199          |
| ITALY.....             | 181          | *       | 181   | *               | *            |
| ENGLAND.....           | 198          | *       | 27    | *               | 171          |
| SPAIN.....             | 309          | *       | 153   | **              | 156          |
| PACIFIC                |              |         |       |                 |              |
| TOTAL.....             | 2,531        | 659     | 738   | 478             | 656          |
| HAWAII.....            | 652          | 201     | 246   | 115             | 90           |
| JAPAN.....             | 1,011        | 106     | 292   | 363             | 250          |
| KOREA.....             | 545          | 352     | *     | *               | 193          |
| PHILIPPINES.....       | 214          | *       | 91    | *               | 123          |
| GUAM.....              | 109          | *       | 109   | *               | *            |
| OTHER LOCATIONS        |              |         |       |                 |              |
| TOTAL.....             | 601          | 195     | 135   | *               | 271          |
| PANAMA CANAL.....      | 85           | 85      | *     | *               | *            |
| ALASKA.....            | 381          | 110     | *     | *               | 271          |
| GUANTANAMO BAY.....    | 135          | *       | 135   | *               | *            |
| TOTAL WORLDWIDE.....   | 10,154       | 3,059   | 3,161 | 1,351           | 2,583        |

\* NOT APPLICABLE.

data tables, we cannot know exactly how much error has resulted from sampling. However, reasonably good estimates can be made of the range within which the responses of the total population would fall. The estimation of confidence limits for the results of the survey is a complex statistical decision and procedure. The following formula has been used to determine asymmetric confidence limits at the 95% level of confidence for sample percentage estimates:

$$P_L = p' - 1.96 \left[ \frac{P_L(1-p_L)}{n} \right]^{1/2} \quad (1.3)$$

$$P_U = p' + 1.96 \left[ \frac{P_U(1-p_U)}{n} \right]^{1/2} \quad (1.3)$$

Where:

$P_L$  = lower limit of the confidence interval

$p'$  = the estimate based on the sample

$n$  = the sample size

$P_U$  = the upper limit of the confidence interval

Table 33 depicts the upper and lower confidence limits for sample estimates.

In comparing two sample estimates, it is important to determine whether the difference between the two estimates is statistically significant. That is, can the difference reasonably be attributable to sampling variations or is it "real." Table 34 displays, for various sample sizes, the minimum difference between two percentage estimates that would be required for the difference to be statistically significant at the .05 level of confidence. For example, if a percentage result is 20 percent for E1-E5's and 15 percent for E6-E9's and the respective sample sizes were 1,000 and 500, there would have to be a difference of at least 5.6 percent for it to be considered a real difference and not attributable to chance. Thus, for this example, the difference would not be statistically significant at the .05 level.

TABLE 33  
CONFIDENCE LIMITS FOR SAMPLE ESTIMATES

| n     | OBSERVED PERCENTAGE |      |       |      |       |      |       |       |       |       |       |       |       |       |       |   |
|-------|---------------------|------|-------|------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
|       | 1.0%                |      | 3.0%  |      | 5.0%  |      | 10.0% |       | 20.0% |       | 30.0% |       | 40.0% |       | 50.0% |   |
|       | -                   | +    | -     | +    | -     | +    | -     | +     | -     | +     | -     | +     | -     | +     | -     | + |
| 100   | 0.9%                | 6.7% | 2.3%  | 7.8% | 3.3%  | 8.6% | 5.4%  | 10.2% | 8.3%  | 11.9% | 10.2% | 12.6% | 11.5% | 12.7% | 12.4% | ± |
| 200   | 0.8%                | 3.8% | 1.9%  | 4.8% | 2.7%  | 5.5% | 4.3%  | 6.7%  | 6.2%  | 8.1%  | 7.6%  | 8.7%  | 8.4%  | 9.0%  | 8.8%  | ± |
| 300   | 0.7%                | 2.8% | 1.7%  | 3.6% | 2.4%  | 4.3% | 3.6%  | 5.3%  | 5.2%  | 6.4%  | 6.2%  | 7.1%  | 7.0%  | 7.4%  | 7.3%  | ± |
| 400   | 0.7%                | 2.2% | 1.6%  | 3.0% | 2.2%  | 3.5% | 3.2%  | 4.5%  | 4.5%  | 5.5%  | 5.5%  | 6.1%  | 6.0%  | 6.3%  | 6.3%  | ± |
| 500   | 0.6%                | 1.9% | 1.5%  | 2.6% | 2.0%  | 3.1% | 3.0%  | 4.0%  | 4.2%  | 4.9%  | 5.0%  | 5.4%  | 5.4%  | 5.7%  | 5.6%  | ± |
| 600   | 0.6%                | 1.7% | 1.4%  | 2.3% | 1.9%  | 3.0% | 2.7%  | 3.5%  | 3.8%  | 4.5%  | 4.6%  | 5.0%  | 5.0%  | 5.2%  | 5.2%  | ± |
| 700   | 0.6%                | 1.5% | 1.2%  | 2.1% | 1.8%  | 2.5% | 2.5%  | 3.2%  | 3.5%  | 4.2%  | 4.3%  | 4.6%  | 4.5%  | 4.8%  | 4.8%  | ± |
| 800   | 0.6%                | 1.4% | 1.2%  | 2.0% | 1.7%  | 2.3% | 2.4%  | 3.0%  | 3.3%  | 3.8%  | 4.0%  | 4.3%  | 4.1%  | 4.5%  | 4.5%  | ± |
| 900   | 0.5%                | 1.3% | 1.1%  | 1.8% | 1.6%  | 2.2% | 2.3%  | 2.8%  | 3.2%  | 3.6%  | 3.7%  | 4.1%  | 4.1%  | 4.3%  | 4.3%  | ± |
| 1000  | 0.5%                | 1.1% | 1.1%  | 1.7% | 1.5%  | 2.1% | 2.2%  | 2.7%  | 3.0%  | 3.4%  | 3.5%  | 3.8%  | 3.8%  | 4.0%  | 4.1%  | ± |
| 2000  | 0.4%                | 0.7% | 0.8%  | 1.1% | 1.1%  | 1.4% | 1.6%  | 1.9%  | 2.2%  | 2.4%  | 2.6%  | 2.7%  | 2.8%  | 2.8%  | 2.8%  | ± |
| 3000  | 0.4%                | 0.6% | 0.7%  | 0.9% | 0.9%  | 1.1% | 1.4%  | 1.5%  | 1.8%  | 1.9%  | 2.1%  | 2.2%  | 2.3%  | 2.3%  | 2.3%  | ± |
| 4000  | 0.3%                | 0.5% | 0.6%  | 0.7% | 0.8%  | 0.9% | 1.1%  | 1.3%  | 1.6%  | 1.7%  | 1.8%  | 1.9%  | 2.0%  | 2.0%  | 2.0%  | ± |
| 5000  | 0.3%                | 0.4% | 0.5%  | 0.6% | 0.7%  | 0.8% | 1.0%  | 1.1%  | 1.4%  | 1.5%  | 1.7%  | 1.7%  | 1.8%  | 1.8%  | 1.8%  | ± |
| 10000 | 0.2%                | 0.3% | 0.4%  | 0.5% | 0.5%  | 0.6% | 0.7%  | 0.8%  | 1.0%  | 1.0%  | 1.2%  | 1.2%  | 1.2%  | 1.2%  | 1.3%  | ± |
| 15000 | 0.2%                | 0.2% | 0.3%  | 0.4% | 0.4%  | 0.5% | 0.6%  | 0.6%  | 0.8%  | 0.8%  | 0.9%  | 1.0%  | 1.0%  | 1.0%  | 1.0%  | ± |
| 99.0% |                     |      | 97.0% |      | 95.0% |      | 90.0% |       | 80.0% |       | 70.0% |       | 60.0% |       | 50.0% |   |
|       |                     |      |       |      |       |      |       |       |       |       |       |       |       |       |       |   |
|       |                     |      |       |      |       |      |       |       |       |       |       |       |       |       |       |   |

OBSERVED PERCENTAGE



TABLE 34 (CONTINUED)

DIFFERENCES REQUIRED FOR SIGNIFICANCE ACCORDING TO SAMPLE SIZE

| SIZE OF SAMPLES COMPARED | OBSERVED PERCENTAGE |                  |                  |                  |                  | SIZE OF SAMPLES COMPARED | OBSERVED PERCENTAGE |      |                  |                  |                  |                  |                  |                  |
|--------------------------|---------------------|------------------|------------------|------------------|------------------|--------------------------|---------------------|------|------------------|------------------|------------------|------------------|------------------|------------------|
|                          | 10%<br>or<br>90%    | 20%<br>or<br>80% | 25%<br>or<br>75% | 30%<br>or<br>70% | 35%<br>or<br>65% |                          | 40%<br>or<br>60%    | 50%  | 10%<br>or<br>90% | 20%<br>or<br>80% | 25%<br>or<br>75% | 30%<br>or<br>70% | 35%<br>or<br>65% | 40%<br>or<br>60% |
| 1800 and 1800            | 2.5%                | 3.4%             | 3.6%             | 3.8%             | 4.1%             | 4.2%                     | 4.3%                | 4.1% | 5.4%             | 5.9%             | 6.2%             | 6.4%             | 6.7%             | 6.8%             |
| 1600                     | 2.6%                | 3.5%             | 3.7%             | 4.1%             | 4.2%             | 4.3%                     | 4.4%                | 4.3% | 4.3%             | 6.1%             | 6.4%             | 6.8%             | 7.0%             | 7.1%             |
| 1400                     | 2.7%                | 3.6%             | 4.0%             | 4.2%             | 4.4%             | 4.5%                     | 4.6%                | 4.6% | 4.5%             | 6.4%             | 6.9%             | 7.1%             | 7.3%             | 7.5%             |
| 1200                     | 2.8%                | 3.8%             | 4.2%             | 4.4%             | 4.6%             | 4.7%                     | 4.8%                | 4.8% | 4.8%             | 6.3%             | 7.3%             | 7.6%             | 7.8%             | 8.0%             |
| 1000                     | 3.0%                | 4.1%             | 4.4%             | 4.6%             | 4.8%             | 4.9%                     | 5.0%                | 5.0% | 5.3%             | 7.1%             | 8.0%             | 8.4%             | 8.6%             | 8.8%             |
| 800                      | 3.2%                | 4.4%             | 4.7%             | 5.0%             | 5.2%             | 5.3%                     | 5.4%                | 5.4% | 6.1%             | 8.2%             | 9.4%             | 9.8%             | 10.0%            | 10.2%            |
| 600                      | 3.6%                | 4.8%             | 5.2%             | 5.5%             | 5.7%             | 5.9%                     | 6.0%                | 6.0% | 8.2%             | 10.9%            | 12.5%            | 13.0%            | 13.3%            | 13.6%            |
| 400                      | 4.3%                | 5.6%             | 6.1%             | 6.4%             | 6.8%             | 6.9%                     | 7.1%                | 7.1% | 4.4%             | 5.9%             | 6.3%             | 6.8%             | 7.0%             | 7.4%             |
| 200                      | 5.7%                | 7.6%             | 8.2%             | 8.7%             | 9.0%             | 9.3%                     | 9.5%                | 9.5% | 4.7%             | 6.1%             | 6.7%             | 7.1%             | 7.4%             | 7.6%             |
| 1600 and 1600            | 2.7%                | 3.6%             | 4.0%             | 4.2%             | 4.3%             | 4.4%                     | 4.5%                | 4.5% | 4.9%             | 6.6%             | 7.1%             | 7.5%             | 7.8%             | 8.0%             |
| 1400                     | 2.8%                | 3.7%             | 4.1%             | 4.3%             | 4.5%             | 4.6%                     | 4.7%                | 4.7% | 5.4%             | 7.2%             | 7.8%             | 8.2%             | 8.6%             | 8.8%             |
| 1200                     | 2.9%                | 3.8%             | 4.3%             | 4.5%             | 4.7%             | 4.8%                     | 4.9%                | 4.9% | 6.2%             | 8.3%             | 9.0%             | 9.6%             | 9.9%             | 10.2%            |
| 1000                     | 3.1%                | 4.2%             | 4.5%             | 4.7%             | 4.9%             | 5.0%                     | 5.1%                | 5.1% | 8.2%             | 11.0%            | 12.0%            | 12.6%            | 13.1%            | 13.7%            |
| 800                      | 3.3%                | 4.4%             | 4.8%             | 5.1%             | 5.3%             | 5.4%                     | 5.5%                | 5.5% | 4.8%             | 6.4%             | 7.0%             | 7.4%             | 7.7%             | 7.9%             |
| 600                      | 3.6%                | 4.9%             | 5.3%             | 5.6%             | 5.8%             | 5.9%                     | 6.1%                | 6.1% | 5.1%             | 6.9%             | 7.4%             | 7.8%             | 8.1%             | 8.4%             |
| 400                      | 4.3%                | 5.5%             | 6.1%             | 6.6%             | 6.8%             | 7.0%                     | 7.1%                | 7.1% | 5.6%             | 7.5%             | 8.0%             | 8.5%             | 8.8%             | 9.3%             |
| 200                      | 5.7%                | 7.6%             | 8.3%             | 8.7%             | 9.2%             | 9.4%                     | 9.6%                | 9.6% | 6.3%             | 8.5%             | 9.3%             | 9.8%             | 10.2%            | 10.6%            |
| 1400 and 1400            | 2.9%                | 3.8%             | 4.2%             | 4.4%             | 4.6%             | 4.7%                     | 4.8%                | 4.8% | 8.4%             | 11.1%            | 12.1%            | 12.8%            | 13.3%            | 13.9%            |
| 1200                     | 3.0%                | 4.1%             | 4.4%             | 4.6%             | 4.8%             | 4.9%                     | 5.0%                | 5.0% | 5.4%             | 7.2%             | 7.8%             | 8.2%             | 8.6%             | 8.8%             |
| 1000                     | 3.1%                | 4.3%             | 4.6%             | 4.8%             | 5.0%             | 5.2%                     | 5.3%                | 5.3% | 5.8%             | 7.8%             | 8.4%             | 8.9%             | 9.3%             | 9.6%             |
| 800                      | 3.4%                | 4.5%             | 4.9%             | 5.2%             | 5.4%             | 5.5%                     | 5.6%                | 5.6% | 6.7%             | 8.8%             | 9.6%             | 10.1%            | 10.5%            | 10.8%            |
| 600                      | 3.7%                | 5.0%             | 5.4%             | 5.7%             | 5.9%             | 6.1%                     | 6.2%                | 6.2% | 8.5%             | 11.4%            | 12.4%            | 13.1%            | 13.6%            | 14.2%            |
| 400                      | 4.4%                | 5.8%             | 6.2%             | 6.7%             | 6.9%             | 7.1%                     | 7.2%                | 7.2% | 6.2%             | 8.3%             | 9.0%             | 9.6%             | 9.9%             | 10.2%            |
| 200                      | 5.8%                | 7.7%             | 8.3%             | 8.8%             | 9.2%             | 9.5%                     | 9.7%                | 9.7% | 7.0%             | 9.3%             | 10.1%            | 10.6%            | 11.1%            | 11.4%            |
| 1200 and 1200            | 3.1%                | 4.2%             | 4.5%             | 4.8%             | 5.0%             | 5.1%                     | 5.2%                | 5.2% | 8.8%             | 11.8%            | 12.7%            | 13.5%            | 14.0%            | 14.5%            |
| 1000                     | 3.2%                | 4.4%             | 4.7%             | 5.0%             | 5.2%             | 5.3%                     | 5.4%                | 5.4% | 7.6%             | 10.2%            | 11.0%            | 11.6%            | 12.1%            | 12.5%            |
| 800                      | 3.5%                | 4.7%             | 5.0%             | 5.3%             | 5.5%             | 5.7%                     | 5.8%                | 5.8% | 9.4%             | 12.5%            | 13.5%            | 14.4%            | 14.9%            | 15.3%            |
| 600                      | 3.8%                | 5.1%             | 5.5%             | 5.8%             | 6.0%             | 6.2%                     | 6.3%                | 6.3% | 10.8%            | 14.5%            | 15.6%            | 16.5%            | 17.2%            | 17.7%            |
| 400                      | 4.4%                | 5.9%             | 6.3%             | 6.8%             | 7.0%             | 7.2%                     | 7.4%                | 7.4% | 10.8%            | 14.5%            | 15.6%            | 16.5%            | 17.2%            | 17.7%            |
| 200                      | 5.8%                | 7.8%             | 8.4%             | 8.9%             | 9.3%             | 9.6%                     | 9.8%                | 9.8% | 10.8%            | 14.5%            | 15.6%            | 16.5%            | 17.2%            | 17.7%            |