

## DOCUMENT RESUME

ED 330 979

CG 023 322

AUTHOR Johnston, Lloyd D.; And Others  
 TITLE Student Drug Use, Attitudes, and Beliefs in the Department of Defense Dependent Schools Class of 1982. Monitoring the Future. Occasional Paper Series, Paper 15.  
 INSTITUTION Michigan Univ., Ann Arbor. Inst. for Social Research.  
 SPONS AGENCY National Inst. on Drug Abuse (DHHS/PHS), Rockville, Md.  
 PUB DATE 83  
 CONTRACT R01DA01411  
 NOTE 78p.; For a related document, see ED 309 371.  
 PUB TYPE Reports - Research/Technical (143)  
 EDRS PRICE MFO1/PC04 Plus Postage.  
 DESCRIPTORS Beliefs; Comparative Analysis; \*Drug Use; High Schools; High School Seniors; \*Illegal Drug Use; Incidence; National Surveys; \*Student Attitudes; Trend Analysis; Values  
 IDENTIFIERS \*Dependents Schools; \*Military Dependents; Monitoring the Future

## ABSTRACT

This paper compared findings from a drug use and related attitudes survey with those from the Monitoring the Future study. The comparison group consisted of high school seniors who attended the Department of Defense Dependents Schools (DoDDS) in 1982. The current prevalence of drug use among high school seniors in DoDDS and comparisons of drug use between high school seniors in DoDDS and seniors in stateside schools were examined. Data on grade of first use, intensity of drug use, attitudes and beliefs, and perceptions of certain relevancy aspects of the social environment were studied. Questionnaires were compiled from DoDDS seniors ( $N=2,460$ ) or 83% of the targeted students. This response compared to the 83% of the sampled targeted stateside seniors. Overall the patterns of licit and illicit substance use by the overseas DoDDS student population were impressively similar to their stateside counterparts. The same proportion of both population reported having ever tried any illicit drug, and nearly identical proportions reported having used an illicit drug other than marijuana. Equivalent proportions of DoDDS and stateside students perceived use of drugs as entailing great risk. Research indicated DoDDS students used inhalants, tranquilizers, heroin, barbiturates and opiates other than heroin, exhibited a higher use of licit drugs, and reported lower usage of marijuana than did stateside students. (BHK)

\*\*\*\*\*  
 \* Reproductions supplied by EDRS are the best that can be made \*  
 \* from the original document. \*  
 \*\*\*\*\*

ED 330979



paper 15

**STUDENT DRUG USE, ATTITUDES, AND BELIEFS IN THE  
DEPARTMENT OF DEFENSE DEPENDENT SCHOOLS CLASS OF 1982**

Lloyd D. Johnston  
Patrick M. O'Malley  
Mary Lou Davis-Sacks

**BEST COPY AVAILABLE**

U.S. DEPARTMENT OF EDUCATION  
Office of Educational Research and Improvement  
EDUCATIONAL RESOURCES INFORMATION  
CENTER (ERIC)

This document has been reproduced as  
received from the person or organization  
originating it

Minor changes have been made to improve  
reproduction quality

Points of view or opinions stated in this docu-  
ment do not necessarily represent official  
OERI position or policy

"PERMISSION TO REPRODUCE THIS  
MATERIAL HAS BEEN GRANTED BY

J.G. Bachman

TO THE EDUCATIONAL RESOURCES  
INFORMATION CENTER (ERIC)."

### **Monitoring the Future: A Continuing Study of the Lifestyles and Values of Youth**

As its title suggests, this study is intended to assess the changing lifestyles, values, and preferences of American youth on a continuing basis. Each year since 1975 about 17,000 seniors have participated in the annual survey, which is conducted in some 130 high schools nationwide. In addition, subsamples of seniors from previously participating classes receive follow-up questionnaires by mail each year.

This Occasional Paper Series is intended to disseminate a variety of products from the study, including pre-publication (and somewhat more detailed) versions of journal articles, other substantive articles, and methodological papers.

A full listing of occasional papers and other study reports is available from Monitoring the Future, Institute for Social Research, The University of Michigan, P.O. Box 1248, Ann Arbor, MI 48106.

**STUDENT DRUG USE, ATTITUDES, AND BELIEFS IN THE  
DEPARTMENT OF DEFENSE DEPENDENT SCHOOLS  
CLASS OF 1982**

*Monitoring the Future Occasional Paper 15*

**Lloyd D. Johnston  
Patrick M. O'Malley  
Mary Lou Davis-Sacks**

**Institute for Social Research  
The University of Michigan  
Ann Arbor, Michigan**

**1983**

## **CONTENTS**

	<u>Page</u>
<b>Executive Summary . . . . .</b>	<b>1</b>
<b>Introduction . . . . .</b>	<b>5</b>
<b>Content Covered in this Report . . . . .</b>	<b>5</b>
<b>Purposes and Rationale for the Research . . . . .</b>	<b>6</b>
<b>Research Design and Procedures . . . . .</b>	<b>6</b>
<b>Representativeness and Validity . . . . .</b>	<b>7</b>
<b>A Caution about the Stimulants Results . . . . .</b>	<b>8</b>
<b>Prevalence of Drug Use . . . . .</b>	<b>11</b>
<b>Prevalence of Drug Use in 1982: All Seniors . . . . .</b>	<b>11</b>
<b>Prevalence Comparisons for Important Subgroups . . . . .</b>	<b>30</b>
<b>Sex Differences . . . . .</b>	<b>30</b>
<b>Differences Related to College Plans . . . . .</b>	<b>32</b>
<b>Regional Differences . . . . .</b>	<b>34</b>
<b>Use at Earlier Grade Levels . . . . .</b>	<b>37</b>
<b>Degree and Duration of Highs . . . . .</b>	<b>41</b>
<b>Attitudes and Beliefs about Drugs . . . . .</b>	<b>49</b>
<b>Personal Disapproval of Drug Use . . . . .</b>	<b>50</b>
<b>Attitudes Regarding the Legality of Drug Use . . . . .</b>	<b>54</b>
<b>The Legal Status of Marijuana . . . . .</b>	<b>56</b>
<b>The Social Milieu . . . . .</b>	<b>59</b>
<b>Exposure to Drug Use by Friends and Others . . . . .</b>	<b>60</b>
<b>Perceived Availability of Drugs . . . . .</b>	<b>65</b>
<b>Perceived Risks of Apprehension and Punishment for Drug Use . . . . .</b>	<b>66</b>
<b>Implications for Validity of the Self-Reported Usage Questions . . . . .</b>	<b>68</b>
<b>Appendix . . . . .</b>	<b>71</b>

## LIST OF TABLES

<u>Tables</u>		<u>Page</u>
1. Prevalence (Percent Ever Used) of Sixteen Types of Drugs: Observed Estimates and 95% Confidence Limits, DoDDS and Stateside Class of 1982 . . . . .		13
2. Prevalence (Percent Ever Used) of Sixteen Types of Drugs, DoDDS and Stateside Class of 1982 . . . . .		16
3. Lifetime Prevalence of Use of Sixteen Types of Drugs by Subgroups, DoDDS and Stateside Class of 1982 . . . . .		22
4. Annual Prevalence of Use of Sixteen Types of Drugs by Subgroups, DoDDS and Stateside Class of 1982 . . . . .		24
5. Thirty-Day Prevalence of Use of Sixteen Types of Drugs by Subgroups, DoDDS and Stateside Class of 1982 . . . . .		26
6. Thirty-Day Prevalence of Daily Use of Sixteen Types of Drugs, by Subgroups, DoDDS and Stateside Class of 1982 . . . . .		28
7. Grade of First Use of Sixteen Types of Drugs, DoDDS Class of 1982 . . . . .		38
8. Grade of First Use of Sixteen Types of Drugs, Stateside Class of 1982 . . . . .		39
9. Perceived Harmfulness of Drugs, DoDDS and Stateside Class of 1982 . . . . .		51
10. Proportions Disapproving of Drug Use, DoDDS and Stateside Class of 1982 . . . . .		52
11. Attitudes Regarding Legality of Drug Use, DoDDS and Stateside Class of 1982 . . . . .		55
12. Attitudes Regarding Marijuana Laws, DoDDS and Stateside Class of 1982 . . . . .		57
13. Proportions of Friends Disapproving of Drug Use, DoDDS and Stateside Class of 1982 . . . . .		61
14. Proportions of Friends Using, DoDDS and Stateside Class of 1982 . . . . .		62
15. Exposure to Drug Use, DoDDS and Stateside Class of 1982 . . . . .		64
16. Reported Availability of Drugs, DoDDS and Stateside Class of 1982 . . . . .		67
17. Perceived Risk of Apprehension and Consequences of Apprehension, DoDDS Class of 1982 . . . . .		69

## LIST OF FIGURES

<u>Figures</u>		<u>Page</u>
A. Lifetime and Annual Prevalence of an Illicit Drug Use Index, DoDDS and Stateside Class of 1982 . . . . .		12
B. Prevalence and Recency of Use of Eleven Types of Drugs, DoDDS Class of 1982 . . . . .		18
C. Prevalence and Recency of Use of Eleven Types of Drugs, Stateside Class of 1982 . . . . .		19
D. Thirty-Day Prevalence of Daily Use of Eleven Types of Drugs, DoDDS Class of 1982 . . . . .		20
E. Thirty-Day Prevalence of Daily Use of Eleven Types of Drugs, Stateside Class of 1982 . . . . .		21
F. Annual Prevalence of an Illicit Drug Use Index by Sex, DoDDS and Stateside Class of 1982 . . . . .		31
G. Annual Prevalence of an Illicit Drug Use Index by College Plans, DoDDS and Stateside Class of 1982 . . . . .		33
H. Annual Prevalence of an Illicit Drug Use Index by Region, DoDDS Class of 1982 . . . . .		35
I. Degree of High Attained by Recent Users, DoDDS Class of 1982 . . . . .		42
J. Degree of High Attained by Recent Users, Stateside Class of 1982 . . . . .		43
K. Duration of High Attained by Recent Users, DoDDS Class of 1982 . . . . .		46
L. Duration of High Attained by Recent Users, Stateside Class of 1982 . . . . .		47

## EXECUTIVE SUMMARY

In the spring of 1982 a survey was conducted of a representative sample of about 2,400 seniors in 33 overseas schools of the DoDDS system. This survey, which used confidential, self-administered questionnaires and was conducted by University of Michigan representatives, matched in both content and method the 1982 stateside administration of the Monitoring the Future study. Monitoring the Future has been conducted annually in the coterminous United States since 1975, under the primary sponsorship of the National Institute on Drug Abuse; it yields the primary statistical information used to estimate student drug use in the domestic population. The 1982 sample contained about 18,000 students in 142 schools.

Drug use and related attitudes, beliefs, and environmental factors for these two populations are compared in this report. (Comparisons on other variables are provided elsewhere.) The key findings are as follows:

- Overall the patterns of licit and illicit substance use by the overseas DoDDS student population are impressively similar to those of their stateside counterparts. Exactly the same proportion of both populations (64%) report having ever tried any illicit drug and nearly identical proportions report having used an illicit drug other than marijuana (40% in DoDDS vs. 41% stateside). These similarities bear testimony to the degree to which the dependents of American servicemen overseas carry the cultural habits of their society with them, since these drug usage rates very likely contrast sharply to those in the surrounding communities overseas.
- Despite the overall similarities, there are some differences between the two populations which are of interest—differences which cannot be explained by any differential proportions planning to attend college (which we know is an important correlate of various types of drug use). (On the average, more of the DoDDS students plan to attend a four-year college than the students in civilian schools.)

Certain drugs show nearly identical lifetime prevalence rates in the two populations—specifically, marijuana, hallucinogens, and sedatives (taken as a class). Other drugs show somewhat lower rates of use in the DoDDS population—cocaine, amphetamines (stimulants), the amyl and butyl nitrites (inhalants), and methaqualone. But the use of several classes of illicit drugs is more widespread in the DoDDS system—inhalants (other than nitrites), tranquillizers, barbiturates, heroin, and opiates other than heroin. (See Tables 1 through 6 for details.)

- The use of the licit drugs, i.e., alcohol and cigarettes, is also higher in the DoDDS system, particularly at frequent levels of use. For example, daily drinking is reported by 8.5% of DoDDS seniors vs. 5.7% of stateside seniors. Daily smoking is reported by 26% in DoDDS vs. 21% stateside.
- The daily marijuana usage rate for DoDDS seniors, however, is lower (4.0% vs. 6.3% stateside) in the DoDDS system, even though nearly equal proportions have used in the preceding month (28.5% in DoDDS vs. 27.0% stateside).
- In general, the differences observed between male and female students, and between the college-bound and non-college-bound, closely parallel those found in the stateside population. Males tend to be heavier users than females of nearly all licit and illicit drugs (the primary exceptions occur for stimulants and cigarettes) and the non-college-bound are heavier users in every case than the college-bound.
- There are some fair-size regional differences in rates of illicit drug use among DoDDS seniors (see Figure H). The highest rate is in the North Germany region, where 58% say they have used a drug illicitly in the past year, followed by the Mediterranean with 56%, South Germany with 53%, the Pacific with 45% and the Atlantic with 45%. The Panama region is somewhat lower than the other regions with only 38% having used any illicit drug, though it does have by far the highest rate of cocaine use. There are also some important regional differences in alcohol and cigarette use. Daily drinking tends to be highest in the Mediterranean and North Germany regions, while daily smoking is highest in those two regions plus the Atlantic region.
- The degree and duration of the highs experienced by users of the various drugs are about the same in the DoDDS sample as in the stateside sample, suggesting a similar intensity of use by users.

- Students in the DoDDS system on the average express somewhat less disapproval of all types of drug use than their stateside counterparts.
- Regarding perceived availability, most illicitly used drugs appear to be less readily available to DoDDS students than to students in the domestic population. There are three exceptions, however: tranquilizers, heroin, and opiates other than heroin. These drugs are reported as readily available by more DoDDS students than stateside students, which may account for the greater use of these drugs in the DoDDS student population.
- In general, equivalent proportions of the DoDDS students and stateside student, perceive use of the various licit and illicit drugs as entailing "great risk" for the user (see Table 9). There are two exceptions, however. Regular marijuana use and daily drinking are not perceived as risky by as many DoDDS students. This could be because fewer of them drive automobiles (one of the important sources of risk for such behaviors) or because they are less exposed to messages in the media about the risks of such behaviors. (Over the last several years there has been a substantial upward shift in the perceived risk of regular marijuana use in the stateside population.)
- In their answers concerning their preferences for the legal prohibition of various types of drug use in public and private settings, the DoDDS students have about the same profile of preferences (see Table 11). The one notable exception occurs in the case of public drunkenness, which significantly fewer DoDDS students think should be legally prohibited.

## **INTRODUCTION**

This report presents findings from a survey of high school seniors attending Department of Defense Dependents Schools (DoDDS) in the spring of 1982.

The survey of DoDDS seniors was carried out as part of an ongoing national research and reporting program being conducted by the University of Michigan's Institute for Social Research. Since 1975, that program, entitled Monitoring the Future: An Ongoing Study of the Lifestyles and Values of Youth, has conducted annual surveys of high school seniors in the United States. In the 1982 data collection, the survey was expanded to include the DoDDS seniors, with funding for the supplement provided by the Department of Defense via an interagency transfer to the National Institute on Drug Abuse—the primary sponsor of the parent project.\*

### **Content Covered in this Report**

Among the topics to be treated here are (1) the current prevalence of drug use among high school seniors in DoDDS and (2) comparisons of drug use between seniors in DoDDS and seniors in stateside schools. Also reported for both groups of seniors are data on grade of first use, intensity of drug use, attitudes and beliefs among seniors concerning various types of drug use, and their perceptions of certain relevant aspects of the social environment.

The eleven separate classes of drugs distinguished are marijuana (including hashish), inhalants, hallucinogens, cocaine, heroin, natural and synthetic opiates other than heroin, stimulants, sedatives, tranquilizers, alcohol, and cigarettes. (This particular organization of drug use classes was chosen to heighten comparability with other publications based on national household surveys on drug abuse.) Separate statistics are also presented here for several sub-classes of drugs: PCP and LSD (both hallucinogens), barbiturates and methaqualone (both sedatives) and the amyl and butyl nitrites (both inhalants). Barbiturates and methaqualone, which are the two components of the "sedatives" class as used here, are measured separately.

---

\*This work was supported by Research Grant No. R01DA01411 from the National Institute on Drug Abuse.

Except for the findings on alcohol and cigarettes, practically all of the information reported here deals with illicit drug use.\* Respondents are asked to exclude any occasions on which they used any of the psychotherapeutic drugs under medical supervision.

We have chosen to focus considerable attention on drug use at the higher frequency levels rather than simply reporting proportions who have ever used various drugs. This is done to help differentiate levels of seriousness, or extent, of drug involvement. While we may yet lack any public consensus of what levels of use constitute "abuse," there is surely a consensus that heavier levels of use are more likely to have detrimental effects for the user and society than are lighter levels. We have also introduced indirect measures of dosage per occasion by asking respondents the duration and intensity of the highs they usually experience with each type of drug.

#### Purposes and Rationale for this Research

A major purpose of including seniors in DoDDS in the 1982 series is to provide accurate data on drug use and related factors among these seniors and, further, to compare the results with comparable data from seniors in stateside schools. Another purpose is to provide comparisons on a variety of other dimensions, a great number of which are considered relevant to the operation of DoDDS. These latter comparisons are not addressed fully in this report but are presented in a separate volume. The current report also does not address trends among DoDDS seniors because this is the first year in which data have been collected from DoDDS seniors.

#### Research Design and Procedures

To maximize the comparability of results obtained from this effort and from the study of stateside seniors, the basic research design for this effort paralleled as closely as possible that used for the stateside study. This design involved data collection from DoDDS seniors during the spring of 1982, the same time of the year in which data were collected from the stateside sample. Flyers explaining the study were mailed to each participating school and distributed to students about ten days before the administration. The actual questionnaire administrations were conducted by Institute for Social Research (ISR) representatives, following standardized procedures detailed in a project instruction manual. These procedures were identical to those followed by ISR representatives who conduct the administrations in stateside schools. The questionnaires were administered in classrooms during normal class periods whenever possible; however, circumstances in some schools required the use of larger group administrations.

---

\*Actually, purchase and use of the butyl nitrites remain largely legal and unregulated in the United States at the present time.

Questionnaire Format. The questionnaire forms administered to the DoDDS seniors were identical to those administered to the domestic sample except that each form included a two-sided answer page at the end which contained questions uniquely appropriate to DoDDS students. Because many questions are needed to cover all of the topic areas in the study, much of the questionnaire content is divided into five different questionnaire forms (which are distributed to participants in an ordered sequence that insures five virtually identical subsamples). About one-third of each questionnaire form consists of key or "core" variables which are common to all forms. All demographic variables, and nearly all of the drug use variables included in this report, are included in this "core" set of measures. Many of the questions dealing with attitudes, beliefs, and perceptions of relevant features of the social milieu are contained in only a single form, however, and are thus based on one-fifth as many cases.

#### Representativeness and Validity

School Participation. All DoDDS high schools with more than 25 enrolled seniors were invited to participate, except in the North Germany and South Germany regions. In order to reduce costs for data collection, only half of all eligible schools in those two regions were selected, using a stratified random procedure in which schools were first stratified within each of the two regions on the basis of the senior class size, the branch of the service hosting the installation to which the school was attached, and the size of the town in which the school was located. In all analyses, compensatory weighting is used for those two regions to achieve a representative, cross-sectional sample of all seniors attending overseas DoDDS schools containing more than 25 seniors. A total of 33 schools in the DoDDS system participated in this study: 8 in the Pacific region, 6 in North German, 5 in South Germany, 7 in the Atlantic region, 5 in the Mediterranean region, and 2 in Panama.

The stateside sample consisted of 141 public and private schools selected through a two-stage procedure to provide an accurate cross-section of all high school seniors throughout the coterminous United States. Of the stateside schools invited to participate in the 1982 survey, 70% agreed to do so. For each refusal, a similar school (in terms of size, geographic area, urbanicity, etc.) was recruited as a replacement.

Student Participation. Completed questionnaires were obtained from 2,460 DoDDS seniors, or 84% of the targeted students. This response rate compares to 83% of the sampled seniors in the domestic survey. The single most important reason that students were missed in the DoDDS and stateside schools is absence from class at the time of data collection. Students with fairly high rates of absenteeism report above-average rates of drug use; therefore, there is some degree of bias introduced into the prevalence estimates by our missing the absentees. Much of that bias could be corrected through the use of special weighting; however, we decided not to do so because the bias in overall drug use estimates was determined to be quite small, and because the necessary weighting procedures would have introduced undesirable

complications. Of course, some students are not absent from class, but simply refuse when asked to complete a questionnaire. However, the proportion of explicit refusals amounts to less than 1 percent of the target sample in DoDDS or stateside schools. The fact that DoDDS and stateside samples have virtually identical response rates eliminates the possibility of any observed differences between the two samples being an artifact due to differential participation rates.

Sampling Accuracy of the Estimates. For purposes of this introduction, it is sufficient to note that drug use estimates based on the total sample of DoDDS seniors have confidence intervals that average about  $\pm 1.6\%$  (as shown in Table 1, the confidence intervals vary from about  $\pm 2.5\%$  to  $\pm 0.5\%$  depending on the drug).\* Confidence intervals for the drug use estimates based on the total sample of stateside seniors average about  $\pm 1.2\%$ . This means that had we been able to invite all schools in the 48 states, the results would be within about one and a half percentage points of our present findings for most drugs at least 95 out of 100 times.

### A Caution about the Stimulant Results

In reporting their psychotherapeutic drug use, respondents are instructed to exclude not only medically supervised use, but also any use of over-the-counter (i.e., non-prescription) drugs. However, in recent years some of those reporting stimulant (amphetamine) use have erroneously been including the use of over-the-counter stay-aware and diet pills, as well as other pills intentionally manufactured to look like amphetamines, and sold under names which sound like them, but which contain no controlled substances. (A number of states have recently enacted laws to stop the manufacture and mail-order distribution of these latter "look-alike, sound-alike" pseudo-amphetamines.) The advertising and sales of over-the-counter diet pills (most of which contain the mild stimulant phenylpropanolamine, and some of which also contain caffeine) have burgeoned in recent years, as has also been true for the "sound-alike, look-alike" pills (most of which contain caffeine). We believe that the inappropriate inclusion of these non-controlled stimulants in the responses to our surveys accounts for much of the sharp rise in reported "amphetamine" use observed in 1980 and 1981.

In the 1982 survey, we introduced some new questions on the use of both controlled and non-controlled stimulants. (We also kept the old version of the question in two questionnaire forms so that it will be possible to "splice" the trend lines resulting from the old and new questions.) In this report we include statistics on "stimulants, adjusted"—which are based on these new questions. We think these have been successful at getting respondents to exclude over-the-counter stimulants and those "look-alike" stimulants which the user knows are look-alikes. However, as is

---

\*Confidence limits for the DoDDS sample were obtained by using formulas appropriate for simple random samples; see the Appendix for a discussion and rationale for this procedure.

true with several other drug classes, the user may at times be ingesting a substance other than the one he or she thinks it to be. Thus, some erroneous self-reports of "amphetamine" use may remain.

We also report statistics on "stimulants" (unadjusted); these are based on the old questions, and are included primarily to make this report more compatible with the report on the stateside survey.

## **PREVALENCE OF DRUG USE**

This section summarizes the levels of drug use reported by the DoDDS class of 1982. Data are included for lifetime use, use during the past year, use during the past month, and daily use. Levels of drug use reported by seniors in DoDDS are compared to those reported by seniors in stateside schools. Also included are comparisons between key subgroups of DoDDS seniors (based on sex, college plans, DoDDS region) and comparisons between these subgroups and comparable subgroups of stateside seniors.

### **Prevalence of Drug Use in 1982: All Seniors**

#### **Lifetime, Monthly and Annual Prevalence**

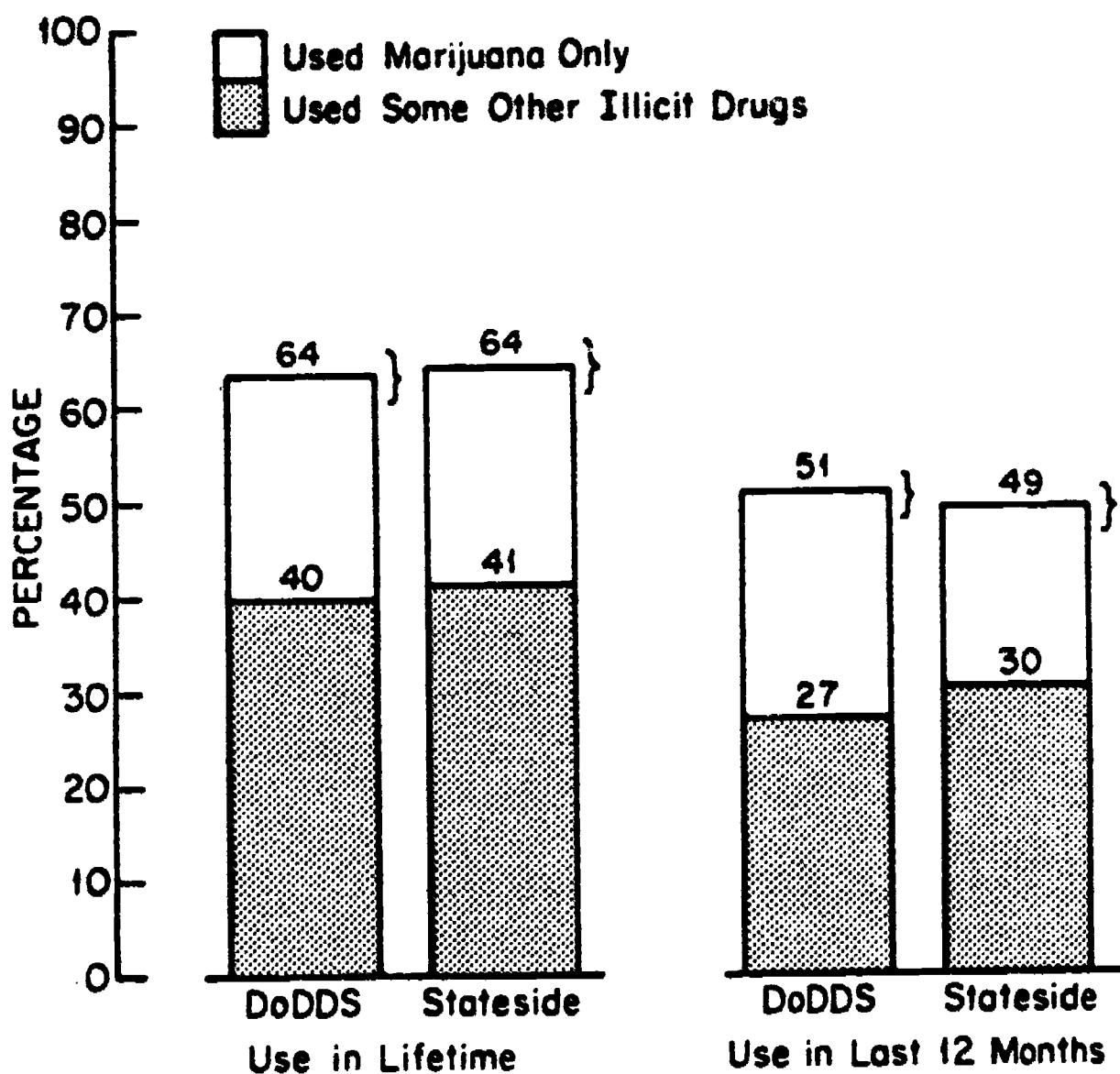
- Almost two-thirds of DoDDS seniors (64%) report illicit drug use at some time in their lives although a substantial proportion of them report using only marijuana (24% of the sample or 38% of illicit drug users). Almost identical proportions of stateside seniors report such use (with 64% reporting any illicit drug use and 23% reporting using only marijuana). (See Figure A.)
- About four in every ten seniors in DoDDS (40%) report using an illicit drug other than marijuana at some time compared to 41% stateside.\*
- Figure B gives a ranking of various drug classes on the basis of their lifetime prevalence figures. Figure C presents comparable data for stateside seniors.

---

\*Use of "other illicit drugs" includes the use of hallucinogens, cocaine, or heroin or the use of other opiates, stimulants, sedatives, or tranquilizers which is not under a doctor's orders.

**FIGURE A**

**Lifetime and Annual Prevalence of an Illicit Drug Use Index,  
DoDDS and Stateside Class of 1982**



**NOTES:** Use of "some other illicit drugs" includes any use of hallucinogens, cocaine, and heroin, or any use which is not under a doctor's orders of other opiates, stimulants, sedatives, or tranquilizers.

The bracket near the top of a bar indicates the lower and upper limits of the 95% confidence interval.

Table 1  
 Prevalence (Percent Ever Used) of Sixteen Types of Drugs:  
 Observed Estimates and 95% Confidence Limits  
 DoDDS and Stateside Class of 1982  
 (Approx. N Stateside=17700)  
 (Approx. N DoDDS=2400)

	DoDDS Sample			Stateside Sample			DoDDS- Stateside Difference
	Lower Limit	Observed estimate	Upper Limit	Lower Limit	Observed limit	Upper Limit	
Marijuana/Hashish	55.6	57.6	59.6	56.5	58.7	60.9	-1.1
Inhalants <sup>1</sup>	15.3	16.9	18.6	17.8	17.8	18.6	4.1666
Inhalants Adjusted <sup>2</sup>	20.4	22.2	24.1	16.9	18.0	19.1	4.26
Amyl/Butyl Nitrites <sup>3</sup>	5.7	7.8	10.5	8.6	9.8	11.2	-2.0
Hallucinogens	11.0	12.2	13.6	11.5	12.5	13.6	-0.3
Hallucinogens Adjusted <sup>4</sup>	12.6	13.9	15.3	14.0	15.0	16.0	-1.1
LSD	9.0	10.1	11.4	8.6	9.6	10.7	0.5
PCP <sup>5</sup>	3.6	5.3	7.7	4.6	6.0	7.4	0.7
Cocaine	11.5	12.8	14.2	14.8	16.0	17.3	-3.266
Heroin	1.9	2.4	3.1	1.0	1.2	1.5	1.2666
Other opiates <sup>6</sup>	12.5	13.8	15.2	8.8	9.6	10.8	4.2666
Stimulants <sup>7-8</sup>	28.0	30.8	33.8	33.6	35.6	37.6	-4.866
Stimulants Adjusted <sup>9</sup>	22.0	24.1	26.4	25.3	27.9	29.6	-3.866
Sedatives <sup>10</sup>	15.6	17.0	18.6	14.0	15.2	16.5	0.5
Barbiturates <sup>11</sup>	12.5	13.8	15.2	9.3	10.3	11.4	3.5666
Methaqualone <sup>12</sup>	7.7	8.8	10.0	9.7	10.7	11.8	-1.96
Tranquilizers <sup>13</sup>	16.6	18.1	19.7	12.8	14.0	15.3	4.1666
Alcohol	95.6	96.4	97.1	91.6	92.8	93.6	3.6666
Cigarettes	74.1	75.9	77.6	68.4	70.1	71.7	5.8666

NOTE: Significance of difference between the two samples:  $\alpha=.05$ ,  $\alpha\alpha=.01$ ,  $\alpha\alpha\alpha=.001$ .

<sup>1</sup>Data based on four questionnaire forms. N is four-fifths of N indicated.

<sup>2</sup>Adjusted for underreporting of amyl and butyl nitrites (see text).

<sup>3</sup>Data based on a single questionnaire form. N is one-fifth of N indicated.

<sup>4</sup>Adjusted for underreporting of PCP (see text).

<sup>5</sup>Only drug use which was not under a doctor's orders is included here.

<sup>6</sup>Data based on two questionnaire forms. N is two-fifths of N indicated.

<sup>7</sup>Adjusted for overreporting of the non-prescription stimulants. Data based on three questionnaire forms. N is three-fifths of N indicated.

- Marijuana is by far the most widely used illicit drug with 58% of DoDDS seniors reporting some use in their lifetime, 46% reporting some use in the past year and 27% reporting use in the last month. The stateside prevalence figures for this drug are nearly identical (59%, 44%, and 29% respectively).
- After marijuana, the most widely used class of other illicit drugs among DoDDS seniors is stimulants (adjusted),\* at 24% lifetime prevalence (compared with 28% stateside).\*\* Next come inhalants (adjusted) at 22% (vs. 18% stateside), tranquilizers at 18% (vs. 14% stateside), and sedatives at 17% (vs. 15% stateside). These are followed by  opiates (other than heroin) at 14% (vs. 10% stateside), hallucinogens (adjusted) at 14% (vs. 15% stateside), cocaine at 13% (vs. 16% stateside), and heroin at 2% (vs. 1% stateside). The rank order of illicit drug classes among stateside seniors is somewhat different, with cocaine ranking higher and tranquilizers ranking lower than among the DoDDS seniors.
- The inhalant estimates have been adjusted upward because we observed that not all users of one subclass of inhalants—amyl and butyl nitrites (described below)—report themselves as inhalant users. Because we included questions specifically about nitrite use for the first time in one 1979 questionnaire form, we were able to discover this problem and make estimates of the degree to which inhalant use was being underreported in the overall estimates. As a result, all prevalence estimates for inhalants have been increased, with the proportional increase being greater for the more recent time intervals (i.e., last month, last year) because use of the other common inhalants, such as glue and aerosols, is more likely to have been discontinued prior to senior year.
- Amyl and butyl nitrites are sold legally in the United States and go by the street names of "poppers" or "snappers" and such brand names as Locker Room and Rush. They have been used by 8% of DoDDS seniors, as compared to 10% of stateside seniors.

---

\*The "adjusted" stimulant estimates are based on a revised set of questions included in the 1982 survey which asked seniors to exclude use which was medically supervised and to exclude the use of any over-the-counter stay-awake and diet pills.

\*\*Only use which was not medically supervised is included in the figures cited in this chapter.

- We also discovered in 1979, by adding to one form questions specifically about PCP use, that some users of the hallucinogenic drug PCP do not report themselves as users of hallucinogens—even though PCP is explicitly included as an example in the questions about hallucinogens. Thus, since 1979 the hallucinogen prevalence and trend estimates have been adjusted upward to correct for this known underreporting.
- Lifetime prevalence for the specific hallucinogenic drug PCP stands at 5% among DoDDS seniors while lifetime prevalence for LSD, the other most widely used hallucinogen, stands at 10%. Lifetime prevalences of PCP and LSD for stateside seniors are very similar (6% and 10% respectively).
- Significantly more DoDDS seniors (14% lifetime prevalence) than stateside seniors (10%) report some use of opiates other than heroin (methadone, opium, codeine, morphine, paregoric).
- Estimates of heroin use are also higher for DoDDS seniors (2.4% lifetime prevalence) than for stateside seniors (1.2%). Given the highly illicit nature of this drug we deem it to be the most likely to be underreported.
- Within the general class of sedatives, DoDDS seniors report greater use of drugs in the broad subclass of barbiturates (14%) than do stateside seniors (lifetime prevalence, 10%). But stateside seniors report greater use of methaqualone (11%) than do the DoDDS seniors (9%). Thus the overall use of sedatives is not so different between the two groups (17% for DoDDS seniors vs. 15% stateside).
- Use of either of the two major licit drugs, alcohol and cigarettes, remains more widespread than use of any of the illicit drugs. Nearly all DoDDS seniors have tried alcohol (96%) and the great majority (78%) have used it in the past month. While the estimates of alcohol use among stateside seniors are also high (lifetime use, 93% and monthly use, 70%), those for DoDDS seniors are significantly higher.
- Some 76% of DoDDS seniors report having tried cigarettes at some time and 36% smoked at least some in the past month. A significantly smaller proportion of stateside seniors have tried cigarettes (70%) or smoked in the last month (30%).

Table 2  
 Prevalence (Percent Ever Used) of Sixteen Types of Drugs:  
 DoDDS and Stateside Class of 1982  
 (Approx. N Stateside=17700)  
 (Approx. N DoDDS=2400)

	Ever Used	Past Month		Past Year, Not Past Month		Not Past Year	Never Used
		State-side DoDDS	State-side DoDDS	State-side DoDDS	State-side DoDDS		
Marijuana/Hashish	58.7	57.6	28.5	27.0	75.6	18.9	14.4 11.7 47.3 42.4
Inhalants <sup>a</sup>	12.8	16.9	1.5	2.1	3.0	4.9	8.3 9.9 87.2 83.1
Inhalants Adjusted <sup>b</sup>	18.0	22.2	2.5	2.8	4.1	6.2	11.4 13.2 82.0 77.8
Amyl/Butyl Nitrites <sup>c</sup>	9.8	7.8	1.1	1.6	2.5	1.6	6.2 4.6 90.2 92.2
Hallucinogens	12.5	7.2	3.4	2.6	4.7	4.3	4.4 0.3 87.5 92.8
Hallucinogens Adjusted <sup>d</sup>	15.0	13.9	4.3	2.7	5.0	4.3	5.7 6.9 55.0 86.1
LSD	9.6	10.1	2.4	2.0	3.7	3.7	3.5 4.4 90.4 89.9
PCP <sup>e</sup>	6.0	5.3	1.0	0.1	1.2	0.3	3.8 4.9 94.0 94.7
Cocaine	16.0	12.8	5.0	2.2	6.5	4.8	4.5 5.8 84.0 87.2
Heroin	1.2	2.4	0.2	0.3	0.4	0.5	0.6 1.6 98.8 97.6
Other opiates <sup>f</sup>	9.6	13.8	7.8	3.0	3.5	5.1	4.3 5.7 90.4 86.2
Stimulants <sup>g,h</sup>	35.6	30.8	13.7	8.4	12.4	12.9	9.5 9.5 64.4 69.2
Stimulants Adjusted <sup>i</sup>	27.9	24.1	10.7	6.6	5.1	9.2	12.1 8.3 72.1 75.9
Sedatives <sup>j</sup>	15.2	17.0	3.4	3.0	5.7	6.5	6.1 7.5 84.8 83.0
Barbiturates <sup>k</sup>	10.3	13.8	2.0	2.2	3.5	5.6	4.8 6.0 89.7 86.2
Methaqualone <sup>l</sup>	10.7	8.8	2.4	1.1	4.4	2.8	3.9 4.9 89.3 91.2
Tranquilizers <sup>m</sup>	14.0	18.1	2.4	3.0	4.6	6.1	7.0 9.0 86.0 81.9
Alcohol	92.8	96.4	69.7	78.5	17.1	14.2	6.0 3.7 7.2 3.6
Cigarettes	70.1	75.9	30.0	36.1	40.7 <sup>n</sup>	39.8 <sup>n</sup>	NA <sup>o</sup> NA <sup>o</sup> 29.9 24.1

<sup>a</sup>Data based on four questionnaire forms. N is four-fifths of N indicated.

<sup>b</sup>Adjusted for underreporting of amyl and butyl nitrites (see text).

<sup>c</sup>Data based on a single questionnaire form. N is one-fifth of N indicated.

<sup>d</sup>Adjusted for underreporting of PCP (see text).

<sup>e</sup>Only drug use which was not under a doctor's orders is included here.

<sup>f</sup>Data based on two questionnaire forms. N is two-fifths of N indicated.

<sup>g,h</sup>Adjusted for overreporting of the non-prescription stimulants. Data based on three questionnaire forms. N is three-fifths of N indicated.

<sup>i</sup>The combined total for the two columns ("past year, not past year") is shown because the question asked did not discriminate between the two answer categories.

BEST COPY AVAILABLE

### Discontinuation Rates

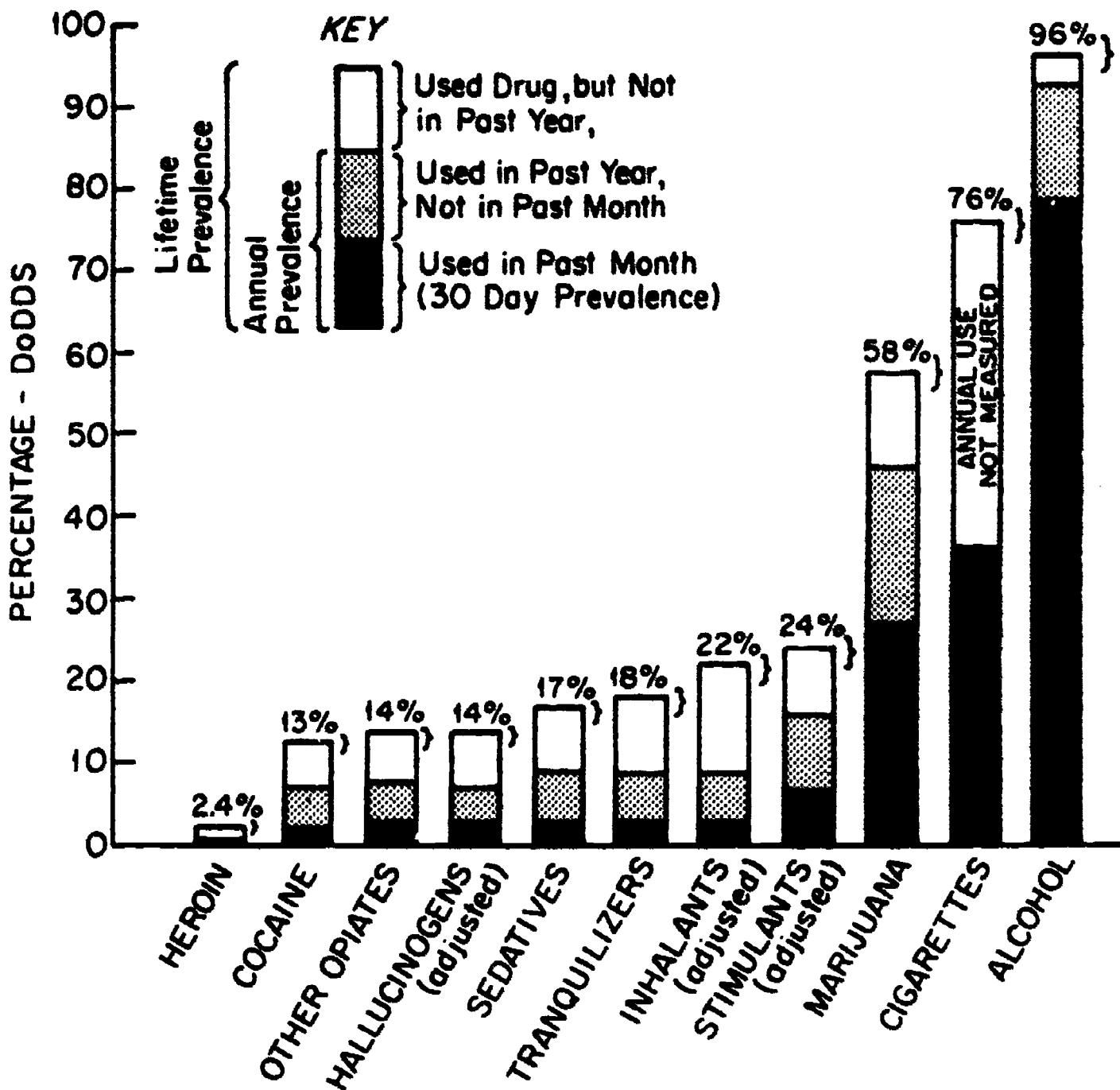
- Among DoDDS seniors the drug classes with the highest rates of discontinuation of use are heroin (67% of previous users had not used in the past twelve months), inhalants (59% of users, adjusted version), the hallucinogen PCP (83%), the sedative methaqualone (66%), and the nitrites specifically (59%). Discontinuation rates for DoDDS seniors are comparable to those for stateside seniors, but discontinuation of cocaine is significantly higher among DoDDS seniors (45%) than among stateside seniors (28%).

### Daily Prevalence

- Frequent use of these drugs is of greatest concern from a health and safety standpoint. Table 6 and Figure D show the prevalence of daily or near daily use of the various classes of drugs. (Figure E shows daily prevalence rates for stateside seniors.) For all drugs, except cigarettes, respondents are considered daily users if they indicate that they had used the drug on twenty or more occasions in the preceding 30 days. For cigarettes, they explicitly state use of one or more cigarettes per day.
- Cigarettes are used daily by more DoDDS respondents (26%) than any of the other drug classes. In fact, 17% say they smoke half-a-pack or more per day. These rates are somewhat higher than the rates among stateside seniors, where 21% are using on a daily basis, and 14% are smoking half-a-pack or more per day.
- Alcohol also is used daily by more of the DoDDS seniors (9%) than stateside seniors (6%). Similar, and very substantial, proportions of DoDDS seniors (42%) and stateside seniors (41%), report that on at least one occasion during the prior two-week interval they had five or more drinks in a row.
- But fewer DoDDS seniors (4.0%) than stateside seniors (6.3%) use marijuana on a daily or near daily basis even though their lifetime, annual and monthly prevalence rates are just about comparable.
- Stimulants are used on a daily basis by more DoDDS seniors (0.3%) than is any other class of illicit drugs other than marijuana. Still, a greater proportion of stateside seniors report daily use of stimulants (0.7%).
- Virtually no DoDDS respondents (0.1%) nor stateside respondents (less than 0.1%) report daily use of heroin in their senior year.

**FIGURE B**

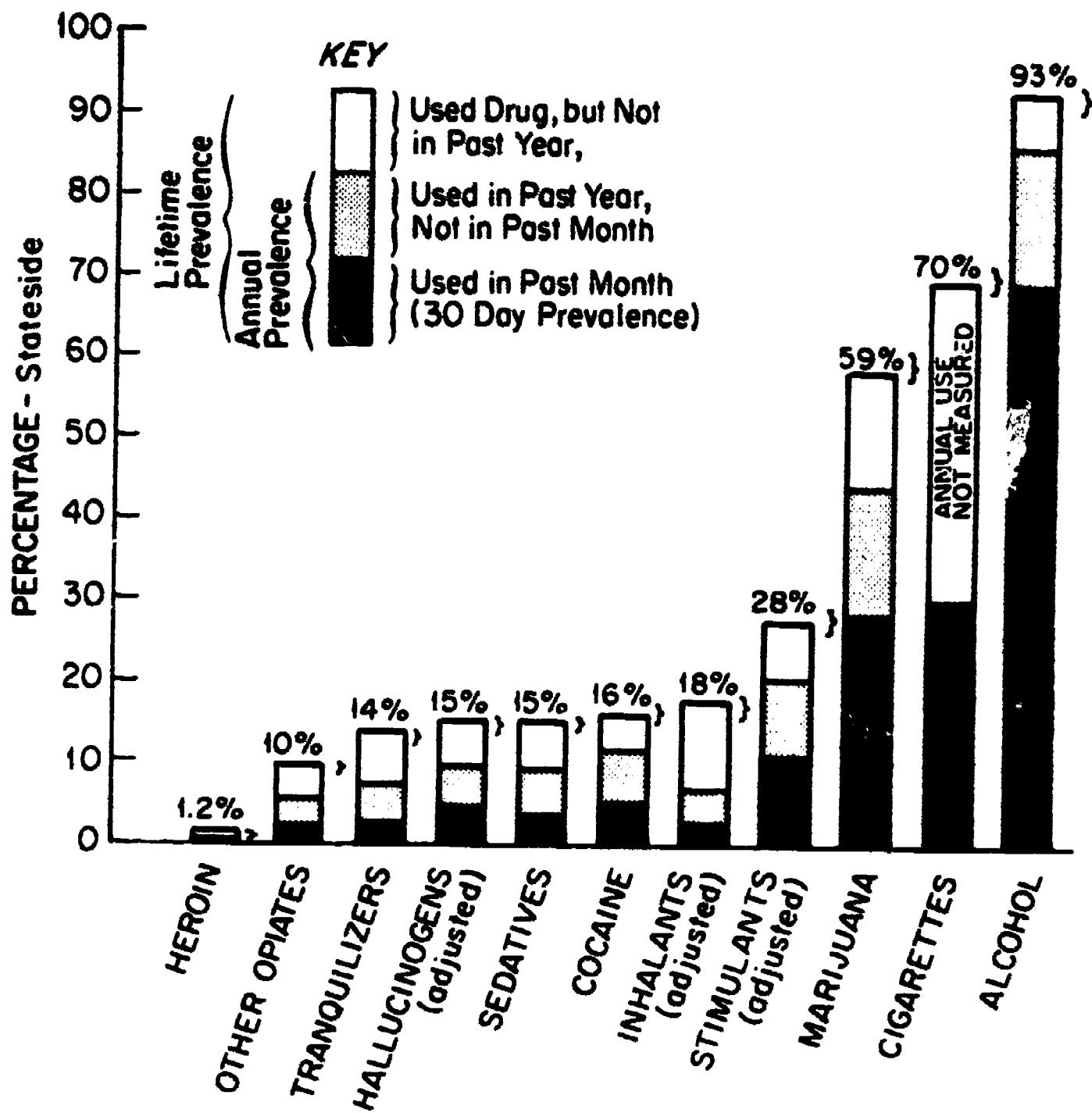
**Prevalence and Recency of Use of Eleven Types of Drugs,  
DoDDS Class of 1982**



**NOTES:** The bracket near the top of a bar indicates the lower and upper limits of the 95% confidence interval.

**FIGURE C**

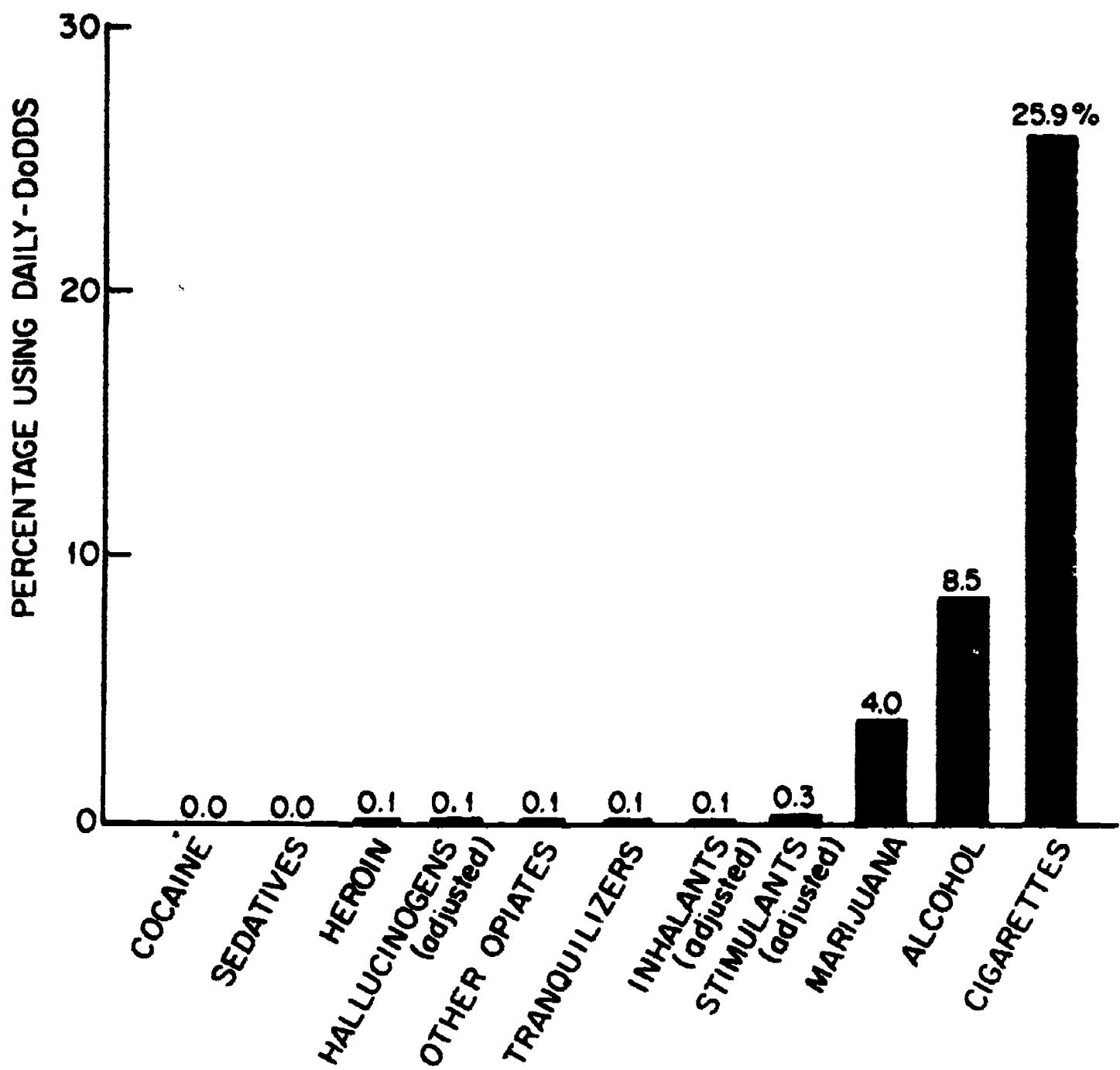
**Prevalence and Recency of Use of Eleven Types of Drugs,  
Stateside Class of 1982**



**NOTES:** The bracket near the top of a bar indicates the lower and upper limits of the 95% confidence interval.

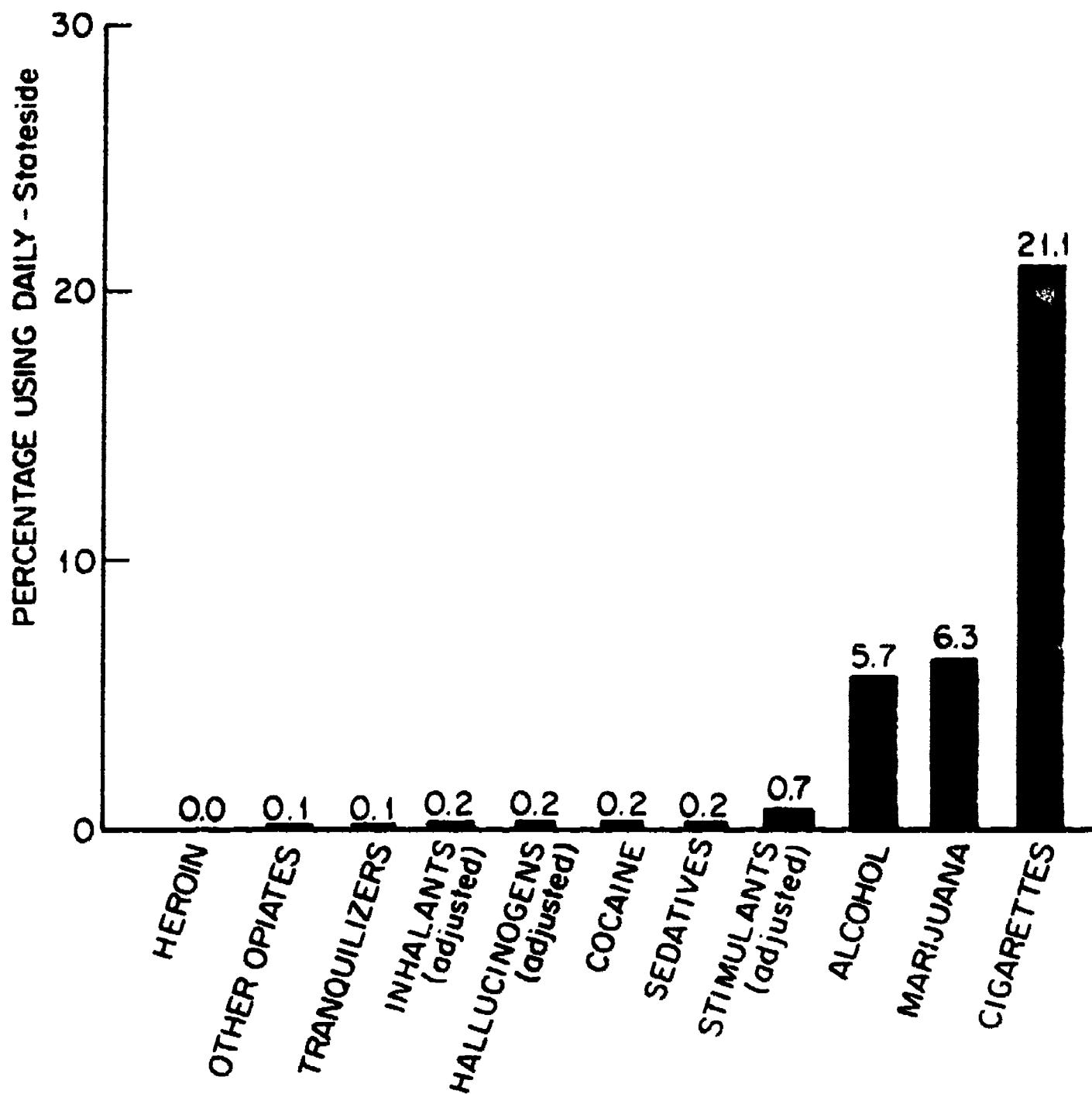
**FIGURE D**

**Thirty-Day Prevalence of Daily Use of Eleven Types of Drugs,  
DoDDS Class of 1982**



**FIGURE E**

**Thirty-Day Prevalence of Daily Use of Eleven Types of Drugs,  
Stateside Class of 1982**



**Table 3**  
**Lifetime Prevalence of Use of Sixteen Types of Drugs, by Subgroups,  
 DoDDS and Stateside, Class of 1982**

Approx. N =	Percent ever used							
	Total		DoDDS Region					
	State-side (17700)	DoDDS (2400)	Atlan- tic (400)	North Germany (550)	South Germany (400)	Mediterranean (250)	Paci- fic (450)	Panama (350)
Marijuana/Heshish	58.7	57.6	56.4	61.4	57.9	64.3	53.8	46.9
Inhalants <sup>a</sup>	12.6	16.9 <sup>b</sup>	14.4	17.0	19.8	13.2	15.6	17.2
Inhalants Adjusted <sup>c</sup>	18.0	22.2 <sup>d</sup>	19.6	22.0	29.5	22.0	16.2	18.9
Amyl/Butyl Nitrites <sup>e</sup>	9.6	7.8	9.6	10.8	7.0	10.4	3.4	1.5
Hallucinogens	12.5	12.2	13.4	14.4	13.5	11.4	9.6	4.7
Hallucinogens Adjusted <sup>f</sup>	15.0	13.9	15.8	17.3	15.4	14.0	9.6	4.7
LSD	9.6	10.1	10.3	12.3	11.6	9.6	7.4	2.9
PCP <sup>g</sup>	6.0	5.3	4.9	9.0	4.7	4.1	2.2	0.0
Cocaine	16.0	12.8 <sup>b</sup>	9.6	15.3	13.0	12.4	9.2	13.6
Heroin	1.2	2.4 <sup>b</sup>	3.1	3.1	2.4	2.8	1.1	0.6
Other opiates <sup>h</sup>	9.6	13.8 <sup>b</sup>	11.6	16.9	13.6	12.9	15.0	6.3
Stimulants <sup>i</sup>	35.6	30.8 <sup>b</sup>	23.7	33.2	33.5	38.6	30.2	20.9
Stimulants Adjusted <sup>j</sup>	27.9	24.1 <sup>b</sup>	25.9	26.4	26.2	21.6	22.5	12.6
Sedatives <sup>k</sup>	15.2	17.0	16.6	17.5	18.2	19.8	15.7	13.0
Barbiturates <sup>l</sup>	10.3	13.8 <sup>b</sup>	14.9	14.3	14.6	14.0	12.0	11.0
Methaqualone <sup>m</sup>	10.7	8.8 <sup>b</sup>	8.6	9.2	8.8	11.2	8.3	6.8
Tranquillizers <sup>n</sup>	14.0	18.1 <sup>b</sup>	17.5	17.4	18.7	18.6	16.8	20.9
Alcohol	92.8	96.4 <sup>b</sup>	97.1	97.2	96.5	99.6	92.9	94.9
Cigarettes	70.7	75.9 <sup>b</sup>	75.1	77.8	73.6	83.5	72.9	74.7

NOTE: Significance of difference between the two samples:  $\alpha=.05$ ,  $\alpha\alpha=.01$ ,  $\alpha\alpha\alpha=.001$ .

<sup>a</sup>Data based on four questionnaire forms. N is four-fifths of N indicated.

<sup>b</sup>Adjusted for underreporting of amyl and butyl nitrites (see text).

<sup>c</sup>Data based on a single questionnaire form. N is one-fifth of N indicated.

<sup>d</sup>Adjusted for underreporting of PCP (see text).

<sup>e</sup>Only drug use which was not under a doctor's orders is included here.

<sup>f</sup>Data based on two questionnaire forms. N is two-fifths of N indicated.

<sup>g</sup>Adjusted for over-reporting of the non-prescription stimulants. Data based on three questionnaire forms. N is three-fifths of N indicated.

**BEST COPY AVAILABLE**

**Table 3 (cont.)**  
**Lifetime Prevalence of Use of Sixteen Types of Drugs, by Subgroups,  
 DoDDS and Stateside, Class of 1982**

Approx. N =	Percent ever used							
	Sex				College Plans			
	Male		Female		Yes		No	
	State-side (8500)	DoDDS (1200)	State-side (8600)	DoDDS (1150)	State-side (9200)	DoDDS (1650)	State-side (7200)	DoDDS (700)
Marijuana/Hashish	67.5	61.8	55.5	53.4	54.0	55.4	63.8	62.3
Inhalants <sup>a</sup>	15.3	20.8	10.4	12.7	11.4	14.1	14.7	22.5
Inhalants Adjusted <sup>b</sup>	21.5	26.2	14.3	18.5	16.1	16.5	20.2	36.1
Amyl/Butyl Nitrates <sup>c</sup>	12.4	9.5	7.3	6.4	9.1	4.3	10.7	16.8
Hallucinogens	14.4	15.3	10.2	8.8	9.7	9.0	15.0	18.3
Hallucinogens Adjusted <sup>d</sup>	17.5	16.5	11.6	10.3	11.3	10.3	17.6	20.7
LSD	11.3	12.6	7.4	7.2	7.1	7.2	11.8	15.3
PCP <sup>e</sup>	7.3	5.6	4.7	4.6	4.7	3.2	7.8	10.7
Cocaine	18.0	15.2	13.7	9.8	13.4	10.1	18.1	18.3
Heroin	1.4	3.0	0.8	1.8	0.8	1.1	1.5	4.6
Other opiates <sup>f</sup>	10.6	15.7	8.6	11.2	8.1	11.9	11.4	17.7
Stimulants <sup>g-h</sup>	31.8	29.9	39.6	32.0	31.2	26.4	41.6	38.5
Stimulants Adjusted <sup>i</sup>	26.8	25.5	28.2	22.1	22.9	20.8	32.8	30.5
Sedatives <sup>j</sup>	16.0	19.1	14.1	14.4	11.9	13.8	18.6	22.9
Barbiturates <sup>k</sup>	10.7	15.5	9.6	11.7	7.6	11.1	13.2	18.9
Methaqualone <sup>l</sup>	11.8	10.3	9.3	6.8	8.2	6.4	13.2	13.6
Tranquillizers <sup>m</sup>	13.8	17.8	14.2	18.0	12.4	15.3	16.2	22.9
Alcohol	93.4	96.1	92.4	96.5	92.4	95.9	93.7	97.2
Cigarettes	67.8	75.0	72.0	76.6	64.7	71.6	75.9	84.8

<sup>a</sup>Data based on four questionnaire forms. N is four-fifths of N indicated.

<sup>b</sup>Adjusted for underreporting of amyl and butyl nitrates (see text).

<sup>c</sup>Data based on a single questionnaire form. N is one-fifth of N indicated.

<sup>d</sup>Adjusted for underreporting of PCP (see text).

<sup>e</sup>Only drug use which was not under a doctor's orders is included here.

<sup>f</sup>Data based on two questionnaire forms. N is two-fifths of N indicated.

<sup>g-h</sup>Adjusted for overreporting of the non-prescription stimulants. Data based on three questionnaire forms. N is three-fifths of N indicated.

**BEST COPY AVAILABLE**

**Table 4**  
**Annual Prevalence of Use of Sixteen Types of Drugs, by Subgroups,  
 DoDDS and Stateside, Class of 1982**

Approx. N =	Percent who used in last twelve months							
	Total		DoDDS Region					
	State-side (17700)	DoDDS (2400)	Asian- tic (400)	North Germany (550)	South Germany (400)	Medi- terre- nean (250)	Paci- fic (450)	Panama (350)
Marijuana/Hashish	44.3	45.9	40.6	52.0	47.6	53.2	38.7	33.0
Inhalants <sup>1</sup>	4.5	7.0***	6.8	6.2	9.1	5.9	6.4	6.2
Inhalants Adjusted <sup>2</sup>	6.6	9.0*	11.2	7.4	10.7	7.8	9.4	8.7
Amyl/Butyl Nitrites <sup>3</sup>	3.6	3.2	4.8	5.4	1.2	4.2	1.1	1.5
Hallucinogens	8.1	6.9	8.1	9.1	7.0	7.1	4.0	1.5
Hallucinogens Adjusted <sup>4</sup>	9.3	7.0	9.2	9.1	7.0	7.1	4.0	1.5
LSD	6.1	5.7	6.0	7.4	6.0	6.8	3.6	1.2
PCP <sup>5</sup>	2.2	0.4**	2.4	0.0	0.0	2.1	0.0	0.0
Cocaine	11.5	7.0***	5.0	8.4	7.0	6.4	2.0	11.9
Heroin	0.6	0.8	0.9	1.2	0.7	1.2	0.4	0.0
Other opiates <sup>6</sup>	5.3	8.1***	6.6	10.0	8.3	6.0	9.6	3.0
Stimulants <sup>7**</sup>	26.1	21.3**	15.0	24.4	23.8	21.8	21.4	13.0
Stimulants Adjusted <sup>8</sup>	20.3	15.8***	16.1	19.8	16.0	14.7	12.1	7.7
Sedatives <sup>9</sup>	9.1	9.5	8.1	10.8	10.2	9.2	8.0	7.7
Barbiturates <sup>10</sup>	5.5	7.8***	6.7	9.4	8.3	6.0	6.3	6.2
Methaqualone <sup>11</sup>	6.8	3.9***	4.1	3.4	3.9	6.4	3.6	3.6
Tranquillizers <sup>12</sup>	7.0	9.1**	8.8	8.8	10.5	9.3	8.5	7.8
Alcohol	86.8	92.7***	95.0	93.6	91.0	98.8	89.6	90.4
Cigarettes	NAT	NA	NA	NA	NA	NA	NA	NA

NOTE: Significance of difference between the two samples: \* $p=.05$ , \*\* $p=.01$ , \*\*\* $p=.001$ .  
 NA indicates data not available.

<sup>1</sup>Data based on four questionnaire forms. N is four-fifths of N indicated.

<sup>2</sup>Adjusted for underreporting of amyl and butyl nitrites (see text).

<sup>3</sup>Data based on a single questionnaire form. N is one-fifth of N indicated.

<sup>4</sup>Adjusted for underreporting of PCP (see text).

<sup>5</sup>Only drug use which was not under a doctor's orders is included here.

<sup>6</sup>Data based on two questionnaire forms. N is two-fifths of N indicated.

<sup>7</sup>Adjusted for overreporting of the non-prescription stimulants. Data based on three questionnaire forms. N is three-fifths of N indicated.

Table 4 (cont.)  
 Annual Prevalence of Use of Sixteen Types of Drugs, by Subgroups.  
 DoDDS and Stateside, Class of 1982

Approx. N =	Percent who used in last twelve months								
	Sex				College Plans				
	Male		Female		Yes			No	
	State-side (8500)	DoDDS (1200)	State-side (8600)	DoDDS (1150)	State-side (9200)	DoDDS (1650)	State-side (7200)	DoDDS (700)	
Marijuana/Hashish	47.2	50.8	40.8	40.9	40.6	43.4	48.2	51.0	
Inhalants <sup>a</sup>	5.8	9.3	3.1	4.7	4.1	6.6	4.9	7.7	
Inhalants Adjusted <sup>b</sup>	8.4	11.7	4.6	6.4	6.3	7.8	7.3	11.8	
Amyl/Butyl Nitrites <sup>c</sup>	5.0	4.2	2.3	2.5	3.5	1.7	3.7	7.1	
Hallucinogens	9.6	8.9	6.1	4.4	6.2	4.7	9.5	10.8	
Hallucinogens Adjusted <sup>d</sup>	10.9	9.1	6.9	4.4	6.9	4.7	10.9	10.9	
LSD	7.4	7.9	4.3	3.1	4.3	3.8	7.5	9.3	
PCP <sup>e</sup>	2.8	0.3	1.6	0.6	1.8	0.0	2.9	1.5	
Cocaine	13.1	8.3	9.6	5.1	9.9	6.0	12.5	8.8	
Heroin	0.8	1.0	0.4	0.6	0.4	0.4	0.7	1.4	
Other opiates <sup>f</sup>	6.0	9.3	4.6	6.8	4.6	7.6	6.1	9.1	
Stimulants <sup>g-h</sup>	23.9	20.6	28.5	21.8	23.2	17.9	30.4	27.7	
Stimulants Adjusted <sup>i</sup>	19.6	17.1	20.3	14.3	16.8	13.3	23.7	20.4	
Sedatives <sup>j</sup>	10.0	11.5	8.0	7.2	7.0	7.3	11.4	13.6	
Barbiturates <sup>k</sup>	5.9	9.7	5.0	5.7	3.8	6.0	7.4	11.3	
Methaqualone <sup>l</sup>	7.5	4.4	5.9	3.0	5.1	2.4	8.4	6.5	
Tranquilizers <sup>m</sup>	6.9	8.9	7.1	9.3	6.3	7.4	8.0	12.7	
Alcohol	88.5	92.9	85.3	92.3	86.4	92.1	87.8	93.6	
Cigarettes	NAT	NA	NA	NA	NA	NA	NA	NA	

NA indicates data not available.

<sup>a</sup>Data based on four questionnaire forms. N is four-fifths of N indicated.

<sup>b</sup>Adjusted for underreporting of amyl and butyl nitrites (see text).

<sup>c</sup>Data based on a single questionnaire form. N is one-fifth of N indicated.

<sup>d</sup>Adjusted for underreporting of PCP (see text).

<sup>e</sup>Only drug use which was not under a doctor's orders is included here.

<sup>f</sup>Data based on two questionnaire forms. N is two-fifths of N indicated.

<sup>g-h</sup>Adjusted for overreporting of the non-prescription stimulants. Data based on three questionnaire forms. N is three-fifths of N indicated.

BEST COPY AVAILABLE

**Table 5**  
**Thirty-Day Prevalence of Use of Sixteen Types of Drugs, by Subgroups,**  
**DoDDS and Stateside, Class of 1982**

Approx. N =	Percent who used in last thirty days							
	Total		DoDDS Region					
	State-side (17700)	DoDDS (2400)	Atlan- tic (400)	North Germany (550)	South Germany (400)	Medi- terre- nean (250)	Paci- fic (450)	Panama (350)
Marijuana/Hashish	28.5	27.0	21.7	34.2	27.7	37.1	15.3	17.3
Inhalants <sup>a</sup>	1.5	2.1	2.6	2.4	1.5	2.9	2.8	0.7
Inhalants Adjusted <sup>b</sup>	2.5	2.8	3.4	3.0	2.2	5.6	2.8	1.4
Amyl/Butyl Nitrites <sup>c</sup>	1.1	1.6	1.2	2.7	1.2	2.0	0.0	1.5
Hallucinogens	3.4	2.6	2.6	3.6	3.1	1.6	1.6	0.3
Hallucinogens Adjusted <sup>d</sup>	4.3	2.7	2.6	3.6	3.1	1.6	1.6	0.3
LSD	2.4	2.0	1.7	2.9	2.4	1.6	0.7	0.3
PCP <sup>e</sup>	1.0	0.16	0.0	0.0	0.0	2.0	0.0	0.0
Cocaine	5.0	2.2 <del>666</del>	0.7	2.9	1.2	2.4	0.7	6.2
Heroin	0.2	0.3	0.2	0.6	0.0	0.8	0.2	0.0
Other opiates <sup>f</sup>	1.8	3.0 <del>656</del>	3.1	3.3	3.6	2.0	3.1	1.2
Stimulants <sup>g-h</sup>	13.7	8.4 <del>666</del>	6.0	9.8	11.0	6.9	6.6	4.3
Stimulants Adjusted <sup>i</sup>	10.7	6.6 <del>666</del>	4.5	10.0	6.2	5.6	4.2	3.4
Sedatives <sup>j</sup>	3.4	3.0	2.6	4.4	1.9	4.0	2.5	2.1
Barbiturates <sup>k</sup>	2.0	2.2	1.9	3.3	1.5	2.4	2.0	1.5
Methaqualone <sup>l</sup>	2.4	1.1 <del>666</del>	1.0	1.3	0.7	2.0	0.9	0.9
Tranquillizers <sup>m</sup>	2.4	3.0	2.4	3.4	2.9	2.4	2.7	3.3
Alcohol	69.7	78.5 <del>666</del>	84.3	83.2	73.7	89.5	67.4	74.4
Cigarettes	30.0	36.1 <del>666</del>	36.4	41.3	31.7	46.1	28.2	32.9

NOTE: Significance of difference between the two samples:  $\alpha=.05$ ,  $\beta=.01$ ,  $\gamma=.001$ .

<sup>a</sup>Data based on four questionnaire forms. N is four-fifths of N indicated.

<sup>b</sup>Adjusted for underreporting of amyl and butyl nitrites (see text).

<sup>c</sup>Data based on a single questionnaire form. N is one-fifth of N indicated.

<sup>d</sup>Adjusted for underreporting of PCP (see text).

<sup>e</sup>Only drug use which was not under a doctor's orders is included here.

<sup>f</sup>Data based on two questionnaire forms. N is two-fifths of N indicated.

<sup>g-h</sup>Adjusted for overreporting of the non-prescription stimulants. Data based on three questionnaire forms. N is three-fifths of N indicated.

Table 5 (cont.)  
 Thirty-Day Prevalence of Use of Sixteen Types of Drugs, by Subgroups,  
 DoDDS and Stateside, Class of 1982

Approx. N =	Percent who used in last thirty days							
	Sex				College Plans			
	Male		Female		Yes		No	
	State-side (6500)	DoDDS (1200)	State-side (8600)	DoDDS (1150)	State-side (9200)	DoDDS (1650)	State-side (7200)	DoDDS (700)
Marijuana/Hashish	31.4	31.0	24.9	22.6	25.9	24.2	32.9	32.8
Inhalants <sup>a</sup>	2.0	2.8	1.1	1.4	1.4	1.6	1.7	3.4
Inhalants Adjusted <sup>b</sup>	4.2	3.0	1.1	1.4	1.9	2.1	3.6	5.0
Amyl/Butyl Nitrates <sup>c</sup>	2.1	1.8	0.2	1.5	1.0	1.1	1.3	3.0
Hallucinogens	4.2	3.2	2.2	1.8	2.3	1.6	4.2	4.3
Hallucinogens Adjusted <sup>d</sup>	5.5	3.5	2.6	1.8	2.7	1.8	5.2	4.3
LSD	2.9	2.3	1.6	1.5	1.5	1.0	3.2	3.5
PCP <sup>e</sup>	1.3	0.3	0.7	0.0	0.7	0.2	1.5	0.0
Cocaine	5.9	2.6	3.8	1.8	4.3	1.9	5.2	2.7
Heroin	0.4	0.5	0.7	0.1	0.2	0.1	0.3	0.8
Other opiates <sup>f</sup>	2.2	3.6	1.5	2.5	1.4	2.5	2.3	4.3
Stimulants <sup>g-h</sup>	11.7	7.6	15.8	9.1	11.1	6.5	17.4	10.9
Stimulants Adjusted <sup>i</sup>	10.2	7.1	10.6	6.3	7.7	4.8	13.7	10.3
Sedatives <sup>j</sup>	3.5	4.7	3.1	1.4	2.2	2.2	4.7	4.7
Barbiturates <sup>k</sup>	2.1	3.6	1.8	0.9	1.3	1.8	2.6	3.4
Methaqualone <sup>l</sup>	2.5	1.5	2.0	0.6	1.4	0.7	3.3	1.8
Tranquillizers <sup>m</sup>	2.6	3.7	2.2	2.4	2.0	2.3	2.8	4.5
Alcohol	74.1	80.8	65.4	75.9	68.6	77.0	71.6	81.1
Cigarettes	26.8	33.7	32.6	37.8	22.1	29.8	36.7	48.6

<sup>a</sup>Data based on four questionnaire forms. N is four-fifths of N indicated.

<sup>b</sup>Adjusted for underreporting of amyl and butyl nitrates (see text).

<sup>c</sup>Data based on a single questionnaire form. N is one-fifth of N indicated.

<sup>d</sup>Adjusted for underreporting of PCP (see text).

<sup>e</sup>Only drug use which was not under a doctor's orders is included here.

<sup>f</sup>Data based on two questionnaire forms. N is two-fifths of N indicated.

<sup>g-h</sup>Adjusted for overreporting of the non-prescription stimulants. Data based on three questionnaire forms. N is three-fifths of N indicated.

BEST COPY AVAILABLE

Table 6  
Thirty-Day Prevalence of Daily Use of Sixteen Types of Drugs.  
by Subgroups, DoDDS and Stateside, Class of 1982

Approx. N =	Percent who used daily in last thirty days								
	Total		DoDDS Region						
	State-side (17700)	DoDDS (2400)	Atlan- tic (400)	North Germany (550)	South Germany (400)	Mediterranean (250)	Paci- fic (450)	Panama (350)	
Ammajuana/Hashish	6.3	4.0***	2.7	5.2	4.4	7.7	2.1	1.2	
Inhalants <sup>a</sup>	0.1	0.1	0.0	0.2	0.0	0.0	0.0	0.0	
Inhalants Adjusted <sup>b</sup>	0.2	0.1	NAT	NA	NA	NA	NA	NA	
Amyl/Butyl Nitrites <sup>c</sup>	0.0	0.1	0.0	0.0	0.0	2.0	0.0	0.0	
Hallucinogens	0.1	0.1	0.0	0.2	0.0	0.0	0.0	0.0	
Hallucinogens Adjusted <sup>d</sup>	0.2	0.1	NAT	NA	NA	NA	NA	NA	
LSD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PCP <sup>e</sup>	0.1	0.1	0.0	0.0	0.0	2.0	0.0	0.0	
Cocaine	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	
Heroin	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	
Other opiates <sup>f</sup>	0.1	0.1	0.0	0.2	0.0	0.0	0.2	0.0	
Stimulants <sup>g-h</sup>	1.1	0.2**	0.0	0.5	0.0	0.0	0.5	0.0	
Stimulants Adjusted <sup>i</sup>	0.7	0.3	0.0	0.5	0.3	0.0	0.8	0.0	
Sedatives <sup>j</sup>	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	
Barbiturates <sup>k</sup>	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	
Methaqualone <sup>l</sup>	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Tranquilizers <sup>m</sup>	0.1	0.1	0.0	0.2	0.0	0.0	0.0	0.0	
Alcohol	5.7	8.5***	5.9	11.2	6.2	15.4	4.2	9.4	
Cigarettes	21.1	25.9***	26.8	30.5	23.3	31.5	17.6	23.9	

NOTE: Significance of difference between the two samples: \* $p=.05$ , \*\* $p=.01$ , \*\*\* $p=.001$ .

<sup>a</sup>TNA indicates data not available.

<sup>b</sup>Data based on four questionnaire forms. N is four-fifths of N indicated.

<sup>c</sup>Adjusted for underreporting of amyl and butyl nitrites (see text). Subgroup comparisons for daily use are not presented because the N's involved in the adjustments are too small.

<sup>d</sup>Data based on a single questionnaire form. N is one-fifth of N indicated.

<sup>e</sup>Adjusted for underreporting of PCP (see text). Subgroup comparisons for daily use are not presented because the N's involved in the adjustments are too small.

<sup>f</sup>Only drug use which was not under a doctor's orders is included here.

<sup>g</sup>Data based on two questionnaire forms. N is two-fifths of N indicated.

<sup>h</sup>Adjusted for overreporting of the non-prescription stimulants. Data based on three questionnaires forms. N is three-fifths of N indicated.

Table 6 (cont.)  
 Thirty-Day Prevalence of Daily Use of Sixteen Types of Drugs,  
 by Subgroups, DoDDS and Stateside, Class of 1982

Approx. N =	Percent who used daily in last thirty days							
	Sex				College Plans			
	Male		Female		Yes		No	
	State-side (8500)	DoDDS (1200)	State-side (6600)	DoDDS (1150)	State-side (9200)	DoDDS (1650)	State-side (7200)	DoDDS (700)
Marijuana/Hashish	8.2	5.5	4.0	2.5	3.9	2.9	8.6	6.7
Inhalants <sup>1</sup>	0.1	0.0	0.1	0.2	0.1	0.0	0.1	0.3
Inhalants Adjusted <sup>2</sup>	NA	NA	NA	NA	NA	NA	NA	NA
Amyl/Butyl Nitrites <sup>3</sup>	0.0	0.3	0.0	0.0	0.0	0.2	0.0	0.0
Hallucinogens	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0
Hallucinogens Adjusted <sup>4</sup>	NA	NA	NA	NA	NA	NA	NA	NA
LSD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PCP <sup>5</sup>	0.1	0.3	0.1	0.0	0.0	0.2	0.3	0.0
Cocaine	0.3	0.0	0.1	0.1	0.2	0.0	0.2	0.0
Heroin	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0
Other opiates <sup>6</sup>	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.3
Stimulants <sup>7--</sup>	0.5	0.3	1.7	0.2	1.0	0.0	1.2	0.2
Stimulants Adjusted <sup>8</sup>	0.4	0.2	0.9	0.5	0.4	0.1	0.8	0.9
Sedatives <sup>9</sup>	0.1	0.1	0.2	0.0	0.1	0.0	0.2	0.1
Barbiturates <sup>10</sup>	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1
Methaqualone <sup>11</sup>	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0
Tranquilizers <sup>12</sup>	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.2
Alcohol	7.7	10.8	3.4	5.7	4.1	6.7	7.5	11.9
Cigarettes	18.2	22.6	23.2	28.4	13.2	19.6	29.5	38.5

NA indicates data not available.

<sup>1</sup>Data based on four questionnaire forms. N is four-fifths of N indicated.

<sup>2</sup>Adjusted for underreporting of amyl and butyl nitrites (see text). Subgroup comparisons for daily use are not presented because the N's involved in the adjustments are too small.

<sup>3</sup>Data based on a single questionnaire form. N is one-fifth of N indicated.

<sup>4</sup>Adjusted for underreporting of PCP (see text). Subgroup comparisons for daily use are not presented because the N's involved in the adjustments are too small.

<sup>5</sup>Only drug use which was not under a doctor's orders is included here.

<sup>6</sup>Data based on two questionnaire forms. N is two-fifths of N indicated.

<sup>7</sup>Adjusted for overreporting of the non-prescription stimulants. Data based on three questionnaire forms. N is three-fifths of N indicated.

BEST COPY AVAILABLE

- Inhalants, hallucinogens, other opiates, and tranquilizers are used on a daily basis by 0.1% of DoDDS seniors.

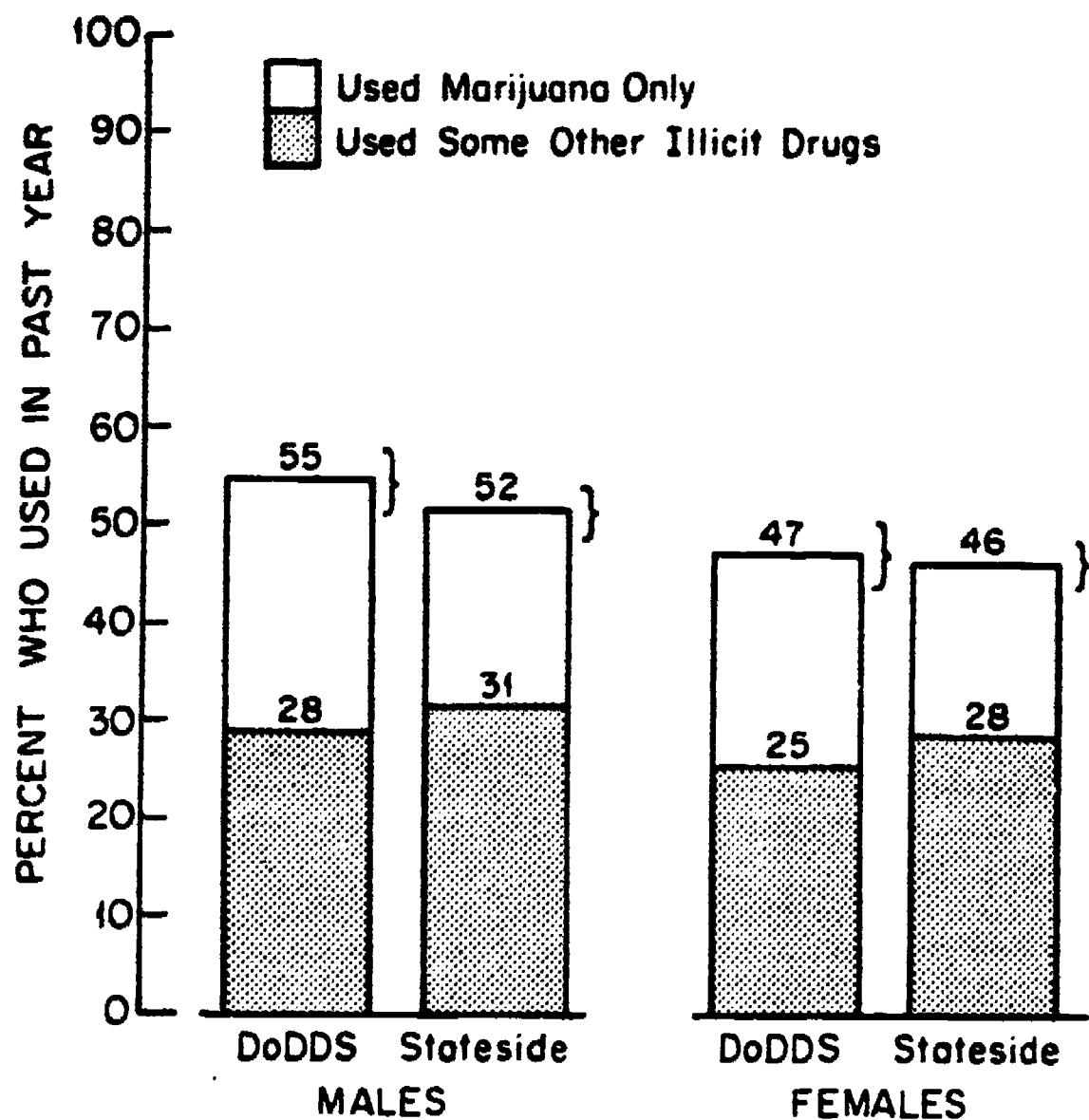
### Prevalence Comparisons for Important Subgroups

#### Sex Differences

- In general, higher proportions of males than females in DoDDS schools are involved in drug use, especially heavy drug use—a fact which is also true stateside. The picture is a complicated one (see Figure F and Tables 3 through 5). About 28% of DoDDS males as compared to 25% of DoDDS females report using some illegal drug other than marijuana during the last year.
- Overall among DoDDS seniors marijuana use is somewhat higher among males, and daily use of marijuana is about twice as frequent among males (5.9% versus 2.5%).
- Males also have considerably higher prevalence rates on most other illegal drugs. The annual prevalence (Table 4) for inhalants, hallucinogens, heroin, the specific drug LSD, and the nitrites tend to be one and one-half to two times as high among males as among females. Males also report somewhat higher annual rates of use than females for cocaine, methaqualone, barbiturates, and opiates other than heroin.
- Males in DoDDS also report somewhat higher annual rates of stimulant use than females.
- PCP and tranquilizers are the only illegal drugs which have been used in the last year by more DoDDS females than males although the differences are small.
- Nearly all these male-female differences observed among seniors in the DoDDS schools parallel the male-female differences found stateside. The only exception occurs in the case of PCP. Among stateside seniors, slightly more males than females have used PCP in the past year.
- Frequent use of alcohol tends to be disproportionately concentrated among males. Daily use, for example, is reported by 10.8% of the DoDDS males but by only 5.7% of the DoDDS females. Also, males drink large quantities of alcohol in a single sitting more often than do females. These differences are consistent with the stateside results.

FIGURE F

Annual Prevalence of an Illicit Drug Use Index by Sex,  
DoDDS and Stateside Class of 1982



NOTES: Use of "some other illicit drugs" includes any use of hallucinogens, cocaine, and heroin, or any use which is not under a doctor's orders of other opiates, stimulants, sedatives, or tranquilizers.

The bracket near the top of a bar indicates the lower and upper limits of the 95% confidence interval.

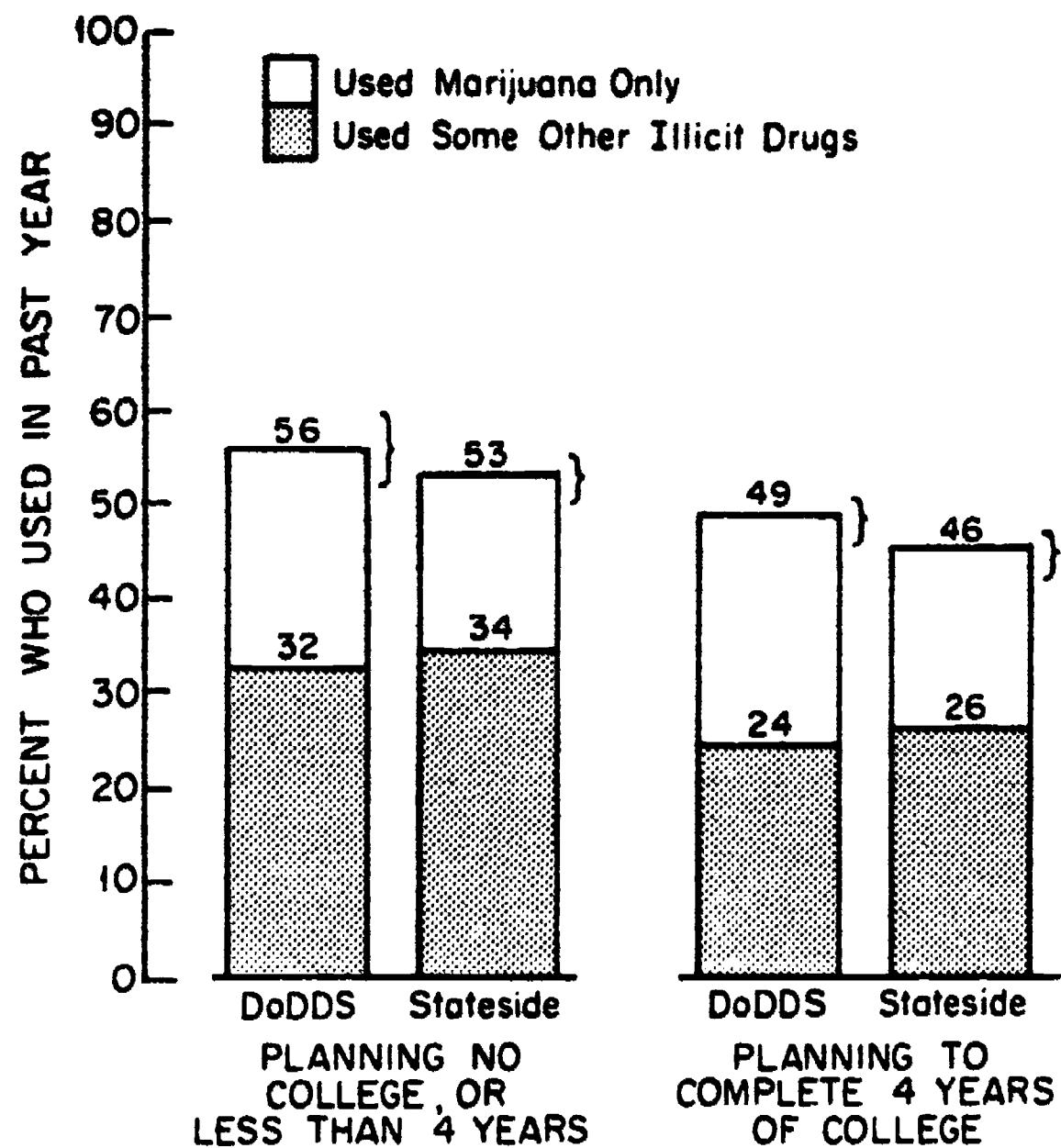
- Finally, for cigarettes there is a very slight sex difference in the prevalence of smoking a half-a-pack or more daily, this time with females showing the higher proportion of users. Of the DoDDS females, 17.3% smoke this heavily versus 16.7% of the males. There is a larger difference in the proportions reporting any use during the past month: 38% of the DoDDS females versus 34% of the DoDDS males. Again, these differences are very similar to those observed stateside.

### Differences Related to College Plans

- Two-thirds (67%) of DoDDS seniors compared to about half (51%) of stateside seniors plan to attend college.
- Overall, DoDDS seniors who expect to complete four years of college (referred to here as the "college-bound") have lower rates of illicit drug use than those not expecting to do so, as is true stateside. (See Figure G and Tables 3 through 5.)
- Annual marijuana use is reported by 43% of the college-bound versus 51% of noncollege-bound. The comparable stateside figures are 41% and 48%.
- There is a substantial difference in the proportion of these two groups using any illicit drug(s) other than marijuana. Of the college-bound DoDDS seniors, 24% reported such behavior in the prior year vs. 32% of the noncollege-bound. A similar pattern emerges among stateside seniors with 26% of college-bound seniors reporting use of any illicit drug other than marijuana vs. 34% of noncollege-bound.
- For most of the specific illicit drugs other than marijuana, annual prevalence is substantially higher among the noncollege-bound both in DoDDS and in stateside schools, as Table 4 illustrates.
- Daily marijuana use and daily stimulant use are much higher among noncollege-bound than among college-bound DoDDS seniors, as is true stateside.
- Frequent alcohol use is also more prevalent among the noncollege-bound seniors in both DoDDS and stateside schools. Drinking on a daily basis is reported by 11.9% of the noncollege-bound DoDDS seniors vs. 6.7% of the college-bound. On the other hand, there are practically no differences between these groups in annual, lifetime or monthly alcohol prevalence.

**FIGURE G**

**Annual Prevalence of an Ilicit Drug Use Index by College Plans,  
DoDDS and Stateside Class of 1982**



**NOTES:** Use of "some other illicit drugs" includes any use of hallucinogens, cocaine, and heroin, or any use which is not under a doctor's orders of other opiates, stimulants, sedatives, or tranquilizers.

The bracket near the top of a bar indicates the lower and upper limits of the 95% confidence interval.

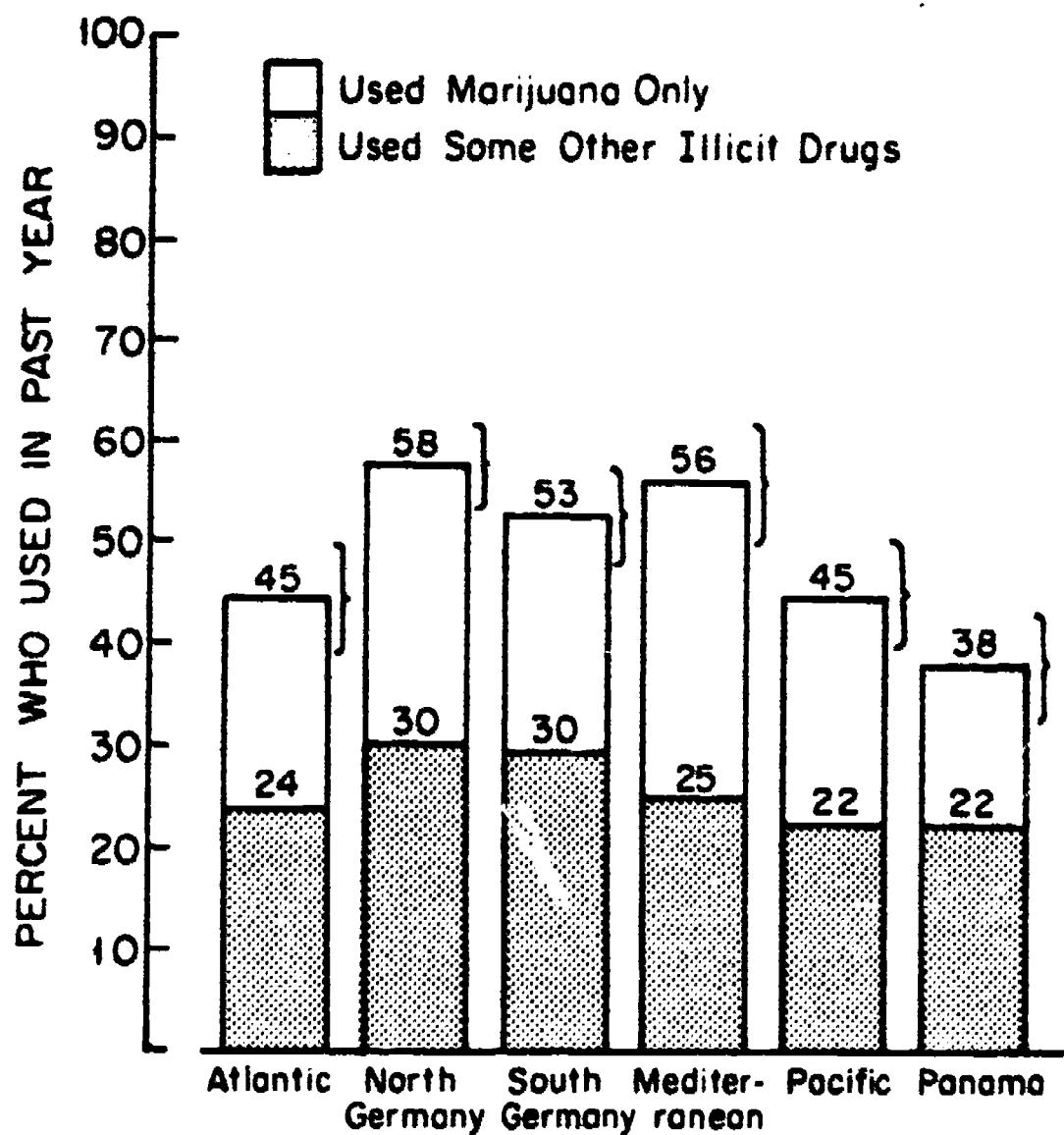
- By far the largest difference in substance use between the college and noncollege-bound involves cigarette smoking. There is a dramatic difference here, with only 11% of the college-bound in DoDDS smoking a half-a-pack or more daily compared with 30% of the noncollege-bound. (The difference among stateside seniors is also dramatic with 8% of college-bound smoking half-a-pack or more daily vs. 21% of noncollege-bound.) Why the DoDDS seniors are appreciably heavier smokers overall than their stateside counterparts is yet to be determined, but it is clear that the difference in college-bound proportions is not the explanation.

### Regional Differences

- There are some fair-size regional differences in rates of illicit drug use among DoDDS seniors (see Figure H). The highest rate is in the North Germany region, where 58% say they have used a drug illicitly in the past year, followed by the Mediterranean with 56%, South Germany with 53%, the Pacific with 45% and the Atlantic with 45%. The Panama region is somewhat lower than the other regions with only 38% having used any illicit drug.
- There is also some regional variation in terms of the percent using some illicit drug other than marijuana in the past year: 30% in North Germany, 30% in South Germany, 25% in the Mediterranean, 24% in the Atlantic, 22% in Panama, and 22% in the Pacific region.
- As Table 4 illustrates, the Panama region shows the lowest annual usage levels for a number of drugs, including marijuana, heroin, opiates other than heroin, stimulants (revised) and sedatives as a class of drugs. But it shows the highest usage level for cocaine, undoubtedly because of greater availability for that drug; almost six times as many DoDDS seniors in Panama have used cocaine in the past year as have used it in the Pacific.
- North Germany shows the highest usage levels for many individual illicit substances including the nitrites, LSD, barbiturates, opiates other than heroin, stimulants (revised) and sedatives.
- The Mediterranean shows the highest usage level of marijuana. Tranquilizers have roughly equivalent prevalence rates across all regions.

**FIGURE H**

**Annual Prevalence of an Illicit Drug Use Index by Region,  
DoDDS Class of 1982**



**NOTES:** Use of "some other illicit drugs" includes any use of hallucinogens, cocaine, and heroin, or any use which is not under a doctor's orders of other opiates, stimulants, sedatives, or tranquilizers.

The bracket near the top of a bar indicates the lower and upper limits of the 95% confidence interval.

- Daily drinking tends to be substantially higher in the Mediterranean and North Germany than in other regions.
- Again, one of the larger differences occurs for regular cigarette smoking. Smoking half-a-pack or more a day occurs most often in North Germany (22%), the Mediterranean (22%), and the Atlantic (21%). Far fewer seniors in South Germany (14%), Panama (12%) or the Pacific (10%) smoke a half-a-pack or more a day. (Data not shown.)

## USE AT EARLIER GRADE LEVELS

In two of the five questionnaire forms used in the study, respondents are asked to indicate the grade in which they were enrolled when they first tried each class of drugs. Table 7 gives the percent of the 1982 DoDDS seniors who first tried each drug at each of the earlier grade levels. Table 8 gives the corresponding percentage for stateside seniors.

- The use of alcohol tends to begin early. The majority of DoDDS seniors (59%) and stateside seniors (56%) reported that their initial experience with alcohol occurred prior to tenth grade. Of the 29% of DoDDS seniors who are (or were) daily cigarette smokers, just over half (15%) had begun daily smoking prior to 10th grade; the other 14% began smoking at that rate sometime during the high school years. While a similar number of stateside seniors started daily smoking prior to 10th grade (15%), fewer (10%) began during high school.
- Initial experimentation with most illegal drugs, however, occurs during the final three years of high school for both DoDDS and state side seniors. Each illegal drug, except marijuana, had been used by no more than 10% of either the DoDDS or stateside class of 1982 by the time they entered tenth grade. (See Table 7 and 8.)
- Two illegal drugs which tend to be used earlier than the others, however, are marijuana and inhalants. About half (48%) of DoDDS seniors who ever used marijuana had their initial experience prior to tenth grade. Among stateside seniors who ever used marijuana, six out of ten (60%) had their initial experience prior to tenth grade.
- Among the 17% of DoDDS seniors who have used inhalants (unadjusted for nitrite under-reporting), over half (58%) had their first experience prior to tenth grade. The proportion is very similar for stateside seniors (61%).

Grade in which drug was first used:	Marijuana	Inhalants <sup>a</sup>	Amyl / Butyl Nitrates	Hallucinogens <sup>a</sup>	LSD	PCP	Cocaine	Heroin	Other Opiates	Stimulants <sup>b</sup> (adjusted)	Sedatives	Barbiturates	Methaqualone	Tranquilizers	Alcohol	Cigarettes (Daily)
6th	2.2	2.2	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.6	11.6	2.8
7-8th	10.5	3.5	0.1	1.6	1.4	0.1	0.7	0.5	1.8	2.8	2.8	3.0	0.8	4.2	23.8	6.3
9th	14.7	4.2	2.5	2.5	1.8	1.6	2.2	0.4	2.4	6.0	3.6	2.9	2.0	3.2	24.0	5.8
10th	11.6	2.8	3.0	2.9	2.3	2.7	3.4	0.8	2.7	5.7	5.3	4.2	3.3	4.5	18.4	7.1
11th	11.8	2.8	1.3	3.6	3.1	0.4	4.1	0.4	3.4	4.6	3.9	2.2	2.5	3.6	11.7	5.4
12th	6.8	1.5	0.8	1.7	1.4	0.4	2.3	0.3	3.5	4.9	1.4	1.6	0.2	1.9	6.8	1.5
Never used	42.4	83.1	92.2	87.8	89.9	94.7	87.2	97.6	86.2	75.9	83.0	86.2	91.2	81.9	3.6	71.1

NOTE: This question was asked in two of the five forms ( $N =$  approximately 960), except for inhalants, PCP, and the nitrites which were asked about in only one form ( $N =$  approximately 480). Only one form was used for stimulants in this table.

<sup>a</sup>Unadjusted for known underreporting of certain drugs. See page 14-15.

Grade in which drug was first used:	Marijuana	Inhalants <sup>a</sup>	Amyl / Butyl Nitrites	Hallucinogens <sup>a</sup>	LSD	PCP	Cocaine	Heroin	Other Opiates	Stimulants <sup>b</sup> (adjusted)	Sedatives	Borbiturates	Methaqualone	Tranquilizers	Alcohol	Cigarettes (Daily)
6th	2.7	2.1	0.1	0.1	0.1	0.2	0.1	0.0	0.4	0.1	0.3	0.2	0.0	0.6	9.4	3.0
7-8th	15.4	3.4	1.6	0.8	0.5	1.0	0.5	0.2	0.6	2.2	1.0	0.7	0.5	1.0	21.4	7.1
9th	16.9	2.3	2.7	2.7	2.0	1.2	1.8	0.3	1.7	6.7	3.2	2.6	1.9	2.6	24.9	5.3
10th	11.9	2.6	2.3	3.7	2.9	1.7	3.9	0.2	2.5	9.0	4.4	3.7	3.2	3.9	18.0	4.2
11th	7.9	0.9	2.3	3.4	2.6	1.0	5.4	0.3	2.3	9.4	4.1	2.2	3.2	3.9	12.9	3.2
12th	4.0	1.5	0.8	1.8	1.4	0.9	4.3	0.2	2.1	3.9	2.2	0.9	1.9	2.0	6.1	1.7
Never used	41.3	87.2	90.2	87.5	90.4	94.0	84.0	98.8	90.4	68.6	84.8	89.7	89.3	86.0	7.2	75.4

NOTE: This question was asked in two of the five forms ( $N =$  approximately 6400), except for inhalants, PCP and the nitrites which were asked about in only one form ( $N =$  approximately 3200). Only one form was used for stimulants in this table.

<sup>a</sup>Unadjusted for known underreporting of certain drugs. See page 14-15.

- For each of the other illicit drugs, less than half of the eventual users in DoDDS schools had begun use prior to tenth grade.
- For several drugs, there are larger proportional differences between the DoDDS and stateside samples in the lifetime prevalence levels at earlier grade levels than in twelfth grade, reflecting the fact that the users in the DoDDS system tended to start earlier. For example, lifetime prevalence of tranquilizer use prior to tenth grade was 8.0% for DoDDS vs. 4.2% in the domestic sample—a ratio of two to one. At the end of twelfth grade lifetime prevalence was 18.1% and 14.0% respectively.
- While the DoDDS system had higher prevalence rates prior to 10th grade for most drugs, the exceptions are interesting. Marijuana prevalence was only 27% compared to 35% stateside. The use of PCP and the nitrite inhalants was also lower in the DoDDS system prior to tenth grade, and, unlike marijuana, remained lower through twelfth grade.

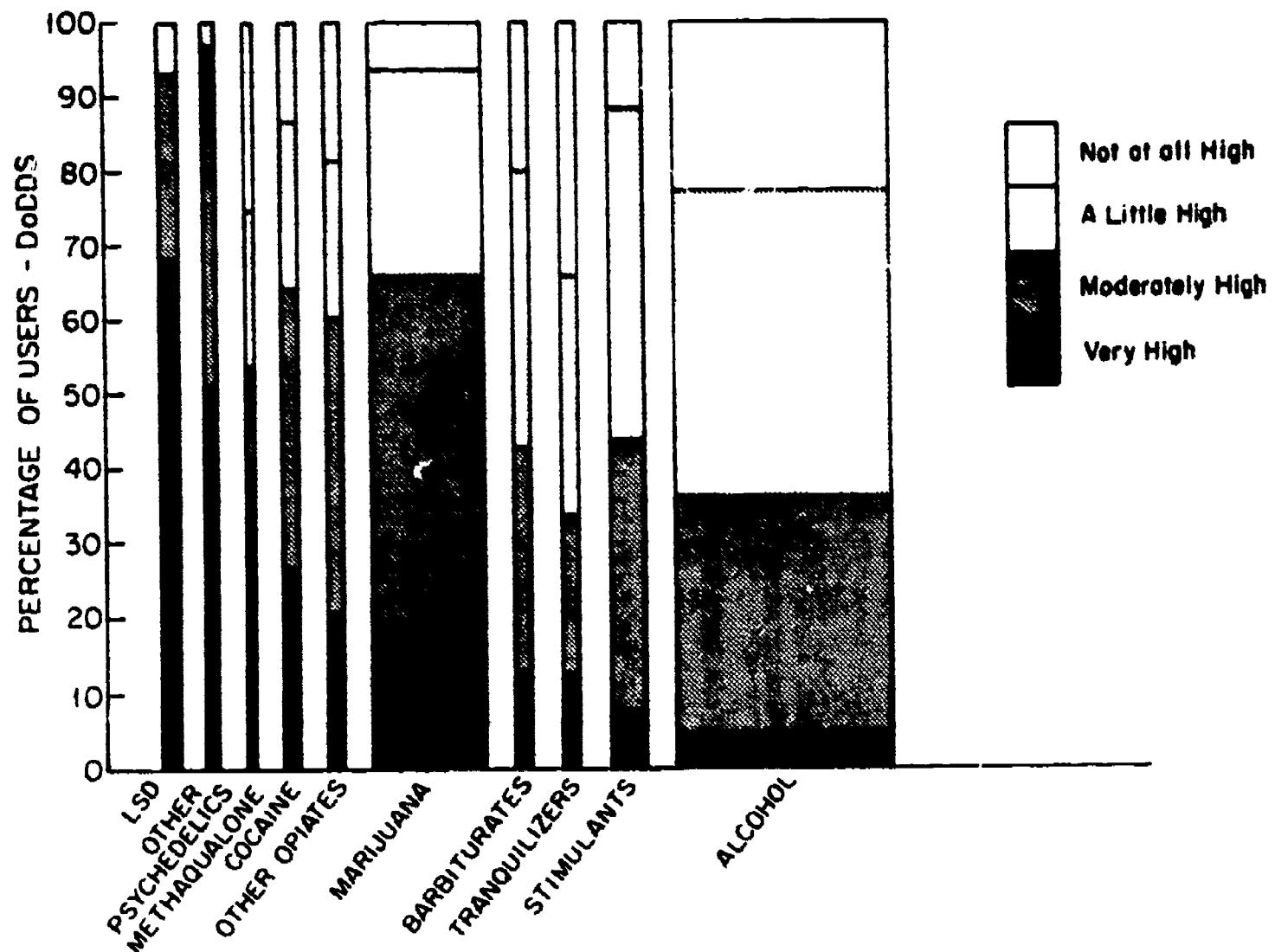
## DEGREE AND DURATION OF HIGHS

On one of the five questionnaire forms, seniors who report use of a drug during the prior twelve months are asked how long they usually stay high and how high they usually get on that drug. These measures were developed both to help characterize the drug-using event and to provide indirect measures of dose or quantity of drugs consumed.

- Figure I shows the proportion of 1982 DoDDS seniors who say that they usually get "not at all high," a little high," "moderately high," or "very high" when they use a given type of drug. Figure J presents these data for stateside seniors. The percentages are based on all respondents who report use of the given drug class in the previous twelve months, and therefore each bar cumulates to 100%. The ordering from left to right is based on the percentage of users of each drug who report that they usually get "very high." (The width of each bar is proportional to the percentage of all seniors having used the drug class in the previous year; this should serve as a reminder that even though a large percentage of users of a drug may get very high, they may represent only a small proportion of all seniors.)
- The drugs which usually result in intense highs are hallucinogens (LSD and other hallucinogens), heroin and methaqualone (Quaaludes). (Heroin has been omitted from Figures I and J because of the small number of cases available.)
- Next come cocaine, opiates other than heroin, and marijuana, with about two-thirds of DoDDS users and stateside users of each drug saying they usually get moderately high or very high when using the drug. Opiates other than heroin, barbiturates, and tranquilizers are less often used to get high; but substantial proportions of DoDDS users (from 34% to 61%) and stateside users (27% to 57%) still say they get moderately or very high after taking these drugs.

**FIGURE I**

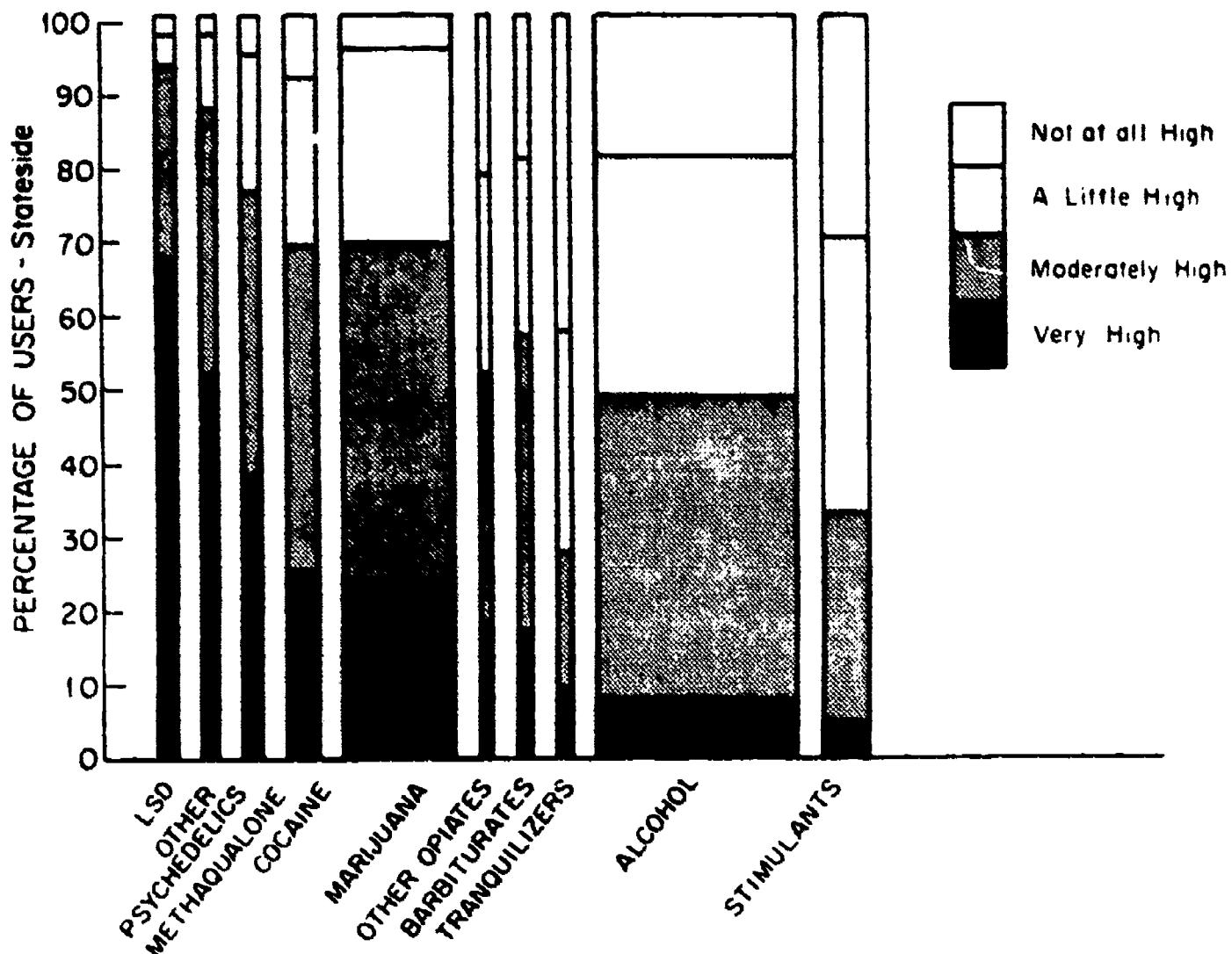
**Degree of High Attained by Recent Users,  
DoDDS Class of 1982**



**NOTE:** The width of each bar is proportionate to the number of seniors reporting any use of each drug in the prior 12 months. Heroin is not included in this figure because these particular questions are not asked of the small number of heroin users.

**FIGURE J**

**Degree of High Attained by Recent Users,  
Stateside Class of 1982**



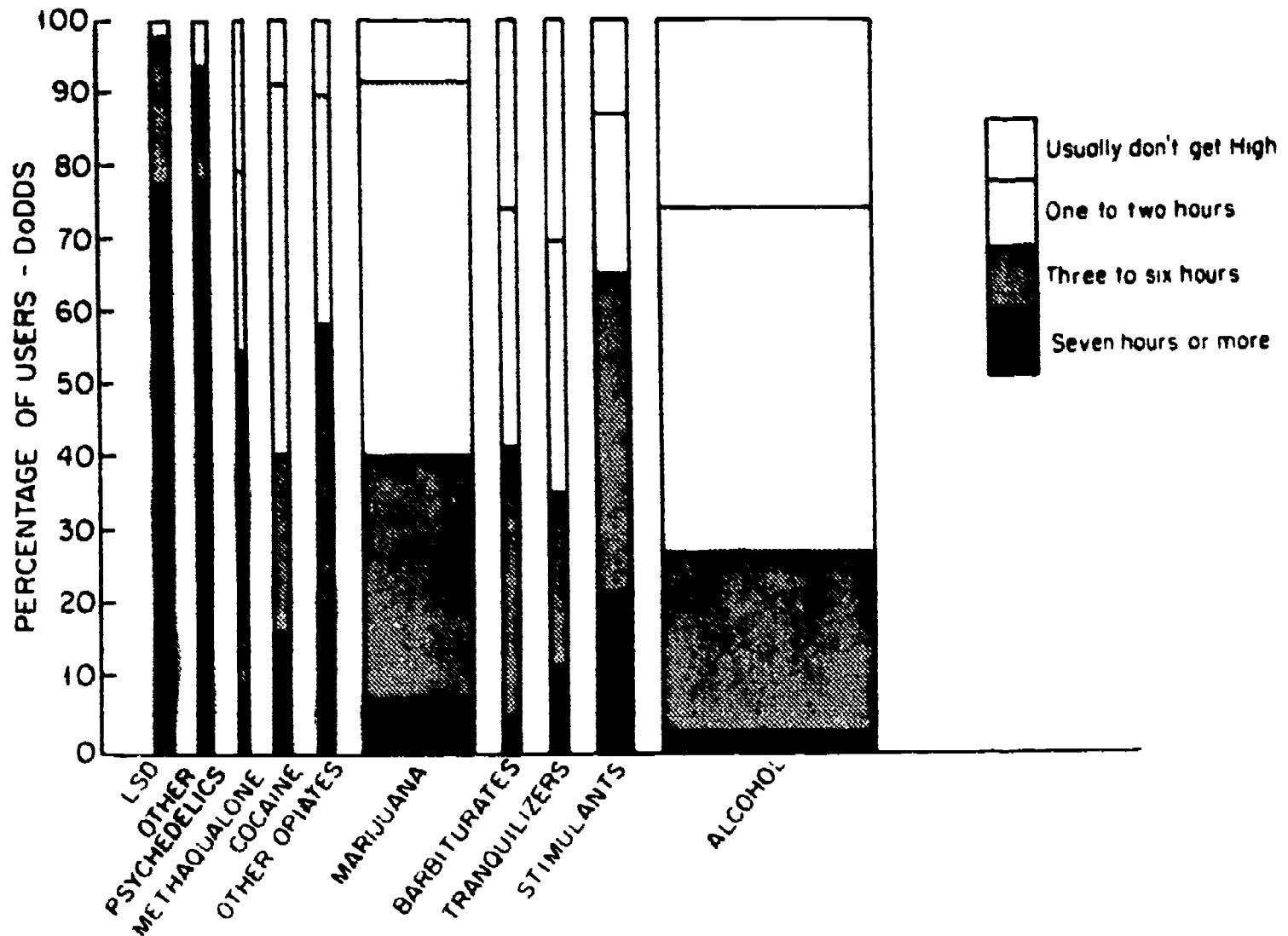
**NOTE:** The width of each bar is proportionate to the number of seniors reporting any use of each drug in the prior 12 months. Heroin is not included in this figure because these particular questions are not asked of the small number of heroin users.

- Relatively few of the many seniors using alcohol (DoDDS, 4.6%; stateside, 7.5%) say that they usually get very high when drinking, although many (DoDDS, 32%; stateside, 41%) usually get at least moderately high. However, for a given individual we would expect more variability from occasion to occasion in the degree of intoxication achieved with alcohol than with most of the other drugs. Therefore, many drinkers surely get very high at least sometimes, even if that is not "usually" the case.
- Figure K and Figure L present data on the duration of the highs usually obtained by users of each class of drugs for DoDDS seniors and stateside seniors, respectively. The drugs are arranged in the same order as for intensity of highs to permit an examination of the amount of correspondence between the degree and duration of highs.
- As can be seen in Figures K and L, hallucinogens (LSD and other hallucinogens) which are reported by both DoDDS and stateside seniors to result in the most intense highs generally are also reported to result in the longest highs. Alcohol ranks low on both dimensions; most DoDDS (47%) and stateside users (41%) report staying high for two hours or less and most (64% DoDDS, 52% stateside) report not getting at all high or getting a "little high."
- For marijuana users in both DoDDS and stateside high schools the modal high is one to two hours.
- Some differences exist between DoDDS and stateside seniors in their reported duration of highs from the illicit drugs other than marijuana; however, because these questions occur on only one form and are asked only of respondents who have used the particular drug in the past twelve months, the number of seniors answering each question is quite small. While this is true to some extent for the stateside data, it is particularly true for the DoDDS data. For example, only 62 DoDDS respondents (unweighted) reported on the degree and duration of highs from amphetamine use, and for the other illicit drugs, the number ranges as low as 19. Therefore, these statistics should be viewed with considerable caution.
- Significantly more DoDDS seniors report long highs (lasting seven hours or more) from hallucinogens other than LSD than stateside seniors (77% of DoDDS vs. 37% of stateside).
- The remaining illicit drugs show differences that could reflect chance variation.

- In sum, the drugs vary considerably in duration of high with a modal high of seven hours or more for hallucinogens and a modal high of one to two hours for marijuana and cocaine. They also vary considerably with the degree of highs usually obtained with them. (These data obviously do not address the qualitative differences in the experiences of being "high.") Sizeable proportions of the users of all of these drugs report that they usually get high for at least three hours per occasion, and for a number of drugs appreciable proportions usually stay high for seven hours or more. While there are some differences between the DoDDS and stateside seniors in the degree and duration of highs usually experienced, in the main their profiles are quite similar on these dimensions.

**FIGURE K**

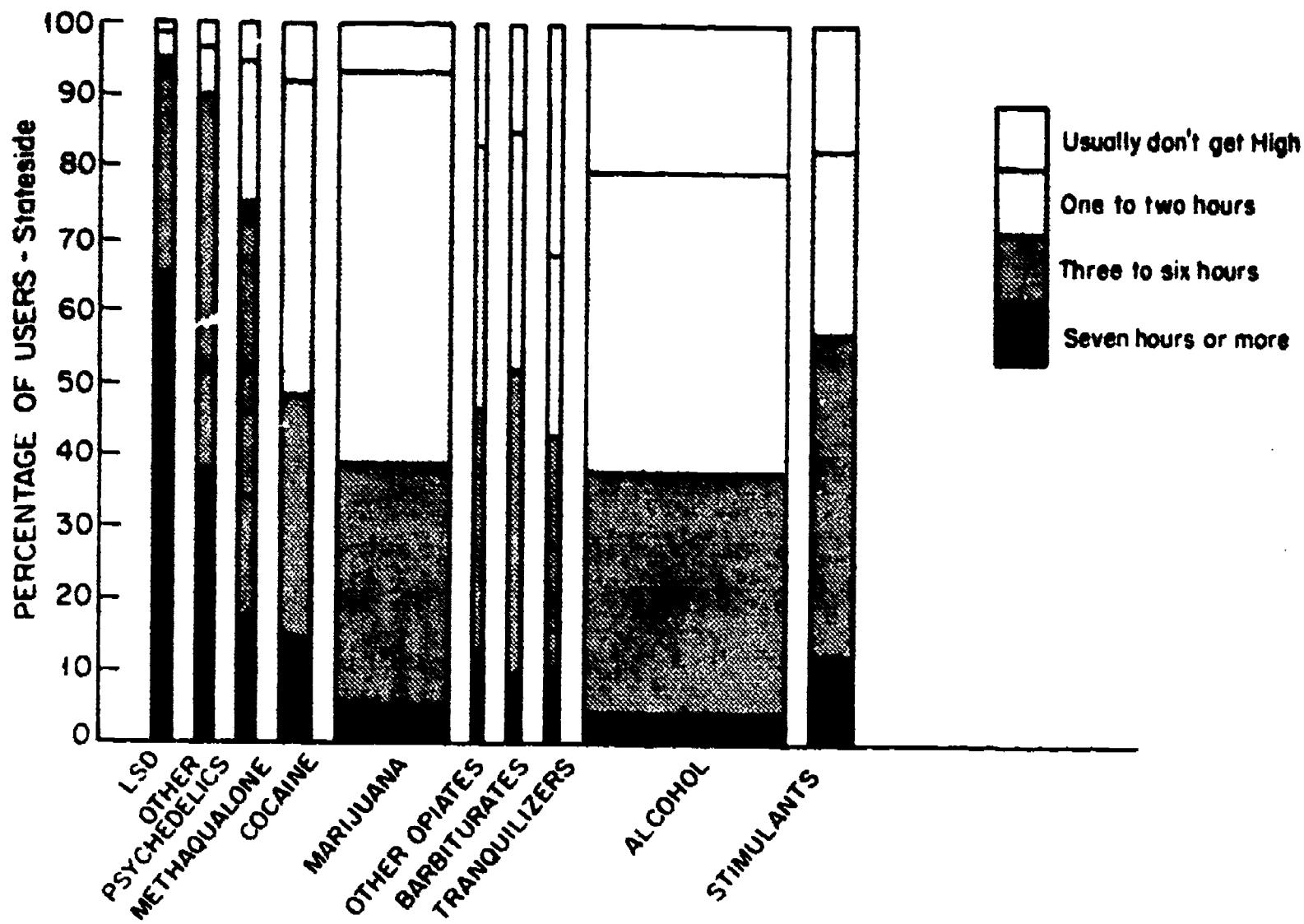
**Duration of High Attained by Recent Users,  
DoDDS Class of 1982**



**NOTE:** The width of each bar is proportionate to the number of seniors reporting any use of each drug in the prior 12 months. Heroin is not included in this figure because these particular questions are not asked of the small number of heroin users.

**FIGURE 1**

**Duration of High Attained by Recent Users,  
Stateside Class of 1982**



**NOTE:** The width of each bar is proportionate to the number of seniors reporting any use of each drug in the prior 12 months. Heroin is not included in this figure because these particular questions are not asked of the small number of heroin users.

## ATTITUDES AND BELIEFS ABOUT DRUGS

This section presents results for three sets of attitude and belief questions. One set concerns how harmful the students think various kinds of drug use would be for the user, the second concerns how much they personally disapprove of various kinds of drug use, and the third asks about attitudes on the legality of using various drugs under different conditions. (The next section deals with the closely related topic of friends' attitudes about drugs, as the seniors perceive them.)

As the data below show, overall percentages of seniors disapproving of use of various drugs, and the percentages believing their use to involve serious risk, both tend to parallel the percentages of actual users. Thus, for example, of the illicit drugs marijuana is the most frequently used and the least likely to be seen as risky to use. This and many other such parallels suggest that the individuals who use a drug are less likely to disapprove use of it or to view its use as involving risk. However, such a comparison of overall percentages, though strongly suggestive, does not establish that a comparable relationship exists at the individual level. Therefore, an extensive series of individual-level analyses of pre-1982 data was conducted, and the results confirm that strong correlations exist between individual use of drugs and the various attitudes and beliefs about those drugs. Those seniors who use a given drug also are more likely to approve its use, downplay its risks, and report their friends as being at least somewhat more accepting of its use.

- Substantial majorities of DoDDS and stateside seniors perceive regular use of any of the illicit drugs, other than marijuana, as entailing "great risk" of harm for the user (see Table 9). Some 90% of DoDDS seniors (86% of stateside seniors) feel this way about heroin—the highest proportion for use of any these drugs—while 84% of DoDDS seniors (and 84% of stateside seniors) associate great risk with using LSD. The proportions attributing great risk to amphetamines, barbiturates, and cocaine are all around 70%.

- Somewhat fewer of the DoDDS students than stateside students associate great risk with regular marijuana use (51% vs. 60%).
- Regular use of cigarettes (i.e., one or more packs a day) is judged by the majority (63% DoDDS, 61% stateside) as entailing a great risk of harm for the user.
- Regular use of alcohol was more explicitly defined in several questions. Very few seniors (16% DoDDS, 22% stateside) associate much risk of harm with having one or two drinks almost daily. Only about a third (32% DoDDS, 36% stateside) think there is great risk involved in having five or more drinks once or twice each weekend. Considerably more (62% DoDDS, 66% stateside) think the user takes a great risk in consuming four or five drinks nearly every day, as would be expected. Stateside seniors tend to judge those various patterns of alcohol use as involving more risk than DoDDS seniors.
- Compared with the above perceptions about the risks of regular use of each drug, many fewer respondents feel that a person runs a "great risk" of harm by simply trying the drug once or twice.
- Very few think there is much risk in using marijuana experimentally (11% DoDDS, 12% stateside) or even occasionally (15% vs. 18%).
- Experimental use of the other illicit drugs, however, is still viewed as risky by a substantial proportion. The percentage of DoDDS seniors associating great risk with experimental use of other illicit drugs ranges from about 23% (vs. 25% stateside) for amphetamines to 49% (vs. 51% stateside) for heroin.
- Almost no seniors in either population believe there is much risk involved in trying an alcoholic beverage once or twice (1% DoDDS, 4% stateside).

#### Personal Disapproval of Drug Use

A different set of questions was developed to try to measure any general moral sentiment attached to various types of drug use. The phrasing, "Do you disapprove of people (who are 18 or older) doing each of the following" was adopted.

**Table 9**  
**Perceived Harmfulness of Drugs,**  
**DoDDS and Stateside Class of 1982**

Q. How much do you think people risk harming themselves (physically or in other ways), if they...	Percent saying "great risk" <sup>a</sup>							
	Total	DoDDS Region						
		State-side DoDDS	Atlan- tic	North Germany	South Germany	Medi- terranean	Paci- fic	Panama
Try marijuana once or twice	11.5	11.2	10.6	13.1	9.6	7.7	6.6	18.6
Smoke marijuana occasionally	18.3	15.3	15.3	17.0	14.5	9.6	14.3	18.3
Smoke marijuana regularly	60.4	50.5 <sup>b</sup>	52.9	53.0	42.2	50.0	53.8	56.3
Try LSD once or twice	44.4	41.7	44.7	47.0	39.8	29.4	39.6	39.4
Take LSD regularly	83.5	83.5	87.1	82.0	81.9	84.6	86.8	81.7
Try cocaine one or twice	32.8	29.0	36.5	27.0	25.3	19.2	36.3	32.4
Take cocaine regularly	73.0	72.7	82.1	76.0	65.3	65.4	74.7	70.0
Try heroin once or twice	51.1	49.2	57.1	56.0	42.7	38.5	49.5	43.7
Take heroin occasionally	69.8	69.6	71.8	74.0	63.9	71.2	65.2	67.6
Take heroin regularly	86.0	89.5 <sup>b</sup>	91.8	89.0	85.5	98.1	91.2	88.7
Try amphetamines one or twice	25.3	22.9	30.6	23.0	18.1	21.2	22.0	26.8
Take amphetamines regularly	64.7	66.8	80.0	65.0	59.0	63.5	74.4	67.1
Try a barbiturate once or twice	27.5	25.8	35.3	28.0	19.5	21.2	24.2	28.2
Take barbiturates regularly	67.6	69.5	78.8	71.0	62.7	63.5	77.8	64.3
Try one or two drinks of an alcoholic beverage (beer, wine, liquor)	3.5	1.2 <sup>b</sup>	1.2	2.0	0.0	1.9	1.1	1.4
Take one or two drinks nearly every day	21.6	16.1 <sup>b</sup>	12.9	16.0	14.5	9.6	23.3	20.0
Take four or five drinks nearly every day	65.5	62.3	60.0	64.0	61.4	57.7	64.4	63.4
Have five or more drinks once or twice each weekend	36.0	32.2	25.9	34.0	31.3	34.6	35.2	31.0
Smoke one or more packs of cigarettes per day	60.5	62.6	65.9	61.0	61.4	61.5	63.7	64.8
Approx. N =	(3560)	(480)	(85)	(100)	(85)	(50)	(90)	(70)

NOTE: Significance of difference between the two samples:  $\alpha=.05$ ,  $\alpha\alpha=.01$ ,  $\alpha\alpha\alpha=.001$ .

<sup>a</sup>Answer alternatives were: (1) No risk, (2) Slight risk, (3) Moderate risk, (4) Great risk, and (5) Can't say, Drug unfamiliar.

**BEST COPY AVAILABLE**

Table 10  
Proportions Disapproving of Drug Use,  
DoDDS and Stateside Class of 1982

2. Do you disapprove of people (who are 16 or older) doing each of the following?	Percent "disapproving" <sup>a</sup>							
	Total	DoDDS Region						
		Stateside	DoDDS	Atlan-	North	South	Mediterranean	Paci-
Trying marijuana once or twice	45.5	35.1 <sup>b</sup>	34.9	27.8	41.0	21.6	38.5	50.0
Smoking marijuana occasionally	59.1	51.5 <sup>b</sup>	54.2	44.4	59.0	37.3	52.2	61.8
Smoking marijuana regularly	80.6	74.7 <sup>b</sup>	74.7	67.6	82.9	58.8	75.1	83.2
Trying LSD once or twice	68.8	81.5 <sup>b</sup>	83.1	77.8	85.5	66.7	85.7	86.8
Take LSD regularly	96.7	93.9 <sup>b</sup>	95.2	92.6	94.0	94.1	93.4	97.1
Try cocaine once or twice	76.6	70.3 <sup>b</sup>	72.0	67.6	74.7	54.0	73.6	73.5
Take cocaine regularly	91.5	88.9	86.3	88.8	91.5	78.0	90.0	92.6
Try heroin once or twice	94.6	89.6 <sup>b</sup>	92.8	85.2	95.2	82.4	89.0	90.5
Take heroin occasionally	96.9	94.4 <sup>b</sup>	96.4	88.9	98.8	94.1	95.6	97.1
Take heroin regularly	97.5	96.1	97.6	93.5	98.8	96.1	95.6	97.1
Try amphetamines once or twice	72.6	68.1 <sup>b</sup>	73.2	60.2	76.8	48.0	72.5	75.0
Take amphetamines regularly	92.0	90.2	93.9	87.0	95.2	78.0	90.1	92.6
Try a barbiturate once or twice	64.4	77.9 <sup>b</sup>	80.7	75.0	80.7	58.8	82.4	85.3
Take barbiturates regularly	94.4	91.8 <sup>b</sup>	92.8	89.8	96.4	84.0	90.1	94.0
Try one or two drinks of an alcoholic beverage (beer, wine, liquor)	18.2	9.6 <sup>b</sup>	3.6	8.3	13.6	6.0	13.2	8.8
Take one or two drinks nearly every day	69.9	62.8 <sup>b</sup>	55.4	59.3	65.9	52.0	71.4	72.1
Take four or five drinks nearly every day	90.9	88.5	95.2	83.2	95.2	70.0	93.4	88.2
Have five or more drinks once or twice each weekend	58.8	52.7 <sup>b</sup>	54.2	45.4	61.4	38.0	61.5	51.5
Smoke one or more packs of cigarettes per day	69.4	62.8 <sup>b</sup>	63.9	57.4	66.3	58.8	67.0	67.6
Approx. N =	(3560)	(480)	(83)	(108)	(83)	(51)	(91)	(68)

NOTE: Significance of difference between the two samples:  $\alpha=.05$ ,  $\alpha=\alpha=.01$ ,  $\alpha=\alpha=.001$ .

<sup>a</sup>Answer alternatives were: (1) Don't disapprove, (2) Disapprove, and (3) Strongly disapprove. Percentages are shown for categories (2) and (3) combined.

### Extent of Disapproval

- The great majority of DoDDS students and stateside students do not condone regular use of any of the illicit drugs (see Table 10). Stateside seniors, however, tend to disapprove of their use more often than DoDDS seniors.
- Regular marijuana use is disapproved by 75% of DoDDS seniors (vs. 81% stateside), and regular use of each of the other illicits receives disapproval from between 89% and 96% of DoDDS seniors (vs. 92% and 98% stateside).
- Smoking a pack (or more) of cigarettes per day receives the disapproval of fully 63% of DoDDS seniors. Somewhat more stateside seniors (69%) disapprove.
- Drinking at the rate of one or two drinks daily also receives disapproval from almost two-thirds of DoDDS seniors (63%). Again, more stateside seniors (70%) disapprove. A curious finding is that weekend binge drinking (five or more drinks once or twice each weekend) is acceptable to more DoDDS and stateside seniors than is moderate daily drinking. While only 53% in DoDDS disapprove of having five or more drinks once or twice a weekend, 63% disapprove of having one or two drinks daily. This is in spite of the fact that they associate greater risk with weekend binge drinking (32%) than with the daily drinking (16%). (The same pattern emerges among stateside seniors although disapproval of all rates is slightly higher than among DoDDS seniors.) One possible explanation for these seemingly inconsistent findings may stem from the fact that a greater proportion of this age group are themselves weekend binge drinkers rather than regular daily drinkers. They have thus expressed attitudes accepting of their own behavior, even though they may be somewhat inconsistent with their beliefs about possible consequences.
- For all drugs fewer people indicate disapproval of experimental or occasional use than of regular use, as would be expected. The differences are not great, however, for the illicit drugs other than marijuana. For example, 70% of the DoDDS sample disapprove of experimenting with cocaine vs. 89% who disapprove its regular use.
- For marijuana, however, the rate of disapproval varies substantially for different usage habits. Only about a third of the DoDDS seniors (35%) disapprove of trying marijuana and only half (52%) disapprove of occasional

use of the drug, while three-quarters (75%) disapprove of regular use. The same pattern of disapproval emerges among stateside seniors although disapproval of each usage habit is stronger among stateside seniors than DoDDS seniors: 46% of stateside seniors disapprove of trying marijuana, 59% disapprove of occasional use, and 81% disapprove of regular use.

### Attitudes Regarding the Legality of Drug Use

Table 11 presents a statement of one set of general questions on the legality of drug use along with the answers provided by the 1982 DoDDS and stateside senior classes. The set lists a sampling of illicit and licit drugs and asks whether their use should be prohibited by law. A distinction is consistently made between use in public and use in private—a distinction which proved quite important in the results.

- Fully 44% of DoDDS seniors believe that cigarette smoking in public places should be prohibited by law, and almost as many think getting drunk in such places should be prohibited (42% DoDDS).
- Over two-thirds of DoDDS seniors (71%) and stateside seniors (73%) favor legally prohibiting marijuana use in public places, despite the fact that the majority have used marijuana themselves; but only about a third (33% DoDDS, 37% stateside) feel that way about marijuana use in private.
- In addition, the great majority of DoDDS seniors believe that the use in public of illicit drugs other than marijuana should be prohibited by law (e.g., 78% in the case of amphetamines and barbiturates, 86% for heroin). About the same proportions of stateside seniors believe public use of amphetamines and barbiturates (76%) and heroin (83%) should be prohibited.
- For all drugs, substantially fewer students in DoDDS and stateside high schools believe that use in private (rather than public) settings should be legal.
- Somewhat fewer DoDDS seniors than stateside seniors feel that private use of amphetamines and barbiturates (48% vs. 54%), and LSD (62% vs. 67%) should be illegal.

Table 11  
Attitudes Regarding Legality of Drug Use,  
DoDDS and Stateside Class of 1982

Q. Do you think that people who are 18 or older should be prohibited by law from doing each of the following?	Percent saying "yes" <sup>a</sup>							
	Total	DoDDS Region						
		State-side DoDDS	Atlan- tic	North Germany	South Germany	Mediterranean	Paci- fic	Panama
Smoke marijuana in private	36.6	33.0	24.4	33.0	33.8	30.8	30.3	47.8
Smoke marijuana in public places	72.8	71.4	66.3	62.1	77.5	69.2	75.3	88.2
Take LSD in private	67.7	62.3	59.3	60.2	61.3	69.2	57.3	76.5
Take LSD in public places	82.7	84.2	81.2	79.6	88.8	86.5	80.9	94.1
Take heroin in private	60.3	67.0	62.8	63.7	69.6	71.2	64.0	76.5
Take heroin in public places	82.5	85.6	83.7	82.4	90.0	88.5	79.8	92.5
Take amphetamines or barbiturates in private	53.5	48.2	44.2	40.8	54.4	54.9	43.8	61.8
Take amphetamines or barbiturates in public places	75.5	78.1	74.4	72.8	82.5	84.6	74.2	86.2
Get drunk in private	79.4	77.7	71.6	79.4	79.0	73.5	79.5	77.9
Get drunk in public places	50.7	41.7	43.0	37.9	40.0	36.5	42.0	58.8
Smoke cigarettes in certain specified public places	42.0	43.6	36.0	37.9	48.8	46.2	49.4	48.5
Approx. N =	(3630)	(480)	(86)	(103)	(80)	(52)	(89)	(67)

NOTE: Significance of difference between the two samples:  $\alpha=.05$ ,  $\alpha\alpha=.01$ ,  $\alpha\alpha\alpha=.001$ .

<sup>a</sup>Answer alternatives were: (1) No, (2) Not sure, and (3) Yes.

BEST COPY AVAILABLE

- The largest DoDDS-stateside difference in preferences regarding the legal status of substance use occurs for public drunkenness. Considerably fewer DoDDS seniors (42%) than stateside seniors (51%) think this should be illegal.

### The Legal Status of Marijuana

Another set of questions goes into more detail about what legal sanctions, if any, students think should be attached to the use and sale of marijuana. Respondents also are asked to guess how they would be likely to react to legalized use and sale of the drug. While the answers to such a question must be interpreted cautiously, we think it worth exploring how young people think they might respond to such changes in the law. (The questions and responses are shown in Table 12 for DoDDS and stateside seniors.)

### Attitudes and Predicted Response to Legalization

- Only about one-quarter of the DoDDS seniors believe marijuana use should be entirely legal (24%). About three out of ten (32%) feel it should be treated as a minor violation—like a parking ticket—but not as a crime. Another 16% indicate no opinion, leaving less than one-third (28%) who feel it still should be a crime. In other words, over half of DoDDS seniors believe that marijuana use should not be treated as a criminal offense. By contrast, slightly more of the stateside sample favor legal restrictions.
- Asked whether they thought it should be legal to sell marijuana if it were legal to use it, a majority of DoDDS seniors (60%) and stateside seniors (57%) said "yes." However, nearly all of these respondents would permit sale only to adults, thus suggesting more conservatism on this subject than might generally be supposed.
- About half of the DoDDS respondents (50% vs. 60% stateside) say that they would not use marijuana even if it were legal to buy and use, and another 23% (vs. 24% stateside) indicate they would use it about as often as they do now, or less. Over one in ten DoDDS seniors 13% (vs. 6% stateside) say they would try it if it were legal. Only 5% (vs. 4% stateside) say they would use it more often than at present.

Table 12  
Attitudes Regarding Marijuana Laws,  
DoDDS and Stateside Class of 1982  
(Entries are percentages))

Q. There has been a great deal of public debate about whether marijuana use should be legal. Which of the following policies would you favor?	Total	DoDDS Region					
	State-side DoDDS	Atlan- tic	North Germany	South Germany	Mediterranean	Paci- fic	Panama
Using marijuana should be entirely legal	20.0 24.26	24.4	31.1	25.0	15.7	20.2	13.2
It should be a minor violation like a parking ticket but not a crime	26.2 31.8	40.7	31.1	28.8	35.3	32.6	26.5
It should be a crime	34.7 28.04	19.8	26.2	30.0	25.5	30.3	36.2
Don't know	17.1 15.9	15.1	11.7	16.3	23.5	16.9	24.1
Approx. N =	(3620) (480)	(86)	(103)	(80)	(51)	(89)	(68)
2. If it were legal for people to USE marijuana, should it also be legal to SELL marijuana?							
NO	29.3 25.0	19.8	19.4	30.0	28.8	25.8	32.4
Yes, but only to adults	46.2 49.2	58.1	49.5	45.0	48.1	52.8	42.6
Yes, to anyone	10.7 10.4	8.1	13.6	10.0	7.7	6.7	11.8
Don't know	13.6 15.4	14.0	17.5	15.0	15.4	14.6	13.2
Approx. N =	(3620) (480)	(86)	(103)	(80)	(52)	(89)	(68)
2. If marijuana were legal to use and legally available, which of the following would you be most likely to do?							
Not use it, even if it were legal and available	60.0 50.2668	51.2	50.5	43.8	38.5	53.9	67.6
Try it	6.3 12.6668	11.6	7.8	13.8	21.2	18.0	11.8
Use it about as often as I do now	21.7 21.6	22.1	20.4	27.5	25.0	15.7	16.2
Use it more often than I do now	3.8 5.3	3.5	9.7	2.5	3.8	4.5	2.9
Use it less than I do now	2.2 1.7	2.3	1.0	2.5	0.0	3.4	0.0
Don't know	6.0 8.64	9.3	10.7	10.0	11.5	4.5	1.5
Approx. N =	(3620) (480)	(86)	(103)	(80)	(52)	(89)	(68)

NOTE: Significance of difference between the two samples:  $\alpha=.05$ ,  $\alpha\alpha=.01$ ,  $\alpha\alpha\alpha=.001$ .

## THE SOCIAL MILIEU

The preceding section dealt with seniors' attitudes about various forms of drug use. Attitudes about drugs, as well as drug-related behaviors, obviously do not occur in a social vacuum. Drugs are discussed in the media; they are a topic of considerable interest and conversation among young people; they are also a matter of much concern to parents, concern which often is strongly communicated to their children. Young people are known to be affected by the actual drug-taking behaviors of their friends and acquaintances, as well as by the availability of the various drugs. This section presents data on several of these relevant aspects of the social milieu. We begin with a set of questions about peer attitudes, questions which closely parallel the questions about respondents' own attitudes about drug use, which were discussed in the preceding section.

### Current Perception of Friends' Attitudes

- This set of questions asked respondents to estimate their friends' attitudes about drug use (Table 13). These questions ask "How do you think your close friends feel (or would feel) about you. . . ." The highest levels of disapproval are associated with heavy daily drinking (85% of DoDDS seniors think friends would disapprove vs. 87% stateside), trying LSD (84% vs. 88% stateside), and trying an amphetamine (76% vs. 76%). Presumably, if heroin were on the list it would receive the highest peer disapproval; and, judging from respondents' own attitudes, barbiturates and cocaine would be roughly as unpopular among peers as amphetamines.
- A substantial majority think their friends would disapprove if they smoked marijuana regularly (76% DoDDS vs. 75% stateside), or smoked a pack or more of cigarettes daily (68% vs. 70% stateside).
- While heavy drinking on weekends is judged by half (51% DoDDS vs. 51% stateside) to be disapproved by their friends, most (69% vs. 72% stateside) think sustained daily drinking would be disapproved.

- Over half (56% DoDDS vs. 57% stateside) feel that friends would disapprove of occasional marijuana smoking and slightly fewer (45% vs. 50% stateside) feel their friends would disapprove trying marijuana once or twice.
- In sum, peer norms differ considerably for the various drugs and for varying degrees of involvement with those drugs, but overall they tend to be relatively conservative. The great majority of seniors in DoDDS and stateside high schools have friendship circles which do not condone use of the illicit drugs other than marijuana, and three-fourths feel that their friends would disapprove of regular marijuana use.
- Overall, peer norms regarding drug use are very similar among the DoDDS and stateside seniors.

### Exposure to Drug Use by Friends and Others

It is generally agreed that much of youthful drug use is initiated through a peer social-learning process; and research has shown a high correlation between an individual's illicit drug use and that of his or her friends. Such a correlation can, and probably does, reflect several different causal patterns: (a) a person with friends who use a drug will be more likely to try the drug; (b) conversely, the individual who is already using a drug will be likely to introduce friends to the experience; and (c) one who is already a user is more likely to establish friendships with others who also are users.

Given the potential importance of exposure to drug use by others, we felt it would be useful to monitor seniors' association with others taking drugs, as well as seniors' perceptions about the extent to which their friends use drugs. Two sets of questions, each covering all or nearly all of the categories of drug use treated in this report, asked seniors to indicate (a) how often during the past twelve months they were around people taking each of the drugs to get high or for "kicks," and (b) what proportion of their own friends use each of the drugs. (The questions dealing with friends' use are shown in Table 14. The data dealing with direct exposure to use may be found in Table 15.) Obviously, responses to these two questions are highly correlated with the respondents' own drug use; thus, for example, seniors who have recently used marijuana are much more likely to report that they have been around others getting high on marijuana, and that most of their friends use it.

### Exposure to Drug Use

- A comparison of responses about friends' use, and about being around people in the last twelve months who were using various drugs to get high, reveals a high degree of correspondence between these two indicators of exposure. For each drug, the proportion

Table 13  
Proportions of Friends Disapproving of Drug Use,  
DoDDS and Stateside Class of 1982

Q. How do you think your close friends feel (or would feel) about you...	Percent saying friends disapprove*							
	Total	DoDDS Region						
		State-side DoDDS	Atlan- tic	North Germany	South Germany	Medi- terranean	Paci- fic	Panama
Trying marijuana once or twice	50.3	45.0	42.9	42.9	48.1	34.6	42.0	62.3
Smoking marijuana occasionally	57.4	56.0	52.4	53.1	55.8	53.8	60.0	69.2
Smoking marijuana regularly	74.7	75.8	72.3	69.4	79.2	82.7	77.8	84.9
Trying LSD once or twice	87.8	84.3	84.3	75.4	84.4	96.2	81.7	92.5
Trying an amphetamine once or twice	75.7	75.8	73.5	74.2	77.9	73.1	72.5	86.8
Taking one or two drinks nearly every day	71.9	69.0	66.7	63.6	76.6	65.4	73.4	67.9
Taking four or five drinks every day	86.6	85.0	84.5	75.5	88.3	96.2	90.0	92.5
Having five or more drinks once or twice every weekend	51.2	51.4	43.5	52.5	53.8	46.2	57.5	49.1
Smoking one or more packs of cigarettes per day	76.5	67.9	67.1	63.9	70.1	71.2	66.7	75.5
Approx. N =	(3020)	(450)	(84)	(98)	(77)	(52)	(81)	(53)

NOTE: Significance of difference between the two samples:  $\alpha=.05$ ,  $\alpha^2=.01$ ,  $\alpha_{\text{adj}}=.001$ .

\*Answer alternatives were: (1) Not disapprove, (2) Disapprove, and (3) Strongly disapprove. Percentages are shown for categories (2) and (3) combined.

BEST COPY AVAILABLE

Table 14  
Proportions of Friends Using  
DoDDS and Stateside Class of 1982

Q. How many of your friends would you estimate...	Total		DoDDS Region					
	Stateside	DoDDS	Atlan-	North	South	Mediterranean	Pacific	Panama
Smoke marijuana								
\$aying none	15.6	18.7	16.5	17.3	14.1	20.8	21.6	32.8
\$aying most or all	23.6	22.0	22.3	29.1	21.1	16.7	13.6	14.9
Use inhalants								
\$aying none	81.6	80.1	72.9	81.5	83.5	80.9	73.3	84.8
\$aying most or all	7.3	1.9	0.0	4.6	1.2	0.0	0.0	1.5
Use nitrites								
\$aying none	82.5	82.5	80.5	77.6	86.7	79.2	86.4	87.9
\$aying most or all	0.9	1.3	1.2	1.8	0.0	2.1	2.3	0.0
Use LSD								
\$aying none	72.2	74.4	70.6	68.2	77.4	75.0	83.0	80.6
\$aying most or all	2.4	1.9	0.0	2.7	3.6	0.0	1.1	0.0
Take other psychedelics								
\$aying none	74.4	77.0	74.1	75.5	78.8	81.3	73.6	82.1
\$aying most or all	1.9	1.6	0.0	3.6	1.2	0.0	1.1	0.0
Take PCP								
\$aying none	82.7	85.1	81.9	83.5	86.7	81.6	87.6	89.4
\$aying most or all	0.9	1.0	0.0	1.8	0.0	2.0	2.2	0.0
Take cocaine								
\$aying none	59.3	70.6	71.4	66.1	73.8	61.7	82.8	67.2
\$aying most or all	4.9	4.6	2.4	6.4	6.0	6.4	1.1	1.5
Take heroin								
\$aying none	86.8	86.5	85.9	85.3	84.7	85.0	91.9	91.0
\$aying most or all	0.7	0.6	0.0	0.9	0.0	2.1	1.2	0.0
Take other narcotics								
\$aying none	76.1	75.6	76.5	73.4	77.4	78.7	71.3	80.6
\$aying most or all	1.4	1.6	0.0	4.6	0.0	0.0	1.1	0.0
Take amphetamines								
\$aying none	49.4	61.7	60.0	60.9	62.4	61.7	59.1	68.7
\$aying most or all	5.4	3.0	0.0	4.5	3.5	4.3	2.3	0.0
Take barbiturates								
\$aying none	66.7	71.0	72.9	70.0	64.7	76.6	74.7	79.1
\$aying most or all	1.6	1.0	0.0	1.8	1.2	0.0	1.1	0.0

(Table continued on next page)

**Table 14**  
**Proportions of friends Using**  
**DoDDS and Stateside Class of 1982**  
**(continued)**

2. How many of your friends would you estimate...	Total	DoDDS Region						
	State-side	DoDDS	Atlan- tic	North Germany	South Germany	Medi- terranean	Paci- fic	Panama
Take quaaludes								
& saying none	64.5	72.5 <sup>a</sup>	71.8	70.6	72.9	72.3	75.9	73.8
& saying most or all	2.6	1.0 <sup>a</sup>	0.0	2.8	0.0	0.0	1.1	0.0
Take tranquilizers								
& saying none	70.1	69.7	66.7	74.3	68.2	70.2	63.2	70.1
& saying most or all	1.1	1.3	0.0	2.8	1.2	2.1	0.0	0.0
Drink alcoholic beverages								
& saying none	4.3	2.4	3.5	3.7	1.2	0.0	2.2	1.5
& saying most or all	69.7	72.2	78.8	72.5	71.5	79.2	67.4	65.7
Get drunk at least once a week								
& saying none	16.9	19.6	11.8	23.6	21.2	16.7	14.8	20.9
& saying most or all	29.9	25.5	24.7	24.6	22.3	35.5	21.6	35.9
Smoke cigarettes								
& saying none	11.7	8.7	3.5	10.9	8.2	10.6	6.7	10.4
& saying most or all	24.1	25.8	34.1	30.9	18.8	34.0	11.2	29.9
Approx. N =	(3300)	(490)	(85)	(110)	(85)	(50)	(90)	(70)

NOTE: Significance of difference between the two samples:  $\alpha=.05$ ,  $\alpha=\alpha_1=.\alpha_{11}=.01$ .

**BEST COPY AVAILABLE**

**Table 15**  
**Exposure to Drug Use,**  
**DoDDS and Stateside Class of 1982**  
**(Entries are percentages)**

Q. During the last 12 MONTHS how often have you been around people who were taking each of the following to get high or for kicks?	Total		DoDDS Region					
	Stateside	DoDDS	Atlan-	North	South	Mediterranean	Paci-	Panama
		tic	Germany	Germany				
Marijuana								
\$aying not at all	22.1	21.9	32.9	14.8	18.3	14.0	26.4	39.7
\$aying often	26.0	30.1	22.0	34.3	31.7	48.0	23.1	19.1
LSD								
\$aying not at all	85.9	80.5	77.8	75.3	81.9	68.6	91.0	97.1
\$aying often	1.9	1.8	1.2	1.9	2.4	6.3	0.0	0.0
Other psychedelics								
\$aying not at all	83.2	86.5	84.1	83.3	86.7	76.0	93.3	97.1
\$aying often	2.6	1.8	0.0	2.8	1.2	6.0	1.1	0.0
Cocaine								
\$aying not at all	65.7	70.4	80.5	63.9	71.1	60.0	86.8	63.2
\$aying often	6.6	3.6	2.4	2.8	3.6	8.0	2.2	5.9
Heroin								
\$aying not at all	92.9	89.7	93.9	86.9	89.2	76.0	95.6	97.0
\$aying often	1.0	1.6	0.0	3.7	0.0	4.0	0.0	1.5
Other narcotics								
\$aying not at all	81.5	77.8	82.9	75.0	79.3	68.0	74.7	88.2
\$aying often	2.4	2.4	0.0	3.7	1.2	6.0	3.3	0.0
Amphetamines								
\$aying not at all	49.6	59.6	65.9	55.1	61.0	44.0	59.3	75.0
\$aying often	12.3	8.2	3.7	6.5	12.2	20.0	7.7	1.5
Barbiturates								
\$aying not at all	74.3	74.1	74.4	68.5	74.7	68.0	76.9	91.2
\$aying often	4.3	3.3	1.2	4.6	2.4	10.0	2.2	0.0
Tranquilizers								
\$aying not at all	73.4	67.2	69.5	66.4	66.3	56.0	70.3	73.5
\$aying often	3.5	4.9	1.2	4.7	4.8	16.0	2.2	5.9
Alcoholic beverages								
\$aying not at all	6.0	3.4	2.4	1.9	3.6	4.0	4.4	7.4
\$aying often	59.3	68.7	69.9	72.2	63.9	86.0	61.5	64.7
Approx. N =	(3650)	(480)	(80)	(110)	(80)	(50)	(90)	(70)

NOTE: Significance of difference between the two samples:  $\alpha=.05$ ,  $\alpha=.01$ ,  $\alpha\alpha=.001$ .

of respondents saying "none" of their friends use it is fairly close to the proportion who say that during the last twelve months they have not been around anyone who was using that drug to get high. Similarly, the proportion saying they are "often" around people getting high on a given drug is roughly the same as the proportion reporting that "most" or "all" of their friends use that drug.

- The highest levels of exposure involve alcohol—a majority (69% DoDDS vs. 59% stateside) say they are "often" around people using it to get high. (This difference in exposure between DoDDS seniors and stateside seniors mirrors differences in their own reported use of alcohol in the last thirty days.) Fully 26% of all DoDDS seniors (30% stateside) say that most or all of their friends go so far as to get drunk at least once a week, which is consistent with the large proportions of DoDDS seniors (42%) and stateside seniors (41%) who report that they personally had taken five or more drinks in a row during the prior two weeks.
- The drug to which students are next most frequently exposed is marijuana. Some 30% of DoDDS seniors are "often" around people using it to get high, and another 25% are exposed "occasionally." Only 22% report no exposure during the year. (The stateside figures are comparable; 28% "often," 27% "occasionally," and 22% "not at all.")
- The proportion of DoDDS seniors saying that "most or all" of their friends smoke cigarettes (26%) is slightly greater than the proportion of stateside seniors (24%). This comparison parallels the fact that a greater proportion of DoDDS seniors (36% vs. 30% stateside) smoked cigarettes in the past month.

#### Perceived Availability of Drugs

One set of questions asks for estimates of how difficult it would be to obtain each of a number of different drugs. The answers range across five categories from "probably impossible" to "very easy." While no systematic effort has been undertaken to assess the validity of these measures, it must be said that they do have a rather high level of face validity—particularly if it is the subjective reality of "perceived availability" which is purported to be measured. It also seems quite reasonable to us to assume that perceived availability tracks actual availability to some extent.

- With the exception of tranquillizers, heroin, and other opiates, each of the drugs listed on Table 16 appears to be more available to stateside seniors than DoDDS seniors. However, the availability of these drugs varies considerably among the DoDDS regions.
- There are substantial differences in the reported availability of the various drugs among both DoDDS and stateside seniors. In general, the more widely used drugs are reported to be available by the highest proportion of the age group, as would be expected (see Table 16).
- Marijuana appears to be readily available to more stateside seniors (89% report it would "fairly easy" or "very easy" to get marijuana) than DoDDS seniors (75%), although the difference in reported use of marijuana in the past month between DoDDS seniors (27%) and stateside seniors (29%) is small.
- After marijuana, seniors in DoDDS and stateside high schools indicate that the psychotherapeutic drugs are the most available to them: amphetamines are seen as available by 62% of DoDDS seniors (71% stateside), barbiturates by 50% DoDDS (55% stateside), and tranquillizers by 63% DoDDS (59% stateside). The greater availability of tranquilizers to DoDDS seniors is paralleled by a somewhat greater use of tranquilizers among DoDDS seniors in the past month (3.0%) than stateside seniors (2.4%). The lower availability of barbiturates to DoDDS seniors is not paralleled by a lower monthly use among DoDDS seniors (2.2%) than among stateside seniors (2.0%).
- Less than one third of DoDDS seniors believe it is easy to get heroin (21%) or other narcotics (29%). Virtually the same proportion of stateside seniors believe it is easy to get heroin (21%) or other narcotics (30%). Nearly half of the stateside seniors (47%) but only a third of DoDDS seniors (33%) see cocaine as being available to them. The perceived availability of cocaine does vary greatly among the DoDDS regions from 52% in Panama region to 9% in the Pacific region. Recall that the proportion of DoDDS seniors in the Panama region who reported cocaine use in the past month (6.2%) is much larger than the proportion in the Pacific region (0.7%).

#### Perceived Risks of Apprehension and Punishment for Drug Use

- We included several items in the questionnaires given to DoDDS seniors about the extent to which both military and local civilian authorities attempt to catch

**Table 16**  
**Reported Availability of Drugs,**  
**DoDDS and State-side Class of 1982**

2. How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?	Percent saying drug would be "Fairly easy" or "Very easy" for them to get*							
	Total	DoDDS Region						
		State-side DoDDS	Atlan- tic	North Germany	South Germany	Medi- terranean	Paci- fic	Panama
Marijuana	88.5 75.2466	78.8	68.5	84.9	65.3	66.3	87.0	
LSD	34.2 26.2466	23.5	32.7	32.1	19.1	7.7	23.5	
Some other psychedelic	30.6 19.6466	18.3	22.7	24.7	10.6	8.8	19.4	
Cocaine	47.4 33.1466	21.2	41.3	33.7	35.6	8.8	51.5	
Heroin	20.8 20.5	12.0	29.4	23.3	21.7	3.3	16.9	
Some other narcotic (including methadone)	30.4 29.0	22.2	32.7	28.6	28.3	25.6		
Amphetamines	70.6 62.1466	57.8	67.3	67.4	57.4	49.5	56.7	
Barbiturates	55.2 49.94	41.0	50.9	59.5	46.7	42.7	44.8	
Tranquilizers	56.9 62.8	53.0	57.8	71.8	70.2	63.7	61.8	
Approx. N =	(3600) (500)	(84)	(111)	(87)	(49)	(95)	(70)	

NOTE: Significance of difference between the two samples:  $\alpha=.05$ ,  $\alpha=\alpha=.01$ ,  $\alpha\alpha\alpha=.001$ .

\*Answer alternatives were: (1) Probably impossible, (2) Very Difficult, (3) Fairly difficult, (4) Fairly easy, and (5) Very easy.

**BEST COPY AVAILABLE**

drug users and the severity of the consequences of being caught with illicit drugs. (Table 17 presents these results.)

- With the exception of the Atlantic and Panama regions, DoDDS seniors believe that local authorities and military authorities are about equally vigorous in their attempts to catching users. In the Atlantic region, military authorities are seen more often (31%) than local authorities (14%) as being "very vigorous." In Panama, local authorities (25%) are more often seen as being very vigorous than are military authorities (18%).
- In the Pacific region, about a third perceive local authorities (36%) and military authorities (34%) as being "very vigorous" in their attempts to catch young people with illicit drugs. Less than a quarter of DoDDS seniors in South Germany, North Germany, and the Mediterranean report that either of these authorities are very vigorous in their attempts.
- On the average, military authorities are seen as imposing more "severe" consequences for possession of cocaine (58% feel the consequence would be severe) than amphetamines (36%) or marijuana (30%). A similar rank order occurs for expected consequences of getting caught by local civilian authorities.
- With the exception of seniors in the Atlantic regions DoDDS seniors believe that the consequences of getting caught with these drugs are more likely to be severe if one is caught by local rather than by military authorities.
- The proportion of DoDDS seniors reporting "severe" consequences for being caught by local authorities are greatest in the Pacific and Panama regions. Interestingly even though both military and civilian authorities in Panama are seen as giving tougher punishment than average for cocaine possession, the use of cocaine is highest in that region—which demonstrates the predominance of availability as a causal factor in its use.

#### Implications for Validity of Self-Reported Usage Questions

- We have noted a high degree of correspondence in the aggregate level data presented in this report among seniors' self-reports of their own drug use, their reports concerning friends' use, and their own exposure to use. We take this consistency as additional

**Table 17**  
**Perceived Risk of Apprehension and Consequences of Apprehension,**  
**DoDDS Class of 1982**  
**N=2400**

Approx. N =	DoDDS Total (2400)	DoDDS Region					
		Atlan- tic (400)	North Germany (550)	South Germany (400)	Midi- terra- nean (250)	Paci- fic (450)	Pana- ma (350)
Proportion reporting that local authorities are <u>very vigorous</u> in their attempts to catch young people using illicit drugs	21.2	13.8	19.5	19.3	15.1	36.2	24.7
Proportion reporting that U.S. military authorities on the installation are <u>very vigorous</u> in their attempts to catch young people using illicit drugs	22.4	30.5	19.5	18.1	20.6	33.6	17.6
Proportion reporting <u>severe</u> <sup>b</sup> consequences for getting caught by local authorities in possession of a small amount of:							
marijuana	40.1	35.4	31.2	35.9	42.2	63.2	51.1
amphetamines	42.8	43.6	35.5	41.0	42.7	58.9	48.1
cocaine	67.3	67.5	63.3	64.6	67.7	75.1	76.4
Proportion reporting <u>severe</u> <sup>b</sup> consequences for getting caught by U.S. military authorities on the installation in possession of a small amount of:							
marijuana	29.8	40.9	25.0	23.4	32.8	37.4	34.3
amphetamines	36.4	50.0	30.3	30.1	39.5	44.8	41.1
cocaine	57.6	69.5	52.8	52.0	57.8	63.3	64.0

<sup>a</sup>Answer alternatives were: (1) Not at all vigorous, (2) Slightly vigorous, (3) Somewhat vigorous, (4) Fairly vigorous, (5) Very Vigorous, and (8) Don't know.

<sup>b</sup>Answer alternatives were: (1) No consequences, (2) Mild, (3) Moderate, (4) Severe, and (8) Don't Know.

**BEST COPY AVAILABLE**

evidence for the validity of the self-report data, since there should be less reason to distort answers on friends' use, or general exposure to use, than to distort the reporting of one's own use. There is also a pretty good correspondence between the DoDDS-stateside comparisons based on self-reported use and those based on amount of exposure to use.

## APPENDIX

### Estimates of Sampling Variance

#### Estimation of Sampling Variances

In most surveys, a relatively small sample is drawn from a much large population. If the sample is randomly drawn, then estimation of the sampling variance of any statistic is a straight-forward procedure. In general, given a simple random sample (srs) of size  $n$ , the variance of an observed prevalence,  $P$ , is simply  $P(1-P)/n$ . In the Monitoring the Future national study, the samples are not simple random samples, so adjustments have to be made to take account of the multi-stage clustered design. These adjustments result in a very straight-forward modification of the srs procedure; specifically, the actual obtained  $n$  is divided by some factor (called a design effect, usually greater than 1), and the resulting "effective  $n$ " is used in the normal srs formulas.

In principle, every different statistic derived from a complex sample can have its own design effect, and different statistics in the same sample can have quite different design effects. In practice, however, design effects are usually averaged across a number of statistics; often, a single design effect is applied to all statistics. In the Monitoring the Future project, extensive explorations revealed systematic differences that led us to employ several different average design effects, varying primarily according to the particular drug measure being examined, and on how many questionnaire forms the measure appeared.\* In all confidence intervals and significant tests reported here, appropriate design effects have been applied to produce "effective  $n$ 's" for the data from stateside seniors.

#### DoDDS Survey

The DoDDS survey provides a very different survey design than a simple random sample one. In four of the six regions, no sampling was done; the surveyed respondents are essentially a complete population—the "universe" of all seniors present on the day of administration. In the other two regions (North and South Germany), a very high proportion (half) of the schools were sampled, after stratification on the senior class size, the branch of service hosting the installation, and the size of the city in which the installation was located.

---

\*See Johnston, L. J., Bachman, J. G., & O'Malley, P. M. Student Drug Use in America: 1975-1981. Rockville, MD: National Institute on Drug Abuse, 1981, for more details.

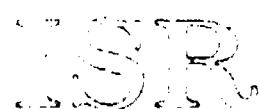
There are a number of alternative ways to determine the best estimate of sampling variances for data obtained in the survey. The approach we adopted in the tables in this report is to treat each prevalence estimate as based on a simple random sample; we used the following reasoning in adopting this approach.

Core data. Consider first the "core" data, data included in all five questionnaire forms. If we used the notion of a complete population survey in four regions, we would estimate a sampling variance of zero in those regions. In the two regions sampled at a rate of 50%, the estimated variance would be 50% smaller than an srs estimate. However, this ignores the clustering by schools which was used; the effect of clustering is generally to increase sampling variance (relative to srs). The two factors—sampling a high proportion of the population and clustering—may well virtually cancel each other out, so that srs estimates should not be very far off.

For the six regions as a whole, the srs procedure is conservative in the sense that it overestimates the sampling variance (compared to the "universe" approach). However, because the total number of obtained questionnaires is about 2,400, the srs variances are still quite small. A prevalence of 50% would have a sampling variance, under the srs assumptions, of only .01%, which would yield a 95% confidence interval of plus-or-minus 2% around the 50% estimate. Although the "universe" approach would result in a still smaller variance, we believe that the srs approach provides a reasonable, though more conservative, estimate. Quite small differences between DoDDS and stateside seniors are still "statistically significant" under this approach. For example, lifetime heroin prevalence rates of 1.2% and 2.4% for the total samples of DoDDS and stateside seniors, respectively, would be significantly different at the .001 level.

Non-Core Data. Most of the non-drug use-measures, such as degree and duration of highs, grade of first use, and attitudes and beliefs, are included in only one questionnaire form. In this case, we essentially have a random sample of 20% of the population in the "universe" regions and 10% of the population in the Germany regions, and the simple random sample assumption makes good sense. Adjusting for the relatively high proportion of the population sampled would decrease the sampling variance, but adjusting for the sample clustering in Germany would increase it.

In sum, a straightforward simple random sample approach seems best for all measures. If another approach is preferred by a reader, alternative ways of assessing significance can be used.



SURVEY RESEARCH CENTER  
INSTITUTE FOR SOCIAL RESEARCH  
THE UNIVERSITY OF MICHIGAN