NATIONAL SURVEY RESULTS ON DRUG USE
from
THE MONITORING THE FUTURE STUDY, 1975-1992

Volume II

College Students and Young Adults

by

Lloyd D. Johnston, Ph.D.
Patrick M. O'Malley, Ph.D.
Jerald G. Bachman, Ph.D.

The University of Michigan
Institute for Social Research

National Institute on Drug Abuse
5600 Fishers Lane
Rockville, Maryland 20857

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
National Institutes of Health

1993

This publication was written by the principal investigators and staff of The Monitoring the Future project, at the Institute for Social Research, the University of Michigan, under Research Grant No. 3 R01 DA 01411 from the National Institute on Drug Abuse.

National Institute on Drug Abuse
NIH Publication No. 93-3598
Printed 1993

For sale by the U.S. Government Printing Office
Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328
ISBN 0-16-042021-0

Preface

This is the second of two volumes presenting the results of the 1992 Monitoring the Future surveys. Prior to 1991, the results of both the high school senior surveys and follow-up surveys of panels drawn from previous graduating senior classes were presented in the same volume. However, this causes a delay in reporting the findings from seniors because the follow-up data collections are not completed until September of each year, whereas the senior data are collected by June. Senior data, and beginning in 1991, data from eighth and tenth grade students, can be presented earlier with the publication of two volumes. There are many readers, in fact, who are interested only in these results from secondary school students. In addition, the growing awareness of drug use on the nation's college campuses has resulted in an increasing number of readers who are interested in the results from college students, and for whom the results of seniors are less relevant. Each of the Volumes, I and II, now may be ordered separately to meet these more specific needs.

ABBREVIATED TABLE OF CONTENTS

Volume II

DETAILED CONTENTS

Volume II

YOUNG ADULTS POST-HIGH SCHOOL

COLLEGE STUDENTS

LIST OF TABLES

Volume II

LIST OF TABLES (continued)

LIST OF FIGURES

Volume II

LIST OF FIGURES (continued)

LIST OF FIGURES (continued)

Chapter 1

INTRODUCTION TO VOLUME II

This is the second volume in a two volume set reporting the results of all surveys through 1992 from the Monitoring the Future study of American secondary school students and young adults. Monitoring the Future is a long-term research program conducted at the University of Michigan's Institute for Social Research under a series of research grants from the National Institute on Drug Abuse. It is comprised of an ongoing series of annual national surveys of American *high school seniors* begun in 1975–the results of which are presented in Volume I–as well as a series of annual *follow-up surveys* of representative samples of the previous participants from each high school senior class going back to the Class of 1976. In 1991, the study also began to survey eighth and tenth grade students; the results from these surveys also are included in Volume I. This second volume presents the results of the 1977 through 1992 follow-up surveys of the graduating classes of 1976 through 1991 as respondents have progressed through young adulthood.

In order for this volume to stand alone, some material from Volume I is repeated here for the reader who does not have Volume I. Specifically, Chapter 2 in this volume is the same as Chapter 2, Volume I, and provides an overview of the key findings presented in both volumes. Chapter 3, Study Design and Procedures, also draws almost entirely from Volume I, Chapter 3. Therefore, the reader already familiar with Volume I will want to skip over these chapters. Otherwise, the content of the two volumes does not overlap.

SURVEYS OF COLLEGE STUDENTS

The follow-up samples in Monitoring the Future provide very good coverage of the national college student population since 1980. College students tend to be a difficult population to study. They generally are not well covered in normal household surveys, which exclude dormitories, fraternities, and sororities from the universe covered. Further, the institution-based samples needed to get accurate national representation of college students must be quite large, since there is such great heterogeneity in the student populations in those institutions. There also may be problems getting good samples and high response rates within many institutions. The current study, which in essence draws the college sample in senior year of high school, has considerable advantages for generating a broadly representative sample of the college students to emerge from each graduating cohort, and it does so at very low cost.

As defined here, the college student population is comprised of all full-time students, one to four years post-high school, enrolled in a two- or four-year college in March during the year of the survey. More will be said about this sample definition in Chapters 3 and 8. Results on the *prevalence* of drug use among college students in 1992 are reported in Chapter 8, and Chapter 9 presents the *trends* in substance use among college students over the past thirteen administrations.

SURVEYS OF YOUNG ADULTS

The young adult sample reported here, which includes the college students, is comprised of representative samples from each graduating class since 1978, all surveyed in 1992. Since 18 is the modal age of high school seniors, the young adults covered here correspond to modal ages 19 through 32. The graduating classes of 1976 and 1977 were not surveyed in 1992 because the study design calls for annual follow-up surveys only up to age 32, and then less frequently beginning at age 35. In this volume we have re-weighted the respondents to correct for the effects of panel attrition on measures such as drug use; however, we are less able to make accurate adjustments for the absence of high school dropouts who were not included in the original high school senior sample. Because nearly all college students have completed high school, the omission of dropouts should have almost no effect on the college student estimates, but this omission does have an effect on the estimates for entire age groups. Therefore, the reader is cautioned that the omission of the 15% to 20% of each cohort who drop out of high school will make the drug use estimates given here for the various young adult age bands somewhat low for the age group as a whole. The proportional effect may be greatest for some of the most dangerous drugs such as heroin and crack, and also for cigarettes–the use of which is most correlated with educational aspirations and attainment.

GENERAL PURPOSES OF THE RESEARCH

The research purposes of the Monitoring the Future study are extensive and can be sketched only briefly here.[1] One major purpose is to serve a social monitoring or social indicator function, intended to characterize accurately the levels and trends in certain behaviors, attitudes, beliefs, and conditions in the population. Another purpose is to develop knowledge which increases our understanding of why changes in these behaviors, attitudes, etc., are taking place. (In the health-related disciplines such work is usually labeled as epidemiology.) These two purposes are addressed in the current series of volumes. There are a number of other purposes for the research, however, which are addressed through other types of publications and professional products. They include: helping to determine what types of young people are at greatest risk for developing various patterns of drug abuse; gaining a better understanding of the lifestyles and value orientations associated with various patterns of drug use, and monitoring how those orientations are shifting over time; determining the immediate and more general aspects of the social environment which are associated with drug use and abuse; determining how drug use is affected by major transitions into and out of social environments (such as military service, civilian employment, college, unemployment) or social roles (marriage, pregnancy, parenthood). We also are interested in determining the life course of the various drug using behaviors during this period of development; distinguishing such "age effects" from cohort and period effects in determining drug use; determining the effects of social legislation on various types of substance use; and determining the changing connotations of drug use and changing patterns of multiple drug use among youth. We believe that the differentiation of period, age, and cohort effects in substance use of various types has been a particularly important contribution of the project;

[1]See Johnston, L.D., O'Malley, P.M., Bachman, J.G., and Schulenberg, J. (1993). *The aims, objectives, and rationale of the Monitoring the Future study.* Monitoring the Future Occasional Paper No. 34. Ann Arbor, MI: Institute for Social Research.

its cohort-sequential research design is especially well-suited to allow such differentiation. Readers interested in publications dealing with any of these other areas, or wishing to receive a copy of a brochure listing publications from the study, should write the authors at the Institute for Social Research, The University of Michigan, Ann Arbor, Michigan, 48106-1248.

Chapter 2

OVERVIEW OF KEY FINDINGS

This monograph reports findings from the ongoing research and reporting project entitled Monitoring the Future: A Continuing Study of the Lifestyles and Values of Youth. Each year since 1975, in-school surveys of nationally representative samples of high school seniors have been conducted. In addition, each year since 1976, representative subsamples of the participants from each previous graduating class have been surveyed by mail. Beginning in 1991, in-school surveys of nationally representative samples of eighth and tenth grade students have also been conducted annually.

Findings on the prevalence and trends in drug use and related factors are presented in Volume I of this report for eighth, tenth, and twelfth grade students; detailed findings for college students and young adult high school graduates 19-32 years old are presented in Volume II. Trend data are presented for varying time intervals, ranging from just 2 years (1991 to 1992) for eighth and tenth grade students, and up to eighteen years in the case of the high school senior population (i.e., since 1975). For college students, a particularly important subset of the young adult population (on which there currently exist no other nationally representative data), prevalence and trend results since 1980 are presented in Volume II.

The high school dropout segment of the population–about 15%-20% of an age group–is of necessity omitted from the coverage of high school seniors, college students, and young adults, though this omission would have negligible effect on the coverage of college students. An appendix to this report discusses the likely effect of omitting dropouts from the sample coverage at senior year. Very few students will have left school by eighth grade, of course, and relatively few by the end of tenth grade, so the results of the school surveys at those levels should be generalizable to the great majority of the relevant age cohorts.

Findings from all five of these national populations–eighth grade students, tenth grade students, twelfth grade students, college students, and young adult high school graduates through age 32–have been summarized and integrated in this chapter so that the reader may quickly get an overview of the key results. Detailed findings on college students and on all young adults are presented separately in Volume II of this report, which is published a few months subsequent to Volume I. Because so many populations, drug classes, and prevalence intervals are discussed here, a single integrative table (Table 1) showing the 1991 to 1992 one-year trends is included in this chapter.[2]

TRENDS IN ILLICIT DRUG USE

- The trend story has become considerably more complicated to summarize this year, due to several factors: (a) there are more

[2]The young adult sample is limited to the age band 19-28 in Table 1 and in nearly all of the discussion in this chapter. Focusing on this more limited age band permits us to cover a longer historical period than would be possible if we used the full age band of 19-32.

populations being tracked, because trend data are now available on eighth and tenth graders; (b) there are some reversals in the recent downward trends in use and in the recent upward trends in the perceived risk and disapproval associated with drug use; and (c) not all populations moved in parallel this year. These complicating factors are very important because they could presage an end to the improvements in the drug situation that the nation may be taking for granted.

- Only one of the three populations on which we have long-term trend data (high school seniors, college students, and young adults aged 19 to 28) showed a continuation of the longer-term decline in the proportion using ***any illicit drug***. Annual prevalence (i.e., use of any illicit drug one or more times in the prior 12 months) fell by 2.3 percentage points among seniors to 27% in 1992–exactly half the peak level of 54% in 1979. College students and young adults, however, who are also well below their peak levels of use, showed nonsignificant increases in 1992 to 31% and 28% annual prevalence rates, respectively.

- The proportions using ***any illicit drug other than marijuana*** in the prior year fell by 1.3 percentage points among seniors to 15% (not a statistically significant change), a rate which is substantially below the 34% peak rate in 1981. Again, there was no change for college students or young adults, 13% and 14% of whom, respectively, report such use.

- The use of ***crack*** cocaine appeared to level in 1987 at relatively low prevalence rates, at least within these populations. (This occurred despite the fact that the crack phenomenon continued a process of diffusion to new communities that year.) In 1992, annual prevalence held steady at its 1991 rate of 1.5% among twelfth graders (down from 3.9% in 1987). Among young adults one to ten years past high school, annual prevalence was 1.4%, and 0.4% among college students–both unchanged in 1992. For twelfth graders, annual crack prevalence among the college-bound is lower than among those not bound for college (1.0% vs. 2.6%).

  There is now rather little regional variation in crack use with annual prevalence among seniors highest in the West (2.1%), followed by the North Central (1.4%), the Northeast (1.3%), and the South (1.2%). Use is now lower in the large cities and the nonmetropolitan areas (both at 1.3%) than in the smaller cities at 1.6%.

  We believe that the particularly intense media coverage of the hazards of crack cocaine, which took place quite early in what could have been a considerably more serious epidemic, likely had the

effect of "capping" that epidemic early by deterring many would-be users and by motivating many experimenters to desist use. While 2.6% of seniors report ever having tried crack, only 0.6% report use in the past month, indicating noncontinuation by 77% of those who try it. The longer-term downward trend can be explained both in terms of lower initiation rates among students and higher noncontinuation rates.

- ***Cocaine*** in general began to decline a year earlier than crack; between 1986 and 1987 the annual prevalence rate dropped dramatically by roughly four-tenths in all three populations studied.[3] As we had predicted earlier, the decline occurred when young people began to see experimental and occasional use–the type of use in which they are most likely to engage–as more dangerous; and this happened by 1987, probably partly because the hazards of cocaine use received extensive media coverage in the preceding year, but almost surely in part because of the cocaine-related deaths in 1986 of sports stars Len Bias and Don Rogers.

  In 1992, this broad decline continued, with annual prevalence falling by nonstatistically significant amounts in all populations *except* eighth graders, who actually showed a statistically significant increase in use. Annual prevalence of cocaine use has fallen by more than two-thirds among the three populations for which long-term data are available.

  Having risen substantially since 1986, the perceived risk of using cocaine in general showed no further change in 1991 among seniors and actually showed some (nonsignificant) decline in 1992. Perceived risk for crack in particular actually dropped in 1991 and still remains below its 1990 peak level–perhaps due to much less public attention being paid to the drug. The earlier rise in student disapproval of cocaine use stalled in 1992.

  Through 1989, there was no decline in perceived availability; in fact, it rose steadily after 1984 suggesting that decreased availability played no role in bringing about the substantial downturn in use. After 1989, however, perceived availability fell some among seniors, which may be explained by the greatly reduced proportions of seniors who say they have any friends who use, since friendship circles are an important part of the supply system. Eighth and tenth graders reported a significant increase in the availability of crack and other cocaine in 1992.

[3]Unless otherwise specified, all references to "cocaine" refer to the use of cocaine in any form, including crack.

As with all the illicit drugs, lifetime cocaine prevalence climbs with age, exceeding 30% by age 27. Unlike all of the other illicit drugs, active use–i.e., annual prevalence or monthly prevalence–also climbs substantially after high school.

- The annual prevalence of ***marijuana*** use among seniors continued its long decline, and fell significantly to the lowest level since the study began (22%, down 2 percentage points from 1991 and down by more than half from a peak level of 51% in 1979). College students and young adults, although at much lower levels of marijuana use than in earlier years, did not show a decline in annual prevalence in 1992 (even though their lifetime rates continued to drop). Their increases of about 1.3 percentage points in annual prevalence (to 28% and 25%, respectively) were not statistically significant, but the increase of 1.0 percentage point among eighth graders (to 7.2%) was.

- ***Daily marijuana*** use remained unchanged for all five populations. Still, the current rates are dramatically lower than in earlier years, down by more than eight-tenths among seniors (to 1.9% vs. 10.7% in the peak year of 1978) and by nearly eight-tenths among college students (to 1.6% from our first reading of 7.2% in 1980).

- In the last couple of years we noted an increase in the use of ***LSD***–a drug of the late 1960s and early 1970s–among college students and young adults. In 1992, all five populations showed an increase in annual prevalence of LSD use though only the one-year increase among eighth graders (from 1.7% to 2.1%) was statistically significant. The 1989-1992 increase for college students is from 3.4% to 5.7%, and for young adults is from 2.7% to 4.3%. While these are not yet dramatic changes they certainly appear to be real and they certainly challenge the notion that "all's well on the drug front." Among seniors in 1992 there was a significant decline of 4.3 percentage points in the proportion seeing great risk associated with trying LSD and a two percentage point decline (nonsignificant) in the proportion disapproving it. Since LSD was one of the earliest drugs popularly used in the overall American drug epidemic, there is a distinct possibility that young people–particularly the youngest cohorts, like the eighth graders–are not as concerned about the risks of use. They have had less opportunity to learn vicariously about the consequences of use by others around them, or to learn from intense media coverage of the issue. This type of "generational forgetting" could set the stage for a whole new epidemic of use.

- The ***inhalants*** constitute another class of abusable substance which bears careful watching. This class of drugs is defined by the form of the substance and its mode of administration–fumes or gases which are inhaled to get high. It includes common household substances such as glues, aerosols, butane, solvents, and so on. One

class of inhalants, ***amyl and butyl nitrites***, became somewhat popular in the late 1970s, but their use has been almost eliminated. For example, annual prevalence among twelfth grade students was 6.5% in 1979 but only 0.5% in 1992.

When the nitrites are removed from consideration, it appears that all other inhalants taken together have had an upward trend in use, from 3.0% among seniors in 1976 to 6.9% in 1990 (and 6.2% in 1992). It appears from the retrospective usage data supplied by twelfth grade students that the increase in inhalant use (unadjusted to include the nitrites) also increased at lower grade levels, where inhalant use is more common, during the late 1980s. Between 1991 and 1992 eighth and tenth grade students showed a nonstatistically significant rise in annual prevalence. Some 10% of the 1992 eighth graders and 8% of the tenth graders indicated use in the prior 12 months, making inhalants the most widely used class of illicitly used drugs for eighth graders and the third most widely used (after marijuana and stimulants) for the tenth graders. The inhalants can and do cause death, and tragically, this often occurs among youngsters in their early teens.

- Prescription-controlled ***stimulants***–one of the most widely used classes of drugs taken illicitly (i.e., outside of medical regimen)–continued their long-term decline among twelfth graders, college students, and young adults, although declines among the latter two groups have become very small because of their low levels of use. Since 1982, annual prevalence has fallen from 20% to 7% among seniors and from 21% to 4% among college students. Annual prevalence is also 4% among young adults, down from 11% in 1986, the first year data were available for 19-28 year olds. However, tenth graders, who have an 8% annual prevalence, showed no change in use, and eighth graders, who have a 7% annual prevalence, showed some increase. (The increase of 0.3 percentage points in eighth grade students' annual use was not significant, but the 30-day increase of 0.7 percentage points was.)

- The annual prevalence among seniors of over-the-counter ***stay-awake pills***, which usually contain caffeine as their active ingredient, nearly doubled in eight years, from 12% in 1982 to 23% in 1990. Since 1990 this statistic has fallen back some to 20% in 1992. Increases also occurred among the college-age young adult population (ages 19-22), where annual prevalence had been as high as 26% in 1989, but is now down to 16% in 1992.

  The other two classes of nonprescription stimulants–the ***look-alikes*** and the over-the-counter ***diet pills***–have also shown some fall-off among both seniors and young adults in recent years. Still, among seniors some 23% of the females have tried diet pills by the end of

senior year, 12% have used them in the past year, and 6% in just the past month.

- ***PCP*** use among seniors fell sharply, from an annual prevalence of 7.0% in 1979 to 2.2% in 1982. It reached a low point of 1.2% in 1988, increased a bit to 2.4% in 1989, and then fell back to 1.4% by 1992. For the young adults, the annual prevalence rate is now only 0.3%.

- The annual prevalence of ***heroin*** use has been very steady since 1979 among seniors at 0.5% to 0.6%. (Earlier, it had fallen from 1.0% in 1975.) It stands at 0.6% in 1992. The heroin statistics for young adults and college students also have remained quite stable in recent years at low rates (about 0.1% to 0.2%). Eighth and tenth graders have about the same annual prevalence as twelfth graders (0.7% and 0.6%, respectively) which is probably due to the fact that the eventual dropouts are captured in the lower grades but not in twelfth grade. The rates in eighth and tenth grades remained unchanged in 1992.

  It is noteworthy that the perceived availability of heroin has risen considerably between 1986 (when 22% of seniors said it would be fairly easy to get) and 1992 (when 35% said the same), yet there has been no change in self-reported use in this population.

- The use of ***opiates other than heroin*** had been fairly level over most of the life of the study. Seniors had an annual prevalence rate of 4% to 6% since 1975. However, in 1991 the first recent significant decline was observed (from 4.5% to 3.5%) although no further changes occurred in 1992. Young adults in their twenties have generally shown a very gradual decline from 3.1% in 1986 to 2.5% in 1992; college students have likewise shown a slow decrease, from 3.8% in 1982-1984 to 2.7% in 1991-1992. Data are not reported for younger grade levels because we believe the students are not accurately discriminating among the drugs which should be included or excluded from this class.

- A long and substantial decline, which began in 1977, has occurred for ***tranquilizer*** use among high school seniors. Annual prevalence now stands at 2.8% compared to 11% in 1977. For the young adult sample, annual prevalence has now declined to 3.4% and for the college student sample to 2.9%. In 1992, this decline continued only among seniors, with no significant changes for the other four populations.

- The long-term gradual decline in ***barbiturate*** use, which began at least as early as 1975, when the study began, halted in 1988; the annual prevalence among seniors fell to 3.2%, compared to 10.7% in

1975. (It stands at 2.8% in 1992.) Annual prevalence of this class of sedative drugs is even lower among the young adult sample (1.6%), and lower still among college students specifically (1.4%). For these groups there has been no further change since 1988. As with the opiates other than heroin, we do not include data here for lower grades because we believe the younger students have more problems with the proper classification of relevant drugs.

- ***Methaqualone***, another sedative drug, has shown quite a different trend pattern than barbiturates. Its use rose steadily among seniors from 1975 to 1981, when annual prevalence reached 8%. It then fell rather sharply to 0.5% by 1991 and remains at 0.6% in 1992. Use also fell among all young adults and among college students, which had annual prevalence rates of only 0.3% and 0.2%, respectively in 1989–the last year in which they were asked about this drug. In recent years, shrinking availability may well have played a role in this drop, as legal manufacture and distribution of the drug ceased. Because of its very low usage rates, only the seniors are now asked about their use of this drug.

- In sum, five classes of illicitly used drugs which have had an impact on appreciable proportions of young Americans in their late teens and twenties are ***marijuana***, ***cocaine***, ***stimulants***, ***LSD***, and ***inhalants***. In 1992, high school seniors showed annual prevalence rates of 22%, 3%, 7%, 6%, and 6%, respectively. Among college students in 1992, the comparable annual prevalence rates are 28%, 3%, 4%, 6%, and 3%; and for all high school graduates one to ten years past high school (young adults) the rates are 25%, 6%, 4%, 4%, and 2%. It is worth noting that LSD has climbed in the rankings because it either has not declined, or in some cases has increased, during a period in which cocaine, amphetamines, and other drugs have declined appreciably. The ***inhalants*** have become relatively more important for similar reasons.

  Clearly, cocaine is relatively more important in the older age group and inhalants are relatively more important in the younger ones. In fact, inhalants are the most widely used of the illicit drugs in eighth grade.

College-Noncollege Differences

- American college students (defined here as those respondents one to four years past high school who were actively enrolled full-time in a two- or four-year college) show annual usage rates for a number of drugs which are about average for their age group, including ***any illicit drug***, ***marijuana*** specifically (although their rate of ***daily marijuana use*** is about two-thirds what it is for the rest of their age group, i.e., 1.6% vs. 2.4%), ***inhalants***, ***hallucinogens***, ***heroin***,

LSD, ***opiates other than heroin***, and ***tranquilizers***. For several categories of drugs, however, college students have rates of use which are below those of their age peers, including ***any illicit drug other than marijuana***, ***cocaine***, ***crack*** cocaine specifically, ***stimulants***, and ***barbiturates***. They actually have a slightly higher rate of use for ***MDMA*** or "ecstasy."

Since college-bound seniors had below average rates of use on all of these illicit drugs while they were in high school, their eventually attaining parity on many of them reflects some closing of the gap. As results from the study published elsewhere have shown, this college effect of "catching up" is largely explainable in terms of differential rates of leaving the parental home and of getting married. College students are more likely to have left the parental home and less likely to have gotten married than their age peers.

- In general, the trends since 1980 in illicit substance use among American college students have been found to parallel those of their age peers not in college. That means that for most drugs there has been a decline in use over the interval. Further, all young adult high school graduates through age 28, as well as college students taken separately, show trends which, for the most part, are highly parallel to the trends among high school seniors, although declines in the active use of many of the drugs over the past half decade have been proportionately larger in these two older populations than among high school seniors.

Male-Female Differences

- Regarding sex differences in three populations (seniors, college students, and young adults), males are more likely to use ***most illicit drugs***, and the differences tend to be largest at the higher frequency levels. ***Daily marijuana use*** among high school seniors in 1992, for example, is reported by 2.8% of males vs. 1.0% of females; among all young adults by 3.6% of males vs. 1.3% of females; and among college students, specifically, by 2.6% of males vs. 0.8% of females. The only exceptions to the rule that males are more frequently users of illicit drugs than females occur for ***stimulant*** and ***tranquilizer*** use in high school, where females are at the same level or slightly higher. The sexes also attain near parity on stimulant and tranquilizer use among the college and young adult populations.

- In the eighth and tenth grade samples, however, there are fewer sex differences in the use of drugs–perhaps because the girls tend to date older boys who are in age groups considerably more likely to use drugs. There is little male-female difference in eighth and tenth grades, for example, in the use of ***inhalants***, ***cocaine***, and ***crack***.

As with the older age groups, ***stimulant*** and ***tranquilizer*** use are actually higher among females.

TRENDS IN ALCOHOL USE

Several findings about alcohol use in these age groups are noteworthy. First, despite the fact that it is illegal for virtually all high school students and most college students to purchase alcoholic beverages, experience with alcohol is almost universal among them (69% of eighth graders have tried it, 82% of tenth graders, 88% of twelfth graders, and 92% of college students) and active use is widespread. Most important, perhaps, is the widespread occurrence of occasions of heavy drinking–here measured by the percent reporting five or more drinks in a row at least once in the prior two-week period. Among eighth graders this statistic stands at 13%, among tenth graders at 21%, among twelfth graders at 28%, and among college students at 41%. After the early twenties this behavior recedes some as is reflected by the 34% found in the entire young adult sample.

- During the period of recent decline in the use of marijuana and other *illicit* drugs there does not appear to have been any "displacement effect" in terms of an increase in ***alcohol*** use among seniors. (It was not uncommon to hear such a displacement hypothesis asserted.) If anything, the opposite seems to be true. Since 1980, the monthly prevalence of alcohol use among seniors has gradually declined, from 72% in 1980 to 51% in 1992. ***Daily use*** declined from a peak of 6.9% in 1979 to 3.4% in 1992; and the prevalence of drinking ***five or more drinks in a row*** during the prior two-week interval fell from 41% in 1983 to 28% in 1992–nearly a one-third decline.

  In 1992 statistically significant declines occurred in all of the populations, except eighth graders, in the prevalence of drinking in the prior 30-days, i.e., in "current prevalence." There were also declines, though none were statistically significant, in the binge drinking rate for all but the eighth grade population. Eighth graders showed increases on both measures, though they were not statistically significant.

College-Noncollege Differences

- The data from college students show a quite different pattern than high school seniors in relation to alcohol use. They show less drop-off in monthly prevalence since 1980 (82% to 71% in 1992) and slightly less decline in ***daily use*** (6.5% in 1980 to 3.7% in 1992). There has also been little change in ***occasions of heavy drinking***, which is at 41% in 1992–higher than the 28% among high school seniors. Since both their noncollege-age peers and high school seniors have been showing a net decrease in occasions of heavy drinking since 1980, the college students stand out in having

maintained a very high rate of binge or party drinking. Since the college-bound seniors in high school are consistently *less* likely to report occasions of heavy drinking than the noncollege-bound, this reflects their "catching up and passing" their peers after high school.

- In most of these surveys from 1980 onward, college students have had a ***daily drinking*** rate (3.7% in 1992) which is slightly lower than that of their age peers (4.0% in 1992), suggesting that they are slightly more likely to confine their drinking to weekends, on which occasions they tend to drink a lot. Again, college men have much higher rates of daily drinking than college women: 4.8% vs. 2.8%. The rate of daily drinking has fallen considerably among the noncollege group from 8.7% in 1981 to 4.0% in 1992, compared to a drop from 4.1% to 3.7% in the college population.

Male-Female Differences

- Quite substantial sex differences remain among high school seniors in the prevalence of ***occasions of heavy drinking*** (20% for females vs. 36% for males in 1992); generally this difference has been diminishing very gradually for more than a decade.

- Very substantial sex differences also remain in alcohol use among college students, and young adults generally, with males drinking more. For example, 51% of college males report having ***five or more drinks in a row*** over the previous two weeks vs. 33% of college females. However, there has been little change in the differences between 1980 and 1992.

TRENDS IN CIGARETTE SMOKING

A number of important findings have emerged from the study concerning cigarette smoking among American adolescents and young adults. During late adolescence sizeable proportions of young people establish regular cigarette habits, despite the demonstrated health risks associated with smoking. In fact, since this study began in 1975, cigarettes have consistently comprised the class of substance most frequently used on a daily basis by high school students.

- While the ***daily smoking*** rate for seniors did drop considerably between 1977 and 1981 (from 29% to 20%), it has dropped very little during the intervening eleven years (by another 3.1%, to 17.2%) despite the appreciable downturn which has occurred in most other forms of drug use (including alcohol) during this period, and despite all the adverse publicity and restrictive legislation addressed to the subject during the 1980's. The proportion of seniors who perceive "great risk" to the user of suffering physical (or other) harm from pack-a-day smoking has risen only 5.5% since 1980 (to 69% in 1992).

Nearly a third of seniors still do not feel there is a great risk associated with smoking.

- The story may be even more troublesome at the lower grade levels. While we do not have long-term trends from eighth and tenth graders, their ***current smoking*** rates were up, if anything, (though not significantly) in the past year to 16% and 22%, respectively. Of particular concern, only 51% of the eighth-grade students and 59% of the tenth-grade students think that a pack-a-day smoker runs a great risk of harm from that behavior. This fact suggests that the health message has not reached American youngsters at the ages when most of the eventual smokers first initiate smoking. Further, there is no indication of any increase in perceived risk (or of disapproval) of smoking in these age groups. Given that cigarette smoking is the greatest preventable cause of death and disease in the country, the need for a more intense and effective prevention effort aimed at younger children is clearly very great.

Age and Cohort-Related Differences

- Initiation of daily smoking most often occurs in grades 6 through 9 (i.e., at modal ages 11-12 to 14-15), with rather little further initiation after high school, although a number of light smokers make the transition to heavy smoking in the first two years after high school. Analyses presented in this volume and elsewhere have shown that cigarette smoking shows a clear "cohort effect." That is, if a class (or birth) cohort establishes an unusually high rate of smoking at an early age relative to other cohorts, it is likely to remain high throughout the life cycle.

- As we reported in the chapter, "Other Findings from the Study" in the 1986 volume in this series, 53% of the half-pack-a-day (or more) smokers in senior year said that they had tried to quit smoking and found they could not. Of those who were daily smokers in high school, nearly three-quarters were daily smokers 7 to 9 years later (based on the 1985 survey), despite the fact that in high school only 5% of them thought they would "definitely" be smoking 5 years hence. Clearly, the smoking habit is established at an early age; it is difficult to break for those young people who have it; and young people greatly overrate their own ability to quit. And with the addition of eighth and tenth grade students to the study, we now know that younger children are even more likely than older ones to underestimate the dangers of smoking.

College-Noncollege Differences

- A striking difference exists between college-bound and noncollege-bound high school seniors in terms of smoking rates. For

example, smoking half-pack or more a day is nearly three times as prevalent among the noncollege-bound (19% vs. 7%). Among respondents one to four years past high school, those not in college show the same dramatically higher rate of smoking compared to college students, with half-pack-a-day smoking standing at 21% and 9%, respectively.

Male-Female Differences

- Since 1980, among college students, females have had slightly higher probabilities of being daily smokers. This long-standing sex difference has not been true of their age peers who are not in college.

RACIAL/ETHNIC COMPARISONS

While we have published articles elsewhere on ethnic differences in drug use, this is only the second volume in this series to include prevalence and trend data for the three largest ethnic groupings–whites, blacks, and Hispanics taken as a group. (Sample size limitations simply do not allow finer subgroup breakdowns unless many years are combined.) Further, 1991 was the first year in which we had data on eighth and tenth graders, for whom ethnic comparisons would be less likely to be affected by differential dropout rates among the three groups than would be true for seniors. A number of interesting findings emerge in these comparisons, and the reader is referred to Chapters 4 and 5 of Volume I for a full discussion of them.

- Black seniors have consistently shown lower usage rates on most drugs, licit and illicit, than white students; and we now know that this also is true at the lower grade levels. In some cases, the differences are quite large.

- Black students have a much lower prevalence of ***daily cigarette smoking*** than white students (4% vs. 21% in senior year) because their smoking rate continued to decline after 1983, while the rate for whites stabilized.

- In twelfth grade, ***binge drinking*** is much less likely to be reported by black students (11%) than by white (32%) or Hispanic students (31%).

- In twelfth grade, of the three groups, whites have the highest rates of use on a number of drugs, including ***inhalants, hallucinogens, LSD*** specifically, ***barbiturates, amphetamines, tranquilizers, opiates other than heroin***, and ***cigarettes***. In 1992 ***marijuana*** and ***alcohol*** usage rates are about equivalent for whites and Hispanics, but whites have previously had the highest rates on these drugs, as well.

- However, Hispanics have the highest usage rates in senior year for a number of the most dangerous drugs: ***cocaine, crack, other cocaine, heroin***, and ***steroids***. Further, in eighth grade, Hispanics have the highest rates not only on these drugs, but on many of the others. For example, in eighth grade, the lifetime prevalence for Hispanics, whites, and blacks is 19%, 10%, and 7% for ***marijuana***; 20%, 18%, and 10% for ***inhalants***; 6%, 4%, and 1% for ***hallucinogens***; 51%, 46%, and 32% for ***cigarettes***; and 20%, 13%, and 10% for ***binge drinking*** in the past two weeks. In other words, Hispanics have the highest rates of use for nearly all drugs in eighth grade, but not in twelfth, which suggests that their considerably higher dropout rate (compared to whites and blacks) may change their relative ranking by twelfth grade. Hispanics also could have a tendency to begin use earlier, but so far we have found no evidence to support this hypothesis.

- With regard to trends, seniors in all three racial/ethnic groups exhibited the recent decline in ***cocaine*** use, although black seniors, who did not show as large an increase in use in earlier years, therefore did not have as large a decline in later ones.

- For virtually ***all of the illicit drugs***, the three groups have tended to trend in parallel. Because white seniors had achieved the highest level of use on a number of drugs–including ***stimulants, barbiturates, methaqualone***, and ***tranquilizers***–they also had the largest declines; blacks have had the lowest rates, and therefore, the smallest declines.

- Important racial/ethnic differences in ***cigarette smoking*** have emerged among seniors during the life of the study. In the late 70's, the three groups were fairly similar in their smoking rates; all three mirrored the general decline in smoking from 1977-1981. Since 1981, however, a considerable divergence has emerged: Smoking rates have declined very little for whites and Hispanics, but the rates for blacks continued to decline steadily. As a result, in 1992, the smoking rates for blacks are about one-fifth to one-third those for whites.

DRUG USE IN EIGHTH GRADE

It may be useful to focus specifically on the youngest age group in the study–the eighth graders–who are about 13 to 14 years old, because the exceptional level of use that they already have attained helps illustrate the urgent need this country has to continue to address the problems of substance abuse among its young.

- By eighth grade 69% of youngsters report having tried ***alcohol*** and more than a quarter (27%) say they have already been drunk at least once.

- ***Cigarettes*** have been tried by nearly half of eighth graders (45%) and 16%, or one in seven, say they have smoked in the prior month. Only 51% say they think there is great risk associated with being a pack-a-day smoker.

- ***Smokeless tobacco*** has been tried by 34% of the male eighth graders, is used currently by 13% of them, and is used daily by 3.4%. Rates are far lower among the female eighth graders.

- Among eighth graders, more than one in every six (17%) have used ***inhalants*** and 5% say they have used in the past month. This is the only class of drugs for which current use is substantially higher in eighth grade than in tenth or twelfth grade (see Table 1).

- ***Marijuana*** has been tried by one in every nine eighth graders (11%), and has been used in the prior month by 4%.

- A surprisingly large number say they have tried prescription-type ***stimulants*** (11%) one in thirty (3%) say they have used them in the prior 30 days.

- Consistent with the retrospective reports from seniors, which have been included in this series of reports in previous years, relatively few of today's eighth graders say they have tried most of the other illicit drugs yet.

  But the proportions having at least some experience with them still is not inconsequential: ***tranquilizers*** (4.1%), ***LSD*** (3.2%), ***other hallucinogens*** (1.7%), ***crack*** (1.6%), ***other cocaine*** (2.4%), ***heroin*** (1.4%), and ***steroids*** (1.7% overall, and 2.6% among males.)

- The very large numbers who have already begun use of the so-called "gateway drugs" (tobacco, alcohol, inhalants, and marijuana) suggests that a substantial number of eighth grade students are already at risk of proceeding further along the fairly orderly progression of involvement.

SUMMARY AND CONCLUSIONS

To summarize the findings on trends, over the last decade or so there have been appreciable declines in the use of a number of the ***illicit drugs*** among seniors, and even larger declines in their use among American college students and young adults more generally. However, as we have previously warned, the stall in these favorable trends in all three populations in

1985, as well as an increase in active ***cocaine*** use that year, should have served as a reminder that these improvements are not inevitable and cannot be taken for granted.

While the general decline resumed in 1986 and, most importantly, was joined by the start of a decline in ***cocaine*** use in 1987 and ***crack*** use in 1988, in 1992 a number of alarm bells are sounding. Although the seniors continued to show improvement on a number of measures in 1992, the college students and young adults did not. Perhaps of greater importance, the eighth graders exhibited a significant increase in ***marijuana, cocaine, LSD***, and ***hallucinogens other than LSD***, as well as a not-quite significant increase in ***inhalant*** use. (In fact, all five populations showed some increase on ***LSD***, continuing a longer term trend for college students and young adults.)

As this study has demonstrated over the years, changes in perceived risk and disapproval have been important causes of the downturns which have occurred in the use of a number of drugs. These beliefs and attitudes surely are in turn influenced by the amount and nature of the public attention being paid to the drug issue. The fact that this attention has declined so substantially in the past couple of years may help to explain why there seems to be little further change in perceived risk and disapproval among the seniors, and some clear backsliding among the eighth graders. (There is even some backsliding among the seniors.)

Of particular concern here is not only the possibility that there may be an increase in the use of particular drugs like LSD and inhalants, but that we may be seeing the beginning of a turnaround in the drug abuse situation more generally among our youngest cohorts–perhaps because they have not had the same opportunities for vicarious learning from the adverse drug experiences of people around them and people children learn about through the media. Clearly there is a danger that "generational forgetting" is beginning to occur–that as the drug epidemic subsides, newer cohorts experience fewer opportunities to learn informally about the dangers of drugs. This may mean that the nation must redouble its efforts to be sure that they learn these lessons through more formal means–from schools, parents, and focused messages in the media, for example–and that this more formalized prevention effort become institutionalized so that it will endure for the long term in order to reach replacement cohorts and generations.

Lest there be any doubt that plenty of problems remain, even without any general resurgence of drug use among the youngest cohorts, the following facts should be noted:

- By their late twenties, over 75% of America's young adults today have tried an ***illicit drug***, including over 50% who have tried some ***illicit drug other than*** (usually in addition to) ***marijuana***. Even for high school seniors these proportions still stand at 41% and 25%, respectively.

- By age 27, over 30% of young Americans have tried ***cocaine***; and as early as the senior year of high school 6% have done so. Roughly one in every forty seniors (2.6%) have tried the particularly dangerous form of cocaine called ***crack***: in the young adult sample one in twenty (5.1%) have tried it.

- Some 1.9% of high school seniors in 1992 smoke ***marijuana daily***, as do slightly more young adults aged 19 to 28 (2.3%). Among seniors in 1992, 8.4% had been daily marijuana smokers at some time for at least a month, and among young adults the comparable figure is 15%.

- Some 28% of seniors have had ***five or more drinks in a row*** at least once in the prior two weeks, and such behavior tends to increase among young adults one to four years past high school. The prevalence of such behavior among male college students reaches 51%.

- Some 28% of seniors are current ***cigarette*** smokers and 17% already are current daily smokers. In addition, many of the lighter smokers will convert to heavy smoking after high school. For example, more than one in every five of the young adult sample aged 19 to 28 is a daily smoker (21%).

Thus, despite the improvements in recent years, it is still true that this nation's secondary school students and young adults show a level of involvement with illicit drugs which is greater than has been documented in any other industrialized nation in the world. Even by longer-term historical standards in this country, these rates remain extremely high. Heavy drinking also remains widespread and troublesome; and certainly the continuing initiation of large proportions of America's young people to cigarette smoking is a matter of the greatest public health concern.

Finally, we note the seemingly unending capacity of pharmacological experts and amateurs to discover new substances with abuse potential that can be used to alter mood and consciousness, as well the potential for our young people to "discover" the abuse potential of existing products, like Robitussin™, and to "rediscover" older drugs, such as LSD. While as a society we have made significant progress on a number of fronts in the fight against drug abuse, we must continually be preparing for, and remaining vigilant against, the opening of new fronts, as well as the reemergence of trouble on older ones.

Unlike youth in the 1950s and early 1960s, today's young people are aware of a wide range of substances they can use to alter mood and consciousness, and they will continue to have access through highly elaborated supply systems. This means that active counterforces must be in place to prevent the burgeoning of any new epidemics, as well as to continue to reduce levels of use in the current one.

TABLE 1

Trends in Prevalence of Various Drugs for Five Populations: 8th, 10th, 12th Graders, College Students, and Young Adults (Ages 19–28)

	Lifetime			Annual			30-Day			Daily		
	1991	1992	'91–'92 change	1991	1992	'91–'92 change	1991	1992	'91–'92 change	1991	1992	'91–'92 change
Any Illicit Drug[a]												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	44.1	40.7	–3.4ss	29.4	27.1	–2.3ss	16.4	14.4	–2.0ss	—	—	—
College Students	50.4	48.8	–1.7	29.2	30.6	+1.3	15.2	16.1	+0.9	—	—	—
Young Adults	62.2	60.2	–2.1s	27.0	28.3	+1.3	15.1	14.8	–0.2	—	—	—
Any Illicit Drug[b] Other Than Marijuana												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	26.9	25.1	–1.8s	16.2	14.9	–1.3	7.1	6.3	–0.8	—	—	—
College Students	25.8	26.1	+0.3	13.2	13.1	–0.1	4.3	4.6	+0.3	—	—	—
Young Adults	37.8	37.0	–0.8	14.3	14.1	–0.2	5.4	5.5	+0.1	—	—	—
Marijuana/Hashish												
8th Grade	10.2	11.2	+1.0s	6.2	7.2	+1.0s	3.2	3.7	+0.5	0.2	0.2	0.0
10th Grade	23.4	21.4	–2.0	16.5	15.2	–1.3	8.7	8.1	–0.6	0.8	0.8	0.0
12th Grade	36.7	32.6	–4.1sss	23.9	21.9	–2.0s	13.8	11.9	–1.9s	2.0	1.9	–0.1
College Students	46.3	44.1	–2.2	26.5	27.7	+1.2	14.1	14.6	+0.6	1.8	1.6	–0.2
Young Adults	58.6	56.4	–2.2s	23.8	25.2	+1.4	13.5	13.3	–0.2	2.3	2.3	0.0
Inhalants[c,d]												
8th Grade	17.6	17.4	–0.2	9.0	9.5	+0.5	4.4	4.7	+0.3	0.2	0.3	+0.1
10th Grade	15.7	16.6	+0.9	7.1	7.5	+0.4	2.7	2.7	0.0	0.1	0.1	0.0
12th Grade	17.6	16.6	–1.0	6.6	6.2	–0.4	2.4	2.3	–0.1	0.2	0.1	–0.1
College Students	14.4	14.2	–0.1	3.5	3.1	–0.4	0.9	1.1	+0.2	—	—	—
Young Adults	14.1	13.9	–0.2	2.2	1.9	–0.3	0.6	0.7	+0.1	*	*	0.0
Hallucinogens[b,d]												
8th Grade	3.2	3.8	+0.6s	1.9	2.5	+0.6ss	0.8	1.1	+0.3s	0.1	0.1	0.0
10th Grade	6.1	6.4	+0.3	4.0	4.3	+0.3	1.6	1.8	+0.2	*	0.1	+0.1
12th Grade	9.6	9.2	–0.4	5.8	5.9	+0.1	2.2	2.1	–0.1	0.1	0.1	0.0
College Students	11.3	12.0	+0.7	6.3	6.8	+0.5	1.2	2.3	+1.1s	—	—	—
Young Adults	16.0	15.9	–0.1	4.6	5.1	+0.5	1.2	1.6	+0.4	0.0	0.0	0.0
LSD												
8th Grade	2.7	3.2	+0.5s	1.7	2.1	+0.4s	0.6	0.9	+0.3s	*	*	0.0
10th Grade	5.6	5.8	+0.2	3.7	4.0	+0.3	1.5	1.6	+0.1	*	0.1	+0.1
12th Grade	8.8	8.6	–0.2	5.2	5.6	+0.4	1.9	2.0	+0.1	0.1	0.1	0.0
College Students	9.6	10.6	+1.0	5.1	5.7	+0.6	0.8	1.8	+1.0s	—	—	—
Young Adults	13.5	13.8	+0.3	3.8	4.3	+0.5	0.8	1.1	+0.3	0.0	0.0	0.0
PCP[e]												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	2.9	2.4	–0.5	1.4	1.4	0.0	0.5	0.6	+0.1	0.1	0.1	0.0
College Students	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	3.1	2.0	–1.2	0.3	0.3	0.0	0.1	0.2	0.0	*	0.0	0.0
Hallucinogens Other than LSD												
8th Grade	1.4	1.7	+0.3	0.7	1.1	+0.4ss	0.3	0.4	+0.1	*	*	0.0
10th Grade	2.2	2.5	+0.3	1.3	1.4	+0.1	0.4	0.5	+0.1	*	*	0.0
12th Grade	3.7	3.3	–0.4	2.0	1.7	–0.3	0.7	0.5	–0.2	*	*	0.0
College Students	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—
Ecstasy[f]												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—
College Students	2.0	2.9	+0.9	0.9	2.0	+1.1	0.2	0.4	+0.2	—	—	—
Young Adults	3.2	3.9	+0.7	0.8	1.0	+0.3	0.1	0.3	+0.1	0.0	0.0	0.0

(Table continued on next page)

TABLE 1 (continued)

Trends in Prevalence of Various Drugs for Five Populations: 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

	Lifetime			Annual			30-Day			Daily		
	1991	1992	'91–'92 change	1991	1992	'91–'92 change	1991	1992	'91–'92 change	1991	1992	'91–'92 change
Cocaine												
8th Grade	2.3	2.9	+0.6s	1.1	1.5	+0.4s	0.5	0.7	+0.2	0.1	*	0.0
10th Grade	4.1	3.3	–0.8s	2.2	1.9	–0.3	0.7	0.7	0.0	0.1	*	0.0
12th Grade	7.8	6.1	–1.7ss	3.5	3.1	–0.4	1.4	1.3	–0.1	0.1	0.1	0.0
College Students	9.4	7.9	–1.5	3.6	3.0	–0.6	1.0	1.0	–0.1	*	0.0	0.0
Young Adults	21.0	19.5	–1.4s	6.2	5.7	–0.5	2.0	1.8	–0.2	0.1	*	0.0
Crack												
8th Grade	1.3	1.6	+0.3	0.7	0.9	+0.2	0.3	0.5	+0.2s	*	*	0.0
10th Grade	1.7	1.5	–0.2	0.9	0.9	0.0	0.3	0.4	+0.1	*	*	0.0
12th Grade	3.1	2.6	–0.5	1.5	1.5	0.0	0.7	0.6	–0.1	0.1	0.1	0.0
College Students	1.5	1.7	+0.2	0.5	0.4	–0.1	0.3	0.1	–0.2	—	—	—
Young Adults	4.8	5.1	+0.3	1.2	1.4	+0.2	0.4	0.4	0.0	*	*	0.0
Other Cocaine[g]												
8th Grade	2.0	2.4	+0.4	1.0	1.2	+0.2	0.5	0.5	0.0	*	*	0.0
10th Grade	3.8	3.0	–0.8ss	2.1	1.7	–0.4	0.6	0.6	0.0	*	*	0.0
12th Grade	7.0	5.3	–1.7sss	3.2	2.6	–0.6s	1.2	1.0	–0.2	0.1	*	0.0
College Students	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	19.8	18.4	–1.4	5.4	5.1	–0.4	1.8	1.7	–0.1	0.1	*	0.0
Heroin												
8th Grade	1.2	1.4	+0.2	0.7	0.7	0.0	0.3	0.4	+0.1	*	*	0.0
10th Grade	1.2	1.2	0.0	0.5	0.6	+0.1	0.2	0.2	0.0	*	*	0.0
12th Grade	0.9	1.2	+0.3	0.4	0.6	+0.2	0.2	0.3	+0.1	*	*	0.0
College Students	0.5	0.5	0.0	0.1	0.1	0.0	0.1	0.0	–0.1	—	—	—
Young Adults	0.9	0.9	0.0	0.1	0.2	0.0	*	0.1	0.0	0.0	*	0.0
Ice[f]												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	3.3	2.9	–0.4	1.4	1.3	–0.1	0.6	0.5	–0.1	0.1	0.1	+0.1
College Students	1.3	0.6	–0.7	0.1	0.2	0.0	0.0	0.0	0.0	—	—	—
Young Adults	2.9	2.2	–0.7	0.3	0.4	+0.1	*	0.1	+0.1	0.0	0.0	0.0
Other Opiates												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	6.6	6.1	–0.5	3.5	3.3	–0.2	1.1	1.2	+0.1	0.1	*	0.0
College Students	7.3	7.3	0.0	2.7	2.7	+0.1	0.6	1.0	+0.4	—	—	—
Young Adults	9.3	8.9	–0.4	2.5	2.5	0.0	0.6	0.7	+0.1	*	*	0.0
Stimulants												
8th Grade	10.5	10.8	+0.3	6.2	6.5	+0.3	2.6	3.3	+0.7s	0.1	0.1	+0.1
10th Grade	13.2	13.1	–0.1	8.2	8.2	0.0	3.3	3.6	+0.3	0.1	0.1	0.0
12th Grade	15.4	13.9	–1.5s	8.2	7.1	–1.1s	3.2	2.8	–0.4	0.2	0.2	0.0
College Students	13.0	10.5	–2.5s	3.9	3.6	–0.2	1.0	1.1	+0.1	0.1	0.0	–0.1
Young Adults	22.4	20.2	–2.1ss	4.3	4.1	–0.1	1.5	1.5	0.0	0.1	0.1	0.0
Tranquilizers												
8th Grade	3.8	4.1	+0.3	1.8	2.0	+0.2	0.8	0.8	0.0	*	*	0.0
10th Grade	5.8	5.9	+0.1	3.2	3.5	+0.3	1.2	1.5	+0.3	*	*	0.0
12th Grade	7.2	6.0	–1.2s	3.6	2.8	–0.8s	1.4	1.0	–0.4s	0.1	*	–0.1
College Students	6.8	6.9	+0.1	2.4	2.9	+0.4	0.6	0.6	0.0	—	—	—
Young Adults	11.8	11.3	–0.5	3.5	3.4	–0.1	0.9	1.0	+0.1	0.0	*	0.0
Nitrites[e]												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.6	1.5	–0.1	0.9	0.5	–0.4	0.4	0.3	–0.1	0.2	0.1	–0.1
College Students	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	1.4	1.2	–0.2	0.2	0.1	–0.1	*	0.1	0.0	*	0.0	0.0
Barbiturates												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	6.2	5.5	–0.7	3.4	2.8	–0.6	1.4	1.1	–0.3	0.1	*	0.0
College Students	3.5	3.8	+0.3	1.2	1.4	+0.2	0.3	0.7	+0.3	—	—	—
Young Adults	8.2	7.4	–0.8	1.8	1.6	–0.2	0.5	0.5	0.0	0.0	*	0.0

(Table continued on next page)

TABLE 1 (continued)

Trends in Prevalence of Various Drugs for Five Populations: 8th, 10th, 12th Graders, College Students, and Young Adults (Ages 19–28)

	Lifetime			Annual			30-Day			Daily		
	1991	1992	'91–'92 change	1991	1992	'91–'92 change	1991	1992	'91–'92 change	1991	1992	'91–'92 change
Alcohol												
Any use												
8th Grade	70.1	69.3	–0.8	54.0	53.7	–0.3	25.1	26.1	+1.0	0.5	0.6	+0.1
10th Grade	83.8	82.3	–1.5	72.3	70.2	–2.1s	42.8	39.9	–2.9ss	1.3	1.2	–0.1
12th Grade	88.0	87.5	–0.5	77.7	76.8	–0.9	54.0	51.3	–2.7s	3.6	3.4	–0.2
College Students	93.6	91.8	–1.8	88.3	86.9	–1.4	74.7	71.4	–3.3s	4.1	3.7	–0.4
Young Adults	94.1	93.4	–0.6	86.9	86.2	–0.8	70.6	69.0	–1.6s	4.9	4.5	–0.4
Been Drunk[f]												
8th Grade	26.7	26.8	+0.1	17.5	18.3	+0.8	7.6	7.5	–0.1	0.1	0.1	0.0
10th Grade	50.0	47.7	–2.3s	40.1	37.0	–3.1sss	20.5	18.1	–2.4ss	0.2	0.3	+0.1
12th Grade	65.4	63.4	–2.0	52.7	50.3	–2.4	31.6	29.9	–1.7	0.9	0.8	–0.1
College Students	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—
5+ drinks in last 2 weeks												
8th Grade	—	—	—	—	—	—	—	—	—	12.9	13.4	+0.5
10th Grade	—	—	—	—	—	—	—	—	—	22.9	21.1	–1.8
12th Grade	—	—	—	—	—	—	—	—	—	29.8	27.9	–1.9
College Students	—	—	—	—	—	—	—	—	—	42.8	41.4	–1.4
Young Adults	—	—	—	—	—	—	—	—	—	34.7	34.2	–0.5
Cigarettes												
Any use												
8th Grade	44.0	45.2	+1.2	—	—	—	14.3	15.5	+1.2	7.2	7.0	–0.2
10th Grade	55.1	53.5	–1.6	—	—	—	20.8	21.5	+0.7	12.6	12.3	–0.3
12th Grade	63.1	61.8	–1.3	—	—	—	28.3	27.8	–0.5	18.5	17.2	–1.3
College Students	—	—	—	35.6	37.3	+1.7	23.2	23.5	+0.3	13.8	14.1	+0.2
Young Adults	—	—	—	37.7	37.9	+0.2	28.2	28.3	+0.1	21.7	20.9	–0.8
1/2pack+/day												
8th Grade	—	—	—	—	—	—	—	—	—	3.1	2.9	–0.2
10th Grade	—	—	—	—	—	—	—	—	—	6.5	6.0	–0.5
12th Grade	—	—	—	—	—	—	—	—	—	10.7	10.0	–0.7
College Students	—	—	—	—	—	—	—	—	—	8.0	8.9	+0.9
Young Adults	—	—	—	—	—	—	—	—	—	16.0	15.7	–0.3
Smokeless Tobacco[h]												
8th Grade	22.2	20.7	–1.5	—	—	—	6.9	7.0	+0.1	1.6	1.8	+0.2
10th Grade	28.2	26.6	–1.6	—	—	—	10.0	9.6	–0.4	3.3	3.0	–0.3
12th Grade	—	32.4	—	—	—	—	—	11.4	—	—	4.3	—
College Students	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—
Steroids[f]												
8th Grade	1.9	1.7	–0.2	1.0	1.1	+0.1	0.4	0.5	+0.1	*	*	0.0
10th Grade	1.8	1.7	–0.1	1.1	1.1	0.0	0.6	0.6	0.0	0.1	*	0.0
12th Grade	2.1	2.1	0.0	1.4	1.1	–0.3	0.8	0.6	–0.2	0.1	0.1	0.0
College Students	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	1.7	1.9	+0.2	0.5	0.4	–0.1	0.2	0.1	–0.1	0.0	0.1	+0.1

NOTE: Level of significance of difference between the two years: s=.05, ss=.01, sss=.001. '—' indicates data not available. '*' indicates less than .05 percent. Any apparent inconsistency between the change estimate and the prevalence estimates for the two years is due to rounding error.

Approx. N: 8th Grade = 17,500 in 1991; 18,600 in 1992
10th Grade = 14,800 in 1991; 14,800 in 1992
12th Grade = 15,000 in 1991; 15,800 in 1992
College Students = 1410 in 1991; 1490 in 1992
Young Adults = 6600 in 1991; 6800 in 1992

Footnotes for Table 1

Note: The young adult sample described in this table is comprised of seniors from the preceding ten classes, i.e. 19-28 year olds who are high school graduates.

[a] Use of "any illicit drugs" includes any use of marijuana, hallucinogens, cocaine, and heroin, or any use of other opiates, stimulants, barbiturates, methaqualone (excluded since 1990), or tranquilizers not under a doctor's orders.

[b] Use of "other illicit drugs" includes any use of hallucinogens, cocaine, and heroin, or any use of other opiates, stimulants, barbiturates, methaqualone (excluded since 1990), or tranquilizers not under a doctor's orders.

[c] Data based on five questionnaire forms in 1991-1992; N is five-sixths of N indicated.

[d] Unadjusted for underreporting of amyl and butyl nitrites.

[e] 12th grade only: Data based on a single questionnaire form; N is one-sixth of N indicated in 1991-1992.

[f] 12th grade only: This drug was asked about in two of the six questionnaire forms. N is one-third of N indicated.

[g] 12th grade only: Data based on four questionnaire forms in 1990-1992; N is four-sixths of N indicated.

[h] Data based on one questionaire form. For 12th graders, N is one-sixth of N indicated. For 8th and 10th graders, N is one-half of N indicated.

Chapter 3

STUDY DESIGN AND PROCEDURES

This chapter presents the research design, sampling plans, and field procedures used in both the in-school surveys of the eighth, tenth, and twelfth grade students, and the follow-up surveys of young adults. Related methodological issues such as response rates, population coverage, and the validity of the measures will also be discussed. We begin with a description of the design which has been used consistently over 18 years to survey high school seniors; then the much more recently instituted design for eighth and tenth graders is described. Finally, the designs for the follow-up surveys of former twelfth graders, and former eighth and tenth graders, are covered.

RESEARCH DESIGN AND PROCEDURES FOR THE SURVEYS OF SENIORS

The data from high school seniors are collected during the spring of each year; data collection began with the class of 1975. Each year's data collection takes place in approximately 125 to 140 public and private high schools selected to provide an accurate representative cross-section of high school seniors throughout the coterminous United States.

The population under study. There are several reasons for choosing the senior year of high school as an optimal point for monitoring the drug use and related attitudes of youth. First, the completion of high school represents the end of an important developmental stage in this society, since it demarcates both the end of universal public education and, for many, the end of living in the parental home. Therefore, it is a logical point at which to take stock of the cumulated influences of these two environments on American youth. Further, the completion of high school represents the jumping-off point from which young people diverge into widely differing social environments and experiences. Finally, there are some important practical advantages to building a system of data collections around samples of high school seniors. The need for systematically repeated, large-scale samples from which to make reliable estimates of change requires that considerable stress be laid on cost efficiency as well as feasibility. The last year of high school constitutes the final point at which a reasonably good national sample of an age-specific cohort can be drawn and studied economically.

The omission of dropouts. One limitation in the design to date has been that it does not include in the target population those young men and women who drop out of high school before graduation–between 15 and 20 percent of each age cohort nationally, according to U.S. Census statistics. The omission of high school dropouts does introduce biases in the estimation of certain characteristics of the entire age group; however, for most purposes, the small proportion of dropouts sets outer limits on the bias. Further, since the bias from missing dropouts should remain just about constant from year to year, their omission should introduce little or no bias in *change* estimates. Indeed, we believe the changes observed over time for those who finish high school are likely to parallel the changes for dropouts in most instances. Appendix 1 in Volume I addresses the likely effects of the exclusion of dropouts on estimates of prevalence of drug use and trends in drug use among the entire age cohort; the reader is referred to it for a more detailed discussion of this issue. In the future, as the

eighth and tenth grade follow-up surveys actually gather data from prospectively defined panels of dropouts, we hope to be able to make direct estimates of the extent to which their omission from the senior samples causes an underestimate for the age group as a whole.

Sampling procedures. A multi-stage random sampling procedure is used for securing the nationwide sample of high school seniors each year. Stage 1 is the selection of particular geographic areas, Stage 2 the selection (with probability proportionate to size) of one or more high schools in each area, and Stage 3 the selection of seniors within each high school. This three-stage sampling procedure has yielded the numbers of participating schools and students shown in Table 2 of Volume I. Sample weights, scaled to sum to the actual sample size are then used in all analyses, which adjust for any differential selection probabilities that may have occurred at any stage.

Questionnaire administration. About ten days before the spring administration, the seniors are given flyers explaining the study. The actual questionnaire administrations are conducted by the local Institute for Social Research representatives and their assistants, following standardized procedures detailed in a project instruction manual. The questionnaires are administered in classrooms during a normal class period whenever possible; however, circumstances in some schools require the use of larger group administrations. Eighth and tenth graders are surveyed between mid-February and mid-May, while twelfth graders are surveyed between mid-March and the end of May.

Questionnaire format. Because many questions are needed to cover all of the topic areas in the study, much of the questionnaire content intended for seniors is divided into six different questionnaire forms which are distributed to participants in an ordered sequence that ensures six virtually identical subsamples. (Five questionnaire forms were used between 1975 and 1988.) 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 environment are contained in only a single form, however, and are thus based on one-sixth as many cases (i.e., approximately 2,700 respondents in 1992) or one-fifth as many cases in 1975-1988 (e.g., approximately 3,300 respondents in 1988). All tables in this report give the sample sizes upon which the statistics are based, stated in terms of weighted numbers of cases (which are roughly equivalent to the actual numbers of cases).

RESEARCH DESIGN AND PROCEDURES FOR THE SURVEYS OF LOWER GRADES

Beginning in 1991 the study was expanded to include nationally representative samples of eighth and tenth grade students. Our intention was to conduct similar surveys on an annual basis and to conduct follow-up surveys of representative sub-samples from each year's sample. The first such follow-ups will be implemented in 1993.

In general, the procedures used for the annual surveys of eighth and tenth grade students closely parallel those used for high school seniors, including the procedures for selecting schools and students, questionnaire administrations, and questionnaire formats. A major exception is that only two different questionnaire forms are used, rather than the six used

with seniors. Identical forms are used for both eighth and tenth grades, and, for the most part, questionnaire content is drawn from the twelfth grade questionnaires. Thus, key demographic variables and measures of drug use and related attitudes and beliefs are generally identical for all three grades. The two forms used in both eighth and tenth grades have a common core (Parts B and C) that parallels the core used in twelfth grade, and each form has somewhat different questions in Parts A and D. Many fewer questions about lifestyles and values are included in these forms than in the twelfth grade forms, in part because we think that many of these attitudes are more likely to be formed by twelfth grade, and therefore are best monitored there. For the national survey of eighth graders, approximately 160 schools are sampled, and approximately 18,000 to 19,000 students are surveyed. For the tenth graders, approximately 125 schools are sampled, and approximately 15,000 students are surveyed.

Our intention is to conduct follow-up surveys at two-year intervals of subsamples of the eighth and tenth graders participating in the study, much as is done with senior follow-up samples. The first such follow-up would be implemented in 1993. This plan has influenced the design of the cross-sectional studies of eighth and tenth graders in two important ways. First, in order to "capture" many of the eighth grade participants two years later in the normal tenth grade cross-sectional study for that year, we select the eighth grade schools by first drawing a sample of high schools and then selecting a sample of their feeder schools which contain eighth graders. This extra stage in the sampling process means that many of the eighth grade participants in, say, the 1991 cross-sectional survey will also be participants in the 1993 cross-sectional survey of tenth graders. Thus, a fair amount of panel data will have been generated with no additional cost.

RESEARCH DESIGN AND PROCEDURES FOR THE FOLLOW-UP SURVEYS OF SENIORS

Beginning with the graduating class of 1976, each senior class is followed up annually after high school on a continuing basis. From the roughly 15,000 to 17,000 seniors originally participating in a given class, a representative sample of 2,400 individuals is chosen for follow-up. In order to ensure sufficient numbers of drug users in the follow-up surveys, those fitting certain criteria of current drug use (that is, those reporting 20 or more uses of marijuana, or any use of any of the other illicit drugs, in the previous 30 days) are selected with higher probability (by a factor of 3.0) than the remaining seniors. Differential weighting is then used in all follow-up analyses to compensate for the differential sampling probabilities. Because those in the drug-using stratum receive a weight of only .33 in the calculation of all statistics to compensate for their overrepresentation, the actual numbers of follow-up cases are somewhat larger than the weighted numbers reported in the tables.

The 2,400 selected respondents from each class are randomly assigned to one of two matching groups of 1,200 each; one group is surveyed on even-numbered calendar years, while the other group is surveyed on odd-numbered years. This two-year cycle is intended to reduce respondent burden, and thus yield a better retention rate across years.

Follow-up procedures. Using information provided by respondents at the time of the senior survey (name, address, phone number, and the name and address of someone who would

always know how to reach them), mail contacts are maintained with those selected for inclusion in the follow-up panels. Newsletters are sent each year, and name and address corrections are requested. The questionnaires are sent by certified mail in mid-April of each year. A check for $5.00, made payable to the respondent, is attached to the front of each questionnaire. Reminder letters and postcards go out at fixed intervals thereafter; finally, those not responding receive a prompting phone call from the Survey Research Center's phone interviewing facility in Ann Arbor. If requested, a second copy of the questionnaire is sent; but no questionnaire content is administered by phone. Most follow-up questionnaires are received by the end of June, though those received by the end of August are still eligible for inclusion.

Panel retention rates. To date the panel retention rates have remained quite high. In the first follow-up after high school, about 80% of the original panel have returned questionnaires. The retention rate reduces with time, as would be expected. The oldest of the panels surveyed in 1992–now 14 years past high school–still has a retention rate of 68%.

Corrections for panel attrition. Since, to a modest degree, attrition is associated with drug use, we have introduced corrections into the prevalence estimates presented here for the follow-up panels. These raise the prevalence estimates from what they would be uncorrected, but only slightly. We believe the resulting estimates to be the most accurate obtainable for the population of high school senior graduates but still low for the age group as a whole, due to the omission of dropouts and absentees from the population covered by the original panels.[4]

Follow-up questionnaire format. The questionnaires used in the follow-up surveys are very much like those used in the senior year. They are optically scanned; they contain a core section on drug use and background and demographic factors common to all forms; and they have questions about a wide range of topics at the beginning and ending sections, many of which are unique to each questionnaire form. Many of the questions asked of seniors are retained in the follow-up questionnaires, and respondents are consistently mailed the same questionnaire form, so that changes over time in their behaviors, attitudes, experiences, and so forth can be measured. Questions specific to high school status and experiences are dropped in the follow-up, of course, and questions relevant to post-high school statuses and experiences are added. Thus, there are questions about college, military service, civilian employment, marriage, parenthood, and so on.

---

[4]The intent of the weighting process is to correct for the effects of differential attrition on follow-up drug use estimates. Different weights are used for different substances. Cigarettes, alcohol, and marijuana each have one weight for every follow-up of each graduating class. The weights are based on the observed differences in the distribution on an index of use of the relevant substance based on the follow-up sample compared to the distribution based on the full base-year sample. For example, the distribution on the index of marijuana use in the 1988 follow-up of approximately 1,000 respondents from the class of 1976 was compared to the original 1976 base-year distribution for the entire participating base-year class of 17,000 respondents; and weights were derived which, when applied to the base-year data for only those participating in the 1988 follow-up, would reproduce the original base-year frequency distribution. A similar procedure is used to determine a weight for all illicits other than marijuana combined. In this case, however, an average weight is derived across graduating classes. Thus, the same weight is applied, for example, to all respondents in the follow-up of 1988, regardless of when they graduated from high school. These weights are then used in the calculation of all prevalence rates based on the follow-up panels.

For most follow-up cohorts, the numbers of cases on single-form questions are only one-fifth the size of the total follow-up sample. The core questions are based on the full sample. Beginning with the Class of 1989, a sixth form was introduced in senior year, so data from the more recent classes will have N's one-sixth the total sample size. In the follow-up studies, single form samples from a cohort are too small to make reliable estimates; therefore, in those cases where they are reported, the data from several adjacent cohorts (and, therefore, age groups) are combined.

REPRESENTATIVENESS AND VALIDITY

School participation. Schools are invited to participate in the study for a two-year period. With very few exceptions, each school from the original sample participating in the first year has agreed to participate for the second. Each year thus far, from 58% to 80% of the high schools invited to participate initially have agreed to do so; for each school refusal, a similar school (in terms of size, geographic area, urbanicity, etc.) is recruited as a replacement.[5] The selection of replacement schools almost entirely removes problems of bias in region, urbanicity, and the like, that might result from certain schools refusing to participate. Other potential biases could be more subtle, however. If, for example, it turned out that most schools with "drug problems" refused to participate, that would seriously bias the sample. And if any other single factor were dominant in most refusals, that also might suggest a source of serious bias. In fact, however, the reasons for a school refusing to participate are varied and are often a function of happenstance events specific to that particular year; only a very small proportion specifically object to the drug content of the survey. Thus we feel quite confident that school refusals have not seriously biased the surveys.

Schools are selected in such a way that half of each year's sample in each grade level is comprised of schools which participated the previous year, and half is comprised of schools which will participate the next year. This staggered half-sample design is used to check on possible errors in the year-to-year trend estimates due to school turnover. For example, separate sets of one-year trend estimates are computed for seniors using first that half-sample of schools which participated in both 1975 *and* 1976, then the half-sample which participated in both 1976 *and* 1977, and so on. Thus, each one-year trend estimate derived in this way is based on a constant set of at least 62 schools. When the resulting trend data (examined separately for each class of drugs) are compared with trends based on the total samples of schools, the results are highly similar, indicating that the trend estimates are little affected by turnover or shifting refusal rates in the school samples. The absolute

[5] Response rates for the junior high and middle schools which produce the eighth grade samples are a little more complicated to calculate. Calculation of the response rates for Monitoring the Future eighth grade schools for 1991 and 1992 is complicated by the fact that they are sampled by "network" (or cluster), based on the high school into which they feed. We first draw a representative sample of tenth grade schools, then sample eighth grade schools from the set of feeder schools to each high school. If there are more than two eighth grade schools feeding into a selected high school, we sample two schools. If either of those schools declines, we replace that school with another school in the same network of feeder schools. If no school in the network agrees to participate, then we count that as a refusal; if only one school in a network agrees to participate, but fails to meet a minimum size criterion of approximately one-third of combined enrollment of the chosen schools, that is also counted as a refusal. If only one of the schools agrees to participate, and that one represents at least one-third the combined enrollment of the chosen schools, then we accept that school, and reweight appropriately. Many networks, of course, have only one feeder eighth grade school in the network, in which case, a school refusal is equivalent to a network refusal. Response rates for the 1991 and 1992 eighth grade by network are: 74% and 69%, respectively.

prevalence estimates for a given year are not as accurate using just the half-sample, however.

Student participation. Completed questionnaires have been obtained from 77% to 86% of all sampled seniors in participating schools each year (see Table 1). Student participation rates for eighth and tenth grades are somewhat higher (90% and 88%, respectively, in 1992). The single most important reason that students are missed is absence from class at the time of data collection; in most cases, it is not workable to schedule a special follow-up data collection for absent students. Students with fairly high rates of absenteeism also report above-average rates of drug use; therefore, there is some degree of bias introduced into the prevalence estimates by missing the absentees. Much of that bias could be corrected through the use of special weighting; however, we decided not to use such a weighting procedure because the bias in overall drug use estimates was determined to be quite small, and because the necessary weighting procedures would have introduced greater variance in the estimates. Appendix A of one of our earlier reports[6] provides a discussion of this point and Appendix I to the present report shows trend and prevalence estimates which would result with corrections for absentees included.

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% of the target sample.

VALIDITY OF THE MEASURES OF SELF-REPORTED DRUG USE

The question always arises whether sensitive behaviors like drug use are honestly reported. Like most studies dealing with sensitive behaviors, we have no direct, totally objective validation of the present measures; however, the considerable amount of inferential evidence that exists strongly suggests that the self-report questions produce largely valid data. A more complete discussion of the contributing evidence which leads to this conclusion may be found in other publications; here we will only briefly summarize the evidence.[7]

First, using a three-wave panel design, we established that the various measures of self-reported drug use have a high degree of reliability–a necessary condition for validity.[8] In essence, this means that respondents were highly consistent in their self-reported behaviors over a three- to four-year time interval. Second, we found a high degree of consistency among logically related measures of use within the same questionnaire administration. Third, the proportion of seniors reporting some illicit drug use by senior year has reached two-thirds of all respondents in peak years and as high as 80% in some follow-up years, which constitutes *prima facie* evidence that the degree of underreporting must be very

[6]Johnston, L.D., O'Malley, P.M., & Bachman, J.G. (1984). *Drugs and American high school students: 1975-1983.* DHHS (ADM) 85-1374. Washington, D.C.: U.S. Government Printing Office.

[7]Johnston, L.D., & O'Malley, P.M. (1985). Issues of validity and population coverage in student surveys of drug use. In B.A. Rouse, N.J. Kozel, & L.G. Richards (Eds.), *Self-report methods of estimating drug use: Meeting current challenges to validity* (NIDA Research Monograph No. 57 (ADM) 85-1402). Washington, D.C.: U.S. Government Printing Office; Johnston, L.D., O'Malley, P.M., & Bachman, J.G. (1984). *Drugs and American high school students: 1975-1983.* DHHS (ADM) 85-1374. Washington, D.C.: U.S. Government Printing Office.

[8]O'Malley, P.M., Bachman, J.G., & Johnston, L.D. (1983). Reliability and consistency in self-reports of drug use. *International Journal of the Addictions, 18,* 805-824.

limited. Fourth, the seniors' reports of use by their unnamed friends–about which they would presumably have less reason to distort–has been highly consistent with self-reported use in the aggregate in terms of both prevalence and trends in prevalence, as will be discussed later in this report. Fifth, we have found self-reported drug use to relate in consistent and expected ways to a number of other attitudes, behaviors, beliefs, and social situations–in other words, there is strong evidence of "construct validity." Sixth, the missing data rates for the self-reported use questions are only very slightly higher than for the preceding nonsensitive questions, in spite of the instruction to respondents to leave blank those drug use questions they felt they could not answer honestly. And seventh, the great majority of respondents, when asked, say they would answer such questions honestly if they were users.

This is not to argue that self-reported measures of drug use are valid in all cases. In the present study we have gone to great lengths to create a situation and set of procedures in which students feel that their confidentiality will be protected. We have also tried to present a convincing case as to why such research is needed. We think the evidence suggests that a high level of validity has been obtained. Nevertheless, insofar as there exists any remaining reporting bias, we believe it to be in the direction of underreporting. Thus, we believe our estimates to be lower than their true values, even for the obtained samples, but not substantially so.

Consistency and the measurement of trends. One further point is worth noting in a discussion of the validity of the findings. The Monitoring the Future project is designed to be sensitive to changes from one time period to another. Accordingly, the measures and procedures have been standardized and applied consistently across each data collection. To the extent that any biases remain because of limits in school and/or student participation, and to the extent that there are distortions (lack of validity) in the responses of some students, it seems very likely that such problems will exist in much the same way from one year to the next. In other words, biases in the survey estimates will tend to be consistent from one year to another, which means that our measurement of *trends* should be affected very little by any such biases. The smooth and consistent nature of most trend curves reported for the various drugs provides rather compelling empirical support for this assertion.

YOUNG ADULTS POST-HIGH SCHOOL

Chapter 4

PREVALENCE OF DRUG USE AMONG YOUNG ADULTS

As described in more detail in the preceding chapter, the Monitoring the Future study conducts ongoing panel studies on representative samples from each graduating class, beginning with the class of 1976. Two matched panels, of roughly 1200 seniors each, are selected from each graduating class–one panel is surveyed every even-numbered year after graduation, the other is surveyed every odd-numbered year. Thus, in a given year, the study encompasses one of the panels from each of the senior classes previously participating in the study. In 1992, this meant that representative samples of the classes of 1978 through 1991–or fourteen previous classes in all–were surveyed by mail. Because the study design calls for an end of biennial follow-ups of these panels after they reach approximately age 32 (i.e., seven follow-ups for each half-panel), the classes of 1976 and 1977 were not included in 1992. They will be surveyed at age 35, and perhaps, at five year intervals thereafter.

In this section we present the results of the 1992 follow-up survey–results which should accurately characterize approximately 85% of young adults in the class cohorts one to fourteen years beyond high school who are high school graduates (modal ages 19 to 32). The high school dropout segment missing from the senior year surveys is, of course, missing from all of the follow-up surveys, as well.

Figures 1 through 19 contain the 1992 *prevalence* data by age, through those respondents fourteen years beyond high school (modal age 32). Later figures contain the *trend* data for each age group, including seniors and graduates who are up to ten years past high school (modal age 28). With the exception of the seniors, age groups have been paired into two-year intervals in both sets of figures in order to increase the number of cases, and thus the reliability, for each point estimate. The trends are based on fairly narrow age bands in order to cover more years. For obvious reasons, trends on the youngest age bands can be calculated for the longest period of time. As the years pass and the class cohorts get older, new age groups are added to the figures.

A NOTE ON LIFETIME PREVALENCE ESTIMATES

In Figures 1 through 19 two different estimates of lifetime prevalence are provided. One estimate is based on the respondent's most recent statement of whether he or she ever used the drug in question (second bar from the left). The other estimate takes into account the respondent's answers regarding lifetime use gathered in *all* of the previous data collections in which he or she participated (the left-most bar). To be categorized as one who has used the drug based on all past answers regarding that drug, the respondent has either (a) to have reported past use in the most recent data collection and/or (b) to have reported some use in his or her lifetime on at least two earlier occasions. Because respondents in the age groups of 18 and 19-20 cannot have their responses adjusted on the basis of two earlier occasions, adjusted prevalences are reported only for ages 21 and older. The first type of estimate is most commonly presented in epidemiological studies, since it can be made based on the data

from a single cross-sectional survey. The latter is possible only when panel data have been gathered and a respondent can be classified as having used a drug at sometime in his or her life, based on earlier answers, even though he or she no longer indicates lifetime use in the most recent survey.

The divergence of these two estimates as a function of age shows that there is more inconsistency as time passes. Obviously, there is more opportunity for inconsistency as the number of data collections increases. Our judgment is that "the truth" lies somewhere between the two estimates: the lower estimate may be depressed by tendencies to forget, forgive, or conceal earlier use, and the upper estimate may include earlier response errors or incorrect definitions of drugs which respondents appropriately corrected in later surveys. It should be noted that a high proportion of those giving inconsistent answers across time had earlier reported having used only once or twice in their lifetime. As we have reported elsewhere, cross-time stability of self-reported usage measures, which take into account the number of occasions of self-reported use, is still very high.[9]

It also should be noted that the divergence between the two lifetime prevalence estimates is greatest for the psychotherapeutic drugs and the derivative index of "use of an illicit drug other than marijuana," which is heavily affected by the psychotherapeutic estimates. We believe this is due to the greater difficulty for respondents in categorizing psychotherapeutic drugs (usually taken in pill form) with a high degree of certainty–especially if they have used them only once or twice. One would expect higher inconsistency across time when the event–and in many of these cases, a single event–is reported with a relatively low degree of certainty at quite different points in time. Those who have gone beyond simple experimentation with one of these drugs would undoubtedly be able to categorize them with a higher degree of certainty. Also, those who have experimented more recently, in the past month or year, should have a higher probability of recall, as well as fresher information for accurately categorizing the drug.

We provide both estimates to make clear that a full use of respondent information provides a possible range for lifetime prevalence estimates, not a single point. However, by far the most important use of the prevalence data is to track *trends* in *current* (as opposed to lifetime) use. Thus, we are much less concerned about the nature of the variability in the lifetime estimates than we might otherwise be. The lifetime prevalence estimates are primarily of importance in showing the degree to which a drug class has penetrated the general population.

PREVALENCE OF DRUG USE AS A FUNCTION OF AGE

For virtually all drugs, available age comparisons show a much higher lifetime prevalence for the older age groups. In fact, figures reach impressive levels among young adults in their early thirties.

---

[9]O'Malley, P.M., Bachman, J.G., & Johnston, L.D. (1983). Reliability and consistency in self-reports of drug use. *International Journal of the Addictions, 18*, 805-824.

- In 1992 the *adjusted* lifetime prevalence figures among 31 to 32 year olds reach 80% for ***any illicit drug***; 64% for ***any illicit drug other than marijuana***; 75% for ***marijuana***; and 41% for ***cocaine***, specifically. *Put another way, among young Americans in the cohorts which graduated high school in 1978 and 1979 only about one-fifth (20%) have never tried an illegal drug.*

  The 1992 survey responses, *unadjusted* for previous answers, show somewhat lower lifetime prevalence: 73% for ***any illicit drug***, 51% for ***any illicit drug other than marijuana***, 71% for ***marijuana***, and 35% for ***cocaine***.

- Despite the higher levels of lifetime use among older age groups, these groups generally show levels of annual or current use which are no higher than such use among high school seniors. In fact, for a number of drugs the levels reported by older respondents are lower, suggesting that the incidence of quitting more than offsets the incidence of initiation after high school.

  In analyses published elsewhere, we looked closely at patterns of change in drug use, and identified some post-high school experiences which contribute to declining levels of annual or current use as respondents grow older. For example, the likelihood of marriage increases with age, and we have found that marriage is consistently associated with declines in ***alcohol*** use in general, ***heavy drinking*** in particular, ***marijuana*** use, and use of ***other illicit drugs***.[10]

- For the use of ***any illicit drug***, lifetime prevalence is 80% among 31 to 32 year olds vs. "only" 41% among the 1992 high school seniors. Annual prevalence, however, is highest among the 19 to 22 year olds (30%) with progressively lower rates among the older age groups (see Figure 1). Current (30-day) prevalence shows little variation across all ages 18 to 32, although again the 19 to 22 year olds have the highest rate (16%).

- A similar pattern exists for ***marijuana***; a higher lifetime prevalence as a function of age, but somewhat lower annual prevalence during the later twenties. Thirty-day prevalence is fairly constant across the age band at 11% to 15% (see Figure 3), and current ***daily marijuana use*** is now between 1% and 3%. (See Table 6).

---

[10]Bachman, J. G., O'Malley, P.M., & Johnston, L. D. (1984). Drug use among young adults: The impacts of role status and social environment. *Journal of Personality and Social Psychology, 47,* 629-645. See also, Bachman, J.G., O'Malley, P.M., Johnston, L.D., Rodgers, W.L., and Schulenberg, J. (1992) *Changes in drug use during the post-high school years.* Monitoring the Future Occasional Paper No. 35. Ann Arbor, MI: Institute for Social Research.

- Statistics on the use of ***any illicit drug other than marijuana*** (Figure 2) have a similar pattern. Like marijuana and the any-illicit-drug-use index, corrected lifetime rates on this index also show an appreciable rise with age, reaching 64% among the 31 to 32 year old age group. Current use is fairly constant at 6% across the age bands 18 to 28, with some fall off beyond that. Annual use, on the other hand, starts to get lower in the age bands after age 24. Most of the drugs which constitute this category show a decline with age in annual prevalence. Thus, the single drug which shows an appreciable increase with age–cocaine–must account for most of the constancy across age observed for this general category.

- Several classes of drugs show rates of current use among the older age groups proportionately much lower than among seniors. For example, annual prevalence rates for ***hallucinogens*** are about 1%-2% among those 27 years old and older, compared to 6% for seniors (Figure 7). For ***stimulants*** lifetime prevalence is again much higher among the older age groups–reflecting the addition of many new initiates in their early twenties (Figure 4). However, active use as reflected in the annual prevalence figure is now lower among the older age groups. This has not always been true; the present pattern is the result of a sharper decline in use among older respondents than has occurred among seniors. These trends are discussed in the next section.

- In 1992, questions on the use of ***crystal methamphetamine*** (ice), are contained in two of the six questionnaire forms. Among the 19 to 32 year old respondents 0.4% reported some use in the prior year–lower than the 1.3% reported by seniors (Figure 15).

- ***Barbiturates*** are similar to stimulants in that lifetime prevalence is appreciably higher in the older ages, but slightly different in that active nonmedical use after high school has always been lower than such use during high school (Figure 11). At present current usage rates are very low in all age groups.

- ***Opiates other than heroin*** show age differences very similar to those seen for barbiturates–somewhat higher lifetime prevalence as a function of age but active nonmedical use consistently the same or lower among post-high school age groups (Figure 12).

- ***Tranquilizer*** use, on the other hand, remains fairly stable for 30-day and annual prevalence rates across the full age band even though lifetime prevalence increases considerably with age (Figure 13).

- ***Cocaine*** presents a unique case among the illicit drugs in that lifetime, annual, and current use are substantially higher among

the older age groups (Figure 5). Annual and current use appear to plateau in the mid-20's and then remain fairly constant through age 32. In 1992, lifetime prevalence by age 31 to 32 was 41% vs. 6% among today's high school seniors, and 13%-15% among the 31 to 32 year old cohorts when they were seniors in 1978-79. Annual prevalence for 31 to 32 year olds today is 6% and 30-day prevalence is 2%–again, higher than for the 1992 seniors. Clearly, cocaine is used much more frequently among people in their twenties than among those in their late teens. This fact continues to distinguish it from all of the other illicit drugs.

- The standard set of three prevalence questions was introduced for ***crack*** use for the first time in 1987 (see Figure 6). In 1992, lifetime prevalence reached 8%-9% among those in their late twenties and early thirties, vs. 2.6% among seniors. However, current prevalence for the follow-up respondents is at or below that for seniors. On average, the follow-up respondents one to fourteen years out of high school have an annual prevalence of 1.3% vs. 1.5% among seniors, and a 30-day prevalence of 0.4% vs. 0.6% among seniors. Taken together these facts suggest that follow-up respondents have a higher rate of noncontinuation than do seniors, as is true for most other drugs.

  As with the senior data, we expect that the omission of high school dropouts is likely to have a greater than average impact on the prevalence estimates for crack.

- In the case of ***alcohol***, all prevalence rates generally increase for the first four years after high school, through age 21 or 22 (Figure 18a). After that, age differences vary slightly for the different prevalence periods. Lifetime prevalence, due to a "ceiling effect," changes very little after age 21 to 22. Current (30-day) use is highest among the 21 to 22 and 23 to 24 year olds and gets progressively lower for each higher age group. Even among the oldest group, 31 to 32, the current usage rate is higher than among 1992 seniors. Current ***daily drinking*** shows no decline after age 23 to 24; it remains fairly constant at 4%-6% through the twenties and early thirties (Figure 18b).

- ***Occasions of heavy drinking*** in the two weeks prior to the survey show the largest differences among the age groups (Figure 18b). The 21 to 22 year olds show the highest prevalence of such heavy drinking (40%) among all respondents; there is a fall-off with each subsequent age group, reaching 24% by ages 31 to 32. There is also a fall-off among ages younger than 21 to 22, dropping to 28% among seniors. We have interpreted this curvilinear relationship as an age-related effect (not a cohort effect), because it seems to replicate across years and different graduating classes, and also because it

has been linked directly to age-related events such as leaving the parental home (which increases heavy drinking) and marriage (which decreases it).[11]

- ***Cigarette smoking*** shows an unusual pattern of age-related differences (Figure 19). On the one hand, current (30-day) smoking is about the same among those in their twenties as among high school seniors, reflecting the fact that relatively few new people are recruited to smoking after high school. On the other hand, smoking at heavier levels–such as smoking daily or smoking half-a-pack daily–is considerably higher among the older age groups, reflecting the fact that many previously moderate smokers move into a pattern of heavier consumption during their twenties.[12] While slightly more than a third of the current smokers in high school smoke at the rate of half-pack a day or more, fully two-thirds of the current smokers in the 31 to 32 age group do so.

- ***MDMA*** (ecstasy) is a drug that has come to the fore fairly recently. In 1989 it was added to two forms only of the follow-up surveys to assess how widespread its use had become among young adults. Questions about its use were not asked of high school students, primarily because we were concerned that its alluring name might have the effect of stimulating interest.

  Relatively few 1992 follow-up respondents report any use of MDMA: among 19 to 32 year olds 3.6% have ever tried it and only 2 in 1000 (0.2%) have used in the prior 30 days (Figure 14). Annual use is highest among 19 to 22 year olds (about 1.8%) vs. older respondents (between 0.0% and 0.8%). Lifetime use also is slightly higher in the early twenties than later, because it is a relatively new drug and because it is more often initiated among those of college age.

- Questions about use of ***steroid***s were added in 1989 to one form only, making it more difficult to determine age-related differences with much accuracy. Overall, 1.6% of 19 to 32 year olds in 1992 reported having used steroids in their lifetime. Annual and 30-day use levels were very low, at 0.3% and 0.1%, respectively. (See Tables 3 to 5).

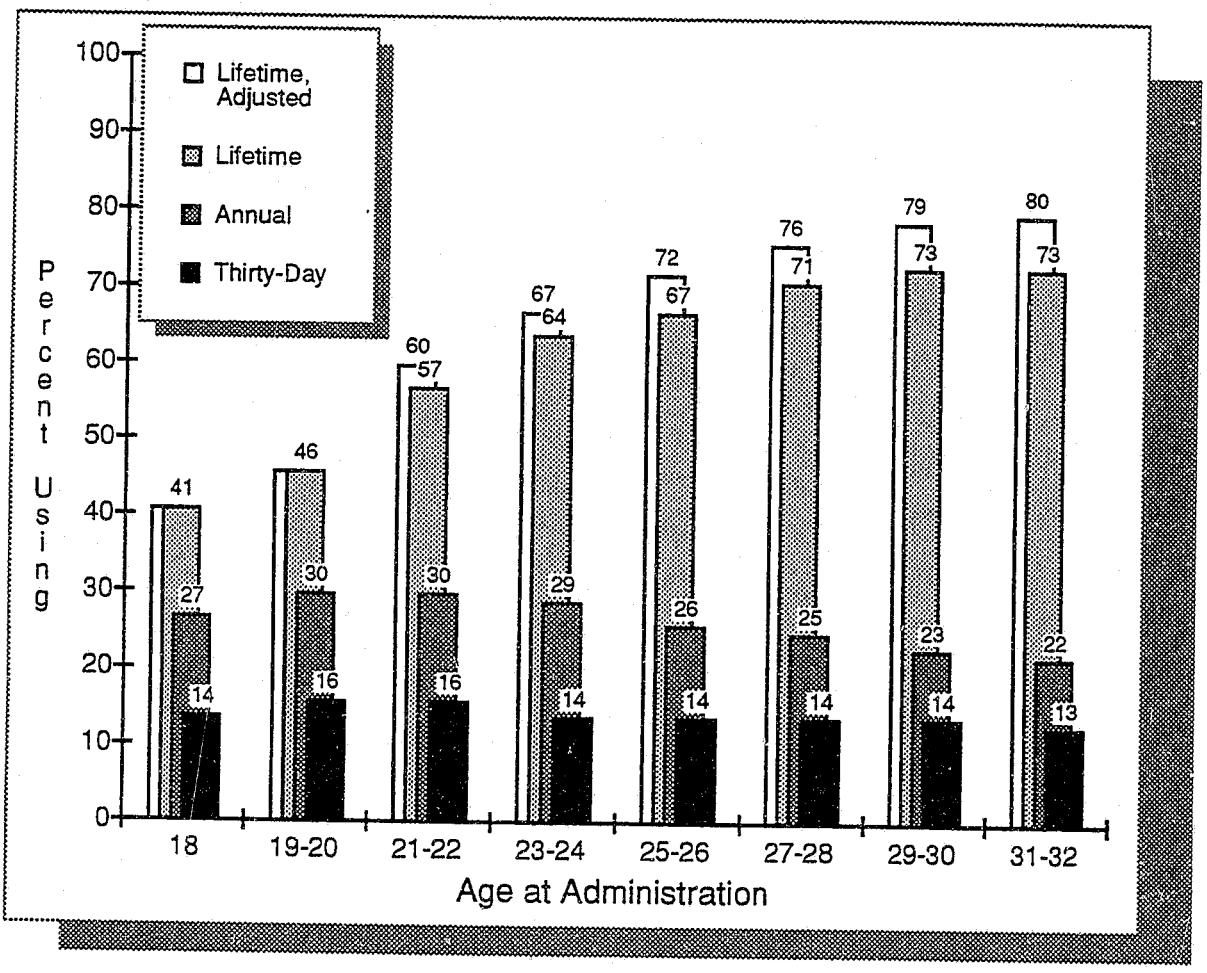
---

[11]O'Malley, P.M., Bachman, J.G., & Johnston, L.D. (1988). Period, age, and cohort effects on substance use among young Americans: A decade of change, 1976-1986. *American Journal of Public Health, 78*, 1315-1321. See also Bachman, O'Malley, & Johnston (1984), *op. cit*; and Bachman, O'Malley, Johnston, Rodgers, & Schulenberg (1992), *op.cit.*

[12]Because age is confounded with class cohort, and because we have established that cigarette smoking shows strong cohort effects (enduring differences among cohorts), one must be careful in interpreting age-related differences in a cross-sectional sample as if they were due only to age effects, i.e., changes with age consistently observable across cohorts. However, multivariate analyses conducted on panel data from multiple cohorts do show a consistent age effect of the type mentioned here (O'Malley, Bachman, & Johnston, (1988), *op. cit.*).

Figure 1

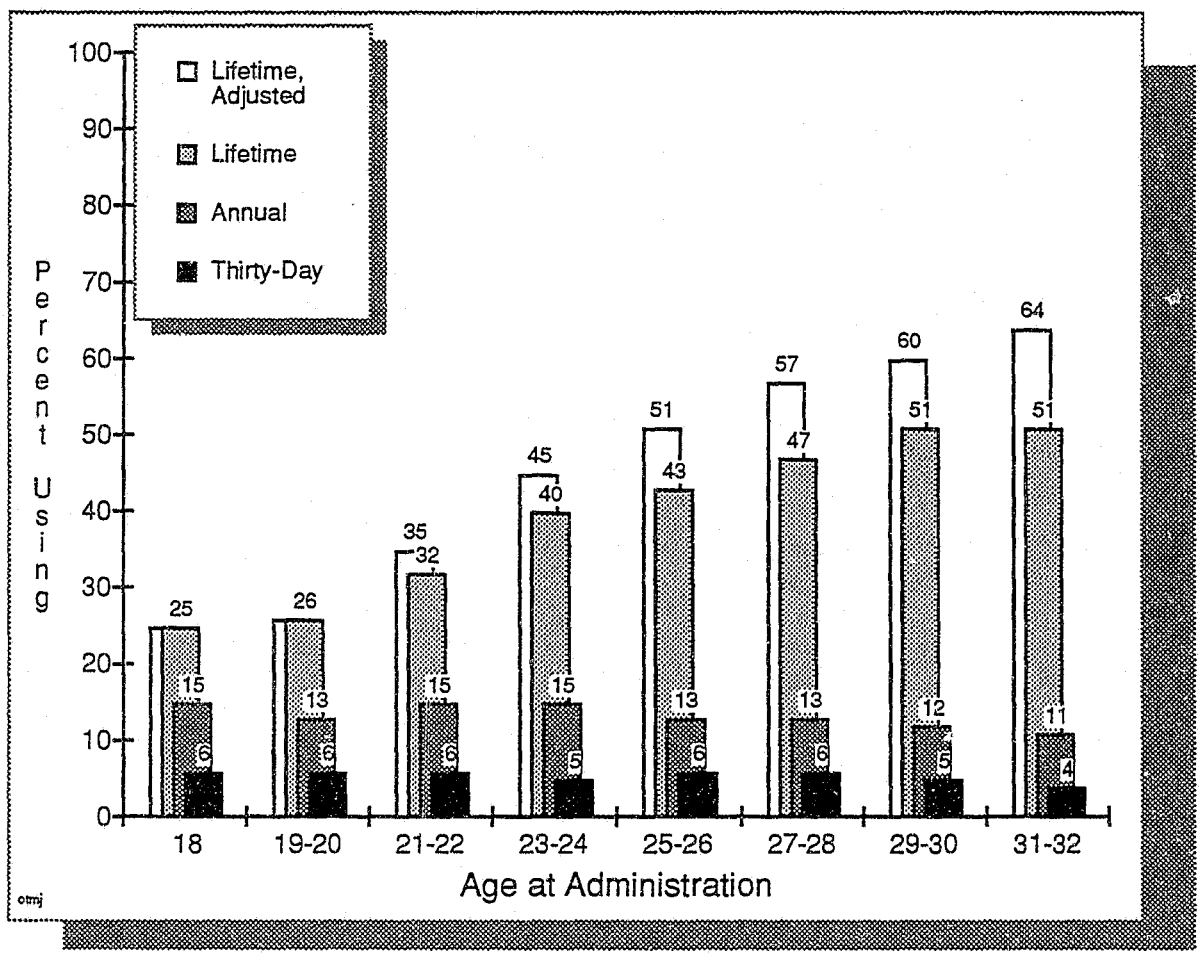
Any Illicit Drug: Lifetime, Annual, and Thirty-Day Prevalence Among Young Adults, 1992
by Age Group



NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

Figure 2

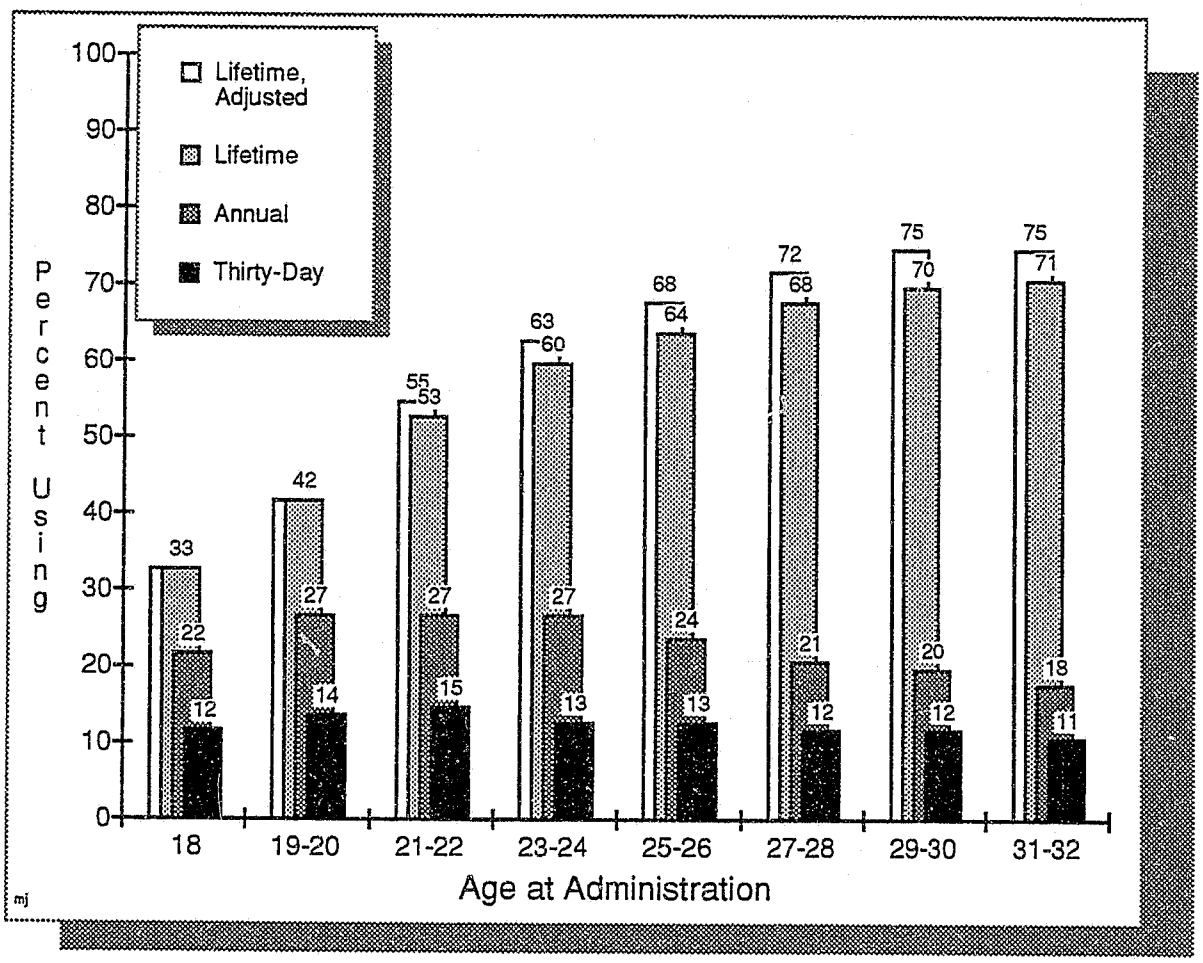
Any Illicit Drug Other than Marijuana: Lifetime, Annual, and Thirty-Day Prevalence Among Young Adults, 1992
by Age Group



NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

Figure 3

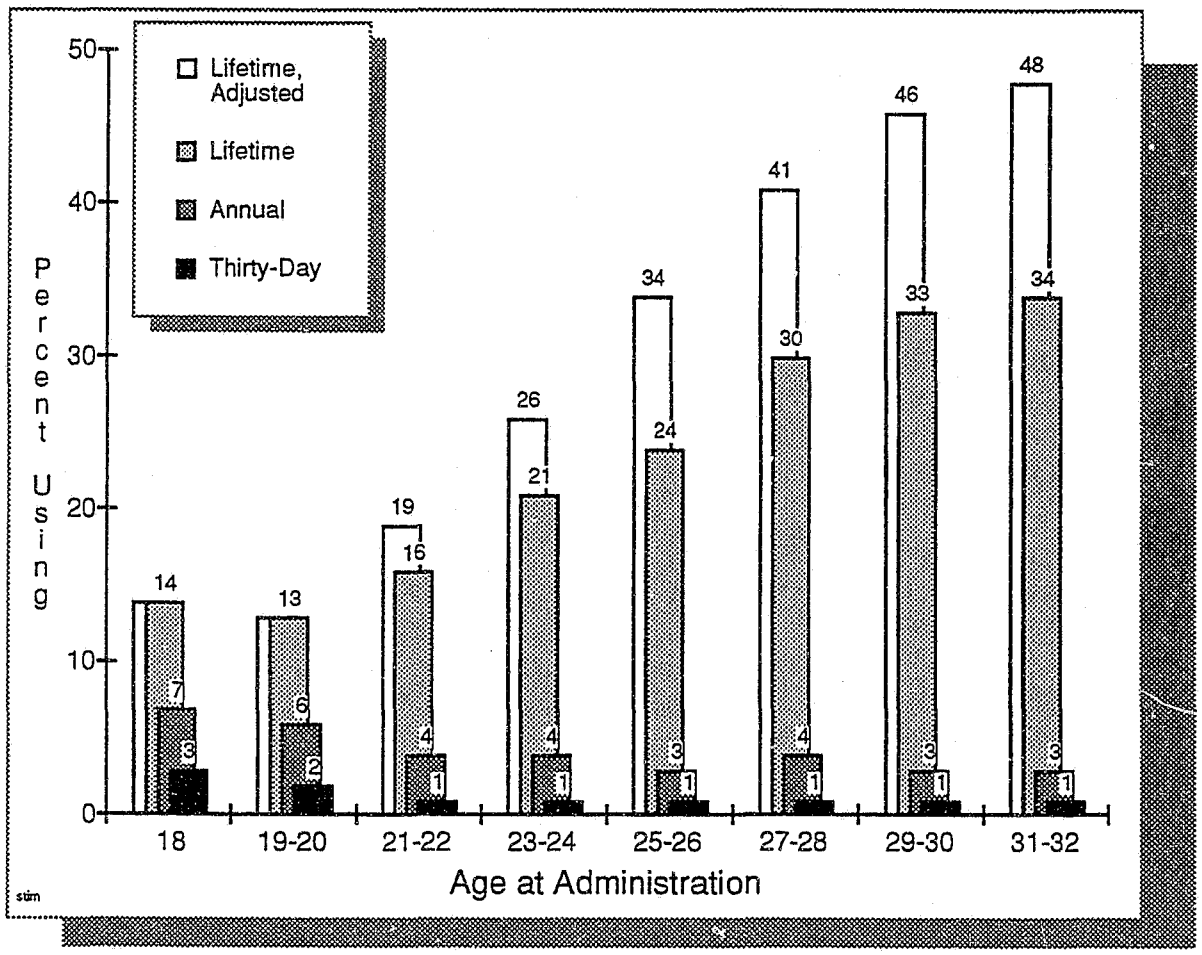
Marijuana: Lifetime, Annual, and Thirty-Day Prevalence Among Young Adults, 1992
by Age Group



NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

Figure 4

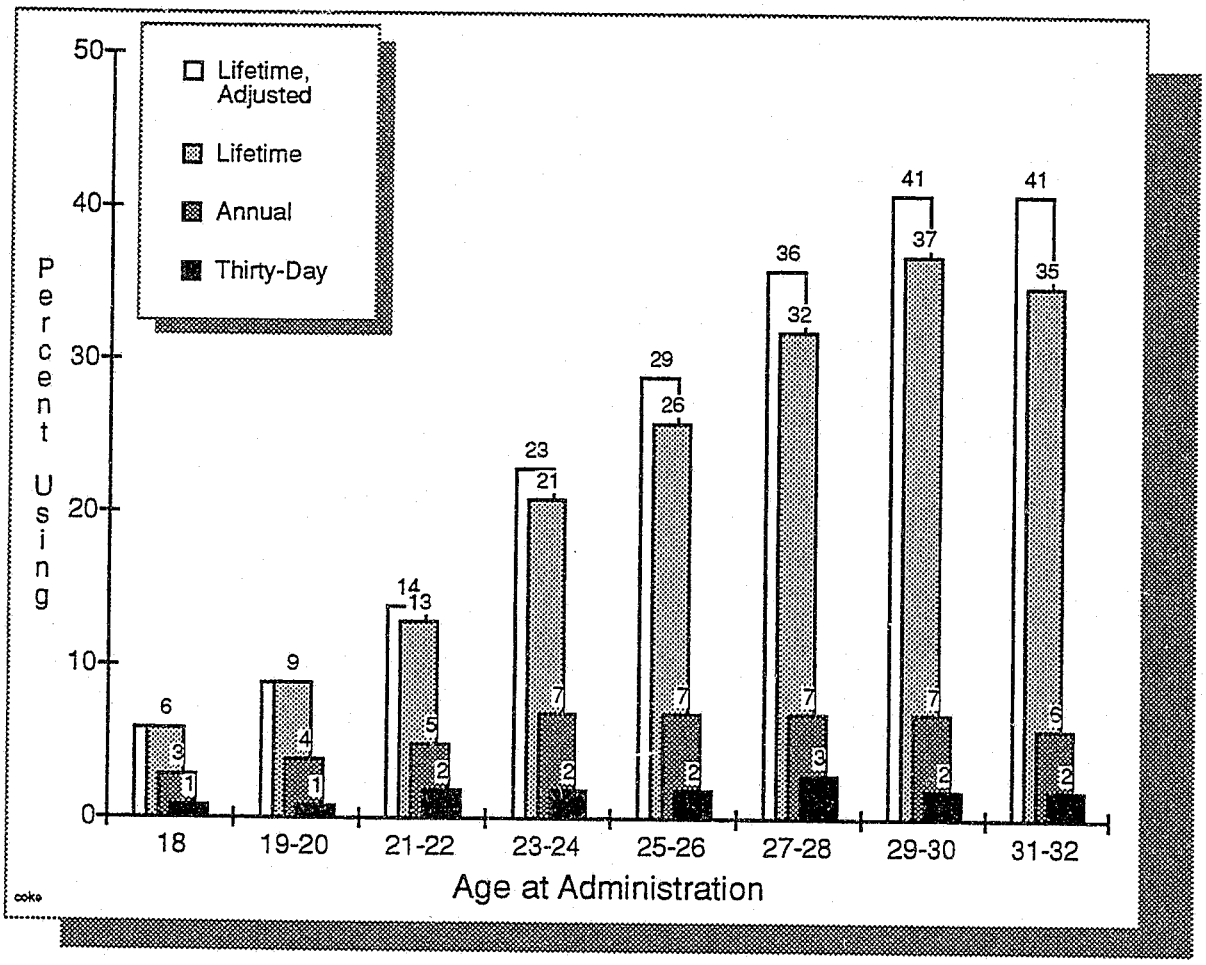
Stimulants: Lifetime, Annual, and Thirty-Day Prevalence Among Young Adults, 1992
by Age Group



NOTES: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion. The divergence between the two lifetime prevalence estimates is due in part to the change in question wording initiated in 1982/1983, which clarified the instruction to omit non-prescription stimulants.

Figure 5

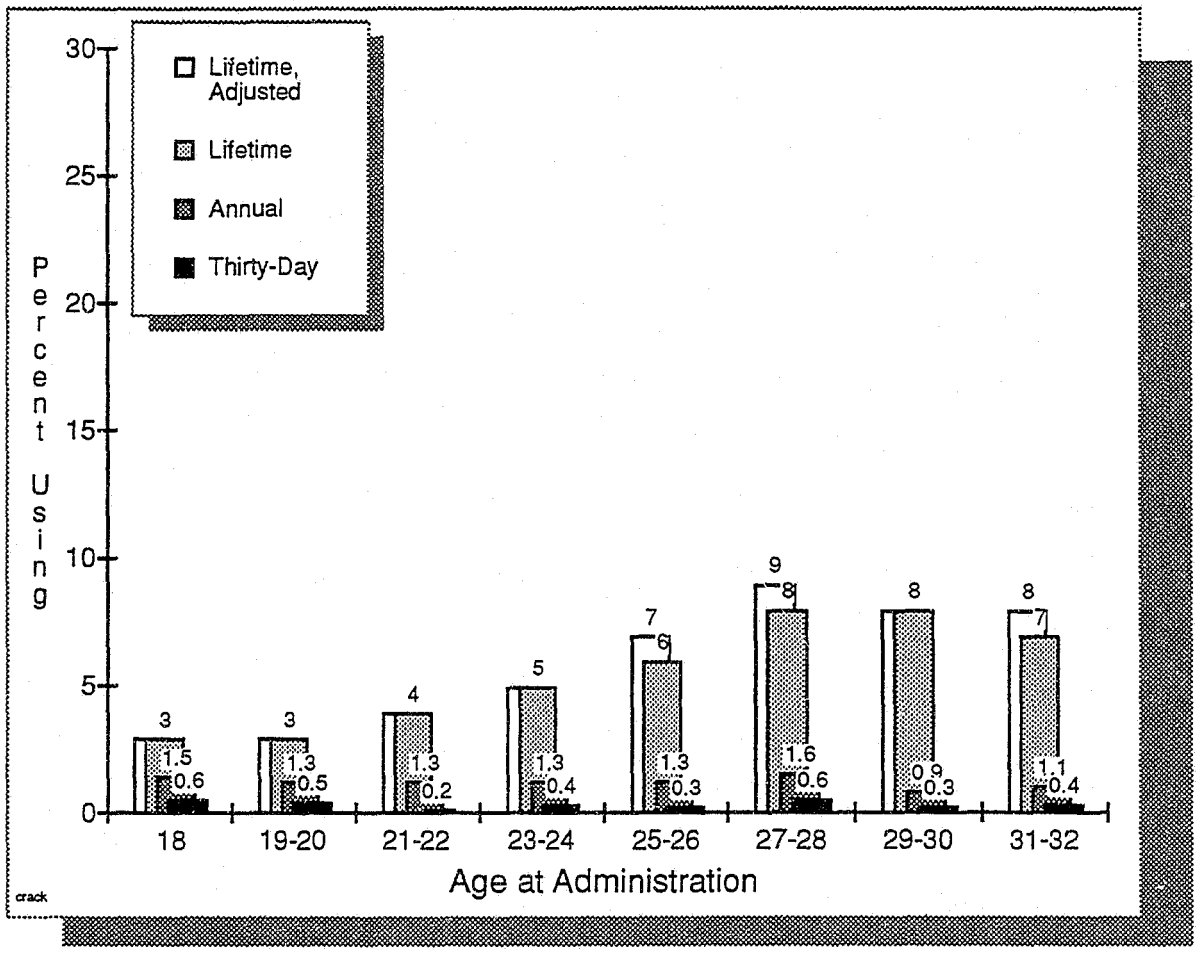
Cocaine: Lifetime, Annual, and Thirty-Day Prevalence Among Young Adults, 1992
by Age Group



NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

Figure 6

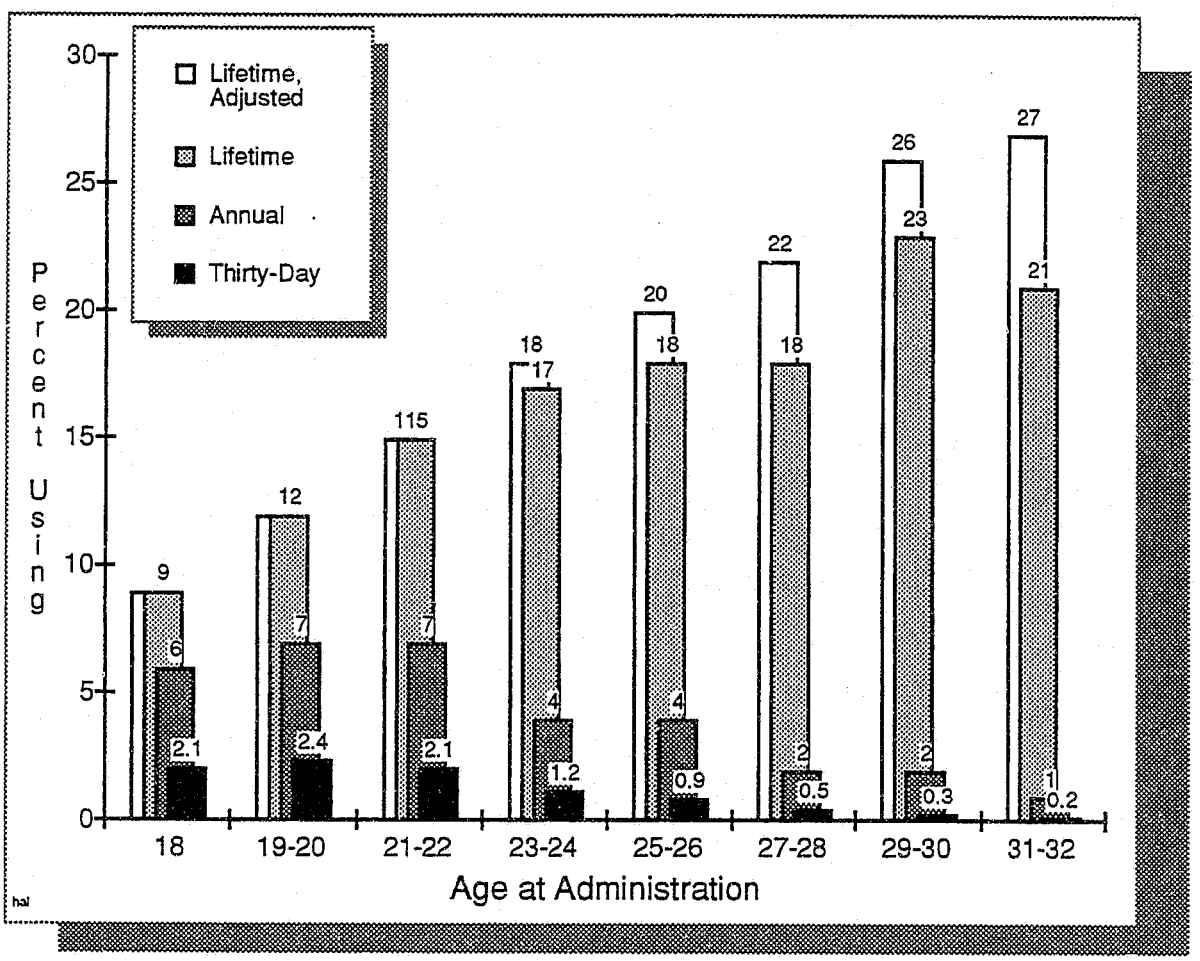
Crack Cocaine: Lifetime, Annual, and Thirty-Day Prevalence Among Young Adults, 1992
by Age Group



NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

Figure 7

Hallucinogens*: Lifetime, Annual, and Thirty-Day Prevalence Among Young Adults, 1992
by Age Group

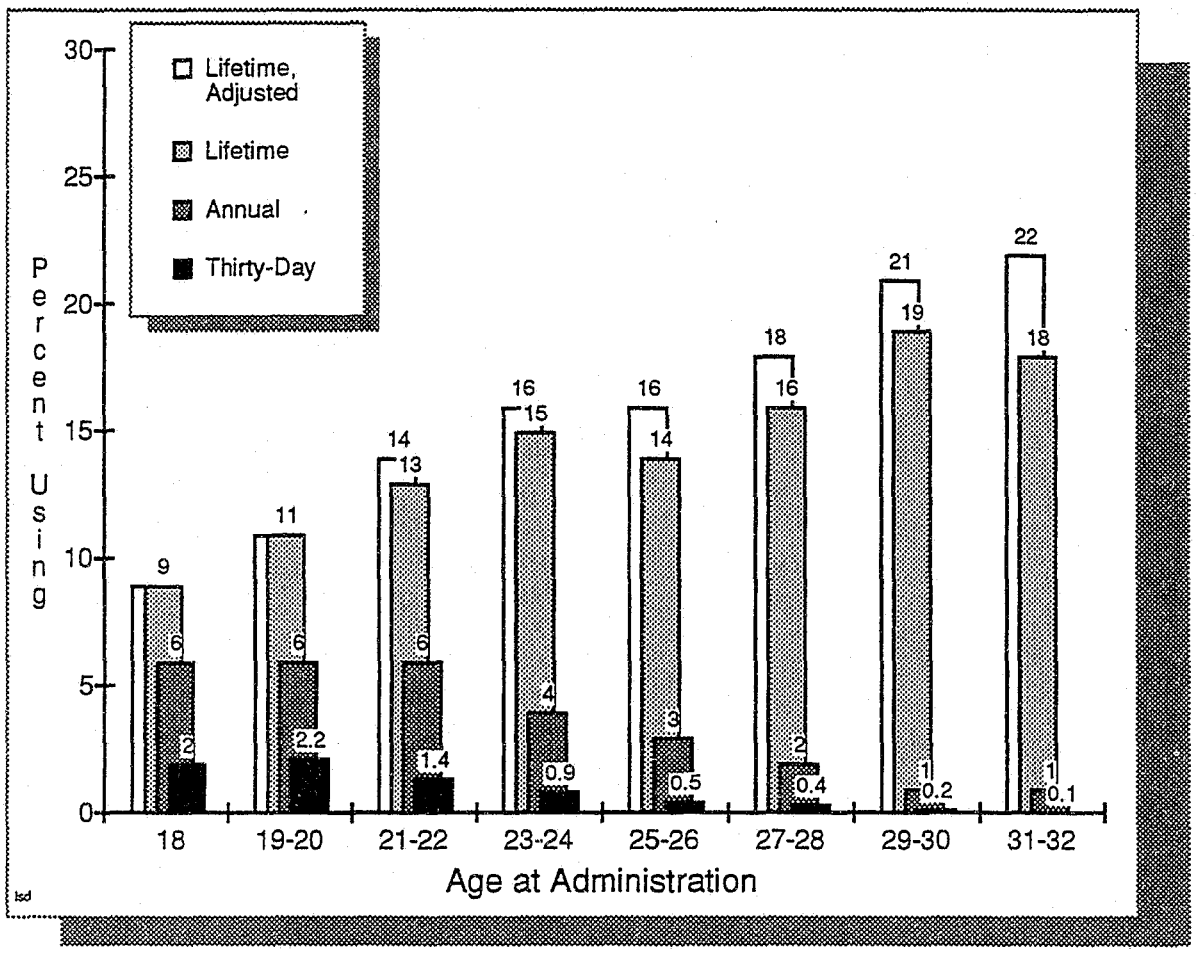


NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

*Unadjusted for the possible underreporting of PCP.

Figure 8

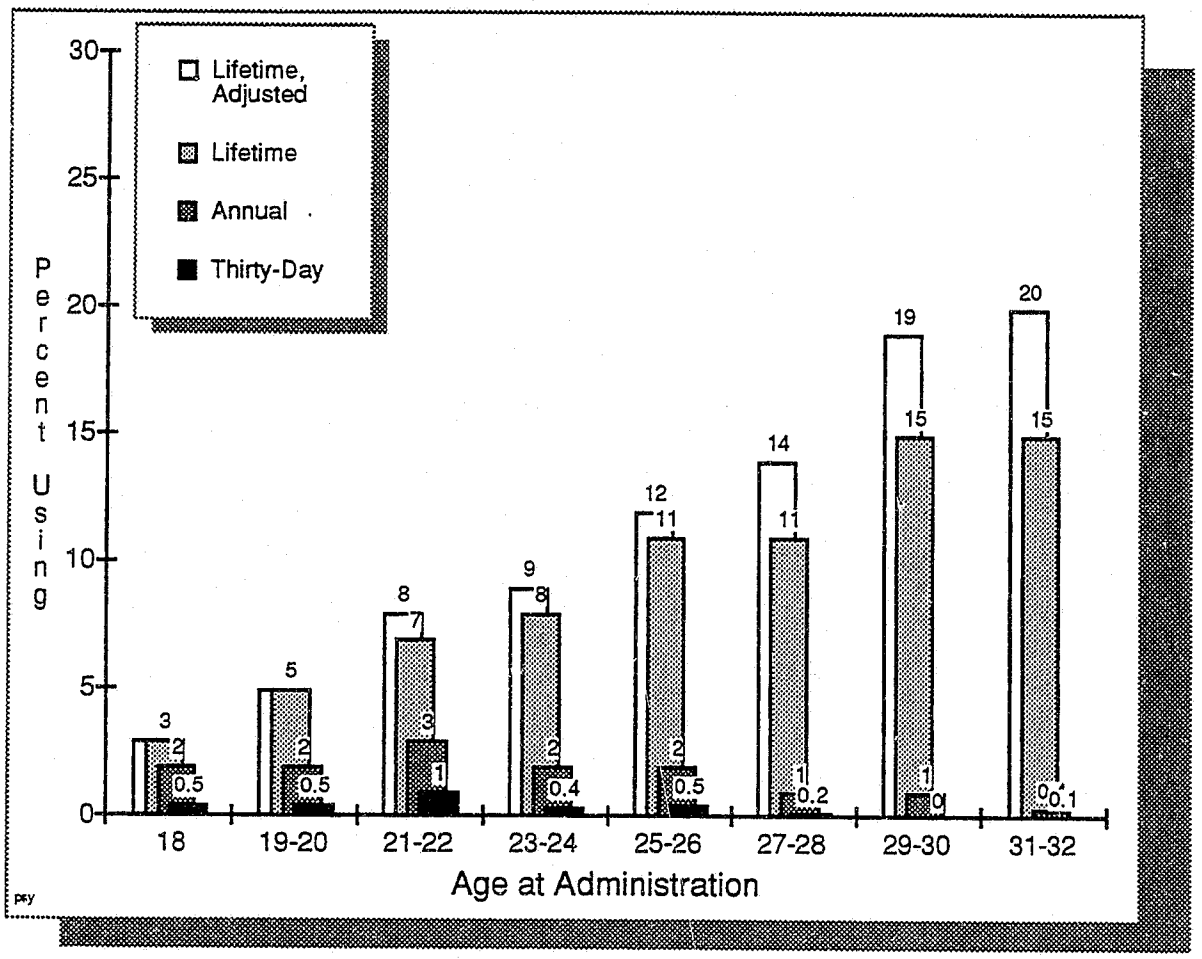
LSD: Lifetime, Annual, and Thirty-Day Prevalence Among Young Adults, 1992
by Age Group



NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

Figure 9

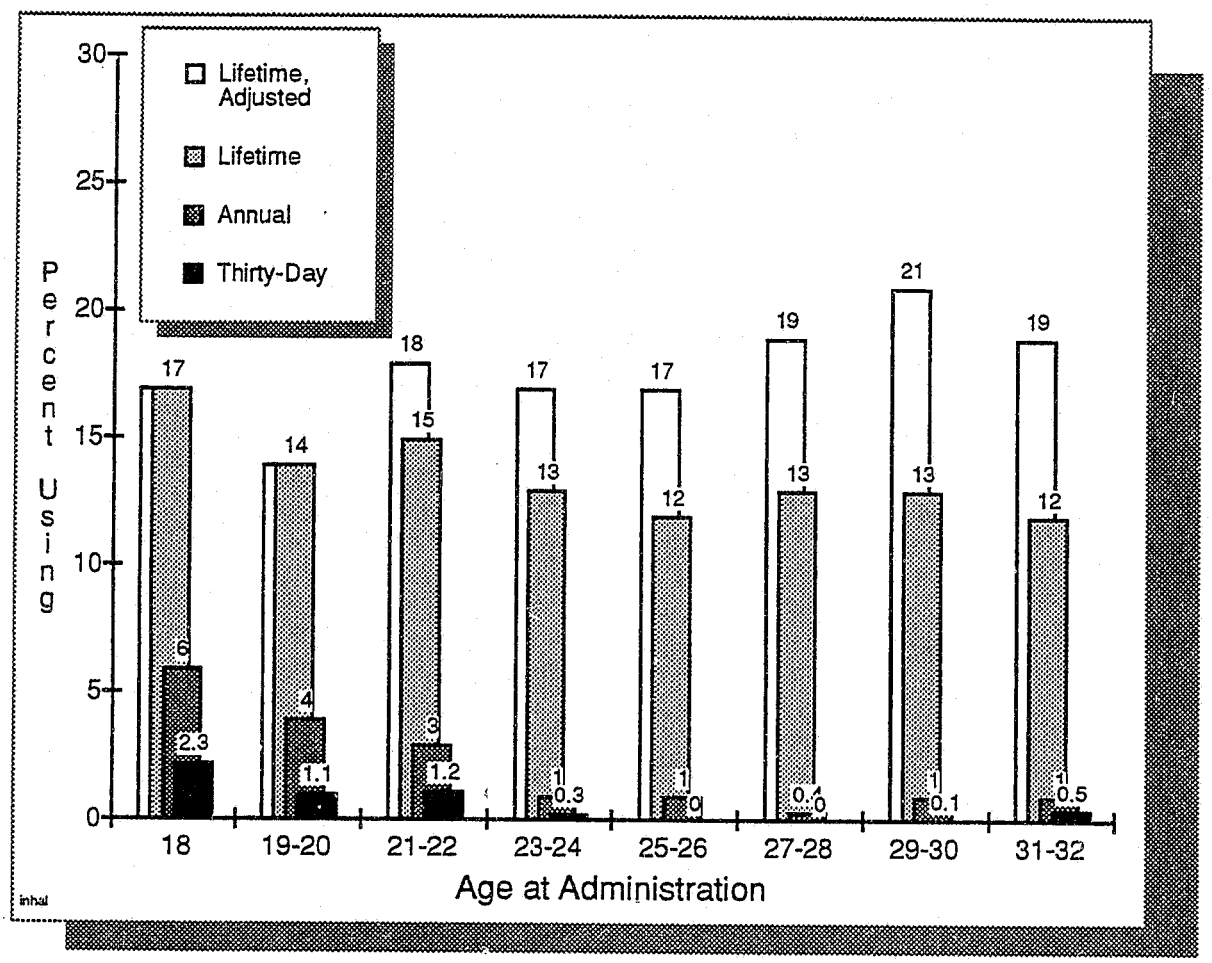
Hallucinogens Other than LSD: Lifetime, Annual, and Thirty-Day Prevalence Among Young Adults, 1992
by Age Group



NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

Figure 10

Inhalants*: Lifetime, Annual, and Thirty-Day Prevalence Among Young Adults, 1992
by Age Group

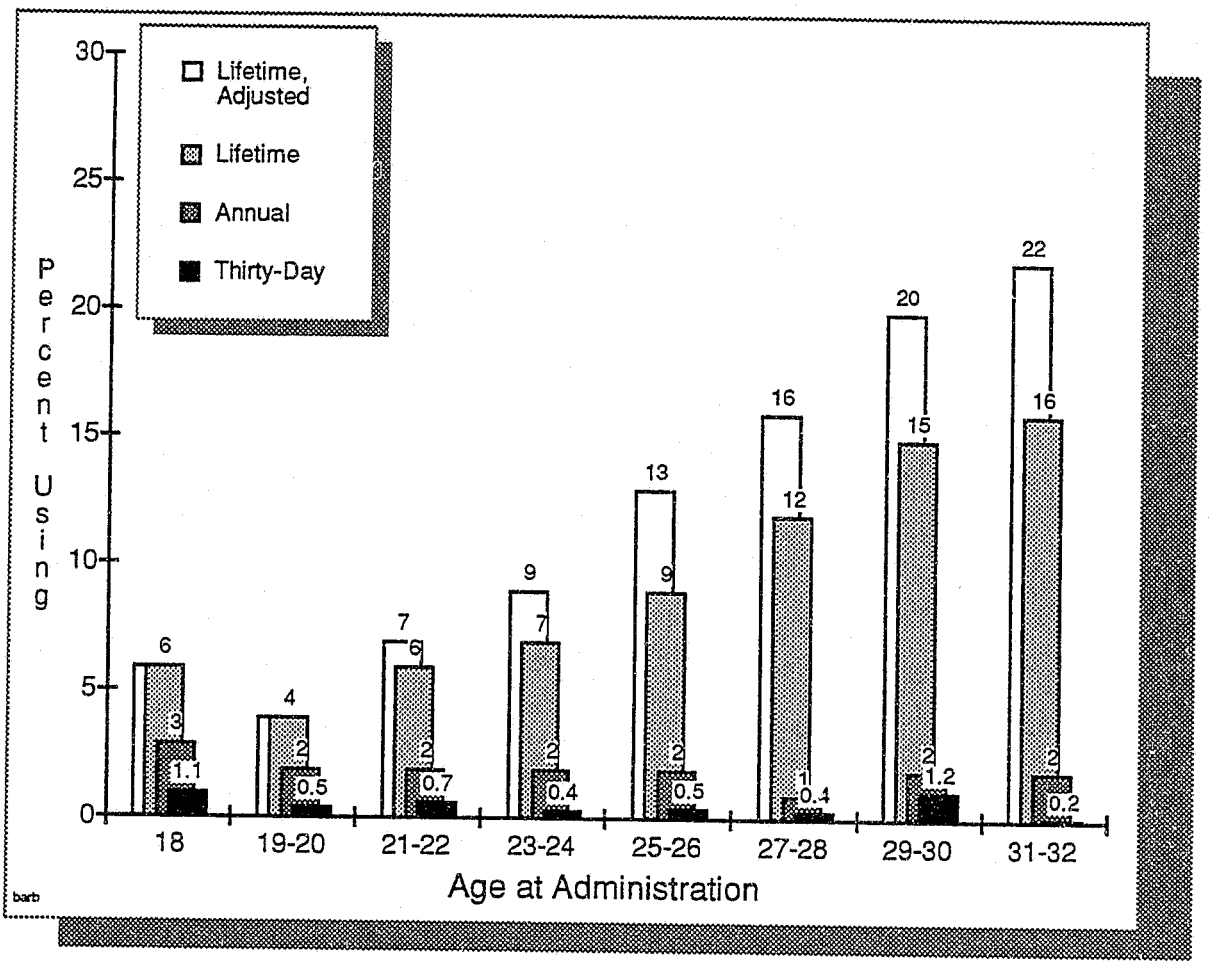


NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

*Unadjusted for the possible underreporting of amyl and butyl nitrites.

Figure 11

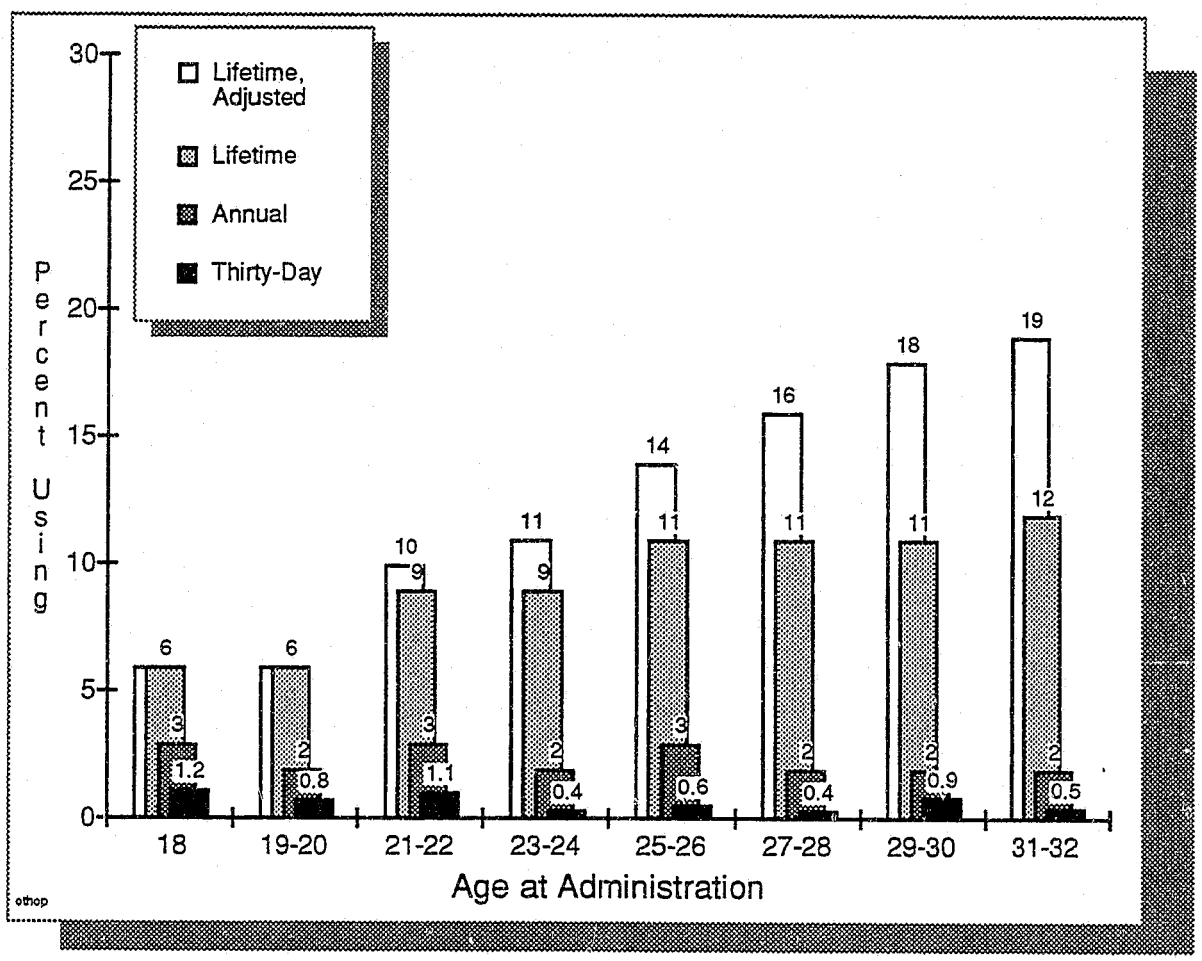
Barbiturates: Lifetime, Annual, and Thirty-Day Prevalence Among Young Adults, 1992
by Age Group



NOTES: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

Figure 12

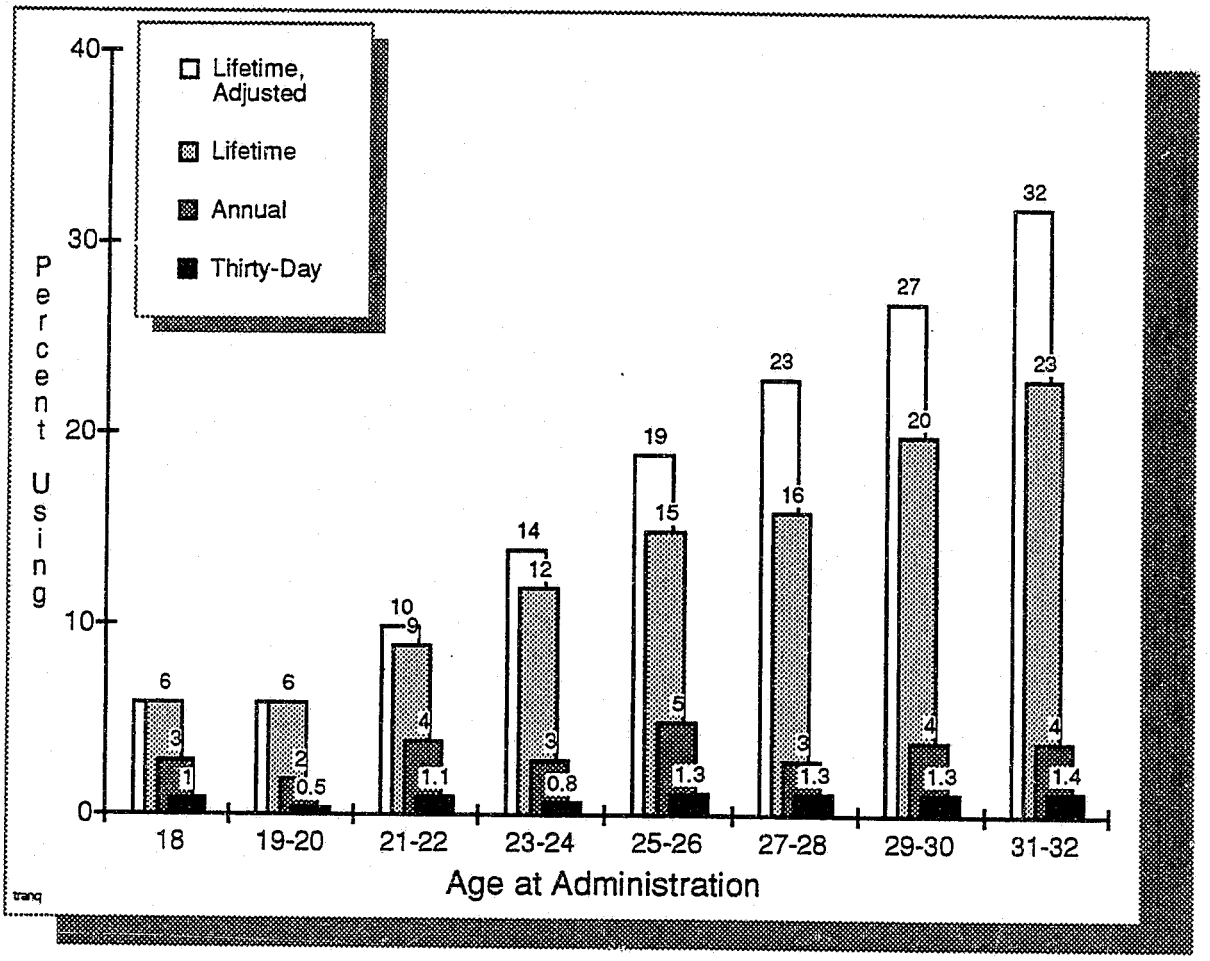
Other Opiates: Lifetime, Annual, and Thirty-Day Prevalence Among Young Adults, 1992
by Age Group



NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

Figure 13

Tranquilizers: Lifetime, Annual, and Thirty-Day Prevalence Among Young Adults, 1992
by Age Group



NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

Figure 14

MDMA: Lifetime, Annual, and Thirty-Day Prevalence Among Young Adults, 1992
by Age Group

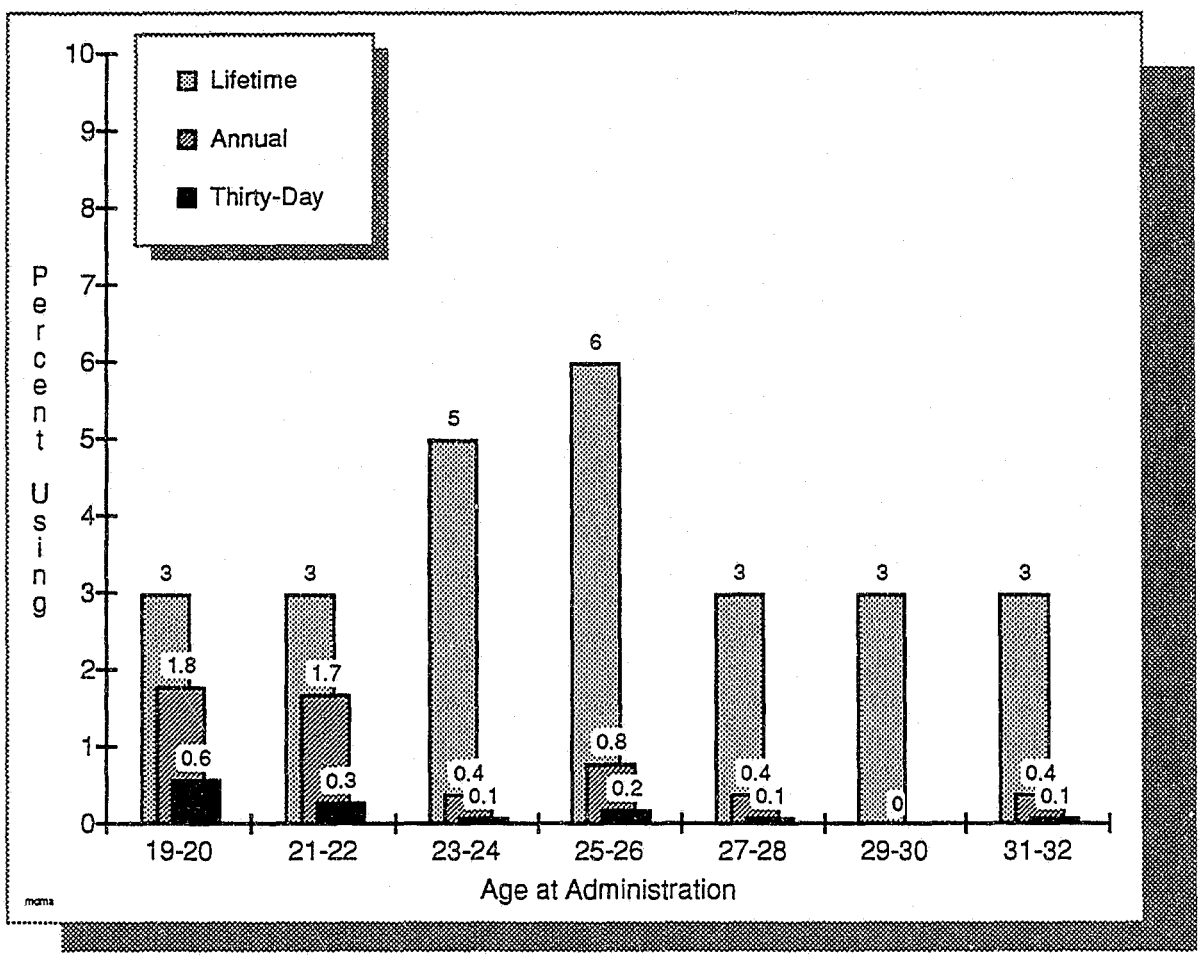


Figure 15

Crystal Methamphetamine ("Ice"): Lifetime, Annual, and Thirty-Day Prevalence Among Young Adults, 1992
by Age Group

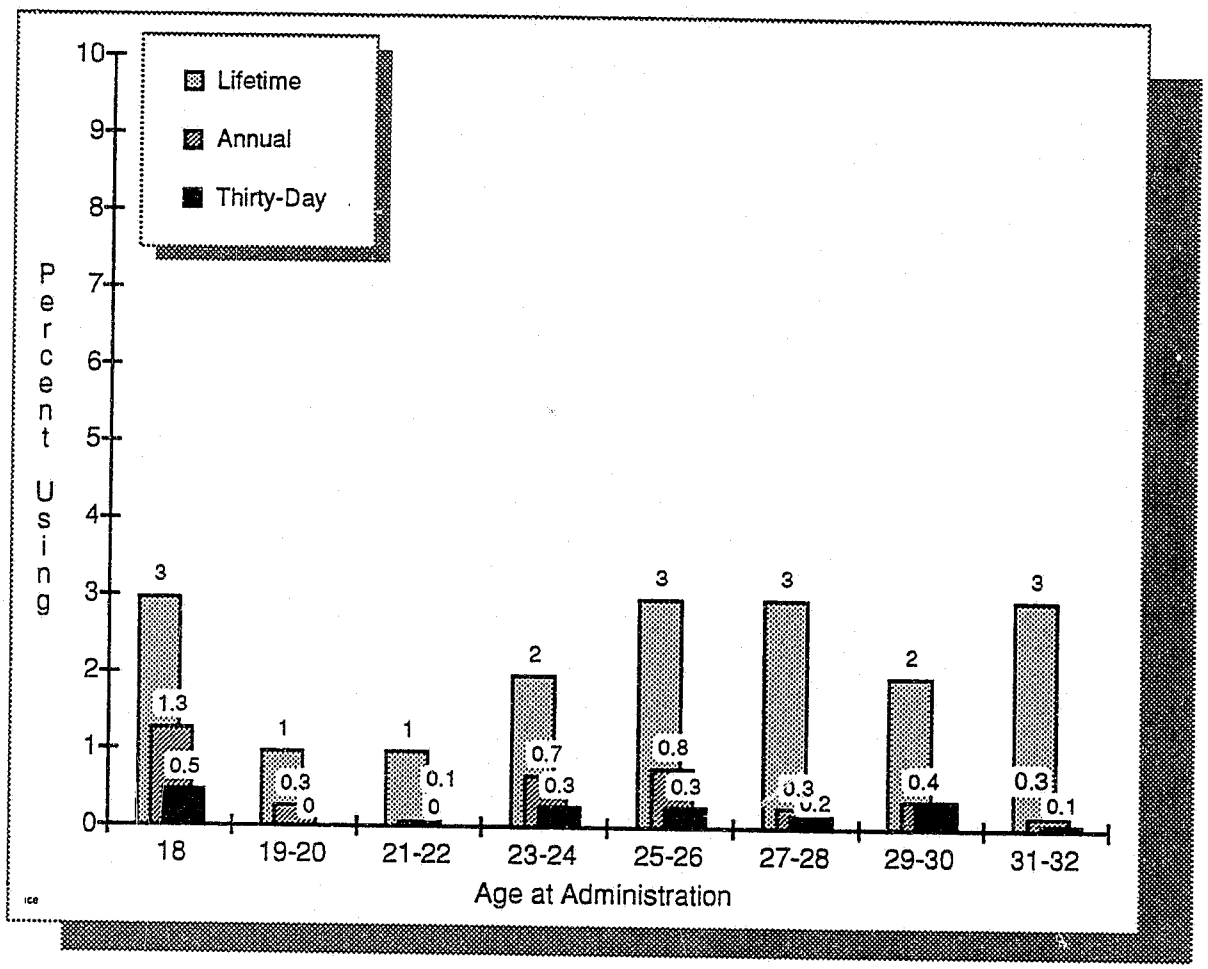


Figure 16

Steroids: Lifetime, Annual, and Thirty-Day Prevalence Among Young Adults, 1992
by Age Group

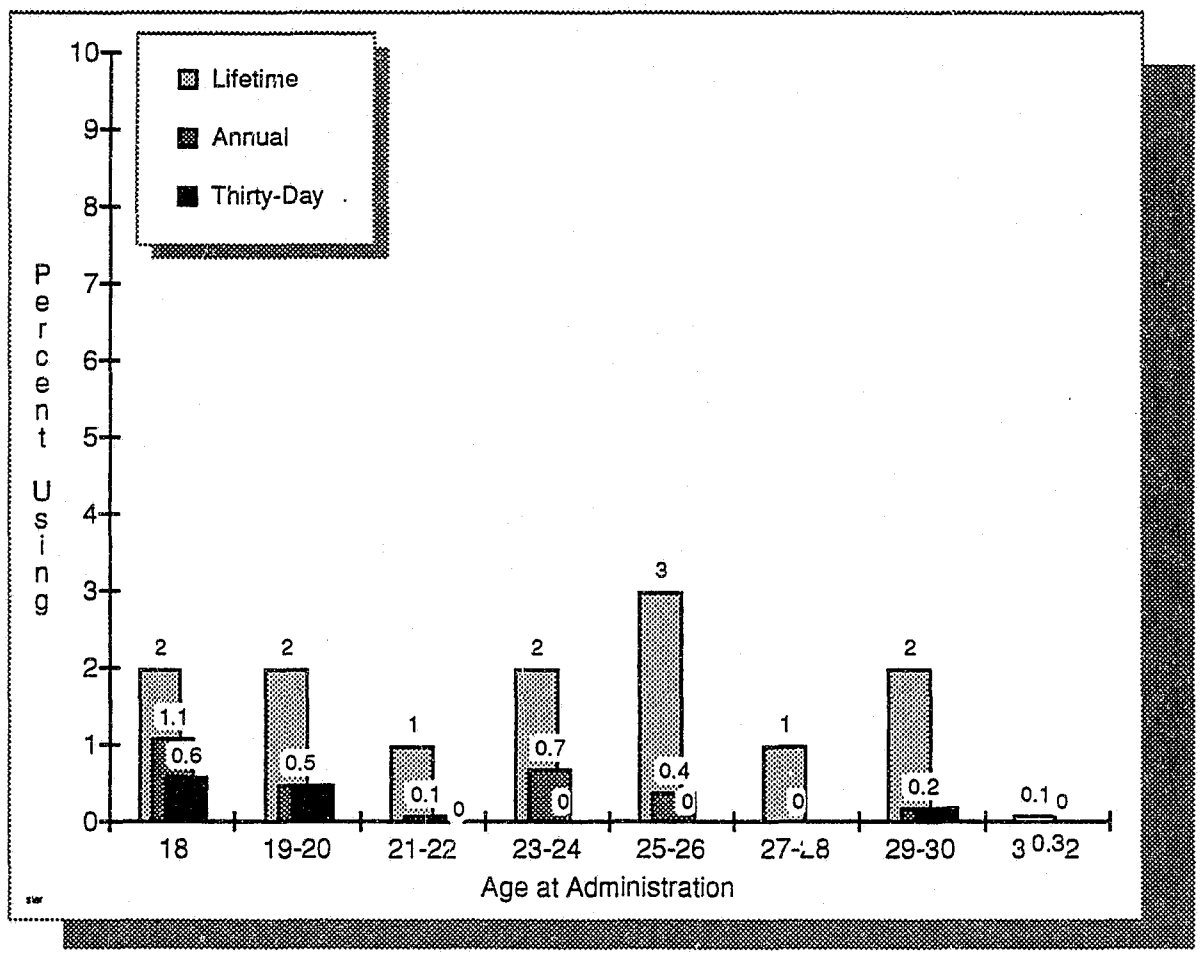
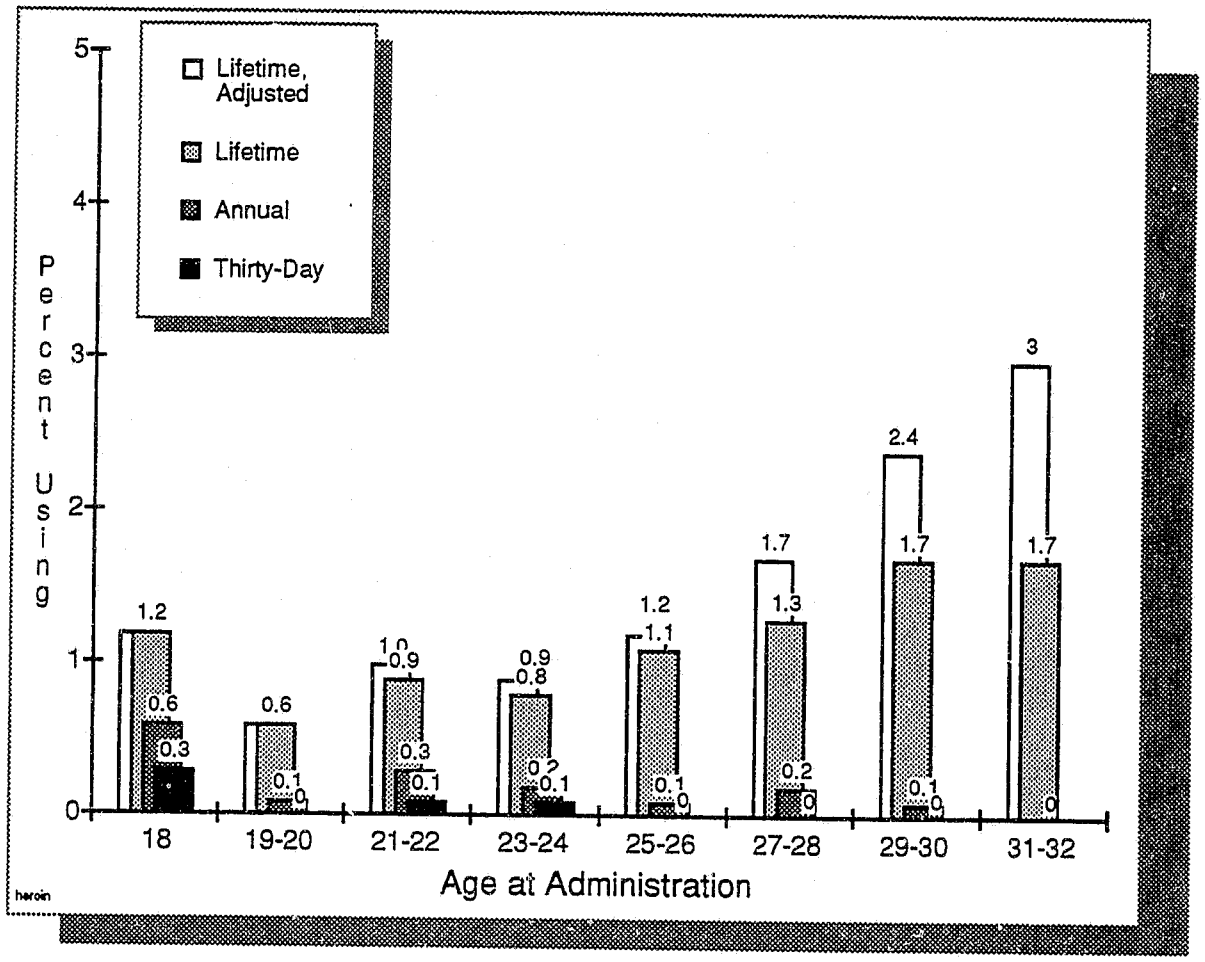


Figure 17

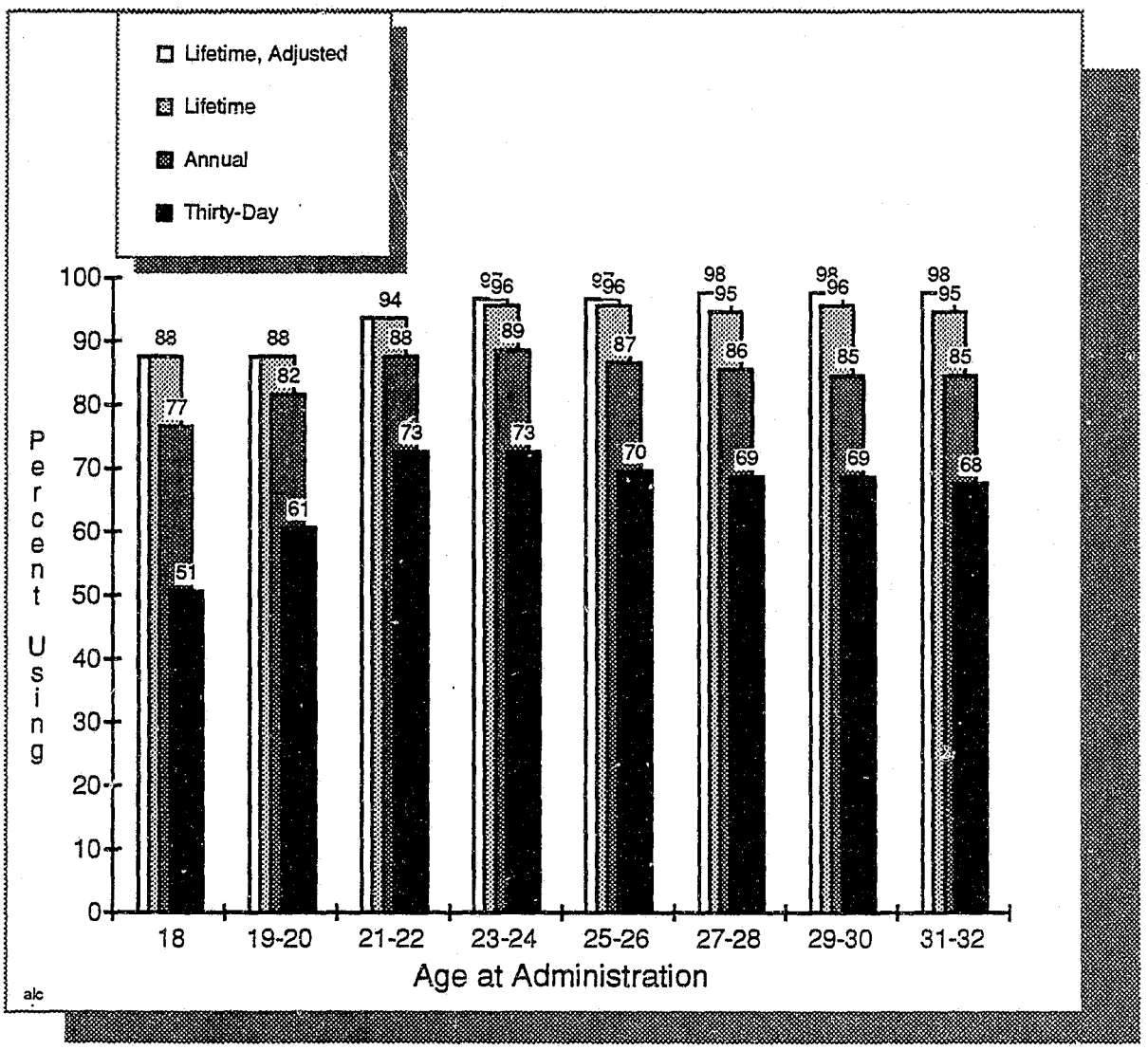
Heroin: Lifetime, Annual, and Thirty-Day Prevalence Among Young Adults, 1992
by Age Group



NOTE: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

Figure 18a

Alcohol: Various Prevalence Rates Among Young Adults, 1992
by Age Group



NOTES: Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

Figure 18b

Alcohol: Two-Week Prevalence of Five or More Drinks in a Row, and Thirty-Day Prevalence of Daily Use Among Young Adults, 1992
by Age Group

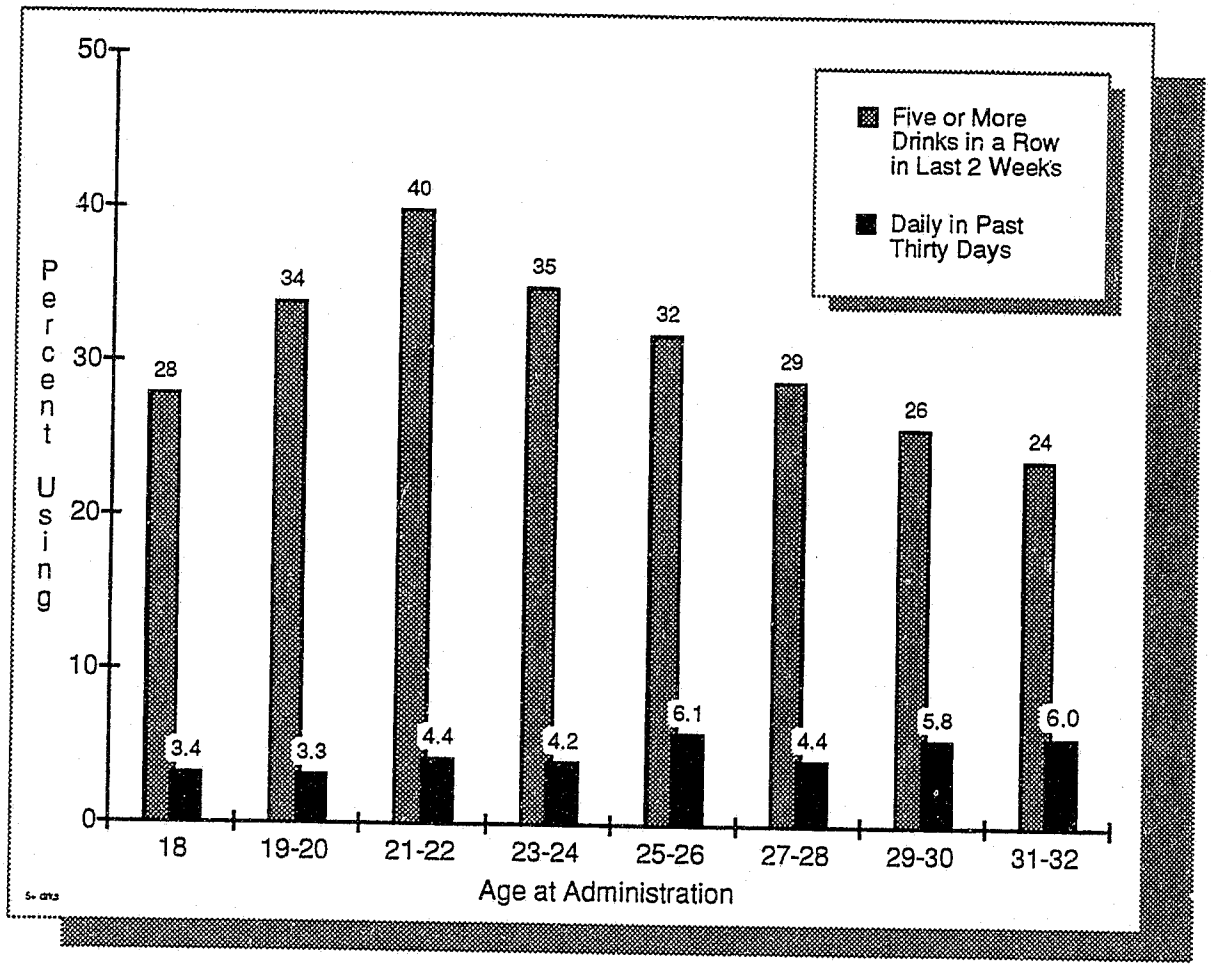
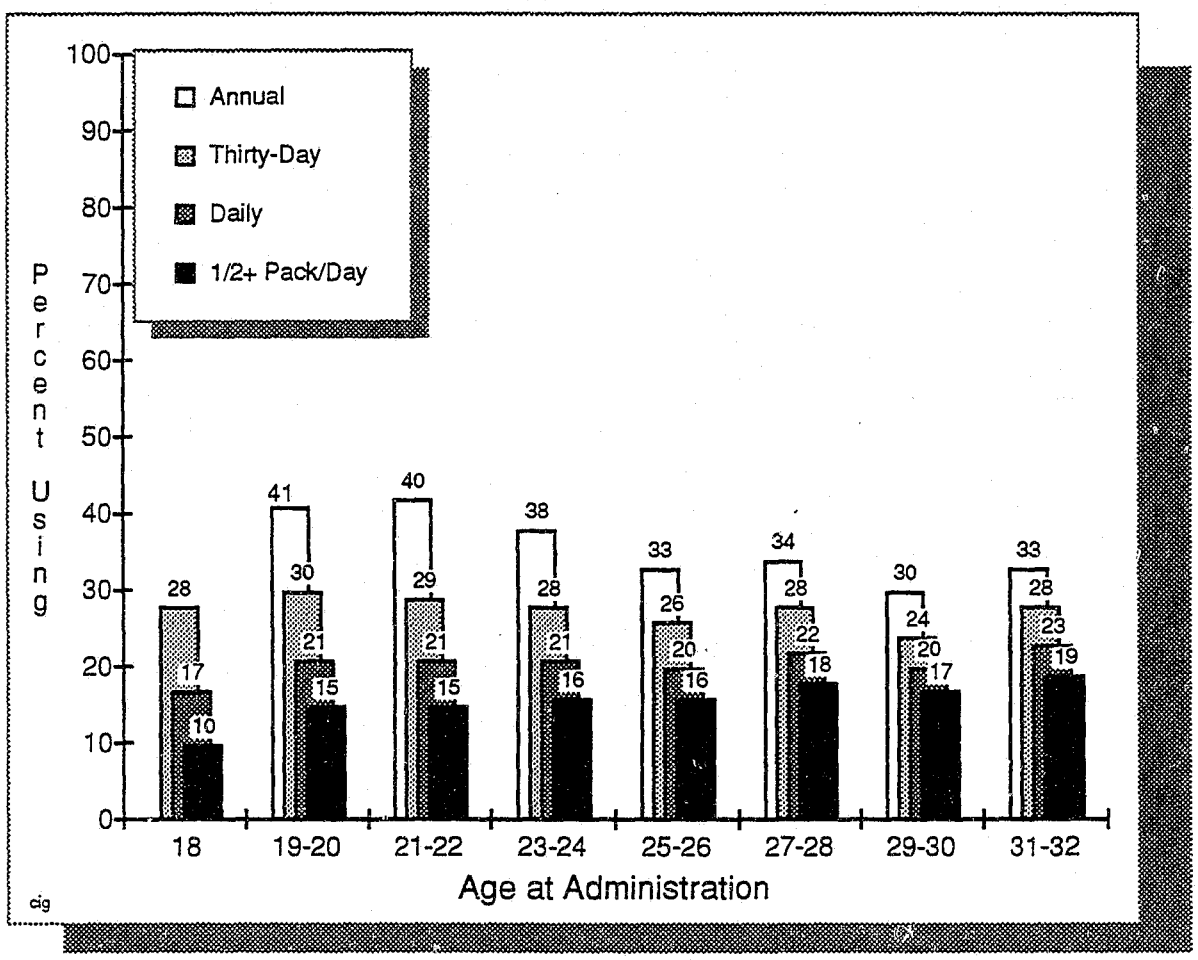


Figure 19

Cigarettes: Annual, Thirty-Day, Daily and Half-Pack-a-Day Prevalence Among Young Adults, 1992
by Age Group



PREVALENCE COMPARISONS FOR SUBGROUPS OF YOUNG ADULTS

Sex Differences

Statistics on usage rates for young adults one to fourteen years beyond high school (modal ages 19 to 32) combined, are given for the total sample and separately for males and females in Tables 2 to 6. In general, most of the sex differences in drug use which pertained in high school may be found in this young adult sample as well.

- Somewhat more males than females report using ***any illicit drug*** during the prior year (30% vs. 24%). Males have higher annual prevalence rates in most of the specific illicit drugs–with the highest ratios pertaining for ***steroids, nitrites, heroin, LSD, hallucinogens*** in general, ***inhalants***, and ***crack***. For example, among the 19 to 32 year olds ***crack*** was used by 1.7% of males vs. 0.9% of females during the prior twelve months.

- Other large sex differences are found in ***daily marijuana use*** (3.6% for males vs. 1.3% for females in 1992), ***daily alcohol use*** (7.5% vs. 2.6%), and occasions of drinking ***five or more drinks in a row*** in the prior two weeks (43% vs. 23%). This sex difference in occasions of heavy drinking is even greater among young adults than among high school seniors, where it is 36% for males vs. 20% for females.

- The use of ***stimulants***, which is now about equivalent among males and females in high school, is also fairly similar for both sexes in this post-high school period (annual prevalence 4.1% vs. 3.5%).

- ***Crystal methamphetamine*** (ice) is used by equally small percentages of males (0.5% annual prevalence) and females (0.3%).

- There are few differences between males and females in rates of ***cigarette use***. Among high school seniors in 1992, males and females are about equally likely to have smoked cigarettes in the past month (26%-29%), and to have smoked daily in the past month (17%). Males are slightly more likely than females to smoke at the half-pack level (10% vs. 9%). These sex differences are very similar among young adults aged 19 to 32. Males are as likely as females to have smoked at all in the past month (28% for both), to smoke daily (21%), and are only slightly more likely to smoke at the half-pack a day level (17% vs. 16%).

- ***Steroid*** use among young adults is much more prevalent among males than females, as is true for seniors. Among seniors 2.1% of the males reported steroid use in the past year vs. 0.1% of the females. These statistics are much lower among the 19 to 32 year olds–0.6% vs. 0.0%–but males still account for nearly all steroid use.

- ***MDMA*** (ecstasy) is slightly higher among males than females in the young adult sample (annual prevalence 1.1% vs. 0.6%, respectively).

Regional Differences

The regional location of each follow-up respondent is determined by his or her answer to a question about state of current residence. States are then assigned to the same regions used in the analysis of the high school data (see Figure 5 in Volume I, or Appendix 2). Tables 3 through 6 present regional differences in lifetime prevalence, annual prevalence, 30-day prevalence, and current daily prevalence, for the 19 to 32 year olds combined.

- Regional differences in use are not very large for ***marijuana***, except that the South is lower than the other regions, as is true among seniors. The South is also somewhat lower in the proportion using ***any illicit drug***.

- The Northeast and West show slightly higher rates of annual ***cocaine*** use than the North Central and the South; these regional differences are smaller on 30-day prevalence. In previous years, there have been much larger regional differences.

- ***Crack*** shows no significant differences based on region for either young adults or seniors, in 1992, though it is highest in the West.

- The annual use of ***stimulants*** is lowest in the Northeast, again consistent with the high school results.

- The use of ***crystal methamphetamine*** (ice) is primarily concentrated in the Western region of the country, 1.3% annual prevalence vs. 0.1%-0.2% for all other regions.

- ***Hallucinogens*** are used by more of the respondents in the Western region (6%) than those in the other three regions (3%-4%). Higher rates in the West also exist for ***LSD*** specifically, 5% vs. 3% in the other regions.

- For the ***remaining illicit drugs*** the annual and 30-day prevalence rates tend to be very low, at or under 4% and 1%, respectively, making regional differences small in absolute terms (see Tables 4 and 5).

- The annual and 30-day prevalence rates for ***alcohol*** are somewhat higher in the Northeast and North Central regions than in the Southern and Western parts of the country, as is true for seniors. ***Occasional heavy drinking*** shows the same pattern: 33%, 36%, 28% and 32% for the Northeast, North Central, South, and West, respectively (see Table 6).

- ***Cigarette smoking*** in these older age groups is lowest in the West and highest in the Northeast and North Central, as it is among seniors.

Differences Related to Population Density

Population density is measured by asking the respondent to check which of a number of listed alternatives best describes the size and nature of the community in which he or she resided during March of that year. The major answer alternatives are listed in Table 3 and the population size given to the respondent to help define each level is provided in the footnote. Examinations of the 1987 and 1988 drug use data for the two most urban strata revealed that the modest differences in prevalence rates between the suburbs and the corresponding cities were not worth the complexity of reporting them separately; accordingly, these categories are merged. For most of the illicit drugs, there is no positive association between size of community and prevalence of use. See Tables 4 through 6 for the exceptions and the relevant results discussed below.

- Among the exceptions is ***marijuana***, which shows a modest positive association with population density. Large and very large city strata show equal rates of marijuana use, which are higher than the smaller cities; small towns have higher rates than the least dense farm/country stratum. (See annual and 30-day prevalence rates in Tables 4 and 5).

- Annual use of ***hallucinogens***, including ***LSD*** and ***MDMA***, is also lower than average in the farm/country, and higher than average in the large and very large cities.

- ***Inhalants*** are also used by fewer respondents in the farm/country stratum, slightly more in the small towns, and still slightly more in the next three strata.

- ***Cocaine*** use has only a modest positive association with population density, and ***crack*** shows no clear relationship.

- The use of ***crystal methamphetamine*** (ice) is not associated with population density. All strata have rates of less than 1%.

- Lifetime, annual, and 30-day ***alcohol*** use measures show a slight positive association with population density. ***Occasions of heavy drinking***, however, are about the same across all strata except farm/country, which has a slightly lower rate. The same is true for ***daily*** use, which stands between 5% and 6% for all community size strata, except for farm/country, at 3%.

- In contrast, a *negative* association with population density exists for ***cigarette smoking***, which is highest in the farm/country stratum and lowest in the very large cities (daily prevalences of 27% and 17%, respectively).

TABLE 2

Prevalence of Use of Various Types of Drugs, by Sex, 1992
Among Respondents of Modal Age 19-32
(Entries are Percentages)

	Males	Females	Total
Approx. Weighted N =	(4100)	(5100)	(9200)
Any Illicit Drug[a]			
Annual	29.8	24.3	26.8
Thirty-Day	17.4	12.2	14.5
Any Illicit Drug[a] Other than Marijuana			
Annual	15.3	11.7	13.3
Thirty-Day	6.0	4.6	5.2
Marijuana			
Annual	26.9	20.8	23.5
Thirty-Day	15.9	10.4	12.9
Daily	3.6	1.3	2.3
Inhalants[b]			
Annual	2.3	0.9	1.5
Thirty-Day	0.8	0.2	0.5
Nitrites[c]			
Annual	0.3	0.1	0.2
Thirty-Day	0.1	0.1	0.1
Hallucinogens			
Annual	6.0	2.5	4.1
Thirty-Day	1.7	0.8	1.2
LSD			
Annual	5.1	2.1	3.5
Thirty-Day	1.3	0.6	0.9
PCP[c]			
Annual	0.0	0.4	0.2
Thirty-Day	0.0	0.2	0.1
Cocaine			
Annual	7.5	4.5	5.8
Thirty-Day	2.5	1.4	1.9
Crack			
Annual	1.7	0.9	1.3
Thirty-Day	0.5	0.3	0.4
Other Cocaine[d]			
Annual	6.4	4.2	5.2
Thirty-Day	2.2	1.3	1.7
MDMA ("Ecstasy")[e]			
Annual	1.1	0.6	0.8
Thirty-Day	0.2	0.2	0.2
Heroin			
Annual	0.2	0.1	0.1
Thirty-Day	0.0	0.1	0.1
Other Opiates[f]			
Annual	2.3	2.3	2.3
Thirty-Day	0.7	0.7	0.7

(Table continued on next page)

TABLE 2 (Cont.)

Prevalence of Use of Various Types of Drugs, by Sex, 1992
Among Respondents of Modal Age 19-32
(Entries are Percentages)

	Males	Females	Total
Approx. Weighted N =	(4100)	(5100)	(9200)
Stimulants, Adjusted[f,g]			
Annual	4.1	3.5	3.8
Thirty-Day	1.4	1.3	1.4
Crystal Methamphetamine ("Ice")[e]			
Annual	0.5	0.3	0.4
Thirty-Day	0.3	0.1	0.2
Barbiturates[f]			
Annual	2.0	1.4	1.7
Thirty-Day	0.6	0.5	0.6
Tranquilizers[f]			
Annual	3.8	3.4	3.6
Thirty-Day	1.0	1.2	1.1
Steroids[c]			
Annual	0.6	0.0	0.3
Thirty-Day	0.2	0.0	0.1
Alcohol			
Annual	87.4	84.5	85.8
Thirty-Day	75.5	63.4	68.8
Daily	7.5	2.6	4.8
5+ drinks in a row in last 2 weeks	42.8	22.7	31.7
Cigarettes			
Annual	36.0	36.3	36.1
Thirty-Day	27.6	27.6	27.6
Daily (Any)	20.8	21.3	21.1
Half-pack or more/day	17.0	15.8	16.3

---

[a]Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, and heroin, or any use of other opiates, stimulants, barbiturates, or tranquilizers not under a doctor's orders.

[b]This drug was asked about in five of the six questionnaire forms. Total N is approximately 7500.

[c]This drug was asked about in one of the six questionnaire forms. Total N is approximately 1800.

[d]This drug was asked about in four of the six questionnaire forms. Total N is approximately 5700.

[e]This drug was asked about in two of the six questionnaire forms. Total N is approximately 3600.

[f]Only drug use which was not under a doctor's orders is included here.

[g]Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription stimulants.

TABLE 3
Lifetime[e] Prevalence of Use of Various Types of Drugs, by Subgroups, 1992
Among Respondents of Modal Age 19-32

(Entries are Percentages)

	Approx. Weighted N	Any Illicit Drug	Any Illicit Drug Other than Marijuana	Marijuana	Inhalants[a,b]	Nitrites[c]	Hallu-cinogens[a]
Total	9200	63.6	40.6	60.1	13.3	2.4	17.4
Sex:							
Male	4100	64.5	41.4	61.9	16.7	3.9	21.8
Female	5100	63.0	39.9	58.6	10.5	1.1	13.9
Modal Age:							
19-20	1500	46.3	25.9	41.7	14.4	0.3	11.9
21-22	1500	56.5	32.0	52.6	14.7	1.2	14.7
23-24	1300	63.9	40.0	59.9	13.1	1.3	16.8
25-26	1300	67.0	43.2	64.2	11.7	1.1	18.1
27-28	1200	71.2	47.2	68.3	12.9	2.2	18.3
29-30	1200	73.4	50.7	70.2	13.4	4.2	23.1
31-32	1200	73.4	50.5	70.7	12.3	6.6	21.3
Region:							
Northeast	1800	68.0	42.8	64.8	14.7	3.0	20.6
North Central	2600	63.8	39.7	60.7	13.0	2.5	16.9
South	3000	58.4	36.1	54.0	11.7	2.2	13.4
West	1700	67.8	47.2	64.8	15.1	1.8	21.8
Population Density:[d]							
Farm/Country	1100	58.9	37.4	54.7	10.5	1.4	13.9
Small Town	2600	61.4	38.8	57.2	12.5	1.8	16.6
Medium City	2100	62.9	40.0	59.2	14.3	1.5	16.3
Large City	1900	67.0	41.8	64.1	13.7	2.7	18.4
Very Large City	1300	68.4	45.6	65.6	15.7	5.6	22.2

[a]Unadjusted for known underreporting of certain drugs. See text for details.
[b]This drug was asked about in five of the six questionnaire forms. Total N is approximately 7500.
[c]This drug was asked about in one of the six questionnaire forms. Total N is approximately 1800.
[d]A small town is defined as having less than 50,000 inhabitants; a medium city as 50,000-100,000; a large city as 100,000-500,000; and a very large city as having over 500,000 residents. Within each level of population density suburban and urban respondents are combined.
[e]Lifetime prevalence is uncorrected for any cross-time inconsistencies in responding.

TABLE 3, cont.
Lifetime[d] Prevalence of Use of Various Types of Drugs, by Subgroups, 1992
Among Respondents of Modal Age 19-32

(Entries are Percentages)

	LSD	PCP[a]	MDMA[b]	Cocaine	Crack	Heroin	Other Opiates
Total	15.1	3.3	3.6	23.8	5.7	1.1	9.6
Sex:							
Male	19.3	4.1	4.8	26.9	7.1	1.6	11.4
Female	11.7	2.5	2.6	21.3	4.5	0.7	8.1
Modal Age:							
19-20	11.1	1.7	3.1	8.9	3.2	0.6	6.3
21-22	13.3	1.9	2.8	13.3	3.9	0.9	8.6
23-24	14.9	1.7	5.1	21.4	4.8	0.8	9.0
25-26	14.3	2.2	5.5	26.0	6.4	1.1	10.7
27-28	16.0	2.4	2.9	32.0	7.9	1.3	10.6
29-30	19.0	6.6	3.0	37.1	7.5	1.7	11.3
31-32	18.3	6.6	2.5	34.7	7.1	1.7	12.0
Region:							
Northeast	16.4	3.6	1.9	28.1	5.1	1.4	10.2
North Central	15.3	3.9	1.1	20.6	4.3	1.2	10.0
South	12.3	2.9	4.4	19.4	5.4	0.8	7.9
West	18.0	2.7	7.6	31.9	8.9	1.6	11.6
Population Density:[c]							
Farm/Country	12.9	1.8	1.2	19.5	4.4	0.8	8.9
Small Town	14.6	3.8	2.5	21.9	4.6	1.2	8.8
Medium City	13.8	3.9	3.0	22.6	6.3	1.0	9.9
Large City	16.0	2.4	4.9	25.9	6.4	1.2	9.5
Very Large City	18.2	3.8	6.4	29.9	6.5	1.5	11.2

[a]This drug was asked about in one of the six questionnaire forms. Total N is approximately 1800.
[b]This drug was asked about in two of the six questionnaire forms. Total N is approximately 3600.
[c]A small town is defined as having less than 50,000 inhabitants; a medium city as 50,000-100,000; a large city as 100,000-500,000; and a very large city as having over 500,000 residents. Within each level of population density suburban and urban respondents are combined.
[d]Lifetime prevalence is uncorrected for any cross-time inconsistencies in responding.

TABLE 3, cont.
Lifetime[e] Prevalence of Use of Various Types of Drugs, by Subgroups, 1992
Among Respondents of Modal Age 19-32

(Entries are Percentages)

	Stimulants[a]	Barbi-turates	"Ice"[b]	Tranqui-lizers	Steroids[c]	Alcohol	Cigarettes
Total	23.8	9.5	2.3	14.0	1.6	93.9	NA
Sex:							
Male	23.9	11.2	3.0	14.5	3.1	94.4	NA
Female	23.6	8.1	1.8	13.6	0.3	93.5	NA
Modal Age:							
19-20	12.5	4.3	1.3	5.6	2.2	88.2	NA
21-22	16.4	5.9	1.1	9.4	0.8	93.7	NA
23-24	20.7	7.2	2.1	11.6	2.2	95.6	NA
25-26	24.1	8.9	3.4	15.3	3.3	95.5	NA
27-28	30.1	11.8	3.2	16.4	0.9	95.0	NA
29-30	32.9	15.0	2.3	20.1	1.6	95.5	NA
31-32	34.3	15.8	3.0	23.0	0.1	95.1	NA
Region:							
Northeast	21.7	9.6	2.0	14.3	1.0	96.2	NA
North Central	25.6	9.2	1.4	12.4	1.7	95.6	NA
South	21.6	9.8	1.6	15.1	1.3	91.5	NA
West	26.9	9.3	5.5	14.2	2.8	93.1	NA
Population Density:[d]							
Farm/Country	24.3	9.3	2.6	12.5	0.9	91.5	NA
Small Town	23.8	10.2	2.2	13.3	1.3	93.5	NA
Medium City	22.7	9.4	2.5	13.8	1.6	93.4	NA
Large City	23.4	9.1	2.5	14.6	2.1	95.2	NA
Very Large City	24.9	9.0	2.0	16.2	2.2	95.9	NA

[a]Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription stimulants.
[b]This drug was asked about in two of the six questionnaire forms. Total N is approximately 3600.
[c]This drug was asked about in one of the six questionnaire forms. Total N is approximately 1800.
[d]A small town is defined as having less than 50,000 inhabitants; a medium city as 50,000-100,000; a large city as 100,000-500,000; and a very large city as having over 500,000 residents. Within each level of population density suburban and urban respondents are combined.
[e]Lifetime prevalence is uncorrected for any cross-time inconsistencies in responding.

TABLE 4
Annual Prevalence of Use of Various Types of Drugs, by Subgroups, 1992
Among Respondents of Modal Age 19-32

(Entries are Perçentages)

	Approx. Weighted N	Any Illicit Drug	Any Illicit Drug Other than Marijuana	Marijuana	Inhalants[a,b]	Nitrites[c]	Hallu-cinogens[a]
Total	9200	26.8	13.3	23.5	1.5	0.2	4.1
Sex:							
Male	4100	29.8	15.3	26.9	2.3	0.3	6.0
Female	5100	24.3	11.7	20.8	0.9	0.1	2.5
Modal Age:							
19-20	1500	29.7	13.4	26.9	3.5	0.0	6.7
21-22	1500	30.0	15.4	26.9	3.0	0.4	7.2
23-24	1300	29.2	14.8	26.6	1.3	0.0	4.2
25-26	1300	26.4	13.4	23.5	0.6	0.0	3.7
27-28	1200	25.3	13.2	21.2	0.4	0.0	2.2
29-30	1200	23.1	11.6	20.1	0.6	0.3	1.9
31-32	1200	21.9	10.7	17.7	0.6	0.6	1.2
Region:							
Northeast	1800	29.0	13.0	26.2	1.8	0.3	4.0
North Central	2600	26.5	12.2	24.0	0.9	0.3	3.6
South	3000	22.7	12.2	19.2	1.7	0.1	3.3
West	1700	32.2	17.4	28.1	1.8	0.1	6.3
Population Density:[d]							
Farm/Country	1100	22.3	11.4	18.9	0.9	0.0	3.0
Small Town	2600	25.2	12.9	21.9	1.3	0.2	3.8
Medium City	2100	28.0	13.2	24.6	1.8	0.0	4.0
Large City	1900	28.2	13.8	25.5	1.8	0.4	4.5
Very Large City	1300	29.2	14.5	25.9	1.9	0.3	4.8

[a]Unadjusted for known underreporting of certain drugs. See text for details.
[b]This drug was asked about in five of the six questionnaire forms. Total N is approximately 7500.
[c]This drug was asked about in one of the six questionnaire forms. Total N is approximately 1800.
[d]A small town is defined as having less than 50,000 inhabitants; a medium city as 50,000-100,000; a large city as 100,000-500,000; and a very large city as having over 500,000 residents. Within each level of population density suburban and urban respondents are combined.

TABLE 4, cont.
Annual Prevalence of Use of Various Types of Drugs, by Subgroups, 1992
Among Respondents of Modal Age 19-32

(Entries are Percentages)

	LSD	PCP[a]	MDMA[b]	Cocaine	Crack	Heroin	Other Opiates
Total	3.5	0.2	0.8	5.8	1.3	0.1	2.3
Sex:							
Male	5.1	0.0	1.1	7.5	1.7	0.2	2.3
Female	2.1	0.4	0.6	4.5	0.9	0.1	2.3
Modal Age:							
19-20	6.3	0.3	1.8	3.7	1.3	0.1	2.2
21-22	6.0	0.7	1.7	5.1	1.3	0.3	3.4
23-24	3.5	0.4	0.4	6.5	1.3	0.2	2.2
25-26	3.2	0.0	0.8	6.6	1.3	0.1	2.6
27-28	1.6	0.0	0.4	7.2	1.6	0.2	1.7
29-30	1.4	0.0	0.0	6.7	0.9	0.1	1.9
31-32	1.0	0.0	0.4	5.7	1.1	0.0	1.5
Region:							
Northeast	3.4	0.3	0.3	6.7	1.2	0.2	2.0
North Central	3.3	0.3	0.2	4.8	1.0	*	2.2
South	3.0	0.2	0.5	5.0	1.5	0.1	2.1
West	4.7	0.0	2.4	8.1	1.5	0.3	2.9
Population Density:[c]							
Farm/Country	2.7	0.2	0.0	4.4	1.5	0.1	1.7
Small Town	3.2	0.5	0.7	5.7	0.8	0.1	2.2
Medium City	3.3	0.3	0.9	5.1	1.5	0.1	2.6
Large City	4.0	0.0	1.1	6.7	1.6	0.3	2.5
Very Large City	4.0	0.0	0.8	7.2	0.9	0.1	2.1

[a]This drug was asked about in one of the six questionnaire forms. Total N is approximately 1800.
[b]This drug was asked about in two of the six questionnaire forms. Total N is approximately 3600.
[c]A small town is defined as having less than 50,000 inhabitants; a medium city as 50,000-100,000; a large city as 100,000-500,000; and a very large city as having over 500,000 residents. Within each level of population density, suburban and urban respondents are combined.
* indicates a quantity greater than 0, but less than 0.05%.

TABLE 4, cont.
Annual Prevalence of Use of Various Types of Drugs, by Subgroups, 1992
Among Respondents of Modal Age 19-32

(Entries are Percentages)

	Stimulants[a]	Barbi-turates	"Ice"[b]	Tranqui-lizers	Steroids[c]	Alcohol	Cigarettes
Total	3.8	1.7	0.4	3.6	0.3	85.8	36.1
Sex:							
Male	4.1	2.0	0.5	3.8	0.6	87.4	36.0
Female	3.5	1.4	0.3	3.4	0.0	84.5	36.3
Modal Age:							
19-20	5.6	1.7	0.3	2.2	0.5	81.9	41.3
21-22	4.3	1.8	0.1	3.8	0.1	87.9	41.5
23-24	4.0	1.7	0.7	3.4	0.7	89.1	37.7
25-26	2.7	1.5	0.8	4.5	0.4	86.7	33.0
27-28	3.5	1.4	0.3	3.4	0.0	85.6	34.2
29-30	3.3	2.0	0.4	3.7	0.2	84.5	29.8
31-32	2.6	1.7	0.2	4.1	0.0	85.0	32.7
Region:							
Northeast	1.6	1.5	0.1	3.4	0.3	90.7	36.6
North Central	4.2	1.6	0.2	3.1	0.1	88.8	39.2
South	4.0	1.9	0.2	4.1	0.2	81.2	35.5
West	5.0	1.5	1.3	3.4	0.7	84.3	32.4
Population Density:[d]							
Farm/Country	4.5	1.6	0.1	2.9	0.2	80.4	39.2
Small Town	4.3	1.9	0.6	3.6	0.2	84.5	36.6
Medium City	3.5	1.9	0.2	3.8	0.0	86.8	36.3
Large City	3.2	1.6	0.4	4.0	0.6	88.1	35.1
Very Large City	3.1	1.1	0.3	3.0	0.5	88.6	33.7

[a]Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription stimulants.
[b]This drug was asked about in two of the six questionnaire forms. Total N is approximately 3600.
[c]This drug was asked about in one of the six questionnaire forms. Total N is approximately 1800.
[d]A small town is defined as having less than 50,000 inhabitants; a medium city as 50,000-100,000; a large city as 100,000-500,000; and a very large city as having over 500,000 residents. Within each level of population density suburban and urban respondents are combined.

TABLE 5
Thirty-Day Prevalence of Use of Various Types of Drugs, by Subgroups, 1992
Among Respondents of Modal Age 19-32

(Entries are Percentages)

	Approx. Weighted N	Any Illicit Drug	Any Illicit Drug Other than Marijuana	Marijuana	Inhalants[a,b]	Nitrites[c]	Hallu-cinogens[a]
Total	9200	14.5	5.2	12.9	0.5	0.1	1.2
Sex:							
Male	4100	17.4	6.0	15.9	0.8	0.1	1.7
Female	5100	12.2	4.6	10.4	0.2	0.1	0.8
Modal Age:							
19-20	1500	15.7	5.5	14.1	1.1	0.0	2.4
21-22	1500	16.4	5.9	14.7	1.2	0.4	2.1
23-24	1300	13.7	5.1	12.5	0.3	0.0	1.2
25-26	1300	14.1	5.5	12.6	0.0	0.0	0.9
27-28	1200	13.9	5.5	12.0	0.0	0.0	0.5
29-30	1200	14.0	4.6	12.2	0.1	0.0	0.3
31-32	1200	13.3	4.4	11.3	0.5	0.4	0.2
Region:							
Northeast	1800	15.2	5.2	13.3	0.5	0.3	0.9
North Central	2600	14.6	4.5	13.5	0.4	0.2	1.2
South	3000	12.5	4.8	10.8	0.6	0.0	0.9
West	1700	17.5	7.4	15.5	0.4	0.0	2.0
Population Density:[d]							
Farm/Country	1100	12.0	4.2	10.7	0.3	0.0	0.7
Small Town	2600	13.6	5.3	11.7	0.2	0.2	1.0
Medium City	2100	14.6	5.2	12.8	0.6	0.0	1.3
Large City	1900	15.9	5.5	14.7	0.7	0.3	1.6
Very Large City	1300	16.0	5.3	14.5	0.7	0.0	1.2

[a]Unadjusted for known underreporting of certain drugs. See text for details.
[b]This drug was asked about in five of the six questionnaire forms. Total N is approximately 7500.
[c]This drug was asked about in one of the six questionnaire forms. Total N is approximately 1800.
[d]A small town is defined as having less than 50,000 inhabitants; a medium city as 50,000-100,000; a large city as 100,000-500,000; and a very large city as having over 500,000 residents. Within each level of population density suburban and urban respondents are combined.

TABLE 5, cont.
Thirty-Day Prevalence of Use of Various Types of Drugs, by Subgroups, 1992
Among Respondents of Modal Age 19-32

(Entries are Percentages)

	LSD	PCP[a]	MDMA[b]	Cocaine	Crack	Heroin	Other Opiates
Total	0.9	0.1	0.2	1.9	0.4	0.1	0.7
Sex:							
Male	1.3	0.0	0.2	2.5	0.5	0.0	0.7
Female	0.6	0.2	0.2	1.4	0.3	0.1	0.7
Modal Age:							
19-20	2.2	0.2	0.6	1.0	0.5	0.0	0.8
21-22	1.4	0.4	0.3	1.6	0.2	0.1	1.1
23-24	0.9	0.4	0.1	1.9	0.4	0.1	0.4
25-26	0.5	0.0	0.2	2.3	0.3	0.0	0.6
27-28	0.4	0.0	0.1	2.5	0.6	0.0	0.4
29-30	0.2	0.0	0.0	2.2	0.3	0.0	0.9
31-32	0.1	0.0	0.1	2.1	0.4	0.0	0.5
Region:							
Northeast	0.7	0.3	0.3	2.3	0.4	*	0.8
North Central	0.9	0.2	0.0	1.4	0.3	*	0.8
South	0.7	0.1	0.2	1.6	0.3	*	0.4
West	1.4	0.0	0.4	2.9	0.5	0.2	1.1
Population Density:[c]							
Farm/Country	0.5	0.0	0.0	1.4	0.5	0.0	0.4
Small Town	0.7	0.3	0.2	1.9	0.3	0.1	0.7
Medium City	1.0	0.3	0.2	1.9	0.5	*	0.7
Large City	1.3	0.0	0.3	2.0	0.4	0.1	0.9
Very Large City	0.9	0.0	0.1	2.2	0.2	*	0.7

[a]This drug was asked about in one of the six questionnaire forms. Total N is approximately 1800.
[b]This drug was asked about in two of the six questionnaire forms. Total N is approximately 3600.
[c]A small town is defined as having less than 50,000 inhabitants; a medium city as 50,000-100,000; a large city as 100,000-500,000; and a very large city as having over 500,000 residents. Within each level of population density suburban and urban respondents are combined.
* indicates a quantity greater than 0.0% but less than 0.05%.

TABLE 5, cont.
Thirty-Day Prevalence of Use of Various Types of Drugs, by Subgroups, 1992
Among Respondents of Modal Age 19-32

(Entries are Percentages)

	Stimulants[a]	Barbi-turates	"Ice"[b]	Tranqui-lizers	Steroids[c]	Alcohol	Cigarettes
Total	1.4	0.6	0.2	1.1	0.1	68.8	27.6
Sex:							
Male	1.4	0.6	0.3	1.0	0.2	75.5	27.6
Female	1.3	0.5	0.1	1.2	0.0	63.4	27.6
Modal Age:							
19-20	2.2	0.5	0.0	0.5	0.5	61.0	29.5
21-22	1.4	0.7	0.0	1.1	0.0	72.7	29.0
23-24	1.2	0.4	0.3	0.8	0.0	73.0	28.4
25-26	0.8	0.5	0.3	1.3	0.0	69.8	26.3
27-28	1.5	0.4	0.2	1.3	0.0	69.1	27.8
29-30	1.1	1.2	0.4	1.3	0.2	69.2	23.8
31-32	1.1	0.2	0.1	1.4	0.0	67.8	27.5
Region:							
Northeast	0.7	0.4	0.0	1.3	0.3	75.7	27.6
North Central	1.3	0.5	0.0	0.8	0.0	72.2	30.4
South	1.4	0.7	0.1	1.4	0.1	61.6	28.0
West	2.1	0.4	0.7	0.8	0.1	69.0	22.8
Population Density:[d]							
Farm/Country	1.7	0.5	0.1	0.7	0.2	59.5	33.0
Small Town	1.5	0.7	0.5	1.2	0.0	67.4	27.8
Medium City	1.2	0.6	0.1	1.1	0.0	69.6	27.7
Large City	1.1	0.6	0.1	1.1	0.1	72.7	26.1
Very Large City	1.0	0.4	0.0	0.9	0.4	73.9	23.9

[a]Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription stimulants.
[b]This drug was asked about in two of the six questionnaire forms. Total N is approximately 3600.
[c]This drug was asked about in one of the six questionnaire forms. Total N is approximately 1800.
[d]A small town is defined as having less than 50,000 inhabitants; a medium city as 50,000-100,000; a large city as 100,000-500,000; and a very large city as having over 500,000 residents. Within each level of population density suburban and urban respondents are combined.

TABLE 6
Thirty-Day Prevalence of Daily Use of Various Types of Drugs, by Subgroups, 1992
Among Respondents of Modal Age 19-32

(Entries are Percentages)

	Approx. Weighted N	Marijuana Daily	Alcohol Daily	Alcohol: 5+ drinks in a row in past 2 weeks	Cigarettes Daily	Cigarettes: Half pack or more per day
Total	9200	2.3	4.8	31.7	21.1	16.3
Sex:						
Male	4100	3.6	7.5	42.8	20.8	17.0
Female	5100	1.3	2.6	22.7	21.3	15.8
Modal Age:						
19-20	1500	1.4	3.3	34.0	20.5	14.5
21-22	1500	2.6	4.4	39.9	21.2	15.1
23-24	1300	2.3	4.2	34.9	20.9	15.5
25-26	1300	2.6	6.1	31.8	20.3	15.8
27-28	1200	2.5	4.4	29.2	21.8	17.9
29-30	1200	2.9	5.8	25.7	20.3	17.0
31-32	1200	2.1	6.0	23.7	22.8	19.3
Region:						
Northeast	1800	2.4	4.8	33.1	21.6	16.9
North Central	2600	2.2	5.1	35.5	23.7	18.8
South	3000	2.0	4.3	27.5	21.5	16.5
West	1700	3.3	5.1	31.6	15.9	11.7
Population Density:[a]						
Farm/Country	1100	2.2	3.4	27.1	26.8	22.5
Small Town	2600	1.9	4.8	32.5	21.5	16.9
Medium City	2100	2.3	4.5	31.5	21.6	15.8
Large City	1900	2.5	6.0	33.4	19.2	14.7
Very Large City	1300	3.0	4.9	32.6	16.9	12.3

[a]A small town is defined as having less than 50,000 inhabitants; a medium city as 50,000-100,000; a large city as 100,000-500,000; and a very large city as having over 500,000 residents. Within each level of population density suburban and urban respondents are combined.

Chapter 5

TRENDS IN DRUG USE AMONG YOUNG ADULTS POST-HIGH SCHOOL

Trends in the use of the various licit and illicit drugs by all high school graduates from one to fourteen years beyond high school are presented in this chapter. Figures 20 through 34 plot separate trend lines for two-year age strata (that is, 1-2 years beyond high school, 3-4 years beyond high school, etc.) in order to damp down the random fluctuations which would be seen with one-year strata. (These two-year strata are not strictly speaking age-strata, because they are based on all respondents from adjacent high school classes, and they do not take account the minor differences in individual respondents' ages; but they are close approximations to age-strata, and we will characterize them by the modal age of the respondents, as age 19 to 20, 21 to 22, and so on.) Each data point in these figures is based on approximately 1200 weighted cases drawn from two adjacent high school classes; actual (unweighted) numbers of cases are somewhat higher. For the 1992 data, the 19-20 year old stratum is comprised of participating respondents from the classes of 1991 and 1990, respectively, the 21 to 22 year old stratum contains data from the classes of 1989 and 1988, and so on.

Tables 7 through 11 present much the same data in summary, tabular form. The data from young adults aged 19 to 28 are combined for each year in which data are available from that full age band (i.e., from 1986 onward). Those aged 29 to 32 are omitted because their inclusion would shorten the time period over which trends can be examined. However, the full data for them are contained in Figures 20 through 34.

TRENDS IN PREVALENCE: YOUNG ADULTS

To repeat, trends in use by young adults may be found in Tables 7 through 11, as well as in Figures 20 through 34.

- Longer term declines for a number of drugs appeared to halt in 1992 (see Table 8). Among the 19 to 28 year old young adult sample this was true for the use of ***any illicit drug, any illicit drug other than marijuana, marijuana, stimulants,*** and ***crack.***

- ***Marijuana*** actually showed a 1.4% increase in annual prevalence (not statistically significant) after years of steady decline. As noted in Volume I there was also an a increase (of 1.0%) among eighth graders; because of the larger sample sizes that change is statistically significant.

- ***LSD*** and ***hallucinogens*** in general also showed an increase in use in 1992, but this continued a trend which began two years earlier. The one-year increases in 1992 alone did not reach statistical significance.

- Over the longer term, trends in use of most drugs among the older age groups have pretty much paralleled the changes among seniors discussed in Chapter 5, Volume I. Many of the changes have been secular trends–that is, they are observable in all the age groups under study. This has generally been true for the longer term declines, and the more recent leveling, for use of ***any illicit drug***, ***marijuana***, ***any illicit drug other than marijuana***, ***stimulants***, ***crack***, and ***tranquilizers***. ***LSD*** and ***opiates other than heroin*** began to level out in 1987, ***barbiturates*** and ***methaqualone*** in 1988.

- Several of these drug classes actually exhibited a faster decline in use among these older age groups than among high school seniors during the decline period (see Figures 20-34). These include ***any illicit drug***, ***any illicit drug other than marijuana***, ***stimulants***, ***hallucinogens*** (until 1987), ***LSD*** (through 1989), and ***methaqualone***.

- In fact there has been a crossover for some drugs when seniors are compared to graduates. Seniors used to have lower usage levels, but in recent years have higher ones, than post-high school respondents for use of ***any illicit drug***, ***any illicit drug other than marijuana***, ***LSD*** (through 1989), and ***stimulants***.

- Figure 23 shows that ***inhalant*** use drops sharply with increasing age. It also shows the long-term gradual increase in annual inhalant use (unadjusted for underreporting of nitrite inhalants) among the youngest three age groups (seniors, those 1-2 years and 3-4 years, past high school). Those respondents 5 or more years past high school, who historically have had a negligible rate of use do not exhibit the same increase in use as the younger respondents.

- The ***alcohol*** trends for the older age groups (see Figure 33) have been somewhat different than for the younger ones, however. The declines during the 80's in ***30-day prevalence*** and ***occasions of heavy drinking*** had been greater for the two youngest age strata (seniors and those 1-2 years past high school) than for the older age groups. These differential trends are due in part to the effects of changes in minimum drinking age laws in many states, which would only be expected to affect the younger age groups. However, because similar (though weaker) trends are evident among high school seniors in states that have maintained a constant minimum

drinking age of 21, the changed laws cannot account for all the downward trends.[5]

Those 3-4 years past high school stand out for showing the smallest downward trend in ***binge drinking***. One important segment, comprised of college students, showed no downward trend.

The older age groups in general have shown only a modest decline in annual and 30-day prevalence rates and little decline in ***binge drinking***. Their rates of daily drinking have fallen by larger proportions. Note also that the trend lines for different ages on binge drinking (Figure 33d) are more spread out on the vertical dimension than is usually the case, reflecting large and persisting age differentials (age effects) in this behavior.

- The prevalence statistics for ***cigarette smoking*** do not tend to show parallel trends across age groups (Figure 34). While the curves are of the same general shape for each age group, each curve tends to be displaced to the right of the immediately preceding age group, which was two years younger. Note that this pattern is very similar to the one described earlier for lifetime smoking rates for various grade levels below senior year: it is the classic pattern exhibited for the presence of a cohort effect–that is, one cohort differs from other cohorts in a consistent way across much or all of the life span. This is how we interpret the cigarette data;[6] and we believe that the cohort differences tend to remain throughout the lifespan due to the highly addictive nature of nicotine. The declining levels of ***cigarette smoking*** at age 18, which was observed when the classes of 1978, 1979, and 1980 became seniors, are now observable in the early thirties age band, as those same classes reach their early thirties (see Figure 34b).

  Apart from cigarettes, none of the other drugs included in the study show a clear pattern of enduring cohort differences, despite wide variations in their use by different cohorts at a given age. There is one exception: A modest cohort effect is observed for daily marijuana use. It may be attributable, in part, to the strong association between that behavior and cigarette smoking.

---

[5]O'Malley, P.M., & Wagenaar, A.C. (1990). Minimum drinking age laws on alcohol use, related behaviors, and traffic crash involvement among American youth: 1976-1987. *Journal of Studies on Alcohol, 52*, 478-491.

[6]O'Malley, P.M., Bachman, J.G., & Johnston, L.D. (1988). Period, age, and cohort effects on substance use among young Americans: A decade of change, 1976-1986. *American Journal of Public Health, 78*, 1315-1321.

- The decline observed for ***MDMA*** (ecstasy) among the young adult sample in 1991 did not continue in 1992; annual use rose from 0.8% to 1.0% (not significant). (See Table 8.) MDMA was not included in the surveys of high school seniors.

- The important downturn in ***cocaine***, observed for the first time among all age groups in 1987, decelerated sharply in 1992 in the age groups encompassed here (see Figure 27). The proportion of 19 to 28 year olds reporting any ***cocaine*** use in the prior year dropped a nonsignificant 0.5% (to 5.7%) in 1992, while seniors dropped by only 0.4%.

- In particular, the decline in ***crack*** use ended in 1992 in this age groups, as well as among seniors (see Figure 28). Among 19 to 28 year olds the annual prevalence rate went from 1.2% to 1.4%, which, nonetheless, is down by over one-half from the peak levels in 1986 through 1988.

- ***Stimulant*** use, which has shown a long and substantial decline since 1981, leveled among the young adult sample in 1992 (Figure 30). As Table 8 shows, 19 to 28 year olds now average a 4.1% annual prevalence rate.

- The use of ***crystal methamphetamine*** (ice) has remained steady at a very low rate of use since it was first measured in 1990. Its annual prevalence is 0.4% in 1992.

- ***LSD*** was the only drug to show a statistically significant increase in 1990 among 19 to 28 year olds. Annual prevalence rose from 2.7% to 3.3%. It again rose in 1991 and by 1992 reached 4.3%. Among seniors it also rose–from 4.9% in 1989 to 5.6% in 1992, which is not statistically significant.

- Use of ***heroin*** remained stable for both seniors and young adults. ***Opiates other than heroin*** leveled after slow long-term declines.

- In sum, except for ***cigarettes*** and ***alcohol***, high school seniors and young adults show longer-term trends in substance use which are highly parallel. Although divergent trends would not necessarily demonstrate a lack of validity in either set of data (because such a divergence could occur as the result of cohort differences), we believe that the high degree of *convergence* provides an important source of validation of the trends reported earlier for the seniors. In fact, each of these sets of data helps to validate the "trend story" reported by the other.

TABLE 7
Trends in Lifetime[k] Prevalence of Various Types of Drugs Among Respondents of Modal Age 19-28

(Entries are Percentages)

	Percent who used in lifetime							
Approx. Wtd. N =	1986 (6900)	1987 (6800)	1988 (6700)	1989 (6600)	1990 (6700)	1991 (6600)	1992 (6800)	'91-'92 change
Any Illicit Drug[h]	70.5	69.9	67.9	66.4	64.5	62.2	60.2	-2.1s
Any Illicit Drug Other than Marijuana	48.4	47.0	44.6	42.7	40.8	37.8	37.0	-0.8
Marijuana	66.5	66.0	63.8	62.8	60.2	58.6	56.4	-2.2s
Inhalants[b]	12.3	12.7	12.6	13.2	12.5	13.4	13.5	+0.1
Inhalants, Adjusted[g]	18.6	15.7	15.0	NA	13.5	14.1	13.9	-0.2
Nitrites[f]	12.6	6.9	6.2	NA	1.9	1.4	1.2	-0.2
Hallucinogens	18.5	17.1	17.0	15.9	16.1	15.7	15.7	+0.1
Hallucinogens, Adjusted[g]	20.1	17.2	17.2	NA	16.5	16.0	15.9	-0.1
LSD	14.6	13.7	13.8	12.7	13.5	13.5	13.8	+0.3
PCP[f]	8.4	4.8	5.0	NA	2.5	3.1	2.0	-1.2
Cocaine	32.0	29.3	28.2	25.8	23.7	21.0	19.5	-1.4s
Crack[c]	NA	6.3	6.9	6.1	5.1	4.8	5.1	+0.3
Other Cocaine[j]	NA	28.2	25.2	25.4	22.1	19.8	18.4	-1.4
MDMA ("Ecstasy")[i]	NA	NA	NA	3.3	3.7	3.2	3.9	+0.7
Heroin	1.3	1.3	1.1	1.0	0.9	0.9	0.9	0.0
Other Opiates[a]	10.7	10.6	9.8	9.6	9.4	9.3	8.9	-0.4
Stimulants, Adjusted[a,d]	32.3	30.8	28.8	25.3	24.4	22.4	20.2	-2.1ss
"Ice"[i]	NA	NA	NA	NA	2.5	2.9	2.2	-0.7
Sedatives[a]	16.7	15.0	13.2	12.1	NA	NA	NA	NA
Barbiturates[a]	11.1	9.7	8.9	7.9	8.7	8.2	7.4	-0.8
Methaqualone[a]	13.1	11.6	9.7	8.7	NA	NA	NA	NA
Tranquilizers[a]	17.6	16.5	15.1	13.5	12.9	11.8	11.3	-0.5
Alcohol	94.8	94.9	94.8	94.5	94.3	94.1	93.4	-0.6
Cigarettes	NA	NA	NA	NA	NA	NA	NA	NA
Steroids[f]	NA	NA	NA	1.1	1.2	1.7	1.9	+0.2

NOTES: Level of significance of difference between the two most recent years:
s = .05, ss = .01, sss = .001.
Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.
NA indicates data not available.
Footnotes continue on next page.

FOOTNOTES FOR TABLES 7-10

[a]Only drug use which was not under a doctor's orders is included here.

[b]This drug was asked about in four of the five questionnaire forms in 1986-89, and five of the six questionnaire forms in 1990-1992. Total N is approximately 5600.

[c]This drug was asked about in two of the five questionnaire forms in 1987-89, and in all six questionnaire forms in 1990-1992.

[d]Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription stimulants.

[e]Adjusted for underreporting of amyl and butyl nitrites.

[f]This drug was asked about in one questionnaire form. Total N in 1992 is approximately 1300.

[g]Adjusted for underreporting of PCP.

[h]Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, and heroin, or any use of other opiates, stimulantts, barbiturates, methaqualone (until 1990), or tranquilizers not under a doctor's orders.

[i]This drug was asked about in two questionnaire forms. Total N in 1992 is approximately 2600.

[j]This drug was asked about in one of the five questionnaire forms in 1987-89, and in four of the six questionnaire forms in 1990-1992. Total N in 1992 is approximately 4300.

[k]Lifetime prevalence is uncorrected for any cross-time inconsistencies in responding. See text.

TABLE 8
Trends in Annual Prevalence of Various Types of Drugs Among Respondents of Modal Age 19-28

(Entries are Percentages)

	Percent who used in last twelve months							
Approx. Wtd. N =	1986 (6900)	1987 (6800)	1988 (6700)	1989 (6600)	1990 (6700)	1991 (6600)	1992 (6800)	'91-'92 change
Any Illicit Drug[h]	41.9	39.3	36.3	32.8	30.7	27.0	28.3	+1.3
Any Illicit Drug[h] Other than Marijuana	27.0	23.9	21.3	18.3	16.7	14.3	14.1	-0.2
Marijuana	36.5	34.8	31.8	29.0	26.1	23.8	25.2	+1.4
Inhalants[b]	1.9	2.1	1.8	1.9	1.9	2.0	1.9	-0.1
Inhalants, Adjusted[g]	3.0	2.8	2.4	NA	2.1	2.2	1.9	-0.3
Nitrites[f]	2.0	1.3	1.0	NA	0.4	0.2	0.1	-0.1
Hallucinogens	4.5	4.0	3.9	3.6	4.1	4.5	5.0	+0.4
Hallucinogens, Adjusted[g]	4.9	4.1	3.9	NA	4.2	4.6	5.1	+0.5
LSD	3.0	2.9	2.9	2.7	3.3	3.8	4.3	+0.5
PCP[f]	0.8	0.4	0.4	NA	0.2	0.3	0.3	0.0
Cocaine	19.7	15.7	13.8	10.8	8.6	6.2	5.7	-0.5
Crack[c]	3.2	3.1	3.1	2.5	1.6	1.2	1.4	+0.1
Other Cocaine[j]	NA	13.6	11.9	10.3	8.1	5.4	5.1	-0.4
MDMA ("Ecstasy")[i]	NA	NA	NA	1.4	1.5	0.8	1.0	+0.3
Heroin	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.0
Other Opiates[a]	3.1	3.1	2.7	2.8	2.7	2.5	2.5	0.0
Stimulants, Adjusted[a,d]	10.6	8.7	7.3	5.8	5.2	4.3	4.1	-0.1
"Ice"[i]	NA	NA	NA	NA	0.4	0.3	0.4	+0.1
Sedatives[a]	3.0	2.5	2.1	1.8	NA	NA	NA	NA
Barbiturates[a]	2.3	2.1	1.8	1.7	1.9	1.8	1.6	-0.2
Methaqualone[a]	1.3	0.9	0.5	0.3	NA	NA	NA	NA
Tranquilizers[a]	5.4	5.1	4.2	3.7	3.7	3.5	3.4	-0.1
Alcohol	88.6	89.4	88.6	88.1	87.4	86.9	86.2	-0.8
Cigarettes	40.1	40.3	37.7	38.0	37.1	37.7	37.9	+0.2
Steroids[f]	NA	NA	NA	0.5	0.3	0.5	0.4	-0.1

NOTES: Level of significance of difference between the two most recent years:
s = .05, ss = .01, sss = .001.
Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.
NA indicates data not available.
See footnotes at end of table 7.

TABLE 9
Trends in Thirty-Day Prevalence of Various Types of Drugs Among Respondents of Modal Age 19-28

(Entries are Percentages)

	Percent who used in last thirty days							
Approx. Wtd. N =	1986 (6900)	1987 (6800)	1988 (6700)	1989 (6600)	1990 (6700)	1991 (6600)	1992 (6800)	'91-'92 change
Any Illicit Drug[h]	25.8	23.4	20.5	17.7	15.9	15.1	14.8	-0.2
Any Illicit Drug Other than Marijuana	13.0	10.7	9.5	7.5	6.0	5.4	5.5	+0.1
Marijuana	22.0	20.7	17.9	15.5	13.9	13.5	13.3	-0.2
Inhalants[b]	0.4	0.6	0.6	0.5	0.6	0.5	0.6	+0.1
Inhalants, Adjusted[g]	0.7	0.9	0.9	NA	0.7	0.6	0.7	+0.1
Nitrites[f]	0.5	0.5	0.4	NA	0.1	*	0.1	0.0
Hallucinogens	1.3	1.2	1.1	1.1	0.9	1.1	1.5	+0.4s
Hallucinogens, Adjusted[g]	1.4	1.2	1.1	NA	1.0	1.2	1.6	+0.4
LSD	0.9	0.8	0.8	0.8	0.6	0.8	1.1	+0.3
PCP[f]	0.2	0.1	0.3	NA	0.2	0.1	0.2	0.0
Cocaine	8.2	6.0	5.7	3.8	2.4	2.0	1.8	-0.2
Crack[c]	NA	1.0	1.2	0.7	0.4	0.4	0.4	0.0
Other Cocaine[j]	NA	4.8	4.8	3.4	2.1	1.8	1.7	-0.1
MDMA ("Ecstasy")[i]	NA	NA	NA	0.4	0.2	0.1	0.3	+0.1
Heroin	0.1	0.1	0.1	0.1	0.1	*	0.1	0.0
Other Opiates[a]	0.9	0.9	0.7	0.7	0.7	0.6	0.7	+0.1
Stimulants, Adjusted[a,d]	4.0	3.2	2.7	2.1	1.9	1.5	1.5	0.0
"Ice"[i]	NA	NA	NA	NA	0.1	*	0.1	+0.1
Sedatives[a]	0.9	0.8	0.7	0.5	NA	NA	NA	NA
Barbiturates[a]	0.7	0.7	0.7	0.5	0.6	0.5	0.5	0.0
Methaqualone[a]	0.3	0.2	0.1	0.0	NA	NA	NA	NA
Tranquilizers[a]	1.8	1.6	1.4	1.2	1.1	0.9	1.0	+0.1
Alcohol	75.1	75.4	74.0	72.4	71.2	70.6	69.0	-1.6s
Cigarettes	31.1	30.9	28.9	28.6	27.7	28.2	28.3	+0.1
Steroids[f]	NA	NA	NA	0.2	0.1	0.2	0.1	-0.1

NOTES: Level of significance of difference between the two most recent years:
s = .05, ss = .01, sss = .001.
Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.
An asterisk indicates a percentage of less than .05%. NA indicates data not available.
See footnotes at end of table 7.

TABLE 10
Trends in Thirty-Day Prevalence of Daily Use of Various Types of Drugs Among Respondents of Modal Age 19-28

(Entries are Percentages)

	Percent who used daily in last thirty days							
Approx. Wtd. N =	1986 (6900)	1987 (6800)	1988 (6700)	1989 (6600)	1990 (6700)	1991 (6600)	1992 (6800)	'91-'92 change
Marijuana	4.1	4.2	3.3	3.2	2.5	2.3	2.3	0.0
Cocaine	0.2	0.1	0.2	0.1	*	0.1	*	0.0
Stimulants, Adjusted[a,d]	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0
Alcohol								
Daily	6.1	6.6	6.1	5.5	4.7	4.9	4.5	-0.4
5+ drinks in a row in last 2 weeks	36.1	36.2	35.2	34.8	34.3	34.7	34.2	-0.5
Cigarettes								
Daily	25.2	24.8	22.7	22.4	21.3	21.7	20.9	-0.8
Half-pack or more per day	20.2	19.8	17.7	17.3	16.7	16.0	15.7	-0.3

NOTES: Level of significance of difference between the two most recent years:
s = .05, ss = .01, sss = .001.
Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.
The illicit drugs not listed here show a daily prevalence of 0.1% or less in all years.
An asterisk indicates a percentage of less than .05%. NA indicates data not available.
See footnotes at end of table 7.

TABLE 11
Trends in Annual and Thirty-Day Prevalence of An Illicit Use Index[a] Among Respondents of Modal Age 19-28

(Entries are Percentages)

	1986	1987	1988	1989	1990	1991	1992	'91-'92 change
	Percent reporting use in last twelve months							
Any Illicit Drug	41.9	39.3	36.3	32.8	30.7	27.0	28.3	+1.3
Males	45.3	42.6	39.5	35.7	33.6	30.0	31.4	+1.4
Females	39.0	36.5	33.6	30.5	28.3	24.5	25.8	+1.2
Any Illicit Drug Other than Marijuana	27.0	23.9	21.3	18.3	16.7	14.3	14.1	-0.2
Males	30.4	26.5	23.8	21.0	19.1	16.4	16.3	-0.1
Females	24.0	21.6	19.4	16.2	14.7	12.5	12.2	-0.2
	Percent reporting use in last thirty days							
Any Illicit Drug	25.8	23.4	20.5	17.7	15.9	15.1	14.8	-0.2
Males	29.9	27.1	23.7	21.1	18.8	18.3	17.9	-0.4
Females	22.2	20.2	17.8	15.0	13.5	12.5	12.4	-0.1
Any Illicit Drug Other than Marijuana	13.0	10.7	9.5	7.5	6.0	5.4	5.5	+0.1
Males	15.2	12.3	10.6	9.1	6.8	6.6	6.5	-0.1
Females	11.0	9.4	8.7	6.2	5.3	4.4	4.7	+0.3
	Approximate Weighted Ns							
All Respondents	(6900)	(6800)	(6700)	(6600)	(6700)	(6600)	(6800)	
Males	(3200)	(3100)	(3000)	(2900)	(3000)	(3000)	(3000)	
Females	(3700)	(3700)	(3700)	(3700)	(3700)	(3600)	(3700)	

NOTES: Level of significance of difference between the two most recent years:
s = .05, ss = .01, sss = .001.
Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

[a]Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, and heroin, or any use of other opiates, stimulants, barbiturates, methaqualone (until 1990), or tranquilizers not under a doctor's orders.

Figure 20
Any Illicit Drug: Trends in Annual Prevalence Among Young Adults by Age Group

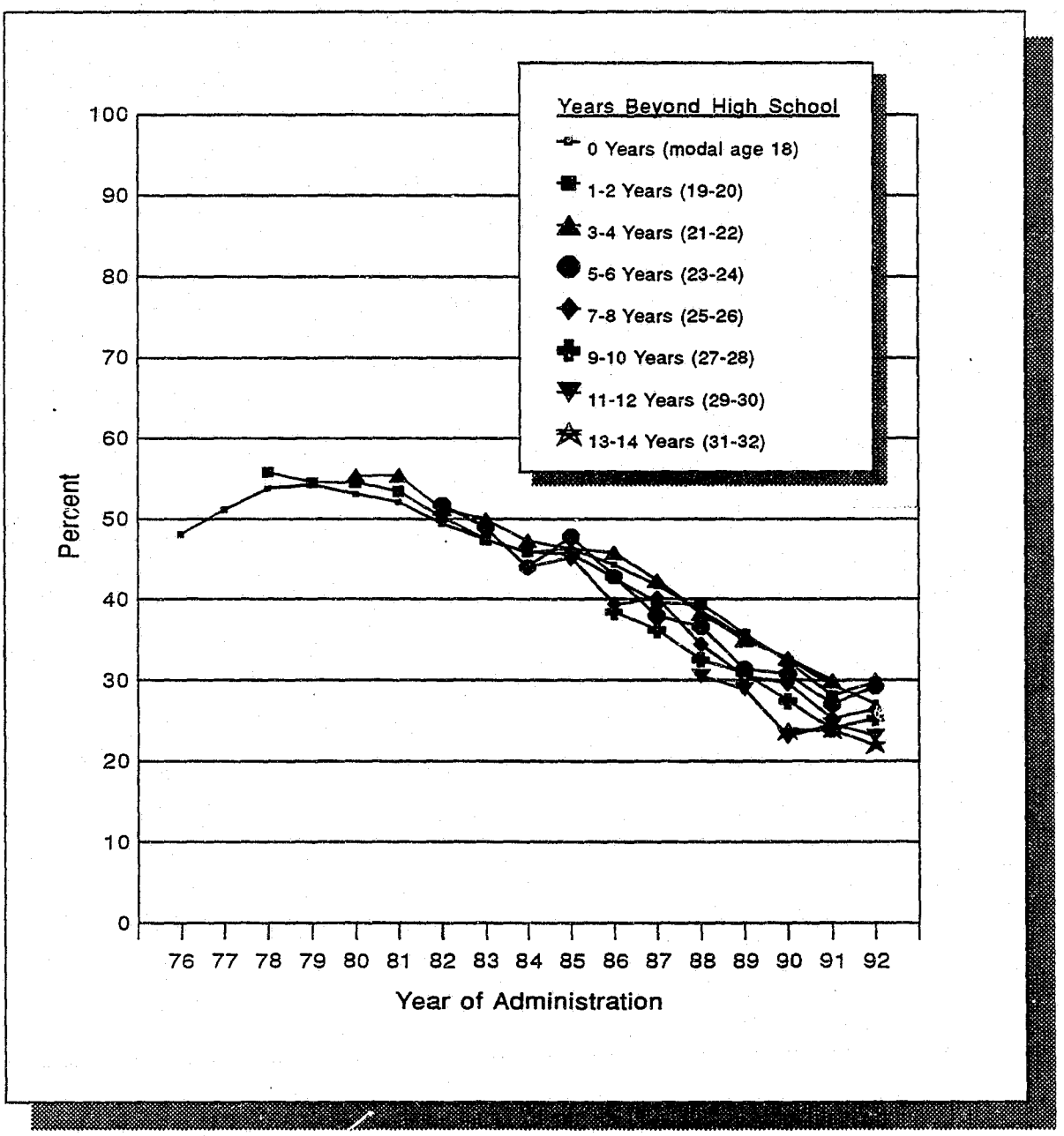


Figure 21
Any Illicit Drug Other than Marijuana: Trends in Annual Prevalence Among Young Adults by Age Group

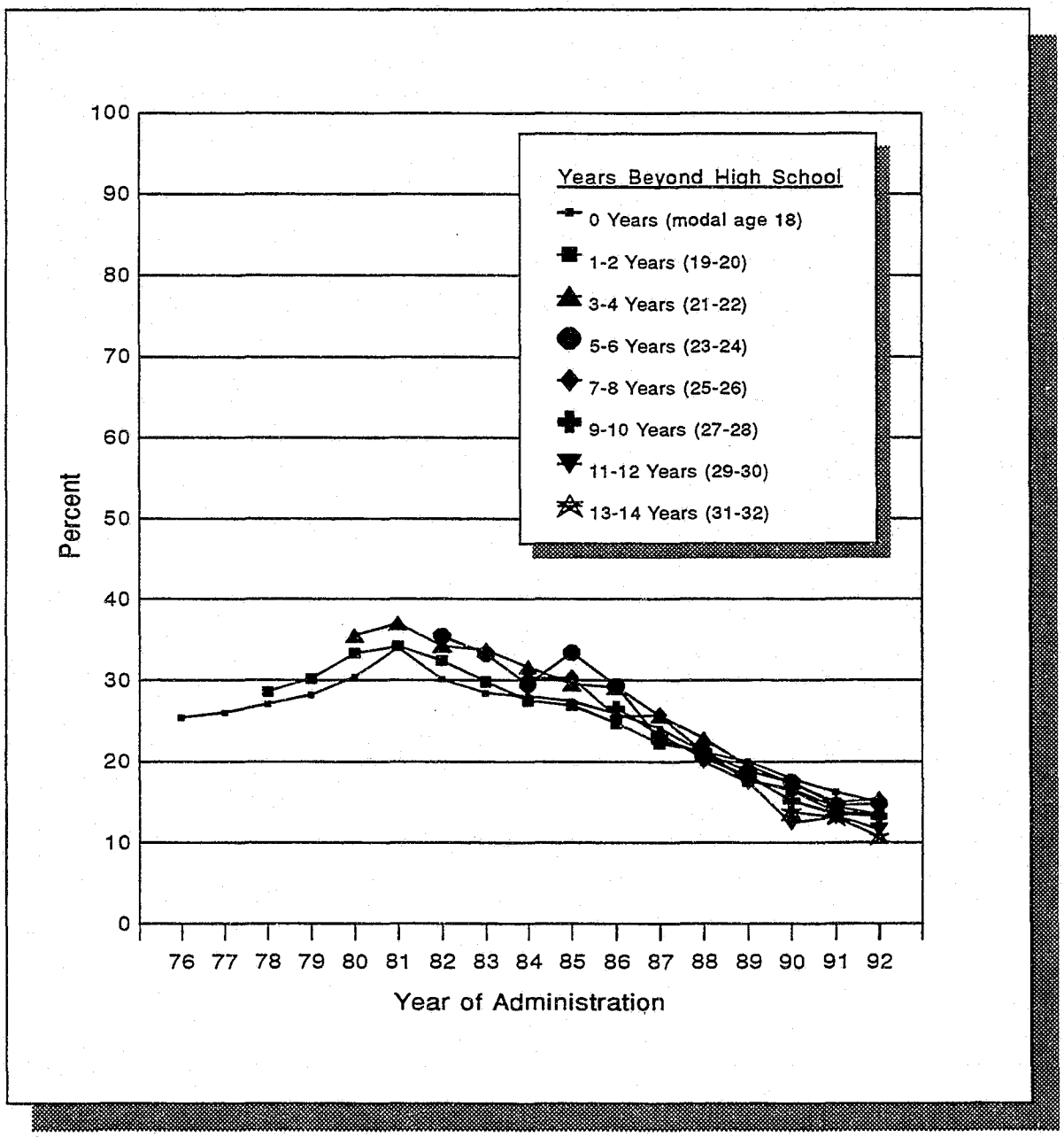


Figure 22a
Marijuana: Trends in Annual Prevalence Among Young Adults by Age Group

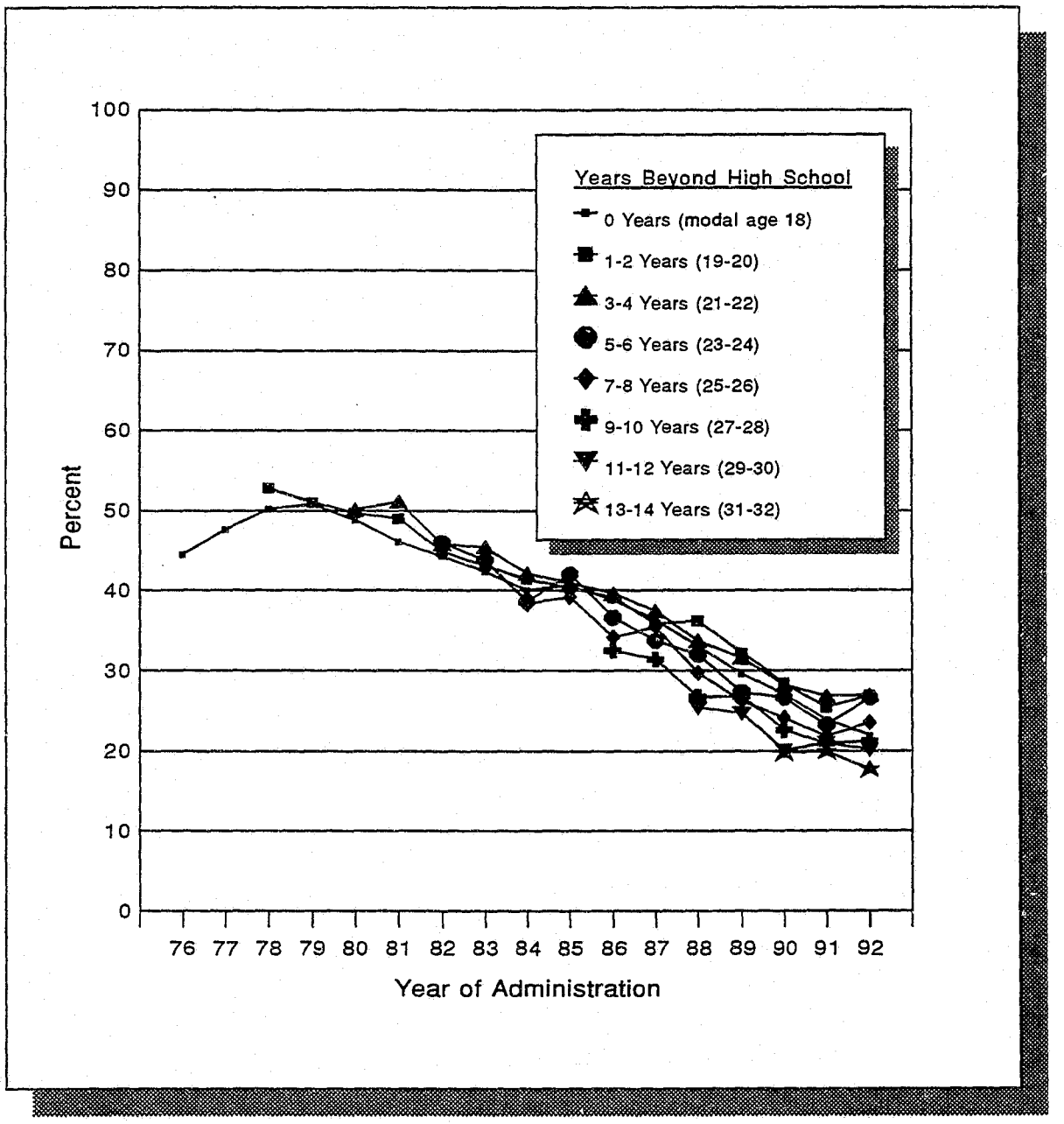


Figure 22b
Marijuana: Trends in Thirty-Day Prevalence Among Young Adults by Age Group

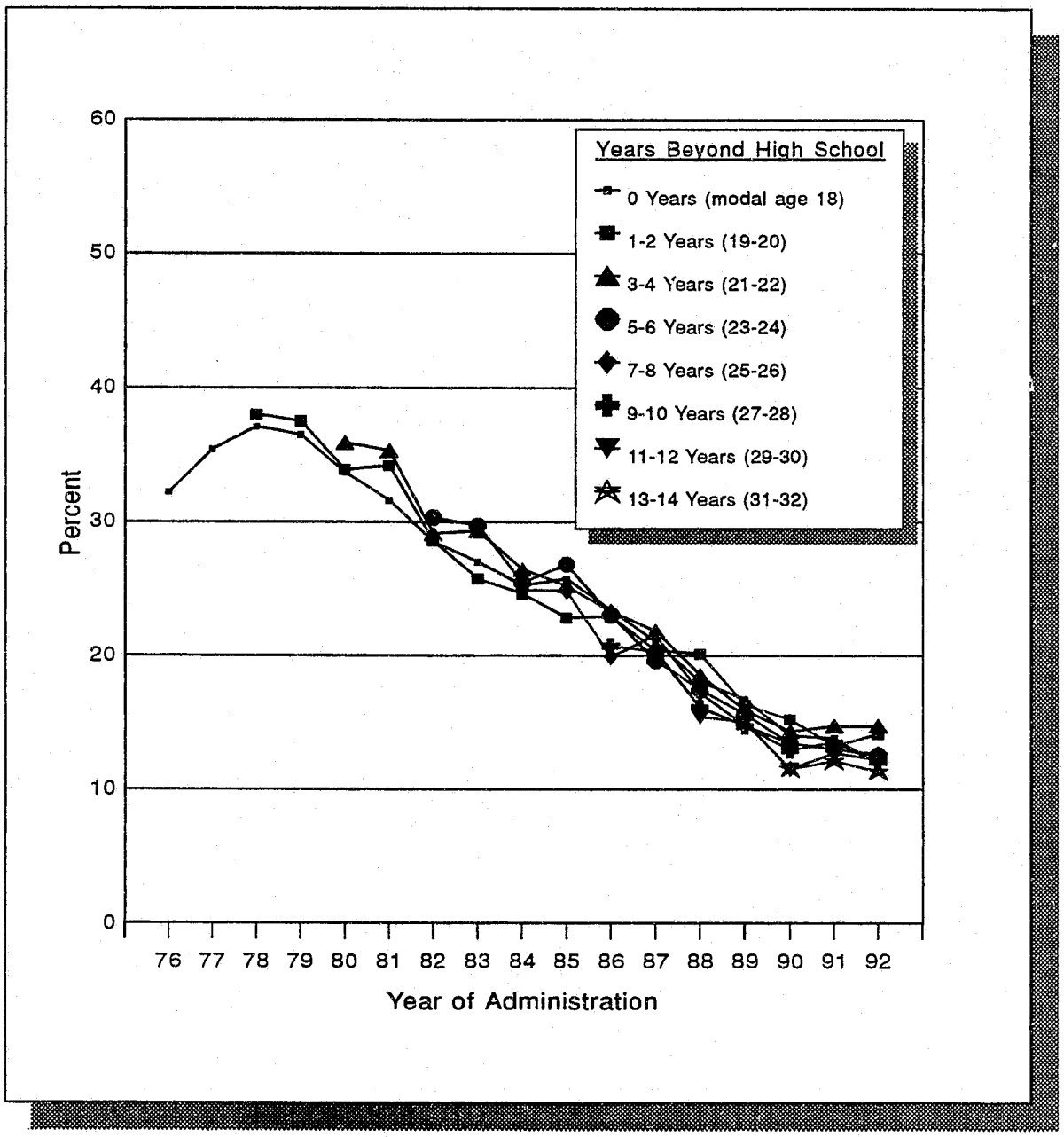


Figure 22c
Marijuana: Trends in Thirty-Day Prevalence of Daily Use Among Young Adults by Age Group

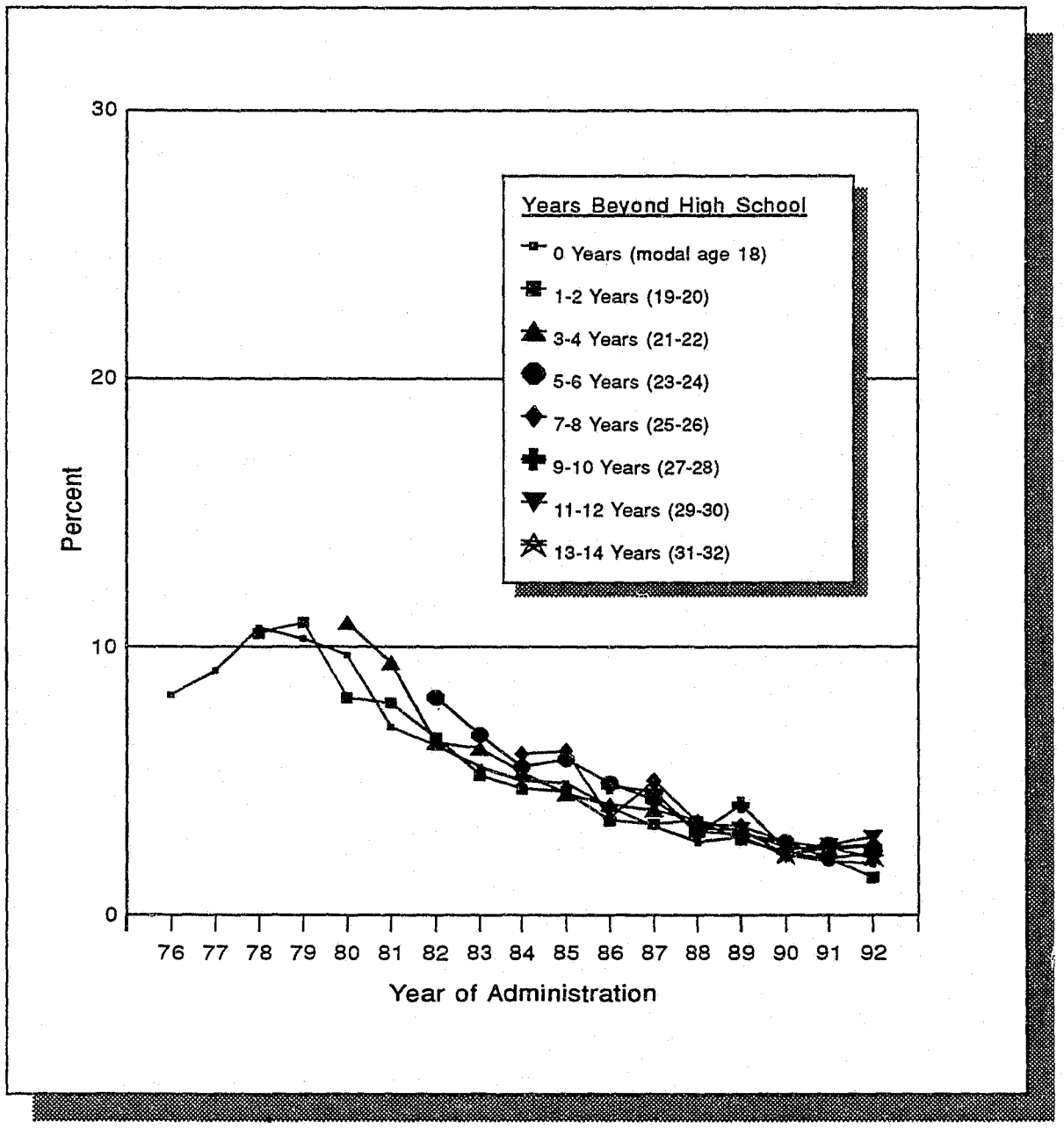
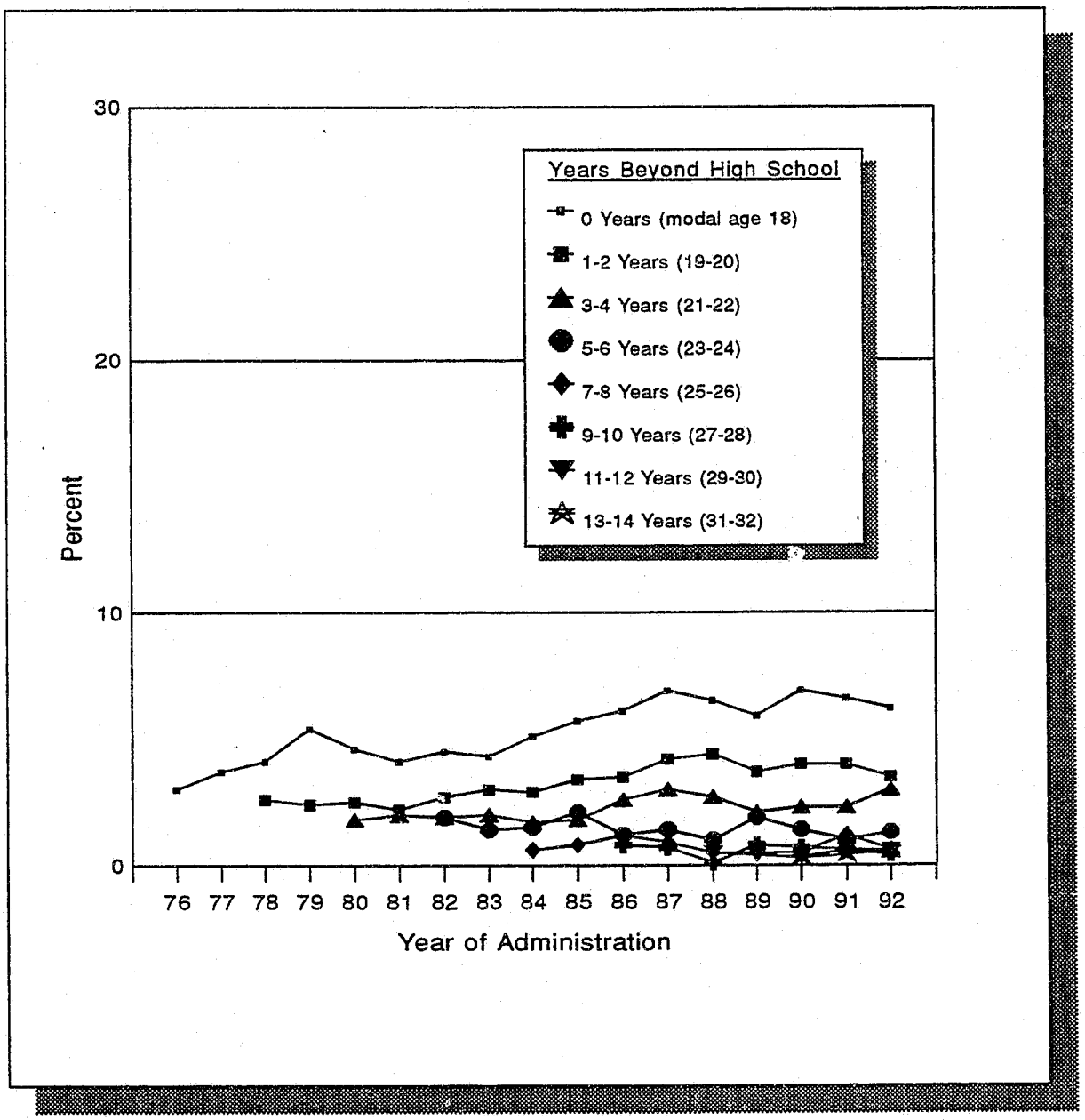
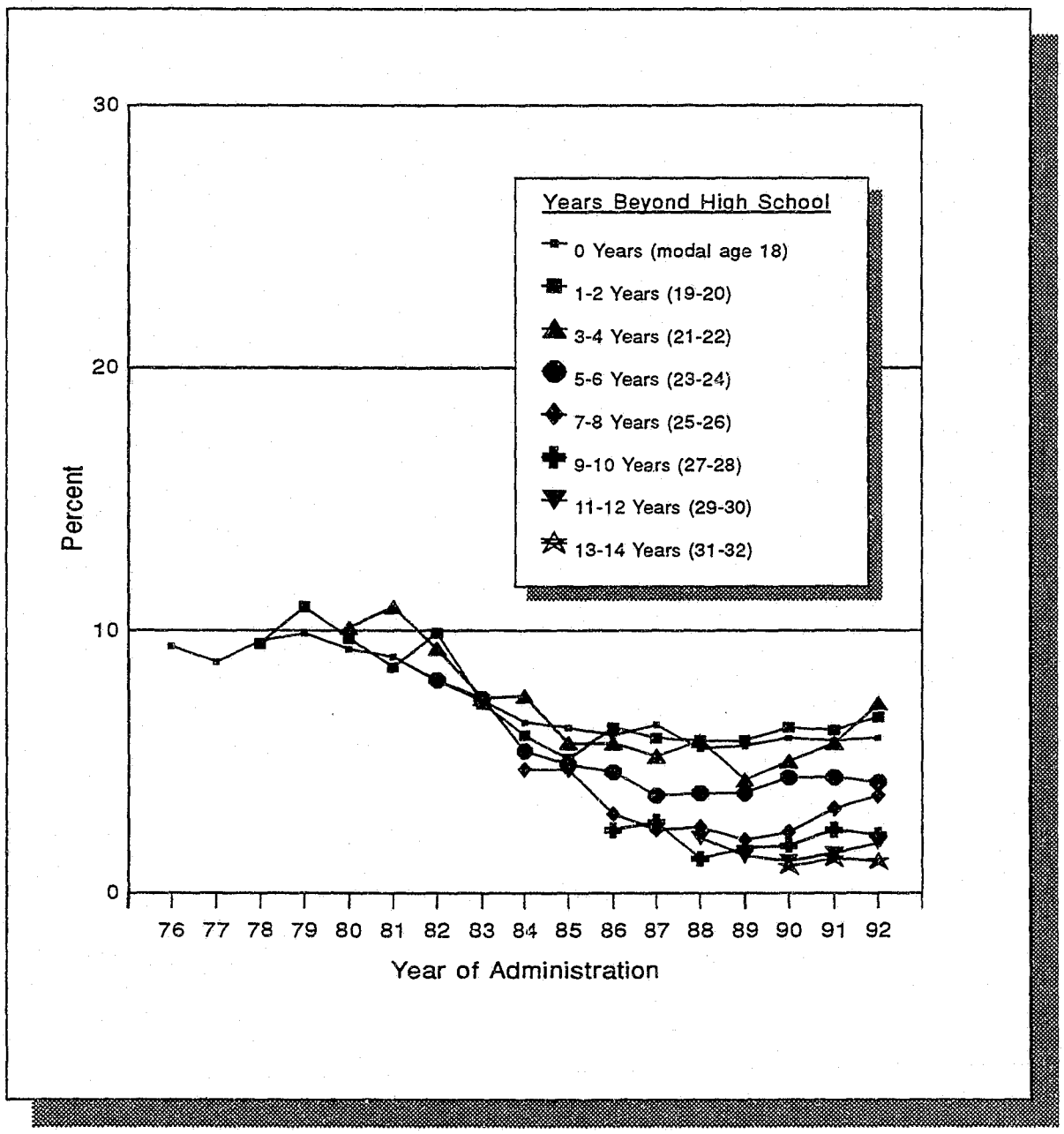


Figure 23
Inhalants*: Trends in Annual Prevalence Among Young Adults by Age Group



*Unadjusted for the possible underreporting of amyl and butyl nitrites. Chapter 5, Volume I, shows that such an adjustment would flatten the trend for seniors considerably because the line was adjusted up more in the earlier years, when nitrite use was more prevalent.

Figure 24
Hallucinogens*: Trends in Annual Prevalence Among Young Adults by Age Group



*Unadjusted for the possible underreporting of PCP.

Figure 25
LSD: Trends in Annual Prevalence Among Young Adults by Age Group

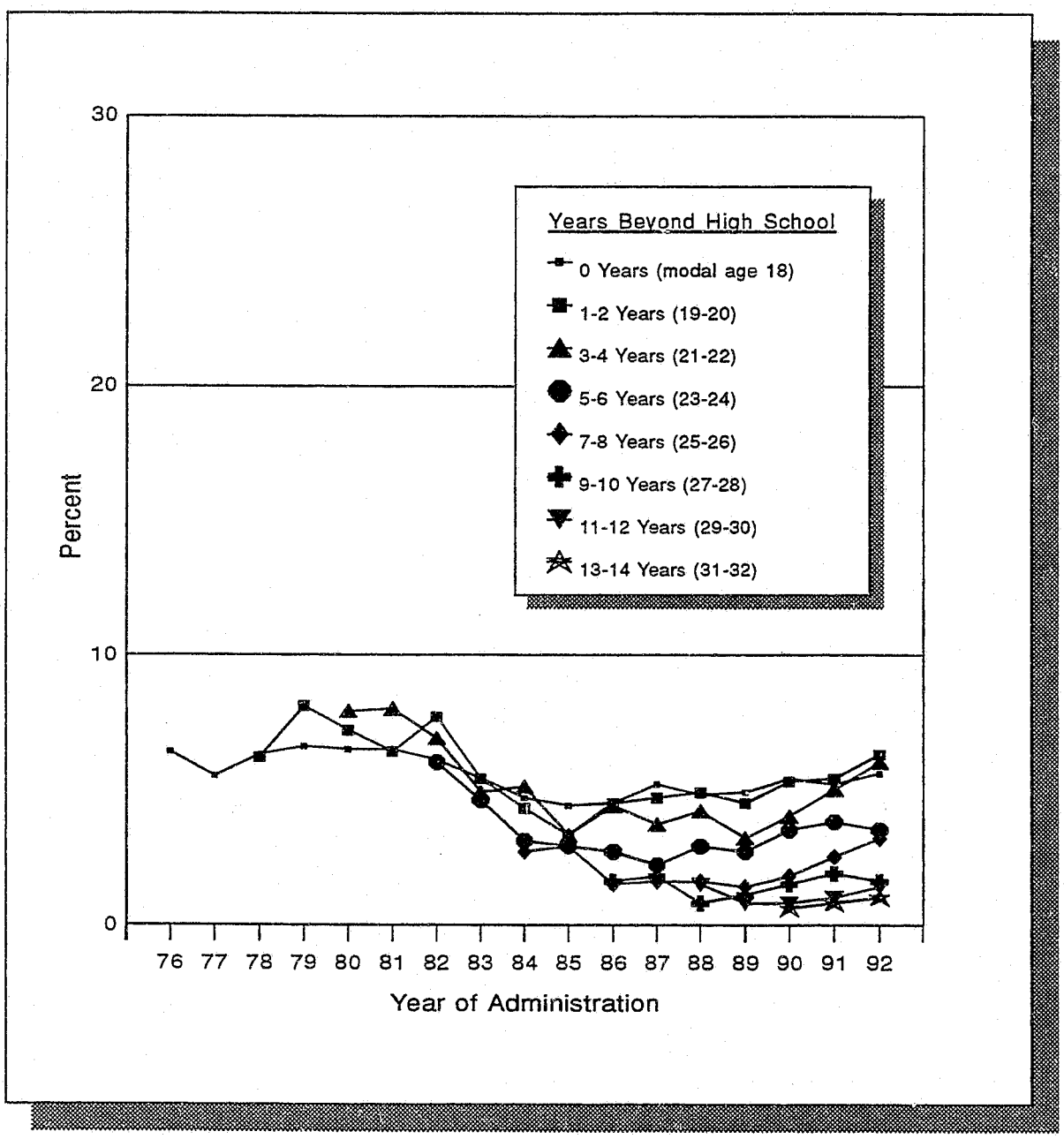


Figure 26
Hallucinogens Other than LSD: Trends in Annual Prevalence Among Young Adults by Age Group

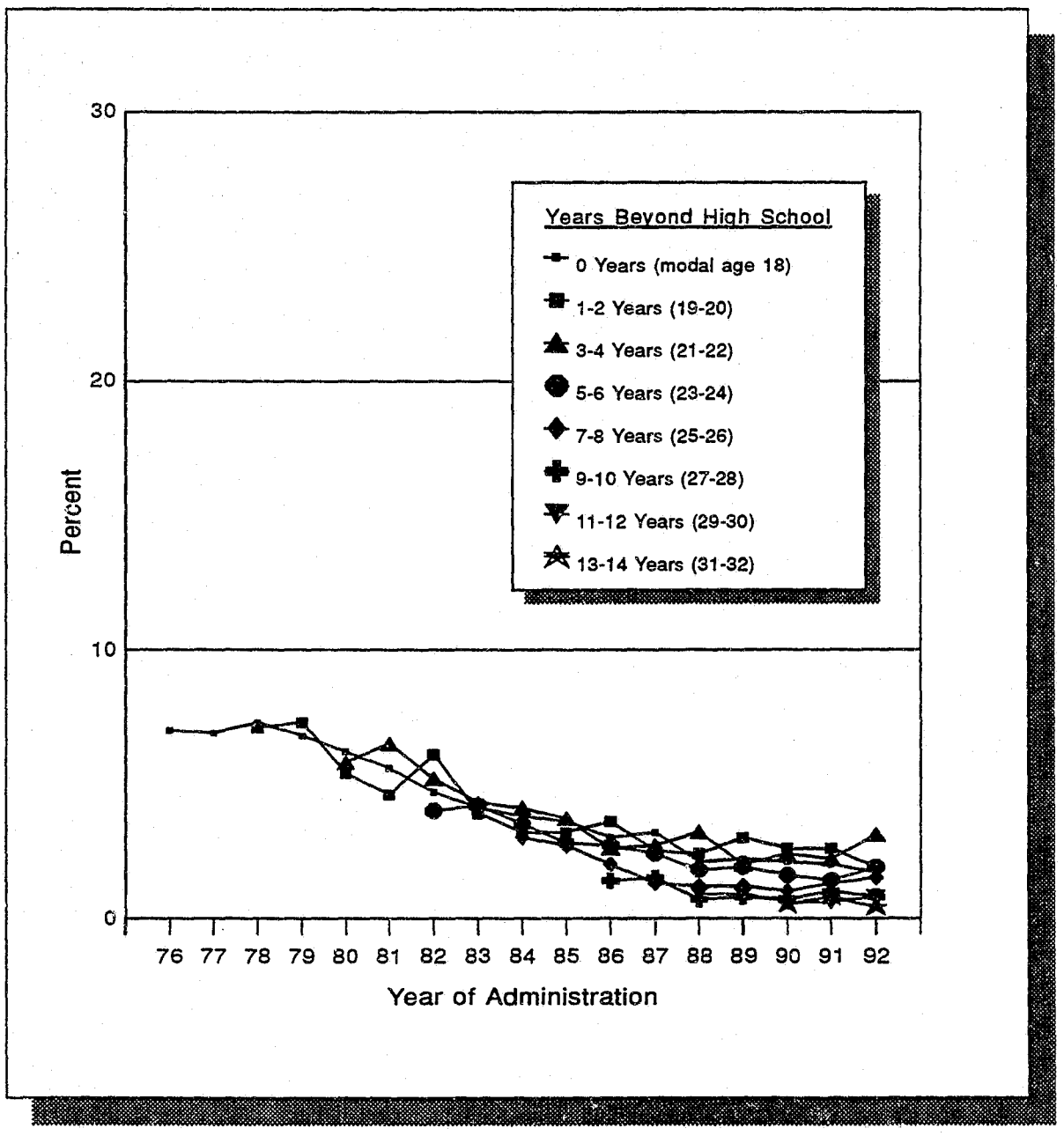


Figure 27
Cocaine: Trends in Annual Prevalence Among Young Adults by Age Group

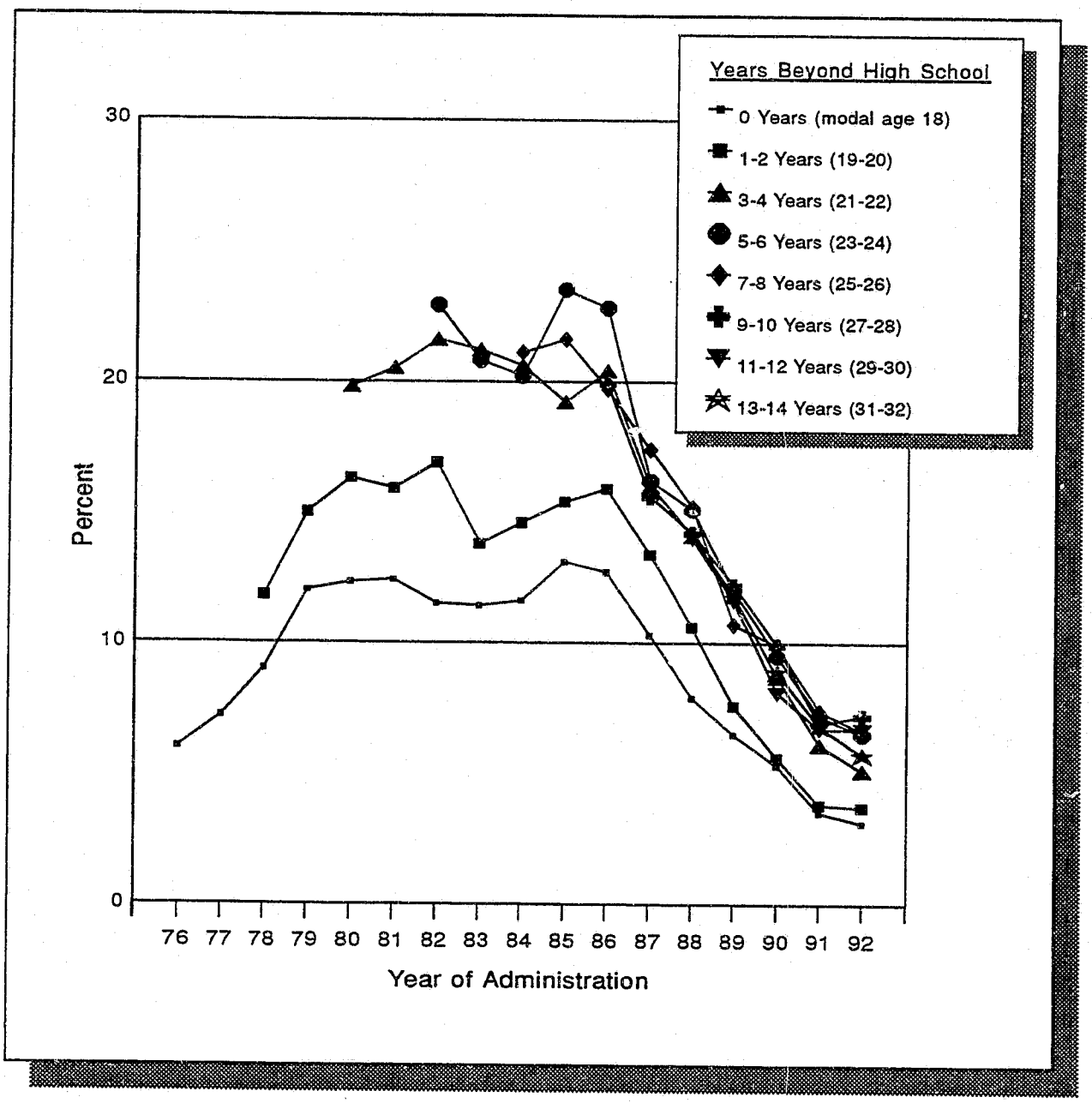


Figure 28
Crack Cocaine: Trends in Annual Prevalence Among Young Adults by Age Group

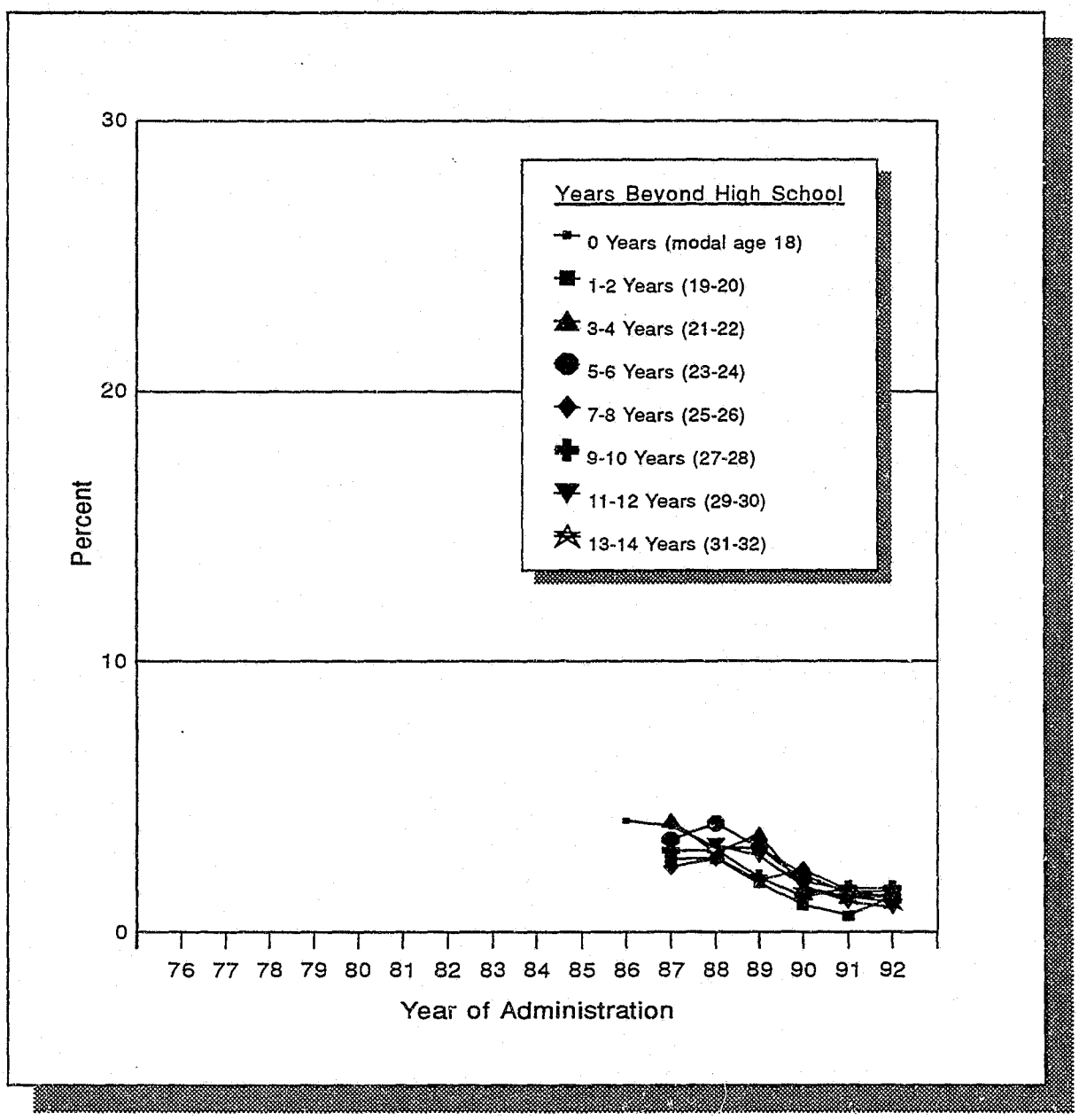


Figure 29
Other Opiates: Trends in Annual Prevalence Among Young Adults by Age Group

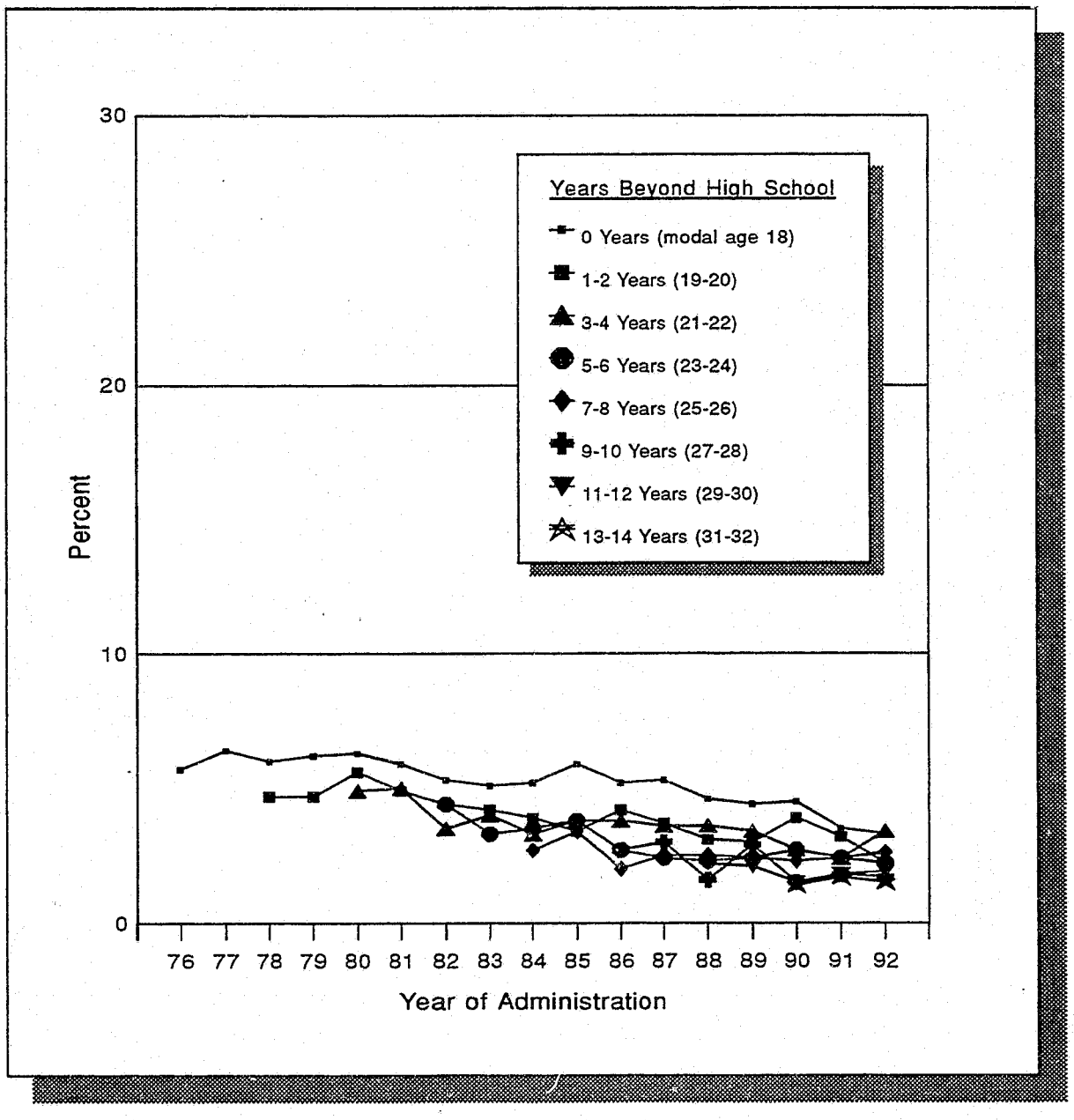
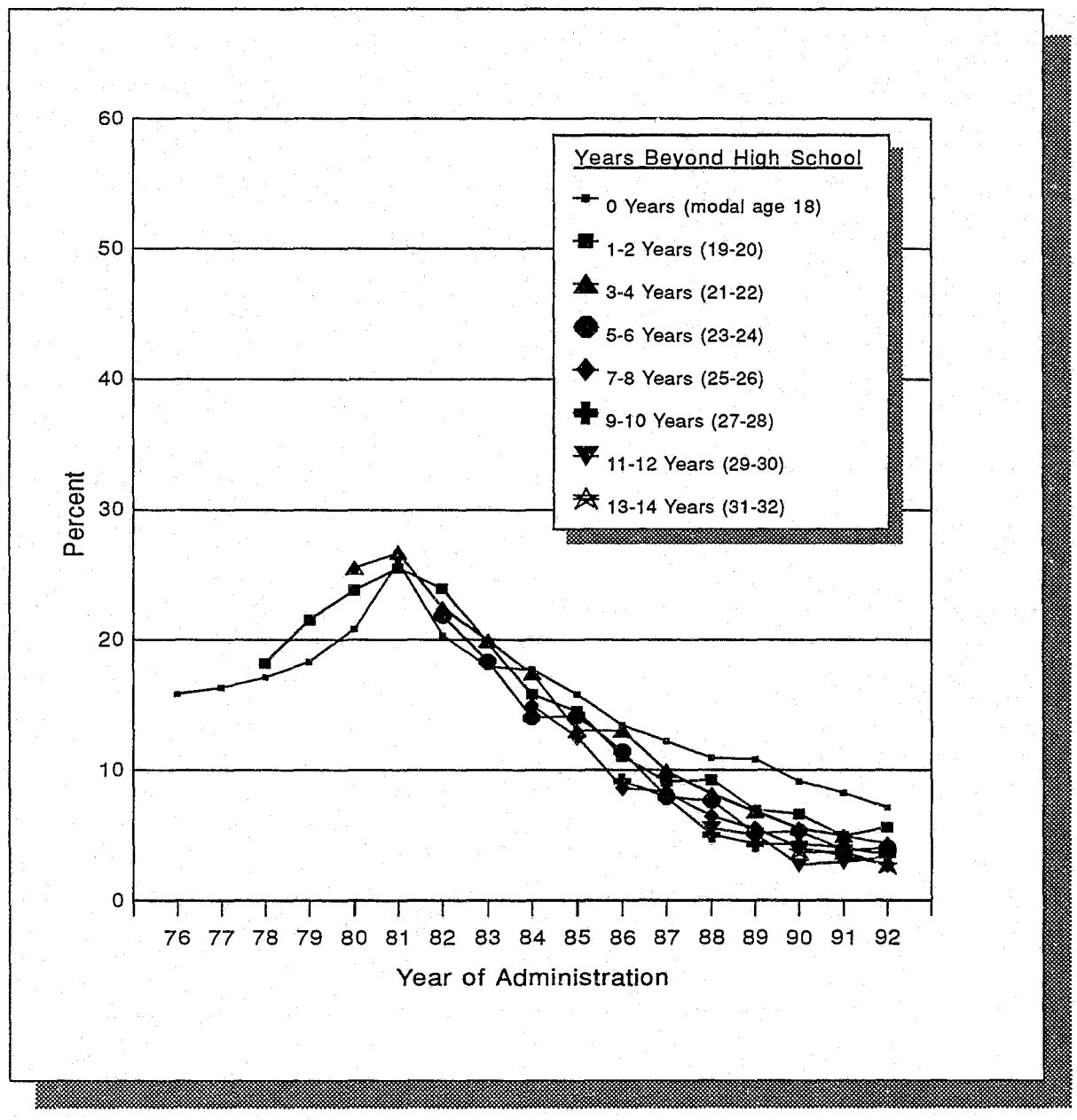


Figure 30
Stimulants: Trends in Annual Prevalence Among Young Adults by Age Group



NOTE: In 1982 there was a change in the amphetamine question to exclude nonprescription stimulants.

Figure 31
Barbiturates: Trends in Annual Prevalence Among Young Adults by Age Group

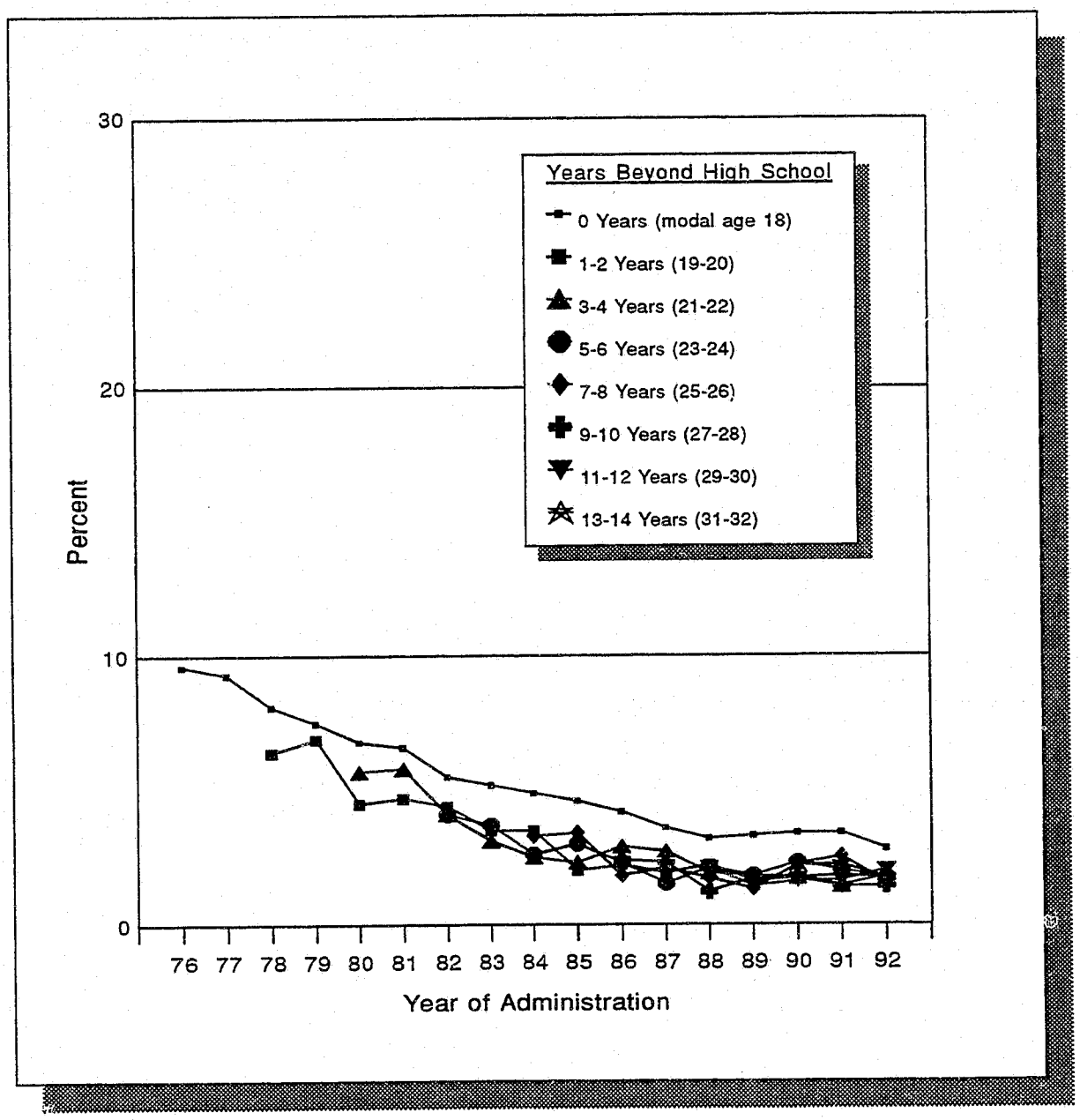


Figure 32
Tranquilizers: Trends in Annual Prevalence Among Young Adults by Age Group

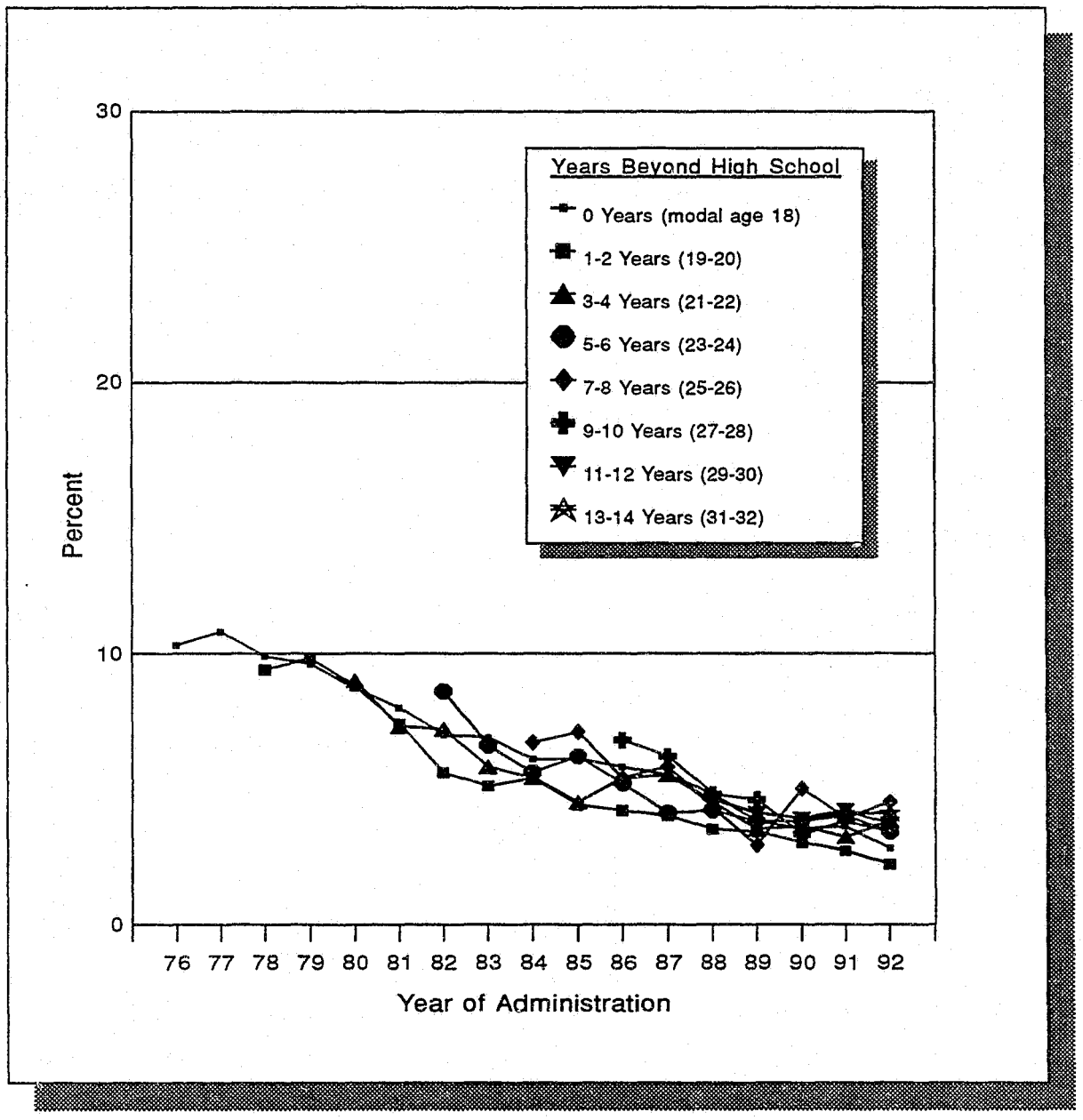


Figure 33a
Alcohol: Trends in Annual Prevalence Among Young Adults by Age Group

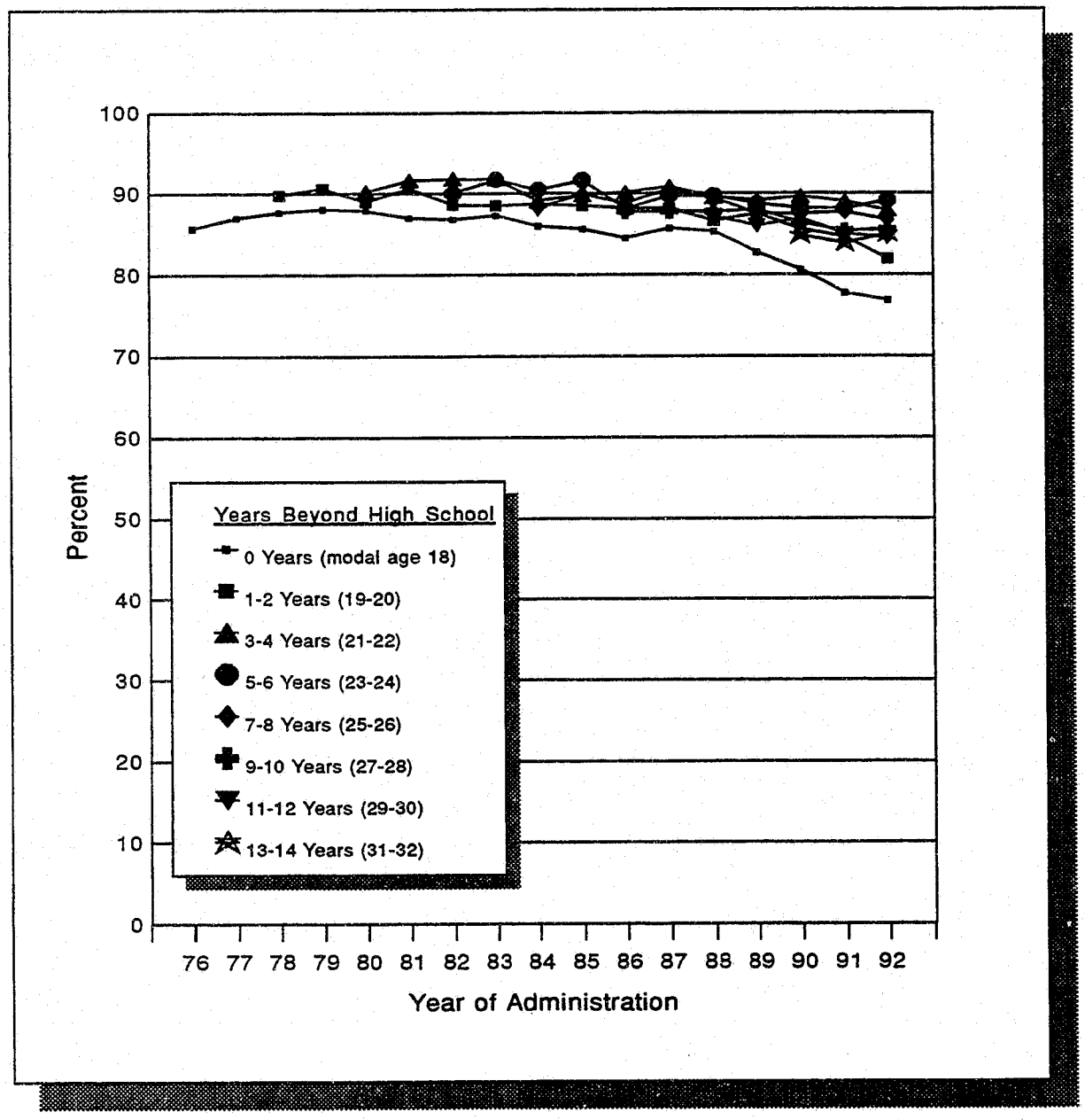


Figure 33b
Alcohol: Trends in Thirty-Day Prevalence Among Young Adults by Age Group

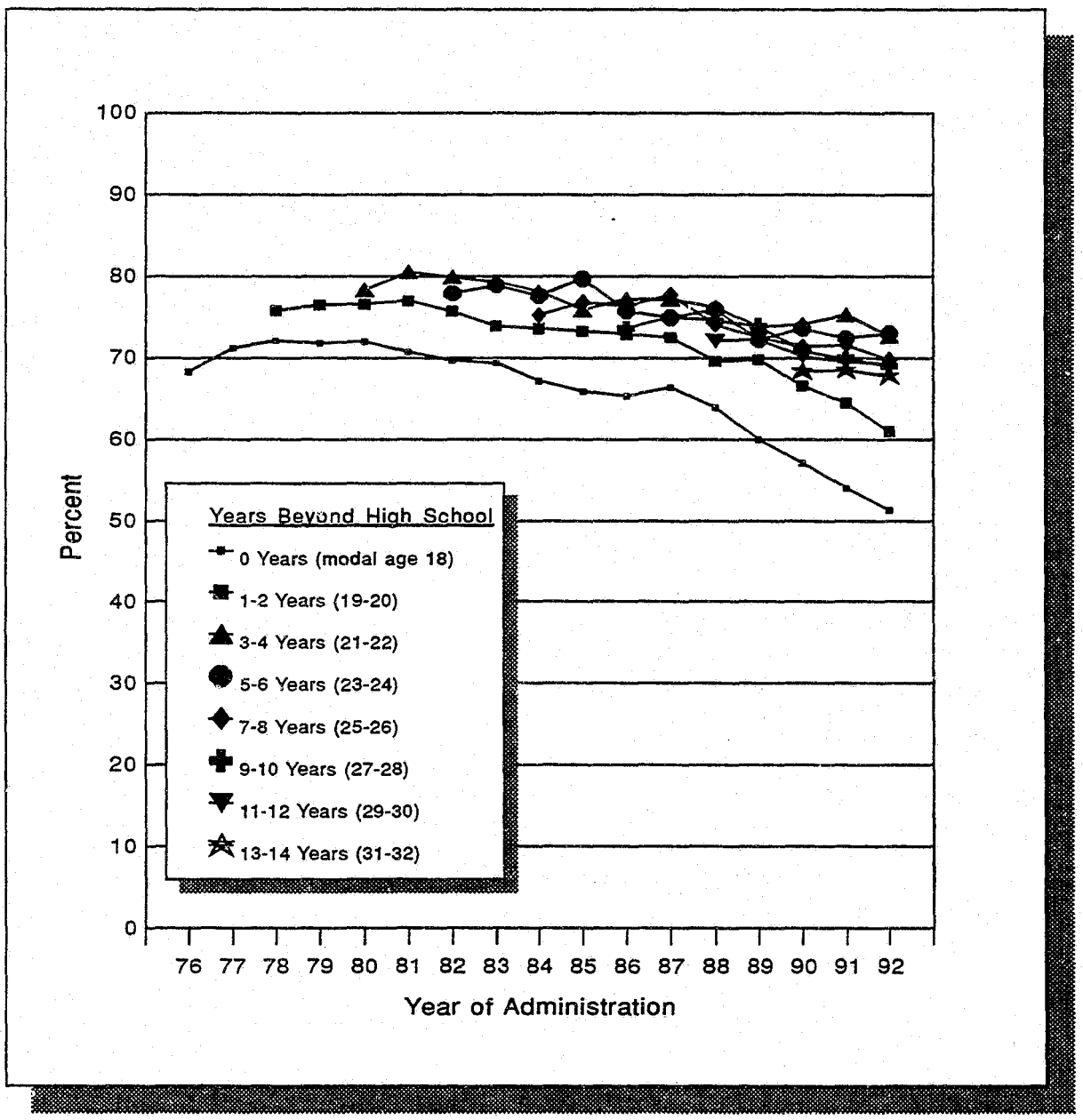


Figure 33c
Alcohol: Trends in Thirty-Day Prevalence of Daily Use Among Young Adults by Age Group

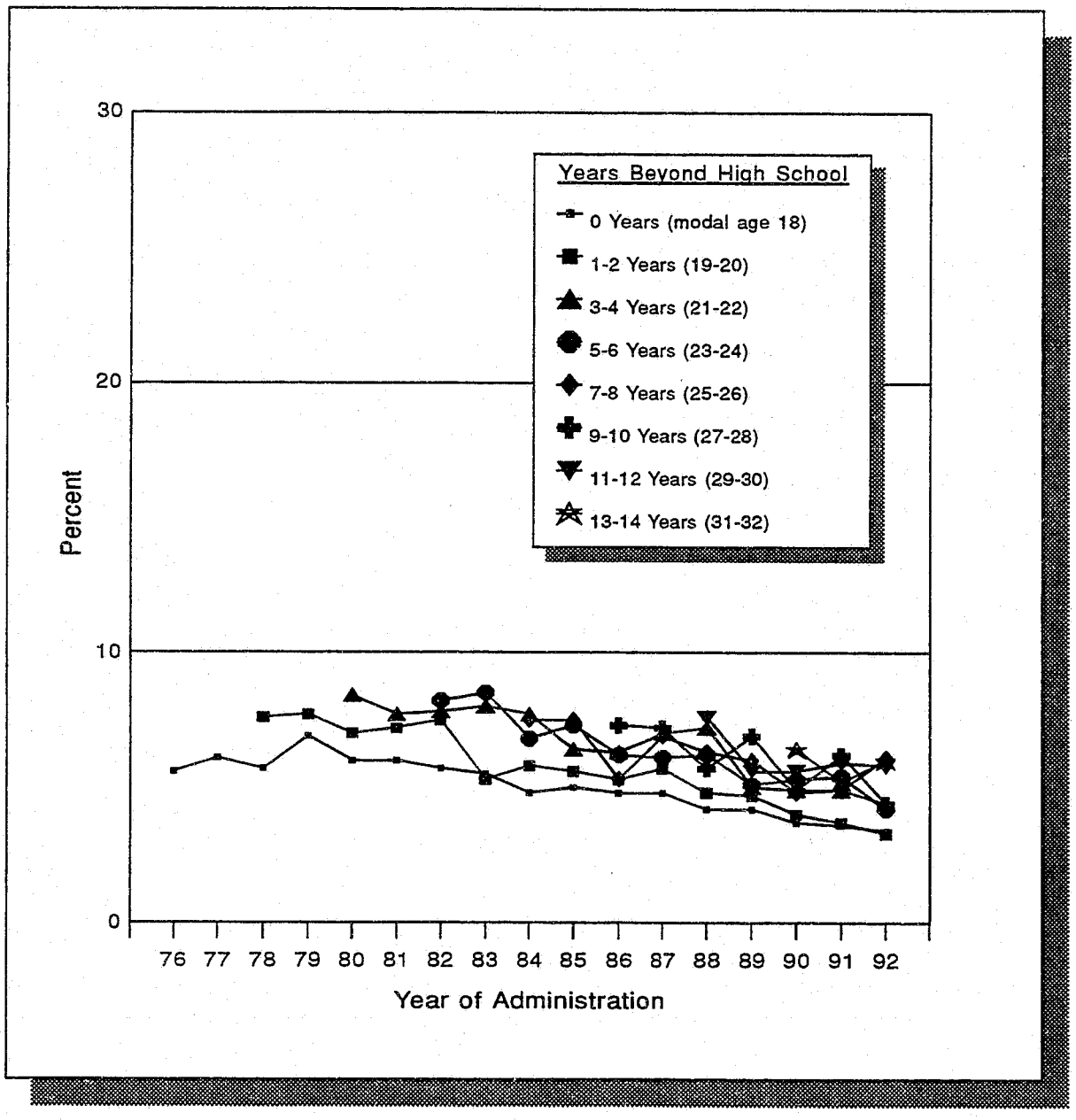


Figure 33d
Alcohol: Trends in Two-Week Prevalence of Five or More Drinks in a Row Among Young Adults, by Age Group

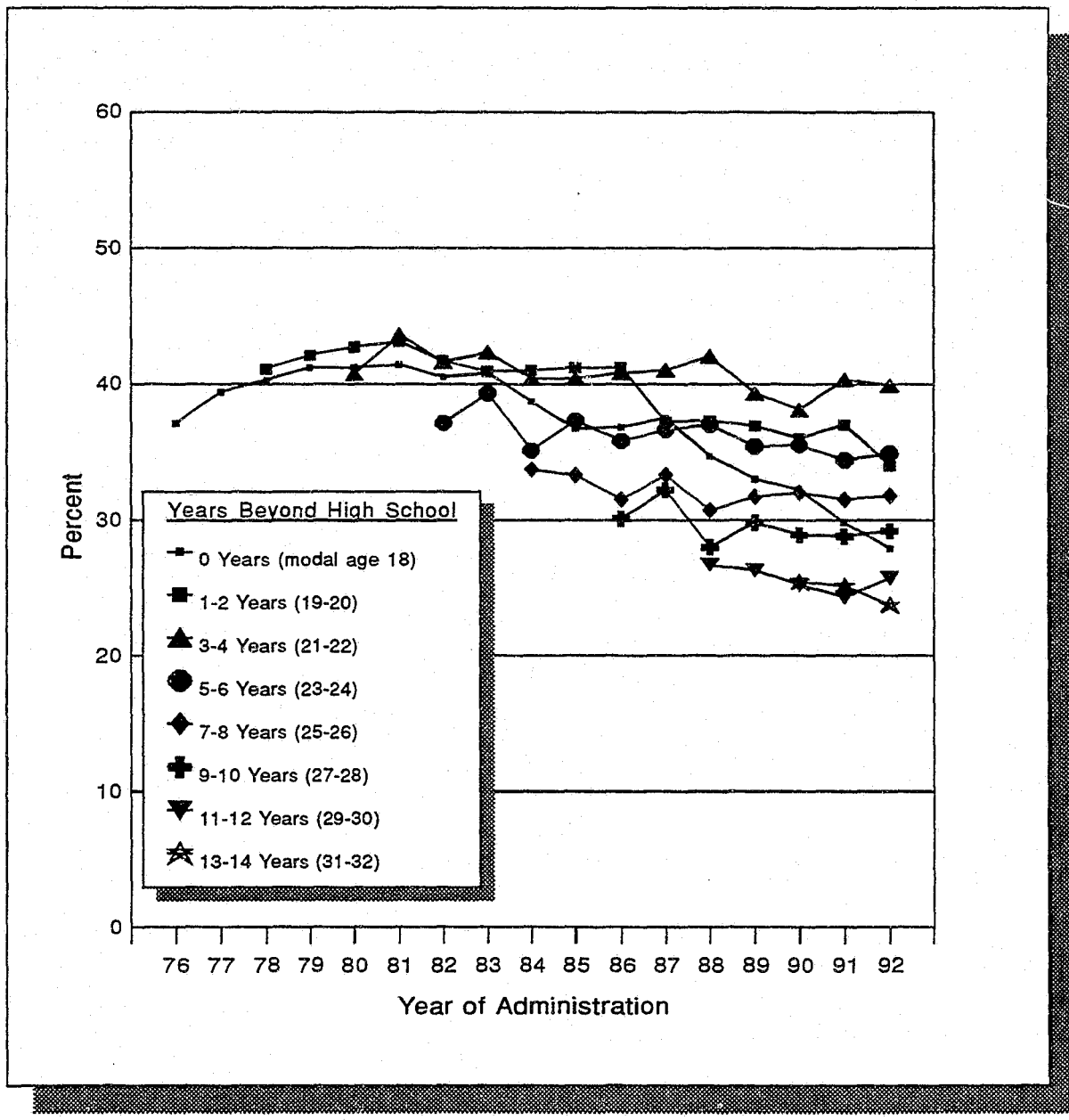


Figure 34a
Cigarettes: Trends in Thirty-Day Prevalence Among Young Adults by Age Group

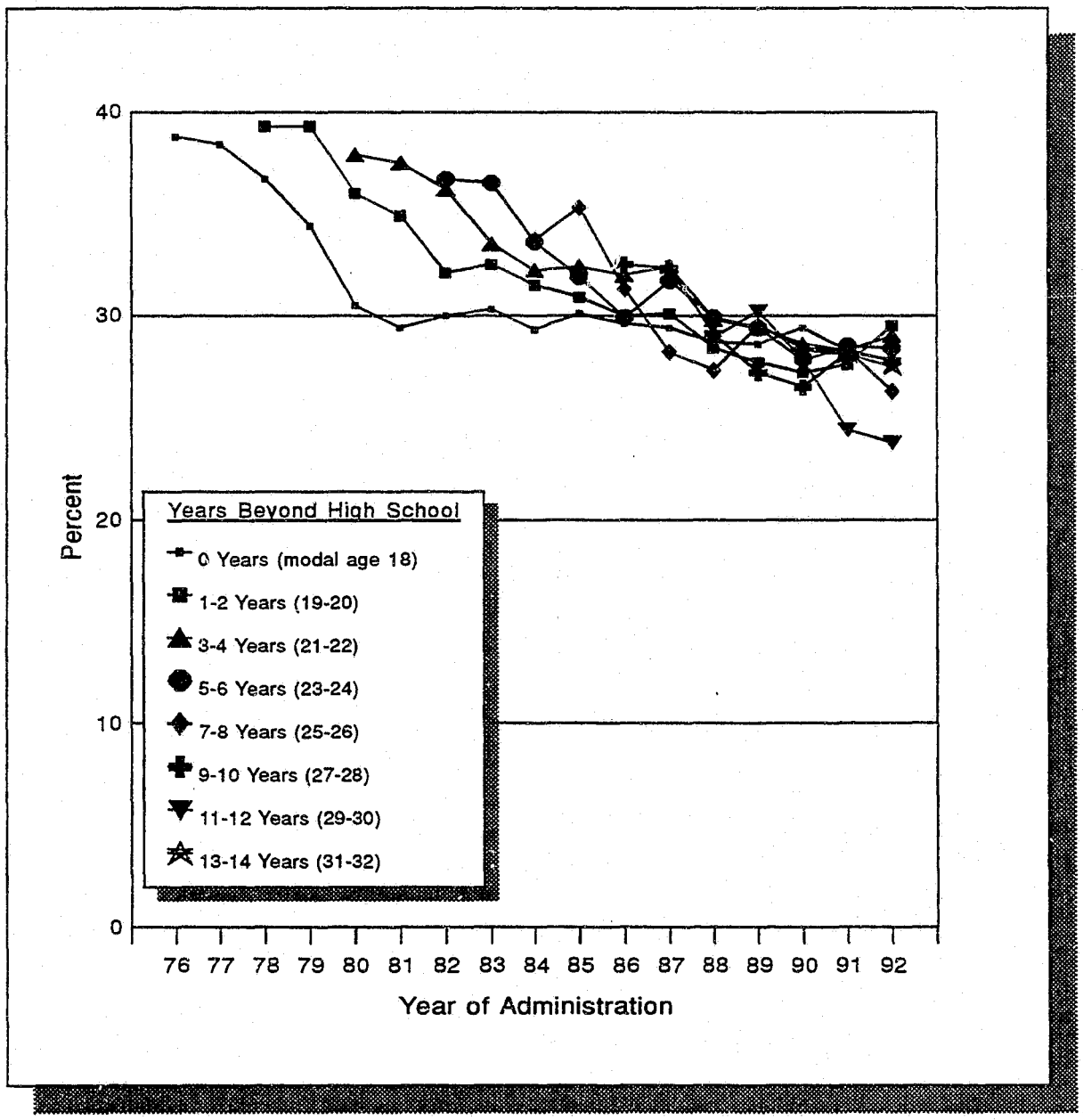


Figure 34b
Cigarettes: Trends in Thirty-Day Prevalence of Daily Use Among Young Adults by Age Group

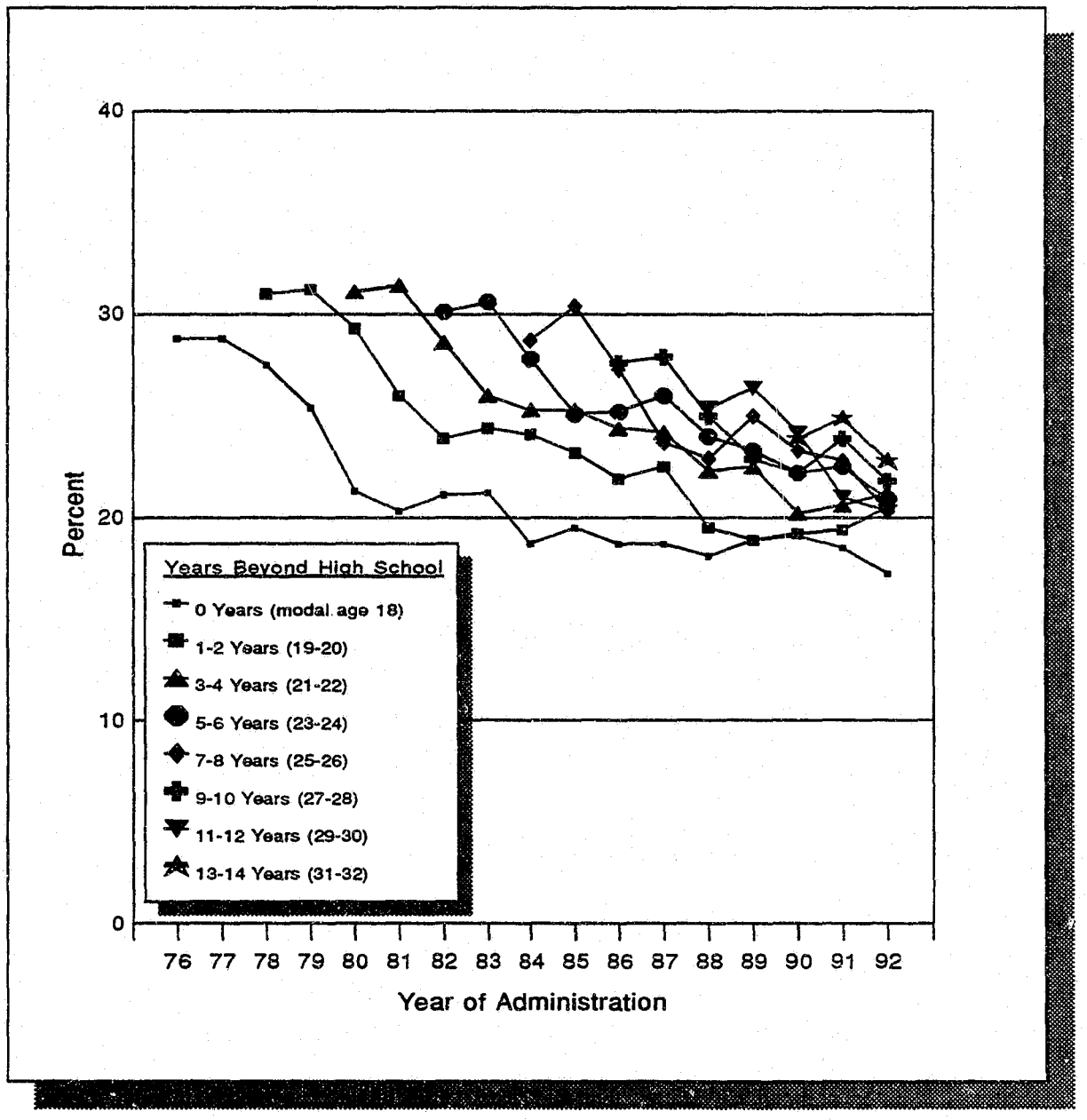
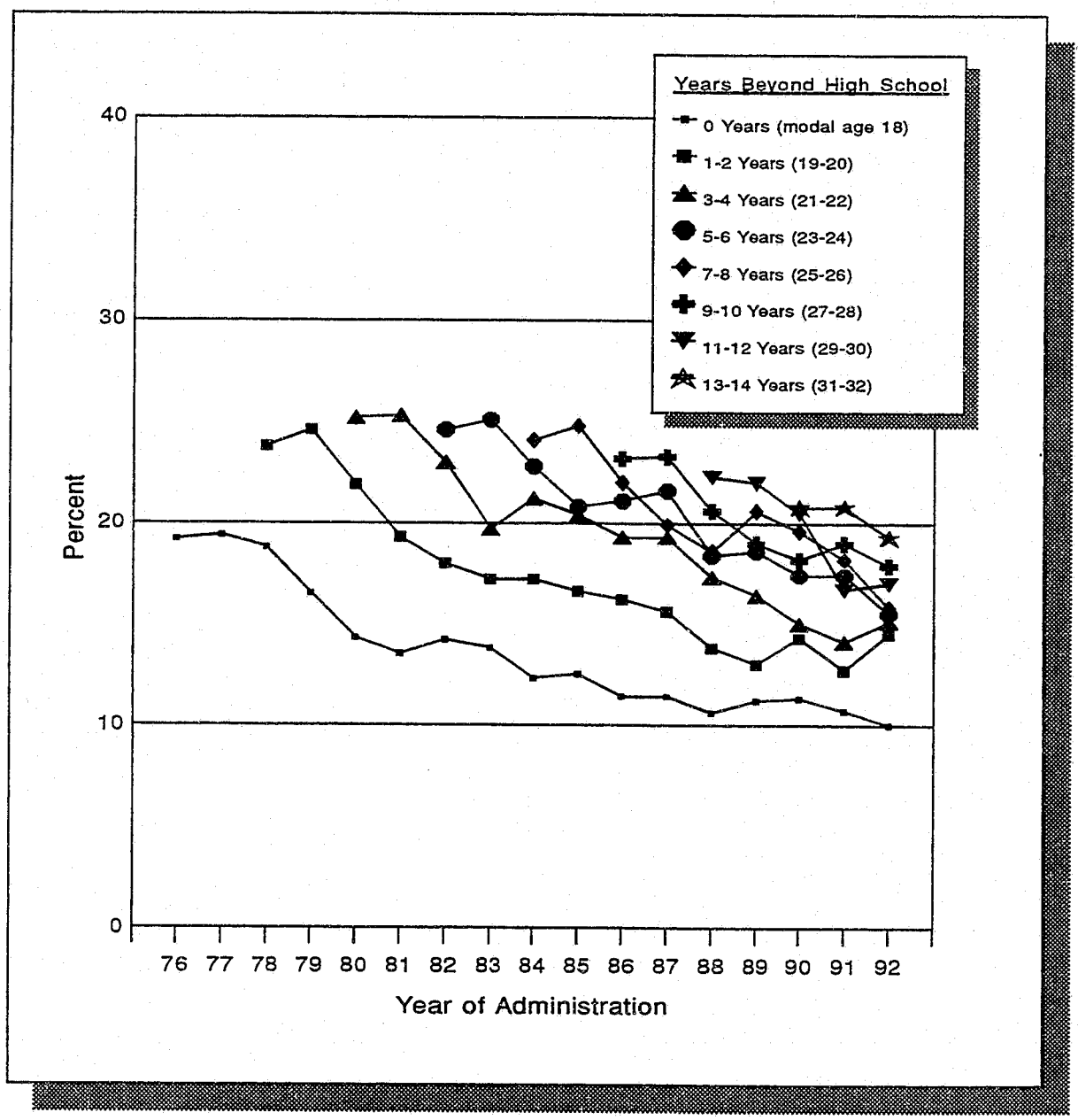


Figure 34c
Cigarettes: Trends in Thirty-Day Prevalence of Smoking a Half Pack or More Daily Among Young Adults, by Age Group



TRENDS FOR IMPORTANT SUBGROUPS OF YOUNG ADULTS

Four-year age groupings have been used here to examine subgroup trends in order to have sufficiently large numbers of cases to make reliable estimates for the subgroups. Subgroup data for respondents of each sex, and for respondents from communities of different size, are available for 19 to 22 year olds since 1980, 23 to 26 year olds since 1984, and 27 to 30 year olds since 1988. Information on region of the country was included in the follow- up surveys beginning in 1987, so trend data are available for the four regions since then. These subgroup trend data are not presented here in tabular form because of the amount of space they would require.

Sex Differences in Trends

- In general, until this year sex differences narrowed because males tended to show faster declines in use of a number of drugs than females. For example, between 1980 and 1991, annual prevalence of use of ***any illicit drug*** among 19 to 22 year olds (data not shown) fell by 25 percentage points among males (to 31%) compared to 24 percentage points among females (to 27%). In 1992, both sexes rose an equal amount, to 32% for males and 28% for females.

- The downward trend in ***marijuana*** use since 1980 among 19 to 22 year olds also had been sharper among males than females, thus narrowing the sex difference. Annual prevalence fell by 27 percentage points (to 29%) among males between 1980 and 1991, while it fell by only 21 percentage points among females (to 24%). In 1992, males held steady while females rose slightly, narrowing the gap still more. During the same interval ***daily marijuana use*** for this age group fell from 13% to 3% among males (where it remains in 1992) vs. from 6% to 2% (down to 1% in 1992) among females–again narrowing the sex difference.

- Similarly for ***LSD***, the 5.7% male-female difference in 1980 for 19 to 22 year olds (10.5% vs. 4.8% annual prevalence) narrowed to 3.3% by 1989 (5.7% vs. 2.4%); a similar narrowing has occurred in the use of ***other hallucinogens*** taken as a class. However, between 1989 and 1992 an overall increase in ***LSD*** use widened the difference again, and it stands at 4.4% (8.6% for males, 4.2% for females).

- Since 1986 annual ***cocaine*** prevalence dropped more among males than females, particularly in the 19 to 22 year age band, where the annual prevalence for males declined by 15.5 percentage points (to 5.4%) vs. 12.1 percentages points among females (to 3.6% in 1992). In the 23 to 26 year old age band there was also a drop in the sex difference since 1986: down 17.9 percentage points (to 8.0%) among males and 11.9 percentage points (to 5.4%) among females. Use

among males in the 27 to 30 year old group also appeared to be dropping faster (down 8.5% vs. 5.8% for females), although data for these respondents are available only since 1988. None of the declines or increases since 1991 have been statistically significant.

- As ***barbiturate*** use has declined since 1980, sex differences have been nearly eliminated among both the 19 to 22 year olds (since 1984, at least) and among the two older age bands: annual prevalence stands between 0% and 2% for both sexes in all three age groups.

- The annual prevalence figures for ***heroin*** appear to have dropped among males in the 19 to 22 year old category since 1980 (from 0.6% to 0.3% in 1992). Rates for females remained very low at 0.1% to 0.3%.

- Both sexes have shown some decline in recent years in the use of ***opiates other than heroin***, with a near elimination of previous sex differences. Annual prevalence has remained at between 2% and 3% for both sexes in all age groupings since 1991.

- Since 1981, rates of ***stimulant*** use have been similar for males and females, and have shown substantial and parallel downward trends for both sexes. Among the 19 to 22 year olds, since 1981 males have dropped 21.6 percentage points in annual prevalence (to 5.7% in 1992), and females have dropped 20.9 points (to 4.4% in 1992).

- Both sexes also have reported similar rates of ***tranquilizer*** use since 1980. In recent years, rates have stalled at between 3% and 5% annual prevalence for both sexes in all three age groupings.

- ***Inhalant*** use has remained constant for both sexes in recent years, which means that it has remained roughly twice as high among males as females. Recall that use is considerably lower among the older age bands than among 19 to 22 year olds; 30-day prevalence in 1992 is virtually zero for either sex after age 22.

- For ***alcohol,*** 30-day prevalence rates have shown some decline since 1981 for both sexes in the 19 to 22 year old age group. Thirty-day prevalence fell from 83% to 72% among males and from 75% to 62% among females. There is still a large sex difference for ***daily drinking*** among this age group in 1992: 5.3% for males vs. 2.7% for females; but not as large as it was in 1981 (11.8% vs. 4.0%). The sex differences are larger for each older age group in 1992 (8.4% vs. 2.6% for 23 to 26 year olds, 8.5% vs. 2.4% for 27 to 30 year olds).

There also are large sex differences in all age groups on ***occasional heavy drinking*** (five or more drinks in a row at least once in the past two weeks), although 19 to 22 year old males have shown some longer term decline in this statistic, from 54% in 1986 to 47% in 1992, thus narrowing the gap slightly (from 24.3 percentage points in 1986 to 17.6 points in 1992).

- Sex differences in ***smoking*** were small among the 19 to 22 year olds since 1980, with females generally averaging a 3% higher daily prevalence rate than males. In 1991 and 1992, this small difference disappeared; 20% to 21% of both sexes reported daily use, and 13% reported use of a half-pack or more per day. Among the 23 to 26 year olds daily rates have also been quite similar for the two sexes; the same has been true among 27 to 30 year olds since 1988 when the data were first available.

Regional Differences in Trends

The follow-up respondent's state of residence was first determined in the 1987 survey, so trend data by region exist only for the interval since then. Changes have been examined for all 19 to 28 year olds combined to increase the reliability of the estimates. In general, the changes which have occurred since 1987 have been pretty consistent across regions, particularly in terms of the direction of the change–for the most part downward.

- There have been substantial drops in all four regions since 1987 for ***any illicit drug, any illicit other than marijuana, marijuana, cocaine,*** and stimulants. ***Tranquilizer*** use has also dropped in all four regions, but from relatively low levels to begin with.

- The declines in ***cocaine*** use in all regions between 1987 and 1991 were greatest in the two regions which had attained the highest levels of use by the mid-80's–the West and the Northeast. In 1992 these declines stalled in all regions except the Northeast, which is similar to the finding for seniors. Less regional variability remains in 1991 than in 1987, but the West still has the highest rate at 8.0% annual prevalence, and the Northeast second highest at 6.7%, while the South has 5.1% and the North Central 4.4%.

- All four regions also have shown an appreciable drop in ***crack*** use since 1987. As was true for cocaine generally, the two regions having the highest rates (the West and the Northeast) have had large absolute and proportional declines, as did the North Central region, resulting in less regional variability in this form of drug use than was the case earlier. Among 19 to 28 year olds the West now has the highest annual prevalence rate (at 1.9%), but this is not much different from the other regions (1.0% - 1.5%).

- Rates of ***inhalant*** use have remained relatively stable and quite low in all four regions among 19 to 28 year olds. The North Central has shown some decline in use over several years.

- Questions about ***MDMA*** ("ecstasy") were added to the surveys in 1989; use rates in both 1989 and 1990 were higher in the West and the South (1990 annual rates of 2.5% and 1.9%), and lower in the Northeast and North Central (1.0% and 0.7%). In 1991 and 1992 use fell (nonsignificantly) in all regions except the West, where annual prevalence rose significantly in 1992 (from 0.9% to 3.1%).

- ***LSD*** has risen some in all four regions since 1987. The West has fairly consistently had the highest rate of use, though there are not large regional differences.

- With respect to ***alcohol*** use there have been modest declines in all four regions since 1987 in current drinking and daily drinking. ***Occasional heavy drinking*** has declined a few percentage points in all regions except in the West, where it has increased slightly.

- Current ***daily cigarette smoking*** dropped only between 2 and 5 percentage points in all regions since 1987 among 19 to 28 year olds. The West consistently has had much lower rates of daily smoking than the other regions though it has shown little decline since 1987.

Trend Differences Related to Population Density

- In general, the proportion of young adults using ***any illicit drug*** declined substantially in recent years in communities of all sizes. (Monitoring the Future distinguishes five levels of population density.) Among 19 to 22 year olds this decline began in 1980 and continued through 1991; in 1992 the decline stalled. The farm/country and small town strata continue to have lower use than all of the other strata. In 1992 the proportions reporting use of an illicit drug in the past year were 23% for the farm/country strata, 28% for small town, 32% for medium city, 31% for large city, and 34% for very large cities. (The absolute differences among these strata narrowed as usage rates fell.) For young adults aged 19 to 26, the difference has become smaller in recent years (only 5% in 1992 between the rural and most urban strata); the relationship also has not held among the 27 to 30 year olds since 1991, with prevalence rates higher among these older respondent in medium-sized cities than in the other areas.

- The use of ***any illicit drug other than marijuana*** tells a similar story. While the very large cities tend to have the highest rates on both indexes, they are only slightly higher than the other urban areas.

- ***Marijuana*** use began to decline in 1981 or 1982 among the 19 to 22 year olds in all community size categories until 1992 when prevalence rates stabilized. All strata have declined by 24 to 25 percentage points since 1980, except the farm/country, although it also shows a substantial overall decrease (19%).

- Among the 19 to 22 year olds, the age group with the highest rates of ***LSD*** use of the young adults, use in communities of all sizes declined appreciably in the 80's. Since 1989 there has been some increase in use in all strata.

  The use of ***other hallucinogens*** taken as a class had fallen in communities of all sizes among the young adults between 1980 and 1987, but there has been very little systematic change since then.

- The important and continuing drop in ***cocaine*** use since 1986 continued in 1992 among 19 to 22 year olds and 23 to 26 year olds in medium-sized and very large cities, and among the 27 to 30 year olds in medium-sized cities (or suburbs thereof). Otherwise, the stall in illicit use this year is also true of cocaine, after an important period of decline among all community-size strata in all age groups.

  Because the declines have been greatest in the large cities, the differences among strata have narrowed, as with seniors; thus cocaine use shows only a weak positive correlation with community size.

- ***Crack*** use among all age groups peaked in 1987 or 1988 and appears to have bottomed out in all strata except farm/country since 1990. Crack use bears little association to community size, except that the very large cities have generally shown lower than average rates in 1991 and 1992.

- ***Stimulant*** use showed large drops since 1981 among 19 to 22 year olds in communities of all sizes; since 1984 (the first time point available) among the 23 to 26 year olds; and since 1988 (first time point available) among the 27 to 30 year olds. There were no statistically significant changes in 1992. There has been little or no systematic association between stimulant use and community size during these time intervals.

- ***Methaqualone*** use, which in 1981 was rather strongly associated (positively) with population density, dropped to annual prevalence rates of 0.8% or below in all size strata for all three age bands by 1989. Its use is no longer measured in the study.

- The use of ***barbiturates*** has also fallen to very low rates (2.7%, or less, annual prevalence by 1992) in all size strata for all three age bands; unlike methaqualone it has not shown much correlation with urbanicity as far back as 1980.

- ***Tranquilizer*** use among young adults has had little or no association with population density over this time interval either. Among the 19 to 22 year olds it showed a decline in all strata from 1980 to about 1985, and some leveling since, to just over 4% annual prevalence. Since 1985 some further, rather modest, declines have occurred, resulting in overall annual prevalence rates of between 3.0% and 4.0% in all three age strata.

- Annual ***heroin*** prevalence in 1992 stands at 0.5% or less in all strata for all three age bands, and has shown little systematic relationship with urbanicity, although in the early eighties it did tend to be more concentrated in cities than in the small-town and farm/country strata among the 19 to 22 year olds.

- Similarly, the annual use of ***opiates other than heroin*** had some positive association with degree of population density in the early eighties; however, it has shown rather little association since then, due to a greater decline in use in the variously sized city strata. For each of the various strata annual prevalence stands at between 1% and 4% among the 19 to 22 year olds, and from 1% to 3% among the two older age bands.

- While the absolute levels of ***inhalant*** use still remain low, between 1984 and 1987 there was a gradual increase among 19 to 22 year olds in all strata (except the very large cities, where it started out highest). There has been no systematic association with population density since, other than slightly lower rates in the farm/country stratum (2.2% in 1992 vs. 3.7% to 3.9% in the three city strata). Among respondents in the next older 23 to 26 year old age band, rates have been consistently low in all strata since 1984 (ranging from 0.6% to 1.7% in 1992); rates are lower still for the oldest, 27 to 30 year old age band (0.0% to 1.1% in 1992).

- In the four years for which data on ***MDMA*** ("ecstasy") have been available, use has generally been lower in the farm/country and small town stratum than in the three urban strata.

- In the eight years between 1984 and 1992, ***alcohol*** use declined modestly in all community-size strata for both the 19 to 22 and the 23 to 26 age groups, with only minor exceptions. In 1992, the association between community size and alcohol use remains only a slightly positive one for 30-day prevalence; there is no association for daily prevalence; and there is a very slightly positive one for occasions of heavy drinking among both age groups.

- ***Cigarette smoking*** has been slightly negatively associated with urbanicity in all three age strata, without much evidence of differential trends related to degree of urbanicity.

Chapter 6

ATTITUDES AND BELIEFS ABOUT DRUGS AMONG YOUNG ADULTS

We have observed in the high school senior data some substantial changes in attitudes and beliefs about the use of drugs, in particular the perceived risk of harm associated with marijuana and cocaine, and personal disapproval of use of marijuana, cocaine, and amphetamines. Further, the importance of these shifts in attitudes and beliefs in explaining changes in actual drug using behavior has been demonstrated in earlier volumes in this series and elsewhere.[7] In this chapter we review trends since 1980 in the same attitudes and beliefs among young adults.

PERCEIVED HARMFULNESS OF DRUGS

Table 12 provides trends in the perceived risks associated with differing usage levels of the various licit and illicit drugs. These questions are contained in one questionnaire form only, limiting the numbers of follow-up cases; accordingly, we use four-year age bands in order to increase the available sample size (to about 500-600 weighted cases per cell) and thus, to improve the reliability of the estimates. Still, these are small sample sizes compared to those available for eighth, tenth, and twelfth graders, so the change estimates are more labile. Because of the nature of the design, trend data are available for a longer period for 19 to 22 year olds (since 1980) than for 23 to 26 year olds (since 1984), or for 27 to 30 year olds (since 1988). Also displayed in this table are comparison data for seniors, shown here as 18 year olds, for 1980 onward.

Beliefs About Harmfulness Among Young Adults

- As Table 12 illustrates, there are considerable differences in the risks young adults associate with the various drugs, as was true among seniors. In general, the results closely parallel those observed among seniors.

[7]Bachman, J.G., Johnston, L.D., O'Malley, P.M., & Humphrey, R.H. (1988). Explaining the recent decline in marijuana use: Differentiating the effects of perceived risks, disapproval, and general lifestyle factors. *Journal of Health and Social Behavior, 29*, 92-112; Bachman, J.G., Johnston, L.D., & O'Malley, P.M. (1990). Explaining the recent decline in cocaine use among young adults: Further evidence that perceived risks and disapproval lead to reduced drug use. *Journal of Health and Social Behavior, 31*, 173-184. Johnston, L.D. (1981) Frequent marijuana use: Correlates, possible effects, and reasons for using and quitting. In R. deSilva, R. Dupont, and G. Russell (Eds.), *Treating the Marijuana Dependent Person* (pp. 8-14). New York: The American Council on Marijuana; Johnston, L.D. (1985). The etiology and prevention of substance use: What can we learn from recent historical changes? In C.L. Jones and R.J. Battjes (Eds.), *Etiology of Drug Abuse: Implications for Prevention* (NIDA Research Monograph No. 56, pp. 155-177). (DHHS Publication No. (ADM) 85-1335). Washington, DC: U.S. Government Printing Office.

TABLE 12
Trends in Perceived Harmfulness of Drugs
Young Adults in Modal Age Groups of 18, 19-22, 23-26, and 27-30

(Entries are Percentages)

Q. How much do you think people risk harming themselves (physically or in other ways), if they ...	Age Group	Percentage saying "great risk"[a] 1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	'91-'92 change
Try marijuana once or twice	18	10.0	13.0	11.5	12.7	14.7	14.8	15.1	18.4	19.0	23.6	23.1	27.1	24.5	-2.6
	19-22	8.3	7.8	9.7	9.7	12.8	11.2	13.0	12.9	16.8	16.9	17.8	19.1	19.7	+0.6
	23-26					9.6	10.0	12.4	14.5	16.0	14.0	17.7	14.0	15.0	+1.0
	27-30									14.6	16.0	17.0	15.7	15.1	-0.5
Smoke marijuana occasionally	18	14.7	19.1	18.3	20.6	22.6	24.5	25.0	30.4	31.7	36.5	36.9	40.6	39.6	-1.0
	19-22	13.9	14.2	16.9	16.7	21.7	20.6	22.4	23.0	28.7	29.1	30.1	30.2	29.5	-0.7
	23-26					15.8	16.3	20.9	20.8	26.8	25.3	30.4	26.2	27.4	+1.2
	27-30									24.2	25.7	28.7	27.4	27.5	+0.1
Smoke marijuana regularly	18	50.4	57.6	60.4	62.8	66.9	70.4	71.3	73.5	77.0	77.5	77.8	78.6	76.5	-2.1
	19-22	43.9	47.8	52.4	58.4	62.2	66.8	67.6	69.4	72.4	74.9	73.0	75.0	69.3	-5.6s
	23-26					52.9	57.5	59.4	65.3	68.3	72.1	71.0	70.9	67.3	-3.7
	27-30									67.5	69.1	69.2	67.5	68.8	+1.3
Try LSD once or twice	18	43.9	45.5	44.9	44.7	45.4	43.5	42.0	44.9	45.7	46.0	44.7	46.6	42.3	-4.3s
	19-22	44.8	44.4	45.0	44.7	46.0	44.3	47.6	49.4	49.2	49.5	49.3	48.0	45.6	-2.4
	23-26					48.3	46.9	47.9	51.5	53.7	50.7	52.0	50.1	49.7	-0.4
	27-30									53.3	55.6	54.6	52.5	53.0	+0.5
Take LSD regularly	18	83.0	83.5	83.5	83.2	83.8	82.9	82.6	83.8	84.2	84.3	84.5	84.3	81.8	-2.5
	19-22	83.4	85.3	86.2	86.0	84.5	86.4	87.1	85.6	85.4	85.5	85.8	86.6	87.0	+0.4
	23-26					89.0	86.6	88.7	90.0	89.2	89.0	88.2	89.1	87.3	-1.8
	27-30									89.1	91.2	92.0	87.1	88.5	+1.4
Try PCP once or twice	18								55.6	58.8	56.6	55.2	51.7	54.8	+3.1
	19-22								63.6	63.8	NA	NA	NA	NA	NA
	23-26								64.8	63.2	NA	NA	NA	NA	NA
	27-30									65.9	NA	NA	NA	NA	NA
Try cocaine once or twice	18	31.3	32.1	32.8	33.0	35.7	34.0	33.5	47.9	51.2	54.9	59.4	59.4	56.8	-2.6
	19-22	31.4	30.4	33.3	28.7	33.1	33.2	35.5	45.9	51.9	51.5	58.1	58.7	56.1	-2.6
	23-26					31.3	31.1	35.9	48.0	47.1	51.3	51.5	50.5	53.5	+3.0
	27-30									45.3	53.0	51.6	52.6	51.8	-0.8
Take cocaine occasionally	18							54.2	66.8	69.2	71.8	73.9	75.5	75.1	-0.4
	19-22							53.8	61.3	67.1	72.6	74.6	72.6	74.9	+2.3
	23-26							50.9	62.6	63.2	69.9	69.9	70.3	69.9	-0.4
	27-30									62.6	66.6	66.6	69.1	69.9	+0.8
Take cocaine regularly	18	69.2	71.2	73.0	74.3	78.8	79.0	82.2	88.5	89.2	90.2	91.1	90.4	90.2	-0.2
	19-22	65.2	69.3	71.5	75.2	75.1	82.9	82.0	88.0	90.3	89.1	93.9	93.5	92.9	-0.6
	23-26					75.6	76.9	83.0	88.9	90.9	91.2	91.2	92.7	89.9	-2.7
	27-30									88.9	92.0	91.4	90.9	92.0	+1.1
Try crack once or twice	18								57.0	62.1	62.9	64.3	60.6	62.4	+1.8
	19-22								59.4	67.3	68.5	69.4	66.9	65.4	-1.5
	23-26								59.1	63.5	69.8	67.3	66.9	67.1	+0.2
	27-30									66.5	64.9	68.7	66.8	64.3	-2.6
Take crack occasionally	18								70.4	73.2	75.3	80.4	76.5	76.3	-0.2
	19-22								75.0	77.3	81.8	82.3	82.7	81.9	-0.8
	23-26								70.3	74.0	79.9	81.1	83.9	84.4	+0.5
	27-30									76.4	76.7	82.6	81.8	79.1	-2.8
Take crack regularly	18								84.6	84.8	85.6	91.6	90.1	89.3	-0.8
	19-22								89.6	91.1	94.1	94.9	95.6	93.4	-2.2
	23-26								88.0	89.2	91.5	94.2	95.4	94.1	-1.4
	27-30									89.6	89.5	95.3	94.4	93.3	-1.1

(Table continued on next page)

TABLE 12 (Cont.)
Trends in Perceived Harmfulness of Drugs
Young Adults in Modal Age Groups of 18, 19-22, 23-26, and 27-30

(Entries are Percentages)

Q. *How much do you think people risk harming themselves (physically or in other ways), if they ...*	Age Group	Percentage saying "great risk"[a] 1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	'91-'92 change
Try cocaine powder once or twice	18								45.3	51.7	53.8	53.9	53.6	57.1	+3.5
	19-22								44.0	48.6	51.1	54.5	52.7	56.2	+3.5
	23-26								41.0	43.6	48.4	48.9	47.4	45.9	-1.5
	27-30									42.0	45.1	46.2	43.3	42.3	-1.0
Take cocaine powder occasionally	18								56.8	61.9	65.8	71.1	69.8	70.8	+1.0
	19-22								58.0	59.0	63.2	70.0	69.9	72.6	+2.6
	23-26								50.0	53.2	62.2	63.3	67.0	65.8	-1.2
	27-30									53.6	52.7	60.9	59.2	61.2	+2.0
Take cocaine powder regularly	18								81.4	82.9	83.9	90.2	88.9	88.4	-0.5
	19-22								86.6	87.6	91.3	92.5	93.8	92.1	-1.7
	23-26								82.9	84.1	88.5	92.4	93.8	91.3	-2.5
	27-30									85.1	86.7	92.7	91.1	91.5	+0.4
Try MDMA ("ecstasy") once or twice	19-22										45.2	47.1	48.8	46.4	-2.4
	23-26										49.5	47.2	47.4	45.5	-1.8
	27-30										44.9	48.7	47.7	44.2	-3.5
Try heroin once or twice	18	52.1	52.9	51.1	50.8	49.8	47.3	45.8	53.6	54.0	53.8	55.4	55.2	50.9	-4.3s
	19-22	57.8	56.8	54.4	52.5	58.7	51.0	55.5	57.9	58.9	59.6	58.3	59.9	59.8	-0.1
	23-26					58.2	59.2	60.8	66.6	65.4	62.3	64.1	62.4	63.7	+1.3
	27-30									66.0	69.7	67.5	66.1	66.5	+0.3
Take heroin occasionally	18	70.9	72.2	69.8	71.8	70.7	69.8	68.2	74.6	73.8	75.5	76.6	74.9	74.2	-0.7
	19-22	77.5	77.8	73.6	74.5	74.9	73.6	77.2	77.6	77.5	79.8	80.8	80.2	81.6	+1.4
	23-26					81.2	80.7	78.9	84.5	82.4	80.8	83.4	84.4	81.5	-2.9
	27-30									86.0	86.8	85.3	84.3	84.9	+0.6
Take heroin regularly	18	86.2	87.5	86.0	86.1	87.2	86.0	87.1	88.7	88.8	89.5	90.2	89.6	89.2	-0.4
	19-22	87.2	89.9	87.5	88.6	86.8	90.2	90.7	90.2	89.6	90.8	91.2	91.5	92.2	+0.7
	23-26					92.0	90.1	90.6	92.8	91.5	91.3	91.0	92.6	91.3	-1.4
	27-30									92.7	93.5	93.0	90.7	91.3	+0.6
Try amphetamines once or twice	18	29.7	26.4	25.3	24.7	25.4	25.2	25.1	29.1	29.6	32.8	32.2	36.3	32.6	-3.7s
	19-22	24.6	24.6	27.8	24.8	26.9	23.9	27.1	27.4	31.7	28.9	35.6	32.8	34.5	+1.7
	23-26					29.6	29.4	29.4	34.1	33.2	32.5	35.3	31.0	32.7	+1.7
	27-30									35.2	37.5	36.9	36.5	36.2	-0.3
Take amphetamines regularly	18	69.1	66.1	64.7	64.8	67.1	67.2	67.3	69.4	69.8	71.2	71.2	74.1	72.4	-1.7
	19-22	71.9	69.9	68.3	69.9	68.4	68.5	72.3	72.0	73.9	71.3	74.0	77.1	73.5	-3.6
	23-26					75.8	77.2	75.6	78.2	77.4	76.7	77.8	79.4	76.4	-2.9
	27-30									80.6	82.9	83.3	79.4	80.3	+0.9
Try crystal meth ("ice")	18												61.6	61.9	+0.3
	19-22											57.8	58.6	57.7	-0.9
	23-26											56.5	56.0	55.6	-0.4
	27-30											59.6	57.2	52.7	-4.4

(Table continued on next page)

TABLE 12 (Cont.)
Trends in Perceived Harmfulness of Drugs
Young Adults in Modal Age Groups of 18, 19-22, 23-26, and 27-30

(Entries are Percentages)

Q. How much do you think people risk harming themselves (physically or in other ways), if they ...	Age Group	Percentage saying "great risk"[a] 1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	'91-'92 change
Try barbiturates once or twice	18	30.9	28.4	27.5	27.0	27.4	26.1	25.4	30.9	29.7	32.2	32.4	35.1	32.2	-2.9
	19-22	27.6	26.4	30.5	25.4	29.9	25.0	30.7	29.6	32.7	30.5	36.4	33.5	33.5	0.0
	23-26					32.2	29.9	30.2	35.5	35.8	32.9	37.9	31.8	33.5	+1.7
	27-30									37.2	38.7	39.0	37.0	38.2	+1.3
Take barbiturates regularly	18	72.2	69.9	67.6	67.7	68.5	68.3	67.2	69.4	69.6	70.5	70.2	70.5	70.2	-0.3
	19-22	74.0	73.3	72.7	71.3	71.6	71.7	74.5	73.0	74.0	71.7	75.5	75.5	73.6	-1.9
	23-26					77.4	77.0	74.9	79.9	79.8	76.6	80.5	77.7	76.3	-1.4
	27-30									81.5	83.7	84.0	79.6	78.6	-1.0
Try one or two drinks of an alcoholic beverage (beer, wine, liquor)	18	3.8	4.6	3.5	4.2	4.6	5.0	4.6	6.2	6.0	6.0	8.3	9.1	8.6	-0.5
	19-22	3.0	3.4	3.1	2.3	4.7	3.1	5.4	3.5	3.9	5.9	6.1	5.4	5.8	+0.4
	23-26					5.5	3.0	6.5	6.6	4.2	5.1	5.7	4.4	5.6	+1.2
	27-30									5.0	6.3	4.4	6.6	5.6	-1.0
Take one or two drinks nearly every day	18	20.3	21.6	21.6	21.6	23.0	24.4	25.1	26.2	27.3	28.5	31.3	32.7	30.6	-2.1
	19-22	22.7	22.9	23.2	23.2	25.0	26.3	27.3	26.1	26.5	28.1	30.1	29.1	30.2	+1.0
	23-26					27.8	27.4	26.9	30.2	29.1	27.8	31.1	30.4	31.6	+1.2
	27-30									27.4	31.7	32.2	31.7	30.9	-0.9
Take four or five drinks nearly every day	18	65.7	64.5	65.5	66.8	68.4	69.8	66.5	69.7	68.5	69.8	70.9	69.5	70.5	+1.0
	19-22	71.2	72.7	73.3	72.7	76.2	74.1	74.0	76.4	72.8	75.7	76.1	75.5	71.8	-3.7
	23-26					76.7	77.9	80.1	77.2	81.8	76.9	79.7	80.2	78.0	-2.2
	27-30									79.3	81.7	84.7	79.1	79.9	+0.9
Have five or more drinks once or twice each weekend	18	35.9	36.3	36.0	38.6	41.7	43.0	39.1	41.9	42.6	44.0	47.1	48.6	49.0	+0.4
	19-22	34.2	30.1	33.5	36.6	37.9	40.2	34.6	36.7	36.9	42.4	40.6	40.8	41.8	+1.0
	23-26					38.4	39.7	39.1	39.8	35.8	37.7	40.2	39.3	37.6	-1.6
	27-30									41.0	42.3	44.1	42.2	45.1	+2.9
Smoke one or more packs of cigarettes per day	18	63.7	63.3	60.5	61.2	63.8	66.5	66.0	68.6	68.0	67.2	68.2	69.4	69.2	-0.2
	19-22	66.5	61.7	64.0	62.1	69.1	71.4	70.4	70.6	71.0	73.4	72.5	77.9	72.6	-5.3s
	23-26					71.1	70.1	75.7	73.6	75.5	71.4	78.5	75.3	76.3	+1.0
	27-30									72.8	75.2	77.8	75.4	77.6	+2.1
Use smokeless tobacco regularly	18							25.8	30.0	33.2	32.9	34.2	37.4	35.5	-1.9
	19-22							29.7	34.1	31.1	37.1	33.5	38.9	40.1	+1.2
	23-26							37.0	38.5	35.8	37.9	40.1	38.9	41.6	+2.7
	27-30									42.8	42.8	43.8	44.3	44.1	-0.2
Approximate Weighted N =	18	3234	3604	3557	3305	3262	3250	3020	3315	3276	2796	2553	2549	2684	
	19-22	590	585	583	585	579	547	581	570	551	565	552	533	527	
	23-26					540	512	545	531	527	498	511	505	518	
	27-30									513	587	490	486	482	

NOTES: Level of significance of difference between the two most recent years:

s = .05, ss = .01, sss = .001.

Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

[a]Answer alternatives were: (1) No risk, (2) Slight risk, (3) Moderate risk, (4) Great risk, and (5) Can't say, drug unfamiliar.

- ***Marijuana*** is seen as the least risky of the illicitly used drugs, although sharp distinctions are made between different levels of use: In 1992, experimental use is perceived as being of "great risk" by 15%-20% of high school graduates (age 19 to 30), while regular use is perceived to be that risky by 67%-69% of them.

  It is interesting to note that fewer of the older age groups see great risk, particularly with occasional and regular use of marijuana, than the younger age bands. Indeed, there has been a quite regular negative ordinal relationship between age and perceived risk for some years. This could reflect an age effect, but we think it is more likely a cohort effect, with the younger cohorts having come to perceive marijuana as more dangerous as they were growing up than did earlier cohorts, and then carrying these beliefs into adulthood.

- Use of any of the other illicit drugs is seen as distinctly more risky than marijuana. Experimental use of both ***amphetamines*** and ***barbiturates*** is perceived as risky by about 33%-38% of young adults age 19 to 30, and 44%-53% think trying ***LSD*** or ***MDMA*** (ecstasy) involves great risk. Trying ***cocaine*** powder is seen as dangerous by 42%-56%, while using ***crack*** or ***heroin once*** or twice is seen as dangerous by 60%-67%.

- In recent years, the older age groups have been *more* likely than the younger age groups to see ***LSD, heroin,*** and ***barbiturates*** as dangerous, just the opposite of the situation with marijuana. At the end of this chapter we offer a closing note on the implications of this finding for theory and prevention.

- Regarding ***cocaine***, there is a modest age-related difference in experimental and occasional use; the older groups perceive less risk than the younger ones, who have had less experience with cocaine. However, with regard to regular cocaine use, the three older age groups are *more* likely to see that behavior as dangerous than the seniors.

- ***Crystal methamphetamine*** (ice) was introduced to this question set in 1990 and the results show what may be an important reason for its lack of rapid spread. Seniors and young adults perceive it as a quite dangerous drug, perhaps because it is likened to crack in most media accounts. Both drugs are burned and the fumes inhaled, both are stimulants, and both can produce dependence.

- ***MDMA*** (ecstasy) questions were introduced a year earlier, and have not been asked of seniors. Young adults see it as a fairly dangerous drug, even for experimentation; just under 50% say there is "great risk" involved. This puts it close to LSD in its level of perceived risk.

- As with seniors, only a minority of the young adults see ***occasional heavy drinking*** as dangerous (38%-45%); however, about three-fourths feel that way about ***daily heavy drinking***.

- Approximately 75% of the young adults perceive regular pack-a-day ***cigarette smoking*** as entailing high risk, higher than the 69% of seniors who hold that belief and much higher than the 50% of eighth graders who do so.

- The use of ***smokeless tobacco*** is seen as dangerous by many fewer, about 42% of young adults and 36% of seniors.

Trends in Perceived Harmfulness Among Young Adults

- Nearly all of the important trends observed among seniors in perceived harmfulness can also be seen among young adults. (See Table 12.) In particular, the risks associated with all levels of ***cocaine*** use rose sharply after 1986, particularly for experimental and occasional use. There was little further change after 1990 for either seniors or young adults.

- The long-term increase in the perceived risk of ***regular marijuana use*** documented among seniors between 1980 and 1989 also occurred among young adults. The proportion of 19 to 22 year olds reporting "great risk" rose from 44% in 1980 (the first data point available) to 75% in 1989. Among seniors the shift over the same interval was from 50% to 78%. (Daily marijuana use dropped appreciably during this time in all of these age groups.) In 1992 however, there was a decline in the perceived dangers of regular marijuana use among the seniors, the 19 to 22 year olds, and the 23-26 year olds.

- In general, young adults have been more cautious about heroin use than high school seniors. Among seniors, there had been a downward shift from 1975 to 1986 in the proportion seeing great risk associated with trying ***heroin***; there was a sharp upturn in

1987, and perceived risk remained at a high level until 1992, when there was a significant downturn. Young adults, although the data do not extend back as far, seem also to have shown an increased caution about heroin use in the latter half of the 1980s, continuing into the 1990s. These trends may reflect respectively, (a) the lesser attention paid to heroin by the media during the late seventies and early eighties than previously, and (b) the subsequent great increase in attention paid to intravenous heroin use in the past few years because of its important role in the spread of AIDS. The decline among seniors in 1992 is more difficult to interpret, but it is consistent with their lowered concern about the dangers of a number of drugs.

- While trend data are available only since 1987 on the risks perceived to be associated with ***crack***, they show increased in the 1987-1990 interval, followed by relatively little change. Were data available a year or two earlier, they undoubtedly would have shown that an even larger shift occurred.

- The perceived risks of ***powdered cocaine*** rose slightly (non-significant) in 1992 among the younger age groups (seniors and 19 to 22 year olds) who now make less distinction between the dangers of powdered cocaine and crack. Those 23 to 30 years old still see a big distinction, however, with regard to experimental and occasional use.

- With regard to ***occasional heavy drinking***, among seniors perceived risk began to rise around 1981, continuing through 1985, and then leveled off until 1989 when it again started to rise. A similar pattern, without the most recent rise, is found among 19 to 22 year olds. The older age bands also show a level pattern recently. Data do not exist for enough years to check for an earlier increase in concern.

- In recent years, the data available from the young adult samples show a modest increase in the proportions associating great risk with ***regular smoking***. For example, over the eight year interval from 1984 to 1992, seniors, 19 to 22 year olds, and 23 to 26 year olds all showed an increase of only 4 or 5 percentage points in the proportion seeing great risk in pack-a-day smoking. Substantial proportions still do not see such risks.

- Since 1986, when questions about ***smokeless tobacco*** were first included, there has been some fair increase in perceived risk among seniors, 19 to 22 year olds, and 23 to 26 year olds. This has had the effect of narrowing the age-related differences among young adults (older respondents see the most risk).

TABLE 13
Trends in Proportions Disapproving of Drug Use
Young Adults in Modal Age Groups of 18, 19-22, 23-26, and 27-30

(Entries are Percentages)

Q. *Do you disapprove of people (who are 18 or older) doing each of the following?*	Age Group	Percentage disapproving[a] 1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	'91-'92 change
Try marijuana once or twice	18	39.0	40.0	45.5	46.3	49.3	51.4	54.6	56.6	60.8	64.6	67.8	68.7	69.9	+1.2
	19-22	38.2	36.1	37.0	42.0	44.1	46.6	51.6	52.8	55.8	62.4	59.6	60.4	57.8	-2.6
	23-26					41.2	38.6	42.6	49.1	48.7	52.5	57.5	58.8	55.0	-3.8
	27-30									49.0	50.9	53.8	54.6	51.9	-2.7
Smoke marijuana occasionally	18	49.7	52.6	59.1	60.7	63.5	65.8	69.0	71.6	74.0	77.2	80.5	79.4	79.7	+0.3
	19-22	49.6	49.1	51.3	56.0	60.4	62.6	66.7	67.2	69.5	77.3	76.3	77.0	74.8	-2.3
	23-26					54.8	52.8	57.0	64.9	63.4	69.4	73.7	73.3	74.0	+0.7
	27-30									65.3	67.1	68.9	73.0	67.2	-5.8s
Smoke marijuana regularly	18	74.6	77.4	80.6	82.5	84.7	85.5	86.6	89.2	89.3	89.8	91.0	89.3	90.1	+0.8
	19-22	74.3	77.2	80.0	81.8	84.9	86.7	89.2	88.7	89.1	91.2	93.1	91.3	89.5	-1.8
	23-26					80.6	81.3	83.3	87.4	86.9	90.4	91.0	89.6	90.2	+0.6
	27-30									87.6	87.5	89.7	89.6	87.2	-2.4
Try LSD once or twice	18	87.3	86.4	88.8	89.1	88.9	89.5	89.2	91.6	89.8	89.7	89.8	90.1	88.1	-2.0
	19-22	87.4	84.8	85.9	88.4	88.1	89.1	90.4	90.0	90.9	89.3	90.5	88.4	84.6	-3.9
	23-26					87.3	87.1	88.0	89.9	91.4	91.0	90.7	89.1	88.8	-0.3
	27-30									91.0	87.2	89.7	87.9	85.6	-2.2
Take LSD regularly	18	96.7	96.8	96.7	97.0	96.8	97.0	96.6	97.8	96.4	96.4	96.3	96.4	95.5	-0.9
	19-22	98.2	97.4	97.7	97.6	97.6	98.8	98.5	98.0	98.1	97.5	99.1	97.5	97.0	-0.5
	23-26					99.2	98.0	98.5	99.0	98.0	98.4	98.3	98.4	98.3	-0.1
	27-30									98.8	97.1	98.9	98.9	97.5	-1.4
Try cocaine once or twice	18	76.3	74.6	76.6	77.0	79.7	79.3	80.2	87.3	89.1	90.5	91.5	93.6	93.0	-0.6
	19-22	73.0	69.3	69.9	74.1	72.5	77.6	78.9	82.3	85.3	88.8	90.1	91.2	90.6	-0.6
	23-26					70.2	70.5	72.1	80.0	82.9	85.5	88.3	88.0	87.3	-0.7
	27-30									82.1	81.0	85.5	86.9	83.9	-3.1
Take cocaine regularly	18	91.1	90.7	91.5	93.2	94.5	93.8	94.3	96.7	96.2	96.4	96.7	97.3	96.9	-0.4
	19-22	91.6	89.3	91.9	94.6	95.0	96.3	97.0	97.2	97.9	97.4	98.9	97.9	98.4	+0.5
	23-26					95.7	95.3	97.3	98.1	97.6	98.3	98.4	98.5	98.7	+0.2
	27-30									98.1	97.0	99.3	99.0	97.2	-1.8s
Try heroin once or twice	18	93.5	93.5	94.6	94.3	94.0	94.0	93.3	96.2	95.0	95.4	95.1	96.0	94.9	-1.1
	19-22	96.3	95.4	95.6	95.2	95.1	96.2	96.8	96.3	97.1	96.4	98.3	95.9	95.9	+0.0
	23-26					96.7	94.9	96.4	97.1	97.4	96.7	96.8	96.9	96.3	-0.6
	27-30									97.9	95.8	97.5	96.6	94.8	-1.9
Take heroin occasionally	18	96.7	97.2	96.9	96.9	97.1	96.8	96.6	97.9	96.9	97.2	96.7	97.3	96.8	-0.5
	19-22	98.6	97.8	98.3	98.3	98.6	98.7	98.3	98.3	98.3	97.9	99.2	98.2	98.1	-0.0
	23-26					99.2	98.2	98.8	99.1	98.4	98.3	98.1	99.0	98.7	-0.4
	27-30									99.2	97.3	99.0	98.9	97.0	-1.8s
Take heroin regularly	18	97.6	97.8	97.5	97.7	98.0	97.6	97.6	98.1	97.2	97.4	97.5	97.8	97.2	-0.6
	19-22	99.2	98.5	98.6	98.7	98.7	99.1	98.9	98.6	98.4	98.3	99.5	98.5	98.3	-0.2
	23-26					99.4	98.8	99.1	99.4	98.7	98.7	98.5	99.3	99.2	-0.1
	27-30									99.4	97.6	99.4	99.0	97.8	-1.2
Try amphetamines once or twice	18	75.4	71.1	72.6	72.3	72.8	74.9	76.5	80.7	82.5	83.3	85.3	86.5	86.9	+0.4
	19-22	74.5	70.5	68.9	74.0	73.0	75.6	78.9	79.9	81.8	85.3	84.4	83.9	83.8	-0.1
	23-26					74.2	74.2	74.6	80.3	83.5	83.3	84.1	84.8	83.4	-1.5
	27-30									83.5	81.0	84.3	83.7	80.9	-2.9
Take amphetamines regularly	18	93.0	91.7	92.0	92.6	93.6	93.3	93.5	95.4	94.2	94.2	95.5	96.0	95.6	-0.4
	19-22	94.8	93.3	94.3	93.4	94.9	96.6	96.9	95.1	97.5	96.8	97.5	97.7	96.7	-1.0
	23-26					96.6	95.9	96.6	97.0	97.2	98.1	97.9	97.9	97.7	-0.2
	27-30									98.1	96.5	98.6	97.8	96.8	-1.0

(Table continued on next page)

TABLE 13 (Cont.)
Trends in Proportions Disapproving of Drug Use
Young Adults in Modal Age Groups of 18, 19-22, 23-26, and 27-30

(Entries are Percentages)

Q. Do you disapprove of people (who are 18 or older) doing each of the following?	Age Group	Percentage disapproving[a] 1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	'91-'92 change
Try barbiturates once or twice	18	83.9	82.4	84.4	83.1	84.1	84.9	86.8	89.6	89.4	89.3	90.5	90.6	90.3	-0.3
	19-22	83.5	82.3	83.8	85.1	85.2	86.1	88.3	87.5	90.1	92.0	91.1	90.4	88.8	-1.5
	23-26					83.9	84.5	84.4	89.8	90.7	89.4	88.8	87.9	88.8	+0.9
	27-30									90.5	88.3	88.4	88.8	86.6	-2.2
Take barbiturates regularly	18	95.4	94.2	94.4	95.1	95.1	95.5	94.9	96.4	95.3	95.3	96.4	97.1	96.5	-0.6
	19-22	96.6	95.6	97.3	96.5	96.6	98.1	98.0	97.0	97.9	97.7	98.7	98.0	97.9	-0.1
	23-26					98.4	98.5	97.7	98.6	98.3	98.3	98.5	98.5	98.6	+0.1
	27-30									98.4	97.1	99.1	98.5	97.7	-0.8
Try one or two drinks of an alcoholic beverage (beer, wine, liquor)	18	16.0	17.2	18.2	18.4	17.4	20.3	20.9	21.4	22.6	27.3	29.4	29.8	33.0	+3.2s
	19-22	14.8	14.5	13.9	15.5	15.3	15.4	16.9	16.0	18.4	22.4	17.6	22.2	16.9	-5.3s
	23-26					17.4	16.1	13.2	17.7	13.7	17.5	18.6	19.5	17.4	-2.1
	27-30									19.5	19.1	18.7	18.8	17.9	-0.9
Take one or two drinks nearly every day	18	69.0	69.1	69.9	68.9	72.9	70.9	72.8	74.2	75.0	76.5	77.9	76.5	75.9	-0.6
	19-22	67.8	69.7	71.3	73.3	74.3	71.3	77.4	75.3	76.5	80.0	79.7	77.1	76.0	-1.1
	23-26					71.4	73.7	71.6	72.7	74.6	74.4	77.6	76.9	75.5	-1.4
	27-30									76.0	73.9	73.3	76.1	69.5	-6.6s
Take four or five drinks nearly every day	18	90.8	91.8	90.9	90.0	91.0	92.0	91.4	92.2	92.8	91.6	91.9	90.6	90.8	+0.2
	19-22	95.2	93.4	94.6	94.6	94.6	94.8	94.9	95.7	94.8	96.1	95.8	96.4	95.5	-0.9
	23-26					96.2	95.0	95.5	96.9	94.3	95.9	96.9	96.1	95.7	-0.4
	27-30									97.4	94.6	96.1	95.3	94.8	-0.5
Have five or more drinks once or twice each weekend	18	55.6	55.5	58.8	56.6	59.6	60.4	62.4	62.0	65.3	66.5	68.9	67.4	70.7	+3.3s
	19-22	57.1	56.1	58.2	61.0	59.7	59.4	60.3	61.6	64.1	66.3	67.1	62.4	65.6	+3.3
	23-26					66.2	68.3	66.5	67.5	65.2	63.2	66.9	64.6	69.6	+5.0
	27-30									73.9	71.4	73.1	72.1	68.4	-3.8
Smoke one or more packs of cigarettes per day	18	70.8	69.9	69.4	70.8	73.0	72.3	75.4	74.3	73.1	72.4	72.8	71.4	73.5	+2.1
	19-22	68.7	68.1	66.3	71.6	69.0	70.5	71.4	72.7	73.8	75.6	73.7	73.2	72.6	-0.6
	23-26					69.9	68.7	67.5	69.7	66.4	71.1	71.5	77.2	73.6	-3.6
	27-30									72.8	69.4	73.5	71.2	70.7	-0.5
Approximate Weighted N =	18	3261	3610	3651	3341	3254	3265	3113	3302	3311	2799	2566	2547	2645	
	19-22	588	573	605	579	586	551	605	587	560	567	569	533	530	
	23-26					542	535	560	532	538	516	524	495	538	
	27-30									526	509	513	485	512	

NOTES: Level of significance of difference between the two most recent years:

s = .05, ss = .01, sss = .001.

Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

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

PERSONAL DISAPPROVAL OF DRUG USE

The questions asked of seniors concerning the extent to which they personally disapprove of various drug-using behaviors are also asked of follow-up respondents, in one of the six questionnaire forms. Trends in the answers of young adults aged 19 to 22, 23 to 26, and 27 to 30 are contained in Table 13. Comparison data for seniors are also provided for 1980 onward. (See also Table 22, Chapter 8, in Volume I, for trends in high school seniors' attitudes and beliefs about drugs.)

Extent of Disapproval by Young Adults

- In general, the attitudes of young adults related to the various drug-using behaviors, both licit and illicit, are highly similar to those held by seniors. This means that the great majority disapprove of using, or even experimenting with, all of the ***illicit drugs other than marijuana***. For example, regular use of each of the following drugs is disapproved by 97% or more of young adults: ***LSD, cocaine, amphetamines, barbiturates,*** and ***heroin***. Even experimentation with each of these drugs is disapproved by 86% to 95% of the young adults.

- These attitudes seem to differ little as a function of age, except that disapproval of experimental use of ***cocaine*** declines with age: seniors (93%), 19 to 22 year olds (91%), 23 to 26 year olds (87%), and 27 to 30 year olds (84%). The differences are consistent with age-related differences in actual use.

- Even for ***marijuana***, more than half of young adults now disapprove experimentation, between two-thirds and three-quarters disapprove occasional use, and nearly 90% disapprove regular use. Once again, there are age-related differences, with progressively less disapproval as one moves from younger to older age groups. Since current marijuana use is about constant across this age band (but active use *during* high school was higher in the older age groups), these age-related differences in attitudes may reflect a residual effect of cohort differences in attitudes which were formed in high school or earlier.

- Rates of disapproval for the various patterns of ***alcohol*** use listed are quite close to those observed among seniors, except that seniors are much more likely to disapprove of experimentation: 33% vs. 17%-18% for the three older groups. On the question about ***occasional heavy drinking***, disapproval is slightly lower among the 19 to 22 year olds (who also have a higher prevalence of such behavior) than among the other age groups.

- Disapproval for ***cigarette smoking*** at the rate of a pack per day or more, varies little by age (between 71% and 74%).

Trends in Disapproval by Young Adults

Prior to 1991, there had been some important changes among American young adults in the extent to which they found various drugs acceptable, even for adult use. However, there was little further change in 1991; 1992 may mark the beginning of some reversals of these trends, although nearly all such shifts are not yet large enough to be statistically significant.

- The largest upward shift occurred for ***marijuana***; the proportion of 19 to 22 year olds disapproving even experimentation rose from 38% in 1980 to 60% in 1990, where it remained in 1991. Although data are available for a shorter period for the 23 to 26 year olds, this group also increased in disapproval of experimenting with marijuana–from 41% in 1984 to 59% in 1991. In 1992 all three young adult groups showed slight declines in their disapproval of marijuana experimentation, decreasing about 3 percentage points. Seniors, on the other hand, showed a very small increase, consistent with trends throughout the past decade.

- In 1992, all four age groups observed some decline in their disapproval of ***LSD*** use, though the great majority still do disapprove.

- While still modest in size, most of the disapproval statistics for ***heroin use***, at any of three levels of use, declined in 1992.

- Among the 19 to 22 year olds disapproval of ***regular cocaine use*** rose gradually from about 92% to 98% in 1992. All three young adult age bands are now near the ceiling of 100%. Young adults 19 to 22, like seniors, showed a sizeable increase in their disapproval of ***experimental use of cocaine***, with the proportion disapproving rising from 73% in 1984 to 91% in 1991; much of the increase occurred since 1986. Over the same period, disapproval also rose among 23 to 26 year olds–from 70% in 1984 to 88% in 1991. In 1992, all four age groups showed some decline (nonsignificant) in their disapproval of cocaine use, suggesting that a turnaround may have begun.

- There had been significant increases in disapproval of experimental use of ***amphetamines*** and ***barbiturates***. Trying amphetamines one or twice was disapproved by 84-85% of 19 to 26 year olds in 1991, compared to 73%-74% in 1984, and the corresponding figures for trying barbiturates were 88%-90% in 1991 compared to 84%-85% in 1984. While there was little systematic change in 1992 for barbiturates, the young adult samples all showed some decline in their disapproval of amphetamine use.

- The story for ***alcohol*** has become quite complicated. Since 1980, increasing proportions of seniors have favored abstention, with the percent disapproving even drinking once or twice rising from 16% in 1980 to 33% in 1992. For the three older age groups, though, there has been little change in these attitudes. These differing trends may reflect the fact that the drinking age in all states has been raised to age 21; this would have the greatest effect on seniors, who may be incorporating the legal restrictions into their normative structure.

  Daily drinking (of one or two drinks) had become more disapproved in the three youngest age bands (seniors through 26 year olds) until about 1990, but disapproval has declined 2 to 4 percentage points since then (non-significant). The 27 to 30 year olds also showed a drop in 1992. It is possible that these changes are reactions to recent cardiovascular health benefits alleged to derive from moderate drinking.
  Weekend ***binge drinking*** has shown a considerable increase in disapproval since the early 80's for the three youngest age groups (who started out the most tolerant) and this continued in 1992. The oldest age group showed a small (non-significant) decline in 1992.

- Since 1984 there has been very little change in the proportions of high school seniors disapproving ***cigarette smoking*** at the rate of one pack or more per day (73% vs. 74%). Among the young adults, disapproval rose only very slightly during the 1980s and has changed little in the last three or four years.

A FURTHER COMMENT: COHORT DIFFERENCES AND IMPLICATIONS FOR PREVENTION

It was noted above that the older age respondents are more likely than younger ones to see the use of ***crack, LSD, heroin,*** and ***barbiturates*** as dangerous, just the opposite of the situation with marijuana. We have offered the framework for a theory of drug epidemics in which direct learning (from personal use) and vicarious learning (from use by others in both the immediate and mass media environments) play an important role in changing these key attitudes.[8] To the extent current data represent cohort effects (enduring differences between cohorts), these findings would be consistent with this theoretical perspective. Clearly, use of these particular drugs was greater when the older cohorts were growing up, and public attention and concern regarding the consequences of these drugs was greatest in the 1970's and early 1980's. In the early 1970's, LSD was alleged to cause brain damage and chromosomal damage, as well as bad trips, flashbacks, and behavior which could prove dangerous. Methamphetamine was discouraged with the slogan "speed kills." There was a

[8]Johnston, L.D. (1991). Toward a theory of drug epidemics. *In* R.L. Donohew, H. Sypher, & W. Bukoski (Eds.), *Persuasive communication and drug abuse prevention.* Hillsdale, NJ: Lawrence Erlbaum. pp. 93-132.

serious epidemic of heroin use in the early 1970's, and so on. The younger cohorts in our study were not exposed to these experiences, but the older cohorts were. While there may have been a secular trend toward greater perceived risk for drugs in general, in the case of LSD there may also have been a cohort effect (younger cohorts seeing less danger) that was enough to offset the secular trend among seniors, who have shown little change in perceived risk since 1980.

This vicarious learning process has a very practical importance for the national strategy for preventing future epidemics. As future cohorts of youngsters grow up with less opportunity for such vicarious learning, because fewer in their immediate social circles and fewer public role models are using these drugs and exhibiting adverse reactions, the less opportunity they will have to learn the hazards of the drugs in the normal course of growing up. Unless those hazards are convincingly communicated to them in other ways–say through school prevention programs and public service advertising–they will become more susceptible to a new epidemic of use of the same or similar drugs.

This caution, which was also given in last year's volume (printed in 1992) presaged a decline in perceived risk and an increase in actual use of a number of drugs among the youngest cohort, eighth graders. Volume I, the companion volume to the present one, reports this unfortunate development and suggests that this form of "generational forgetting," in which replacement cohorts lose some of the knowledge held by their predecessors, and become more vulnerable to using drugs, may be taking place already.

Chapter 7

THE SOCIAL MILIEU FOR YOUNG ADULTS

In Volume I we examined the extent to which secondary school students are exposed to drug use of various kinds, their perceptions of the relevant norms in their peer groups, and the extent to which they perceive various drugs to be available to them. In this chapter the same issues are addressed for the young adult population, many of whom are in social environments quite different from the ones they experienced during their high school years.

PEER NORMS AS PERCEIVED BY YOUNG ADULTS

Table 14 gives the current status and trends in peer norms for the same three age bands discussed in Chapter 6: namely, 19 to 22 year olds, 23 to 26 year olds, and 27 to 30 year olds. Trend data are available since 1980, 1984, and 1988, respectively, for these three age bands. The table also includes comparison data for seniors.

The questions use the same answer scale, stated in terms of degree of disapproval of the use of the various drugs at different levels of use, as do the questions (discussed in Chapter 6) which ask about the respondent's own attitudes about those behaviors. The list of drug-using behaviors is shorter here, and the questions are contained on a different questionnaire form (and therefore have a different set of respondents). However, the results for perceived peer norms are generally quite consistent with those for personal disapproval; i.e., the proportion saying that they personally disapprove of a drug-using behavior tends to approximate the proportion saying that their close friends would disapprove of that same behavior. The major exceptions are ***marijuana***, where friends' attitudes have consistently been reported as more disapproving than their own attitudes, and ***binge drinking***, where friends' attitudes have consistently been seen as less disapproving than their own attitudes. Note also that the divergence is greatest for the oldest age band in the case of marijuana.

Current Perceptions of Friends' Attitudes

- The peer norms reported by young adults one to twelve years past high school are similar to those reported by high school seniors. That is, for each of the ***illicit drugs other than marijuana*** the great majority think that their close friends would disapprove of their even trying such drugs once or twice (about 89% for ***LSD*** and 88% for ***cocaine***).

- Nearly two-thirds of the young adults (65%) now think their friends would disapprove of their even trying ***marijuana***, while three-fourths think they would disapprove of occasional use and 89% think they would disapprove of regular use.

TABLE 14
Trends in Proportions of Friends Disapproving of Drug Use
Young Adults in Modal Age Groups of 18, 19-22, 23-26, and 27-30

(Entries are Percentages)

Q. *How do you think your close friends feel (or would feel) about you...*	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	'91-'92 change
Trying marijuana once or twice	18	42.6	46.4	50.3	52.0	54.1	54.7	56.7	58.0	62.9	63.7	70.3	69.7	73.1	+3.4s
	19-22	41.0	40.6	46.9	47.1	51.6	54.5	55.2	54.7	58.7	63.0	63.6	64.7	64.7	+0.0
	23-26					47.7	47.0	49.1	53.9	58.2	62.6	61.3	64.5	65.6	+1.1
	27-30									58.6	58.7	61.4	64.6	63.5	-1.1
Smoking marijuana occasionally	18	50.6	55.9	57.4	59.9	62.9	64.2	64.4	67.0	72.1	71.1	76.4	75.8	79.2	+3.4s
	19-22	50.9	49.2	54.0	57.9	59.4	64.6	64.4	65.1	69.8	71.5	74.1	73.9	74.3	+0.5
	23-26					54.3	56.4	57.1	63.1	68.1	73.2	71.8	72.5	75.3	+2.7
	27-30									67.8	69.4	71.9	73.7	76.0	+2.3
Smoking marijuana regularly	18	72.0	75.0	74.7	77.6	79.2	81.0	82.3	82.9	85.5	84.9	86.7	85.9	88.0	+2.1
	19-22	70.3	75.2	75.7	79.5	80.0	82.7	83.5	84.8	86.9	87.5	89.1	88.4	89.1	+0.8
	23-26					77.8	78.4	80.9	82.0	85.8	89.2	88.1	87.9	90.3	+2.4
	27-30									85.4	86.0	88.4	89.2	88.7	-0.4
Trying LSD once or twice	18	87.4	86.5	87.8	87.8	87.6	88.6	89.0	87.9	89.5	88.4	87.9	87.9	87.3	-0.6
	19-22	87.4	90.5	88.0	89.3	89.3	91.1	90.5	91.8	90.8	91.2	89.1	89.9	87.2	-2.7
	23-26					87.4	90.8	88.6	89.8	88.9	91.0	90.1	92.4	88.9	-3.5
	27-30									88.8	89.7	92.3	91.1	91.4	+0.3
Trying cocaine once or twice	18	NA	NA	NA	NA	NA	NA	79.6	83.9	88.1	88.9	90.5	91.8	92.2	+0.4
	19-22	NA	NA	NA	NA	NA	NA	76.4	NA	84.8	87.7	89.2	92.3	91.9	-0.4
	23-26					NA	NA	70.8	NA	81.4	84.5	84.1	86.7	87.4	+0.7
	27-30									81.8	81.1	83.7	83.5	84.4	+0.9
Taking cocaine occasionally	18	NA	NA	NA	NA	NA	NA	87.3	89.7	92.1	92.1	94.2	94.7	94.4	-0.3
	19-22	NA	NA	NA	NA	NA	NA	84.9	NA	91.0	93.8	94.2	95.6	95.9	+0.3
	23-26					NA	NA	81.7	NA	88.2	91.5	92.4	94.1	93.8	-0.2
	27-30									87.7	89.5	90.0	92.2	92.3	+0.1
Trying an amphetamine once or twice	18	78.9	74.4	75.7	76.8	77.0	77.0	79.4	80.0	82.3	84.1	84.2	85.3	85.7	+0.4
	19-22	75.8	76.7	75.3	74.3	77.0	79.7	81.5	81.3	83.0	83.5	84.5	86.5	83.8	-2.7
	23-26					78.4	79.1	76.7	81.7	83.0	85.6	84.3	85.0	83.6	-1.4
	27-30									82.7	84.1	84.9	84.6	84.7	+0.0
Taking one or two drinks nearly every day	18	70.5	69.5	71.9	71.7	73.6	75.4	75.9	71.8	74.9	76.4	79.0	76.6	77.9	+1.3
	19-22	71.9	72.1	68.6	73.5	71.6	72.2	72.7	70.2	73.9	77.1	73.3	73.7	74.0	+0.2
	23-26					63.6	66.8	67.7	68.3	69.2	70.8	72.7	72.5	72.1	-0.3
	27-30									71.0	68.0	70.4	71.9	68.8	-3.0
Taking four or five drinks nearly every day	18	87.9	86.4	86.6	86.0	86.1	88.2	87.4	85.6	87.1	87.2	88.2	86.4	87.4	+1.0
	19-22	93.7	91.7	89.9	91.9	91.7	92.5	91.5	90.8	90.4	92.5	89.9	91.7	92.6	+0.9
	23-26					90.8	90.2	92.5	92.8	93.7	92.1	92.1	92.4	91.1	-1.3
	27-30									92.8	92.0	92.9	92.7	92.7	-0.0
Having five or more drinks once or twice each weekend	18	50.6	50.3	51.2	50.6	51.3	55.9	54.9	52.4	54.0	56.4	59.0	58.1	60.8	+2.7
	19-22	53.5	51.7	51.7	53.3	50.8	53.3	47.0	49.4	50.5	56.8	53.1	51.4	53.6	+2.2
	23-26					53.8	57.3	61.0	57.2	58.8	57.5	55.1	56.8	58.4	+1.6
	27-30									61.9	65.1	66.3	68.2	66.2	-1.9
Smoking one or more packs of cigarettes per day	18	74.4	73.8	70.3	72.2	73.9	73.7	76.2	74.2	76.4	74.4	75.3	74.0	76.2	+2.2
	19-22	75.6	75.1	75.4	78.5	76.2	79.7	77.7	78.6	80.2	78.4	77.5	78.3	79.0	+0.6
	23-26					73.9	77.3	80.3	80.5	79.5	80.5	78.5	83.3	82.3	-1.0
	27-30									81.2	80.9	82.9	84.5	83.1	-1.4
Approximate Weighted N =	18	2766	3120	3024	2722	2721	2688	2639	2815	2778	2400	2184	2160	2229	
	19-22	569	597	580	577	582	556	577	595	584	555	559	537	520	
	23-26					510	548	549	540	510	513	516	516	507	
	27-30									483	518	479	480	451	

NOTES: Level of significance of difference between the two most recent years:

s = .05, ss = .01, sss = .001.

Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

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

- There is a small drop-off in peer disapproval with increasing age for the experimental or occasional use of either ***marijuana*** or ***cocaine***. ***LSD*** shows the opposite: some increase in disapproval with age.

- Almost three-quarters of young adults say their friends would disapprove if they were ***daily drinkers***, and 9 out of 10 if they were ***heavy daily drinkers***. However, only 54% and 58% of the 19 to 26 year olds, who exhibit the highest rates for such drinking, say their friends would disapprove of ***heavy weekend drinking***, vs. 61% of the seniors and 66% of the 27 to 30 year olds.

- Peer disapproval of ***cigarette smoking*** is reasonably high in all four age bands: 76% of seniors say their friends would disapprove of pack-a-day smoking, 79% of the 19 to 22 year olds, 82% of the 23 to 26 year olds, and 83% of the 27 to 30 year olds say so. It appears that anti-smoking attitudes are weakest among younger people; the differences cannot be explained by differences in actual smoking rates since the older cohorts have the highest smoking rates, and also had the highest rates as seniors.

Trends in Peer Norms for Young Adults

- Important changes in the social acceptability of drug using behaviors among young adults' peers have occurred over the years of this study. Since 1980, peer disapproval of ***marijuana*** use has grown substantially in all of the young adult age bands; for example, among the 19 to 22 year olds the proportion thinking their friends would disapprove if they even tried marijuana rose from 41% in 1980 to 65% in 1992.

- There has been a more gradual increase in peer disapproval levels for ***amphetamine*** use.

- ***LSD*** has generally shown little change; if anything, disapproval among 19 to 26 year olds has edged downward in the past few years–in particular in 1992.

- Perceived peer norms regarding ***cocaine*** use were first measured in 1986. During the next five years self-reported cocaine use declined substantially and peer norms shifted considerably toward disapproval. By 1992, 92% of the 19 to 22 year olds thought their friends would disapprove of their even trying cocaine (vs. 76% in 1986), and 96% thought their friends would disapprove of occasional use (vs. 85% in 1986). In the two older age bands shifts have been occurring in the same direction, but peer disapproval of experimenting with cocaine still remains negatively associated with age.

- While peer norms regarding ***alcohol*** use have become somewhat more restrictive among seniors, there has been little change among the young adults.

- Peer norms regarding ***cigarette smoking*** became more restrictive among high school seniors in the early years of this study: peer disapproval rose from 64% in 1975 to 73% in 1979. Since then, there has been little further change; friends' disapproval stood at 76% in 1992, thirteen years later. Similarly, there has been little change in recent years among the older groups: between 1985 and 1992, peer disapproval among 19 to 22 year olds has hovered around 80%, and among 23 to 26 year olds it increased a bit from 77% to 82%. Despite recent publicity about changing norms and new laws restricting smoking, in the past seven years there has been little change in rates of perceived peer disapproval of cigarette smoking, particularly among those of high school and college ages. There may have been a modest increase in perceived peer disapproval in the older age strata.

EXPOSURE TO DRUG USE BY FRIENDS AND OTHERS

Exposure to drug use is measured by two sets of questions, each appearing on a (different) single questionnaire form. The first asks about proportion of close friends using each drug, the second about how often the respondent has been around people using each of a list of drugs "to get high or for kicks." These are the same questions asked of seniors, and the results from seniors are included in Tables 15 and 16 for comparison purposes.

Exposure to Drug Use among Young Adults

- Relatively high proportions of young adults have at least some friends who use illicit drugs (Table 15). Among 19 to 22 year olds, two-thirds (67%) had any friends who used ***some illicit drug***, and 45% had friends who use some ***illicit drug other than marijuana***. The percentages are about the same for the 23 to 26 year olds but slightly lower for the 27 to 30 year olds. About 9% of the younger group, and 6% of the two older groups, say that *most or all* of their friends use some illicit drug; only 1% to 3% of all three young adult age bands say most or all of their friends use any illicit drugs other than marijuana.

- Exposure is greatest, of course, for ***marijuana*** (almost two-thirds report some friends using) followed by ***cocaine*** (23%-30%), ***amphetamines*** (15%-20%), ***LSD*** (11%-22%), and ***crack*** (10%-12%). The other illicit drugs have relatively small proportions of friends using ranging from 5% or less for ***heroin*** to between 3% and 13% for the other illicit drugs.

- Interestingly, some 20% of the 19 to 22 year olds know someone who is taking ***steroids***, though fewer of the 23 to 26 year olds do (15%) and fewer still of the 27 to 30 year olds (8%). Clearly, this is a phenomenon concentrated among young adults in their late teens and early twenties.

- For a number of drugs the proportion having any friends who use is lower for each higher age group. These include ***inhalants***, ***LSD***, ***other hallucinogens***, ***MDMA***, ***heroin***, ***opiates other than heroin***, and ***steroids***. These age-related differences are consistent with the age-related differences in self-reported use.

- ***Cocaine*** is the one illicit drug that shows an important increase in active use with age. In general it has shown the highest prevalence of friends' use in the oldest age groups and the lowest among seniors.

- In general it appears that even some respondents who report that friends use illicit drugs are not directly exposed to use themselves, judging by the differences in proportions saying they have some friends who use (Table 15), and the proportions who say they have not been around people who were using during the prior year (Table 16). This is especially true of the older age band.

- With respect to ***alcohol*** use, the great majority of young adults have at least some friends who ***get drunk at least once a week***, although this differs by age: 80% of the high school seniors, 77% of the 19 to 22 year olds, 73% of the 23 to 26 year olds, and 66% of the 27 to 30 year olds. The proportions who say *most or all* of their friends get drunk once a week differ substantially by age: 29% of the seniors, 23% of the 19 to 22 year olds, 15% of the 23 to 26 year olds, and 6% of the 27 to 30 year olds. In terms of direct exposure during the past year to people who were drinking alcohol "to get high or for 'kicks'," such exposure is almost universal in these four age groups: 91%, 93%, 91%, and 87%, respectively. (See Table 16.)

- Nearly all of these four groups also have at least a few friends who ***smoke cigarettes***, with little difference by age, although as people get older they are less likely to report that *none* of their friends smoke. At the other end of the scale, about one-fifth of each of the younger two groups state that *most or all* of their friends smoke (21% of the seniors and 20% of the 19 to 22 year olds), while only 16% of the 23 to 26 year olds and 13% of the 27 to 30 year olds say the same. This reduction in the segregation of smokers probably reflects the gradual dissolution of self-selected affiliation groups in high school and the formation of more heterogeneous work-based and neighborhood-based friendship networks after high school.

TABLE 15
Trends in Proportions of Friends Using Drugs
Young Adults in Modal Age Groups of 18, 19-22, 23-26, and 27-30

(Entries are Percentages)

Q. How many friends would you estimate...	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	'91-'92 change
Take any illicit drug[a]															
% saying any friends	18	87.5	85.4	86.3	82.6	81.0	82.4	82.2	81.7	79.1	76.9	71.0	69.1	67.3	-1.8
	19-22	90.2	88.0	86.8	85.0	82.3	82.9	80.5	76.7	77.2	78.4	72.7	71.5	66.8	-4.7
	23-26					83.6	82.7	80.3	80.9	74.4	73.8	65.8	63.0	67.3	+4.3
	27-30									74.8	72.9	69.6	67.1	61.5	-5.6
% saying most or all	18	32.5	29.8	26.5	23.8	20.9	22.7	21.5	18.6	15.8	15.7	11.6	11.7	12.0	+0.3
	19-22	34.9	32.8	28.1	22.4	21.9	18.2	16.2	14.0	13.5	10.9	10.5	8.8	9.0	+0.1
	23-26					19.6	15.4	16.2	11.7	9.5	9.7	9.5	7.4	6.2	-1.2
	27-30									8.6	6.4	5.9	2.9	5.8	+2.9s
Take any illicit drug[a] other than marijuana															
% saying any friends	18	62.4	63.3	64.7	61.2	61.3	61.8	63.3	62.4	56.5	56.2	50.1	46.3	47.1	+0.8
	19-22	67.9	67.8	66.7	65.2	60.8	62.1	61.0	57.3	53.5	60.8	53.4	51.5	45.3	-6.2s
	23-26					63.7	64.0	59.0	61.1	55.1	54.2	47.8	41.8	46.1	+4.3
	27-30									55.9	55.0	49.7	47.2	37.7	-9.5ss
% saying most or all	18	11.1	11.9	10.9	11.0	10.3	10.4	10.3	9.2	6.9	7.7	5.1	4.6	5.3	+0.7
	19-22	9.8	12.9	11.8	9.8	9.3	8.6	7.6	5.0	5.3	4.0	3.2	2.6	3.3	+0.7
	23-26					10.6	6.6	8.6	5.2	3.9	4.2	3.4	1.6	1.8	+0.2
	27-30									4.6	3.0	2.8	1.0	1.4	+0.4
Smoke marijuana															
% saying any friends	18	86.4	83.0	84.4	80.3	77.7	79.5	79.2	78.4	75.3	72.5	68.3	65.8	63.1	-2.7
	19-22	88.8	86.4	85.2	83.8	81.6	81.1	78.5	75.3	75.1	73.8	67.6	68.0	63.5	-4.5
	23-26					82.0	80.8	77.7	79.4	71.6	69.8	61.8	59.6	61.3	+1.7
	27-30									71.8	68.2	65.1	62.6	58.0	-4.5
% saying most or all	18	31.3	27.7	23.8	21.7	18.3	19.8	18.2	15.8	13.6	13.4	10.1	10.0	10.3	+0.3
	19-22	34.1	30.6	25.6	20.6	19.4	16.0	13.3	12.5	12.2	9.0	9.2	8.3	8.2	-0.2
	23-26					17.0	14.3	13.7	10.4	7.8	8.6	8.3	6.9	5.6	-1.3
	27-30									6.8	4.4	4.0	2.8	5.1	+2.3
Use inhalants															
% saying any friends	18	17.8	16.5	18.4	16.1	19.3	21.2	22.4	24.7	20.8	22.1	20.0	19.2	22.2	+3.0s
	19-22	11.9	13.2	13.8	12.3	11.7	9.6	10.9	12.7	10.9	11.7	13.0	12.2	12.6	+0.4
	23-26					7.7	6.7	7.2	6.1	6.2	5.9	6.1	4.4	5.1	+0.7
	27-30									4.6	3.5	2.9	2.5	3.3	+0.8
% saying most or all	18	1.2	0.9	1.3	1.1	1.1	1.5	2.0	1.9	1.2	1.9	1.0	0.7	1.8	+1.1ss
	19-22	0.5	0.4	0.7	0.3	0.5	0.6	0.7	0.7	0.7	0.4	0.6	0.2	0.8	+0.6
	23-26					0.6	0.2	0.6	0.1	0.2	0.4	0.4	0.1	0.0	-0.1
	27-30									0.3	0.0	0.2	0.2	0.0	-0.2
Use nitrites															
% saying any friends	18	19.0	17.4	17.5	14.5	15.0	15.6	18.0	18.3	13.6	13.3	10.4	8.9	9.0	+0.1
	19-22	18.4	16.0	14.2	13.8	8.9	9.9	11.7	13.2	10.2	NA	NA	NA	NA	NA
	23-26					10.8	7.8	8.0	7.9	5.2	NA	NA	NA	NA	NA
	27-30									6.6	NA	NA	NA	NA	NA
% saying most or all	18	1.3	1.2	0.9	0.7	1.2	1.0	1.2	1.3	0.7	0.9	0.6	0.4	0.7	+0.3
	19-22	0.3	0.4	0.9	0.6	0.6	0.6	0.4	0.4	0.2	NA	NA	NA	NA	NA
	23-26					0.8	0.3	0.4	0.3	0.1	NA	NA	NA	NA	NA
	27-30									0.5	NA	NA	NA	NA	NA
Take LSD															
% saying any friends	18	28.1	28.5	27.8	24.0	23.9	24.4	24.5	25.3	24.1	25.2	25.0	23.4	28.1	+4.7ss
	19-22	30.9	25.9	26.5	22.6	21.6	18.8	18.7	18.2	19.0	20.1	20.1	22.0	22.2	+0.2
	23-26					21.5	17.2	15.4	15.9	13.3	14.1	12.3	12.5	15.0	+2.5
	27-30									10.4	7.7	9.1	8.6	10.9	+2.2
% saying most or all	18	1.8	2.2	2.4	1.4	2.0	1.5	1.8	1.6	1.5	2.4	1.9	1.7	2.4	+0.7
	19-22	1.2	0.8	0.9	1.0	0.6	0.8	0.9	0.6	1.3	0.4	1.2	1.4	1.9	+0.6
	23-26					0.8	0.5	1.0	0.2	0.6	0.5	0.6	0.2	0.4	+0.2
	27-30									0.3	0.2	0.3	0.3	0.0	-0.3

(Table continued on next page)

TABLE 15 (Cont.)
Trends in Proportions of Friends Using Drugs
Young Adults in Modal Age Groups of 18, 19-22, 23-26, and 27-30

(Entries are Percentages)

Q. How many friends would you estimate...	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	'91-'92 change
Take other psychedelics															
% saying any friends	18	28.2	26.3	25.6	22.1	21.3	22.0	22.3	21.7	17.8	18.1	15.9	15.1	17.0	+1.9
	19-22	33.4	25.5	25.1	21.0	20.2	16.6	15.8	15.0	16.1	13.9	15.3	14.2	12.0	-2.2
	23-26					20.0	16.7	13.2	13.2	11.7	9.6	8.7	8.5	9.8	+1.3
	27-30									10.6	7.4	7.1	6.8	7.9	+1.1
% saying most or all	18	2.2	2.1	1.9	1.6	1.9	1.4	1.3	1.2	0.9	1.4	1.0	0.8	1.0	+0.2
	19-22	1.5	0.9	1.1	1.2	0.7	1.0	0.7	0.6	0.9	0.2	0.5	0.8	0.7	0.0
	23-26					0.8	0.3	0.5	0.3	0.2	0.3	0.8	0.1	0.4	+0.3
	27-30									0.2	0.1	0.3	0.2	0.0	-0.2
Use PCP															
% saying any friends	18	22.2	17.2	17.3	14.2	14.2	15.9	16.1	15.5	13.5	14.7	13.0	12.0	12.7	+0.7
	19-22	24.1	15.3	15.3	12.6	9.5	8.9	10.1	9.7	10.1	NA	NA	NA	NA	NA
	23-26					11.6	6.8	7.4	6.9	5.1	NA	NA	NA	NA	NA
	27-30									6.7	NA	NA	NA	NA	NA
% saying most or all	18	1.6	0.9	0.9	1.1	1.1	1.2	1.2	1.1	0.8	1.2	0.5	0.5	0.9	+0.4
	19-22	0.5	0.3	0.3	0.5	0.7	0.7	0.2	0.1	0.3	NA	NA	NA	NA	NA
	23-26					0.6	0.0	0.4	0.0	0.2	NA	NA	NA	NA	NA
	27-30									0.4	NA	NA	NA	NA	NA
Take cocaine															
% saying any friends	18	41.6	40.1	40.7	37.6	38.9	43.8	45.6	43.7	37.7	37.4	31.7	26.8	26.3	-0.5
	19-22	51.0	48.9	49.8	46.5	47.6	45.9	48.3	45.7	42.0	42.7	33.2	29.7	22.8	-6.9ss
	23-26					52.4	53.2	51.6	50.7	47.1	40.8	34.8	29.0	28.8	-0.2
	27-30									47.9	43.3	38.3	35.7	29.9	-5.7
% saying most or all	18	6.1	6.3	4.9	5.1	5.1	5.8	6.2	5.1	3.4	3.7	2.1	1.5	1.5	0.0
	19-22	7.0	8.6	7.8	6.1	6.3	6.1	6.1	3.3	3.5	2.1	1.2	1.1	1.0	-0.1
	23-26					9.1	5.3	7.0	4.1	3.1	2.7	2.1	0.6	0.9	+0.3
	27-30									3.8	2.0	2.3	0.9	1.2	+0.3
Take crack															
% saying any friends	18								27.4	25.4	26.1	19.2	17.6	17.8	+0.2
	19-22								23.8	21.8	20.6	14.6	14.3	11.8	-2.5
	23-26								26.4	22.4	19.8	14.4	10.8	10.8	0.0
	27-30									22.1	18.4	16.6	11.6	10.3	-1.4
% saying most or all	18								2.2	1.1	2.1	0.6	0.6	0.7	+0.1
	19-22								0.7	0.8	1.0	0.6	0.2	0.1	-0.1
	23-26								0.8	0.9	0.8	0.5	0.1	0.1	0.0
	27-30									1.2	0.9	0.9	0.3	0.0	-0.3
Take MDMA ("ecstasy")															
% saying any friends	18											12.4	11.9	10.7	-1.2
	19-22										16.3	14.3	12.0	12.9	+0.9
	23-26										7.6	9.0	9.5	11.0	+1.5
	27-30										5.6	6.3	5.4	4.6	-0.8
% saying most or all	18											2.2	1.7	2.1	+0.4
	19-22										0.4	0.7	0.2	0.7	+0.6
	23-26										0.5	0.2	0.1	0.1	0.0
	27-30										0.5	0.3	0.0	0.1	+0.1
Take heroin															
% saying any friends	18	13.0	12.5	13.2	12.0	13.0	14.5	15.3	13.9	12.4	14.0	11.4	11.4	13.2	+1.8
	19-22	11.0	8.1	9.4	7.5	7.1	6.5	8.5	8.5	7.8	6.8	6.5	6.1	4.7	-1.4
	23-26					6.1	4.4	4.3	6.5	3.6	5.2	4.2	3.6	3.8	+0.2
	27-30									3.8	2.8	4.5	2.7	3.1	+0.5
% saying most or all	18	1.0	0.5	0.7	0.8	0.8	0.9	1.1	0.9	0.7	1.1	0.4	0.4	0.7	+0.3
	19-22	0.3	0.5	0.1	0.2	0.4	0.6	0.2	0.3	0.2	0.2	0.3	0.2	0.1	-0.1
	23-26					0.4	0.2	0.2	0.0	0.2	0.4	0.2	0.3	0.4	+0.1
	27-30									0.2	0.1	0.2	0.2	0.0	-0.2

(Table continued on next page)

TABLE 15 (Cont.)
Trends in Proportions of Friends Using Drugs
Young Adults in Modal Age Groups of 18, 19-22, 23-26, and 27-30

(Entries are Percentages)

Q. How many friends would you estimate...	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	'91-'92 change
Take other narcotics															
% saying any friends	18	22.4	23.1	23.9	20.8	21.4	22.8	21.8	23.2	19.2	19.2	17.2	13.7	14.9	+1.2
	19-22	22.8	20.4	21.9	17.9	17.4	16.9	14.6	15.4	14.1	15.0	12.9	14.1	10.8	-3.2
	23-26					16.0	14.9	14.0	13.0	10.6	10.8	10.5	8.5	8.4	-0.1
	27-30									12.1	8.6	9.1	9.3	7.5	-1.8
% saying most or all	18	1.7	1.5	1.4	1.4	1.6	1.4	1.8	1.4	1.2	1.4	0.9	0.5	1.1	+0.6
	19-22	0.9	0.7	0.6	0.5	0.8	1.0	0.5	0.4	0.9	0.1	0.6	0.4	0.5	+0.1
	23-26					0.4	0.3	0.7	0.0	0.3	0.2	0.2	0.0	0.0	0.0
	27-30									0.3	0.0	0.2	0.2	0.1	-0.1
Take amphetamines															
% saying any friends	18	43.9	48.8	50.6	46.1	45.1	43.3	41.8	39.5	33.4	33.5	28.7	24.3	24.3	0.0
	19-22	54.1	52.2	51.3	49.7	46.1	42.1	38.5	34.5	26.8	29.6	23.3	26.2	19.5	-6.7ss
	23-26					45.6	40.1	33.5	32.1	28.4	23.1	20.6	17.1	15.1	-1.9
	27-30									26.1	21.6	19.3	17.0	15.3	-1.8
% saying most or all	18	4.8	6.4	5.4	5.1	4.5	3.4	3.4	2.6	1.9	2.6	1.9	1.3	1.3	0.0
	19-22	3.8	5.7	4.6	3.8	3.3	2.9	1.3	1.9	1.4	0.7	1.0	0.6	0.9	+0.3
	23-26					1.9	1.8	1.7	1.2	0.3	0.6	0.7	0.8	0.4	-0.4
	27-30									0.6	0.4	0.5	0.5	0.1	-0.4
Take barbiturates															
% saying any friends	18	30.5	31.1	31.3	28.3	26.6	27.1	25.6	24.3	19.7	20.3	17.4	14.8	16.4	+1.6
	19-22	33.2	27.9	27.7	23.6	22.0	17.2	18.8	15.5	14.0	14.1	11.9	12.8	10.7	-2.2
	23-26					22.2	18.7	16.3	14.1	11.2	10.4	8.9	8.3	8.7	+0.4
	27-30									12.0	8.5	8.8	7.1	6.6	-0.5
% saying most or all	18	2.6	2.1	1.8	1.7	1.7	1.6	1.4	1.1	1.1	1.4	0.6	0.5	0.6	+0.1
	19-22	1.1	1.3	1.0	0.8	0.8	0.5	0.3	0.4	0.8	0.1	0.2	0.3	0.1	-0.2
	23-26					0.4	0.3	0.3	0.3	0.1	0.2	0.2	0.1	0.1	0.0
	27-30									0.2	0.0	0.4	0.2	0.2	0.0
Take quaaludes															
% saying any friends	18	32.5	35.0	35.5	29.7	26.1	26.0	23.5	22.0	17.1	16.6	14.3	12.0	13.1	+1.1
	19-22	38.3	36.2	35.4	30.5	24.6	19.9	20.3	16.9	12.5	10.9	10.0	10.6	9.2	-1.4
	23-26					25.7	21.0	17.4	15.0	12.1	10.3	8.6	5.9	6.4	+0.5
	27-30									11.8	7.9	8.2	7.0	7.1	+0.1
% saying most or all	18	3.6	3.6	2.6	2.6	1.7	1.3	1.6	1.0	1.0	1.3	0.8	0.5	0.8	+0.3
	19-22	1.9	2.7	1.2	1.3	1.2	0.6	0.2	0.4	0.4	0.2	0.6	0.2	0.1	-0.1
	23-26					0.6	0.3	0.7	0.2	0.2	0.4	0.2	0.1	0.2	+0.1
	27-30									0.5	0.2	0.2	0.2	0.0	-0.2
Take tranquilizers															
% saying any friends	18	29.7	29.5	29.9	26.7	26.6	25.8	24.2	23.3	19.9	18.0	14.9	13.5	14.6	+1.1
	19-22	37.5	33.9	28.7	22.9	22.0	19.7	20.6	18.0	16.4	14.8	13.4	13.0	11.3	-1.7
	23-26					29.3	26.3	22.3	20.8	15.5	13.1	14.8	12.1	12.5	+0.4
	27-30									20.1	16.6	16.9	14.9	12.0	-2.9
% saying most or all	18	1.9	1.4	1.1	1.2	1.5	1.2	1.3	1.0	0.7	1.5	0.5	0.4	0.7	+0.3
	19-22	0.7	0.9	0.5	0.8	0.3	0.7	0.3	0.6	0.4	0.1	0.4	0.5	0.1	-0.4
	23-26					0.4	0.3	0.5	0.0	0.3	0.4	0.2	0.3	0.1	-0.2
	27-30									0.5	0.3	0.4	0.2	0.1	-0.1
Take steroids															
% saying any friends	18											25.9	24.7	21.5	-3.2s
	19-22										23.4	21.5	22.2	19.7	-2.5
	23-26										15.3	15.0	12.3	14.5	+2.1
	27-30										9.9	10.5	7.5	8.0	+0.5
% saying most or all	18											1.8	1.0	1.7	+0.7
	19-22										0.2	0.6	0.0	0.1	+0.1
	23-26										0.4	0.0	0.0	0.2	+0.2
	27-30										0.5	0.0	0.0	0.0	0.0

(Table continued on next page)

TABLE 15 (Cont.)
Trends in Proportions of Friends Using Drugs
Young Adults in Modal Age Groups of 18, 19-22, 23-26, and 27-30

(Entries are Percentages)

Q. How many friends would you estimate...	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	'91-'92 change
Drink alcoholic beverages															
% saying any friends	18	96.1	94.7	95.7	95.5	94.6	94.6	95.6	95.4	95.7	95.1	92.0	91.2	90.5	-0.7
	19-22	96.3	96.7	96.6	97.3	96.8	95.8	96.9	95.6	97.0	97.6	96.1	95.2	93.1	-2.1
	23-26					96.8	96.8	96.2	95.9	95.3	95.4	94.7	93.9	95.1	+1.2
	27-30									96.1	96.0	95.2	94.4	95.6	+1.2
% saying most or all	18	68.9	67.7	69.7	69.0	66.6	66.0	68.0	71.8	68.1	67.1	60.5	58.6	56.9	-1.7
	19-22	76.6	77.6	75.2	75.1	74.9	71.9	74.2	71.3	73.4	74.1	70.0	71.4	67.4	-4.0
	23-26					73.2	74.4	69.5	74.9	68.9	69.8	67.1	69.3	68.8	-0.5
	27-30									66.7	67.8	62.0	62.7	63.3	+0.5
Get drunk at least once a week															
% saying any friends	18	83.1	81.8	83.1	83.9	81.5	82.5	84.7	85.6	84.4	82.8	79.2	79.8	79.9	+0.1
	19-22	80.9	79.9	80.0	80.4	79.8	76.7	82.0	81.1	80.6	80.4	80.1	80.8	76.5	-4.3
	23-26					73.1	72.7	73.5	73.7	72.1	73.1	72.2	74.0	73.1	-0.9
	27-30									66.3	61.8	65.4	65.2	65.5	+0.3
% saying most or all	18	30.1	29.4	29.9	31.0	29.6	29.9	31.8	31.3	29.6	31.1	27.5	29.7	28.6	-1.1
	19-22	21.9	23.3	22.0	20.2	22.7	21.7	20.8	21.3	24.0	22.6	23.6	24.9	22.6	-2.3
	23-26					11.4	11.6	12.5	11.9	12.8	12.0	13.9	11.6	14.6	+3.1
	27-30									5.2	6.3	6.7	6.6	5.9	-0.8
Smoke cigarettes															
% saying any friends	18	90.6	88.5	88.3	87.0	86.0	87.0	87.8	88.3	87.7	86.5	84.9	85.7	84.4	-1.3
	19-22	94.4	94.3	93.4	93.1	91.9	91.6	91.1	90.3	89.3	90.0	86.1	86.1	86.7	+0.5
	23-26					93.9	95.0	91.6	92.1	89.8	90.1	88.7	89.6	85.6	-4.0s
	27-30									92.6	89.8	90.7	90.4	88.0	-2.4
% saying most or all	18	23.3	22.4	24.1	22.4	19.2	22.8	21.5	21.0	20.2	23.1	21.4	21.8	21.4	-0.4
	19-22	31.8	27.6	25.6	25.2	25.6	22.7	21.9	22.5	19.3	19.9	19.2	20.2	20.3	+0.1
	23-26					25.6	22.7	19.7	18.5	16.5	20.5	16.9	18.1	16.0	-2.1
	27-30									15.8	14.2	11.6	12.9	11.9	-0.9
Approximate Weighted N =	18	2987	3307	3303	3095	2945	2971	2798	2948	2961	2587	2361	2339	2373	
	19-22	576	592	564	579	543	554	579	572	562	579	556	526	510	
	23-26					527	534	546	528	528	506	510	507	516	
	27-30									516	507	499	476	478	

NOTES: Level of significance of difference between the two most recent years:

s = .05, ss = .01, sss = .001.

Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

[a]These estimates were derived from responses to the questions listed above. For the young adult sample, "any illicit drug" includes all of the drugs listed except cigarettes and alcohol.

TABLE 16
Trends in Exposure to Drug Use
Young Adults in Modal Age Groups of 18, 19-22, 23-26, and 27-30
(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"?

	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	'91-'92 change
Any illicit drug[a]															
% saying any exposure	18	84.3	82.7	81.4	79.4	77.9	77.7	75.5	73.9	71.3	68.6	67.6	64.2	61.3	-2.9
	19-22	80.6	81.0	81.5	76.5	76.3	77.4	74.6	72.7	69.5	61.5	60.8	58.9	58.6	-0.3
	23-26					68.9	70.2	68.0	62.4	62.7	58.3	54.6	52.1	48.2	-3.9
	27-30									52.4	50.2	47.0	39.6	41.7	+2.0
% saying often exposed	18	36.3	36.1	31.4	29.8	28.3	27.2	26.3	23.3	20.8	22.0	20.7	18.2	18.0	-0.2
	19-22	34.6	34.0	32.1	24.4	24.4	23.7	21.1	18.9	19.9	16.2	16.4	17.6	21.4	+3.8
	23-26					20.7	23.3	18.5	17.4	18.2	13.8	13.7	13.3	12.2	-1.0
	27-30									13.7	12.0	10.8	8.2	10.5	+2.3
Any illicit drug[a] other than marijuana															
% saying any exposure	18	58.5	62.6	62.5	59.4	59.8	59.3	55.3	51.7	47.8	47.1	45.4	40.0	41.6	+1.6
	19-22	56.9	58.4	61.6	54.9	57.1	53.3	53.4	48.5	46.4	36.5	39.4	33.8	37.1	+3.3
	23-26					51.5	51.9	51.5	43.6	42.9	36.8	34.0	30.0	27.3	-2.7
	27-30									35.8	33.7	31.5	25.8	26.6	+0.9
% saying often exposed	18	14.1	17.1	16.6	14.2	14.6	12.9	12.1	10.2	9.6	10.7	9.2	7.9	7.5	-0.4
	19-22	11.8	15.6	13.5	11.1	10.7	10.2	8.2	8.1	7.5	6.7	4.5	4.4	5.5	+1.1
	23-26					9.0	10.4	9.3	8.5	6.7	5.0	5.1	3.5	2.6	-0.9
	27-30									6.0	4.7	4.1	3.2	3.7	+0.4
Marijuana															
% saying any exposure	18	82.0	80.2	77.9	76.2	74.4	73.5	72.0	70.4	67.0	64.8	63.4	59.6	56.8	-2.8
	19-22	79.8	79.8	78.7	72.7	74.1	75.5	72.4	70.5	66.3	59.3	57.5	55.0	56.4	+1.4
	23-26					65.3	66.0	64.1	59.0	57.6	55.0	50.6	47.9	44.6	-3.3
	27-30									49.1	47.4	42.1	36.0	38.2	+2.2
% saying often exposed	18	33.8	33.1	28.0	26.1	24.8	24.2	24.0	20.6	17.9	19.5	17.8	16.0	15.6	-0.4
	19-22	32.6	30.5	30.3	21.1	21.9	20.3	18.6	16.4	18.3	14.2	14.7	15.9	19.9	+3.9
	23-26					17.5	20.6	14.6	14.8	15.6	11.6	11.2	11.6	10.9	-0.7
	27-30									10.9	9.8	8.5	6.7	8.9	+2.2
LSD															
% saying any exposure	18	17.2	17.4	16.1	13.8	12.5	13.2	13.1	12.9	13.4	15.0	14.9	15.7	17.8	+2.1
	19-22	17.4	15.8	16.0	13.5	12.8	12.7	10.8	10.9	12.0	12.0	12.1	13.1	19.3	+6.2ss
	23-26					8.3	9.3	8.8	7.3	6.3	6.7	8.4	8.6	8.8	+0.2
	27-30									3.6	3.2	3.3	3.6	3.9	+0.3
% saying often exposed	18	1.4	2.0	1.9	1.4	1.5	1.3	1.6	1.8	1.6	2.2	2.6	2.9	3.0	+0.1
	19-22	1.4	1.5	1.4	0.6	0.8	0.7	0.5	1.2	0.6	1.1	1.2	1.0	2.0	+1.0
	23-26					0.3	0.4	0.4	0.7	0.6	0.3	0.5	0.2	0.8	+0.6
	27-30									0.3	0.2	0.5	0.2	0.2	0.0
Other psychedelics															
% saying any exposure	18	20.4	17.6	16.8	13.1	12.7	12.5	11.8	10.0	9.0	8.8	9.4	9.4	9.7	+0.3
	19-22	18.3	16.3	16.3	12.5	10.5	11.0	9.2	9.1	7.7	8.4	8.3	8.9	10.6	+1.7
	23-26					8.4	8.9	9.1	6.0	5.1	4.8	5.7	5.5	5.1	-0.4
	27-30									5.0	3.4	3.4	3.4	2.1	-1.4
% saying often exposed	18	2.2	2.0	2.6	1.1	1.7	1.4	1.5	1.2	1.1	1.3	1.2	1.3	1.1	-0.2
	19-22	1.1	0.9	0.9	0.7	0.8	0.8	0.2	0.8	0.3	0.4	0.4	0.5	0.7	+0.2
	23-26					0.1	0.3	0.5	0.6	0.8	0.1	0.4	0.4	0.0	-0.4
	27-30									0.2	0.4	0.5	0.3	0.1	-0.2
Cocaine															
% saying any exposure	18	37.7	36.3	34.9	33.3	35.6	38.3	37.4	34.9	30.2	30.2	27.7	21.3	19.8	-1.5
	19-22	37.6	42.3	43.6	36.6	38.9	39.4	41.5	37.0	36.2	26.6	24.0	18.5	19.8	+1.4
	23-26					38.5	40.6	42.0	34.5	35.9	28.0	24.0	19.9	16.7	-3.1
	27-30									28.9	28.3	24.2	18.6	19.4	+0.8
% saying often exposed	18	5.9	6.6	6.6	5.2	6.7	7.1	7.8	5.9	5.1	5.4	4.7	3.4	2.7	-0.7
	19-22	5.8	7.6	6.5	4.3	6.5	7.0	5.4	5.2	4.8	4.3	2.2	1.6	1.7	+0.1
	23-26					5.3	8.5	7.0	6.0	5.4	3.5	2.5	1.7	1.4	-0.3
	27-30									4.4	3.9	2.9	2.2	2.0	-0.3
Heroin															
% saying any exposure	18	7.4	6.6	7.1	5.1	6.0	5.5	6.0	5.8	5.7	6.5	5.4	5.1	5.4	+0.3
	19-22	4.4	3.3	4.1	2.9	3.1	4.8	2.9	2.9	2.9	2.9	2.5	3.0	2.7	-0.3
	23-26					2.3	3.3	3.2	2.9	1.7	2.3	2.3	1.8	1.7	-0.1
	27-30									2.1	1.4	1.5	0.9	1.0	+0.1
% saying often exposed	18	0.4	0.6	1.0	0.7	1.1	0.5	1.0	0.9	0.8	1.0	0.5	0.9	0.7	-0.2
	19-22	0.2	0.3	0.3	0.1	0.2	0.5	0.2	0.1	0.2	0.1	0.2	0.4	0.6	+0.1
	23-26					0.0	0.7	0.3	0.6	0.4	0.3	0.6	0.3	0.0	-0.3
	27-30									0.3	0.3	0.5	0.2	0.2	0.0

(Table continued on next page)

TABLE 16 (Cont.)
Trends in Exposure to Drug Use
Young Adults in Modal Age Groups of 18, 19-22, 23-26, and 27-30

(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"?	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	'91-'92 change
Other narcotics															
% saying any exposure	18	19.6	17.5	18.5	17.3	18.0	18.4	15.6	14.4	14.8	13.8	14.2	11.3	11.1	-0.2
	19-22	14.4	14.4	15.2	10.9	12.4	13.7	9.8	12.2	11.2	9.0	9.4	9.2	8.5	-0.7
	23-26					9.0	12.3	9.2	9.7	7.4	8.0	5.9	8.3	7.0	-1.3
	27-30									6.5	6.5	5.8	5.5	3.7	-1.8
% saying often exposed	18	1.7	1.7	2.4	2.2	2.0	1.8	2.1	1.7	1.7	1.7	1.6	1.4	1.3	-0.1
	19-22	0.7	0.5	0.5	0.9	0.7	1.0	0.5	0.4	0.9	0.3	0.2	1.0	0.9	-0.1
	23-26					0.4	0.5	1.3	0.8	0.8	0.5	1.6	0.7	0.1	-0.6
	27-30									0.7	0.5	1.0	0.3	0.8	+0.4
Amphetamines															
% saying any exposure	18	40.8	49.5	50.2	46.1	45.0	41.0	36.5	31.7	27.9	27.4	28.3	23.6	24.5	+0.9
	19-22	42.3	48.6	48.4	39.7	41.3	35.9	31.3	26.7	21.2	18.5	19.5	17.4	21.3	+3.9
	23-26					32.3	30.5	29.1	20.9	18.8	14.0	16.8	14.6	11.8	-2.8
	27-30									15.6	14.3	13.5	10.7	11.4	+0.7
% saying often exposed	18	8.3	12.1	12.3	10.1	9.0	6.5	5.8	4.5	4.1	4.7	4.1	3.1	3.0	-0.1
	19-22	7.4	9.9	7.7	6.9	5.4	4.4	3.1	3.3	2.2	1.5	1.1	1.9	2.6	+0.7
	23-26					3.9	3.2	2.2	3.3	1.9	0.7	2.0	1.3	0.2	-1.1s
	27-30									2.0	2.0	1.2	0.8	0.8	+0.1
Barbiturates															
% saying any exposure	18	25.2	25.9	25.7	22.5	21.2	18.9	15.8	13.1	12.4	11.8	13.3	10.0	10.2	+0.2
	19-22	25.6	23.1	21.8	18.3	15.7	14.7	12.8	12.0	8.2	8.3	6.5	7.9	7.3	-0.6
	23-26					16.1	13.1	11.0	7.1	7.1	6.6	6.9	5.9	6.5	+0.6
	27-30									8.0	6.8	5.9	5.4	5.2	-0.2
% saying often exposed	18	3.4	4.0	4.3	3.0	2.7	1.7	2.1	1.5	1.4	1.7	1.7	1.2	1.1	-0.1
	19-22	2.5	2.8	1.1	1.4	0.7	1.3	0.5	0.7	0.7	0.3	0.7	0.4	0.7	+0.3
	23-26					0.7	0.9	1.7	0.8	0.6	0.3	1.1	0.3	0.3	-0.1
	27-30									0.7	0.4	0.6	0.2	0.4	+0.2
Tranquilizers															
% saying any exposure	18	29.1	29.0	26.6	23.5	23.1	23.4	19.6	18.4	18.2	15.1	16.3	14.2	12.7	-1.5
	19-22	29.6	26.9	28.5	19.5	21.2	19.5	16.4	18.5	13.8	12.0	12.7	12.6	11.0	-1.6
	23-26					23.1	21.0	16.9	15.9	13.4	12.9	12.0	10.4	9.7	-0.7
	27-30									15.0	11.6	11.1	9.7	10.3	+0.7
% saying often exposed	18	3.2	4.2	3.5	2.9	2.9	2.2	2.5	2.6	2.2	2.1	1.9	1.4	1.9	+0.5
	19-22	3.2	2.6	1.8	2.1	1.5	1.7	0.9	1.1	1.8	1.0	1.1	1.1	1.5	+0.4
	23-26					2.0	1.6	2.6	1.8	1.2	0.8	0.5	1.0	0.6	-0.4
	27-30									1.4	0.3	1.7	0.8	1.3	+0.5
Alcoholic beverages															
% saying any exposure	18	94.7	94.0	94.0	94.0	94.0	94.0	94.1	93.9	93.1	92.3	93.6	91.7	90.6	-1.1
	19-22	94.3	93.8	94.5	93.4	94.2	92.7	93.6	94.4	92.5	91.8	92.4	94.0	93.3	-0.7
	23-26					90.3	92.7	91.4	90.6	91.1	92.9	91.3	91.0	91.4	+0.4
	27-30									87.1	88.4	86.2	87.7	87.3	-0.4
% saying often exposed	18	60.2	61.0	59.3	60.2	58.7	59.5	58.0	58.7	56.4	55.5	56.1	54.5	53.1	-1.4
	19-22	59.6	61.2	62.5	56.6	59.3	61.8	59.9	61.4	55.4	53.8	56.0	53.9	56.1	+2.2
	23-26					52.1	54.8	51.4	53.0	48.1	50.9	49.7	48.4	45.4	-3.0
	27-30									39.9	39.5	38.7	38.0	39.9	+1.9
Approximate Weighted N =	18	3259	3608	3645	3334	3238	3252	3078	3296	3300	2795	2556	2525	2630	
	19-22	582	574	6701	569	578	549	591	582	556	567	567	532	528	
	23-26					533	532	557	529	531	514	523	494	532	
	27-30									522	507	506	478	502	

NOTES: Level of significance of difference between the two most recent years:

s = .05, ss = .01, sss = .001.

Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

[a]These estimates were derived from responses to the questions listed above. "Any illicit drug" includes all of the drugs listed except alcohol.

Trends in Exposure to Drug Use

Tables 15 and 16 also provide trend data on the proportions of friends using and in direct exposure to use. Once again, trends are available for the 19 to 22 year olds since 1980, for the 23 to 26 year olds since 1984, and for the 27 to 30 year olds since 1988. Data for high school seniors since 1980 also have been included in these tables.

- As for seniors, trends in exposure to use tend to parallel trends in self-reported use for the various drugs among young adults. Since 1980 that has meant a decreasing number of respondents being exposed to ***any illicit drug use*** (Table 16), or reporting use in their own friendship circle (Table 15).

- This has been due largely to the decrease in exposure to ***marijuana*** use. It is particularly noteworthy that, while 34% of the 19 to 22 year olds in 1980 said *most or all* of their friends used marijuana, only 8% said the same in 1992. Clearly the number of friendship groupings in which marijuana use is widespread has dropped dramatically.

- The proportion exposed to use of ***any illicit drugs other than marijuana***, by way of contrast, did not change much between 1980 and 1986, but between 1986 and 1992 there was a drop in such exposure in all four age groups. In all four age groups this appears to be due particularly to drops in exposure to the use of ***cocaine*** and ***amphetamines***, although there were decreases for ***methaqualone***, ***barbiturates***, and ***tranquilizers*** as well.

- All age groups have shown a longer term decline in exposure to ***barbiturate*** use, as well as the use of ***amphetamines***, ***methaqualone***, ***opiates other than heroin***, and ***tranquilizers***.

- In recent years there has been a considerable drop in the proportion of all four age groups who say they have any friends who use ***crack***. Self-reported use has declined in the same period.

- For all four age groups there have been some modest declines in the proportion saying that most or all of their friends drink ***alcohol***, but little change in the proportion saying that most or all of their friends ***get drunk*** once a week.

- Among seniors, the proportion who said most or all of their friends ***smoked cigarettes*** declined appreciably between 1975 and 1981, about when self-reported use declined, and leveled thereafter. Among 19 to 22 year olds a decline in friends' use occurred between 1980 (or possibly earlier) and 1985, followed by a leveling; and among 23 to 26 year olds such a downturn was evident between at

least 1984 (the first year for which data are available) and 1988. These staggered changes illustrate that the "cohort effects" are moving up the age spectrum.

- All of these changes parallel changes in self-reported use by these four age groups, reinforcing our trust in the validity of the self-report data.

PERCEIVED AVAILABILITY OF DRUGS

Young adults participating in the follow-up survey receive identical questions to those asked of seniors about how difficult they think it would be to get each of the various drugs if they wanted them. The questions are contained in only one of the six questionnaire forms, yielding a weighted sample size for each four-year age band of about 500 to 600 cases per year. The data for the follow-up samples are presented in Table 17, along with the data for the seniors.

Perceived Availability for Young Adults

- In general, the proportions of young adults in the follow-up age bands who say it would be "fairly easy" or "very easy" to get various of the illicit drugs are highly similar to the proportions of seniors reporting such easy access. This is true for ***marijuana***, ***other psychedelics***, ***MDMA***, ***crack***, ***other opiates***, ***amphetamines***, and ***barbiturates***.

- The major exceptions include ***cocaine***, which shows easier access to the drug for young adults than for high school seniors: 53% of seniors, 55% of 19 to 22 year olds, 61% of 23 to 26 year olds, and 63% of 27 to 30 year olds. Note, however, the high level of availability of this dangerous drug to all these age groups.

- ***Crack*** is available to roughly equal proportions (between 42% and 45%) of all four age groups.

- ***MDMA*** (ecstasy) is also available to roughly equal proportions (about one-quarter) of all four age groups.

- ***Tranquilizers*** show an increase in availability with age, while ***LSD*** is easier for the seniors and 19 to 22 year olds to get than for the two older groups.

- ***Marijuana*** is almost universally available to these age groups, while ***amphetamines*** and ***cocaine*** are seen as available by the majority. ***Barbiturates*** and ***tranquilizers*** are seen as available by nearly half.

TABLE 17
Trends in Reported Availability of Drugs
Young Adults in Modal Age Groups of 18, 19-22, 23-26, and 27-30

(Entries are Percentages)

Q. *How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?*	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	'91-'92 change
Marijuana	18	89.0	89.2	88.5	86.2	84.6	85.5	85.2	84.8	85.0	84.3	84.4	83.3	82.7	-0.6
	19-22	95.6	91.1	92.4	89.7	88.3	89.5	87.2	85.9	87.1	87.1	86.2	86.0	87.8	+1.8
	23-26					92.5	88.8	88.8	90.3	86.9	88.7	83.3	82.5	83.8	+1.3
	27-30									89.3	86.0	83.1	83.8	80.7	-3.1
Amyl & Butyl Nitrites	18	NA	NA	NA	NA	NA	NA	NA	23.9	25.9	26.8	24.4	22.7	25.9	+3.2s
	19-22	NA	NA	NA	NA	NA	NA	NA	22.8	26.0	NA	NA	NA	NA	NA
	23-26					NA	NA	NA	23.1	28.0	NA	NA	NA	NA	NA
	27-30									26.7	NA	NA	NA	NA	NA
LSD	18	35.3	35.0	34.2	30.9	30.6	30.5	28.5	31.4	33.3	38.3	40.7	39.5	44.5	+5.0ss
	19-22	39.6	38.4	35.1	31.8	32.7	29.6	30.5	29.9	33.9	36.4	36.6	37.8	42.5	+4.8
	23-26					32.7	29.1	30.0	27.5	32.7	32.6	30.2	32.8	33.5	+0.7
	27-30									29.4	29.9	32.3	27.0	30.9	+3.9
PCP	18	NA	NA	NA	NA	NA	NA	NA	22.8	24.9	28.9	27.7	27.6	31.7	+4.1s
	19-22	NA	NA	NA	NA	NA	NA	NA	21.7	24.6	NA	NA	NA	NA	NA
	23-26					NA	NA	NA	21.2	27.6	NA	NA	NA	NA	NA
	27-30									24.3	NA	NA	NA	NA	NA
MDMA	18	NA	NA	NA	NA	NA	NA	NA	NA	NA	21.7	22.0	22.1	24.2	+2.1
	19-22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	26.6	24.9	27.1	+2.2
	23-26					NA	NA	NA	NA	NA	NA	21.4	23.1	26.4	+3.3
	27-30									NA	NA	27.1	20.8	22.2	+1.5
Some other psychedelic	18	35.0	32.7	30.6	26.6	26.6	26.1	24.9	25.0	26.2	28.2	28.3	28.0	29.9	+1.9
	19-22	42.1	37.7	33.5	31.0	28.9	28.7	26.3	27.5	28.7	28.1	28.9	26.6	28.3	+1.7
	23-26					31.8	29.6	26.4	25.6	29.6	28.7	27.0	25.7	27.7	+1.9
	27-30									28.6	29.6	30.8	24.9	24.8	-0.1
Cocaine	18	47.9	47.5	47.4	43.1	45.0	48.9	51.5	54.2	55.0	58.7	54.5	51.0	52.7	+1.7
	19-22	55.7	56.2	57.1	55.2	56.2	56.9	60.4	65.0	64.9	66.8	61.7	54.3	54.5	+0.2
	23-26					63.7	67.2	65.8	69.0	71.7	70.0	65.6	58.0	61.1	+3.1
	27-30									68.6	68.2	64.0	60.0	63.1	+3.1
Crack	18	NA	NA	NA	NA	NA	NA	NA	41.1	42.1	47.0	42.4	39.9	43.5	+3.6s
	19-22	NA	NA	NA	NA	NA	NA	NA	41.9	47.3	47.2	46.9	42.1	42.1	0.0
	23-26					NA	NA	NA	44.5	53.0	49.9	46.9	42.0	42.6	+0.6
	27-30									46.5	46.8	46.8	43.1	45.2	+2.0
Cocaine powder	18	NA	NA	NA	NA	NA	NA	NA	52.9	50.3	53.7	49.0	46.0	48.0	+2.0
	19-22	NA	NA	NA	NA	NA	NA	NA	58.7	60.2	61.7	56.5	52.5	48.9	-3.6
	23-26					NA	NA	NA	64.9	69.1	60.1	58.6	53.2	56.4	+3.2
	27-30									63.5	62.8	57.9	55.8	56.8	+1.0
Heroin	18	21.2	19.2	20.8	19.3	19.9	21.0	22.0	23.7	28.0	31.4	31.9	30.6	34.9	+4.3ss
	19-22	18.9	19.4	19.3	16.4	17.2	20.8	21.2	24.4	28.5	31.6	30.7	25.3	30.2	+4.9
	23-26					18.6	18.1	21.0	22.3	28.4	31.2	28.1	25.6	25.7	+0.1
	27-30									23.6	27.4	29.5	22.1	25.6	+3.5
Some other narcotic (including methadone)	18	29.4	29.6	30.4	30.0	32.1	33.1	32.2	33.0	35.8	38.3	38.1	34.6	37.1	+2.5
	19-22	32.7	32.4	30.8	31.0	28.7	34.3	32.6	33.8	37.9	37.9	35.6	35.4	35.2	-0.2
	23-26					32.8	32.1	33.6	32.2	35.9	36.4	34.7	33.2	33.9	+0.7
	27-30									31.6	36.2	36.1	29.0	31.8	+2.9
Amphetamines	18	61.3	69.5	70.8	68.5	68.2	66.4	64.3	64.5	63.9	64.3	59.7	57.3	58.8	+1.5
	19-22	71.7	72.6	73.5	69.7	69.1	69.1	63.1	61.8	61.3	62.2	57.7	58.3	56.3	-2.0
	23-26					65.8	66.0	64.5	65.3	62.2	60.1	55.8	54.8	54.5	-0.3
	27-30									54.3	58.6	55.3	54.4	50.4	-4.0
"Ice"	18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	24.0	24.3	26.0	+1.7
	19-22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	24.0	21.8	22.5	+0.7
	23-26					NA	NA	NA	NA	NA	NA	22.3	20.0	21.3	+1.3
	27-30									NA	NA	27.3	19.7	22.0	+2.3

(Table continued on next page)

TABLE 17 (Cont.)
Trends in Reported Availability of Drugs
Young Adults in Modal Age Groups of 18, 19-22, 23-26, and 27-30

(Entries are Percentages)

Q. *How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?*	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	'91-'92 change
Barbiturates	18	49.1	54.9	55.2	52.5	51.9	51.3	48.3	48.2	47.8	48.4	45.9	42.4	44.0	+1.6
	19-22	59.5	61.1	56.8	54.2	48.1	52.7	46.8	44.6	45.5	47.7	44.2	41.7	43.4	+1.6
	23-26					52.7	47.7	46.4	45.9	47.4	44.8	41.6	39.6	42.0	+2.3
	27-30									43.2	44.5	44.2	38.5	37.8	-0.8
Tranquilizers	18	59.1	60.8	58.9	55.3	54.5	54.7	51.2	48.6	49.1	45.3	44.7	40.8	40.9	+0.1
	19-22	67.4	62.8	62.0	62.3	52.5	55.6	52.9	50.3	50.0	49.4	45.4	44.8	40.7	-4.1
	23-26					60.2	54.3	54.1	56.3	52.8	51.4	47.8	45.1	48.1	+3.0
	27-30									55.3	54.4	54.9	47.5	47.8	+0.3
Steroids	18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	56.5	54.1	51.7	-2.4
	19-22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	44.1	44.8	46.3	+1.5
	23-26					NA	NA	NA	NA	NA	NA	37.6	35.8	39.3	+3.6
	27-30									NA	NA	36.4	30.6	35.0	+4.3
Approximate Weighted N =	18	3240	3578	3602	3385	3269	3274	3077	3271	3231	2806	2549	2476	2586	
	19-22	582	601	582	588	559	571	592	581	568	572	571	534	512	
	23-26					540	541	548	539	526	514	532	511	523	
	27-30									519	513	510	487	475	

NOTES: Level of significance of difference between the two most recent years:

s = .05, ss = .01, sss = .001.

Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

[a]Answer alternatives were: (1) Probably impossible, (2) Very difficult, (3) Fairly difficult, (4) Fairly easy, and (5) Very easy.

- ***Steroids*** are reported as available by many more of the younger age groups (e.g., 52% of seniors) than by the older ones (e.g., 35% of the 27 to 30 year olds).

- ***Alcohol*** and ***cigarettes*** are assumed to be available to virtually all young adults in these three age groups, so questions were not even included for these two drugs.

Trends in Perceived Availability

- The major trends in the perceived availability of these drugs to young adults parallel those shown for seniors. ***Marijuana*** has been virtually universally available to all these age groups throughout the historical periods covered by the available data. There has been a slight decrease (of 7%) among seniors since the peak year of 1979, and a slightly larger decrease (of 8%) since 1980 among 19 to 22 year olds. Perceived availability is roughly the same for all four groups (81% to 88% think it would be "fairly easy" or "very easy" to get marijuana).

- ***Cocaine*** availability, on the other hand, had been moving up among all three age groups over the 1985 to 1987 intervals, reaching historic highs in 1987. (Recall that seniors showed a rise in availability in earlier years–from 1975 to 1980–followed by a leveling between 1980 and 1985. Availability appeared to be level during the latter period among young adults also.) It is noteworthy that perceived availability of cocaine increased in all three age bands in 1987–the same year that use actually dropped sharply. Between 1988 and 1989, the two younger age strata (age 18 and 19 to 22) were still increasing, while the two older were beginning to decrease in the proportion who believed cocaine to be easily available. In 1990 and 1991, all four groups reported decreased availability–quite likely because the number who have friends who are users has dropped so substantially in the last few years–and then leveled in 1992, when usage rates also leveled.

- ***Crack*** availability increased between 1987 and 1989, but then declined a bit until leveling (or perhaps increasing slightly) in 1992.

- The trends in ***LSD*** availability among young adults have also been fairly parallel to those for seniors. Among seniors there was a drop of about 10% in the mid 1970's and a later drop in the interval 1980 to 1986. The latter drop, at least, is paralleled in the early data for 19 to 22 year olds. Between 1986 and 1992, availability increased among seniors and the 19 to 22 year olds–particularly in 1992. There are no clear trends for the two oldest age groups in recent years, which may reflect their very low levels of use of this drug.

- In the early 1980's there was a fair decline among all age groups in the availability of ***hallucinogens other than LSD***; there has been little change since then.

- The availability of ***MDMA*** (ecstasy) rose in all four age groups in 1992, having shown no prior systematic trending since the questions were first introduced in 1989 and 1990.

- ***Heroin*** availability varied within a fairly narrow range from 1980 to 1986, but then showed a fair increase among seniors and the 19 to 26 year olds through 1990. Since then there has been little systematic change.

- The availability of ***opiates other than heroin*** slowly rose among all age groups between 1980 and 1989, followed by some decline, then leveling in 1992.

- The reported availability of ***amphetamines*** peaked in 1982 for both seniors and 19 to 22 year olds and has been declining gradually since, having fallen by 12% among seniors and 17% among the 19 to 22 year olds. Since 1987 there has been a decline of 11% among the 23 to 26 year olds, as well.

- ***Barbiturates*** have also shown a decline in availability since about 1981 or 1982 in the two younger groups, by 11% among seniors and 18% among 19 to 22 year olds. Since 1984, when data were first available for 23 to 26 year olds, availability has declined by 5%. This decline halted in 1992.

- Finally, ***tranquilizer*** availability has been declining gradually among seniors since the study first began in 1975 (from 72% in 1975 to 41% in 1992). Since 1980, when data were first available for 19 to 22 year olds, availability has been declining more sharply and from a higher level than among seniors, such that previous differences between them in availability have been just about eliminated.

- Since data on ***steroid*** availability were first gathered in 1990, there has been little systematic change among the young adults and only a slight decline among seniors, to whom it is most available.

COLLEGE STUDENTS

Chapter 8

PREVALENCE OF DRUG USE AMONG COLLEGE STUDENTS

The follow-up design of the Monitoring the Future project is capable of generating an excellent national sample of college students–better in many ways than the more typical design which first samples colleges and then samples students within them, because in the present sample the students are not clustered in a limited number of colleges. Given the much greater diversity in post-secondary institutions than in high schools, the use of a clustered sample would place far greater limitations on sample accuracy at the college level than at the high school level. (Note that the absence of dropouts in the high school senior sample should have practically no effect on the college sample, since very few of the dropouts would go on to college.)

Perhaps the major limitation of the present design for the purpose of characterizing college students is that it limits the age range of the college sample. For trend estimation purposes, we have decided to limit the age band to the most typical one for college attendance, i.e., one to four years past high school, which corresponds to the modal ages of 19 to 22 years old. According to statistics from the United States Bureau of the Census,[9] this age band should encompass about 79% of all undergraduate college students enrolled full-time in 1989. Although extending the age band to be covered by an additional two years would cover 86% of all enrolled college students, it would also reduce by two years the interval over which we could report trend data. Some special analyses conducted earlier indicated that the differences in prevalence estimates under the two definitions were extremely small. The annual prevalence of all drugs except cocaine shifted only about one- or two-tenths of a percent, based on comparisons made in 1985. Cocaine, which has the greatest amount of age-related change, would have had an annual prevalence rate only 0.8% higher if the six-year age span were included rather than the four-year age span. Thus, for purposes of estimating all prevalence rates except lifetime prevalence, the four-year and six-year intervals are nearly interchangeable.

On the positive side, controlling the age band may be desirable for trend estimation purposes, because it controls for the possibility that the age composition of college students changes much with time. Otherwise, college students characterized in one year would represent a noncomparable segment of the population when compared to college students surveyed in another year.

College students are defined here as those follow-up respondents one to four years past high school who say they were registered as full-time students at the beginning of March in the year in question ***and*** *who say they are enrolled in a two- or four-year college.* Thus, the definition encompasses only those who are one to four years past high school and are active full-time undergraduate college students in the year in question. It excludes those who previously may have been college students or may have completed college.

---

[9]U.S. Bureau of the Census. (Telephone communication, unpublished data: 1991). *Current population reports: Population characteristics*, Series P-20, No. 400. Washington, DC: U.S. Government Printing Office.

Prevalence rates for college students and their same-age peers are provided in Tables 18 to 22. Having statistics for both groups makes it possible to see whether college students are above or below their age peers in terms of their usage rates. The college-enrolled sample now constitutes exactly half (50%) of the entire follow-up sample one to four years past high school. Any difference between the two groups would likely be enlarged if data from the missing high school dropout segment were available for inclusion as part of the noncollege segment; therefore, any differences observed here are only an indication of the direction and relative size of differences between the college and the entire noncollege-enrolled populations, not an absolute estimate of them.

PREVALENCE OF DRUG USE: COLLEGE STUDENTS

For most drugs, use among college students now tends to be lower than among their age-peers, but the degree of difference varies considerably by drug as Tables 18 through 22 show.

- There is little difference between those enrolled in college vs. their fellow high school graduates of the same age, one to four years past high school, in annual prevalence of an overall index of ***any illicit drug use*** (college students at 31%, others at 29%). However, college students are slightly lower in their use of ***any illicit drug other than marijuana*** (13% vs. 16%). In fact, for almost all the individual illicit drugs except ***marijuana*** or ***MDMA***, use among college students is lower than among their age peers. The overall index of use shows college students as higher because marijuana is an exception to the general rule.

- Annual ***marijuana*** use is slightly higher among college students (28%) than among their fellow high school graduates of the same age (26%). However, their rate of current ***daily marijuana use*** is slightly lower, 1.6% vs. 2.4%.

- ***Cocaine*** shows the largest absolute difference in annual prevalence among the illicit drugs, 3.0% for college students vs. 5.9% for those not in college.

- The next largest absolute difference after ***cocaine*** occurs for ***stimulants***, with 3.6% of the college students vs. 6.3% of the others reporting use in the past year.

- Annual use of ***crack*** is distinctly lower among college students than among their "noncollege" age-peers, at 0.4% vs. 2.2%, respectively. It has the largest proportional difference between the two groups.

- College students are slightly below their noncollege age peers in annual usage rates for ***LSD*** (5.7% vs. 6.7%), ***barbiturates*** (1.4% vs. 2.0%), ***opiates other than heroin*** (2.7% vs. 2.9%), and ***tranquilizers*** (2.9% vs. 3.1%).

- The annual prevalence for ***inhalants*** is slightly lower among the respondents in college full time, at 3.1% vs. 3.5% for the noncollege respondents.

- Both groups have equally low levels of self-reported use of ***ice*** (both at 0.2%).

- ***Heroin*** also shows low levels of use, but as usual, the rate is higher among the noncollege group (0.3%) than among the college students 0.1%).

- Use of ***MDMA*** (ecstasy) is slightly, but not significantly, higher among college students than among their noncollege age peers: annual prevalence is 2.0% vs. 1.5%.

- Today's college students have slightly higher annual prevalence of ***alcohol*** use compared to their age peers (87% vs. 83%), a higher monthly prevalence (71% vs. 62%), but a very slightly lower daily prevalence (3.7% vs. 4.0%). The most important difference lies in the prevalence of ***occasions of heavy drinking*** (five or more drinks in a row in the past two weeks), which is 41% among college students vs. 33% among their age peers. (As noted in the next section, this difference appears primarily because heavy drinking is relatively low among noncollege females.) In sum, college students participate in more of what is probably heavy weekend drinking, even though they are a little less likely to drink on a daily basis.

- By far the largest absolute difference between college students and others their age occurs for ***cigarette smoking***. For example, their prevalence of daily smoking is only 14% vs. 28% for high school graduates that age who are currently not in college full-time. Smoking at the rate of half-pack a day stands at 9% vs. 21% for these two groups, respectively. Recall that the high school senior data show the college-bound to have much lower smoking rates in high school than the noncollege-bound: thus these substantial differences observed at college age actually preceded college attendance.[10]

[10]See also Bachman, J.G., O'Malley, P.M., and Johnston, L.D. (1984). Drug use among young adults: The impacts of role status and social environments. *Journal of Personality and Social Psycholcgy, 47*, 629-645.

SEX DIFFERENCES IN PREVALENCE AMONG COLLEGE STUDENTS

Tabular data are provided separately for male and female college students, and their same age-peers, in Tables 18 to 22.

- It may be seen that most of the sex differences among college students replicate those discussed earlier for all young adults (one to fourteen years past high school), which in turn replicated sex differences in high school for the most part. That means that among college students, males have higher annual prevalence rates for most drugs, with the largest proportional sex differences evident for ***heroin*** (0.2% vs. 0.0%), ***inhalants*** (4.0% vs. 2.2%), ***LSD*** (7.4% vs. 4.3%), ***hallucinogens*** in general (8.7% vs. 5.3%), ***cocaine*** in general (3.6% vs. 2.4%), ***crack*** (0.5% vs. 0.4%), and ***marijuana*** (30.6% vs. 25.3%).

- Among college students, females showed about the same prevalence for ***stimulants*** (3.5%) as did their male counterparts (3.8%), as well as for ***barbiturates*** (1.4% vs. 1.5%), ***ice*** (0.3% vs. 0.0%), ***MDMA*** (2.1% vs. 1.8%), ***opiates other than heroin*** (2.9% vs. 2.6%), and ***tranquilizers*** (3.0% vs. 2.7%).

- As is true for the entire young adult sample, substantial sex differences are to be found in ***daily marijuana use*** (2.6% for males vs. 0.8% for females).

- Annual prevalence of ***alcohol*** is only slightly higher for male than for female college students (89% vs. 86%), but males are clearly higher on thirty-day prevalence (77% vs. 67%), and much higher on ***daily drinking*** (4.8% vs 2.8%), and ***occasional heavy drinking*** (51% vs. 33%).

  Among males, taking ***five or more drinks in a row*** occurs less often for the noncollege group (42%) compared to college students (51%), and this difference occurs also for females (25% and 33%, respectively).

- One drug-using behavior which has shown a sex difference among college students somewhat different from that observed in the sample of all young adults is ***cigarette smoking***. While the

noncollege segment of this age group has consistently shown little or no sex difference in smoking rates in recent years, among college students there *has* been a consistent sex difference in smoking, with college women a bit more likely to smoke than college men. In 1992, 16% of the females vs. 12% of the males indicated daily smoking. A glance at Figure 48 in the next chapter shows a fairly consistent sex difference among college students prior to 1987. In recent years the difference appears to be narrowing.

TABLE 18

Lifetime[c] Prevalence for Various Types of Drugs, 1992: Full-time College Students vs. Others

Among Respondents 1-4 Years Beyond High School

(Entries are Percentages)

	Total		Males		Females	
	Full-Time College	Others	Full-Time College	Others	Full-Time College	Others
Any Illicit Drug[e]	48.8	53.8	50.8	55.0	47.1	52.9
Any Illicit Drug[e] Other than Marijuana	26.1	31.5	26.3	32.9	26.1	30.3
Marijuana	44.1	50.0	47.6	52.0	41.2	48.3
Inhalants[d]	14.2	15.0	15.7	19.9	13.0	11.0
Hallucinogens	12.0	14.6	14.6	18.3	9.8	11.5
LSD	10.6	13.8	12.8	17.3	8.7	10.9
Cocaine	7.9	14.2	9.5	16.8	6.6	12.1
Crack	1.7	5.4	1.9	7.6	1.6	3.5
MDMA ("Ecstasy")[f]	2.9	3.0	2.7	4.6	3.1	1.8
Heroin	0.5	1.0	0.9	1.4	0.2	0.7
Other Opiates[a]	7.3	7.5	7.9	8.0	6.8	7.0
Stimulants, Adjusted[a,b]	10.5	18.2	10.6	18.7	10.4	17.7
"Ice"[f]	0.6	1.8	0.6	2.3	0.7	1.3
Barbiturates[a]	3.8	6.3	4.2	7.4	3.5	5.4
Tranquilizers[a]	6.9	7.9	6.7	7.7	7.1	8.2
Alcohol	91.8	90.0	92.4	89.9	91.2	90.1
Cigarettes	NA	NA	NA	NA	NA	NA
Approximate Weighted N =	(1490)	(1490)	(680)	(680)	(810)	(820)

NOTE: NA indicates data not available.

[a]Only drug use which was not under a doctor's orders is included here.
[b]Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription stimulants.
[c]Data are uncorrected for cross-time inconsistencies in the answers.
[d]This drug was asked about in five of the six questionnaire forms. Total N in 1992 for college students is approximately 1240.
[e]Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, and heroin, or any use of other opiates, stimulants, barbiturates, or tranquilizers not under a doctor's orders.
[f]This drug was asked about in two questionnaire forms. Total N in 1992 for college students is approximately 500.

TABLE 19

Annual Prevalence for Various Types of Drugs, 1992: Full-time College Students vs. Others

Among Respondents 1-4 Years Beyond High School
(Entries are Percentages)

	Total		Males		Females	
	Full-Time College	Others	Full-Time College	Others	Full-Time College	Others
Any Illicit Drug[e]	30.6	29.1	32.8	30.4	28.7	28.1
Any Illicit Drug[e] Other than Marijuana	13.1	15.6	13.8	18.0	12.6	13.5
Marijuana	27.7	26.2	30.6	27.3	25.3	25.3
Inhalants[d]	3.1	3.5	4.0	5.6	2.2	1.7
Hallucinogens	6.8	7.1	8.7	10.2	5.3	4.6
LSD	5.7	6.7	7.4	9.8	4.3	4.1
Cocaine	3.0	5.9	3.6	7.2	2.4	4.8
Crack	0.4	2.2	0.5	3.5	0.4	1.1
MDMA ("Ecstasy")[a]	2.0	1.5	1.8	2.6	2.1	0.7
Heroin	0.1	0.3	0.2	0.4	0.0	0.2
Other Opiates[b]	2.7	2.9	2.6	2.7	2.9	3.0
Stimulants, Adjusted[b,c]	3.6	6.3	3.8	7.5	3.5	5.3
"Ice"[a]	0.2	0.2	0.0	0.6	0.3	0.0
Barbiturates[b]	1.4	2.0	1.5	2.6	1.4	1.4
Tranquilizers[b]	2.9	3.1	2.7	3.8	3.0	2.6
Alcohol	86.9	82.9	88.5	83.7	85.5	82.1
Cigarettes	37.3	45.2	38.4	44.5	36.4	45.9
Approximate Weighted N =	(1490)	(1490)	(680)	(680)	(810)	(820)

NOTE: NA indicates data not available.

[a]This drug was asked about in two questionnaire forms. Total N in 1992 for college students is approximately 500.
[b]Only drug use which was not under a doctor's orders is included here.
[c]Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription stimulants.
[d]This drug was asked about in five of the six questionnaire forms. Total N in 1992 for college students is approximately 1240.
[e]Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, and heroin, or any use of other opiates, stimulants, barbiturates, or tranquilizers not under a doctor's orders.

TABLE 20

Thirty-Day Prevalence for Various Types of Drugs, 1992: Full-time College Students vs. Others

Among Respondents 1-4 Years Beyond High School
(Entries are Percentages)

	Total		Males		Females	
	Full-Time College	Others	Full-Time College	Others	Full-Time College	Others
Any Illicit Drug[e]	16.1	16.0	18.0	17.6	14.5	14.7
Any Illicit Drug[e] Other than Marijuana	4.6	6.7	5.1	8.1	4.2	5.6
Marijuana	14.6	14.3	16.7	16.0	12.9	12.9
Inhalants[d]	1.1	1.2	1.7	2.4	0.6	0.1
Hallucinogens	2.3	2.3	2.9	3.2	1.8	1.5
LSD	1.8	1.9	2.1	2.9	1.4	1.0
Cocaine	1.0	1.7	1.0	2.4	0.9	1.2
Crack	0.1	0.6	0.0	1.0	0.2	0.2
MDMA ("Ecstasy")[a]	0.4	0.5	0.6	0.3	0.3	0.7
Heroin	0.0	0.1	0.0	0.0	0.0	0.2
Other Opiates[b]	1.0	1.0	0.8	1.0	1.2	0.9
Stimulants, Adjusted[b,c]	1.1	2.5	1.3	2.9	0.9	2.1
"Ice"[a]	0.0	0.0	0.0	0.0	0.0	0.0
Barbiturates[b]	0.7	0.5	0.7	0.4	0.7	0.6
Tranquilizers[b]	0.6	1.1	0.7	1.1	0.4	1.2
Alcohol	71.4	62.3	77.0	67.2	66.7	58.1
Cigarettes	23.5	35.0	23.5	34.1	23.4	35.7
Approximate Weighted N =	(1490)	(1490)	(680)	(680)	(810)	(820)

NOTE: NA indicates data not available.

[a]This drug was asked about in two questionnaire forms. Total N in 1992 for college students is approximately 500.
[b]Only drug use which was not under a doctor's orders is included here.
[c]Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription stimulants.
[d]This drug was asked about in five of the six questionnaire forms. Total N in 1992 for college students is approximately 1240.
[e]Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, and heroin, or any use of other opiates, stimulants, barbiturates, or tranquilizers not under a doctor's orders.

TABLE 21

Thirty-Day Prevalence of Daily Use for Marijuana, Cocaine, Stimulants, Alcohol, and Cigarettes, 1992: Full-time College Students vs. Others

Among Respondents 1-4 Years Beyond High School

(Entries are Percentages)

	Total		Males		Females	
	Full-Time College	Others	Full-Time College	Others	Full-Time College	Others
Marijuana	1.6	2.4	2.6	4.1	0.8	0.9
Cocaine	0.0	0.1	0.0	0.1	0.0	0.1
Stimulants, Adjusted[a,b]	0.0	0.1	0.0	0.1	0.0	0.1
Alcohol						
Daily	3.7	4.0	4.8	5.7	2.8	2.5
5+ drinks in a row in past 2 weeks	41.4	32.5	51.0	41.9	33.4	24.5
Cigarettes						
Daily (any)	14.1	27.5	12.3	28.1	15.5	27.0
Half-pack or more per day	8.9	20.5	8.5	21.7	9.2	19.5
Approximate Weighted N =	(1490)	(1490)	(680)	(680)	(810)	(820)

NOTE: The illicit drugs not listed here show a daily prevalence of less than 0.05% in all groups.

[a]Only drug use which was not under a doctor's orders is included here.
[b]Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription stimulants.

TABLE 22

Lifetime[a], Annual, and Thirty-Day Prevalence of an Illicit Drug Use Index, 1992
Full-time College Students vs. Others
Among Respondents 1-4 Years Beyond High School
(Entries are Percentages)

	Total		Males		Females	
	Full-Time College	Others	Full-Time College	Others	Full-Time College	Others
			Percent Reporting Use in Lifetime			
Any Illicit Drug[b]	48.8	53.8	50.8	55.0	47.1	52.9
Any Illicit Drug Other than Marijuana	26.1	31.5	26.3	32.9	26.1	30.3
			Percent Reporting Use in Last Twelve Months			
Any Illicit Drug[b]	30.6	29.1	32.8	30.4	28.7	28.1
Any Illicit Drug Other than Marijuana	13.1	15.6	13.8	18.0	12.6	13.5
			Percent Reporting Use in Last Thirty Days			
Any Illicit Drug[b]	16.1	16.0	18.0	17.6	14.5	14.7
Any Illicit Drug Other than Marijuana	4.6	6.7	5.1	8.1	4.2	5.6
Approximate Weighted N =	(1490)	(1490)	(680)	(680)	(810)	(820)

[a]Data are uncorrected for cross-time inconsistencies in the answers.

[b]Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, and heroin, or any use of other opiates, stimulants, sedatives or tranquilizers not under a doctor's orders.

Chapter 9

TRENDS IN DRUG USE AMONG COLLEGE STUDENTS

Since the drug-using behaviors of American college students in the late 1960's and early 1970's represented the beginning of what was to become a very broad epidemic of illicit drug use in the American population, it is important to note what has happened to those behaviors among college students in more recent years.

In this section we continue to use the same definition of college students: high school graduates one to four years past high school who are enrolled full time in a two-year or four-year college at the beginning of March in the year in question. For comparison purposes trend data are provided on the remaining respondents who are also one to four years past high school. (See Figures 35 through 48.) Because the rate of college enrollment declines steadily with number of years beyond high school, the comparison group is slightly older on the average than the college-enrolled group. However, this should influence the comparisons of the college-enrolled with the other group rather little, since age effects in this age range are rather small.

It should also be remembered that the difference between the enrolled and other group shows the degree to which college students are above or below average for other high school *graduates* in this age band. Were we able to include the high school dropout segment in the "other" calculation, any differences with the college-enrolled likely would be accentuated.

For each year there are approximately 1100-1500 respondents constituting the college student sample (see Table 27 for N's per year) and roughly 1500-1700 respondents constituting the "other" group one to four years past high school. Comparisons of the trends since 1980 in these two groups are given below. (It was not until 1980 that enough follow-up years had accrued to characterize young people one to four years past high school.)

TRENDS IN PREVALENCE 1980-1992: COLLEGE STUDENTS

- The proportion of college students using ***any illicit drug*** in the prior year dropped steadily from 1980 to 1984 (from 56% to 45%), leveled from 1984 to 1986, declined significantly from 45% to 29% between 1986 and 1991, and increased in 1992 to 31%. (The increase was statistically nonsignificant.) (See Table 24 and Figure 35.) ***Marijuana*** use has shown a similar pattern (see Table 24), and in both cases the trend curves have been almost identical for both college students and those not enrolled in college (see Figures 35 and 37a). Except for the increase in 1992, they also track almost exactly the trend curves for high school seniors.

TABLE 23

Trends in Lifetime[e] Prevalence of Various Types of Drugs

Among College Students 1–4 Years Beyond High School

(Entries are percentages)

	Percent who used in lifetime													
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	'91–'92 change
Approx. Wtd. N =	(1040)	(1130)	(1150)	(1170)	(1110)	(1080)	(1190)	(1220)	(1310)	(1300)	(1400)	(1410)	(1490)	
Any Illicit Drug[f]	69.4	66.8	64.6	66.9	62.7	65.2	61.8	60.0	58.4	55.6	54.0	50.4	48.8	–1.7
Any Illicit Drug Other than Marijuana	42.2	41.3	39.6	41.7	38.6	40.0	37.5	35.7	33.4	30.5	28.4	25.8	26.1	+0.3
Marijuana	65.0	63.3	60.5	63.1	59.0	60.6	57.9	55.8	54.3	51.3	49.1	46.3	44.1	–2.2
Inhalants[b]	10.2	8.8	10.6	11.0	10.4	10.6	11.0	13.2	12.6	15.0	13.9	14.4	14.2	–0.1
Hallucinogens	15.0	12.0	15.0	12.2	12.9	11.4	11.2	10.9	10.2	10.7	11.2	11.3	12.0	+0.7
LSD	10.3	8.5	11.5	8.8	9.4	7.4	7.7	8.0	7.5	7.8	9.1	9.6	10.6	+1.0
Cocaine	22.0	21.5	22.4	23.1	21.7	22.9	23.3	20.6	15.8	14.6	11.4	9.4	7.9	–1.5
Crack[c]	NA	NA	NA	NA	NA	NA	NA	3.3	3.4	2.4	1.4	1.5	1.7	+0.2
MDMA ("Ecstasy")[g]	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.8	3.9	2.0	2.9	+0.9
Heroin	0.9	0.6	0.5	0.3	0.5	0.4	0.4	0.6	0.3	0.7	0.3	0.5	0.5	0.0
Other Opiates[a]	8.9	8.3	8.1	8.4	8.9	6.3	8.8	7.6	6.3	7.6	6.8	7.3	7.3	0.0
Stimulants[a]	29.5	29.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Stimulants, Adjusted[a,d]	NA	NA	30.1	27.8	27.8	25.4	22.3	19.8	17.7	14.6	13.2	13.0	10.5	–2.5s
Crystal methamphetamine[h]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.0	1.3	0.6	–0.7
Sedatives[a]	13.7	14.2	14.1	12.2	10.8	9.3	8.0	6.1	4.7	4.1	NA	NA	NA	NA
Barbiturates[a]	8.1	7.8	8.2	6.6	6.4	4.9	5.4	3.5	3.6	3.2	3.8	3.5	3.8	+0.3
Methaqualone[a]	10.3	10.4	11.1	9.2	9.0	7.2	5.8	4.1	2.2	2.4	NA	NA	NA	NA
Tranquilizers[a]	15.2	11.4	11.7	10.8	10.8	9.8	10.7	8.7	8.0	8.0	7.1	6.8	6.9	+0.1
Alcohol	94.3	95.2	95.2	95.0	94.2	95.3	94.9	94.1	94.9	93.7	93.1	93.6	91.8	–1.8

NOTES: Level of significance of difference between the two most recent years:
s = .05, ss = .01, sss = .001.
Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.
An asterisk indicates a percentage of less than 0.05%. NA indicates data not available.

[a] Only drug use which was not under a doctor's orders is included here.

[b] This drug was asked about in four of the five questionnaire forms in 1980–89, and in five of the six questionnaire forms in 1990–1992. Total N in 1992 (for college students) is 1240.

[c] This drug was asked about in two of the five questionnaire forms in 1987–89, and in all six questionnaire forms in 1990–1992.

[d] Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription stimulants.

[e] Data are uncorrected for cross-time inconsistencies in the answers.

[f] Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, and heroin, or any use of other opiates, stimulants, barbiturates, methaqualone (until 1990), or tranquilizers not under a doctor's orders.

[g] This drug was asked about in two of the five questionnaire forms in 1989, and in two of the six questionnaire forms in 1990–1992. Total N in 1992 (for college students) is 520.

[h] This drug was asked about in two of the six questionnaire forms. Total N in 1992 (for college students) is 500.

TABLE 24

Trends in Annual Prevalence of Various Types of Drugs

Among College Students 1–4 Years Beyond High School

(Entries are percentages)

	Percent who used in last twelve months													
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	'91–'92 change
Approx. Wtd. N =	(1040)	(1130)	(1150)	(1170)	(1110)	(1080)	(1190)	(1220)	(1310)	(1300)	(1400)	(1410)	(1490)	
Any Illicit Drug[e]	56.2	55.0	49.5	49.8	45.1	46.3	45.0	40.1	37.4	36.7	33.3	29.2	30.6	+1.3
Any Illicit Drug[e] Other than Marijuana	32.3	31.7	29.9	29.9	27.2	26.7	25.0	21.3	19.2	16.4	15.2	13.2	13.1	–0.1
Marijuana	51.2	51.3	44.7	45.2	40.7	41.7	40.9	37.0	34.6	33.6	29.4	26.5	27.7	+1.2
Inhalants[b]	3.0	2.5	2.5	2.8	2.4	3.1	3.9	3.7	4.1	3.7	3.9	3.5	3.1	–0.4
Hallucinogens	8.5	7.0	8.7	6.5	6.2	5.0	6.0	5.9	5.3	5.1	5.4	6.3	6.8	+0.5
LSD	6.0	4.6	6.3	4.3	3.7	2.2	3.9	4.0	3.6	3.4	4.3	5.1	5.7	+0.6
Cocaine	16.8	16.0	17.2	17.3	16.3	17.3	17.1	13.7	10.0	8.2	5.6	3.6	3.0	–0.6
Crack[c]	NA	NA	NA	NA	NA	NA	1.3	2.0	1.4	1.5	0.6	0.5	0.4	–0.1
MDMA ("Ecstasy")[f]	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.3	2.3	0.9	2.0	+1.1
Heroin	0.4	0.2	0.1	*	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0
Other Opiates[a]	5.1	4.3	3.8	3.8	3.8	2.4	4.0	3.1	3.1	3.2	2.9	2.7	2.7	+0.1
Stimulants[a]	22.4	22.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Stimulants, Adjusted[a,d]	NA	NA	21.1	17.3	15.7	11.9	10.3	7.2	6.2	4.6	4.5	3.9	3.6	–0.2
Crystal methamphetamine[g]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.1	0.1	0.2	0.0
Sedatives[a]	8.3	8.0	8.0	4.5	3.5	2.5	2.6	1.7	1.5	1.0	NA	NA	NA	NA
Barbiturates[a]	2.9	2.8	3.2	2.2	1.9	1.3	2.0	1.2	1.1	1.0	1.4	1.2	1.4	+0.2
Methaqualone[a]	7.2	6.5	6.6	3.1	2.5	1.4	1.2	0.8	0.5	0.2	NA	NA	NA	NA
Tranquilizers[a]	6.9	4.8	4.7	4.6	3.5	3.6	4.4	3.8	3.1	2.6	3.0	2.4	2.9	+0.4
Alcohol	90.5	92.5	92.2	91.6	90.0	92.0	91.5	90.9	89.6	89.6	89.0	88.3	86.9	–1.4
Cigarettes	36.2	37.6	34.3	36.1	33.2	35.0	35.3	38.0	36.6	34.2	35.5	35.6	37.3	+1.7

NOTES: Level of significance of difference between the two most recent years:
s = .05, ss = .01, sss = .001.
Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.
An asterisk indicates a percentage of less than 0.05%. NA indicates data not available.

[a] Only drug use which was not under a doctor's orders is included here.

[b] This drug was asked about in four of the five questionnaire forms in 1980–89, and in five of the six questionnaire forms in 1990–1992. Total N in 1992 (for college students) is 1240.

[c] This drug was asked about in one of the five questionnaire forms in 1986, in two of the five questionnaire forms in 1987–89, and in all six forms in 1990–1992.

[d] Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription stimulants.

[e] Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, and heroin, or any use of other opiates, stimulants, barbiturates, methaqualone (until 1990), or tranquilizers not under a doctor's orders.

[f] This drug was asked about in two of the five questionnaire forms in 1989, and in two of the six questionnaire forms in 1990–1992. Total N in 1992 (for college students) is 520.

[g] This drug was asked about in two of the six questionnaire forms. Total N in 1992 (for college students) is 500.

TABLE 25

Trends in Thirty-Day Prevalence of Various Types of Drugs

Among College Students 1–4 Years Beyond High School

(Entries are percentages)

	Percent who used in last thirty days													
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	'91–'92 change
Approx. Wtd. N =	(1040)	(1130)	(1150)	(1170)	(1110)	(1080)	(1190)	(1220)	(1310)	(1300)	(1400)	(1410)	(1490)	
Any Illicit Drug[e]	38.4	37.6	31.3	29.3	27.0	26.1	25.9	22.4	18.5	18.2	15.2	15.2	16.1	+0.9
Any Illicit Drug[e] Other than Marijuana	20.7	18.6	17.1	13.9	13.8	11.8	11.6	8.8	8.5	6.9	4.4	4.3	4.6	+0.3
Marijuana	34.0	33.2	26.8	26.2	23.0	23.6	22.3	20.3	16.8	16.3	14.0	14.1	14.6	+0.6
Inhalants[b]	1.5	0.9	0.8	0.7	0.7	1.0	1.1	0.9	1.3	0.8	1.0	0.9	1.1	+0.2
Hallucinogens	2.7	2.3	2.6	1.8	1.8	1.3	2.2	2.0	1.7	2.3	1.4	1.2	2.3	+1.1s
LSD	1.4	1.4	1.7	0.9	0.8	0.7	1.4	1.4	1.1	1.4	1.1	0.8	1.8	+1.0s
Cocaine	6.9	7.3	7.9	6.5	7.6	6.9	7.0	4.6	4.2	2.8	1.2	1.0	1.0	–0.1
Crack[c]	NA	NA	NA	NA	NA	NA	NA	0.4	0.5	0.2	0.1	0.3	0.1	–0.2
MDMA ("Ecstasy")[f]	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.3	0.6	0.2	0.4	+0.2
Heroin	0.3	0.0	0.0	0.0	*	*	0.0	0.1	0.1	0.1	0.0	0.1	0.0	–0.1
Other Opiates[a]	1.8	1.1	0.9	1.1	1.4	0.7	0.6	0.8	0.8	0.7	0.5	0.6	1.0	+0.4
Stimulants[a]	13.4	12.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Stimulants, Adjusted[a,d]	NA	NA	9.9	7.0	5.5	4.2	3.7	2.3	1.8	1.3	1.4	1.0	1.1	+0.1
Crystal methamphetamine[g]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	0.0
Sedatives[a]	3.8	3.4	2.5	1.1	1.0	0.7	0.6	0.6	0.6	0.2	NA	NA	NA	NA
Barbiturates[a]	0.9	0.8	1.0	0.5	0.7	0.4	0.6	0.5	0.5	0.2	0.2	0.3	0.7	+0.3
Methaqualone[a]	3.1	3.0	1.9	0.7	0.5	0.3	0.1	0.2	0.1	0.0	NA	NA	NA	NA
Tranquilizers[a]	2.0	1.4	1.4	1.2	1.1	1.4	1.9	1.0	1.1	0.8	0.5	0.6	0.6	0.0
Alcohol	81.8	81.9	82.8	80.3	79.1	80.3	79.7	78.4	77.0	76.2	74.5	74.7	71.4	–3.3s
Cigarettes	25.8	25.9	24.4	24.7	21.5	22.4	22.4	24.0	22.6	21.1	21.5	23.2	23.5	+0.3

NOTES: Level of significance of difference between the two most recent years:
s = .05. ss = .01, sss = .001.
Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.
An asterisk indicates a percentage of less than 0.05%. NA indicates data not available.

[a] Only drug use which was not under a doctor's orders is included here.

[b] This question was asked in four of the five questionnaire forms in 1980–89, and in five of the six questionnaire forms in 1990–1992. Total N in 1992 (for college students) is 1240.

[c] This question was asked in two of the five questionnaire forms in 1987–89, and in all six questionnaire forms in 1990–1992.

[d] Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription stimulants.

[e] Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, and heroin, or any use of other opiates, stimulants, barbiturates, methaqualone (until 1990), or tranquilizers not under a doctor's orders.

[f] This drug was asked about in two of the five questionnaire forms in 1989, and in two of the six questionnaire forms in 1990–1992. Total N in 1992 (for college students) is 520.

[g] This drug was asked about in two of the six questionnaire forms. Total N in 1992 (for college students) is 500.

TABLE 26

Trends in Thirty-Day Prevalence of Daily Use for Marijuana, Cocaine, Stimulants, Alcohol, and Cigarettes

Among College Students 1–4 Years Beyond High School

(Entries are percentages)

	Percent who used daily in last thirty days													
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	'91–'92 change
Approx. Wtd. N =	(1040)	(1130)	(1150)	(1170)	(1110)	(1080)	(1190)	(1220)	(1310)	(1300)	(1400)	(1410)	(1490)	
Marijuana	7.2	5.6	4.2	3.8	3.6	3.1	2.1	2.3	1.8	2.6	1.7	1.8	1.6	–0.2
Cocaine	0.2	0.0	0.3	0.1	0.4	0.1	0.1	0.1	0.1	*	0.0	*	0.0	0.0
Stimulants[a]	0.5	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Stimulants, Adjusted[a,b]	NA	NA	0.3	0.2	0.2	*	0.1	0.1	*	*	0.0	0.1	0.0	–0.1
Alcohol														
Daily	6.5	5.5	6.1	6.1	6.6	5.0	4.6	6.0	4.9	4.0	3.8	4.1	3.7	–0.4
5+ drinks in a row in last 2 weeks	43.9	43.6	44.0	43.1	45.4	44.6	45.0	42.8	43.2	41.7	41.0	42.8	41.4	–1.4
Cigarettes														
Daily	18.3	17.1	16.2	15.3	14.7	14.2	12.7	13.9	12.4	12.2	12.1	13.8	14.1	+0.2
Half-pack or more per day	12.7	11.9	10.5	9.6	10.2	9.4	8.3	8.2	7.3	6.7	8.2	8.0	8.9	+0.9

NOTES: For all drugs not included here, daily use is below 0.5% in all years. Level of significance of difference between the two most recent years:
s =.05, ss =.01, sss =.001.
Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.
An asterisk indicates a percentage of less than 0.05%. NA indicates data not available.

[a] Only drug use which was not under a doctor's orders is included here.

[b] Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription stimulants.

TABLE 27
Trends in Lifetime, Annual, and Thirty-Day Prevalence of An Illicit Drug Use Index Among College Students 1-4 Years Beyond High School, by Sex
(Entries are percentages)

	1980[a]	*1981*[a]	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	'91-'92 change
							Percent reporting use in lifetime[b]							
Any Illicit Drug	*69.4*	*66.8*	64.6	66.9	62.7	65.2	61.8	60.0	58.4	55.6	54.0	50.4	48.8	-1.7
Males	*71.0*	*67.5*	68.1	71.3	66.4	69.8	64.7	63.5	56.0	56.5	52.5	51.3	50.8	-0.5
Females	*67.5*	*66.3*	61.5	63.0	59.2	61.6	59.4	57.4	60.2	54.9	55.1	49.7	47.1	-2.7
Any Illicit Drug Other than Marijuana	*42.2*	*41.3*	39.6	41.7	38.6	40.0	37.5	35.7	33.4	30.5	28.4	25.8	26.1	+0.3
Males	*42.8*	*39.8*	45.1	44.6	40.9	42.1	38.2	37.2	31.8	30.6	26.2	27.6	26.3	-1.4
Females	*41.6*	*42.6*	34.7	39.2	36.4	38.3	37.0	34.6	34.6	30.4	30.1	24.3	26.1	+1.8
							Percent reporting use in last twelve months							
Any Illicit Drug	*56.2*	*55.0*	49.5	49.8	45.1	46.3	45.0	40.1	37.4	36.7	33.3	29.2	30.6	+1.3
Males	*58.9*	*56.2*	54.6	53.4	48.4	50.9	49.8	43.3	37.0	38.2	34.2	30.2	32.8	+2.5
Females	*53.3*	*54.0*	44.9	46.7	41.9	42.7	41.1	37.7	37.6	35.4	32.5	28.4	28.7	+0.3
Any Illicit Drug Other than Marijuana	*32.3*	*31.7*	29.9	29.9	27.2	26.7	25.0	21.3	19.2	16.4	15.2	13.2	13.1	-0.1
Males	*33.7*	*32.8*	33.4	33.5	29.2	29.7	28.6	23.5	19.4	18.7	15.7	14.4	13.8	-0.6
Females	*31.1*	*30.8*	26.9	26.8	25.2	24.4	22.1	19.6	19.0	14.6	14.8	12.1	12.6	+0.4
							Percent reporting use in last thirty days							
Any Illicit Drug	*38.4*	*37.6*	31.3	29.3	27.0	26.1	25.9	22.4	18.5	18.2	15.2	15.2	16.1	+0.9
Males	*42.9*	*40.6*	37.7	33.8	30.4	29.9	31.0	24.0	18.8	20.0	18.2	16.0	18.0	+2.0
Females	*34.0*	*34.8*	25.6	25.5	23.7	23.2	21.7	21.1	18.3	16.7	12.7	14.6	14.5	-0.1
Any Illicit Drug Other than Marijuana	*20.7*	*18.6*	17.1	13.9	13.8	11.8	11.6	8.8	8.5	6.9	4.4	4.3	4.6	+0.3
Males	*22.8*	*18.6*	20.2	16.0	16.1	12.6	14.4	9.0	8.2	8.0	4.9	4.8	5.1	+0.3
Females	*18.7*	*18.5*	14.2	12.1	11.5	11.2	9.3	8.5	8.8	6.0	4.0	3.9	4.2	+0.3
							Approximate Weighted N							
All Respondents	1040	1130	1150	1170	1110	1080	1190	1220	1310	1300	1400	1410	1490	
Males	520	530	550	550	540	490	540	520	560	580	620	640	680	
Females	520	600	610	620	570	600	650	700	750	720	780	770	810	

NOTES: Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001.

[a]Revised questions about stimulant use were introduced in 1982 to exclude more completely the inappropriate reporting of nonprescription stimulants. The data in italics are therefore not strictly comparable to the other data.

[b]Data are uncorrected for cross-time inconsistencies in the answers.

- ***Use of any illicit drugs other than marijuana*** declined more steadily between 1980 and 1986, with annual prevalence among college students dropping gradually from 32% to 25%. Such use showed an accelerating decline (to 13%) between 1987 and 1991, prior to leveling in 1992 (Table 24). Again, this parallels the trend for the noncollege group (Figure 36).

- In general, for ***most individual classes of illicit drugs***, the trends since 1980 among those enrolled in college tend to parallel those for the noncollege group, as well as the trends observed among seniors. That is, for most drugs there has been a decline in use since then. In 1992, however, a number of drugs leveled, possibly increased in use, among college students: these include ***marijuana, hallucinogens, LSD, MDMA***, and ***opiates other than heroin***. Again, noncollege respondents' use paralleled that of their college-aged peers.

- The 30-day prevalence of ***marijuana*** use among college students decreased steadily through 1990, dropping by more than half since 1980 from 34% to 14%. Their noncollege peers showed a comparable decline over the same time interval, from 35% to 14% (see Figure 25). Both groups showed increases in 1992, although these increases did not reach statistical significance.

- ***Daily marijuana*** use among college students fell significantly between 1980 and 1986, from 7.2% to 2.1%, as it did for those not in college and as it did among high school seniors. (The latter two groups showed sharper declines because they started higher than the college students in 1980.) Since 1986 the decline has decelerated and perhaps ceased. The rate stands at 1.6% in 1992. In sum, the proportion of American college students who actively smoke marijuana on a daily basis has dropped by more than three-fourths since 1980 (see Figure 37b).

- An appreciable and ongoing decline has occurred for ***stimulant*** use. Annual prevalence dropped by more than eight-tenths, from 21% in 1982 to 4% in 1991. Proportionately this was a larger drop than among seniors, but fairly parallel to the overall change among their age-peers not in college (Figure 44). However, in 1992, use among college students leveled, while it increased among their noncollege age-peers. Over the years, those not in college have consistently reported a higher rate of stimulant use.

- ***Methaqualone*** showed a dramatic drop among college students, falling from an annual prevalence of 7.2% in 1980 to 0.2% in 1989. Practically no college-noncollege difference remained for methaqualone as both groups approached a 0% prevalence level.

Because of the very low levels reported for this drug it was dropped from the questionnaires in 1990 to make room for other questions.

- During the early eighties, one of the largest declines observed among college students was for ***LSD.*** Annual prevalence fell from 6.3% in 1982 to 2.2% in 1985. This figure rose to 3.9% in 1986, remained fairly level through 1989, and then increased significantly to 5.7% in 1992. Those young adults not in college have shown fairly parallel trends, as have high school seniors (Figure 40).

- ***Barbiturate*** use was already quite low among college students in 1980 (at 2.9% annual prevalence) but it fell by more than half to 1.3% by 1985. This proportional decline was, once again, sharper than among high school students, and less sharp than among the young adults not in college. Annual prevalence has remained unchanged since 1985 among college students (see Figure 45).

- Figure 46 shows that the annual prevalence of ***tranquilizer*** use among college students dropped by half in the period 1980-1984, from 6.9% to 3.5%, remained fairly level until 1988, when it declined again (to 3.1%).[11] It is down to 2.9% in 1992. Use in the noncollege segment dropped more sharply in the 1980-1984 period, narrowing the difference between the two groups. Then it levelled between 1985 and 1988, and has declined further to 3.1% in 1992. Tranquilizer use also dropped steadily among seniors, from 10.8% in 1977 to 2.8% in 1992.

- The use of ***opiates other than heroin*** by college students has held fairly steady (2.7% in 1992) after dropping slightly between 1980 and 1982 (5.1% to 3.8%, annual prevalence) and then to 3.1% in 1987. This trend closely parallels use among noncollege young adults and seniors (Figure 43).

- Like the high school seniors, college students showed a relatively stable pattern of ***cocaine*** use between 1980 and 1986, followed by a large decline from an annual prevalence of 17% in 1986 to 3% in 1992–a drop of over eight-tenths. Their noncollege counterparts also showed a large decline from 19% in 1986 to 5.9% in 1992. Use among college students has dropped more sharply than among high school seniors, with the result that since 1990 there has been no difference between high school seniors and college students in annual prevalence rates for cocaine (Figure 42). Unlike most of the drugs discussed here, cocaine does show a continuing decline in 1992, though clearly decelerating.

[11]The use of barbiturates and tranquilizers very likely also was dropping during the latter half of the 1970s, judging by the trends among high school seniors.

- It is in regard to ***alcohol*** use that college students appear to be showing some shifts in use which are different from those observed either among their age peers not in college or among high school seniors. The noncollege segment and the seniors have shown fairly substantial declines since 1981 in the prevalence of having ***five or more drinks in a row*** during the two weeks prior to the survey. College students, however, have shown less decline (Figure 47c). Between 1981 and 1992 this measure of heavy drinking dropped by 13.5% for high school seniors, by 10.7% for the noncollege 19 to 22 year olds, but by only 2.2% among college students. As a result, the difference between college students and each of the other groups has increased and the difference between the other two groups on this behavior has widened.

  It is interesting to conjecture about why college students have not shown much decline in heavy drinking while their noncollege peers and high school seniors have. One possibility is that campuses have provided some insulation to the effects of changes in the drinking age laws. Also, in college under-age individuals are mixed in with peers who are of legal age to purchase alcohol in a way that is no longer true in high schools and less true, perhaps, for those 19 to 22 who are not in college.

  On the other hand, college students generally have had slightly lower rates of ***daily drinking*** than their age group taken as a whole, although in 1991 and 1992 such differences virtually disappeared (Figure 47b). Daily drinking among the young adults not enrolled in college declined from 8.7% in 1981 to 6.5% in 1984, remained essentially unchanged through 1988, and since then has resumed a decline (to 4.0% in 1992). The daily drinking estimates for college students–which appear a little less stable, perhaps due to smaller sample sizes in the eighties–showed little or no decline between 1980 and 1984, but some considerable decline since then. Daily prevalence was 6.5% in 1980, 6.6% in 1984, 4.9% in 1988, and 3.7% in 1992.

- ***Cigarette smoking*** among American college students declined modestly in the first half of the eighties. Thirty-day prevalence fell from 26% to 22% between 1980 and 1985, but has been relatively stable since then (it was 24% in 1992). The ***daily smoking*** rate fell from 18.3% in 1980 to 12.7% in 1986, and remained fairly level through 1990. Since 1990 it has risen from 12.1% to 14.1% in 1992.

  While the rates of smoking are dramatically lower among college students than among those not in college, their trends were quite parallel up to 1986, when smoking rates stabilized among college students and continued to decline among young adults not in

college. In 1992, a larger increase among 19 to 22 year olds not going to college full-time may be widening the gap again.

- In sum, the trends in substance use among American college students generally parallel closely those occurring among their age group as a whole. One important exception occurred for occasions of ***heavy drinking***, which fell off among those not enrolled full-time in college (as well as among high school seniors) but remained fairly constant among college students.

  The overall drug use trends among college students are also parallel, for the most part, to the trends among high school seniors, although declines in many drugs over the decade (1980-1990) were proportionately larger among college students, and for that matter among all young adults of college age, than among seniors. Despite parallel trends up to 1991, only seniors continue to show a decline in ***marijuana*** use in 1992, and both 19 to 22 year old subgroups show some increase.

SEX DIFFERENCES IN TRENDS AMONG COLLEGE STUDENTS

One trend which is not obvious from the figures included here is the fact that the proportion of female college students has been rising slowly. Females constituted 50% of our 1980 sample of college students and 54% of our 1992 sample. Given that substantial sex differences exist in the use of some drugs, we have been concerned that apparent long-term trends in the levels of drug use among college students might actually be attributable to changes in the sex composition of that population. For that reason, in particular, we present separate trend lines for the male and female components of the college student population. Differences in the trends observed for these two groups are illustrated in the lower panels of Figures 35 through 48, and are discussed below.

In general, trends in the use of the various drugs, and in the overall drug use indexes, have been highly parallel for male and female college students, as an examination of the relevant figures will show. The most noteworthy exceptions are mentioned below.

- After 1986, ***cocaine*** has dropped more steeply for males than for females in general, and among male college students in particular; narrowing the gap between the sexes (see Figure 42).

- Certain other drug use measures have shown a convergence of usage levels between the sexes, mainly because they are converging toward zero. ***Daily marijuana use*** is one such example, with the decline among males between 1980 and 1986 narrowing the gap between the sexes. Since 1986 there has been no further narrowing, however. (In 1992 the rates were 2.6% vs. 0.8% for male and female college students, respectively.) See Figure 37b.

- ***Methaqualone*** also showed a convergence in use through 1989, with males declining more (no figure given).

- ***Stimulant*** use (Figure 44) also showed some convergence in the early eighties due to a greater decline among males. In fact, male and female college student use has been essentially equal for the past four years.

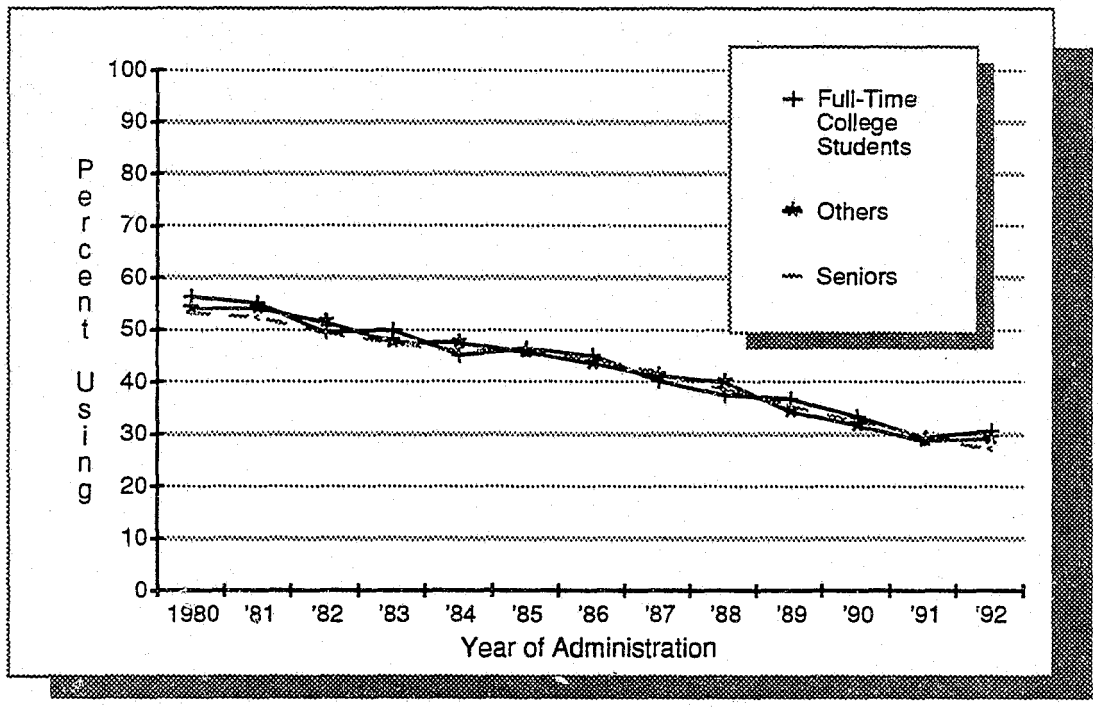
- Annual prevalence of ***alcohol*** use has been virtually identical for the two sexes throughout the period.

  Among college males, occasions of heavy drinking clearly became more prevalent (by about 5%) in the 1984-1986 period than they had been at the beginning of the eighties; and, if anything, they became less prevalent among noncollege males (by about 4%). This led to college males overtaking and surpassing noncollege males in occasions of heavy drinking (58% vs. 52%, respectively, in 1986). At the same time the prevalence for college females held steady while for noncollege females it dropped about 3%. The result of these trends was that college students looked somewhat more different from the noncollege segment on this measure in the mid-eighties and beginning of the nineties than they did in the early eighties.

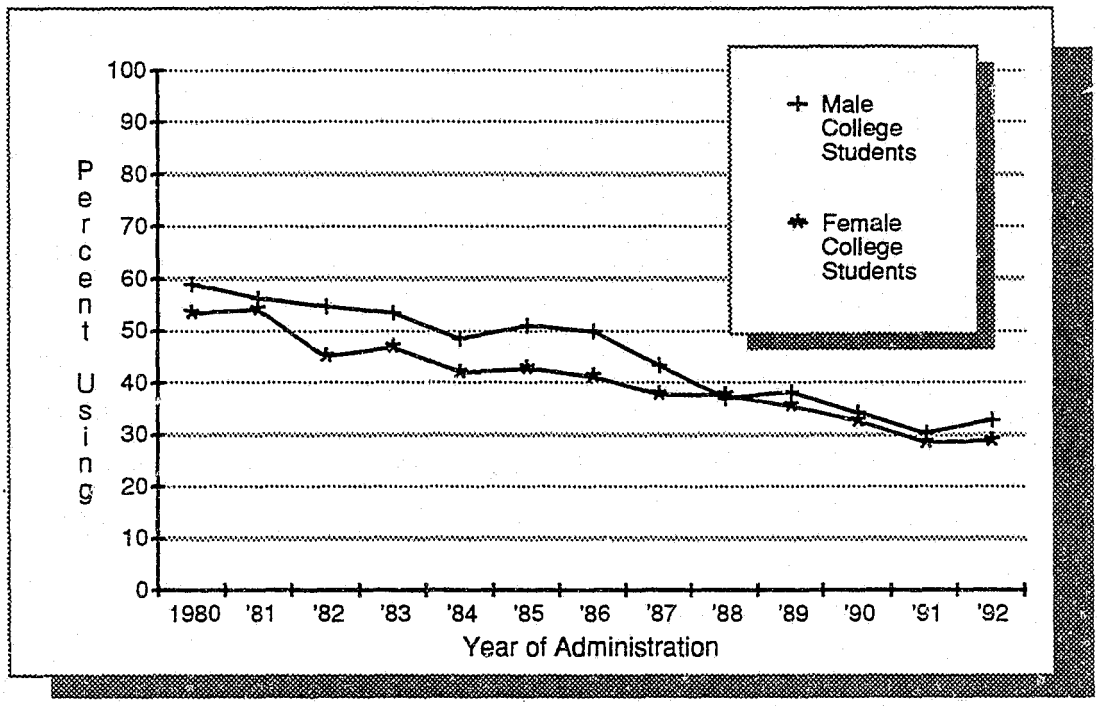
- Between 1980 and 1988 ***cigarette smoking*** has consistently been higher among females than males in college, despite decreases for both sexes during the first half of the decade (Figures 48a-c). However, since about 1984 the gap has been narrower than it was in the early eighties, because use by female college students declined some, while use by male college students did not. There was a fairly stable period from about 1984-1990, but college students of both sexes have shown slight increases in use between 1990 and 1992.

Figure 35

Any Illicit Drug: Trends in Annual Prevalence Among College Students Vs. Others[a]
1-4 Years Beyond High School



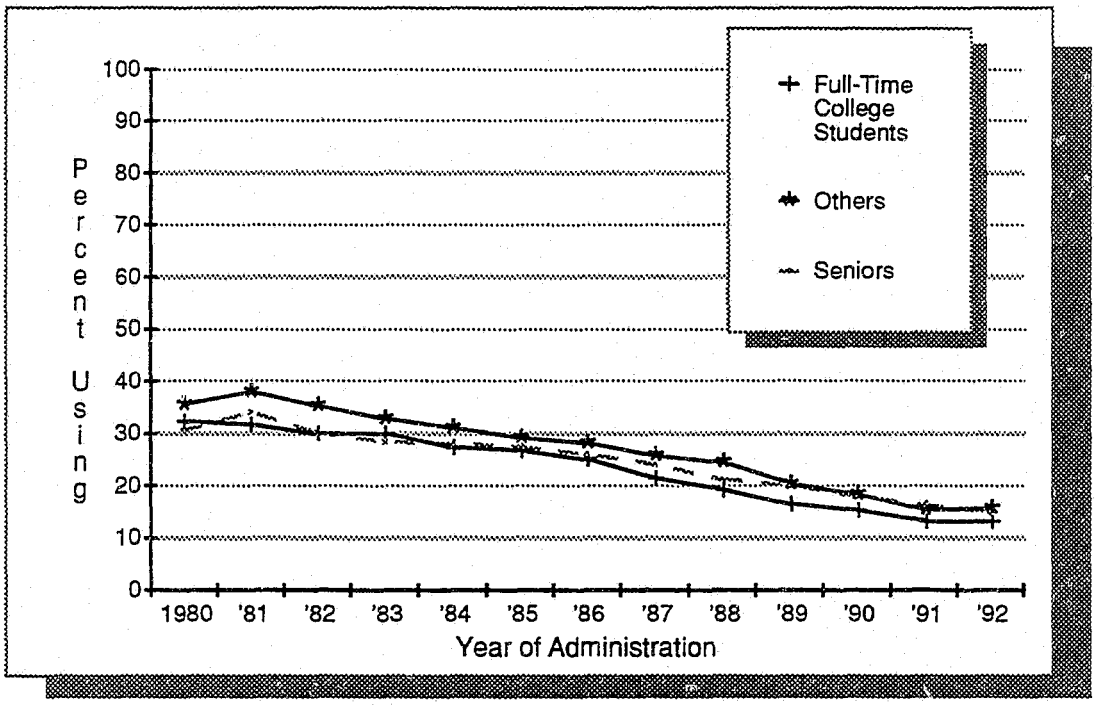
Any Illicit Drug: Trends in Annual Prevalence Among Male and Female College Students



[a]"Others" refers to high school graduates 1-4 years beyond high school not currently enrolled full-time in college.

Figure 36

Any Illicit Drug Other than Marijuana: Trends in Annual Prevalence Among College Students Vs. Others
1-4 Years Beyond High School



Any Illicit Drug Other than Marijuana: Trends in Annual Prevalence Among Male and Female College Students

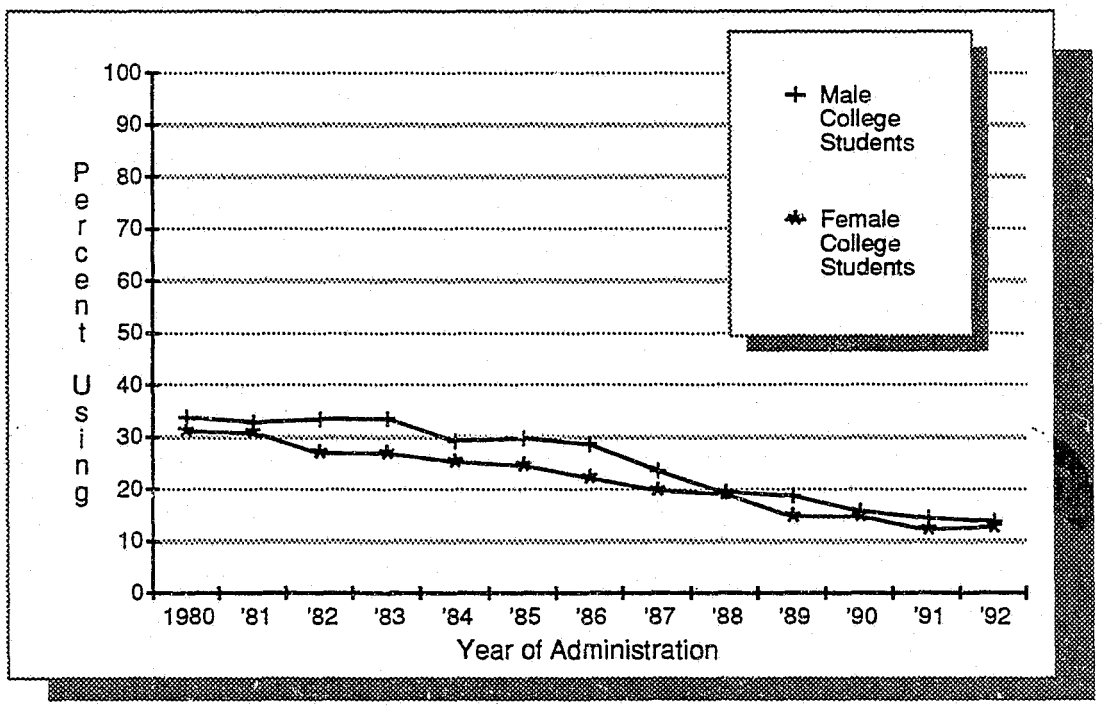
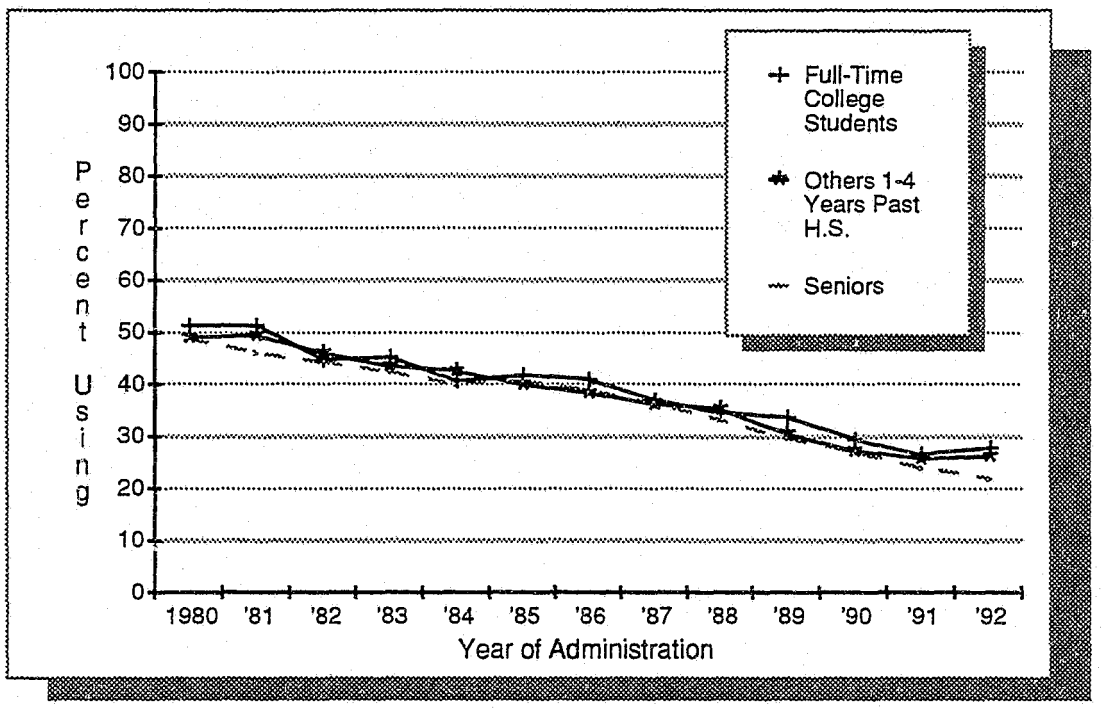


Figure 37a

Marijuana: Trends in Annual Prevalence
Among College Students Vs. Others
1-4 Years Beyond High School



Marijuana: Trends in Annual Prevalence
Among Male and Female College Students

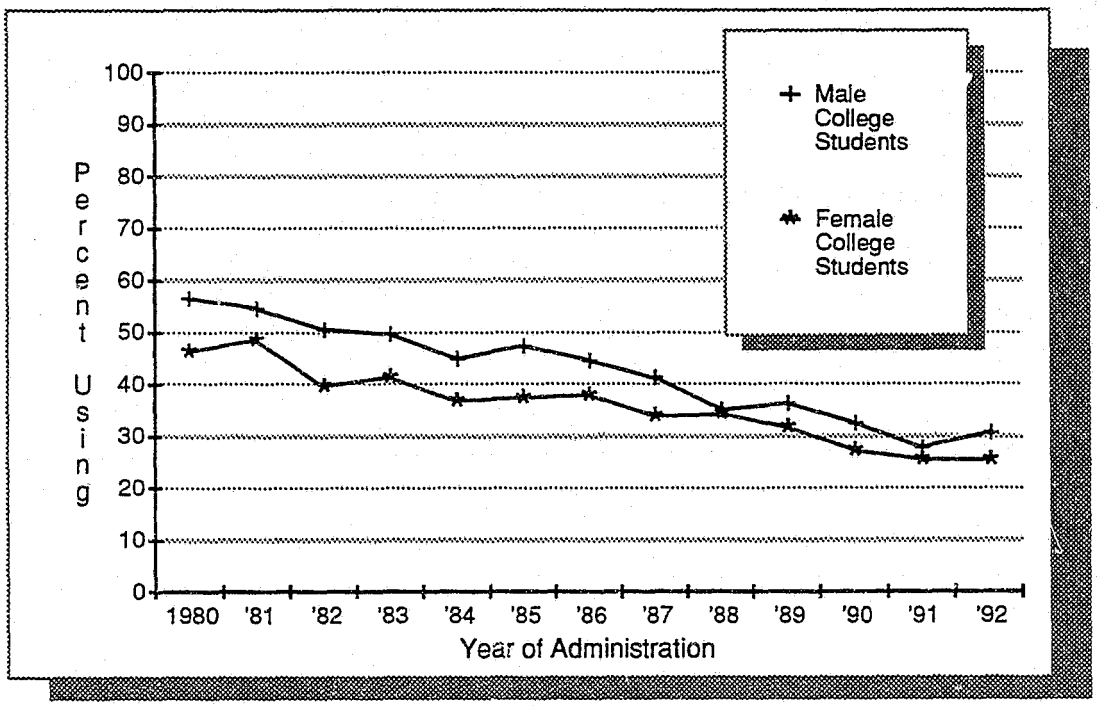
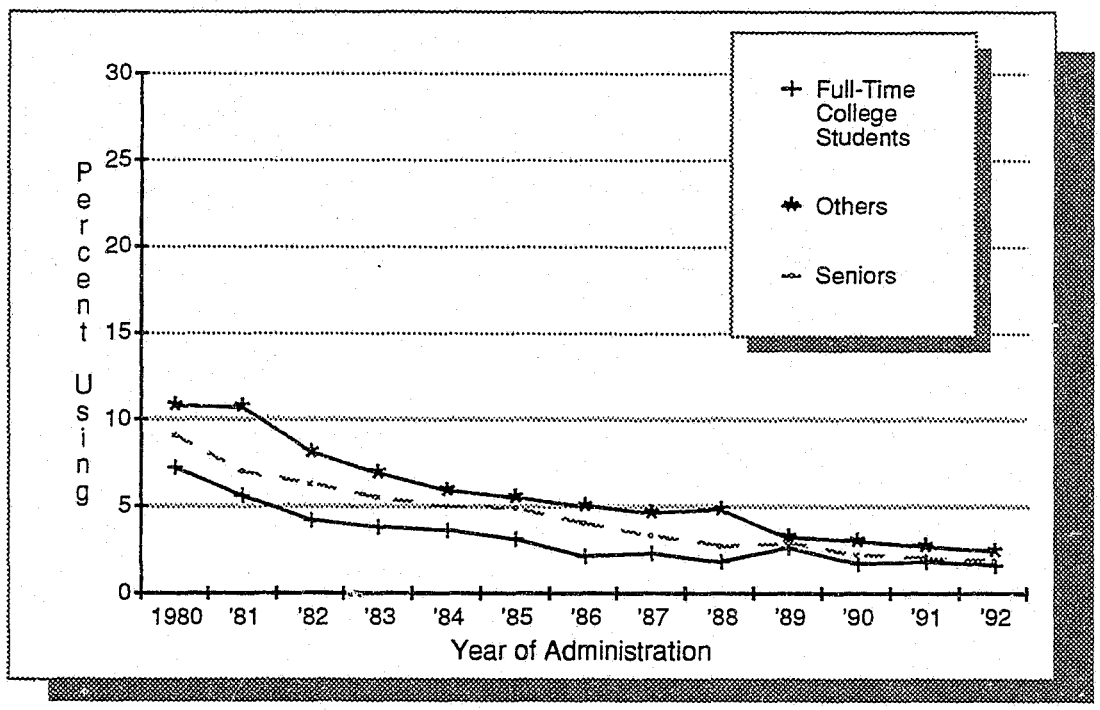


Figure 37b

Marijuana: Trends in Thirty-Day Prevalence of Daily Use Among College Students Vs. Others
1-4 Years Beyond High School



Marijuana: Trends in Thirty-Day Prevalence of Daily Use Among Male and Female College Students

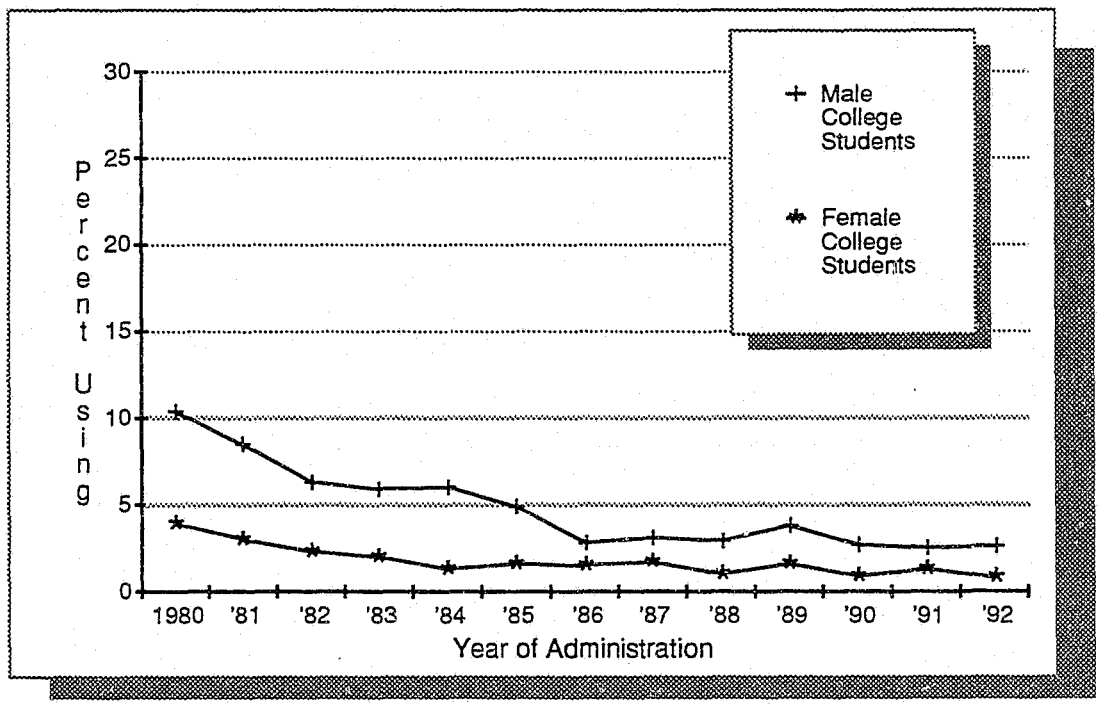
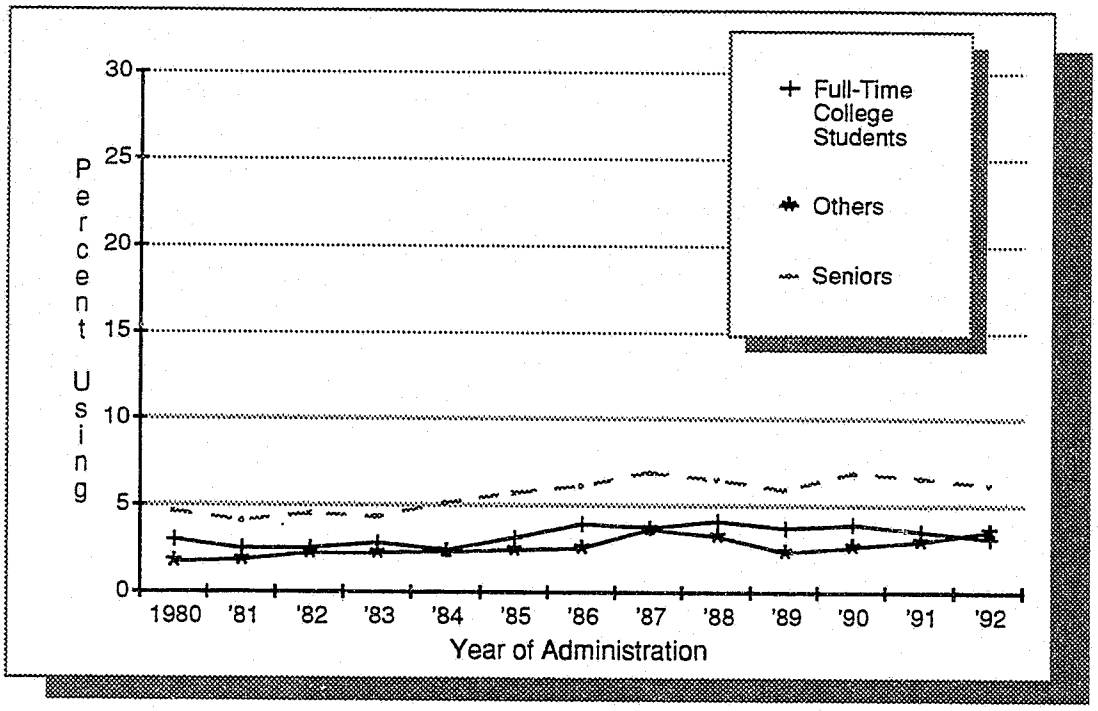
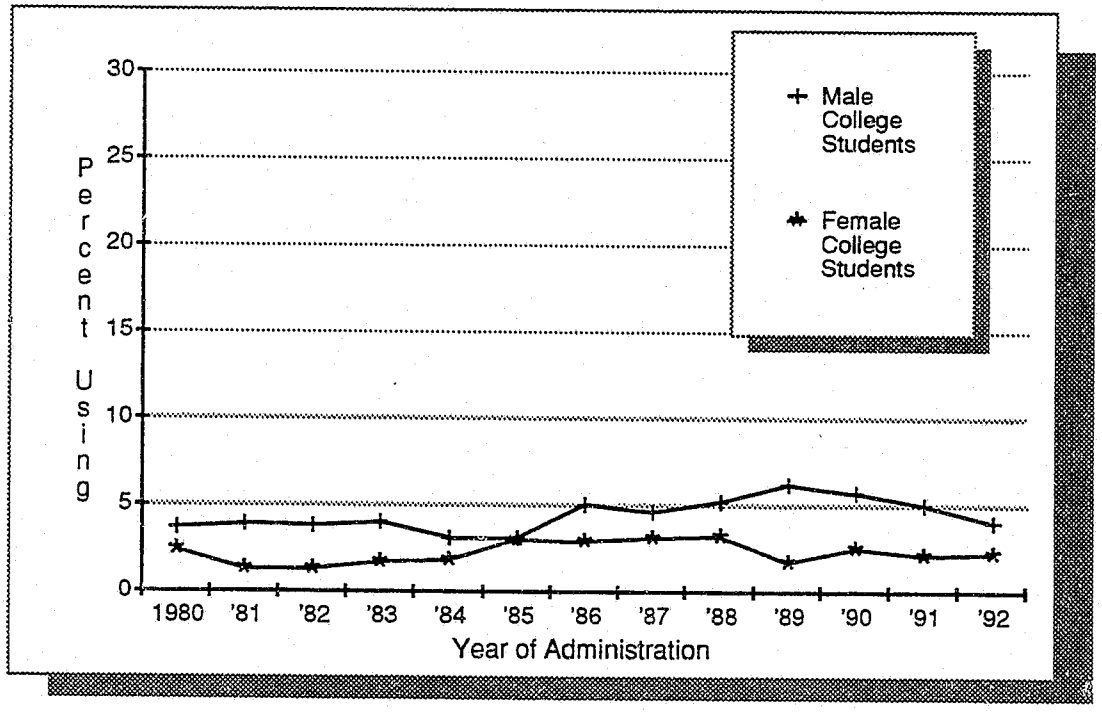


Figure 38

Inhalants*: Trends in Annual Prevalence Among College Students Vs. Others
1-4 Years Beyond High School



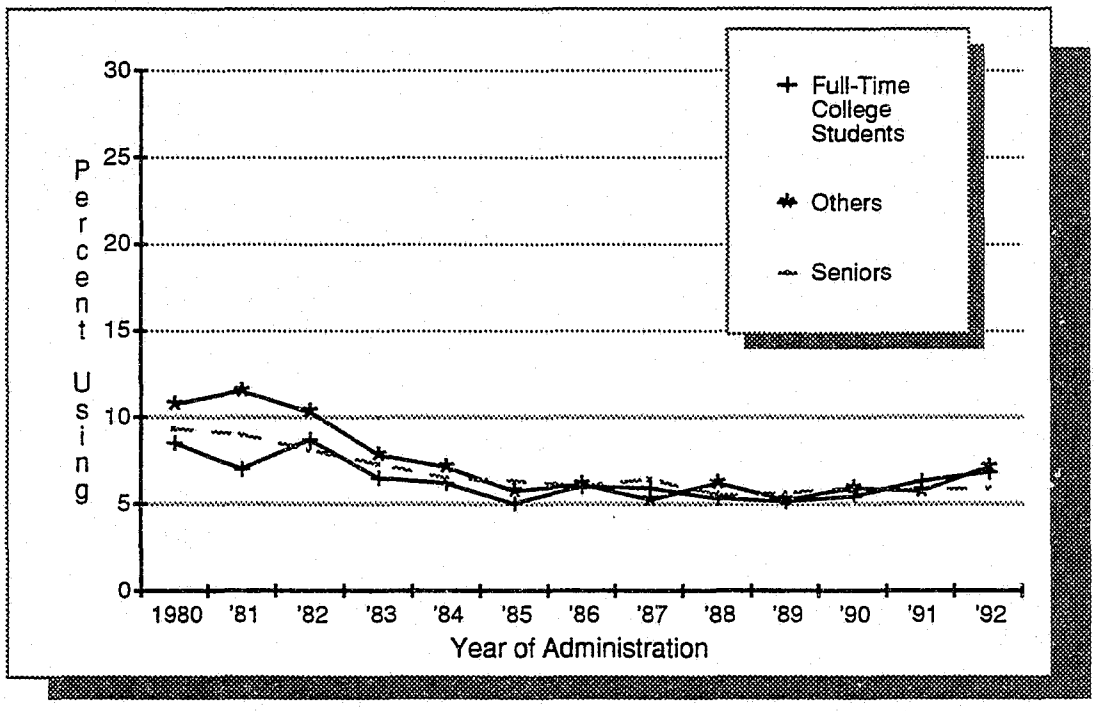
Inhalants*: Trends in Annual Prevalence Among Male and Female College Students



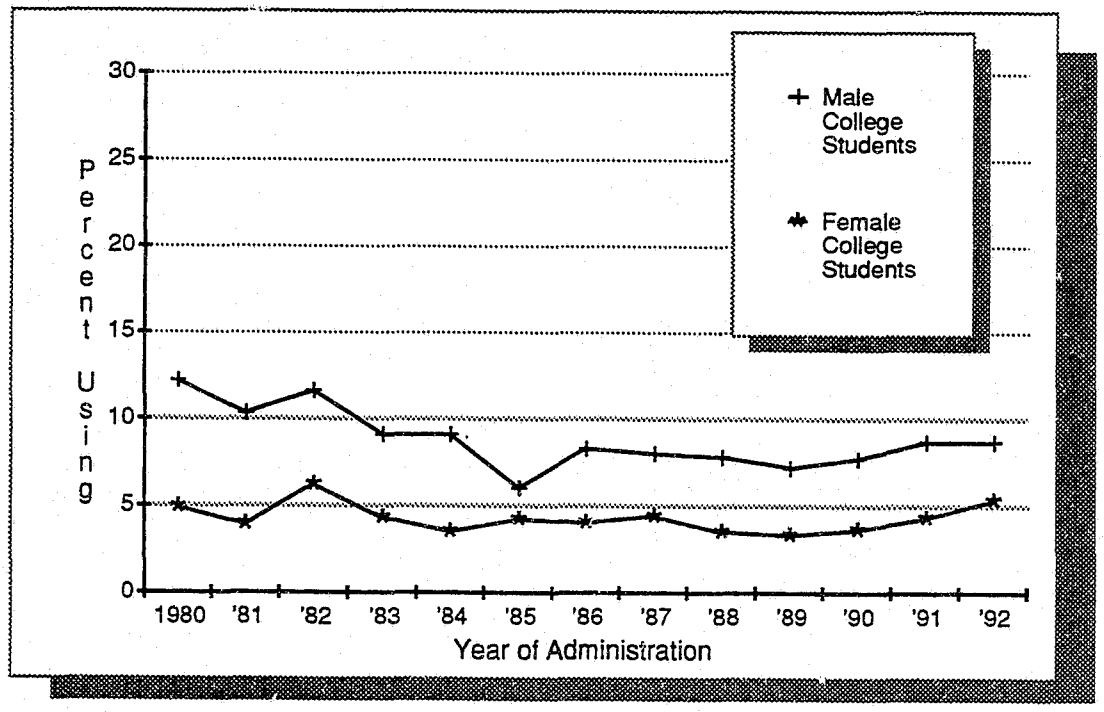
*Unadjusted for the possible underreporting of amyl and butyl nitrites.

Figure 39

Hallucinogens*: Trends in Annual Prevalence Among College Students Vs. Others
1-4 Years Beyond High School



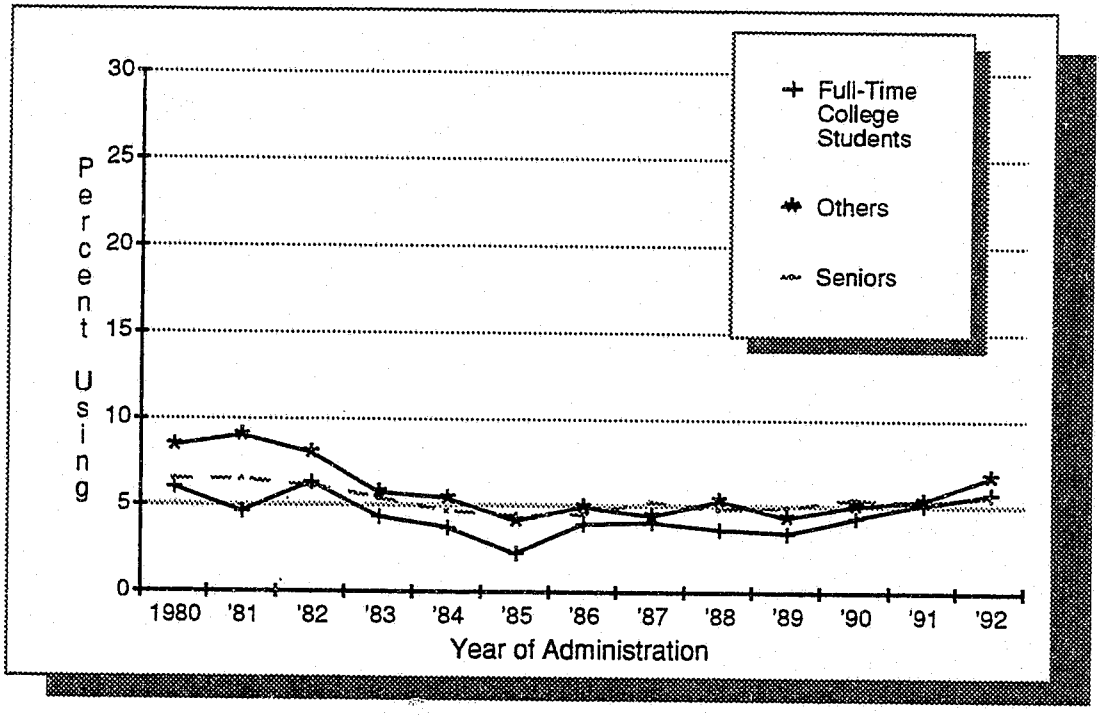
Hallucinogens*: Trends in Annual Prevalence Among Male and Female College Students



*Unadjusted for the possible underreporting of PCP.

Figure 40

LSD: Trends in Annual Prevalence Among College Students Vs. Others
1-4 Years Beyond High School



LSD: Trends in Annual Prevalence Among Male and Female College Students

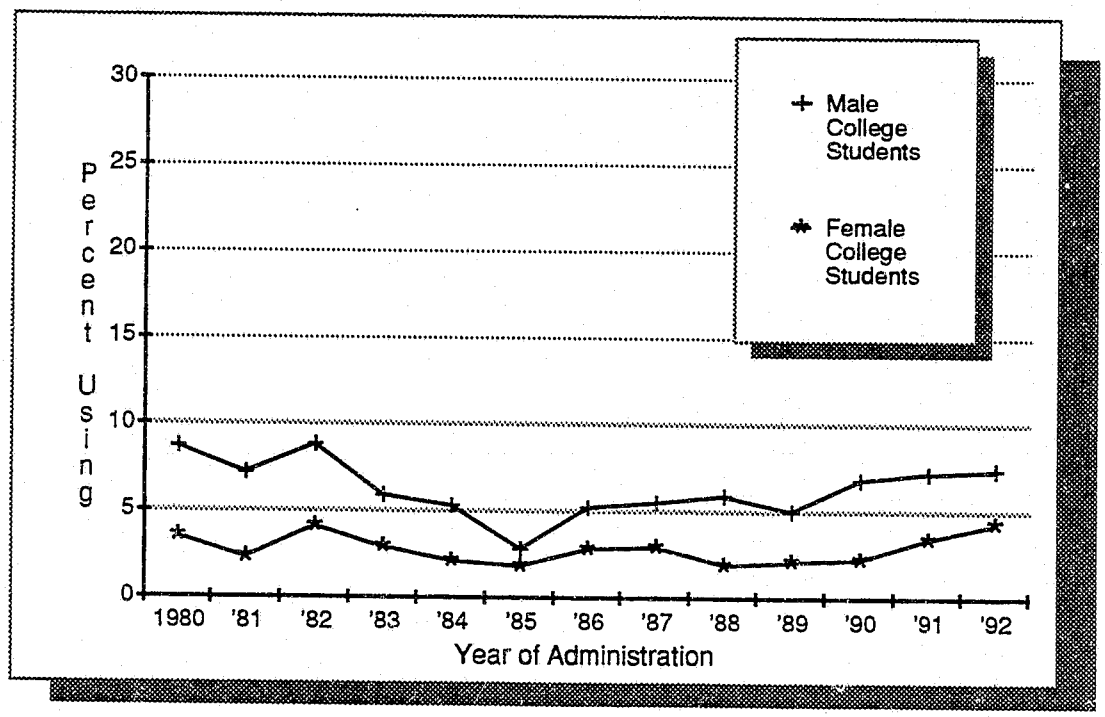
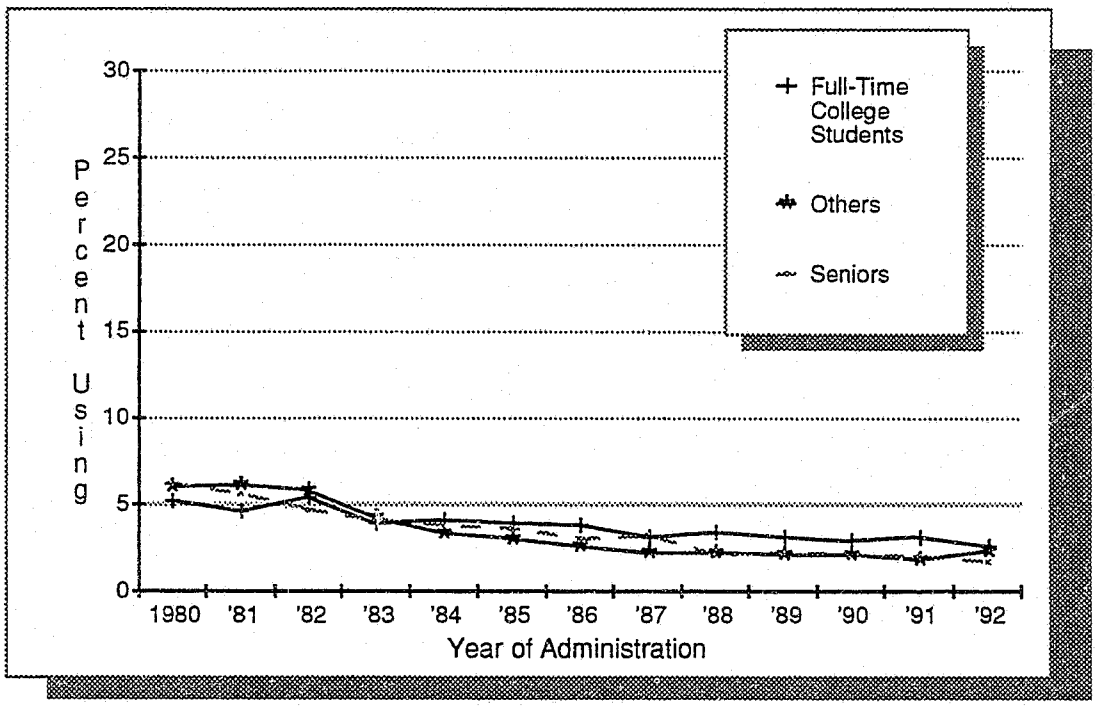


Figure 41

Hallucinogens Other than LSD: Trends in Annual Prevalence Among College Students Vs. Others
1-4 Years Beyond High School



Hallucinogens Other than LSD: Trends in Annual Prevalence Among Male and Female College Students

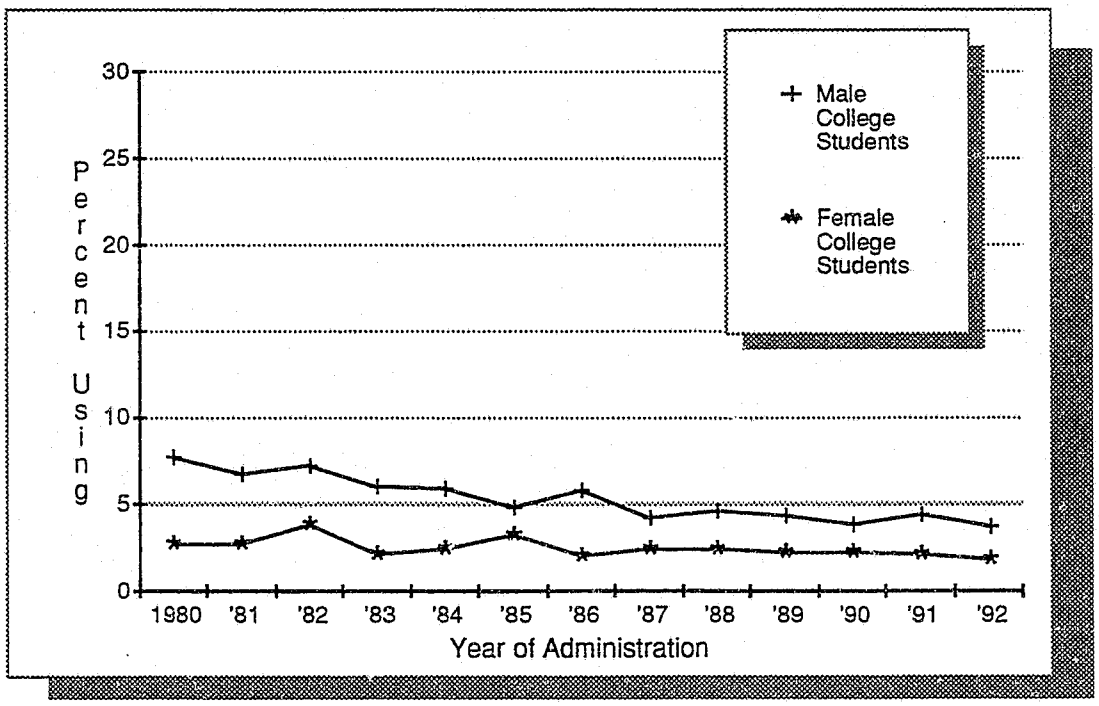
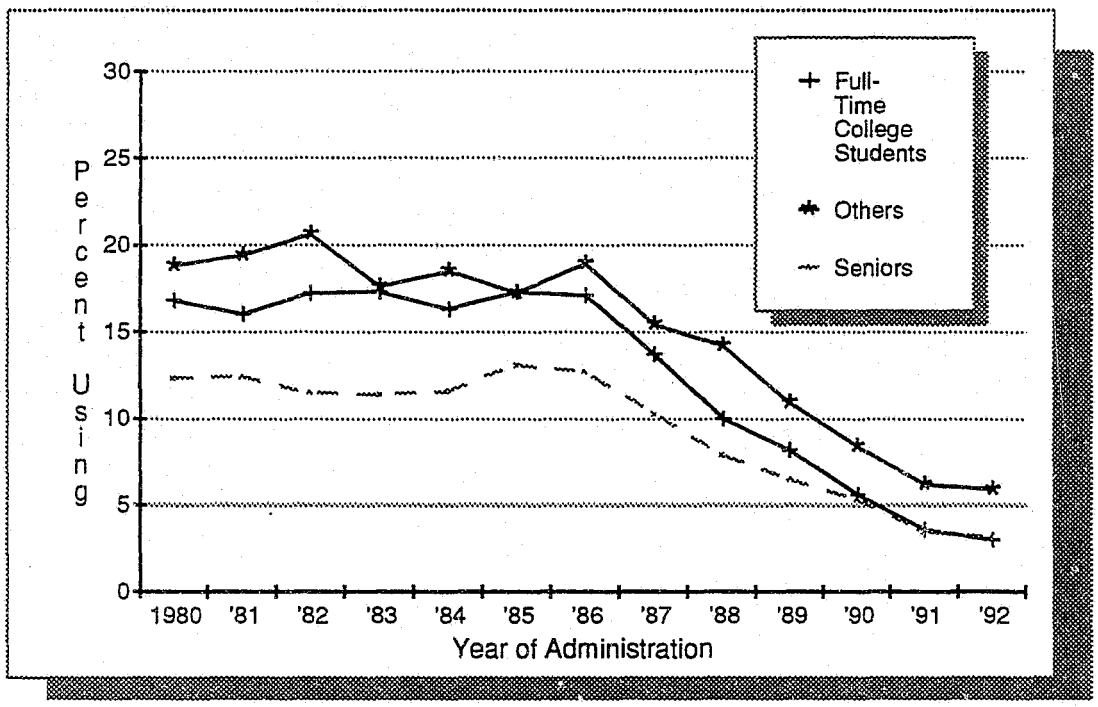


Figure 42

Cocaine: Trends in Annual Prevalence
Among College Students Vs. Others
1-4 Years Beyond High School



Cocaine: Trends in Annual Prevalence
Among Male and Female College Students

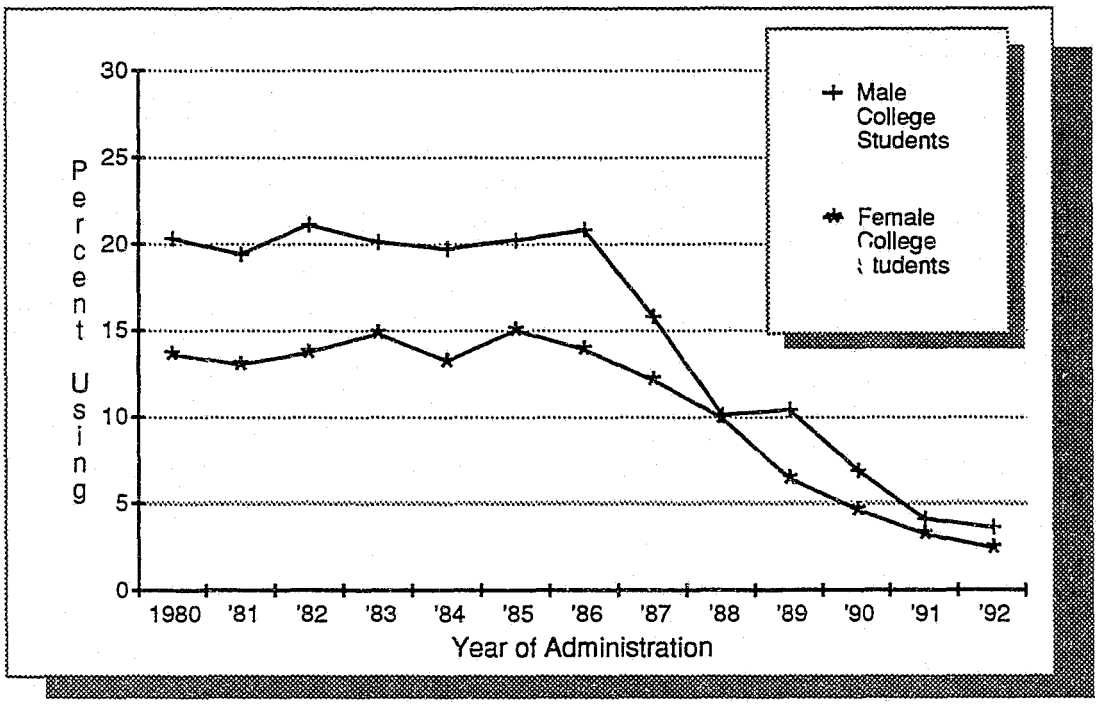
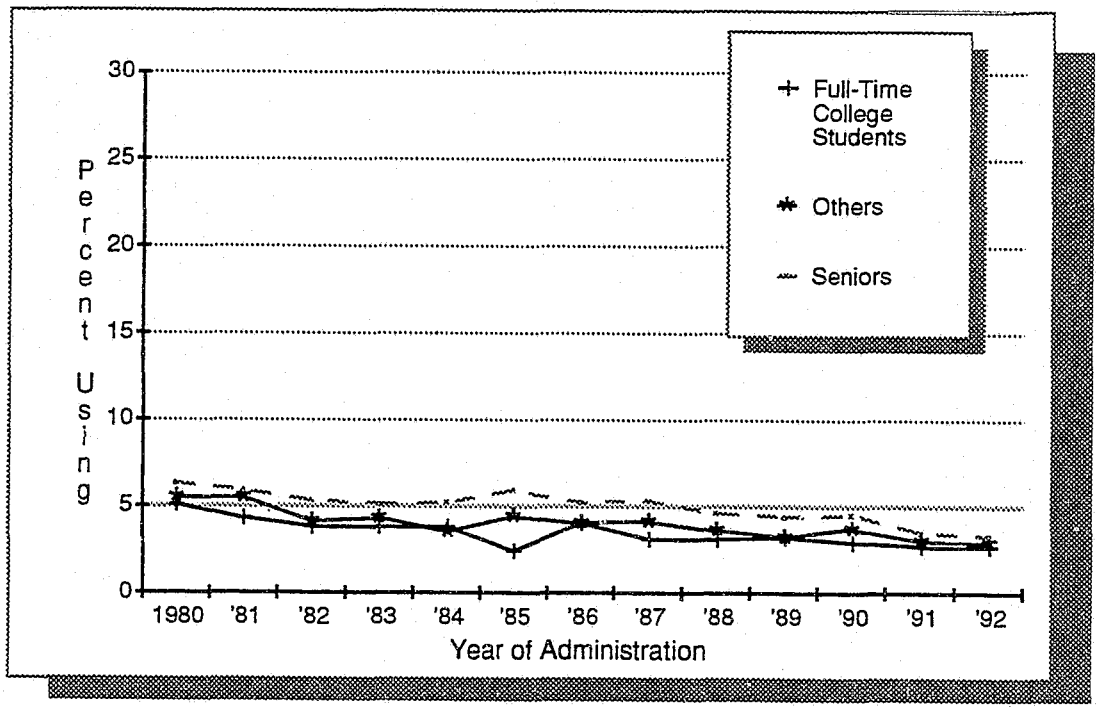


Figure 43

Other Opiates: Trends in Annual Prevalence Among College Students Vs. Others
1-4 Years Beyond High School



Other Opiates: Trends in Annual Prevalence Among Male and Female College Students

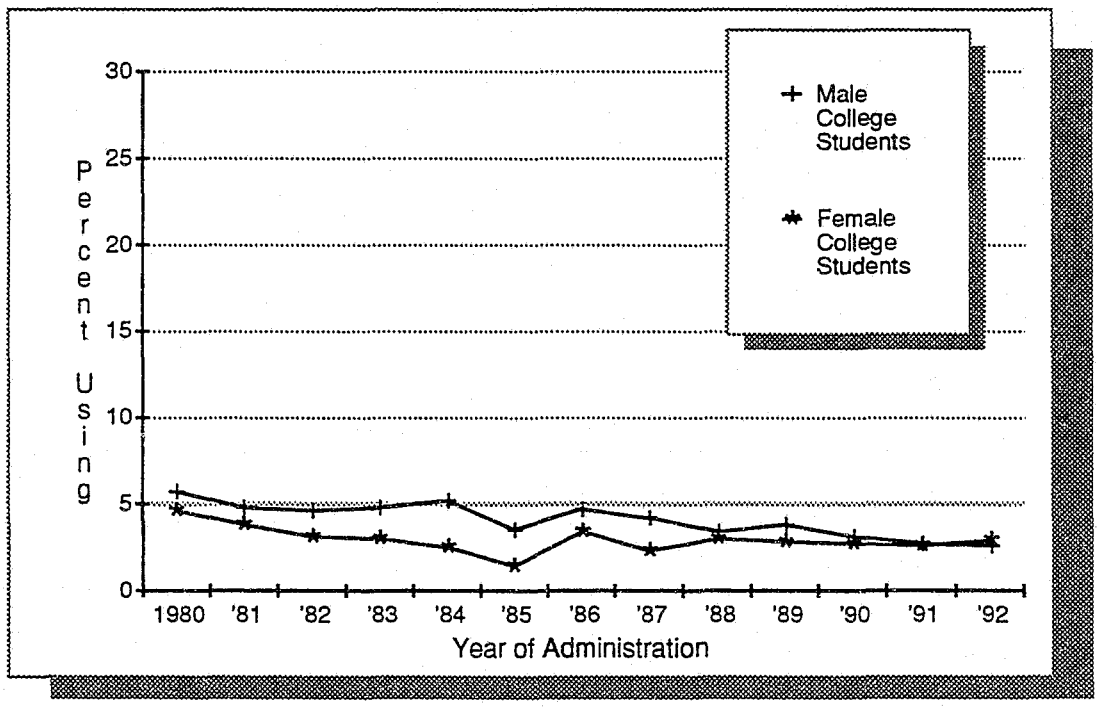
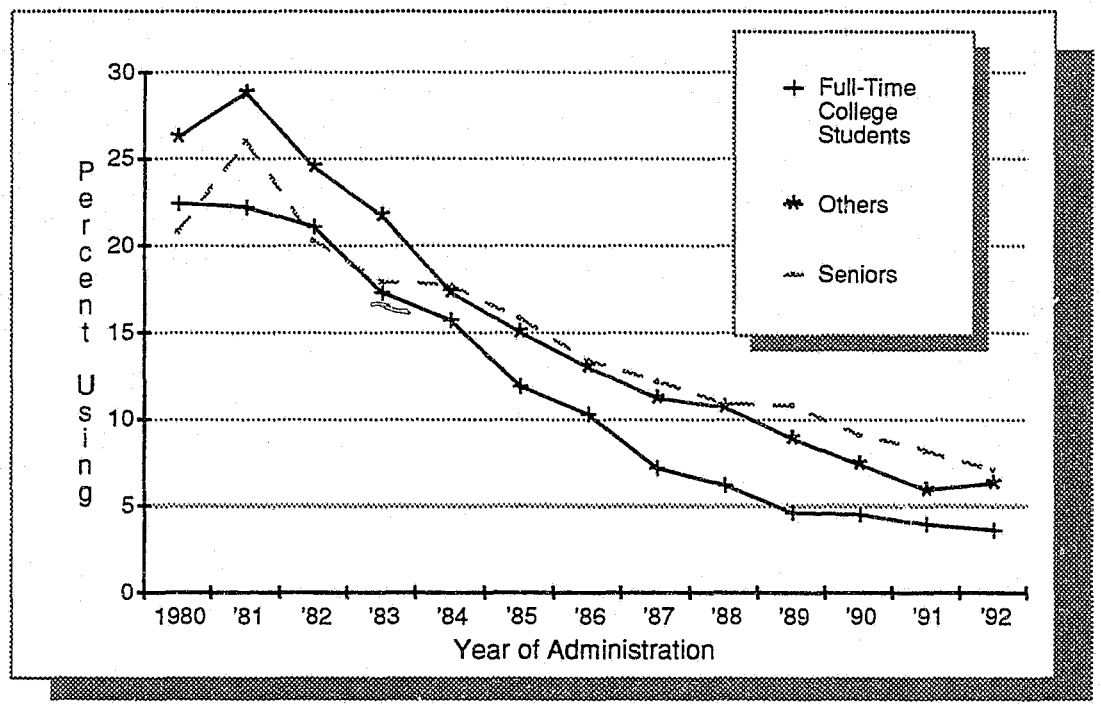


Figure 44

Stimulants: Trends in Annual Prevalence
Among College Students Vs. Others
1-4 Years Beyond High School



Stimulants: Trends in Annual Prevalence
Among Male and Female College Students

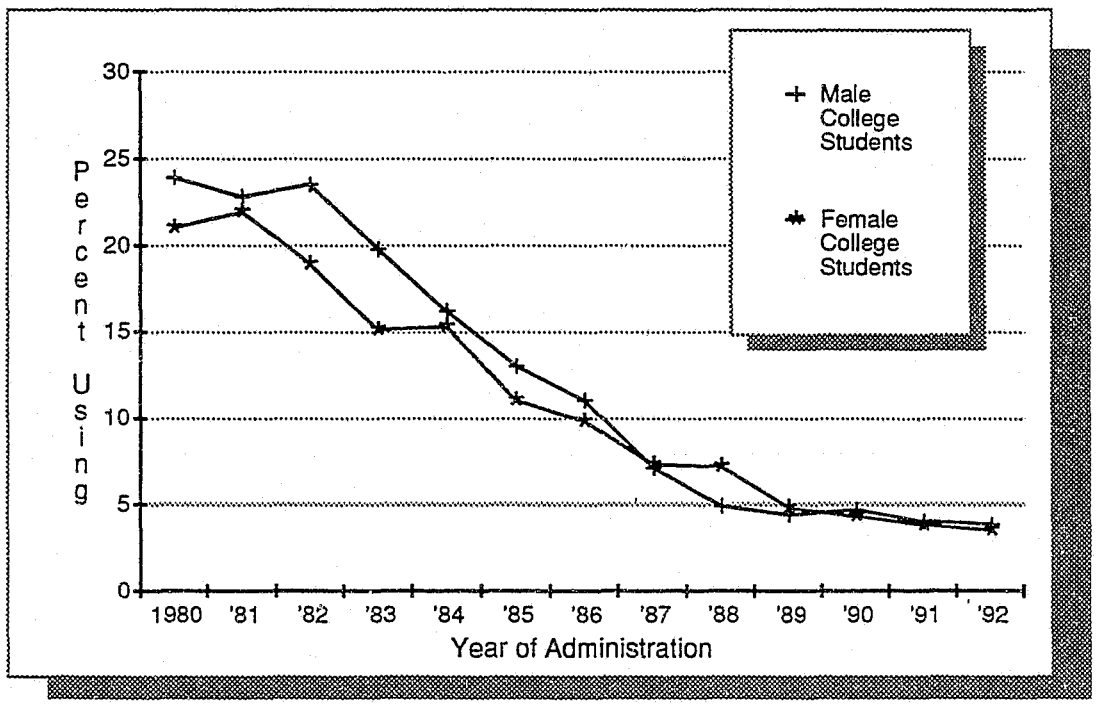
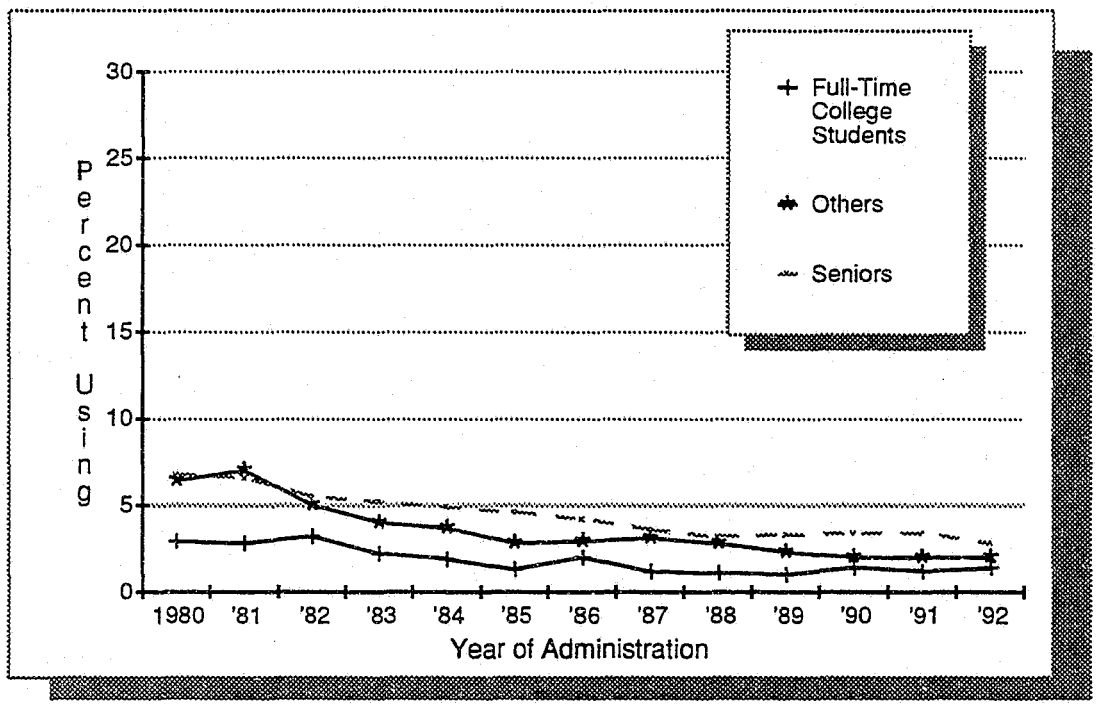


Figure 45

Barbiturates: Trends in Annual Prevalence Among College Students Vs. Others
1-4 Years Beyond High School



Barbiturates: Trends in Annual Prevalence Among Male and Female College Students

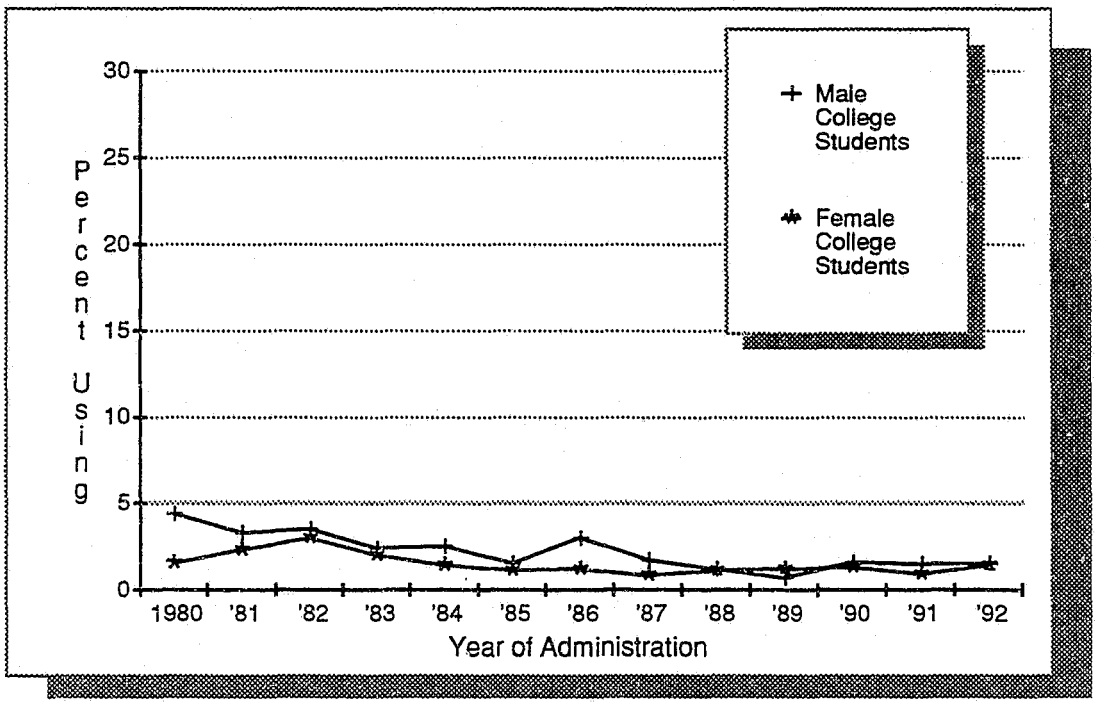
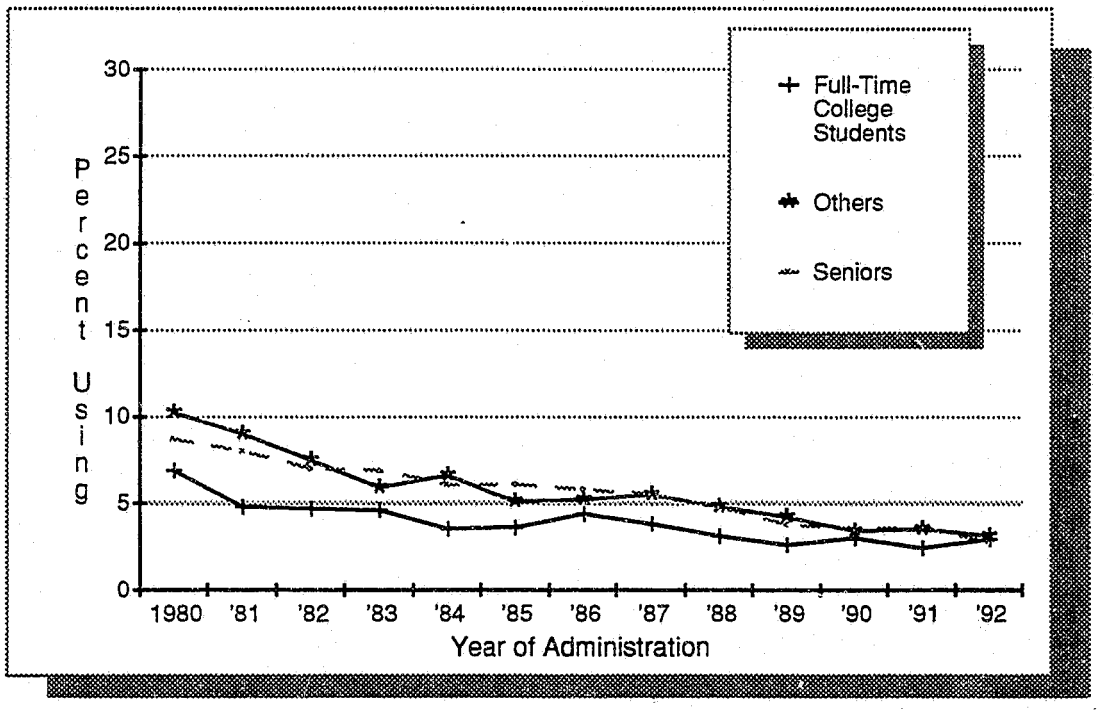


Figure 46

Tranquilizers: Trends in Annual Prevalence Among College Students Vs. Others
1-4 Years Beyond High School



Tranquilizers: Trends in Annual Prevalence Among Male and Female College Students

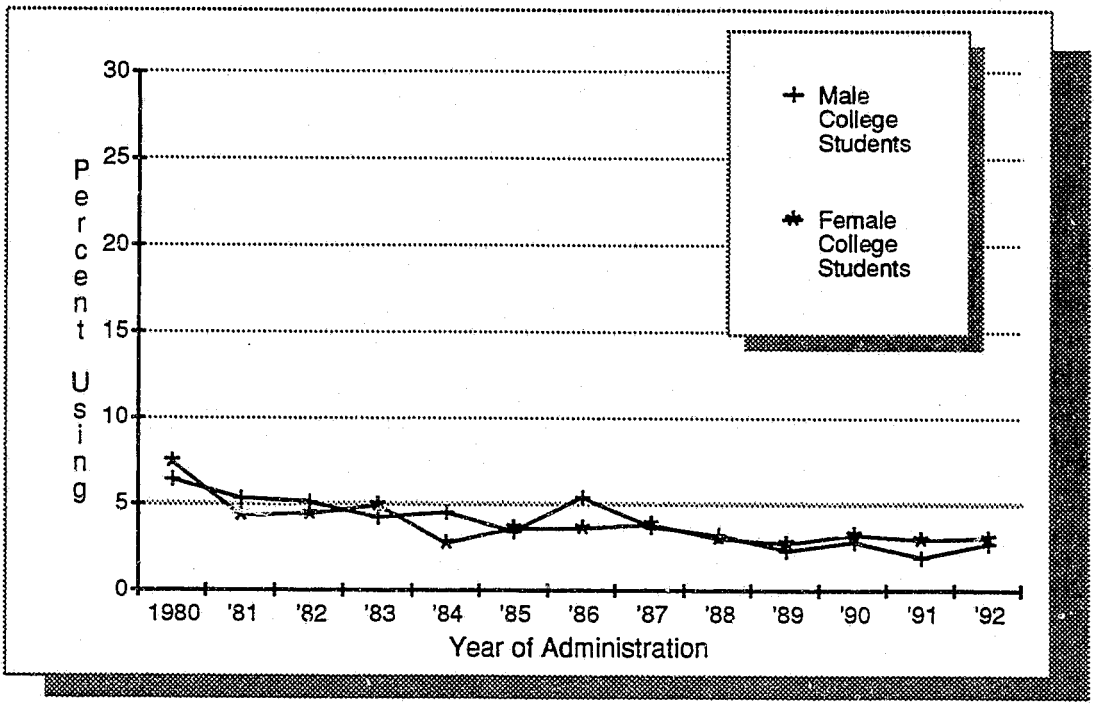
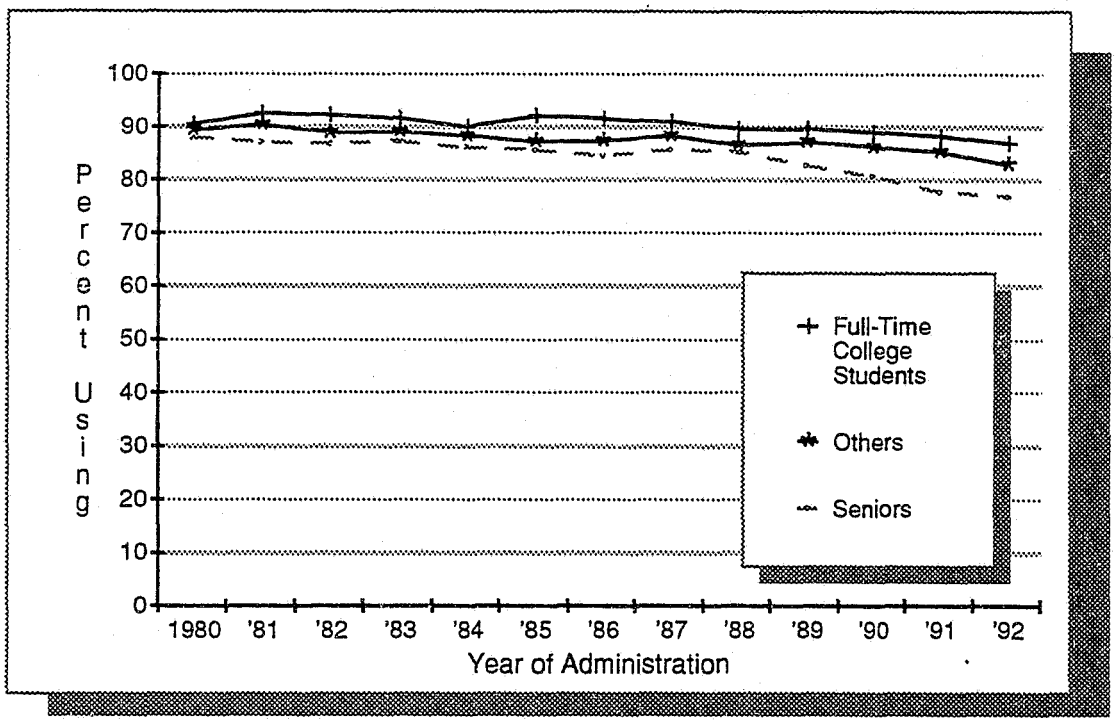


Figure 47a

Alcohol: Trends in Annual Prevalence Among College Students Vs. Others
1-4 Years Beyond High School



Alcohol: Trends in Annual Prevalence Among Male and Female College Students

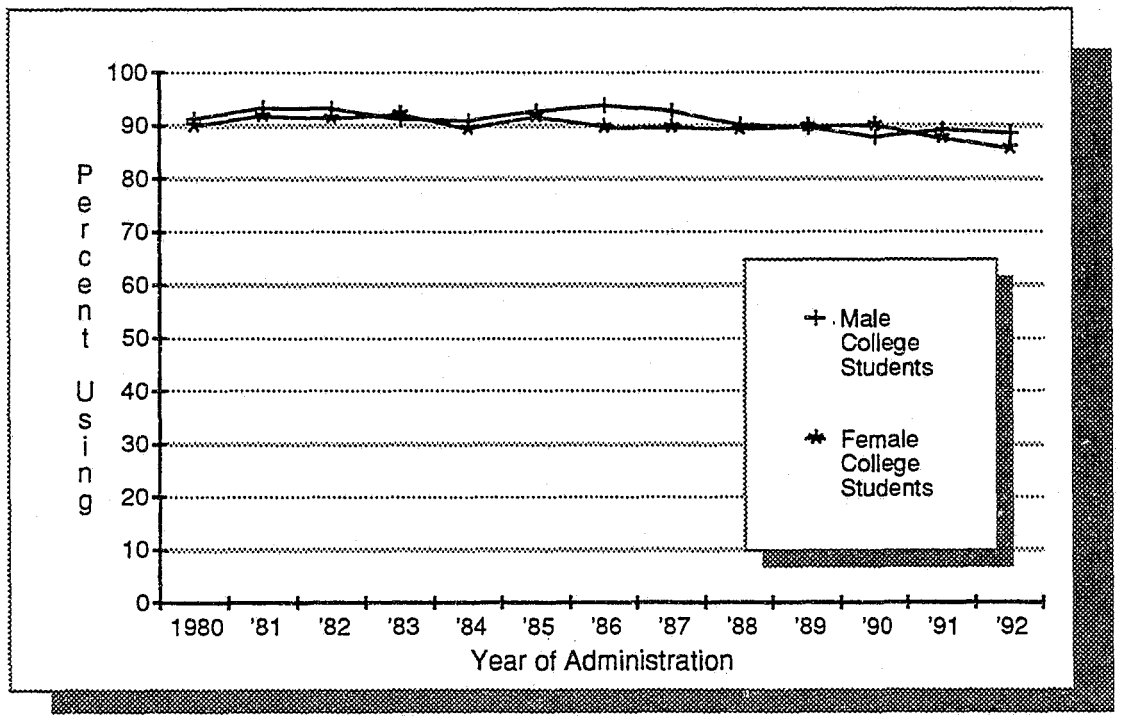
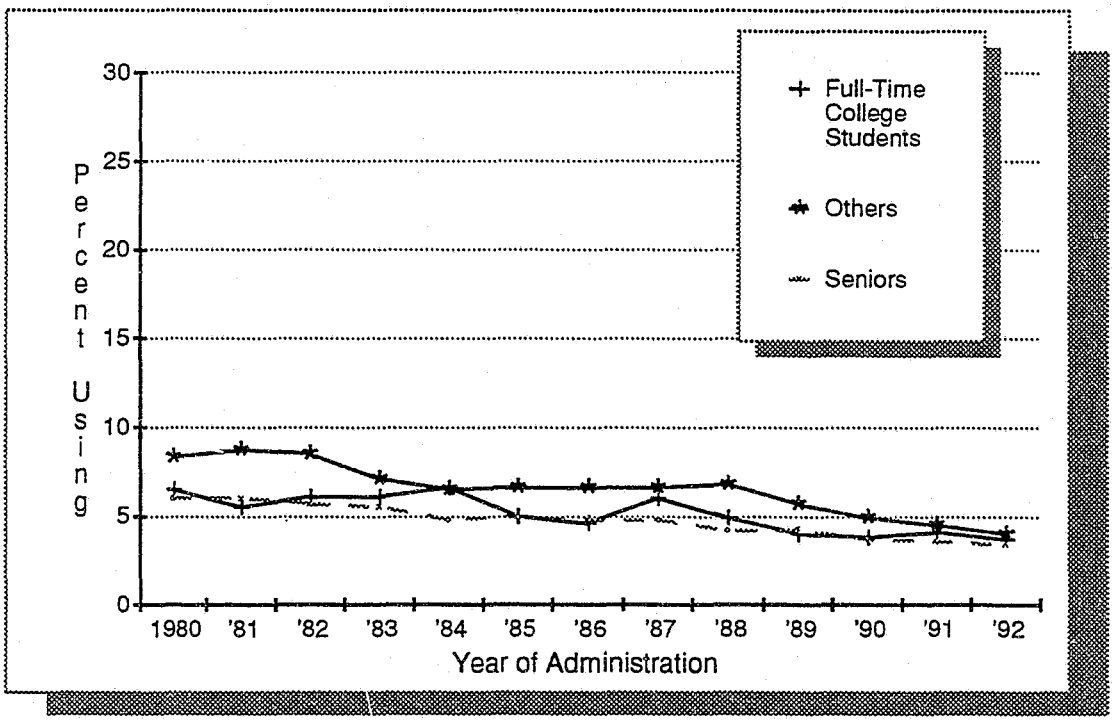


Figure 47b

Alcohol: Trends in Thirty-Day Prevalence of Daily Use Among College Students Vs. Others
1-4 Years Beyond High School



Alcohol: Trends in Thirty-Day Prevalence of Daily Use Among Male and Female College Students

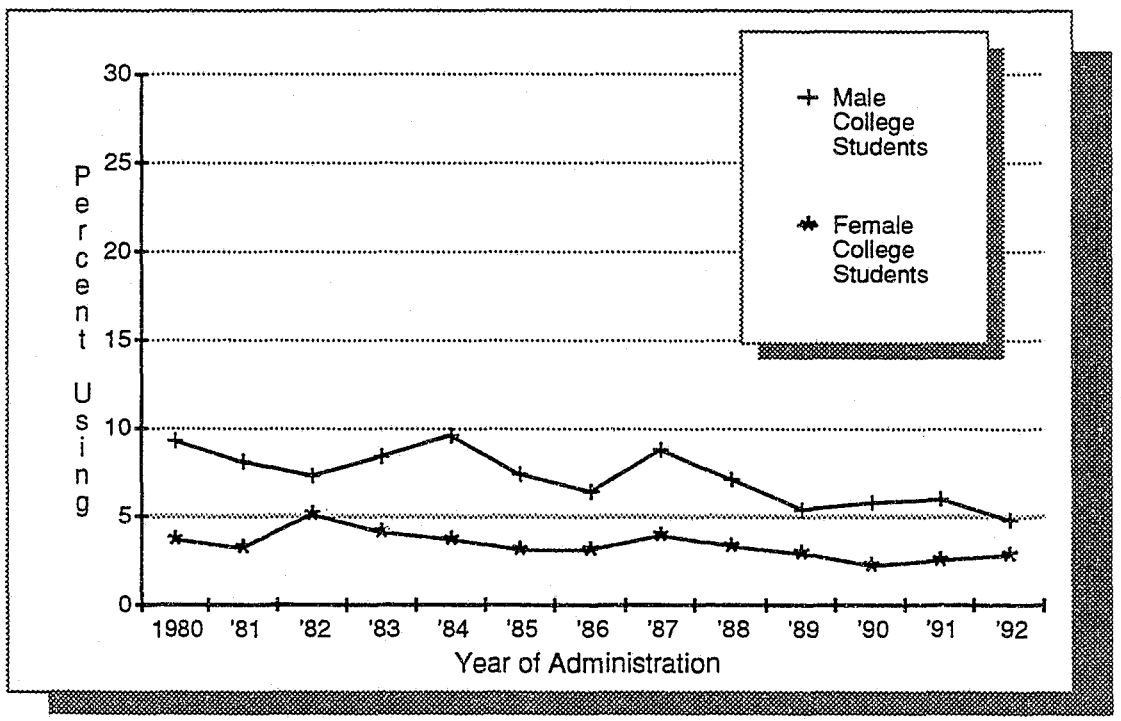
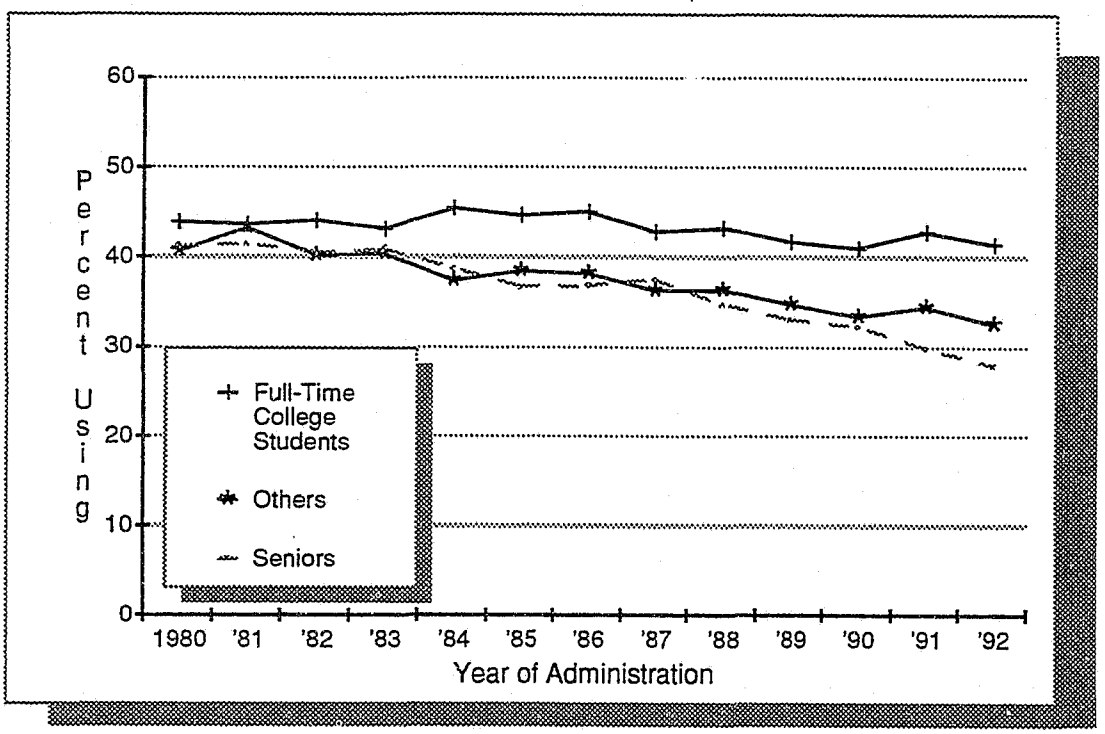


Figure 47c

Alcohol: Trends in Two-Week Prevalence of Five or More Drinks in a Row Among College Students Vs. Others
1-4 Years Beyond High School



Alcohol: Trends in Two-Week Prevalence of Five or More Drinks in a Row Among Male and Female College Students

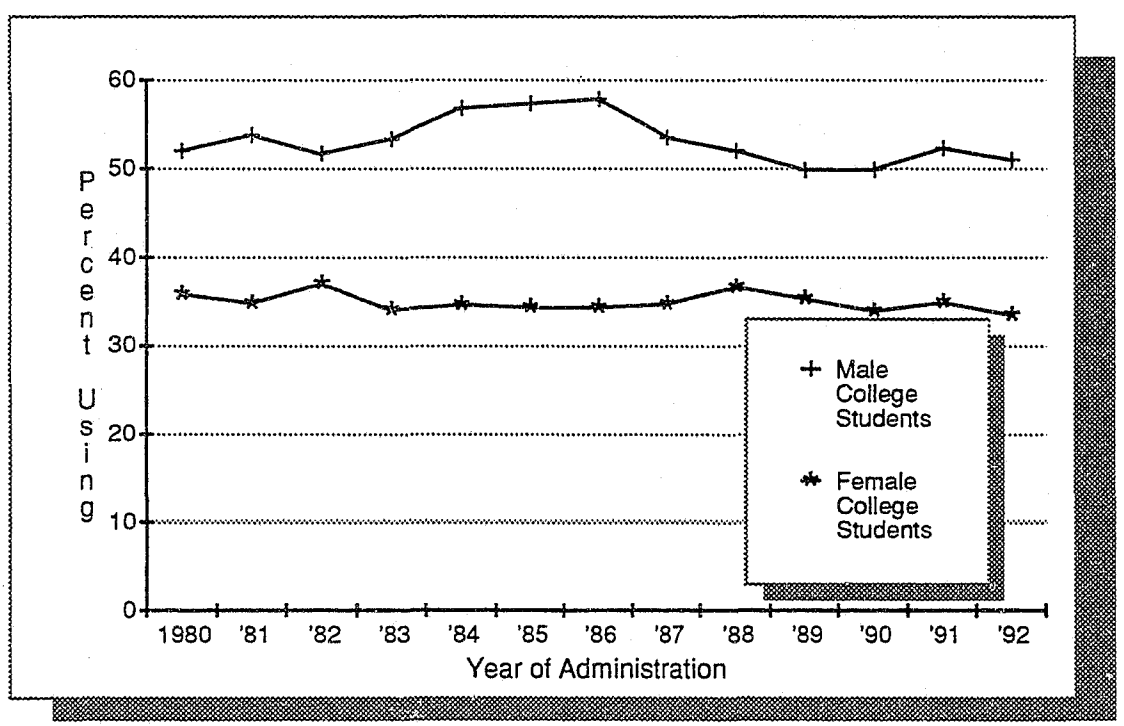
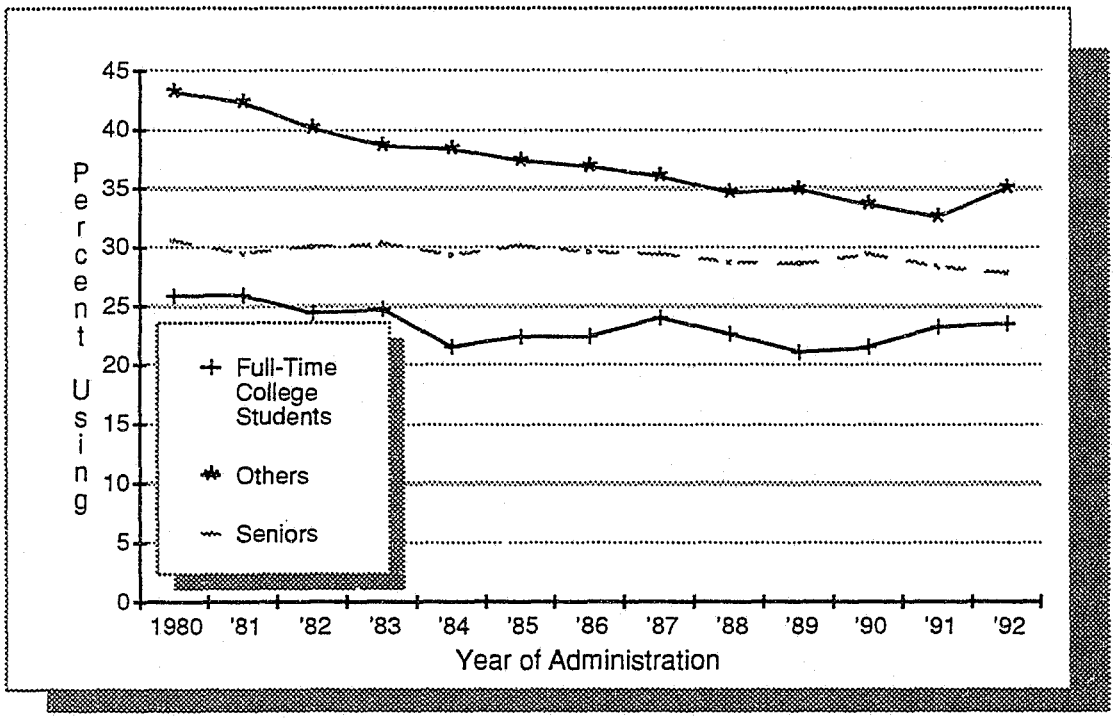


Figure 48a

Cigarettes: Trends in Thirty-Day Prevalence Among College Students Vs. Others

1-4 Years Beyond High School



Cigarettes: Trends in Thirty-Day Prevalence Among Male and Female College Students

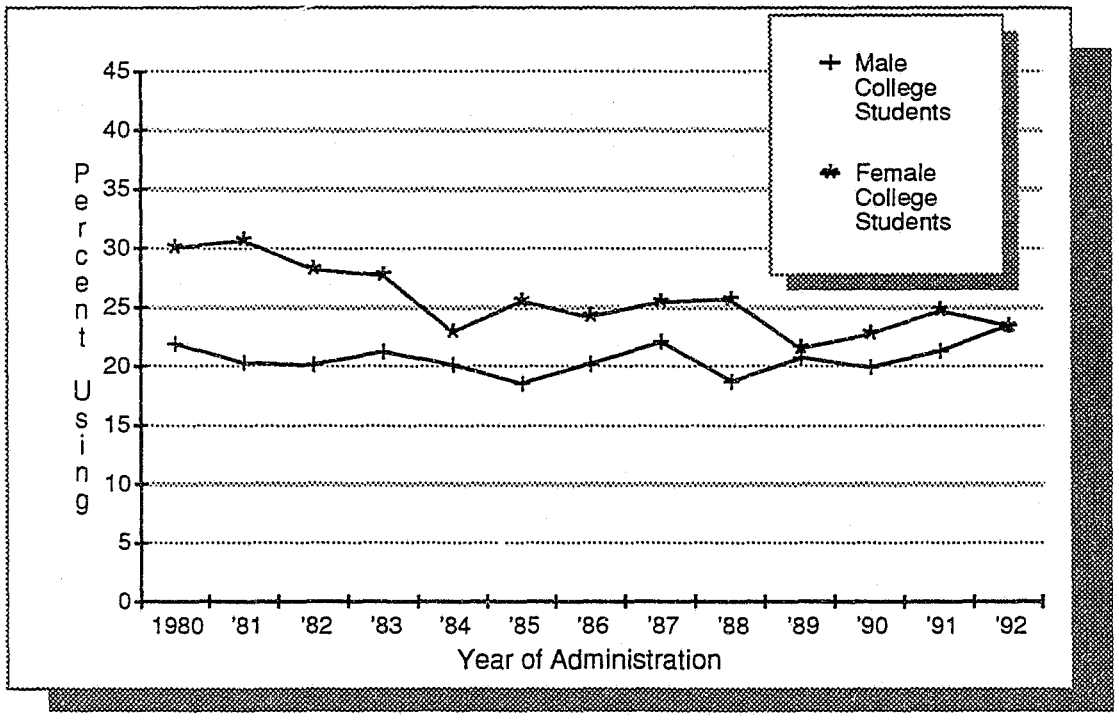
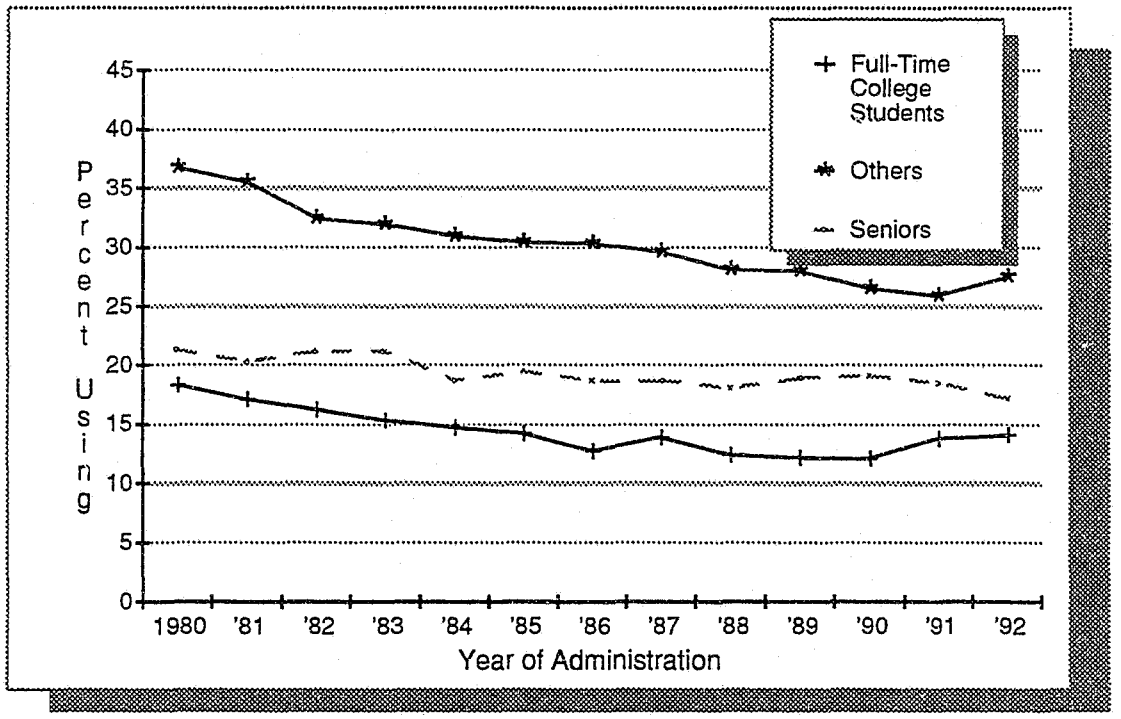


Figure 48b

Cigarettes: Trends in Thirty-Day Prevalence of Daily Use Among College Students Vs. Others
1-4 Years Beyond High School



Cigarettes: Trends in Thirty-Day Prevalence of Daily Use Among Male and Female College Students

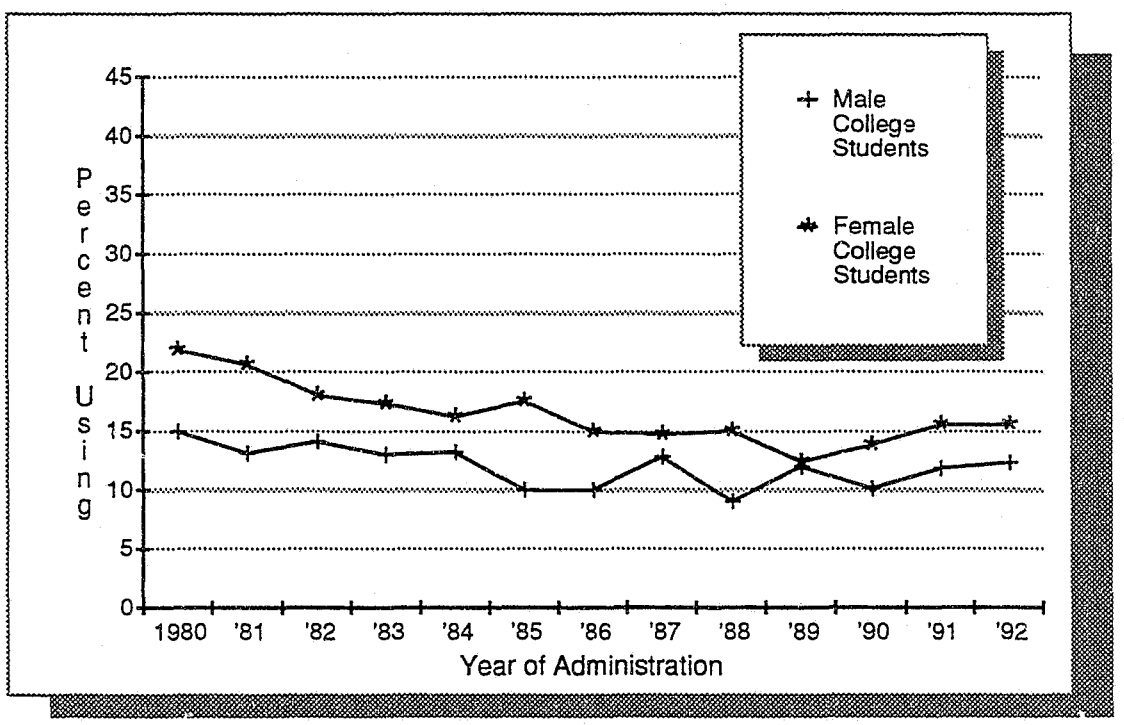
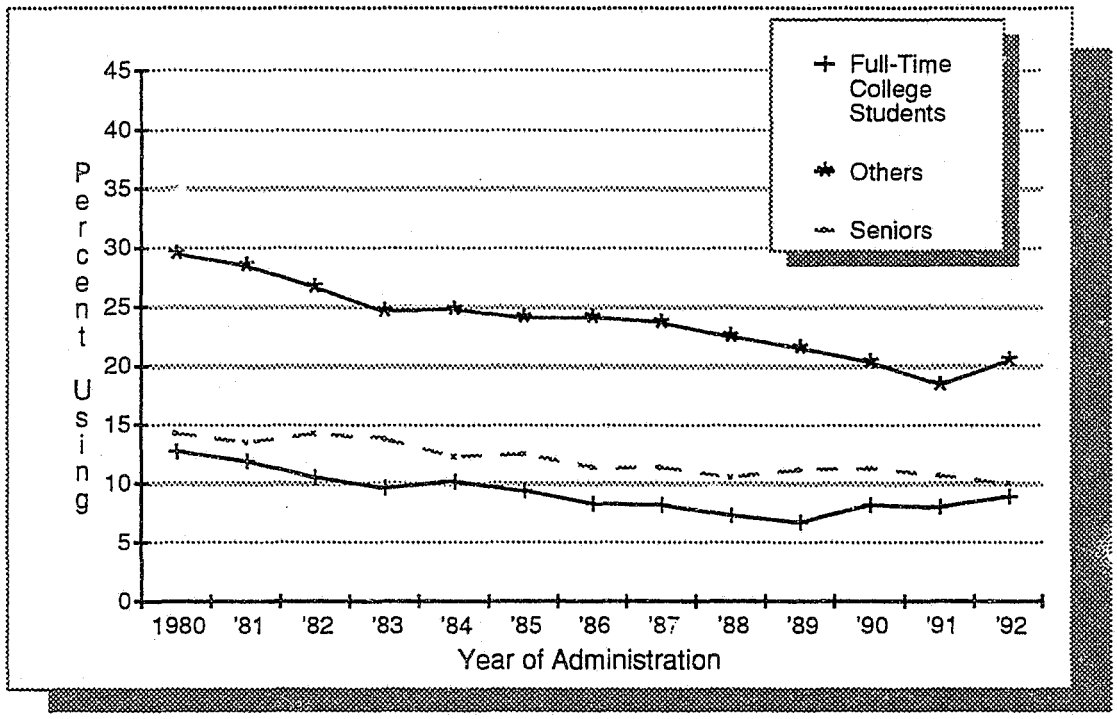
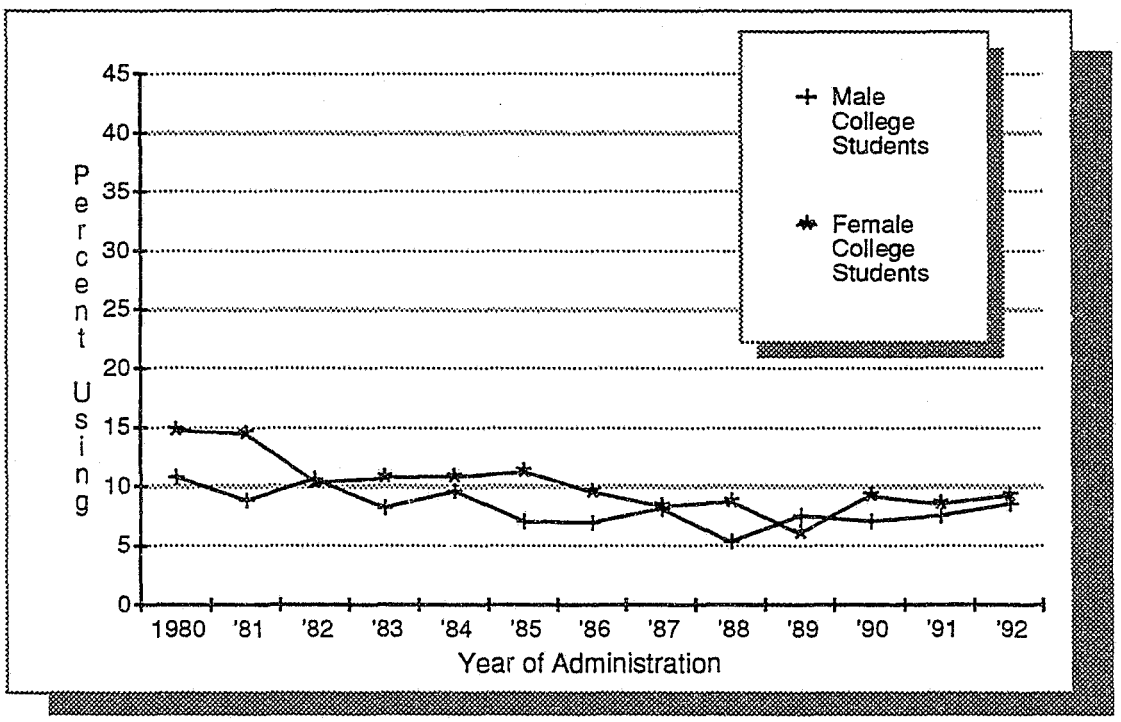


Figure 48c

Cigarettes: Trends in Thirty-Day Prevalence of Use of Half-Pack or More Per Day Among College Students Vs. Others
1-4 Years Beyond High School



Cigarettes: Trends in Thirty-Day Prevalence of Use of Half-Pack or More Per Day Among Male and Female College Students



☆ U.S. GOVERNMENT PRINTING OFFICE: 1993—342-309/93587

ISBN 0-16-042021-0