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Volume II

College Students & Adults Ages 19–45

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MONITORING THE FUTURE

NATIONAL SURVEY RESULTS ON DRUG USE, 1975–2007

Volume II

College Students and Adults Ages 19–45

by

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ABBREVIATED CONTENTS*

*See next page for Detailed Contents.

DETAILED CONTENTS

DETAILED CONTENTS (continued)

DETAILED CONTENTS (continued)

LIST OF TABLES

LIST OF TABLES (continued)

LIST OF TABLES (continued)

LIST OF TABLES (continued)

LIST OF FIGURES

LIST OF FIGURES (continued)

LIST OF FIGURES (continued)

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Chapter 1

INTRODUCTION

Monitoring the Future, which is now in its 33rd year, is a long-term program of research conducted at the University of Michigan's Institute for Social Research under a series of investigator-initiated research grants from the National Institute on Drug Abuse. The study is comprised of several ongoing series of annual surveys of nationally representative samples of 8th- and 10th-grade students (begun in 1991), 12th-grade students (begun in 1975), and adults (begun in 1976). As we report in this volume, several segments of the adult population are covered in the follow-up surveys of high school graduates. One important segment is American college students; a second is their age peers who are not attending college, sometimes called the "forgotten half"; and a third is all young adult high school graduates of modal ages 19 to 30, which we refer to as the "young adult" sample. Finally, high school graduates at the specific modal ages of 35, 40, and 45 are included each year in longer term follow-ups.

The follow-up surveys have been conducted by mail on representative subsamples of the previous participants from each high school senior class. This volume presents data from the 1977 through 2007 follow-up surveys of the graduating high school classes of 1976 through 2006 as these respondents have progressed into adulthood—now through age 45 for the oldest respondents, and soon to be through age 50.

To permit this volume to stand alone, we have repeated some material from *Volume I*. Specifically, chapter 2 in the present volume is the same as chapter 2 in *Volume I*; it provides an integrated overview of the key findings presented in both volumes. Chapter 3, "Study Design and Procedures," is also the same as chapter 3, *Volume I*. The reader already familiar with *Volume I* may wish to skip over these chapters here. Otherwise, the content of the two volumes does not overlap.

SURVEYS OF COLLEGE STUDENTS

The follow-up samples in Monitoring the Future (MTF) have provided excellent coverage of the national college student population for more than a quarter of a century. College students tend to be a difficult population to study. They are generally not well covered in normal household surveys, which typically exclude dormitories, fraternities, and sororities. Further, institution-based samples of college students must be quite large in order to attain accurate national representation because of the great heterogeneity in the types of student populations served in those institutions. Obtaining good samples and high response rates within many institutions also poses difficulties. 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 college students who emerge from each graduating cohort (and it does so at very low cost). Further, its "before," "during," and "after" college design permits examination of the many changes associated with the college experience. Moreover, it has comparable panel data on the high school graduates who are not attending college, a segment that is important not only in its own right but also as a comparison group for the college students.

As defined here, the college student population comprises 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 is said about this sample definition in chapters 3 and 8. Results on the *prevalence* of drug use among college students and their noncollege peers in 2007 are reported in chapter 8, and results on the *trends* in substance use among college students and their noncollege peers over the past 28 national surveys are reported in chapter 9.

SURVEYS OF YOUNG ADULTS AND THOSE AGES 35, 40, AND 45

The young adult sample is comprised of representative samples from each graduating class from 1995 to 2006, all surveyed in 2007. Since 18 is the modal age of 12th graders, the young adults covered here correspond to modal ages 19 through 30. (The college students are included as a part of this young adult sample.) The study design calls for annual follow-up surveys of each class cohort (though each individual participates in a follow-up survey only every two years) through age 30, after which surveys occur at five-year intervals beginning at age 35. In 2007 the graduating classes of 1980, 1985, and 1990 were sent the age-45, age-40, and age-35 questionnaires, respectively. Data were collected from 45-year-old respondents for the first time in 2003. Panel data into middle adulthood on nationally representative samples of the population are extremely rare and valuable. This is especially true for panel data on successive class cohorts from the general population, because it allows the differentiation of period-, age-, and cohort-related change.

In this volume, we have reweighted respondent data to adjust for the effects of panel attrition on measures such as drug use by using a statistical technique called poststratification, which will be explained later. We are less able to adjust 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 population estimates, but this omission does affect the estimates for entire age groups. Therefore, the reader is advised that the omission of about 15% of each cohort who drop out of high school will likely 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, crack, and methamphetamine, as well as for cigarettes—the use of which is highly correlated with educational aspirations and attainment.

GENERAL PURPOSES OF THE RESEARCH

The research purposes of MTF are extensive and can be outlined here only briefly.[1] One major purpose is to serve a social monitoring or social indicator function, to accurately characterize the levels and trends in certain behaviors, attitudes, beliefs, and conditions in the population. Social indicators can have important agenda-setting functions for society; they are especially useful for gauging progress toward national goals and indicating the impacts of major historical events, including social or policy changes. Another purpose of the study is to develop knowledge that

[1]For a more complete listing and discussion of the study's many objectives, see Johnston, L. D., O'Malley, P. M., Schulenberg, J. E., & Bachman, J. G. (2006). *The aims and objectives of the Monitoring the Future study and progress toward fulfilling them as of 2006* (Monitoring the Future Occasional Paper No. 65). Ann Arbor, MI: Institute for Social Research. Available online at www.monitoringthefuture.org/pubs.html#papers.

increases our understanding of how and why changes in these behaviors, attitudes, beliefs, and so on are taking place. (In health-related disciplines, such work is usually labeled *epidemiology*.) These two broad purposes are addressed in the current series of volumes.

The many additional purposes for the research are addressed in other types of publications and professional products, including books and journal articles. These 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 that are associated with drug use and abuse; and 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 seek to determine the life course of the various drug-using behaviors during this period of development; distinguish such "age effects" from cohort and period effects that are influencing drug use; determine the effects of social legislation on various types of substance use; and determine the changing connotations of drug use and changing patterns of multiple drug use among youth. We believe that differentiating among period, age, and cohort effects on use of various types of substances has been a particularly important contribution of the project; its cohort-sequential research design is especially well suited to allow such differentiation. In fact, a number of important cohort effects that first emerged in the 1990s in terms of both use and attitudes about use are featured in this volume.

One additional purpose, related to but somewhat distinct from the others, is addressed here. In 2004, for the first time, data were included on the prevalence and interconnectedness of risk and risk-reduction behaviors related to the spread of the human immunodeficiency virus (HIV), which causes acquired immunodeficiency syndrome (AIDS). A set of questions about these behaviors was included in the 2004 through 2006 follow-up surveys in two of the six questionnaire forms that were administered to 21- to 30-year-olds. These questions were included in three of the six questionnaire forms in 2007. The results from that work are presented and discussed in chapter 10. Many of the analytic objectives just outlined in relation to substance use can now be pursued in this study in relation to HIV/AIDS. Because needle sharing is a major vector for the spread of HIV/AIDS, and because other risk behaviors are associated with drug use, this additional subject seems an appropriate addition to the study.

Readers interested in publications dealing with any of these other areas are invited to visit the study's Web site at www.monitoringthefuture.org. A complete listing of all publications from the study is available there, as well as abstracts and/or complete manuscripts for many of those publications. Complete text of press releases from the study is also provided. For additional information, please e-mail us at MTFinfo@isr.umich.edu.

Chapter 2

KEY FINDINGS:
AN OVERVIEW AND INTEGRATION ACROSS FIVE POPULATIONS

Monitoring the Future, now in its 33rd year, has become one of the nation's most relied-upon sources of information on changes taking place in licit and illicit psychoactive drug use among American adolescents, college students, young adults, and more recently, middle-aged adults. During the last three decades, the study has tracked and reported on the use of an ever-growing array of such substances in these populations.

This annual series of monographs, written by the study's investigators and published by its sponsor—the National Institute on Drug Abuse—is one of the major vehicles by which the epidemiological findings from the study are reported. This two-volume monograph reports findings from the inception of the study in 1975 through 2007—the results of 33 national surveys. (A companion series of annual reports provides a much briefer, advance synopsis of the key findings from the latest surveys of secondary school students.[2])

Monitoring the Future has conducted in-school surveys of nationally representative samples of (a) 12th-grade students each year since 1975 and (b) 8th- and 10th-grade students each year since 1991. In addition, beginning with the class of 1976, the project has conducted follow-up mail surveys on representative subsamples of the respondents from each previously participating 12th-grade class. These follow-up surveys continue into young adulthood and beyond.

A number of important findings have been summarized in this chapter to provide the reader with an overview of the key results. Because so many populations, drugs, and prevalence intervals are discussed here, a single integrative set of tables (Tables 2-1 through 2-4) show the 1991–2007 trends for all drugs on all five populations: 8th-grade students, 10th-grade students, 12th-grade students, full-time college students modal ages 19–22, and all young adults modal ages 19–28 who are high school graduates. (Note that the young adult group includes the college student population.) *Volume II* also contains data on older age bands: specifically, ages 35, 40, and 45.

TRENDS IN ILLICIT DRUG USE—THE ADVENT OF COHORT EFFECTS

Early in the 1990s, we noted an increase in use of several illicit drugs among secondary school students, and some important changes among the students in terms of certain key attitudes and beliefs related to drug use. In the volume reporting 1992 survey results, we noted the beginning of such reversals in both use and attitudes among 8th graders, the youngest respondents surveyed in this study, and also a reversal in attitudes among 12th graders. Specifically, the proportions

[2]Johnston, L. D., O'Malley P. M., Bachman, J. G., & Schulenberg J. E. (2008). *Monitoring the Future national results on adolescent drug use: Overview of key findings, 2007* (NIH Publication No. 08-6418). Bethesda, MD: National Institute on Drug Abuse. (Also available on the Web at www.monitoringthefuture.org.)

seeing great risk in using drugs began to decline, as did the proportions saying they disapproved of use. As we suggested then, those reversals indeed presaged "an end to the improvements in the drug situation that the nation may be taking for granted." The use of illicit drugs rose sharply in all three grade levels after 1992 as negative attitudes and beliefs about drug use continued to erode. This pattern continued into the mid-1990s, and beyond that for some drugs.

In 1997, for the first time in six years, the overall rate of ***illicit drug use*** finally began to decline among 8th graders. And although use of marijuana continued to rise that year among the 10th and 12th graders, their use of several other drugs leveled off, and relevant attitudes and beliefs also began to reverse in many cases. In 1998, illicit drug use continued a gradual decline among 8th graders and started to decline at 10th and 12th grades. In 1999, 2000, and 2001, the decline continued for 8th graders, whereas use held fairly level among 10th and 12th graders. In 2002 and 2003, use by 8th and 10th graders decreased significantly, and use by 12th graders finally began to drop, albeit by less than a statistically significant amount. Nonsignificant declines continued for all three grades in 2004. The long-term decline in illicit drug use among 8th graders paused in 2005, but continued among 10th and 12th graders. Annual prevalence declined in all three grades in both 2006 and 2007, with the 8th-grade decline in 2007 being statistically significant. As we have noted previously, the gradual decline observed among 8th graders suggested an eventual further decline at the upper grades as the 8th graders aged. We are seeing those declines, though they are a bit erratic.

As will be illustrated below in the discussion of specific drugs, the increase in use of many drugs during the 1990s among secondary school students, combined with fairly level rates of use among college students and young adults, resulted in some unusual reversals in the usage rates by age. Figure 2-1 illustrates the point. In the early years of the epidemic, illicit drug use rates were clearly higher in the college-age group (and eventually the young adults) than they were among secondary school students. But by the late 1990s, the highest rates of active use (i.e., use within the prior year or prior 30 days) were found in the late secondary school years. In fact, in 1996 and 1997 both 10th and 12th graders actually had higher annual prevalence rates for illicit drug use (i.e., higher percentages reporting use within the prior year) than either college students or young adults. This changed somewhat after 2001, as the earlier heavier using cohorts of adolescents began to comprise the college student and young adult populations, while at the same time use among the secondary school students was declining.

- In 2007, the rank order by age group for annual prevalence of using ***any illicit drug*** was 12th graders (36%), college students (35%), 19- to 28-year-olds (33%), 10th graders (28%), and 8th graders (13%). With respect to using ***any illicit drug other than marijuana*** in the past 12 months, the rank order was 12th graders (19%), 19- to 28-year-olds (18%), college students (17%), 10th graders (13%), and 8th graders (7%). As can be seen by this divergence of trends for the different age groups, something other than a simple secular trend in drug use was taking place; specifically, important cohort differences were emerging.

- From the early 1990s until 1997, ***marijuana*** use rose sharply among secondary school students, as did their use of a number of ***other illicit drugs***, though more gradually. We have called this period a "relapse phase" in the longer term epidemic. An increase in

marijuana use also occurred among American college students, largely reflecting "generational replacement" (i.e., a cohort effect), wherein earlier cohorts were replaced in the college population by more recent ones who were more drug-experienced before they left high school. This resurgence in illicit drug use spread *up* the age spectrum in a reversal of the way the epidemic spread several decades earlier. In the 1960s the epidemic began on the nation's college campuses, and then the behavior diffused downward in age to high school students and eventually to junior high school students. This time the increases began in middle schools and radiated up the age spectrum. The graduating class cohorts in the middle and late 1990s carried with them the pattern of heavier drug use that emerged while they were in secondary school in the early 1990s.

The increases during the 1990s in use of ***any illicit drug*** (including use of ***marijuana*** and use of ***other illicit drugs*** treated as a class) were substantially larger, in both proportional and absolute terms, in the three secondary school grades than in either the college or young adult populations. Among college students and young adults, the annual prevalence of use of ***any illicit drug*** held remarkably stable from 1991 through 1997, at the same time that use rose appreciably among adolescents (Figure 2-1). We projected that, as generational replacement continued to occur, we would likely see some increase in use of illicit drugs by the young adults. As would be expected given their younger age range (19–22), the increase happened sooner and more sharply among the college students than among the young adults in general (age range 19–28). Peak rates (since 1990) in annual prevalence of any illicit drug were reached in 1996 among 8th graders, in 1997 among 10th and 12th graders, in 2001 among college students, and in 2004 in the young adult segment. Similarly, the declines in use among secondary school students since those peak years have thus far shown up only slightly and mostly nonsignificantly among college students, and even less so among young adults.

Again, these diverging trends across age groups clearly show that changes during the 1990s reflected some important cohort effects rather than broad secular trends that would have appeared simultaneously in all of the age groups. During all of the previous years of the study, the use of most drugs moved in parallel across most age groups, indicating that secular change was prevailing.

- Similar to the use patterns for illicit drugs, the trend for ***cigarette*** smoking evidenced a generational replacement effect during the 1990s in that college students showed a sharp increase in smoking beginning in 1995, as the heavier smoking cohorts of adolescents from the early to mid-1990s entered college. This has been a more typical pattern of change for cigarettes, however, since differences in cigarette smoking rates among class cohorts tend to remain through the life course and also tend to account for much of the overall change in use observed at any given age.

  In the early 1990s, cigarette smoking among 8th and 10th graders rose by about 50%—a particularly sharp and worrisome rise (based on 30-day prevalence rates shown in Table 2-3, and daily and half-pack rates shown in Table 2-4). Smoking also rose among 12th graders, beginning a year later. The increase in current smoking ended among 8th and 10th graders in 1996, among 12th graders in 1997, and among college students in 1999.

The appreciable decline in the smoking rate that first began among the 8th graders in 1996 now appears to be radiating up the age spectrum as these cohorts age. (The 8th-grade 30-day prevalence rate fell from 21% in 1996 to 7% in 2007.) The young adult stratum has shown little evidence yet of an appreciable decline in current smoking, though rates have declined some since 2004. The rate (26%) is about five percentage points below the recent peak in 1998, with the decline accelerating as the cohort effect works its way up the age bands. Smoking among the college student subgroup, on the other hand, has been falling for several years; in 2006, thirty-day prevalence fell by 4.6 percentage points—a highly significant decline—but with no further decline in 2007. The decline in smoking rates among secondary school students has been decelerating in all three grades in recent years.

- During the 1990s, the annual prevalence of ***marijuana*** use tripled among 8th graders (from 6% in 1991 to 18% in 1996), more than doubled among 10th graders (from 15% in 1992 to 35% in 1997), and nearly doubled among 12th graders (from 22% in 1992 to 39% in 1997). Among college students, however, the increase in marijuana use, presumably largely due to a generational replacement effect, was much more gradual. Annual prevalence of use rose by about one third, from 27% in 1991 to 36% in 1998. Marijuana use began to decline in 1997 among 8th graders and then did the same in 1998 among 10th and 12th graders. Its rate of decline was rather modest, however, perhaps due in part to effects of the public debates over medical use of marijuana during that period. In 2001, use remained level in all three grades, but between 2001 and 2004 all three grades showed significant declines in their annual prevalence of marijuana use, with the proportional decline greatest among the 8th graders. The 8th graders have shown the most steady long-term decline since their recent peak, which occurred in 1996; the decline continued into 2007, for a 44% drop since 1996. Declines have been occurring in the upper grades since about 2001, with their annual prevalence rates having fallen from recent peaks by 30% and 18%, respectively. The decline in annual marijuana use from recent peak levels among college students has so far been quite modest, declining from 36% in 2001 to 32% in 2007. Young adults showed very little change in that interval, from 29% to 28% (see Table 2-2).

  Daily marijuana use in all of these groups rose substantially after 1992, reaching peak levels in a somewhat staggered fashion as that just described (see Table 2-4). Daily use began a slow decline after 1999 among 8th graders, after 2001 among 10th graders, and after 2003 among 12th graders, consistent with a cohort effect pattern. College student and young adult rates have been fairly level in recent years. In general, prevalence of daily marijuana use has been slow to decline, even though annual and 30-day prevalence figures have been dropping. Still, the rates today are low in relation to the peaks reported in the late 1970s. For example, 12th graders' daily prevalence of use of 5.1% in 2007 is less than half the 10.7% peak figure reached in 1978, at the height of the illicit drug epidemic, and a bit below the recent high of 6.0% recorded in 2003.

  The amount of perceived risk associated with using marijuana fell during the earlier period of increased use in the late 1970s, and fell again during the more recent resurgence of use in the 1990s. Indeed, perceived risk among 12th graders began to decline a year

before use began to rise in the upturn of the 1990s, making perceived risk a leading indicator of change in use. (The same may have happened in 8th grade, as well, but we do not have data starting early enough to check that possibility.) The decline in perceived risk halted after 1997 for 8th and 10th graders, and annual prevalence began to decline a year or two later. Again, perceived risk was a leading indicator of change in use, as it has proven to be for a number of drugs. As discussed in *Volume I*, chapter 8, these attitudes show evidence of cohort effects over the past decade and a half.

Personal disapproval of marijuana use slipped considerably among 8th graders between 1991 and 1996 and among 10th and 12th graders between 1992 and 1997. For example, the proportions of 8th, 10th, and 12th graders who said they disapproved of trying marijuana once or twice fell by 17, 21, and 19 percentage points, respectively, over those intervals of decline. There has since been some increase in disapproval among 8th graders and, beginning more recently, among 10th and 12th graders.

- Among 12th graders, the proportions using ***any illicit drug other than marijuana*** in the past year rose from a low of 15% in 1992 to 21% in 1997 to 22% in 2001 (see Table 2-2); these levels are substantially below the 34% peak rate reached two decades earlier, in 1981. All of the younger groups showed significant increases between 1992 and 1997, with use beginning to increase in 1992 among 8th graders, in 1993 among 10th and 12th graders, and in 1995 among college students—again reflecting evidence of a cohort effect. Use peaked in 1996 among 8th and 10th graders and by 1997 among 12th graders; it appears to have peaked around 2004 among the college students and young adults. The 8th graders have shown some gradual decline in their use of the other illicit drugs, treated as a class, since 1996; the decline among 10th graders paused after 1998 and did not resume until after 2001, pausing again in 2007; 12th-grade use also showed some declines after 2001, and stands just three percentage points lower (at 19%) in 2007. Among college students and young adults, there is little evidence yet of a decline in the proportions using any illicit drug other than marijuana; their rates have held fairly steady since 2004.

- Between 1989 and 1992 we noted an increase among 12th graders, college students, and young adults in their use of ***LSD***, a drug quite popular in the late 1960s and early 1970s. In 1992 the newly added populations (8th and 10th graders) were also showing an increase in LSD use; and for several more years, modest increases persisted in all five populations. Use of LSD peaked in 1995 among college students and young adults and in 1996 among 8th, 10th, and 12th graders, after which LSD use gradually declined in all five populations until 2001, when it dropped sharply. Overall, the pattern for LSD use seems more consistent with secular change than a cohort effect. The different age groups moved in parallel for the most part, likely in response to historical events in the environment, including a sharp reduction in LSD availability after 2001.

  Prior to the significant increase in LSD use among 12th graders in 1993, there was a significant 4.3-percentage-point decline between 1991 and 1992 in the proportion seeing great risk associated with trying LSD. (Once again, perceived risk proved to be a leading indicator of change in use.) The decline in perceived risk continued through 1997 and

halted in 1998. The proportion of 12th graders disapproving of LSD use began to decline a year later (as is often the case) in 1992, and continued to decline through 1996.

Because LSD was one of the earliest drugs to be popularly used in the American drug epidemic, young people of that era may have been relatively unaware of the risks of use. They had less opportunity to learn vicariously about the consequences of use by observing others around them or to learn from intense media coverage of the issue, which occurred some years earlier. We were concerned that this type of "generational forgetting" of the dangers of a drug, which occurs as a result of generational replacement, could set the stage for a whole new epidemic of use. In fact, perceived harmfulness of LSD began to decline after 1991 among 12th graders. Perceived risk and disapproval among 8th and 10th graders, first measured in 1993, both showed declines until 1997 or 1998, after which they leveled and then declined some more. In 2004, twelfth graders' personal disapproval of trying LSD increased significantly, with no further change since. Because the decline in use in the last few years has generally *not* been accompanied by expected changes in these attitudes and beliefs, we suspected that some displacement by another drug might have been taking place, at least through 2001. The most logical candidate is ***ecstasy*** (***MDMA***), which, like LSD, is used for its hallucinogenic effects; ecstasy was popular in the club and rave scenes, and was very much on the rise through 2001. After 2001, a sharp decline in the reported availability of LSD in all five populations (which corresponded to the closing of a major LSD lab by the DEA) very likely played a major role in the sharp decline in use among all of them. However, we want to mention in caution that young people's attitudes are changing such as to make them receptive to LSD use some time in the future, should a plentiful supply re-emerge.

- Questions about the use of ***ecstasy*** (***MDMA***) have been included in the follow-up surveys of college students and young adults since 1989; however, because of our concern about stimulating interest in an attractive-sounding and little-known drug, these questions were not added to the secondary school surveys until 1996. From 1989 to 1994, the annual prevalence rates tended to be quite low in the older age groups for whom we had data, but in 1995 these rates increased substantially—from 0.5% to 2.4% among college students, and from 0.7% to 1.6% among young adults generally.

  When usage data were first gathered on secondary school students in 1996, the 10th and 12th graders actually showed higher rates of annual use (both 4.6%) than the college students (2.8%). Ecstasy use then fell steadily at all three grades of secondary school between 1996 and 1998, though it did not fall in the older age groups. But between 1998 and 2001, use rose sharply in all five populations. In fact, annual prevalence more than doubled in that three-year period among 12th graders, college students, and young adults, and nearly doubled in the lower grades. In 2000 even the 8th graders showed a significant increase in use. Among young adults, the increase in use occurred primarily among those under age 29. Ecstasy use for all five age groups declined slightly in 2002, but significantly only for the 10th graders; declined again in 2003, with significant drops for all groups except the college students; and showed some decline again in 2004, with the largest decreases among the college students and young adults. This pattern suggests that both cohort effects and a secular trend were at work. Once again, this decline in use

among secondary school students was predicted by an increase in perceived risk in 2001—an increase that continued through 2004. The annual prevalence fell by half in 2004 alone among college students, and all five groups are at rates that range from just under one half to three quarters lower than their recent peaks in 2001. Since 2004 use has been fairly stable in all five populations.

Ecstasy use among all five populations has been moving fairly synchronously since 1999, which suggests that a secular trend (some change in events in the social environment) has affected everyone. We believe an important change during this period was the increasing availability of information on the adverse effects of ecstasy use via stories in the popular media, dissemination of the scientific evidence by the National Institute on Drug Abuse, and an anti-ecstasy media campaign by the Partnership for a Drug-Free America and the Office of National Drug Control Policy, initiated in 2002.

The quite dramatic increase in reported availability of ecstasy through 2001 was substantiated by law enforcement data on ecstasy seizures. Of the 12th graders surveyed in 1991, only 22% thought they could get ecstasy fairly easily, but a decade later (in 2001) 62% thought that they could. After 2001, however, the perceived availability of ecstasy began decreasing in all three grades, possibly due in part to the steep decline in the number of users, who serve as supply points for others. The decreases continued into 2007 among 8th graders, but halted in the upper grades that year. See Figure 8-6 in *Volume I*, chapter 8 for a graphic presentation of the trends in ecstasy use, availability, and perceived risk for 12th graders.

- Between 1982 and 1992, annual prevalence rates for ***amphetamine*** use (other than use that was ordered by a physician) among 12th graders fell by nearly two thirds, from 20.3% to 7.1%. Rates among college students fell even more over the same interval, from 21.1% to 3.6%. During the relapse phase in the drug epidemic in the 1990s, annual amphetamine use increased by about half among 8th and 10th graders between 1991 and 1996, and also increased among 12th graders and college students between 1992 and 1996. After 1996 the age groups diverged, with amphetamine use declining gradually among 8th and 10th graders and continuing to rise among 12th graders, college students, and young adults until about 2002. The decline continued through 2004 for 8th graders and through 2005 for 10th graders, while the rise among the 12th graders and college students finally halted by 2003. The 12th graders finally exhibited a significant decline in annual prevalence of amphetamine use in 2005, and the college students showed a leveling after 2006. Young adults have not shown a clear pattern of decline; their rates of amphetamine use have been stable since 2001. This pattern of cross-age-group change suggests a cohort effect at work for amphetamine use.

  The increase in nonmedical use of amphetamines (and a concurrent decrease in disapproval) that began among 12th graders in 1993 followed a sharp drop in perceived risk a year earlier (which, as we have noted for a number of drugs, often serves as a leading indicator). Following a period of decline, both perceived risk and disapproval among 12th graders generally drifted up from 1995 through 2007. Use of amphetamines

(nonmedical) among 12th graders remained fairly steady from 1997 through 2004, and then decreased from 2004 to 2007.

- Use of the amphetamine ***Ritalin*** outside of medical supervision showed a distinct increase around 1997—with annual prevalence among 12th graders going from 0.1% in 1992 to 2.8% in 1997—and then stayed level for a few years (see appendix E in *Volume I*, Table E-2[3]). Because of its increasing importance, a differently structured question was introduced for Ritalin use in 2001. This new question, which we prefer to the original, does not use a prior branching question and produced somewhat higher prevalence rates. Results from the new question suggest an ongoing, gradual decline in Ritalin use in all five populations, which continued into 2007.

- ***Methamphetamine*** questions were introduced in 1999 because of rising concern about the use of this drug; but a decline in use has been observed among all five populations in the years since then, although the young adults did not show declines until 2005. In 2007 this decline continued in all five populations, and was significant in grades 8 and 12. These declines occurred during a period in which there were many stories in the media suggesting that methamphetamine use was a *growing* problem.

- We have had questions for a longer time—since 1990—about the use of ***crystal methamphetamine*** (***ice***) (a crystallized form of methamphetamine that can be smoked, much like crack). The use of crystal methamphetamine increased between the early and late 1990s among the three populations asked about their use: 12th graders, college students, and young adults. The estimates are less stable than usual due to the relatively small sample sizes asked about this drug, but it appears that crystal methamphetamine use held fairly steady from 1999 through 2005 among 12th graders, before declining some. Use may have risen some among college students and young adults generally until 2005, before trailing off some since then.

- ***Inhalants*** are defined as fumes or gases that are inhaled to get high, and they include common household substances such as glues, aerosols, butane, and solvents. In the early 1990s, there was a troublesome increase in inhalant use among secondary school students, followed by a reversal after 1995. After reaching a low point in 2002 or 2003 in grades 8, 10, and 12, use of inhalants increased some in all grades, but has been declining in all grades more recently. Perceived risk among 8th and 10th graders was declining fairly steadily since 2001, quite possibly as a result of generational forgetting of the dangers of these drugs; but this decline did not continue in 2007. A new anti-inhalant campaign has been developed that might be effective in offsetting this decline in perceived risk, much as a similar campaign did in the mid-1990s.

- One class of inhalants, ***amyl and butyl nitrites***, became somewhat popular in the late 1970s, but their use has been almost eliminated. The annual prevalence rate among 12th-grade students was 6.5% in 1979 but only 0.8% in 2007.

[3]As discussed in appendix E of *Volume I*, the absolute prevalence rates for Ritalin were probably higher than these statistics indicate, but the trend story is likely quite accurate. See Table 2-2 for more accurate estimates of the absolute annual prevalence rates in recent years; these estimates are based on a new question that does not require the respondent to first indicate some amphetamine use before asking about his or her Ritalin use.

- ***Crack cocaine*** use spread rapidly from the early to mid-1980s. Still, among 12th graders, the use of crack remained relatively low during this period (3.9% annual prevalence in 1987). Clearly, crack had quickly attained a reputation as a dangerous drug, and by the time of our first measurement of perceived risk in 1987, it was seen as the most dangerous of all of the drugs. Annual prevalence dropped sharply in the next few years, reaching 1.5% by 1991, where it remained through 1993. Perceived risk began a long and substantial decline after 1990; use began to rise gradually after 1993, from 1.5% to 2.7% by 1999, before finally declining slightly in 2000 and then leveling.

  Among 8th and 10th graders, crack use rose gradually in the 1990s: from 0.7% in 1991 to 2.1% by 1998 among 8th graders, and from 0.9% in 1992 to 2.5% in 1998 among 10th graders. And, as just discussed, use among 12th graders peaked in 1999 at 2.7% and among young adults at 1.4%. Since those peak years, crack use has declined appreciably—by about 37% among 8th graders, 48% among 10th graders, and 27% among 12th graders—yet it has held fairly steady among college students and young adults, at least until 2007, when use among college students appeared to decline. In general, the prevalence rates for this drug are relatively low—between 0.6% and 1.9% in all five groups. Among 12th graders, the group with the highest prevalence rate, annual crack prevalence among the college-bound is considerably lower than among those not bound for college (1.5% for college-bound versus 3.7% for non-college-bound in 2007).

  We believe that the particularly intense and early media coverage of the hazards of crack cocaine likely had the effect of capping an epidemic early by deterring many would-be users and motivating many experimenters to desist use. As has been mentioned, when we first measured crack use in 1987, it had the highest level of perceived risk of any illicit drug. Also, it did not turn out to be "instantly addicting" upon first-time use, as had been widely reported. In recent years, roughly 4% of 12th graders reported trying crack; however, only about 1% reported any use in the prior month, and of these recent users, only about half (i.e., about 0.5% of the total sample) reported using crack more than one or two times in the prior month. It thus appears that, among the small numbers of 12th graders who have ever tried crack, the great majority did not establish a pattern of continued use, let alone develop an addiction.

  In 1993 the levels of perceived risk and disapproval associated with crack dropped in all three grade levels, foretelling the rise in use that occurred in all three grades between 1994 and 1998. Because more than a decade had passed since the 1986 media frenzy over crack and its dangers, it is quite possible that generational forgetting contributed to the declines in risk and disapproval. Indeed, perceived risk of crack use eroded steadily at all grade levels from 1991 (or 1992 in the case of the 12th graders) through 2000. There has not been much systematic change in risk or disapproval of crack since then.

- Use of ***cocaine***[4] in general began to decline a year earlier than crack, probably because crack was still in the process of diffusing to new parts of the country, being still quite

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

new. Between 1986 and 1987 the annual prevalence rate for cocaine dropped dramatically, by about one fifth in all three populations being studied at that time—12th graders, college students, and young adults. The decline occurred when young people finally began to view experimental and occasional use—the type of use in which they are most likely to engage—as more dangerous. This change was probably influenced by the extensive media campaigns that began in the preceding year, but also almost surely by the highly publicized cocaine-related deaths in 1986 of sports stars Len Bias and Don Rogers. By 1992 the annual prevalence of cocaine use had fallen by about two thirds among the three populations for which long-term data are available (12th graders, college students, and young adults).

During the 1990s, however, cocaine use in all five age populations increased some, both beginning and ending in a staggered pattern by age, consistent with a cohort effect working its way up the age ladder. Use rose among 8th graders from 1991 to 1998, among 10th and 12th graders from 1992 to 1999, among college students from 1994 to 2004, and among young adults from 1996 through 2004. (Note that, among college students and young adults, use is now a bit lower since their peak rates reached in 2004; however, there does not yet seem to be any continuing decline.)

The story regarding attitudes and beliefs is informative. Having risen substantially after 1986, the perceived risk of using cocaine actually showed some (nonsignificant) decline in 1992 among 12th graders. In 1993, perceived risk for ***cocaine other than crack*** fell sharply in all grades and disapproval began to decline in all grades, though not as sharply as perceived risk. The decline in perceived risk had virtually ended by 1995 among 8th graders, by 1998 among 10th graders, and by 2001 among 12th graders, suggesting a cohort effect at work in this important belief, which tends to drive use. Disapproval declined between 1991 and 1996 among 8th graders, before leveling (until 2007, when a significant increase was observed); it also declined from 1992 through 1998 among 10th and 12th graders, with the exception of an increase for 12th graders in 1995. These changes foretold a subsequent leveling of use at each grade level. Use has since drifted down gradually in the lower grades.

The perceived availability of cocaine among 12th graders rose steadily from 1983 to 1989, suggesting that availability played no role in the substantial downturn in use that occurred after 1986. After 1989, however, perceived availability fell some among 12th graders—which may be explained in part by the greatly reduced proportions of 12th graders who said they have any friends who use, because friendship circles are an important part of the supply system. From 1992 through 1998 or 1999, perceived availability of powder cocaine changed little in the three grades, but after 1998 it declined fairly steadily among 8th graders through 2004 and among 10th and 12th graders through 2003, after which it leveled in 8th grade and eventually in 10th grade.

As with all the illicit drugs, lifetime cocaine prevalence climbs with age; in 2007 it reached 38% among 45-year-olds. Unlike all of the other illicit drugs, active use of cocaine—i.e., annual or monthly prevalence—holds fairly steady after high school (and, until recent years, its use actually increased after high school) rather than declining (see

Figure 4-7 in *Volume II*). Nearly all of the other illicit drugs show a decline in active use with age.

- ***PCP*** use fell sharply among 12th graders between 1979 and 1982, from an annual prevalence of 7.0% to 2.2%. It reached a low point of 1.2% in 1988, rose some in the 1990s to 2.6% in 1996 during the relapse period in the drug epidemic, and then declined to 1.1% by 2002, with little change thereafter. For young adults, the annual prevalence rate has fluctuated between 0.1% and 0.6%.

- Looking at the long-term trends, we see that the annual prevalence of ***heroin*** use among 12th graders fell by half between 1975 (1.0%) and 1979 (0.5%), then stabilized for 15 years, through 1994. Heroin use was also stable in the early 1990s among the other four populations covered here. Then, in 1994 for 8th graders and in 1995 for all other groups, use suddenly increased, with rates doubling or tripling in one or two years for 12th graders, college students, and young adults, and then remaining at the new higher levels among all five populations for the rest of the decade. Between 1999 and 2000, however, use significantly decreased among 8th graders (from 1.4% to 1.1%) and significantly increased among 12th graders (from 1.1% to 1.5%), with the latter change due entirely to an increase in noninjection use. Use of heroin declined significantly among 10th and 12th graders in 2001, as did use of heroin without a needle. In 2002 little change took place among the secondary school students, but young adults showed a significant decline in their reported heroin use. A significant decline in use of heroin overall, as well as use of heroin without a needle, occurred among 10th graders in 2003. In sum, all age groups have annual prevalence rates of heroin use in 2007 that are below their recent peaks (by roughly one third to one half in the case of 8th, 10th, and 12th graders, but by less among the college students and young adults); and there is no evidence of any ongoing trends at present.

  Two factors very likely contributed to the upturn in heroin use in the 1990s. One is a long-term decline in the perceived risk of harm, probably due to generational forgetting, because it had been a long time since the country had experienced a heroin epidemic along with publicity about its accompanying casualties. The second factor, not unrelated to the first, is that in the 1990s the greatly increased purity of heroin allowed it to be used by means other than injection. This may have lowered an important psychological barrier for some potential users, making heroin use less aversive and seemingly less addictive and less risky in general, because avoiding injection reduces the likelihood of transmission of HIV, hepatitis, or other serious blood-borne diseases. By introducing some new questions on heroin use in 1995, we were able to show that significant proportions of past-year users in all five populations were indeed taking heroin by means other than injection (see Table 2-2 and chapter 4 for details).

  The risk perceived to be associated with heroin fell for more than a decade after the study began, with 60% of the 1975 twelfth graders seeing a great risk of trying heroin once or twice, and only 46% of the 1986 twelfth graders saying the same. Between 1986 and 1991, perceived risk rose some, from 46% to 55%, undoubtedly reflecting the newly recognized threat of HIV infection associated with heroin injection. After 1991, however,

perceived risk fell again (to 51% by 1995), this time perhaps reflecting the fact that the newer heroin available on the street could be administered by methods other than injection. Between 1996 and 1998, perceived risk among 12th graders rose—perhaps as the result of an antiheroin campaign launched by the Partnership for a Drug-Free America in June 1996, as well as the visibility of heroin-related deaths of some celebrities in the entertainment and fashion design worlds. The perceived risk of trying heroin decreased among 12th graders in 1999, however, foretelling a significant increase in their use of the drug in 2000. In 2001, as the perceived risk of trying heroin increased slightly, 12th-graders' use declined significantly. In recent years there has been little change in the perceived risk of heroin use.

Questions about the degree of risk perceived to be associated with heroin use were introduced into the questionnaires for 8th and 10th graders in 1995. The questions asked specifically and only about use "without using a needle" because we thought this was the form of heroin use of greatest concern at that point. (Similar questions were asked of 12th graders, as well, in one of the six questionnaire forms.) In general, perceived risk for heroin use without a needle rose in all three grades in 1996 and 1997, before leveling.

- The use of ***narcotics other than heroin*** is reported only for 12th graders and older populations because we believe that younger students are not accurately discriminating among the drugs that should be included or excluded from this general class. Use declined gradually over most of the first half of the study in these groups. Twelfth graders had an annual prevalence rate in 1977 of 6.4%, which fell to 3.3% by 1992. But after about 1992 or 1993, all of the older age groups showed continuing increases for a decade or more, through 2003 or 2004, before stabilizing. An updating of the list of examples given in the question stem in 2002 led to an increase in reported prevalence. After a considerable increase in use from 1992 through 2002, the use of narcotics other than heroin has remained relatively constant since then, but at the highest levels ever recorded by the study.

  The specific drugs in this class are listed in Table E-4 in appendix E of *Volume I*. Among these, ***Vicodin***, ***codeine***, ***OxyContin***, and ***Percocet*** are commonly mentioned by 12th graders in recent years. They also account for much of the increase in use of the general class, though reported use of other substances in the class have increased as well.

- In 2002, specific questions were added for two drugs in this class—***Vicodin*** and ***OxyContin***—and the observed prevalence rates suggest that these two drugs very likely help to account for the upturn in use of the general class of narcotics other than heroin. In 2003, Vicodin had attained surprisingly high prevalence rates in the five populations under study here—an annual prevalence of 2.8% in 8th grade, 7.2% in 10th grade, 10.5% in 12th grade, 7.5% among college students, and 8.6% among young adults. In 2007 the rates were similar, at 2.7%, 7.2%, 9.6%, 6.7%, and 8.9% (respectively). Lower annual prevalence rates were found for OxyContin than Vicodin in 2003 across all age groups—1.7%, 3.6%, 4.5%, 2.2%, and 2.6%, respectively—but given that it is a highly addictive narcotic drug, the rates are not inconsequential. In 2007 the respective annual prevalence rates were generally a little higher: 1.8%, 3.9% 5.2%, 2.8%, and 2.9%. Because

OxyContin has received considerable adverse publicity in recent years, it is possible that perceived risk (which we do not measure) will increase. But because its use appears to have originated in several fairly delimited geographic areas, it seems likely that OxyContin was diffusing to new communities for some time, which may have delayed its turnaround overall, as seems to have happened earlier for crack and ecstasy.

- Use of ***tranquilizers*** among 12th graders saw a long and substantial decline from 11% annual prevalence in 1977 to 2.8% in 1992. After 1992, use increased significantly among 12th graders (as has been true with most drugs), reaching 7.7% in 2002 (but the question was revised slightly in 2001 to include Xanax as an example of a tranquilizer, so a small portion of the increase may be an artifact). Since then annual prevalence has leveled or even dropped a bit (6.2% in 2007). Reported tranquilizer use also increased modestly among 8th graders, from 1.8% in 1991 to 3.3% in 1996, before declining to 2.6% in 1998 and leveling since then. As with a number of other drugs, the downturn in use began considerably earlier among 8th graders compared to their older counterparts. Among 10th graders, annual prevalence remained stable between 1991 and 1994 at around 3.3%, and increased significantly to 5.6% in 2000 and 7.3% in 2001 (possibly including some artifact, as noted above). Use declined some after 2001, reaching 5.3% in 2007. After a period of stability, college student use showed an increase between 1994 and 2003, more than tripling in that period. For the young adult sample, after a long period of decline, annual prevalence more than doubled between 1997 and 2002, with little change thereafter. Most of the reported tranquilizer use in recent years has involved ***Valium*** and ***Xanax*** (see Table E-3 in appendix E of *Volume I*).

- The long-term gradual decline in ***sedative*** (***barbiturate***) use among 12th graders, which has been observed since the start of the study in 1975, halted in 1992. (Data are not included here for 8th and 10th graders, again because we believe that the younger students have more problems with proper classification of the relevant drugs.) Use among 12th graders then rose during the relapse phase in the drug epidemic, from 2.8% in 1992 to 6.7% by 2002—still well below the peak rate of 10.7% in 1975—and has shown little change thereafter. The 2007 annual prevalence of this class of drugs is lower among young adults (4.2%) and college students (3.6%) than among 12th graders (6.2%). Use among college students began to rise a few years later than it did among 12th graders, likely reflecting a cohort effect. Among young adults, sedative (barbiturate) use has increased since the early 1990s, rising from 1.6% in 1992 to 4.4% in 2004. It stands at 4.2% in 2007.

- ***Methaqualone***, another sedative drug, has shown a trend pattern quite different from barbiturates. Methaqualone use rose among 12th graders from 1975 to 1981, when annual prevalence reached 7.6%. Its use then fell very sharply, declining to 0.2% by 1993 before rising significantly during the general drug resurgence in the 1990s, to 1.1% by 1996. Prevalence rates have shown little consistent change since then, with use standing at 0.5% in 2007. Use also fell in the 1980s among young adults and college students, who had annual prevalence rates of only 0.3% and 0.2%, respectively, by 1989—the last year they were asked about this drug. In the late 1980s, shrinking availability may well have

played a role in the decline, as legal manufacture and distribution of methaqualone ceased. Because of its very low usage rates, only the 12th graders are now asked about use of this drug.

- It is an important development that use of most of the several classes of ***psychotherapeutic drugs***—sedatives (barbiturates), tranquilizers, and narcotics other than heroin—has become a larger part of the nation's drug abuse problem. While the rise appears to have halted, most rates remain near recent peak levels. During much of the 1990s and into the 2000s, we were seeing a virtually uninterrupted increase among 12th graders, college students, and young adults in the use of all of these drugs, which had fallen from favor from the mid-1970s through the early 1990s. Use then began rising in the early 1990s and continued to rise after the increase in use of most of the illegal drugs had ended in the late 1990s.

- To summarize, for many years five classes of illicitly used drugs—***marijuana***, ***amphetamines***, ***cocaine***, ***LSD***, and ***inhalants***—had an impact on appreciable proportions of young Americans in their late teens and 20s. In 2007, twelfth graders showed annual prevalence rates for these drugs of 31.7%, 7.5%, 5.2%, 2.1%, and 3.7% (respectively), reflecting declines in just about all of them, but in LSD in particular. Among college students in 2007, the comparable annual prevalence rates are 31.8%, 6.9%, 5.4%, 1.3%, and 1.5%; and for all young adults the rates are 28.5%, 5.6%, 6.2%, 1.1%, and 0.8%. Because ***LSD*** use has fallen so precipitously since 2001 in all five populations, it really no longer ranks as one of the major drugs of abuse, whereas ***narcotics other than heroin*** have become quite important due to their long-term rise that began in the 1990s. These narcotics now have annual prevalence rates of 8–9% among 12th graders, college students, and young adults. ***Tranquilizers*** have also become more important due to a similar rise in use, with prevalence rates in 2007 of about 6–7% across the same three populations, as have ***sedatives*** (***barbiturates***), with rates of 6.2%, 3.6% and 4.2%, respectively. The increase in use of these prescription-type drugs, combined with the decline in use of many illegal drugs, means that the use of prescription-type drugs clearly has become a more important part of the nation's drug problem.

- ***Ecstasy*** (***MDMA***) joined this set of long-established, more prevalent drugs for a period of time. However, annual prevalence rates for ecstasy dropped considerably between 2000 and 2007, from 3.1% to 1.5% for 8th graders, from 5.4% to 3.5% for 10th graders, from 8.2% to 4.5% for 12th graders, from 9.1% to 2.2% among college students, and from 7.2% to 2.5% among young adults.

- In 8th grade, ***inhalants*** rank second only to marijuana among the illicitly used drugs in terms of annual prevalence, and they actually rank first in lifetime use. Because the use of inhalants reflects a form of illicit psychoactive drug use, and because of its importance among the younger adolescents, an additional index of "any illicit drug use including inhalants" was introduced in Tables 2-1 through 2-3. The inclusion of inhalants makes relatively little difference in the illicit drug index prevalence rates for the older age groups, but considerable difference for the younger ones. For example, in 2007 the

proportion of 8th graders reporting any illicit drug use in their lifetime, exclusive of inhalants, was 19%, whereas including inhalants raised the figure to 28%.

- Several drugs have been added to the study's coverage in recent years, and they are all discussed in chapter 4 of *Volume I*. These include ***ketamine***, ***GHB***, and ***Rohypnol***, which are so-called "club drugs" (in addition to LSD and ecstasy). In general, these drugs have low prevalence rates that have declined over the past several years among 8th, 10th, and 12th graders: the 2007 annual prevalence rates for ***ketamine*** are 1.0%, 0.8%, and 1.3%, respectively; for ***GHB***, 0.7%, 0.6%, and 0.9%; and for ***Rohypnol***, 0.7% and 0.7% for 8th and 10th graders (the Rohypnol question for 12th graders was changed in 2002 and in 2007 stands at 1.0%). There was little change this year in the use of any of these three drugs. The two narcotic drugs added to our coverage in 2002—***OxyContin*** and ***Vicodin***—show considerably higher prevalence rates than do these drugs, as noted earlier.

- Two new substances used primarily by males to develop their physique and physical strength were added to the question set in 2001. One is ***androstenedione***, a precursor to anabolic steroids, which could be purchased over the counter until early 2005. Among males, where use is heavily concentrated, the 2007 annual prevalence rates are 0.9%, 0.9%, and 1.2% in grades 8, 10, and 12. (Among females, the rates are 0.8%, 0.2%, and 0.4%.) As discussed in chapter 10 of *Volume I*, the proportion of young males who report past-year use of ***androstenedione*** and/or ***steroids*** was appreciable. In 2001, when the "andro" question was introduced, the annual prevalence rate was 8.0% for 12th-grade boys. The rate has fallen considerably in all three grades since then, and in 2007 it was 3.0% among 12th-grade boys, reflecting a drop of more than three fifths.

- Another physique-enhancing substance that is not a drug, but rather a type of protein supplement, is ***creatine***. Because we thought its use was often combined with the use of steroids and androstenedione, we included a question on it in 2001 and found prevalence of use to be very high. Among males, who again are the primary users, the 2007 annual prevalence for creatine is 3.2%, 11.7%, and 15.3% in grades 8, 10, and 12. In other words, one in every seven 12th-grade boys had used creatine in the prior year. (For girls, the rates are far lower at 0.9%, 0.8%, and 1.3%.)

- Beginning in 1982, the study included a set of questions about the use of *nonprescription* stimulants, including stay-awake pills, diet pills, and the so-called "look-alikes." The annual prevalence among 12th graders of over-the-counter ***stay-awake pills***, which usually contain caffeine as their active ingredient, nearly doubled between 1982 and 1990, increasing from 12% to 23%. After 1990 this statistic fell, reaching 7.6% by 2007, the lowest level ever reported. Use has also declined among the college-age young adult population (ages 19 to 22), from a peak of 26% in 1989 to a low of 7.3% in 2007. (Data for the young adults are not shown.) The ***look-alikes*** have also shown some falloff in recent years. Among 12th graders, annual prevalence decreased slightly from 6.8% in 1995 to 5.0% in 1999, increased to 7.1% in 2001, and then decreased to 2.8% by 2007, the lowest level ever reported. Among young adults ages 19 to 22, use of look-alikes also

declined from 6.0% in 1995 to 1.3% in 2007. Among 12th graders, annual prevalence rates for over-the-counter ***diet pills*** declined from 15% to 10% between 1986 and 1995, increased to 15% by 2002, then declined to 6.7% in 2007. (Among 12th-grade girls in 2007, 14% had tried diet pills by the end of senior year, 9% used them in the past year, and 5% used them in just the past 30 days.) Among young adults ages 19 to 22, annual prevalence rates declined from 17% to 7% between 1986 and 1995, rose back to 17% by 2002, and then declined again to 8% by 2007. Use of these over-the-counter drugs by 12th graders is covered in chapter 10 of *Volume I*. One additional type of over-the-counter drug was added to the 8th-, 10th-, and 12th-grade questionnaires in 2006—***dextromethorphan***, a cough suppressant found in many cough and cold medications. Respondents were asked, "How often have you taken cough or cold medicines to get high?" The proportions indicating such use in the prior 12 months were 4%, 5%, and 6% in grades 8, 10, and 12—not inconsequential proportions. In 2007, the rates were about the same.

College–Noncollege Differences in Illicit Drug Use

- For analytic purposes, "college students" are defined here as those respondents one to four years past high school who are actively enrolled full-time in a two- or four-year college in March of the year of the survey. For nearly all categories of illicit drugs, college students show *lower* rates of use than their age-mates not in college. The only exception relates to inhalants, where they have equivalent rates. For a few categories of drugs—including ***any illicit drug***, ***marijuana***, ***hallucinogens***, and ***heroin***—college students also show annual usage rates that are about *average* for all high school graduates their age. (College students are about average on the index of any illicit drug use because they have average rates of marijuana use, which largely drives the index.)

- Although college-bound 12th graders have generally had below-average rates of use on *all* of the illicit drugs while they were in high school, these students' eventual use of some illicit drugs attained parity with, or even exceeded, the rates of those who do not attend college. As results from the study published in two recent books have shown, this college effect of "catching up" is largely explainable in terms of differential rates of leaving the parental home after high school graduation and of getting married. College students are more likely than their age peers to have left the parental home and its constraining influences, and less likely to have entered marriage with its constraining influences.[5]

- In general, the substantial decline in illicit substance use among American college students after 1980 has paralleled that of their age peers not in college. Further, from 1980 until 1992, all young adult high school graduates through age 28, as well as college students taken separately, showed trends that were highly parallel (for the most part) to trends among 12th graders (see chapter 9 of *Volume II*). After 1992 a number of drugs

[5]Bachman, J. G., Wadsworth, K. N., O'Malley, P. M., Johnston, L. D., & Schulenberg, J. E. (1997). *Smoking, drinking, and drug use in young adulthood: The impacts of new freedoms and new responsibilities.* Mahwah, NJ: Lawrence Erlbaum Associates. See also Bachman, J. G., O'Malley, P. M., Schulenberg, J. E., Johnston, L. D., Bryant, A. L., & Merline, A. C. (2002). *The decline of substance use in young adulthood: Changes in social activities, roles, and beliefs.* Mahwah, NJ: Lawrence Erlbaum Associates.

showed an increase in use among 12th graders (as well as 8th and 10th graders), but not among college students and young adults for some period of time.

This divergence, combined with the fact that the upturn began first among 8th graders (in 1992), suggests that cohort effects were emerging for illicit drug use, as discussed earlier. In fact, as those heavier using cohorts of 12th graders entered the college years, we saw a lagged increase in the use of several drugs in college. For example, annual prevalence reached a low point among 12th graders in 1992 for a number of drugs (e.g., ***cocaine***, ***amphetamines***, ***sedatives*** [***barbiturates***], ***tranquilizers***, ***narcotics other than heroin***, and ***any illicit drug other than marijuana***) before rising thereafter; among college students, those same drugs reached a low two years later in 1994, and then began to rise gradually. Then, in 1998, as ***marijuana*** use was declining in secondary school, we saw a sharp increase in use among college students. Consistent with our earlier predictions, the evidence for cohort effects resulting from generational replacement is impressive.

Male–Female Differences in Illicit Drug Use

- Regarding gender differences in the three older populations (12th graders, 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. For example, 2007 ***daily marijuana use*** rates among 12th graders are 6.8% for males versus 3.2% for females; among all adults (ages 19 to 30) the rates are 6.4% for males versus 3.5% for females; and among college students the rates are 4.9% for males versus 2.6% for females.

- The 8th- and 10th-grade samples evidence fewer and smaller gender differences in the use of drugs—perhaps because girls tend to date and then emulate older boys, who are in age groups considerably more likely to use drugs. While the rate of prior-year ***marijuana*** use is slightly higher for males, the rate for the use of ***any illicit drug other than marijuana*** tends to be slightly higher for females. There is little male–female difference in 8th and 10th grades in the use of ***ecstasy*** (***MDMA***), ***cocaine***, ***crack***, ***heroin***, ***Ritalin***, ***Rohypnol***, and ***GHB***. The use of ***inhalants***, ***amphetamines***, ***Ritalin***, ***methamphetamine***, and ***tranquilizers*** is slightly 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 secondary school students and most college students to purchase alcoholic beverages, their experience with alcohol is widespread. Alcohol has been tried by 39% of current 8th graders, 62% of 10th graders, 72% of 12th graders, and 83% of college students; active use is also widespread. Most important, perhaps, is the prevalence of ***occasions of heavy drinking***—five or more drinks in a row at least once in the prior two-week period—which was reported by 10% of 8th graders, 22% of 10th graders, 26% of 12th graders, and 41% of college students surveyed in 2007. Heavy drinking peaks in the early 20s, and recedes with age after that, reflected by the 38% rate

found in the entire young adult sample and the 28% rate found among 29- to 30-year-olds.

Alcohol use did not increase as use of other illicit drugs decreased among 12th graders from the late 1970s to the early 1990s, although it was common to hear such a displacement hypothesis asserted. This study demonstrates that the opposite seems to be true. After 1980, when illicit drug use was declining, the ***monthly prevalence of alcohol use*** among 12th graders also declined gradually, but substantially, from 72% in 1980 to 51% in 1992. ***Daily alcohol use*** declined by half over the same interval, 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 1993—nearly a one-third decline. When illicit drug use rose again in the 1990s, alcohol use (particularly binge drinking) rose some as well—albeit not nearly as sharply as did marijuana use. In the late 1990s, as illicit drug use leveled in secondary schools and began a gradual decline, similar trends were observed for alcohol. Therefore, the long-term evidence from this study indicates that alcohol use moves much more in concert with illicit drug use than counter to it.

College–Noncollege Differences in Alcohol Use

- Trends in ***alcohol*** use among college students are quite different than those for 12th graders or noncollege respondents of the same age (see Figure 9-14 in *Volume II*). From 1980 to 1993, college students showed considerably less drop-off in monthly prevalence of ***alcohol*** use (82% to 70%) than did 12th graders (72% to 51%), and also less decline in ***occasions of heavy drinking*** (from 44% to 40%) than either 12th graders (41% to 27%) or their noncollege age-mates (41% to 34%). Because both their noncollege age-mates and high school students were showing greater declines, the college students stood out as having maintained a high rate of heavy (or binge) drinking. Since 1993, this behavior has changed little among college students—in fact, their rate of binge drinking in 2007, 41%, is almost the same as their 1993 rate—while the rate among noncollege age-mates increased to 34% in 2007 and the 12th graders' rate increased to 32% in 1998, but then decreased to 25% by 2006. Still, college students continue to stand out as having a relatively high rate of binge drinking.

  Although college-bound 12th graders are consistently less likely than their non-college-bound counterparts to report occasions of heavy drinking, the higher rates of such drinking among college students compared to noncollege peers indicate that these 12th graders catch up to and pass their peers in binge drinking after high school graduation. As stated above, we have shown that this differential change after high school is largely attributable to college students' greater likelihood of leaving the parental home and smaller likelihood of getting married in the four years after graduating from high school. A recent publication from the study also shows that membership in a fraternity or sorority tends to increase heavy episodic drinking and marijuana use.[6]

[6]McCabe, S. E., Schulenberg, J. E., Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Kloska, D. D. (2005). Selection and socialization effects of fraternities and sororities on U.S. college student substance use: A multi-cohort national longitudinal study. *Addiction, 100,* 512–524.

- Since 1980, college students have generally had ***daily drinking*** rates that were slightly lower than their age peers, suggesting that they were more likely to confine their drinking to weekends, when they tend to drink a lot. The rate of daily drinking among the noncollege group fell from 8.3% in 1980 to 3.2% in 1994, but by 2000 had risen to 5.8%, about where it remained in 2006 (5.7%) before declining to 5.4% in 2007. Daily drinking by the college group also dropped in approximately the same time period, from 6.5% in 1980 to 3.0% in 1995, then increased to 5.0% in 2002; since then it has remained at 4–5%.

Male–Female Differences in Alcohol Use

- College men report much higher rates of ***daily drinking*** than college women (6.2% versus 3.1% in 2007). This gender difference also exists in the noncollege group (8.3% versus 3.3% in 2007).

- Given that the physiological impacts of five drinks are considerably greater for the typical young female versus the typical young male, it is not surprising that we find substantial gender differences in the prevalence of having ***five or more drinks in a row.*** Among 12th graders, the rates in 2007 are 22% for females versus 31% for males. This difference has generally been diminishing since the study began; in 1975 there was a 23-percentage-point difference between them, versus a 9-point difference by 2007.

- Among college students and young adults generally, there are also substantial gender differences in alcohol use, with college males drinking the most. In 2007, for example, 49% of college males report having ***five or more drinks in a row*** over the previous two weeks versus 36% of college females. Over the life of the study this gender difference has narrowed gradually, with the rate declining somewhat for males and increasing somewhat for females.

TRENDS IN CIGARETTE SMOKING

A number of very important findings about ***cigarette smoking*** among American adolescents and young adults have emerged during the life of the study, and we believe that one of the study's more important contributions to the long-term health of the nation's people has been to document and call attention to these trends. Despite the demonstrated health risks associated with smoking, young people have continued to establish regular cigarette habits during late adolescence in sizeable proportions, and, during the first half of the 1990s, in growing proportions. In fact, since the study began in 1975, cigarettes have consistently remained the class of abusable substances most frequently used on a daily basis by high school students.

- During most of the 1980s, when smoking rates were falling steadily among adults, we reported that smoking among adolescents was not declining. Then the situation went from bad to worse. Among 8th and 10th graders, the ***current*** (***past 30-day***) ***smoking*** rate increased by about half between 1991 (when their use was first measured) and 1996; and among 12th graders, the current smoking rate rose by nearly one third between 1992 and 1997. This study played an important role in bringing these disturbing increases in

adolescent smoking to public attention during those years, which was the historical period in which major social action was initiated in the White House, the FDA, the Congress, and eventually the state attorneys general, culminating in the tobacco settlement between the industry and the states.

Fortunately—and largely as the result of that settlement, we believe—there have been some important declines in current smoking since 1996 among 8th and 10th graders, and since 1997 among 12th graders. In fact, the declines have more than offset the increases observed earlier in the 1990s. In 2007, 7% of 8th graders (down from 14% in 1991 and 21% in 1996) reported smoking one or more cigarettes in the prior 30 days—a decline of two thirds from the recent peak rate. Some 14% of 10th graders were current smokers in 2007 (down from 21% in 1991 and 30% in 1996), representing a more than one-half drop from the recent peak rate. And in 2007, 22% of 12th graders were current smokers (versus 28% in 1991 and 37% in 1997), representing over a one-third drop from the recent peak. In recent years these declines have either ended or nearly ended. Despite these very important improvements in the past decade, nearly one quarter of today's young Americans are current smokers by the time they complete high school. Other research consistently shows that smoking rates are substantially higher among those who drop out before graduating.[7] Perhaps the most important fact at present is that the improvement appears to be drawing to an end.

Among college students, the peak rate in current smoking was not reached until 1999 (31%), but after that it declined only moderately (to 24% in 2005) until 2006, when a significant decline brought it down to 19%, with a 20% figure in 2007. Young adults 19 to 28 years old have shown only modest change in rates of current smoking between 1996 (30%) and 2007 (26%). However, we would expect that, as the cohort effects work their way up the age spectrum, smoking will decrease more in this age group as well.

- ***Daily smoking*** rates increased during the mid-1990s by about half among 8th graders (from a low of 7.0% in 1992 to 10.4% in 1996) and 10th graders (from a low of 12.3% in 1992 to 18.3% in 1996), while daily smoking among 12th graders increased by 43% (from a low of 17.2% in 1992 to 24.6% in 1997).[8] In 1997 we saw the first evidence of a change in the situation, as daily smoking rates declined among 8th graders and leveled among 10th graders, followed by a significant decline in 10th and 12th graders' daily smoking rates by 1998. All three grades have shown continual declines in daily smoking in the years since, with the more recent declines occurring primarily among the 12th graders as cohort effects worked their way up the age scale (though in 2007 it was mainly among the 8th graders that further decline occurred). Among college students, daily smoking increased by nearly half from 1994 (13%) through 1999 (19%)—reflecting the cohort replacement effect of the heavier smoking 12th-grade classes—before a

[7]For a recent analysis showing much higher smoking rates among 8th graders who later dropped out before completing high school, see Bachman, J. G., O'Malley, P. M., Schulenberg, J. E., Johnston, L. D., Freedman-Doan, P., & Messersmith, E. E. (2008). *The education–drug use connection: How successes and failures in school relate to adolescent smoking, drug use, and delinquency.* New York: Lawrence Erlbaum Associates/Taylor & Francis.

[8]For 12th graders, during a much earlier period (from 1977 to 1981) there had been a substantial decline in daily smoking, a leveling for nearly a decade (through 1990), and a slight decline in 1991 and 1992.

turnaround began in 2000, decreasing the level of daily use to 9% by 2007. The decline since 2000 has been smallest among young adults: prevalence rates were 22% in 2000 and 17% in 2007.

- The dangers that survey participants perceive to be associated with ***pack-a-day smoking*** differ greatly by grade level and seem to be unrealistically low at all grade levels. Currently, about three quarters of 12th graders (77%) report that pack-a-day smokers run a great risk of harming themselves physically or in other ways, but only 61% of the 8th graders say the same. All three grades showed a decrease in perceived risk between 1993 and 1995, as use was rising rapidly, but a slightly larger and offsetting increase in perceived risk occurred between 1995 and 2000, presaging the subsequent downturn in smoking. Between 2000 and 2003, perceived risk remained relatively level in all grades. In 2004, perceived risk increased in all grades: but since then, only the 12th graders have shown a continuation of the rise, and even among them perceived risk leveled in 2007.

- Disapproval of cigarette smoking was in decline for a longer period: from 1991 through 1996 among 8th and 10th graders, and from 1992 to 1996 among 12th graders. Since then there has been a fairly steady increase in disapproval of cigarette smoking in all three grades—at least until 2007, when the increase halted among 8th graders. Undoubtedly the heavy media coverage of the tobacco issue (the settlement with the state attorneys general, the congressional debate, the eventual state settlements, etc.) had an important influence on these attitudes and beliefs. However, that coverage diminished considerably in 1998, raising the question of whether those changes in youth attitudes would continue. It may well be, of course, that the removal of certain kinds of cigarette advertising and promotion, combined with national- and state-level antismoking campaigns and more recent significant increases in cigarette prices, have served to sustain and prolong these changes. In terms of media effects, this study has shown important changes in reported recall of antismoking ads resulting from both state and national campaigns.[9]

Age- and Cohort-Related Differences in Cigarette Smoking

- Initiation of smoking occurs most often in grades 6 through 9 (i.e., at modal ages 11–12 to 14–15), although according to the 2007 eighth graders, 8% had already initiated smoking before grade 6. The initiation rate trails off considerably by 12th grade, although a number of the light smokers in 12th grade 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 evidences 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, the rate is likely to remain high throughout the life cycle relative to that of other birth cohorts at equivalent ages.

- As we reported in the "Other Findings from the Study" chapter in the 1986 volume in this series, some 53% of the 12th graders who were half-pack-a-day (or more) smokers in

[9]Johnston, L. D., Terry-McElrath, Y. M., O'Malley, P. M., & Wakefield, M. (2005). Trends in recall and appraisal of anti-smoking advertising among American youth: National survey results, 1997–2001. *Prevention Science, 6*, 1–19.

senior year in 1985 said that many had tried to quit smoking and found they could not. Of those who had been daily smokers in 12th grade, nearly three quarters were still daily smokers seven to nine years later (based on the 1985 follow-up survey), despite the fact that in high school only 5% of them thought they would "definitely" be smoking five years hence. A more recent analysis, based on the 1995 follow-up survey, showed similar results. Nearly two thirds (63%) of those who had been daily smokers in the 12th grade were still daily smokers seven to nine years later, although in high school only 3% of them had thought they would "definitely" be smoking five 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 overestimate their own ability to quit. Additional data from the 8th- and 10th-grade students show us that younger adolescents are even more likely than older ones to seriously underestimate the dangers of smoking.

- The surveys of 8th and 10th graders also show that cigarettes are readily available to teens in 2007, even though perceived availability has been dropping for some years for these age groups: 56% of 8th graders and 78% of 10th graders say that cigarettes would be "fairly easy" or "very easy" for them to get, if they wanted them. Between 1992 (when these questions were first asked) and 1997, there was little change in reported availability. Since then, however, perceived availability of cigarettes has decreased significantly for 8th and 10th graders, quite likely reflecting the impact of new regulations and related enforcement efforts aimed at reducing the sale of cigarettes to children.[10] (Twelfth graders are not asked this question.)

College–Noncollege Differences in Cigarette Smoking

- A striking difference in smoking rates has long existed between college-bound and non-college-bound 12th graders. For example, in 2007, smoking a half pack or more per day is about three times as prevalent among the non-college-bound 12th graders as among the college bound (12.5% versus 4.0%). Among respondents of college age (one to four years past high school), those not in college also show dramatically higher rates of half-pack-a-day smoking than those who are in college—17.0% versus 4.3%, respectively. Clearly, the differences precede college attendance.

- In the first half of the 1990s, smoking rose among college students and their same-age peers, although the increases were not as steep for either group as they were among 12th graders. But in 1998 and 1999, while smoking was declining among secondary school students at all grades, smoking increased significantly for college students, no doubt reflecting the cohort effect from earlier, heavier smoking classes of 12th graders moving into the older age groups. Between 1991 and 1999, the 30-day prevalence of cigarette smoking by college students rose from 23% to 31%, or by about one third, and daily smoking rose from 14% to 19%, also by about one third. The year 2000 showed, for the first time in several years, a decline in college student smoking; that continued with a significant decline to 23% in 2003, and another significant decline to 19% in 2006. The rate in 2007 was 20%, possibly indicating a leveling off. (Because of the smaller numbers

[10]For a more detailed examination of recent changes in youth access to cigarettes, see Johnston, L. D., O'Malley, P. M., & Terry-McElrath, Y. M. (2004). Methods, locations, and ease of cigarette access for American youth, 1997–2002. *American Journal of Preventive Medicine, 27*, 267–276.

of cases in the college student samples, the trend lines are not always as smooth as they are for most of the other groups discussed here.) A much more modest decline has also been observed among their noncollege peers, but only since 2001.

Male–Female Differences in Cigarette Smoking

- In the 1970s, 12th-grade females caught up to and passed 12th-grade males in rates of ***current smoking***. Both genders then showed a decline in use followed by a long, fairly level period, with use by females consistently higher, but with the gender difference diminishing. In the early 1990s, another crossover occurred when rates rose more among males than females, and males have been consistently slightly higher in rates of current smoking since 1991 among 12th graders. In the lower grades, the genders have had similar smoking rates since their use was first measured in 1991.

- Among college students, females had a slightly higher probability of being daily smokers from 1980 through 1994—although this long-standing gender difference was not seen among their age peers who were not in college. However, a crossover occurred between 1994 and 2001, with college males exceeding college females in daily smoking—an echo of the crossover among 12th graders in 1991. Since about 2001 there has been little consistent gender difference in smoking among college students.

RACIAL/ETHNIC COMPARISONS

The three largest ethnic groups in the population—Whites, African Americans, and Hispanics—are examined here for 8th, 10th, and 12th graders. (Sample size limitations simply do not allow finer subgroup breakdowns unless data from many years are combined. Separate publications from the study have done just that.) A number of interesting findings emerge from the comparison of these three groups; the reader is referred to chapters 4 and 5 of *Volume I* for a full discussion and to appendix D of *Volume I* for a tabular documentation across all drugs.[11] The trends for these three subgroups are also presented graphically in an occasional paper available online.[12]

- African-American 12th graders have consistently shown lower usage rates than White 12th graders for most drugs, both licit and illicit. At the lower grade levels, where few have yet dropped out of school, African-American students also have lower usage rates

[11]We periodically publish comparisons that contain a number of the smaller racial/ethnic groups in the population, based on data combined for a number of contiguous years in order to attain adequate sample sizes. The first was Bachman, J. G., Wallace, J. M., Jr., O'Malley, P. M., Johnston, L. D., Kurth, C. L., & Neighbors, H. W. (1991). Racial/ethnic differences in smoking, drinking, and illicit drug use among American high school seniors, 1976–1989. *American Journal of Public Health, 81*, 372–377. More recent articles are: Wallace, J. M., Jr., Bachman J. G., O'Malley, P. M., Johnston, L. D., Schulenberg, J. E., & Cooper, S. M. (2002). Tobacco, alcohol and illicit drug use: Racial and ethnic differences among U.S. high school seniors, 1976–2000. *Public Health Reports, 117 (Supplement 1),* S67–S75; Wallace, J. M., Jr., Bachman, J. G., O'Malley, P. M., Schulenberg, J. E., Cooper, S. M., & Johnston, L. D. (2003). Gender and ethnic differences in smoking, drinking, and illicit drug use among American 8th, 10th, and 12th grade students, 1976–2000. *Addictions, 98*, 225–234; and Delva, J., Wallace, J. M., Jr., O'Malley, P. M., Bachman, J. G., Johnston, L. D., & Schulenberg, J. E. (2005). The epidemiology of alcohol, marijuana, and cocaine use among Mexican American, Puerto Rican, Cuban American, and other Latin American 8th-grade students in the United States: 1991–2002. *American Journal of Public Health*, *95*, 696–702.

[12]Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2008). *Demographic subgroup trends for various licit and illicit drugs, 1975–2007* (Monitoring the Future Occasional Paper No. 69) [Online]. Ann Arbor, MI: Institute for Social Research. Available: www.monitoringthefuture.org.

for many drugs, though not all. (In 2007, marijuana is an exception at 8th grade.) The differences are quite large for some drugs, including ***inhalants***, ***LSD***, ***hallucinogens other than LSD***, ***powder cocaine***, ***amphetamines***, ***methamphetamine***, ***tranquilizers***, ***OxyContin***, and ***Vicodin***.

- African-American students currently have a much lower 30-day prevalence rate of ***cigarette smoking*** than White students (11% versus 25% among 12th graders in 2007) because their smoking rate declined from 1983 to 1992, while the rate for White students stabilized for some years. After 1992, smoking rates rose among both White and African-American 12th graders, but by 1998 there was a leveling, and since then a reversal, in both groups in all grades. The White students showed a continuing decline since 2003 in all three grades, while smoking rates among African-American students have stayed about level.

- In 12th grade, ***occasions of heavy drinking*** are much less likely to be reported by African-American students (12%) than White students (30%) or Hispanic students (23%).

- In 12th grade, of the three racial/ethnic groups, Whites tend to have the highest rates of use on a number of drugs, including ***marijuana***, ***hallucinogens***, ***LSD*** specifically, ***hallucinogens other than LSD***, ***ecstasy*** (***MDMA***), ***narcotics other than heroin***, ***OxyContin*** specifically, ***Vicodin*** specifically, ***amphetamines***, ***Ritalin*** specifically, ***sedatives*** (***barbiturates***), ***tranquilizers***, ***alcohol***, ***getting drunk***, ***cigarettes***, and ***smokeless tobacco***.

- Hispanics have the highest usage rate in 12th grade for a number of the most dangerous drugs, for example, ***heroin*** in general and ***heroin with and without a needle***, ***crack***, ***cocaine***, ***methamphetamine***, and ***crystal methamphetamine*** (***ice***). Further, in 8th grade, Hispanics have the highest rates not only for these drugs, but for many of the others, as well. For example, in 8th grade, the 2007 annual prevalence of ***marijuana*** use for Hispanics is 14%, versus 10% for Whites and 11% for African Americans; the two-week prevalence of ***binge drinking*** is 16% for Hispanics, 10% for Whites, and 8% for African Americans. In other words, Hispanics have the highest rates of use for many drugs in 8th grade, but not in 12th, which suggests that their considerably higher dropout rate (compared to Whites and African Americans) may change their relative ranking by 12th grade.

- With regard to trends, 12th graders in all three racial/ethnic groups exhibited a decline in ***cocaine*** use from 1986 through 1992, although the decline was less steep among African-American 12th graders because their earlier increase in use was not as large as the increase among White and Hispanic students.

- For virtually ***all of the illicit drugs***, the three groups have tended to trend in parallel. Because White 12th graders had the highest level of use on a number of drugs—including ***amphetamines***, ***sedatives*** (***barbiturates***), and ***tranquilizers***—they also had the largest declines; African Americans have had the lowest rates and, therefore, the smallest declines.

DRUG USE IN EIGHTH GRADE

It is useful to focus specifically on the youngest age group in the study—the 8th graders, most of whom are 13 or 14 years old—because the worrisome levels of both licit and illicit drug use that they report help illustrate the nation's urgent need to continue to address the substance abuse problems among its youth.

- Among 8th graders in 2007, 39% report having tried ***alcohol*** (more than just a few sips), and nearly one in five (18%) say they have already been ***drunk*** at least once.

- Nearly one quarter of the 8th graders in 2007 (22%) have tried ***cigarettes***, and one in fourteen (7.1%) say they have smoked in the prior month. Shocking to most adults is the fact that only 61% of 8th graders recognize that there is great risk associated with being a pack-a-day smoker. While an increasing proportion will recognize the risk by 12th grade, for many this is too late, because they will have developed a smoking habit by then.

- ***Smokeless tobacco*** has been tried by 13% of male 8th graders in 2007, was used in the past month by 4.7% of them, and is used daily by 1.6%. (Rates are much lower among females.)

- One 8th grader in six (16%) reported using ***inhalants***, and 1 in 26 (3.9%) reported use in just the past month. This is the only class of drugs for which use is substantially higher in 8th grade than in 10th or 12th grade.

- ***Marijuana*** has been tried by nearly one in every seven 8th graders (14%) and has been used in the prior month by about 1 in every 18 (5.7%).

- A surprisingly large number of 8th graders (6.5%) say they have tried prescription-type ***amphetamines*** without medical instruction; 2.0% say they have used them in the prior 30 days.

- For most of the ***other illicit drugs***, relatively few 8th graders in 2007 say they have tried them. (This is consistent with the retrospective reports from 12th graders concerning the grades in which they first used the various drugs.) But the proportions having at least some experience with them is not inconsequential. Even a rate as low as 3% represents about one child in every 30-student classroom. The 2007 eighth-grade proportions reporting any lifetime experience with the other illicit drugs are: ***tranquilizers*** (3.9%), ***hallucinogens other than LSD*** (2.6%), ***methamphetamine*** (1.8%), ***cocaine other than crack*** (2.6%), ***ecstasy*** (2.3%), ***crack*** (2.1%), ***LSD*** (1.6%), ***steroids*** (1.5% overall, and 2.1% among males), ***heroin*** (1.3%), and ***Rohypnol*** (1.0%).

- In total, 28% of all 8th graders in 2007 have tried ***some illicit drug other than marijuana*** (including inhalants), while 11% or about one in nine have tried ***some illicit drug other than marijuana or inhalants***. Put another way, in an average 30-student classroom of 8th

graders, about eight have used some illicit drug other than marijuana, and three or four have used some drug other than marijuana or inhalants.

- The very large number of 8th graders who have already begun using the so-called "gateway drugs" (***tobacco***, ***alcohol***, ***inhalants***, and ***marijuana***) suggests that a substantial number are also at risk of proceeding further to such drugs as LSD, cocaine, amphetamines, and heroin.

DRUG USE BY AGE 45

Because we have now followed graduating 12th graders into their mid-40s, we can characterize the drug-using history of today's 45-year-olds (at least those who are high school graduates). This is important, not only because it shows how use by these respondents has developed over the almost three decades since they left high school, but also because many of them are now themselves the parents of adolescents. Their own past experiences with drug use may complicate communications with their children regarding drugs and, worse, their active use of substances may set an example for their children. The level of lifetime use they have attained is striking (see chapter 4 of *Volume II* for greater detail and discussion).

- Among 45-year-old high school graduates in 2007, we estimate that about three quarters (73%) have tried ***marijuana***, and that three fifths (60%) have tried an ***illicit drug other than marijuana***. (These estimates are adjusted to correct for panel attrition, as described in chapter 4 of *Volume II*.)

  Their current behavior is far less extreme than those statistics might imply, but it is not by any means negligible. One in eight (13%) indicates using marijuana in the last 12 months, while 1 in 10 (11%) affirms use of any other illicit drug in that time period. Their past-month prevalence rates are lower—6.9% and 5.0%, respectively. About 1 in 37 (2.7%) is a ***current daily marijuana*** user, though substantially more indicate that they have used marijuana daily at some time in the past.

- Quite high proportions of the 45-year-old respondents in 2007 have had some experience during their lifetime with nonmedical use of several of the specific illicit drugs other than marijuana. These include ***cocaine*** in any form (38%), ***amphetamines*** (34%), ***tranquilizers*** (25%), ***hallucinogens*** of any type (26%), ***narcotics other than heroin*** (21%), and ***sedatives*** (***barbiturates***) (20%). In sum, today's adults in their mid-40s tend to be a very drug-experienced segment of the population, as might be expected due to the fact that they graduated from high school near the peak of the drug epidemic. To repeat, 73% have tried marijuana and 60% have tried some illicit drug other than marijuana.

- Illicit drugs other than marijuana that have been used in just the prior 12 months by this age group (outside of medical regimen) include ***narcotics other than heroin*** (4.4%), ***tranquilizers*** (3.9%), ***cocaine*** (3.6%), and ***noncrack forms of cocaine*** (3.2%). Little active use is reported by these respondents for ***amphetamines***, ***crack***, or ***heroin***. (Of

course, we would not expect *heavy* heroin or crack users to have remained in the panel studies.)

- ***Alcohol*** consumption is relatively high among these 45-year-olds, with almost two thirds (64%) indicating that they consumed at least one alcoholic drink in the prior 30 days, 8.8% reporting current ***daily drinking*** (defined as drinking on 20 or more occasions in the prior 30 days), and 19% indicating ***occasional heavy drinking*** (defined as five or more drinks on at least one occasion in the prior two weeks). The rate of occasional heavy drinking is much lower than was exhibited by members of this cohort when they were of high school and college ages.

- Nearly one in five (18%) of these 45-year-old high school graduates currently smokes ***cigarettes***. Almost all of those are current ***daily smokers*** (15%).

SUMMARY AND CONCLUSIONS

We can summarize the findings on trends as follows: For more than a decade—from the late 1970s to the early 1990s—the use of a number of ***illicit drugs*** declined appreciably among 12th-grade students, and declined even more among American college students and young adults. These substantial improvements—which seem largely explainable in terms of changes in attitudes about drug use, beliefs about the risks of drug use, and peer norms against drug use—have some extremely important policy implications. One is that these various substance-using behaviors among American young people are malleable—they *can* be changed. It has been done before. The second is that demand-side (rather than supply-side) factors appear to have been pivotal in bringing about most of those changes. The levels of marijuana availability, as reported by 12th graders, have held fairly steady throughout the life of the study. (Moreover, both abstainers and quitters rank availability and price very low on their list of reasons for not using.) And, in fact, the perceived availability of cocaine was actually rising during the beginning of the sharp decline in cocaine and crack use in the mid- to late 1980s, which occurred when the perceived risk associated with that drug rose sharply. (See the last section of chapter 9, *Volume I*, for more examples and further discussion of this point.)

However, improvements are surely not inevitable; and when they occur, they should not be taken for granted. Relapse is always possible and, indeed, just such a "relapse" in the longer term epidemic occurred during the early to mid-1990s, as the country let down its guard on many fronts. (See chapter 8 of *Volume I* for a more detailed discussion.)

In 1992, eighth graders exhibited a significant increase in annual use of ***marijuana***, ***cocaine***, ***LSD***, and ***hallucinogens other than LSD***, as well as an increase in ***inhalant*** use. (In fact, all five populations showed some increase in ***LSD*** use, continuing a longer term trend for college students and young adults.) Further, the attitudes and beliefs of 12th graders regarding drug use began to soften.

In 1993, use of several drugs began to rise among 10th and 12th graders as well, fulfilling our earlier predictions based on eroding beliefs about the dangers of drugs and decreasing

disapproval of drug use. Increases occurred in a number of the so-called "gateway drugs"—***marijuana***, ***cigarettes***, and ***inhalants***—that we argued boded ill for the later use of other drugs in the usual sequence of drug use involvement. Indeed, the proportion of students reporting the use of ***any illicit drug other than marijuana*** rose steadily after 1991 among 8th and 10th graders and after 1992 among 12th graders. (This proportion increased by more than half among 8th graders, with annual prevalence rising from 8.4% in 1991 to 13.1% in 1996.) The softening attitudes about ***crack*** and ***other forms of cocaine*** also provided a basis for concern—and indeed the use of both increased fairly steadily through 1998.

Over the years, this study has demonstrated that changes in perceived risk and disapproval have been important causes of change in the use of a number of drugs. These beliefs and attitudes are almost certainly influenced by the amount and nature of public attention paid to the drug issue in the historical period during which young people are growing up. A substantial decline in attention to this issue in the early 1990s very likely explains why the increases in perceived risk and disapproval among students ceased and began to backslide. News coverage of the drug issue plummeted between 1989 and 1993 (although it made a considerable comeback as surveys—including this one—began to document that the problem was worsening again), and the media's *pro bono* placement of ads from the Partnership for a Drug-Free America also fell considerably. (During that period, the 12th graders in this study showed a steady decline in their recalled exposure to such ads, and in the judged impact of such ads on their own drug-taking behavior.)

Also, the deterioration in the drug abuse situation first began among our youngest cohorts—perhaps because they had not had the same opportunities for vicarious learning from the adverse drug experiences of people around them and people portrayed in the media—those we have called the "unfortunate role models." Clearly, there was a danger that, as the drug epidemic subsided in the 1980s and early 1990s, newer cohorts would have far less opportunity to learn through informal means about the dangers of drugs—that what we have called a "generational forgetting" of those risks would occur through a process of generational replacement of older, more drug-savvy cohorts with newer, more naive ones. This suggests that as drug use subsides, as it did by the early 1990s, the nation must redouble its efforts to ensure that such naive cohorts learn these lessons about the dangers of drugs through more formal means—from schools, parents, and focused messages in the media, for example—and that this more formalized prevention effort be *institutionalized* so that it will endure for the long term. Clearly, for the foreseeable future, American young people will be aware of the psychoactive potential of a host of drugs and will continue to have access to them. That means that each new generation of young people must learn the reasons that they should *not* use drugs. Otherwise, their natural curiosity and desires for new experiences will lead a great many to use.

Another lesson that derives from the epidemiological data in this study is that social influences that tend to reduce the *initiation* of substance use also have the potential to deter the *continuation* of use by those who have already begun to use, particularly if they are not yet deeply involved in use. Chapter 5 of *Volume I* shows how increased quitting rates have contributed importantly to downturns in the use of a number of drugs at different historical periods. The lesson for prevention is that primary prevention should not be the only goal of intervention programs; early-stage users may be persuaded to quit when their beliefs and attitudes regarding drugs are changed.

The following facts help to put into perspective the magnitude and variety of substance use problems that presently remain among American young people:

- More than a quarter (28%) of today's 8th graders have tried an ***illicit drug*** (if inhalants are included as an illicit drug), and nearly half (49%) of 12th graders have done so.

- By their late 20s, three of five (60%) of today's young adults have tried an ***illicit drug***, and more than a third (34%) have tried some ***illicit drug other than marijuana*** (usually in addition to marijuana). (These figures do not include inhalants.)

- Today, about one in six Americans (15% in 2007) has tried ***cocaine*** by the age of 30, and 8% have tried it by their senior year of high school (i.e., by age 17 or 18). More than 1 in every 31 twelfth graders (3.2%) has tried ***crack***. In the young adult sample, 1 in 25 (3.9%) has tried crack by age 29–30.

- More than 1 in every 20 twelfth graders (5.1%) in 2007 smokes ***marijuana daily***. Among young adults ages 19 to 28, the percentage is nearly the same (5.0%) and very close to the recent peak level. Among those same 12th graders in 2007, one in every six (16%) has been a daily marijuana smoker at some time for at least a month, and among young adults the comparable figure is one in five (20%).

- One in four 12th graders (26%) consumed ***five or more drinks in a row*** at least once in the two weeks prior to the survey, and we know that such behavior tends to increase among young adults one to four years past high school—that is, the peak college years. Indeed, almost half (49%) of all male college students report such binge drinking.

- Despite considerable improvements in smoking rates among American adolescents over more than a decade, almost a quarter (22%) of 12th graders in 2007 were current ***cigarette*** smokers, and one in eight (12%) were already current *daily* smokers. In addition, we know from studying previous cohorts that many young adults increase their rates of smoking within a year or so after they leave high school.

- Despite the substantial improvement in this country's drug situation in the 1980s and early 1990s, and then some further improvement beginning in the late 1990s, American secondary school students and young adults show a level of involvement with ***illicit drugs*** that is among the highest in the world's industrialized nations.[13] Even by longer term historical standards in this country, these rates remain extremely high, though in general they are not as high as in the peak years of the epidemic in the late 1970s. ***Heavy drinking*** also remains widespread and troublesome, and certainly the continuing initiation to ***cigarette smoking*** of a large, albeit declining, proportion of young people remains a matter of the greatest public health concern. Unfortunately, the declines in

[13]A published report from an international collaborative study, modeled largely after Monitoring the Future, provides comparative data from national school surveys of 15- to 16-year-olds that was completed in 2003 in 35 European countries. It also includes 2003 MTF data from 10th graders in the United States. See Hibell, B., Andersson, B., Bjarnasson, T., Ahlström, S., Balakireva, O., Kokkevi, A., & Morgan, M. (Eds.). (2004). *The ESPAD report 2003* (*The European School Survey Project on Alcohol and Other Drugs): Alcohol and other drug use among students in 35 European countries.* Stockholm: The Swedish Council for Information on Alcohol and Other Drugs, and the Council of Europe.

youth smoking have decelerated sharply in all grades in recent years, indicating that the improvements in youth smoking overall may be nearing an end.

- 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, and of young people to discover the abuse potential of existing products, such as Robitussin, and to rediscover older drugs, such as ***LSD*** and ***heroin***. While as a society we have made significant progress on a number of fronts in the fight against drug abuse, we must remain vigilant against the opening of new fronts, as well as the reemergence of trouble on older ones. In particular, we must guard against generational forgetting in our newest cohorts of adolescents due to a lack of public attention to the issue during the time that they are growing up.

  One of the dynamics that keeps the drug epidemic rolling is the emergence of new drugs whose hazards are little known. In 1999 we saw this happen with the drug ***ecstasy*** (***MDMA***). Other drugs like ***Rohypnol***, ***ketamine***, ***GHB***, and ***OxyContin*** have appeared in the past decade and have been added to the list of drugs under study. The spread of such new drugs appears to be facilitated and hastened today by young people's widespread use of chat rooms and other sites on the Internet. We predict a continuous flow of such new substances onto the scene, and believe that the task of rapidly documenting their emergence, establishing their adverse consequences, and quickly demystifying them will remain an important means by which policymakers, researchers, and educators deal with the continuing threats posed by such drugs. We also anticipate that there will be rediscoveries of older substances, as has been occurring in recent years with respect to the various psychotherapeutic prescription drugs, including tranquilizers, sedatives (barbiturates), and narcotic drugs.

The drug problem is not an enemy that can be vanquished. It is more a recurring and relapsing problem that must be contained to the greatest extent possible on an ongoing basis. Therefore, it is a problem that requires an ongoing, dynamic response from our society—one that takes into account the continuing generational replacement of our children, the generational forgetting of the dangers of drugs that can occur with that replacement, and the perpetual stream of new abusable substances that will threaten to lure our young people into involvement with drugs.

TABLE 2-1
Trends in Lifetime Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Any Illicit Drug[a]																		
8th Grade	18.7	20.6	22.5	25.7	28.5	31.2	29.4	29.0	28.3	26.8	26.8	24.5	22.8	21.5	21.4	20.9	19.0	-1.9 s
10th Grade	30.6	29.8	32.8	37.4	40.9	45.4	47.3	44.9	46.2	45.6	45.6	44.6	41.4	39.8	38.2	36.1	35.6	-0.5
12th Grade	44.1	40.7	42.9	45.6	48.4	50.8	54.3	54.1	54.7	54.0	53.9	53.0	51.1	51.1	50.4	48.2	46.8	-1.4
College Students	50.4	48.8	45.9	45.5	45.5	47.4	49.0	52.9	53.2	53.7	53.6	51.8	53.9	52.2	52.3	50.6	50.5	-0.1
Young Adults	62.2	60.2	59.6	57.5	57.4	56.4	56.7	57.0	57.4	58.2	58.1	59.0	60.2	60.5	60.4	59.7	59.8	+0.1
Any Illicit Drug other than Marijuana[a,b]																		
8th Grade	14.3	15.6	16.8	17.5	18.8	19.2	17.7	16.9	16.3	15.8‡	17.0	13.7	13.6	12.2	12.1	12.2	11.1	-1.1
10th Grade	19.1	19.2	20.9	21.7	24.3	25.5	25.0	23.6	24.0	23.1‡	23.6	22.1	19.7	18.8	18.0	17.5	18.2	+0.7
12th Grade	26.9	25.1	26.7	27.6	28.1	28.5	30.0	29.4	29.4	29.0‡	30.7	29.5	27.7	28.7	27.4	26.9	25.5	-1.4
College Students	25.8	26.1	24.3	22.0	24.5	22.7	24.4	24.8	25.5	25.8‡	26.3	26.9	27.6	28.0	26.5	26.3	25.3	-0.9
Young Adults	37.8	37.0	34.6	33.4	32.8	31.0	30.5	29.9	30.2	31.3‡	31.6	32.8	33.9	35.2	34.0	34.8	34.2	-0.6
Any Illicit Drug including Inhalants[a,c,d]																		
8th Grade	28.5	29.6	32.3	35.1	38.1	39.4	38.1	37.8	37.2	35.1	34.5	31.6	30.3	30.2	30.0	29.2	27.7	-1.5
10th Grade	36.1	36.2	38.7	42.7	45.9	49.8	50.9	49.3	49.9	49.3	48.8	47.7	44.9	43.1	42.1	40.1	39.8	-0.3
12th Grade	47.6	44.4	46.6	49.1	51.5	53.5	56.3	56.1	56.3	57.0	56.0	54.6	52.8	53.0	53.5	51.2	49.1	-2.1
College Students	52.0	50.3	49.1	47.0	47.0	49.1	50.7	55.4	54.4	54.6	53.1	52.3	54.1	52.9	53.9	53.3	52.5	-0.8
Young Adults	63.4	61.2	61.2	58.5	59.0	58.2	58.4	58.5	58.5	59.5	59.0	59.6	60.6	62.5	61.4	61.2	61.2	0.0
Marijuana/Hashish																		
8th Grade	10.2	11.2	12.6	16.7	19.9	23.1	22.6	22.2	22.0	20.3	20.4	19.2	17.5	16.3	16.5	15.7	14.2	-1.5
10th Grade	23.4	21.4	24.4	30.4	34.1	39.8	42.3	39.6	40.9	40.3	40.1	38.7	36.4	35.1	34.1	31.8	31.0	-0.8
12th Grade	36.7	32.6	35.3	38.2	41.7	44.9	49.6	49.1	49.7	48.8	49.0	47.8	46.1	45.7	44.8	42.3	41.8	-0.5
College Students	46.3	44.1	42.0	42.2	41.7	45.1	46.1	49.9	50.8	51.2	51.0	49.5	50.7	49.1	49.1	46.9	47.5	+0.6
Young Adults	58.6	56.4	55.9	53.7	53.6	53.4	53.8	54.4	54.6	55.1	55.7	56.8	57.2	57.4	57.0	56.7	56.7	0.0
Inhalants[c,d]																		
8th Grade	17.6	17.4	19.4	19.9	21.6	21.2	21.0	20.5	19.7	17.9	17.1	15.2	15.8	17.3	17.1	16.1	15.6	-0.5
10th Grade	15.7	16.6	17.5	18.0	19.0	19.3	18.3	18.3	17.0	16.6	15.2	13.5	12.7	12.4	13.1	13.3	13.6	+0.3
12th Grade	17.6	16.6	17.4	17.7	17.4	16.6	16.1	15.2	15.4	14.2	13.0	11.7	11.2	10.9	11.4	11.1	10.5	-0.6
College Students	14.4	14.2	14.8	12.0	13.8	11.4	12.4	12.8	12.4	12.9	9.6	7.7	9.7	8.5	7.1	7.4	6.3	-1.0
Young Adults	13.4	13.5	14.1	13.2	14.5	14.1	14.1	14.2	14.2	14.3	12.8	12.4	12.2	11.6	10.3	10.9	9.1	-1.8 s
Nitrites[e]																		
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.6	1.5	1.4	1.7	1.5	1.8	2.0	2.7	1.7	0.8	1.9	1.5	1.6	1.3	1.1	1.2	1.2	+0.1
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	1.4	1.2	1.3	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hallucinogens[b,f]																		
8th Grade	3.2	3.8	3.9	4.3	5.2	5.9	5.4	4.9	4.8	4.6‡	5.2	4.1	4.0	3.5	3.8	3.4	3.1	-0.3
10th Grade	6.1	6.4	6.8	8.1	9.3	10.5	10.5	9.8	9.7	8.9‡	8.9	7.8	6.9	6.4	5.8	6.1	6.4	+0.4
12th Grade	9.6	9.2	10.9	11.4	12.7	14.0	15.1	14.1	13.7	13.0‡	14.7	12.0	10.6	9.7	8.8	8.3	8.4	0.0
College Students	11.3	12.0	11.8	10.0	13.0	12.6	13.8	15.2	14.8	14.4‡	14.8	13.6	14.5	12.0	11.0	10.6	9.1	-1.5
Young Adults	15.7	15.7	15.4	15.4	16.1	16.4	16.8	17.4	18.0	18.4‡	18.3	19.6	19.7	19.3	17.6	17.2	16.0	-1.1

(Table continued on next page.)

TABLE 2-1 (cont.)
Trends in Lifetime Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
LSD																		
8th Grade	2.7	3.2	3.5	3.7	4.4	5.1	4.7	4.1	4.1	3.9	3.4	2.5	2.1	1.8	1.9	1.6	1.6	0.0
10th Grade	5.6	5.8	6.2	7.2	8.4	9.4	9.5	8.5	8.5	7.6	6.3	5.0	3.5	2.8	2.5	2.7	3.0	+0.3
12th Grade	8.8	8.6	10.3	10.5	11.7	12.6	13.6	12.6	12.2	11.1	10.9	8.4	5.9	4.6	3.5	3.3	3.4	+0.1
College Students	9.6	10.6	10.6	9.2	11.5	10.8	11.7	13.1	12.7	11.8	12.2	8.6	8.7	5.6	3.7	3.5	3.3	-0.2
Young Adults	13.5	13.8	13.6	13.8	14.5	15.0	15.0	15.7	16.2	16.4	16.0	15.1	14.6	13.4	11.2	10.1	9.6	-0.5
Hallucinogens other than LSD[b,f]																		
8th Grade	1.4	1.7	1.7	2.2	2.5	3.0	2.6	2.5	2.4	2.3‡	3.9	3.3	3.2	3.0	3.3	2.8	2.6	-0.3
10th Grade	2.2	2.5	2.8	3.8	3.9	4.7	4.8	5.0	4.7	4.8‡	6.6	6.3	5.9	5.8	5.2	5.5	5.7	+0.2
12th Grade	3.7	3.3	3.9	4.9	5.4	6.8	7.5	7.1	6.7	6.9‡	10.4	9.2	9.0	8.7	8.1	7.8	7.7	-0.1
College Students	6.0	5.7	5.4	4.4	6.5	6.5	7.5	8.7	8.8	8.2‡	10.7	11.0	12.8	10.1	10.6	10.1	8.5	-1.6
Young Adults	8.4	8.0	7.6	7.4	7.8	7.9	8.5	9.4	9.3	9.9‡	12.0	15.0	16.4	15.6	15.4	14.9	14.1	-0.8
PCP[g]																		
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	2.9	2.4	2.9	2.8	2.7	4.0	3.9	3.9	3.4	3.4	3.5	3.1	2.5	1.6	2.4	2.2	2.1	-0.1
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	3.1	2.0	1.9	2.0	2.2	1.9	2.4	2.7	2.3	2.3	3.1	2.5	3.0	2.7	2.0	2.4	2.1	-0.4
Ecstasy (MDMA)[h]																		
8th Grade	—	—	—	—	—	3.4	3.2	2.7	2.7	4.3	5.2	4.3	3.2	2.8	2.8	2.5	2.3	-0.1
10th Grade	—	—	—	—	—	5.6	5.7	5.1	6.0	7.3	8.0	6.6	5.4	4.3	4.0	4.5	5.2	+0.8
12th Grade	—	—	—	—	—	6.1	6.9	5.8	8.0	11.0	11.7	10.5	8.3	7.5	5.4	6.5	6.5	0.0
College Students	2.0	2.9	2.3	2.1	3.1	4.3	4.7	6.8	8.4	13.1	14.7	12.7	12.9	10.2	8.3	6.9	5.4	-1.5
Young Adults	3.2	3.9	3.8	3.8	4.5	5.2	5.1	7.2	7.1	11.6	13.0	14.6	15.3	16.0	14.9	14.4	13.1	-1.3
Cocaine																		
8th Grade	2.3	2.9	2.9	3.6	4.2	4.5	4.4	4.6	4.7	4.5	4.3	3.6	3.6	3.4	3.7	3.4	3.1	-0.3
10th Grade	4.1	3.3	3.6	4.3	5.0	6.5	7.1	7.2	7.7	6.9	5.7	6.1	5.1	5.4	5.2	4.8	5.3	+0.5
12th Grade	7.8	6.1	6.1	5.9	6.0	7.1	8.7	9.3	9.8	8.6	8.2	7.8	7.7	8.1	8.0	8.5	7.8	-0.7
College Students	9.4	7.9	6.3	5.0	5.5	5.0	5.6	8.1	8.4	9.1	8.6	8.2	9.2	9.5	8.8	7.7	8.5	+0.8
Young Adults	21.0	19.5	16.9	15.2	13.7	12.9	12.1	12.3	12.8	12.7	13.1	13.5	14.7	15.2	14.3	15.2	14.7	-0.4
Crack[i]																		
8th Grade	1.3	1.6	1.7	2.4	2.7	2.9	2.7	3.2	3.1	3.1	3.0	2.5	2.5	2.4	2.4	2.3	2.1	-0.2
10th Grade	1.7	1.5	1.8	2.1	2.8	3.3	3.6	3.9	4.0	3.7	3.1	3.6	2.7	2.6	2.5	2.2	2.3	0.0
12th Grade	3.1	2.6	2.6	3.0	3.0	3.3	3.9	4.4	4.6	3.9	3.7	3.8	3.6	3.9	3.5	3.5	3.2	-0.3
College Students	1.5	1.7	1.3	1.0	1.8	1.2	1.4	2.2	2.4	2.5	2.0	1.9	3.1	2.0	1.7	2.3	1.3	-0.9
Young Adults	4.8	5.1	4.3	4.4	3.8	3.9	3.6	3.8	4.3	4.6	4.7	4.3	4.7	4.2	4.1	4.4	3.9	-0.6
Other Cocaine[j]																		
8th Grade	2.0	2.4	2.4	3.0	3.4	3.8	3.5	3.7	3.8	3.5	3.3	2.8	2.7	2.6	2.9	2.7	2.6	-0.1
10th Grade	3.8	3.0	3.3	3.8	4.4	5.5	6.1	6.4	6.8	6.0	5.0	5.2	4.5	4.8	4.6	4.3	4.8	+0.5
12th Grade	7.0	5.3	5.4	5.2	5.1	6.4	8.2	8.4	8.8	7.7	7.4	7.0	6.7	7.3	7.1	7.9	6.8	-1.1
College Students	9.0	7.6	6.3	4.6	5.2	4.6	5.0	7.4	7.8	8.1	8.3	8.6	8.5	9.3	8.1	6.2	8.0	+1.7
Young Adults	19.8	18.4	15.1	13.9	12.4	11.9	11.3	11.5	11.8	11.7	12.1	12.8	13.5	14.4	13.3	14.4	14.0	-0.4

(Table continued on next page.)

TABLE 2-1 (cont.)
Trends in Lifetime Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change	
Heroin[k]																			
8th Grade	1.2	1.4	1.4	2.0	2.3	2.4	2.1	2.3	2.3	1.9	1.7	1.6	1.6	1.6	1.5	1.4	1.3	-0.1	
10th Grade	1.2	1.2	1.3	1.5	1.7	2.1	2.1	2.3	2.3	2.2	1.7	1.8	1.5	1.5	1.5	1.4	1.5	+0.1	
12th Grade	0.9	1.2	1.1	1.2	1.6	1.8	2.1	2.0	2.0	2.4	1.8	1.7	1.5	1.5	1.5	1.4	1.5	+0.1	
College Students	0.5	0.5	0.6	0.1	0.6	0.7	0.9	1.7	0.9	1.7	1.2	1.0	1.0	0.9	0.5	0.7	0.5	-0.2	
Young Adults	0.9	0.9	0.9	0.8	1.1	1.3	1.3	1.6	1.7	1.8	2.0	1.8	1.9	1.9	1.7	1.9	1.6	-0.3	
With a Needle[l]																			
8th Grade	—	—	—	—	1.5	1.6	1.3	1.4	1.6	1.1	1.2	1.0	1.0	1.1	1.0	1.0	0.9	-0.1	
10th Grade	—	—	—	—	1.0	1.1	1.1	1.2	1.3	1.0	0.8	1.0	0.9	0.8	0.8	0.9	0.9	0.0	
12th Grade	—	—	—	—	0.7	0.8	0.9	0.8	0.9	0.8	0.7	0.8	0.7	0.7	0.9	0.8	0.7	-0.1	
College Students	—	—	—	—	0.4	0.1	0.2	0.5	0.8	0.7	0.2	0.3	0.1	0.1	0.3	0.3	0.1	-0.2	
Young Adults	—	—	—	—	0.4	0.4	0.3	0.4	0.6	0.4	0.6	0.4	0.5	0.4	0.6	0.6	0.5	-0.1	
Without a Needle[l]																			
8th Grade	—	—	—	—	1.5	1.6	1.4	1.5	1.4	1.3	1.1	1.0	1.1	1.0	0.9	0.9	0.7	-0.2	
10th Grade	—	—	—	—	1.1	1.7	1.7	1.7	1.6	1.7	1.3	1.3	1.0	1.1	1.1	1.0	1.1	0.0	
12th Grade	—	—	—	—	1.4	1.7	2.1	1.6	1.8	2.4	1.5	1.6	1.8	1.4	1.3	1.1	1.4	+0.3	
College Students	—	—	—	—	0.5	1.0	1.2	2.1	1.0	2.5	1.3	1.2	1.1	1.0	0.3	0.8	0.4	-0.4	
Young Adults	—	—	—	—	0.9	1.3	1.5	1.7	1.9	2.1	2.1	1.8	2.2	2.1	1.8	2.4	1.9	-0.5	
Narcotics other than Heroin[m,n]																			
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
12th Grade	6.6	6.1	6.4	6.6	7.2	8.2	9.7	9.8	10.2	10.6	9.9‡	13.5	13.2	13.5	12.8	13.4	13.1	-0.2	
College Students	7.3	7.3	6.2	5.1	7.2	5.7	8.2	8.7	8.7	8.9	11.0‡	12.2	14.2	13.8	14.4	14.6	14.1	-0.4	
Young Adults	9.3	8.9	8.1	8.2	9.0	8.3	9.2	9.1	9.5	10.0	11.5‡	13.9	16.8	17.6	17.8	18.7	18.8	+0.2	
Amphetamines[m]																			
8th Grade	10.5	10.8	11.8	12.3	13.1	13.5	12.3	11.3	10.7	9.9	10.2	8.7	8.4	7.5	7.4	7.3	6.5	-0.8	
10th Grade	13.2	13.1	14.9	15.1	17.4	17.7	17.0	16.0	15.7	15.7	16.0	14.9	13.1	11.9	11.1	11.2	11.1	-0.1	
12th Grade	15.4	13.9	15.1	15.7	15.3	15.3	16.5	16.4	16.3	15.6	16.2	16.8	14.4	15.0	13.1	12.4	11.4	-1.0	
College Students	13.0	10.5	10.1	9.2	10.7	9.5	10.6	10.6	11.9	12.3	12.4	11.9	12.3	12.7	12.3	10.7	11.2	+0.6	
Young Adults	22.4	20.2	18.7	17.1	16.6	15.3	14.6	14.3	14.1	15.0	15.0	14.8	15.2	15.9	14.6	15.6	15.3	-0.3	
Methamphetamine[o,p]																			
8th Grade	—	—	—	—	—	—	—	—	4.5	4.2	4.4	3.5	3.9	2.5	3.1	2.7	1.8	-0.9	s
10th Grade	—	—	—	—	—	—	—	—	7.3	6.9	6.4	6.1	5.2	5.3	4.1	3.2	2.8	-0.4	
12th Grade	—	—	—	—	—	—	—	—	8.2	7.9	6.9	6.7	6.2	6.2	4.5	4.4	3.0	-1.4	ss
College Students	—	—	—	—	—	—	—	—	7.1	5.1	5.3	5.0	5.8	5.2	4.1	2.9	1.9	-0.9	
Young Adults	—	—	—	—	—	—	—	—	8.8	9.3	9.0	9.1	8.9	9.0	8.3	7.3	6.7	-0.6	
Crystal Meth. (Ice)[p]																			
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
12th Grade	3.3	2.9	3.1	3.4	3.9	4.4	4.4	5.3	4.8	4.0	4.1	4.7	3.9	4.0	4.0	3.4	3.4	-0.1	
College Students	1.3	0.6	1.6	1.3	1.0	0.8	1.6	2.2	2.8	1.3	2.3	2.0	2.9	2.2	2.4	1.7	1.3	-0.4	
Young Adults	2.9	2.2	2.7	2.5	2.1	3.1	2.5	3.4	3.3	3.9	4.0	4.1	4.7	4.7	4.4	4.7	3.7	-1.0	

(Table continued on next page.)

TABLE 2-1 (cont.)
Trends in Lifetime Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Sedatives (Barbiturates)[m]																		
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	6.2	5.5	6.3	7.0	7.4	7.6	8.1	8.7	8.9	9.2	8.7	9.5	8.8	9.9	10.5	10.2	9.3	-0.9
College Students	3.5	3.8	3.5	3.2	4.0	4.6	5.2	5.7	6.7	6.9	6.0	5.9	5.7	7.2	8.5	6.3	5.9	-0.4
Young Adults	8.2	7.4	6.5	6.4	6.7	6.6	6.5	6.9	7.4	8.1	7.8	8.0	8.7	9.7	10.0	9.5	9.8	+0.3
Methaqualone[m,q]																		
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.3	1.6	0.8	1.4	1.2	2.0	1.7	1.6	1.8	0.8	1.1	1.5	1.0	1.3	1.3	1.2	1.0	-0.3
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tranquilizers[b,m]																		
8th Grade	3.8	4.1	4.4	4.6	4.5	5.3	4.8	4.6	4.4	4.4‡	5.0	4.3	4.4	4.0	4.1	4.3	3.9	-0.5
10th Grade	5.8	5.9	5.7	5.4	6.0	7.1	7.3	7.8	7.9	8.0‡	9.2	8.8	7.8	7.3	7.1	7.2	7.4	+0.2
12th Grade	7.2	6.0	6.4	6.6	7.1	7.2	7.8	8.5	9.3	8.9‡	10.3	11.4	10.2	10.6	9.9	10.3	9.5	-0.8
College Students	6.8	6.9	6.3	4.4	5.4	5.3	6.9	7.7	8.2	8.8‡	9.7	10.7	11.0	10.6	11.9	10.0	9.1	-0.9
Young Adults	11.8	11.3	10.5	9.9	9.7	9.3	8.6	9.6	9.6	10.5‡	11.9	13.4	13.8	14.9	14.5	15.0	14.5	-0.5
Rohypnol[r]																		
8th Grade	—	—	—	—	—	1.5	1.1	1.4	1.3	1.0	1.1	0.8	1.0	1.0	1.1	1.0	1.0	-0.1
10th Grade	—	—	—	—	—	1.5	1.7	2.0	1.8	1.3	1.5	1.3	1.0	1.2	1.0	0.8	1.3	+0.5
12th Grade	—	—	—	—	—	1.2	1.8	3.0	2.0	1.5	1.7	—	—	—	—	—	—	—
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alcohol[s]																		
Any Use																		
8th Grade	70.1	69.3‡	55.7	55.8	54.5	55.3	53.8	52.5	52.1	51.7	50.5	47.0	45.6	43.9	41.0	40.5	38.9	-1.6
10th Grade	83.8	82.3‡	71.6	71.1	70.5	71.8	72.0	69.8	70.6	71.4	70.1	66.9	66.0	64.2	63.2	61.5	61.7	+0.2
12th Grade	88.0	87.5‡	80.0	80.4	80.7	79.2	81.7	81.4	80.0	80.3	79.7	78.4	76.6	76.8	75.1	72.7	72.2	-0.5
College Students	93.6	91.8	89.3	88.2	88.5	88.4	87.3	88.5	88.0	86.6	86.1	86.0	86.2	84.6	86.6	84.7	83.1	-1.5
Young Adults	94.1	93.4	92.1	91.2	91.6	91.2	90.7	90.6	90.2	90.7	89.9	90.2	89.3	89.4	89.1	88.9	87.9	-1.0
Been Drunk[t]																		
8th Grade	26.7	26.8	26.4	25.9	25.3	26.8	25.2	24.8	24.8	25.1	23.4	21.3	20.3	19.9	19.5	19.5	17.9	-1.6
10th Grade	50.0	47.7	47.9	47.2	46.9	48.5	49.4	46.7	48.9	49.3	48.2	44.0	42.4	42.3	42.1	41.4	41.2	-0.2
12th Grade	65.4	63.4	62.5	62.9	63.2	61.8	64.2	62.4	62.3	62.3	63.9	61.6	58.1	60.3	57.5	56.4	55.1	-1.3
College Students	79.6	76.8	76.4	74.4	76.6	76.2	77.0	76.8	75.1	74.7	76.1	75.1	74.9	73.4	72.9	73.1	71.6	-1.5
Young Adults	82.9	81.1	81.4	80.7	82.1	80.7	81.4	79.8	81.6	80.4	81.1	81.2	80.9	80.1	79.9	80.9	80.1	-0.8

(Table continued on next page.)

TABLE 2-1 (cont.)
Trends in Lifetime Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change	
Flavored Alcoholic Beverages[g,o]																			
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	37.9	35.5	35.5	34.0	-1.4	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	58.6	58.8	58.1	55.7	-2.3	
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	71.0	73.6	69.9	68.4	-1.4	
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	79.0	84.5	80.9	80.6	-0.2	
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	83.2	84.6	84.4	84.0	-0.4	
Cigarettes																			
Any Use																			
8th Grade	44.0	45.2	45.3	46.1	46.4	49.2	47.3	45.7	44.1	40.5	36.6	31.4	28.4	27.9	25.9	24.6	22.1	-2.4	ss
10th Grade	55.1	53.5	56.3	56.9	57.6	61.2	60.2	57.7	57.6	55.1	52.8	47.4	43.0	40.7	38.9	36.1	34.6	-1.5	
12th Grade	63.1	61.8	61.9	62.0	64.2	63.5	65.4	65.3	64.6	62.5	61.0	57.2	53.7	52.8	50.0	47.1	46.2	-0.9	
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Smokeless Tobacco[u]																			
8th Grade	22.2	20.7	18.7	19.9	20.0	20.4	16.8	15.0	14.4	12.8	11.7	11.2	11.3	11.0	10.1	10.2	9.1	-1.1	
10th Grade	28.2	26.6	28.1	29.2	27.6	27.4	26.3	22.7	20.4	19.1	19.5	16.9	14.6	13.8	14.5	15.0	15.1	+0.1	
12th Grade	—	32.4	31.0	30.7	30.9	29.8	25.3	26.2	23.4	23.1	19.7	18.3	17.0	16.7	17.5	15.2	15.1	-0.1	
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Steroids[v,w]																			
8th Grade	1.9	1.7	1.6	2.0	2.0	1.8	1.8	2.3	2.7	3.0	2.8	2.5	2.5	1.9	1.7	1.6	1.5	-0.1	
10th Grade	1.8	1.7	1.7	1.8	2.0	1.8	2.0	2.0	2.7	3.5	3.5	3.5	3.0	2.4	2.0	1.8	1.8	0.0	
12th Grade	2.1	2.1	2.0	2.4	2.3	1.9	2.4	2.7	2.9	2.5	3.7	4.0	3.5	3.4	2.6	2.7	2.2	-0.5	
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Young Adults	1.7	1.9	1.5	1.3	1.5	1.5	1.4	1.4	1.9	1.4	1.4	1.6	1.8	1.9	1.8	1.8	1.7	-0.1	

Source. The Monitoring the Future study, the University of Michigan.

Footnotes for Tables 2-1 through 2-4

Notes. Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.
"—" indicates data not available.
"*" indicates less than 0.05% but greater than 0%.
"‡" indicates some change in the question. See relevant footnote for that drug. See relevant figure to assess the impact of the wording changes.
Any apparent inconsistency between the change estimate and the prevalence-of-use estimates for the two most recent classes is due to rounding error.

Approximate Weighted *N*s	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
8th Graders	17,500	18,600	18,300	17,300	17,500	17,800	18,600	18,100	16,700	16,700	16,200	15,100	16,500	17,000	16,800	16,500	16,100
10th Graders	14,800	14,800	15,300	15,800	17,000	15,600	15,500	15,000	13,600	14,300	14,000	14,300	15,800	16,400	16,200	16,200	16,100
12th Graders	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200	14,500
College Students	1,410	1,490	1,490	1,410	1,450	1,450	1,480	1,440	1,440	1,350	1,340	1,260	1,270	1,400	1,360	1,280	1,250
Young Adults	6,600	6,800	6,700	6,500	6,400	6,300	6,400	6,200	6,000	5,700	5,800	5,300	5,300	5,700	5,400	5,100	4,800

[a]For 12th graders, college students, and young adults only: Use of "any illicit drug" includes any use of marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin or any use of narcotics other than heroin, amphetamines, sedatives (barbiturates), or tranquilizers not under a doctor's orders. For 8th and 10th graders only: The use of narcotics other than heroin and sedatives (barbiturates) has been excluded because these younger respondents appear to overreport use (perhaps because they include the use of nonprescription drugs in their answers).

[b]In 2001 the question text was changed on half of the questionnaire forms for each age group. "Other psychedelics" was changed to "other hallucinogens" and "shrooms" was added to the list of examples. For the tranquilizer list of examples, Miltown was replaced with Xanax. For 8th, 10th, and 12th graders only: The 2001 data presented here are based on the changed forms only; *N* is one half of *N* indicated. In 2002 the remaining forms were changed to the new wording. The data are based on all forms beginning in 2002. Data for any illicit drug other than marijuana and data for hallucinogens are also affected by these changes and have been handled in a parallel manner.

[c]For 12th graders, college students, and young adults only: Data based on five of six forms in 1991–1998; *N* is five sixths of *N* indicated. Data based on three of six forms beginning in 1999; *N* is three sixths of *N* indicated.

[d]Inhalants are unadjusted for underreporting of amyl and butyl nitrites.

[e]For 12th graders only: Data based on one of six forms; *N* is one sixth of *N* indicated. For young adults only: Data based on one of six forms; *N* is one sixth of *N* indicated. Questions about nitrite use were dropped from the young adult questionnaires in 1995.

[f]Hallucinogens are unadjusted for underreporting of PCP.

[g]For 12th graders, college students, and young adults only: Data based on one of six forms; *N* is one sixth of *N* indicated.

[h]For 8th and 10th graders only: Data based on one of two forms in 1996; *N* is one half of *N* indicated. Data based on one third of *N* indicated in 1997–2001 due to changes in the questionnaire forms. Data based on two of four forms beginning in 2002; *N* is one half of *N* indicated. For 12th graders only: Data based on one of six forms in 1996–2001; *N* is one sixth of *N* indicated. Data based on two of six forms beginning in 2002; *N* is two sixths of *N* indicated. For college students and young adults only: Data based on two of six forms in 1991–2001; *N* is two sixths of *N* indicated. Data based on three of six forms beginning in 2002; *N* is three sixths of *N* indicated.

[i]For college students and young adults only: Data based on five of six forms beginning in 2002; *N* is five sixths of *N* indicated.

[j]For 12th graders only: Data based on four of six forms; *N* is four sixths of *N* indicated. For college students and young adults only: Data based on four of six forms; *N* is four sixths of *N* indicated.

[k]In 1995, the heroin question was changed in one of two forms for 8th and 10th graders, in three of six forms for 12th graders, and in two of six forms for college students and young adults. Separate questions were asked for use with injection and without injection. In 1996, the heroin question was changed in all remaining 8th- and 10th-grade forms. Data presented here represent the combined data from all forms.

[l]For 8th and 10th graders only: Data based on one of two forms in 1995; *N* is one half of *N* indicated. Data based on all forms beginning in 1996. For 12th graders only: Data based on three of six forms; *N* is three sixths of *N* indicated. For college students and young adults only: Data based on two of six forms; *N* is two sixths of *N* indicated.

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

[n]In 2002 the question text was changed in half of the questionnaire forms. The list of examples of narcotics other than heroin was updated: Talwin, laudanum, and paregoric—all of which had negligible rates of use by 2001—were replaced with Vicodin, OxyContin and Percocet. The 2002 data presented here are based on the changed forms only; *N* is one half of *N* indicated. In 2003, the remaining forms were changed to the new wording. The data are based on all forms beginning in 2003.
[o]For 8th and 10th graders only: Data based on one of four forms; *N* is one third of *N* indicated.
[p]For 12th graders, college students, and young adults only: Data based on two of six forms; *N* is two sixths of *N* indicated.
[q]For 12th graders only: Data based on one of six forms; *N* is one sixth of *N* indicated.
[r]For 8th and 10th graders only: Data based on one of two forms in 1996; *N* is one half of *N* indicated. Data based on three of four forms in 1997–1998; *N* is two thirds of *N* indicated. Data based on two of four forms in 1999–2001; *N* is one third of *N* indicated. Data based on one of four forms beginning in 2002; *N* is one sixth of *N* indicated. For 12th graders only: Data based on one of six forms in 1996–2001; *N* is one sixth of *N* indicated. Data based on two of six forms beginning in 2002; *N* is two sixths of *N* indicated. Data for 2001 and 2002 are not comparable due to changes in the questionnaire forms. For college students and young adults only: Data based on two of six forms; *N* is two sixths of *N* indicated.
[s]For 8th, 10th, and 12th graders only: In 1993, the question text was changed slightly in half of the forms to indicate that a "drink" meant "more than just a few sips." The 1993 data are based on the changed forms only; *N* is one half of *N* indicated for these groups. In 1994 the remaining forms were changed to the new wording. The data are based on all forms beginning in 1994. In 2004, the question text was changed slightly in half of the forms. An examination of the data did not show any effect from the wording change. The remaining forms were changed in 2005. For college students and young adults: The revision of the question text resulted in rather little change in the reported prevalence of use. The data for all forms are used to provide the most reliable estimate of change.
[t]For 12th graders only: Data based on two of six forms; *N* is two sixths of *N* indicated. For college students and young adults only: Data based on three of six forms; *N* is three sixths of *N* indicated.
[u]For 8th and 10th graders only: Data based on one of two forms for 1991–1996 and on two of four forms beginning in 1997; *N* is one half of *N* indicated. For 12th graders only: Data based on one of six forms; *N* is one sixth of *N* indicated. For college students and young adults only: Questions about smokeless tobacco use were dropped from the analyses in 1989.
[v]For 8th, 10th, and 12th graders only: In 2006, the question text was changed slightly in some of the forms. An examination of the data did not show any effect from the wording change. For 12th graders only: Data based on two of six forms in 1991–2005; *N* is two sixths of *N* indicated. Data based on three of six forms in 2006; *N* is three sixths of *N* indicated.
[w]For college students, and young adults only: Data based on two of six forms; *N* is two sixths of *N* indicated.
[x]For 12th graders only: Data based on two of six forms in 2002–2005; *N* is two sixths of *N* indicated. Data based on three of six forms beginning in 2006; *N* is three sixths of *N* indicated.
[y]For 12th graders only: Data based on two of six forms in 2000; *N* is two sixths of *N* indicated. Data based on three of six forms in 2001; *N* is three sixths of *N* indicated. Data based on one of six forms beginning in 2002; *N* is one sixth of *N* indicated. For college students and young adults only: Data based on two of six forms; *N* is two sixths of *N* indicated.
[z]For 12th graders only: Data based on two of six forms in 2000; *N* is two sixths of *N* indicated. Data based on three of six forms beginning in 2001; *N* is three sixths of *N* indicated. For college students and young adults only: Data based on two of six forms; *N* is two sixths of *N* indicated.
[aa]For 12th graders only: The 2003 flavored alcoholic beverage data were created by adjusting the 2004 data to reflect the observed 2003 to 2004 change in a slightly different version of the flavored alcoholic beverage question. In 2004 the original question was revised to include wine coolers among the examples—a change that had very little effect on the observed prevalence-of-use rate.
[bb]Daily use is defined as use on 20 or more occasions in the past 30 days except for cigarettes and smokeless tobacco, for which actual daily use is measured, and for 5+ drinks, for which the prevalence of having five or more drinks in a row in the last two weeks is measured.
[cc]For 12th graders only: Due to a coding error, previously released versions of this table contained values that were slightly off for the measure of five or more drinks in a row for 2005 and 2006. These have been corrected here.

TABLE 2-2
Trends in Annual Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Any Illicit Drug[a]																		
8th Grade	11.3	12.9	15.1	18.5	21.4	23.6	22.1	21.0	20.5	19.5	19.5	17.7	16.1	15.2	15.5	14.8	13.2	-1.6 s
10th Grade	21.4	20.4	24.7	30.0	33.3	37.5	38.5	35.0	35.9	36.4	37.2	34.8	32.0	31.1	29.8	28.7	28.1	-0.7
12th Grade	29.4	27.1	31.0	35.8	39.0	40.2	42.4	41.4	42.1	40.9	41.4	41.0	39.3	38.8	38.4	36.5	35.9	-0.5
College Students	29.2	30.6	30.6	31.4	33.5	34.2	34.1	37.8	36.9	36.1	37.9	37.0	36.5	36.2	36.6	33.9	35.0	+1.1
Young Adults	27.0	28.3	28.4	28.4	29.8	29.2	29.2	29.9	30.3	30.8	32.1	32.4	33.0	33.7	32.8	32.1	32.5	+0.5
Any Illicit Drug other than Marijuana[a,b]																		
8th Grade	8.4	9.3	10.4	11.3	12.6	13.1	11.8	11.0	10.5	10.2‡	10.8	8.8	8.8	7.9	8.1	7.7	7.0	-0.7
10th Grade	12.2	12.3	13.9	15.2	17.5	18.4	18.2	16.6	16.7	16.7‡	17.9	15.7	13.8	13.5	12.9	12.7	13.1	+0.4
12th Grade	16.2	14.9	17.1	18.0	19.4	19.8	20.7	20.2	20.7	20.4‡	21.6	20.9	19.8	20.5	19.7	19.2	18.5	-0.7
College Students	13.2	13.1	12.5	12.2	15.9	12.8	15.8	14.0	15.4	15.6‡	16.4	16.6	17.9	18.6	18.5	18.1	17.3	-0.8
Young Adults	14.3	14.1	13.0	13.0	13.8	13.2	13.6	13.2	13.7	14.9‡	15.4	16.3	18.1	18.8	18.5	18.4	18.1	-0.2
Any Illicit Drug including Inhalants[a,c,d]																		
8th Grade	16.7	18.2	21.1	24.2	27.1	28.7	27.2	26.2	25.3	24.0	23.9	21.4	20.4	20.2	20.4	19.7	18.0	-1.7 s
10th Grade	23.9	23.5	27.4	32.5	35.6	39.6	40.3	37.1	37.7	38.0	38.7	36.1	33.5	32.9	31.7	30.7	30.2	-0.5
12th Grade	31.2	28.8	32.5	37.6	40.2	41.9	43.3	42.4	42.8	42.5	42.6	42.1	40.5	39.1	40.3	38.0	37.0	-0.9
College Students	29.8	31.1	31.7	31.9	33.7	35.1	35.5	39.1	37.4	37.0	38.2	37.7	36.0	35.9	37.9	35.5	36.8	+1.3
Young Adults	27.8	29.2	28.9	29.2	30.4	30.2	30.1	30.6	30.6	31.2	33.2	32.4	32.7	34.9	32.8	32.6	33.2	+0.6
Marijuana/Hashish																		
8th Grade	6.2	7.2	9.2	13.0	15.8	18.3	17.7	16.9	16.5	15.6	15.4	14.6	12.8	11.8	12.2	11.7	10.3	-1.4 s
10th Grade	16.5	15.2	19.2	25.2	28.7	33.6	34.8	31.1	32.1	32.2	32.7	30.3	28.2	27.5	26.6	25.2	24.6	-0.6
12th Grade	23.9	21.9	26.0	30.7	34.7	35.8	38.5	37.5	37.8	36.5	37.0	36.2	34.9	34.3	33.6	31.5	31.7	+0.2
College Students	26.5	27.7	27.9	29.3	31.2	33.1	31.6	35.9	35.2	34.0	35.6	34.7	33.7	33.3	33.3	30.2	31.8	+1.6
Young Adults	23.8	25.2	25.1	25.5	26.5	27.0	26.8	27.4	27.6	27.9	29.2	29.3	29.0	29.2	28.2	27.7	28.5	+0.8
Inhalants[c,d]																		
8th Grade	9.0	9.5	11.0	11.7	12.8	12.2	11.8	11.1	10.3	9.4	9.1	7.7	8.7	9.6	9.5	9.1	8.3	-0.8
10th Grade	7.1	7.5	8.4	9.1	9.6	9.5	8.7	8.0	7.2	7.3	6.6	5.8	5.4	5.9	6.0	6.5	6.6	+0.2
12th Grade	6.6	6.2	7.0	7.7	8.0	7.6	6.7	6.2	5.6	5.9	4.5	4.5	3.9	4.2	5.0	4.5	3.7	-0.9
College Students	3.5	3.1	3.8	3.0	3.9	3.6	4.1	3.0	3.2	2.9	2.8	2.0	1.8	2.7	1.8	1.5	1.5	+0.1
Young Adults	2.0	1.9	2.1	2.1	2.4	2.2	2.3	2.1	2.3	2.1	1.7	1.6	1.4	1.7	1.3	1.3	0.8	-0.5
Nitrites[e]																		
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	0.9	0.5	0.9	1.1	1.1	1.6	1.2	1.4	0.9	0.6	0.6	1.1	0.9	0.8	0.6	0.5	0.8	+0.3
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	0.2	0.1	0.4	0.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hallucinogens[b,f]																		
8th Grade	1.9	2.5	2.6	2.7	3.6	4.1	3.7	3.4	2.9	2.8‡	3.4	2.6	2.6	2.2	2.4	2.1	1.9	-0.1
10th Grade	4.0	4.3	4.7	5.8	7.2	7.8	7.6	6.9	6.9	6.1‡	6.2	4.7	4.1	4.1	4.0	4.1	4.4	+0.3
12th Grade	5.8	5.9	7.4	7.6	9.3	10.1	9.8	9.0	9.4	8.1‡	9.1	6.6	5.9	6.2	5.5	4.9	5.4	+0.5
College Students	6.3	6.8	6.0	6.2	8.2	6.9	7.7	7.2	7.8	6.7‡	7.5	6.3	7.4	5.9	5.0	5.6	4.9	-0.7
Young Adults	4.5	5.0	4.5	4.8	5.6	5.6	5.9	5.2	5.4	5.4‡	5.4	4.7	5.2	4.7	4.5	4.1	3.8	-0.3

(Table continued on next page.)

TABLE 2-2 (cont.)
Trends in Annual Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
LSD																		
8th Grade	1.7	2.1	2.3	2.4	3.2	3.5	3.2	2.8	2.4	2.4	2.2	1.5	1.3	1.1	1.2	0.9	1.1	+0.1
10th Grade	3.7	4.0	4.2	5.2	6.5	6.9	6.7	5.9	6.0	5.1	4.1	2.6	1.7	1.6	1.5	1.7	1.9	+0.2
12th Grade	5.2	5.6	6.8	6.9	8.4	8.8	8.4	7.6	8.1	6.6	6.6	3.5	1.9	2.2	1.8	1.7	2.1	+0.4
College Students	5.1	5.7	5.1	5.2	6.9	5.2	5.0	4.4	5.4	4.3	4.0	2.1	1.4	1.2	0.7	1.4	1.3	-0.1
Young Adults	3.8	4.3	3.8	4.0	4.6	4.5	4.4	3.5	4.0	3.7	3.4	1.8	1.2	0.9	0.8	1.2	1.1	-0.1
Hallucinogens other than LSD[b,f]																		
8th Grade	0.7	1.1	1.0	1.3	1.7	2.0	1.8	1.6	1.5	1.4‡	2.4	2.1	2.1	1.9	2.0	1.8	1.6	-0.2
10th Grade	1.3	1.4	1.9	2.4	2.8	3.3	3.3	3.4	3.2	3.1‡	4.3	4.0	3.6	3.7	3.5	3.7	3.8	+0.2
12th Grade	2.0	1.7	2.2	3.1	3.8	4.4	4.6	4.6	4.3	4.4‡	5.9	5.4	5.4	5.6	5.0	4.6	4.8	+0.2
College Students	3.1	2.6	2.7	2.8	4.0	4.1	4.9	4.4	4.5	4.4‡	5.5	5.8	7.1	5.6	5.0	5.4	4.7	-0.7
Young Adults	1.7	1.9	1.9	2.0	2.5	2.8	3.1	3.0	3.0	3.4‡	3.5	4.0	4.9	4.5	4.2	3.8	3.6	-0.2
PCP[g]																		
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.4	1.4	1.4	1.6	1.8	2.6	2.3	2.1	1.8	2.3	1.8	1.1	1.3	0.7	1.3	0.7	0.9	+0.2
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	0.3	0.3	0.2	0.3	0.3	0.2	0.5	0.6	0.6	0.3	0.6	0.3	0.3	0.1	0.6	0.2	0.3	+0.1
Ecstasy (MDMA)[h]																		
8th Grade	—	—	—	—	—	2.3	2.3	1.8	1.7	3.1	3.5	2.9	2.1	1.7	1.7	1.4	1.5	+0.1
10th Grade	—	—	—	—	—	4.6	3.9	3.3	4.4	5.4	6.2	4.9	3.0	2.4	2.6	2.8	3.5	+0.7
12th Grade	—	—	—	—	—	4.6	4.0	3.6	5.6	8.2	9.2	7.4	4.5	4.0	3.0	4.1	4.5	+0.4
College Students	0.9	2.0	0.8	0.5	2.4	2.8	2.4	3.9	5.5	9.1	9.2	6.8	4.4	2.2	2.9	2.6	2.2	-0.5
Young Adults	0.8	1.0	0.8	0.7	1.6	1.7	2.1	2.9	3.6	7.2	7.5	6.2	4.5	3.5	3.0	3.0	2.5	-0.6
Cocaine																		
8th Grade	1.1	1.5	1.7	2.1	2.6	3.0	2.8	3.1	2.7	2.6	2.5	2.3	2.2	2.0	2.2	2.0	2.0	-0.1
10th Grade	2.2	1.9	2.1	2.8	3.5	4.2	4.7	4.7	4.9	4.4	3.6	4.0	3.3	3.7	3.5	3.2	3.4	+0.3
12th Grade	3.5	3.1	3.3	3.6	4.0	4.9	5.5	5.7	6.2	5.0	4.8	5.0	4.8	5.3	5.1	5.7	5.2	-0.5
College Students	3.6	3.0	2.7	2.0	3.6	2.9	3.4	4.6	4.6	4.8	4.7	4.8	5.4	6.6	5.7	5.1	5.4	+0.3
Young Adults	6.2	5.7	4.7	4.3	4.4	4.1	4.7	4.9	5.4	5.4	5.8	5.8	6.6	7.1	6.9	6.6	6.2	-0.3
Crack[i]																		
8th Grade	0.7	0.9	1.0	1.3	1.6	1.8	1.7	2.1	1.8	1.8	1.7	1.6	1.6	1.3	1.4	1.3	1.3	+0.1
10th Grade	0.9	0.9	1.1	1.4	1.8	2.1	2.2	2.5	2.4	2.2	1.8	2.3	1.6	1.7	1.7	1.3	1.3	0.0
12th Grade	1.5	1.5	1.5	1.9	2.1	2.1	2.4	2.5	2.7	2.2	2.1	2.3	2.2	2.3	1.9	2.1	1.9	-0.1
College Students	0.5	0.4	0.6	0.5	1.1	0.6	0.4	1.0	0.9	0.9	0.9	0.4	1.3	1.3	0.8	1.0	0.6	-0.4
Young Adults	1.2	1.4	1.3	1.1	1.1	1.1	1.0	1.1	1.4	1.2	1.3	1.0	1.0	1.3	1.2	1.1	1.0	-0.1
Other Cocaine[j]																		
8th Grade	1.0	1.2	1.3	1.7	2.1	2.5	2.2	2.4	2.3	1.9	1.9	1.8	1.6	1.6	1.7	1.6	1.5	-0.1
10th Grade	2.1	1.7	1.8	2.4	3.0	3.5	4.1	4.0	4.4	3.8	3.0	3.4	2.8	3.3	3.0	2.9	3.1	+0.1
12th Grade	3.2	2.6	2.9	3.0	3.4	4.2	5.0	4.9	5.8	4.5	4.4	4.4	4.2	4.7	4.5	5.2	4.5	-0.7
College Students	3.2	2.4	2.5	1.8	3.3	2.3	3.0	4.2	4.2	4.1	4.1	5.0	5.1	6.3	5.0	3.8	5.3	+1.5
Young Adults	5.4	5.1	3.9	3.6	3.9	3.8	4.3	4.5	4.8	4.8	5.3	5.6	6.1	6.4	6.3	5.9	5.6	-0.3

(Table continued on next page.)

TABLE 2-2 (cont.)
Trends in Annual Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Heroin[k]																		
8th Grade	0.7	0.7	0.7	1.2	1.4	1.6	1.3	1.3	1.4	1.1	1.0	0.9	0.9	1.0	0.8	0.8	0.8	0.0
10th Grade	0.5	0.6	0.7	0.9	1.1	1.2	1.4	1.4	1.4	1.4	0.9	1.1	0.7	0.9	0.9	0.9	0.8	0.0
12th Grade	0.4	0.6	0.5	0.6	1.1	1.0	1.2	1.0	1.1	1.5	0.9	1.0	0.8	0.9	0.8	0.8	0.9	+0.2
College Students	0.1	0.1	0.1	0.1	0.3	0.4	0.3	0.6	0.2	0.5	0.4	0.1	0.2	0.4	0.3	0.3	0.2	-0.1
Young Adults	0.1	0.2	0.2	0.1	0.4	0.4	0.3	0.4	0.4	0.4	0.5	0.2	0.4	0.3	0.4	0.4	0.3	0.0
With a Needle[l]																		
8th Grade	—	—	—	—	0.9	1.0	0.8	0.8	0.9	0.6	0.7	0.6	0.6	0.7	0.6	0.5	0.6	0.0
10th Grade	—	—	—	—	0.6	0.7	0.7	0.8	0.6	0.5	0.4	0.6	0.5	0.5	0.5	0.5	0.5	0.0
12th Grade	—	—	—	—	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.5	0.5	0.4	-0.1
College Students	—	—	—	—	0.1	*	0.1	0.2	0.1	0.1	0.1	*	0.1	0.1	0.3	0.3	*	-0.3
Young Adults	—	—	—	—	0.1	0.1	0.1	0.1	0.1	*	0.3	*	*	0.1	0.2	0.3	0.1	-0.2
Without a Needle[l]																		
8th Grade	—	—	—	—	0.8	1.0	0.8	0.8	0.9	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.5	-0.1
10th Grade	—	—	—	—	0.8	0.9	1.1	1.0	1.1	1.1	0.7	0.8	0.5	0.7	0.7	0.6	0.6	0.0
12th Grade	—	—	—	—	1.0	1.0	1.2	0.8	1.0	1.6	0.8	0.8	0.8	0.7	0.8	0.6	1.0	+0.4 s
College Students	—	—	—	—	0.0	0.8	0.4	0.9	0.3	0.8	0.6	0.2	0.1	0.6	0.2	0.3	0.2	-0.1
Young Adults	—	—	—	—	0.3	0.4	0.4	0.7	0.6	0.5	0.9	0.2	0.4	0.3	0.4	0.5	0.3	-0.2
Narcotics other than Heroin[m,n]																		
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	3.5	3.3	3.6	3.8	4.7	5.4	6.2	6.3	6.7	7.0	6.7‡	9.4	9.3	9.5	9.0	9.0	9.2	+0.2
College Students	2.7	2.7	2.5	2.4	3.8	3.1	4.2	4.2	4.3	4.5	5.7‡	7.4	8.7	8.2	8.4	8.8	7.7	-1.1
Young Adults	2.5	2.5	2.2	2.5	3.0	2.9	3.3	3.4	3.8	4.1	5.0‡	7.1	8.5	9.0	8.7	9.1	8.7	-0.4
OxyContin[m,o,w,x]																		
8th Grade	—	—	—	—	—	—	—	—	—	—	—	1.3	1.7	1.7	1.8	2.6	1.8	-0.7
10th Grade	—	—	—	—	—	—	—	—	—	—	—	3.0	3.6	3.5	3.2	3.8	3.9	+0.1
12th Grade	—	—	—	—	—	—	—	—	—	—	—	4.0	4.5	5.0	5.5	4.3	5.2	+0.9
College Students	—	—	—	—	—	—	—	—	—	—	—	1.5	2.2	2.5	2.1	3.0	2.8	-0.2
Young Adults	—	—	—	—	—	—	—	—	—	—	—	1.9	2.6	3.1	3.1	3.1	2.9	-0.2
Vicodin[m,o,w,x]																		
8th Grade	—	—	—	—	—	—	—	—	—	—	—	2.5	2.8	2.5	2.6	3.0	2.7	-0.3
10th Grade	—	—	—	—	—	—	—	—	—	—	—	6.9	7.2	6.2	5.9	7.0	7.2	+0.2
12th Grade	—	—	—	—	—	—	—	—	—	—	—	9.6	10.5	9.3	9.5	9.7	9.6	-0.2
College Students	—	—	—	—	—	—	—	—	—	—	—	6.9	7.5	7.4	9.6	7.6	6.7	-0.9
Young Adults	—	—	—	—	—	—	—	—	—	—	—	8.2	8.6	8.9	9.3	9.1	8.9	-0.1
Amphetamines[m]																		
8th Grade	6.2	6.5	7.2	7.9	8.7	9.1	8.1	7.2	6.9	6.5	6.7	5.5	5.5	4.9	4.9	4.7	4.2	-0.5
10th Grade	8.2	8.2	9.6	10.2	11.9	12.4	12.1	10.7	10.4	11.1	11.7	10.7	9.0	8.5	7.8	7.9	8.0	+0.1
12th Grade	8.2	7.1	8.4	9.4	9.3	9.5	10.2	10.1	10.2	10.5	10.9	11.1	9.9	10.0	8.6	8.1	7.5	-0.6
College Students	3.9	3.6	4.2	4.2	5.4	4.2	5.7	5.1	5.8	6.6	7.2	7.0	7.1	7.0	6.7	6.0	6.9	+0.9
Young Adults	4.3	4.1	4.0	4.5	4.6	4.2	4.6	4.5	4.7	5.4	5.8	5.9	5.8	6.2	5.1	5.6	5.6	0.0

(Table continued on next page.)

TABLE 2-2 (cont.)
Trends in Annual Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change	
Ritalin[m,o,p]																			
8th Grade	—	—	—	—	—	—	—	—	—	—	2.9	2.8	2.6	2.5	2.4	2.6	2.1	-0.5	
10th Grade	—	—	—	—	—	—	—	—	—	—	4.8	4.8	4.1	3.4	3.4	3.6	2.8	-0.9	
12th Grade	—	—	—	—	—	—	—	—	—	—	5.1	4.0	4.0	5.1	4.4	4.4	3.8	-0.6	
College Students	—	—	—	—	—	—	—	—	—	—	—	5.7	4.7	4.7	4.2	3.9	3.7	-0.2	
Young Adults	—	—	—	—	—	—	—	—	—	—	—	2.9	2.9	2.7	2.5	2.6	2.4	-0.3	
Methamphetamine[o,p]																			
8th Grade	—	—	—	—	—	—	—	—	3.2	2.5	2.8	2.2	2.5	1.5	1.8	1.8	1.1	-0.7	ss
10th Grade	—	—	—	—	—	—	—	—	4.6	4.0	3.7	3.9	3.3	3.0	2.9	1.8	1.6	-0.2	
12th Grade	—	—	—	—	—	—	—	—	4.7	4.3	3.9	3.6	3.2	3.4	2.5	2.5	1.7	-0.8	s
College Students	—	—	—	—	—	—	—	—	3.3	1.6	2.4	1.2	2.6	2.9	1.7	1.2	0.4	-0.8	
Young Adults	—	—	—	—	—	—	—	—	2.8	2.5	2.8	2.5	2.7	2.8	2.4	1.9	1.5	-0.4	
Crystal Meth. (Ice)[p]																			
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
12th Grade	1.4	1.3	1.7	1.8	2.4	2.8	2.3	3.0	1.9	2.2	2.5	3.0	2.0	2.1	2.3	1.9	1.6	-0.2	
College Students	0.1	0.2	0.7	0.8	1.1	0.3	0.8	1.0	0.5	0.5	0.6	0.8	0.9	1.1	1.4	0.6	0.7	+0.1	
Young Adults	0.3	0.4	0.8	0.9	1.2	0.9	0.9	1.1	0.9	1.2	1.1	1.4	1.3	1.5	1.6	1.1	1.1	0.0	
Sedatives (Barbiturates)[m]																			
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
12th Grade	3.4	2.8	3.4	4.1	4.7	4.9	5.1	5.5	5.8	6.2	5.7	6.7	6.0	6.5	7.2	6.6	6.2	-0.4	
College Students	1.2	1.4	1.5	1.2	2.0	2.3	3.0	2.5	3.2	3.7	3.8	3.7	4.1	4.2	3.9	3.4	3.6	+0.2	
Young Adults	1.8	1.6	1.9	1.8	2.1	2.2	2.4	2.5	2.8	3.4	3.7	3.9	3.9	4.4	4.2	3.9	4.2	+0.3	
Methaqualone[m,q]																			
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
12th Grade	0.5	0.6	0.2	0.8	0.7	1.1	1.0	1.1	1.1	0.3	0.8	0.9	0.6	0.8	0.9	0.8	0.5	-0.3	
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Tranquilizers[b,m]																			
8th Grade	1.8	2.0	2.1	2.4	2.7	3.3	2.9	2.6	2.5	2.6‡	2.8	2.6	2.7	2.5	2.8	2.6	2.4	-0.1	
10th Grade	3.2	3.5	3.3	3.3	4.0	4.6	4.9	5.1	5.4	5.6‡	7.3	6.3	5.3	5.1	4.8	5.2	5.3	0.0	
12th Grade	3.6	2.8	3.5	3.7	4.4	4.6	4.7	5.5	5.8	5.7‡	6.9	7.7	6.7	7.3	6.8	6.6	6.2	-0.5	
College Students	2.4	2.9	2.4	1.8	2.9	2.8	3.8	3.9	3.8	4.2‡	5.1	6.7	6.9	6.7	6.4	5.8	5.5	-0.2	
Young Adults	3.5	3.4	3.1	2.9	3.4	3.2	3.1	3.8	3.7	4.6‡	5.5	7.0	6.8	7.4	6.7	6.5	7.1	+0.7	

(Table continued on next page.)

TABLE 2-2 (cont.)
Trends in Annual Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
OTC Cough/Cold Medicines[o,p]																		
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.2	4.0	-0.1
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.3	5.4	+0.1
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.9	5.8	-1.0
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rohypnol[r]																		
8th Grade	—	—	—	—	—	1.0	0.8	0.8	0.5	0.5	0.7	0.3	0.5	0.6	0.7	0.5	0.7	+0.1
10th Grade	—	—	—	—	—	1.1	1.3	1.2	1.0	0.8	1.0	0.7	0.6	0.7	0.5	0.5	0.7	+0.1
12th Grade	—	—	—	—	—	1.1	1.2	1.4	1.0	0.8	0.9‡	1.6	1.3	1.6	1.2	1.1	1.0	-0.1
College Students	—	—	—	—	—	—	—	—	—	—	—	0.7	0.4	0.3	0.1	0.2	0.1	-0.1
Young Adults	—	—	—	—	—	—	—	—	—	—	—	0.3	0.5	0.1	0.1	0.2	0.3	+0.1
GHB[o,y]																		
8th Grade	—	—	—	—	—	—	—	—	—	1.2	1.1	0.8	0.9	0.7	0.5	0.8	0.7	-0.1
10th Grade	—	—	—	—	—	—	—	—	—	1.1	1.0	1.4	1.4	0.8	0.8	0.7	0.6	-0.1
12th Grade	—	—	—	—	—	—	—	—	—	1.9	1.6	1.5	1.4	2.0	1.1	1.1	0.9	-0.2
College Students	—	—	—	—	—	—	—	—	—	—	—	0.6	0.3	0.7	0.4	*	0.1	+0.1
Young Adults	—	—	—	—	—	—	—	—	—	—	—	0.8	0.6	0.5	0.3	0.2	0.4	+0.2
Ketamine[o,z]																		
8th Grade	—	—	—	—	—	—	—	—	—	1.6	1.3	1.3	1.1	0.9	0.6	0.9	1.0	+0.1
10th Grade	—	—	—	—	—	—	—	—	—	2.1	2.1	2.2	1.9	1.3	1.0	1.0	0.8	-0.2
12th Grade	—	—	—	—	—	—	—	—	—	2.5	2.5	2.6	2.1	1.9	1.6	1.4	1.3	0.0
College Students	—	—	—	—	—	—	—	—	—	—	—	1.3	1.0	1.5	0.5	0.9	0.2	-0.6
Young Adults	—	—	—	—	—	—	—	—	—	—	—	1.2	0.9	0.6	0.5	0.5	0.3	-0.1
Alcohol[s]																		
Any Use																		
8th Grade	54.0	53.7‡	45.4	46.8	45.3	46.5	45.5	43.7	43.5	43.1	41.9	38.7	37.2	36.7	33.9	33.6	31.8	-1.8
10th Grade	72.3	70.2‡	63.4	63.9	63.5	65.0	65.2	62.7	63.7	65.3	63.5	60.0	59.3	58.2	56.7	55.8	56.3	+0.4
12th Grade	77.7	76.8‡	72.7	73.0	73.7	72.5	74.8	74.3	73.8	73.2	73.3	71.5	70.1	70.6	68.6	66.5	66.4	-0.1
College Students	88.3	86.9	85.1	82.7	83.2	82.9	82.4	84.6	83.6	83.2	83.0	82.9	81.7	81.2	83.0	82.1	80.9	-1.2
Young Adults	86.9	86.2	85.3	83.7	84.7	84.0	84.3	84.0	84.1	84.0	84.3	84.9	83.3	84.4	83.8	84.4	84.0	-0.5
Been Drunk[t]																		
8th Grade	17.5	18.3	18.2	18.2	18.4	19.8	18.4	17.9	18.5	18.5	16.6	15.0	14.5	14.5	14.1	13.9	12.6	-1.3
10th Grade	40.1	37.0	37.8	38.0	38.5	40.1	40.7	38.3	40.9	41.6	39.9	35.4	34.7	35.1	34.2	34.5	34.4	-0.1
12th Grade	52.7	50.3	49.6	51.7	52.5	51.9	53.2	52.0	53.2	51.8	53.2	50.4	48.0	51.8	47.7	47.9	46.1	-1.8
College Students	69.1	67.3	65.6	63.1	62.1	64.2	66.8	67.0	65.4	64.7	68.8	66.0	64.7	67.1	64.2	66.2	64.8	-1.4
Young Adults	62.0	60.9	61.1	58.8	61.6	59.9	63.2	59.6	63.2	60.6	63.1	61.8	62.9	63.8	63.5	65.7	65.8	+0.1
Flavored Alcoholic Beverages[g,o,aa]																		
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	30.4	27.9	26.8	26.0	-0.8
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	49.7	48.5	48.8	45.9	-2.9 s
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	55.2	55.8	58.4	54.7	53.6	-1.0
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	63.2	67.0	63.5	62.6	-0.8
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	62.7	58.4	58.5	58.9	+0.4

(Table continued on next page.)

TABLE 2-2 (cont.)
Trends in Annual Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Cigarettes																		
Any Use																		
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
College Students	35.6	37.3	38.8	37.6	39.3	41.4	43.6	44.3	44.5	41.3	39.0	38.3	35.2	36.7	36.0	30.9	30.7	-0.2
Young Adults	37.7	37.9	37.8	38.3	38.8	40.3	41.8	41.6	41.1	40.9	41.1	39.1	38.6	39.0	39.1	36.9	36.2	-0.7
Bidis[o,p]																		
8th Grade	—	—	—	—	—	—	—	—	—	3.9	2.7	2.7	2.0	1.7	1.6	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	6.4	4.9	3.1	2.8	2.1	1.6	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	9.2	7.0	5.9	4.0	3.6	3.3	2.3	1.7	-0.6
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Kreteks[o,p]																		
8th Grade	—	—	—	—	—	—	—	—	—	—	2.6	2.6	2.0	1.9	1.4	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	6.0	4.9	3.8	3.7	2.8	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	10.1	8.4	6.7	6.5	7.1	6.2	6.8	+0.6
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids[v,w]																		
8th Grade	1.0	1.1	0.9	1.2	1.0	0.9	1.0	1.2	1.7	1.7	1.6	1.5	1.4	1.1	1.1	0.9	0.8	-0.1
10th Grade	1.1	1.1	1.0	1.1	1.2	1.2	1.2	1.2	1.7	2.2	2.1	2.2	1.7	1.5	1.3	1.2	1.1	-0.1
12th Grade	1.4	1.1	1.2	1.3	1.5	1.4	1.4	1.7	1.8	1.7	2.4	2.5	2.1	2.5	1.5	1.8	1.4	-0.3
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	0.5	0.4	0.3	0.4	0.5	0.3	0.5	0.4	0.6	0.4	0.4	0.4	0.5	0.5	0.5	0.3	0.7	+0.4

Source. The Monitoring the Future study, the University of Michigan.

Note. See relevant footnotes at the end of Table 2-1.

TABLE 2-3
Trends in 30-Day Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Any Illicit Drug[a]																		
8th Grade	5.7	6.8	8.4	10.9	12.4	14.6	12.9	12.1	12.2	11.9	11.7	10.4	9.7	8.4	8.5	8.1	7.4	-0.7
10th Grade	11.6	11.0	14.0	18.5	20.2	23.2	23.0	21.5	22.1	22.5	22.7	20.8	19.5	18.3	17.3	16.8	16.9	+0.2
12th Grade	16.4	14.4	18.3	21.9	23.8	24.6	26.2	25.6	25.9	24.9	25.7	25.4	24.1	23.4	23.1	21.5	21.9	+0.4
College Students	15.2	16.1	15.1	16.0	19.1	17.6	19.2	19.7	21.6	21.5	21.9	21.5	21.4	21.2	19.5	19.2	19.3	+0.1
Young Adults	15.1	14.8	14.9	15.3	15.8	15.8	16.4	16.1	17.1	18.1	18.8	18.9	19.9	19.1	18.6	18.5	18.9	+0.4
Any Illicit Drug other than Marijuana[a,b]																		
8th Grade	3.8	4.7	5.3	5.6	6.5	6.9	6.0	5.5	5.5	5.6‡	5.5	4.7	4.7	4.1	4.1	3.8	3.6	-0.2
10th Grade	5.5	5.7	6.5	7.1	8.9	8.9	8.8	8.6	8.6	8.5‡	8.7	8.1	6.9	6.9	6.4	6.3	6.9	+0.6
12th Grade	7.1	6.3	7.9	8.8	10.0	9.5	10.7	10.7	10.4	10.4‡	11.0	11.3	10.4	10.8	10.3	9.8	9.5	-0.3
College Students	4.3	4.6	5.4	4.6	6.3	4.5	6.8	6.1	6.4	6.9‡	7.5	7.8	8.2	9.1	8.2	8.2	8.1	-0.1
Young Adults	5.4	5.5	4.9	5.3	5.7	4.7	5.5	5.5	6.0	6.4‡	7.0	7.7	8.3	8.5	8.2	8.1	8.6	+0.5
Any Illicit Drug including Inhalants[a,c,d]																		
8th Grade	8.8	10.0	12.0	14.3	16.1	17.5	16.0	14.9	15.1	14.4	14.0	12.6	12.1	11.2	11.2	10.9	10.1	-0.8
10th Grade	13.1	12.6	15.5	20.0	21.6	24.5	24.1	22.5	23.1	23.6	23.6	21.7	20.5	19.3	18.4	17.7	18.1	+0.4
12th Grade	17.8	15.5	19.3	23.0	24.8	25.5	26.9	26.6	26.4	26.4	26.5	25.9	24.6	23.3	24.2	22.1	22.8	+0.7
College Students	15.1	16.5	15.7	16.4	19.6	18.0	19.6	21.0	21.8	22.6	21.9	21.9	21.6	21.7	19.0	19.7	18.1	-1.7
Young Adults	15.4	15.3	15.1	16.1	16.1	16.4	16.9	16.7	17.4	18.8	19.2	19.5	20.1	19.6	18.0	18.4	19.1	+0.7
Marijuana/Hashish																		
8th Grade	3.2	3.7	5.1	7.8	9.1	11.3	10.2	9.7	9.7	9.1	9.2	8.3	7.5	6.4	6.6	6.5	5.7	-0.8
10th Grade	8.7	8.1	10.9	15.8	17.2	20.4	20.5	18.7	19.4	19.7	19.8	17.8	17.0	15.9	15.2	14.2	14.2	-0.1
12th Grade	13.8	11.9	15.5	19.0	21.2	21.9	23.7	22.8	23.1	21.6	22.4	21.5	21.2	19.9	19.8	18.3	18.8	+0.4
College Students	14.1	14.6	14.2	15.1	18.6	17.5	17.7	18.6	20.7	20.0	20.2	19.7	19.3	18.9	17.1	16.7	16.8	+0.1
Young Adults	13.5	13.3	13.4	14.1	14.0	15.1	15.0	14.9	15.6	16.1	16.7	16.9	17.3	16.5	15.8	15.7	16.0	+0.3
Inhalants[c,d]																		
8th Grade	4.4	4.7	5.4	5.6	6.1	5.8	5.6	4.8	5.0	4.5	4.0	3.8	4.1	4.5	4.2	4.1	3.9	-0.2
10th Grade	2.7	2.7	3.3	3.6	3.5	3.3	3.0	2.9	2.6	2.6	2.4	2.4	2.2	2.4	2.2	2.3	2.5	+0.3
12th Grade	2.4	2.3	2.5	2.7	3.2	2.5	2.5	2.3	2.0	2.2	1.7	1.5	1.5	1.5	2.0	1.5	1.2	-0.3
College Students	0.9	1.1	1.3	0.6	1.6	0.8	0.8	0.6	1.5	0.9	0.4	0.7	0.4	0.4	0.3	0.4	0.1	-0.3
Young Adults	0.5	0.6	0.7	0.5	0.7	0.5	0.5	0.7	0.8	0.5	0.4	0.5	0.3	0.3	0.2	0.3	0.2	-0.1
Nitrites[e]																		
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	0.4	0.3	0.6	0.4	0.4	0.7	0.7	1.0	0.4	0.3	0.5	0.6	0.7	0.7	0.5	0.3	0.5	+0.2
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	*	0.1	0.2	0.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hallucinogens[b,f]																		
8th Grade	0.8	1.1	1.2	1.3	1.7	1.9	1.8	1.4	1.3	1.2‡	1.6	1.2	1.2	1.0	1.1	0.9	1.0	+0.1
10th Grade	1.6	1.8	1.9	2.4	3.3	2.8	3.3	3.2	2.9	2.3‡	2.1	1.6	1.5	1.6	1.5	1.5	1.7	+0.2
12th Grade	2.2	2.1	2.7	3.1	4.4	3.5	3.9	3.8	3.5	2.6‡	3.3	2.3	1.8	1.9	1.9	1.5	1.7	+0.1
College Students	1.2	2.3	2.5	2.1	3.3	1.9	2.1	2.1	2.0	1.4‡	1.8	1.2	1.8	1.3	1.2	0.9	1.3	+0.4
Young Adults	1.1	1.5	1.2	1.4	1.7	1.2	1.5	1.4	1.3	1.2‡	1.2	0.9	1.2	0.9	0.8	0.7	0.9	+0.2

(Table continued on next page.)

TABLE 2-3 (cont.)
Trends in 30-Day Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
LSD																		
8th Grade	0.6	0.9	1.0	1.1	1.4	1.5	1.5	1.1	1.1	1.0	1.0	0.7	0.6	0.5	0.5	0.4	0.5	+0.1
10th Grade	1.5	1.6	1.6	2.0	3.0	2.4	2.8	2.7	2.3	1.6	1.5	0.7	0.6	0.6	0.6	0.7	0.7	0.0
12th Grade	1.9	2.0	2.4	2.6	4.0	2.5	3.1	3.2	2.7	1.6	2.3	0.7	0.6	0.7	0.7	0.6	0.6	0.0
College Students	0.8	1.8	1.6	1.8	2.5	0.9	1.1	1.5	1.2	0.9	1.0	0.2	0.2	0.2	0.1	0.3	0.3	0.0
Young Adults	0.8	1.1	0.8	1.1	1.3	0.7	0.9	1.0	0.8	0.8	0.7	0.3	0.2	0.1	0.1	0.2	0.2	0.0
Hallucinogens other than LSD[b,f]																		
8th Grade	0.3	0.4	0.5	0.7	0.8	0.9	0.7	0.7	0.6	0.6‡	1.1	1.0	1.0	0.8	0.9	0.7	0.7	0.0
10th Grade	0.4	0.5	0.7	1.0	1.0	1.0	1.2	1.4	1.2	1.2‡	1.4	1.4	1.2	1.4	1.3	1.3	1.4	+0.2
12th Grade	0.7	0.5	0.8	1.2	1.3	1.6	1.7	1.6	1.6	1.7‡	1.9	2.0	1.5	1.7	1.6	1.3	1.4	+0.1
College Students	0.6	0.7	1.1	0.8	1.6	1.2	1.2	0.7	1.2	0.8‡	0.8	1.1	1.7	1.2	1.1	0.7	1.1	+0.4
Young Adults	0.3	0.5	0.6	0.6	0.6	0.6	0.7	0.5	0.6	0.7‡	0.6	0.8	1.2	0.9	0.8	0.6	0.8	+0.2
PCP[g]																		
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	0.5	0.6	1.0	0.7	0.6	1.3	0.7	1.0	0.8	0.9	0.5	0.4	0.6	0.4	0.7	0.4	0.5	+0.1
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	0.1	0.2	0.2	0.1	*	0.1	0.1	0.2	0.2	*	*	0.1	0.1	0.1	*	*	*	0.0
Ecstasy (MDMA)[h]																		
8th Grade	—	—	—	—	—	1.0	1.0	0.9	0.8	1.4	1.8	1.4	0.7	0.8	0.6	0.7	0.6	0.0
10th Grade	—	—	—	—	—	1.8	1.3	1.3	1.8	2.6	2.6	1.8	1.1	0.8	1.0	1.2	1.2	0.0
12th Grade	—	—	—	—	—	2.0	1.6	1.5	2.5	3.6	2.8	2.4	1.3	1.2	1.0	1.3	1.6	+0.3
College Students	0.2	0.4	0.3	0.2	0.7	0.7	0.8	0.8	2.1	2.5	1.5	0.7	1.0	0.7	0.8	0.6	0.4	-0.3
Young Adults	0.1	0.3	0.3	0.2	0.4	0.3	0.6	0.8	1.3	1.9	1.8	1.3	0.8	0.6	0.6	0.7	0.5	-0.2
Cocaine																		
8th Grade	0.5	0.7	0.7	1.0	1.2	1.3	1.1	1.4	1.3	1.2	1.2	1.1	0.9	0.9	1.0	1.0	0.9	-0.1
10th Grade	0.7	0.7	0.9	1.2	1.7	1.7	2.0	2.1	1.8	1.8	1.3	1.6	1.3	1.7	1.5	1.5	1.3	-0.2
12th Grade	1.4	1.3	1.3	1.5	1.8	2.0	2.3	2.4	2.6	2.1	2.1	2.3	2.1	2.3	2.3	2.5	2.0	-0.6 s
College Students	1.0	1.0	0.7	0.6	0.7	0.8	1.6	1.6	1.2	1.4	1.9	1.6	1.9	2.4	1.8	1.8	1.7	-0.1
Young Adults	2.0	1.8	1.4	1.3	1.5	1.2	1.6	1.7	1.9	1.7	2.2	2.2	2.4	2.2	2.2	2.3	2.1	-0.2
Crack[i]																		
8th Grade	0.3	0.5	0.4	0.7	0.7	0.8	0.7	0.9	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.6	0.6	0.0
10th Grade	0.3	0.4	0.5	0.6	0.9	0.8	0.9	1.1	0.8	0.9	0.7	1.0	0.7	0.8	0.7	0.7	0.5	-0.2 s
12th Grade	0.7	0.6	0.7	0.8	1.0	1.0	0.9	1.0	1.1	1.0	1.1	1.2	0.9	1.0	1.0	0.9	0.9	0.0
College Students	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.1	0.3	0.4	0.4	0.1	*	0.1	+0.1
Young Adults	0.4	0.4	0.4	0.3	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.0
Other Cocaine[j]																		
8th Grade	0.5	0.5	0.6	0.9	1.0	1.0	0.8	1.0	1.1	0.9	0.9	0.8	0.7	0.7	0.7	0.7	0.6	-0.1
10th Grade	0.6	0.6	0.7	1.0	1.4	1.3	1.6	1.8	1.6	1.6	1.2	1.3	1.1	1.5	1.3	1.3	1.1	-0.1
12th Grade	1.2	1.0	1.2	1.3	1.3	1.6	2.0	2.0	2.5	1.7	1.8	1.9	1.8	2.2	2.0	2.4	1.7	-0.7 s
College Students	1.0	0.9	0.6	0.3	0.8	0.6	1.3	1.5	1.0	0.9	1.5	1.4	1.9	2.2	1.8	1.3	1.6	+0.4
Young Adults	1.8	1.7	1.1	1.0	1.3	1.1	1.5	1.5	1.6	1.5	1.8	2.0	2.1	2.1	1.9	1.9	2.0	+0.1

(Table continued on next page.)

TABLE 2-3 (cont.)
Trends in 30-Day Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Heroin[k]																		
8th Grade	0.3	0.4	0.4	0.6	0.6	0.7	0.6	0.6	0.6	0.5	0.6	0.5	0.4	0.5	0.5	0.3	0.4	+0.2
10th Grade	0.2	0.2	0.3	0.4	0.6	0.5	0.6	0.7	0.7	0.5	0.3	0.5	0.3	0.5	0.5	0.5	0.4	0.0
12th Grade	0.2	0.3	0.2	0.3	0.6	0.5	0.5	0.5	0.5	0.7	0.4	0.5	0.4	0.5	0.5	0.4	0.4	0.0
College Students	0.1	*	*	*	0.1	*	0.2	0.1	0.1	0.2	0.1	*	*	0.1	0.1	0.2	0.1	0.0
Young Adults	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	*	0.1	0.1	0.1	0.2	0.1	0.0
With a Needle[l]																		
8th Grade	—	—	—	—	0.4	0.5	0.4	0.5	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.3	+0.1 s
10th Grade	—	—	—	—	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.0
12th Grade	—	—	—	—	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.2	-0.1
College Students	—	—	—	—	*	*	0.1	*	0.1	0.1	*	*	0.1	0.1	0.1	0.1	*	-0.1
Young Adults	—	—	—	—	*	*	0.1	*	0.1	*	0.2	*	*	0.1	0.1	0.1	*	-0.1
Without a Needle[l]																		
8th Grade	—	—	—	—	0.3	0.4	0.4	0.3	0.4	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.0
10th Grade	—	—	—	—	0.3	0.3	0.4	0.5	0.5	0.4	0.2	0.4	0.2	0.3	0.3	0.3	0.2	-0.1
12th Grade	—	—	—	—	0.6	0.4	0.6	0.4	0.4	0.7	0.3	0.5	0.4	0.3	0.5	0.3	0.4	+0.1
College Students	—	—	—	—	*	0.1	0.2	0.2	0.3	0.4	0.3	*	*	0.3	*	0.2	0.1	-0.1
Young Adults	—	—	—	—	0.1	*	0.1	0.2	0.2	0.2	0.4	*	0.1	0.1	0.1	0.3	0.2	-0.1
Narcotics other than Heroin[m,n]																		
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.1	1.2	1.3	1.5	1.8	2.0	2.3	2.4	2.6	2.9	3.0‡	4.0	4.1	4.3	3.9	3.8	3.8	+0.1
College Students	0.6	1.0	0.7	0.4	1.2	0.7	1.3	1.1	1.0	1.7	1.7‡	3.2	2.3	3.0	3.1	3.1	2.2	-0.8
Young Adults	0.6	0.7	0.7	0.6	0.9	0.7	0.9	0.9	1.2	1.4	1.7‡	2.9	2.9	3.0	3.5	3.2	3.4	+0.2
Amphetamines[m]																		
8th Grade	2.6	3.3	3.6	3.6	4.2	4.6	3.8	3.3	3.4	3.4	3.2	2.8	2.7	2.3	2.3	2.1	2.0	-0.1
10th Grade	3.3	3.6	4.3	4.5	5.3	5.5	5.1	5.1	5.0	5.4	5.6	5.2	4.3	4.0	3.7	3.5	4.0	+0.5
12th Grade	3.2	2.8	3.7	4.0	4.0	4.1	4.8	4.6	4.5	5.0	5.6	5.5	5.0	4.6	3.9	3.7	3.7	0.0
College Students	1.0	1.1	1.5	1.5	2.2	0.9	2.1	1.7	2.3	2.9	3.3	3.0	3.1	3.2	2.9	2.5	3.1	+0.6
Young Adults	1.5	1.5	1.5	1.7	1.7	1.5	1.7	1.7	1.9	2.3	2.4	2.5	2.5	2.4	2.1	2.2	2.3	+0.2
Methamphetamine[o,p]																		
8th Grade	—	—	—	—	—	—	—	—	1.1	0.8	1.3	1.1	1.2	0.6	0.7	0.6	0.6	0.0
10th Grade	—	—	—	—	—	—	—	—	1.8	2.0	1.5	1.8	1.4	1.3	1.1	0.7	0.4	-0.3
12th Grade	—	—	—	—	—	—	—	—	1.7	1.9	1.5	1.7	1.7	1.4	0.9	0.9	0.6	-0.3
College Students	—	—	—	—	—	—	—	—	1.2	0.2	0.5	0.2	0.6	0.2	0.1	0.2	0.1	-0.1
Young Adults	—	—	—	—	—	—	—	—	0.8	0.7	1.0	1.0	0.7	0.6	0.7	0.5	0.6	+0.1
Crystal Meth. (Ice)[p]																		
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	0.6	0.5	0.6	0.7	1.1	1.1	0.8	1.2	0.8	1.0	1.1	1.2	0.8	0.8	0.9	0.7	0.6	-0.1
College Students	*	*	0.3	0.5	0.3	0.1	0.2	0.3	*	*	0.1	*	0.3	0.1	0.2	*	0.1	+0.1
Young Adults	*	0.1	0.3	0.5	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.4	0.6	0.3	0.3	0.0

(Table continued on next page.)

TABLE 2-3 (cont.)
Trends in 30-Day Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Sedatives (Barbiturates)[m]																		
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.4	1.1	1.3	1.7	2.2	2.1	2.1	2.6	2.6	3.0	2.8	3.2	2.9	2.9	3.3	3.0	2.7	-0.3
College Students	0.3	0.7	0.4	0.4	0.5	0.8	1.2	1.1	1.1	1.1	1.5	1.7	1.7	1.5	1.3	1.3	1.4	+0.1
Young Adults	0.5	0.5	0.6	0.6	0.8	0.8	0.9	0.9	1.1	1.3	1.7	1.5	1.5	1.8	1.7	1.5	1.6	+0.1
Methaqualone[m,q]																		
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	0.2	0.4	0.1	0.4	0.4	0.6	0.3	0.6	0.4	0.2	0.5	0.3	0.4	0.5	0.5	0.4	0.4	0.0
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tranquilizers[b,m]																		
8th Grade	0.8	0.8	0.9	1.1	1.2	1.5	1.2	1.2	1.1	1.4‡	1.2	1.2	1.4	1.2	1.3	1.3	1.1	-0.2
10th Grade	1.2	1.5	1.1	1.5	1.7	1.7	2.2	2.2	2.2	2.5‡	2.9	2.9	2.4	2.3	2.3	2.4	2.6	+0.2
12th Grade	1.4	1.0	1.2	1.4	1.8	2.0	1.8	2.4	2.5	2.6‡	2.9	3.3	2.8	3.1	2.9	2.7	2.6	-0.1
College Students	0.6	0.6	0.4	0.4	0.5	0.7	1.2	1.3	1.1	2.0‡	1.5	3.0	2.8	2.7	2.2	2.1	1.8	-0.3
Young Adults	0.9	1.0	1.0	0.8	1.1	0.7	1.1	1.2	1.3	1.8‡	2.1	2.8	2.4	2.7	2.6	2.3	2.8	+0.5
Rohypnol[r]																		
8th Grade	—	—	—	—	—	0.5	0.3	0.4	0.3	0.3	0.4	0.2	0.1	0.2	0.2	0.4	0.3	-0.1
10th Grade	—	—	—	—	—	0.5	0.5	0.4	0.5	0.4	0.2	0.4	0.2	0.3	0.2	0.2	0.2	0.0
12th Grade	—	—	—	—	—	0.5	0.3	0.3	0.3	0.4	0.3	—	—	—	—	—	—	—
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alcohol[s]																		
Any Use																		
8th Grade	25.1	26.1‡	24.3	25.5	24.6	26.2	24.5	23.0	24.0	22.4	21.5	19.6	19.7	18.6	17.1	17.2	15.9	-1.3
10th Grade	42.8	39.9‡	38.2	39.2	38.8	40.4	40.1	38.8	40.0	41.0	39.0	35.4	35.4	35.2	33.2	33.8	33.4	-0.4
12th Grade	54.0	51.3‡	48.6	50.1	51.3	50.8	52.7	52.0	51.0	50.0	49.8	48.6	47.5	48.0	47.0	45.3	44.4	-0.9
College Students	74.7	71.4	70.1	67.8	67.5	67.0	65.8	68.1	69.6	67.4	67.0	68.9	66.2	67.7	67.9	65.4	66.6	+1.2
Young Adults	70.6	69.0	68.3	67.7	68.1	66.7	67.5	66.9	68.2	66.8	67.0	68.3	67.0	68.4	68.6	68.7	69.5	+0.8
Been Drunk[t]																		
8th Grade	7.6	7.5	7.8	8.7	8.3	9.6	8.2	8.4	9.4	8.3	7.7	6.7	6.7	6.2	6.0	6.2	5.5	-0.7
10th Grade	20.5	18.1	19.8	20.3	20.8	21.3	22.4	21.1	22.5	23.5	21.9	18.3	18.2	18.5	17.6	18.8	18.1	-0.7
12th Grade	31.6	29.9	28.9	30.8	33.2	31.3	34.2	32.9	32.9	32.3	32.7	30.3	30.9	32.5	30.2	30.0	28.7	-1.3
College Students	45.0	45.0	43.8	42.8	37.9	40.3	46.4	44.3	44.6	43.9	44.7	44.4	40.4	47.4	43.1	47.6	46.8	-0.8
Young Adults	35.4	35.6	34.2	34.3	33.0	33.2	35.6	34.2	37.7	35.7	36.8	37.1	37.8	39.0	39.0	42.1	41.4	-0.7

(Table continued on next page.)

TABLE 2-3 (cont.)
Trends in 30-Day Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change	
Flavored Alcoholic Beverages[g,o]																			
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	14.6	12.9	13.1	12.2	-0.9	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	25.1	23.1	24.7	21.8	-2.9	ss
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	31.1	30.5	29.3	29.1	-0.2	
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	34.1	30.9	26.2	27.5	+1.3	
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	29.5	27.6	24.9	25.9	+1.0	
Cigarettes																			
Any Use																			
8th Grade	14.3	15.5	16.7	18.6	19.1	21.0	19.4	19.1	17.5	14.6	12.2	10.7	10.2	9.2	9.3	8.7	7.1	-1.6	ss
10th Grade	20.8	21.5	24.7	25.4	27.9	30.4	29.8	27.6	25.7	23.9	21.3	17.7	16.7	16.0	14.9	14.5	14.0	-0.5	
12th Grade	28.3	27.8	29.9	31.2	33.5	34.0	36.5	35.1	34.6	31.4	29.5	26.7	24.4	25.0	23.2	21.6	21.6	0.0	
College Students	23.2	23.5	24.5	23.5	26.8	27.9	28.3	30.0	30.6	28.2	25.7	26.7	22.5	24.3	23.8	19.2	19.9	+0.7	
Young Adults	28.2	28.3	28.0	28.0	29.2	30.1	29.9	30.9	30.3	30.1	30.2	29.2	28.4	29.2	28.6	27.0	26.2	-0.9	
Smokeless Tobacco[u]																			
8th Grade	6.9	7.0	6.6	7.7	7.1	7.1	5.5	4.8	4.5	4.2	4.0	3.3	4.1	4.1	3.3	3.7	3.2	-0.5	
10th Grade	10.0	9.6	10.4	10.5	9.7	8.6	8.9	7.5	6.5	6.1	6.9	6.1	5.3	4.9	5.6	5.7	6.1	+0.4	
12th Grade	—	11.4	10.7	11.1	12.2	9.8	9.7	8.8	8.4	7.6	7.8	6.5	6.7	6.7	7.6	6.1	6.6	+0.5	
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Steroids[v,w]																			
8th Grade	0.4	0.5	0.5	0.5	0.6	0.4	0.5	0.5	0.7	0.8	0.7	0.8	0.7	0.5	0.5	0.5	0.4	-0.1	
10th Grade	0.6	0.6	0.5	0.6	0.6	0.5	0.7	0.6	0.9	1.0	0.9	1.0	0.8	0.8	0.6	0.6	0.5	-0.1	
12th Grade	0.8	0.6	0.7	0.9	0.7	0.7	1.0	1.1	0.9	0.8	1.3	1.4	1.3	1.6	0.9	1.1	1.0	0.0	
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Young Adults	0.2	0.1	0.0	0.1	0.2	0.2	0.2	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	+0.3	s

Source. The Monitoring the Future study, the University of Michigan.

Note. See relevant footnotes at the end of Table 2-1.

TABLE 2-4
Trends in 30-Day Prevalence of Daily Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Marijuana/Hashish Daily[bb]																		
8th Grade	0.2	0.2	0.4	0.7	0.8	1.5	1.1	1.1	1.4	1.3	1.3	1.2	1.0	0.8	1.0	1.0	0.8	-0.2
10th Grade	0.8	0.8	1.0	2.2	2.8	3.5	3.7	3.6	3.8	3.8	4.5	3.9	3.6	3.2	3.1	2.8	2.8	+0.1
12th Grade	2.0	1.9	2.4	3.6	4.6	4.9	5.8	5.6	6.0	6.0	5.8	6.0	6.0	5.6	5.0	5.0	5.1	+0.1
College Students	1.8	1.6	1.9	1.8	3.7	2.8	3.7	4.0	4.0	4.6	4.5	4.1	4.7	4.5	4.0	4.3	3.5	-0.8
Young Adults	2.3	2.3	2.4	2.8	3.3	3.3	3.8	3.7	4.4	4.2	5.0	4.5	5.3	5.0	4.9	5.0	5.0	0.0
Alcohol[s,bb]																		
Any Daily Use																		
8th Grade	0.5	0.6‡	1.0	1.0	0.7	1.0	0.8	0.9	1.0	0.8	0.9	0.7	0.8	0.6	0.5	0.5	0.6	+0.1
10th Grade	1.3	1.2‡	1.8	1.7	1.7	1.6	1.7	1.9	1.9	1.8	1.9	1.8	1.5	1.3	1.3	1.4	1.4	0.0
12th Grade	3.6	3.4‡	3.4	2.9	3.5	3.7	3.9	3.9	3.4	2.9	3.6	3.5	3.2	2.8	3.1	3.0	3.1	0.0
College Students	4.1	3.7	3.9	3.7	3.0	3.2	4.5	3.9	4.5	3.6	4.7	5.0	4.3	3.7	4.6	4.8	4.3	-0.5
Young Adults	4.9	4.5	4.5	3.9	3.9	4.0	4.6	4.0	4.8	4.1	4.4	4.7	5.1	4.5	5.2	5.4	5.6	+0.2
Been Drunk Daily[t,bb]																		
8th Grade	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.0
10th Grade	0.2	0.3	0.4	0.4	0.6	0.4	0.6	0.6	0.7	0.5	0.6	0.5	0.5	0.4	0.4	0.5	0.5	0.0
12th Grade	0.9	0.8	0.9	1.2	1.3	1.6	2.0	1.5	1.9	1.7	1.4	1.2	1.6	1.8	1.5	1.6	1.3	-0.2
College Students	0.5	0.2	0.3	0.8	0.5	0.1	1.3	0.8	1.0	0.7	0.5	0.8	1.1	0.8	0.5	0.6	0.7	+0.2
Young Adults	0.5	0.4	0.4	0.5	0.3	0.4	0.9	0.5	0.9	0.5	0.4	0.6	0.8	0.7	0.5	0.6	0.6	0.0
5+ Drinks in a Row in Last 2 Weeks[cc]																		
8th Grade	12.9	13.4	13.5	14.5	14.5	15.6	14.5	13.7	15.2	14.1	13.2	12.4	11.9	11.4	10.5	10.9	10.3	-0.6
10th Grade	22.9	21.1	23.0	23.6	24.0	24.8	25.1	24.3	25.6	26.2	24.9	22.4	22.2	22.0	21.0	21.9	21.9	0.0
12th Grade	29.8	27.9	27.5	28.2	29.8	30.2	31.3	31.5	30.8	30.0	29.7	28.6	27.9	29.2	27.1	25.4	25.9	+0.5
College Students	42.8	41.4	40.2	40.2	38.6	38.3	40.7	38.9	40.0	39.3	40.9	40.1	38.5	41.7	40.1	40.2	41.1	+0.9
Young Adults	34.7	34.2	34.4	33.7	32.6	33.6	34.4	34.1	35.8	34.7	35.9	35.9	35.8	37.1	37.0	37.6	37.8	+0.2
Cigarettes																		
Any Daily Use																		
8th Grade	7.2	7.0	8.3	8.8	9.3	10.4	9.0	8.8	8.1	7.4	5.5	5.1	4.5	4.4	4.0	4.0	3.0	-0.9 s
10th Grade	12.6	12.3	14.2	14.6	16.3	18.3	18.0	15.8	15.9	14.0	12.2	10.1	8.9	8.3	7.5	7.6	7.2	-0.4
12th Grade	18.5	17.2	19.0	19.4	21.6	22.2	24.6	22.4	23.1	20.6	19.0	16.9	15.8	15.6	13.6	12.2	12.3	+0.1
College Students	13.8	14.1	15.2	13.2	15.8	15.9	15.2	18.0	19.3	17.8	15.0	15.9	13.8	13.8	12.4	9.2	9.3	+0.1
Young Adults	21.7	20.9	20.8	20.7	21.2	21.8	20.6	21.9	21.5	21.8	21.2	21.2	20.3	20.8	19.6	18.6	17.3	-1.3
1/2 Pack+/Day																		
8th Grade	3.1	2.9	3.5	3.6	3.4	4.3	3.5	3.6	3.3	2.8	2.3	2.1	1.8	1.7	1.7	1.5	1.1	-0.4
10th Grade	6.5	6.0	7.0	7.6	8.3	9.4	8.6	7.9	7.6	6.2	5.5	4.4	4.1	3.3	3.1	3.3	2.7	-0.5
12th Grade	10.7	10.0	10.9	11.2	12.4	13.0	14.3	12.6	13.2	11.3	10.3	9.1	8.4	8.0	6.9	5.9	5.7	-0.2
College Students	8.0	8.9	8.9	8.0	10.2	8.4	9.1	11.3	11.0	10.1	7.8	7.9	7.6	6.8	6.7	4.9	4.3	-0.5
Young Adults	16.0	15.7	15.5	15.3	15.7	15.3	14.6	15.6	15.1	15.1	14.6	14.2	13.9	13.5	12.5	11.9	11.1	-0.8

(Table continued on next page.)

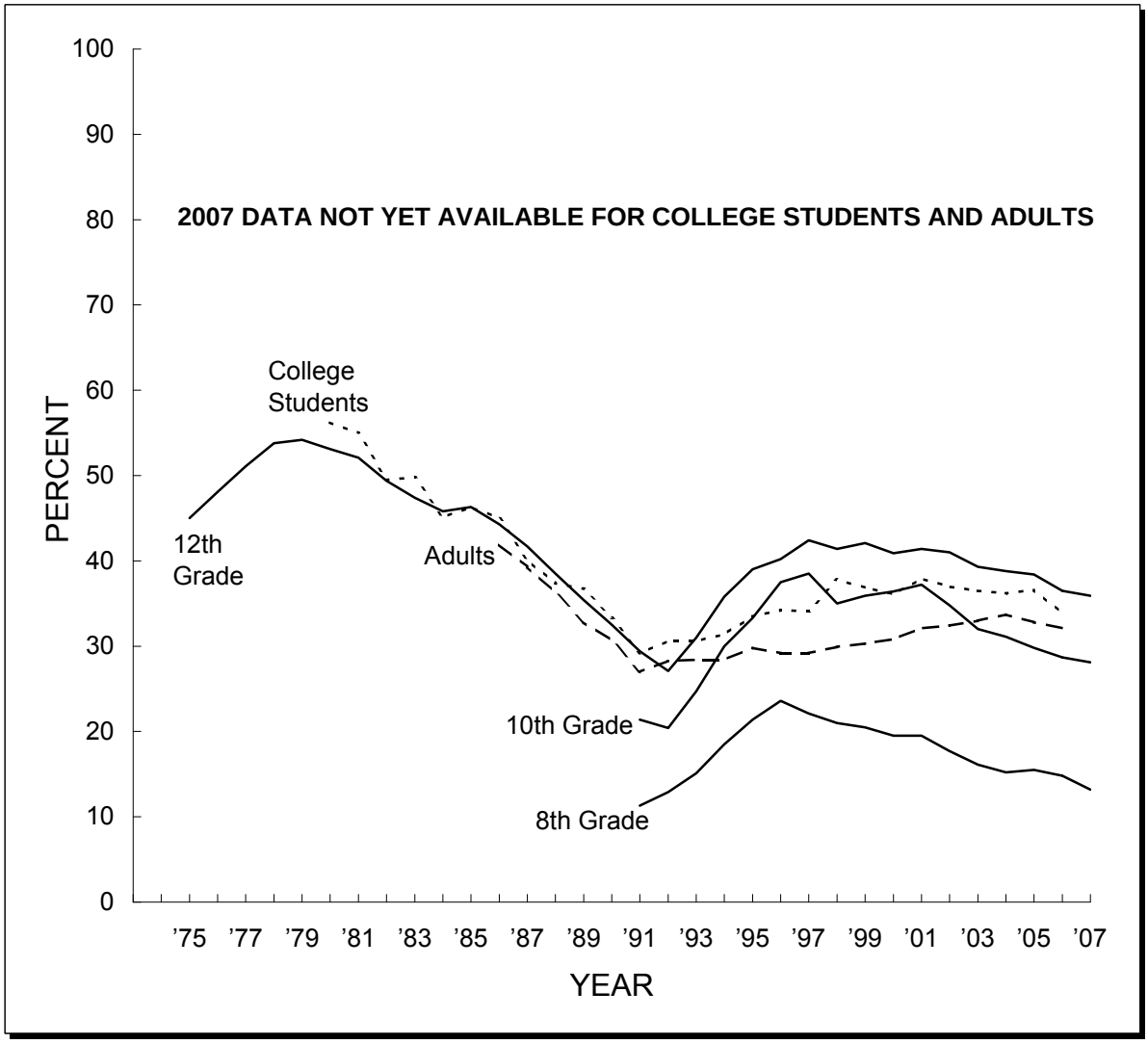
TABLE 2-4 (cont.)
Trends in 30-Day Prevalence of Daily Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Smokeless Tobacco Daily[u]																		
8th Grade	1.6	1.8	1.5	1.9	1.2	1.5	1.0	1.0	0.9	0.9	1.2	0.8	0.8	1.0	0.7	0.7	0.8	+0.1
10th Grade	3.3	3.0	3.3	3.0	2.7	2.2	2.2	2.2	1.5	1.9	2.2	1.7	1.8	1.6	1.9	1.7	1.6	-0.1
12th Grade	—	4.3	3.3	3.9	3.6	3.3	4.4	3.2	2.9	3.2	2.8	2.0	2.2	2.8	2.5	2.2	2.8	+0.7
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Source. The Monitoring the Future study, the University of Michigan.

Note. See relevant footnotes at the end of Table 2-1.

FIGURE 2-1
Trends in Annual Prevalence of an Illicit Drug Use Index across 5 Populations



Source. The Monitoring the Future study, the University of Michigan.

Notes. "Illicit drug use index" includes any use of marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin; or any use which is not under a doctor's orders of other opiates, stimulants, sedatives (barbiturates), methaqualone (excluded since 1990), or tranquilizers.
Beginning in 1982, the question about stimulant use (i.e., amphetamines) was revised to get respondents to exclude the inappropriate reporting of nonprescription stimulants. The prevalence rate dropped slightly as a result of this methodological change.

Chapter 3

STUDY DESIGN AND PROCEDURES

The design of Monitoring the Future (MTF) incorporates several types of surveys into one study, yielding analytic power beyond the sum of those component parts. The components include cross-sectional studies, repeated cross-sectional studies, and panel studies of particular cohorts. The annual cross-sectional studies provide point estimates of various behaviors and conditions at any given year for a number of subpopulations (e.g., 8th graders, 10th graders, 12th graders, college students, etc.). Repeating these cross-sectional studies over time allows an assessment of change across years in those same segments of the population. The panel-study feature permits the examination of change over time in the same individuals comprising a class cohort, in this case, as they enter adult roles and environments and assume adult responsibilities.

With a *series* of panel studies of sequential graduating class cohorts, in what is known as a cohort-sequential design, we are able to distinguish among, and explain, three fundamentally different types of change: period-related, age-related, and cohort-related. It is this last feature, the cohort-sequential design aspect, which creates the synergistic effect in terms of analytic power.

This chapter describes this complex research design, including the sampling plans and field procedures used in both the annual in-school cross-sectional surveys of 8th-, 10th-, and 12th-grade students and the follow-up surveys into early and middle adulthood—the panel studies. Related methodological issues such as response rates, population coverage, and the validity of the measures are also discussed.

We begin by describing the design that has been used consistently over the past 33 years to survey 12th graders; then we describe the more recently instituted design for 8th and 10th graders. Finally, we cover the design for the follow-up surveys of former 12th graders.[14, 15]

RESEARCH DESIGN AND PROCEDURES FOR THE SURVEYS OF TWELFTH GRADERS

Twelfth graders have been surveyed in the spring of each year since 1975. Each year's data collection takes place in approximately 120 to 146 public and private high schools selected to provide an accurate representative cross section of 12th graders throughout the coterminous United States (see Figure 3-1).

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[14]For a more detailed description of the study design, see Bachman, J. G., Johnston, L. D., O'Malley, P. M., & Schulenberg, J. E. (2006). *The Monitoring the Future project after thirty-two years: Design and procedures* (Monitoring the Future Occasional Paper No. 64). Ann Arbor, MI: Institute for Social Research, available online at www.monitoringthefuture.org/pubs/occpapers/occ64.pdf.

[15]For a more detailed description of the full range of research objectives of Monitoring the Future, see Johnston, L. D., O'Malley, P. M., Schulenberg, J. E., & Bachman, J. G. (2006). *The aims and objectives of the Monitoring the Future study and progress toward fulfilling them as of 2006* (Monitoring the Future Occasional Paper No. 65). Ann Arbor, MI: Institute for Social Research, available online at www.monitoringthefuture.org/pubs/occpapers/occ65.pdf.

The Population under Study

We chose the senior year of high school because, for several reasons, it is an optimal point at which to monitor the drug use and related attitudes of youth. First, completion of high school represents the end of an important developmental stage in this society, demarcating both the end of universal education and, for many, the end of living full-time in the parental home. Therefore, it is a logical point at which to take stock of the cumulated influences of these two major environments on American youth. Further, completion of high school represents the jumping-off point from which young people diverge into widely differing social environments and experiences. Senior year, then, represents a good time to take a "before" measure, allowing calculation of changes that may be attributable to the many environmental and role transitions occurring in young adulthood, including college attendance. Finally, there were some important practical advantages to building the original system of data collections around samples of 12th graders. 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 study design is the exclusion of those young men and women who drop out of high school before graduation—between 15% and 20% of each age cohort nationally, according to U.S. Census statistics. Clearly, the omission of high school dropouts introduces 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 A to *Volume I* addresses in detail the likely effects of the exclusion of dropouts (as well as absentees from school) on estimates of drug use prevalence and trends among the entire age cohort.

Sampling Procedures and Sample Weights

A multistage random sampling procedure is used to secure the nationwide sample of 12th graders each year. Stage 1 is the selection of particular geographic areas, Stage 2 is the selection (with probability proportionate to size) of one or more high schools in each area, and Stage 3 is the selection of 12th graders within each high school. Up to about 350 twelfth graders in each school may be included. In schools with fewer 12th graders, the usual procedure is to include all of them in the data collection, though a smaller sample is sometimes taken to accommodate the needs of the school. When a subset of 12th graders is to be selected, it is done either by randomly sampling entire classrooms or by some other unbiased, random method. Weights are assigned to compensate for differential probabilities of selection at each stage of sampling. Final weights are normalized to average 1.0 (so that the weighted number of cases equals the unweighted number of cases overall). This three-stage sampling procedure has yielded the numbers of participating schools and students shown in Table 3-1.

Questionnaire Administration

About three weeks prior to the questionnaire administration date, parents of the target respondents are sent a letter by first-class mail, usually from the principal, announcing and describing the study and providing them an opportunity to decline participation of their son or daughter if they wish. A flyer describing the study in more detail is enclosed with the letter. Copies of the same flyers are also given to the students by the teachers in the target classrooms in advance of the date of administration. The flyers make clear that participation is entirely voluntary. Local Institute for Social Research representatives and their assistants conduct the actual questionnaire administrations 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. Teachers are asked to remain present in the classroom to help maintain order, but to remain at their desks so that they cannot see students' answers.

Questionnaire Format

Because many questions are needed to cover all of the topic areas in the study, much of the questionnaire content for 12th graders is divided into six different questionnaire forms distributed to participants in an ordered sequence that ensures six virtually identical random subsamples. (Five questionnaire forms were used between 1975 and 1988.) About one third of each questionnaire form consists of key, or "core," variables common to all forms. All demographic variables, and nearly all of the drug *use* variables included in this report, are contained in this core set of measures. Many of the questions dealing with attitudes, beliefs, and perceptions of relevant features of the social environment are in a single form only, and the data are thus based on one fifth as many cases in 1975–1988 (approximately 3,300 per year) and on one sixth as many cases beginning in 1989 (approximately 2,600 per year). All tables in this report list the sample sizes upon which the statistics are based, stated in terms of the weighted number of cases (which, as explained above, is roughly equivalent to the actual number of cases).

RESEARCH DESIGN AND PROCEDURES FOR THE SURVEYS OF EIGHTH AND TENTH GRADERS

In 1991, the study was expanded to include nationally representative samples of 8th- and 10th-grade students surveyed on an annual basis. In general, the procedures used for the annual in-school surveys of 8th- and 10th-grade students closely parallel those used for 12th graders, including the procedures for selecting schools and students, questionnaire administration, and questionnaire formats. A major exception is that only two different questionnaire forms were used from 1991 to 1996, expanding to four forms beginning in 1997, rather than the six used with 12th graders. The 8th- and 10th-grade surveys use identical questionnaire forms; for the most part, the questionnaire content is drawn from the 12th-grade questionnaires. Thus, key demographic variables and measures of drug use and related attitudes and beliefs are generally identical for all three grades. The forms used in both 8th and 10th grades have a common core (Parts B and C) that parallels the core used in 12th-grade forms. Many fewer questions about other values and attitudes are included in the 8th- and 10th-grade forms, in part because we think that many of them are likely to be more fully formed by 12th grade and, therefore, are best monitored there.

For the national survey of 8th graders each year, approximately 150 schools (mostly junior high schools and middle schools) are sampled, and approximately 17,000 students are surveyed. For the 10th graders, approximately 130 high schools are sampled and about 15,000 students surveyed annually. (See Table 3-1 for specifics.)[16]

Mode of Administration

From 1991 to 1993, follow-ups for 8th and 10th graders were administered that were similar to those for 12th graders (see Footnote 3). When follow-up surveys of new cohorts of 8th and 10th graders were no longer being conducted, the collection of personal identification information for follow-up purposes was no longer necessary. For confidentiality reasons, this personal information had been gathered on a tear-off sheet at the back of each questionnaire. We believed that there were potential advantages in moving toward a fully anonymous procedure for these grade levels, including the following: (a) school cooperation might be easier to obtain; (b) any suppression effect that the confidential mode of administration might have could be both eliminated and quantified; and (c) if there *were* any mode of administration effect, it would be removed from the national data, which are widely compared with results of state and local surveys (nearly all of which use anonymous questionnaires), thus making those comparisons more valid. Therefore, in 1998 for the first time, in half of the 8th- and 10th-grade schools surveyed, the administered questionnaires were made fully anonymous. Specifically, the half-sample of schools beginning their two-year participation in Monitoring the Future in 1998 received the anonymous questionnaires, while the half-sample participating in the study for their second and final year continued to get the confidential questionnaires.

A careful examination of the 1998 results, based on the two equivalent half-samples at grades 8 and 10, revealed that there was no effect of this methodological change among 10th graders, and, at most, only a very modest effect in the self-reported substance use rates among 8th graders (with prevalence rates slightly higher in the anonymous condition). The net effect of this methodological change is a possible increase in the observed 8th-grade prevalence estimates for marijuana, alcohol, and cigarettes in 1998 from what they would have been without a change in questionnaire administration. For those three drugs, that means that the declines in use in 1998 may be slightly understated for the 8th graders only. In other words, the direction of the change is the same as that shown in the tables, but the actual declines may be slightly larger than those shown. For example, the annual prevalence of marijuana use among 8th graders is shown to have fallen by 0.8 percentage points between 1997 and 1998; however, the half-sample of 8th-grade schools receiving exactly the same type of questionnaire that was used in 1997 showed a slightly greater decline of 1.5 percentage points.

[16]The research design originally called for follow-up surveys of subsamples of the 8th and 10th graders participating in the study, carried out at two-year intervals, similar to the 12th-grade follow-up samples. From 1991 to 1994, this plan influenced the design of the cross-sectional studies of 8th and 10th graders in an important way. In order to "recapture" many of the 8th-grade participants two years later in the normal 10th-grade cross-sectional study for that year, we selected the 8th-grade schools by drawing a sample of high schools and then selecting a sample of their "feeder schools" that contained 8th graders. This extra stage in the sampling process meant that many of the 8th-grade participants in, say, the 1991 cross-sectional survey were also participants in the 1993 cross-sectional survey of 10th graders. Thus, a fair amount of panel data was generated at no additional cost. However, having followed this design from 1991 through 1993, we concluded that the savings in follow-up costs did not justify the complexities in sampling, administration, and interpretation. Therefore, since 1994, we have used a simplified design in which 8th-grade schools are drawn independently of the 10th-grade school sample. Further follow-ups (at two-year intervals) have been conducted only on respondent panels drawn from the first three cohorts of students surveyed in the 8th and 10th grades—that is, those surveyed in school in 1991, 1992, and 1993. (A book reporting results from analyses of these panels was published recently: Bachman, J. G., O'Malley, P. M., Schulenberg, J. E., Johnston, L. D., Freedman-Doan, P., & Messersmith, E. E. (2008). The education–drug use connection: How successes and failures in school relate to adolescent smoking, drinking, drug use, and delinquency. New York: Lawrence Erlbaum Associates.)

For cigarettes, this change in method appeared to have no effect on self-reported rates of daily use or half pack per day use, and only a very small effect on 30-day prevalence. Thus, for example, the 30-day prevalence of cigarette use among all 8th graders surveyed fell 0.3 percentage points between 1997 and 1998, while the half-sample of 8th-grade schools receiving exactly the same type of questionnaire as was used in 1997 showed a slightly greater decline of 0.6 percentage points. Finally, lifetime cigarette prevalence fell by 1.6 percentage points between 1997 and 1998, but in the half-sample of schools with a constant methodology, it fell by 2.6 percentage points.

We have examined in detail the effects of administration mode in a published article, in which we use multivariate controls to assess the effects of the change on the 8th-grade self-report data. It generally shows even less effect than is to be found without such controls.[17]

All tables and figures in *Volume I* use data from both of the half-samples of 8th graders surveyed in a given year, combined. This is also true for the 10th graders (for whom we found no methodological effect) and the 12th graders (for whom it is assumed there is no such effect, since none was found among the 10th graders). (See this chapter's later section entitled "Representativeness and Sample Accuracy" under the subheading "School Participation," for a further discussion of half-samples among all three grades.)

In 1999, the remaining half of the participating schools (all beginning the first of their two years of participation) received anonymous questionnaires as well. Thus, from 1999 on, all data from 8th- and 10th-grade students have been gathered using anonymous questionnaires. We continue to use confidential questionnaires with 12th graders in order to permit follow-up of the small proportion (2,400 out of about 16,000 seniors surveyed in 12th grade each year) that are randomly selected to be invited to participate in the panel studies.

Questionnaire Forms and Sample Proportions

Another benefit of not interlocking the school samples at 8th and 10th grades was that we could consider having more forms of the questionnaire. Beginning in 1997, the number of forms was expanded to four, but the four forms are not distributed in equal numbers. Forms 1, 2, 3, and 4 are assigned to one third, one third, one sixth, and one sixth of the students, respectively. Thus, if a question appears on only one form, it is administered to either one third or one sixth of the sample. Similarly, a question in two forms may be assigned to one third of the sample (one sixth plus one sixth), one half of the sample (one third plus one sixth), or two thirds of the sample (one third plus one third). No questions appear on exactly three forms. Footnotes to the tables indicate what proportion of all respondents in each grade complete the question, if that proportion is other than the entire sample.

The two additional forms were introduced to allow for more questions. The new Forms 1 and 2 substantially follow the content of the previous Forms 1 and 2, but each is now assigned to a third of the sample instead of half. Form 3 builds on Form 1, with some questions omitted to make room for more content; and Form 4 builds on the content of Form 2 in a similar manner. Much of the new content was placed in both of the new forms (Forms 3 and 4), each of which is

[17]O'Malley, P. M., Johnston, L. D., Bachman, J. G., & Schulenberg, J. E. (2000). A comparison of confidential versus anonymous survey procedures: Effects on reporting of drug use and related attitudes and beliefs in a national study of students. *Journal of Drug Issues, 30,* 35–54.

administered to one sixth of the sample, in order to assign one third of the total sample to those new questions.

RESEARCH DESIGN AND PROCEDURES FOR THE FOLLOW-UP SURVEYS OF TWELFTH GRADERS

Beginning with the graduating class of 1976, some members of each senior class have been selected to be surveyed by mail after high school graduation. From the roughly 13,000 to 17,000 12th graders originally participating in a given senior class, a representative sample of 2,400 individuals is randomly chosen for follow-up. In order to ensure sufficient numbers of drug users in the follow-up surveys, 12th graders reporting 20 or more occasions of marijuana use in the previous 30 days (i.e., "daily users"), or *any* use of the other illicit drugs in the previous 30 days, are selected with higher probability (by a factor of 3.0) than the remaining 12th graders. Differential weighting is then used in all follow-up analyses to compensate for these differential sampling probabilities. Because those in the drug-using stratum receive a weight of only 0.33 in the calculation of all statistics to correct for their overrepresentation at the selection stage, there are actually more follow-up respondents than are reported in the weighted *N*s given in the tables.

The 2,400 participants selected from each 12th-grade class are randomly split into two matching groups of 1,200 each—one group to be surveyed on even-numbered calendar years, and the other group to be surveyed on odd-numbered years. This two-year cycle is intended to reduce the burden on individual respondents, thus yielding a better retention rate across the years. By alternating the two half-samples, we have data from a given graduating class every year, even though any given respondent participates only every other year.

Until 2002, each respondent was surveyed biennially up to seven times; at the seventh follow-up, which would occur either 13 or 14 years after graduation, the respondents had reached modal age 31 or 32. Beginning in 2002, the seventh biennial follow-up was discontinued, and each respondent was surveyed every other year until modal age 29 or 30. Additional follow-ups occur at modal ages 35, 40, and 45. (Age-45 follow-ups began in 2003, when the class of 1976 reached that age.) We will conduct an age-50 follow-up for the first time in 2008 and plan to continue follow-ups at five-year intervals thereafter. Data like these, gathered on representative national samples over such a large portion of the life span, are extremely rare and can provide needed insight into the etiology of substance use and related behaviors across much of the life course.

Follow-Up Procedures

Using information provided by 12th-grade respondents on a tear-off card (containing the respondent's name, address, and phone number, and the name and address of someone who would always know how to reach them), mail contact is maintained with the subset of people selected for inclusion in the follow-up panels. Newsletters are sent to them each year, and name and address corrections are requested from both the U.S. Postal Service and the individual. Questionnaires are sent to each individual biennially in the spring. A check for $20, made

payable to the respondent, is attached to the front of each questionnaire.[18] Reminder letters and postcards are sent at fixed intervals thereafter; finally, those who have not responded receive a prompting phone call from the Survey Research Center's phone interviewing facility in Ann Arbor, Michigan. If requested, a second copy of the questionnaire is sent; but no questionnaire content is administered by phone. If a respondent asks not to be contacted further, that wish is honored.

Follow-Up Questionnaire Format

The questionnaires used in the young adult follow-up surveys are very much like those used in the senior year. They are optically scanned; all forms contain a common core section that includes questions on drug use, background, and demographics; 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 12th graders are also included in the corresponding follow-up questionnaires, and respondents are consistently mailed the same version (or form) of the questionnaire that they first received in senior year, 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 status and experiences are added. Thus, there are questions about college, military service, civilian employment, marriage, parenthood, and so on. Most of these are added to the core section. For the five-year surveys that begin at age 35, the questionnaire content is streamlined (only one form is used) and directed at the major family and work issues of middle adulthood; we have also added measures of substance use disorders. Still, many of the questions are repeated from the young adult surveys.

For the early follow-up cohorts, the numbers of cases on single-form questions were one fifth the size of the total follow-up sample because five different questionnaire forms were used. Beginning with the class of 1989, a sixth form was introduced in the senior year. That new questionnaire form was first sent to follow-up respondents in 1990; therefore, single-form data since then have *N*s one sixth the total follow-up sample size. In the follow-up studies, single-form samples from a single cohort are too small to make reliable estimates; therefore, in most cases where they are reported, the data from several adjacent cohorts are combined or concatenated.

REPRESENTATIVENESS AND SAMPLE ACCURACY

School Participation

Schools are invited to participate in the study for a two-year period. For each school that declines to participate, a similar school (in terms of size, geographic area, urbanicity, etc.) is recruited as a replacement for that "slot." In 2007, either an original school or a replacement school was obtained in 97% of the sample units, or slots. With very few exceptions, each school participating in the first year has agreed to participate in the second year as well. Figure 3-2

[18]For the class of 1991 and all prior classes, the follow-up checks were for $5. The rate was raised to $10, beginning with the class of 1992, to compensate for the effects of inflation over the life of the study. An experiment was first conducted that suggested that the increased payment was justified based on the increased panel retention it achieved. Payment increased to $20 in 2004 for much the same reason.

provides the year-specific school participation rates and the percentage of slots filled since 1977. (The data for the years prior to 1991 are for 12th grade only; beginning in 1991, the data are for 8th, 10th, and 12th grades combined.) As shown in the figure, replacements for declining schools are obtained in the vast majority of cases.

Two questions are sometimes raised with respect to school participation rates: (a) Are participation rates sufficient to ensure the representativeness of the sample? (b) Does variation in participation rates over time contribute to changes in estimates of drug use?

With respect to the first issue, the selection of replacement schools (which occurs in practically all instances of an original school refusal) 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, the sample would be seriously biased. And if any other single factor were dominant in most refusals, that reason for refusal also might suggest a source of serious bias. In fact, however, the reasons given for a school refusing to participate tend to be varied and are often a function of happenstance specific to that particular year; only a very small proportion specifically object to the drug-related or "sensitive" nature of the survey content.

If it were the case that schools differed substantially in drug use, then which particular schools participated could have a greater effect on estimates of drug use. However, the great majority of variance in drug use lies within schools, not between schools.[19] For example, between 1991 and 2002, the between-schools variance for 12-month marijuana use was 4.0–5.3% of the total variance for each of the three grades; for inhalant use, 1.6–2.7%; for cocaine use, 1.2–2.2%; for alcohol use, 3.5–6.1%; and for cigarette use, 2.1–5.2%. To the extent that schools tend to be fairly similar in drug use, which particular schools participate (within a selection framework that seeks national representation) has a small effect on estimates of drug use. The fact that the overwhelming majority of variance in drug use lies within schools implies that, at least with respect to drug use, schools are for the most part fairly similar.[20] Further, some, if not most, of the between-schools variance is due to differences related to region, urbanicity, etc.—factors that remain well controlled in the present sampling design because of the way in which replacement schools are selected.

With respect to the second issue, the observed data from the series make it extremely unlikely that results have been significantly affected by changes in response rates. If changes in response rates seriously affected prevalence estimates, there would be noticeable bumps up or down in concert with the changing rates. But in fact this series of surveys produces results that are very smooth and change in an orderly fashion from one year to the next. This suggests that the level of school-related error in the estimates does not vary much over time. Moreover, the fact that

[19]O'Malley, P. M., Johnston, L. D., Bachman, J. G., Schulenberg, J. E., & Kumar, R. (2006). How substance use differs among American secondary schools. *Prevention Science, 7*, 409–420.

[20]Among the schools that actually participated in the study, there is very little difference in substance use rates between the schools that were original selections, taken as a set, and the schools that were replacement schools. Averaged over the years 1991 through 2000, for grades 8, 10, and 12 combined, the difference between original schools and replacement schools averaged 0.03% in the observed prevalence rates averaged across a number of drug use measures: two indexes of annual illicit drug use, the annual prevalence of each of the major illicit drug classes, and several measures of alcohol and cigarette use. For the individual drugs and drug indexes, the differences between the original and replacement schools, averaged across grades and years, fell within ±0.9%.

different substances trend in distinctly different ways further refutes any likelihood that changes in response rates are affecting prevalence estimates generally. We have observed, for example, marijuana use decreasing while cocaine use was stable (in the early 1980s), alcohol use declining while cigarette use was stable (in the mid- to late 1980s), and marijuana use increasing while inhalant use was decreasing (from 1994 to 1997). All of these patterns are explainable in terms of psychological, social, and cultural factors (as described in this and previous volumes in this series) and cannot be explained by the common factor of changes in response rates.

Of course, there could be some sort of constant bias across the years; but even in the unlikely event that there is, it seems highly improbable that it would be of much consequence for policy purposes, given that it would not affect trends and likely would have a very modest effect on prevalence rates. Thus we have a high degree of confidence that school refusal rates have not seriously biased the survey results.

Nevertheless, it is apparent that securing the cooperation of high schools has become more difficult in recent years. This is a problem common to the field, not specific to Monitoring the Future. Therefore, beginning with the 2003 survey, we have provided payment to schools as a means of increasing their incentive to participate. (Several other ongoing school-based survey studies also use payments to schools.)

At each grade level, half of each year's sample comprises schools that started their participation the previous year, and half comprises schools that began participating in the current year. (Both samples are national replicates, meaning that each is drawn to be nationally representative by itself.) 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 based on students in the half-sample of schools that participated in both 2005 *and* 2006, then based on the students in the half-sample that participated in both 2006 *and* 2007, and so on. Thus, each one-year *matched half-sample* trend estimate derived in this way is based on a constant set of schools (about 65 in 12th grade, for example, over a given one-year interval). When the trend data derived from the matched half-sample (examined separately for each class of drugs) are compared with trends based on the total sample of schools, the results are usually highly similar, indicating that the trend estimates are affected little by turnover or shifting refusal rates in the school samples. As would be expected, the *absolute* prevalence-of-use estimates for a given year are not as accurate using just the half-sample because the sample size is only half as large.

Student Participation

In 2007, completed questionnaires were obtained from 91% of all sampled students in 8th grade, 88% in 10th grade, and 81% in 12th grade. (See Table 3-1 for response rates in earlier years.) The single most important reason that students are missed is absence from class at the time of data collection; in most cases, for reasons of cost efficiency, we do not schedule special follow-up data collections for absent students. Because students with fairly high rates of absenteeism also report above-average rates of drug use, some degree of bias is introduced into the prevalence estimates by missing the absentees. Much of that bias could be corrected through the use of special weighting based on the reported absentee rates provided by the students who *did* respond; 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 sampling variance in the estimates. Appendix A in an earlier report[21] provides a discussion of this point, and appendix A in *Volume I* of the present monograph illustrates the changes in trend and prevalence estimates that would result if corrections for absentees had been 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 1.5% of the target sample for each grade.

Sampling Accuracy of the Estimates

Confidence intervals (95%) are provided in Tables 4-1a through 4-1d for lifetime, annual, 30-day, and daily prevalence of use for 8th-, 10th-, and 12th-grade students. As can be seen in Table 4-1a, confidence intervals for lifetime prevalence for 12th graders average less than ±1.5% across a variety of drug classes. That is, if we took a large number of samples of this size from the universe of all schools containing 12th graders in the coterminous United States, 95 times out of 100 the sample would yield a result that would be less than 1.5 percentage points divergent from the result we would get from a comparable massive survey of *all* 12th graders in *all* schools. This is a high level of sampling accuracy, and it should permit detection of fairly small changes from one year to the next. Confidence intervals for the other prevalence periods (past 12 months, past 30 days, and current daily use) are generally smaller than those for lifetime use. In general, confidence intervals for 8th and 10th graders are very similar to those observed for 12th graders. Some drugs (smokeless tobacco, PCP, nitrites, and others, as indicated in the footnotes for Tables 2-1 to 2-4) are measured on only one or two questionnaire forms; these drugs will have somewhat larger confidence intervals due to their smaller sample sizes. Appendix C of *Volume I* contains information for the interested reader on how to calculate confidence intervals around other point estimates; it also provides the information needed to compare trends across time or to test the significance of differences between subgroups in any given year.

PANEL RETENTION

We discuss here the nature of the panel attrition problem generally, the response rates we have attained in the Monitoring the Future panel surveys in recent years, and evidence relevant to assessing the impact of attrition on the study's research results.

The Problem of Panel Attrition

Virtually all longitudinal studies of drug use, including Monitoring the Future, experience attrition, which is often differential with respect to substance use.[22] In addition, survey response rates in general have been declining over the past few decades,[23] highlighting an important challenge in the conduct of population-based research.

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

[22]McGuigan, K. A., Ellickson, P. L., Hays, R. D., & Bell, R. M. (1997). Adjusting for attrition in school-based samples: Bias, precision, and cost trade-off of three methods. *Evaluation Review, 21,* 554–567.

[23]Groves, R. M., Dillman, D. A., Eltinge, J. L., & Little, R. J. A. (Eds.) (2002). *Survey nonresponse.* New York: Wiley.

A vital feature of the Monitoring the Future panel studies is their very low cost per respondent. There are many advantages to collecting panel data through low-cost mail surveys, as we have done since the outset of the study. Indeed, given the number of panel surveys we administer each year (roughly 11,000) across the entire coterminous United States, using low-cost mail surveys is our best (and really the only) cost-effective option. One disadvantage of this mode of data collection is that attrition rates tend to be higher than those that might be obtained with much more expensive methods, such as intensive personal tracking and interviewing. Certainly there exist a few large epidemiological/etiological surveys that have better retention rates, but their procedures are extremely expensive and not realistic for an ongoing effort like this one. Nevertheless, our retention rates compare reasonably favorably with those of most longitudinal studies (including interview studies) reported in the field.

Response Rates Attained

The series of survey data on American college students now encompasses 27 years. We know about our respondents' actual college attendance only from those who are invited and do complete follow-up questionnaires; however, we can use senior year questionnaire answers (i.e., college intentions and program of study) to predict college attendance with a high degree of accuracy. The study's retention of college-bound 12th graders remains quite good. Among those participants in high school who were targeted for follow-up, *and* who reported planning to attend college and being enrolled in a college-prep curriculum, the follow-up retention rates for the three most recent classes surveyed at each follow-up point were: 63% in the first follow-up, one to two years past high school (based on the classes of 2004–2006); 62% in the second follow-up, three to four years past high school (based on the classes of 2002–2004); and 58% in the third follow-up, five to six years past high school (based on the classes of 2000–2002). These rates compare quite favorably with the other major national survey of substance use among college students, the Harvard College Alcohol Study, which had cross-sectional response rates of 59% in 1997 and 1999, and 52% in 2001.[24] To date in *Volume II*, we have reported only on college students who are one to four years past high school graduation. As the average age of attendance rises, having the extended age coverage will be of growing importance. Retention rates in the biennial follow-ups of *all* panel members modal ages 19–30 (corresponding to the first six follow-ups) decline with the length of the follow-up interval, of course. For the five-year period from 2003 to 2007, the response rate in the first follow-up (corresponding to one to two years past high school) averaged 57%; and for the second through sixth follow-ups (corresponding to 3–12 years past high school) response rates averaged 52%. Among the very long-term respondents—the 35-, 40-, and 45-year-olds—the retention rates are quite good, apparently because some of the decline with age in retention rates reflects cohort differences. Among the 35-year-old respondents surveyed from 2003 to 2007 (corresponding to 17 years past high school), the average response rate was 48%. Among the 40-year-old respondents surveyed from 2003 to 2007, corresponding to a 22-year follow-up interval, the average retention rate was 53%. Among 45-year-olds surveyed in 2003 to 2007, the average retention rate was 59%.

[24]Wechsler, H., Lee, J. E., Kuo, M., Seibring, M., Nelson, T. F., & Lee, H. (2002). Trends in college binge drinking during a period of increased prevention efforts: Findings from 4 Harvard School of Public Health College Alcohol Study surveys: 1993–2001. *Journal of American College Health, 50*, 203–217.

In sum, the response rates attained under the current design range from respectable to quite good, especially when the low-cost nature of the procedures and the substantial length of the questionnaires are taken into account. More importantly, the evidence leaves us confident that the data resulting from these follow-up panels are reasonably accurate, which brings us to our adjustments for panel attrition and the comparison of our results with those from other sources.

The Impact of Panel Attrition on Research Results

An important purpose of the Monitoring the Future follow-ups is to allow estimation of drug prevalence rates among American high school graduates at various age levels, as published annually in *Volume II* of this series. Thus, we have always been concerned about making the appropriate adjustments to account for panel attrition. In essence, our standard adjustment process is a poststratification procedure in which we reweight the data obtained from the follow-up samples so that their reweighted senior year distribution on a given drug reproduces the original (senior year) distribution of use observed for that drug based on all participating seniors. This procedure is carried out separately for cigarettes, alcohol, and marijuana, as well as other illicit drugs (combined). As expected, this procedure produces estimates that are somewhat higher than those uncorrected for attrition, indicating that there is indeed some positive association between drug use and panel attrition. However, the adjustments are relatively modest, as is documented next.

One reason the adjustments are modest is that attrition rates do not differ greatly by levels of senior year substance use; they differ some, but less than one might expect. For example, among all respondents who had never used marijuana, an average of 79% of the classes of 1976–1998 participated in the first follow-up. The proportion responding is somewhat lower among those who had used marijuana once or twice in the past 12 months: 75%. This proportion decreases gradually with increasing levels of marijuana use; but even among those who used marijuana on 20–39 occasions in the past 30 days in their high school senior year, 67% participated in the first follow-up. The corresponding participation rates for the same drug use strata at the fourth follow-up (i.e., at modal ages 25–26) were 66%, 63%, and 56%, respectively. Thus, even among those who were quite heavy users of marijuana in high school, response rates at the fourth follow-up were only 10 percentage points lower than among those who had never used marijuana by high school senior year. That is not to say that we assume that all types of drug users remain in the panels at comparably high rates. We believe that people who become dependent on, or addicted to, heroin or cocaine are unlikely to be retained in reasonable proportions. That is why we are careful not to quantify or characterize these special segments of the population. But we note that they constitute very low proportions of the drug-using portion of the population, and even lower proportions of the entire adult population. Therefore, for a great many purposes, the Monitoring the Future samples are extremely useful.

The National Survey on Drug Use and Health (NSDUH) would seem to provide the best available data against which to validate the estimates generated for adult age groups in Monitoring the Future because it is also based on national samples, but uses cross-sectional surveys that do not carry the burden of panel attrition. (Their results, of course, may be affected by their own nonresponse rates; but that will be true of any comparison survey. The overall response rate for the NSDUH in 2006 was 74%.)

In some earlier analyses, we compared the prevalence rates on a set of drugs—cigarettes, alcohol, marijuana, and cocaine—for which there was reasonable similarity in question wording across the two studies. The comparisons that follow are for the age group 19–28 in the Monitoring the Future panel data, and for 19–28 (or 19–29 for 1999 only) in the NSDUH cross-sectional data. We used the most recent readily available comparable data—2004, but similar results are found in a number of prior years. Other things equal, NSDUH should have higher rates than MTF because it includes school dropouts. Nevertheless, the MTF estimates for the 30-day prevalence of marijuana are actually higher (14.4% without poststratification and 16.5% with it) than the NSDUH estimate (14.0%). The same is true for the 12-month cocaine prevalence estimate (6.3% without poststratification and 7.1% with it, vs. 6.3% in the NSDUH estimate).

The other two comparisons made were for alcohol and cigarettes. Both of these drugs show larger differences, with alcohol use consistently higher in Monitoring the Future and cigarette use consistently higher in NSDUH. We believe it likely that both are due to definitional differences in the exact question wording. In 2004, Monitoring the Future estimates of 30-day alcohol prevalence were 67.8% and 68.4% (with poststratification) versus 62.6% in NSDUH. For cigarettes, the 30-day Monitoring the Future prevalence estimates were 27.1% and 29.2%, respectively, versus 39.4% in NSDUH. (Because cigarette smoking rates are particularly high among dropouts, some of this difference should be explainable by differences in the populations covered by the two studies.) It is worth noting that the nature and magnitude of the differences between Monitoring the Future and NSDUH estimates tend to be quite consistent for each of the four drugs at least as far back as 1992.

The fact that Monitoring the Future estimates for both marijuana and cocaine are higher than NSDUH estimates (especially after applying the poststratification reweighting) suggests that attrition does not produce substantially lower estimates of drug use than would be obtained if response rates were higher. Our estimates come out as high as, and in fact somewhat higher than, the best available comparison study for estimating rates using cross-sectional data, and that despite the loss of dropouts and absentees (in high school) from the MTF samples.

It is also worth noting that even with attrition, there remain in the Monitoring the Future follow-up samples substantial proportions of recent users of the various substances. In recent years, about 15–17% of the 19–28-year-old respondents reported marijuana use in just the prior 30 days, and about 5–7% reported past 12-month use of cocaine. These proportions and the underlying numbers of actual cases are quite adequate for analytic purposes, particularly given that the follow-up surveys oversample those who reported illicit drug use in the senior year surveys.

An important point worth emphasizing here is that in the present study, attrition is not necessarily as great a problem as is nonresponse in a cross-sectional study. This is because we already know a great deal about each of the follow-up nonrespondents, including their substance use, based on a lengthy questionnaire in senior year (and, for many, in subsequent years as well). Thus, adjustments can be made utilizing data that are highly informative about the missing individuals.

Effects on Relational Analyses

While differential attrition (uncorrected) may contribute to some bias in point estimates and other univariate statistics, such attrition tends to have less influence on bivariate and multivariate statistics. This was found to be true in a secondary analysis of data from seven panel studies that followed adolescents over time,[25] and we have found this to be true in our Monitoring the Future panel analyses[26] and in analyses with other panel data sets.[27] Thus, differential attrition may be of less concern in multivariate panel analyses focused on understanding the course, causes, and consequences of substance use. Still, as we summarized above, correcting for attrition can be important, and we continue to do so.

VALIDITY OF THE MEASURES OF SELF-REPORTED DRUG USE

Are sensitive behaviors such as drug use 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 existing inferential evidence strongly suggests that the self-report questions used in Monitoring the Future produce largely valid data. A more complete discussion of the contributing evidence that leads to this conclusion may be found in other publications.[28] Here we only briefly summarize the evidence.

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.[29] In essence, 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 12th graders reporting some illicit drug use by senior year has reached two thirds of all respondents in peak years and over 80% in some follow-up years, constituting *prima facie* evidence that the degree of underreporting must be very limited. Fourth, the 12th graders' reports of use by their unnamed friends—about whom they would presumably have less reason to conceal information about

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[25]Cordray, S., & Polk, K. (1983). The implication of respondent loss in panel studies of deviant behavior. *Journal of Research in Crime and Delinquency, 20,* 214–242.

[26]Bryant, A. L., Schulenberg, J. E., Bachman, J. G., O'Malley, P. M., & Johnston, L. D. (2000). Understanding the links among school misbehavior, academic achievement, and cigarette use: A national panel study of adolescents. *Prevention Science, 1*(2), 71–87; Schulenberg, J. E., Bachman, J. G., O'Malley, P. M., & Johnston, L. D. (1994). High school educational success and subsequent substance use: A panel analysis following adolescents into young adulthood. *Journal of Health and Social Behavior, 35,* 45–62.

[27]Bachman, J. G., O'Malley, P. M., & Johnston, J. (1978). *Youth in Transition: Vol. 6. Adolescence to adulthood: A study of change and stability in the lives of young men.* Ann Arbor, MI: Institute for Social Research; Schulenberg, J. E., Bryant, A. L., & O'Malley, P. M. (2004). Taking hold of some kind of life: How developmental tasks relate to trajectories of well-being during the transition to adulthood. *Development and Psychopathology, 16,* 1119–1140.

[28]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, DC: 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, DC: U.S. Government Printing Office; Wallace, J. M., Jr., & Bachman, J. G. (1993). Validity of self-reports in student-based studies on minority populations: Issues and concerns. In M. de LaRosa (Ed.), *Drug abuse among minority youth: Advances in research and methodology* (NIDA Research Monograph No. 130). Rockville, MD: National Institute on Drug Abuse.

[29]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.

use—have been highly consistent with self-reported use in the aggregate, in terms of both prevalence *and* trends in prevalence, as will be discussed in chapter 9, *Volume I*. 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 explicit instructions to respondents immediately preceding the drug section to leave blank those drug use questions they felt they could not answer honestly. Seventh, an examination of consistency in reporting of lifetime use conducted on the long-term panels of graduating seniors found quite low levels of recanting of earlier reported use of the illegal drugs.[30] There was a higher level of recanting for the psychotherapeutic drugs, which we interpreted as suggesting that adolescents actually may overestimate their use of some of these drugs because of misinformation about definitions that is corrected as they get older. Finally, the great majority of respondents, when asked, say they would answer such questions honestly if they were users.[31]

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 recognize that their confidentiality will be protected. We have also tried to present a convincing case as to why such research is needed. The evidence suggests that a high level of validity has been obtained. Nevertheless, insofar as any remaining reporting bias exists, we believe it to be in the direction of underreporting. Thus, with the possible exception of the psychotherapeutic drugs, we believe our estimates to be lower than their true values, even for the obtained samples, but not substantially so.

One additional procedure we undertake to help assure the validity of our data is worth noting. We check for logical inconsistencies in the triplets of answers about the use of each drug (i.e., about lifetime, past year, and past 30-day use), and if a respondent exceeds a minimum number of inconsistencies across the drug use questions, his or her record is deleted from the data set. Similarly, we check for improbably high rates of use of multiple drugs and delete such cases, on the assumption that the respondents are not taking the task seriously. Fortunately, relatively few cases have to be eliminated for these reasons.

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. A great strength of this study, in our opinion, is that the measures and procedures have been standardized and applied consistently across many years. 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

[30]Johnston, L. D., & O'Malley, P. M. (1997). The recanting of earlier reported drug use by young adults. In L. Harrison (Ed.), *The validity of self-reported drug use: Improving the accuracy of survey estimates* (NIDA Research Monograph No. 167, pp. 59–80). Rockville, MD: National Institute on Drug Abuse.

[31]For a discussion of reliability and validity of student self-report measures of drug use like those used in Monitoring the Future across varied cultural settings, see also Johnston, L. D., Driessen, F. M. H. M., & Kokkevi, A. (1994). *Surveying student drug misuse: A six-country pilot study*. Strasbourg, France: Council of Europe.

much the same proportions 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.

TABLE 3-1
Sample Sizes and Response Rates

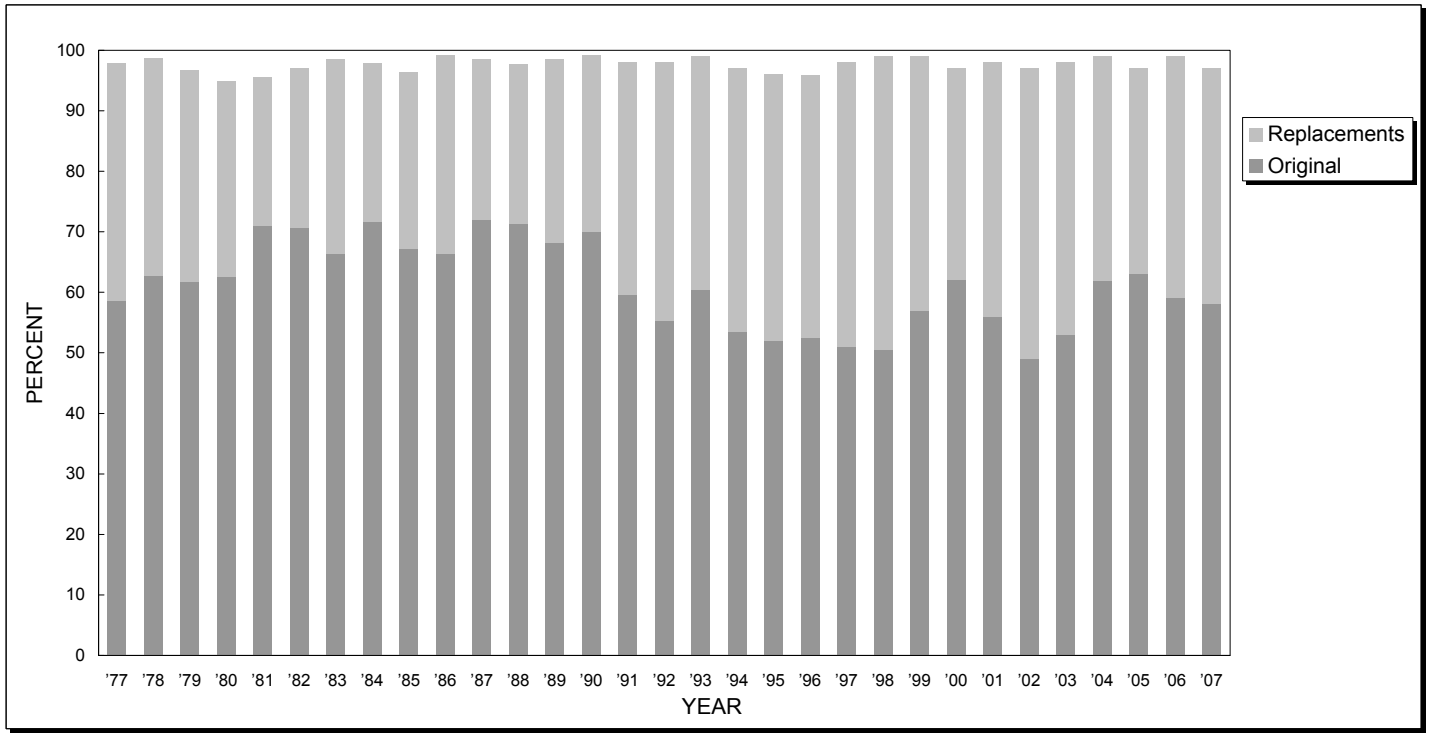
	Number of Public Schools			Number of Private Schools			Total Number of Schools				Total Number of Students				*Student Response Rate (%)*		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	Total	8th	10th	12th	Total	*8th*	*10th*	*12th*
1975	—	—	111	—	—	14	—	—	125	—	—	—	15,791	—	—	—	*78*
1976	—	—	108	—	—	15	—	—	123	—	—	—	16,678	—	—	—	*77*
1977	—	—	108	—	—	16	—	—	124	—	—	—	18,436	—	—	—	*79*
1978	—	—	111	—	—	20	—	—	131	—	—	—	18,924	—	—	—	*83*
1979	—	—	111	—	—	20	—	—	131	—	—	—	16,662	—	—	—	*82*
1980	—	—	107	—	—	20	—	—	127	—	—	—	16,524	—	—	—	*82*
1981	—	—	109	—	—	19	—	—	128	—	—	—	18,267	—	—	—	*81*
1982	—	—	116	—	—	21	—	—	137	—	—	—	18,348	—	—	—	*83*
1983	—	—	112	—	—	22	—	—	134	—	—	—	16,947	—	—	—	*84*
1984	—	—	117	—	—	17	—	—	134	—	—	—	16,499	—	—	—	*83*
1985	—	—	115	—	—	17	—	—	132	—	—	—	16,502	—	—	—	*84*
1986	—	—	113	—	—	16	—	—	129	—	—	—	15,713	—	—	—	*83*
1987	—	—	117	—	—	18	—	—	135	—	—	—	16,843	—	—	—	*84*
1988	—	—	113	—	—	19	—	—	132	—	—	—	16,795	—	—	—	*83*
1989	—	—	111	—	—	22	—	—	133	—	—	—	17,142	—	—	—	*86*
1990	—	—	114	—	—	23	—	—	137	—	—	—	15,676	—	—	—	*86*
1991	131	107	117	31	14	19	162	121	136	419	17,844	14,996	15,483	48,323	*90*	*87*	*83*
1992	133	106	120	26	19	18	159	125	138	422	19,015	14,997	16,251	50,263	*90*	*88*	*84*
1993	126	111	121	30	17	18	156	128	139	423	18,820	15,516	16,763	51,099	*90*	*86*	*84*
1994	116	116	119	34	14	20	150	130	139	419	17,708	16,080	15,929	49,717	*89*	*88*	*84*
1995	118	117	120	34	22	24	152	139	144	435	17,929	17,285	15,876	51,090	*89*	*87*	*84*
1996	122	113	118	30	20	21	152	133	139	424	18,368	15,873	14,824	49,065	*91*	*87*	*83*
1997	125	113	125	27	18	21	152	131	146	429	19,066	15,778	15,963	50,807	*89*	*86*	*83*
1998	122	110	124	27	19	20	149	129	144	422	18,667	15,419	15,780	49,866	*88*	*87*	*82*
1999	120	117	124	30	23	19	150	140	143	433	17,287	13,885	14,056	45,228	*87*	*85*	*83*
2000	125	121	116	31	24	18	156	145	134	435	17,311	14,576	13,286	45,173	*89*	*86*	*83*
2001	125	117	117	28	20	17	153	137	134	424	16,756	14,286	13,304	44,346	*90*	*88*	*82*
2002	115	113	102	26	20	18	141	133	120	394	15,489	14,683	13,544	43,716	*91*	*85*	*83*
2003	117	109	103	24	20	19	141	129	122	392	17,023	16,244	15,200	48,467	*89*	*88*	*83*
2004	120	111	109	27	20	19	147	131	128	406	17,413	16,839	15,222	49,474	*89*	*88*	*82*
2005	119	107	108	27	20	21	146	127	129	402	17,258	16,711	15,378	49,347	*90*	*88*	*82*
2006	122	105	116	29	18	20	151	123	136	410	17,026	16,620	14,814	48,460	*91*	*88*	*83*
2007	119	103	111	32	17	21	151	120	132	403	16,495	16,398	15,132	48,025	*91*	*88*	*81*

Source. The Monitoring the Future study, the University of Michigan.

FIGURE 3-1
Schools included in 1 Year's Data Collection
8th, 10th, and 12th Grades

Source. The Monitoring the Future study, the University of Michigan.
Note. One dot equals one school.

FIGURE 3-2
School Participation Rates



Percent of slots filled by...	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
Original	59	63	62	63	71	71	66	72	67	66	72	71	68	70	59	55	60	53	52	53	51	51	57	62	56	49	53	62	63	59	58
Replacements	39	36	35	32	25	26	32	26	29	33	26	26	30	29	39	43	39	44	44	43	47	48	42	35	42	48	45	37	34	40	39
Total	98	99	97	95	96	97	99	98	96	99	99	98	99	99	98	98	99	97	96	96	98	99	99	97	98	97	98	99	97	99	97

Source. The Monitoring the Future study, the University of Michigan.

Chapter 4

PREVALENCE OF DRUG USE IN EARLY AND MIDDLE ADULTHOOD

For many substances, early adulthood is the period with the highest prevalence rates. There tends to be a rise in use with age during the early post–high school years, corresponding to the new freedoms associated with leaving high school and often moving away from the parental home.[32] But there are also sometimes strong cohort effects that are reflected in differences among age groups at a given point in time; in this chapter we will see evidence of both types of effects.

Estimates of drug use in the adult population are most often generated through household survey interviews of cross-sections of the general population. In the present study, our estimates come from self-completed mail questionnaires from respondents in the follow-up surveys. These are representative samples of previous classes of high school students who started their participation in the study in their senior year. As described in more detail in chapter 3, Monitoring the Future has conducted ongoing panel studies on representative samples from each graduating high school senior class beginning with the Class of 1976. From each class, two matched subpanels of roughly 1,200 students each are randomly selected to comprise long-term follow-up panels—one of these two panels is surveyed every even-numbered year after graduation, and the other is surveyed every odd-numbered year, up through age 30. So, while each cohort participates every year, each respondent participates only every other year. This alternating panel design was chosen to reduce the repetitiveness of participating in the panel study, because the questionnaire remains the same between ages 19 and 30. Thus, in a given year, the study encompasses one of the two panels from each of the last 12 senior classes previously participating in the study.[33] In 2007, representative samples of the Classes of 1995 through 2006—ages 19–30—were surveyed, using the standard young adult survey instruments. For brevity, we refer to this 19- through 30-year-old age group as "young adults" in this chapter.

To build on these important national panels of young adults, we have extended the surveys into middle adulthood. The middle adulthood surveys are conducted at modal age 35 (that is, 17 years after high school graduation) and at five-year intervals thereafter. In 2007, the Class of 1990 received the age-35 follow-up questionnaire, the Class of 1985 received the age-40 questionnaire, and the Class of 1980 received the age-45 questionnaire. In these later follow-ups, both of the half panels from the relevant graduating class are surveyed using a single questionnaire form (one for age 35, and a different one for ages 40 and 45) instead of six forms.

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[32]Bachman, J. G., O'Malley, P. M., Schulenberg, J. E., Johnston, L. D., Freedman-Doan, P., & Messersmith, E. E. (2008). *The education–drug use connection: How successes and failures in school relate to adolescent smoking, drug use, and delinquency.* New York: Lawrence Erlbaum Associates/Taylor & Francis.

[33]Through 2001, the follow-ups also included modal ages 31 and 32. This seventh follow-up was dropped in 2002 because we believed that the marginal costs were no longer justified by the marginal benefits of having these follow-up data, given that an age-35 survey is being conducted. Throughout the time between surveys, we send a newsletter to respondents in order to help maintain contact with them.

The results of these 2007 follow-up surveys should accurately characterize approximately 87% of all young adults 1 to 12 years beyond high school (modal ages 19 to 30) as well as about 88% of adults 17, 22, and 27 years beyond high school (modal ages 35, 40, and 45). The remaining 12% or so—the high school dropout segment—were missing from the senior year surveys and, as a result, were missing from all of the follow-up surveys as well. Thus, the results presented here are not necessarily generalizable to that small segment of the population that did not complete high school. The more typical household survey approach in theory does not miss this segment, although even there the dropouts are probably underrepresented to some degree because they tend to be more difficult to locate and interview.

Figures 4-1 through 4-21 contain the 2007 *prevalence* data by age, corresponding to those respondents 1 to 12 years beyond high school (modal ages 19 to 30), as well as 18-, 35-, 40-, and 45-year-olds. Figures provided in chapter 5 contain the *trend* data derived from the repeated cross-sectional surveys for each age group, including 12th graders and high school graduates through age 45. In the figures in this chapter and chapter 5, age groups spanning the young adult years have been paired into two-year intervals in order to increase the number of cases, and thus the precision, for each point estimate. The data for ages 35, 40, and 45 are, of necessity, based on a single age in each case. As indicated above, *both* half samples from a given class cohort are included in each year's samples of 35-, 40-, and 45-year-olds, so in 2007 the two half samples come from the graduating classes of 1990, 1985, and 1980, respectively. Their respective weighted numbers of cases are 890, 890, and 999. (Actual, unweighted numbers are somewhat higher.)

It is worth noting that the pattern of age-related differences showing up in any one year can be checked in an adjacent year (i.e., the previous year's volume or the succeeding year's) for replicability, because two nonoverlapping half-samples of follow-up respondents in the 19-to-30 age band are surveyed on alternating years. In the case of the 35-, 40-, and 45-year-olds, two entirely different graduating classes make up the samples for any two adjacent years.

A NOTE ON ADJUSTED LIFETIME PREVALENCE ESTIMATES

In Figures 4-1 through 4-21, 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 (the light gray bar). 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 white bar). *To be categorized as one who has used the drug based on all past answers regarding that drug, the respondent must have reported either lifetime use in the most recent data collection and/or some use in his or her lifetime on at least two earlier data collections.* Because respondents of ages 18 through 20 cannot have their responses adjusted on the basis of two earlier data collections, adjusted prevalence rates are reported only for ages 21 and up. Most other epidemiological studies can present only an unadjusted estimate because they have data from a single cross-sectional survey. An adjusted estimate of the type used here is possible only when panel data have been gathered so that a respondent can be classified as having used a drug at some time 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 that respondents appropriately corrected in later surveys as they became more knowledgeable. It should be noted that a fair proportion of those giving inconsistent answers across time had earlier reported having used the given drug only once or twice in their lifetime.

As we have reported elsewhere, the cross-time stability of self-reported usage measures, taking into account both prevalence and frequency of self-reported use, is still very high.[34] Note that the divergence between the two lifetime prevalence estimates is greatest for the psychotherapeutic drugs and for 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 respondents having greater difficulty accurately categorizing psychotherapeutic drugs (usually taken in pill form) with a high degree of certainty—especially if such a drug was used only once or twice. We 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 of importance primarily in showing the degree to which a drug class has penetrated the general population overall as well as particular cohorts; we believe that the evidence from the lifetime estimates suggests that cross-sectional surveys of adults are subject to underreporting, and that to a degree such underreporting increases with age.[35]

The reader is reminded that the reweighting procedures used to correct the panel data for the effects of panel attrition are described in chapter 3.

[34]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.

[35]For a more detailed analysis and discussion, see Johnston, L. D., & O'Malley, P. M. (1997). The recanting of earlier-reported drug use by young adults. In L. Harrison & A. Hughes (Eds.), *The validity of self-reported drug use: Improving the accuracy of survey estimates* (NIDA Research Monograph No. 97-4147). Washington, DC: National Institute on Drug Abuse.

PREVALENCE OF DRUG USE AS A FUNCTION OF AGE

Figures 4-1 through 4-21 provide 2007 prevalence rates for each class of drugs, covering the age range 18 to 45. For virtually all drugs, available age comparisons show much higher *lifetime* prevalence for the older age groups, as would be expected. In fact, the figures reach surprisingly high levels among adults in their early 30s through their mid-40s.

- The adjusted lifetime prevalence figures are most striking for today's 45-year-olds, who were passing through adolescence near the peak of the drug epidemic. Some 83% of them reported trying ***an illicit drug*** (lifetime prevalence, adjusted), leaving only 17% who have reported not doing so (see Figure 4-1). Some 77% of the 45-year-olds said they had tried ***marijuana***, and over two thirds (69%) said they had tried some ***other illicit drug***, including 44% who have tried ***cocaine*** specifically. Clearly, the parents of today's teenagers are themselves a very drug-experienced generation.

- In 2007, the adjusted lifetime prevalence figures among 29- to 30-year-olds reach 69% for ***any illicit drug***, 65% for ***marijuana***, 43% for ***any illicit drug other than marijuana***, and 18% for ***cocaine***. Put another way, even among young Americans who graduated from high school in 1995 and 1996—after the peak of the larger drug epidemic—only about one third (31%) have *never* tried an illegal drug.

  Their 2007 survey responses, *unadjusted* for previous answers, show somewhat lower lifetime prevalence: 64% for ***any illicit drug***, 61% for ***marijuana***, 36% for ***any illicit drug other than marijuana***, and 16% for ***cocaine***.

- Despite the higher lifetime prevalence rates among older age groups, these groups generally show *annual* or *30-day* prevalence rates that are no higher than they are among today's 12th graders. In fact, for a number of drugs, the levels reported by older respondents are lower—sometimes considerably lower—suggesting that the incidence of quitting more than offsets the incidence of initiating use of these drugs during the years after high school.

  In analyses published elsewhere, we looked closely at patterns of change in drug use with age and identified post–high school experiences that contribute to declining levels of annual or current use of drugs 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***, ***marijuana*** use, ***cocaine*** use, and most likely just about all of the other illicit drugs as well.[36]

[36]Bachman, J. G., Wadsworth, K. N., O'Malley, P. M., Johnston, L. D., & Schulenberg, J. E. (1997). *Smoking, drinking, and drug use in young adulthood: The impacts of new freedoms and new responsibilities.* Mahwah, NJ: Lawrence Erlbaum Associates; and Bachman, J. G., O'Malley, P. M., Schulenberg, J. E., Johnston, L. D., Bryant, A. L., & Merline, A. C. (2002). *The decline of substance use in young adulthood: Changes in social activities, roles, and beliefs*. Mahwah, NJ: Lawrence Erlbaum Associates. See also Schulenberg, J., O'Malley, P. M., Bachman, J. G., & Johnston, L. D. (2000). "Spread your wings and fly": The course of well-being and substance use during the transition to young adulthood. In L. J. Crockett & R. K. Silbereisen (Eds.), *Negotiating adolescence in times of social change* (pp. 224–255). New York: Cambridge University Press. And see O'Malley, P. M., Bachman, J. G., Johnston, L. D., & Schulenberg, J. E. (2004). Studying the transition from youth to adulthood: Impacts on substance use and abuse. In J. S. House, F. T. Juster, R. L. Kahn, H. Schuman, & E. Singer (Eds.), *A telescope on society: Survey research and social science at the University of Michigan and beyond* (pp. 305–329). Ann Arbor, MI: The University of Michigan Press.

- For the use of ***any illicit drug*** (Figure 4-1), lifetime prevalence (unadjusted) is 64% among 29- to 30-year-olds versus 47% among the 2007 twelfth graders. Annual prevalence, however, is highest among the younger respondents (12th graders at 36%) with progressively lower rates among the older age groups, reaching 23% among the 29- to 30-year-olds. Current (30-day) prevalence shows much the same pattern, with 12th graders having the highest rate (22%) and the rate generally declining with each age band, reaching 13% among the 29- to 30-year-olds.

- Among the 35-, 40-, and 45-year-olds, lifetime prevalence rates for ***marijuana***, ***any illicit drug***, and ***any illicit drug other than marijuana*** generally increase with each age level. (This is also true for many of the other specific illicit drugs.) However, annual and 30-day prevalence rates generally decline slightly across age levels from 18 to 35, and then remain fairly level through age 45 (the oldest age covered in the study so far). Thus, it is clear that greater proportions of the older cohorts have discontinued use.

- Among young adults, a similar pattern exists for ***marijuana***: a higher lifetime prevalence as a function of age, but considerably lower annual and 30-day prevalence rates through the late 20s (Figure 4-3). After age 35 there is little difference across the age bands. Current ***daily marijuana*** use shows the least variation across age (as shown in Figure 5-3c). Still, in 2007 it ranges from 5.1% among 12th graders down to 3.2% among 29- to 30-year-olds. Daily use in 2007 ranges from 1.9% among 35-year-olds to 2.7% among 45-year-olds, indicating that most daily users in their teenage years are no longer daily users. Note again the evidence of a cohort effect, in that the 45-year-olds had a higher rate of marijuana use when they were high school seniors (1980) than did the 35-year-olds (Class of 1990).

- Statistics on the use of ***any illicit drug other than marijuana*** (Figure 4-2) have a somewhat similar pattern. Like marijuana and the any-illicit-drug-use index, adjusted lifetime rates on this index also show an appreciable rise with age level, reaching 43% among the 29- to 30-year-old age group and 69% among the 45-year-olds. In other words, over 40% of today's 30-year-olds have tried some illicit drug other than marijuana, and almost 70% of all 45-year-olds have done so. Current use shows a slight decline across age bands, ranging from 9% among 12th graders to 6% among 29- to 30-year-olds. After ages 21–22, annual use is generally lower with increased age of the respondent. A number of the individual drugs that comprise this general category show lower rates of use at higher ages for annual prevalence, usually with the highest rate observed at ages 18–20. This is particularly true for ***amphetamines***, ***hallucinogens***, ***LSD*** specifically, ***inhalants***, and ***sedatives*** (***barbiturates***). The falloff with age is not as great nor as consistent for ***cocaine***, ***crack***, ***other cocaine***, ***crystal methamphetamine*** (***ice***), ***heroin***, ***narcotics other than heroin***, ***tranquilizers***, and ***ecstasy*** (***MDMA***), though in general, usage rates are somewhat lower among those in their 30s than among those in their early 20s. Several classes of drugs are discussed individually next.

- ***Inhalants*** show some very interesting differences across the age strata (see Figure 4-13). There is little difference across age in contemporaneously reported lifetime prevalence but a considerable difference in the lifetime prevalence figure *adjusted* for previous reporting of

use. The adjusted pattern—an increase with age—is the one we have come to expect, and we believe is the more accurate one. Annual prevalence rates drop off with age, while 30-day rates begin fairly low and can drop only a little. Clearly, the use of inhalants is extremely low beyond about age 20, and we know from data presented in *Volume I* that much of the decline in use with age has already occurred by the time young people have reached 12th grade. Questions on inhalant use are not included in the surveys administered to respondents over the age of 30, given the extremely low rates of use reported by age 30.

- For ***amphetamines***, lifetime prevalence is again much higher among the older age groups—reflecting in part the addition of new users who initiate use in their 20s, but also reflecting some cohort differences (Figure 4-4). (There is also a considerable divergence between the corrected lifetime prevalence versus the contemporaneously reported lifetime prevalence, as is true for most of the psychotherapeutic drugs.) However, more recent use, as reflected in the annual prevalence figure, is considerably lower among the older age groups. This has not always been true; the present pattern reflects a sharper historic decline in use among older respondents than has occurred among 12th graders, as well as cohort differences in having ever used these drugs. These trends are discussed in the next chapter.

- ***Ritalin***, an amphetamine widely prescribed for the treatment of attention deficit hyperactivity disorder (ADHD), shows a drop-off in annual prevalence (outside of medical supervision) after ages 23–24 (3.1%) to ages 25–26 (1.2%), consistent with the interpretation that it is often used by college students trying to stay awake and alert for studying and completing assignments (see Table 4-3). By ages 29–30 it is down to just 0.2%, which may reflect some cohort difference as well as an age effect.

- Questions on the use of ***methamphetamine*** are contained in two of the six questionnaire forms, making the estimates less reliable than those based on all six forms. Methamphetamine use declines some with age (though not very systematically), with annual prevalence at 1.7% among 18-year-olds, and 0.7% among 29- to 30-year-olds (Table 4-3 and Figure 4-5).

- ***Crystal methamphetamine*** (***ice***) is also asked about on only two forms through age 30 (and is not asked of the 35-, 40-, or 45-year-old respondents). Among the 19- to 30-year-old respondents *combined*, 1.0% reported some use in the prior year—lower than the 1.6% reported by 12th graders (see Table 4-3 and Figure 4-6). Those above age 24 have lower annual prevalence rates than those who are younger.

- ***Sedatives*** (***barbiturates***) show lifetime prevalence rates that are fairly similar across the age band 23 through 40, but are appreciably higher among 45-year-olds. Above age 35, *annual* use falls with age (Figure 4-14). At present, current usage rates are quite low in all age groups (highest at age 18 at 3%); therefore, 30-day use varies rather little by age. Because of

the substantial long-term decline in sedative (barbiturate) use over the life of the study, the 45-year-olds have, by far, the highest adjusted lifetime prevalence rate (25%).[37]

- Annual prevalence of ***narcotics other than heroin*** is highest in the 18-to-28 age range (at 8% to 9%), compared to 4% among 45-year-olds. Thirty-day prevalence shows a somewhat similar profile.

- ***Tranquilizer*** use shows an increase with age in lifetime prevalence through age 28, then some falloff through age 35, with the highest rates among those over 35—again, with the oldest cohorts having much higher levels of lifetime use. On the other hand, there is some modest decrease with age in annual prevalence. Thirty-day prevalence is 2% to 3% among 18- to 30-year-olds, and 1% to 2% among 35- to 45-year-olds (Figure 4-16).

- ***Cocaine*** had generally presented a unique case among the illicit drugs, in that lifetime, annual, and current prevalence rates have *all* tended to rise with age into the 20s. By 1994, however, 30-day cocaine use had reached such low levels that it varied rather little by age. Following the resurgence of cocaine use in the 1990s, some differences by age in annual prevalence emerged, though there are still rather few differences for current prevalence (Figure 4-7). Annual prevalence is now highest among those ages 19 through 28, who were 12th graders when the increase in cocaine use occurred in the 1990s. The cohort differences in lifetime cocaine use are particularly vivid, with the 40- and 45-year-olds showing 32% and 44% adjusted lifetime prevalence rates, respectively, compared to 14% among 21- to 22-year-olds in 2007.

- In 2007, lifetime prevalence of ***crack*** use (Figure 4-8) is fairly similar among ages 18 through 22. Lifetime prevalence is higher among those 23–35 and highest among 40- and 45-year-olds, reflecting something of a cohort effect due to the rather transient popularity of crack in the early to mid-1980s. Current prevalence is 0.9% or below in all age groups. Annual prevalence is highest among 18-year-olds at 1.9% and lower among those above age 28. We believe that the omission of high school dropouts is likely to have a greater than average impact on the prevalence estimates for crack. It also seems likely that any members of the panels who are dependent on crack (or other illicit drugs like heroin) would be less likely than average to respond to the questionnaires; therefore, such extreme users are no doubt underrepresented among the panel respondents.

- ***Ecstasy*** (***MDMA***) was added to two of the six forms of the follow-up surveys in 1989 to assess how widespread its use had become among young adults. It was added to a third form in 2002. Questions about its use were not asked of high school students until 1996, primarily because we were concerned that its alluring name might have the effect of stimulating interest in the drug. We were less concerned about such an effect after the name of the drug

[37]Barbiturates were the dominant form of sedatives in use when these questions were first introduced. In the intervening years, a number of non-barbiturate sedatives have entered the market and largely displaced barbiturate sedatives. We believe that a number of users of non-barbiturate sedatives are reporting them in answer to this question, which also defines them in terms of the conditions for which they are prescribed. In recognition of this fact, we now label them as "sedatives (barbiturates)." The rewording of the question was made in half of the questionnaire forms in 2004 and in the other half in 2005.

had become more widely known. (Ecstasy use is not asked of the 35-, 40-, or 45-year-old respondents.)

In 2007, among all 19- to 30-year-olds combined, 14% say they have tried ***ecstasy***; among 12th graders, 7% say they have used it. The age differences in ecstasy use are quite dramatic, with lifetime prevalence now highest (22%) at ages 27–28 and generally declining with age thereafter (see Figure 4-17). This very likely reflects the fact that ecstasy use rose very rapidly between 1997 and 2001, and then declined quite sharply; therefore, recent graduating classes report less use than their predecessors, and much earlier classes reported less use than their successors. Annual prevalence is highest among 18- to 24-year-olds, at 3–5%, and is lower among 25- to 30-year olds. Past-month ecstasy use is now at 1% or less for all age bands between 19 and 30.

- All ***alcohol*** prevalence rates are higher among those of post–high school age than among those in high school, and they generally increase for the first three to five years after high school, through age 23 or 24 (Figures 4-20a and 4-20b). After that, prevalence rates vary only modestly among the different age groups. Lifetime prevalence changes very little after ages 23 to 24, due in large part to a "ceiling effect." Current (30-day) alcohol use is considerably higher among those ages 21–22 (75%) than among 12th graders (44%); it drops some through the age strata, reaching 64% at age 45. Current ***daily drinking*** (Figure 4-20b) is also slightly higher and level among those 21 to 30 years old (5–6%) versus among those 18–20 (3%). The highest rate of daily drinking is among those at age 45 (9%).

- Among the various measures of alcohol consumption, ***occasions of heavy drinking*** (that is, having five or more drinks in a row on at least one occasion in the two weeks prior to the survey) show some differences among the age groups (Figure 4-20b). There is a large difference between 18-year-olds (26%) and 21- to 22-year-olds, who have the highest prevalence of such heavy drinking (46%). Then there is a falloff at each subsequent age level above age 22, reaching 19% by age 45. We have interpreted this curvilinear relationship as reflecting an age effect—and not a cohort effect—because it seems to replicate across different graduating class cohorts, 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), both of which are, in turn, related to attending college.[38] Among those at ages 35 to 45, about one fifth (19% to 24%) report such heavy drinking in the prior two-week interval.

- ***Cigarette smoking*** also shows an unusual pattern of age-related differences (Figure 4-21). Current (30-day) smoking used to be about the same rate among those in their early 20s compared to 12th graders, in part reflecting the fact that relatively few new people are recruited to smoking after high school. Beginning in 2005, however, current smoking is somewhat lower among 12th graders than among the next several age bands (reaching a high

[38]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, J. G., Wadsworth, K. N., O'Malley, P. M., Johnston, L. D., & Schulenberg, J. E. (1997). *Smoking, drinking, and drug use in young adulthood: The impacts of new freedoms and new responsibilities.* Mahwah, NJ: Lawrence Erlbaum Associates.

of 28% among 21- to 22-year-olds), almost surely due to the sharp drop in smoking that has been occurring among secondary school students—a cohort effect. Smoking at heavier levels—such as smoking half a pack daily—is (and has been) higher among those in their 20s than among 12th graders, reflecting, at least in part, the fact that many light or moderate smokers in high school move into a pattern of heavier consumption after high school.[39] While about a quarter (26%) of the current smokers in the 12th grade smoke at the rate of a half pack per day or more, well over one half (55%) of the current smokers in the 29-to-30 age group do so.

- Questions about the use of ***steroids*** were added in 1989 to one form only (and to an additional form in 1990), making it difficult to determine age-related differences with much accuracy due to the limited sample sizes. (Steroid questions are not asked of the 35-, 40-, or 45-year-old respondents.) Overall, in 2007 1.9% of 19- to 30-year-olds combined reported having used steroids in their lifetime. Annual and 30-day use levels were very low, at 0.6% and 0.3%, respectively (see Tables 4-2 through 4-4). The rates among 12th graders tend to be higher than the rates among older age groups (see Figure 4-18), possibly reflecting both age and cohort effects. (As described in *Volume I*, the prevalence of steroid use among 12th graders rose sharply between 2000 and 2002. At present, the highest annual use among the young adults is among 21- to 22-year-olds, at 1.0%.)

In sum, lifetime prevalence rates in some of the older age groups studied here, who passed through adolescence in the heyday of the drug epidemic, show impressively high lifetime rates of illicit drug use—particularly when lifetime prevalence is corrected for the recanting of earlier reported use. However, the *current* use of most illicit drugs is substantially lower among those in their 30s and 40s than among those in their late teens to early 20s. For the two licit drugs, alcohol and cigarettes, the picture is a more complicated one. Steroids also present a somewhat complicated picture.

PREVALENCE COMPARISONS FOR SUBGROUPS OF YOUNG ADULTS

Subgroup differences for the group of young adults 1 to 12 years beyond high school (corresponding to modal ages 19 to 30) are presented in Tables 4-1 through 4-5. While Table 4-1 provides only gender differences, the remaining tables have prevalence rates by gender, age, region of the country, and population density. Each of these subgroup dimensions is discussed separately below.

Gender Differences

In general, most of the gender differences in drug use that were observed in high school students may be found in the young adult (19- to 30-year-old) sample as well. See Table 4-1 for the full set of gender comparisons.

[39]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—that is, 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 (see O'Malley, Bachman, & Johnston, 1988, in previous footnote).

- Among young adults, more males than females report using ***any illicit drug*** during the prior year (34% versus 29%). Males have higher annual prevalence rates for nearly all of the specific illicit drugs—with ratios greater than two for ***inhalants***, ***LSD***, ***hallucinogens other than LSD***, ***crack***, and ***steroids***. For example, among the 19- to 30-year-olds, ***LSD*** was used by 1.6% of males versus 0.6% of females during the prior 12 months (see Table 4-1).

- All three measures of ***cocaine*** showed higher rates of use by males than females (19- to 30-year-olds). Annual ***cocaine*** use was reported by 7.6% of males and 4.7% of females; ***other cocaine*** use by 6.8% of males and 4.4% of females; and ***crack*** use by 1.3% of males and 0.6% of females.

- Other large gender differences among the 19- to 30-year-olds are found in ***daily marijuana*** use (6.4% for males versus 3.5% for females), ***daily alcohol*** use (8.7% versus 3.4%), and occasions of drinking ***five or more drinks in a row*** in the prior two weeks (47% versus 29%). This gender difference in occasions of heavy drinking is larger among young adults than among 12th graders, where it is 31% for males versus 22% for females.

- ***Ecstasy*** (***MDMA***) use is only modestly higher among males than among females in the young adult sample overall (annual prevalence 2.7% versus 2.0%, respectively).

- The annual prevalence of use of ***narcotics other than heroin*** outside of medical supervision is at 9.4% for males versus 7.5% for females. Use of ***Vicodin***, one of the most widely used drugs in the class, differs by more (11.2% versus 7.2%, respectively). There is a larger proportional gender difference for ***OxyContin*** (annual prevalence of 3.6% for males versus 2.0% for females).

- The use of ***amphetamines***, which is now about equivalent among males and females in high school, is also fairly similar for both genders in this post–high school period (annual prevalence of 5.7% versus 4.5%, respectively).

- In the 1980s, there were few differences between males and females in rate of ***cigarette*** use. By the early 1990s, however, males had slightly higher rates of use. In 2007, among the 19- to 30-year-olds, males are a little more likely to have smoked in the past month (27% versus 25%), to have smoked daily (18% versus 17%), and to have smoked half a pack or more per day (13% versus 11%).

- ***Steroid*** use among young adults is much more prevalent among males than females, as is true for 12th graders. Among 12th graders, 2.3% of males reported steroid use in the past year versus 0.6% of females. These statistics are much lower among the 19- to 30-year-olds, but use by males remains considerably higher (1.2% for males versus 0.2% for females).

Regional Differences

Follow-up respondents are asked in what state they currently reside. States are then grouped into the same regions used in the analysis of the high school data.[40] Tables 4-2 through 4-5 present regional differences in lifetime, annual, 30-day, and current daily prevalence, for the 19- to 30-year-olds combined.

- There exist some regional differences in the use of ***marijuana***, with the Northeast and West somewhat higher than the South and Midwest. The Northeast and West are also slightly higher in the proportion using ***any illicit drug*** and ***any illicit drug other than marijuana*** (see Table 4-3).

- ***Methamphetamine*** use is highest in the West (annual prevalence of 2.4%), lower in the Midwest (1.5%) and South (1.3%), and lowest in the Northeast (0.5%) (see Table 4-3).

- The use of ***crystal methamphetamine*** (***ice***) by 19- to 30-year-olds is highest in the West and Midwest (1.3% annual prevalence in 2007), slightly lower in the South (1.2%), and lowest in the Northeast (at less than 0.05%). Among 12th graders, the West has the highest rate of use followed by the South.

- The West and Northeast continue to have higher rates than the other two regions for ***hallucinogen*** use, though the regional differences are not large.

- For ***ecstasy*** (***MDMA***), annual prevalence is lower in the Midwest (1.6%) than in the other three regions (2.4% to 2.7%).

- ***OxyContin*** use is higher in the Northeast (3.6%) than the other regions (2.2% to 2.5%). ***Vicodin*** use is highest in the West (12.2%) , followed by the Midwest (9.9%), the Northeast (7.6%), and the South (7.0%).

- Use of several "club drugs"—***Rohypnol***, ***GHB***, and ***ketamine***—appears to be higher in the West, though the annual prevalence rates are very low in all regions (Table 4-3).

- The use of ***steroids*** is higher in the South and West, though again the prevalence rates are very low.

- For the remaining illicit drugs, regional differences are not substantial (see Tables 4-3 and 4-4).

[40]States are grouped into regions as follows: ***Northeast***—Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania; ***Midwest***—Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas; ***South***—Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas; ***West***—Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, and California.

- Prevalence rates for ***alcohol*** use are typically somewhat higher in the Northeast and Midwest regions than in the South and West; this pattern has generally been true among 12th graders as well. For ***binge drinking***, the Northeast and Midwest have prevalence rates of 41% and 39%, respectively, whereas the West and South have rates of 35% and 32%. Self-reported ***drunkenness*** shows a similar pattern, as would be expected.

- As with alcohol, ***cigarette smoking*** among young adults is highest in the Midwest and Northeast, which have 30-day prevalence rates of 31% and 28%. It is lower in the West (21%) and South (23%). This difference is most pronounced at the current half-pack-a-day level (Table 4-5), where the rate in the West (7.5%) is about half the rate in the Midwest (14.6%). The Northeast (11.9%) and South (10.7%) are intermediate.

Population Density Differences

Population density is measured by asking respondents to select the response category that best describes the size and nature of the community where they lived during March of the year in which they were completing the follow-up questionnaire. The various categories are listed in Tables 4-2 through 4-5; and the population sizes given to the respondent to help define each level are provided in a footnote to each table. An examination 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 have been merged since then to increase sample sizes. See Tables 4-2 through 4-5 for the tabular results discussed below.

- Differences in illicit drug use by population density tend to be very modest, perhaps more modest than is commonly supposed. Among the general population, use of most illicit drugs is fairly broadly distributed among all areas from rural to urban. To the extent that there are variations, almost all of the associations are positive, with rural/country areas having the lowest levels of use, and small towns having the next lowest. Medium-sized cities, large cities, and very large cities tend to be higher, with only small variations among them. Positive associations with population density exist for annual prevalence of ***any illicit drug***, ***marijuana***, and ***ecstasy***. The association is strongest for ecstasy, where the annual prevalence rate in the very large cities (2.9%) is about twice that in small towns (1.5%).

- In 2007, annual prevalence rates of ***methamphetamine*** and ***crystal methamphetamine*** (***ice***) use are three times higher in the farm/country stratum than in very large cities (Table 4-3).

- ***Amphetamines*** do not show a clearly discernible association with population density.

- Among young adults, the lifetime and annual ***alcohol*** use measures all show a slight positive association with population density, while 30-day use has a somewhat stronger positive association, with 59% of the farm/country stratum reporting use in the prior 30 days versus 78% of those in very large cities. ***Occasions of heavy drinking*** are positively associated with urbanicity as well (see Table 4-5). ***Daily alcohol use*** falls between 4.0% and 7.2% for all community size strata, again with a positive association with population density.

- Contrary to what we find for almost all other substances, there exists a *negative* association between population density and ***daily cigarette smoking***, which is highest in the rural/country stratum and lowest in the very large cities (daily prevalence rates of 24% and 13%, respectively). Smoking at the half-pack-a-day level is more than twice as high in the farm/country stratum (18%) as in very large cities (7%) (see Table 4-5).

TABLE 4-1

Prevalence of Use of Various Types of Drugs by Gender among Respondents of Modal Ages 19–30, 2007

(Entries are percentages.)

	Males	Females	Total
Approximate Weighted N =	*2300*	*3500*	*5800*
Any Illicit Drug[a]			
Annual	33.6	29.1	30.8
30-Day	21.5	15.7	18.0
Any Illicit Drug[a] other than Marijuana			
Annual	19.4	15.8	17.2
30-Day	9.4	7.5	8.2
Marijuana			
Annual	30.4	24.3	26.7
30-Day	19.3	12.2	15.0
Daily[b]	6.4	3.5	4.7
Inhalants[c]			
Annual	1.1	0.5	0.8
30-Day	0.2	0.1	0.1
Hallucinogens			
Annual	5.2	2.2	3.4
30-Day	1.2	0.5	0.8
LSD			
Annual	1.6	0.6	1.0
30-Day	0.3	0.1	0.2
Hallucinogens other than LSD			
Annual	4.9	2.1	3.2
30-Day	1.1	0.4	0.7
PCP[d]			
Annual	0.3	0.4	0.3
30-Day	0.3	*	0.1
Ecstasy (MDMA)[c]			
Annual	2.7	2.0	2.3
30-Day	0.8	0.3	0.5
Cocaine			
Annual	7.6	4.7	5.8
30-Day	2.6	1.5	1.9
Crack[e]			
Annual	1.3	0.6	0.9
30-Day	0.5	0.1	0.3
Other Cocaine[f]			
Annual	6.8	4.4	5.4
30-Day	2.5	1.4	1.8
Heroin			
Annual	0.4	0.2	0.3
30-Day	0.2	0.1	0.1
With a Needle[g]			
Annual	0.2	0.1	0.1
30-Day	0.1	*	*
Without a Needle[g]			
Annual	0.2	0.2	0.2
30-Day	0.1	0.2	0.1

(Table continued on next page.)

TABLE 4-1 (cont.)

Prevalence of Use of Various Types of Drugs by Gender among Respondents of Modal Ages 19–30, 2007

(Entries are percentages.)

	Males	Females	Total
Approximate Weighted N =	*2300*	*3500*	*5800*
Narcotics other than Heroin[h]			
Annual	9.4	7.5	8.3
30-Day	3.6	3.0	3.3
Amphetamines, Adjusted [h,i]			
Annual	5.7	4.5	5.0
30-Day	2.1	2.0	2.0
Methamphetamine[g]			
Annual	1.7	1.2	1.4
30-Day	0.7	0.3	0.5
Crystal Methamphetamine (Ice)[g]			
Annual	1.1	1.0	1.0
30-Day	0.2	0.3	0.2
Sedatives (Barbiturates)[h]			
Annual	4.5	3.7	4.0
30-Day	1.7	1.5	1.6
Tranquilizers[h]			
Annual	7.7	6.1	6.8
30-Day	3.0	2.4	2.6
Alcohol			
Annual	84.1	84.4	84.3
30-Day	73.5	66.9	69.5
Daily[b]	8.7	3.4	5.5
5+ Drinks in a Row in the Last 2 Weeks	46.6	29.3	36.1
10+ Drinks in a Row in the Last 2 Weeks[d]	25.1	4.7	13.0
15+ Drinks in a Row in the Last 2 Weeks[d]	11.0	1.5	5.4
Been Drunk[c]			
Annual	68.4	62.4	64.8
30-Day	45.6	35.7	39.7
Daily[b]	1.1	0.3	0.6
Flavored Alcoholic Beverages[d]			
Annual	50.2	61.8	57.2
30-Day	20.3	27.7	24.8
Cigarettes			
Annual	36.0	34.7	35.2
30-Day	26.6	25.0	25.6
Daily	17.9	16.9	17.3
Half Pack or More per Day	12.5	10.7	11.4
Steroids[g]			
Annual	1.2	0.2	0.6
30-Day	0.8	*	0.3

Source. The Monitoring the Future study, the University of Michigan.

"*" indicates a prevalence rate of less than 0.05%.

(Table continued on next page.)

Footnotes for Table 4-1

[a]Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, heroin or other narcotics, amphetamines, sedatives (barbiturates), or tranquilizers not under a doctor's orders.

[b]Daily use is defined as use on 20 or more occasions in the past 30 days except for cigarettes, for which actual daily use is measured, and for 5+ drinks, for which the prevalence of having five or more drinks in a row in the last two weeks is measured.

[c]This drug was asked about in three of the six questionnaire forms. Total *N* is approximately 2900.

[d]This drug was asked about in one of the six questionnaire forms. Total *N* is approximately 1000.

[e]This drug was asked about in five of the six questionnaire forms. Total *N* is approximately 4800.

[f]This drug was asked about in four of the six questionnaire forms. Total *N* is approximately 3900.

[g]This drug was asked about in two of the six questionnaire forms. Total *N* is approximately 1900.

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

[i]Based on data from the revised question, which attempts to exclude the inappropriate reporting of nonprescription amphetamines.

TABLE 4-2

Lifetime Prevalence of Use of Various Types of Drugs by Subgroups among Respondents of Modal Ages 19–30, 2007

(Entries are percentages.)

	Approximate Weighted N	Any Illicit Drug[a]	Any Illicit Drug[a] other than MJ	Marijuana	Inhalants[b]	Hallucinogens	LSD	Hallucinogens other than LSD	PCP[c]	Ecstasy (MDMA)[b]	Cocaine	Crack[d]
Total	*5800*	60.4	34.6	57.5	9.5	16.9	10.7	14.7	2.2	13.6	15.0	3.9
Gender:												
Male	*2300*	61.9	36.5	60.4	12.1	21.1	13.5	19.1	3.1	14.4	17.5	5.0
Female	*3500*	59.4	33.4	55.5	7.8	14.2	8.9	11.8	1.7	13.0	13.3	3.3
Modal Age:												
19–20	*1000*	49.0	26.2	46.8	7.1	8.5	3.6	7.5	0.5	6.7	9.4	2.2
21–22	*1000*	59.5	32.4	55.8	6.6	13.1	5.0	12.4	0.9	10.1	13.6	3.0
23–24	*900*	62.6	36.2	59.1	8.7	16.5	9.0	14.6	4.4	11.7	14.1	4.5
25–26	*900*	63.8	37.4	60.2	11.4	19.6	13.4	16.9	2.2	16.5	17.4	5.4
27–28	*900*	64.6	39.7	62.6	12.4	23.7	18.0	20.1	2.5	21.8	19.7	4.4
29–30	*1000*	63.5	36.5	61.1	11.0	21.2	16.0	17.3	2.9	15.6	16.3	4.4
Region:												
Northeast	*1200*	63.8	34.6	62.1	9.8	18.0	10.4	16.2	3.8	15.4	14.4	3.1
Midwest	*1600*	60.2	33.4	57.7	8.9	17.6	11.7	14.8	2.0	10.1	13.9	4.4
South	*1900*	57.0	33.3	53.1	8.6	13.6	9.0	11.3	2.0	14.3	14.0	3.3
West	*1000*	63.8	39.1	60.6	12.3	20.9	12.7	18.8	1.7	16.1	19.2	5.1
Population Density:[e]												
Farm/Country	*600*	53.1	31.0	49.1	7.2	12.2	9.3	10.3	2.2	9.2	12.7	5.8
Small Town	*1500*	58.6	33.9	55.4	8.9	16.0	9.7	13.3	1.8	11.7	13.4	4.1
Medium City	*1400*	59.8	33.6	57.2	9.5	16.4	10.8	13.9	2.7	12.9	14.8	3.9
Large City	*1300*	61.6	35.2	59.1	8.6	17.4	10.5	15.6	3.2	14.3	15.1	3.1
Very Large City	*800*	67.5	39.1	64.9	13.8	21.6	13.5	19.4	0.7	20.6	19.2	3.6

Source. The Monitoring the Future study, the University of Michigan.

[a]Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, heroin or other narcotics, amphetamines, sedatives (barbiturates), or tranquilizers not under a doctor's orders.

[b]This drug was asked about in three of the six questionnaire forms. Total *N* is approximately 2900.

[c]This drug was asked about in one of the six questionnaire forms. Total *N* is approximately 1000.

[d]This drug was asked about in five of the six questionnaire forms. Total *N* is approximately 4800.

[e]A small town is defined as having fewer 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. Within each level of population density, suburban and urban respondents are combined.

(Table continued on next page.)

TABLE 4-2 (cont.)

Lifetime Prevalence of Use of Various Types of Drugs by Subgroups among Respondents of Modal Ages 19–30, 2007

(Entries are percentages.)

	Approximate Weighted N	Other Cocaine[a]	Heroin	Heroin With Needle[b]	Heroin Without Needle[b]	Narcotics other than Heroin[c]	Amphetamines[c,d]	Methamphetamine[b]	Crystal Methamphetamine (Ice)[b]
Total	*5800*	14.3	1.7	0.5	1.9	18.7	15.1	7.1	4.0
Gender:									
Male	*2300*	16.6	2.2	0.6	2.2	20.8	15.8	8.6	4.7
Female	*3500*	12.8	1.3	0.4	1.7	17.2	14.6	6.1	3.5
Modal Age:									
19–20	*1000*	8.7	1.0	0.4	0.9	13.5	12.0	3.0	2.5
21–22	*1000*	12.8	1.3	0.3	1.3	19.2	15.1	4.6	4.3
23–24	*900*	13.8	1.2	0.1	1.5	20.8	16.7	6.9	3.8
25–26	*900*	17.4	2.4	0.8	3.0	19.6	16.3	9.9	4.4
27–28	*900*	17.9	2.2	0.8	3.0	21.5	16.5	9.3	3.3
29–30	*1000*	15.7	2.0	0.5	2.0	17.8	14.3	9.3	5.6
Region:									
Northeast	*1200*	14.0	1.7	1.1	2.2	19.0	13.7	3.1	1.0
Midwest	*1600*	13.4	1.7	0.2	2.0	19.4	15.8	7.8	4.4
South	*1900*	12.3	1.5	0.3	2.0	16.3	15.2	6.1	3.2
West	*1000*	19.5	1.8	0.6	1.5	22.0	15.4	11.9	8.2
Population Density:[e]									
Farm/Country	*600*	13.5	2.0	0.2	0.2	16.7	15.5	9.2	4.6
Small Town	*1500*	12.1	1.9	0.8	2.5	18.6	14.9	6.2	4.0
Medium City	*1400*	14.7	1.5	0.8	1.7	18.6	15.1	7.2	4.3
Large City	*1300*	14.0	1.5	0.1	1.7	18.0	14.6	6.6	4.2
Very Large City	*800*	17.9	1.6	0.2	2.8	22.4	15.6	7.6	3.0

Source. The Monitoring the Future study, the University of Michigan.

[a]This drug was asked about in four of the six questionnaire forms. Total *N* is approximately 3900.

[b]This drug was asked about in two of the six questionnaire forms. Total *N* is approximately 1900.

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

[d]Based on data from the revised question, which attempts to exclude the inappropriate reporting of nonprescription amphetamines.

[e]A small town is defined as having fewer 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. Within each level of population density, suburban and urban respondents are combined.

(Table continued on next page.)

TABLE 4-2 (cont.)

Lifetime Prevalence of Use of Various Types of Drugs by Subgroups among Respondents of Modal Ages 19–30, 2007

(Entries are percentages.)

	Approximate Weighted N	Sedatives (Barbiturates)[a]	Tranquilizers[a]	Alcohol	Been Drunk[b]	Flavored Alcoholic Beverages[c]	Cigarettes	Steroids[d]
Total	*5800*	9.9	14.6	88.7	81.2	83.9	—	1.9
Gender:								
Male	*2300*	10.5	15.6	88.0	81.0	80.4	—	4.6
Female	*3500*	9.5	13.9	89.1	81.4	86.1	—	0.2
Modal Age:								
19–20	*1000*	7.5	9.6	76.1	64.6	77.2	—	0.8
21–22	*1000*	8.3	13.6	90.1	81.7	82.8	—	1.4
23–24	*900*	10.6	15.9	91.9	82.6	87.8	—	2.0
25–26	*900*	10.3	15.4	91.1	85.8	87.5	—	1.7
27–28	*900*	12.6	18.3	90.9	86.4	85.2	—	2.6
29–30	*1000*	10.6	15.3	92.3	86.5	83.2	—	2.9
Region:								
Northeast	*1200*	9.2	14.0	92.3	87.2	85.2	—	1.8
Midwest	*1600*	9.1	13.3	91.2	84.7	84.8	—	1.4
South	*1900*	10.7	15.8	86.2	75.7	82.5	—	1.7
West	*1000*	10.6	15.0	85.8	79.4	85.3	—	3.1
Population Density:[e]								
Farm/Country	*600*	8.9	12.2	85.0	77.4	77.7	—	0.9
Small Town	*1500*	8.9	13.9	87.8	79.4	81.9	—	1.6
Medium City	*1400*	9.2	14.2	88.5	82.1	83.3	—	1.9
Large City	*1300*	11.1	14.7	89.7	81.6	86.2	—	2.0
Very Large City	*800*	11.8	18.0	91.8	86.4	89.8	—	2.9

Source. The Monitoring the Future study, the University of Michigan.

"—" indicates data not available.

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

[b]This drug was asked about in three of the six questionnaire forms. Total *N* is approximately 2900.

[c]This drug was asked about in one of the six questionnaire forms. Total *N* is approximately 1000.

[d]This drug was asked about in two of the six questionnaire forms. Total *N* is approximately 1900.

[e]A small town is defined as having fewer 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. Within each level of population density, suburban and urban respondents are combined.

TABLE 4-3

Annual Prevalence of Use of Various Types of Drugs by Subgroups among Respondents of Modal Ages 19–30, 2007

(Entries are percentages.)

	Approximate Weighted N	Any Illicit Drug[a]	Any Illicit Drug[a] other than MJ	Marijuana	Inhalants[b]	Hallucinogens	LSD	Hallucinogens other than LSD	PCP[c]	Ecstasy (MDMA)[b]	Cocaine	Crack[d]
Total	*5800*	30.8	17.2	26.7	0.8	3.4	1.0	3.2	0.3	2.3	5.8	0.9
Gender:												
Male	*2300*	33.6	19.4	30.4	1.1	5.2	1.6	4.9	0.3	2.7	7.6	1.3
Female	*3500*	29.1	15.8	24.3	0.5	2.2	0.6	2.1	0.4	2.0	4.7	0.6
Modal Age:												
19–20	*1000*	35.2	17.8	33.1	1.8	5.4	1.5	5.2	*	3.1	5.8	0.8
21–22	*1000*	35.0	19.7	30.5	1.0	4.8	1.3	4.7	*	2.7	7.2	0.8
23–24	*900*	34.1	19.1	29.3	0.4	3.5	1.4	3.0	1.4	2.6	5.8	1.0
25–26	*900*	29.3	17.0	24.7	0.4	2.7	0.9	2.4	*	1.9	6.4	1.5
27–28	*900*	28.5	16.9	24.4	0.5	2.6	0.6	2.5	*	1.9	5.9	1.0
29–30	*1000*	22.7	13.0	18.3	0.5	1.3	0.3	1.2	0.6	1.4	4.1	0.3
Region:												
Northeast	*1200*	35.9	18.4	32.5	1.3	4.4	1.1	4.0	1.1	2.5	6.8	0.8
Midwest	*1600*	30.0	17.0	26.4	0.7	3.3	1.1	2.9	0.4	1.6	5.9	1.3
South	*1900*	27.2	16.1	22.2	0.5	2.5	0.7	2.4	*	2.7	4.8	0.6
West	*1000*	34.0	18.5	30.0	0.9	4.1	1.1	4.0	*	2.4	6.7	0.7
Population Density:[e]												
Farm/Country	*600*	22.7	14.3	17.9	0.6	2.2	1.3	2.1	*	2.1	4.9	1.4
Small Town	*1500*	28.8	16.5	24.3	1.0	2.9	1.0	2.7	0.9	1.5	4.8	1.1
Medium City	*1400*	32.5	18.4	28.3	0.9	3.7	1.1	3.3	*	2.4	6.5	0.7
Large City	*1300*	32.1	17.2	28.1	0.5	3.9	0.8	3.7	0.5	2.8	5.6	0.7
Very Large City	*800*	35.4	18.4	32.6	0.8	3.6	0.8	3.4	*	2.9	7.3	0.5

Source. The Monitoring the Future study, the University of Michigan.

"*" indicates a prevalence rate of less than 0.05%.

[a]Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, heroin or other narcotics, amphetamines, sedatives (barbiturates), or tranquilizers not under a doctor's orders.

[b]This drug was asked about in three of the six questionnaire forms. Total *N* is approximately 2900.

[c]This drug was asked about in one of the six questionnaire forms. Total *N* is approximately 1000.

[d]This drug was asked about in five of the six questionnaire forms. Total *N* is approximately 4800.

[e]A small town is defined as having fewer 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. Within each level of population density, suburban and urban respondents are combined.

(Table continued on next page.)

TABLE 4-3 (cont.)

Annual Prevalence of Use of Various Types of Drugs by Subgroups among Respondents of Modal Ages 19–30, 2007

(Entries are percentages.)

	Approximate Weighted N	Other Cocaine[a]	Heroin	Heroin With Needle[b]	Heroin W/out Needle[b]	Narcotics other than Heroin[c]	OxyContin[b,]	Vicodin[b,c]	Amphetamines[c,d]	Ritalin[b,c]	Methamphetamine[b]
Total	*5800*	5.4	0.3	0.1	0.2	8.3	2.6	8.7	5.0	2.0	1.4
Gender:											
Male	*2300*	6.8	0.4	0.2	0.2	9.4	3.6	11.2	5.7	3.1	1.7
Female	*3500*	4.4	0.2	0.1	0.2	7.5	2.0	7.2	4.5	1.3	1.2
Modal Age:											
19–20	*1000*	5.4	0.3	*	0.1	8.2	3.4	8.1	6.7	3.7	1.2
21–22	*1000*	7.0	0.5	0.3	0.7	9.4	3.5	8.4	7.5	2.6	0.8
23–24	*900*	5.6	0.3	0.1	0.1	9.4	3.7	12.1	5.9	3.1	2.8
25–26	*900*	5.7	0.2	0.2	0.4	8.5	1.9	7.2	4.2	1.2	1.4
27–28	*900*	4.5	0.2	*	*	8.1	2.0	9.0	3.3	1.1	1.5
29–30	*1000*	4.0	0.2	0.3	*	6.1	1.1	7.8	2.1	0.2	0.7
Region:											
Northeast	*1200*	6.4	0.5	0.5	0.4	8.8	3.6	7.6	5.0	2.4	0.5
Midwest	*1600*	5.3	0.4	0.1	0.4	8.7	2.4	9.9	5.3	3.0	1.5
South	*1900*	4.2	0.1	0.1	0.1	6.7	2.5	7.0	5.1	1.5	1.3
West	*1000*	6.6	0.2	*	0.1	10.3	2.2	12.2	4.0	0.9	2.4
Population Density:[e]											
Farm/Country	*600*	3.9	0.3	*	*	7.3	2.4	6.9	4.8	1.8	3.1
Small Town	*1500*	4.3	0.4	0.5	0.4	8.0	2.3	8.2	5.7	1.9	1.4
Medium City	*1400*	6.8	0.4	0.1	0.2	9.4	2.3	10.6	5.0	2.1	1.4
Large City	*1300*	5.0	0.2	*	0.3	8.2	3.7	8.4	4.7	1.6	0.8
Very Large City	*800*	6.1	0.1	*	*	7.7	2.4	9.0	4.0	2.8	1.1

Source. The Monitoring the Future study, the University of Michigan.

"*" indicates a prevalence rate of less than 0.05%.

[a]This drug was asked about in four of the six questionnaire forms. Total *N* is approximately 3900.

[b]This drug was asked about in two of the six questionnaire forms. Total *N* is approximately 1900.

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

[d]Based on data from the revised question, which attempts to exclude the inappropriate reporting of nonprescription amphetamines.

[e]A small town is defined as having fewer 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. Within each level of population density, suburban and urban respondents are combined.

(Table continued on next page.)

TABLE 4-3 (cont.)

Annual Prevalence of Use of Various Types of Drugs by Subgroups among Respondents of Modal Ages 19–30, 2007

(Entries are percentages.)

	Approximate Weighted N	Crystal Methamphetamine (Ice)[b]	Sedatives (Barbiturates)[a]	Tranquilizers[a]	Rohypnol[b]	GHB[b]	Ketamine[b]	Alcohol	Been Drunk[c]	Flavored Alcoholic Beverages[d]	Cigarettes	Steroids[b]
Total	*5800*	1.0	4.0	6.8	0.3	0.4	0.3	84.3	64.8	57.2	35.2	0.6
Gender:												
Male	*2300*	1.1	4.5	7.7	0.5	0.7	0.6	84.1	68.4	50.2	36.0	1.2
Female	*3500*	1.0	3.7	6.1	0.1	0.1	0.1	84.4	62.4	61.8	34.7	0.2
Modal Age:												
19–20	*1000*	0.9	4.4	5.7	0.7	0.7	0.8	72.9	55.9	61.4	34.6	0.6
21–22	*1000*	0.9	4.1	7.6	0.3	0.1	0.2	87.8	71.2	64.3	37.0	1.0
23–24	*900*	1.8	4.6	7.5	*	0.4	0.6	87.8	68.4	59.8	37.0	0.3
25–26	*900*	1.2	3.8	7.4	0.1	*	*	86.1	68.2	55.8	37.2	0.5
27–28	*900*	0.6	4.0	7.6	0.1	0.7	0.1	85.8	65.6	52.3	35.0	1.0
29–30	*1000*	0.7	3.2	5.0	0.3	0.2	0.2	85.9	60.4	49.0	30.6	0.0
Region:												
Northeast	*1200*	*	4.1	7.5	0.2	0.4	0.3	88.6	73.1	59.6	37.3	0.4
Midwest	*1600*	1.3	3.6	5.7	0.2	0.3	0.5	87.8	69.3	57.5	40.2	0.2
South	*1900*	1.2	4.3	7.6	0.2	0.2	0.1	80.7	55.9	55.2	31.9	0.9
West	*1000*	1.3	4.3	6.3	0.5	0.8	0.5	81.4	65.2	59.5	31.7	0.6
Population Density:[e]												
Farm/Country	*600*	2.3	3.0	5.7	0.5	*	0.5	77.3	55.3	48.7	38.3	0.2
Small Town	*1500*	1.3	4.3	6.7	0.1	0.1	0.1	82.6	60.6	54.8	36.9	0.6
Medium City	*1400*	0.6	4.1	6.6	0.3	0.4	0.6	84.9	67.4	59.2	33.8	0.8
Large City	*1300*	0.6	4.5	6.6	0.3	0.1	0.1	86.2	65.4	59.8	33.4	0.2
Very Large City	*800*	0.7	3.3	7.6	0.3	1.5	0.4	88.9	74.3	59.5	35.6	1.0

Source. The Monitoring the Future study, the University of Michigan.

"*" indicates a prevalence rate of less than 0.05%.

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

[b]This drug was asked about in two of the six questionnaire forms. Total *N* is approximately 1900.

[c]This drug was asked about in three of the six questionnaire forms. Total *N* is approximately 2900.

[d]This drug was asked about in one of the six questionnaire forms. Total *N* is approximately 1000.

[e]A small town is defined as having fewer 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. Within each level of population density, suburban and urban respondents are combined.

TABLE 4-4

Thirty-Day Prevalence of Use of Various Types of Drugs by Subgroups among Respondents of Modal Ages 19–30, 2007

(Entries are percentages.)

	Approximate Weighted N	Any Illicit Drug[a]	Any Illicit Drug[a] other than MJ	Marijuana	Inhalants[b]	Hallucinogens	LSD	Hallucinogens other than LSD	PCP[c]	Ecstasy (MDMA)[b]	Cocaine	Crack[d]
Total	*5800*	18.0	8.2	15.0	0.1	0.8	0.2	0.7	0.1	0.5	1.9	0.3
Gender:												
Male	*2300*	21.5	9.4	19.3	0.2	1.2	0.3	1.1	0.3	0.8	2.6	0.5
Female	*3500*	15.7	7.5	12.2	0.1	0.5	0.1	0.4	*	0.3	1.5	0.1
Modal Age:												
19–20	*1000*	20.7	9.4	18.4	0.6	1.6	0.3	1.6	*	0.2	1.4	0.2
21–22	*1000*	21.3	9.4	18.0	0.2	1.0	0.4	0.7	*	0.5	2.8	0.4
23–24	*900*	19.3	8.7	16.2	*	0.6	0.1	0.6	*	0.3	1.6	0.1
25–26	*900*	17.0	7.8	13.6	*	0.8	*	0.8	*	1.2	2.2	0.5
27–28	*900*	15.9	7.7	13.5	0.1	0.4	*	0.4	*	0.5	2.5	0.3
29–30	*1000*	13.4	6.5	10.4	*	0.2	0.1	0.1	0.6	0.2	1.1	0.2
Region:												
Northeast	*1200*	21.1	8.4	18.7	*	1.0	0.3	0.8	0.6	0.4	2.3	0.2
Midwest	*1600*	16.5	8.2	14.0	*	0.6	*	0.6	*	0.4	1.9	0.5
South	*1900*	15.6	8.0	12.3	0.2	0.7	0.1	0.6	*	0.5	1.5	0.1
West	*1000*	21.1	8.8	17.6	0.4	0.8	0.3	0.7	*	0.6	2.2	0.1
Population Density:[e]												
Farm/Country	*600*	12.5	6.9	9.8	*	0.7	0.2	0.7	*	1.2	1.4	0.8
Small Town	*1500*	17.3	8.7	13.9	0.3	0.7	0.2	0.6	*	0.1	1.5	0.3
Medium City	*1400*	18.5	8.7	15.1	0.1	0.8	0.1	0.7	*	0.7	2.1	0.1
Large City	*1300*	19.0	7.8	16.2	0.2	1.0	0.2	0.8	0.5	0.5	1.9	0.2
Very Large City	*800*	20.3	8.1	18.4	0.1	0.5	0.1	0.5	*	0.1	2.8	0.1

Source. The Monitoring the Future study, the University of Michigan.

"*" indicates a prevalence rate of less than 0.05%.

[a]Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, heroin or other narcotics, amphetamines, sedatives (barbiturates), or tranquilizers not under a doctor's orders.

[b]This drug was asked about in three of the six questionnaire forms. Total *N* is approximately 2900.

[c]This drug was asked about in one of the six questionnaire forms. Total *N* is approximately 1000.

[d]This drug was asked about in five of the six questionnaire forms. Total *N* is approximately 4800.

[e]A small town is defined as having fewer 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. Within each level of population density, suburban and urban respondents are combined.

(Table continued on next page.)

TABLE 4-4 (cont.)

Thirty-Day Prevalence of Use of Various Types of Drugs by Subgroups among Respondents of Modal Ages 19–30, 2007

(Entries are percentages.)

	Approximate Weighted N	Other Cocaine[a]	Heroin	Heroin With Needle[b]	Heroin Without Needle[b]	Narcotics other than Heroin[c]	Amphetamines[c,d]	Methamphetamine[b]	Crystal Methamphetamine (Ice)[b]
Total	*5800*	1.8	0.1	*	0.1	3.3	2.0	0.5	0.2
Gender:									
Male	*2300*	2.5	0.2	0.1	0.1	3.6	2.1	0.7	0.2
Female	*3500*	1.4	0.1	*	0.2	3.0	2.0	0.3	0.3
Modal Age:									
19–20	*1000*	1.0	0.2	*	*	3.0	3.2	0.7	0.3
21–22	*1000*	3.1	0.3	*	0.5	3.9	2.9	0.2	0.1
23–24	*900*	1.5	0.2	*	0.1	3.5	2.5	0.7	0.7
25–26	*900*	2.4	0.1	*	0.1	3.2	1.8	1.0	0.3
27–28	*900*	2.0	*	*	*	3.3	1.2	0.1	*
29–30	*1000*	0.9	0.2	0.2	*	2.8	0.6	*	*
Region:									
Northeast	*1200*	2.2	0.2	0.1	0.3	3.1	2.0	0.1	*
Midwest	*1600*	1.8	0.3	*	0.2	3.9	1.9	0.3	0.4
South	*1900*	1.3	*	*	0.1	2.6	2.5	0.5	0.3
West	*1000*	2.2	0.1	*	0.1	3.8	1.5	1.2	0.2
Population Density:[e]									
Farm/Country	*600*	0.8	0.3	*	*	3.5	2.4	1.4	0.6
Small Town	*1500*	1.3	0.2	0.1	0.3	3.2	2.1	0.3	0.3
Medium City	*1400*	2.2	0.1	*	0.1	3.9	1.9	0.4	0.1
Large City	*1300*	1.9	0.1	*	0.2	3.0	2.0	0.3	0.1
Very Large City	*800*	2.5	0.1	*	*	2.5	2.1	0.6	0.3

Source. The Monitoring the Future study, the University of Michigan.

"*" indicates a prevalence rate of less than 0.05%.

[a]This drug was asked about in four of the six questionnaire forms. Total *N* is approximately 3900.

[b]This drug was asked about in two of the six questionnaire forms. Total *N* is approximately 1900.

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

[d]Based on data from the revised question, which attempts to exclude the inappropriate reporting of nonprescription amphetamines.

[e]A small town is defined as having fewer 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. Within each level of population density, suburban and urban respondents are combined.

(Table continued on next page.)

TABLE 4-4 (cont.)

Thirty-Day Prevalence of Use of Various Types of Drugs by Subgroups among Respondents of Modal Ages 19–30, 2007

(Entries are percentages.)

	Approximate Weighted N	Sedatives (Barbiturates)[a]	Tranquilizers[a]	Alcohol	Been Drunk[b]	Flavored Alcoholic Beverages[c]	Cigarettes	Steroids[d]
Total	*5800*	1.6	2.6	69.5	39.7	24.8	25.6	0.3
Gender:								
Male	*2300*	1.7	3.0	73.5	45.6	20.3	26.6	0.8
Female	*3500*	1.5	2.4	66.9	35.7	27.7	25.0	*
Modal Age:								
19–20	*1000*	1.8	2.3	54.7	37.1	26.3	22.6	0.3
21–22	*1000*	1.6	3.0	74.5	50.3	30.0	27.8	0.6
23–24	*900*	1.9	2.9	73.1	42.1	27.1	26.7	*
25–26	*900*	1.4	3.3	73.8	40.6	27.4	27.5	0.5
27–28	*900*	1.3	2.8	71.9	37.1	17.4	26.6	0.7
29–30	*1000*	1.5	1.6	69.8	31.7	19.6	22.9	*
Region:								
Northeast	*1200*	1.6	2.8	75.9	48.2	26.1	27.6	0.2
Midwest	*1600*	1.4	2.2	71.9	42.9	27.9	30.5	0.1
South	*1900*	1.8	3.0	64.5	31.5	24.1	23.4	0.4
West	*1000*	1.5	2.4	68.9	40.5	20.4	20.6	0.6
Population Density:[e]								
Farm/Country	*600*	1.5	2.1	59.2	30.9	19.5	30.2	*
Small Town	*1500*	1.8	2.7	65.4	35.0	23.2	28.1	0.2
Medium City	*1400*	1.3	2.6	69.8	41.0	28.1	24.5	0.5
Large City	*1300*	1.6	2.6	73.4	41.6	25.7	24.0	0.1
Very Large City	*800*	1.6	2.8	78.1	48.6	22.9	22.2	0.8

Source. The Monitoring the Future study, the University of Michigan.

"*" indicates a prevalence rate of less than 0.05%.

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

[b]This drug was asked about in three of the six questionnaire forms. Total *N* is approximately 2900.

[c]This drug was asked about in one of the six questionnaire forms. Total *N* is approximately 1000.

[d]This drug was asked about in two of the six questionnaire forms. Total *N* is approximately 1900.

[e]A small town is defined as having fewer 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. Within each level of population density, suburban and urban respondents are combined.

TABLE 4-5

Thirty-Day Prevalence of Daily Use of Various Types of Drugs by Subgroups among Respondents of Modal Ages 19–30, 2007

(Entries are percentages.)

	Approximate Weighted N	Marijuana Daily[a]	Alcohol Daily[a]	Alcohol: 5+ Drinks in a Row in Past 2 Weeks	Cigarettes Daily	Cigarettes: Half Pack or More per Day
Total	*5800*	4.7	5.5	36.1	17.3	11.4
Gender:						
Male	*2300*	6.4	8.7	46.6	17.9	12.5
Female	*3500*	3.5	3.4	29.3	16.9	10.7
Modal Age:						
19–20	*1000*	5.1	3.4	31.4	12.9	7.5
21–22	*1000*	4.9	6.1	45.8	18.3	10.7
23–24	*900*	5.2	6.0	39.8	17.5	10.6
25–26	*900*	4.1	6.5	38.3	19.2	14.3
27–28	*900*	5.7	6.2	33.4	19.3	13.0
29–30	*1000*	3.2	5.1	28.4	16.8	12.6
Region:						
Northeast	*1200*	5.3	6.6	41.4	18.4	11.9
Midwest	*1600*	4.7	5.5	39.2	20.9	14.6
South	*1900*	3.6	4.7	31.5	16.2	10.7
West	*1000*	5.9	5.5	35.0	12.5	7.5
Population Density:[b]						
Farm/Country	*600*	4.4	5.7	29.3	23.5	17.7
Small Town	*1500*	4.1	4.0	33.8	19.9	13.3
Medium City	*1400*	5.0	5.4	37.1	17.5	11.3
Large City	*1300*	5.1	5.7	37.3	13.9	9.4
Very Large City	*800*	4.9	7.2	42.1	12.5	6.6

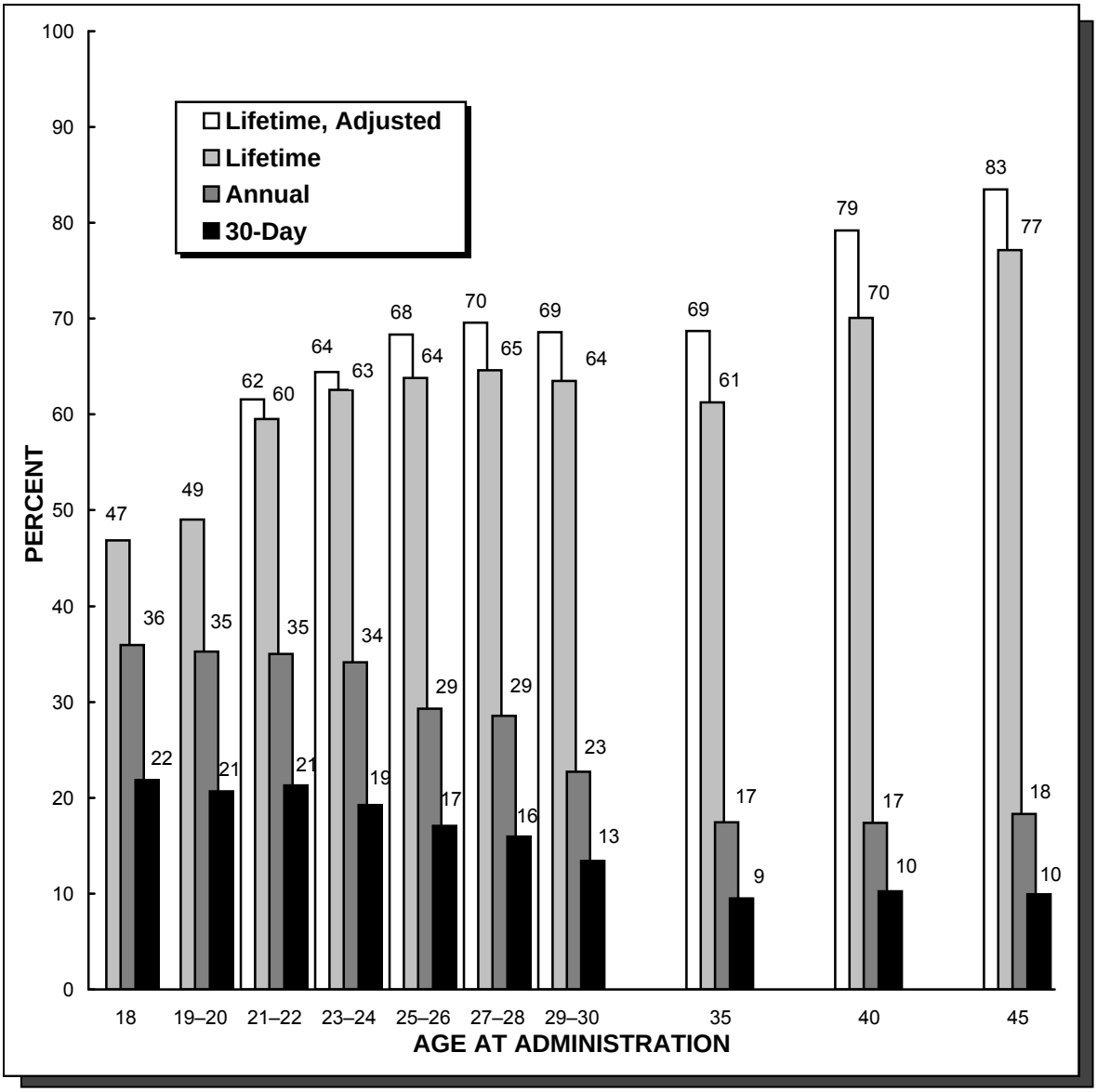
Source. The Monitoring the Future study, the University of Michigan.

[a]Daily use is defined as use on 20 or more occasions in the past 30 days except for cigarettes, for which actual daily use is measured, and for 5+ drinks, for which the prevalence of having five or more drinks in a row in the last two weeks is measured.

[b]A small town is defined as having fewer 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. Within each level of population density, suburban and urban respondents are combined.

FIGURE 4-1

Any Illicit Drug: Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 45 by Age Group, 2007

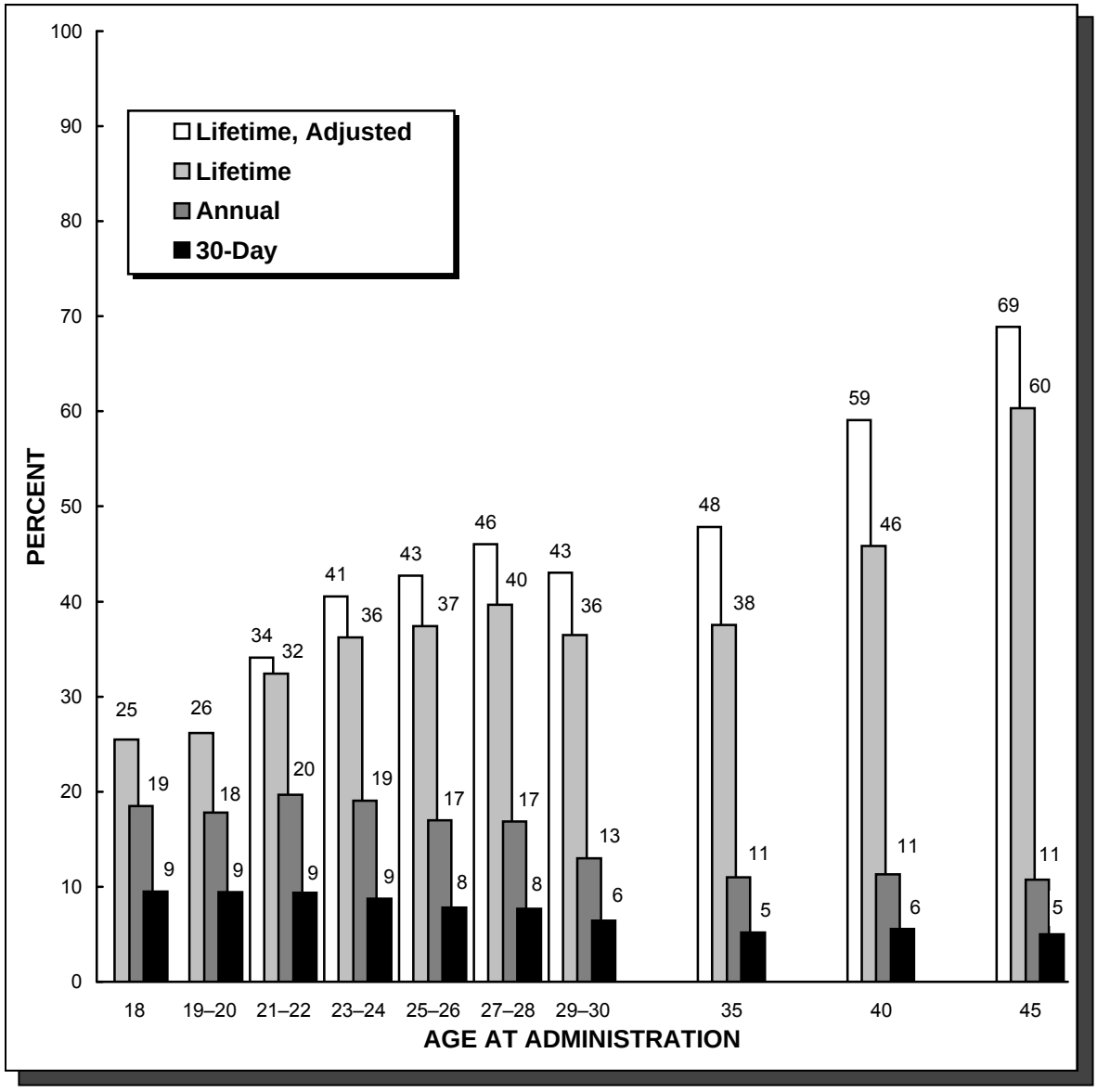


Source. The Monitoring the Future study, the University of Michigan.

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

FIGURE 4-2

Any Illicit Drug other than Marijuana: Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 45 by Age Group, 2007

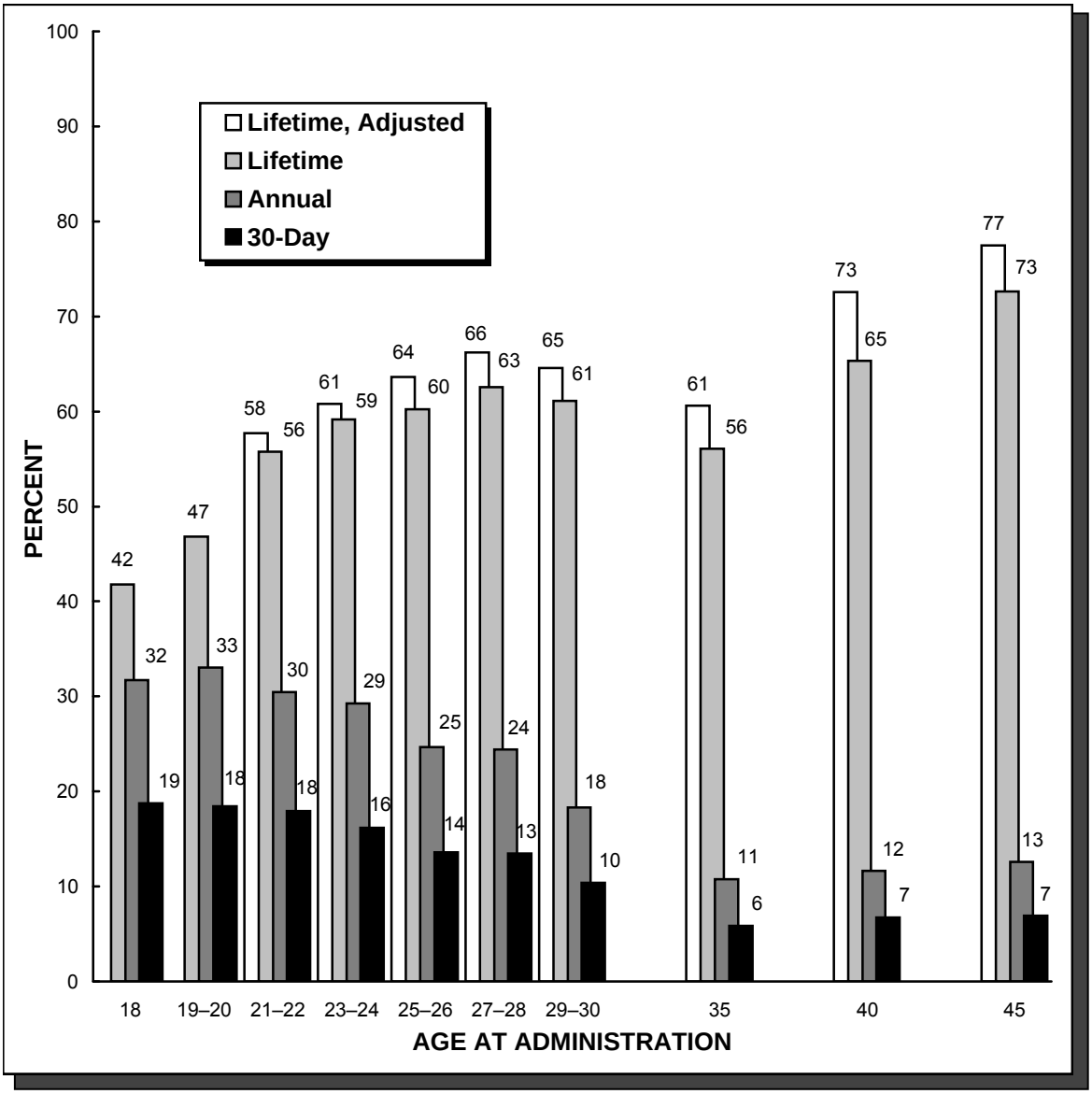


Source. The Monitoring the Future study, the University of Michigan.

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

FIGURE 4-3

Marijuana: Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 45 by Age Group, 2007

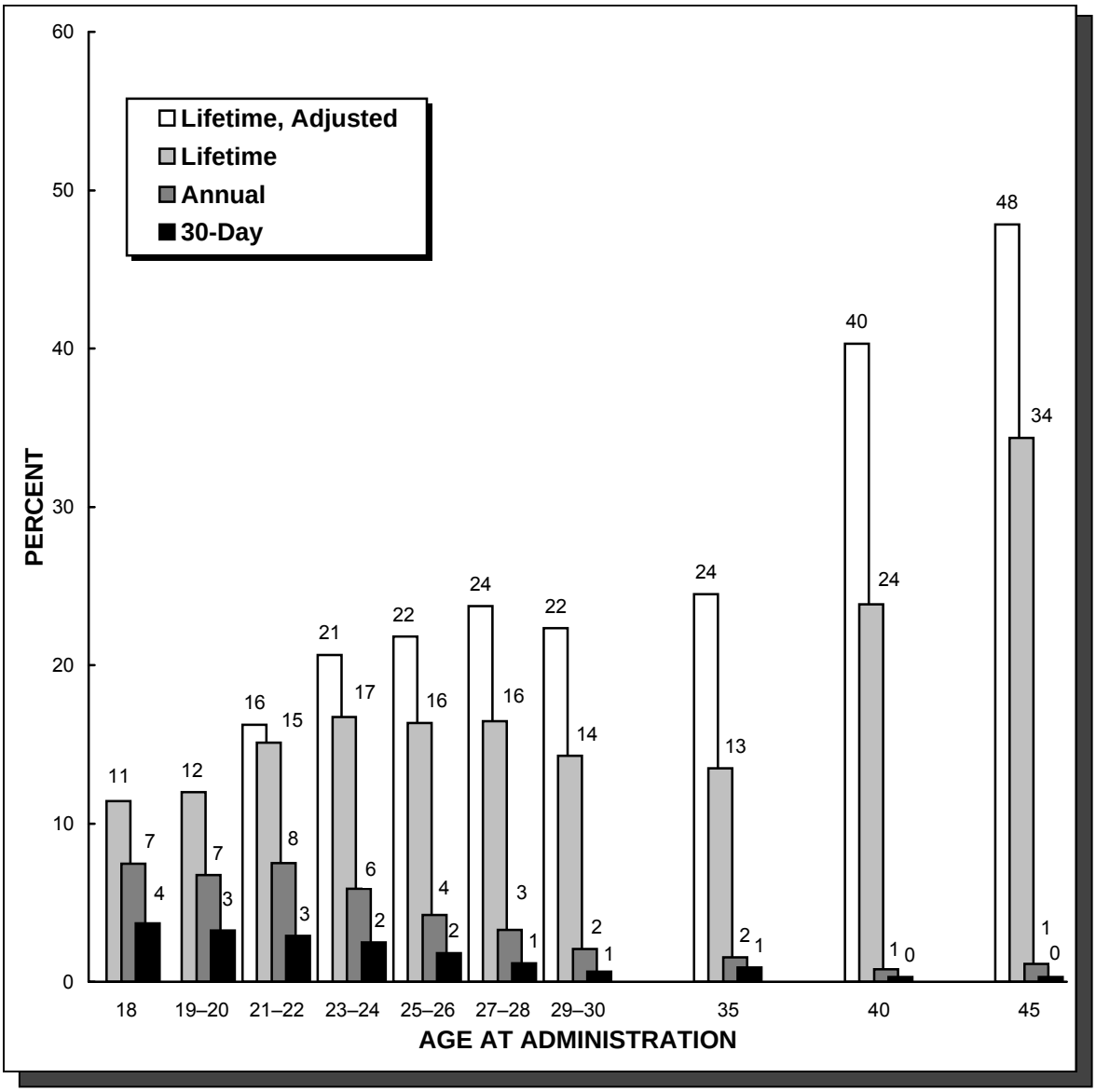


Source. The Monitoring the Future study, the University of Michigan.

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

FIGURE 4-4

Amphetamines: Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 45 by Age Group, 2007

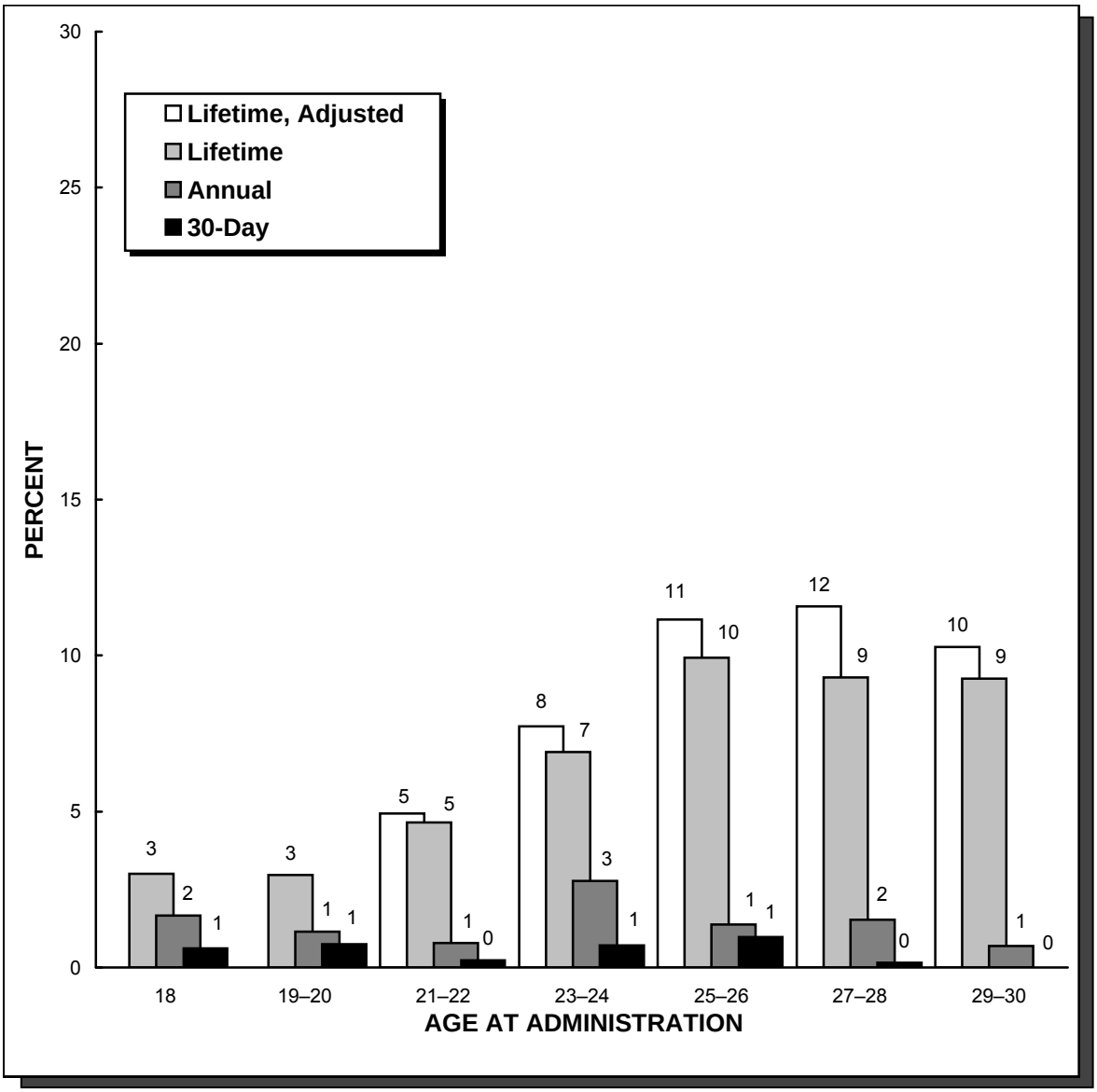


Source. The Monitoring the Future study, the University of Michigan.

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

FIGURE 4-5

Methamphetamine: Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 30[a] by Age Group, 2007



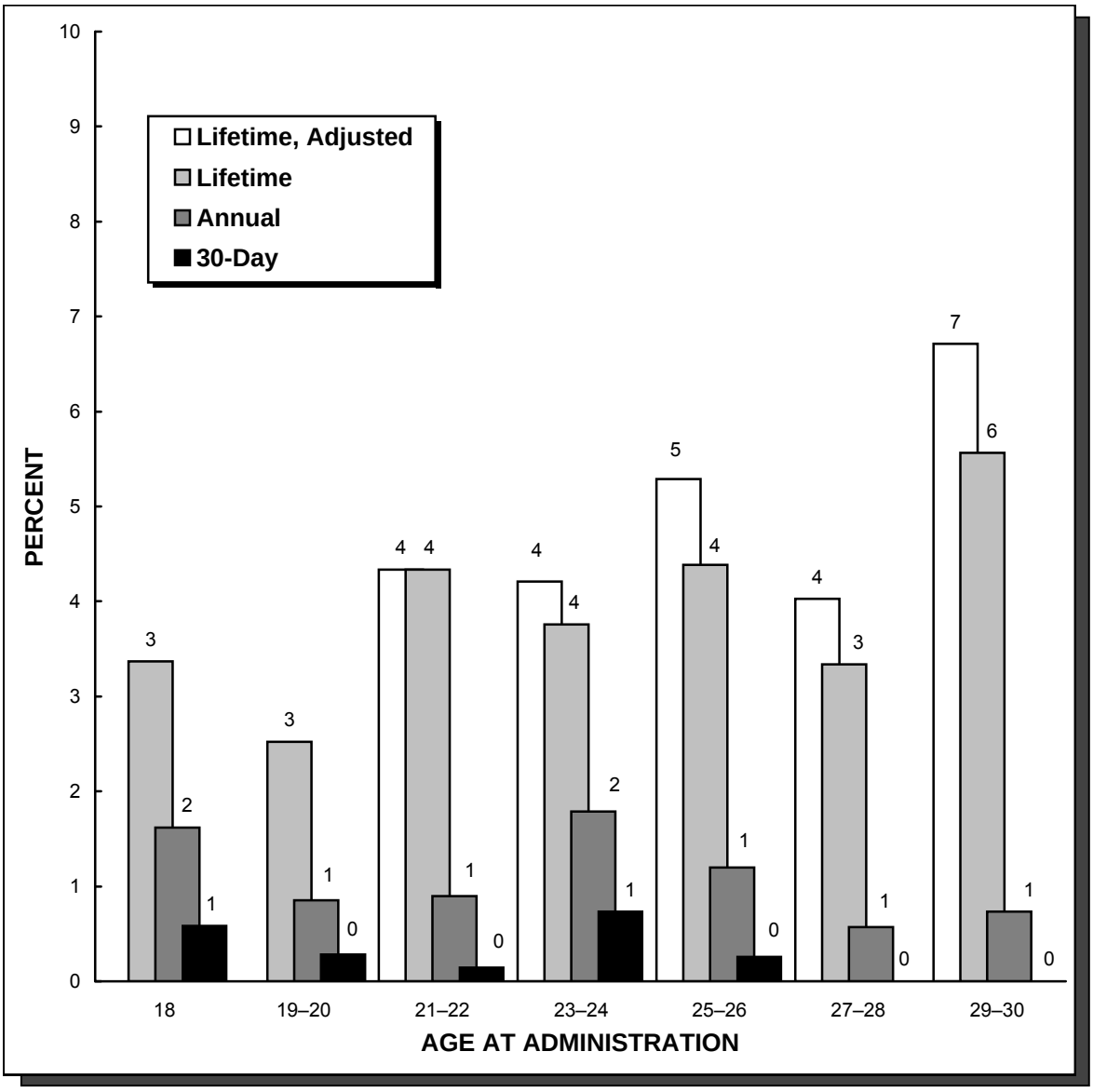
Source. The Monitoring the Future study, the University of Michigan.

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

[a]This specific drug was not included in the age-35, age-40, or age-45 questionnaires.

FIGURE 4-6

Crystal Methamphetamine (Ice): Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 30[a] by Age Group, 2007



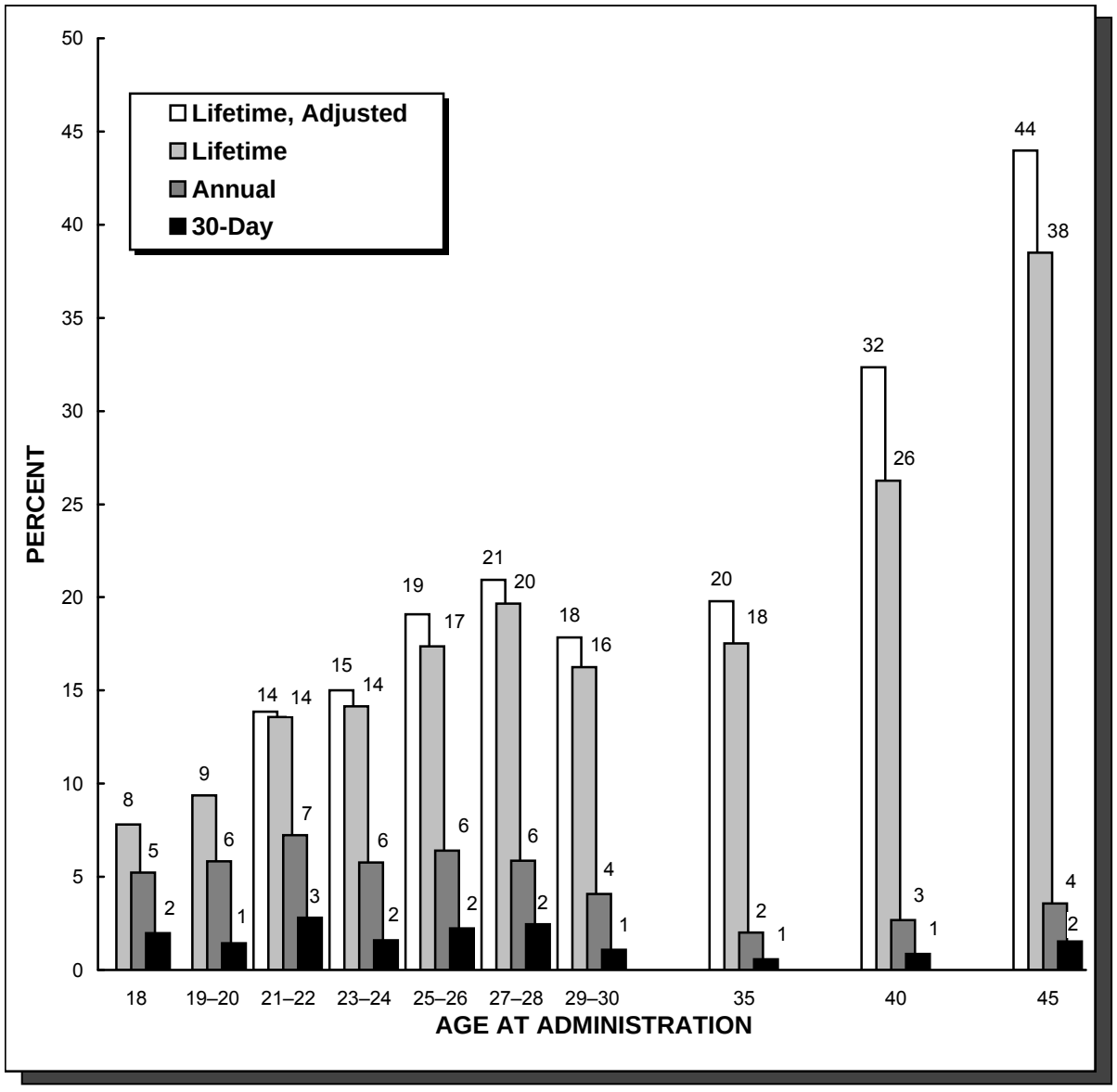
Source. The Monitoring the Future study, the University of Michigan.

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

[a]This specific drug was not included in the age-35, age-40, or age-45 questionnaires.

FIGURE 4-7

Cocaine: Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 45 by Age Group, 2007

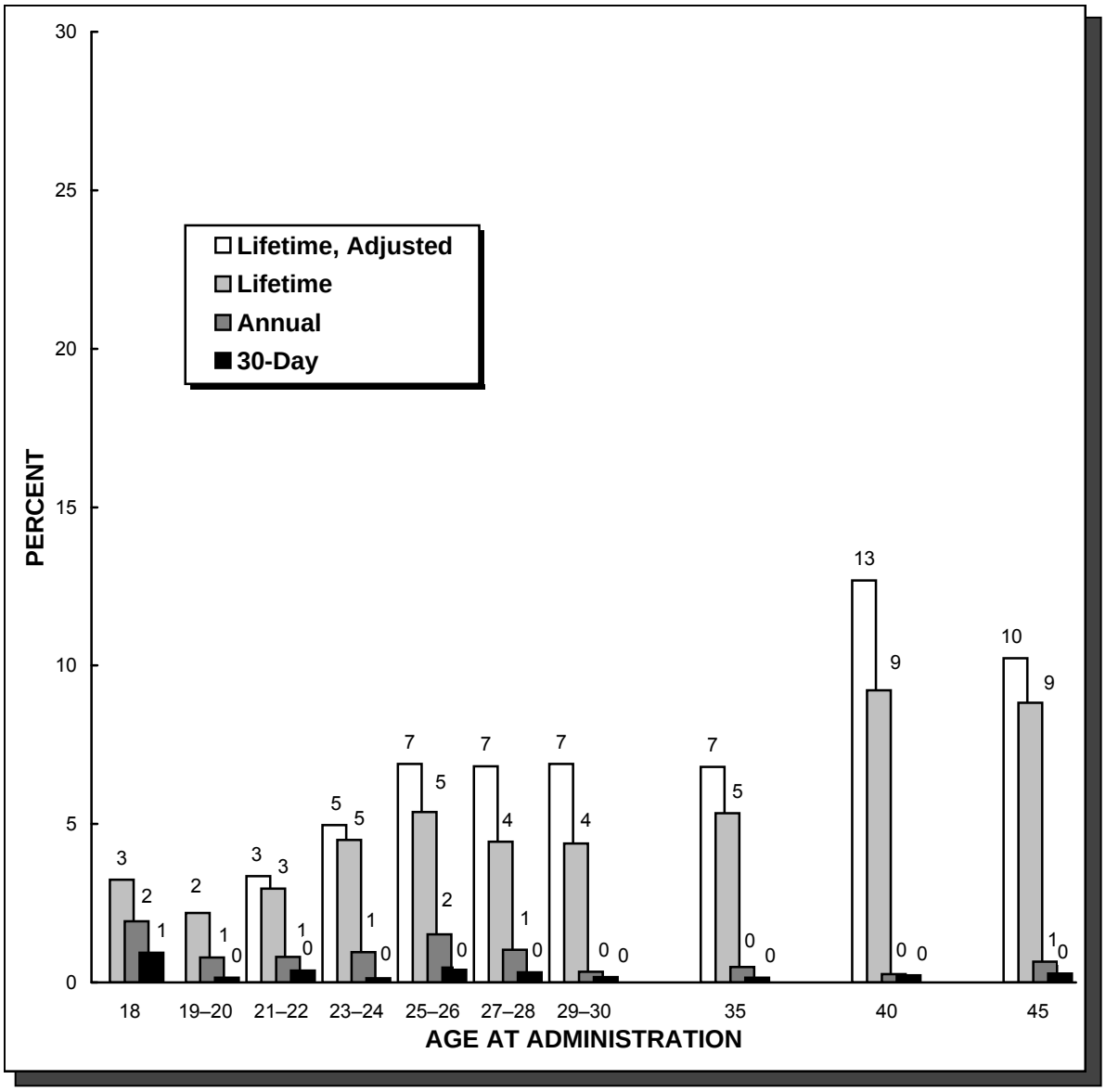


Source. The Monitoring the Future study, the University of Michigan.

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

FIGURE 4-8

Crack Cocaine: Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 45 by Age Group, 2007

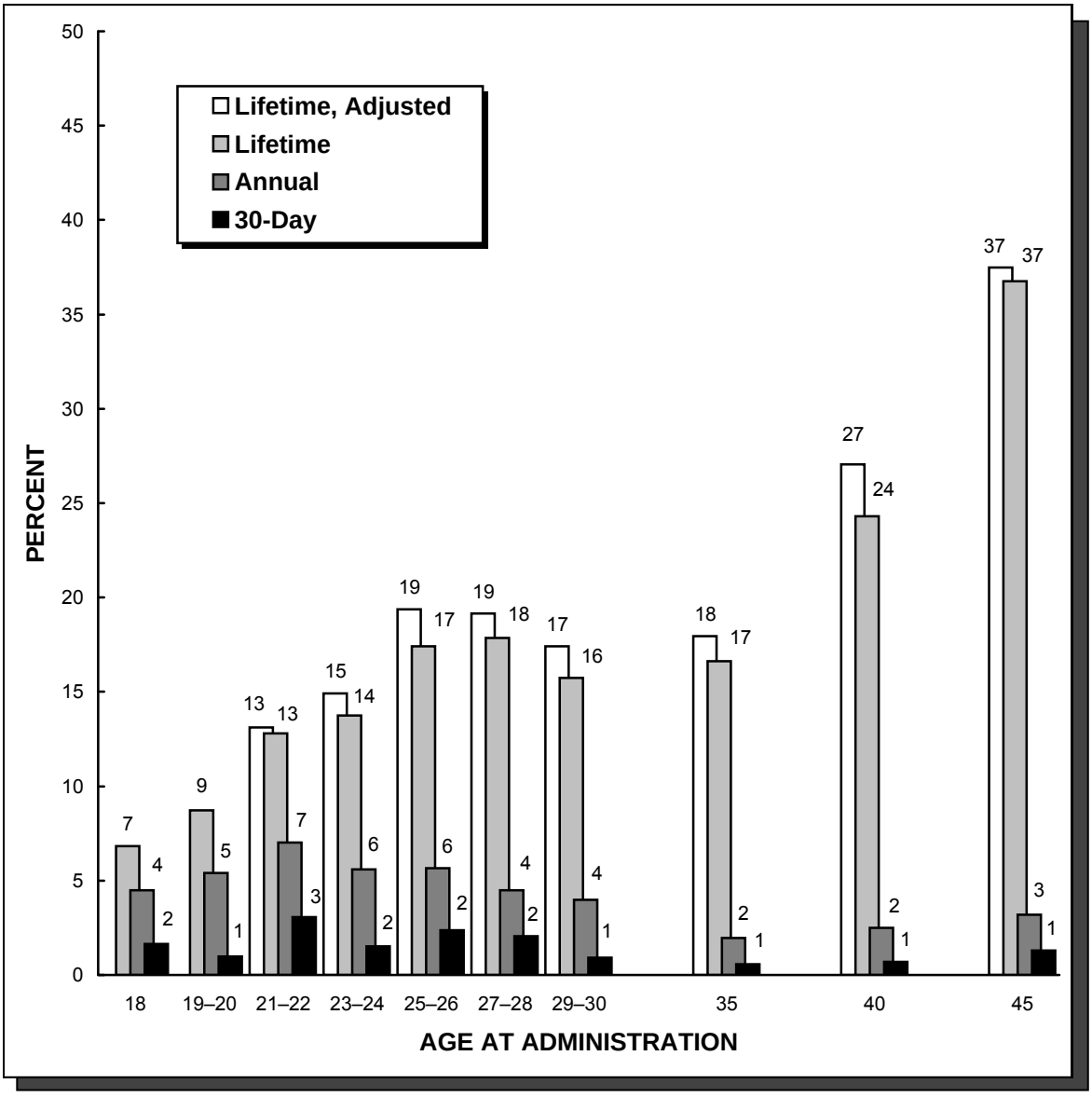


Source. The Monitoring the Future study, the University of Michigan.

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

FIGURE 4-9

Other Cocaine: Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 45 by Age Group, 2007

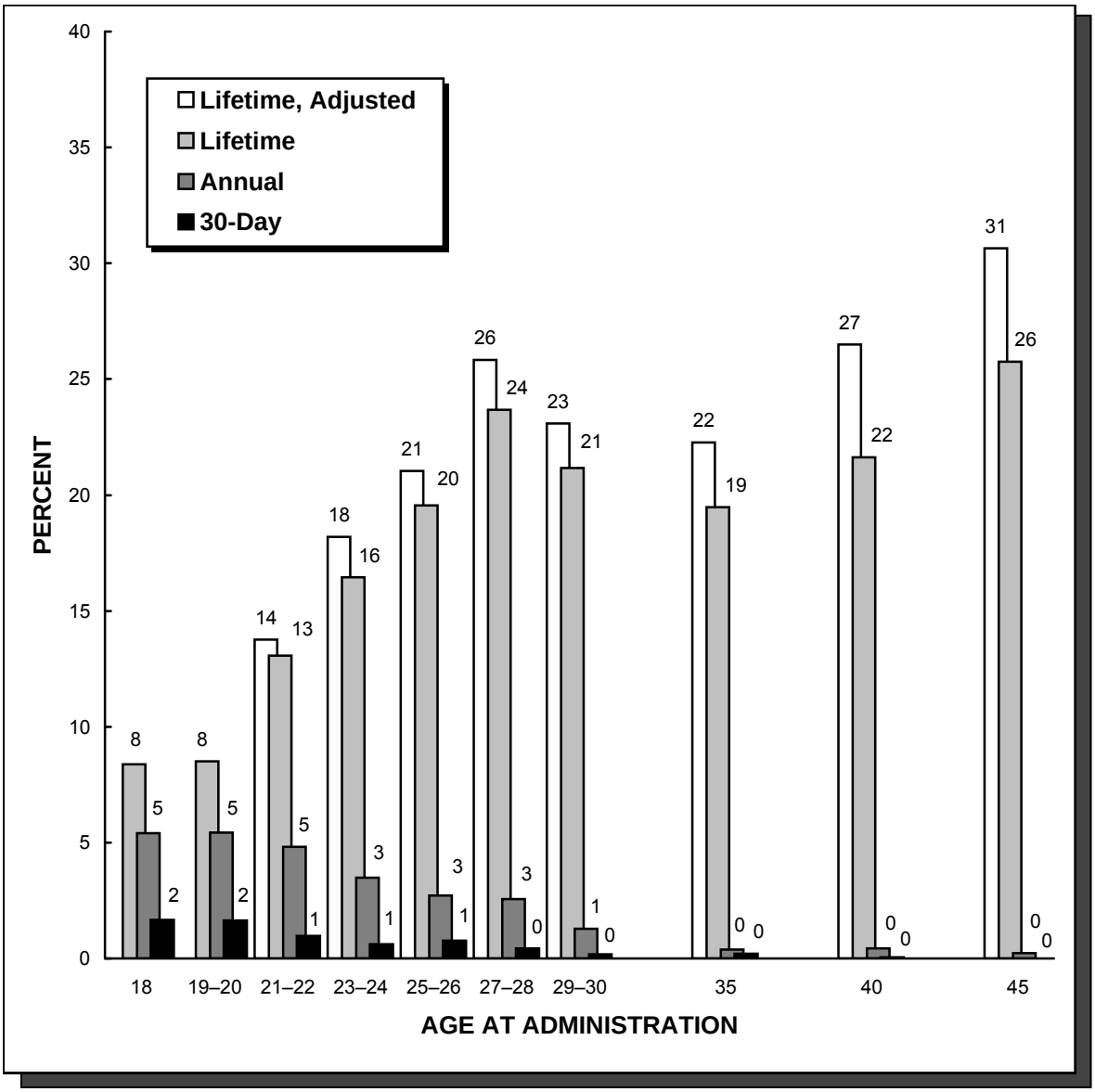


Source. The Monitoring the Future study, the University of Michigan.

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

FIGURE 4-10

Hallucinogens:[a] Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 45 by Age Group, 2007



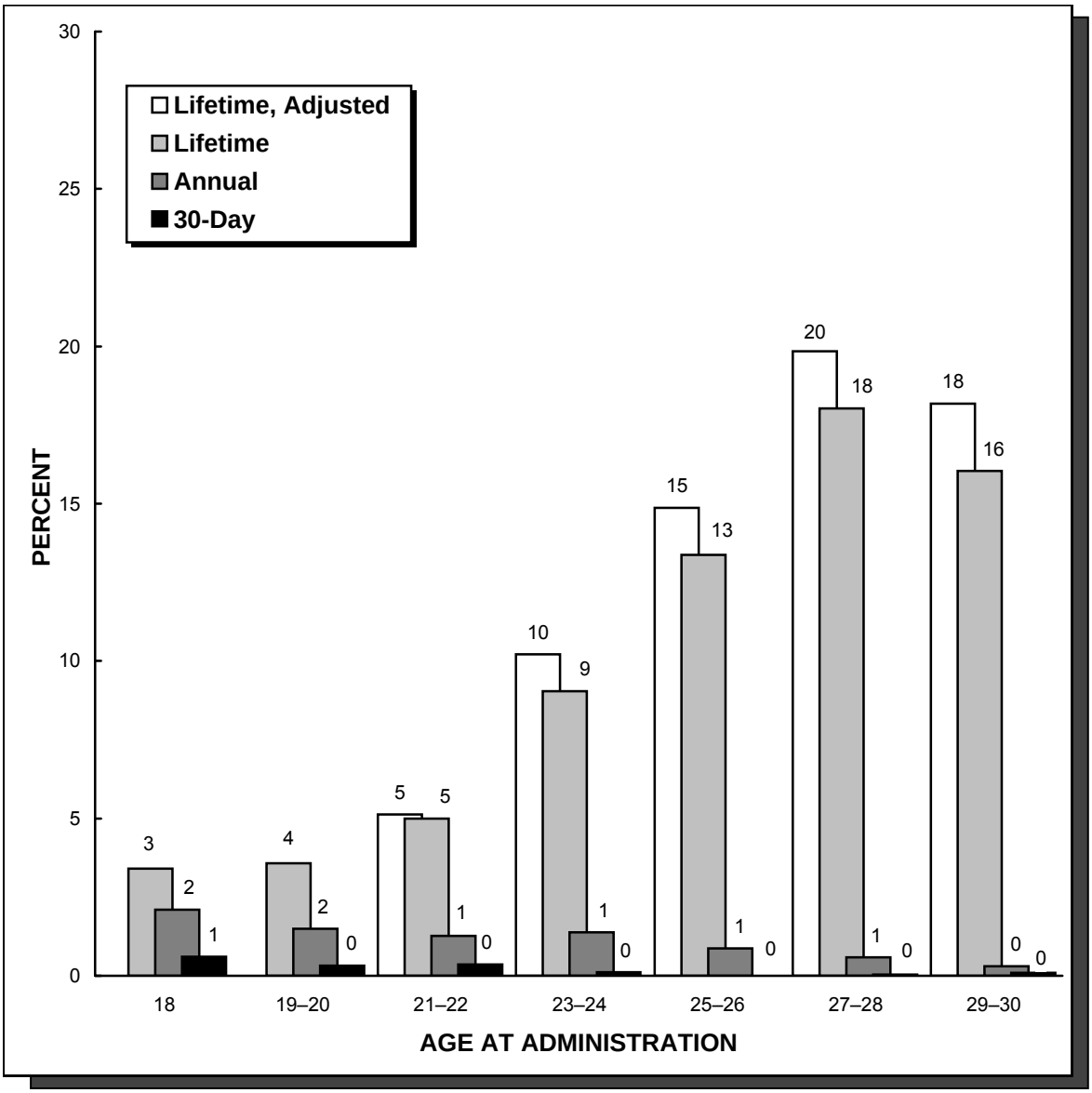
Source. The Monitoring the Future study, the University of Michigan.

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

[a]Unadjusted for the possible underreporting of PCP.

FIGURE 4-11

LSD: Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 30[a] by Age Group, 2007



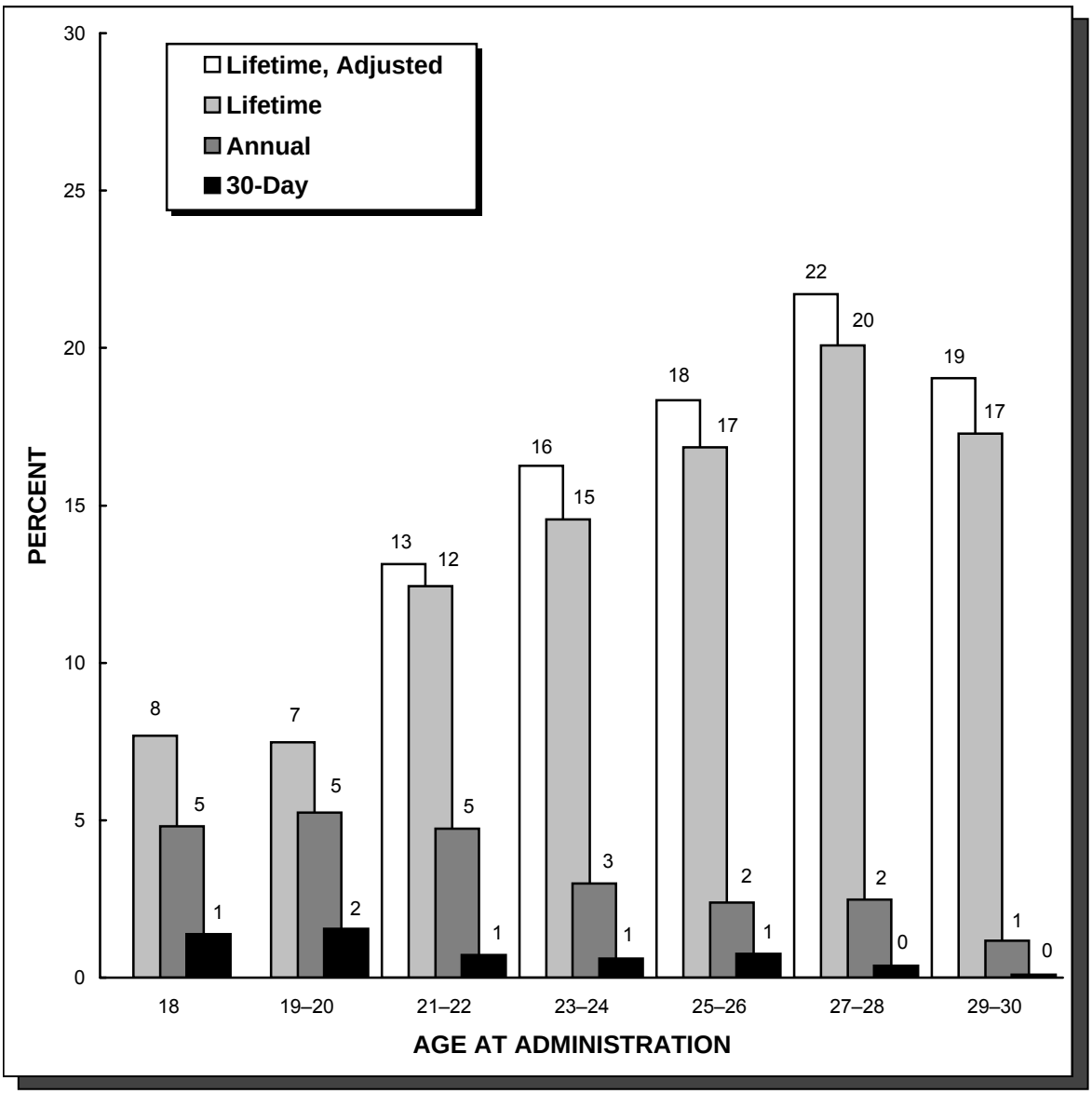
Source. The Monitoring the Future study, the University of Michigan.

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

[a]This specific drug was not included in the age-35, age-40, or age-45 questionnaires.

FIGURE 4-12

Hallucinogens other than LSD:[a] Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 30[b] by Age Group, 2007



Source. The Monitoring the Future study, the University of Michigan.

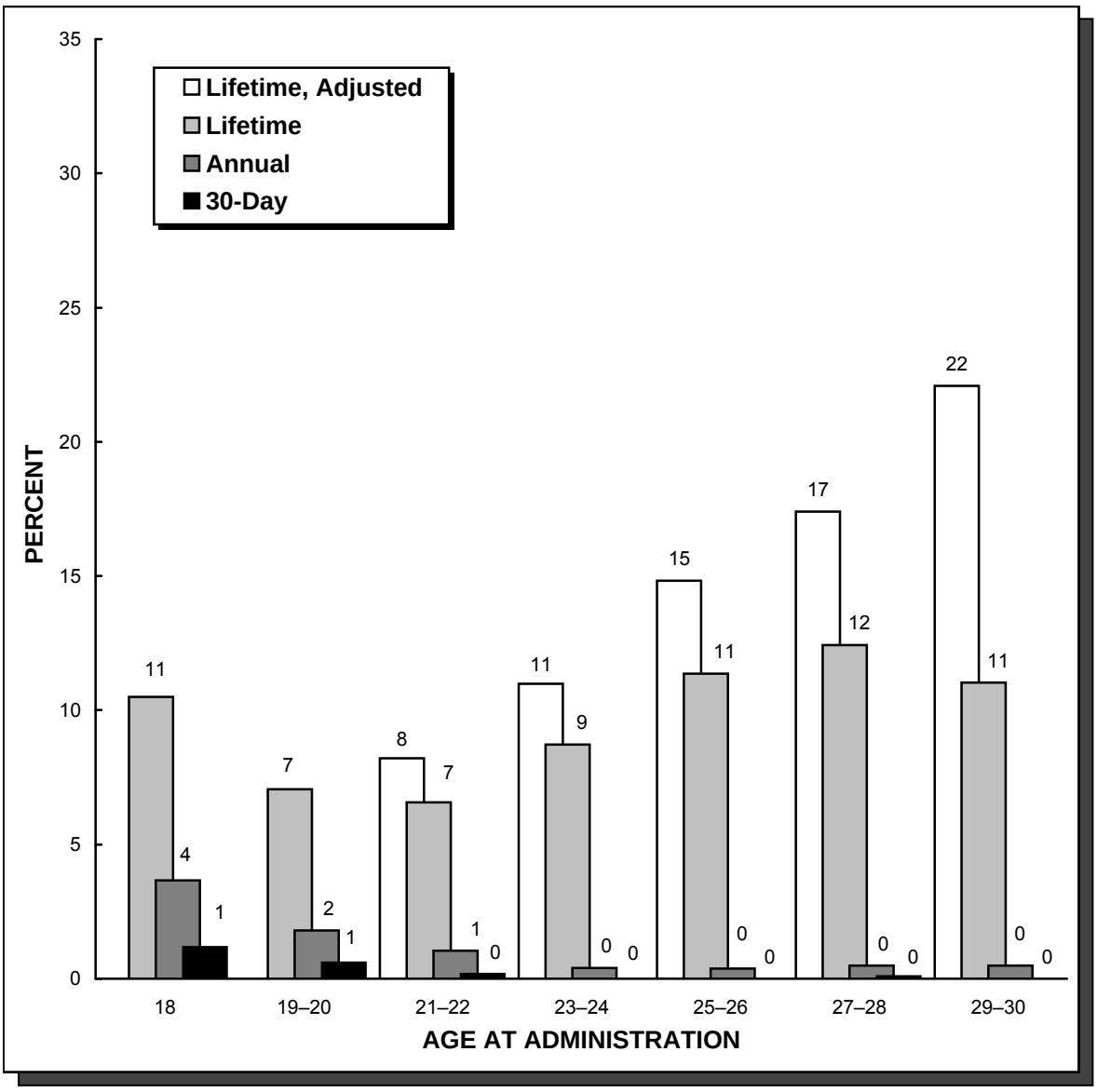
Note. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

[a]Unadjusted for the possible underreporting of PCP.

[b]This specific drug was not included in the age-35, age-40, or age-45 questionnaires.

FIGURE 4-13

Inhalants:[a] Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 30[b] by Age Group, 2007



Source. The Monitoring the Future study, the University of Michigan.

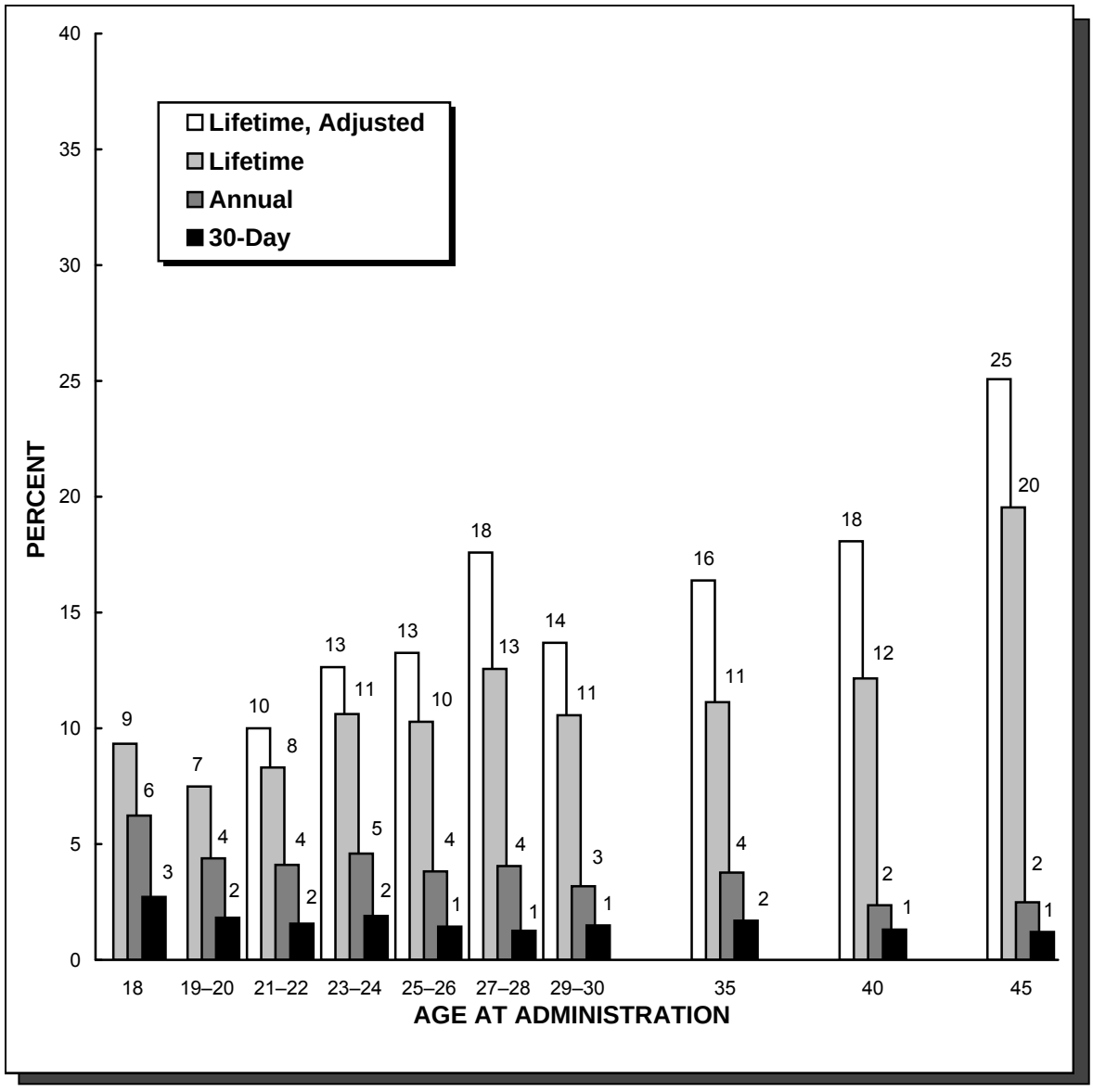
Note. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

[a]Unadjusted for the possible underreporting of amyl and butyl nitrites.

[b]This specific drug was not included in the age-35, age-40, or age-45 questionnaires.

FIGURE 4-14

Sedatives (Barbiturates): Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 45 by Age Group, 2007

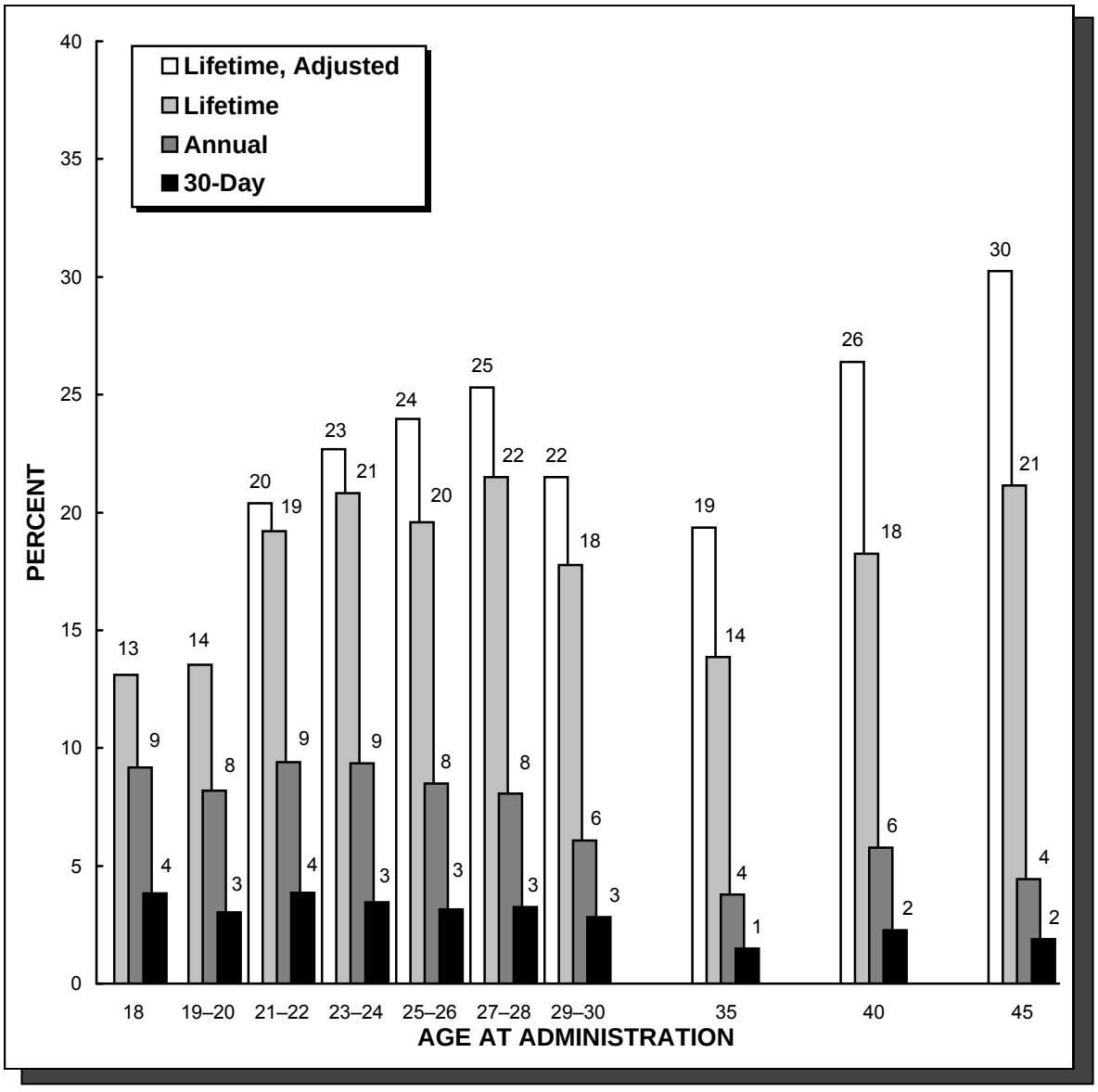


Source. The Monitoring the Future study, the University of Michigan.

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

FIGURE 4-15

Narcotics other than Heroin: Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 45 by Age Group, 2007

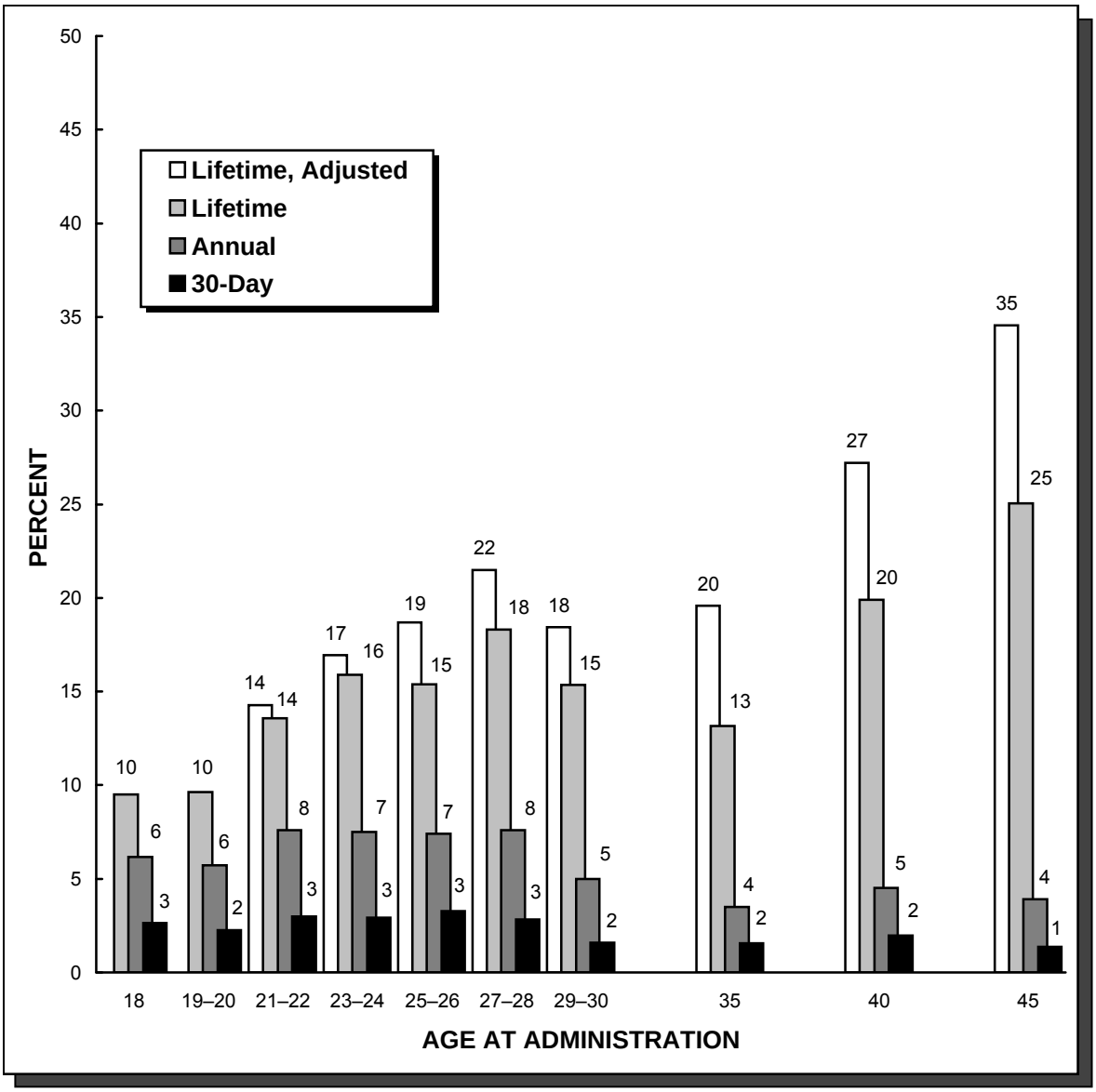


Source. The Monitoring the Future study, the University of Michigan.

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

FIGURE 4-16

Tranquilizers: Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 45 by Age Group, 2007

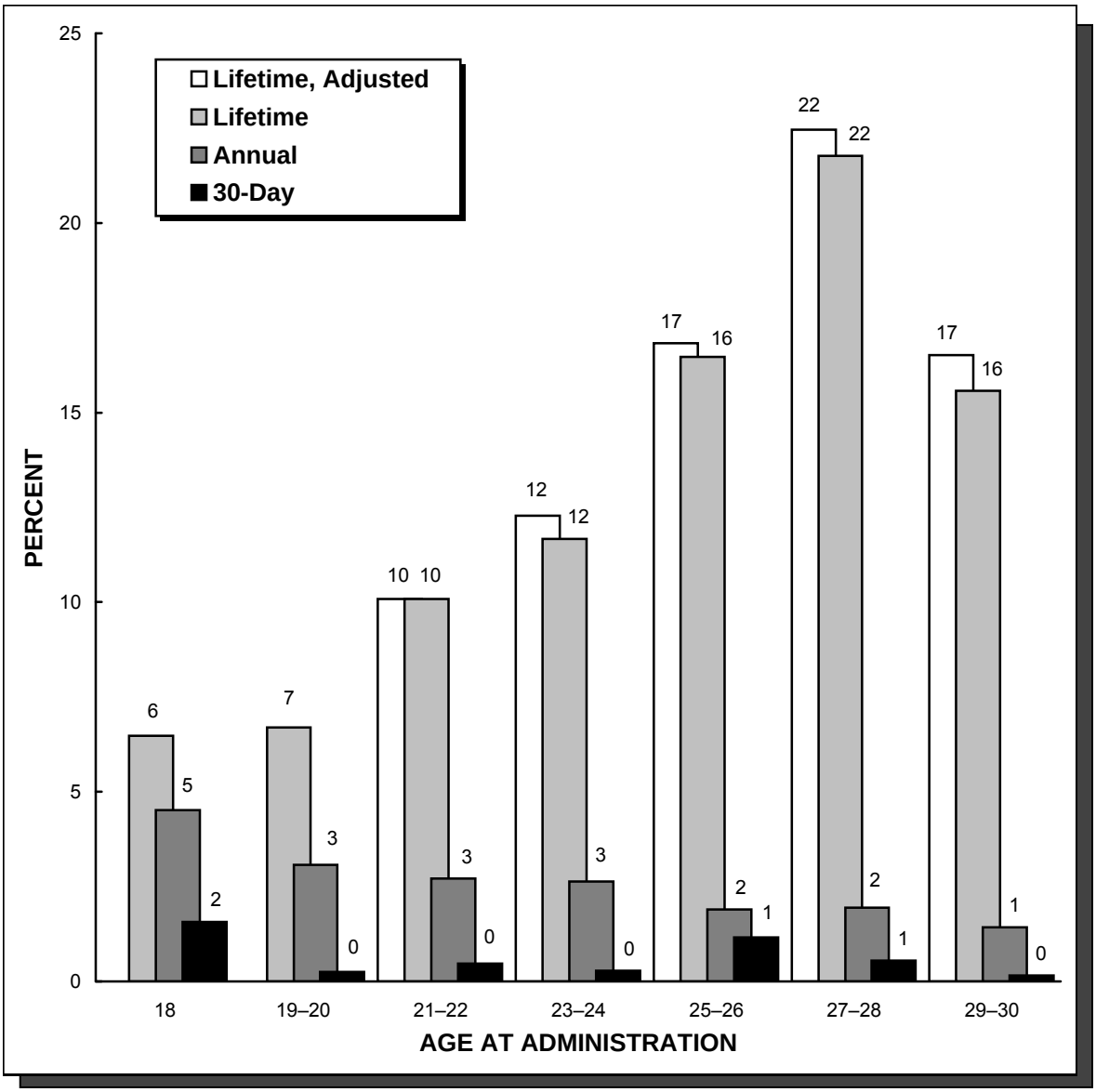


Source. The Monitoring the Future study, the University of Michigan.

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

FIGURE 4-17

Ecstasy (MDMA): Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 30[a] by Age Group, 2007



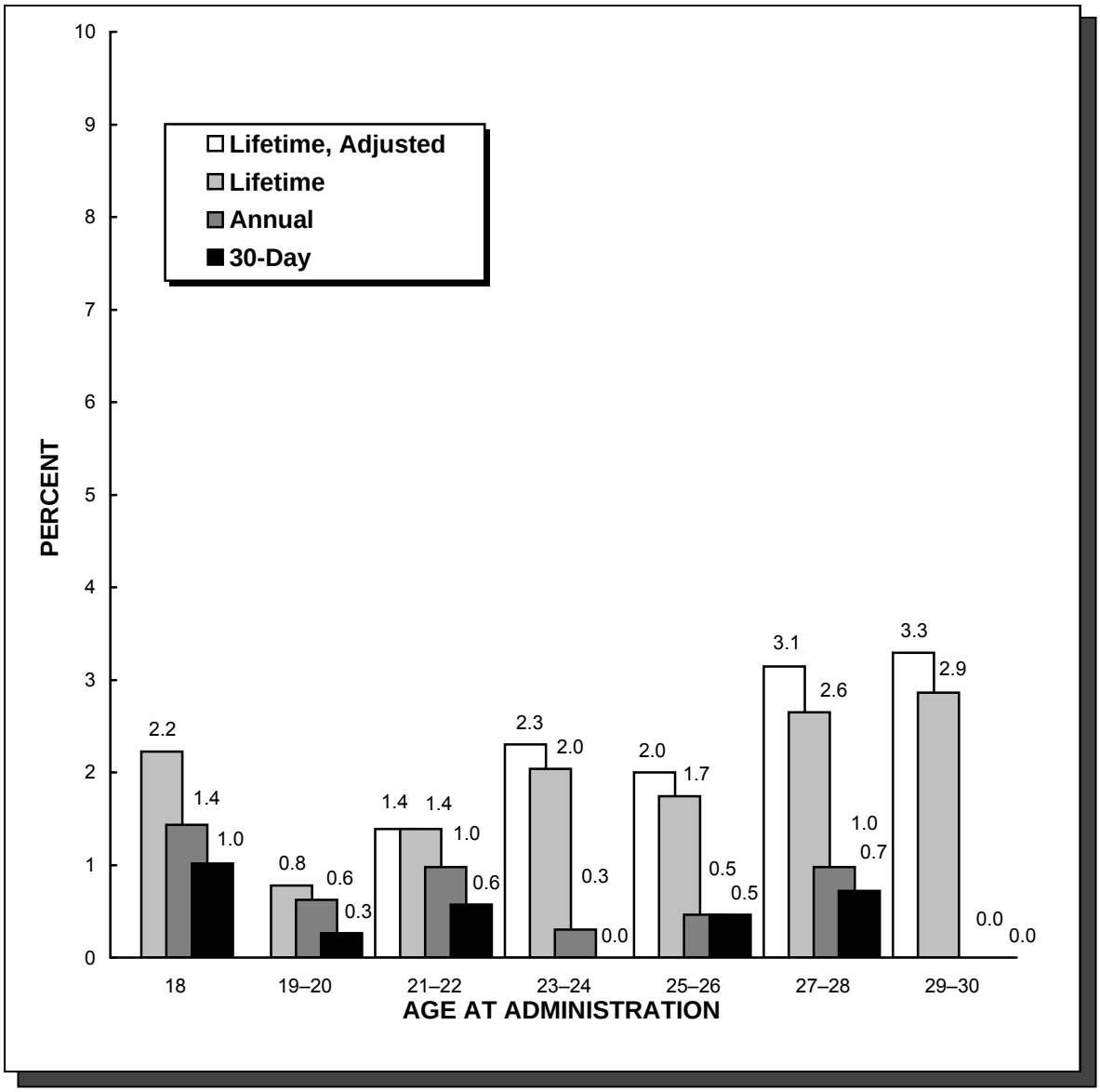
Source. The Monitoring the Future study, the University of Michigan.

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

[a]This specific drug was not included in the age-35, age-40, or age-45 questionnaires.

FIGURE 4-18

Steroids: Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 30[a] by Age Group, 2007



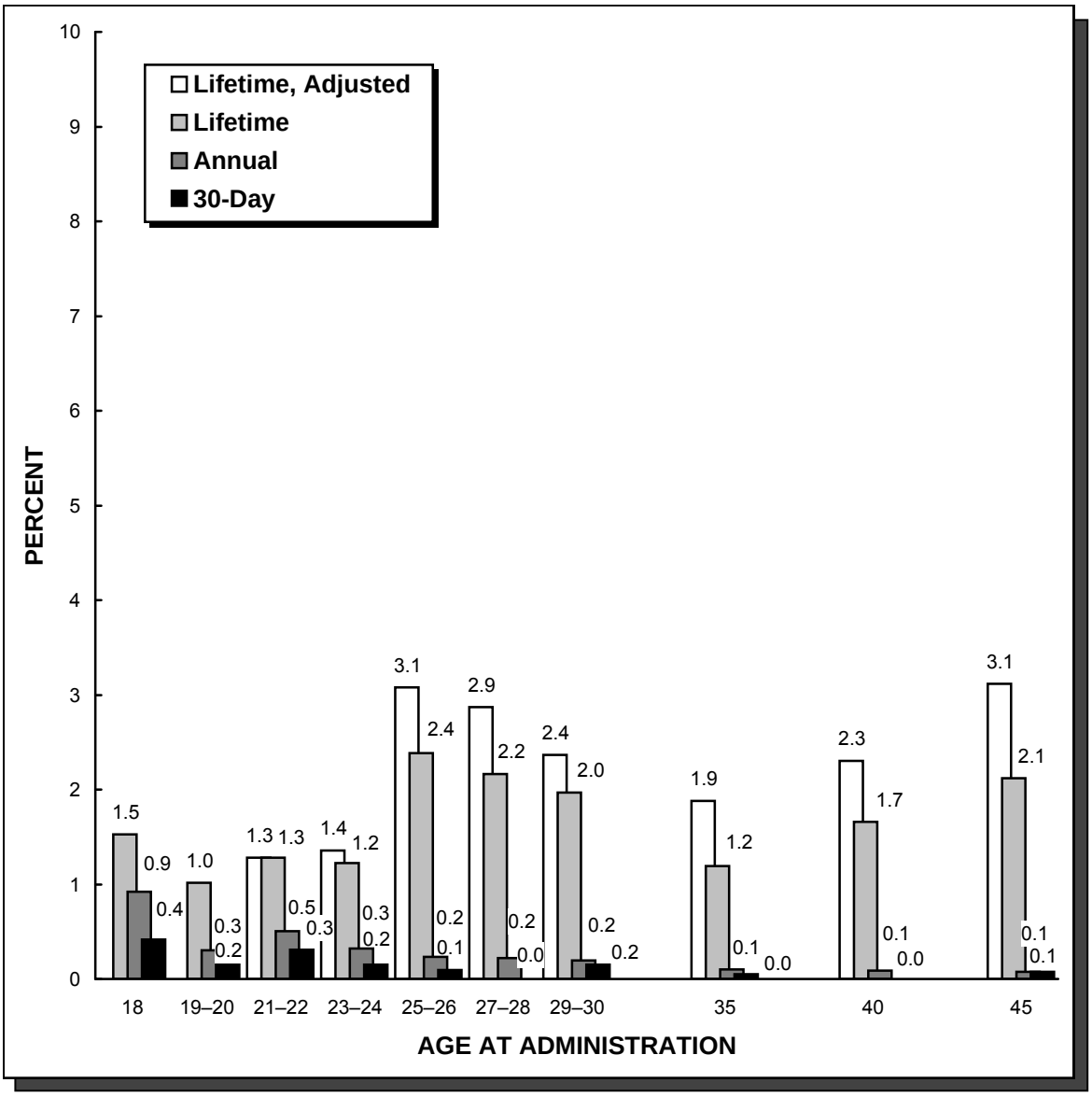
Source. The Monitoring the Future study, the University of Michigan.

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

[a]This specific drug was not included in the age-35, age-40, or age-45 questionnaires.

FIGURE 4-19

Heroin: Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 45 by Age Group, 2007

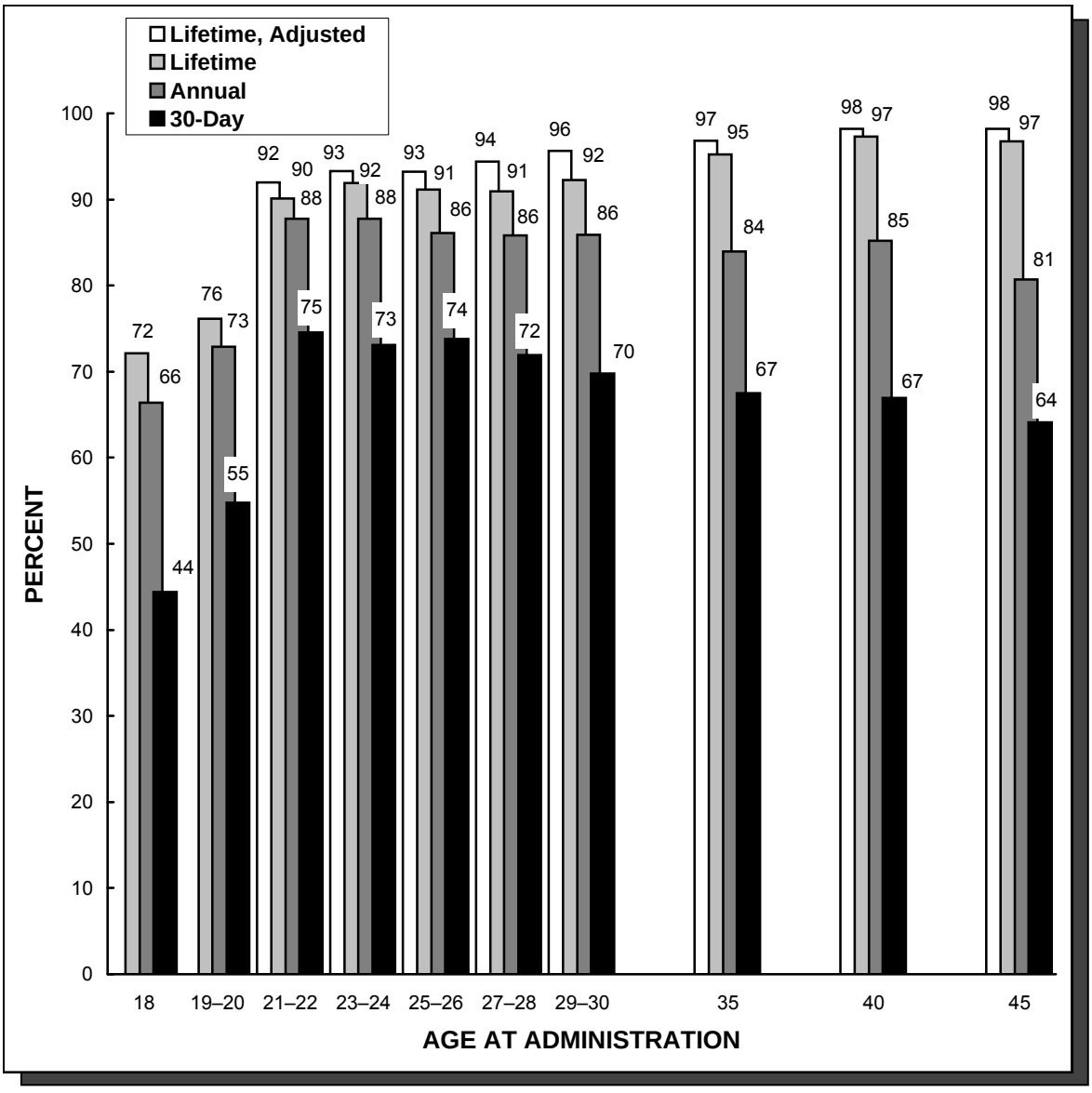


Source. The Monitoring the Future study, the University of Michigan.

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

FIGURE 4-20a

Alcohol: Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 45 by Age Group, 2007

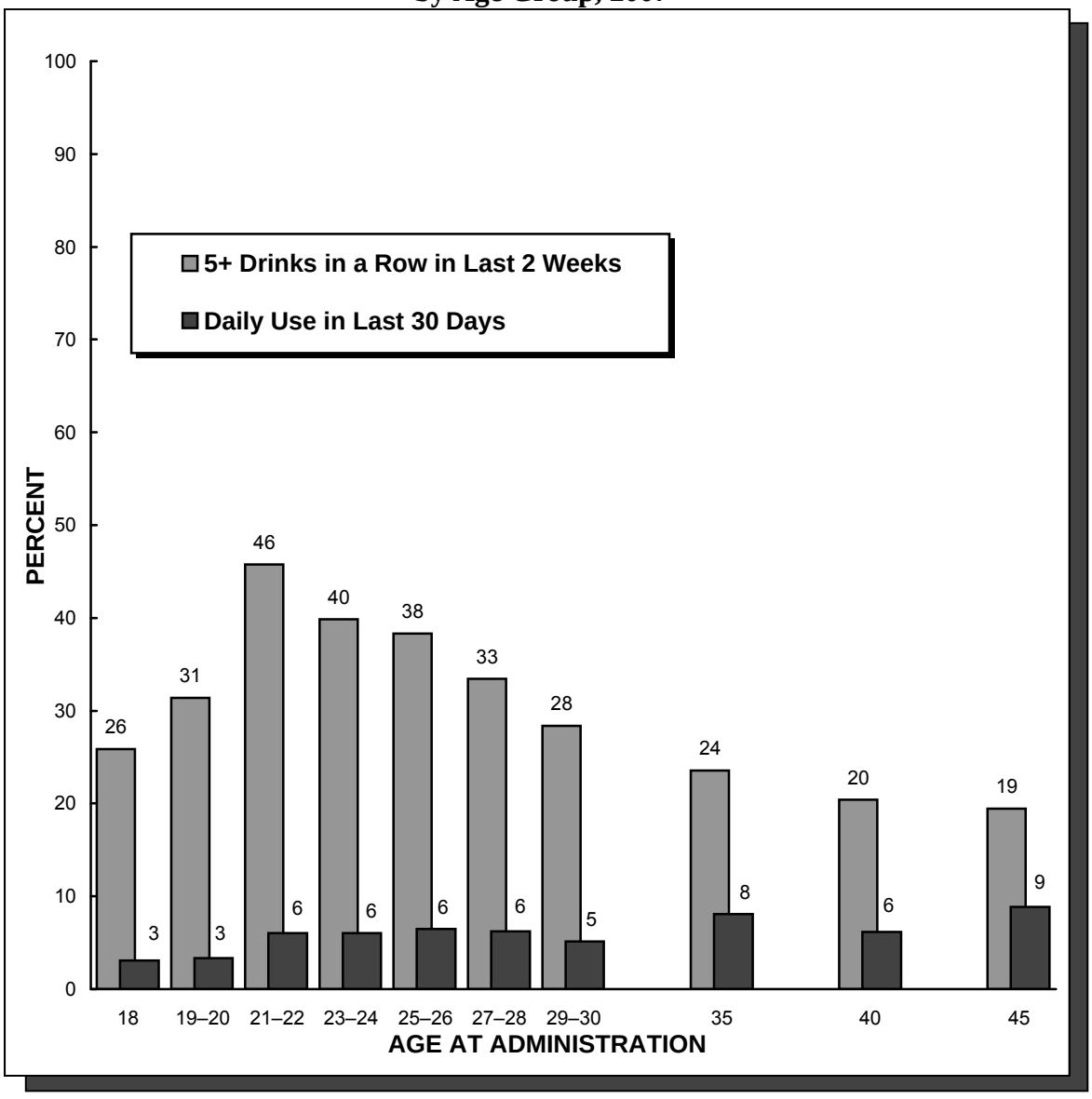


Source. The Monitoring the Future study, the University of Michigan.

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

FIGURE 4-20b

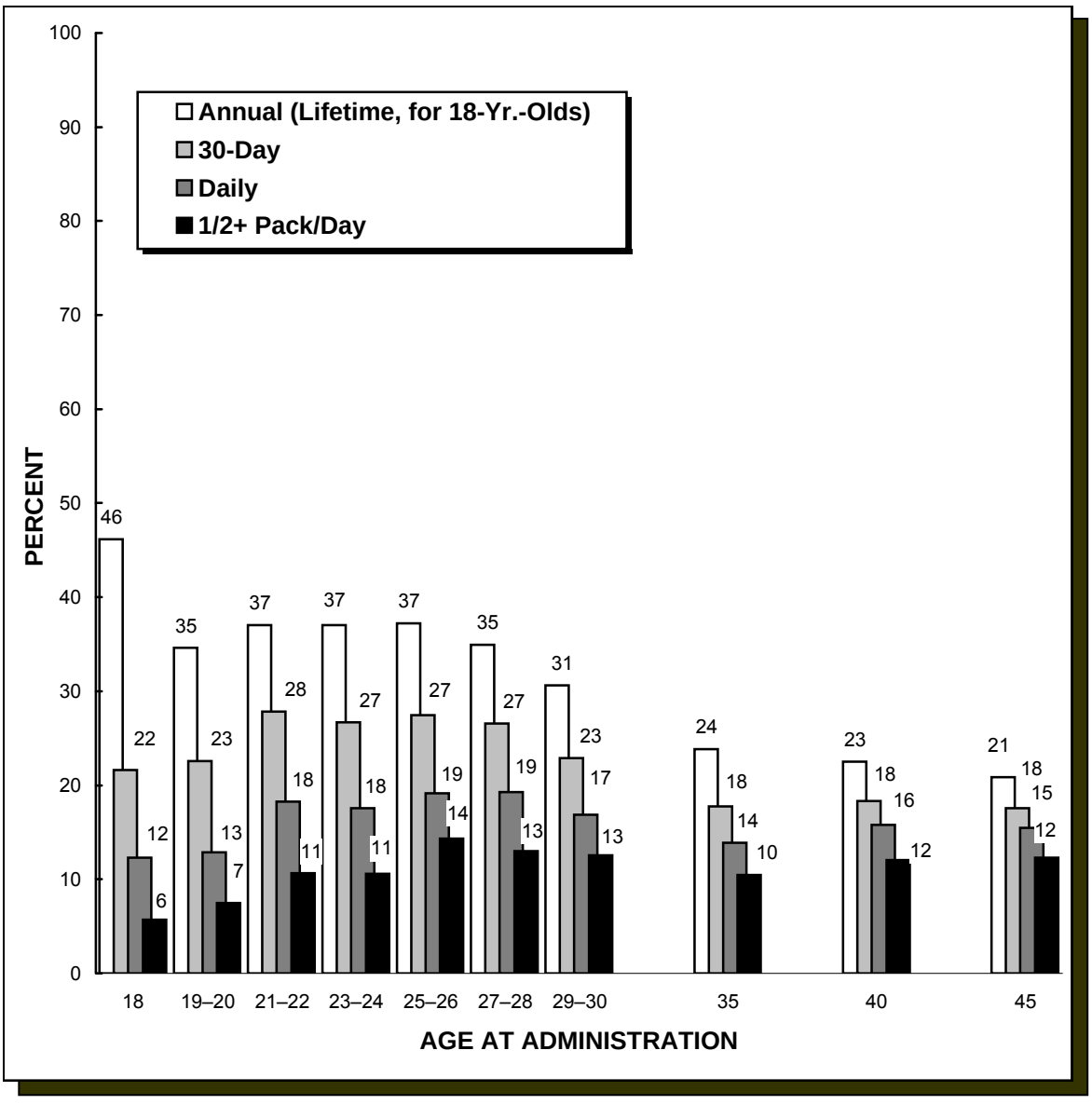
Alcohol: 2-Week Prevalence of 5 or More Drinks in a Row and 30-Day Prevalence of Daily Use among Respondents of Modal Ages 18 through 45 by Age Group, 2007



Source. The Monitoring the Future study, the University of Michigan.

FIGURE 4-21

Cigarettes: Annual, 30-Day, Daily, and Half-Pack-a-Day Prevalence among Respondents of Modal Ages 18 through 45 by Age Group, 2007



Source. The Monitoring the Future study, the University of Michigan.

Chapter 5

TRENDS IN DRUG USE IN EARLY AND MIDDLE ADULTHOOD

In this chapter we use data from the longitudinal studies of many graduating cohorts to examine trends for the various age bands under study. Panel data are typically used to study changes in the same individuals over time. Here, however, we are looking across historical time at the behaviors and attitudes of particular age groups in the population. In other words, the data can be used much as we use the repeated cross-sectional surveys of secondary school students to track changes in behaviors over time for particular grade levels. In this chapter, we report historical trends in the use of various licit and illicit drugs by high school graduates for particular age bands between 1 and 27 years beyond high school, spanning modal ages 19 through 45.

In the early 1990s, we began to document large and important increases among secondary school students in the use of several substances, particularly marijuana and cigarettes. The increases continued among 12th graders through 1997, as discussed in *Volume I*. One of the important issues addressed in this chapter is whether such increases occurred only among adolescents or whether recent graduating classes have carried their higher levels of drug use with them as they have moved into young adulthood. In other words, are they exhibiting lasting cohort effects?

Figures 5-1 through 5-19c plot separate trend lines for two-year age strata (that is, respondents who are one to two years beyond high school, three to four years beyond high school, etc.), which are used in order to reduce the random fluctuations that would be seen with one-year strata. (Strictly speaking, these two-year strata are not age strata, because they are based on all respondents in the given year from two adjacent high school classes, and they do not take account of the minor differences in individual respondents' ages within each graduating class; however, they are close approximations to age strata, and we characterize them by the modal age of the respondents as ages 19 to 20, 21 to 22, and so on.) Each data point in these figures is based on approximately 1,200 weighted cases drawn from two adjacent high school classes; actual (unweighted) numbers of cases are somewhat higher than those shown in the tables. For the 2007 data, the 19- to 20-year-old stratum is composed of participating respondents from the high school graduating classes of 2006 and 2005, respectively; the 21- to 22-year-old stratum contains data from the classes of 2004 and 2003, respectively; and so on. Figures 5-1 through 5-19c also present some recent trend data from the age-35, age-40, and age-45 follow-ups. These older age strata are constituted in a slightly different way, in that the two half samples from a *single* graduating class (which through age 30 had been surveyed in alternating years) are now both surveyed in the same year. In 2007, the 35-year-olds are graduates from the high school class of 1990 (weighted $N = 890$), the 40-year-olds are graduates from the high school class of 1985 (weighted $N = 890$), and the 45-year-olds are graduates from the high school class of 1980 (weighted $N = 999$). (Again, the unweighted or actual Ns are somewhat higher.)

Tables 5-1 through 5-5 are derived from the same data but presented in tabular form for 19- to 28-year-olds combined (i.e., those who graduated from high school 1 to 10 years earlier). Data are given for each year in which they are available for that full age band (i.e., from 1986 onward). Those ages 29 and over 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 5-1 through 5-19c.

TRENDS IN PREVALENCE: EARLY AND MIDDLE ADULTHOOD

The trend results are as follows:

- Longer term declines among young adults in the annual prevalence of several drugs appeared to end in 1992 or 1993 (see Table 5-2). 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***, ***hallucinogens***, ***narcotics other than heroin***, ***crack***, ***amphetamines***, ***sedatives*** (***barbiturates***), and ***tranquilizers***. In 1994, annual prevalence for most drugs remained steady. ***Cocaine other than crack*** reached its low point in 1994 after a period of substantial decline. In 1995 there were modest increases (a percentage point or less) in the annual prevalence of almost all of the drug classes in Table 5-2, some of which were statistically significant.

  Thus, it is clear that by 1992 or 1993 the downward secular trend observable in all of these age strata (as well as among adolescents) had ended.[41] (Such secular trends, in which different age groups move in parallel, are also called "period effects.") What has happened since then, however, is more of a cohort effect, reflecting an interaction between age and period such that only adolescents showed the increase in illicit drug use initially, and then they carried those new (higher) levels of drug use with them as they entered older age bands. Figure 5-1 shows the effects due to generational replacement, as the teens of the early 1990s reached their 20s. It can be seen that, while all age groups moved fairly parallel through about 1992, the youngest age bands first showed signs of increase in their overall level of illicit drug use. The 18-year-olds shifted up first, followed by the 19- to 20-year-olds in 1994, the 21- to 22-year-olds in 1996, the 23- to 26-year-olds in 1999, and the 29- to 30-year-olds in 2004. So far, the 35-, 40-, and 45-year-olds have not shown much increase. In fact, the 8th graders, who are not included in these graphs, showed an increase in use a year earlier than the 12th graders.

  To repeat, in the earlier decline phase of the drug epidemic, annual prevalence of use of ***any illicit drug*** moved in parallel for all of the age strata, as illustrated in Figure 5-1; this pattern reflects a secular trend, because a similar change is observed simultaneously across different age levels. After 1992—in what we have called the "relapse phase" of the popular drug epidemic that began in the 1960s—a quite different pattern emerged, with the 8th graders increasing their drug use first, then the 10th and 12th graders; then the next oldest age group, but with a little delay; the next oldest then following, but with a longer delay; and the oldest groups not yet showing an increase This pattern reflects a classic cohort effect, in which

[41] Actually, the downturn ended at least a year earlier among the youngest adolescents—the 8th graders—who showed the beginning of an increase in 1992 (see Table 2-2).

different age groups are not all moving in parallel; rather, different age groups show increases when the cohorts (that is, high school classes) having heavier use at an earlier stage in development reach the relevant age level. Further, the slopes of the age bands are successively less steep in the older age groups, suggesting that some of the cohort effect may be dissipating with maturation. But we think it unlikely that only cohort effects are occurring (in addition to the long-established age effects); period effects (i.e., historical effects that have an impact on all age bands in a given historical period) also play a role.

- Use of ***marijuana***, the major component of the illicit drug use index, shows an almost identical pattern to the index (Figure 5-3a). After a long and steady decline from the late 1970s to the early 1990s, use leveled for a while among young adults before beginning a gradual increase. Virtually all of this increase was attributable to the two youngest age bands (18 and 19 to 20) until 1996, when the 21- to 22-year-olds began to show a rise. The older age bands then tended to show increases fairly sequentially. The 18-year-olds began a decline after 1997, and later several of the succeeding age bands through age 26 began to show declines in a pattern that again suggests lasting cohort differences.

- A similar pattern emerged for current ***daily marijuana*** use (Figure 5-3c). In the mid- to late 1990s, daily marijuana use among the 35- and 40-year-olds was as high as, or higher than, use among some younger age groups, suggesting a lasting cohort effect on this behavior. However, in recent years, the 35-, 40-, and 45-year-olds have been similar to those ages 27 to 30, who have had among the lowest levels of daily use. An important finding shown in Figure 5-3c is that, although the various age groups had been moving in parallel for many years at fairly similar levels of prevalence, the trends diverged considerably in the 1990s in a staggered fashion, such that now 18- to 26-year-olds have distinctly higher levels of daily marijuana use than the older age groups, again reflecting stable cohort differences.

- The index of using ***any illicit drug other than marijuana*** has shown a similar transition in the pattern of change. Period effects seemed to predominate until about 1992, but a cohort-related pattern of change emerged thereafter (Figure 5-2). And, while use leveled by 1997 among 18-year-olds, it began rising during that interval among 25- to 26-year-olds and is now also rising among 27- to 28-year-olds and 29- to 30-year-olds. The primary difference from the picture for marijuana is that the increases were not as sharp in the 1990s for most of the age bands. (Compare Figure 5-2 with Figure 5-1 to see the difference.)

- In the 1980s and 1990s, ***LSD*** use also increased among those in their teens and early 20s more than among the older strata, as Figure 5-6 illustrates. Over the interval 1985 to 1996, there was a gradual but considerable increase in LSD use among those in the age band 18 to 24, which was sharpest among 12th graders and the 19- to 20-year-olds. (In this case the increase did not seem to radiate up the age spectrum beyond age 26.) A turnaround began among 12th graders after 1995 and then among the older age groups in a somewhat staggered fashion, again indicative of a cohort effect. Declines in the years since have been greatest among the 18- to 24-year-olds, who had attained the highest rates of LSD use. LSD use declined considerably from 2001 to 2003 in all age bands (including 8th and 10th graders), and then leveled at historically low rates, suggesting that an important secular trend may have set in, quite possibly related to decreased availability of the drug.

- Several drug classes actually exhibited a faster decline in use among the older age groups than among 12th graders during the *earlier* period of decline in the 1980s (see Figures 5-1 through 5-19c). These included ***any illicit drug***, ***any illicit drug other than marijuana***, ***amphetamines***, ***hallucinogens*** (until 1987), ***LSD*** (through 1989), and ***methaqualone***.

- In fact, there was a crossover for some drugs when 12th graders are compared to young adult graduates. In earlier years 12th graders had lower usage levels, but more recently they have tended to have higher ones than post–high school respondents for use of ***any illicit drug***, ***marijuana***, ***any illicit drug other than marijuana***, ***hallucinogens***, ***LSD*** specifically, ***amphetamines***, ***tranquilizers***, ***narcotics other than heroin***, and ***crystal methamphetamine*** (***ice***). However, since then, as the next two age strata after high school continued to show increases on a number of these drugs, they have closed the gap with 12th graders. This has been true for ***marijuana***, ***hallucinogens***, ***LSD***, ***narcotics other than heroin***, and ***tranquilizers***. (See, for example, Figure 5-3a for annual marijuana prevalence.)

- ***Cocaine*** (Figure 5-9) gives a quite dramatic picture of change. Unlike most of the other drugs, active use of cocaine has generally tended to rise with age after high school, usually peaking approximately three to four years past graduation. This is a classic example of an age effect. Despite the large age differences in absolute prevalence, all age strata moved in a fairly parallel way through 1991, indicating that a secular trend was taking place in addition to the age effect. All began a sharp and sustained decline in use after 1986. The two youngest strata (12th graders and 19- to 20-year-olds) leveled by 1992, whereas use continued a decelerating decline for a few years beyond that in the older age groups, signaling the beginning of a cohort effect. From 1994 to 1999, cocaine use rose some in the five youngest strata (i.e., those younger than 27) on a somewhat staggered basis, with the three older groups still decreasing a bit more over that same period. This, to some degree, reversed the age differences that were so prominent in the 1970s and 1980s. Cohort-related change appears to have predominated in the 1990s, quite possibly as the result of "generational forgetting" of the cocaine-related casualties so evident in the early to mid-1980s. In other words, those in the older cohorts retained that learning, but those in the newer cohorts never had it. The fact that from 1994 to 1996 the 35-year-olds had higher lifetime prevalence levels of cocaine use than some of the younger age groups also suggests some lasting cohort-related differences established during the peak years of the cocaine epidemic.

- ***Crack*** use was added to the 12th graders' questionnaires in 1986 and to the follow-up questionnaires in 1987. The decline in crack use, which began right after the introduction of these questions, ended in 1991 among 12th graders, and by 1994 it had ended among young adults (see Figure 5-10 and Table 5-2). Among 19- to 28-year-olds, the annual prevalence rate held at about 1%, which was down from the peak levels of just over 3% in 1986 through 1988. As was true for a number of other drugs, crack use began to rise after 1993 among 12th graders, but not in the older age strata until years later, when increases were observed in a somewhat staggered pattern going up the age scale. Again, a cohort effect due to generational replacement seems to have been occurring. Since 1994, the 18-year-olds have had the highest reported rates of use, and from 1999 to 2003 the 19- to 20-year-olds generally had the second highest rate, before the 21- to 22-year-olds took over that position

as a result of cohort effects. Importantly, all groups now have annual prevalence rates below 2.0%.

- With regard to ***inhalants***, the large separation of the age band lines for the younger groups in Figure 5-4 shows that, across many cohorts, use has dropped consistently and sharply with age, particularly in the first few years after high school. In fact, of all the populations covered in this study, the 8th graders (not shown in Figure 5-4) have had the highest rate of use, indicating that the decline in use with age starts at least as early as 8th or 9th grade. Like cocaine, inhalants have shown a strong age effect, but unlike cocaine, use of inhalants *declines* with age.

  Figure 5-4 also shows that, until the mid-1990s, there was a long-term gradual increase in annual inhalant use (unadjusted for underreporting of nitrite inhalants), one which was greatest among 12th graders, next greatest among 19- to 20-year-olds, and next greatest among 21- to 22-year-olds. Respondents more than six years past high school, who historically have had a negligible rate of use, did not exhibit the increases in use seen among the younger respondents, which began at least as early as 1977 among 12th graders and in 1983 among 19- to 20-year-olds. There was some subsequent increase among 21- to 22-year-olds and later still an increase among 23- to 24-year-olds. After 1995, this long-term trend, reflecting a cohort effect, began to reverse in the two youngest age strata and subsequently among the next two age strata. The older age strata have generally shown negligible rates of inhalant use.

- The annual prevalence for ***ecstasy*** (***MDMA***) use among the entire young adult sample (ages 19 to 28) was at about 1.5% in 1989 and 1990 (Table 5-2 and Figure 5-8). After 1991 it dropped to around 0.8% for several years before starting to rise significantly in 1995. Then ecstasy use began to rise in all of the young adult age strata, most notably in the younger age bands (19 through 26) through 2001. Use among 12th graders, which was not measured until 1996, was by then the highest of any of the age groups at 4.6% annual prevalence. Twelfth graders' use slipped by a full percentage point through 1998 before jumping significantly—by two full percentage points—in 1999. (Use by 10th graders also jumped significantly in 1999.) Thus it appears that young people from their mid-teens to mid-20s discovered ecstasy after some years of low and relatively level use. In 2000 the sharp increase in use continued among ages 15 to 16 (10th graders) through age 26, and also showed up among 8th graders (13- to 14-year-olds) for the first time. By 2001 the increase had slowed and even begun to reverse among ages 18 to 26, even as the 31- to 32-year-olds showed their first appreciable increase in ecstasy use. We attributed the deceleration in 2001 to a fairly sharp increase in perceived risk that year and predicted a turnaround in use in 2002. In 2002, and again in 2003, perceived risk increased sharply and, as Figure 5-8 illustrates, all age bands showed a reversal, with a sharp decrease in use. Clearly, the decrease has been sharpest in the younger age bands, perhaps because a cohort effect is at work in the upper ages, helping to offset a downward secular trend.

- In the late 1970s, ***amphetamine*** use rose with age beyond high school; but after a long period of decline in use from 1981 to the early 1990s, this relationship had reversed (see Figure 5-13). The declines were greatest in the older strata and least among 12th graders,

even though use decreased substantially in all groups. As was true for many of the illicit drugs, amphetamine use began to rise among the 12th graders after 1992, and eventually among the 19- to 24-year-olds; but there has only recently been a small increase among those 25 to 30 years old. In other words, another cohort-related pattern of change seems to have emerged in the 1990s for amphetamines, though in this case it may be dissipating quickly after respondents reach their early 20s. In fact, some decline in amphetamine use is observable in the younger age strata since 2003, and among 19- to 20-year-olds since 2004. At present the age differences through age 45 are of considerable magnitude and mostly ordinal (with the 18- to 22-year-olds showing the highest rates of use and those over 30 much lower rates). There has been little further change in the upper age bands in recent years.

- Since 1990, when it was first measured, use of ***crystal methamphetamine*** (***ice***) has remained at fairly low rates in this young adult population (Figure 5-14). However, among 19- to 28-year-olds combined, annual prevalence rose from 0.4% in 1992 to 1.6% by 2005, before falling to 1.1% in 2006—a nonsignificant change—where it remained in 2007 (Table 5-2). Use had been rising among 12th graders and 19- to 20-year-olds specifically between 2000 and 2002, but since then their use fell back to around the 2000 levels. General ***methamphetamine*** use has only been measured since 1999, and its use until 2005 was stable among 19- to 28-year-olds, with annual prevalence fluctuating between 2.4% and 2.8%. Since then, use has declined to 1.5% by 2007 (Table 5-2). This recent decline may well reflect a cohort effect, because use has been declining steadily among 12th graders since 2002.

- Use of ***heroin*** increased appreciably in 1995 among 12th graders and young adults ages 19 to 24, but not among the older age bands (Figure 5-11). It has remained at this higher plateau in these younger age bands since then. Among young adults generally, annual use had previously been quite stable from at least as far back as 1986 through 1994 (Table 5-2), and it stabilized again at a higher level after 1994—a level roughly twice as high as the previous one. Heroin use among 12th graders and 19- to 20-year-olds has declined slightly since 2000 or 2001, respectively, but the older age groups have maintained a fairly stable rate of use.

- Among 19- to 28-year-olds, the use of ***narcotics other than heroin*** leveled after 1991, following a long period of slow, fairly steady decline (Figure 5-12). Twelfth graders showed an appreciable increase in use beginning in 1993, which continued into 2004, while 19- to 20-year-olds showed some increase after 1994, 21- to 22-year-olds after 1996, 23- to 24-year-olds after 1997, and the older age groups after 2000. Thus, cohort-related change appears to have been occurring during the 1990s and beyond for this class of drugs, following a long period of secular trends. In 2002, the question text was changed on three of the six questionnaire forms to update the list of examples of narcotics other than heroin. Talwin, laudanum, and paregoric, each of which had negligible rates of use by 2001, were replaced by Vicodin, OxyContin, and Percocet. As a consequence of this revision, reported use rates increased in 2002. Data presented here for 2002 are from three of the six questionnaire forms with the new wording (which showed higher prevalence rates than the older question did). All six questionnaire forms contained the new wording beginning in 2003, so the data presented for 2003 and after are based on all forms. Although the older

version of the question showed no significant changes occurring in 2002, there was a significant increase in narcotics use observed in 2003 (based on the new question in both 2002 and 2003). Among 19- to 28-year-olds, annual prevalence reached a peak level of 9.0% in 2004, about where it is in 2007 (8.7%). Some turnaround was observed in some of the younger age bands after 2004 in the use of this important class of drugs, but it should be noted that its use continues to rise in the older age bands.

- The annual prevalence rates for ***Vicodin*** and ***OxyContin***, which were first measured in 2002 (separately from the general question about narcotics other than heroin), were appreciable (8.2% and 1.9%, respectively) for 19- to 28-year-olds. Increases were observed for these two drugs in the subsequent years. Among 19- to 28-year-olds (see Table 5-2), the annual prevalence of OxyContin use rose from 1.9% in 2002 to 3.1% in 2004 through 2006—changes that were fairly parallel to those observed among 12th graders over the same interval (when their annual prevalence rose from 4.0% in 2002 to 5.5% in 2005). The 2002–2005 increases in OxyContin use were significant for both 12th graders and 19- to 28-year-olds. Annual prevalence in 2007 was 2.9%, down slightly from the 3.1% observed in 2004, 2005, and 2006. Vicodin use rose by less, but started from a higher base, with annual prevalence increasing slightly among 19- to 28-year-olds, from 8.2% in 2002 to 9.1% in 2006. (It stands at 8.9% in 2007, again down slightly.) In sum, the use of these two narcotic drugs was rising for several years among young adults, but neither has shown any further increase since 2005.

- ***Sedative*** (***barbiturate***) use (Figure 5-15) showed a long-term parallel decline in all age groups covered through the late 1970s and 1980s, leveling by about 1988. While use remained low and quite level for most of the age bands for about five years, it began to rise by 1993 among 18-year-olds, by 1995 among 19- to 20-year-olds, by 1997 among 21- to 22-year-olds, by 1998 among 23- to 24-year-olds, by 2001 among 25- to 28-year-olds, and by 2005 among 29- to 30-year-olds. The same cohort-related pattern of change seen during the 1990s for many other drugs also exists for sedatives (barbiturates); like most of the other drugs, this pattern was preceded by a long period of secular change. While use has now leveled off among most of the younger age groups, the 35-, 40-, and 45-year-olds all showed an increase in sedative use in 2007.

- ***Tranquilizers*** (Figure 5-16) follow a similar pattern to that just described for sedatives (barbiturates). One difference is that the 12th graders' annual prevalence rate has not always been the highest among the various age groups, as was the case for sedatives (barbiturates), although it was highest between 1994 and 2000 as a result of a greater increase in tranquilizer use among the 12th graders than in the young adult strata. In the last six years or so, however, as use rose and then leveled among those in their early 20s, the 12th graders no longer stand out as having the highest rate of tranquilizer use. In fact, it is the 21- to 22-year-olds that had the highest rate in 2005 through 2007. This is another clear example of a cohort-related pattern of change. Now that tranquilizer use has leveled and begun to decline among 12th graders and 19- to 20-year-olds, it is likely that we will see that pattern echoed in the older age groups as a new cohort effect plays out.

- The use of ***anabolic steroids*** (Figure 5-17) is substantially lower after high school than during, and this has been true since measures of steroid use were first introduced into two of

the follow-up questionnaires in 1991. The age-related differences are not consistent; the prevalence rates among the young adult strata are all quite low and do not appear to trend in any systematic way. In general, it seems that the rise in steroid use from 1999 to 2003 among 8th and 10th graders and from 2001 to 2004 among 12th graders was largely specific to those age groups. Note that use is negligible by ages 29 to 30.

- The ***alcohol*** trends for the older age groups (see Figures 5-18a–d) have been somewhat different than for the younger age groups in some interesting ways. For ***30-day prevalence*** and ***occasions of heavy drinking***, the declines for the two youngest age strata (12th graders and those one to two years past high school) during the 1980s were greater than for the older age groups. These differential trends were due in part to the effects of changes in minimum drinking age laws in many states, changes that would be expected to affect primarily the age groups under age 21. However, because similar (though weaker) trends were evident among 12th graders in states that maintained a constant minimum drinking age of 21, the changed laws cannot account for all the downward trends, suggesting that there was also a more general downward trend in alcohol consumption during the 1980s.[42] By 1994, these declines in 30-day prevalence had slowed or discontinued for virtually all age groups until 1997, when they began to turn downward again for 12th graders, and 1999, when they started down among the 19- to 20-year-olds.

  Those respondents three to four years past high school stand out for showing the smallest downward trend in ***occasional heavy drinking*** or ***binge drinking*** (i.e., having five or more drinks in a row at least once in the past two weeks) since the early 1980s (see Figure 5-18d). One important segment of that age stratum is composed of college students, who showed very little decline in use (see chapter 9).

  The older age groups, in general, have shown only a modest long-term decline in annual prevalence rates and no recent decline in binge drinking or 30-day prevalence rates. Note that the binge drinking trend lines for different age groups (Figure 5-18d) are spread out on the vertical dimension, reflecting large and persisting age differentials (age effects) in this behavior. The relationship with age is curvilinear, however. In recent years the 21- to 22-year-olds have consistently shown the highest rates of binge drinking, while the two adjacent age bands have shown the next highest. Binge drinking appears to have been gradually increasing in recent years, particularly among 23- to 24-year-olds and 25- to 26-year-olds. This is perhaps driven in part by the fact that an increasing proportion of them are enrolled in college, where binge drinking rates tend to be high. In addition, they tend to be unmarried, which also affects rates of binge drinking.[43] In 2007 the binge drinking rate for 19- to 20-year-olds is considerably lower (31%) than for those just one to two years older (46%).

  From the early 1980s through the mid-1990s, rates of ***daily drinking*** (Figure 5-18c) fell by considerable proportions in all age strata for which we have data, reflecting an important

[42]O'Malley, P. M., & Wagenaar, A. C. (1991). Effects of 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.

[43]Bachman, J. G., Wadsworth, K. N., O'Malley, P. M., Johnston, L. D., & Schulenberg, J. (1997). *Smoking, drinking, and drug use in young adulthood: The impacts of new freedoms and new responsibilities.* Mahwah, NJ: Lawrence Erlbaum Associates.

change in drinking patterns in the culture. Among 19- to 28-year-olds combined, daily drinking declined from 1987 (6.6%) to 2000 (4.1%), and has increased since then, reaching 5.6% in 2007 (see Table 5-4). Daily drinking rates have generally been highest for 35-, 40-, and 45-year-olds in recent years.

It is worth noting that the 35-, 40-, and 45-year-olds have had among the lowest rates of binge drinking but among the highest rates of daily drinking in recent years for which we have data available. These patterns—particularly the high rate of daily drinking—likely reflect age effects as well as perhaps some enduring cohort differences (because these cohorts had considerably higher rates of daily drinking when they were in high school).

- The prevalence rates for ***cigarette smoking*** show more complex trends than most other substances, due to the long-term presence of both cohort and age effects, plus slightly different patterns of such effects on different measures of smoking in the past 30 days (one or more cigarettes per month, one or more cigarettes per day, and a half pack or more of cigarettes per day).

  In the earlier years of the study, the curves across time were of the same general shape for each age band (Figures 5-19a–c), but each of those curves tended to be displaced to the right of the immediately preceding age group, which was two years younger. The pattern is clearest in Figure 5-19c (half pack plus per day). This pattern is very similar to the one described in *Volume I* for lifetime smoking rates for various grade levels *below* senior year; it is the classic pattern exhibited by a cohort effect—that is, when cohorts (in this case, high school graduating class cohorts) differ from other cohorts in a consistent way across much or all of the life span. We interpret the cigarette data as reflecting just such a cohort effect,[44] and we believe that the persisting cohort differences are due to the dependence-producing characteristics of cigarette smoking.

  The declining levels of cigarette smoking across cohorts at age 18, which were observed when the classes of 1978 through 1981 became 12th graders, were later observable in the early-30s age band, as those same high school graduating classes grew older (see Figures 5-19b and c). This was true at least through about 1991. After that, there was a considerable convergence of rates across age groups, largely because there were few cohort differences among the senior classes who graduated from the early to mid-1980s through the early 1990s—a period of fairly level use.

  In addition to these cohort differences, there are somewhat different age trends in which, as respondents grow older, the proportion smoking at all in the past 30 days declines some, while the proportion smoking a half pack per day actually increases. Put another way, many of the light smokers in high school either become heavy smokers or quit smoking.[45]

[44]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.

[45] To illustrate, in the graduating class cohort of 1976, 39% were 30-day smokers in senior year, 39% by ages 19 to 20, but only 28% by ages 31 to 32—a net drop of 11 percentage points over the entire interval. By way of contrast, 19% of that class were half-pack-a-day smokers in senior year, 24% by ages 19 to 20, and 21% at ages 31 to 32—a net gain of five percentage points and two percentage points over the respective intervals.

The picture was further complicated in the 1990s, when it appears that a new cohort effect emerged, with smoking among adolescents rising sharply (beginning after 1991 for 8th and 10th graders and after 1992 for 12th graders). The 19- to 20-year-olds soon showed a rise at the beginning of the 1990s— perhaps responding to some of the same social forces as the adolescents (including the Joe Camel advertising campaign); but 21- to 24-year-olds did not show an increase until about 1995, and 25- to 26-year-olds until about 1996. Those young adults over age 26 have not yet shown much increase; it is possible that an upward cohort effect was offset by a downward secular trend during this period.

After about 1999, smoking rates among virtually all age groups leveled or declined, suggesting that societal forces may be affecting all age groups in a similar way, giving rise to some secular trends. Large increases in price and a great deal of adverse publicity for the tobacco industry are highly plausible candidates for such forces, as are an increase in state and national antismoking advertising, the demise of the Joe Camel campaign and billboard advertising, and the imposition of no-smoking regulations in many public and workplace settings by states and municipalities. Note that since 2003 thirty-day, daily, and half-pack smoking have all declined among 35-, 40-, and 45-year-olds (Figures 5-19a, b, c).

- Apart from cigarettes, *none* of the other drugs included in the study showed a clear long-term pattern of enduring cohort differences in the earlier years of the study (the 1970s and 1980s), despite wide variations in their use by different cohorts at a given age. There was one exception; a modest cohort effect was observable for ***daily marijuana*** use (Figure 5-3c) during the late 1970s and early 1980s.[46] **(**But as more recent classes leveled at lower rates of use, evidence for the cohort effect faded.) The emergence in the 1990s of a new epidemic of marijuana use among teens once again yielded a strong pattern of cohort effects. As can be seen in Figure 5-3c, daily use rose sharply among 12th graders and 19- to 20-year-olds after 1992, among 21- to 22-year-olds after 1993 with a sharp rise occurring in 1997, among 23- to 24-year-olds after 1998, among 25- to 26-year-olds after 2000, among 27- to 28-year-olds in 2003, among 29- to 30-year-olds in 2005, among 35- and 40-year-olds in 2006, and among 45-year-olds in 2007. This is not unlike the pattern of change for cigarette smoking that occurred in the 1990s (Figure 5-19a). The cohort effect for daily marijuana use may be attributable, in part, to the very strong association between that behavior and regular cigarette smoking. It is noteworthy that even among the 35-, 40-, and 45-year-olds in the study, 1.9–2.7% report that they currently smoke marijuana on a daily basis. That amounts to 1 in every 37 to 52 adults at those ages. And we know from results published in *Volume I* that many more have been daily marijuana users for at least a month at some time in their lives.

- In sum, except for ***cigarettes*** and ***alcohol,*** substance use prior to 1992 among 12th graders and young adults had shown *longer term* trends that were highly parallel across age groups, indicating that general secular trends predominated in that period. Since 1992, however, there has been considerable divergence in the trends for different age bands on a number of drugs as use among adolescents rose sharply, followed by subsequent rises among 19- to 20-year-olds, 21- to 22-year-olds, and so on. This divergence indicates a new cohort effect, quite possibly reflecting a generational forgetting of the dangers of drugs by the cohorts who

[46]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.

reached senior year in the early to mid-1990s. The data discussed in chapter 6, "Attitudes and Beliefs about Drugs among Young Adults," provide additional evidence for this interpretation.

TRENDS FOR IMPORTANT SUBGROUPS OF YOUNG ADULTS

Four-year age bands have been used here to examine subgroup trends in order to yield sufficiently large numbers of cases to permit reliable estimates for the various subgroups being examined. Subgroup data for respondents of each gender and for respondents from communities of different sizes 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. Beginning in 1987, a question about state of residence was added to all follow-up questionnaires, permitting trend data to be calculated for the four regions of the country since then. These various subgroup data are not presented in tables or figures here because of the substantial amount of space they would require. Rather, a verbal synopsis of what they contain is presented.

Gender Differences in Trends

- Over the long term, gender differences narrowed for some drugs among young adults in each of these three age bands, primarily when a steeper decline in use among males (who generally had higher rates of use) occurred in the 1980s. The overall picture, though, is one of parallel trends, with use among males remaining higher for most drugs, including the indexes of ***any illicit drug*** use in the prior year and use of ***any illicit drug other than marijuana*** (see Table 5-5, for example).

- The downward trend in ***marijuana*** use among 19- to 22-year-olds between 1980 and 1989 was also a bit sharper among males than females, narrowing the gap between the two groups. Annual prevalence fell by 22 percentage points (to 34%) among males, compared to a drop of 14 percentage points (to 31%) among females, leaving a difference of three percentage points. In the late 1990s through 2007, the gap widened to seven percentage points (36% versus 29% by 2007).

  Similarly, between 1980 and 1993, ***daily marijuana*** use for this age group fell more steeply, from 12.9% to 2.9% among males, versus 6.1% to 1.7% among females, considerably narrowing the rather large gap. As use began to rise after 1993, the gap widened again. Among 23- to 26-year-olds, as daily use first began to increase in 1998 and 1999, the gap between the genders began to widen. In the oldest age group (ages 27–30), the difference had been fairly constant, with daily marijuana use among males generally being two to three times higher than among females. After 2001, however, use increased more among females, narrowing the gap somewhat, but an increase from 2004 to 2007 among males this age opened one of the largest gender gaps seen for daily marijuana use in the age band.

- Males have shown slightly higher proportions using ***any illicit drug other than marijuana*** in all three age bands, a fact that has not changed appreciably over the years, though the differences tended to narrow some as use dropped, and to widen as use increased.

- For ***LSD***, males have consistently had higher rates of use than females. Among 19- to 22-year-olds, the male–female differences tended to diminish as use declined (from 1980 to 1985 and again from 1999 to 2004) and expand as use increased (1986–1995). In the two older age bands there was less change in use, and differences had been relatively consistent (with males higher) since data have been available, beginning in 1984 for 23- to 26-year-olds and in 1988 for 27- to 30-year-olds. After 1999 and 2001 for the two groups, respectively, LSD use dropped, substantially narrowing the gender differences. Males began to show these declines first, and both genders have moved to almost no use since about 2003.

- ***Ecstasy*** (***MDMA***) exhibited little or no gender difference in any of the three age bands before use began to grow in the late 1990s. Even since then, among the 19- to 22-year-olds there has been little gender difference, except that use among males started to decline one year ahead of use among females. But in the older age groups a gender difference did open up after 1997, with males fairly consistently having higher rates of use among both 23- to 26-year-olds and 27- to 30-year-olds.

- Males have had higher rates of ***cocaine*** use than females throughout the life of the study. During the period of sharp decline from the peak levels in annual cocaine prevalence (1986–1993), use dropped more among males than females, narrowing the gender differences. In the 19- to 22-year-old age band, annual prevalence for males declined by 16 percentage points (to 4.5%) versus 13 percentage points among females (to 2.8%) in 1993. In the 23- to 26-year-old age band, there was also a narrowing of the gender difference between 1986 and 1993, with annual prevalence down 19 percentage points among males (to 6.9%) and 13 percentage points among females (to 4.2%). Use in the 27- to 30-year-old group also dropped faster among males between 1988 (when data were first available) and 1997—down 13 percentage points versus 7 among females. In sum, during the period of sharp decline in overall cocaine use, the gender differences—which had been fairly large—narrowed considerably in all three of these age bands. During the more recent resurgence in cocaine use, which has occurred on a somewhat staggered basis over the years, the gap between genders expanded only slightly.

- A similar occurrence happened with ***crack*** during the earlier period of decline, though the proportional difference between the two genders has consistently been higher than for cocaine overall. With crack, though, there was some gender convergence (between 1992 and 1998) among 19- to 22-year-olds, as use among males declined slightly and use among females rose gradually. Since 1999, there has been no consistent change in differences between males and females. In the two older age bands, males consistently had slightly higher crack usage rates, at least until a decline among males over the past year or two that diminished the difference.

- As ***sedative*** (***barbiturate***) use declined through the 1980s, the modest gender differences (males were higher) were virtually eliminated in all three age bands. Beginning in the early 1990s, there emerged a staggered increase in use by both genders across all three age groups, with males increasing more than females, thereby opening a small difference again in the late 1990s and early 2000s; in 2007 males are still slightly higher than females.

- During the period from 1982 through about 1994, there was little gender difference in annual prevalence for ***heroin.*** After 1994, use increased some, particularly among the younger groups, with males generally attaining slightly higher rates than females. As of 2007 the gender differences in heroin rates had just about disappeared among 19- to 26-year-olds, with all groups between 0.3% and 0.4%. Males still had a higher rate of use among 27- to 30-year-olds (0.5% versus 0.0%).

- Among 19- to 22-year-olds, both genders showed some decline in their use of ***narcotics other than heroin*** between 1980 and 1991, with a near elimination of previous gender differences (males had been higher). Beginning in 1994, use by males began to rise in this age band, while use by females began to rise a year later. Some gender differences have developed as use has increased, with males at 9.6% and females at 8.3% in 2007. The picture for 23- to 26-year-olds is very similar: the gender difference (males higher) had been eliminated by 1988, but re-emerged after 1995 as use increased more among males. Among 27- to 30-year-olds, there has been a smaller gender difference and the least increase in use in the 2000s. Still, use has increased for both genders since 1999, with males having slightly higher rates of use.

- The use of ***OxyContin*** and ***Vicodin*** has generally been higher among males than females for the six years for which we have data.

- In general there has been no appreciable gender difference in ***amphetamine*** use for some years in any of these three age bands. Between 1981 and 1991, rates of amphetamine use were similar for males and females and showed substantial and parallel downward trends for both genders. Among 19- to 22-year-olds, annual prevalence of use dropped 22 percentage points for males (to 5.2% in 1991) and 21 percentage points for females (to 4.7% in 1991). There were small increases in annual prevalence for both genders in the 19- to 22-year-old age group after 1991, in the 23- to 26-year-old age group after 1995, and in the 27- to 30-year-old age band after 2000, but the genders diverged slightly (males higher), and use has leveled in all three age bands. Nonmedical use of ***Ritalin***, a prescription amphetamine added to the study's coverage in 2002, has generally been higher among males than females.

- ***Crystal methamphetamine*** (***ice***) was added to the study in 1990. In the early 1990s, use was low and very similar for both genders in all three young adult age bands. More of the increase in use that occurred in the mid-1990s in the younger two age bands occurred among males—opening a gender gap. The gap then narrowed, though males on average were slightly more likely to report use of crystal methamphetamine until 2005. It should be noted that the estimates are a bit unstable for this drug due to limited sample sizes.

- For ***tranquilizers***, both genders showed a long, gradual decline (and very similar rates of use) from 1980 through about 1993 in all three age bands. Beginning in 1995, use increased for both genders in the 19- to 22-year-old group, followed by an increase beginning after 1997 among 23- to 26-year-olds and after 1999 among 27- to 30-year-olds, again reflecting cohort effects driven by generational replacement. Some gender difference emerged in this period of increase (and subsequent decrease after 2002 and 2003, respectively, for the lower two age bands), with males reporting somewhat higher usage rates. Among 27- to 30-year-olds,

males' use is higher (e.g., 7.7% annual prevalence versus 5.3% for females in 2007) and still rising.

- ***Inhalant*** use has generally been quite a bit higher among males than females in all three age groups. The 19- to 22-year-old group showed a gradual upward shift from 1980 to 1988, followed by a leveling for some years for both genders. In 1997, female inhalant use began to decline among 19- to 22-year-olds, followed by males in 2001; however, the gender gap did not diminish much with this decline until 2005, when there was a convergence. Among 23- to 26-year-olds there was a widening gender gap as use by males increased between 1992 and 1999, though a decline among males since then has narrowed the gap, and since 2005 it has been eliminated almost completely. In the oldest age stratum, use among males has consistently been slightly higher, though the prevalence of inhalant use is very low by this age.

- Use of three "club drugs"—***GHB***, ***ketamine***, and ***Rohypnol***—has tended to be a bit more concentrated among males in all three age strata. However, the estimates are not very stable because of the limited numbers of cases upon which they are based; the prevalence rates are all very low.

- For ***alcohol***, 30-day prevalence rates exhibited a gradual, parallel decline from 1981 through 1992 for both genders 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 by 1992. In the two older age bands, there had also been a modest, parallel decline for both genders, from 1985 through 1992 in the case of 23- to 26-year-olds, and at least from 1988 (when data were first available) to 1991 or 1992 in the case of 27- to 30-year-olds. Since 1992, both genders in the older two age bands have shown fairly level rates of use, with males somewhat higher; however, among 19- to 22-year-olds there has been some convergence, because use by males has declined slightly while use by females has increased slightly. The increasing proportion of women attending college may explain this convergence, at least in part.

  There was also a general long-term decline in ***daily drinking*** from about 1981 or 1982 through about 1992, with daily use falling more among males, considerably reducing, but far from eliminating, what had been a large gender difference among 19- to 22-year-olds. To illustrate, in 1981, 11.8% of males reported daily use versus 4.0% of females; the comparable 1992 statistics were 5.3% and 2.7%. After 1995, daily drinking began to increase among 19- to 22-year-olds for both genders, but leveled a few years later. From 2002 to 2005 daily use was rising among males and falling among females, increasing their differences, but there has been some convergence since 2005. There was still a large gender difference for daily drinking among the 19- to 22-year-old age group in 2007—7.0% for males versus 3.2% for females—but not nearly as large as it had been in 1981 (11.8% versus 4.0%). The gender differences have been similar for the older age groups (in 2007, for example, 10.4% for males versus 3.5% for females among 23- to 26-year-olds), and there has been little evidence of any convergence or divergence in the two upper age bands.

  There are also long-established and large gender differences in all age groups in the prevalence of ***occasional heavy drinking***. Males in the 19- to 22-year-old band showed some

longer term decline in this statistic, from 54% in 1986 to 45% in 1995, as female use remained steady, thus narrowing the gender gap (from 24 percentage points in 1986 to 17 percentage points in 1995). Since 1995, binge drinking among 19- to 22-year-old females has been drifting upward from 28% to 34% by 2007, whereas among males it has held fairly steady, narrowing the difference some. In the two older age bands (23- to 26-year-olds and 27- to 30-year-olds), the sizable gender differences have been mostly stable as the binge drinking rates have drifted steadily upward in both genders. To illustrate, among 23- to 26-year-olds, the binge drinking rate among females has risen from 22% in 1995 to 31% in 2007, while among males it has risen from 44% in 1994 to 51% in 2007. (The increases observed among 27- to 30-year-olds have not been as steep.) *This sustained increase for 23- to 26-year-olds is striking, and may be due at least in part to the increased rate of college attendance and decreased rate of marriage among this age group.*

- Most striking for ***cigarette smoking*** are the similarities between the genders in both absolute levels and trends, though there are some differences. All three age groups showed a long-term decline in ***daily smoking*** rates for both males and females after data were first available for each: 19- to 22-year-olds from 1980 to 1990; 23- to 26-year-olds from 1984 to 1992; and 27- to 30-year-olds from 1988 to 1999—again reflecting a cohort effect moving up the age scale. Male and female ***30-day smoking*** rates have also been very close over most of the time for which data are available, particularly in the two older age groups. But among 19- to 22-year-olds there was a crossover after 1993—before that point, females had slightly higher 30-day prevalence rates, but after that males did from 1994 on. Among 23- to 26-year-olds, the genders had very similar smoking rates until males started reporting higher 30-day smoking rates from 1998 on. In the oldest age band, the two genders were quite close until males first reported higher rates in 2002, and their rate has generally remained somewhat higher since; in 2007 it was 26% among males and 24% among females.

  There were some increases in the last decade and a half in 30-day smoking rates among the two younger groups and especially among males. For example, from 1993 to 1999, 19- to 22-year-old males increased from 29% to 37%, while females increased from 29% to 34%. Because smoking rates in high school graduating classes after 1992 had been on the rise, and because we know that class cohorts tend to maintain their relative differences over time, we had predicted the increase in smoking among 19- to 22-year-olds and eventually in the older age bands as the heavier smoking high school class cohorts grew older. Beginning in 1996, smoking began to rise among 23- to 26-year-olds, before leveling after 1998. Again, it rose more among males, opening a small gender gap.

Regional Differences in Trends

The respondent's current state of residence was first asked in the 1987 follow-up survey; thus trend data by region exist only for the interval since then. In this case, changes have been examined for all 19- to 28-year-olds combined to increase the reliability of the estimates. Because gender, for example, crosscut all regions, it has less sampling error than when the sample is divided into four separate regions. (Each region is represented by between 1,000 and 2,200 cases in all years.) In general, the changes that have occurred since 1987 have been fairly consistent across regions, particularly in terms of the direction of change. By combining the three age strata that we have been discussing thus far in this chapter, we are eliminating any ability to see the cohort effects that

have been observed for so many drugs. But, for purposes in this subsection, we are going to take an average across the three strata.

- In general, the four regions of the country—Northeast, Midwest, South, and West—have moved in parallel ways. There were substantial drops among young adults in all four regions between 1987 (the initial measurement point) and 1991 for ***any illicit drug***, ***marijuana***, ***any illicit drug other than marijuana***, ***cocaine***, ***crack***, and ***amphetamines***. Since 1991 in most or all regions, there has been some increase and then a leveling in the use of these drugs (except cocaine, which continued to decline through the mid-1990s, inched up thereafter, and then leveled since 2004).

- The proportion of 19- to 28-year-olds using ***any illicit drug*** has been consistently lowest in the South and highest in the West and Northeast. For ***marijuana*** use, the South stands out as being consistently lowest, and for the most part the Midwest has been second lowest. Generally, the other two regions have been fairly close to one another. For the use of ***any illicit drug other than marijuana***, the West stood out as consistently highest, with the other three regions being very similar, at least until 2000; since 2001, use in the Northeast has been about as high as in the West, though the regional differences are not large.

- From 1991 through 1995, the West had slightly higher annual prevalence rates of ***LSD*** use than the other three regions among young adults (use dropped in 1995 in the West). Otherwise the usage rates have been quite similar in all four regions; all showed sharp declines in LSD use after 2001, though use had been declining in the Northeast for several years prior to that.

- Questions about ***ecstasy*** (***MDMA***) were added to the follow-up surveys of young adults in 1989. Through 1993, rates were highest in the West and South and lower in the Northeast and Midwest regions. Subsequently, use in the Northeast began to increase (as was true among 12th graders), exceeding the levels of use found in the South and West from 1999 to 2001. The Midwest has consistently had a much lower level of ecstasy use than the other three regions. In 2000 all four regions showed a sharp and fairly parallel increase in ecstasy use; the rise decelerated in 2001 and began to decline thereafter in all regions. As we have discussed elsewhere, we believe that this decrease may be caused by growing concern about the hazards of ecstasy use. By 2003, little regional difference remained in annual prevalence, largely because the declines in use were most pronounced in the Northeast and West, and by 2007 use was down a little more in all regions.

- The considerable declines in ***cocaine*** use, observed in all regions between 1987 and 1991, were greatest in the two regions that had attained the highest levels of use by the mid-1980s—the West and Northeast. Thus, regional differences had diminished considerably by 1992. Similar to the finding for 12th graders, in 1992 these declines stalled in all regions except the Northeast. A gradual further decline then occurred in all regions through 1996 (1997 for the West) before a slight rise began to occur, likely reflecting the effects of generational replacement. Very little regional variability in annual cocaine prevalence has existed since the mid-1990s, though the West has continued to show the highest lifetime prevalence.

- All four regions also exhibited an appreciable drop in ***crack*** use between 1987 and 1991, again with the greatest declines in the West and Northeast, where prevalence had been the highest. Use then generally leveled in all regions except the South, where it continued a gradual decline through 1997. As was true for cocaine generally, annual prevalence rates among the regions have converged; they now stand between 0.7% in the South and 1.4% in the Midwest. (It is worth noting that lifetime use of crack has been highest in the West since crack use was first measured in 1987, much as is true for cocaine in general.)

- From 1987 (when data were first available) through 1994, rates of ***inhalant*** use remained relatively stable, quite low, and about equal in all four regions among 19- to 28-year-olds. Annual use then rose in the Northeast in 1995 and 1996 and remained higher than in the other regions through 2000, when it dropped back to rates comparable to the other three regions. Except for that divergence, the regions have moved very much in parallel for this class of drugs. Annual prevalence in 2007 is at very low levels in this age group, between 0.5% and 1.5%.

- The regions have trended fairly similarly in their prevalence of ***amphetamine*** use by young adults. The only modest exception was that use declined more in the Northeast (which started out lowest) in the period 1987 to 1992, giving it a substantially lower rate than the other three regions; it remained lowest until 1998. (The West has fairly consistently had the highest rate, but not by much.) By the late 1990s, the Northeast had caught up to the Midwest and South, making the regional differences very small; there have been essentially no regional differences since 2000.

- ***Methamphetamine*** use in general has been measured only since 1999 (though crystal methamphetamine, discussed next, has been in the study for a longer time). It shows some differences in rates among the regions and some differential trending, with a gradual decline in annual prevalence in the Northeast (where use has generally been lowest) and a gradual increase in the West (where use fairly consistently has been highest). Use in the other two regions remained fairly flat until 2006, when both regions showed some decline. Lifetime prevalence has been particularly high in the West, ranging between 11% and 16% since 1999. It has been declining quite steadily, however, since 2001.

- The West has consistently had the highest rates for ***crystal methamphetamine*** (***ice***), and the regional differences have been very substantial, particularly in terms of lifetime use. The Northeast has generally had the lowest rates. In fact, when data were first available on crystal methamphetamine in 1990, the West had a lifetime prevalence of 5.1% versus a range of 1.7% to 2.3% in the other three regions. By 2006, the lifetime prevalence rate in the West had increased to 8.8%, and lifetime prevalence in the Midwest and South grew quite steadily over that interval. This strongly suggests that crystal methamphetamine use among young adults diffused from the West primarily to the South and Midwest regions, but diffused much less to the Northeast. The annual prevalence figures tell a similar story, but also show that there was a spike in past-year use in the West from 1991 to 1995 before use there declined and then stabilized at around 2% from 1997 through 2001. It then rose again in the West between 2001 and 2003 and stabilized at a higher level around 2.7%. In 2007, use in the West declined (annual prevalence of 1.5%), narrowing the differences with the other regions.

- The annual prevalence for ***sedatives*** (***barbiturates***) remained flat, and at about equivalent levels, in all four regions of the country from 1987, when regional data were first available, through 1994. Rates then rose gradually in all regions for a number of years, before leveling in all regions sometime between 2002 and 2007 at similar levels of use.

- The picture for ***tranquilizers*** is similar to that for sedatives (barbiturates). Use generally held fairly steady in all regions from 1987 through 1993. Since then there has been some increase in all regions, with the South experiencing the most increase through 2004, after which all regions showed a leveling in use. The regional differences have been small, though the South tends to have a slightly higher rate—this difference grew a bit larger during the period of increasing use in the late 1990s.

- Levels and trends in ***heroin*** use have been quite comparable across the four regions since 1987. All regions had low and stable rates through the early 1990s. A gradual increase was observed from about 1993 through 2000, and prevalence has been stable since then. On average the Northeast has tended to have the highest rate of heroin use, but the annual prevalence rates have remained below 1% in all regions since 1987.

- Trends in prevalence of the use of ***narcotics other than heroin*** have also been quite parallel for the four regions. A gradual and long-term increase occurred from the mid-1990s through 2003 or 2004, depending on the region, with little systematic change thereafter.

- The annual prevalence of ***OxyContin*** use has risen some in all four regions since its use was first measured in 2002. In 2007 the annual prevalence for all regions fell in the range of 2.6% and 4.2%. Annual prevalence of use for ***Vicodin*** has shown greater differences among the regions. The West and Midwest have generally had the highest rates, with the South the lowest and the Northeast in between. There has been little net change between 2002 and 2007 in the annual prevalence in each region, but use patterns in the interim have been different for each region. (It should be noted that the sample sizes are more limited than usual for these two drugs because questions about them occur on only two of the six questionnaire forms.)

- When two club drugs, ***ketamine*** and ***GHB***, were first measured in 2002, the Northeast stood out as having a higher rate of annual use; but use in the Northeast has dropped since then, bringing that region's usage rates down to the same very low levels as the other three regions. ***Rohypnol*** use has remained very low in all four regions over the same interval, not reaching 1% in any region.

- With respect to ***alcohol*** use, there were modest declines in 30-day prevalence in all four regions between 1987 (when the first measurement was available for 19- to 28-year-olds) and 1992. The rates for 30-day prevalence then leveled in all regions. The West and South have consistently had lower rates of 30-day use than the Northeast and Midwest (as has generally been true among 12th graders). In 2007, the 30-day prevalence rates for each community-size stratum are about where they were in 1992, with all regions showing a very flat pattern of prevalence over that 15-year interval.

Current ***daily use*** of alcohol also showed a decline from the first (1987) data collection through about 1994 or 1995 in all regions. The proportional declines were substantial—on the order of 40–50%. (This decline corresponds to a period of appreciable decline in daily drinking among 12th graders, though we can tell from their longer term data that their decline started in 1980; thus the decline may well have started earlier among 19- to 28-year-olds as well.) Since the mid-1990s there has been some upward trending in daily prevalence in all regions; the rates are all between 4.8% and 6.7% in 2007, with the Northeast having the highest average rate over the past five years and the South the lowest.

Occasional heavy drinking (or "binge drinking") was fairly level in all regions between 1987 (when regional differences were first measured) and the late 1990s or early 2000s. There have been some modest increases in recent years, particularly in the Northeast and West. The rates have consistently been appreciably higher in the Northeast (43% in 2007) and Midwest (42%) than in the West (36%) and South (33%).

- There have been highly consistent regional differences among young adults in ***cigarette smoking*** since data were first available in 1987—they exist for monthly, daily, and half-pack-daily prevalence rates. The West has consistently had the lowest rates (e.g., 12% daily prevalence in 2007) and the South the next lowest (17% in 2007); the Northeast and Midwest have the highest smoking rates at 18% and 21%, respectively, in 2007. After some slight decline in 30-day prevalence in all regions between 1987 and 1989, rates leveled off for about five years (roughly through 1994). There then followed a very gradual increase of a few percentage points through 1998, followed by a gradual decrease. Daily use showed a very similar pattern. For half-pack-a-day smoking, the decline phase was longer (from 1987 through about 1992 or 1993), likely reflecting the lag between smoking initiation and regular heavy smoking. Since 1998, half-pack smoking rates have gradually declined in all four regions. In general, all of these measures have shown parallel movements across regions, suggesting that the forces accounting for whatever changes there have been are nationwide in scope. It should be remembered that, as illustrated earlier in this chapter, there are strong cohort effects in smoking which are weakened to some degree when we combine age groups across a 10-year age span, as we have done in the present analyses.

Population Density Differences in Trends

The analyses presented here for population density return to the use of four-year age groupings, which allows a longer time interval to be examined for the younger strata and for cross-age comparisons of the trends. Among young adults, five levels of population density are distinguished based on the respondent's answer to the question, "In March of this year did you live mostly in . . ."; a very large city (over 500,000 people), a large city (100,000 to 500,000), a medium-sized city (50,000 to 100,000), a small city or town (under 50,000), or farm/country? Suburbs of cities of each size were combined with the city.

- The proportions of young adults using ***any illicit drug*** have moved in parallel among the various community-size strata. In general, the farm/country stratum has tended to have lower use than all of the other strata. The other four community-size strata have tended to differ little from one another, though the very large cities have generally ranked at the top. In 2007, the proportions of 19- to 22-year-olds reporting use of an illicit drug in the past year were

23% for the farm/country stratum, 36% for small towns and medium-sized cities, 35% for large-sized cities, and 41% for very large cities.

- Trends in the use of ***any illicit drug other than marijuana*** tell a similar story. There was a long period of fairly parallel decline along with some convergence of usage rates among the community-size strata at all three age levels (among 19- to 22-year-olds it was between 1981 and 1992) followed by an increase in use and then a leveling. In general, small, large, and very large cities have all tended to have about the same rates, and the farm/country stratum has tended to have the lowest rates, particularly prior to 1990; the differences by population density have been quite small since about 2000, ranging from 15% to 20% across the different community-size strata in 2007, for example, among the 19- to 22-year-olds. These trends have been somewhat staggered across the different age strata, indicating some cohort effects.

- ***Marijuana*** use has moved pretty much in parallel among the various community-size strata over the time intervals for which data exist. Among 19- to 22-year-olds, the rates have been quite close among all communities, except for the farm/country stratum. The most rural region has consistently had the lowest rate of marijuana use, and it fell less in the decline period and rose more slowly in the subsequent increase than in the other community-size strata. Use has also tended to be lower in the more rural areas in the older two age bands. ***Daily marijuana use*** has also moved very much in parallel among the five population-density strata within each age band. In 2007 the rates among those ages 19 through 22 were lowest in the more rural strata.

- In general, there have not been large differences in ***LSD*** use among adults as a function of community size since 1983. Among 19- to 22-year-olds (the young adult age group with by far the highest rates of LSD use prior to 2003), use in communities of all sizes declined appreciably in the early to mid-1980s, particularly in the urban strata, eliminating modest prior differences by 1984. From around 1989 through 1996, there was some increase in LSD use in all population-density strata among 19- to 22-year-olds, with the most rural region generally continuing to have the lowest prevalence (though this has not always been true since 1998). After 1997, there was some decline in LSD use in all community-size strata among 19- to 22-year-olds, followed by a sharp decline occurring from 2001 to 2003. The 23- to 26-year-old respondents had some modest increases after 1989 in all community-size strata, though the increases had virtually ended by 1995; since about 1999, there have been declines in all strata, again with the largest decline in 2001–2003 in most regions. In *Volume I* in this series we discussed how a sharp decline in supply may be responsible for the sharp decline among all ages after 2001. In the oldest age group, LSD use has remained very low and for the most part quite stable, with a small decline in the last few years.

- The use of ***hallucinogens other than LSD***, taken as a class, has also shown considerably higher rates in the youngest age band compared to the two older ones, suggesting a sharp falloff in use with age. Use of this class of drugs fell in communities of all sizes among young adults between 1980 and about 1988. Then there was a leveling of use for a few years, followed by an extended increase in use among all community-size strata in the 19- to 22-year-old age band. By 2003 the rates attained by each stratum exceeded those originally

observed in 1980, but there have been declines since then, with very large cities being the last to show the decline. The 23- to 26-year-old group has shown slightly higher rates of use since 1998. The sharpest increase occurred in the very large cities in 1999 and 2000, possibly as a result of growing ecstasy use. Among 27- to 30-year-olds, the trend lines have been very flat with only minor community-size stratum differences, until 2001 when all strata, especially the very large cities, began to increase before leveling after 2005. All three age groups have shown higher rates of use than previously observed, since 1994 in the case of 19- to 21-year-olds, since about 2000 in the case of 22- to 26-year-olds, and since about 2002 in the case of 27- to 30-year-olds—likely in part reflecting a cohort effect in the use of these drugs, but also reflecting the change in question wording to include "shrooms" as an example.

- ***Ecstasy*** (***MDMA***) use was first measured in 1989, and since then has shown the largest increase among younger adults of any of the drugs. Use in 1989 was highest among 19- to 22-year-olds in the very large cities (5% annual prevalence); but prevalence declined in all population-density strata between 1989 and 1994 (to 1.6% or less). By 1998, use had begun to increase in all community-size strata within this age band, except in the farm/country stratum. The farm/country stratum moved up sharply in 1999, but then the three most urban strata jumped sharply in 2000, opening a fair gap in use as a function of population density, with large and very large cities having rates nearly twice as high as any of the other strata in 2002. All community-size strata showed large declines in ecstasy use since 2000 or 2001, which lasted through 2004, narrowing the differences among them. Among 23- to 26-year-olds, use began to increase a little later, and again the most urban stratum showed the most increase, particularly in 2000; but use began to decline after 2001 (in the urban areas) or 2002 (in the rural and small town strata), which had the effect of narrowing the differences among strata. All population-density strata have continued to decline, or at least remain level, since 2003. Considerably less increase in ecstasy use occurred among 27- to 30-year-olds, though there was some increase in the largest cities starting after 1996 and in the large and medium-sized cities after 1999. Since 1997 the very large cities have stood out as having higher rates of ecstasy use than the other four strata.

  Ecstasy use trends in the past five years tell an interesting story. In the very large cities, where use had spiked early, use peaked in all three age bands in 2000 and then began to decline. The medium-sized cities were beginning to level or decline in all three age bands. The small town and farm/country strata peaked in 2001 in all age groups. These data support our belief, based on school-level analyses of secondary schools, that the presence of this drug was still diffusing geographically—in this case, from more urban to more rural areas—and, were it not for this continued diffusion, ecstasy use would actually have declined nationally a year earlier. The data from 12th graders on perceived risk provide the clue as to the most likely cause of this turnaround; they showed a large jump in the level of perceived risk associated with ecstasy use from 2000 through 2003. Unlike most other drugs discussed here, the pattern of change since the mid-1990s appears to reflect secular trends, with all age groups moving pretty much in parallel, more than cohort effects.

- In the early 1980s, ***cocaine*** use was positively correlated with population density, with the highest use in the very large cities. The important drop in cocaine use that began after 1986

slowed considerably after 1992 or 1993 in all three age strata and in communities of all sizes, by which time the positive association with population density had been virtually eliminated. Among 19- to 22-year-olds there has been a sustained increase in cocaine use among all community-size strata since about 1993 or 1994, and among 23- to 26-year-olds since about 1998. As just stated, usage rates among the population-density strata tended to converge considerably during the period of decline, and this convergence remains, with the very large cities showing rates of cocaine use only slightly higher than the less densely populated areas. In the 27- to 30-year-old age group, a gradual increase in use has emerged in nearly all population-density strata since 2000, no doubt reflecting a cohort effect working its way up the age spectrum. By 2004 all of these strata in the oldest age band leveled or declined from their peak rates, the single exception being within very large cities, where use has remained high, creating a divergence between this stratum and the other four.

- ***Crack*** use among all age groups peaked in 1987 or 1988 (strongly suggesting a secular trend at work at that time) and, after declining, bottomed out in all population-density strata for several years. The crack use reported in these young adult samples at all three age levels has borne practically no systematic association with community size, and for the most part the strata have all tended to move in parallel.

- ***Amphetamine*** use shows virtually no differences in use associated with urbanicity in any of the three age groups, and this has generally been true since 1983.

- Use of ***crystal methamphetamine*** (***ice***), first measured in 1990, has shown a modest increase since the early 1990s among the younger two young adult strata, and since the late 1990s among the oldest stratum. This has been observable in most population-density groupings. It is difficult to see any sustained differences in use as a function of population density; but the trend lines across time are quite erratic due to the small numbers of cases.

- The use of ***methamphetamine*** in any form has been measured only since 1999. In general, the farm/country stratum has had higher than average rates of use in the two younger age groups: otherwise there has been little systematic difference. Among 19- to 22- year-olds, all community-size strata have shown a decline in use since 2003 or 2004, reaching very low levels by 2007. Use has held quite steady over the same interval among 23- to 26-year-olds, while it has generally declined in all population-density strata since 2002 among 27- to 30-year-olds.

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

- Unlike methaqualone, ***sedatives*** (***barbiturates***) have never shown much correlation with urbanicity, at least as far back as 1980. This remains true in all three age bands.

- ***Tranquilizer*** use among young adults has also had little or no association with population density over this time interval.

- From 1980 to 1995, annual ***heroin*** prevalence was less than 1.0%—usually much less—in all population-density strata for all three age bands. After 1994, use among 19- to 22-year-olds in all community-size strata rose and reached 1.0% in the three most urban strata by 1998. In fact, in the very large cities, it reached 2.1% in 2000 (versus 0.3% to 0.6% in the other strata). Use levels are lower among 23- to 26-year-olds and lower still among 27- to 30-year-olds, and it is difficult to discern systematic differences among the population-density strata in those age bands. In 2007 the annual prevalence of heroin is below 0.7% in all community-size strata in all three age bands of young adults.

- The annual use of ***narcotics other than heroin*** had some positive association with degree of population density among 19- to 22-year-olds through the early 1990s; however, it has shown rather little association since then. Use of narcotics other than heroin has increased substantially in all community-size strata since 1993 in the case of 19- to 22-year-olds, since about 1996 in the case of 23- to 26-year-olds, and since about 1998 in the case of the 27- to 30-year-olds; however, no systematic differentiation by community size is evident. Clearly a cohort effect is at work, and the increasing use of these drugs was quite widespread. Use tended to level off since about 2003 or 2004 in all three age bands.

- Unfortunately, sample sizes for two of the narcotic drugs of particular interest, ***OxyContin*** and ***Vicodin***, are not sufficient to estimate population-density differences or trends with a reasonable degree of accuracy.

- The absolute levels of ***inhalant*** use have remained low in these age groups, particularly above age 22. However, during the mid- to late 1980s, there was a gradual increase in use among 19- to 22-year-olds in all community-size strata. No strong or consistent association with population density has appeared, though the very large cities have generally tended to have higher rates than the other areas among 19- to 22-year-olds, particularly in the period 1998 through 2000.

- There have been few differences as a function of population density in the 30-day prevalence of drinking ***alcohol*** among 19- to 22-year-olds, since data were first available on them in 1980, except that the farm/country stratum has tended to have lower-than-average use. In the two older age bands, however, there has been a fairly consistent positive correlation between population density and use of alcohol in the past 30 days. So, for example, 61% of 27- to 30-year-olds in the farm/country stratum have had alcohol in the prior 30 days, compared to 79% of those in very large cities. But there have been no consistent differences in current ***daily drinking*** associated with urbanicity in any of the three age bands. For ***occasional heavy drinking***, all community-size strata have been fairly close across time at all three age levels, again with the exception that the farm/country stratum has fairly consistently shown a slightly lower rate of binge drinking in the youngest two age bands.

- ***Cigarette smoking*** has been negatively associated with urbanicity in all three age strata, without much evidence of differential trends related to degree of urbanicity, with one exception. Among 19- to 22-year-olds, all smoking prevalence measures rose from 1997 through 1999 in the farm/country and small town strata, while most other strata remained level. The differences in 1999 were most striking for half-pack-a-day smoking among the 19-

to 22-year-olds—24% for farm/country, 19% for small town, 15% for both medium-sized and large cities, and 10% for very large cities—compared with 1985, when there was virtually no difference in half-pack-a-day smoking rates among these strata (all were at 18% or 19%). Thus, smoking among those in their early 20s has become more concentrated in the nonurban populations. Among 19- to 22-year-olds, there has been a decline in 30-day prevalence in most population-density strata since 2000. Continuing declines in smoking among 12th graders would lead us to expect still further declines in the young adults, as well. While smoking has been dropping among 19- to 22-year-olds, use has generally remained negatively correlated with degree of urbanicity.

TABLE 5-1

Trends in Lifetime Prevalence of Various Types of Drugs among Respondents of Modal Ages 19–28

(Entries are percentages.)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Approximate Weighted N =	*6900*	*6800*	*6700*	*6600*	*6700*	*6600*	*6800*	*6700*	*6500*	*6400*	*6300*	*6400*	*6200*	*6000*	*5700*	*5800*	*5300*	*5300*	*5700*	*5400*	*5100*	*4800*	
Any Illicit Drug[a]	70.5	69.9	67.9	66.4	64.5	62.2	60.2	59.6	57.5	57.4	56.4	56.7	57.0	57.4	58.2	58.1	59.0	60.2	60.5	60.4	59.7	59.8	+0.1
Any Illicit Drug[a] other than MJ	48.4	47.0	44.6	42.7	40.8	37.8	37.0	34.6	33.4	32.8	31.0	30.5	29.9	30.2	31.3	31.6	32.8	33.9	35.2	34.0	34.8	34.2	-0.6
Marijuana	66.5	66.0	63.8	62.8	60.2	58.6	56.4	55.9	53.7	53.6	53.5	53.8	54.4	54.6	55.1	55.7	56.8	57.2	57.4	57.0	56.7	56.7	0.0
Inhalants[b]	12.3	12.7	12.6	13.2	12.5	13.4	13.5	14.1	13.2	14.5	14.1	14.1	14.2	14.2	14.3	12.8	12.4	12.2	11.6	10.3	10.9	9.1	-1.8 s
Nitrites[c]	2.6	6.9	6.2	—	1.9	1.4	1.2	1.3	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hallucinogens[d]	18.5	17.1	17.0	15.9	16.1	15.7	15.7	15.4	15.4	16.1	16.4	16.7	17.4	18.0	18.4	18.3	19.6	19.7	19.3	17.6	17.2	16.0	-1.1
LSD	14.6	13.7	13.8	12.7	13.5	13.5	13.8	13.6	13.8	14.5	15.0	15.0	15.7	16.2	16.4	16.0	15.1	14.6	13.4	11.2	10.1	9.6	-0.5
Hallucinogens other than LSD[d]	12.6	11.4	10.6	9.4	9.1	8.4	8.0	7.6	7.4	7.8	7.9	8.4	9.4	9.3	9.9	12.0	15.0	16.4	15.6	15.4	14.9	14.1	-0.8
PCP[e]	8.4	4.8	5.0	—	2.5	3.1	2.0	1.9	2.0	2.2	1.9	2.4	2.7	2.3	2.3	3.1	2.5	3.0	2.7	2.0	2.4	2.1	-0.4
Ecstasy (MDMA)[f]	—	—	—	3.3	3.7	3.2	3.9	3.8	3.8	4.5	5.2	5.1	7.2	7.1	11.6	13.0	14.6	15.3	16.0	14.9	14.4	13.1	-1.3
Cocaine	32.0	29.3	28.2	25.8	23.7	21.0	19.5	16.9	15.2	13.7	12.9	12.0	12.3	12.8	12.7	13.1	13.5	14.7	15.2	14.3	15.2	14.7	-0.4
Crack[g]	—	6.3	6.9	6.1	5.1	4.8	5.1	4.3	4.4	3.8	3.9	3.6	3.8	4.3	4.6	4.7	4.3	4.7	4.2	4.1	4.4	3.9	-0.6
Other Cocaine[h]	—	28.2	25.2	25.4	22.1	19.8	18.4	15.1	13.9	12.4	11.9	11.3	11.5	11.8	11.7	12.1	12.8	13.5	14.4	13.3	14.4	14.0	-0.4
Heroin	1.3	1.3	1.1	1.0	0.9	0.9	0.9	0.9	0.8	1.1	1.3	1.3	1.6	1.7	1.8	2.0	1.8	1.9	1.9	1.7	1.9	1.6	-0.3
With a Needle[i]	—	—	—	—	—	—	—	—	—	0.4	0.4	0.3	0.4	0.6	0.4	0.6	0.4	0.5	0.4	0.6	0.6	0.5	-0.1
Without a Needle[i]	—	—	—	—	—	—	—	—	—	1.0	1.4	1.5	1.7	1.9	2.1	2.1	1.8	2.2	2.1	1.8	2.4	1.9	-0.5
Narcotics other than Heroin[j,k]	10.7	10.6	9.8	9.6	9.4	9.3	8.9	8.1	8.2	9.0	8.3	9.2	9.1	9.5	10.0	11.5	13.9	16.8	17.6	17.8	18.7	18.8	+0.2
Amphetamines, Adj.[j,l]	32.3	30.8	28.8	25.3	24.4	22.4	20.2	18.7	17.1	16.6	15.3	14.6	14.3	14.1	15.0	15.0	14.8	15.2	15.9	14.6	15.6	15.3	-0.3
Methamphetamine[i]	—	—	—	—	—	—	—	—	—	—	—	—	—	8.8	9.3	9.0	9.1	8.9	9.0	8.3	7.3	6.7	-0.6
Crystal Meth. (Ice)[j]	—	—	—	—	2.5	2.9	2.2	2.7	2.5	2.1	3.1	2.5	3.4	3.3	3.9	4.0	4.1	4.7	4.7	4.4	4.7	3.7	-1.0
Sedatives (Barbiturates)[j]	11.1	9.7	8.9	7.9	8.7	8.2	7.4	6.5	6.4	6.7	6.6	6.5	6.9	7.4	8.1	7.8	8.0	8.7	9.7	10.0	9.5	9.8	+0.3
Sedatives, Adj.[j,m]	16.7	15.0	13.2	12.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Methaqualone[j]	13.1	11.6	9.7	8.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tranquilizers[d,j]	17.6	16.5	15.1	13.5	12.9	11.8	11.3	10.5	9.9	9.7	9.3	8.6	9.6	9.6	10.5	11.9	13.4	13.8	14.9	14.5	15.0	14.5	-0.5
Alcohol[n]	94.8	94.9	94.8	94.5	94.3	94.1	93.4	92.1	91.2	91.6	91.2	90.7	90.6	90.2	90.7	89.9	90.2	89.3	89.4	89.1	88.9	87.9	-1.0
Been Drunk[o]	—	—	—	—	—	82.9	81.1	81.4	80.7	82.1	80.7	81.4	79.8	81.6	80.4	81.1	81.2	80.9	80.1	79.9	80.9	80.1	-0.8
Flvd. Alcoholic Bvg.[p]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	83.2	84.6	84.4	84.0	-0.4
Cigarettes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids[q]	—	—	—	1.1	1.2	1.7	1.9	1.5	1.3	1.5	1.5	1.4	1.4	1.9	1.4	1.4	1.6	1.8	1.9	1.8	1.8	1.7	-0.1

Source. The Monitoring the Future study, the University of Michigan.

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.

"—" indicates data not available.

See footnotes on next page.

Footnotes for Tables 5-1 through 5-4

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

[b]This drug was asked about in four of the five questionnaire forms in 1986–1989; *N* is four fifths of *N* indicated. Data was based on five of the six questionnaire forms in 1990–1998; *N* is five sixths of *N* indicated. Data was based on three of six questionnaire forms in 1999–2007; *N* is three sixths of *N* indicated.

[c]This drug was asked about in one questionnaire form. *N* is one fifth of *N* indicated in 1986–1988 and one sixth of *N* indicated in 1990–1994.

[d]In 2001 the question text was changed on three of the six questionnaire forms. "Other psychedelics" was changed to "other hallucinogens," and "shrooms" was added to the list of examples. For tranquilizers, Miltown was replaced with Xanax. Beginning in 2002 the remaining forms were changed to the new wording.

[e]This drug was asked about in one of the five questionnaire forms in 1986–1988; *N* is one fifth of *N* indicated. Data was based on one of six questionnaire forms in 1990–2007; *N* is one sixth of *N* indicated.

[f]This drug was asked about in two of the five questionnnare forms in 1989; *N* is two fifths of *N* indicated. Data was based on two of the six questionnaire forms in 1990–2001; *N* is two sixths of *N* indicated. Data was based on three of the six questionnaire forms in 2002–2007; *N* is three sixths of *N* indicated.

[g]This drug was asked about in two of the five questionnaire forms in 1987–1989; *N* is two fifths of *N* indicated. Data based on all six questionnaire forms in 1990–2001. Data based on five of six questionnaire forms in 2002–2007; *N* is five sixths of *N* indicated.

[h]This drug was asked about in one of the five questionnaire forms in 1987–1989; *N* is one fifth of *N* indicated. Data based on four of the six questionnaire forms in 1990–2007; *N* is four sixths of *N* indicated.

[i]This drug was asked about in two of the six questionnaire forms. *N* is two sixths of *N* indicated.

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

[k]In 2002 the question text was changed on three of the six questionnaire forms. The list of examples of narcotics other than heroin was updated: Talwin, laudanum, and paregoric—all of which had negligible rates of use by 2001—were replaced by Vicodin, OxyContin, and Percocet. The 2002 data presented here are based on the changed forms only; *N* is three sixths of *N* indicated. In 2003 the remaining forms were changed to the new wording. The data are based on all forms in 2003 and beyond.

[l]Based on the data from the revised question, which attempts to exclude the inappropriate reporting of nonprescription amphetamines.

[m]"Sedatives, adjusted" data are a combination of barbiturate and methaqualone data.

[n]In 1993 and 1994, the question text was changed slightly in three of the six questionnaire forms to indicate that a "drink" meant "more than just a few sips." Because this revision resulted in rather little change in reported prevalence in the surveys of high school graduates, the data for all forms combined are used in order to provide the most reliable estimate of change. After 1994 the new question text was used in all six of the questionnaire forms.

[o]This drug was asked about in three of the six questionnaire forms. *N* is three sixths of *N* indicated.

[p]This drug was asked about in one of the six questionnaire forms. *N* is one sixth of *N* indicated.

[q]This drug was asked about in one of the five questionnaire forms in 1989; *N* is one fifth of *N* indicated. Data based on two of the six questionnaire forms in 1990–2007; *N* is two sixths of *N* indicated.

[r]Daily use is defined as use on 20 or more occasions in the past 30 days except for cigarettes, for which actual daily use is measured, and for 5+ drinks, for which the prevalence of having five or more drinks in a row in the last two weeks is measured.

TABLE 5-2
Trends in Annual Prevalence of Various Types of Drugs among Respondents of Modal Ages 19–28

(Entries are percentages.)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Approximate Weighted N =	*6900*	*6800*	*6700*	*6600*	*6700*	*6600*	*6800*	*6700*	*6500*	*6400*	*6300*	*6400*	*6200*	*6000*	*5700*	*5800*	*5300*	*5300*	*5700*	*5400*	*5100*	*4800*	
Any Illicit Drug[a]	41.9	39.3	36.3	32.8	30.7	27.0	28.3	28.4	28.4	29.8	29.2	29.2	29.9	30.3	30.8	32.1	32.4	33.0	33.7	32.8	32.1	32.5	+0.5
Any Illicit Drug[a] other than MJ	27.0	23.9	21.3	18.3	16.7	14.3	14.1	13.0	13.0	13.8	13.2	13.6	13.2	13.7	14.9	15.4	16.3	18.1	18.8	18.5	18.4	18.1	-0.2
Marijuana	36.5	34.8	31.8	29.0	26.1	23.8	25.2	25.1	25.5	26.5	27.0	26.8	27.4	27.6	27.9	29.2	29.3	29.0	29.2	28.2	27.7	28.5	+0.8
Inhalants[b]	1.9	2.1	1.8	1.9	1.9	2.0	1.9	2.1	2.1	2.4	2.2	2.3	2.1	2.3	2.1	1.7	1.6	1.4	1.7	1.3	1.3	0.8	-0.5
Nitrites[c]	2.0	1.3	1.0	—	0.4	0.2	0.1	0.4	0.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hallucinogens[d]	4.5	4.0	3.9	3.6	4.1	4.5	5.0	4.5	4.8	5.6	5.6	5.8	5.2	5.4	5.4	5.4	4.7	5.2	4.7	4.5	4.1	3.8	-0.3
LSD	3.0	2.9	2.9	2.7	3.3	3.8	4.3	3.8	4.0	4.6	4.5	4.4	3.5	4.0	3.7	3.4	1.8	1.2	0.9	0.8	1.2	1.1	-0.1
Hallucinogens other than LSD[d]	2.5	2.1	1.9	1.8	1.7	1.7	1.9	1.9	2.0	2.5	2.8	3.1	3.0	3.0	3.4	3.5	4.0	4.9	4.5	4.2	3.8	3.6	-0.2
PCP[e]	0.8	0.4	0.4	—	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.5	0.6	0.6	0.3	0.6	0.3	0.3	0.1	0.6	0.2	0.3	+0.1
Ecstasy (MDMA)[f]	—	—	—	1.4	1.5	0.8	1.0	0.8	0.7	1.6	1.7	2.1	2.9	3.6	7.2	7.5	6.2	4.5	3.5	3.0	3.0	2.5	-0.6
Cocaine	19.7	15.7	13.8	10.8	8.6	6.2	5.7	4.7	4.3	4.4	4.1	4.6	4.9	5.4	5.4	5.8	5.8	6.6	7.1	6.9	6.6	6.2	-0.3
Crack[g]	3.2	3.1	3.1	2.5	1.6	1.2	1.4	1.3	1.1	1.1	1.1	1.0	1.1	1.4	1.2	1.3	1.0	1.0	1.3	1.2	1.1	1.0	-0.1
Other Cocaine[h]	—	13.6	11.9	10.3	8.1	5.4	5.1	3.9	3.6	3.9	3.8	4.3	4.5	4.8	4.8	5.3	5.6	6.1	6.4	6.3	5.9	5.6	-0.3
Heroin	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.4	0.4	0.3	0.4	0.4	0.4	0.5	0.2	0.4	0.3	0.4	0.4	0.3	0.0
With a Needle[i]	—	—	—	—	—	—	—	—	—	0.1	0.1	0.1	0.1	0.1	*	0.3	*	*	0.1	0.2	0.3	0.1	-0.2
Without a Needle[i]	—	—	—	—	—	—	—	—	—	0.3	0.4	0.4	0.6	0.6	0.5	0.9	0.2	0.4	0.3	0.4	0.5	0.3	-0.2
Narcotics other than Heroin[j,k]	3.1	3.1	2.7	2.8	2.7	2.5	2.5	2.2	2.5	3.0	2.9	3.3	3.4	3.8	4.1	5.0	7.1	8.5	9.0	8.7	9.1	8.7	-0.4
OxyContin[i,j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.9	2.6	3.1	3.1	3.1	2.9	-0.2
Vicodin[i,j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.2	8.6	8.9	9.3	9.1	8.9	-0.1
Amphetamines, Adj.[j,l]	10.6	8.7	7.3	5.8	5.2	4.3	4.1	4.0	4.5	4.6	4.2	4.6	4.5	4.7	5.4	5.8	5.9	5.8	6.2	5.1	5.6	5.6	-0.0
Ritalin[i,j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.9	2.9	2.7	2.5	2.6	2.4	-0.3
Methamphetamine[i]	—	—	—	—	—	—	—	—	—	—	—	—	—	2.8	2.5	2.8	2.5	2.7	2.8	2.4	1.9	1.5	-0.4
Crystal Meth. (Ice)[j]	—	—	—	—	0.4	0.3	0.4	0.8	0.9	1.2	0.9	0.9	1.1	0.9	1.2	1.1	1.4	1.3	1.5	1.6	1.1	1.1	0.0
Sedatives (Barbiturates)[j]	2.3	2.1	1.8	1.7	1.9	1.8	1.6	1.9	1.8	2.1	2.2	2.4	2.5	2.8	3.4	3.7	3.9	3.9	4.4	4.2	3.9	4.2	+0.3
Sedatives, Adj.[j,m]	3.0	2.5	2.1	1.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Methaqualone[j]	1.3	0.9	0.5	0.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tranquilizers[d,j]	5.4	5.1	4.2	3.7	3.7	3.5	3.4	3.1	2.9	3.4	3.2	3.1	3.8	3.7	4.6	5.5	7.0	6.8	7.4	6.7	6.5	7.1	+0.7
Rohypnol[i]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.3	0.5	0.1	0.1	0.2	0.3	+0.1
GHB[i]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.8	0.6	0.5	0.3	0.2	0.4	+0.2
Ketamine[i]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.2	0.9	0.6	0.5	0.5	0.3	-0.1
Alcohol[n]	88.6	89.4	88.6	88.1	87.4	86.9	86.2	85.3	83.7	84.7	84.0	84.3	84.0	84.1	84.0	84.3	84.9	83.3	84.4	83.8	84.4	84.0	-0.5
Been Drunk[o]	—	—	—	—	—	62.0	60.9	61.1	58.8	61.6	59.9	63.2	59.6	63.2	60.6	63.1	61.8	62.9	63.8	63.5	65.7	65.8	+0.1
Flvd. Alcoholic Bvg.[p]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	62.7	58.4	58.5	58.9	+0.4
Cigarettes	40.1	40.3	37.7	38.0	37.1	37.7	37.9	37.8	38.3	38.8	40.3	41.8	41.6	41.1	40.9	41.1	39.1	38.6	39.0	39.1	36.9	36.2	-0.7
Steroids[q]	—	—	—	0.5	0.3	0.5	0.4	0.3	0.4	0.5	0.3	0.5	0.4	0.6	0.4	0.4	0.4	0.5	0.5	0.5	0.3	0.7	+0.4

Source. The Monitoring the Future study, the University of Michigan

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.

"—" indicates data not available.

"*" indicates a prevalence rate of less than 0.05%.

See relevant footnotes at the end of Table 5-1.

TABLE 5-3
Trends in 30-Day Prevalence of Various Types of Drugs among Respondents of Modal Ages 19–28

(Entries are percentages.)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Approximate Weighted N =	*6900*	*6800*	*6700*	*6600*	*6700*	*6600*	*6800*	*6700*	*6500*	*6400*	*6300*	*6400*	*6200*	*6000*	*5700*	*5800*	*5300*	*5300*	*5700*	*5400*	*5100*	*4800*	
Any Illicit Drug[a]	25.8	23.4	20.5	17.7	15.9	15.1	14.8	14.9	15.3	15.8	15.8	16.4	16.1	17.1	18.1	18.8	18.9	19.9	19.1	18.6	18.5	18.9	+0.4
Any Illicit Drug[a] other than MJ	13.0	10.7	9.5	7.5	6.0	5.4	5.5	4.9	5.3	5.7	4.7	5.5	5.5	6.0	6.4	7.0	7.7	8.3	8.5	8.2	8.1	8.6	+0.5
Marijuana	22.0	20.7	17.9	15.5	13.9	13.5	13.3	13.4	14.1	14.0	15.1	15.0	14.9	15.6	16.1	16.7	16.9	17.3	16.5	15.8	15.7	16.0	+0.3
Inhalants[b]	0.4	0.6	0.6	0.5	0.6	0.5	0.6	0.7	0.5	0.7	0.5	0.5	0.7	0.8	0.5	0.4	0.5	0.3	0.3	0.2	0.3	0.2	-0.1
Nitrites[c]	0.5	0.5	0.4	—	0.1	*	0.1	0.2	0.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hallucinogens[d]	1.3	1.2	1.1	1.1	0.9	1.1	1.5	1.2	1.4	1.7	1.2	1.5	1.4	1.3	1.2	1.2	0.9	1.2	0.9	0.8	0.7	0.9	+0.2
LSD	0.9	0.8	0.8	0.8	0.6	0.8	1.1	0.8	1.1	1.3	0.7	0.9	1.0	0.8	0.8	0.7	0.3	0.2	0.1	0.1	0.2	0.2	0.0
Hallucinogens other than LSD[d]	0.6	0.6	0.4	0.5	0.4	0.3	0.5	0.6	0.6	0.6	0.6	0.7	0.5	0.6	0.7	0.6	0.8	1.2	0.9	0.8	0.6	0.8	+0.2
PCP[e]	0.2	0.1	0.3	—	0.2	0.1	0.2	0.2	0.1	*	0.1	0.1	0.2	0.2	*	*	0.1	0.1	0.1	*	*	*	0.0
Ecstasy (MDMA)[f]	—	—	—	0.4	0.2	0.1	0.3	0.3	0.2	0.4	0.3	0.6	0.8	1.3	1.9	1.8	1.3	0.8	0.6	0.6	0.7	0.5	-0.2
Cocaine	8.2	6.0	5.7	3.8	2.4	2.0	1.8	1.4	1.3	1.5	1.2	1.5	1.7	1.9	1.7	2.2	2.2	2.4	2.2	2.2	2.3	2.1	-0.2
Crack[g]	—	1.0	1.2	0.7	0.4	0.4	0.4	0.4	0.3	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.0
Other Cocaine[h]	—	4.8	4.8	3.4	2.1	1.8	1.7	1.1	1.0	1.3	1.1	1.5	1.5	1.6	1.5	1.8	2.0	2.1	2.1	1.9	1.9	2.0	+0.1
Heroin	0.1	0.1	0.1	0.1	0.1	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	*	0.1	0.1	0.1	0.2	0.1	0.0
Narcotics other than Heroin[j,k]	0.9	0.9	0.7	0.7	0.7	0.6	0.7	0.7	0.6	0.9	0.7	0.9	0.9	1.2	1.4	1.7	2.9	2.9	3.0	3.5	3.2	3.4	+0.2
Amphetamines, Adj.[j,l]	4.0	3.2	2.7	2.1	1.9	1.5	1.5	1.5	1.7	1.7	1.5	1.7	1.7	1.9	2.3	2.4	2.5	2.5	2.4	2.1	2.2	2.3	+0.2
Methamphetamine[j]	—	—	—	—	—	—	—	—	—	—	—	—	—	0.8	0.7	1.0	1.0	0.7	0.6	0.7	0.5	0.6	+0.1
Crystal Meth. (Ice)[j]	—	—	—	—	—	*	0.1	0.3	0.5	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.4	0.6	0.3	0.3	0.0
Sedatives (Barbiturates)[j]	0.7	0.7	0.7	0.5	0.6	0.5	0.5	0.6	0.6	0.8	0.8	0.9	0.9	1.1	1.3	1.7	1.5	1.5	1.8	1.7	1.5	1.6	+0.1
Sedatives, Adj.[j,m]	0.9	0.8	0.7	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Methaqualone[j]	0.3	0.2	0.1	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tranquilizers[d,j]	1.8	1.6	1.4	1.2	1.1	0.9	1.0	1.0	0.8	1.1	0.7	1.1	1.2	1.3	1.8	2.1	2.8	2.4	2.7	2.6	2.3	2.8	+0.5
Alcohol[n]	75.1	75.4	74.0	72.4	71.2	70.6	69.0	68.3	67.7	68.1	66.7	67.5	66.9	68.2	66.8	67.2	68.3	67.0	68.4	68.6	68.7	69.5	+0.8
Been Drunk[o]	—	—	—	—	—	35.4	35.6	34.2	34.3	33.0	33.2	35.6	34.2	37.7	35.7	36.8	37.1	37.8	39.0	39.0	42.1	41.4	-0.7
Flvd. Alcoholic Bvg.[p]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	29.5	27.6	24.9	25.9	+1.0
Cigarettes	31.1	30.9	28.9	28.6	27.7	28.2	28.3	28.0	28.0	29.2	30.1	29.9	30.9	30.3	30.1	30.2	29.2	28.4	29.2	28.6	27.0	26.2	-0.9
Steroids[q]	—	—	—	0.2	0.1	0.2	0.1	*	0.1	0.2	0.2	0.2	0.2	0.3	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.4	+0.3 s

Source. The Monitoring the Future study, the University of Michigan.

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.

"—" indicates data not available.

"*" indicates a prevalence rate of less than 0.05%.

See relevant footnotes at the end of Table 5-1.

TABLE 5-4
Trends in 30-Day Prevalence of Daily Use of Various Types of Drugs among Respondents of Modal Ages 19–28

(Entries are percentages.)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Approximate Weighted N =	*6900*	*6800*	*6700*	*6600*	*6700*	*6600*	*6800*	*6700*	*6500*	*6400*	*6300*	*6400*	*6200*	*6000*	*5700*	*5800*	*5300*	*5300*	*5700*	*5400*	*5100*	*4800*	
Marijuana[r]	4.1	4.2	3.3	3.2	2.5	2.3	2.3	2.4	2.8	3.3	3.3	3.8	3.7	4.4	4.2	5.0	4.5	5.3	5.0	4.9	5.0	5.0	0.0
Cocaine[r]	0.2	0.1	0.2	0.1	*	0.1	*	0.1	*	0.1	*	*	*	0.1	*	0.1	*	*	0.1	0.1	0.1	*	0.0
Amphetamines, Adj.[j,l,r]	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.3	0.2	0.1	0.2	0.1	-0.1
Alcohol																							
Daily[n,r]	6.1	6.6	6.1	5.5	4.7	4.9	4.5	4.5	3.9	3.9	4.0	4.6	4.0	4.8	4.1	4.4	4.7	5.1	4.5	5.2	5.4	5.6	+0.2
Been Drunk[o,r]	—	—	—	—	—	0.5	0.4	0.4	0.5	0.3	0.4	0.9	0.5	0.9	0.5	0.4	0.6	0.8	0.7	0.5	0.6	0.6	0.0
5+ Drinks in a Row in Last 2 Weeks	36.1	36.2	35.2	34.8	34.3	34.7	34.2	34.4	33.7	32.6	33.6	34.4	34.1	35.8	34.7	35.9	35.9	35.8	37.1	37.0	37.6	37.8	+0.2
Cigarettes																							
Daily	25.2	24.8	22.7	22.4	21.3	21.7	20.9	20.8	20.7	21.2	21.8	20.6	21.9	21.5	21.8	21.2	21.2	20.3	20.8	19.6	18.6	17.3	-1.3
Half Pack or More per Day	20.2	19.8	17.7	17.3	16.7	16.0	15.7	15.5	15.3	15.7	15.3	14.6	15.6	15.1	15.1	14.6	14.2	13.9	13.5	12.5	11.9	11.1	-0.8

Source. The Monitoring the Future study, the University of Michigan.

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 0.2% or less in all years.

"*" indicates a prevalence rate of less than 0.05%.

"—" indicates data not available.

See relevant footnotes at the end of Table 5-1.

TABLE 5-5

Trends in Annual and 30-Day Prevalence of an Illicit Drug Use Index[a] among Respondents of Modal Ages 19–28

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
	Percentage who used in last 12 months																						
Any Illicit Drug	41.9	39.3	36.3	32.8	30.7	27.0	28.3	28.4	28.4	29.8	29.2	29.2	29.9	30.3	30.8	32.1	32.4	33.0	33.7	32.8	32.1	32.5	+0.5
Males	45.3	42.6	39.5	35.7	33.6	30.0	31.4	31.1	32.3	32.1	31.6	31.9	33.6	33.9	34.4	34.9	35.6	36.0	37.0	35.3	35.9	35.4	-0.5
Females	39.0	36.5	33.6	30.5	28.3	24.5	25.8	26.1	25.3	28.1	27.3	27.1	27.1	27.6	28.2	30.1	30.2	31.0	31.4	31.1	29.5	30.7	+1.2
Any Illicit Drug other than Marijuana	27.0	23.9	21.3	18.3	16.7	14.3	14.1	13.0	13.0	13.8	13.2	13.6	13.2	13.7	14.9	15.4	16.3	18.1	18.8	18.5	18.4	18.1	-0.2
Males	30.4	26.5	23.8	21.0	19.1	16.4	16.3	14.7	16.2	16.2	15.4	15.6	16.2	16.7	17.8	17.2	18.9	19.8	21.3	20.4	21.8	20.3	-1.5
Females	24.0	21.6	19.4	16.2	14.7	12.5	12.2	11.6	10.5	12.0	11.4	12.0	11.0	11.5	12.9	14.1	14.6	17.0	17.1	17.3	16.0	16.7	+0.7
	Percentage who used in past 30 days																						
Any Illicit Drug	25.8	23.4	20.5	17.7	15.9	15.1	14.8	14.9	15.3	15.8	15.8	16.4	16.1	17.1	18.1	18.8	18.9	19.9	19.1	18.6	18.5	18.9	+0.4
Males	29.9	27.1	23.7	21.1	18.8	18.3	17.9	17.4	19.5	18.6	19.0	19.8	20.1	20.0	21.5	21.9	22.8	22.4	23.1	22.0	22.5	22.7	+0.1
Females	22.2	20.2	17.8	15.0	13.5	12.5	12.4	12.9	12.1	13.5	13.3	13.8	13.2	15.0	15.6	16.6	16.3	18.3	16.3	16.4	15.7	16.4	+0.7
Any Illicit Drug other than Marijuana	13.0	10.7	9.5	7.5	6.0	5.4	5.5	4.9	5.3	5.7	4.7	5.5	5.5	6.0	6.4	7.0	7.7	8.3	8.5	8.2	8.1	8.6	+0.5
Males	15.2	12.3	10.6	9.1	6.8	6.6	6.5	5.9	7.1	6.8	5.7	6.8	7.1	7.3	7.8	8.1	8.5	9.2	10.6	9.2	10.2	10.0	-0.2
Females	11.0	9.4	8.7	6.2	5.3	4.4	4.7	4.0	3.9	4.8	4.0	4.5	4.4	5.1	5.4	6.3	7.1	7.7	7.1	7.6	6.8	7.7	+1.0
	Approximate Weighted N																						
All Respondents	*6900*	*6800*	*6700*	*6600*	*6700*	*6600*	*6800*	*6700*	*6500*	*6400*	*6300*	*6400*	*6200*	*6000*	*5700*	*5800*	*5300*	*5300*	*5700*	*5400*	*5100*	*4800*	
Males	*3200*	*3100*	*3000*	*2900*	*3000*	*3000*	*3000*	*3000*	*2900*	*2800*	*2700*	*2800*	*2700*	*2600*	*2400*	*2400*	*2200*	*2200*	*2300*	*2200*	*2100*	*1900*	
Females	*3700*	*3700*	*3700*	*3700*	*3700*	*3600*	*3700*	*3700*	*3600*	*3600*	*3600*	*3600*	*3500*	*3400*	*3300*	*3400*	*3100*	*3100*	*3400*	*3200*	*3000*	*2900*	

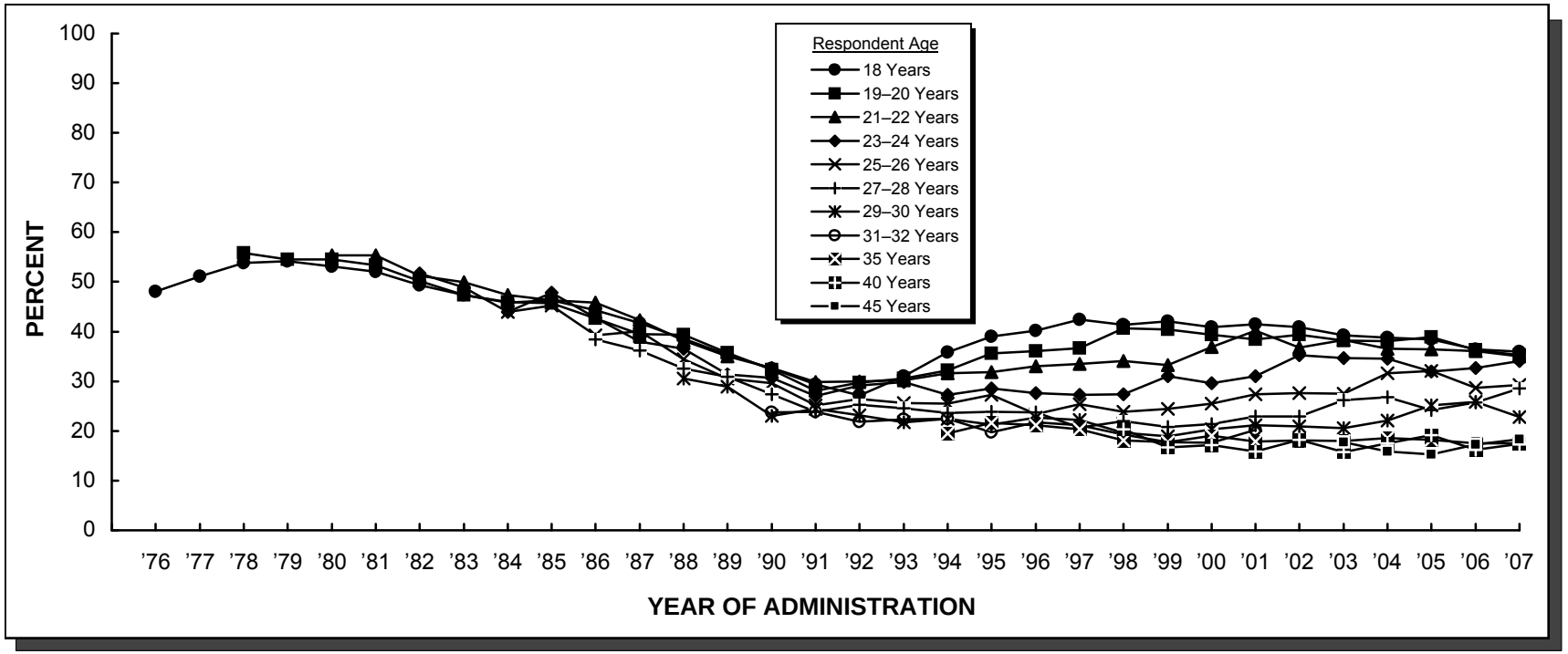
Source. The Monitoring the Future study, the University of Michigan.

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, heroin or other narcotics, amphetamines, sedatives (barbiturates), methaqualone (until 1990), or tranquilizers not under a doctor's orders.

FIGURE 5-1

Any Illicit Drug: Trends in Annual Prevalence among Respondents of Modal Ages 18 through 45 by Age Group



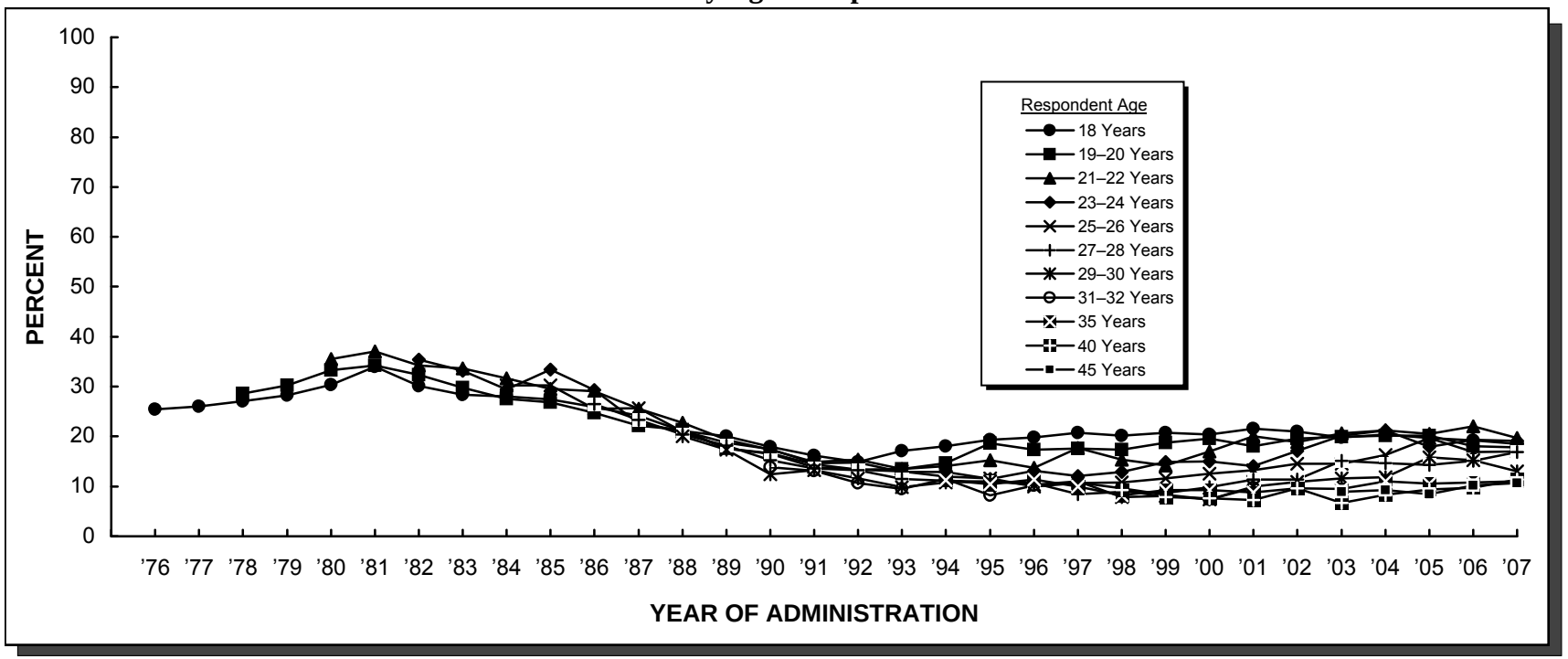
Age	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
18 Years	48.1	51.1	53.8	54.2	53.1	52.1	49.4	47.4	45.8	46.3	44.3	41.7	38.5	35.4	32.5	29.4	27.1	31.0	35.8	39.0	40.2	42.4	41.4	42.1	40.9	41.4	41.0	39.3	38.8	38.4	36.5	35.9
19–20 Years			55.8	54.5	54.5	53.4	50.2	47.4	45.9	45.7	42.6	39.5	39.4	35.7	32.3	28.1	29.7	30.5	32.2	35.6	36.1	36.7	40.6	40.4	39.3	38.4	39.4	38.1	38.0	38.9	36.3	35.2
21–22 Years					55.3	55.4	51.2	49.9	47.3	46.3	45.8	42.3	38.2	35.0	32.7	29.9	30.0	30.2	31.6	31.9	33.0	33.5	34.1	33.3	36.9	40.2	36.7	38.3	36.5	36.4	36.0	35.0
23–24 Years							51.7	48.9	44.0	47.8	42.8	37.9	36.6	31.4	30.7	27.0	29.2	29.8	27.3	28.5	27.6	27.3	27.4	31.1	29.6	31.1	35.2	34.6	34.5	31.9	32.7	34.1
25–26 Years									44.0	45.2	39.3	40.1	34.4	30.5	29.6	25.2	26.4	25.6	25.5	27.3	23.4	25.4	23.9	24.5	25.5	27.4	27.6	27.5	31.6	32.0	28.6	29.3
27–28 Years											38.4	36.2	32.5	30.9	27.4	23.9	25.3	24.6	23.6	23.9	23.7	20.7	22.0	20.8	21.4	22.9	22.9	26.3	26.8	24.3	25.7	28.5
29–30 Years													30.5	28.9	23.0	24.5	23.1	21.7	22.4	21.3	22.7	22.2	19.6	19.0	20.3	21.1	20.9	20.6	22.0	25.2	25.9	22.7
31–32 Years[a]															23.7	23.8	21.9	22.3	22.4	19.8	21.7	21.2	19.3	17.7	17.6	20.2	—	—	—	—	—	—
35 Years																			19.5	21.6	21.2	20.3	18.1	17.7	19.1	17.8	18.1	17.9	18.5	18.2	17.5	17.5
40 Years																							20.3	16.7	17.2	15.8	18.2	15.8	17.5	19.1	16.2	17.4
45 Years																												17.8	15.8	15.3	17.2	18.3

Source. The Monitoring the Future study, the University of Michigan.

[a]Beginning in 2002, respondents were followed through age 30 (instead of 32, as in past years).

FIGURE 5-2

Any Illicit Drug other than Marijuana: Trends in Annual Prevalence among Respondents of Modal Ages 18 through 45 by Age Group

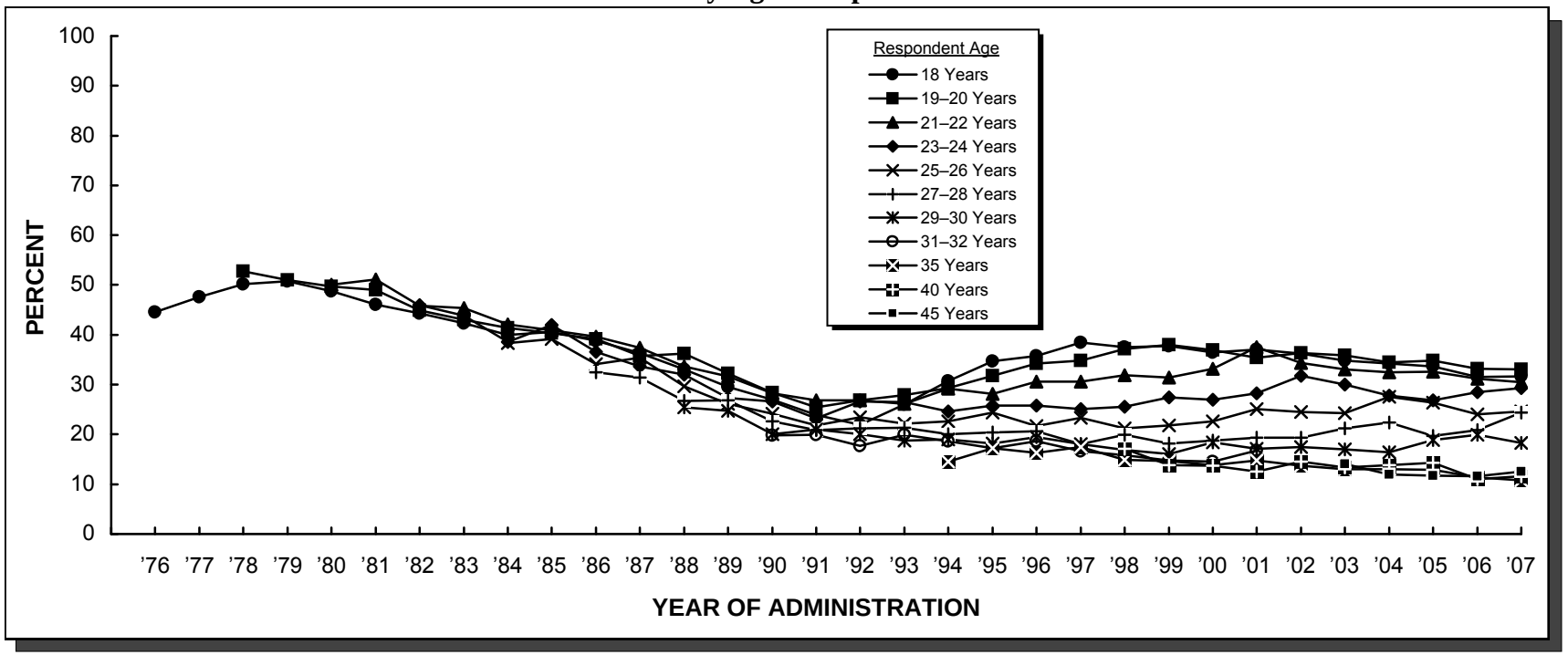


Age	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
18 Years	25.4	26.0	27.1	28.2	30.4	34.0	30.1	28.4	28.0	27.4	25.9	24.1	21.1	20.0	17.9	16.2	14.9	17.1	18.0	19.4	19.8	20.7	20.2	20.7	20.4	21.6	20.9	19.8	20.5	19.7	19.2	18.5
19–20 Years			28.6	30.2	33.3	34.2	32.4	29.8	27.5	26.9	24.7	22.2	21.3	17.6	16.5	13.8	13.4	13.5	14.6	18.6	17.4	17.6	17.3	18.7	19.6	18.0	19.6	19.9	20.2	20.2	18.1	17.8
21–22 Years					35.5	37.0	34.2	33.7	31.6	29.5	29.1	25.6	22.8	19.4	17.4	14.9	15.4	13.5	14.1	15.2	13.7	17.7	15.3	14.1	17.0	20.0	18.9	20.7	21.2	20.5	22.0	19.7
23–24 Years							35.4	33.2	29.4	33.4	29.3	22.6	21.1	18.8	17.5	14.6	14.8	12.9	12.9	11.5	13.1	12.1	12.9	14.8	15.0	14.1	17.2	20.1	21.2	18.0	19.4	19.1
25–26 Years									30.2	30.3	25.5	25.7	21.0	17.6	16.6	14.4	13.4	13.0	12.0	11.6	10.0	10.7	10.8	11.6	12.5	13.3	14.6	14.5	16.3	19.7	16.9	17.0
27–28 Years											26.5	23.3	20.4	18.2	15.2	13.6	13.2	11.5	11.1	10.9	10.7	8.4	8.9	8.6	9.9	11.4	11.4	15.1	14.6	14.2	15.1	16.9
29–30 Years													20.0	17.4	12.4	13.2	11.6	9.9	10.8	11.0	10.3	11.0	7.8	8.1	7.4	9.9	10.9	11.6	11.8	15.8	15.3	13.0
31–32 Years[a]															13.8	13.1	10.7	9.5	11.5	8.2	10.2	10.8	9.6	8.3	7.4	9.7	—	—	—	—	—	—
35 Years																			11.2	10.4	11.4	10.0	8.2	9.3	9.3	8.8	9.6	9.5	11.0	10.5	10.8	11.0
40 Years																							9.3	7.9	7.7	7.3	9.7	6.7	8.3	9.4	9.8	11.3
45 Years																												8.9	9.3	8.4	10.3	10.7

Source. The Monitoring the Future study, the University of Michigan.

[a]Beginning in 2002, respondents were followed through age 30 (instead of 32, as in past years).

FIGURE 5-3a
Marijuana: Trends in Annual Prevalence among Respondents of Modal Ages 18 through 45 by Age Group

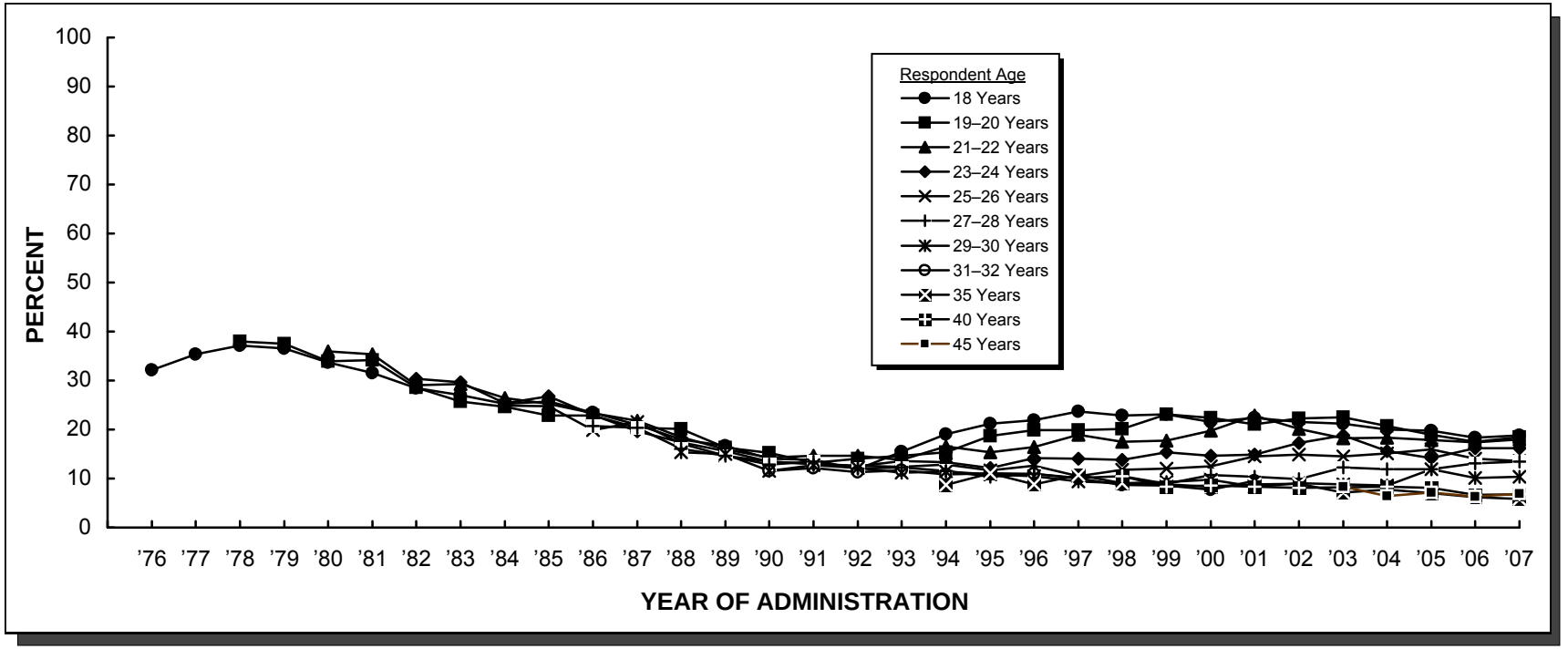


Age	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
18 Years	44.5	47.6	50.2	50.8	48.8	46.1	44.3	42.3	40.0	40.6	38.8	36.3	33.1	29.6	27.0	23.9	21.9	26.0	30.7	34.7	35.8	38.5	37.5	37.8	36.5	37.0	36.2	34.9	34.3	33.6	31.5	31.7
19–20 Years			52.8	51.0	49.7	49.0	44.9	43.0	41.4	40.3	39.1	35.8	36.2	32.2	28.4	25.4	26.9	27.9	29.3	31.8	34.2	34.8	37.2	37.9	37.0	35.4	36.4	35.9	34.5	34.9	33.2	33.1
21–22 Years					50.1	51.1	45.8	45.4	42.1	40.9	39.6	37.4	33.7	31.6	28.2	26.8	26.9	26.1	29.2	28.1	30.6	30.6	31.9	31.5	33.2	37.5	34.3	33.1	32.5	32.6	31.1	30.5
23–24 Years							46.0	43.8	38.6	42.0	36.6	33.7	32.0	27.3	26.6	23.2	26.6	26.5	24.6	25.8	25.8	25.1	25.5	27.4	26.9	28.3	31.8	30.0	27.7	26.8	28.5	29.3
25–26 Years									38.3	39.2	34.1	35.4	29.7	26.2	24.1	21.8	23.5	22.2	22.6	24.4	21.7	23.3	21.2	21.8	22.7	25.0	24.5	24.3	27.6	26.4	24.0	24.7
27–28 Years											32.5	31.4	26.7	26.8	22.6	20.9	21.2	21.3	20.1	20.4	20.6	18.0	19.9	18.2	18.8	19.4	19.4	21.2	22.4	19.7	20.9	24.4
29–30 Years													25.4	24.7	20.0	21.0	20.1	18.8	19.0	18.2	19.5	18.0	16.9	16.0	18.4	17.1	17.5	17.0	16.4	18.9	19.9	18.3
31–32 Years[a]															19.8	19.9	17.7	19.9	18.6	17.2	18.6	16.7	15.8	14.8	14.5	16.7	—	—	—	—	—	—
35 Years																			14.5	17.2	16.3	17.5	14.9	14.7	13.8	14.8	13.7	13.0	13.0	12.9	11.4	10.8
40 Years																							17.1	13.8	13.7	12.5	14.6	13.4	13.9	14.3	11.0	11.6
45 Years																												14.0	11.9	11.7	11.6	12.6

Source. The Monitoring the Future study, the University of Michigan.

[a]Beginning in 2002, respondents were followed through age 30 (instead of 32, as in past years).

FIGURE 5-3b
Marijuana: Trends in 30-Day Prevalence among Respondents of Modal Ages 18 through 45 by Age Group



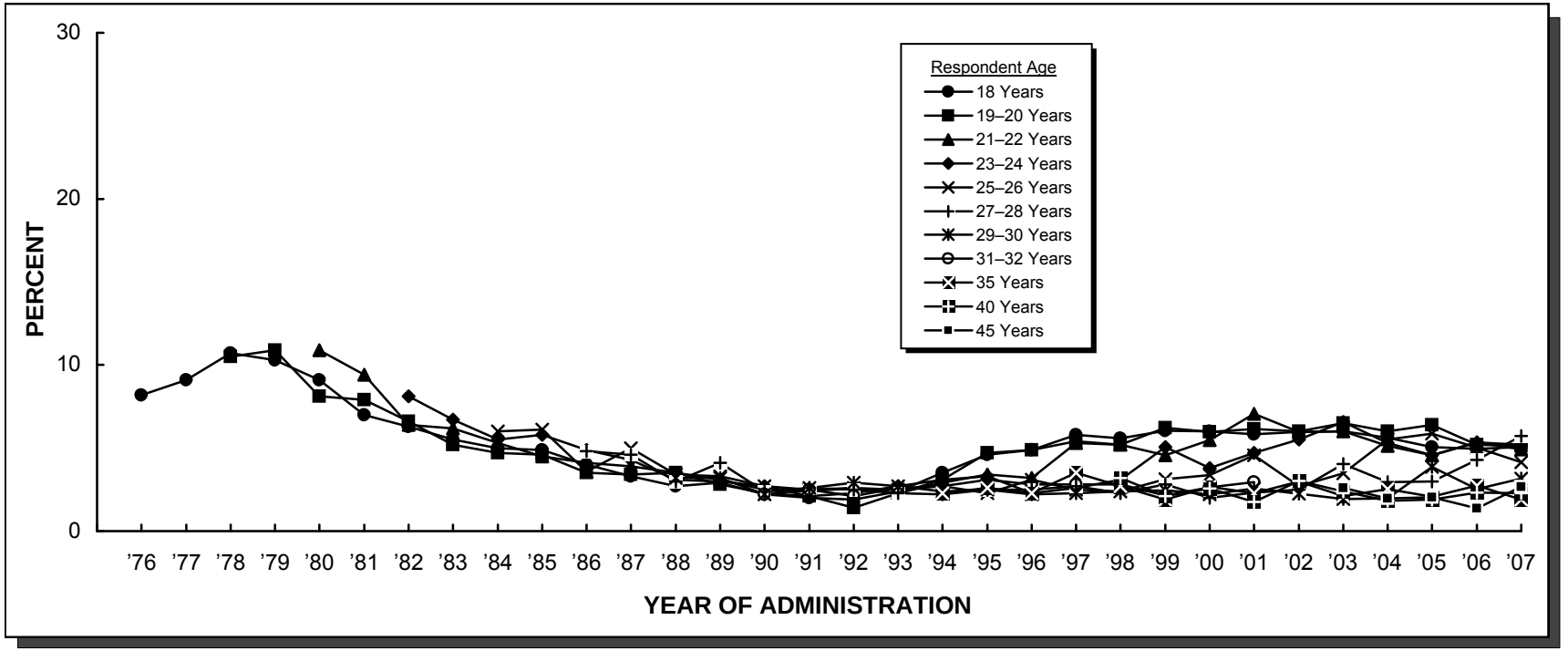
Age	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
18 Years	32.2	35.4	37.1	36.5	33.7	31.6	28.5	27.0	25.2	25.7	23.4	21.0	18.0	16.7	14.0	13.8	11.9	15.5	19.0	21.2	21.9	23.7	22.8	23.1	21.6	22.4	21.5	21.2	19.9	19.8	18.3	18.8
19–20 Years			38.0	37.5	33.9	34.2	28.6	25.7	24.6	22.8	22.9	20.4	20.1	16.3	15.2	13.2	14.1	14.6	15.3	18.7	19.9	19.9	20.1	23.1	22.3	21.0	22.2	22.5	20.7	18.9	17.5	18.4
21–22 Years					35.9	35.3	29.1	29.3	26.4	25.2	23.3	21.8	18.5	15.9	14.3	14.7	14.7	13.8	16.5	15.4	16.4	18.9	17.5	17.8	19.8	22.9	20.1	18.2	18.3	17.9	17.4	18.0
23–24 Years							30.3	29.7	25.4	26.8	23.0	19.6	17.4	15.6	13.4	13.0	12.5	13.6	13.3	12.2	14.2	14.0	13.8	15.3	14.7	14.9	17.2	18.9	15.6	14.1	16.2	16.2
25–26 Years									24.9	24.8	19.9	21.5	17.2	14.7	13.4	13.0	12.6	12.4	12.9	11.7	12.6	10.5	11.8	12.0	12.5	14.5	14.8	14.5	15.1	15.9	14.0	13.6
27–28 Years											20.7	20.3	16.1	14.7	12.9	13.5	12.0	12.3	11.6	10.4	11.0	10.1	10.5	8.9	10.7	10.3	9.9	12.2	12.0	11.9	13.1	13.5
29–30 Years													15.4	15.0	11.5	12.7	12.2	11.2	11.4	10.8	10.5	9.4	9.0	9.3	9.8	8.3	9.0	8.9	8.5	11.9	10.1	10.4
31–32 Years[a]															11.5	12.1	11.3	11.7	10.8	11.1	10.9	10.0	8.7	8.5	7.7	9.6	—	—	—	—	—	—
35 Years																			8.7	11.1	8.8	10.7	9.1	8.8	8.3	8.8	8.9	7.1	7.8	7.0	6.2	5.8
40 Years																							10.5	8.3	8.5	8.3	8.1	8.2	8.3	8.1	6.7	6.7
45 Years																												8.4	6.5	7.2	6.3	6.9

Source. The Monitoring the Future study, the University of Michigan.

[a]Beginning in 2002, respondents were followed through age 30 (instead of 32, as in past years).

FIGURE 5-3c

Marijuana: Trends in 30-Day Prevalence of Daily Use among Respondents of Modal Ages 18 through 45 by Age Group



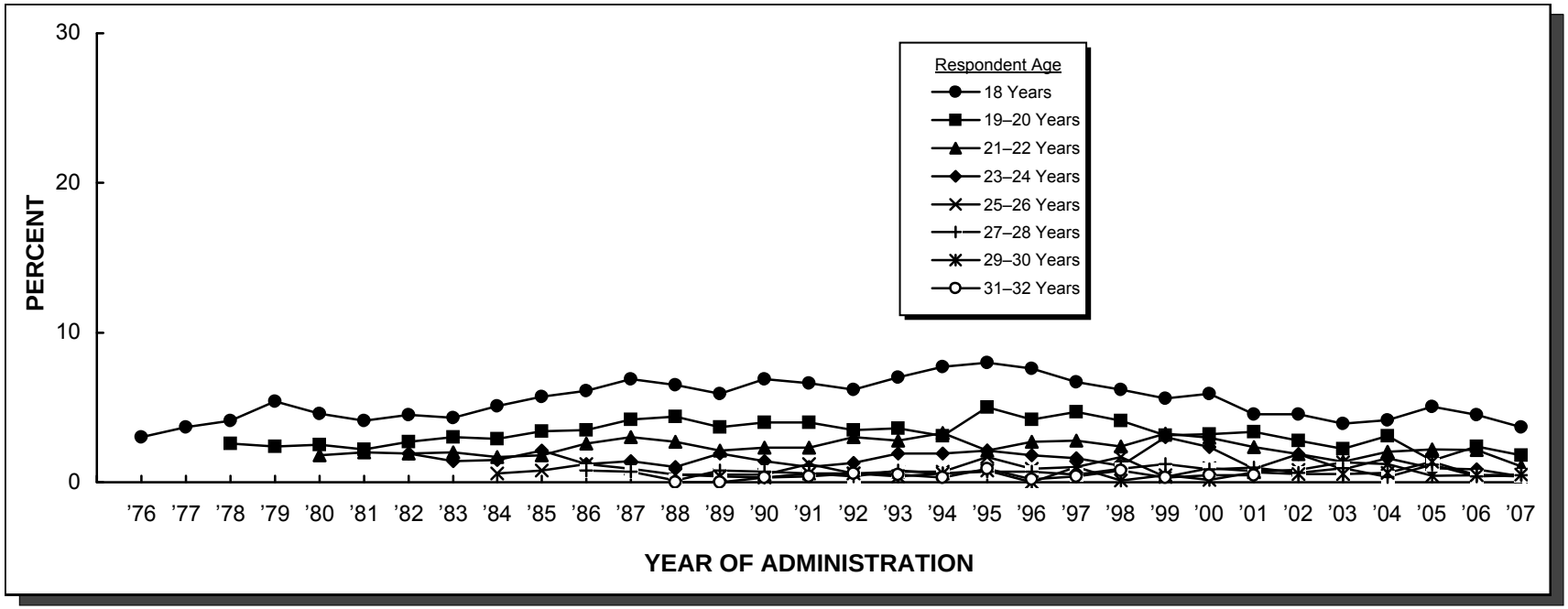
Age	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
18 Years	8.2	9.1	10.7	10.3	9.1	7.0	6.3	5.5	5.0	4.9	4.0	3.3	2.7	2.9	2.2	2.0	1.9	2.4	3.5	4.6	4.9	5.8	5.6	6.0	6.0	5.8	6.0	6.0	5.6	5.0	5.0	5.1
19–20 Years			10.5	10.9	8.1	7.9	6.6	5.2	4.7	4.6	3.5	3.4	3.5	2.8	2.3	2.1	1.4	2.3	3.1	4.7	4.9	5.4	5.2	6.2	6.0	6.1	6.0	6.5	6.0	6.4	5.2	5.1
21–22 Years					10.9	9.4	6.4	6.2	5.3	4.5	4.1	3.9	3.5	3.1	2.5	2.4	2.6	2.3	2.9	3.4	3.2	5.3	5.2	4.6	5.5	7.0	6.0	6.0	5.1	4.6	5.3	4.9
23–24 Years							8.1	6.7	5.5	5.8	4.9	4.3	3.1	3.0	2.7	2.1	2.3	2.7	3.1	3.3	2.3	2.6	3.1	5.1	3.8	4.7	5.5	6.6	5.3	4.5	5.3	5.2
25–26 Years									6.0	6.1	3.6	5.0	3.4	3.3	2.7	2.5	2.6	2.5	2.7	2.3	3.1	2.5	2.4	3.1	3.4	4.6	2.7	3.5	5.5	5.9	5.0	4.1
27–28 Years											4.8	4.6	3.0	4.1	2.4	2.6	2.5	2.3	2.2	2.5	2.5	2.7	2.3	2.8	2.0	2.3	2.5	4.0	2.9	3.0	4.3	5.7
29–30 Years													3.2	3.2	2.2	2.6	2.9	2.7	2.4	2.5	2.2	2.3	2.4	2.5	2.2	2.6	2.3	1.9	2.0	3.9	2.5	3.2
31–32 Years[a]															2.2	2.5	2.1	2.6	2.7	3.1	2.8	2.8	2.8	2.1	2.6	2.9	—	—	—	—	—	—
35 Years																			2.3	2.6	2.3	3.5	2.7	1.9	2.7	2.3	3.0	2.1	2.5	2.1	2.8	1.9
40 Years																							3.2	2.1	2.6	1.8	3.0	2.4	1.8	1.9	2.3	2.3
45 Years																												2.6	2.0	2.1	1.4	2.7

Source. The Monitoring the Future study, the University of Michigan.

[a]Beginning in 2002, respondents were followed through age 30 (instead of 32, as in past years).

FIGURE 5-4

Inhalants:[a] Trends in Annual Prevalence among Respondents of Modal Ages 18 through 32[b,c] by Age Group



Age	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
18 Years	3.0	3.7	4.1	5.4	4.6	4.1	4.5	4.3	5.1	5.7	6.1	6.9	6.5	5.9	6.9	6.6	6.2	7.0	7.7	8.0	7.6	6.7	6.2	5.6	5.9	4.5	4.5	3.9	4.2	5.0	4.5	3.7
19–20 Years			2.6	2.4	2.5	2.2	2.7	3.0	2.9	3.4	3.5	4.2	4.4	3.7	4.0	4.0	3.5	3.6	3.1	5.0	4.2	4.7	4.1	3.1	3.2	3.4	2.8	2.2	3.1	1.5	2.4	1.8
21–22 Years					1.8	2.0	1.9	2.0	1.7	1.8	2.6	3.0	2.7	2.1	2.3	2.3	3.0	2.8	3.3	2.1	2.7	2.8	2.4	3.3	3.0	2.4	1.9	1.4	2.1	2.2	2.1	1.0
23–24 Years							1.9	1.4	1.5	2.1	1.2	1.4	1.0	1.9	1.4	1.0	1.3	1.9	1.9	2.1	1.8	1.6	1.1	3.0	2.4	0.9	1.9	0.9	1.6	1.0	0.9	0.4
25–26 Years									0.6	0.8	1.2	0.9	0.5	0.5	0.5	1.2	0.6	0.7	0.7	1.7	0.9	1.0	1.7	0.4	1.0	0.8	0.8	1.3	1.2	0.4	0.5	0.4
27–28 Years											0.8	0.7	0.1	0.8	0.7	0.6	0.4	0.8	0.6	0.7	0.7	0.5	0.9	1.2	0.9	1.0	0.6	1.0	0.3	1.2	0.4	0.5
29–30 Years													0.5	0.4	0.3	0.6	0.6	0.4	0.6	0.8	*	1.0	0.1	0.5	0.1	0.7	0.5	0.5	0.6	1.4	0.5	0.5
31–32 Years[c]															0.3	0.4	0.6	0.5	0.3	0.9	0.2	0.4	0.8	0.3	0.5	0.5	—	—	—	—	—	—

Source. The Monitoring the Future study, the University of Michigan.

"*" indicates a percentage of less than 0.05%.

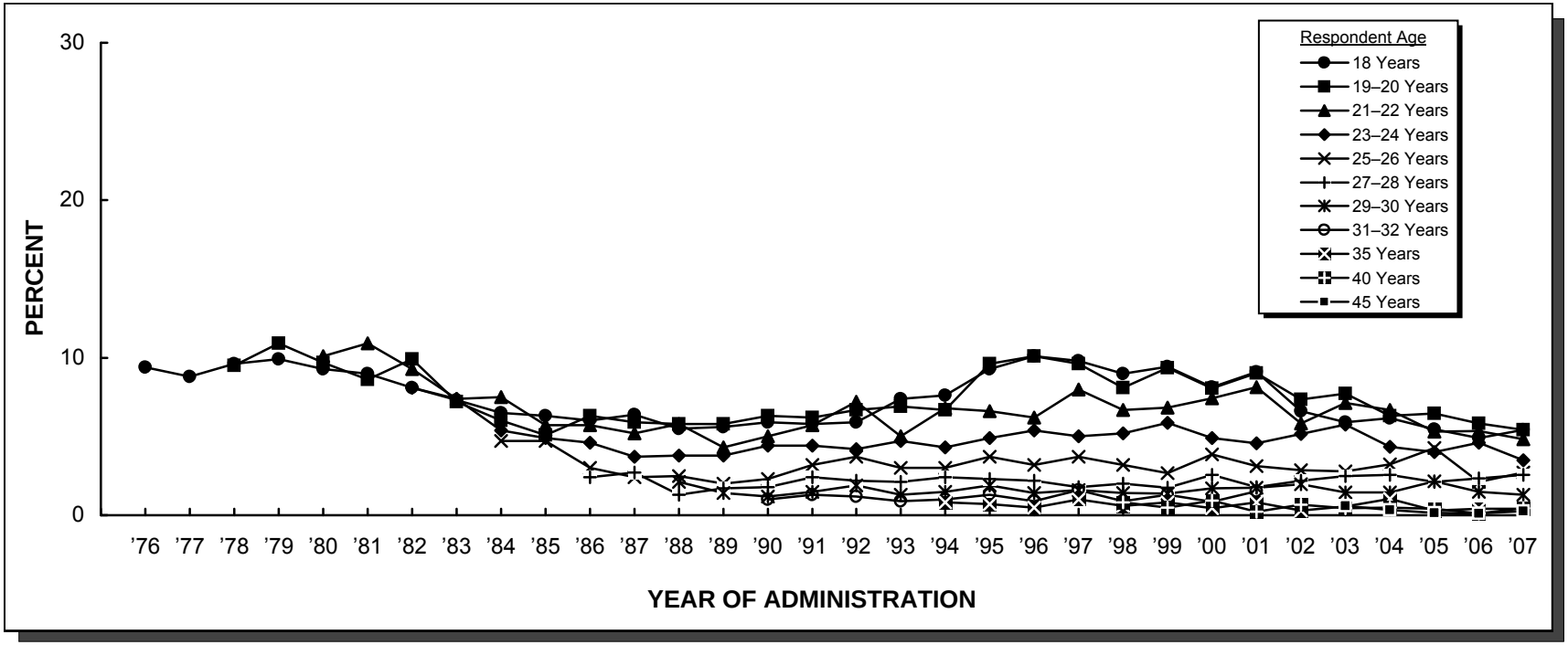
[a]Unadjusted for the possible underreporting of amyl and butyl nitrites. Chapter 5, *Volume I*, shows that such an adjustment would flatten the trend for seniors considerably because the line was adjusted up more in the earlier years, when nitrite use was more prevalent. Questions about nitrite use were dropped from the follow-up questionnaires beginning in 1995.

[b]Questions about the use of inhalants were not included in the questionnaires for the 35-, 40-, and 45-year-olds.

[c]Beginning in 2002, respondents were followed through age 30 (instead of 32, as in past years).

FIGURE 5-5

Hallucinogens:[a] Trends in Annual Prevalence among Respondents of Modal Ages 18 through 45 by Age Group



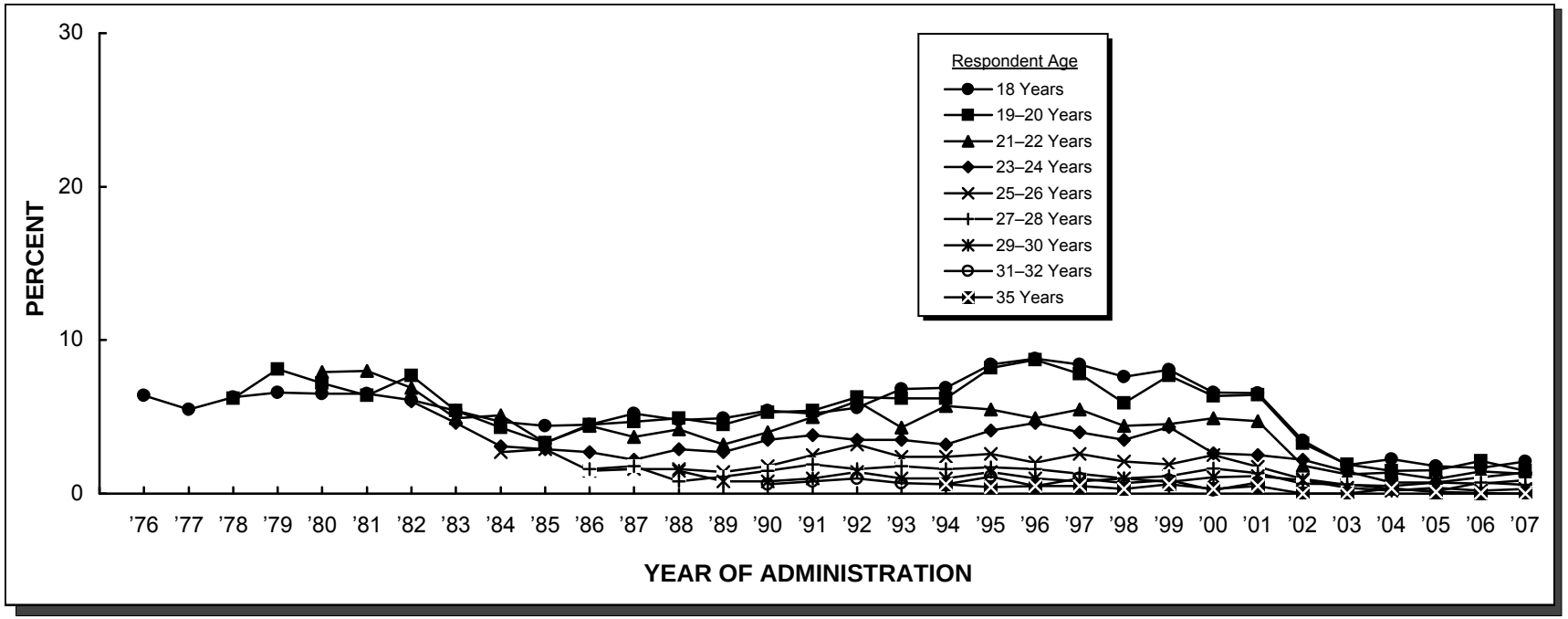
Age	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
18 Years	9.4	8.8	9.6	9.9	9.3	9.0	8.1	7.3	6.5	6.3	6.0	6.4	5.5	5.6	5.9	5.8	5.9	7.4	7.6	9.3	10.1	9.8	9.0	9.4	8.1	9.1	6.6	5.9	6.2	5.5	4.9	5.4
19–20 Years			9.5	10.9	9.7	8.6	9.9	7.2	6.0	5.1	6.3	5.9	5.8	5.8	6.3	6.2	6.7	6.9	6.7	9.6	10.1	9.6	8.1	9.4	8.0	9.0	7.3	7.7	6.3	6.4	5.8	5.4
21–22 Years					10.1	10.9	9.3	7.4	7.5	5.7	5.7	5.2	5.8	4.3	5.0	5.7	7.2	5.0	6.8	6.6	6.2	8.0	6.7	6.8	7.4	8.1	5.8	7.1	6.7	5.3	5.3	4.8
23–24 Years							8.1	7.4	5.4	4.9	4.6	3.7	3.8	3.8	4.4	4.4	4.2	4.7	4.3	4.9	5.4	5.0	5.2	5.9	4.9	4.6	5.2	5.8	4.4	4.0	4.6	3.5
25–26 Years									4.7	4.7	3.0	2.4	2.5	2.0	2.3	3.2	3.7	3.0	3.0	3.7	3.2	3.7	3.2	2.7	3.9	3.1	2.8	2.8	3.2	4.3	2.1	2.7
27–28 Years											2.4	2.7	1.3	1.7	1.8	2.4	2.2	2.1	2.4	2.3	2.2	1.8	2.0	1.7	2.6	1.8	2.2	2.5	2.6	2.1	2.4	2.6
29–30 Years													2.1	1.4	1.2	1.5	1.9	1.3	1.5	1.9	1.4	1.6	1.4	1.4	1.7	1.7	2.0	1.5	1.4	2.1	1.5	1.3
31–32 Years[b]															1.0	1.3	1.2	0.9	1.0	1.3	0.9	1.6	0.9	1.3	0.9	1.5	—	—	—	—	—	—
35 Years																			0.8	0.7	0.5	1.0	0.6	0.8	0.5	0.8	0.3	0.6	1.0	0.3	0.4	0.4
40 Years																							0.8	0.5	0.9	0.2	0.7	0.5	0.5	0.4	0.1	0.4
45 Years																												0.6	0.3	0.1	0.1	0.2

Source. The Monitoring the Future study, the University of Michigan.

[a]Unadjusted for the possible underreporting of PCP.

[b]Beginning in 2002, respondents were followed through age 30 (instead of 32, as in past years).

FIGURE 5-6
LSD: Trends in Annual Prevalence among Respondents of Modal Ages 18 through 35[a] by Age Group



Age	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
18 Years	6.4	5.5	6.3	6.6	6.5	6.5	6.1	5.4	4.7	4.4	4.5	5.2	4.8	4.9	5.4	5.2	5.6	6.8	6.9	8.4	8.8	8.4	7.6	8.1	6.6	6.6	3.5	1.9	2.2	1.8	1.7	2.1
19–20 Years			6.2	8.1	7.2	6.4	7.7	5.4	4.3	3.3	4.5	4.7	4.9	4.5	5.3	5.4	6.3	6.2	6.2	8.2	8.7	7.8	5.9	7.7	6.3	6.4	3.3	1.9	1.5	1.5	2.1	1.5
21–22 Years					7.9	8.0	6.9	4.9	5.1	3.3	4.4	3.7	4.2	3.2	4.0	5.0	6.0	4.3	5.7	5.5	4.9	5.5	4.4	4.5	4.9	4.7	1.8	1.2	1.4	1.0	1.4	1.3
23–24 Years							6.0	4.6	3.1	2.9	2.7	2.2	2.9	2.7	3.5	3.8	3.5	3.5	3.2	4.1	4.6	4.0	3.5	4.3	2.6	2.5	2.2	1.4	0.7	0.7	1.1	1.4
25–26 Years									2.7	2.9	1.5	1.6	1.6	1.4	1.8	2.5	3.2	2.4	2.4	2.6	2.0	2.6	2.1	1.9	2.5	1.7	1.0	0.6	0.5	0.7	0.6	0.9
27–28 Years											1.6	1.8	0.8	1.1	1.5	1.9	1.6	1.8	1.6	1.7	1.6	1.3	1.0	1.2	1.6	1.3	0.7	0.6	0.3	0.1	0.7	0.6
29–30 Years													1.5	0.8	0.8	1.0	1.4	1.0	1.0	1.4	1.0	0.8	1.0	0.8	1.0	1.1	0.9	0.4	0.2	0.4	0.2	0.3
31–32 Years[b]															0.6	0.8	1.0	0.7	0.6	1.1	0.5	1.0	0.7	0.9	0.2	0.7	—	—	—	—	—	—
35 Years[a]																			0.6	0.4	0.5	0.5	0.3	0.6	0.3	0.5	*	*	0.4	0.1	0.1	—

Source. The Monitoring the Future study, the University of Michigan.

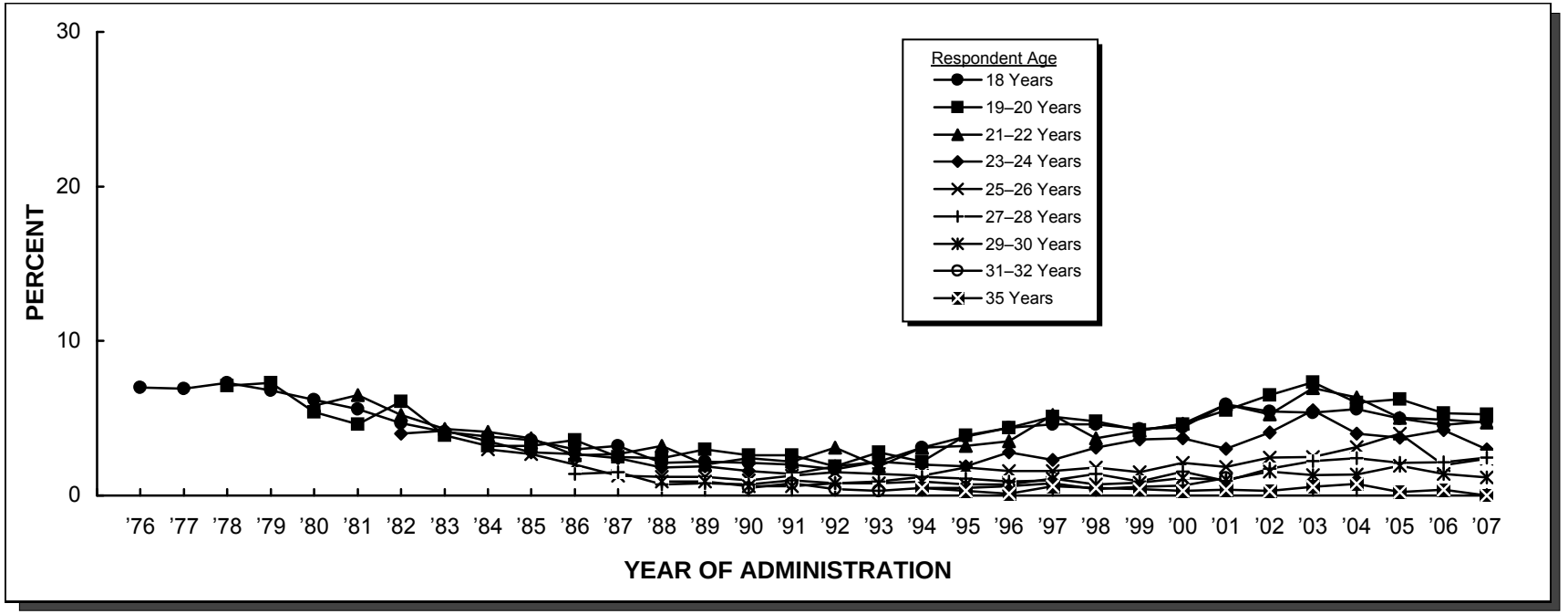
"*" indicates a percentage of less than 0.05%.

[a]Questions about LSD use were not included in the questionnaires administered to the 40- and 45-year-olds, or the 35-year-olds after 2006.

[b]Beginning in 2002, respondents were followed through age 30 (instead of 32, as in past years).

FIGURE 5-7

Hallucinogens other than LSD:[a] Trends in Annual Prevalence among Respondents of Modal Ages 18 through 35[b] by Age Group



Age	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
18 Years	7.0	6.9	7.3	6.8	6.2	5.6	4.7	4.1	3.8	3.6	3.0	3.2	2.1	2.2	2.1	2.0	1.7	2.2	3.1	3.8	4.4	4.6	4.6	4.3	4.4	5.9	5.4	5.4	5.6	5.0	4.6	4.8
19–20 Years			7.1	7.3	5.4	4.6	6.1	3.9	3.2	3.2	3.6	2.5	2.4	3.0	2.6	2.6	1.9	2.8	2.2	3.9	4.4	5.1	4.8	4.2	4.6	5.5	6.5	7.3	6.0	6.2	5.3	5.2
21–22 Years					5.8	6.5	5.2	4.3	4.1	3.7	2.6	2.7	3.2	2.0	2.4	2.2	3.1	1.9	3.1	3.2	3.5	5.2	3.7	4.2	4.7	5.9	5.2	6.9	6.3	5.0	4.9	4.7
23–24 Years							4.0	4.2	3.5	2.8	2.7	2.4	1.8	1.9	1.6	1.4	1.9	2.2	2.0	1.9	2.8	2.3	3.1	3.6	3.7	3.0	4.1	5.5	4.0	3.7	4.2	3.0
25–26 Years									3.0	2.7	2.0	1.3	1.2	1.2	1.0	1.3	1.5	1.4	1.3	1.8	1.6	1.6	1.8	1.5	2.1	1.9	2.5	2.5	3.1	4.0	2.0	2.4
27–28 Years											1.4	1.5	0.7	0.8	0.7	1.0	0.8	0.9	1.2	1.1	0.9	1.0	1.4	0.9	1.6	0.9	1.7	2.2	2.4	2.1	2.1	2.5
29–30 Years													0.9	0.9	0.6	0.6	0.8	0.8	0.9	0.7	0.7	1.1	0.7	0.8	1.1	1.0	1.6	1.3	1.4	1.9	1.4	1.2
31–32 Years[c]															0.5	0.8	0.4	0.3	0.5	0.5	0.6	0.8	0.4	0.6	0.6	1.1	—	—	—	—	—	—
35 Years[b]																			0.5	0.3	0.1	0.6	0.5	0.4	0.3	0.4	0.3	0.6	0.8	0.2	0.4	—

Source. The Monitoring the Future study, the University of Michigan.

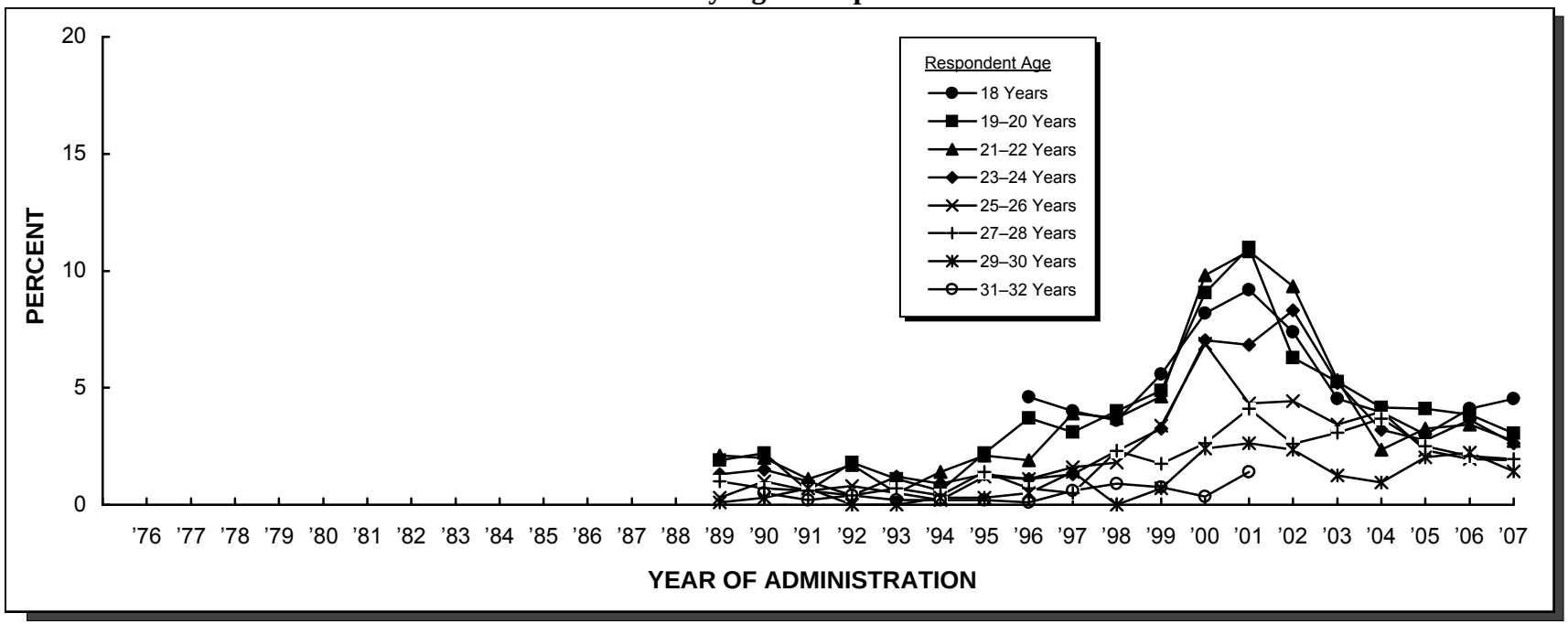
[a]Unadjusted for the possible underreporting of PCP.

[b]Questions about the use of hallucinogens other than LSD were not included in the questionnaires administered to the 40- and 45-year-olds, or the 35-year-olds after 2006.

[c]Beginning in 2002, respondents were followed through age 30 (instead of 32, as in past years).

FIGURE 5-8

Ecstasy (MDMA): Trends in Annual Prevalence among Respondents of Modal Ages 18 through 32[a] by Age Group



Age	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
18 Years																					4.6	4.0	3.6	5.6	8.2	9.2	7.4	4.5	4.0	3.0	4.1	4.5
19–20 Years														1.9	2.2	0.6	1.8	1.1	0.6	2.2	3.7	3.1	4.0	4.9	9.1	11.0	6.3	5.3	4.2	4.1	3.8	3.1
21–22 Years														2.1	2.0	1.1	1.7	0.5	1.4	2.1	1.9	3.9	3.7	4.6	9.8	10.8	9.3	5.3	2.4	3.3	3.4	2.7
23–24 Years														1.3	1.5	1.0	0.4	1.2	0.9	1.3	1.1	1.3	2.3	3.3	7.0	6.8	8.3	5.2	3.2	2.8	3.6	2.6
25–26 Years														0.3	1.0	0.6	0.8	0.5	0.2	1.2	1.1	1.6	1.8	3.4	6.9	4.3	4.4	3.4	4.0	2.3	2.0	1.9
27–28 Years														1.0	0.7	0.6	0.4	0.7	0.4	1.4	0.7	0.5	2.3	1.8	2.6	4.1	2.6	3.1	3.7	2.5	2.1	1.9
29–30 Years														0.1	0.3	0.7	*	*	0.3	0.3	0.5	1.4	*	0.7	2.4	2.6	2.4	1.2	0.9	2.0	2.2	1.4
31–32 Years[b]															0.5	0.2	0.4	0.2	0.2	0.2	0.1	0.6	0.9	0.8	0.3	1.4	—	—	—	—	—	—

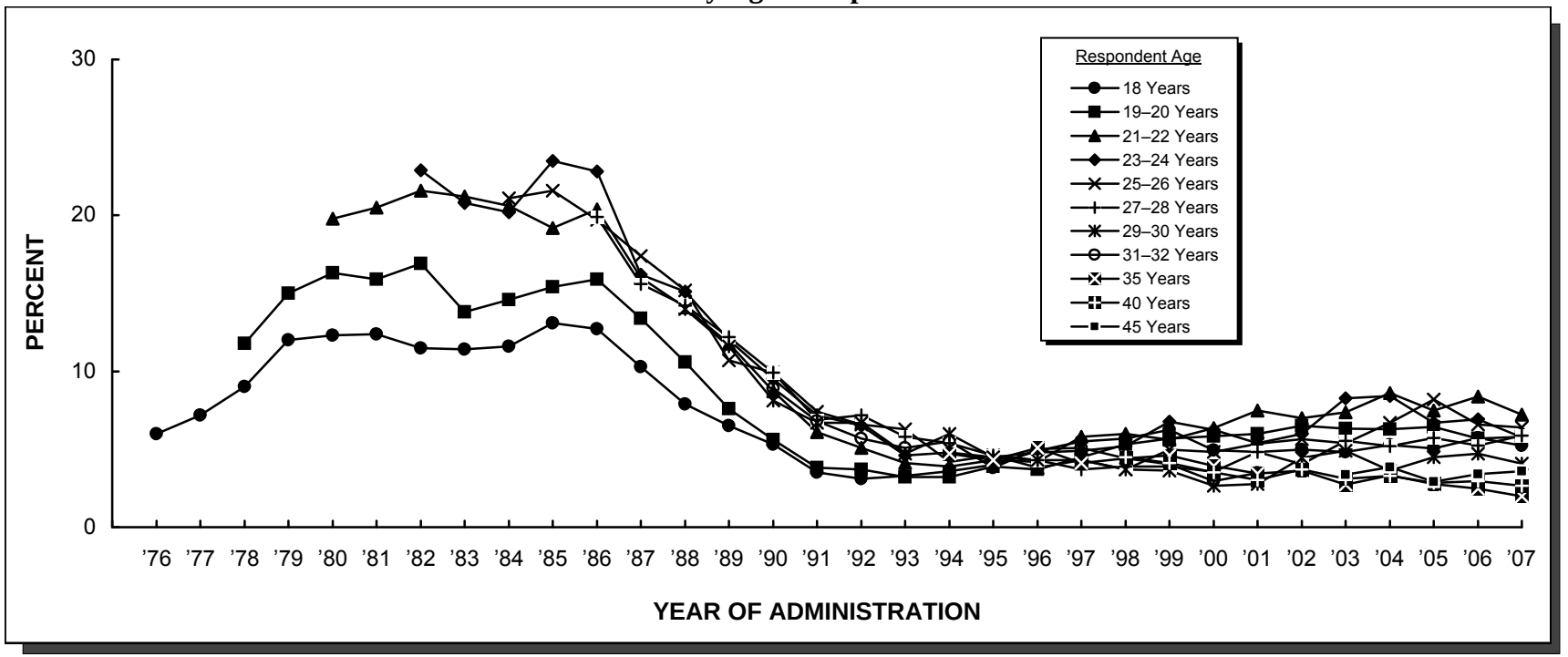
Source. The Monitoring the Future study, the University of Michigan.

"*" indicates a percentage of less than 0.05%.

[a]Questions about use of ecstasy (MDMA) were not included in the questionnaires administered to the 35-, 40-, and 45-year-olds.

[b]Beginning in 2002, respondents were followed through age 30 (instead of 32, as in past years).

FIGURE 5-9
Cocaine: Trends in Annual Prevalence among Respondents of Modal Ages 18 through 45 by Age Group

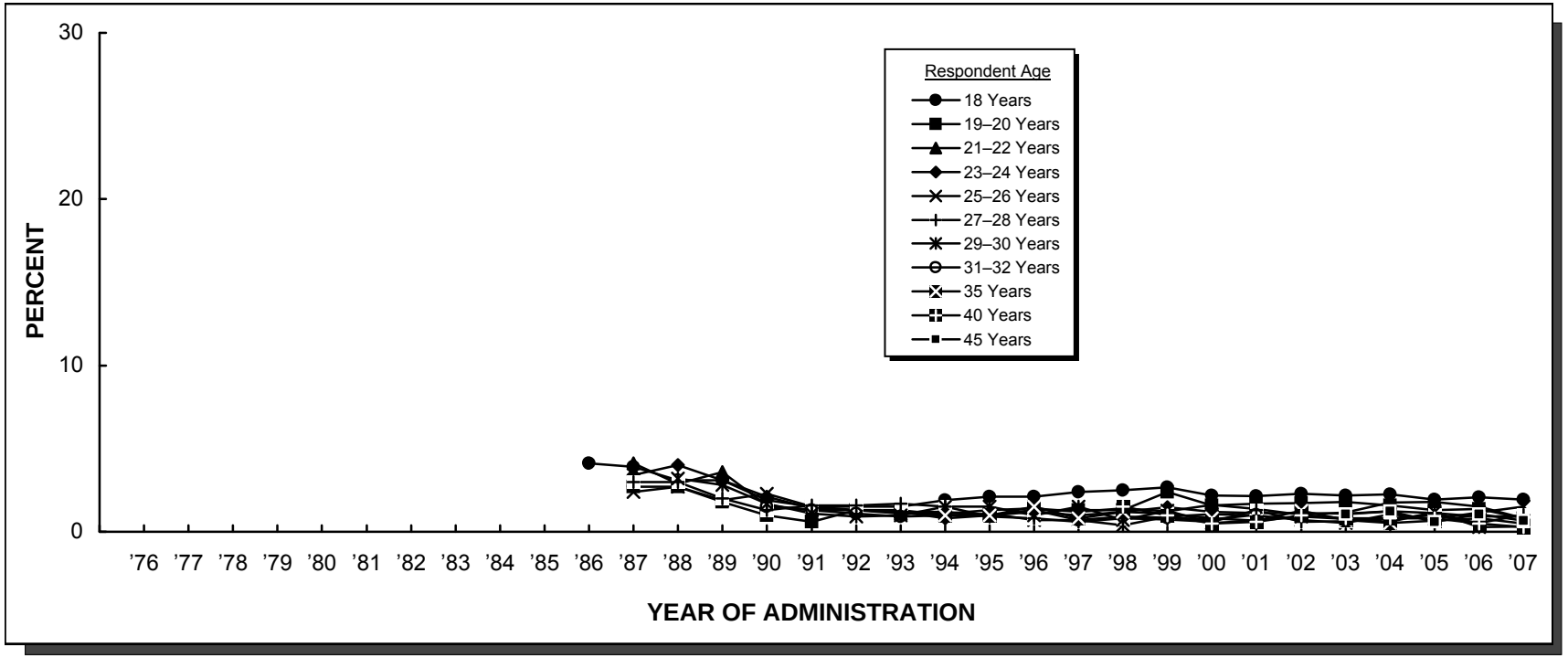


Age	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
18 Years	6.0	7.2	9.0	12.0	12.3	12.4	11.5	11.4	11.6	13.1	12.7	10.3	7.9	6.5	5.3	3.5	3.1	3.3	3.6	4.0	4.9	5.5	5.7	6.2	5.0	4.8	5.0	4.8	5.3	5.1	5.7	5.2
19–20 Years			11.8	15.0	16.3	15.9	16.9	13.8	14.6	15.4	15.9	13.4	10.6	7.6	5.6	3.8	3.7	3.2	3.2	3.9	3.7	4.5	5.3	5.7	5.8	6.0	6.5	6.3	6.3	6.4	5.7	5.8
21–22 Years					19.8	20.5	21.6	21.2	20.6	19.2	20.4	16.0	14.1	11.8	8.7	6.1	5.1	4.1	3.9	4.3	4.2	5.8	6.0	5.6	6.3	7.5	7.0	7.4	8.6	7.5	8.4	7.2
23–24 Years							22.9	20.8	20.2	23.5	22.8	16.2	15.1	12.0	9.5	7.2	6.5	4.6	4.8	4.5	4.8	4.9	5.2	6.8	6.3	5.4	6.0	8.3	8.4	6.7	6.9	5.8
25–26 Years									21.1	21.6	19.7	17.4	15.2	10.7	9.9	7.4	6.6	6.3	4.2	4.6	3.8	4.3	3.7	5.0	4.8	5.4	5.6	5.4	6.7	8.2	6.6	6.4
27–28 Years											19.9	15.6	14.2	12.2	9.9	6.9	7.2	5.8	5.4	4.6	4.3	3.7	3.9	3.9	3.6	4.8	4.0	5.5	5.2	5.7	5.2	5.9
29–30 Years													14.0	11.6	8.1	6.7	6.7	4.7	6.0	4.5	4.3	4.3	3.7	3.6	2.7	2.8	4.4	4.9	3.6	4.5	4.7	4.1
31–32 Years[a]															8.9	6.8	5.7	5.1	5.5	3.8	5.0	5.1	4.4	4.1	3.0	3.5	—	—	—	—	—	—
35 Years																			4.7	4.3	5.1	4.1	4.4	4.6	3.9	3.5	3.6	2.7	3.3	2.8	2.5	2.0
40 Years																							4.5	4.1	3.5	3.0	3.7	3.1	3.3	2.8	3.0	2.7
45 Years																												3.4	3.9	2.9	3.4	3.6

Source. The Monitoring the Future study, the University of Michigan.

[a]Beginning in 2002, respondents were followed through age 30 (instead of 32, as in past years).

FIGURE 5-10
Crack Cocaine: Trends in Annual Prevalence among Respondents of Modal Ages 18 through 45 by Age Group

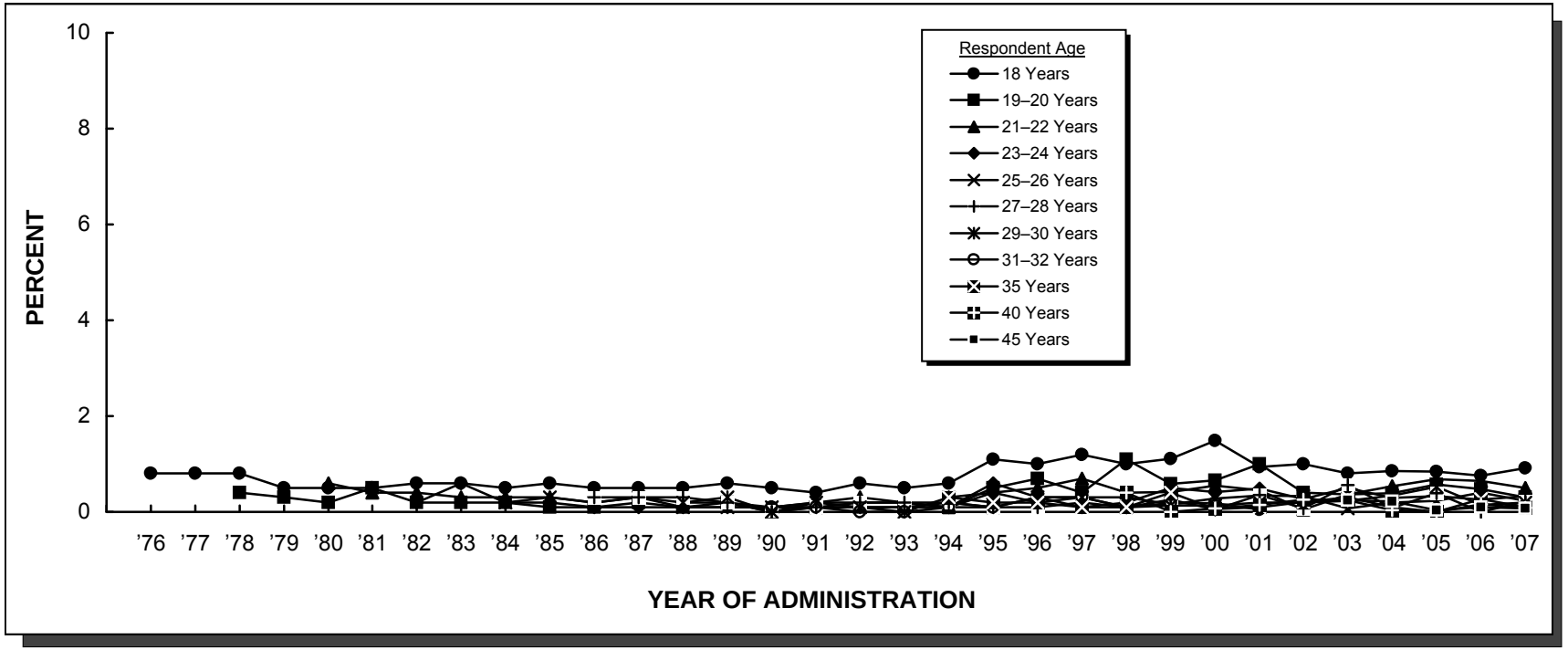


Age	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
18 Years											4.1	3.9	3.1	3.1	1.9	1.5	1.5	1.5	1.9	2.1	2.1	2.4	2.5	2.7	2.2	2.1	2.3	2.2	2.3	1.9	2.1	1.9
19–20 Years												2.7	2.7	1.8	1.0	0.6	1.3	1.2	1.2	1.0	1.3	1.3	1.3	2.4	1.6	1.7	1.7	1.8	1.6	1.3	1.4	0.8
21–22 Years												4.1	2.9	3.6	1.6	1.3	1.3	1.1	1.1	1.3	1.4	1.2	1.4	1.2	1.6	1.4	1.0	1.2	1.8	1.8	1.5	0.8
23–24 Years												3.4	4.0	3.1	2.1	1.4	1.3	1.2	0.8	1.0	1.2	1.0	1.2	1.5	1.2	1.1	1.1	1.1	1.2	1.1	0.9	1.0
25–26 Years												2.4	2.7	1.9	2.3	1.5	1.3	1.3	1.0	1.1	0.7	0.7	0.4	0.9	1.1	1.0	0.7	0.5	1.1	0.8	1.2	1.5
27–28 Years												3.0	3.0	2.0	1.3	1.6	1.6	1.7	1.5	0.9	0.8	0.6	0.8	0.8	0.6	1.3	0.6	0.6	0.8	1.0	0.5	1.0
29–30 Years													3.2	2.8	1.7	1.1	0.9	1.0	1.5	1.5	1.0	1.5	0.7	1.3	0.5	0.7	0.9	0.8	0.6	1.2	0.3	0.3
31–32 Years[a]															1.5	1.3	1.1	0.9	1.0	1.0	1.3	0.7	0.9	0.8	0.7	1.0	—	—	—	—	—	—
35 Years																			1.0	1.0	1.5	0.8	1.2	1.1	0.8	0.7	1.3	0.7	0.5	0.7	0.8	0.5
40 Years																							1.5	1.0	0.5	0.6	1.0	0.8	0.8	0.8	0.5	0.3
45 Years																												1.1	1.2	0.6	1.1	0.7

Source. The Monitoring the Future study, the University of Michigan.

[a]Beginning in 2002, respondents were followed through age 30 (instead of 32, as in past years).

FIGURE 5-11
Heroin: Trends in Annual Prevalence among Respondents of Modal Ages 18 through 45 by Age Group



Age	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
18 Years	0.8	0.8	0.8	0.5	0.5	0.5	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.6	0.5	0.4	0.6	0.5	0.6	1.1	1.0	1.2	1.0	1.1	1.5	0.9	1.0	0.8	0.9	0.8	0.8	0.9
19–20 Years			0.4	0.3	0.2	0.5	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	*	0.1	0.1	0.1	0.1	0.5	0.7	0.4	1.1	0.6	0.7	1.0	0.4	0.4	0.4	0.6	0.5	0.3
21–22 Years					0.6	0.4	0.4	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.1	0.2	0.3	0.2	0.1	0.4	0.5	0.7	0.4	0.4	0.5	0.5	0.1	0.4	0.5	0.7	0.6	0.5
23–24 Years							0.2	0.6	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.6	0.3	0.1	0.2	0.5	0.4	0.5	0.3	0.5	0.3	0.3	0.3	0.3
25–26 Years									0.2	0.3	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.1	0.2	0.2	0.4	0.2
27–28 Years											0.3	0.3	0.3	0.2	*	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.3	0.1	0.3	0.1	0.6	0.1	0.4	*	0.2
29–30 Years													0.2	0.3	*	0.2	0.1	*	0.3	0.4	0.2	0.3	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.5	0.1	0.2
31–32 Years[a]															0.1	0.1	*	*	0.1	0.1	0.3	0.3	0.1	0.2	0.2	*	—	—	—	—	—	—
35 Years																			0.3	0.2	0.2	0.1	0.1	0.4	0.1	0.1	0.2	0.3	0.1	*	0.3	0.1
40 Years																							0.4	*	0.1	0.1	0.3	0.2	*	*	0.2	0.1
45 Years																												0.2	0.2	*	0.1	0.1

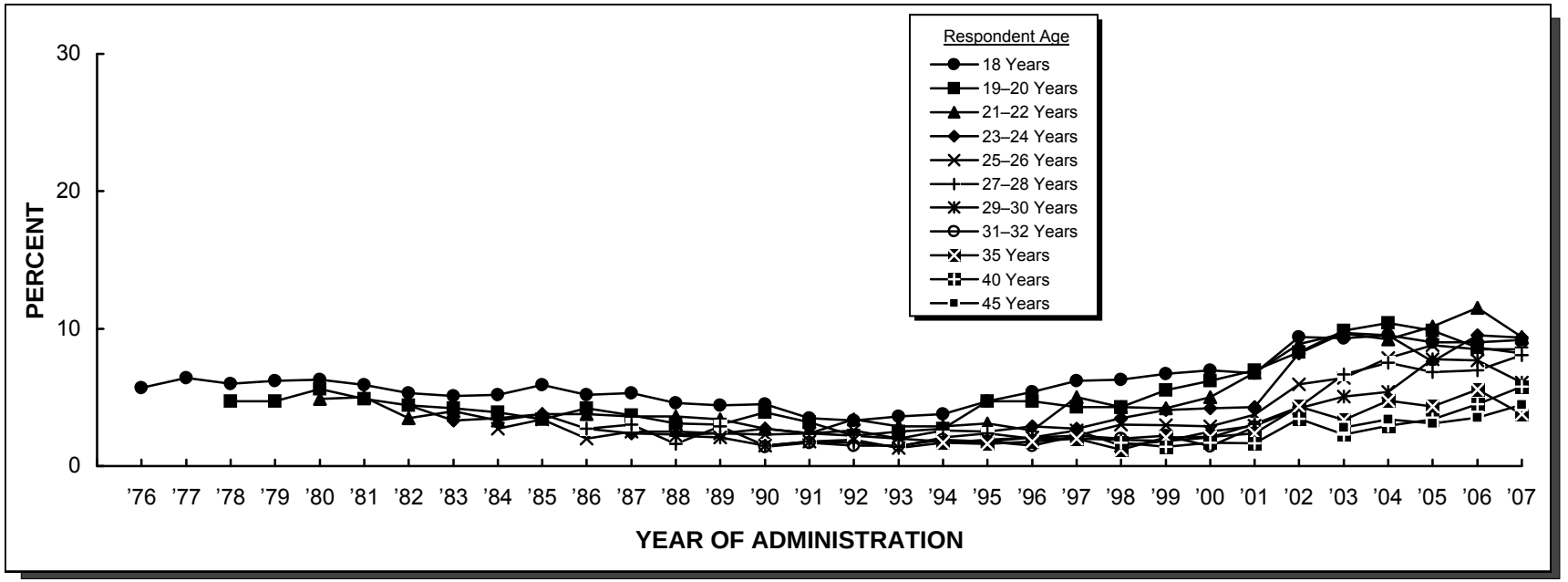
Source. The Monitoring the Future study, the University of Michigan.

"*" indicates a percentage of less than 0.05%.

[a]Beginning in 2002, respondents were followed through age 30 (instead of 32, as in past years).

FIGURE 5-12

Narcotics other than Heroin:[a] Trends in Annual Prevalence among Respondents of Modal Ages 18 through 45 by Age Group



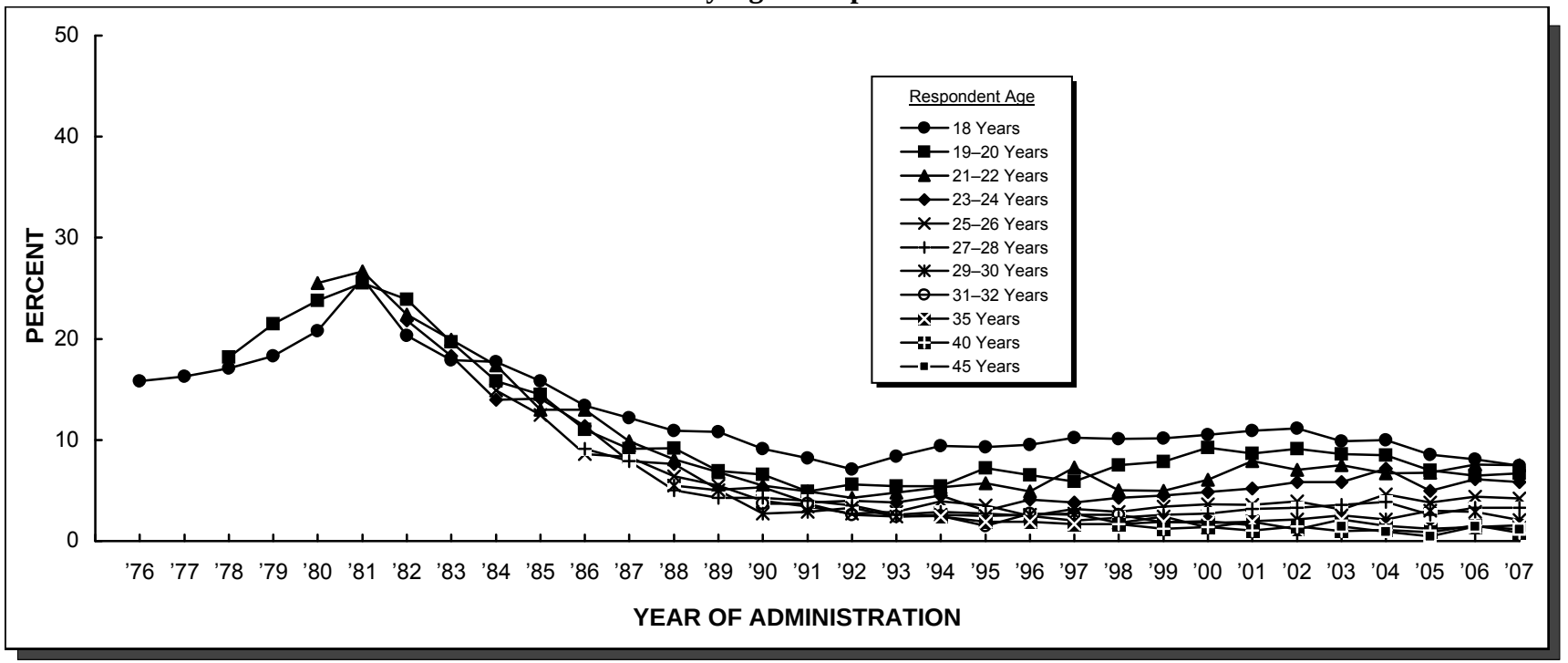
Age	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
18 Years	5.7	6.4	6.0	6.2	6.3	5.9	5.3	5.1	5.2	5.9	5.2	5.3	4.6	4.4	4.5	3.5	3.3	3.6	3.8	4.7	5.4	6.2	6.3	6.7	7.0	6.7	9.4	9.3	9.5	9.0	9.0	9.2
19–20 Years			4.7	4.7	5.6	4.9	4.4	4.2	3.9	3.4	4.2	3.7	3.1	3.0	3.9	3.2	2.2	2.5	2.7	4.7	4.7	4.3	4.3	5.5	6.2	7.0	8.3	9.9	10.4	9.9	8.6	8.2
21–22 Years					4.9	5.0	3.5	4.0	3.3	3.8	3.8	3.6	3.6	3.4	2.7	2.4	3.4	2.9	2.9	3.1	2.6	5.0	4.3	4.2	5.0	6.8	8.9	9.6	9.2	10.2	11.5	9.4
23–24 Years							4.4	3.3	3.5	3.8	2.7	2.4	2.3	2.4	2.7	2.4	2.2	2.0	2.6	2.5	2.9	2.7	3.5	4.1	4.2	4.3	8.2	9.7	9.5	7.6	9.5	9.4
25–26 Years									2.7	3.4	2.0	2.5	2.5	2.4	2.3	2.4	2.6	2.0	1.8	1.8	2.1	2.2	3.0	3.0	2.9	3.7	6.0	6.4	7.9	8.8	8.5	8.5
27–28 Years											2.7	3.0	1.6	2.9	1.5	1.8	1.7	1.4	2.1	2.4	2.0	2.0	1.9	1.8	2.1	3.1	4.3	6.7	7.5	6.9	7.0	8.1
29–30 Years													2.2	2.1	1.5	1.8	1.9	1.3	1.7	1.9	2.1	2.6	1.5	1.8	2.5	2.9	4.2	5.1	5.4	7.8	7.7	6.1
31–32 Years[b]															1.4	1.7	1.5	1.5	1.9	1.8	1.5	2.2	2.0	2.2	1.4	2.9	—	—	—	—	—	—
35 Years																			1.7	1.6	1.8	2.0	1.2	2.1	2.1	2.4	4.4	3.4	4.8	4.3	5.6	3.8
40 Years																							1.7	1.4	1.7	1.6	3.4	2.3	2.9	3.4	4.5	5.8
45 Years																												2.8	3.4	3.1	3.5	4.4

Source. The Monitoring the Future study, the University of Michigan.

[a]In 2002 the question text was changed on half of the questionnaire forms for 18–30-year-olds. The list of examples of narcotics other than heroin was updated. Talwin, laudanum, and paregoric—all of which had negligible rates of use by 2001—were replaced by Vicodin, OxyContin, and Percocet. The 2001 data presented here are based on all forms. The 2002 data are based on the changed forms only. In 2003 the remaining forms were changed to the new wording. The data are based on all forms in 2003. Beginning in 2002 data were based on the changed question text for 35- and 40-year-olds.

[b]Beginning in 2002, respondents were followed through age 30 (instead of 32, as in past years).

FIGURE 5-13
Amphetamines: Trends in Annual Prevalence among Respondents of Modal Ages 18 through 45 by Age Group

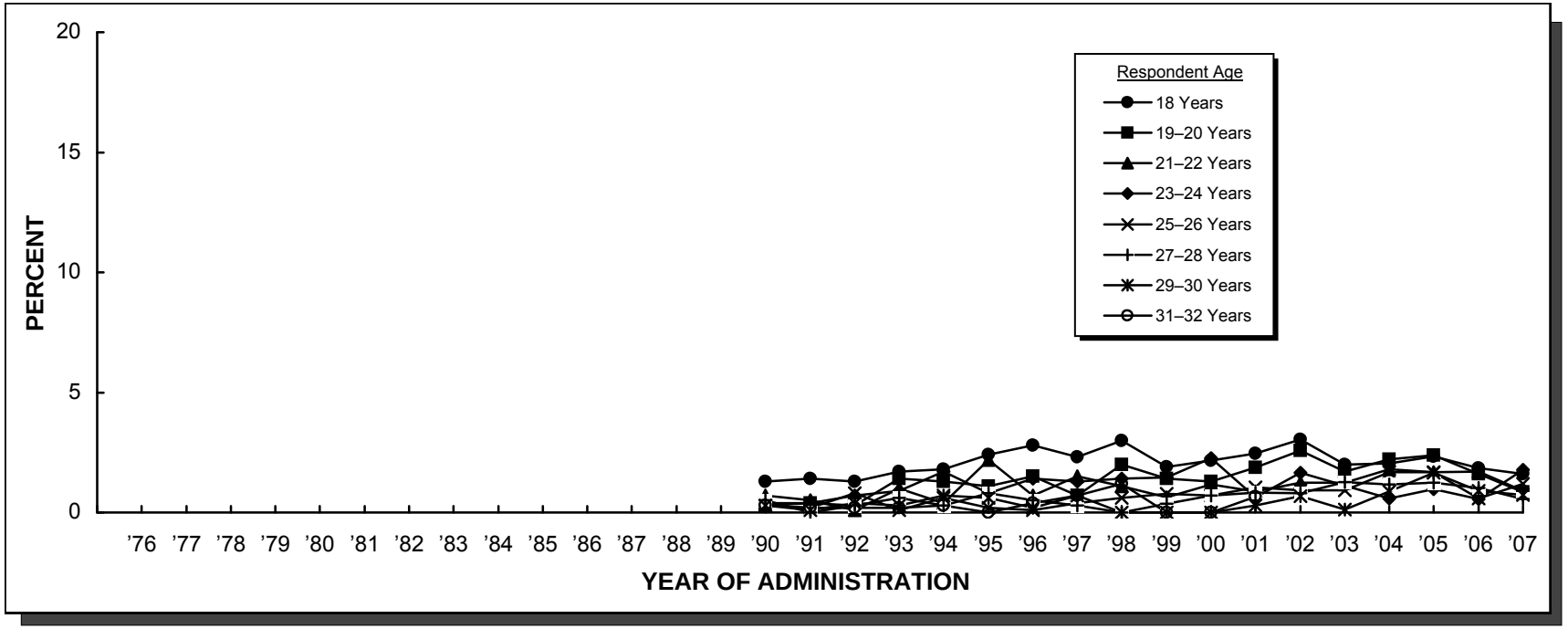


Age	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
18 Years	15.8	16.3	17.1	18.3	20.8	26.0	20.3	17.9	17.7	15.8	13.4	12.2	10.9	10.8	9.1	8.2	7.1	8.4	9.4	9.3	9.5	10.2	10.1	10.2	10.5	10.9	11.1	9.9	10.0	8.6	8.1	7.5
19–20 Years			18.2	21.5	23.8	25.5	23.9	19.7	15.8	14.5	11.0	9.1	9.2	6.9	6.6	4.9	5.6	5.4	5.4	7.2	6.5	5.9	7.5	7.9	9.3	8.7	9.1	8.6	8.5	7.0	6.5	6.7
21–22 Years					25.5	26.7	22.4	19.9	17.4	13.0	13.0	9.9	8.1	6.8	5.5	4.9	4.3	4.8	5.3	5.7	4.9	7.3	5.0	5.0	6.0	7.9	7.1	7.5	6.7	6.8	7.6	7.5
23–24 Years							21.8	18.3	14.0	14.1	11.4	7.9	7.6	5.1	5.3	3.8	4.0	3.8	4.5	3.0	4.1	3.8	4.3	4.5	4.8	5.2	5.8	5.8	7.1	5.0	6.1	5.9
25–26 Years									14.9	12.5	8.6	8.3	6.4	5.5	4.0	3.4	2.7	2.9	3.9	3.5	2.5	3.2	2.9	3.4	3.6	3.6	3.9	3.1	4.6	3.8	4.4	4.2
27–28 Years											9.1	7.9	5.0	4.3	4.3	4.0	3.5	2.6	2.9	2.7	2.5	2.0	2.3	2.6	2.7	3.2	3.3	3.6	3.9	2.6	3.3	3.3
29–30 Years													5.5	5.0	2.7	2.9	3.3	2.4	2.6	2.5	2.6	2.7	1.8	2.4	1.4	1.9	2.1	2.6	2.2	3.0	2.9	2.1
31–32 Years[a]															3.7	3.7	2.6	2.4	2.5	1.5	2.7	2.6	2.6	1.9	1.9	1.5	—	—	—	—	—	—
35 Years																			2.4	1.9	1.9	1.7	1.7	1.9	1.8	1.9	1.2	2.2	1.5	1.2	1.4	1.5
40 Years																							1.7	1.2	1.4	1.0	1.4	1.0	1.1	0.8	1.6	0.8
45 Years																												1.4	0.9	0.5	1.4	1.1

Source. The Monitoring the Future study, the University of Michigan.

[a]Beginning in 2002, respondents were followed through age 30 (instead of 32, as in past years).

FIGURE 5-14
Crystal Methamphetamine (Ice): Trends in Annual Prevalence among Respondents of Modal Ages 18 through 32[a] by Age Group



Age	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
18 Years															1.3	1.4	1.3	1.7	1.8	2.4	2.8	2.3	3.0	1.9	2.2	2.5	3.0	3.0	2.0	2.3	1.9	1.6
19–20 Years															0.3	0.4	0.3	1.4	1.3	1.1	1.5	0.7	2.0	1.4	1.3	1.9	2.6	2.6	1.7	2.4	1.6	0.9
21–22 Years															0.7	0.5	0.1	1.0	0.4	2.2	0.7	1.5	1.1	0.6	1.2	0.9	1.2	1.2	1.2	1.7	1.7	0.9
23–24 Years															0.4	0.4	0.7	0.9	1.7	0.8	1.4	1.3	1.4	1.5	2.3	0.6	1.6	1.6	1.1	1.0	0.5	1.8
25–26 Years															0.3	0.2	0.8	0.1	0.6	0.2	0.1	0.4	0.6	0.8	0.7	1.1	0.9	0.9	0.9	1.7	0.6	1.2
27–28 Years															0.5	*	0.3	0.6	0.3	0.8	0.5	0.3	*	0.4	0.7	0.8	0.8	0.8	1.3	1.3	1.0	0.6
29–30 Years															0.3	0.1	0.4	0.3	0.7	0.6	0.2	0.7	*	*	*	0.3	0.7	0.7	0.1	1.7	0.9	0.7
31–32 Years[b]															0.3	0.2	0.2	0.2	0.3	*	0.4	0.7	1.2	*	*	0.7	—	—	—	—	—	—

Source. The Monitoring the Future study, the University of Michigan.

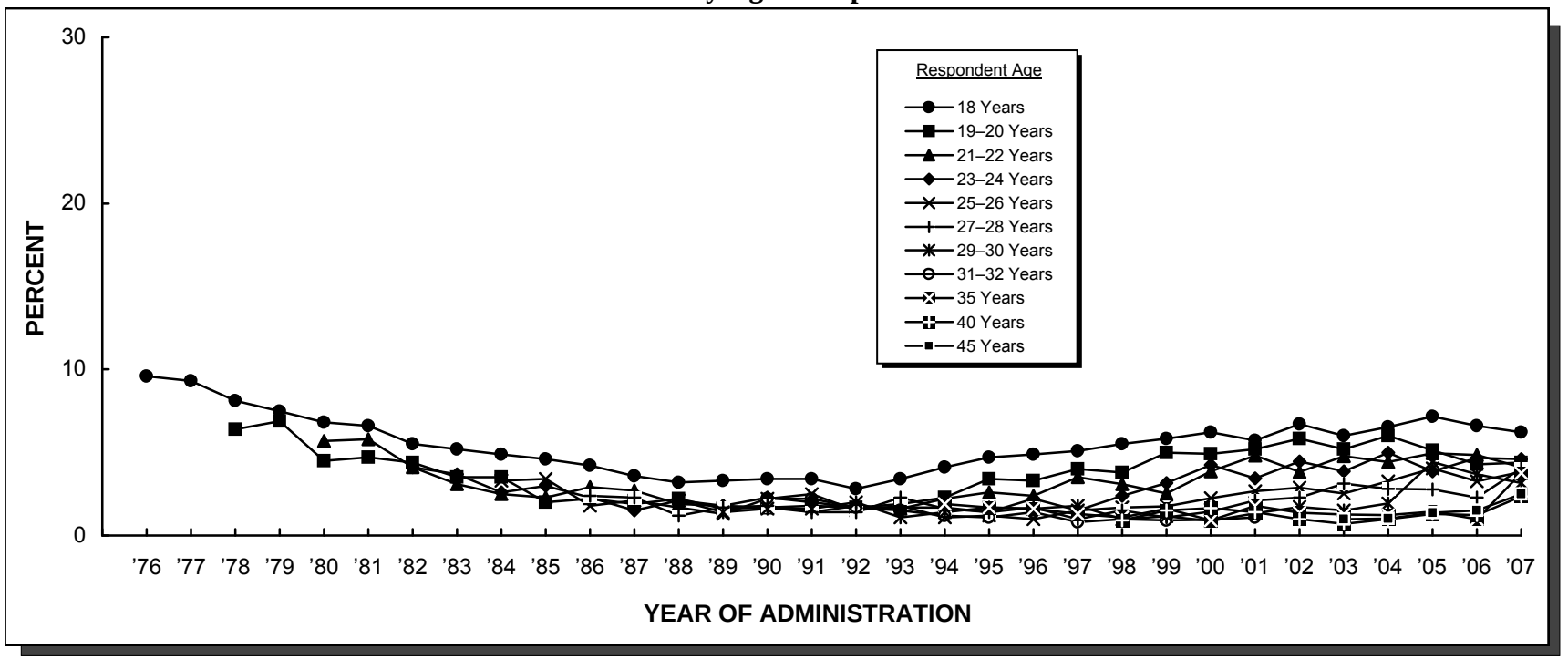
"*" indicates a percentage of less than 0.05%.

[a]Questions about the use of crystal methamphetamine were not included in the questionnaires administered to the 35-, 40-, and 45-year-olds.

[b]Beginning in 2002, respondents were followed through age 30 (instead of 32, as in past years).

FIGURE 5-15

Sedatives (Barbiturates): Trends in Annual Prevalence among Respondents of Modal Ages 18 through 45 by Age Group

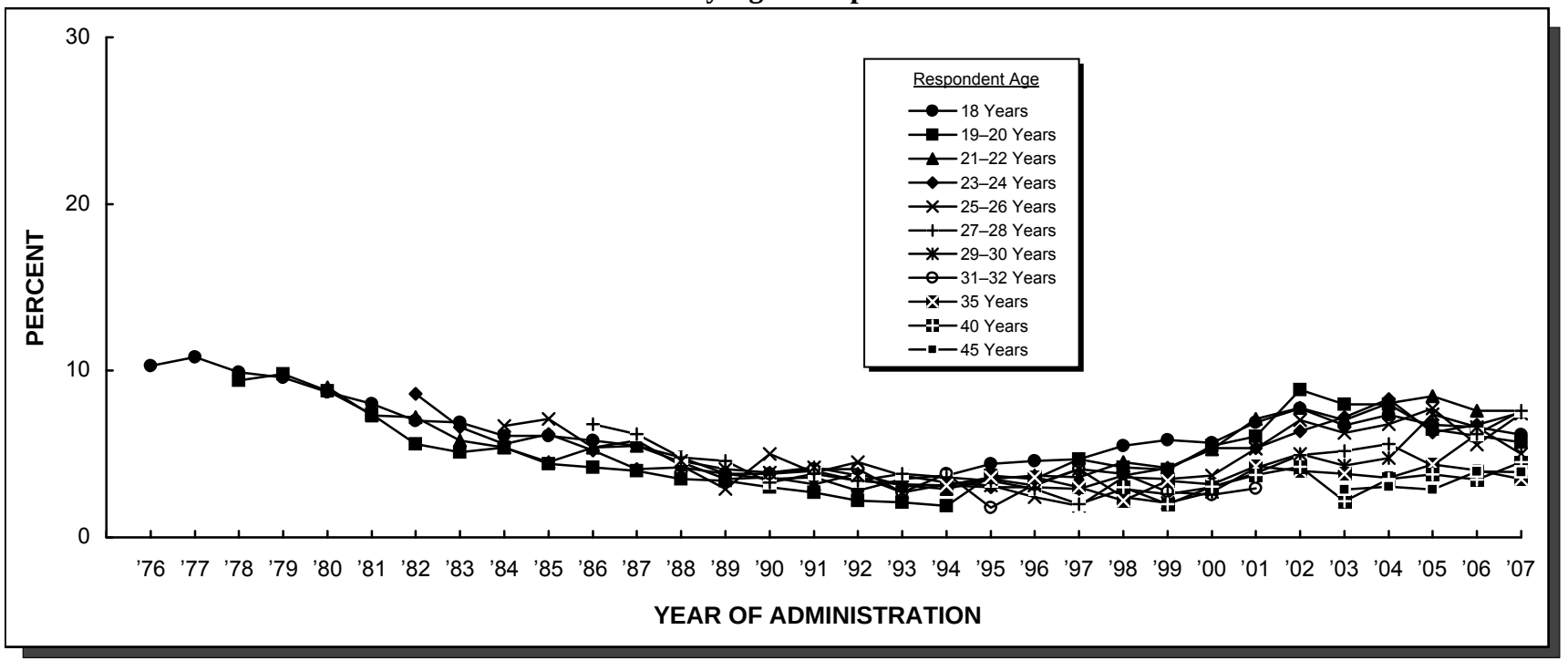


Age	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
18 Years	9.6	9.3	8.1	7.5	6.8	6.6	5.5	5.2	4.9	4.6	4.2	3.6	3.2	3.3	3.4	3.4	2.8	3.4	4.1	4.7	4.9	5.1	5.5	5.8	6.2	5.7	6.7	6.0	6.5	7.2	6.6	6.2
19–20 Years			6.4	6.9	4.5	4.7	4.4	3.5	3.5	2.0	2.2	1.9	2.2	1.6	1.7	1.8	1.7	1.9	2.3	3.4	3.3	4.0	3.8	5.0	4.9	5.2	5.8	5.2	6.0	5.1	4.3	4.4
21–22 Years					5.7	5.8	4.1	3.1	2.5	2.3	2.9	2.7	1.9	1.8	1.7	1.4	1.8	1.6	2.2	2.6	2.4	3.5	3.1	2.5	3.9	4.8	3.8	4.8	4.4	5.0	4.8	4.1
23–24 Years							4.1	3.7	2.6	3.0	2.3	1.5	2.1	1.8	2.3	2.0	1.7	1.7	1.7	1.4	2.2	1.5	2.4	3.2	4.3	3.4	4.4	3.9	5.0	3.8	4.7	4.6
25–26 Years									3.3	3.4	1.8	2.1	1.7	1.3	2.2	2.5	1.5	1.8	1.1	1.2	1.0	1.5	1.7	1.8	2.2	2.7	2.9	2.5	3.3	4.0	3.3	3.8
27–28 Years											2.4	2.3	1.2	1.7	1.8	1.4	1.4	2.3	1.6	1.4	1.7	1.0	1.5	1.1	1.4	2.1	2.3	3.1	2.8	2.8	2.3	4.0
29–30 Years													2.1	1.4	1.6	1.6	2.0	1.1	1.4	1.7	1.6	1.8	1.0	1.2	0.9	1.3	1.7	1.5	1.9	4.4	3.7	3.2
31–32 Years[a]															2.2	2.2	1.7	1.5	1.2	1.1	1.4	0.8	1.0	0.9	0.9	1.1	—	—	—	—	—	—
35 Years																			1.9	1.7	1.6	1.3	1.1	1.6	0.9	1.8	1.4	1.3	1.2	1.4	1.0	3.8
40 Years																							0.9	1.5	1.6	1.4	1.0	0.7	1.0	1.3	1.2	2.4
45 Years																												1.0	1.0	1.4	1.5	2.5

Source. The Monitoring the Future study, the University of Michigan.

[a]Beginning in 2002, respondents were followed through age 30 (instead of 32, as in past years).

FIGURE 5-16
Tranquilizers: Trends in Annual Prevalence among Respondents of Modal Ages 18 through 45 by Age Group



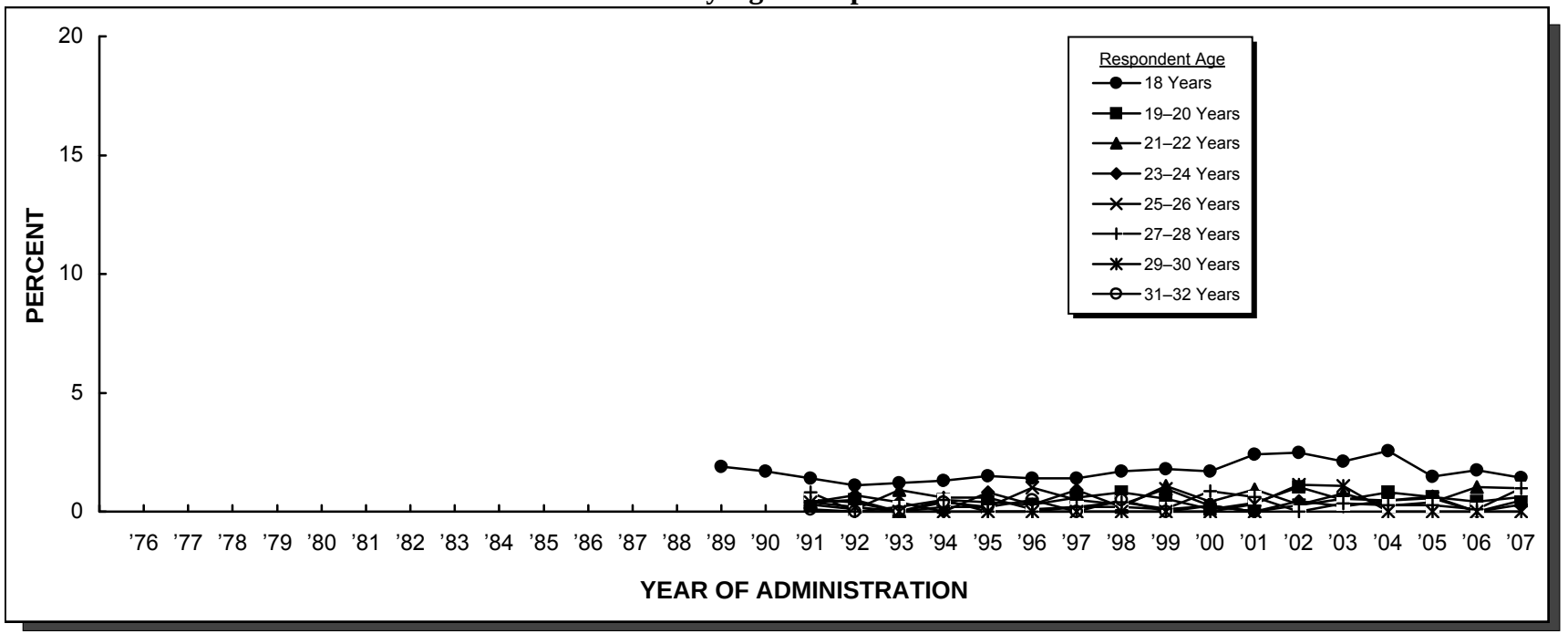
Age	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
18 Years	10.3	10.8	9.9	9.6	8.7	8.0	7.0	6.9	6.1	6.1	5.8	5.5	4.8	3.8	3.5	3.6	2.8	3.5	3.7	4.4	4.6	4.7	5.5	5.8	5.7	6.9	7.7	6.7	7.3	6.8	6.6	6.2
19–20 Years			9.4	9.8	8.8	7.4	5.6	5.1	5.4	4.4	4.2	4.0	3.5	3.4	3.0	2.7	2.2	2.1	1.9	3.7	3.5	4.7	4.2	4.1	5.5	6.1	8.8	8.0	8.0	6.5	6.1	5.7
21–22 Years					9.0	7.3	7.2	5.8	5.4	4.5	5.4	5.5	4.5	3.5	3.6	3.2	3.8	3.1	2.9	3.5	3.7	3.6	4.5	4.2	5.3	7.1	7.8	7.0	8.1	8.5	7.6	7.6
23–24 Years							8.6	6.6	5.6	6.2	5.2	4.1	4.2	3.8	3.8	4.0	3.4	3.2	3.1	3.0	3.0	2.9	3.7	4.2	5.3	5.4	6.4	7.2	8.3	6.3	6.8	7.5
25–26 Years									6.7	7.1	5.4	5.8	4.3	2.9	5.0	3.9	4.5	3.7	3.3	3.1	2.4	1.9	3.6	3.5	3.7	5.3	7.0	6.3	6.8	7.7	5.6	7.4
27–28 Years											6.8	6.2	4.8	4.6	3.3	3.8	3.4	3.8	3.6	3.4	2.9	2.0	2.9	2.6	3.0	3.9	4.9	5.2	5.6	4.3	6.2	7.6
29–30 Years													4.6	4.1	3.9	4.2	3.7	2.7	3.2	3.5	3.1	4.1	2.4	2.1	2.7	4.2	5.0	4.3	4.8	7.4	6.6	5.0
31–32 Years[a]															3.8	4.1	4.1	2.7	3.8	1.8	3.2	4.1	3.8	2.7	2.6	3.0	—	—	—	—	—	—
35 Years																			3.1	3.6	3.6	3.0	2.2	3.4	3.2	4.3	4.0	3.8	3.6	4.4	4.0	3.5
40 Years																							3.0	2.0	3.0	3.7	4.2	2.2	3.5	3.8	3.5	4.5
45 Years																												2.9	3.1	2.9	4.0	3.9

Source. The Monitoring the Future study, the University of Michigan.

[a]Beginning in 2002, respondents were followed through age 30 (instead of 32, as in past years).

FIGURE 5-17

Steroids: Trends in Annual Prevalence among Respondents of Modal Ages 18 through 32[a] by Age Group

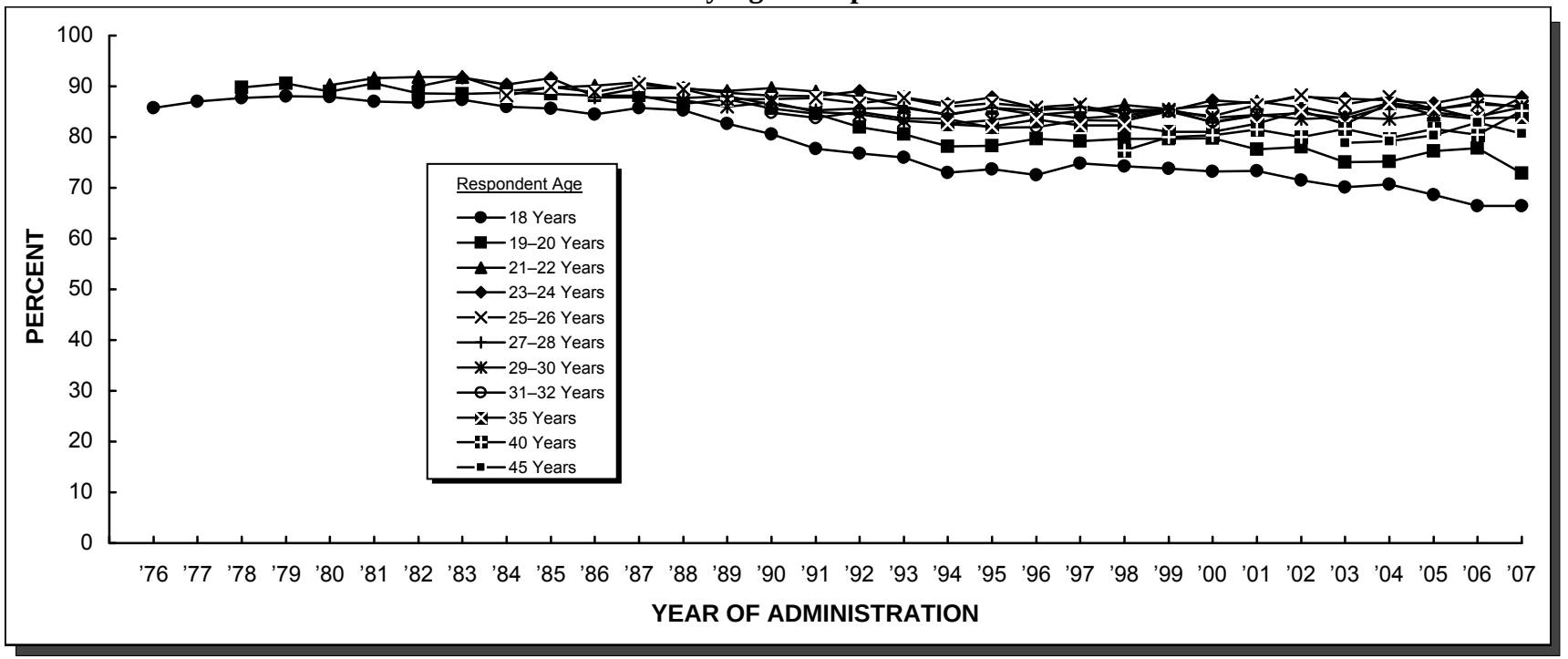


Age	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
18 Years														1.9	1.7	1.4	1.1	1.2	1.3	1.5	1.4	1.4	1.7	1.8	1.7	2.4	2.5	2.1	2.5	1.5	1.8	1.4
19–20 Years																0.4	0.5	*	0.5	0.4	0.3	0.6	0.8	0.5	0.1	0.4	1.0	0.5	0.8	0.6	0.4	0.6
21–22 Years																0.3	0.1	0.9	0.6	0.6	0.1	0.2	0.2	1.1	0.4	0.9	0.3	0.8	0.2	0.4	1.0	1.0
23–24 Years																0.4	0.7	0.4	*	0.8	0.3	0.9	0.2	0.1	0.3	*	0.4	0.2	0.5	0.6	*	0.3
25–26 Years																0.5	0.4	*	0.2	0.2	1.0	0.5	0.3	1.0	0.2	*	0.3	0.5	0.5	0.6	*	0.5
27–28 Years																0.8	*	0.2	0.5	*	*	0.2	0.4	0.1	0.9	0.6	*	0.3	0.3	0.3	0.1	1.0
29–30 Years																0.4	0.2	*	*	*	*	*	*	*	*	0.3	1.1	1.1	*	*	*	*
31–32 Years[b]																0.1	*	*	0.4	0.2	0.5	*	0.5	*	0.2	*	—	—	—	—	—	—

Source. The Monitoring the Future study, the University of Michigan.
"*" indicates a percentage of less than 0.05%.

[a]Questions about the use of steroids were not included in the questionnaires administered to the 35-, 40-, and 45-year-olds.
[b]Beginning in 2002, respondents were followed through age 30 (instead of 32, as in past years).

FIGURE 5-18a
Alcohol: Trends in Annual Prevalence among Respondents of Modal Ages 18 through 45 by Age Group

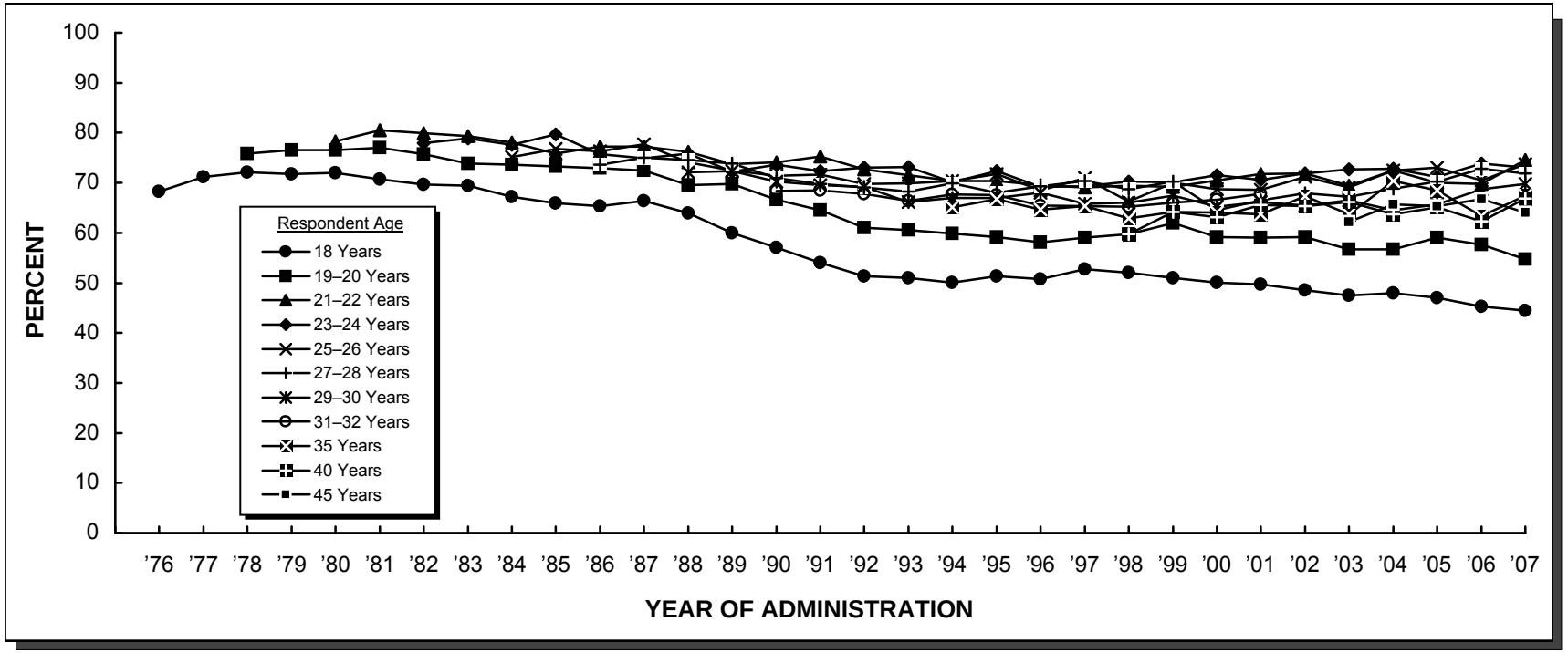


Age	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
18 Years	85.7	87.0	87.7	88.1	87.9	87.0	86.8	87.3	86.0	85.6	84.5	85.7	85.3	82.7	80.6	77.7	76.8	76.0	73.0	73.7	72.5	74.8	74.3	73.8	73.2	73.3	71.5	70.1	70.6	68.6	66.5	66.4
19–20 Years			89.8	90.6	89.0	90.6	88.6	88.5	88.7	88.5	88.2	88.2	86.6	87.5	85.6	84.6	81.9	80.6	78.2	78.3	79.6	79.2	79.7	79.6	79.7	77.6	78.0	75.0	75.2	77.3	77.9	72.9
21–22 Years					90.2	91.6	91.8	91.8	89.1	89.8	90.1	90.8	89.5	89.1	89.6	89.0	87.9	85.9	84.4	85.7	84.4	85.1	86.3	85.5	86.2	87.0	85.8	84.3	86.8	84.4	83.6	87.8
23–24 Years							90.0	91.7	90.4	91.6	88.1	89.7	89.7	88.7	88.2	88.1	89.1	87.8	86.6	87.8	85.7	85.4	84.9	85.2	87.2	86.7	88.0	87.6	87.2	86.6	88.2	87.8
25–26 Years									88.2	89.9	88.8	90.5	89.4	87.5	87.5	87.7	86.7	87.8	86.0	86.7	85.9	86.4	83.8	85.0	84.2	86.3	88.3	86.4	87.9	85.6	86.4	86.1
27–28 Years											87.8	87.8	87.7	88.0	86.4	85.3	85.6	85.7	84.5	85.7	85.3	85.9	85.3	85.4	82.9	84.2	84.7	83.6	86.1	85.3	86.9	85.8
29–30 Years													87.2	86.0	86.9	85.0	84.5	83.2	82.6	83.3	84.7	83.7	84.2	85.4	83.7	84.3	83.6	83.9	83.5	84.8	84.0	85.9
31–32 Years[a]															84.8	83.8	85.0	83.6	83.6	81.8	82.0	83.3	83.2	85.1	82.9	84.4	—	—	—	—	—	—
35 Years																			82.5	82.1	83.5	82.3	82.3	81.0	81.0	82.7	85.1	82.6	86.7	85.8	83.7	84.0
40 Years																							77.3	80.0	80.3	81.5	80.0	81.6	79.8	81.6	80.5	85.2
45 Years																												78.9	79.2	80.3	82.8	80.7

Source. The Monitoring the Future study, the University of Michigan.

[a]Beginning in 2002, respondents were followed through age 30 (instead of 32, as in past years).

FIGURE 5-18b
Alcohol: Trends in 30-Day Prevalence among Respondents of Modal Ages 18 through 45 by Age Group

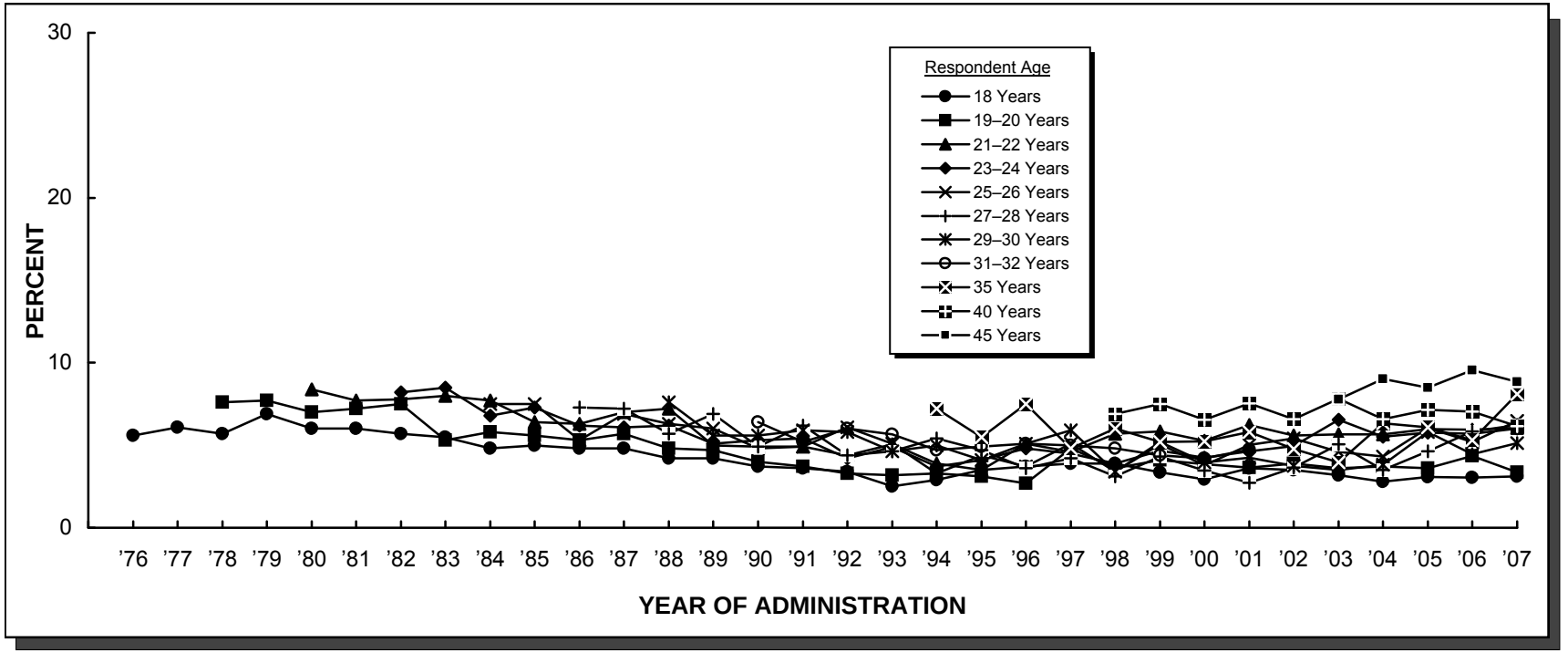


Age	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
18 Years	68.3	71.2	72.1	71.8	72.0	70.7	69.7	69.4	67.2	65.9	65.3	66.4	63.9	60.0	57.1	54.0	51.3	51.0	50.1	51.3	50.8	52.7	52.0	51.0	50.0	49.8	48.6	47.5	48.0	47.0	45.3	44.4
19–20 Years			75.8	76.5	76.6	77.0	75.7	73.9	73.6	73.3	72.9	72.5	69.6	69.8	66.6	64.5	61.0	60.5	59.9	59.2	58.1	59.0	59.7	62.0	59.1	59.0	59.2	56.7	56.7	59.0	57.6	54.7
21–22 Years					78.3	80.5	79.9	79.3	78.1	75.9	77.2	77.2	76.2	73.8	74.1	75.3	72.7	71.6	70.4	70.4	69.5	69.1	69.4	69.2	70.5	71.8	71.9	69.5	72.4	70.1	69.7	74.5
23–24 Years							77.9	78.9	77.6	79.7	75.7	74.9	75.9	72.2	73.6	72.4	73.0	73.1	70.1	72.3	69.2	69.3	70.3	70.2	71.5	70.6	71.9	72.7	72.8	71.2	73.8	73.1
25–26 Years									75.2	76.8	76.3	77.7	74.1	72.5	71.4	71.6	69.8	69.9	70.4	71.8	68.5	70.9	66.3	70.0	68.7	68.7	71.2	69.1	72.4	73.0	70.4	73.8
27–28 Years											73.6	75.0	74.6	73.9	70.9	69.8	69.1	68.3	69.9	68.0	69.3	70.4	68.7	70.2	64.6	66.5	67.9	67.2	68.8	70.3	72.8	71.9
29–30 Years													72.1	72.3	70.2	69.6	69.2	66.2	67.0	67.0	68.0	65.8	66.1	67.4	65.2	66.2	65.4	66.5	64.5	65.7	68.7	69.8
31–32 Years[a]															68.4	68.5	67.8	66.4	67.7	67.6	65.5	65.3	65.2	66.0	66.7	67.8	—	—	—	—	—	—
35 Years																			65.1	66.8	64.7	65.3	62.9	64.2	64.0	63.7	67.3	63.7	70.3	68.5	63.3	67.5
40 Years																							59.8	64.2	63.1	65.6	65.4	66.2	63.7	65.1	62.3	66.9
45 Years																												62.2	65.7	65.4	66.7	64.1

Source. The Monitoring the Future study, the University of Michigan.

[a]Beginning in 2002, respondents were followed through age 30 (instead of 32, as in past years).

FIGURE 5-18c
Alcohol: Trends in 30-Day Prevalence of Daily Use among Respondents of Modal Ages 18 through 45 by Age Group



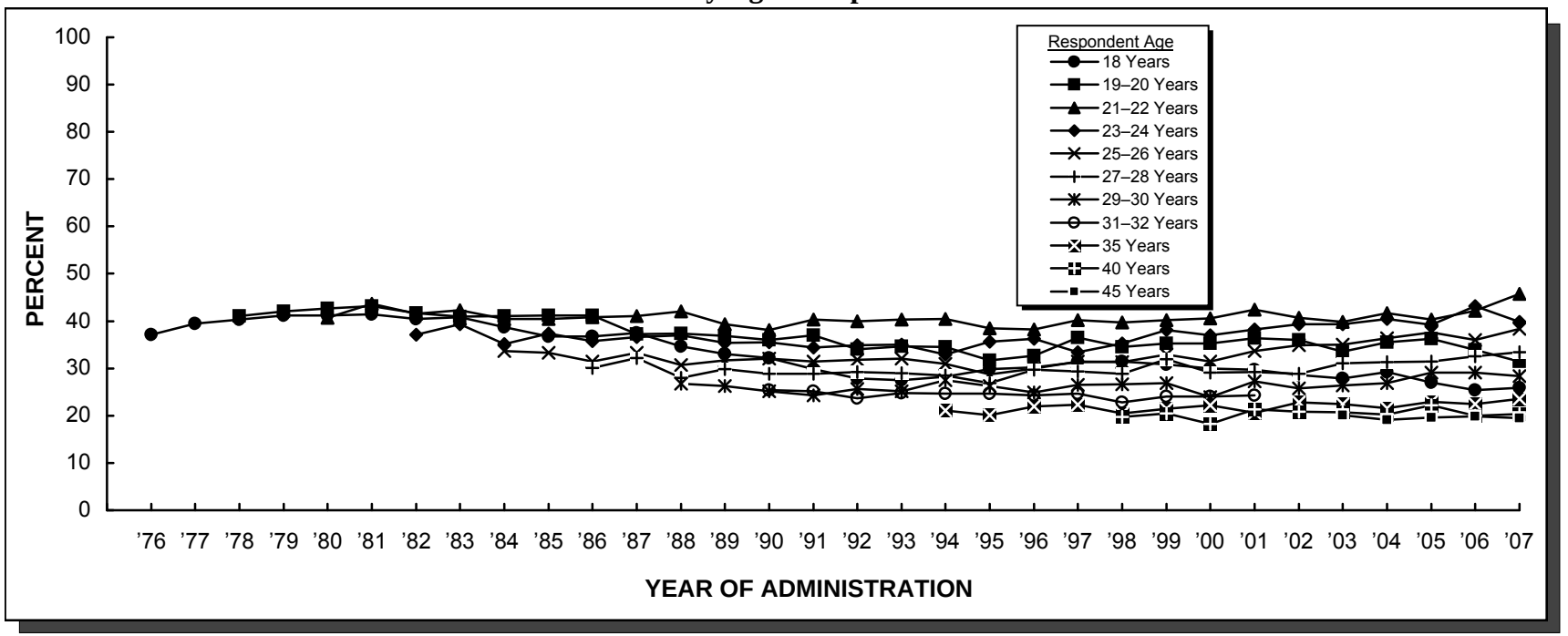
Age	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
18 Years	5.6	6.1	5.7	6.9	6.0	6.0	5.7	5.5	4.8	5.0	4.8	4.8	4.2	4.2	3.7	3.6	3.4	2.5	2.9	3.5	3.7	3.9	3.9	3.4	2.9	3.6	3.5	3.2	2.8	3.1	3.0	3.1
19–20 Years			7.6	7.7	7.0	7.2	7.5	5.3	5.8	5.6	5.3	5.7	4.8	4.7	4.0	3.7	3.3	3.2	3.3	3.1	2.7	4.8	3.6	4.1	3.9	3.6	3.9	3.6	3.7	3.6	4.3	3.4
21–22 Years					8.4	7.7	7.8	8.0	7.7	6.4	6.3	7.0	7.2	5.0	4.9	4.9	4.4	5.1	3.9	3.5	5.1	4.6	5.7	5.9	5.3	6.2	5.6	5.7	5.7	6.0	5.9	6.1
23–24 Years							8.2	8.5	6.8	7.3	6.2	6.1	6.2	5.1	5.3	5.4	4.2	4.9	3.7	4.1	4.8	4.5	3.9	4.7	4.2	4.6	5.0	6.5	5.5	5.8	5.7	6.0
25–26 Years									7.5	7.5	5.3	6.9	6.3	6.0	4.8	4.9	6.1	5.1	3.3	4.4	3.7	5.1	3.4	5.1	3.8	5.0	5.4	4.6	4.3	6.0	5.2	6.5
27–28 Years											7.3	7.2	5.7	6.9	4.9	6.2	4.4	4.7	5.4	4.7	3.6	4.2	3.1	4.3	3.5	2.7	3.7	5.1	3.5	4.6	5.8	6.2
29–30 Years													7.6	5.6	5.6	5.9	5.8	4.6	5.0	4.1	5.1	5.9	3.4	5.2	3.9	4.3	3.8	3.5	3.8	5.8	4.5	5.1
31–32 Years[a]															6.4	5.2	6.0	5.7	4.7	4.9	5.1	5.0	4.8	4.4	4.2	4.7	—	—	—	—	—	—
35 Years																			7.2	5.5	7.5	4.8	6.0	5.2	5.2	5.8	4.8	3.9	6.3	6.1	5.3	8.1
40 Years																							6.9	7.5	6.5	7.5	6.6	7.8	6.6	7.2	7.0	6.1
45 Years																												7.8	9.0	8.5	9.5	8.8

Source. The Monitoring the Future study, the University of Michigan.

[a]Beginning in 2002, respondents were followed through age 30 (instead of 32, as in past years).

FIGURE 5-18d

Alcohol: Trends in 2-Week Prevalence of Having 5 or More Drinks in a Row among Respondents of Modal Ages 18 through 45 by Age Group



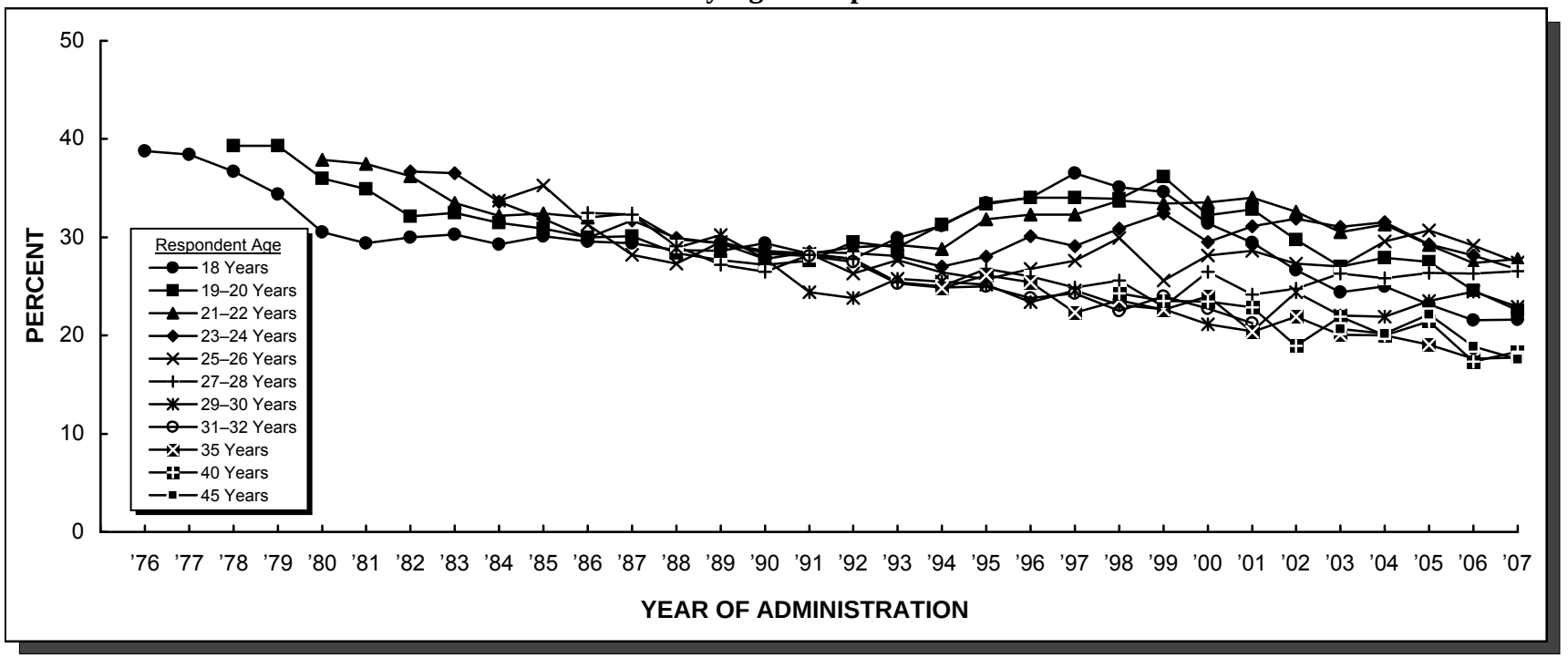
Age	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
18 Years	37.1	39.4	40.3	41.2	41.2	41.4	40.5	40.8	38.7	36.7	36.8	37.5	34.7	33.0	32.2	29.8	27.9	27.5	28.2	29.8	30.2	31.3	31.5	30.8	30.0	29.7	28.6	27.9	29.2	27.1[a]	25.4	25.9
19–20 Years			41.1	42.1	42.7	43.1	41.7	40.9	41.0	41.2	41.2	37.2	37.3	36.9	36.0	37.0	34.0	34.6	34.5	31.7	32.7	36.5	34.5	35.3	35.3	36.3	36.0	33.6	35.5	36.3	33.9	31.4
21–22 Years					40.7	43.6	41.6	42.3	40.4	40.4	40.8	41.0	42.0	39.3	38.1	40.3	39.9	40.3	40.5	38.5	38.2	40.2	39.7	40.2	40.6	42.4	40.7	39.9	41.7	40.4	42.2	45.8
23–24 Years							37.1	39.3	35.1	37.3	35.8	36.6	37.0	35.4	35.5	34.4	34.9	35.0	32.9	35.6	36.3	33.4	35.3	38.1	37.0	38.2	39.4	39.3	40.4	39.2	43.2	39.8
25–26 Years									33.7	33.3	31.5	33.3	30.7	31.7	32.0	31.5	31.8	32.1	30.9	28.7	30.0	31.5	31.3	33.0	31.5	33.7	34.9	35.1	36.4	37.7	36.0	38.3
27–28 Years											30.1	32.2	28.0	29.8	28.9	28.8	29.2	29.0	28.5	26.9	29.7	29.3	28.9	32.0	29.1	29.2	28.9	31.1	31.3	31.5	32.5	33.4
29–30 Years													26.7	26.3	25.2	24.3	25.7	25.1	27.5	26.3	24.9	26.5	26.6	26.9	24.0	27.3	25.8	26.4	26.9	29.1	29.1	28.4
31–32 Years[b]															25.4	25.1	23.7	24.8	24.6	24.7	24.3	24.7	22.8	24.1	24.1	24.3	—	—	—	—	—	—
35 Years																			21.1	20.0	21.9	22.3	20.4	21.4	22.2	20.6	22.9	22.4	21.6	23.0	22.5	23.6
40 Years																							19.7	20.5	18.3	21.3	20.8	20.7	20.2	22.2	20.0	20.4
45 Years																												20.1	19.2	19.6	19.8	19.4

Source. The Monitoring the Future study, the University of Michigan.

[a]Due to a coding error for 18-year-olds, previous versions of this figure contained a value that was slightly off for the measure of five or more drinks in a row for 2005. This has been corrected here.

[b]Beginning in 2002, respondents were followed through age 30 (instead of 32, as in past years).

FIGURE 5-19a
Cigarettes: Trends in 30-Day Prevalence among Respondents of Modal Ages 18 through 45 by Age Group



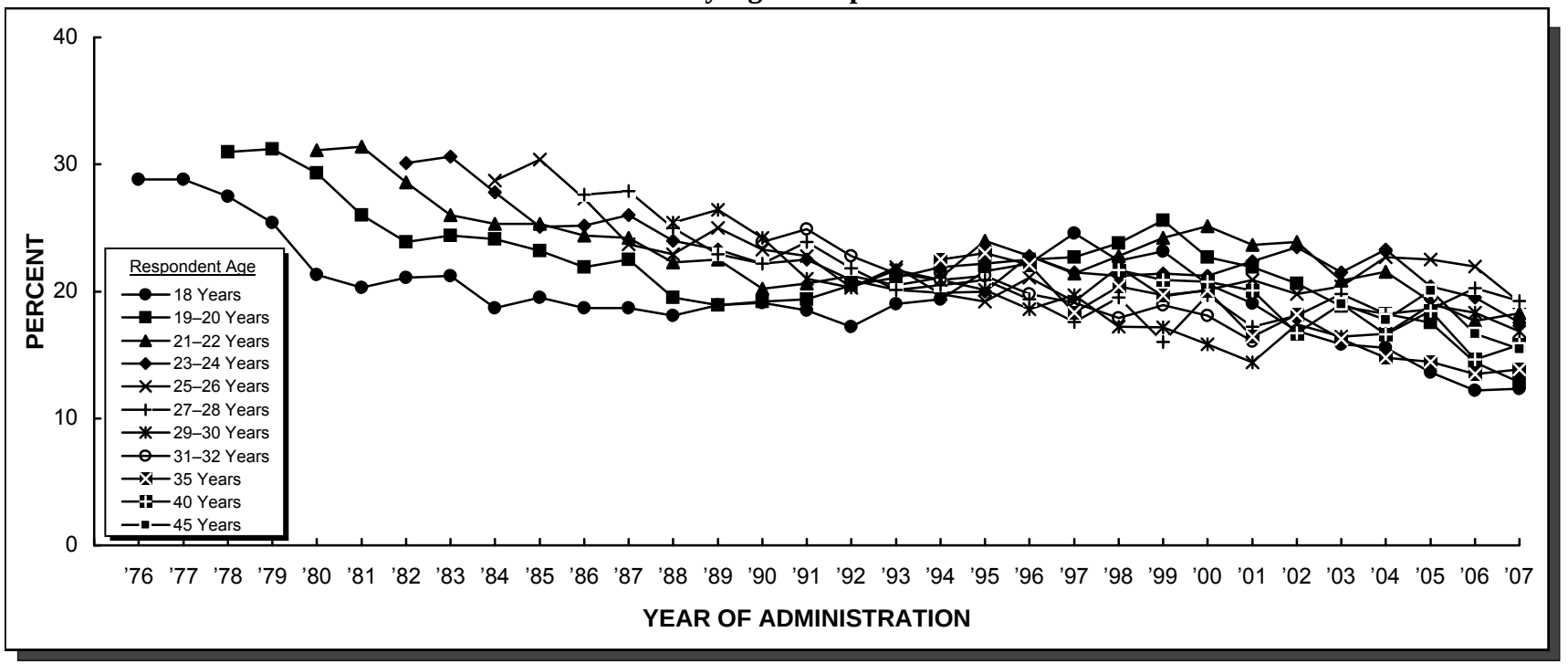
Age	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
18 Years	38.8	38.4	36.7	34.4	30.5	29.4	30.0	30.3	29.3	30.1	29.6	29.4	28.7	28.6	29.4	28.3	27.8	29.9	31.2	33.5	34.0	36.5	35.1	34.6	31.4	29.5	26.7	24.4	25.0	23.2	21.6	21.6
19–20 Years			39.3	39.3	36.0	34.9	32.1	32.5	31.5	30.9	30.0	30.1	28.4	27.7	27.2	27.6	29.5	29.0	31.3	33.4	34.0	34.0	33.9	36.1	32.2	32.8	29.8	27.0	27.9	27.5	24.6	22.6
21–22 Years					37.9	37.5	36.2	33.5	32.2	32.4	32.0	32.4	29.8	29.4	28.6	28.3	29.0	29.2	28.8	31.8	32.3	32.3	33.7	33.4	33.6	34.0	32.6	30.5	31.3	29.2	27.3	27.8
23–24 Years							36.7	36.5	33.6	31.9	29.9	31.7	29.9	29.4	27.8	28.5	28.4	28.1	27.0	28.0	30.1	29.1	30.9	32.4	29.5	31.1	31.9	31.0	31.5	29.3	28.1	26.7
25–26 Years									33.7	35.3	31.3	28.2	27.3	29.5	28.4	28.3	26.3	27.7	26.4	25.7	26.8	27.6	29.9	25.6	28.2	28.6	27.3	27.0	29.6	30.7	29.1	27.5
27–28 Years											32.5	32.3	29.1	27.2	26.5	28.2	27.8	25.4	25.0	26.8	26.0	24.9	25.6	22.9	26.5	24.2	24.7	26.3	25.9	26.3	26.3	26.6
29–30 Years													28.9	30.2	27.8	24.4	23.8	25.8	25.5	25.2	23.4	24.6	23.1	22.7	21.2	20.4	24.4	22.0	21.9	23.5	24.4	22.9
31–32 Years[a]															28.3	28.1	27.5	25.3	24.9	25.0	23.8	24.3	22.5	24.0	22.7	21.2	—	—	—	—	—	—
35 Years																			24.8	26.1	25.4	22.3	23.6	22.6	24.0	20.4	21.9	20.1	20.0	19.1	17.7	17.8
40 Years																							24.3	23.5	23.5	22.9	18.9	21.9	20.0	21.4	17.3	18.3
45 Years																												20.7	20.2	22.1	18.9	17.6

Source. The Monitoring the Future study, the University of Michigan.

[a]Beginning in 2002, respondents were followed through age 30 (instead of 32, as in past years).

FIGURE 5-19b

Cigarettes: Trends in 30-Day Prevalence of Daily Use among Respondents of Modal Ages 18 through 45 by Age Group



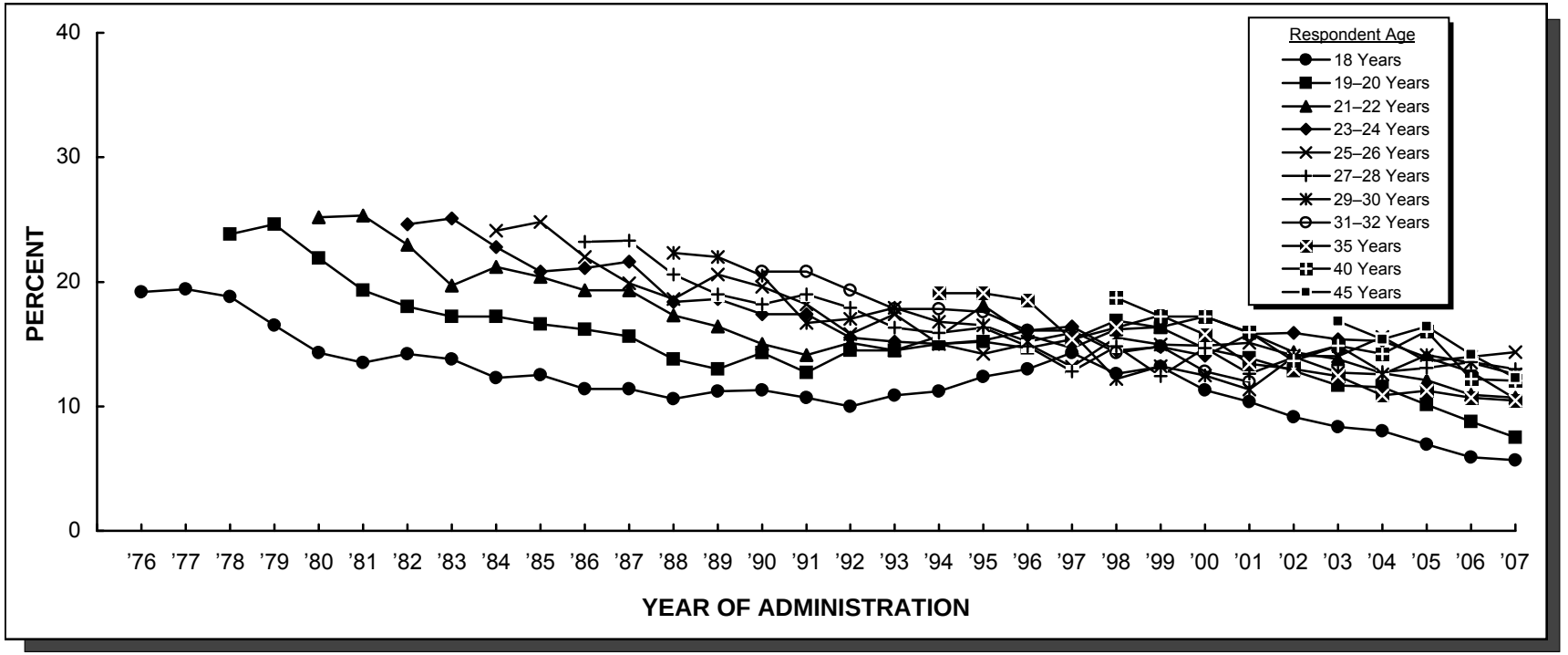
Age	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
18 Years	28.8	28.8	27.5	25.4	21.3	20.3	21.1	21.2	18.7	19.5	18.7	18.7	18.1	18.9	19.1	18.5	17.2	19.0	19.4	21.6	22.2	24.6	22.4	23.1	20.6	19.0	16.9	15.8	15.6	13.6	12.2	12.3
19–20 Years			31.0	31.2	29.3	26.0	23.9	24.4	24.1	23.2	21.9	22.5	19.5	18.9	19.2	19.4	20.5	21.1	21.9	22.2	22.5	22.7	23.8	25.6	22.7	21.9	20.6	18.8	18.2	17.6	14.4	12.9
21–22 Years					31.1	31.4	28.6	26.0	25.3	25.3	24.4	24.2	22.3	22.5	20.2	20.6	21.2	20.5	21.1	24.0	22.8	21.4	22.8	24.2	25.1	23.6	23.9	20.8	21.5	19.2	17.7	18.3
23–24 Years							30.1	30.6	27.8	25.1	25.2	26.0	24.0	23.3	22.2	22.5	20.9	20.1	19.9	20.0	22.8	21.5	21.2	21.4	21.2	22.4	23.5	21.5	23.3	20.4	19.5	17.5
25–26 Years									28.7	30.4	27.3	23.7	22.9	25.0	23.3	22.8	20.3	21.9	19.8	19.2	21.1	19.2	21.9	19.6	20.1	20.9	19.8	20.4	22.7	22.5	22.0	19.2
27–28 Years											27.6	27.9	25.0	22.9	22.2	23.9	21.8	20.1	20.5	20.9	19.4	17.6	19.5	16.0	19.7	17.2	18.1	19.8	18.2	18.6	20.2	19.3
29–30 Years													25.4	26.4	24.2	21.0	20.3	21.7	20.9	20.1	18.6	19.7	17.2	17.2	15.8	14.4	17.4	16.4	16.7	18.9	18.3	16.8
31–32 Years[a]															23.9	24.9	22.8	21.4	20.9	21.2	19.8	19.1	17.9	18.9	18.1	16.1	—	—	—	—	—	—
35 Years																			22.5	23.0	22.1	18.3	20.4	19.7	20.1	16.4	18.2	16.3	14.8	14.5	13.5	13.9
40 Years																							21.7	20.9	20.8	20.1	16.7	19.0	16.6	18.5	14.6	15.8
45 Years																												19.0	17.8	20.1	16.7	15.4

Source. The Monitoring the Future study, the University of Michigan.

[a]Beginning in 2002, respondents were followed through age 30 (instead of 32, as in past years).

FIGURE 5-19c

Cigarettes: Trends in 30-Day Prevalence of Smoking a Half Pack or More per Day among Respondents of Modal Ages 18 through 45 by Age Group



Age	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
18 Years	19.2	19.4	18.8	16.5	14.3	13.5	14.2	13.8	12.3	12.5	11.4	11.4	10.6	11.2	11.3	10.7	10.0	10.9	11.2	12.4	13.0	14.3	12.6	13.2	11.3	10.3	9.1	8.4	8.0	6.9	5.9	5.7
19–20 Years			23.8	24.6	21.9	19.3	18.0	17.2	17.2	16.6	16.2	15.6	13.8	13.0	14.3	12.7	14.5	14.5	15.0	15.2	14.7	15.4	16.9	16.3	14.6	13.9	12.8	11.7	11.6	10.1	8.8	7.5
21–22 Years					25.2	25.3	23.0	19.7	21.2	20.4	19.3	19.3	17.3	16.4	15.0	14.1	15.1	14.5	15.6	18.1	15.7	14.7	16.2	16.4	17.2	15.9	14.4	13.8	12.7	12.1	10.9	10.7
23–24 Years							24.6	25.1	22.8	20.8	21.1	21.6	18.4	18.6	17.4	17.4	15.5	15.2	15.0	15.3	16.1	16.4	14.5	14.8	14.1	15.8	15.9	15.4	15.2	13.9	12.8	10.6
25–26 Years									24.1	24.8	22.0	19.9	18.6	20.6	19.6	18.2	15.8	17.4	15.0	14.2	15.0	13.2	15.5	15.0	14.8	15.1	14.1	14.0	15.6	13.6	14.0	14.3
27–28 Years											23.2	23.3	20.6	19.0	18.2	19.0	17.9	16.3	15.9	16.3	14.8	12.8	14.8	12.4	14.7	12.6	13.9	14.8	12.8	13.1	13.6	13.0
29–30 Years													22.3	22.0	20.5	16.7	17.0	17.9	16.8	16.5	15.2	15.9	12.2	13.2	12.5	11.4	14.0	12.7	12.5	14.1	13.5	12.6
31–32 Years[a]															20.8	20.8	19.3	17.8	17.8	17.6	16.1	16.1	14.3	14.8	12.8	11.9	—	—	—	—	—	—
35 Years																			19.1	19.1	18.5	15.4	16.3	17.3	15.7	13.4	13.0	12.4	10.9	11.3	10.7	10.5
40 Years																							18.7	17.2	17.2	15.9	13.6	14.9	14.2	16.0	12.2	12.1
45 Years																												16.8	15.4	16.4	14.2	12.3

Source. The Monitoring the Future study, the University of Michigan.

[a]Beginning in 2002, respondents were followed through age 30 (instead of 32, as in past years).

Chapter 6

ATTITUDES AND BELIEFS ABOUT DRUGS AMONG YOUNG ADULTS

One of the most important theoretical and practical contributions of this study has been to demonstrate the extent to which attitudes and beliefs about drugs determine use of the various drugs. Earlier volumes in this monograph series, as well as other publications from the study, have demonstrated that shifts in certain attitudes and beliefs—in particular the degree of risk of harm perceived to be associated with use of a particular drug—are important in explaining changes in actual drug-using behavior. Indeed, on a number of occasions we have accurately predicted such changes.[47] In this chapter, we review trends since 1980 in the attitudes and beliefs among young adults.

PERCEIVED HARMFULNESS OF DRUGS

Table 6-1 provides trends in the percentages of young adults who perceive a "great risk" of harm associated with differing usage levels of 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 300–600 weighted cases per year for each age band) and, thus, to improve the reliability of the estimates. (The numbers of weighted cases are given at the end of Table 6-1. The actual numbers of respondents are somewhat larger.) Still, these are relatively small sample sizes compared to those available for 8th, 10th, and 12th graders, and thus the change estimates may be relatively more labile. Because of the nature of the Monitoring the Future 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 27- to 30-year-olds (since 1988). Also displayed in this table are comparison data for 12th graders, shown here as 18-year-olds, from 1980 onward. (See also Table 8-3 in chapter 8 of *Volume I* for the longer term trends in 12th graders' levels of perceived risk.) Questions about these attitudes and beliefs are not included in the questionnaires for 35-, 40-, and 45-year-old respondents.

- Table 6-1 illustrates considerable differences in the degree of risk young adults associate with various drugs. In general, the results closely parallel the distinctions made by 12th graders.

[47]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; Bachman, J. G., Johnston, L. D., & O'Malley, P. M. (1998). Explaining recent increases in students' marijuana use: Impacts of perceived risks and disapproval, 1976 through 1996. *American Journal of Public Health, 88,* 887–892; Johnston, L. D. (1981). Characteristics of the daily marijuana user. In R. de Silva, R. L. DuPont, & G. K. Russell (Eds.), *Treating the marijuana-dependent person* (pp. 12–15). 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 & 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). Rockville, MD: National Institute on Drug Abuse.

- ***Marijuana*** is seen as the least risky of the illicit drugs, although sharp distinctions are made between different levels of marijuana use. In 2007, experimental use of marijuana is perceived as being of "great risk" by only 11–17% of all high school graduates in the age band 19 to 30, whereas regular use is perceived to carry great risk by over half (50–53%).

  It is interesting to note that in the mid-1980s and early 1990s, fewer of the older age groups attached great risk to marijuana use than did the younger age bands. Indeed, there was a regular negative ordinal relationship between age and perceived risk for some years after 1980, when the first comparisons were available. Although this may have first looked like an age effect, our study design allows us to recognize it as a cohort effect: the younger cohorts initially perceived marijuana as more dangerous than the older cohorts and persisted in such beliefs as they grew older. Newer cohorts, however, have shown lower levels of perceived risk. Twelfth graders from the Class of 2007 are much less likely to perceive regular marijuana use as dangerous than did 12th-grade cohorts in the late 1980s and early 1990s. This reflects what we have interpreted as "generational forgetting," a phenomenon wherein younger replacement cohorts no longer carry the knowledge—or had the direct or vicarious experience on which the knowledge is based—that the older cohorts had at that age. (The implications of this concept for prevention are discussed in the last section of this chapter.)

  The decline in perceived risk that began in the 1990s was greater in the younger age bands, including grades 8 and 10, and least among the 27- to 30-year-olds. We believe that much of the decline in perceived risk that occurred in the older age bands resulted directly from generational replacement of earlier cohorts by later, less concerned ones. The credibility of this view is strengthened by the 1993–1995 reversal of the relationship between age and perceived risk of regular use. This reversal is consistent with an underlying cohort effect and could not simply reflect an association between age and a regular change in these attitudes (i.e., an "age effect"). The decline in perceived risk for regular marijuana use ended in a somewhat staggered fashion—among 12th graders in 1999, among 19- to 22-year-olds in 2001, among 23- to 26-year-olds in 2002, and among 27- to 30-year-olds in 2004. In 2007 all four age strata showed declines of three to four percentage points in perceived risk for regular marijuana use, though not one of the declines was statistically significant.

- Young adults view experimental use of any of the other illicit drugs as distinctly more risky than use of marijuana. About 26–28% of young adults ages 19 to 30 think trying ***sedatives*** (***barbiturates***) involves great risk; the corresponding figures are 37–38% for ***amphetamines***, 40–52% for ***LSD*** or ***ecstasy*** (***MDMA***), 47–54% for ***cocaine powder***, 52–64% for ***crack***, and 68–70% for ***heroin***. (Note that the two classes of prescription drugs have the lowest levels of perceived risk among this set.)

- In the past, the older age groups were more likely than the younger age groups to see ***LSD*** as dangerous. The age distinctions for LSD use became sharper through about 2001 as perceived risk declined more in the younger age groups—again indicating some important cohort changes in these attitudes, quite likely as a result of generational forgetting. In recent years, there has been a decline in perceived risk in the older age groups, likely as a result of

generational replacement (i.e., new cohorts moving up the age spectrum), which has begun to diminish the age differences.

- Young adults have generally reported somewhat higher perceived risk with respect to ***cocaine*** use than 12th graders, who have had less experience with this drug. Among 12th graders and the young adult age groups, the danger associated with using cocaine on a regular basis grew considerably (by 13 and 17 percentage points, respectively) between 1980 and 1986. However, these changed beliefs did not translate into changed behavior until the perceived risk associated with *experimental* and *occasional* use began to rise sharply after 1986. When these two measures rose, a sharp decline in actual use occurred.

  We hypothesized that respondents saw only these lower levels of use as relevant to them and, therefore, saw themselves as vulnerable only to the dangers of such use. (No one starts out planning to be a heavy user; further, in the early 1980s, cocaine was not believed to be addictive.) Based on this hypothesis, we included the additional question about occasional use in 1986, just in time to capture a sharp increase in perceived risk later that year. This increase occurred largely in response to the growing media frenzy about cocaine—and crack cocaine, in particular—and to the widely publicized, cocaine-related deaths of several public figures (most notably, Len Bias, a collegiate basketball star and high National Basketball Association draft pick). After stabilizing for a few years, perceived risk began to fall off after about 1991 among 12th graders, but not among the older age groups—again suggesting that lasting cohort differences were emerging, quite possibly as a result of generational forgetting of the dangers of cocaine in the younger age groups. A decline in perceived risk began among 19- to 22-year-olds starting after 1994, among 23- to 26-year-olds after 1997, and among 27- to 30-year-olds after 2001.

- A similar situation now exists for ***crack***, for which perceived risk is highest in the oldest age band and lowest among 12th graders. Trend data (available since 1987) on the risks perceived to be associated with use of crack show increases in the 1987–1990 interval for all age groups, followed by relatively little change in the older age strata. Since 1990, twelfth graders have shown decreases in the perceived risk of experimental use of crack—perhaps reflecting the onset of generational forgetting of its dangers—leaving them as perceiving considerably less risk than the older groups. The young adult age groups have shown a staggered decline in this measure, with 19- to 22-year-olds showing a decline after 1994, 23- to 26-year-olds since 1996, and 27- to 30-year-olds after 2001. As a result, the different ages spread out more in their levels of perceived risk of crack use, until recent declines in the older age groups after about 2002.

- Questions about perceived risk of ***crystal methamphetamine*** (***ice***) use were introduced in 1990, and the results show what may be an important reason for its lack of rapid spread. More than half of all 12th graders and young adults perceived it as a quite dangerous drug even to try, perhaps because it was likened to crack in many media accounts. (Both drugs come in crystal form, both are burned and the fumes inhaled, both are stimulants, and both can produce a strong dependence.) There was rather little age-related difference in perceived risk associated with use of crystal methamphetamine in 1990 and 1991 (although the two

youngest age groups were somewhat higher). But as perceived risk fell considerably among 12th graders (and eventually among 19- to 22-year-olds) and held steady or rose in the oldest two age groups, an age-related difference emerged. Now perceived risk has risen some among 19- to 22-year-olds, narrowing the age-related differences that had emerged for a few years. Still, 12th graders are less likely to see risk attached to trying crystal methamphetamine (60%) than are 27- to 30-year-olds (68%), again very likely due to generational forgetting.

- Questions about perceived risk of ***ecstasy*** (***MDMA***) were introduced in the follow-up surveys in 1989, but were not asked of 12th graders until 1997. At the beginning of the 1990s, all young adult age bands viewed ecstasy as a fairly dangerous drug, even for experimentation. But, again, the different age bands had diverging trends during the 1990s, with the oldest two age bands continuing to see ecstasy as quite dangerous, but the 19- to 22-year-olds (and very likely the 12th graders, for whom we did not have data until 1997) coming to see it as less so. In 2000, 38% of 12th graders saw great risk in trying ecstasy versus 49% of 27- to 30-year-olds; in 2001, the corresponding figures were 46% and 54%. In fact, three of the four age bands showed appreciable increases in perceived risk for ecstasy in 2001, which led us to predict a decline in use in an earlier edition of this volume. The increase in perceived risk continued in 2002 in the two youngest age strata, and their use of ecstasy did, indeed, begin to decline—and decline sharply (see chapter 5). Perceived risk continued to rise through 2005 for the two youngest age groups, with the increase extending through 2007 among 23- to 26-year-olds. In 2007 there were small declines among the two younger age bands, but the younger groups were still more concerned than the older age group about the dangers of ecstasy use—a reversal of the situation that occurred in the late 1990s.

- Young adults have been more cautious about ***heroin*** use than 12th graders. In general, there has been relatively little change over the years in the proportions of all age groups seeing *regular* heroin use as dangerous; the great majority of each group (over 86%) consistently held this viewpoint. With regard to heroin experimentation, from 1975 to 1986 there had been a downward shift among 12th graders in the proportion seeing great risk associated with trying heroin. Following this decline (although their data do not extend back as far), young adults showed an increased caution about heroin use in the latter half of the 1980s—possibly due to the association of heroin injection with the spread of HIV—followed by a leveling through most of the 1990s. In 1996 and 1997, young adults' perceived risk increased some, as happened among the 12th graders (as well as among the 8th and 10th graders). These various trends may reflect, respectively, (a) the lesser attention paid to heroin by the media during the late 1970s and early 1980s as cocaine took center stage; (b) the subsequent great increase in attention paid to intravenous heroin use in the latter half of the 1980s because of the new focus on its important role in the spread of HIV/AIDS; (c) the emergence in the 1990s of heroin so pure that people no longer needed to use a needle to administer it, resulting in lower perceived risk; and (d) the subsequent increased attention given to heroin by the media (partly as a result of some overdose deaths by public figures and partly prompted by the emergence of "heroin chic" in the design industry), as well as through an anti-heroin media campaign launched by the Partnership for a Drug-Free

America in June 1996. At present, young adults still see heroin use as more dangerous than do 12th graders (Table 6-1); the differences have generally been largest for experimental and occasional use.

- A large minority of young adults see ***heavy drinking on weekends*** as dangerous (40–44%), as do 12th graders (46%). The belief that heavy drinking carries great risk has increased over the years in these age groups, rising among 12th graders from 36% in 1980 to 49% in 1992. Among 19- to 22-year-olds, it rose from a low of 30% in 1981 to 42% in 1992; the increases among the older groups were smaller. The increase in this belief may well help to explain the important decline in actual heavy drinking, and may in turn be explained by the media campaigns against drunk driving and the increase in the drinking age in a number of states.[48] After reaching peaks in the early 1990s, perceived risk for this behavior eased back some in all age strata, following a staggered pattern in which perceived risk peaked among 18-year-olds in 1992, among 19- to 22-year-olds in 1993, among 23- to 26-year-olds in 1994, and among 27- to 30-year-olds in 1995, suggesting a cohort effect.

- Between 1980 and 1991, a gradually increasing proportion of all four age groups viewed drinking ***one or two drinks per day*** as dangerous; but then they all showed a parallel decrease in perceived risk for this behavior through at least 2000. It seems likely that the earlier increase was due to the general rising concern about the consequences of alcohol use, particularly drunk driving, and that the subsequent decline was due to increasing reports of cardiovascular health benefits of light-to-moderate daily alcohol consumption. In recent years there has been little systematic change in this belief in any of the age strata, and there has been little difference by age.

- More than four fifths (80–84%) of young adults now perceive regular ***pack-a-day cigarette smoking*** as entailing high risk, higher than the 77% of 12th graders who hold that belief and much higher than the 61% of 8th graders who do so. In recent years, 18-year-olds have consistently shown lower perceived risk than young adults, while 10th graders have been still lower and 8th graders lowest. Clearly, there is an age effect in young people coming to understand the dangers of smoking. Unfortunately, it appears that much of the learning about the risks of smoking happens after a great deal of smoking initiation has occurred and many young people have already become addicted. These beliefs about smoking risks have strengthened very gradually in all age groups from senior year forward during the years we have monitored them (see Table 6-1). The parallel changes in these beliefs across the different age groups indicate a period effect, rather than a cohort effect, suggesting that all of these age groups were responding to common influences in the larger culture. These influences are discussed at some length in the chapter on attitudes and beliefs in *Volume I*. In the past three or four years, the rise in perceived risk appears to have ended in the several young adult strata, while there has been some slight further increase among 12th graders.

[48]See O'Malley, P. M., & Johnston, L. D. (1999). Drinking and driving among U.S. high school seniors: 1984–1997. *American Journal of Public Health, 89*, 678–684. See also O'Malley, P. M., & Johnston, L. D. (2003). Unsafe driving by high school seniors: National trends from 1976 to 2001 in tickets and accidents after use of alcohol, marijuana and other illegal drugs. *Journal of Studies on Alcohol, 64*, 305–312.

- The regular use of ***smokeless tobacco*** is seen as dangerous by 49–61% of young adults and 44% of 12th graders. However, these beliefs have also gradually strengthened in all age groups over the intervals covered (Table 6-1). As with cigarettes, the change appears to reflect a secular trend (period effect), because it has been occurring in parallel for all age groups. Also like cigarettes, smokeless tobacco has seen the degree of perceived risk level off in the past several years—this time in all strata, including 12th graders.

PERSONAL DISAPPROVAL OF DRUG USE

The questions asked of 12th graders concerning the extent to which they personally disapprove of various drug-using behaviors among "people (who are 18 or older)" are also asked of follow-up respondents in one of the six questionnaire forms. Trends in the answers of young adults in the age bands of 19 to 22, 23 to 26, and 27 to 30 are contained in Table 6-2. Comparison data for 12th graders are also provided for 1980 onward. (See Table 8-6 in chapter 8, *Volume I*, for the longer term trends in 12th graders' levels of disapproval associated with using the various drugs.)

- In general, disapproval levels of adult use of the various drugs rank similarly across substances for both 12th graders and young adults. The great majority of young adults disapprove of using, or even experimenting with, all of the ***illicit drugs other than marijuana***. For example, 95% or more of young adults in 2007 disapprove of regular use of each of the following drugs: ***LSD***, ***cocaine***, ***amphetamines***, ***sedatives*** (***barbiturates***), and ***heroin***. Fully 83% to 98% of young adults disapprove of experimentation with each of these drugs. Many of these attitudes differ rather little as a function of age, at present; when there is a difference, the younger age groups are usually the least disapproving.

- Even for ***marijuana***, about half of young adults now disapprove of experimentation (from 48% to 55%), about two thirds (between 64% and 68%) disapprove of occasional use, and the great majority (84% to 87%) disapprove of regular use.

  Marijuana use shows the widest fluctuations in disapproval over time—generally, fluctuations that parallel the changes in perceived risk (though sometimes with a one-year lag, with the change in perceived risk coming first). The most fluctuation has occurred among 12th graders, nearly as much among 19- to 22-year-olds, and the least among 27- to 30-year-olds (Table 6-2). Among 12th graders, disapproval of regular marijuana use increased substantially in the 1980s, peaked in the early 1990s, declined through much of the 1990s, and then leveled around 1998 with little change since then. The 19- to 22-year-olds had a quite similar pattern, though the decline continued a year longer, likely due to generational replacement. Among 23- to 26-year-olds, there were some declines starting later in the 1990s, but the declines have been very modest.

- The great majority of all age groups have disapproved of even experimenting with ***LSD*** since 1980, when these data were first available. Beginning around 1990, all age groups decreased some in their disapproval of trying LSD (from high levels of disapproval, all at 90% or 91%). The decline was steepest among 12th graders, but there was a reversal in their disapproval in 1997, and then an increase since then. Disapproval in the older age groups

declined less, and in a staggered fashion; this trend has shown some evidence of a reversal among 19- to 22-year-olds and 23- to 26-year-olds since 2001 and 2002, respectively. This pattern again suggests some lasting cohort differences in these attitudes.

- Since 2001, when it was first measured among young adults, disapproval of ***ecstasy*** use has risen in all age groups, and now all have very high levels. Experimenting with ecstasy is disapproved of by 88% of 12th graders, declining with age to 82% among 27- to 30-year-olds in 2007. This decline with age may reflect cohort differences in past experience with ecstasy.

- Disapproval of all three levels of ***heroin*** use has remained very high and stable throughout the life of the study. There was one minor exception, however: a little slippage in disapproval of experimental use among 12th graders from 1991 through 1996 (from 96% to 92%)—a period during which heroin usage rates began to rise.

- Disapproval of regular ***cocaine*** use rose gradually among 19- to 22-year-olds, from 89% in 1981 to 99% in 1990, about where it has remained since. All three young adult age bands are now near the ceiling of 100%. Disapproval of experimental use of cocaine increased during the 1980s, peaking first among 12th graders at 94% in 1991. It then peaked among 19- to 22-year-olds (at 94%) and 23- to 26-year-olds (at 92%) in 1995. Finally, it peaked among 27- to 30-year-olds at 90% in 1999. All age groups have had some modest falloff in disapproval of cocaine use since reaching their peak levels of disapproval in the 1990s. Again, the lag in inflection points between the successive age groups suggests some lasting cohort differences in these attitudes that show up as each cohort makes its way through the successive age bands. For the last few years, all age groups' disapproval of experimental cocaine use has hovered around 85–90%.

- Disapproval of experimental use has moved very much in parallel for ***amphetamines*** and ***sedatives*** (***barbiturates***). Disapproval of both drugs increased significantly during the 1980s, accompanied by declining use. Trying *amphetamines* once or twice was disapproved of by 73–74% of 19- to 26-year-olds in 1984, compared to 84% by 1990. The corresponding figures for disapproval of trying *sedatives* were 84–85% in 1984 compared to 89–91% by 1990. Disapproval of amphetamine and sedative use slipped some among 12th graders after 1992 and among 19- to 22-year-olds after 1994, with the 23- to 26-year-olds following suit after 1996, and the 27- to 30-year-old stratum in 2004. This pattern of staggered change again suggests cohort effects, reflecting lasting cohort differences in these attitudes. In recent years there has been a staggered increase in disapproval of both amphetamines and sedatives that has shown up in all age groups.

- The story for ***alcohol*** is quite an interesting one, in that changes in the minimum drinking age law seem to have led to modest changes in norms for the affected cohorts. Between 1980 and 1992, an increasing proportion of 12th graders favored total abstention, with the percent who disapproved of drinking only once or twice rising from 16% in 1980 to 33% in 1992. (This figure has fallen back slightly, and stands at 31% in 2007.) Among 19- to 22-year-olds, there was a modest increase from 15% to 22% disapproving of any use between 1985 and

1989, where it held for some years; this figure fell back to 17% in 2007. For the two oldest age groups, there has been rather little change in these attitudes so far. These differing trends may reflect the fact that during the 1980s, the drinking age was raised in a number of states so that by 1987 it was 21 in all states; this change would have had the greatest effect on 12th graders, who may have incorporated the legal restrictions into their normative structure and, as they entered the second age band, brought these new norms with them. Put another way, these changes could reflect a cohort effect resulting from the laws that were prevailing when the cohort passed through late adolescence. But the changes may be exhibited only when the respondents are in the age bands directly impacted by the law.

Disapproval of ***daily drinking*** (one or two drinks) has not shown any such cohort effects, because all age groups have moved in parallel, at similar levels of disapproval. The three youngest age bands (which include 12th graders through 26-year-olds) showed an increase in disapproval of daily drinking up until about 1990 (there was little data yet available on the oldest age group), but disapproval has declined a fair amount in all of the age groups since then. A bit of a gap between 12th graders and young adults opened up between 2004 and 2007 when 12th graders increased their disapproval of daily drinking while young adults did not. This pattern of cross-time change closely parallels what was observed for the perceived risk of light daily drinking, discussed previously; and the later decline in both variables may well be due to widely publicized reports that some cardiovascular benefits result from having one or two drinks per day.

There was a considerable increase in disapproval of ***heavy drinking on weekends*** from the early 1980s for the two youngest age groups, and this continued through 1992 for 12th graders (who then showed some drop-off) and through 1996 among 19- to 22-year-olds (who also then showed some drop-off). As Figure 5-18d illustrates, the prevalence of occasional heavy drinking declined substantially among 12th graders and 19- to 22-year-olds between 1981 and the early 1990s, as norms became more restrictive. There was little or no change in the older age strata, either in their levels of disapproval or in their rates of occasional heavy drinking, until the early 2000s, when disapproval began to drop some in both strata.

At present, 12th graders are most likely to disapprove of trying alcoholic beverages (as has been the case for some years), but are the least disapproving of heavy daily drinking. Weekend binge drinking is least disapproved of by 19- to 22-year-olds, who report the highest levels of such behavior.

- Some fluctuations in the disapproval of ***cigarette smoking*** have occurred over the intervals covered by the study. Twelfth graders showed some increase in disapproval of pack-a-day-or-more smoking between 1982 (69%) and 1992 (74%). Their disapproval then fell through 1997 (to 67%) as their smoking increased; disapproval then increased in the last several years, to 82% in 2006 (before leveling in 2007 at 81%), as smoking declined. The 19- to 22-year-olds showed a similar increase in disapproval from 1982 (66%) to 1989 (76%), and are at 81% in 2007.

  All four age strata showed some upward drift in their level of disapproval of smoking since about 1999, suggesting a secular change in these attitudes during this historical period.

A FURTHER COMMENTARY: COHORT DIFFERENCES AND THEIR IMPLICATIONS FOR PREVENTION AND THEORY

An important theoretical point to be made—based on the strong evidence reported here for cohort effects in perceived risk and disapproval of many of the drugs under study—is that one cause for cohort effects in actual use is lasting cohort differences in these critical attitudes and beliefs. *The attitudes and beliefs brought into adulthood from adolescence tend to persevere.*

The second point has to do with the causes of the cohort effects in attitudes and beliefs. We noted earlier that the older respondents are more likely than the younger ones to see the use of ***marijuana***, ***LSD***, ***heroin***, ***amphetamines***, ***ecstasy***, ***crystal methamphetamine***, ***cocaine***, ***crack***, and ***sedatives*** (***barbiturates***) as dangerous. We have offered the framework for a theory of drug epidemics in which direct learning (from personal use) and vicarious learning (from observing use by others in both the immediate and mass media environments) play important roles in changing these key attitudes.[49] To the extent that the data on perceived risk represent cohort effects (enduring differences between class 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 were greatest in the 1970s and early to mid-1980s. In the early 1970s, LSD was alleged to cause brain and chromosomal damage, as well as bad trips, flashbacks, and behavior that could prove dangerous. Methamphetamine use was discouraged with the slogan "speed kills." In addition, there was a serious epidemic of heroin use in the early 1970s. More recent cohorts in our study (through the mid-1990s, at least) were not exposed to those experiences. 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 an operating cohort effect (with younger cohorts seeing less danger) offsetting the secular trend among 12th graders; the net effect was a decrease in 12th graders' perceived risk of LSD use after 1980.

This vicarious learning process has a very practical application for national strategy for preventing future epidemics. Because fewer in their immediate social circles and fewer public role models may be using these drugs and exhibiting the adverse consequences of use, future cohorts of youth may have less opportunity to learn about the adverse consequences of these drugs in the normal course of growing up. Unless those hazards are convincingly communicated to them in *other ways*—for example, through school prevention programs, by their parents, and through the mass media, including public service advertising—they will become more susceptible to a new epidemic of use of the same or similar drugs.

Volume I, the companion to this volume, reported an increase in use of several drugs in 8th, 10th, and 12th grades in 1994 through 1997. This increase suggests that this form of generational forgetting may well have been taking place during those years. For the cohorts that follow such a rise in use, there is once again an increased opportunity for vicarious learning from the adverse

[49]Johnston, L. D. (1991). Toward a theory of drug epidemics. In L. Donohew, H. E. Sypher, & W. J. Bukoski (Eds.), *Persuasive communication and drug abuse prevention (*pp. 93–131). Hillsdale, NJ: Lawrence Erlbaum. Available at http://monitoringthefuture.org/pubs.html#chapts.

experiences of those around them, but by that time, members of affected cohorts have had to learn the hard way what consequences await those who become involved with the various drugs.

TABLE 6-1

Trends in Perceived Harmfulness as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Q. How much do you think people risk harming themselves (physically or in other ways), if they. . .	Age Group	Percentage saying "great risk"[a]																												2006–2007 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
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	21.9	19.5	16.3	15.6	14.9	16.7	15.7	13.7	15.3	16.1	16.1	15.9	16.1	17.8	18.6	+0.8
	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	19.4	18.8	13.3	16.9	14.8	13.4	12.5	14.3	11.9	13.3	17.1	15.3	15.6	14.4	10.8	-3.6
	23–26					9.6	10.0	12.4	14.5	16.0	14.0	17.7	14.0	15.0	13.0	15.0	15.8	18.5	15.1	16.7	16.4	13.1	13.0	15.1	15.3	13.6	13.0	13.9	13.0	-0.9
	27–30									14.6	16.0	17.0	15.7	15.1	14.0	14.8	16.1	16.2	16.1	16.4	16.1	14.4	17.3	16.2	18.0	13.8	14.5	14.5	16.6	+2.2
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	35.6	30.1	25.6	25.9	24.7	24.4	23.9	23.4	23.5	23.2	26.6	25.4	25.8	25.9	27.1	+1.2
	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	30.3	31.3	25.5	25.6	22.0	22.0	19.8	25.8	18.0	21.0	24.1	23.2	24.3	22.1	22.3	+0.2
	23–26					15.8	16.3	20.9	20.8	26.8	25.3	30.4	26.2	27.4	24.0	25.5	27.7	27.3	26.4	26.8	26.4	24.9	20.5	24.5	22.2	22.7	21.6	22.3	20.2	-2.1
	27–30									24.2	25.7	28.7	27.4	27.5	26.8	28.1	28.3	28.1	26.0	25.8	25.3	25.8	25.0	30.2	27.9	25.1	24.8	21.8	25.6	+3.8
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	72.5	65.0	60.8	59.9	58.1	58.5	57.4	58.3	57.4	53.0	54.9	54.6	58.0	57.9	54.8	-3.1
	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	69.2	65.0	62.1	61.3	60.7	53.4	55.2	58.0	49.6	56.7	57.8	57.2	55.3	54.5	50.4	-4.1
	23–26					52.9	57.5	59.4	65.3	68.3	72.1	71.0	70.9	67.3	64.1	63.2	64.2	62.7	64.1	62.7	60.1	60.3	55.1	53.7	56.7	54.2	53.6	55.9	52.5	-3.4
	27–30									67.5	69.1	69.2	67.5	68.8	69.4	65.6	69.2	67.3	65.0	63.6	66.1	64.0	61.7	63.5	64.7	59.3	57.0	54.9	51.5	-3.5
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	39.5	38.8	36.4	36.2	34.7	37.4	34.9	34.3	33.2	36.7	36.2	36.2	36.5	36.1	37.0	+1.0
	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	42.4	42.3	40.3	44.4	40.1	38.7	38.1	37.9	37.5	35.3	39.7	39.2	38.7	43.5	40.9	-2.6
	23–26					48.3	46.9	47.9	51.5	53.7	50.7	52.0	50.1	49.7	49.0	46.8	45.8	46.1	46.6	45.7	49.3	44.9	48.5	45.7	43.8	40.7	39.9	38.1	42.8	+4.7
	27–30									53.3	55.6	54.6	52.5	53.0	51.5	53.5	52.5	50.1	52.0	52.0	49.9	46.4	46.7	44.9	47.5	47.2	47.9	44.9	44.6	-0.3
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	79.4	79.1	78.1	77.8	76.6	76.5	76.1	75.9	74.1	73.9	72.3	70.2	69.9	69.3	67.3	-2.0
	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	81.3	81.0	80.5	82.4	83.6	78.6	82.2	81.6	79.2	81.1	78.6	78.4	77.8	78.9	77.5	-1.4
	23–26					89.0	86.6	88.7	90.0	89.2	89.0	88.2	89.1	87.3	85.3	87.5	86.3	84.7	85.6	82.1	85.4	84.1	86.0	85.3	84.3	83.5	80.8	82.0	80.3	-1.8
	27–30									89.1	91.2	92.0	87.1	88.5	89.0	89.2	88.4	87.0	87.2	90.5	87.8	85.3	86.9	85.3	87.5	83.9	87.9	82.2	85.7	+3.5
Try PCP once or twice	18								55.6	58.8	56.6	55.2	51.7	54.8	50.8	51.5	49.1	51.0	48.8	46.8	44.8	45.0	46.2	48.3	45.2	47.1	46.6	47.0	48.0	+1.1
	19–22								63.6	63.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26								64.8	63.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30									65.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try ecstasy (MDMA) once or twice	18																		33.8	34.5	35.0	37.9	45.7	52.2	56.3	57.7	60.1	59.3	58.1	-1.2
	19–22										45.2	47.1	48.8	46.4	45.0	51.1	48.3	46.7	45.5	42.7	37.6	37.9	40.5	46.8	50.1	52.3	53.8	51.0	50.3	-0.7
	23–26										49.5	47.2	47.4	45.5	41.9	50.6	49.3	50.4	50.5	47.7	50.0	46.7	45.7	45.6	45.9	44.9	51.2	46.4	51.4	+5.0
	27–30										44.9	48.7	47.7	44.2	51.7	47.3	50.0	50.6	48.8	50.4	50.9	48.9	53.6	52.0	58.8	49.1	50.2	46.5	51.9	+5.4
Take ecstasy (MDMA) occasionally	18																						—	—	—	—	—	—	—	—
	19–22																						72.5	77.8	81.7	78.3	80.0	82.5	79.3	-3.2
	23–26																						72.5	71.9	73.6	77.4	77.2	77.0	78.7	+1.7
	27–30																						75.2	76.5	79.9	76.9	74.7	70.4	72.0	+1.6
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	57.6	57.2	53.7	54.2	53.6	54.6	52.1	51.1	50.7	51.2	51.0	50.7	50.5	52.5	51.3	-1.2
	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	60.5	63.8	57.7	61.9	55.5	55.4	52.8	56.7	48.9	55.5	55.0	55.5	55.6	54.0	55.8	+1.8
	23–26					31.3	31.1	35.9	48.0	47.1	51.3	51.5	50.5	53.5	54.1	56.0	58.7	57.2	63.1	60.2	62.6	63.1	62.4	61.0	55.4	52.1	53.0	52.5	56.9	+4.4
	27–30									45.3	53.0	51.6	52.6	51.8	54.7	53.5	56.4	53.6	54.6	60.5	61.7	59.9	60.9	58.8	56.4	61.4	56.5	58.1	54.8	-3.2

(Table continued on next page.)

TABLE 6-1 (cont.)

Trends in Perceived Harmfulness as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Q. How much do you think people risk harming themselves (physically or in other ways), if they. . .	Age Group	Percentage saying "great risk"[a]																												2006–2007 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Take cocaine occasionally	18							54.2	66.8	69.2	71.8	73.9	75.5	75.1	73.3	73.7	70.8	72.1	72.4	70.1	70.1	69.5	69.9	68.3	69.1	67.2	66.7	69.8	68.8	-1.0
	19–22							53.8	61.3	67.1	72.6	74.6	72.6	74.9	75.4	78.0	73.4	76.6	76.1	71.2	68.0	72.4	70.0	69.9	70.3	70.2	72.1	71.0	71.5	+0.5
	23–26							50.9	62.6	63.2	69.9	69.9	70.3	69.9	72.8	70.3	76.0	71.3	76.5	74.2	77.8	76.2	74.2	75.4	68.3	74.1	70.4	68.5	70.9	+2.4
	27–30									62.6	66.6	66.6	69.1	69.9	69.1	69.9	70.0	67.8	73.8	73.2	75.4	76.5	78.1	74.3	72.6	75.3	76.2	74.6	72.1	-2.5
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	90.1	89.3	87.9	88.3	87.1	86.3	85.8	86.2	84.1	84.5	83.0	82.2	82.8	84.6	83.3	-1.3
	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	91.7	92.2	91.5	92.2	91.6	88.7	88.5	90.7	85.1	88.3	87.4	87.1	89.2	86.2	86.7	+0.5
	23–26					75.6	76.9	83.0	88.9	90.9	91.2	91.2	92.7	89.9	91.9	92.6	93.3	90.6	93.2	92.9	92.7	92.9	91.1	91.5	88.5	91.5	88.0	90.9	88.0	-2.9
	27–30									88.9	92.0	91.4	90.9	92.0	91.6	92.1	91.3	91.6	92.7	93.0	92.4	92.3	94.5	91.2	92.9	91.3	94.0	90.0	89.9	-0.2
Try crack once or twice	18								57.0	62.1	62.9	64.3	60.6	62.4	57.6	58.4	54.6	56.0	54.0	52.2	48.2	48.4	49.4	50.8	47.3	47.8	48.4	47.8	47.3	-0.5
	19–22								59.4	67.3	68.5	69.4	66.9	65.4	63.5	70.1	61.9	65.2	62.0	59.3	56.1	52.9	54.1	54.1	55.1	56.8	56.6	55.3	51.9	-3.4
	23–26								59.1	63.5	69.8	67.3	66.9	67.1	64.2	69.3	64.8	68.6	64.7	67.3	64.6	63.2	59.8	60.9	58.5	56.4	60.6	54.7	58.4	+3.7
	27–30									66.5	64.9	68.7	66.8	64.3	68.8	65.6	66.4	66.7	68.5	66.5	65.0	62.9	69.3	67.4	66.0	62.6	61.9	56.8	64.1	+7.3
Take crack occasionally	18								70.4	73.2	75.3	80.4	76.5	76.3	73.9	73.8	72.8	71.4	70.3	68.7	67.3	65.8	65.4	65.6	64.0	64.5	63.8	64.8	63.6	-1.2
	19–22								75.0	77.3	81.8	82.3	82.7	81.9	83.6	84.3	78.8	83.5	79.1	79.1	75.5	74.9	72.3	75.3	75.3	76.0	75.0	72.8	77.7	+4.9
	23–26								70.3	74.0	79.9	81.1	83.9	84.4	81.6	83.2	81.4	85.9	80.8	84.2	81.6	84.0	80.1	82.2	77.1	76.4	78.6	76.8	79.8	+3.1
	27–30									76.4	76.7	82.6	81.8	79.1	83.6	78.6	81.1	81.3	85.3	81.7	79.8	81.6	84.4	81.5	81.9	82.1	79.5	82.8	79.1	-3.7
Take crack regularly	18								84.6	84.8	85.6	91.6	90.1	89.3	87.5	89.6	88.6	88.0	86.2	85.3	85.4	85.3	85.8	84.1	83.2	83.5	83.3	82.8	82.6	-0.2
	19–22								89.6	91.1	94.1	94.9	95.6	93.4	96.2	96.0	94.2	94.7	93.3	92.8	92.3	91.1	89.6	91.1	93.8	93.3	92.5	90.3	90.3	0.0
	23–26								88.0	89.2	91.5	94.2	95.4	94.1	93.4	94.9	95.5	96.1	91.4	95.6	94.4	95.6	93.4	94.7	92.2	92.5	93.1	93.3	93.1	-0.2
	27–30									89.6	89.5	95.3	94.4	93.3	93.5	93.0	94.0	94.3	96.0	94.3	95.2	93.5	96.8	94.2	94.4	94.0	95.2	94.1	93.6	-0.4
Try cocaine powder once or twice	18								45.3	51.7	53.8	53.9	53.6	57.1	53.2	55.4	52.0	53.2	51.4	48.5	46.1	47.0	49.0	49.5	46.2	45.4	46.2	45.8	45.1	-0.7
	19–22								44.0	48.6	51.1	54.5	52.7	56.2	49.7	62.0	55.8	57.1	53.8	53.0	47.9	48.0	47.1	47.9	49.4	48.7	50.2	48.7	46.8	-1.9
	23–26								41.0	43.6	48.4	48.9	47.4	45.9	45.6	52.5	48.9	57.2	53.6	54.1	53.8	53.2	53.9	52.5	50.8	46.0	53.3	45.8	48.1	+2.3
	27–30									42.0	45.1	46.2	43.3	42.3	49.9	47.1	48.2	48.9	49.1	49.8	49.7	52.2	53.3	54.4	56.6	52.5	52.9	49.0	53.6	+4.6
Take cocaine powder occasionally	18								56.8	61.9	65.8	71.1	69.8	70.8	68.6	70.6	69.1	68.8	67.7	65.4	64.2	64.7	63.2	64.4	61.4	61.6	60.8	61.9	59.9	-2.1
	19–22								58.0	59.0	63.2	70.0	69.9	72.6	70.6	75.4	73.0	77.4	70.7	73.0	69.3	69.3	64.4	68.9	69.3	68.6	68.1	66.4	67.1	+0.7
	23–26								50.0	53.2	62.2	63.3	67.0	65.8	64.0	68.8	68.8	76.1	72.8	77.0	70.8	76.0	70.5	73.7	67.9	64.6	69.9	66.7	69.9	+3.2
	27–30									53.6	52.7	60.9	59.2	61.2	64.3	61.0	65.9	68.2	69.7	68.5	70.1	71.3	73.5	71.9	71.7	71.5	71.7	73.1	69.3	-3.9
Take cocaine powder regularly	18								81.4	82.9	83.9	90.2	88.9	88.4	87.0	88.6	87.8	86.8	86.0	84.1	84.6	85.5	84.4	84.2	82.3	81.7	82.7	82.1	81.5	-0.6
	19–22								86.6	87.6	91.3	92.5	93.8	92.1	94.0	94.9	93.5	93.8	92.8	91.5	92.4	90.7	89.8	91.0	92.0	91.6	90.7	89.1	89.5	+0.4
	23–26								82.9	84.1	88.5	92.4	93.8	91.3	92.4	92.8	92.1	94.8	90.8	93.7	93.6	94.2	92.2	93.4	89.1	89.4	91.2	92.9	92.3	-0.6
	27–30									85.1	86.7	92.7	91.1	91.5	92.5	90.7	92.7	91.7	93.0	92.3	93.1	91.5	94.0	93.3	94.1	93.1	93.9	92.4	92.5	+0.1

(Table continued on next page.)

TABLE 6-1 (cont.)

Trends in Perceived Harmfulness as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Q. How much do you think people risk harming themselves (physically or in other ways), if they. . .	Age Group	Percentage saying "great risk"[a]																												2006–2007 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
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	50.7	52.8	50.9	52.5	56.7	57.8	56.0	54.2	55.6	56.0	58.0	56.6	55.2	59.1	58.4	-0.7
	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	58.9	60.8	58.9	61.0	63.9	60.7	63.5	63.2	64.0	63.1	64.6	67.3	66.5	65.0	69.6	+4.5
	23–26					58.2	59.2	60.8	66.6	65.4	62.3	64.1	62.4	63.7	65.0	63.3	64.1	63.5	67.3	67.3	68.0	70.7	71.9	69.8	70.6	67.5	69.2	67.0	68.3	+1.3
	27–30									66.0	69.7	67.5	66.1	66.5	69.3	69.6	66.4	66.4	67.9	69.7	70.1	67.4	68.2	70.9	72.3	68.4	74.4	70.8	70.2	-0.6
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	72.0	72.1	71.0	74.8	76.3	76.9	77.3	74.6	75.9	76.6	78.5	75.7	76.0	79.1	76.2	-2.9
	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	78.8	79.0	77.9	82.1	84.7	80.4	82.5	82.0	83.6	82.2	84.9	85.1	83.8	84.3	85.4	+1.1
	23–26					81.2	80.7	78.9	84.5	82.4	80.8	83.4	84.4	81.5	82.1	80.8	85.3	82.4	86.5	83.9	88.5	86.6	88.4	90.0	88.3	86.7	87.5	85.2	86.5	+1.3
	27–30									86.0	86.8	85.3	84.3	84.9	86.2	86.8	83.1	83.8	85.8	86.6	87.1	86.5	86.4	87.9	87.4	88.6	91.2	88.3	88.5	+0.2
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	88.3	88.0	87.2	89.5	88.9	89.1	89.9	89.2	88.3	88.5	89.3	86.8	87.5	89.7	87.8	-1.9
	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	89.2	91.2	89.9	94.0	93.7	92.4	92.8	94.0	91.3	92.6	93.9	94.3	94.9	94.2	93.6	-0.6
	23–26					92.0	90.1	90.6	92.8	91.5	91.3	91.0	92.6	91.3	91.6	93.0	93.5	92.7	94.4	93.4	93.7	94.8	95.9	96.3	96.5	96.0	94.8	95.8	93.1	-2.7
	27–30									92.7	93.5	93.0	90.7	91.3	92.6	93.8	92.4	92.1	93.8	95.0	93.7	94.2	94.5	95.9	94.9	95.0	97.3	95.3	94.8	-0.5
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	31.3	31.4	28.8	30.8	31.0	35.3	32.2	32.6	34.7	34.4	36.8	35.7	37.7	39.5	41.3	+1.9
	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	33.3	36.3	32.9	36.8	30.1	31.7	33.7	35.0	34.2	38.1	40.2	36.8	38.3	40.0	38.4	-1.5
	23–26					29.6	29.4	29.4	34.1	33.2	32.5	35.3	31.0	32.7	32.6	32.9	34.3	34.9	37.8	40.9	41.8	39.9	41.6	38.0	38.3	33.2	39.1	37.0	38.0	+1.0
	27–30									35.2	37.5	36.9	36.5	36.2	34.0	37.5	36.0	36.2	34.5	37.6	36.3	39.4	38.5	39.0	40.5	39.2	38.2	39.7	37.4	-2.3
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	69.9	67.0	65.9	66.8	66.0	67.7	66.4	66.3	67.1	64.8	65.6	63.9	67.1	68.1	68.1	-0.1
	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	73.5	71.6	72.2	75.8	72.3	71.9	72.4	73.4	71.1	72.7	75.0	72.4	74.1	72.1	73.8	+1.7
	23–26					75.8	77.2	75.6	78.2	77.4	76.7	77.8	79.4	76.4	76.2	73.6	80.5	78.5	79.1	77.5	78.7	79.0	77.7	77.9	80.1	75.1	80.1	78.3	77.0	-1.3
	27–30									80.6	82.9	83.3	79.4	80.3	79.8	78.4	77.7	75.6	77.4	81.1	82.6	80.8	79.9	79.8	81.5	77.6	78.9	78.9	77.6	-1.3
Try crystal meth. (ice)	18												61.6	61.9	57.5	58.3	54.4	55.3	54.4	52.7	51.2	51.3	52.7	53.8	51.2	52.4	54.6	59.1	60.2	+1.1
	19-22											57.8	58.6	57.7	57.5	61.4	58.9	61.1	56.4	55.8	50.6	49.2	52.5	56.5	60.0	60.3	63.1	63.5	65.0	+1.6
	23–26											56.5	56.0	55.6	52.0	61.0	57.8	64.1	60.7	58.2	61.3	60.1	59.2	57.7	58.6	55.9	63.9	63.9	66.6	+2.7
	27–30											59.6	57.2	52.7	60.3	57.9	58.5	59.1	59.8	59.9	61.0	59.7	66.4	62.5	66.6	62.8	62.6	64.9	67.9	+3.0
Try sedatives/ barbiturates[b] 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	29.2	29.9	26.3	29.1	26.9	29.0	26.1	25.0	25.7	26.2	27.9	24.9	24.7	28.0	27.9	-0.1
	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	33.4	35.0	30.5	34.1	31.4	27.7	28.5	30.3	30.0	30.7	32.7	26.7	26.9	28.9	28.1	-0.8
	23–26					32.2	29.9	30.2	35.5	35.8	32.9	37.9	31.8	33.5	32.8	34.0	34.8	35.8	37.3	40.3	39.4	37.0	38.5	34.7	36.5	22.2	29.8	26.3	25.9	-0.4
	27–30									37.2	38.7	39.0	37.0	38.2	36.5	40.5	36.6	37.2	35.7	36.7	35.2	36.3	40.9	37.3	38.6	31.4	31.7	28.8	28.0	-0.8
Take sedatives/ barbiturates[b] 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	66.1	63.3	61.6	60.4	56.8	56.3	54.1	52.3	50.3	49.3	49.6	54.0	54.1	56.8	55.1	-1.6
	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	71.1	69.4	66.4	70.7	69.5	65.1	64.7	64.6	61.8	64.5	63.8	60.2	64.4	61.3	63.2	+1.9
	23–26					77.4	77.0	74.9	79.9	79.8	76.6	80.5	77.7	76.3	75.0	74.3	77.6	77.1	75.2	73.9	75.1	73.8	73.1	73.1	72.8	63.9	67.0	67.6	64.8	-2.9
	27–30									81.5	83.7	84.0	79.6	78.6	80.2	78.3	77.7	74.1	77.1	79.9	80.7	75.5	78.2	75.4	79.0	70.1	75.2	68.0	70.0	+2.0

(Table continued on next page.)

TABLE 6-1 (cont.)
Trends in Perceived Harmfulness as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Q. How much do you think people risk harming themselves (physically or in other ways), if they. . .	Age Group	Percentage saying "great risk"[a]																												2006–2007 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
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	8.2	7.6	5.9	7.3	6.7	8.0	8.3	6.4	8.7	7.6	8.4	8.6	8.5	9.3	10.5	+1.1
	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	6.6	6.5	4.5	3.3	3.2	4.2	5.7	5.4	4.8	6.6	7.5	5.1	3.8	7.7	5.1	-2.6
	23–26					5.5	3.0	6.5	6.6	4.2	5.1	5.7	4.4	5.6	3.2	4.5	4.3	4.8	4.4	4.4	6.6	3.5	5.5	5.1	5.7	4.7	5.3	5.1	4.8	-0.3
	27–30									5.0	6.3	4.4	6.6	5.6	4.7	4.1	6.7	4.7	4.0	6.2	5.9	4.7	5.5	3.1	6.9	4.6	7.3	4.2	6.2	+2.0
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	28.2	27.0	24.8	25.1	24.8	24.3	21.8	21.7	23.4	21.0	20.1	23.0	23.7	25.3	25.1	-0.2
	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	28.0	27.5	24.0	23.0	24.2	22.1	23.9	22.1	19.6	22.7	19.8	21.3	22.1	22.0	19.0	-3.0
	23–26					27.8	27.4	26.9	30.2	29.1	27.8	31.1	30.4	31.6	25.9	26.2	26.1	22.0	20.2	21.0	26.0	21.7	23.5	23.4	19.1	22.9	19.9	22.5	21.2	-1.2
	27–30									27.4	31.7	32.2	31.7	30.9	28.0	27.4	27.2	24.0	24.8	20.8	25.3	22.0	22.7	21.7	21.4	21.8	23.7	20.2	21.5	+1.3
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	67.8	66.2	62.8	65.6	63.0	62.1	61.1	59.9	60.7	58.8	57.8	59.2	61.8	63.4	61.8	-1.6
	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	72.1	70.3	72.5	68.5	71.4	70.4	69.9	69.9	64.5	71.1	66.4	65.3	63.0	66.6	68.8	+2.2
	23–26					76.7	77.9	80.1	77.2	81.8	76.9	79.7	80.2	78.0	76.7	77.5	75.2	72.0	75.1	69.3	72.8	71.7	75.8	74.9	71.1	74.2	71.2	72.4	70.2	-2.2
	27–30									79.3	81.7	84.7	79.1	79.9	79.1	76.6	82.2	76.1	79.3	75.7	75.1	77.4	72.8	76.2	70.6	72.1	77.5	73.0	76.5	+3.6
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	48.3	46.5	45.2	49.5	43.0	42.8	43.1	42.7	43.6	42.2	43.5	43.6	45.0	47.6	45.8	-1.8
	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	42.4	41.9	39.9	40.7	36.6	42.0	37.2	38.9	37.2	37.8	40.4	38.1	37.5	37.2	43.4	+6.2
	23–26					38.4	39.7	39.1	39.8	35.8	37.7	40.2	39.3	37.6	36.2	40.2	37.9	39.1	37.4	41.1	40.2	34.9	39.0	36.8	36.3	37.9	36.8	38.4	39.7	+1.4
	27–30									41.0	42.3	44.1	42.2	45.1	42.9	43.2	44.6	41.5	40.0	40.2	41.9	37.9	41.6	40.6	42.5	40.5	44.0	39.1	40.4	+1.3
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	69.5	67.6	65.6	68.2	68.7	70.8	70.8	73.1	73.3	74.2	72.1	74.0	76.5	77.6	77.3	-0.3
	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	76.0	71.2	71.6	73.8	76.3	77.2	75.7	77.1	76.6	80.6	77.8	81.1	80.5	80.8	79.3	-1.4
	23–26					71.1	70.1	75.7	73.6	75.5	71.4	78.5	75.3	76.3	78.4	76.4	76.0	76.0	77.6	76.5	80.9	79.7	83.9	85.1	83.6	84.1	81.6	86.4	80.7	-5.7 s
	27–30									72.8	75.2	77.8	75.4	77.6	75.0	75.3	75.6	73.0	80.3	80.9	80.7	78.4	82.7	80.6	82.0	81.7	84.1	83.8	84.3	+0.5
Use smokeless tobacco regularly	18							25.8	30.0	33.2	32.9	34.2	37.4	35.5	38.9	36.6	33.2	37.4	38.6	40.9	41.1	42.2	45.4	42.6	43.3	45.0	43.6	45.9	44.0	-1.9
	19–22							29.7	34.1	31.1	37.1	33.5	38.9	40.1	43.3	37.6	42.3	40.9	46.5	47.4	47.0	52.0	48.4	53.6	50.8	49.9	47.6	46.4	48.9	+2.5
	23–26							37.0	38.5	35.8	37.9	40.1	38.9	41.6	44.6	42.9	46.6	47.2	46.2	48.4	53.1	49.8	59.8	61.4	58.9	57.8	55.8	59.1	55.3	-3.8
	27–30									42.8	42.8	43.8	44.3	44.1	47.3	46.3	44.2	43.6	50.2	52.6	53.6	49.9	53.2	56.7	58.2	55.7	58.9	57.5	61.4	+3.9
Approximate Weighted N =	18	*3,234*	*3,604*	*3,557*	*3,305*	*3,262*	*3,250*	*3,020*	*3,315*	*3,276*	*2,796*	*2,553*	*2,549*	*2,684*	*2,759*	*2,591*	*2,603*	*2,449*	*2,579*	*2,564*	*2,306*	*2,130*	*2,173*	*2,198*	*2,466*	*2,491*	*2,512*	*2,407*	*2,450*	
	19–22	*590*	*585*	*583*	*585*	*579*	*547*	*581*	*570*	*551*	*565*	*552*	*533*	*527*	*480*	*490*	*500*	*469*	*464*	*431*	*447*	*424*	*430*	*395*	*402*	*447*	*412*	*411*	*375*	
	23–26					*540*	*512*	*545*	*531*	*527*	*498*	*511*	*505*	*518*	*503*	*465*	*446*	*438*	*420*	*413*	*418*	*400*	*392*	*382*	*401*	*426*	*408*	*361*	*351*	
	27–30									*513*	*587*	*490*	*486*	*482*	*473*	*443*	*450*	*422*	*434*	*416*	*400*	*377*	*384*	*369*	*380*	*388*	*374*	*358*	*344*	

Source. The Monitoring the Future study, the University of Michigan.

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.

"—" indicates data not available.

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

[b]In 2004 the question text was changed from "barbiturates" to "sedatives/barbiturates" and the list of examples was changed from "downers, goofballs, reds, yellows, etc." to just "downers." These changes likely explain the discontinuity in the 2003 and 2004 results.

TABLE 6-2

Trends in Proportions Disapproving of Drug Use among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Q. Do you disapprove of people (who are 18 or older) doing each of the following?

	Age Group	Percentage disapproving[a]																												2006–2007 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Trying 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	63.3	57.6	56.7	52.5	51.0	51.6	48.8	52.5	49.1	51.6	53.4	52.7	55.0	55.6	58.6	+2.9
	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	60.6	63.5	57.1	55.4	56.2	55.9	54.0	55.2	49.3	48.7	54.2	48.3	50.3	51.2	47.6	-3.6
	23–26					41.2	38.6	42.6	49.1	48.7	52.5	57.5	58.8	55.0	54.6	52.3	51.9	56.3	54.5	55.3	55.7	54.8	51.2	52.4	47.8	53.4	47.7	47.5	54.6	+7.1
	27–30									49.0	50.9	53.8	54.6	51.9	56.8	55.7	57.5	54.1	59.0	55.7	52.6	58.0	54.4	56.9	54.9	55.4	52.1	52.0	50.9	-1.0
Smoking 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	75.5	68.9	66.7	62.9	63.2	64.4	62.5	65.8	63.2	63.4	64.2	65.4	67.8	69.3	70.2	+0.8
	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	75.8	76.9	70.4	68.9	70.2	67.8	66.4	70.7	64.6	62.3	68.0	64.3	67.9	62.6	64.1	+1.6
	23–26					54.8	52.8	57.0	64.9	63.4	69.4	73.7	73.3	74.0	71.9	70.9	68.1	72.5	69.2	70.4	71.1	68.6	67.4	64.0	63.8	69.3	65.6	62.2	68.0	+5.8
	27–30									65.3	67.1	68.9	73.0	67.2	72.2	69.4	72.5	70.5	74.5	72.4	71.5	72.2	70.9	69.1	71.2	69.1	68.2	68.7	67.5	-1.1
Smoking 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	87.6	82.3	81.9	80.0	78.8	81.2	78.6	79.7	79.3	78.3	78.7	80.7	82.0	82.2	83.3	+1.1
	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	90.2	90.1	86.8	87.7	88.1	85.3	84.5	86.6	84.5	82.8	84.8	82.7	84.4	82.5	83.7	+1.2
	23–26					80.6	81.3	83.3	87.4	86.9	90.4	91.0	89.6	90.2	92.1	90.3	90.1	88.9	88.1	87.5	86.1	83.9	86.4	81.7	82.3	87.4	84.3	81.9	85.3	+3.3
	27–30									87.6	87.5	89.7	89.6	87.2	89.4	88.7	91.9	89.9	92.1	89.2	90.0	89.5	89.3	88.8	87.7	88.6	86.3	86.4	86.8	+0.5
Trying 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	85.9	82.5	81.1	79.6	80.5	82.1	83.0	82.4	81.8	84.6	85.5	87.9	87.9	88.0	87.8	-0.2
	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	88.5	86.8	84.2	83.0	83.1	80.8	83.2	82.3	81.4	83.7	86.2	85.0	87.6	85.4	88.5	+3.0
	23–26					87.3	87.1	88.0	89.9	91.4	91.0	90.7	89.1	88.8	86.9	87.3	87.1	86.7	87.9	84.1	84.8	80.3	83.0	79.2	80.1	84.0	84.0	84.5	87.6	+3.1
	27–30									91.0	87.2	89.7	87.9	85.6	88.8	88.2	87.4	88.7	88.7	87.3	86.6	87.2	85.7	82.7	85.6	82.5	82.2	82.0	84.1	+2.1
Taking 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	95.8	94.3	92.5	93.2	92.9	93.5	94.3	94.2	94.0	94.0	94.4	94.6	95.6	95.9	94.9	-1.0
	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	97.8	97.7	96.8	97.0	97.4	96.3	97.0	96.8	96.5	96.9	98.4	97.3	98.9	97.8	97.7	-0.1
	23–26					99.2	98.0	98.5	99.0	98.0	98.4	98.3	98.4	98.3	98.1	97.7	96.7	97.7	96.1	97.6	98.0	97.0	97.1	97.9	96.9	97.1	98.7	97.0	98.4	+1.4
	27–30									98.8	97.1	98.9	98.9	97.5	98.5	98.7	98.6	98.1	97.5	97.4	97.9	98.6	98.2	98.0	98.2	98.2	97.2	96.7	97.2	+0.5
Trying ecstasy (MDMA) once or twice	18																		82.2	82.5	82.1	81.0	79.5	83.6	84.7	87.7	88.4	89.0	87.8	-1.1
	19–22																						81.5	80.3	87.2	83.5	90.3	87.5	88.5	+1.0
	23–26																						80.6	80.6	80.2	83.1	83.9	83.9	87.4	+3.5
	27–30																						84.2	84.0	86.3	83.2	82.4	82.2	81.8	-0.4
Taking ecstasy (MDMA) occasionally	18																						—	—	—	—	—	—	—	—
	19–22																						92.8	91.8	95.6	93.8	96.7	94.0	95.3	+1.3
	23–26																						90.5	91.8	92.1	93.3	94.4	93.7	94.3	+0.6
	27–30																						91.7	93.0	94.3	91.0	92.1	93.4	92.8	-0.6
Trying 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	92.7	91.6	90.3	90.0	88.0	89.5	89.1	88.2	88.1	89.0	89.3	88.6	88.9	89.1	89.6	+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	92.7	93.9	94.2	92.0	91.7	89.9	90.9	89.9	87.7	87.9	89.3	87.7	92.3	88.2	89.2	+1.0
	23–26					70.2	70.5	72.1	80.0	82.9	85.5	88.3	88.0	87.3	89.2	89.2	91.8	90.7	91.5	89.0	91.3	87.1	90.1	85.8	86.4	87.4	88.3	84.4	87.6	+3.3
	27–30									82.1	81.0	85.5	86.9	83.9	85.7	86.6	86.6	88.3	89.2	90.3	90.4	89.4	90.3	88.5	91.5	88.0	87.0	85.8	87.7	+1.9
Taking 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	97.5	96.6	96.1	95.6	96.0	95.6	94.9	95.5	94.9	95.0	95.8	95.4	96.0	96.1	96.2	+0.1
	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	97.8	98.8	98.2	97.9	98.0	97.8	97.6	98.0	97.2	97.0	98.2	98.5	98.7	98.9	99.0	+0.1
	23–26					95.7	95.3	97.3	98.1	97.6	98.3	98.4	98.5	98.7	98.4	98.8	97.7	97.8	96.9	98.5	98.3	97.8	97.5	97.5	97.6	98.1	98.9	97.3	98.1	+0.8
	27–30									98.1	97.0	99.3	99.0	97.2	98.7	99.0	98.9	98.5	97.9	97.8	98.8	98.7	98.4	97.8	98.8	98.8	97.8	97.2	97.9	+0.7

(Table continued on next page.)

TABLE 6-2 (cont.)

Trends in Proportions Disapproving of Drug Use among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Q. Do you disapprove of people (who are 18 or older) doing each of the following?

	Age Group	Percentage disapproving[a]																												2006–2007 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Trying 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	94.4	93.2	92.8	92.1	92.3	93.7	93.5	93.0	93.1	94.1	94.1	94.2	94.3	93.8	94.8	+1.0
	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	96.3	96.6	95.6	95.2	95.6	95.1	95.5	94.1	94.2	95.0	96.4	95.9	98.8	95.6	97.6	+2.0
	23–26					96.7	94.9	96.4	97.1	97.4	96.7	96.8	96.9	96.3	95.4	96.5	95.9	96.1	95.2	94.6	96.3	93.1	95.0	94.8	95.0	95.0	96.1	93.7	97.2	+3.5 s
	27–30									97.9	95.8	97.5	96.6	94.8	97.3	94.7	96.3	96.0	96.9	95.9	96.7	95.9	96.4	94.4	97.6	94.9	95.6	93.9	96.4	+2.5
Taking 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	97.0	96.2	95.7	95.0	95.4	96.1	95.7	96.0	95.4	95.6	95.9	96.4	96.3	96.2	96.8	+0.6
	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	98.1	98.3	97.7	97.9	97.8	98.2	97.2	98.0	97.9	97.9	98.3	98.9	99.4	98.2	98.8	+0.6
	23–26					99.2	98.2	98.8	99.1	98.4	98.3	98.1	99.0	98.7	98.4	98.6	97.7	98.7	97.4	97.5	98.5	98.2	97.8	97.5	97.2	98.5	98.3	97.7	98.8	+1.1
	27–30									99.2	97.3	99.0	98.9	97.0	98.9	98.7	98.9	98.0	98.7	97.6	98.8	98.6	98.4	98.6	98.7	98.1	97.7	97.1	98.1	+1.0
Taking 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	97.5	97.1	96.4	96.3	96.4	96.6	96.4	96.6	96.2	96.2	97.1	97.1	96.7	96.9	97.1	+0.2
	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	98.4	98.8	98.4	98.3	98.1	98.3	98.2	98.5	98.2	98.3	98.8	99.0	99.2	98.9	99.1	+0.2
	23–26					99.4	98.8	99.1	99.4	98.7	98.7	98.5	99.3	99.2	98.9	98.8	98.7	98.9	97.6	98.5	98.7	98.8	98.4	98.3	98.6	98.9	98.9	98.0	99.0	+1.0
	27–30									99.4	97.6	99.4	99.0	97.8	99.0	99.4	99.1	98.6	98.4	98.1	98.8	98.7	98.7	98.4	99.3	98.8	99.1	97.5	98.2	+0.7
Trying 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	84.2	81.3	82.2	79.9	81.3	82.5	81.9	82.1	82.3	83.8	85.8	84.1	86.1	86.3	87.3	+1.0
	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	87.2	88.3	85.0	84.4	83.3	84.6	84.9	83.8	82.1	81.4	86.3	82.1	88.2	84.9	84.8	-0.2
	23–26					74.2	74.2	74.6	80.3	83.5	83.3	84.1	84.8	83.4	84.8	82.7	86.0	86.4	85.7	83.5	84.5	82.4	83.9	83.5	79.9	81.6	81.3	79.0	85.8	+6.8 s
	27–30									83.5	81.0	84.3	83.7	80.9	83.5	82.0	83.1	85.8	86.3	85.9	86.4	84.5	86.0	86.4	84.9	82.4	81.3	81.1	84.5	+3.4
Taking 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	96.0	94.1	94.3	93.5	94.3	94.0	93.7	94.1	93.4	93.5	94.0	93.9	94.8	95.3	95.4	+0.1
	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	97.3	97.9	96.8	97.2	97.8	96.7	97.5	96.1	97.3	96.4	97.1	97.1	98.4	97.5	98.6	+1.2
	23–26					96.6	95.9	96.6	97.0	97.2	98.1	97.9	97.9	97.7	98.4	97.7	97.0	97.9	97.0	98.0	97.0	97.6	96.8	96.3	97.2	95.9	98.3	96.2	97.6	+1.4
	27–30									98.1	96.5	98.6	97.8	96.8	97.7	99.0	98.9	98.2	98.1	97.7	98.2	98.5	97.6	97.4	98.1	98.0	97.6	96.4	98.4	+2.0
Trying sedatives/ barbiturates[b] 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	89.7	87.5	87.3	84.9	86.4	86.0	86.6	85.9	85.9	86.6	87.8	83.7	85.4	85.3	86.5	+1.2
	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	90.7	91.1	90.5	89.1	86.6	85.8	86.6	84.2	85.2	84.2	87.7	81.8	86.6	83.4	82.7	-0.7
	23–26					84	84.5	84.4	89.8	90.7	89.4	88.8	87.9	88.8	88.5	88.0	89.3	88.3	88.3	87.4	87.3	85.2	86.9	86.8	81.8	80.3	81.6	80.5	84.3	+3.9
	27–30									90.5	88.3	88.4	88.8	86.6	88.9	87.6	88.0	89.4	88.8	88.4	87.6	87.3	88.5	86.9	89.2	81.8	78.7	80.1	83.5	+3.4
Taking sedatives/ barbiturates[b] 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	97.0	96.1	95.2	94.8	95.3	94.6	94.7	95.2	94.5	94.7	94.4	94.2	95.2	95.1	94.6	-0.5
	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	98.2	98.7	97.7	97.9	97.7	97.7	97.3	97.4	96.9	97.8	98.5	96.6	98.3	98.1	98.3	+0.2
	23–26					98.4	98.5	97.7	98.6	98.3	98.3	98.5	98.5	98.6	98.5	98.5	97.4	98.4	97.4	98.5	97.6	97.4	97.0	97.1	97.1	96.1	98.0	96.3	97.8	+1.5
	27–30									98.4	97.1	99.1	98.5	97.7	98.4	99.1	99.0	98.5	97.9	97.7	98.5	98.1	98.4	97.2	98.4	98.1	96.5	95.6	97.4	+1.7
Trying 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	30.1	28.4	27.3	26.5	26.1	24.5	24.6	25.2	26.6	26.3	27.2	26.0	26.4	29.0	31.0	+2.0
	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	20.8	22.2	22.0	22.0	18.3	21.5	18.3	18.4	16.3	18.3	20.1	20.7	22.3	17.8	17.3	-0.5
	23–26					17.4	16.1	13.2	17.7	13.7	17.5	18.6	19.5	17.4	18.1	17.6	16.5	18.0	15.8	18.6	19.1	19.9	15.9	18.1	13.0	16.3	13.5	14.7	14.9	+0.2
	27–30									19.5	19.1	18.7	18.8	17.9	19.5	18.6	18.2	16.1	17.4	15.2	15.9	14.8	15.9	18.4	15.4	18.8	16.1	15.0	14.2	-0.8

(Table continued on next page.)

TABLE 6-2 (cont.)

Trends in Proportions Disapproving of Drug Use among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Q. Do you disapprove of people (who are 18 or older) doing each of the following?	Age Group	Percentage disapproving[a]																												2006–2007 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Taking 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	77.8	73.1	73.3	70.8	70.0	69.4	67.2	70.0	69.2	69.1	68.9	69.5	70.8	72.8	73.3	+0.5
	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	75.0	78.0	74.7	73.5	73.2	70.3	67.3	66.7	68.3	63.9	66.9	68.1	64.6	68.2	65.1	-3.1
	23–26					71.4	73.7	71.6	72.7	74.6	74.4	77.6	76.9	75.5	74.2	73.3	69.7	70.6	68.4	70.2	73.4	66.3	66.5	62.7	65.0	61.7	64.4	62.0	62.4	+0.3
	27–30									76.0	73.9	73.3	76.1	69.5	73.5	72.4	71.8	71.4	71.8	69.8	67.9	65.9	68.9	70.9	63.1	66.7	60.5	62.0	65.8	+3.8
Taking 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	90.6	89.8	88.8	89.4	88.6	86.7	86.9	88.4	86.4	87.5	86.3	87.8	89.4	90.6	90.5	-0.1
	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	95.1	96.2	95.5	94.2	93.9	92.4	92.4	92.8	94.2	92.6	92.5	92.2	93.2	92.9	92.9	0.0
	23–26					96.2	95.0	95.5	96.9	94.3	95.9	96.9	96.1	95.7	95.7	95.7	95.2	96.5	93.8	96.1	95.1	94.3	93.5	93.7	92.6	93.1	94.8	92.9	95.6	+2.7
	27–30									97.4	94.6	96.1	95.3	94.8	94.8	96.4	96.7	96.4	96.2	95.0	97.2	95.3	96.1	95.4	95.6	96.0	92.8	92.7	95.0	+2.3
Having 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	70.1	65.1	66.7	64.7	65.0	63.8	62.7	65.2	62.9	64.7	64.2	65.7	66.5	68.5	68.8	+0.3
	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	63.5	68.1	66.0	69.2	66.5	63.2	63.5	65.1	58.3	57.5	61.9	59.4	60.1	59.3	59.1	-0.1
	23–26					66.2	68.3	66.5	67.5	65.2	63.2	66.9	64.6	69.6	66.8	66.9	65.3	70.9	66.6	69.5	68.1	66.2	66.0	61.2	65.5	60.9	64.5	59.7	62.4	+2.7
	27–30									73.9	71.4	73.1	72.1	68.4	73.4	73.5	73.7	72.4	73.0	71.1	73.1	73.1	73.0	70.9	71.5	73.8	67.5	67.3	71.5	+4.3
Smoking 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	70.6	69.8	68.2	67.2	67.1	68.8	69.5	70.1	71.6	73.6	74.8	76.2	79.8	81.5	80.7	-0.8
	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	72.8	75.3	69.8	72.2	74.3	72.3	70.1	73.1	73.2	73.4	73.4	74.8	81.5	77.2	81.0	+3.7
	23–26					69.9	68.7	67.5	69.7	66.4	71.1	71.5	77.2	73.6	72.9	70.3	72.2	73.0	71.7	73.9	73.8	72.7	77.3	74.8	75.7	76.2	74.8	74.1	76.2	+2.2
	27–30									72.8	69.4	73.5	71.2	70.7	73.8	72.3	73.9	72.7	74.3	71.7	71.0	78.6	75.2	78.8	76.2	77.6	77.3	73.9	81.1	+7.2 s
Approximate Weighted N =	*18*	*3,261*	*3,610*	*3,651*	*3,341*	*3,254*	*3,265*	*3,113*	*3,302*	*3,311*	*2,799*	*2,566*	*2,547*	*2,645*	*2,723*	*2,588*	*2,603*	*2,399*	*2,601*	*2,545*	*2,310*	*2,150*	*2,144*	*2,160*	*2,442*	*2,455*	*2,460*	*2,377*	*2,450*	
	19–22	*588*	*573*	*605*	*579*	*586*	*551*	*605*	*587*	*560*	*567*	*569*	*533*	*530*	*489*	*474*	*465*	*480*	*470*	*446*	*449*	*416*	*413*	*402*	*396*	*431*	*378*	*378*	*333*	
	23–26					*542*	*535*	*560*	*532*	*538*	*516*	*524*	*495*	*538*	*514*	*475*	*466*	*449*	*423*	*401*	*397*	*389*	*404*	*346*	*385*	*403*	*374*	*364*	*325*	
	27–30									*526*	*509*	*513*	*485*	*512*	*462*	*442*	*450*	*430*	*453*	*449*	*429*	*395*	*368*	*359*	*346*	*370*	*367*	*330*	*355*	

Source. The Monitoring the Future study, the University of Michigan.

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.

"—" indicates data not available.

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

[b]In 2004 the question text was changed from "barbiturates" to "sedatives/barbiturates" and the list of examples was changed from "downers, goofballs, reds, yellows, etc." to just "downers." These changes likely explain the discontinuity in the 2003 and 2004 results.

Chapter 7

THE SOCIAL CONTEXT

Individuals' social contexts can influence their likelihood of using drugs in a number of ways. The environment can bring about an awareness of new drugs (knowledge of their existence and potential for altering mood and consciousness) and provide social norms regarding drug use. It can also provide social modeling of either use or abstention from use, and influence the availability of drugs (through friends and friends' contacts). Since its inception, MTF has measured three important features of the social environment: (1) peer groups' norms about drug use, (2) the amount of direct exposure to use of the various drugs through friends and others, and (3) the perceived availability of the various drugs. All three factors are measured by self-reports and are, therefore, measures of the perceived environment, though the evidence suggests that they bear a strong correlation with the actual environment. We believe that these three factors are important influences on substance use, at both the individual (micro) and the aggregate (macro) level.

In *Volume I*, we examined these factors among secondary school students. In this chapter, we do the same for the young (and sometimes middle) adult population, whose social contexts typically differ considerably from what they were in high school. Most high school graduates today enter college, many get civilian jobs, and some enter military service. These transitions almost always change the institutional environments experienced by young adults (colleges, work organizations, military services, etc.) and therefore the circles of people to whom they are exposed and with whom they develop friendships.

Each of the question sets discussed here is contained in only one of the six questionnaire forms, so the case counts are lower than those presented in most chapters in this volume. (Also, in comparison to the secondary school samples covered in *Volume I*, follow-up samples are necessarily much smaller.) Therefore, the prevalence and trend estimates are more subject to fluctuation due to relatively greater sampling error.

PEER NORMS AMONG ADULTS

Table 7-1 provides current levels and trends in perceived friends' disapproval of drug use among 12th graders, 19- to 22-year-olds, 23- to 26-year-olds, and 27- to 30-year-olds. (These are the same age groupings used in chapter 6.) Trend data are available since 1980, 1984, and 1988, respectively, for these three 4-year age groupings of young adults.

The questions regarding friends' disapproval include the same answer scale (stated in terms of disapproval rates associated with different use levels of the various drugs) as the questions that ask about the respondents' own attitudes about those behaviors (discussed in chapter 6). The list of drug-using behaviors is shorter here, and the questions appear on a different questionnaire form and, therefore, have a different set of respondents. However, because the questionnaire forms are distributed randomly in senior year, there should be no systematic sample differences across forms. Furthermore, the results for perceived peer norms are generally quite consistent with those for

personal disapproval in the aggregate; that is, the proportion saying that they personally disapprove of a drug-using behavior tends to be similar to the proportion saying that their close friends would disapprove of that same behavior.[50] Exceptions are ***trying marijuana once or twice*** and ***smoking one or more packs of cigarettes per day***, to which respondents have consistently reported their friends' attitudes as *more* disapproving than their own attitudes (especially in the oldest age band), and ***heavy weekend drinking***, to which friends' attitudes are seen as *less* disapproving than their own.

Current Perceptions of Friends' Attitudes

Table 7-1 provides trends for each age band in the proportions of respondents indicating how their close friends would feel about the respondent engaging in various drug-using behaviors. For purposes of simplification, we begin by addressing results across the entire 19- to 30-year age band (tabular data for the entire age band are not presented). Then we distinguish among the three age bands: 19 to 22, 23 to 26, and 27 to 30.

- We find that the peer norms reported by young adults 1 to 12 years past high school are quite similar to those reported by 12th graders. That is, for each of the ***illicit drugs other than marijuana***, the great majority of young adults think that their close friends would disapprove of their even *trying* such drugs once or twice (91% for ***cocaine***, 88% for ***LSD***, and 87% for ***amphetamines***).

- Well over half of young adults (57%) now think their friends would disapprove of their even trying ***marijuana***, while two thirds (67%) think their friends would disapprove of occasional use, and about 83% think they would disapprove of regular use. So, clearly the norms differ as a function of level of marijuana use, but for all levels of use they tend to be restrictive for the majority of young adults.

- About two thirds (64%) of young adults say their friends would disapprove if they were ***daily drinkers***, and 9 out of 10 (90%) think friends would disapprove if they had four or five drinks nearly every day.

- Friends' disapproval of ***heavy drinking on weekends*** is distinctly lower. Only 51–56% of any age group think that their friends would disapprove of their having five or more drinks once or twice each weekend. The 19- to 22-year-olds and the 23- to 26-year-olds—among whom this kind of drinking is most prevalent—have lower levels of disapproval (54% and 51%) than 18-year-olds (60%) or 27- to 30-year-olds (56%).

- Peer disapproval of ***cigarette*** smoking is reasonably high in all four age bands: 81% of 12th graders say their friends would disapprove of pack-a-day smoking, as do 81–87% of the 19- to 30-year-olds.

[50]The question reads, "How do you think your close friends feel (or would feel) about you… [smoking marijuana once or twice]?" The answer categories are "don't disapprove," "disapprove," and "strongly disapprove." Percentages discussed are for the last two categories combined.

Trends in Peer Norms

- Important changes in the social acceptability of drug-using behaviors among both 12th graders' and young adults' peers have occurred over the life of this study (see Table 7-1). Among 12th graders, the proportion who said that their friends would disapprove of their trying ***marijuana*** rose from 41% in 1979 to 73% in 1992—a period of substantial decline in use. Friends' disapproval also grew substantially stronger in all of the young adult age bands in the years for which data are available. For example, among 19- to 22-year-olds, the proportion thinking their friends would disapprove if they even tried marijuana rose from 41% in 1981 to 65% in 1992. A similar peak in disapproval occurred for the 23- to 26-year-olds in 1992 and 1993, and among 27- to 30-year-olds in 1994 and 1995—at 66% for both age bands. In all age groups, disapproval subsequently declined, though the declines in peer disapproval were earliest and greatest among 12th graders. The decline ended in 1997 for 12th graders and began to reverse, but continued through 2002 among 19- to 26-year-olds. Perceived peer disapproval of trying marijuana increased over the past several years in the younger age groups, but there has been little systematic change in the two oldest age bands through 2006, though both showed a sizeable decline in 2007 (statistically significant for occasional use).

  Friends' disapproval of more frequent marijuana use also rose until the early 1990s among 18-year-olds, and then declined between 1992 and 1997. It declined through 1999 among 19- to 22-year-olds and continued to decline among 23- to 30-year-olds through 2003. In essence, peer norms have moved in a way consistent with the existence of some lasting cohort differences.

- There was a more gradual increase in peer disapproval levels of ***amphetamine*** use for all age groups through 1991, followed by definite declines evident among 12th graders through 1997. Since 1997, levels of disapproval among 18- to 30-year-olds have increased again.

- Through 1991, peer disapproval of trying ***LSD*** showed very little change in any of the age bands, but it fell some in the 1990s, especially among 18-year-olds and subsequently among 19- to 22-year-olds. These declines bottomed out in a staggered fashion, beginning with the 12th graders in 1997, who have since shown a nine-percentage-point increase in peer disapproval. There has been an eight-percentage-point increase among 19- to 22-year-olds (since 2000) and 23- to 26-year-olds (since 2001). There is now almost no difference among the age groups, with 84–90% of all of them saying their friends would disapprove of their trying LSD.

- Perceived peer norms regarding ***cocaine*** use were first measured in 1986. During the next eight years, self-reported cocaine use declined substantially as peer norms in all age bands shifted considerably toward disapproval. For example, by 1994, 95% of the 19- to 22-year-olds thought their friends would disapprove of their even trying cocaine. After 1994, peer norms against use continued to strengthen a bit in the upper age bands, perhaps through generational replacement, but weakened slightly in the younger age bands, likely reflecting a new cohort effect. In recent years there has been little difference by age in peer norms against cocaine use, with 86–93% saying their friends would disapprove of their even trying

it. By way of contrast, in 1986 that statistic ranged between 71% and 80% among 18- to 26-year-olds.

- Peer norms regarding ***occasional heavy drinking*** (five or more drinks once or twice each weekend) have tended to be weakest among the 19- to 22-year-old age stratum (where such behavior is most common) and strongest among the 27- to 30-year-old stratum. Since 2002, however, the 23- to 26-year-olds were also low relative to the two other age bands in their disapproval of weekend binge drinking. Among 12th graders, friends' attitudes became somewhat more restrictive between 1981 and 1992 (and binge drinking declined during that interval), but attitudes have been fairly level since then. There was a similar upward trend in disapproval among the various young adult age bands that followed a staggered pattern, likely reflecting a cohort effect. However, between 1997 and 2000 the 19- to 22-year-old age group became somewhat less disapproving of occasional binge drinking; this was followed by a decline in peer disapproval between 2001 and 2004 among 23- to 26-year-olds, but little net change by 2007 among 27- to 30-year-olds. Despite some increases in peer disapproval over the years, this rather extreme form of drinking has the least restrictive perceived peer norms of all of the substance-using behaviors measured in the study.

- Peer norms regarding ***cigarette smoking*** (at the rate of one or more packs per day) became somewhat more restrictive among 12th graders in the early years of this study; peer disapproval rose from 64% in 1975 to 73% in 1979. There was little further net change for 13 years through 1992, when friends' disapproval stood at 76%. However, peer disapproval of smoking slipped some in the 1990s. Between 1992 or 1993 and 1997 or 1998, all age groups showed a decrease in perceived peer disapproval of smoking. Since then the two younger strata have shown some strengthening of norms against smoking. Between 1998 and 2007, the proportion saying that their close friends would disapprove of their smoking a pack or more of cigarettes per day rose from 69% to 81% among 18-year-olds and from 69% to 87% among 19- to 22-year-olds. The two older strata did not see a comparable change until 2006, when there was a significant increase observed among 23- to 26-year-olds. The norms are now quite close across the age ranges, with 81–87% reporting their friends would disapprove of pack-a-day smoking.

ADULTS' EXPOSURE TO DRUG USE THROUGH FRIENDS AND OTHERS

Exposure to drug use is important because it provides both the modeling of the behavior by peers (possibly including direct encouragement to use) and immediate access. Exposure is measured by two sets of questions, each appearing on a (different) single questionnaire form. The first set asks the respondent to estimate what proportion of his or her friends use each drug, while the second asks, "During the LAST TWELVE MONTHS how often were you around people who were using each of the following to get high or for 'kicks'?" The same questions are asked of 12th graders, and their results are included for comparison purposes in Tables 7-2 and 7-3. (Questions about exposure to drug use were not included in the questionnaires for 35-, 40-, and 45-year-olds, so they could not be included in Table 7-3.) We continue to deal with four-year age bands for the friends' use questions in order to increase the reliability of the estimates. (Ages 35, 40, and 45 are included as one-year age bands, with both half samples from those cohorts surveyed; those years have larger numbers of cases

than single years at the earlier ages, because only one questionnaire form is used in the surveys of those age groups, instead of six.) At the end of each table is a summary of the weighted number of cases upon which each annual estimate is based. (The actual numbers of cases are somewhat higher.)

Exposure to Drug Use

- Relatively high proportions of young adults in all of these age bands have at least *some* friends who use ***some illicit drug*** (Table 7-2). In recent years, the proportion has declined considerably with age, although this was not always the case. The differences opened up in the 1990s as use rose among the younger strata. In 2007, illicit drug use by at least some friends is reported by 78% of 12th graders, 63% of 27- to 30-year-olds, 42% of 35-year-olds, and 39% of 45-year-olds. The proportions who say that *most or all* of their friends use one or more of the illicit drugs are much lower: 22% for 12th graders, 7% among 27- to 30-year-olds, and between 1.3% and 2.2% for the 35-, 40-, and 45-year-olds—quite a dramatic difference across ages, and one that is consistent with the large differences in their own self-reported current use.

- With regard to ***illicit drugs other than marijuana***, taken as a whole, considerably fewer report that *any* of their friends use: 50% for 12th graders, 53% for 19- to 22-year-olds, 34% for 27- to 30-year-olds, 21% for 35-year-olds, and 25% for 45-year-olds. These age differences are considerably greater than they were throughout the 1980s (although the older age groups were not assessed then). During the period of increasing drug use in the 1990s, primarily among adolescents, the 12th graders reported having the highest proportion of friends using drugs. However, as those 12th graders have aged, it is now the young adults ages 19 to 22 who are showing the highest proportion of friends using drugs. The proportions saying that *most or all* of their friends use ***illicit drugs other than marijuana*** in 2007 are 7%, 4%, and 1%, respectively, for the three youngest age bands, with fewer than 1% of respondents over the age of 30 reporting such high proportions of their friends using other illicit drugs. Thus, relatively few of these age groups appear to be deeply immersed in a drug culture involving illicit drugs beyond marijuana.

- With respect to individual illicit drugs, exposure among all of the age groups is greatest for ***marijuana***, with 75% of 12th graders, 77% of 19- to 22-year-olds, 60% of 27- to 30-year-olds, and 29–39% of 35-, 40-, and 45-year-olds reporting that at least some of their friends use the drug. The next highest exposures are for ***hallucinogens other than LSD*** (30% among 12th graders, 27% among 19- to 22-year-olds, 16% among 23- to 26-year-olds, and 11% among 27- to 30-year-olds), followed by ***cocaine***, ***amphetamines***, and ***ecstasy*** (***MDMA***). Because of the dramatic increase in its use during the 1990s and early 2000s, ecstasy surpassed a number of the more traditional drugs, though its use has declined sharply in recent years.

  For the remaining illicit drugs, the proportion of young adults reporting that some friends use a given drug is 10% or higher in at least one of the young adult age groups for the following drugs: ***LSD*** (8–15%), ***narcotics other than heroin*** (11–24%), ***sedatives*** (***barbiturates***) (13–

20%), ***steroids*** (7–18%), ***crack cocaine*** (7–16%), ***tranquilizers*** (9–17%), and ***amphetamines*** (10–27%). See Table 7-2 for specifics.

- For most illicit drugs, the proportion of young adults having any friends who use them decreases with age, consistent with the age differentials in self-reported use. The steepest declines occur with ***inhalants*** (18% of 18-year-olds down to 2.8% of 27- to 30-year-olds). (Inhalant use is not asked of the 35-, 40-, and 45-year-olds, precisely *because* of this sharp decline in use with age.)

- For some years, ***cocaine*** showed significantly higher rates of active use among adults compared to 12th graders. That is no longer true, although there is rather little drop-off with age in early adulthood; consequently, there is not a great difference associated with age in having friends who use cocaine (19–30% for all four of the younger age groups). (The 35-, 40-, and 45-year-olds are asked separately about cocaine powder and crack use; far fewer, but still a fair proportion, report having friends who use cocaine powder—7% to 9% in 2007 for all three groups.)

- For ***crack***, however, the story is different. Reported friends' use of crack now descends sharply with age, although this was not true in the mid-1980s, when measures of crack use were first included in the surveys. In 2007, 22% of 12th graders report having any friends using crack, versus 3% of 35-, 40- and 45-year-olds.

- The proportion reporting that they have any friends who use ***heroin*** also decreases sharply with age, from 13% among 12th graders to 3% among 27- to 30-year-olds. ***Narcotics other than heroin*** also follow a similar pattern, though the decline with age is not as sharp. (Older respondents are not asked these questions.)

- In general, it appears that some respondents who report that their friends use ***illicit drugs*** are not directly exposed to that use themselves, judging by the differences in proportions saying they have some friends who use (Table 7-2) and the proportions who say they have been around people who were using during the prior year (Table 7-3).

- 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: 76% of 12th graders, 84% of 19- to 22-year-olds, 80% of 23- to 26-year-olds, 72% of 27- to 30-year-olds, 55% of 35-year-olds, 46% of 40-year-olds, and 43% of 45-year-olds. Given the potential serious consequences of this behavior, these rates are impressively high across a wide age range. The proportions who say *most or all* of their friends get drunk once a week differ more substantially by age: 27% of 12th graders and 32% of 19- to 22-year-olds, declining sharply to 12% of 27- to 30-year-olds and 4% of 45-year-olds. Note in particular how high these rates are among the high school and college-age populations. In terms of direct exposure during the past year to people who were drinking alcohol "to get high or for 'kicks,'" having some such exposure is almost universal in the three 4-year age groups of young adults: 92%, 95%, and 90%, respectively (see Table 7-3).

- From ages 18 through 30, about four fifths of respondents (77–82%) have at least a few friends who ***smoke cigarettes***, with considerable falloff by age 35. In fact, 16–18% of the 12th graders and 19- to 22-year-olds state that *most or all* of their friends smoke. Above those ages, the proportions decline to 13% of 27- to 30-year-olds and 5–6% for those 35 years of age and older. This increase in the segregation of smokers from nonsmokers likely reflects the stratification of young people after high school as a function of educational attainment, which is highly correlated with cigarette smoking. Also, it can be seen in Table 7-2 that there was much less age-related difference in the late 1980s, suggesting that the sharp rise in smoking among high school students during much of the 1990s, followed by a sharp decline in the years since, accentuated the age differentials, and that those differentials remain, reflecting lasting cohort effects.

Trends in Exposure to Drug Use

Tables 7-2 and 7-3 also provide *trend* data on the proportions of respondents' friends using drugs and the proportion of respondents directly exposed to drug use by others. Both of these measures of exposure to use will be discussed in this section. Once again, trends are available for 19- to 22-year-olds since 1980, for 23- to 26-year-olds since 1984, and for 27- to 30-year-olds since 1988. Data for 35-, 40-, and 45-year-olds are available on friends' use since 1994, 1998, and 2003, respectively. (Questions about frequency of being around drug users were not included in the questionnaires administered to 35-, 40-, and 45-year-old respondents, so those age bands are not included in Table 7-3. However, they were asked about the proportions of their friends using.) Data for 12th graders since 1980 have also been included in these tables for comparison purposes.

- An examination of Table 7-3 shows that exposure to illicit drug use (in the 12 months preceding the survey) declines with age for ***any illicit drug***, ***marijuana***, and ***any illicit drug other than marijuana***, as well as for nearly all of the specific illicit drugs. In general, these differences replicate across different historical periods, with the exception of ***cocaine***, which did not show a decline in exposure with increasing age until after 1996. These declines reflect age effects (changes with age observed across multiple cohorts) in both exposure to use and in personal use of most drugs.

- Until 1992, young adults' trends in exposure to use tended to parallel those observed for 12th graders. Over the 12-year period of 1980 to 1992, that meant a decreasing number of respondents were exposed to ***any illicit drug*** use (Table 7-3) or reported any such use in their own friendship circle (Table 7-2). After 1992, however, an important *divergence* in trends among age groups emerged: 12th graders showed a substantial increase in both friends' use and exposure to use (as well as self-reported use); 19- to 22-year-olds showed a similar rise, but lagged by a few years; 23- to 26-year-olds subsequently showed some rise; while the 27- to 30-year-old age band did not show a rise until 2002. As discussed in earlier chapters, this pattern no doubt reflects the emergence of lasting cohort differences driven by the process of generational replacement.

- ***Marijuana*** showed a very similar pattern of change. In addition, returning to the measures of friends' use, it is particularly noteworthy that, while 34% of 19- to 22-year-olds in 1980 said *most or all* of their friends used marijuana, only 9% said the same in 1993. Clearly, the

number of friendship groupings in which marijuana use was widespread dropped dramatically over that interval. The figure increased to 19% by 1999, where it remained for a couple of years. Friends' use has declined some in the past few years for the two youngest strata, but only recently leveled among the older strata.

- The proportion reporting having any friends who use ***any illicit drugs other than marijuana*** began to decline after 1982. By 1991 or 1992 there had been a considerable drop in all four age groups. (This drop appears to be due particularly to decreases in friends' use of ***cocaine*** and ***amphetamines***, although there were decreases for ***sedatives*** (***barbiturates***) and ***tranquilizers*** as well.) The levels then began to rise in the two youngest age bands in the early 1990s, while at the same time they continued to decline in the two oldest age bands, opening up a large age-related difference in exposure to use. Since 2001 there has been some decline in friends' use in the two youngest age strata, narrowing the age differences some.

- Between 1987 and about 1992, there was a considerable drop in all four age groups in the proportion of respondents who said they had any friends who used ***crack***. (Self-reported use declined in the same period.) After that decline, the rates of friends' use increased some in the two youngest age bands and decreased some in the four oldest ones, resulting in a large age differential that is still evident.

- It is noteworthy that there has been a substantial increase since the early 1990s in the proportion of 12th graders and 19- to 22-year-olds reporting that they have friends using ***narcotics other than heroin*** (though the increase was greater among the 12th graders, where it began). Increases within the next two older age strata (ages 23–30) began later, and have been more modest.

- The proportions saying that any of their friends use ***ecstasy*** (***MDMA***) increased sharply in all age groups for which data are available, though in a staggered fashion. Twelfth graders showed the first sharp increase beginning after 1992, 19- to 22-year-olds after 1994, 23- to 26-year-olds after 1996, and 27- to 30-year-olds after 1997. These sharp increases ended among 12th graders in 2001 and among 19- to 30-year-olds a year later. Since those peak levels, the proportions saying that they had any friends using ecstasy have generally declined, corresponding with a decline in self-reported use. All four age groups now report that 16–24% of their friends use ecstasy.

- For all four age groups, there were modest declines between 1987 and 1992 in the proportion saying that most or all of their friends drink ***alcohol***. After 1992, there was very little change in the four youngest age bands until 2002, when 12th graders' friends' use dropped while it continued to climb in the other age bands. In the years for which data are available, the older three age bands have shown an increase in the proportions saying that most or all of their friends drink alcohol—an increase not seen in the younger three age bands. The 35-, 40-, and 45-year-olds have consistently been much less likely to report that most or all of their friends ***get drunk*** at least once a week.

- Among 12th graders, the proportion who said most or all of their friends smoked ***cigarettes*** declined appreciably between 1975 and 1981, the same period in which self-reported use declined. After that, neither measure showed much change until about 1992. Thereafter, substantial increases in both measures occurred. By 1997, fully one third (34%) of 12th graders reported that most or all of their friends smoked cigarettes (up from 21% in 1992); since then, friends' use has declined (to 16% in 2007) along with self-reported use. Among 19- to 22-year-olds, a decline in friends' use occurred between 1980 (or possibly earlier) and 1985, followed by a leveling through 1994. The percentage saying most friends smoke increased from 22% in 1994 to 29% in 2000, before beginning to decline. Among 23- to 26-year-olds, a downturn was evident between at least 1984 (the first year for which data are available) and 1988, and then reported friends' use leveled. After 2002, some slight increase occurred, but a reversal has been occurring since 2004. These staggered changes until about 1998 illustrate that cohort effects were moving up the age spectrum (as the cohorts themselves aged). Since 1998 (or the earliest year available, for the age bands above 30), the proportion saying that any of their friends smoke has shown some decline among those above age 30, but little or no change among 23- to 30-year-olds (which now contain the heavier smoking senior classes of the mid-1990s) until about 2006.

Nearly all of these changes in exposure to drug use across the various drugs parallel changes in self-reported use by these age groups. This pattern reinforces our trust in the validity of self-report data, because there would presumably be less motivation to distort answers about the proportion of an unnamed set of friends who use a drug than about one's own use. Also reassuring is the systematic nature of the patterns of change across age strata (whether in terms of parallel changes consistent with a secular trend, or staggered ones consistent with a cohort-related trend).

PERCEIVED AVAILABILITY OF DRUGS AMONG ADULTS

Young and middle adults participating in the follow-up surveys receive survey questions identical to those asked of 12th graders regarding 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. The data for the young adult follow-up samples, which are grouped into the same four-year age bands, are presented in Table 7-4, along with the data for 12th graders and 35-, 40-, and 45-year-olds. Sample sizes are presented at the bottom.

Perceived Availability

As is true for 12th graders, substantial proportions of the American adult population have access to various illicit drugs. (We do not ask about access to alcohol and cigarettes because we assume these are readily available to all adults.)

- ***Marijuana*** is the most available illicit drug, with 88% of the young adult age strata saying it would be "fairly easy" or "very easy" to get. Access generally decreases with age after age 30; but even at age 45, 70% of respondents say they can get it fairly easily.

- ***Ecstasy*** (***MDMA***) is among the most widely available of all of the illicit drugs other than marijuana. Its availability is now greatest among 23- to 26-year-olds (42%). It used to be

greatest for 12th graders (now 41%) and 19- to 22-year-olds (now at 38%). This reversal may reflect the aging of the heavier using cohorts, who knew how to acquire ecstasy. (The question is not asked of those 35, 40, or 45 years of age.)

- ***Amphetamines*** are also among the most available of the illicit drugs (48–56% among young adults and 38–40% among 35-, 40-, and 45-year-olds). Note that there is a fair difference among the age bands, with those above age 26 reporting amphetamines to be less available.

- ***Sedatives*** (***barbiturates***) are a bit less available than amphetamines to these age groups (46–48%), and ***tranquilizers*** are reported as available by considerably fewer still (29–32%), which historically was not always the case.

- ***Cocaine*** is reported as readily available by a significant proportion of young adults, with 46–47% saying it would be fairly easy to get. ***Powdered cocaine*** availability does not differ much by age (43–45%). ***Crack*** is available to somewhat smaller proportions than powdered cocaine—31–36% for all three post–high school young adult age strata and 33–37% for 35-, 40-, and 45-year-olds. Cocaine was considerably more available to the older age groups in the 1980s (up through age 30, at least), but is now about equally available across all four lower age bands, including 12th graders.

- ***Hallucinogens other than LSD*** are reported as available by 44% of 12th graders and 38% of 19- to 26-year-olds. Availability is lower among 27- to 30-year-olds at 30%. Older respondents are not asked the question.

- ***LSD*** now shows only a moderate degree of availability for all ages (22–29%).

- More than a third of young adults (38–42%) say they can get ***narcotics other than heroin*** fairly easily, as do 37% of 12th graders.

- ***Steroids*** show some declines in perceived availability with increasing age, as has generally been the case, ranging from 40% among 12th graders down to 31% among 27- to 30-year-olds. (The question is not asked of respondents above age 30.)

- About a quarter (22–28%) of young adults and 12th graders say that they could get ***heroin*** fairly easily. A far smaller proportion report having used heroin.

- ***Crystal methamphetamine*** (***ice***) is perceived to be available by between a quarter and a third of each age group (25–30%).

Trends in Perceived Availability

- ***Marijuana*** has been almost universally available to the adolescent and young adult age groups throughout the historical periods covered by the data (since 1975 in the case of 12th graders). There was a slight decrease from 1979, the peak year, through 1991 among 12th graders, and a slightly larger decrease from 1980 through 1991 among 19- to 20-year-olds. Availability rose by a few percentage points in nearly all strata between about 1993 and 2001, and since then has slipped back a few percentage points in the two younger strata. Perceived availability is now a bit higher for the younger age groups (84–88% for 12th graders through 27- to 30-year-olds versus 70–76% for those ages 35 to 45). In general, though, their trends in availability have been quite parallel since the late 1990s, suggesting secular trends in prevailing conditions that affect availability.

- ***Cocaine*** availability increased among all three younger age strata over the 1984–1988 interval, reaching historic highs in 1988 and 1989. (Twelfth graders showed a rise in availability in earlier years—from 1975 to 1980—followed by a leveling between 1980 and 1984. Availability was also level during the latter period among 19- to 22-year-olds.) From a policy perspective, it is worth noting that in all three age bands for which we have data, the perceived availability of cocaine *increased* in 1987—the same year that use actually dropped sharply. Between 1988 and 1989, in the two younger age strata (ages 18–22), the proportions reporting that they could get cocaine fairly easily were still increasing, whereas in the older age strata the proportions were beginning to decrease. In 1990 and 1991, all four groups reported decreased availability—quite parallel to the number who had friends who were users and to personal use, both of which dropped substantially in these years and then leveled in 1992. Perceived availability of cocaine dropped to between 49% and 57% for all four age groups by 1993, with the absolute declines ranging from four to seven percentage points. After that there was some falloff in perceived availability in all age strata through age 30—particularly among those ages 23 through 30—and an increasing convergence. However, since 2003 (or 2004 in the case of 27- to 30-year-olds) there has been some increase in cocaine availability in all four age groups.

- ***Crack*** availability peaked in 1988–1989 for all age groups (it was first assessed in 1987) and declined through 1992, with little further change until 1995. Since 1995, crack availability has declined some in all of the lower five age strata. Data on 40- and 45-year-olds is available for a shorter interval, but also shows declines from peak levels.

- The trends in ***LSD*** availability among young adults have some parallels to those for 12th graders. Among 12th graders, there was a drop of about 10 percentage points in the mid-1970s, and a later drop in the interval 1980 to 1986. The latter drop, at least, was paralleled in the data from 19- to 22-year-olds. After 1986, LSD availability increased considerably in all age bands, reaching its peak levels (the highest we have recorded since these questions were introduced) by 1995, with a considerable age-related difference developing (with availability lower in the older age groups). Since 1995, availability has fallen substantially in all age bands (with the exception of the 45-year olds, for whom there is limited trend data available), but particularly in the youngest two age strata, narrowing the differences among

the age groups. Indeed, the drop-off in availability of LSD to 12th graders and 19- to 22-year-olds was quite sharp in 2002, possibly contributing to the steep decline in use that year. Availability among 40- and 45-year-olds is the lowest. In 2007, between 22% and 29% of each age group say they could get LSD fairly easily, which contrasts quite dramatically with the mid-1990s, when over 50% of those in the younger age strata said they could get it.

- In the early 1980s, there was a fair decline among all age groups in the availability of ***hallucinogens other than LSD***; there was little additional change through 1992. From 1992 to 1995, the three youngest age groups all showed an increase in availability, with 12th graders showing the largest increase. From 1996 to 2000, availability was fairly steady. All age groups showed substantial increases in 2001, but this undoubtedly was due to the changed question wording in which, among other things, "shrooms" was added to the examples of hallucinogens. Since 2001 the general pattern has been one of stability, but with the levels of availability more differentiated by age. Generally, the lower the age stratum, the higher the reported availability. So, it appears that the inclusion of "shrooms," or psilocybin mushrooms, introduced a greater variability with age in the availability of hallucinogens other than LSD, taken as a class.

- The availability of ***ecstasy*** (***MDMA***) rose very substantially in all of these age groups during the 1990s and early 2000s. (The questions were first introduced in 1989 and 1990.) Among 12th graders, reported availability nearly tripled, from 22% in 1989 to 62% in 2001—the peak year for 12th graders. All four age groupings showed sharp increases in 2000 and 2001, with the older age groups continuing to increase through 2002—their peak year. The two youngest strata have shown considerable declines since 2002, and reported availability of ecstasy now varies little by age, ranging between 38% and 42% among all the age strata covered in 2007.

- ***Heroin*** availability varied within a fairly narrow range from 1980 to 1986, but then showed a fair-sized increase among both 12th graders and young adults through 1990. It then rose further among 12th graders and 19- to 22-year-olds through 1995 before declining a bit. In the older two age groups, heroin availability remained fairly flat from 1990 to 1995, increased some through 1999, and declined thereafter. It is clear that heroin was much more available to all of these age groups in the 1990s than it was in the 1980s. It was this increase in the availability of heroin, and also in its purity, that most likely led to the emergence of noninjection forms of heroin administration during this period. All age groups have shown some decline in heroin availability since 1997 or 1998, during which interval there has been only modest variability in heroin availability across the 18-to-30 age range. (The question is not asked of respondents over age 30.)

- The availability of ***narcotics other than heroin*** slowly rose among all age groups between 1980 and 1989, followed by a period of considerable stability from 1989 through 1994. After 1994, availability increased modestly, accompanied by steadily rising use. But in the past few years, there has been some modest falloff in availability among all age strata except the 27- to 30-year-olds. For the most part, there has not been a consistent difference by age in

the availability of narcotics other than heroin. (Respondents over age 30 are not asked this question.)

- The reported availability of ***amphetamines*** peaked in 1982 for both 12th graders and 19- to 22-year-olds, after which it fell until 1991, by 14 percentage points among 12th graders and 15 percentage points among 19- to 22-year-olds. Between 1984, when data were first available, and 2005, there was a decline of 14 percentage points among 23- to 26-year-olds as well. For 27- to 30-year-olds, reported availability decreased by nine percentage points between 1988 (the first measurement point) and 2005. There have been decreases among 35-year-olds as well. In general, the age groups above age 30 have reported somewhat lower availability than the younger strata. These differential rates of availability across the age groups emerged after 1992, when prevalence of use began to rise among 12th graders.

- By way of contrast, ***crystal methamphetamine*** or "***ice***" exhibited an increase in availability in the 1990s, rising for all four age strata from 1991 to 1998 or 1999, before stabilizing with similar rates of availability from ages 18 to 30.

- ***Sedatives*** (***barbiturates***) exhibited a long-term decline in availability from about 1981 or 1982 through 2003 in the two younger groups—a 20-percentage-point drop among 12th graders and a 23-percentage-point drop among 19- to 22-year-olds. All groups showed an increase in 2004—no doubt due primarily to a change in the question wording—and no further systematic change through 2007.

- ***Tranquilizer*** availability has declined long-term by two thirds among 12th graders, from 72% in 1975 to 24% in 2007. Since 1980, when data were first collected for 19- to 22-year-olds, tranquilizer availability declined sharply and by more than half (from 67% in 1980 to 29% in 2007), such that previous differences in availability between these two groups were eliminated by 1992. The older age groups also showed a considerable decline in the availability of tranquilizers through 2003 among 23- to 26-year-olds and through 2006 among 27- to 30-year-olds. For the most part, trend lines for the different age groups have been quite parallel, as was true for sedatives (barbiturates). Indeed, this class of drugs has shown the most consistent pattern of change in perceived availability over the life of the study.

- Data on ***steroid*** availability were first gathered in 1990. There appears to have been a modest decline in availability in all age groups since about 2000.

TABLE 7-1

Trends in Proportions of Friends Disapproving of Drug Use among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Q. How do you think your close friends feel (or would feel) about you. . .	Age Group	Percentage saying friends disapprove[a]																												2006–2007 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
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	66.6	62.7	58.1	55.8	53.0	53.8	55.1	58.1	57.6	54.1	58.4	59.5	60.9	62.3	60.4	-1.9
	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	63.4	63.7	58.5	64.3	58.4	57.0	56.5	56.0	54.2	53.4	56.5	61.0	57.9	60.5	58.4	-2.2
	23–26					47.7	47.0	49.1	53.9	58.2	62.6	61.3	64.5	65.6	65.5	63.2	63.8	61.2	59.3	66.5	62.6	64.6	55.2	53.8	51.4	57.7	55.9	60.7	55.8	-5.0
	27–30									58.6	58.7	61.4	64.6	63.5	64.4	66.3	66.1	65.8	65.0	65.4	61.8	63.9	64.9	67.1	61.9	67.2	61.2	64.1	58.2	-6.0
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	73.8	69.1	65.4	63.1	59.9	60.4	61.6	63.9	64.3	60.3	64.2	65.0	67.6	68.1	65.8	-2.3
	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	73.1	73.0	66.6	71.3	65.1	65.1	64.6	61.8	61.0	62.6	63.3	70.1	67.2	68.8	70.6	+1.8
	23–26					54.3	56.4	57.1	63.1	68.1	73.2	71.8	72.5	75.3	73.5	72.2	70.7	70.8	68.5	73.6	70.2	70.9	63.9	64.5	61.6	63.5	65.5	71.3	63.8	-7.5 s
	27–30									67.8	69.4	71.9	73.7	76.0	75.1	76.4	73.8	75.6	72.4	74.9	74.5	75.0	74.2	72.9	71.4	76.9	70.4	74.9	66.4	-8.5 s
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	83.5	80.6	78.9	76.1	74.1	74.7	74.5	76.1	77.8	75.3	77.0	77.3	79.5	79.8	78.3	-1.4
	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	87.6	85.9	83.9	84.5	83.3	81.1	78.2	78.5	80.0	80.5	79.1	84.4	82.2	84.1	83.7	-0.4
	23–26					77.8	78.4	80.9	82.0	85.8	89.2	88.1	87.9	90.3	89.1	88.8	84.9	89.5	85.6	87.1	86.8	86.9	83.7	82.8	80.0	79.2	82.7	83.7	81.9	-1.7
	27–30									85.4	86.0	88.4	89.2	88.7	88.2	88.9	89.7	89.6	87.8	90.8	89.2	91.6	90.1	87.9	87.2	88.0	87.7	88.2	84.3	-3.9
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	83.5	83.4	82.6	80.8	79.3	81.7	83.2	84.7	85.5	84.9	87.5	87.3	88.4	89.5	88.4	-1.1
	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	87.7	87.9	84.6	85.3	83.6	81.7	82.0	82.1	85.2	86.9	86.9	88.6	90.5	90.4	90.0	-0.4
	23–26					87.4	90.8	88.6	89.8	88.9	91.0	90.1	92.4	88.9	87.7	86.3	85.3	88.5	85.4	87.6	84.5	85.3	82.8	83.6	79.3	82.4	85.6	89.3	90.4	+1.2
	27–30									88.8	89.7	92.3	91.1	91.4	89.9	91.2	89.7	89.3	88.5	88.7	88.4	85.6	87.4	86.3	87.1	87.7	86.9	88.5	83.5	-5.0
Trying cocaine once or twice	18							79.6	83.9	88.1	88.9	90.5	91.8	92.2	91.1	91.4	91.1	89.2	87.3	88.8	88.7	90.2	89.3	89.1	91.2	87.9	89.0	88.7	89.6	+1.0
	19–22							76.4	—	84.8	87.7	89.2	92.3	91.9	92.4	94.7	91.7	91.5	91.8	90.0	91.2	89.4	89.1	91.7	90.6	90.3	90.3	91.2	93.3	+2.2
	23–26							70.8	—	81.4	84.5	84.1	86.7	87.4	87.7	87.9	90.4	90.0	91.1	92.0	89.6	90.5	88.0	88.5	83.6	84.2	84.6	88.7	91.7	+3.0
	27–30									81.8	81.1	83.7	83.5	84.4	86.1	87.8	87.5	88.7	89.4	89.3	90.5	90.4	89.3	88.8	89.9	91.8	89.5	92.0	86.4	-5.7 s
Taking cocaine occasionally	18							87.3	89.7	92.1	92.1	94.2	94.7	94.4	93.7	93.9	93.8	92.5	90.8	92.2	91.8	92.8	92.2	92.2	93.0	91.0	92.3	92.4	93.1	+0.8
	19–22							84.9	—	91.0	93.8	94.2	95.6	95.9	95.6	97.5	95.6	95.7	96.6	93.1	95.7	94.7	94.5	95.6	95.1	96.0	95.3	96.1	97.1	+1.0
	23–26							81.7	—	88.2	91.5	92.4	94.1	93.8	93.5	94.3	94.6	95.4	95.1	95.2	95.2	96.7	94.7	93.2	91.2	90.1	93.0	94.9	95.9	+1.1
	27–30									87.7	89.5	90.0	92.2	92.3	92.8	94.6	94.1	94.6	94.2	96.1	95.4	95.9	94.2	94.0	95.1	96.3	94.5	95.4	93.2	-2.3
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	83.2	84.5	81.9	80.6	80.4	82.6	83.0	84.1	83.8	83.3	85.9	84.7	86.1	86.7	87.3	+0.6
	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	85.0	87.2	83.1	86.0	84.5	84.0	85.8	81.6	84.5	87.6	87.6	89.4	88.9	89.4	89.1	-0.3
	23–26					78.4	79.1	76.7	81.7	83.0	85.6	84.3	85.0	83.6	84.2	84.7	87.6	86.5	83.3	87.0	85.9	85.1	83.1	83.9	81.5	82.7	86.2	89.9	89.3	-0.6
	27–30									82.7	84.1	84.9	84.6	84.7	84.1	85.9	85.5	85.6	85.9	85.8	87.2	87.8	86.4	86.0	87.9	88.9	87.5	88.5	82.9	-5.5 s
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	76.8	75.8	72.6	72.9	71.5	72.3	71.7	71.6	73.4	71.6	74.7	72.8	74.0	73.2	74.5	+1.4
	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	71.2	73.0	68.3	68.9	73.5	67.3	68.6	66.6	64.9	68.5	64.4	72.4	68.3	68.7	68.4	-0.3
	23–26					63.6	66.8	67.7	68.3	69.2	70.8	72.7	72.5	72.1	67.6	71.5	68.2	72.8	68.1	66.9	66.1	65.4	64.4	61.6	62.1	61.8	62.3	66.1	62.5	-3.6
	27–30									71.0	68.0	70.4	71.9	68.8	73.2	70.9	68.8	65.7	67.3	66.7	64.3	67.3	67.1	64.0	64.5	65.0	62.8	64.9	59.4	-5.5

(Table continued on next page.)

TABLE 7-1 (cont.)

Trends in Proportions of Friends Disapproving of Drug Use among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Q. How do you think your close friends feel (or would feel) about you. . .	Age Group	Percentage saying friends disapprove[a]																												2006–2007 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
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	87.2	85.2	84.1	82.6	82.5	82.8	82.2	82.8	84.4	80.1	83.1	82.9	82.7	83.3	84.8	+1.5
	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	89.6	90.1	88.8	88.1	90.0	85.9	87.9	86.6	84.6	87.7	86.8	89.8	86.8	89.0	90.7	+1.6
	23–26					90.8	90.2	92.5	92.8	93.7	92.1	92.1	92.4	91.1	93.1	92.1	92.2	92.6	90.7	93.7	89.9	92.5	91.1	88.1	89.3	87.8	89.1	90.8	87.8	-3.0
	27–30									92.8	92.0	92.9	92.7	92.7	93.9	94.0	92.9	91.9	93.8	92.1	95.3	92.4	91.2	92.7	92.6	92.5	93.4	92.3	91.3	-1.0
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	58.5	59.1	58.0	57.8	56.4	55.5	57.6	57.7	57.8	55.6	60.3	59.4	59.9	60.6	60.0	-0.6
	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	51.9	54.4	55.5	52.1	56.4	52.8	51.8	45.2	47.4	50.4	47.9	52.4	53.2	54.8	54.4	-0.4
	23–26					53.8	57.3	61.0	57.2	58.8	57.5	55.1	56.8	58.4	57.6	61.4	58.9	58.4	55.6	60.0	54.5	56.6	56.9	52.9	49.5	49.5	51.9	56.0	51.3	-4.7
	27–30									61.9	65.1	66.3	68.2	66.2	66.7	63.7	64.6	61.6	64.0	63.0	57.7	65.8	58.8	63.3	59.6	64.6	56.9	62.7	56.3	-6.4
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	71.8	72.4	69.2	69.3	68.5	69.0	71.2	72.6	74.5	75.7	79.2	78.6	81.1	81.2	81.4	+0.2
	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	76.0	73.8	70.9	73.9	76.5	69.2	73.9	71.1	74.3	77.3	78.3	82.1	82.7	84.8	87.0	+2.3
	23–26					73.9	77.3	80.3	80.5	79.5	80.5	78.5	83.3	82.3	77.4	80.1	78.8	78.3	75.8	76.5	78.0	79.9	77.0	75.4	78.3	77.6	77.4	84.4	82.6	-1.7
	27–30									81.2	80.9	82.9	84.5	83.1	86.8	82.5	83.4	81.9	80.5	81.9	82.6	84.0	83.6	86.1	84.0	84.6	82.2	84.1	81.3	-2.7
Approximate Weighted N =	*18*	*2766*	*3120*	*3024*	*2722*	*2721*	*2688*	*2639*	*2815*	*2778*	*2400*	*2184*	*2160*	*2229*	*2220*	*2149*	*2177*	*2030*	*2095*	*2037*	*1945*	*1775*	*1862*	*1820*	*2133*	*2208*	*2183*	*2183*	*2161*	
	19–22	*569*	*597*	*580*	*577*	*582*	*556*	*577*	*595*	*584*	*555*	*559*	*537*	*520*	*510*	*470*	*480*	*471*	*466*	*436*	*430*	*379*	*402*	*361*	*399*	*427*	*395*	*395*	*361*	
	23–26					*510*	*548*	*549*	*540*	*510*	*513*	*516*	*516*	*507*	*481*	*463*	*445*	*436*	*419*	*425*	*394*	*398*	*378*	*366*	*363*	*377*	*361*	*344*	*349*	
	27–30									*483*	*518*	*479*	*480*	*451*	*451*	*457*	*439*	*439*	*422*	*440*	*397*	*394*	*374*	*364*	*346*	*408*	*362*	*327*	*330*	

Source. The Monitoring the Future study, the University of Michigan.

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.

"—" indicates data not available.

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

TABLE 7-2

Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, and 45

Q. How many of your friends would you estimate. . .	Age Group	Percentage saying friends use[a]																										2006–2007 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Take any illicit drug[b]																														
% saying any	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	71.0	78.3	78.6	80.6	83.4	84.6	82.0	82.0	82.8	81.8	80.7	81.2	79.8	78.8	77.7	-1.2
	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	71.7	71.6	71.6	76.2	77.2	79.8	77.3	83.1	81.1	78.3	79.4	78.1	78.6	74.7	79.8	+5.1
	23–26					83.6	82.7	80.3	80.9	74.4	73.8	65.8	63.0	67.3	64.6	66.7	65.3	64.6	67.0	67.6	67.9	67.8	66.9	73.4	70.8	70.8	74.2	72.2	71.3	-0.9
	27–30									74.8	72.9	69.6	67.1	61.5	60.2	57.1	58.5	59.1	60.9	58.3	59.6	55.6	57.2	61.8	58.6	63.1	63.7	62.3	62.7	+0.4
	35															38.1	37.4	39.7	39.2	38.4	36.3	37.7	39.1	40.9	37.5	37.9	40.0	40.4	42.1	+1.7
	40																			39.2	38.2	38.0	38.4	36.2	36.5	34.6	36.2	35.4	34.6	-0.8
	45																								37.8	38.3	34.3	36.7	38.5	+1.9
% 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	15.5	20.3	21.7	23.8	23.7	25.9	25.5	24.5	25.2	23.1	23.5	23.0	20.2	20.9	21.7	+0.8
	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	10.4	14.9	13.1	17.3	16.2	16.8	20.6	18.9	20.3	20.2	17.3	14.7	15.8	16.8	14.5	-2.3
	23–26					19.6	15.4	16.2	11.7	9.5	9.7	9.5	7.4	6.2	6.4	8.7	7.6	8.8	10.5	9.6	8.4	9.7	10.4	10.3	10.3	11.7	9.7	11.1	8.1	-3.0
	27–30									8.6	6.4	5.9	2.9	5.8	5.0	5.6	6.1	3.6	4.5	5.3	5.7	5.3	7.1	6.9	6.9	3.9	4.7	5.4	6.5	+1.2
	35															2.1	1.9	2.0	3.0	3.1	2.8	3.1	3.2	2.9	3.2	2.8	2.5	2.1	2.2	0.0
	40																			2.3	2.0	2.0	1.6	2.2	1.6	1.6	2.1	2.5	2.0	-0.5
	45																								2.2	1.5	1.4	1.7	1.3	-0.4
Take any illicit drug[b] other than marijuana	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	48.7	53.7	53.7	54.5	55.1	55.6	51.2	52.5	55.0	54.3	50.0	51.4	51.3	51.0	50.0	-1.0
% saying any	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	51.4	46.3	46.4	46.5	49.7	53.3	54.8	56.1	60.0	57.2	50.8	53.4	54.9	49.5	52.5	+3.0
	23–26					63.7	64.0	59.0	61.1	55.1	54.2	47.8	41.8	46.1	42.3	39.4	40.3	32.8	35.1	35.4	41.1	42.5	42.6	49.4	42.3	47.1	46.6	45.6	42.6	-3.0
	27–30									55.9	55.0	49.7	47.2	37.7	38.5	33.9	37.7	36.4	33.9	34.1	35.2	31.7	33.5	36.0	34.7	35.8	33.1	36.2	34.2	-2.0
	35															21.4	21.6	22.1	19.2	19.3	19.0	17.9	18.7	20.4	18.5	20.2	18.5	18.1	20.7	+2.6
	40																			20.9	21.0	21.9	21.4	21.0	20.2	18.5	21.0	20.3	20.3	0.0
	45																								23.4	25.1	20.8	22.7	25.0	+2.3
% 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	7.1	7.1	7.7	8.9	7.0	8.9	7.4	7.4	7.0	6.1	6.7	7.3	6.7	5.3	6.5	+1.2
	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	4.0	4.4	3.5	6.2	4.1	4.3	5.1	7.7	8.0	5.7	5.1	3.5	4.8	4.2	3.9	-0.3
	23–26					10.6	6.6	8.6	5.2	3.9	4.2	3.4	1.6	1.8	2.8	2.5	1.9	1.9	2.6	2.8	2.2	3.8	3.7	2.8	3.7	3.1	3.2	3.2	1.0	-2.2 s
	27–30									4.6	3.0	2.8	1.0	1.4	1.5	1.5	1.5	0.9	1.2	0.9	1.3	1.5	2.6	2.3	0.7	0.8	0.9	1.4	2.2	+0.8
	35															0.8	0.5	0.7	0.5	0.7	0.9	1.0	0.9	0.6	0.6	0.4	0.5	0.5	0.6	+0.1
	40																			0.4	0.8	0.7	0.5	0.3	0.3	0.2	0.5	0.7	0.6	0.0
	45																								0.7	0.7	0.4	0.9	0.5	-0.5

(Table continued on next page.)

TABLE 7-2 (cont.)

Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, and 45

Q. How many of your friends would you estimate. . .	Age Group	Percentage saying friends use[a]																											2006–2007 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Smoke marijuana																														
% saying any	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	67.4	75.6	76.1	78.0	81.4	83.2	80.7	80.5	81.2	79.4	78.9	79.5	77.4	76.4	74.8	-1.6
	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	67.6	67.4	68.8	74.9	74.7	77.2	73.9	81.2	78.4	77.2	76.5	75.6	75.8	72.0	76.6	+4.5
	23–26					82.0	80.8	77.7	79.4	71.6	69.8	61.8	59.6	61.3	61.2	62.6	63.2	62.6	63.5	65.0	64.4	64.8	64.5	68.8	67.7	68.4	70.7	67.6	69.0	+1.4
	27–30									71.8	68.2	65.1	62.6	58.0	57.4	52.3	55.7	55.1	58.3	55.5	57.0	51.7	56.5	59.0	55.8	60.4	60.8	61.0	60.2	-0.8
	35															36.9	36.3	36.3	35.0	34.6	33.3	34.9	35.6	37.4	32.9	34.7	37.2	37.3	38.6	+1.4
	40																			34.6	32.5	32.3	31.8	31.4	30.7	29.9	30.4	29.4	29.2	-0.2
	45																								31.1	29.4	26.3	28.4	30.0	+1.6
% 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	13.9	18.9	20.7	22.2	22.5	23.8	24.2	23.2	24.0	21.4	21.7	21.1	17.9	19.6	19.2	-0.5
	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	8.5	13.0	12.5	16.3	16.2	16.4	19.4	16.6	18.5	18.6	16.0	15.0	13.4	15.7	13.4	-2.4
	23–26					17.0	14.3	13.7	10.4	7.8	8.6	8.3	6.9	5.6	5.6	7.5	6.6	8.2	9.8	9.0	8.5	8.2	9.0	8.7	9.3	9.8	8.0	10.1	7.9	-2.2
	27–30									6.8	4.4	4.0	2.8	5.1	5.2	5.0	5.6	3.5	3.9	4.8	5.5	4.9	6.3	6.2	6.7	3.5	4.3	5.0	6.6	+1.6
	35															3.0	2.5	2.9	2.9	2.8	2.6	2.8	2.6	2.7	3.1	2.7	2.3	2.0	2.1	0.0
	40																			2.1	1.4	1.9	1.2	2.0	1.4	1.6	1.8	2.1	1.6	-0.5
	45																								1.9	0.9	1.3	1.1	1.0	-0.1
Use inhalants																														
% saying any	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	23.7	26.5	27.5	27.2	27.4	25.9	21.6	23.5	22.2	21.0	17.5	17.9	18.1	18.9	17.9	-1.0
	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	13.8	14.0	14.2	16.2	13.7	16.2	16.3	13.7	13.7	10.4	10.0	9.5	11.1	11.0	9.6	-1.4
	23–26					7.7	6.7	7.2	6.1	6.2	5.9	6.1	4.4	5.1	6.3	7.0	9.3	5.6	7.5	6.2	7.9	6.9	7.5	7.4	7.9	6.2	5.8	5.2	3.7	-1.4
	27–30									4.6	3.5	2.9	2.5	3.3	2.9	3.5	4.0	4.1	3.6	3.8	4.2	3.6	6.0	4.5	3.2	2.6	3.2	3.3	2.8	-0.4
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
% 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	1.8	2.0	2.0	2.4	1.9	2.7	1.8	1.4	1.4	1.2	1.1	1.2	2.0	1.2	1.6	+0.5
	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	0.7	0.7	0.6	1.1	0.7	1.3	0.8	0.6	1.2	0.4	0.6	*	0.1	0.5	0.3	-0.2
	23–26					0.6	0.2	0.6	0.1	0.2	0.4	0.4	0.1	*	0.1	0.2	0.7	0.5	0.8	*	0.1	0.7	0.1	0.4	0.3	*	0.1	0.3	*	-0.3
	27–30									0.3	*	0.2	0.2	*	0.2	*	*	*	*	*	*	*	0.3	0.3	*	*	*	*	*	0.0
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—

(Table continued on next page.)

TABLE 7-2 (cont.)

Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, and 45

Q. How many of your friends would you estimate. . .	Age Group	Percentage saying friends use[a]																											2006–2007 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Use nitrites																														
% saying any	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	10.7	10.0	10.7	11.2	11.9	12.9	10.9	11.0	11.9	11.2	8.5	9.4	9.1	8.1	7.7	-0.4
	19–22	18.4	16.0	14.2	13.8	8.9	9.9	11.7	13.2	10.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26					10.8	7.8	8.0	7.9	5.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30									6.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
% 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	0.7	0.8	0.8	0.8	0.7	1.0	0.7	1.0	0.6	0.8	1.0	1.2	1.0	0.5	0.7	+0.3
	19–22	0.3	0.4	0.9	0.6	0.6	0.6	0.4	0.4	0.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26					0.8	0.3	0.4	0.3	0.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30									0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
Take LSD																														
% saying any	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	31.3	34.1	36.9	37.9	36.5	36.8	32.2	31.9	32.2	28.6	21.9	23.5	19.5	18.7	18.3	-0.5
	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	28.8	23.8	26.9	28.6	24.7	29.4	28.2	27.8	28.4	24.0	15.4	15.9	13.9	14.2	15.1	+0.9
	23–26					21.5	17.2	15.4	15.9	13.3	14.1	12.3	12.5	15.0	17.2	17.3	21.5	15.3	18.2	15.2	18.1	19.3	16.8	15.8	16.1	14.4	12.0	11.7	11.2	-0.6
	27–30									10.4	7.7	9.1	8.6	10.9	8.7	8.1	12.0	11.6	12.3	12.6	13.4	11.8	12.5	13.1	11.4	8.9	6.6	9.1	7.6	-1.5
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
% 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	3.8	4.2	4.8	5.0	3.7	4.7	3.9	3.1	2.9	1.7	1.9	1.5	1.5	0.8	1.2	+0.3
	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	2.1	2.5	2.3	3.8	1.4	2.5	1.8	2.1	2.7	1.6	0.8	0.3	0.3	0.2	0.8	+0.5
	23–26					0.8	0.5	1.0	0.2	0.6	0.5	0.6	0.2	0.4	0.7	1.1	0.7	0.7	0.6	1.0	1.5	0.9	0.3	0.4	0.8	0.4	0.2	0.3	*	-0.3
	27–30									0.3	0.2	0.3	0.3	*	0.3	0.4	0.3	0.4	0.4	0.1	0.6	0.4	0.4	0.3	0.1	*	0.3	0.4	0.4	+0.1
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—

(Table continued on next page.)

TABLE 7-2 (cont.)

Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, and 45

Percentage saying friends use[a]

Q. How many of your friends would you estimate. . .	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Take other																														
hallucinogens[c]	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	19.3	21.4	23.8	26.4	26.3	27.4	22.5	24.0	35.4	33.6	30.1	31.9	31.0	30.1	30.1	0.0
% saying any	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	15.0	13.8	14.9	17.2	17.2	19.1	18.9	20.9	33.6	33.5	24.8	26.8	25.1	27.8	26.7	-1.2
	23–26					20.0	16.7	13.2	13.2	11.7	9.6	8.7	8.5	9.8	9.4	10.3	11.7	10.4	13.0	11.7	9.6	11.3	18.6	22.4	20.2	24.5	18.5	18.9	15.9	-3.0
	27–30									10.6	7.4	7.1	6.8	7.9	7.1	6.6	7.9	7.5	6.8	7.8	9.4	8.0	14.6	14.9	13.5	12.4	9.4	14.9	10.6	-4.3
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
% 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	1.7	2.2	2.2	2.3	2.6	3.1	2.4	2.4	2.9	2.3	2.4	2.6	2.2	1.7	1.7	0.0
	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	0.9	1.6	1.5	1.0	1.1	1.7	0.8	2.0	2.3	2.2	1.5	1.1	0.6	0.9	1.0	+0.1
	23–26					0.8	0.3	0.5	0.3	0.2	0.3	0.8	0.1	0.4	0.7	0.6	0.8	0.1	0.8	0.7	0.8	0.3	0.6	0.7	1.0	0.8	0.7	1.0	0.4	-0.6
	27–30									0.2	0.1	0.3	0.2	*	0.2	0.3	0.1	0.2	0.3	0.2	0.2	0.4	0.6	1.0	0.1	*	0.4	0.4	0.4	+0.1
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
Take PCP																														
% saying any	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	15.6	15.5	18.3	20.3	19.7	20.2	16.8	17.5	19.1	17.2	13.6	11.8	10.1	10.6	9.4	-1.2
	19–22	24.1	15.3	15.3	12.6	9.5	8.9	10.1	9.7	10.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26					11.6	6.8	7.4	6.9	5.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30									6.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
% 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	1.9	1.2	1.2	1.3	1.4	1.6	1.5	1.7	1.3	1.0	1.5	1.1	1.0	0.5	0.8	+0.3
	19–22	0.5	0.3	0.3	0.5	0.7	0.7	0.2	0.1	0.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26					0.6	*	0.4	*	0.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30									0.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—

(Table continued on next page.)

TABLE 7-2 (cont.)

Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, and 45

Q. How many of your friends would you estimate. . .	Age Group	Percentage saying friends use[a] 1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Take ecstasy (MDMA)																														
% saying any	18											12.4	11.9	10.7	12.8	15.9	20.7	24.2	27.7	24.5	26.7	37.3	41.9	38.0	34.2	28.9	23.1	23.0	23.6	+0.6
	19–22										16.3	14.3	12.0	12.9	13.7	11.3	17.2	20.7	21.4	26.0	30.7	42.4	43.3	43.4	31.3	27.6	28.3	25.2	21.6	-3.6
	23–26										7.6	9.0	9.5	11.0	9.8	11.4	11.2	11.3	15.1	13.7	15.2	25.9	29.4	36.8	27.0	31.2	25.3	23.4	16.5	-6.9 s
	27–30										5.6	6.3	5.4	4.6	6.6	5.8	6.9	10.1	7.4	8.5	12.4	13.1	17.8	20.6	19.4	20.6	15.6	22.6	15.9	-6.7 s
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
% saying most or all	18											2.2	1.7	2.1	1.2	1.7	2.8	3.0	2.6	2.5	2.7	4.8	5.2	3.7	2.7	3.2	2.5	1.9	2.1	+0.2
	19–22										0.4	0.7	0.2	0.7	0.7	0.5	0.5	0.8	1.7	2.0	2.9	4.9	5.8	2.7	1.9	1.9	1.1	0.7	0.8	+0.1
	23–26										0.5	0.2	0.1	0.1	0.5	0.1	0.4	0.1	0.8	0.8	0.4	2.9	1.7	1.2	2.0	1.1	1.3	0.9	0.3	-0.6
	27–30										0.5	0.3	*	0.1	0.3	0.2	0.5	0.1	0.3	*	0.8	0.4	0.3	0.9	0.5	0.6	0.2	*	0.1	+0.1
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
Take cocaine																														
% saying any	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	24.5	26.1	24.8	28.1	28.2	31.2	27.8	27.2	27.1	26.8	23.8	29.3	28.1	29.7	29.7	0.0
	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	24.3	21.5	22.0	19.4	22.2	26.8	25.7	24.8	27.4	28.2	25.5	26.2	27.2	26.6	29.4	+2.9
	23–26					52.4	53.2	51.6	50.7	47.1	40.8	34.8	29.0	28.8	27.1	22.3	24.4	18.1	19.7	18.7	20.1	20.3	19.4	23.7	21.9	27.4	25.6	24.6	23.1	-1.5
	27–30									47.9	43.3	38.3	35.7	29.9	27.6	22.6	26.2	20.8	21.5	18.6	20.7	16.5	19.7	16.0	17.0	17.0	17.9	19.5	18.6	-0.9
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
% 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	2.1	1.5	2.0	2.2	2.0	3.2	2.9	2.0	1.7	1.7	2.4	2.3	2.3	1.9	2.1	+0.2
	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	0.5	1.5	0.9	1.0	0.8	1.5	1.1	1.0	1.8	1.0	1.4	0.7	2.1	1.0	1.1	+0.1
	23–26					9.1	5.3	7.0	4.1	3.1	2.7	2.1	0.6	0.9	0.8	1.0	0.3	0.4	1.1	0.9	0.5	0.8	1.6	1.0	1.6	1.0	1.5	1.4	0.8	-0.6
	27–30									3.8	2.0	2.3	0.9	1.2	0.8	0.8	0.4	0.4	0.6	0.1	0.4	0.4	0.5	0.6	0.3	0.3	*	*	1.4	+1.4 s
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—

(Table continued on next page.)

TABLE 7-2 (cont.)

Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, and 45

Q. How many of your friends would you estimate. . .	Age Group	Percentage saying friends use[a]																										2006–2007 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Take crack																														
% saying any	18								27.4	25.4	26.1	19.2	17.6	17.8	17.9	20.0	19.2	21.6	22.2	24.4	19.0	21.4	23.4	21.5	18.7	22.5	22.9	22.3	21.8	-0.5
	19–22								23.8	21.8	20.6	14.6	14.3	11.8	13.6	13.8	14.0	9.4	13.1	16.4	15.7	16.5	17.4	18.0	11.8	16.0	14.9	14.5	16.0	+1.4
	23–26								26.4	22.4	19.8	14.4	10.8	10.8	8.8	8.8	11.1	8.2	8.3	8.3	8.8	7.9	8.6	10.1	10.4	10.8	10.8	10.0	8.7	-1.4
	27–30									22.1	18.4	16.6	11.6	10.3	10.2	10.4	10.3	8.6	6.3	6.4	8.7	6.0	7.1	6.4	6.5	5.2	8.5	9.1	6.9	-2.1
	35															4.5	5.1	4.4	3.1	2.8	3.2	3.9	2.8	3.2	2.8	3.1	2.6	2.8	3.0	+0.2
	40																			3.8	3.0	2.9	3.5	2.6	2.7	2.6	2.8	2.3	3.1	+0.8
	45																								3.7	3.3	2.4	3.0	2.9	-0.1
% saying most or all	18								2.2	1.1	2.1	0.6	0.6	0.7	0.9	1.0	1.1	0.9	1.1	1.7	1.5	1.4	0.8	0.8	1.4	1.6	1.6	1.0	1.3	+0.3
	19–22								0.7	0.8	1.0	0.6	0.2	0.1	0.3	0.4	0.3	0.5	0.3	0.9	0.9	0.5	0.3	0.2	0.4	0.1	1.0	0.8	0.3	-0.5
	23–26								0.8	0.9	0.8	0.5	0.1	0.1	0.5	0.2	*	0.3	0.5	0.4	*	0.5	0.3	*	0.3	0.5	0.2	0.7	0.1	-0.6
	27–30									1.2	0.9	0.9	0.3	*	0.6	0.3	0.1	0.2	0.2	0.1	*	*	*	0.3	0.1	*	0.1	*	0.3	+0.3
	35															0.6	0.3	0.4	*	0.1	0.3	0.5	0.2	0.3	0.3	0.1	0.2	0.2	0.2	0.0
	40																			*	0.2	0.2	0.1	*	*	*	0.1	0.2	0.1	-0.1
	45																								0.4	0.3	0.2	0.2	*	-0.2
Take cocaine powder																														
% saying any	18								—	—	25.3	24.6	19.8	19.7	18.1	20.7	19.2	22.8	24.8	22.9	22.0	21.3	20.1	22.4	23.2	25.4	23.2	22.8	22.3	-0.5
	19–22								—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26								—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30									—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	35															14.2	12.9	15.4	11.1	10.4	10.0	10.3	9.4	9.4	8.2	9.2	8.3	8.4	9.1	+0.7
	40																			10.8	8.9	8.8	8.8	8.5	7.6	7.6	8.9	7.3	6.7	-0.5
	45																								8.3	8.0	7.0	7.4	8.0	+0.6
% saying most or all	18								—	—	2.3	2.5	1.8	2.0	1.6	1.9	1.7	1.9	2.0	1.9	1.9	1.8	1.5	1.9	1.9	3.3	1.7	1.7	1.8	+0.2
	19–22								—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26								—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30									—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	35															0.8	0.3	0.6	0.4	0.4	0.6	0.7	0.4	0.4	0.4	0.2	0.2	0.2	0.4	+0.1
	40																			0.2	0.2	*	0.2	0.1	0.1	0.1	0.2	0.5	0.2	-0.3
	45																								0.5	0.5	0.2	0.4	0.1	-0.3

(Table continued on next page.)

TABLE 7-2 (cont.)

Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, and 45

Q. How many of your friends would you estimate. . .	Age Group	Percentage saying friends use[a] 1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Take heroin																														
% saying any	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	13.3	14.3	14.5	15.6	15.6	16.5	12.7	14.9	13.1	12.9	10.3	12.7	13.1	12.7	12.9	+0.1
	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	7.0	8.1	10.4	6.7	7.4	9.4	9.7	7.7	8.7	8.9	5.3	7.0	6.4	7.5	9.0	+1.5
	23–26					6.1	4.4	4.3	6.5	3.6	5.2	4.2	3.6	3.8	4.5	4.9	5.8	4.0	6.2	5.8	4.8	4.7	5.0	5.2	6.1	2.9	5.1	3.5	4.3	+0.8
	27–30									3.8	2.8	4.5	2.7	3.1	3.6	4.2	3.6	4.4	4.2	3.5	3.8	2.8	4.3	3.9	3.4	3.0	3.8	2.5	3.0	+0.6
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
% 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	1.1	1.0	1.1	0.9	0.8	1.3	1.0	1.1	0.9	0.7	0.9	0.9	1.1	0.8	1.4	+0.6
	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	0.2	0.4	0.4	0.4	0.2	0.5	0.1	0.3	0.6	*	0.3	*	0.3	0.4	0.3	-0.1
	23–26					0.4	0.2	0.2	*	0.2	0.4	0.2	0.3	0.4	0.1	0.2	0.2	*	0.7	*	*	0.3	*	0.1	*	*	0.3	0.3	*	-0.3
	27–30									0.2	0.1	0.2	0.2	*	0.2	0.3	*	*	*	0.1	*	*	*	0.3	*	*	*	*	*	0.0
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
Take other narcotics																														
% saying any	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	16.1	18.5	19.5	21.8	22.2	24.8	22.9	23.1	24.0	27.5	21.6	24.6	21.4	23.0	20.7	-2.3
	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	13.2	10.5	15.9	13.4	13.2	15.2	19.8	23.2	23.0	21.8	21.9	22.6	19.9	17.6	23.7	+6.1 s
	23–26					16.0	14.9	14.0	13.0	10.6	10.8	10.5	8.5	8.4	8.7	8.0	10.5	8.9	9.9	9.4	10.4	11.2	13.5	14.6	18.4	16.8	18.3	17.6	14.2	-3.4
	27–30									12.1	8.6	9.1	9.3	7.5	8.2	8.0	7.7	9.5	7.9	8.3	7.2	8.4	11.2	11.8	11.0	12.0	12.5	13.1	10.6	-2.5
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
% 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	1.2	1.0	1.6	1.5	1.4	2.9	1.8	2.0	2.0	2.1	2.4	2.4	1.9	1.8	2.6	+0.8
	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	0.6	0.6	0.6	0.4	0.4	0.8	0.4	1.2	1.8	1.3	1.0	0.5	1.0	0.9	0.3	-0.7
	23–26					0.4	0.3	0.7	*	0.3	0.2	0.2	*	*	*	0.3	0.2	*	0.6	0.3	*	0.4	0.5	0.6	0.6	0.5	0.8	0.5	0.3	-0.2
	27–30									0.3	*	0.2	0.2	0.1	0.2	0.2	*	0.2	*	*	0.2	*	*	0.3	0.1	*	*	0.6	*	-0.6
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—

(Table continued on next page.)

TABLE 7-2 (cont.)

Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, and 45

Q. How many of your friends would you estimate. . .	Age Group	Percentage saying friends use[a]																											2006–2007 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Take amphetamines																													
% saying any	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	27.5	28.1	30.3	32.2	32.7	33.8	30.8	32.9	33.2	34.4	28.1	31.4	28.8	29.0	27.4	-1.6
	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	21.0	20.9	21.7	21.6	21.1	24.4	25.5	28.4	28.0	28.6	24.0	23.5	25.9	25.4	26.9	+1.5
	23–26					45.6	40.1	33.5	32.1	28.4	23.1	20.6	17.1	15.1	16.8	16.2	18.2	12.5	14.4	14.1	14.2	14.5	17.5	18.4	18.0	18.8	18.4	19.7	17.6	-2.0
	27–30									26.1	21.6	19.3	17.0	15.3	14.0	13.1	13.7	15.5	12.9	11.0	11.8	11.9	12.9	12.3	12.0	13.5	11.8	12.5	10.0	-2.5
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
% 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	2.0	1.8	2.0	2.8	2.4	3.4	2.8	3.1	2.2	2.4	2.1	2.9	2.2	2.0	2.4	+0.4
	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	0.2	1.1	1.2	0.7	0.7	1.2	0.7	1.7	1.6	1.3	1.2	0.5	0.7	1.1	0.4	-0.6
	23–26					1.9	1.8	1.7	1.2	0.3	0.6	0.7	0.8	0.4	1.5	0.9	0.5	0.2	0.8	0.5	0.6	0.3	0.5	0.3	0.7	0.1	0.3	0.7	*	-0.7
	27–30									0.6	0.4	0.5	0.5	0.1	0.5	0.5	0.3	0.3	0.1	0.3	0.6	0.1	0.5	0.9	0.1	*	0.4	0.4	0.4	+0.1
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
Take sedatives/barbiturates[d]																													
% saying any	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	17.8	18.2	17.8	21.6	20.4	22.8	20.9	21.6	22.1	25.3	18.1	25.2	22.3	22.5	20.8	-1.7
	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	11.7	9.7	13.3	11.6	12.1	14.8	16.0	15.2	18.6	17.1	14.4	18.8	19.6	18.7	20.1	+1.4
	23–26					22.2	18.7	16.3	14.1	11.2	10.4	8.9	8.3	8.7	8.2	7.6	9.6	6.9	8.4	7.9	8.3	6.6	11.1	10.9	12.9	16.7	15.7	16.2	16.5	+0.3
	27–30									12.0	8.5	8.8	7.1	6.6	6.7	7.4	7.2	6.7	6.5	6.1	5.7	6.4	7.9	7.4	7.3	11.5	10.5	13.5	12.5	-1.0
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
% 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	1.0	1.1	1.4	1.6	1.1	2.5	1.4	1.7	1.1	1.7	1.9	2.0	1.8	1.3	1.6	+0.3
	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	0.1	0.3	0.8	0.2	0.7	0.4	0.4	1.0	0.9	0.8	0.7	0.3	0.3	0.2	0.6	+0.4
	23–26					0.4	0.3	0.3	0.3	0.1	0.2	0.2	0.1	0.1	0.3	0.2	*	*	0.8	*	*	0.4	0.4	*	0.2	0.4	0.2	0.5	*	-0.5
	27–30									0.2	*	0.4	0.2	0.2	0.2	*	*	0.3	*	*	0.2	*	0.3	0.6	0.1	*	0.5	0.4	0.6	+0.3
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—

(Table continued on next page.)

TABLE 7-2 (cont.)

Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, and 45

Q. How many of your friends would you estimate. . .	Age Group	Percentage saying friends use[a]																											2006–2007 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Take quaaludes																														
% saying any	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	14.2	14.2	15.5	18.1	16.1	17.4	15.5	16.2	17.8	18.0	14.2	16.6	13.6	13.4	13.6	+0.2
	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	10.0	7.8	11.5	10.1	9.3	10.6	11.4	13.1	14.6	13.0	10.3	8.3	8.2	8.6	8.8	+0.2
	23–26					25.7	21.0	17.4	15.0	12.1	10.3	8.6	5.9	6.4	7.6	7.7	9.0	6.3	6.5	6.6	6.4	4.9	7.7	8.5	8.9	6.5	7.7	5.6	5.6	-0.1
	27–30									11.8	7.9	8.2	7.0	7.1	6.5	6.6	4.5	6.9	4.9	4.1	5.1	5.0	4.9	6.6	4.3	4.4	3.6	4.9	4.3	-0.6
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
% 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	1.1	1.1	1.3	1.7	1.1	2.0	1.4	1.4	1.2	1.2	1.2	1.6	1.3	1.3	1.6	+0.4
	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	0.2	0.7	0.1	0.6	0.5	0.4	0.9	0.8	0.1	0.4	*	0.4	0.2	*	-0.2
	23–26					0.6	0.3	0.7	0.2	0.2	0.4	0.2	0.1	0.2	0.6	0.2	0.2	*	0.8	*	0.2	0.3	0.3	0.1	0.2	0.1	0.2	0.3	0.3	0.0
	27–30									0.5	0.2	0.2	0.2	*	0.2	*	*	0.2	*	*	0.2	0.3	*	0.3	*	*	0.3	0.7	*	-0.7
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
Take tranquilizers																														
% saying any	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	15.5	16.5	15.8	18.1	17.9	19.7	16.4	19.4	18.6	21.2	17.2	18.3	16.9	15.3	15.5	+0.2
	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	11.9	9.5	13.6	10.5	11.7	13.7	16.2	16.7	21.3	18.1	14.5	12.3	11.5	13.0	17.2	+4.2
	23–26					29.3	26.3	22.3	20.8	15.5	13.1	14.8	12.1	12.5	11.0	13.4	10.4	10.7	9.6	8.5	9.8	11.2	12.4	14.9	12.9	15.1	13.1	10.7	12.3	+1.6
	27–30									20.1	16.6	16.9	14.9	12.0	12.5	13.9	11.9	11.0	10.8	12.6	10.4	10.6	9.6	10.6	10.4	9.9	9.7	8.5	9.1	+0.6
	35															14.3	12.2	13.1	10.8	10.7	11.4	10.8	12.2	12.5	11.4	12.7	12.4	12.2	14.7	+2.4
	40																			13.7	14.8	15.2	15.1	15.6	15.0	13.6	14.1	16.1	16.0	-0.1
	45																								17.3	19.8	15.4	18.3	20.7	+2.4
% 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	0.9	0.9	1.1	1.4	0.8	2.3	1.3	2.1	1.3	1.6	1.5	1.7	1.6	1.2	1.8	+0.6
	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	0.1	0.2	0.7	0.7	0.8	0.6	0.3	0.6	0.9	0.4	0.4	0.3	0.3	0.3	0.3	0.0
	23–26					0.4	0.3	0.5	*	0.3	0.4	0.2	0.3	0.1	0.4	0.2	*	*	1.1	0.1	*	0.5	0.8	0.1	*	0.5	0.7	0.4	*	-0.4
	27–30									0.5	0.3	0.4	0.2	0.1	0.2	0.4	*	0.2	*	*	0.4	*	0.4	0.6	0.1	*	0.2	0.2	*	-0.2
	35															0.5	0.3	0.3	0.1	0.2	0.6	0.6	0.2	0.1	0.2	0.3	0.5	0.3	0.5	+0.2
	40																			*	0.4	0.1	0.3	0.2	*	0.2	0.2	0.3	0.3	0.0
	45																								0.3	0.2	0.2	0.1	0.3	+0.2

(Table continued on next page.)

TABLE 7-2 (cont.)

Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, and 45

Q. How many of your friends would you estimate. . .	Age Group	Percentage saying friends use[a]																											2006–2007 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Drink alcoholic beverages																													
% saying any	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	88.9	90.1	90.9	89.6	90.7	91.2	90.2	89.8	89.2	88.0	87.9	87.8	87.2	86.0	85.1	-0.9
	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	95.1	92.5	94.8	93.7	94.5	94.5	92.8	95.2	93.4	94.5	92.5	90.4	95.0	91.9	94.0	+2.2
	23–26					96.8	96.8	96.2	95.9	95.3	95.4	94.7	93.9	95.1	94.4	94.0	94.1	92.7	95.4	95.5	93.3	94.5	93.1	95.3	92.8	94.9	91.6	93.6	94.7	+1.0
	27–30									96.1	96.0	95.2	94.4	95.6	93.4	93.3	93.3	93.1	95.1	93.1	94.4	92.7	91.4	92.8	90.5	94.4	93.7	95.6	92.4	-3.2
	35															89.6	89.9	90.3	89.5	88.1	88.7	89.6	89.3	90.1	87.4	93.4	91.3	90.6	90.5	-0.1
	40																			88.4	88.9	90.7	89.6	90.5	89.2	90.5	92.1	90.8	93.0	+2.1
	45																								87.9	90.3	89.8	90.1	89.8	-0.2
% 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	57.0	59.6	56.4	56.4	60.9	61.0	58.2	57.2	59.2	53.7	53.1	53.9	55.3	52.4	52.0	-0.4
	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	66.5	68.7	63.9	67.0	63.8	69.4	67.8	70.1	65.4	68.8	63.9	66.4	71.8	65.4	71.1	+5.7
	23–26					73.2	74.4	69.5	74.9	68.9	69.8	67.1	69.3	68.8	68.7	70.7	67.0	68.9	66.6	67.4	63.6	70.8	65.7	73.4	66.0	71.3	69.3	69.2	70.2	+1.1
	27–30									66.7	67.8	62.0	62.7	63.3	61.3	63.2	62.6	64.1	66.6	62.9	64.4	64.8	64.9	66.3	61.5	69.0	66.2	70.7	65.6	-5.0
	35															43.8	45.1	49.5	46.6	47.1	46.0	49.1	48.4	52.9	51.6	53.7	55.5	55.2	56.1	+0.9
	40																			37.7	41.4	42.5	44.7	44.8	47.2	43.3	47.2	45.9	50.3	+4.5
	45																								38.9	41.7	42.4	45.1	46.6	+1.5
Get drunk at least once a week																														
% saying any	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	79.2	81.4	78.9	78.5	82.4	81.1	81.5	79.5	79.6	78.3	77.3	79.0	78.7	77.4	75.5	-1.9
	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	81.1	79.6	83.2	80.9	79.2	82.3	82.8	82.2	81.9	81.5	81.5	80.5	85.1	81.7	84.4	+2.6
	23–26					73.1	72.7	73.5	73.7	72.1	73.1	72.2	74.0	73.1	74.3	72.1	73.1	74.5	71.9	74.1	71.0	76.5	74.7	81.0	76.4	75.8	80.7	80.9	80.4	-0.5
	27–30									66.3	61.8	65.4	65.2	65.5	64.5	62.7	67.1	66.7	65.4	65.5	65.9	64.3	64.7	68.9	66.5	73.8	72.4	74.6	72.0	-2.6
	35															44.3	43.2	44.9	42.9	46.1	44.5	46.9	47.6	48.3	47.9	52.0	50.7	52.6	55.0	+2.4
	40																			41.6	40.6	42.2	41.3	42.6	42.9	43.2	48.4	47.2	46.3	-0.9
	45																								41.6	42.2	41.6	40.0	42.7	+2.7
% 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	27.6	28.4	27.4	29.0	30.9	31.7	30.1	32.4	32.7	28.3	27.1	27.6	28.5	27.7	27.0	-0.7
	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	28.8	26.3	28.2	26.0	26.6	29.8	29.3	28.1	30.2	31.0	29.6	29.0	31.2	32.9	32.0	-0.8
	23–26					11.4	11.6	12.5	11.9	12.8	12.0	13.9	11.6	14.6	13.2	15.2	15.2	14.0	17.0	16.0	16.8	17.4	19.1	19.2	18.3	24.0	24.0	20.3	22.8	+2.5
	27–30									5.2	6.3	6.7	6.6	5.9	6.7	6.4	7.9	8.6	7.7	9.3	12.1	9.8	11.7	8.9	13.0	9.4	11.2	13.5	12.2	-1.4
	35															3.6	3.6	5.4	3.2	4.4	4.9	4.6	4.8	4.5	5.2	5.3	5.3	5.6	6.1	+0.5
	40																			2.8	3.0	2.5	2.9	3.8	3.9	3.0	3.6	4.0	3.4	-0.6
	45																								3.6	2.7	2.7	3.1	3.7	+0.6

(Table continued on next page.)

TABLE 7-2 (cont.)

Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, and 45

Q. How many of your friends would you estimate. . .	Age Group	Percentage saying friends use[a]																											2006–2007 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Smoke cigarettes																														
% saying any	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	84.8	88.1	87.9	88.3	89.9	89.5	89.3	87.2	86.8	85.4	83.3	83.7	81.8	81.4	77.1	-4.3 ss
	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	86.7	86.1	88.8	89.2	91.3	92.6	91.0	90.9	90.9	89.7	86.5	89.7	89.3	85.8	86.8	+0.9
	23–26					93.9	95.0	91.6	92.1	89.8	90.1	88.7	89.6	85.6	88.3	86.4	86.8	85.3	85.4	88.7	84.1	86.5	86.7	86.4	86.5	87.0	87.3	85.4	84.1	-1.3
	27–30									92.6	89.8	90.7	90.4	88.0	85.8	84.8	84.9	85.4	84.1	81.1	86.3	85.1	84.9	87.0	82.8	83.5	81.0	84.4	81.7	-2.7
	35															72.7	71.7	71.7	72.4	71.8	69.9	70.8	69.2	66.6	67.0	67.7	65.5	67.0	64.8	-2.1
	40																			70.2	70.0	67.8	64.3	65.5	65.1	62.4	63.8	64.6	59.2	-5.4 s
	45																								66.1	67.0	62.9	60.9	58.5	-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	25.0	25.3	27.5	30.4	34.4	33.9	31.1	28.2	25.0	23.0	19.6	20.6	16.7	15.8	16.4	+0.6
	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	22.2	21.7	28.4	24.0	25.1	28.8	26.8	29.4	27.0	25.7	20.2	20.7	20.4	15.2	17.9	+2.7
	23–26					25.6	22.7	19.7	18.5	16.5	20.5	16.9	18.1	16.0	15.5	16.6	13.9	17.6	17.0	16.8	17.5	17.0	15.5	15.1	18.3	19.8	19.6	13.9	14.7	+0.7
	27–30									15.8	14.2	11.6	12.9	11.9	14.3	10.9	12.3	10.4	12.1	12.3	13.4	11.7	10.2	12.9	12.2	9.2	12.6	12.6	12.7	+0.1
	35															7.9	7.2	9.3	7.2	8.0	9.0	6.7	8.8	6.6	6.3	6.9	6.0	6.8	5.7	-1.1
	40																			8.1	7.4	6.8	5.7	5.8	5.9	6.0	7.0	5.1	4.7	-0.4
	45																								5.7	5.9	6.1	5.4	4.5	-0.9
Take steroids																														
% saying any	18											25.9	24.7	21.5	19.0	18.1	19.5	17.9	18.9	18.3	20.0	19.8	21.7	21.6	21.1	22.8	19.1	19.8	20.1	+0.3
	19–22										23.4	21.5	22.2	19.7	20.7	16.8	16.6	16.1	16.8	20.0	20.6	18.9	20.0	19.3	17.1	21.4	20.1	21.0	18.3	-2.7
	23–26										15.3	15.0	12.3	14.5	11.1	10.5	12.4	7.3	13.0	9.2	15.0	12.2	13.6	14.3	12.9	12.4	11.6	13.4	13.8	+0.4
	27–30										9.9	10.5	7.5	8.0	8.0	8.0	8.0	10.2	9.1	7.0	11.2	9.3	10.7	6.4	11.6	10.1	7.4	7.5	6.7	-0.8
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
% saying most or all	18											1.8	1.0	1.7	0.9	1.2	1.3	0.8	1.7	1.4	0.9	1.9	1.2	1.5	1.5	2.6	1.5	0.9	1.2	+0.3
	19–22										0.2	0.6	*	0.1	0.4	0.2	0.1	*	0.1	0.3	0.1	0.3	0.7	0.7	0.4	*	0.1	0.3	0.3	0.0
	23–26										0.4	*	*	0.2	0.1	0.1	*	*	0.5	*	0.1	0.3	0.2	0.1	*	0.1	0.3	0.3	*	-0.3
	27–30										0.5	*	*	*	0.2	0.1	*	*	*	*	*	*	*	0.3	*	*	0.1	*	*	0.0
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—

(Table continued on next page.)

TABLE 7-2 (cont.)

Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, and 45

	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Approximate	*18*	*2987*	*3307*	*3303*	*3095*	*2945*	*2971*	*2798*	*2948*	*2961*	*2587*	*2361*	*2339*	*2373*	*2410*	*2337*	*2379*	*2156*	*2292*	*2313*	*2060*	*1838*	*1923*	*1968*	*2233*	*2271*	*2266*	*2266*	*2253*
Weighted N =	*19–22*	*576*	*592*	*564*	*579*	*543*	*554*	*579*	*572*	*562*	*579*	*556*	*526*	*510*	*468*	*435*	*470*	*469*	*467*	*437*	*426*	*402*	*402*	*375*	*388*	*443*	*395*	*377*	*362*
	23–26					*527*	*534*	*546*	*528*	*528*	*506*	*510*	*507*	*516*	*495*	*449*	*456*	*416*	*419*	*394*	*414*	*387*	*403*	*358*	*362*	*411*	*361*	*336*	*340*
	27–30									*516*	*507*	*499*	*476*	*478*	*461*	*419*	*450*	*464*	*454*	*428*	*424*	*363*	*359*	*348*	*369*	*396*	*363*	*350*	*324*
	35															*1200*	*1187*	*1187*	*1209*	*1067*	*1071*	*1033*	*1005*	*918*	*968*	*985*	*1041*	*953*	*884*
	40																			*1098*	*1156*	*1144*	*1119*	*1083*	*945*	*1004*	*975*	*951*	*896*
	45																								*976*	*1074*	*1052*	*1009*	*999*

Source. The Monitoring the Future study, the University of Michigan.

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.

"—" indicates data not available.
"*" indicates a prevalence rate of less than 0.05%.

[a]Answer alternatives were: (1) None, (2) A few, (3) Some, (4) Most, (5) All. The "any" percentage combines categories (2)–(5). The "most or all" percentage combines categories (4) and (5).

[b]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. For the 35-, 40-, and 45-year-olds, "any illicit drug" includes marijuana, tranquilizers, crack, cocaine powder, and "other illicit drugs."

[c]In 2001 the question text was changed from "other psychedelics" to "other hallucinogens," and "shrooms" was added to the list of examples. These changes likely explain the discontinuity in the 2001 results.

[d]In 2004 the question text was changed from "barbiturates" to "sedatives/barbiturates" and the list of examples was changed from "downers, goofballs, reds, yellows, etc." to just "downers." These changes likely explain the discontinuity in the 2004 results.

TABLE 7-3

Trends in Exposure to Drug Use among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

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	Percentage saying exposed to drug[a]																											2006–2007 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Any illicit drug[b]																														
% saying any	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	66.1	70.8	75.3	78.0	78.8	77.2	77.9	76.0	76.5	76.5	73.6	74.3	73.0	73.7	70.8	-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	58.4	60.7	66.4	67.2	65.3	69.1	65.8	64.7	69.7	65.7	68.0	67.6	68.8	67.1	67.4	+0.3
	23–26					68.9	70.2	68.0	62.4	62.7	58.3	54.6	52.1	48.2	49.9	47.1	54.2	50.3	55.4	50.6	50.5	55.1	56.4	56.5	57.0	53.5	53.9	56.7	58.3	+1.5
	27–30									52.4	50.2	47.0	39.6	41.7	38.9	45.6	42.4	44.9	41.6	37.5	41.1	40.8	42.2	47.0	46.7	43.3	45.7	48.4	44.1	-4.3
% saying often	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	24.0	29.3	32.3	33.8	34.7	33.2	35.6	32.6	33.6	32.6	31.8	30.4	29.9	29.7	27.8	-1.9
	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	16.1	18.1	23.7	20.4	25.3	24.2	24.0	21.3	26.1	25.2	26.5	26.8	25.2	24.2	22.8	-1.4
	23–26					20.7	23.3	18.5	17.4	18.2	13.8	13.7	13.3	12.2	11.1	11.1	12.5	12.8	14.3	14.2	15.0	15.9	16.4	15.9	17.8	15.1	18.7	14.9	18.9	+4.1
	27–30									13.7	12.0	10.8	8.2	10.5	9.0	12.5	8.5	10.1	10.3	8.5	9.6	9.4	10.4	13.8	13.9	10.3	14.5	13.2	9.7	-3.5
Any illicit drug[b] other than marijuana																														
% saying any	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	42.6	45.3	47.2	49.7	47.9	47.3	46.5	47.2	49.9	49.3	46.3	48.3	45.9	45.4	45.4	0.0
	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	29.4	33.9	36.8	36.5	39.4	40.0	36.4	38.1	39.2	38.0	40.2	40.9	41.1	38.5	42.7	+4.2
	23–26					51.5	51.9	51.5	43.6	42.9	36.8	34.0	30.0	27.3	27.8	24.9	26.8	23.2	25.6	27.1	28.0	31.0	31.4	31.5	32.2	32.6	32.3	34.5	33.1	-1.4
	27–30									35.8	33.7	31.5	25.8	26.6	24.2	25.8	21.1	21.8	21.4	15.4	19.5	17.2	22.2	23.1	26.1	23.2	27.1	27.4	24.8	-2.6
% saying often	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	9.6	9.4	11.1	12.1	11.7	9.9	11.7	10.5	11.9	12.6	10.8	11.4	10.6	11.4	10.8	-0.6
	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	4.1	5.1	7.7	3.9	7.6	7.0	4.8	6.4	7.8	8.6	5.2	7.9	8.0	6.7	6.9	+0.1
	23–26					9.0	10.4	9.3	8.5	6.7	5.0	5.1	3.5	2.6	3.0	2.2	3.5	3.4	3.1	3.1	4.3	3.5	3.4	5.0	5.4	5.4	4.0	5.4	6.7	+1.3
	27–30									6.0	4.7	4.1	3.2	3.7	2.4	3.4	2.9	3.4	3.2	1.0	2.5	1.6	3.7	4.7	4.9	2.4	5.6	4.0	3.4	-0.6
Marijuana																														
% saying any	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	61.0	67.2	72.7	75.6	76.8	75.5	75.8	73.8	74.9	74.2	71.4	72.2	70.8	71.4	68.4	-3.1
	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	55.4	56.8	64.0	64.8	63.4	67.1	63.5	63.9	68.0	64.6	64.8	65.1	66.8	65.4	66.3	+0.9
	23–26					65.3	66.0	64.1	59.0	57.6	55.0	50.6	47.9	44.6	45.9	44.4	51.0	47.8	53.1	48.8	48.1	51.8	54.2	53.5	54.4	50.6	49.7	51.9	53.3	+1.4
	27–30									49.1	47.4	42.1	36.0	38.2	35.3	41.9	38.3	41.8	39.1	35.7	38.7	38.8	37.0	44.6	44.1	40.4	42.4	44.1	40.7	-3.3
% saying often	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	20.9	27.6	30.7	31.8	32.9	31.4	34.4	30.3	30.8	30.7	30.4	28.0	27.0	27.8	25.1	-2.7
	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	14.7	17.0	22.1	20.3	23.7	22.8	23.0	20.4	24.5	24.8	24.2	24.5	23.6	23.1	20.1	-3.0
	23–26					17.5	20.6	14.6	14.8	15.6	11.6	11.2	11.6	10.9	10.4	10.4	11.1	11.5	12.9	13.6	13.2	15.2	15.6	14.9	16.2	13.7	17.8	12.5	16.2	+3.7
	27–30									10.9	9.8	8.5	6.7	8.9	7.6	10.7	7.4	9.1	8.9	8.1	8.8	8.6	8.4	11.7	11.7	9.6	12.2	11.5	8.2	-3.3

(Table continued on next page.)

TABLE 7-3 (cont.)
Trends in Exposure to Drug Use
among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

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	Percentage saying exposed to drug[a]																											2006–2007 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
LSD																														
% saying any	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	21.0	24.2	26.1	27.6	25.9	23.1	23.6	22.0	21.6	17.2	14.2	12.4	10.8	11.6	12.4	+0.7
	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	13.4	16.5	18.6	20.7	22.3	21.0	20.1	15.9	15.2	13.6	10.0	8.5	7.2	10.4	6.3	-4.1
	23–26					8.3	9.3	8.8	7.3	6.3	6.7	8.4	8.6	8.8	7.8	8.4	9.9	8.6	7.6	9.8	9.4	9.8	11.1	9.3	5.5	4.4	4.7	5.6	4.5	-1.2
	27–30									3.6	3.2	3.3	3.6	3.9	4.9	5.3	5.5	4.3	3.9	3.2	3.7	3.2	4.3	4.8	3.0	4.7	4.0	3.4	3.9	+0.5
% saying often	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	3.9	4.2	6.1	4.7	5.1	3.2	4.1	3.3	2.8	2.6	1.8	1.6	1.5	1.9	1.7	-0.2
	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	1.1	0.4	3.6	1.4	1.8	2.0	1.7	1.4	2.4	0.9	0.2	0.1	0.7	0.7	0.3	-0.4
	23–26					0.3	0.4	0.4	0.7	0.6	0.3	0.5	0.2	0.8	0.3	0.5	0.5	0.4	0.2	0.1	0.3	0.2	*	0.3	0.3	*	0.3	*	0.5	+0.5
	27–30									0.3	0.2	0.5	0.2	0.2	0.5	0.5	0.2	0.2	*	*	0.1	*	*	*	0.3	0.3	0.6	*	0.1	+0.1
Other hallucinogens[c]																														
% saying any	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	12.1	14.0	15.8	16.6	17.8	15.9	17.7	16.3	28.1	26.4	25.8	24.8	24.3	23.8	23.5	-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	6.7	8.3	12.8	13.1	15.0	15.0	12.4	11.8	22.8	23.4	18.9	18.7	19.5	17.8	20.2	+2.4
	23–26					8.4	8.9	9.1	6.0	5.1	4.8	5.7	5.5	5.1	5.7	5.2	5.5	6.9	5.6	8.7	5.8	8.9	14.8	14.7	11.9	10.1	11.3	10.3	9.8	-0.5
	27–30									5.0	3.4	3.4	3.4	2.1	3.7	3.4	4.2	3.2	2.9	2.6	3.0	3.0	6.4	7.7	6.3	7.9	8.8	7.8	6.8	-1.0
% saying often	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	1.9	2.3	2.5	2.7	2.8	1.7	2.7	2.1	3.6	4.5	3.2	3.2	2.6	4.1	3.0	-1.2
	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	0.4	0.2	1.6	0.7	0.7	0.5	0.6	0.8	2.6	2.4	0.4	0.7	1.2	0.7	0.7	+0.1
	23–26					0.1	0.3	0.5	0.6	0.8	0.1	0.4	0.4	*	0.2	0.4	0.3	0.3	0.2	*	*	0.4	0.2	0.4	*	*	0.5	*	0.6	+0.6
	27–30									0.2	0.4	0.5	0.3	0.1	0.5	0.2	0.3	0.2	0.5	*	0.1	*	0.4	*	*	0.3	0.6	*	0.4	+0.4
Cocaine																														
% saying any	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	19.2	18.8	21.6	25.0	25.6	26.6	25.8	24.2	24.5	24.9	24.8	24.4	25.7	28.2	25.2	-3.0
	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	13.5	14.7	14.1	19.3	18.8	21.6	18.5	19.1	20.6	22.5	18.4	23.6	22.7	22.9	22.5	-0.5
	23–26					38.5	40.6	42.0	34.5	35.9	28.0	24.0	19.9	16.7	14.6	14.3	14.1	12.5	14.0	16.0	18.2	16.4	16.9	18.3	17.4	18.7	19.2	19.3	19.0	-0.3
	27–30									28.9	28.3	24.2	18.6	19.4	16.6	14.3	11.4	12.1	11.4	8.6	11.6	10.2	11.6	12.2	12.6	13.0	15.8	16.0	14.1	-2.0
% saying often	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	2.9	2.5	3.2	4.0	4.2	3.7	4.6	4.6	4.5	5.3	5.0	4.7	4.2	5.3	4.6	-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	1.7	1.8	1.7	1.2	2.4	3.2	1.4	3.8	3.0	4.1	1.6	2.6	4.0	2.6	1.8	-0.9
	23–26					5.3	8.5	7.0	6.0	5.4	3.5	2.5	1.7	1.4	1.7	1.0	1.7	1.3	1.8	1.5	2.2	1.8	1.0	2.5	1.9	2.9	1.8	2.0	3.2	+1.2
	27–30									4.4	3.9	2.9	2.2	2.0	1.2	1.5	1.4	1.9	1.6	0.8	1.5	0.3	1.6	2.4	1.7	0.7	2.4	0.8	0.7	-0.1

(Table continued on next page.)

TABLE 7-3 (cont.)

Trends in Exposure to Drug Use among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

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	Percentage saying exposed to drug[a]																											2006–2007 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Heroin																														
% saying any	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	5.7	7.3	7.9	8.6	9.1	8.7	8.1	9.1	8.7	8.3	7.3	6.6	7.3	9.0	8.6	-0.4
	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	2.0	3.7	3.8	3.6	3.7	6.4	3.2	5.2	3.2	5.3	3.4	3.0	3.2	3.7	3.3	-0.4
	23–26					2.3	3.3	3.2	2.9	1.7	2.3	2.3	1.8	1.7	1.5	1.9	2.8	2.9	2.7	3.1	2.9	2.6	2.4	3.8	2.0	3.1	2.6	3.5	3.6	+0.1
	27–30									2.1	1.4	1.5	0.9	1.0	2.0	2.0	1.7	1.5	1.3	1.4	1.9	1.9	2.3	2.7	1.3	3.2	2.9	2.3	3.0	+0.7
% saying often	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	1.1	0.7	1.2	1.6	1.2	0.9	1.3	1.5	0.7	1.3	1.2	1.2	0.8	1.7	1.1	-0.6
	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	0.4	0.6	1.2	0.2	0.4	0.7	0.8	0.7	0.8	0.6	0.2	*	0.8	0.1	*	-0.1
	23–26					*	0.7	0.3	0.6	0.4	0.3	0.6	0.3	*	*	*	0.2	0.2	0.3	0.5	1.0	*	*	0.8	0.5	0.5	0.3	0.6	0.3	-0.3
	27–30									0.3	0.3	0.5	0.2	0.2	0.9	0.3	0.6	0.6	*	*	0.2	*	*	0.7	0.3	*	0.4	0.3	0.4	+0.1
Other narcotics																														
% saying any	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	12.4	14.9	15.5	18.5	20.4	20.7	21.9	21.1	21.6	22.5	21.8	20.3	19.0	18.9	18.9	0.0
	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	6.8	10.1	12.1	11.5	14.5	15.3	13.9	17.0	18.3	18.7	13.6	14.5	16.8	15.3	12.5	-2.7
	23–26					9.0	12.3	9.2	9.7	7.4	8.0	5.9	8.3	7.0	4.6	6.9	7.8	7.4	6.5	8.1	9.4	10.9	12.2	12.0	12.6	12.6	12.4	13.0	14.4	+1.4
	27–30									6.5	6.5	5.8	5.5	3.7	5.6	5.9	5.7	4.7	4.9	3.6	5.2	6.5	9.0	7.9	9.5	8.8	11.6	10.6	9.2	-1.4
% saying often	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	1.7	1.7	2.1	3.4	2.5	2.8	3.9	2.9	3.0	3.8	3.0	3.3	2.6	3.4	3.4	0.0
	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	0.6	0.8	1.4	0.7	1.5	1.7	1.1	2.4	1.6	3.0	1.2	0.8	2.4	1.9	1.7	-0.2
	23–26					0.4	0.5	1.3	0.8	0.8	0.5	1.6	0.7	0.1	0.3	0.1	0.1	0.3	0.7	0.5	1.1	0.7	1.0	0.9	1.6	1.4	1.3	1.1	1.8	+0.7
	27–30									0.7	0.5	1.0	0.3	0.8	1.2	0.8	0.8	0.7	0.5	*	0.2	1.1	1.0	0.7	1.2	0.1	1.7	0.7	0.8	0.0
Amphetamines																														
% saying any	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	24.7	28.2	28.1	31.5	31.0	29.9	30.1	29.5	31.5	30.6	27.4	27.2	26.4	26.6	23.8	-2.8
	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	15.1	20.3	21.0	22.3	24.6	24.8	21.2	24.8	23.3	25.5	21.6	23.7	22.2	22.7	22.8	+0.1
	23–26					32.3	30.5	29.1	20.9	18.8	14.0	16.8	14.6	11.8	13.2	11.2	13.0	11.1	11.7	14.6	12.3	18.5	18.2	17.9	15.4	18.8	15.6	18.7	16.6	-2.1
	27–30									15.6	14.3	13.5	10.7	11.4	11.3	11.0	10.6	7.6	9.1	6.6	10.4	7.4	11.1	11.5	12.2	11.4	12.2	14.1	10.0	-4.2
% saying often	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	3.9	4.1	4.5	5.6	5.2	4.7	6.3	4.4	6.0	6.4	4.9	5.3	4.1	5.6	4.3	-1.3
	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	1.5	3.3	5.0	1.3	4.1	2.9	2.2	2.4	2.6	5.6	1.7	4.1	3.1	2.9	2.3	-0.6
	23–26					3.9	3.2	2.2	3.3	1.9	0.7	2.0	1.3	0.2	0.8	0.9	1.6	1.3	1.4	2.2	1.7	1.4	2.2	0.7	1.3	1.7	1.6	2.6	1.6	-0.9
	27–30									2.0	2.0	1.2	0.8	0.8	1.3	0.7	1.6	1.8	1.0	0.2	1.1	0.4	0.6	1.5	1.0	1.2	1.0	0.8	1.1	+0.3

(Table continued on next page.)

TABLE 7-3 (cont.)
Trends in Exposure to Drug Use
among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

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	Percentage saying exposed to drug[a]																												2006–2007 change
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Sedatives/barbiturates[d]																														
% saying any	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	11.9	13.0	14.5	15.5	16.1	16.1	17.1	16.3	17.1	17.7	14.8	21.5	20.4	21.3	18.8	-2.4
	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	7.2	7.4	10.1	8.8	11.7	13.4	11.6	13.1	13.1	16.0	11.9	17.2	17.8	16.0	16.1	+0.1
	23–26					16.1	13.1	11.0	7.1	7.1	6.6	6.9	5.9	6.5	3.8	4.2	5.7	6.6	4.9	8.5	7.1	9.3	9.0	9.8	7.9	15.9	12.5	14.8	13.1	-1.6
	27–30									8.0	6.8	5.9	5.4	5.2	5.7	4.5	5.2	3.5	3.8	2.7	4.1	2.9	5.3	6.0	6.1	9.2	12.4	11.9	10.3	-1.6
% saying often	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	1.6	1.7	2.0	2.9	2.5	2.7	3.8	2.7	2.7	4.6	2.8	4.1	3.7	3.9	3.9	0.0
	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	0.7	1.3	1.3	0.4	0.9	1.4	0.9	1.6	1.2	1.8	0.8	1.7	2.1	2.5	1.4	-1.1
	23–26					0.7	0.9	1.7	0.8	0.6	0.3	1.1	0.3	0.3	*	*	0.2	0.3	0.8	0.5	0.9	0.7	0.2	0.3	0.4	0.7	1.1	1.1	1.6	+0.5
	27–30									0.7	0.4	0.6	0.2	0.4	1.2	0.2	0.6	0.5	0.2	*	0.6	0.2	0.9	0.4	0.6	0.4	1.7	0.7	1.3	+0.6
Tranquilizers[e]																														
% saying any	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	13.8	16.5	15.7	17.9	18.9	17.3	18.2	17.7	23.8	22.7	21.0	22.1	20.9	21.8	19.3	-2.5
	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	10.0	12.0	11.8	10.7	15.6	16.9	14.3	18.5	21.3	23.6	20.0	21.9	20.6	23.1	21.4	-1.6
	23–26					23.1	21.0	16.9	15.9	13.4	12.9	12.0	10.4	9.7	10.9	9.8	10.3	10.1	9.4	10.9	10.8	12.3	16.4	20.1	18.7	19.9	20.1	19.9	18.8	-1.0
	27–30									15.0	11.6	11.1	9.7	10.3	10.4	9.0	11.2	9.6	9.6	6.1	8.8	7.6	12.6	13.6	15.3	14.6	18.1	19.2	16.7	-2.5
% saying often	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	1.7	1.8	2.3	3.5	3.2	2.8	3.7	3.5	4.9	5.8	4.2	4.1	4.5	5.4	4.9	-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	1.1	1.3	1.5	0.5	1.3	1.6	1.5	1.7	3.1	3.6	2.3	2.7	2.7	3.2	3.0	-0.1
	23–26					2.0	1.6	2.6	1.8	1.2	0.8	0.5	1.0	0.6	0.7	0.1	1.1	1.5	0.7	1.1	1.5	1.7	1.3	2.1	1.6	2.0	1.3	2.6	2.4	-0.2
	27–30									1.4	0.3	1.7	0.8	1.3	1.3	1.0	1.1	0.8	1.2	0.2	0.9	0.4	1.6	1.6	1.9	0.8	3.5	2.9	2.6	-0.3
Alcoholic beverages																														
% saying any	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	91.8	90.0	91.2	91.5	91.4	92.2	91.8	90.7	90.8	89.5	88.3	87.6	87.4	87.6	86.5	-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	92.9	93.7	93.1	93.7	93.1	91.8	91.0	93.3	94.3	93.7	93.6	92.5	92.7	92.0	91.8	-0.1
	23–26					90.3	92.7	91.4	90.6	91.1	92.9	91.3	91.0	91.4	90.3	89.5	91.9	89.6	93.1	89.1	91.5	92.1	90.1	91.9	91.8	92.2	90.0	94.0	94.5	+0.6
	27–30									87.1	88.4	86.2	87.7	87.3	86.6	86.2	89.3	89.2	86.4	88.4	88.7	89.8	91.2	89.0	90.0	85.3	92.2	91.8	89.6	-2.2
% saying often	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	51.9	54.0	54.0	54.5	53.9	54.5	53.5	50.2	52.7	50.8	49.0	48.2	49.1	47.8	46.4	-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	56.8	57.0	56.3	52.3	54.2	57.9	54.7	54.3	53.4	54.9	55.7	54.3	58.9	55.0	60.7	+5.8
	23–26					52.1	54.8	51.4	53.0	48.1	50.9	49.7	48.4	45.4	45.4	43.3	47.5	44.8	49.8	44.6	45.7	49.6	48.8	46.3	50.5	48.3	46.4	57.1	54.2	-2.9
	27–30									39.9	39.5	38.7	38.0	39.9	38.1	39.3	38.0	34.7	37.1	36.6	38.3	34.4	40.0	39.6	40.6	36.8	43.6	47.3	44.3	-3.1
Approximate	*18*	*3259*	*3608*	*3645*	*3334*	*3238*	*3252*	*3078*	*3296*	*3300*	*2795*	*2556*	*2525*	*2630*	*2730*	*2581*	*2608*	*2407*	*2595*	*2541*	*2312*	*2153*	*2147*	*2162*	*2454*	*2456*	*2469*	*2469*	*2448*	
Weighted N =	*19–22*	*582*	*574*	*601*	*569*	*578*	*549*	*591*	*582*	*556*	*567*	*567*	*532*	*528*	*489*	*460*	*464*	*485*	*471*	*445*	*450*	*415*	*412*	*403*	*396*	*432*	*377*	*378*	*333*	
	23–26					*533*	*532*	*557*	*529*	*531*	*514*	*523*	*494*	*532*	*513*	*471*	*467*	*447*	*424*	*400*	*398*	*389*	*406*	*345*	*385*	*404*	*374*	*363*	*327*	
	27–30									*522*	*507*	*506*	*478*	*502*	*457*	*425*	*452*	*432*	*455*	*449*	*430*	*395*	*369*	*359*	*347*	*370*	*370*	*330*	*356*	

Source. The Monitoring the Future study, the University of Michigan.

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.

"*" indicates a prevalence rate of less than 0.05%.

[a]Answer alternatives were: (1) Not at all, (2) Once or twice, (3) Occasionally, (4) Often. The "any" percentage combines categories (2)–(4).

[b]These estimates were derived from responses to the question for the following drugs: marijuana, LSD, other hallucinogens, cocaine, heroin or other narcotics, amphetamines, sedatives (barbiturates), and tranquilizers.

[c]In 2001 the question text was changed from "other psychedelics" to "other hallucinogens," and "shrooms" was added to the list of examples. These changes likely explain the discontinuity in the 2001 results.

[d]In 2004 the question text was changed from "barbiturates" to "sedatives/barbiturates" and the list of examples was changed from "downers, goofballs, reds, yellows, etc." to just "downers." These changes likely explain the discontinuity in the 2004 results.

[e]In 2001 Xanax was added to the list of examples. This change likely explains the discontinuity in the 2001 results.

TABLE 7-4

Trends in Availability of Drugs as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, and 45

Q. How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?

Percentage saying "fairly easy" or "very easy" to get[a]

	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 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	83.0	85.5	88.5	88.7	89.6	90.4	88.9	88.5	88.5	87.2	87.1	85.8	85.6	84.9	83.9	-1.0
	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	85.6	87.2	87.9	89.3	90.6	89.9	87.4	89.6	91.7	88.1	87.7	87.3	88.0	86.8	88.4	+1.6
	23–26					92.5	88.8	88.8	90.3	86.9	88.7	83.3	82.5	83.8	84.6	87.1	86.2	85.3	84.4	87.5	85.9	88.4	87.0	89.1	87.2	88.8	87.0	86.8	87.6	+0.8
	27–30									89.3	86.0	83.1	83.8	80.7	82.8	80.3	83.3	82.6	84.5	82.1	83.0	81.5	84.8	83.6	81.8	86.0	84.6	87.6	87.8	+0.2
	35															75.7	75.6	73.0	77.1	76.0	74.9	77.1	75.3	76.5	75.1	75.6	73.8	75.1	75.5	+0.4
	40																			73.4	71.7	73.1	70.4	72.1	72.3	68.9	73.6	69.7	71.2	+1.5
	45																								68.5	69.9	70.1	67.9	70.1	+2.2
Amyl & butyl nitrites	18	—	—	—	—	—	—	—	23.9	25.9	26.8	24.4	22.7	25.9	25.9	26.7	26.0	23.9	23.8	25.1	21.4	23.3	22.5	22.3	19.7	20.0	19.7	18.4	18.1	-0.4
	19–22	—	—	—	—	—	—	—	22.8	26.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26					—	—	—	23.1	28.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30									26.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
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	49.2	50.8	53.8	51.3	50.7	48.8	44.7	46.9	44.7	39.6	33.6	33.1	28.6	29.0	28.7	-0.3
	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	44.9	43.7	50.5	50.8	47.7	51.1	43.8	47.1	42.5	37.9	34.1	30.3	27.7	29.0	23.0	-6.0
	23–26					32.7	29.1	30.0	27.5	32.7	32.6	30.2	32.8	33.5	33.4	40.1	41.0	43.6	39.2	40.4	41.2	40.4	38.3	37.2	34.1	38.5	26.5	30.3	25.2	-5.0
	27–30									29.4	29.9	32.3	27.0	30.9	30.5	27.2	35.6	33.6	35.2	32.9	35.7	35.6	38.3	32.3	33.5	30.0	29.3	29.7	26.8	-2.9
	35															33.8	32.4	28.4	32.9	31.2	27.7	32.2	28.7	29.1	29.8	25.6	24.0	28.7	26.6	-2.0
	40																			31.1	31.0	28.5	25.7	27.4	25.0	24.4	24.3	23.9	21.5	-2.4
	45																								24.2	27.0	25.4	23.7	23.6	-0.1
Other hallucinogens[b]	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	33.5	33.8	35.8	33.9	33.9	35.1	29.5	34.5	48.5	47.7	47.2	49.4	45.0	43.9	43.7	-0.3
	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	29.5	28.6	31.5	31.5	33.4	34.1	31.1	33.4	45.9	48.8	45.1	46.9	48.5	41.9	39.3	-2.6
	23–26					31.8	29.6	26.4	25.6	29.6	28.7	27.0	25.7	27.7	25.3	28.3	29.2	32.6	31.0	32.4	31.5	28.5	38.3	39.7	39.2	44.4	39.2	41.5	36.8	-4.7
	27–30									28.6	29.6	30.8	24.9	24.8	25.4	24.7	29.3	25.9	28.0	25.2	30.3	25.0	38.6	33.3	35.6	31.2	30.8	32.1	30.0	-2.1
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—

(Table continued on next page.)

TABLE 7-4 (cont).

Trends in Availability of Drugs as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, and 45

Q. How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?

Percentage saying "fairly easy" or "very easy" to get[a]

	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
PCP	18	—	—	—	—	—	—	—	22.8	24.9	28.9	27.7	27.6	31.7	31.7	31.4	31.0	30.5	30.0	30.7	26.7	28.8	27.2	25.8	21.9	24.2	23.2	23.1	21.0	-2.1
	19–22	—	—	—	—	—	—	—	21.7	24.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26					—	—	—	21.2	27.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30									24.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
Ecstasy (MDMA)	18	—	—	—	—	—	—	—	—	—	21.7	22.0	22.1	24.2	28.1	31.2	34.2	36.9	38.8	38.2	40.1	51.4	61.5	59.1	57.5	47.9	40.3	40.3	40.9	+0.7
	19–22	—	—	—	—	—	—	—	—	—	—	26.6	24.9	27.1	23.9	27.0	29.3	33.4	35.6	39.4	43.2	49.9	55.5	59.7	52.1	45.8	43.5	41.2	38.4	-2.9
	23–26					—	—	—	—	—	—	21.4	23.1	26.4	24.0	26.0	27.8	28.7	31.1	30.1	34.9	41.8	51.5	52.9	49.3	51.3	46.4	44.6	42.2	-2.4
	27–30									—	—	27.1	20.8	22.2	22.8	21.9	27.1	29.3	24.3	26.4	30.0	35.5	40.6	41.2	41.0	41.1	38.0	40.5	40.7	+0.2
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
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	48.5	46.6	47.7	48.1	48.5	51.3	47.6	47.8	46.2	44.6	43.3	47.8	44.7	46.5	47.1	+0.6
	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	49.2	49.9	49.4	44.4	49.7	47.7	52.6	52.1	49.6	47.6	46.7	47.0	50.0	47.4	47.3	-0.1
	23–26					63.7	67.2	65.8	69.0	71.7	70.0	65.6	58.0	61.1	53.8	54.4	54.7	50.2	46.9	51.8	45.7	45.0	44.6	47.8	40.8	50.7	48.4	51.2	47.4	-3.7
	27–30									68.6	68.2	64.0	60.0	63.1	56.8	53.1	57.0	53.0	50.4	46.9	50.0	44.6	45.5	46.3	42.9	38.0	43.1	43.2	45.8	+2.6
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
Crack	18	—	—	—	—	—	—	—	41.1	42.1	47.0	42.4	39.9	43.5	43.6	40.5	41.9	40.7	40.6	43.8	41.1	42.6	40.2	38.5	35.3	39.2	39.3	38.8	37.5	-1.2
	19–22	—	—	—	—	—	—	—	41.9	47.3	47.2	46.9	42.1	42.1	38.4	41.6	40.7	32.9	39.9	40.0	40.8	40.2	37.3	35.7	37.5	33.7	34.0	35.2	35.7	+0.4
	23–26					—	—	—	44.5	53.0	49.9	46.9	42.0	42.6	42.5	42.4	42.3	37.9	37.2	38.4	35.0	31.9	37.1	33.9	32.8	36.5	35.1	34.0	31.4	-2.6
	27–30									46.5	46.8	46.8	43.1	45.2	45.8	41.1	44.7	39.9	36.5	33.3	38.8	35.9	36.9	33.4	33.7	28.0	34.4	29.6	36.4	+6.7
	35															49.6	48.2	43.1	44.3	45.0	41.6	45.0	41.2	38.9	40.5	36.1	34.2	37.1	35.1	-1.9
	40																			43.3	44.3	42.0	38.7	39.5	39.0	35.8	38.6	37.1	32.7	-4.4 s
	45																								37.0	40.0	40.6	36.2	37.0	+0.8

(Table continued on next page.)

TABLE 7-4 (cont).

Trends in Availability of Drugs as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, and 45

Q. How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?

Percentage saying "fairly easy" or "very easy" to get[a]

	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Cocaine powder	18	—	—	—	—	—	—	—	52.9	50.3	53.7	49.0	46.0	48.0	45.4	43.7	43.8	44.4	43.3	45.7	43.7	44.6	40.7	40.2	37.4	41.7	41.6	42.5	41.2	-1.3
	19–22	—	—	—	—	—	—	—	58.7	60.2	61.7	56.5	52.5	48.9	45.7	47.8	45.5	41.3	46.0	47.1	45.2	45.2	43.3	43.9	45.5	43.2	44.3	44.2	44.5	+0.3
	23–26					—	—	—	64.9	69.1	60.1	58.6	53.2	56.4	50.5	49.7	49.6	45.9	43.6	44.4	44.3	41.8	44.4	40.7	43.4	48.5	45.1	46.4	45.0	-1.4
	27–30									63.5	62.8	57.9	55.8	56.8	55.0	48.9	52.9	48.4	45.1	43.9	46.5	43.9	42.7	42.4	39.7	37.9	40.2	42.7	43.0	+0.3
	35															53.9	52.1	46.7	48.3	47.0	43.4	47.9	43.1	41.7	42.0	39.6	35.8	39.5	37.4	-2.2
	40																			46.0	46.7	44.7	41.5	41.5	40.7	38.5	40.3	37.8	35.2	-2.7
	45																								39.0	40.2	40.6	37.3	38.2	+0.9
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	33.7	34.1	35.1	32.2	33.8	35.6	32.1	33.5	32.3	29.0	27.9	29.6	27.3	27.4	29.7	+2.2
	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	30.0	33.2	35.2	29.1	31.4	32.1	32.7	29.4	30.2	26.4	26.9	22.6	25.4	25.3	26.5	+1.2
	23–26					18.6	18.1	21.0	22.3	28.4	31.2	28.1	25.6	25.7	25.7	29.2	29.3	32.3	30.5	35.1	31.9	25.7	26.6	27.2	25.5	30.9	22.5	28.1	22.2	-5.9
	27–30									23.6	27.4	29.5	22.1	25.6	28.5	24.4	30.7	29.5	30.0	28.3	33.0	29.3	29.9	27.0	27.5	22.0	27.8	25.4	27.5	+2.1
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
Some other narcotic	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	37.5	38.0	39.8	40.0	38.9	42.8	40.8	43.9	40.5	44.0	39.3	40.2	39.2	39.6	37.3	-2.3
	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	33.5	35.1	38.7	37.3	38.3	38.9	39.5	41.1	44.1	40.4	40.6	39.4	41.4	38.5	38.3	-0.3
	23–26					32.8	32.1	33.6	32.2	35.9	36.4	34.7	33.2	33.9	33.1	35.8	32.6	36.7	35.7	39.9	38.2	38.1	35.8	40.0	40.3	47.7	44.7	45.5	41.7	-3.8
	27–30									31.6	36.2	36.1	29.0	31.8	33.0	34.8	36.9	37.2	35.2	32.2	36.9	32.4	39.4	38.5	38.9	35.8	37.7	39.8	41.3	+1.5
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
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	61.5	62.0	62.8	59.4	59.8	60.8	58.1	57.1	57.1	57.4	55.0	55.4	51.2	52.9	49.6	-3.3
	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	56.0	56.6	60.3	56.9	55.5	56.3	57.6	60.2	56.5	53.7	55.1	53.9	56.9	52.3	55.8	+3.5
	23–26					65.8	66.0	64.5	65.3	62.2	60.1	55.8	54.8	54.5	52.6	52.9	56.0	52.8	51.2	53.2	49.1	51.1	49.4	48.2	50.3	51.8	51.9	58.0	53.7	-4.3
	27–30									54.3	58.6	55.3	54.4	50.4	52.9	48.3	53.7	51.7	48.1	41.4	48.2	47.6	49.3	45.6	48.7	43.9	45.3	49.2	48.1	-1.1
	35															45.6	43.5	39.1	40.9	39.4	38.5	42.2	39.6	39.2	39.2	35.4	35.4	40.3	40.4	+0.1
	40																			41.0	41.9	39.4	37.5	39.4	38.7	37.9	41.1	38.4	37.6	-0.8
	45																								35.8	39.8	39.3	37.1	38.3	+1.1

(Table continued on next page.)

TABLE 7-4 (cont).

Trends in Availability of Drugs as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, and 45

Q. How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?

Percentage saying "fairly easy" or "very easy" to get[a]

	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Crystal meth. (ice)	18	—	—	—	—	—	—	—	—	—	—	24.0	24.3	26.0	26.6	25.6	27.0	26.9	27.6	29.8	27.6	27.8	28.3	28.3	26.1	26.7	27.2	26.7	25.1	-1.6
	19–22	—	—	—	—	—	—	—	—	—	—	24.0	21.8	22.5	20.9	24.7	25.5	25.4	29.3	31.0	31.8	27.4	28.4	31.2	26.5	27.1	28.9	29.1	27.7	-1.5
	23–26					—	—	—	—	—	—	22.3	20.0	21.3	22.9	24.5	24.7	24.7	25.8	30.2	28.5	25.8	26.4	25.1	26.4	32.3	27.8	32.3	27.8	-4.5
	27–30									—	—	27.3	19.7	22.0	21.2	21.7	25.8	26.1	25.1	22.6	29.1	25.3	27.6	29.5	30.9	25.5	27.4	31.8	29.7	-2.2
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
Sedatives/ barbiturates[c]	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	44.5	43.3	42.3	41.4	40.0	40.7	37.9	37.4	35.7	36.6	35.3	46.3	44.4	43.8	41.7	-2.1
	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	41.9	40.6	42.9	41.1	39.8	39.2	42.3	40.6	39.3	40.8	38.4	43.8	47.8	42.6	47.5	+4.9
	23–26					52.7	47.7	46.4	45.9	47.4	44.8	41.6	39.6	42.0	38.8	40.3	42.1	40.6	39.1	42.6	39.7	37.6	36.1	36.4	37.8	49.4	48.4	51.4	46.5	-4.9
	27–30									43.2	44.5	44.2	38.5	37.8	39.7	37.4	39.9	41.2	39.1	33.9	38.4	36.1	38.1	34.8	35.6	40.5	42.9	43.3	46.4	+3.1
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
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	41.1	39.2	37.8	36.0	35.4	36.2	32.7	33.8	33.1	32.9	29.8	30.1	25.7	24.4	23.6	-0.8
	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	40.9	41.0	40.2	37.6	37.8	36.8	37.1	36.5	34.9	34.6	34.2	29.7	30.1	22.8	28.5	+5.7
	23–26					60.2	54.3	54.1	56.3	52.8	51.4	47.8	45.1	48.1	43.2	45.9	44.3	42.3	36.4	39.4	38.3	37.6	38.7	33.7	32.5	36.6	32.9	33.0	31.7	-1.3
	27–30									55.3	54.4	54.9	47.5	47.8	47.4	44.4	44.8	46.2	41.9	39.9	41.5	36.7	42.9	38.1	35.9	30.6	33.5	32.1	32.4	+0.3
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—
Steroids	18	—	—	—	—	—	—	—	—	—	—	—	46.7	46.8	44.8	42.9	45.5	40.3	41.7	44.5	44.6	44.8	44.4	45.5	40.7	42.6	39.7	41.1	40.1	-1.0
	19–22	—	—	—	—	—	—	—	—	—	—	44.1	44.8	46.3	41.7	40.9	41.8	40.8	39.2	39.2	40.5	40.3	38.1	41.4	39.4	37.8	37.6	37.1	37.9	+0.8
	23–26					—	—	—	—	—	—	37.6	35.8	39.3	35.8	37.0	37.4	33.9	35.5	34.9	37.1	34.0	34.7	33.1	31.1	34.7	31.2	34.2	33.3	-1.0
	27–30									—	—	36.4	30.6	35.0	31.6	30.5	33.1	35.6	32.5	30.5	34.5	36.2	34.6	33.0	32.6	30.6	32.4	29.7	30.9	+1.2
	35															—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40																			—	—	—	—	—	—	—	—	—	—	—
	45																								—	—	—	—	—	—

(Table continued on next page.)

TABLE 7-4 (cont).

Trends in Availability of Drugs as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, and 45

	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Approximate	*18*	*3240*	*3578*	*3602*	*3385*	*3269*	*3274*	*3077*	*3271*	*3231*	*2806*	*2549*	*2476*	*2586*	*2670*	*2526*	*2552*	*2340*	*2517*	*2520*	*2215*	*2095*	*1850*	*2138*	*2391*	*2169*	*2161*	*2161*	*2420*
Weighted N =	*19–22*	*582*	*601*	*582*	*588*	*559*	*571*	*592*	*581*	*568*	*572*	*571*	*534*	*512*	*480*	*459*	*470*	*467*	*463*	*433*	*425*	*400*	*398*	*375*	*386*	*441*	*392*	*376*	*362*
	23–26					*540*	*541*	*548*	*539*	*526*	*514*	*532*	*511*	*523*	*500*	*463*	*449*	*418*	*419*	*395*	*415*	*388*	*401*	*362*	*356*	*411*	*359*	*335*	*338*
	27–30									*519*	*513*	*510*	*487*	*475*	*473*	*437*	*446*	*468*	*459*	*425*	*424*	*365*	*357*	*349*	*368*	*393*	*359*	*347*	*324*
	35															*1142*	*1141*	*1146*	*1150*	*1032*	*1022*	*981*	*977*	*890*	*934*	*963*	*1009*	*925*	*863*
	40																			*1029*	*1093*	*1096*	*1065*	*1037*	*898*	*967*	*928*	*919*	*868*
	45																								*911*	*1026*	*1005*	*972*	*954*

Source. The Monitoring the Future study, the University of Michigan.

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.

"—" indicates data not available.

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

[b]In 2001 the question text was changed from "other psychedelics" to "other hallucinogens," and "shrooms" was added to the list of examples. These changes likely explain the discontinuity in the 2001 results.

[c]In 2004 the question text was changed from "barbiturates" to "sedatives/barbiturates" and the list of examples was changed from "downers, goofballs, reds, yellows, etc." to just "downers." These changes likely explain the discontinuity in the 2004 results.

Chapter 8

PREVALENCE OF DRUG USE AMONG COLLEGE STUDENTS

We believe that one of the more important functions of the Monitoring the Future study has been to track various forms of substance use among the nation's college students, in part because they have often been the harbingers of social and political changes that spread eventually to other segments of the population up and down the age spectrum. This was certainly the case for the epidemic of illicit drug use that emerged in the American population in the late 1960s.

Monitoring the Future has been able to generate an unparalleled national sample of college students every year since 1980 by following representative samples of high school classes after they graduate. The graduating class of 1976 was the first such class followed after graduation, and by 1980 the survey included college students one to four years post–high school. The 2007 survey is thus the 28th such survey covering this important segment of the general population.

The absence of dropouts in the original high school senior samples has practically no effect on the representativeness of these college samples because very few dropouts go on to college. One notable 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 decided to limit the age band to the most typical one for college attendance, that is, one to four years past high school, which corresponds to the modal ages of 19 to 22. According to the latest statistics available from the United States Census Bureau,[51] this age band should encompass about 67% of all undergraduate college students enrolled full-time in 2006, down some from the 79% covered in 1989. Although expanding the age band to include an additional two years would cover 76% 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 in 1985 indicated that the differences in *prevalence-of-use* 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. Cocaine, which has the greatest amount of age-related change, would have had an annual prevalence rate only 0.8 percentage points higher if the six-year age span were included rather than the four-year age span. A replication of these analyses in 1997 yielded virtually the same results. Thus, for purposes of estimating all prevalence rates except lifetime prevalence, the four- and six-year intervals are nearly interchangeable, suggesting that this limitation is negligible for our purposes.

On the positive side, maintaining a consistent age band allows for trend estimation by controlling for changes in the age composition of college students over the years. Otherwise, college students characterized in one year might represent a noncomparable segment of the larger population when compared to college students surveyed in another year.

[51]U.S. Census Bureau, October 2006. Available at http://www.census.gov.

Definition of college students. *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 in a two- or four-year undergraduate college at the beginning of March in the year in question*. Note that students at two-year colleges, such as community colleges, are included. The definition excludes those who are currently enrolled in college part-time and those who previously may have been college students or may have completed college.

Prevalence-of-use rates for college students, as well as their same-age peers who are also high school graduates, are provided in Tables 8-1 to 8-4. Having statistics for both groups, a unique feature of the Monitoring the Future panels, makes it possible to see whether college students' substance use rates are higher or lower than those of their age peers (one to four years past high school, i.e., of modal ages 19 to 22). The college-enrolled sample now constitutes well over half (63%) of the entire follow-up sample one to four years past high school. The differences reported here pertain to those who are full-time college students versus those who are not, *among high school graduates.* If data from the missing high school dropout segment were available for inclusion as part of the noncollege segment, any difference between the two groups in terms of their substance use would likely be enlarged; therefore, any differences observed here are only an indication of the direction and relative size of differences between the college and the *entire* noncollege population, not an absolute estimate of them.

PREVALENCE OF DRUG USE AMONG COLLEGE STUDENTS VERSUS THOSE NOT ENROLLED IN COLLEGE

In 2007, lifetime prevalence of use among college students is lower for all illicit drugs compared with use among their age peers, but the degree of difference varies considerably by drug, as Table 8-1 shows. There is less difference between the two groups on annual or 30-day prevalence-of-use rates, and annual rates of use for ***inhalants***, ***Ritalin***, and ***alcohol*** are higher among college students than among those not enrolled in college (see Tables 8-2 and 8-3).

- In 2007, the annual prevalence of use for ***any illicit drug*** is 35% among both college students and high school graduates not in college. A higher proportion of noncollege students have used ***any illicit drug other than marijuana*** in the past year (21%) than college students (17%).

- Annual ***marijuana*** use is the same among college students and high school graduates of the same age who are not in college (32%). The rate of current ***daily marijuana*** use, however, is considerably lower among college students (3.5% versus 7.6%) (see Table 8-4 for the prevalence of current daily use).

- Large proportional differences in annual prevalence between college students and those not in college are seen for ***Rohypnol*** (0.1% versus 1.2%), ***GHB*** (0.1% and 0.9%), and ***methamphetamine*** (0.4% and 1.9%)—due in part to very low rates for college students.

- Smaller proportional differences occur for ***ketamine***, with 0.2% of the college students versus 0.9% of their noncollege age peers reporting use in the past year; ***heroin***, at 0.2%

versus 0.8%; ***crack***, at 0.6% versus 1.2%; ***steroids***, at 0.6% versus 1.2%; ***ecstasy*** (***MDMA***), at 2.2% versus 3.8%; ***OxyContin***, at 2.8% versus 4.5%; ***Vicodin***, at 6.7% versus 10.6%; ***crystal methamphetaime*** (***ice***), at 0.7% versus 1.1%; ***cocaine***, at 5.4% versus 8.3%; ***tranquilizers***, at 5.5% versus 8.4%; and ***sedatives*** (***barbiturates***), at 3.6% versus 5.3%.

- It should be noted that, while the absolute differences are not great between college students and their noncollege age peers on many of the low-prevalence drugs, the ratio of the differences tends to be high (more than twice as high for the noncollege group in a number of cases). Further, these differences are diminished by the absence of the high school dropouts from the noncollege group. It is clear that use of a number of the illicit drugs other than marijuana tends to be concentrated among those not in college.

- ***Ritalin***, a drug in the amphetamine class and added to the MTF questionnaires in 2002, has typically shown a different pattern, with use higher among college students than among those not in college (though not in 2005), quite possibly explained by college students using Ritalin to stay awake late at night to finish assignments or study for tests. In 2007, college students' rate of annual use was at 3.7% and the noncollege group was 2.3%.

- In 2007, college students were modestly higher in lifetime, annual, and 30-day use of ***alcohol*** than the noncollege group.

- College students had a significantly higher prevalence of ***occasions of heavy drinking*** (five or more drinks in a row in the past two weeks)—41% versus 34% among their age peers. *Indeed, it is noteworthy that nearly half of all college students (47%) report having* ***been drunk*** *in the prior 30 days*. However, their rates of ***daily drinking*** were slightly (not significantly) lower than their noncollege age peers (4.3% versus 5.4%) (see Table 8-4). In high school, college-bound students, especially in earlier grades, were far less likely to drink alcohol at any level compared to their non-college-bound peers; thus, the relative and absolute increases in alcohol use in the first few years following high school are quite striking for college students.

- Because of increasing attention being paid to the problem of ***extreme binge drinking***, in 2005 we introduced a set of questions on the subject into one of the six questionnaire forms used with young adults, including college students. The questions ask the respondent about the frequency in the past two weeks of their having (a) four or more drinks in a row, (b) five or more drinks in a row, (c) 10 or more drinks in a row, and (d) 15 or more drinks in a row. Logically, the frequency of events at the lower cut-off levels should always be equal to or greater than the frequency of events at a higher cut-off level. Extremely few respondents were found to violate that logical assumption, suggesting that respondents understood the question set and answered them consistently. The low *N*s resulting from a single questionnaire form necessitate combining the three years of data (2005–2007), and even then only 662 weighted cases are available from the college student population and 389 for their noncollege peers. However, they give us an idea of the prevalence and frequency of these measures of what we have called "extreme binge drinking."

About one in eight college students (13%) reported having 10 or more drinks in a row at least once in the prior two weeks, and 5% (or 1 in 20) reported 15 or more drinks in a row. Their noncollege peers had about the same rates (14% and 7%, respectively). While we lack earlier data on these measures to determine whether this type of extreme drinking behavior has changed over time, it is clear that it is quite high today among both college students and their non-college age peers. As discussed below, there is a major difference between males and females in the prevalence of these behaviors.

- In 2007, nearly two thirds (63%) of college students reported using ***flavored alcoholic beverages*** in the prior year, almost identical to the rate for the noncollege group (64%).

- Among all substances studied, both licit and illicit, the largest absolute differences in 30-day and daily prevalence rates between the two groups occur for ***cigarette smoking***. For example, the prevalence of daily smoking for college students is "only" 9% versus 26% for their age-mates not enrolled full-time in college. Smoking at the rate of a half pack per day stands at 4% versus 17% for these two groups, respectively. Recall that the 12th-grade data show the college-bound have much lower smoking rates in high school than the non-college-bound; thus, in contrast to what was true for alcohol use, these substantial differences observed at college age actually preceded college attendance.[52] The smoking differences would likely be even greater if dropouts were included in the noncollege group because dropouts have an exceptionally high rate of smoking.

- The prevalence of using ***steroids*** in the past year does not differ significantly for the noncollege segment (1.2%) and college students (0.6%).

In sum, the noncollege segment is generally more drug-involved than the college student segment. This pattern is a continuation of the high school scenario in which those without college plans are more likely to use drugs. The only substance for which college students are significantly and substantially more likely to be users is ***alcohol*** (including ***getting drunk*** and ***binge drinking***).

GENDER DIFFERENCES IN PREVALENCE OF USE AMONG COLLEGE STUDENTS

Tabular data are provided separately in Tables 8-1 to 8-4 for male and female college students and their same-age peers.

- Most of the gender differences *among college students* replicate those discussed earlier for all young adults 1 to 12 years past high school, and they in turn replicate gender differences among secondary school students for the most part. That means that among college students, males have higher annual prevalence rates for most of the illicit drugs. The annual prevalence rates for use of ***any illicit drug*** are 38% for males versus 33% for females; for ***any illicit drug other than marijuana***, 19% versus 16%; for ***marijuana***, 36% versus 29%;

[52] See also Bachman, J. G., Wadsworth, K. N., O'Malley, P. M., Johnston, L. D., & Schulenberg, J. E. (1997). *Smoking, drinking, and drug use in young adulthood: The impacts of new freedoms and new responsibilities.* Mahwah, NJ: Lawrence Erlbaum Associates.

for ***hallucinogens***, 7.7% versus 3.1%; for ***LSD*** specifically, 2.2% versus 0.8%; for ***hallucinogens other than LSD***, 7.3% versus 3.1%; and for ***narcotics other than heroin***, 8.7% versus 7.1%.

- The gender difference is particularly large for one of the narcotic drugs: ***Vicodin***, 10.0% for males versus 4.8% for females.

- Annual prevalence of ***marijuana*** use is the same between college males and their age-mates not in college (36%), and very similar between college females (29%) and their age-mates not in college (28%).

- ***Daily marijuana*** use is higher among male college students compared to female college students (4.9% versus 2.6%).

- College males and females report a similar prevalence of ***getting drunk*** in the prior 30 days (46% and 47%). Both male and female college students have higher rates of ***occasional binge drinking*** than their counterparts not in college (36% for college females versus 30% for noncollege females and 49% versus 40% for males, respectively) (see Table 8-4). More ***extreme levels of binge drinking***, however, show a large gender difference in both groups. Among college students, the prevalence of having 10 or more drinks in a row in the prior two weeks was 6% for college females versus 26% for college males for 2005–2007 combined. The prevalence of having 15 or more drinks in a row was 0.8% for college females versus 12% for college males. The comparable numbers for those the same age who were not in college are very similar, though it should be remembered that the *N*'s are quite small.

- ***Flavored alcoholic beverages*** are consumed by slightly more females than males, regardless of whether they attend college (67% of females versus 55% of males in college reporting past-year use, and 67% versus 59%, respectively, for the noncollege group).

- Among college students, 30-day prevalence of ***cigarette smoking*** is slightly higher for males (22%) than for females (19%), but among the noncollege segment, prevalence is slightly lower for males (31%) than for females (36%). ***Daily smoking*** is reported by higher proportions of males than females in the college segment (10.7% versus 8.4%) and the reverse is true for the noncollege segment (24% versus 27%). Rates of smoking ***a half pack or more per day*** are 5.2% and 3.8% for males and females among college students, and 17% for both genders in the noncollege segment.

- Noncollege females account for a disproportionately large part of the overall college versus noncollege differences in the use of ***narcotics other than heroin***, ***amphetamines***, ***Vicodin***, and ***tranquilizers***.

TABLE 8-1

Lifetime Prevalence of Use for Various Types of Drugs, 2007: Full-Time College Students vs. Others among Respondents 1 to 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[a]	50.5	60.5	52.3	62.4	49.4	59.0
Any Illicit Drug[a] other than Marijuana	25.3	35.9	26.5	37.4	24.6	34.8
Marijuana	47.5	57.3	51.7	59.9	44.9	55.4
Inhalants[b]	6.3	7.4	9.4	9.9	4.5	5.4
Hallucinogens	9.1	13.7	13.5	17.7	6.4	10.8
LSD	3.3	6.0	5.4	8.6	2.0	4.1
Hallucinogens other than LSD	8.5	12.4	12.4	16.3	6.2	9.5
Ecstasy (MDMA)[b]	5.4	13.0	5.3	14.7	5.5	11.8
Cocaine	8.5	16.2	9.6	19.6	7.8	13.7
Crack[c]	1.3	4.6	1.7	5.1	1.1	4.3
Other Cocaine[d]	8.0	15.4	7.8	21.0	8.1	11.5
Heroin	0.5	2.3	0.7	2.2	0.4	2.3
With a Needle[e]	0.1	0.7	*	0.8	0.2	0.7
Without a Needle[e]	0.4	2.1	0.3	1.1	0.5	3.0
Narcotics other than Heroin[f]	14.1	20.2	15.6	21.0	13.2	19.6
Amphetamines, Adjusted[f,g]	11.2	17.7	12.3	17.8	10.6	17.6
Methamphetamine[e]	1.9	7.1	1.7	8.3	2.1	6.2
Crystal Methamphetamine (Ice)[e]	1.3	6.6	1.2	9.9	1.3	4.4
Sedatives (Barbiturates)[f]	5.9	11.3	7.3	11.3	5.0	11.4
Tranquilizers[f]	9.1	15.7	9.5	16.1	8.8	15.3
Alcohol	83.1	83.0	82.3	79.4	83.6	85.9
Been Drunk[b]	71.6	75.9	67.8	72.1	74.1	78.5
Flavored Alcoholic Bvg.[h]	80.6	79.0	77.6	72.4	82.4	84.4
Cigarettes	—	—	—	—	—	—
Steroids[e]	0.6	1.9	1.3	3.9	0.2	0.3
Approximate Weighted N =	*1250*	*730*	*480*	*310*	*770*	*420*

Source. The Monitoring the Future study, the University of Michigan.

"*" indicates a prevalence rate of less than 0.05%.

"—" indicates data not available.

[a]Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, heroin or other narcotics, amphetamines, sedatives (barbiturates), or tranquilizers not under a doctor's orders.

[b]This drug was asked about in three of the six questionnaire forms. Total *N* in 2007 for college students is approximately 630.

[c]This drug was asked about in five of the six questionnaire forms. Total *N* in 2007 for college students is approximately 1040.

[d]This drug was asked about in four of the six questionnaire forms. Total *N* in 2007 for college students is approximately 830.

[e]This drug was asked about in two of the six questionnaire forms. Total *N* in 2007 for college students is approximately 420.

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

[g]Based on the data from the revised question, which attempts to exclude inappropriate reporting of nonprescription amphetamines.

[h]This drug was asked about in one of the six questionnaire forms. Total *N* in 2007 for college students is approximately 210.

TABLE 8-2

Annual Prevalence of Use for Various Types of Drugs, 2007: Full-Time College Students vs. Others among Respondents 1 to 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[a]	35.0	35.4	38.0	38.6	33.1	33.1
Any Illicit Drug[a] other than Marijuana	17.3	21.1	19.0	22.3	16.3	20.2
Marijuana	31.8	31.8	35.8	36.4	29.4	28.4
Inhalants[b]	1.5	1.2	2.3	1.8	1.1	0.8
Hallucinogens	4.9	5.5	7.7	8.0	3.1	3.6
LSD	1.3	1.5	2.2	2.1	0.8	1.0
Hallucinogens other than LSD	4.7	5.3	7.3	7.7	3.1	3.6
Ecstasy (MDMA)[b]	2.2	3.8	1.4	4.7	2.7	3.1
Cocaine	5.4	8.3	6.3	11.0	4.9	6.2
Crack[c]	0.6	1.2	0.8	1.7	0.4	0.8
Other Cocaine[d]	5.3	7.8	5.1	12.5	5.4	4.6
Heroin	0.2	0.8	0.3	0.5	0.1	1.0
With a Needle[e]	*	0.4	*	*	*	0.7
Without a Needle[e]	0.2	0.7	0.3	0.4	0.2	1.0
Narcotics other than Heroin[f]	7.7	10.5	8.7	10.9	7.1	10.2
OxyContin[e,f]	2.8	4.5	4.1	4.4	2.0	4.6
Vicodin[e,f]	6.7	10.6	10.0	12.5	4.8	9.2
Amphetamines, Adjusted[f,g]	6.9	7.5	8.1	8.1	6.2	7.1
Ritalin[e,f]	3.7	2.3	4.6	4.2	3.1	0.8
Methamphetamine[e]	0.4	1.9	0.6	3.4	0.2	0.9
Crystal Methamphetamine (Ice)[e]	0.7	1.1	0.7	2.0	0.7	0.5
Sedatives (Barbiturates)[f]	3.6	5.3	4.2	5.4	3.2	5.3
Tranquilizers[f]	5.5	8.4	6.2	8.5	5.1	8.3
Rohypnol[e]	0.1	1.2	*	2.5	0.1	0.3
GHB[e]	0.1	0.9	*	1.6	0.2	0.3
Ketamine[e]	0.2	0.9	0.3	2.2	0.2	*
Alcohol	80.9	79.3	80.1	77.1	81.4	80.9
Been Drunk[b]	64.8	60.9	61.9	61.6	66.7	60.5
Flavored Alcoholic Bvg.[h]	62.6	63.5	55.2	58.5	67.0	67.3
Cigarettes	30.7	44.1	32.2	39.6	29.7	47.3
Steroids[e]	0.6	1.2	1.3	2.3	0.2	0.3
Approximate Weighted N =	*1250*	*730*	*480*	*310*	*770*	*420*

Source. The Monitoring the Future study, the University of Michigan.

"*" indicates a prevalence rate of less than 0.05%.

[a]Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, heroin or other narcotics, amphetamines, sedatives (barbiturates), or tranquilizers not under a doctor's orders.

[b]This drug was asked about in three of the six questionnaire forms. Total *N* in 2007 for college students is approximately 630.

[c]This drug was asked about in five of the six questionnaire forms. Total *N* in 2007 for college students is approximately 1040.

[d]This drug was asked about in four of the six questionnaire forms. Total *N* in 2007 for college students is approximately 830.

[e]This drug was asked about in two of the six questionnaire forms. Total *N* in 2007 for college students is approximately 420.

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

[g]Based on the data from the revised question, which attempts to exclude inappropriate reporting of nonprescription amphetamines.

[h]This drug was asked about in one of the six questionnaire forms. Total *N* in 2007 for college students is approximately 210.

TABLE 8-3

Thirty-Day Prevalence of Use for Various Types of Drugs, 2007: Full-Time College Students vs. Others among Respondents 1 to 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[a]	19.3	23.8	22.7	28.4	17.1	20.4
Any Illicit Drug[a] other than Marijuana	8.1	11.5	9.5	12.8	7.2	10.5
Marijuana	16.8	20.4	20.2	26.1	14.8	16.2
Inhalants[b]	0.1	0.8	*	1.3	0.2	0.4
Hallucinogens	1.3	1.3	2.2	2.5	0.8	0.4
LSD	0.3	0.3	0.7	0.7	0.1	*
Hallucinogens other than LSD	1.1	1.2	1.7	2.4	0.7	0.4
Ecstasy (MDMA)[b]	0.4	0.3	0.5	0.5	0.3	0.2
Cocaine	1.7	2.8	1.8	4.1	1.7	1.8
Crack[c]	0.1	0.5	0.2	0.7	0.1	0.4
Other Cocaine[d]	1.6	2.6	1.4	4.7	1.8	1.2
Heroin	0.1	0.4	0.3	0.2	0.1	0.5
Narcotics other than Heroin[f]	2.2	5.4	3.2	5.1	1.7	5.7
Amphetamines, Adjusted[e,f]	3.1	3.0	2.8	3.7	3.2	2.5
Crystal Methamphetamine (Ice)[e]	0.1	0.3	*	0.5	0.2	0.3
Sedatives (Barbiturates)[e]	1.4	2.2	1.0	2.9	1.6	1.7
Tranquilizers[e]	1.8	4.0	1.6	4.1	1.9	3.9
Alcohol	66.6	61.3	67.2	64.1	66.2	59.1
Been Drunk[b]	46.8	37.5	46.3	41.9	47.1	34.5
Flavored Alcoholic Beverages[h]	27.5	29.5	17.0	31.9	33.7	27.5
Cigarettes	19.9	33.8	21.8	31.3	18.8	35.6
Approximate Weighted N =	*1250*	*730*	*480*	*310*	*770*	*420*

Source. The Monitoring the Future study, the University of Michigan.

"*" indicates a prevalence rate of less than 0.05%.

[a]Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, heroin or other narcotics, amphetamines, sedatives (barbiturates), or tranquilizers not under a doctor's orders.

[b]This drug was asked about in three of the six questionnaire forms. Total *N* in 2007 for college students is approximately 630.

[c]This drug was asked about in five of the six questionnaire forms. Total *N* in 2007 for college students is approximately 1040.

[d]This drug was asked about in four of the six questionnaire forms. Total *N* in 2007 for college students is approximately 830.

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

[f]Based on the data from the revised question, which attempts to exclude inappropriate reporting of nonprescription amphetamines.

[g]This drug was asked about in two of the six questionnaire forms. Total *N* in 2007 for college students is approximately 420.

[h]This drug was asked about in one of the six questionnaire forms. Total *N* in 2007 for college students is approximately 210.

TABLE 8-4

Thirty-Day Prevalence of Daily Use for Various Types of Drugs, 2007: Full-Time College Students vs. Others among Respondents 1 to 4 Years beyond High School

(Entries are percentages.)

	Total		Males		Females	
	Full-Time College	Others	Full-Time College	Others	Full-Time College	Others
Marijuana[a]	3.5	7.6	4.9	10.9	2.6	5.1
Cocaine[a]	*	*	*	*	*	*
Amphetamines, Adjusted[a,b,c]	0.1	0.1	0.2	*	0.1	0.2
Alcohol						
Daily[a]	4.3	5.4	6.2	8.3	3.1	3.3
5+ Drinks in a Row in Past 2 Weeks	41.1	34.0	49.0	39.8	36.2	29.7
Cigarettes						
Daily	9.3	25.8	10.7	23.9	8.4	27.1
Half Pack or More per Day	4.3	17.0	5.2	16.6	3.8	17.3
Approximate Weighted N =	*1250*	*730*	*480*	*310*	*770*	*420*

Source. The Monitoring the Future study, the University of Michigan.

"*" indicates a prevalence rate of less than 0.05%.

[a]Daily use is defined as use on 20 or more occasions in the past 30 days except for cigarettes, for which actual daily use is measured, and for 5+ drinks, for which the prevalence of having five or more drinks in a row in the last two weeks is measured.

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

[c]Based on the data from the revised question, which attempts to exclude inappropriate reporting of nonprescription amphetamines.

Chapter 9

TRENDS IN DRUG USE AMONG COLLEGE STUDENTS

College students are often the harbingers of social change in society, and such was the case with the emergence of the illicit drug epidemic of the last 40 years. Illicit drug use increased dramatically among American college students in the mid-1960s, then spread quickly to their noncollege age peers and eventually down the age spectrum to high school and even middle school students. College students were thus the leading edge of that critical social change in illicit drug use. As we shall show in this chapter, the diffusion process seems to have reversed during the more recent "relapse" of the epidemic in the 1990s, when use increased first among those in early adolescence and then radiated *up* the age spectrum as those cohorts grew older. Use has subsequently declined among adolescents; this decline, like the recent increase, is radiating up the age spectrum.

The definition of college students is the same here as described in chapter 8: high school graduates one to four years past high school who are enrolled full-time in a two- or four-year college at the beginning of March in the year in question. For comparison purposes, trend data are provided on the remaining follow-up respondents in this age band, who are also one to four years past high school (see Figures 9-1 through 9-15c). Because the proportion of an age group in college declines steadily with the number of years beyond high school, this comparison group is slightly older on average than the college-enrolled group. It is also worth noting that the proportion of young adult high school graduates one to four years beyond high school who are enrolled full-time in college has increased considerably over the past 28 surveys. In 2007, about 63% of the weighted number of follow-up respondents one to four years past high school met our definition of college students, compared with only 38% in the 1980 survey. That 25-percentage-point increase represents a substantial rise—nearly a two-thirds rise—over the past two and a half decades in the proportion of high school graduates attending college.

The reader is reminded that the difference between the enrolled group and the other group provides an estimate of 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 calculation for the noncollege group, many of the differences with the college-enrolled would likely be accentuated.

For each year, there are approximately 1,100–1,500 weighted respondents constituting the college student sample (see Table 9-5 for *N*s per year) and roughly 700–1,700 respondents constituting the noncollege group among those one to four years beyond high school. Comparisons of the trends for these two groups are provided in this chapter. Because it was not until 1980 that enough follow-up years had accrued to characterize young people one to four years past high school, the comparisons begin with that year.

TRENDS IN PREVALENCE 1980–2007: COLLEGE STUDENTS VERSUS THOSE NOT ENROLLED IN COLLEGE

- The proportion of college students using ***any illicit drug*** in the 12 months prior to the survey (i.e., the annual prevalence rate) dropped fairly steadily between 1980 and 1991 (from 56% to 29%) (see Table 9-2). In other words, illicit drug use by college students fell by nearly half over the 11-year period 1980–1991. After 1991, annual (and also 30-day) prevalence held fairly steady for a couple of years before beginning to rise, reaching 38% in 1998 and again in 2001—still well below the peak of 56% in 1980. There has not been a great deal of change since then, although some decline has occurred in the past couple of years (the rate was 35% in 2007). The noncollege group moved similarly from 1980 to 1998. Twelfth graders also showed a similar trajectory in the decline phase through 1991, but their rise in use after 1992 was distinctly sharper, as Figure 9-1 illustrates. All three groups showed a leveling after 1998. However, in 2000, the noncollege group exhibited a four-percentage-point increase that was due largely to their sharper increases in marijuana, amphetamine, and tranquilizer use in that year, and their level remains above the college student sector. Also noteworthy is the fact that use among high school seniors has declined some since 1999 (by about six percentage points), whereas among college students there was little decline until 2006, when the rate fell nearly three percentage points. Use by their noncollege counterparts declined by four percentage points in 2007. As a result, all three groups now have quite similar prevalence rates in 2007, in contrast to the mid- to late 1990s, when 12th graders had considerably higher rates of use. We believe the divergence among the three groups and subsequent convergence of college students and high school seniors, at least, reflect cohort effects.

- Use of ***any illicit drug other than marijuana*** declined fairly steadily and appreciably among college students between 1980 and 1994, with annual prevalence dropping by nearly two thirds from 32% to 12% (Table 9-2). This generally paralleled the trends for the noncollege group, as well as for 12th graders. All three groups showed some increase in use during the 1990s: the 12th graders after 1992, the noncollege group after 1993, and the college students after 1994. However, the rise in use of illicit drugs other than marijuana was not as sharp among college students as it was in either of the two other groups (Figure 9-2). After 1999, as use among 12th graders leveled off, the college students and noncollege segment showed some further increase. In fact, the college students and noncollege respondents continued to show an increase in their annual prevalence rate from 1998 through 2004, before declining from 2005 through 2007. College students and 12th graders now have about the same prevalence rates, following more than a decade in which the 12th graders had higher rates. Again, this divergence and then convergence most likely reflect some cohort effects working their way up the age spectrum. Of the three groups, the noncollege group has shown the highest rates of using illicit drugs other than marijuana since 2000.

  In general, among those enrolled in college, the trends during the 1980s for most individual classes of illicit drugs tended to parallel those for the noncollege group and those observed among 12th graders. During the 1990s, however, there was more divergence in the trends,

with the college students usually showing less increase than the 12th graders, and, for some drugs, less increase than their age-mates not in college.

- The annual prevalence of ***marijuana*** use among college students decreased steadily from 1981 through 1991, dropping by nearly half from 51% to 27% (Figure 9-3a). Their noncollege peers showed a comparable decline over the same time interval, as did the 12th graders. Use among 12th graders rose sharply after 1992, while use among college students and their age peers rose more gradually. From 1991 through 1998, annual prevalence rose by nearly 10 percentage points among college students, by 7 percentage points among their age peers not in college, but by 14 percentage points among 12th graders. As a result, the 12th graders came to exhibit the highest rate of marijuana use in the last half of the 1990s. The 12th graders were the first to show a leveling off in marijuana use (in 1998), followed by the college students in 1999 and the noncollege group in 2002. All three groups had very similar rates of use in 2005 through 2007, during a period of gradual decline.

- ***Daily marijuana*** use among college students (Figure 9-3b) fell appreciably between 1980 and 1986, from 7.2% to 2.1%, as it did for those not in college and for 12th graders. (The latter two groups were able to show sharper declines because they started higher than college students in 1980. This sharper decline nearly eliminated the differences among them by 1989.) After 1986, the decline decelerated, and by 1991 the rate stood at 1.8%. In sum, the proportion of American college students who actively smoked marijuana on a daily basis dropped by about three fourths between 1980 and 1991. Daily use then leveled until 1994 and began increasing thereafter, reaching 4.6% in 2000. Since then, daily use for college students has declined (to 3.5% in 2007). The other two groups showed considerably larger increases after 1993 than did college students, with 12th graders' daily use rates leveling after 2000 and declining after 2004. The noncollege segment showed further increase in 2001, reaching 9.4%; their use was down to 7.6% in 2007, still well above college students. Of the three groups, the college students have had the lowest rate of daily marijuana use throughout the life of the study, and the noncollege segment the highest. As is often the case, these subgroup differences narrowed considerably during overall declines in use and widened during periods of increasing use.

- A dramatic decline occurred for ***amphetamine*** use between 1981 and 1991 (Figure 9-11). Annual prevalence among college students dropped by more than eight tenths, from 22% in 1981 to 4% in 1991. Proportionately, this was a larger drop than among 12th graders, but fairly parallel to the overall change among their age peers not in college. Amphetamine use among college students and their noncollege age peers leveled for a year before beginning to increase in both groups after 1992 and 1993, respectively, through 2001, with a leveling in 2002. During the 1990s and early 2000s, the prevalence rates for amphetamines in all three groups have remained well below the rates observed in the early 1980s. Since 2002 there have been some small nonparallel changes among the three groups, with amphetamine use among college students (who have consistently had the lowest rate of use since the mid-1980s) holding steady through 2007, while use among 12th graders and the noncollege group declined.

- Use of ***inhalants*** has been very low among college students since 1980, when data were first gathered on them, and the noncollege respondents have had just about the same low rates of use. Twelfth graders have consistently had higher rates of inhalant use than either of these segments of the young adult population. All three groups have trended in parallel, though, with an increase in use from around 1981 through 1995, followed by a long decline thereafter. The increase and decline were more pronounced among 12th graders than among the two young adult groups.

- During the early 1980s, one of the largest proportional declines observed among college students was for ***LSD*** (see Figure 9-6). Annual prevalence fell from 6.3% in 1982 to 2.2% in 1985. After 1985, their use began to increase, reaching 6.9% by 1995. After 1995, use fell gradually among college students, their age-mates, and 12th graders. In 2002 there was a particularly sharp decrease in all groups, resulting in a considerable convergence in usage rates. All three groups now have annual prevalence rates between 1.3% and 2.1%. College students have continued to report lower levels of use than the other two groups since the mid-1990s.

- The use of ***ecstasy*** (***MDMA***) by American college students and their noncollege age peers began to rise after 1994 (Figure 9-8). After 1997 there was a sharp increase among college students. Their annual prevalence rose three- to fourfold in just three years, from 2.4% in 1997 to 9.2% in 2001, before it began to decrease, falling to 2.2% by 2007. The trends among the noncollege segment have run fairly parallel to those for college students and 12th graders through 2007, although the period of sharp increase appeared to start later for them (after 1999), eventually reaching a higher level of use. From 2000 through 2006, the noncollege segment exhibited the highest rate of ecstasy use—reaching 14% in 2001, when use among college students and 12th graders was at 9%. All three groups showed sharp declines in the following three years and a leveling of use by 2005 through 2007.

- When the college data were first available in 1980, ***sedative*** (***barbiturate***) use was already quite low among college students (at 2.9% annual prevalence) (see Figure 9-12), but it still fell by more than half to 1.3% by 1985. This proportional decline was sharper than among 12th graders and less sharp than among the young adults not in college, both of whom started at a considerably higher level of use. Annual prevalence remained essentially unchanged between 1985 and 1993 for all three groups. All groups then showed a gradual increase in use between 1993 (or 1994 in the case of the college students) and 2001, with 12th graders showing a significant increase in 2002 and use in the other two groups leveling off. The college students showed a fairly steady increase over the 10-year period 1994–2004, with pauses in 1998 and 2002 and then a leveling in 2005; but the other two groups remained at higher levels than the college students throughout this period. Recently, declines in use appeared among the college students beginning in 2005, and among the other two groups beginning in 2006.

- Figure 9-13 shows that the annual prevalence of ***tranquilizer*** use among college students dropped by nearly three fourths in the period 1980–1994, from 6.9% to 1.8%.[53] After this long period of gradual decline, tranquilizer use then began to increase gradually, returning to 6.9% by 2003. Use by the noncollege segment and by 12th graders dropped more sharply, eliminating the differences among the three groups by 1992. Use rose after 1992 for all but the college students, again creating some differences, and then rose in all three groups after 1994; in 2002, tranquilizer use was once again at or near its recent high in all three groups. From 1999 through 2002 the increase in use was particularly sharp among the noncollege segment, making them the highest using group. In 2003, however, the noncollege group and the 12th graders showed their first declines in recent years, thus narrowing the differences among the three groups. Since 2004 all three groups have shown modest declines in use. Still, tranquilizer use in all three groups remains near the highest levels reached since 1980.

- The overall trends in the use of ***narcotics other than heroin***[54] have been quite parallel to those for sedatives (barbiturates) and tranquilizers. By 1994 the use of narcotics other than heroin (Figure 9-10a) by college students was about half what it was in 1980 (2.4% in 1994 versus 5.1% in 1980) as a result of a fairly gradual decline over the interval. This trend closely parallels use among their noncollege counterparts and 12th graders. As with a number of other drugs, use among 12th graders began to rise after 1992, but use among college students did not begin to increase until after 1994, likely due to a cohort effect. In 2003, annual prevalence among college students reached an historic high point of 8.7% before leveling. (It was 7.7% in 2007.) Use among 12th graders leveled after reaching an historic high in 2004 of 9.5% (9.2% in 2007). The noncollege group emerged after 2000 as the heaviest using group for the first time, as their use kept increasing through 2005, reaching an all-time high of 13%. In 2006 and 2007 they finally showed what might be the start of a decline, but they still remain above the other two groups.

- Although data were not collected until 2002, it is clear that ***OxyContin*** and ***Vicodin*** (Figures 9-10b and 9-10c) help to explain the difference between the college and noncollege segments in their use of narcotics other than heroin. The noncollege group has had annual prevalence rates up to twice that for the college students in the use of both drugs (see Table 8-2). Annual prevalence of ***OxyContin*** use rose continuously among 12th graders (from 4.0% in 2002 to 5.5% in 2005). Use in the noncollege segment also rose from 2002 to 2005, from 3.3% to 6.2%. Among college students it rose from 1.5% in 2002 to 2.1% in 2005. Since 2005 use increased some more among college students, but appeared to decline in the other two groups. ***Vicodin*** use showed a somewhat different pattern, with annual prevalence among all three groups remaining fairly level over the period 2002 through 2007 substantially higher than for OxyContin. As with OxyContin, the noncollege segment has had consistently higher Vicodin use than the college students. The 12th graders have fallen in between the two young adult groups in their rate of Vicodin use, but are closer to the noncollege group in their rate of OxyContin use.

[53]The use of sedatives (barbiturates) and tranquilizers very likely dropped during the latter half of the 1970s, as well, judging by the trends among 12th graders.

[54]As discussed in chapters 4 and 5, because the questions about narcotics other than heroin were changed in 2002, the prevalence figures are adjusted estimates. See the earlier discussion for details.

- Like the 12th graders, college students showed a relatively stable pattern of ***cocaine*** use between 1980 and 1986, when their usage levels (and those of their age peers) were considerably higher than those observed among 12th graders (see Figure 9-9). This level period was followed by a dramatic drop of nearly nine tenths in annual prevalence among college students, from 17.1% in 1986 to 2.0% in 1994. Their noncollege counterparts also showed a large but somewhat less dramatic decline, from 18.9% in 1986 to 5.1% in 1994. Because use among college students also dropped more sharply than among 12th graders, there was little or no difference between those two groups in annual prevalence rates for cocaine use between 1990 and 1995. After 1995, cocaine use rose the least among the college students, creating a reversal of the previous gap, with the 12th graders having higher levels of use than the college students; this lasted for a few years before the college students caught up. Between 1994 and 1998, annual cocaine prevalence for college students increased significantly, from a 14-year low of 2.0% in 1994 to 4.5% by 1998, roughly where it stayed through 2002. Their use then showed a gradual rise after 2002, with annual prevalence increasing from 4.8% to 6.6% in 2004; it then dropped off some to 5.4% by 2007. Twelfth graders and the noncollege segment also exhibited an increase in annual prevalence of cocaine use after 1992 and 1993, respectively. Use has been level among 12th graders since 2000, but continued to increase among those not in college between 1999 and 2006, considerably widening the gap between the noncollege segment and the other two groups. In 2007 use among the noncollege segment finally showed some decline.

- College students have shown some shifts in ***alcohol*** use that are different from those observed among both the noncollege group and among 12th graders. As can be seen in Figure 9-14d, both the noncollege segment and 12th graders showed fairly substantial declines from 1981 through 1990 in the prevalence of having ***five or more drinks in a row*** at least once during the prior two weeks. (The 12th graders then showed further decline for three more years.) In contrast, college students showed no decline in binge drinking from 1981 to 1986, and then only a modest decline of five percentage points from 1986 through 1993. In the 11-year period between 1981 (when all three populations were very close in use) and 1992, this measure of heavy drinking dropped by 14 percentage points among 12th graders, by 11 percentage points among noncollege 19- to 22-year-olds, but by only 2 percentage points among full-time college students of the same age. After 1992, binge drinking began to rise among 12th graders, while still declining some among college students—likely reflecting a cohort effect emerging during this period, similar to that observed for a number of illicit drugs—narrowing the gap somewhat. Binge drinking subsequently began to increase among the noncollege segment after 1995, and by less among college students after 1996—increases that continued into 2001. Since 2001, college students have held fairly steady in their rates of binge drinking, while the noncollege segment has shown a small decline. Meanwhile, among 12th graders, binge drinking started a gradual decline after 1998 that continued through 2006, enlarging the difference between them and the other two groups. Once again there is evidence of cohort effects at work here since the beginning of the 1990s, with the inflection points being later for the older strata. Despite the different patterns of trends, perhaps the most noteworthy facts are that college students have exhibited the highest level of, and greatest constancy of rate in, binge drinking throughout the entire 28-year interval that college student samples have been included in the study.

It is interesting to conjecture why college students did not show much decline in heavy drinking for a decade (1981–1991) while their noncollege peers and 12th graders did. One possibility is that campuses provided some insulation from the effects of changes in the drinking age laws that took place during that interval. Similarly, entrenched in many college campuses is a culture of binge drinking which has proven impervious to many societal trends (and intervention attempts) regarding excessive alcohol use.[55] Also, individuals who are under the legal drinking age in college are mixed in with peers who are of legal age to purchase alcohol; this is no longer true in high schools and less true, perhaps, for many of those ages 19 to 22 who are not in college. Finally, much alcohol advertising and promotion was and is directed specifically at the college student population.

College students generally have had somewhat lower rates of ***daily drinking*** than their age-mates not in college, though by the early 1990s such differences nearly disappeared (Figure 9-14c). Daily drinking among young adults (one to four years past high school) not enrolled in college declined from 8.7% in 1981 to 6.5% in 1984, remained essentially unchanged through 1988, declined further (to 3.2%) by 1994, then increased to 5.8% by 2004, about where it is in 2007. College students' daily drinking estimates—which appear a little less stable, perhaps due to smaller sample sizes in the 1980s—showed little or no decline between 1980 (6.5%) and 1984 (6.6%), but a considerable decline from 1984 through 1995 (to 3.0%), followed by a period of some increase, reaching 5.0% in 2002. After 2002 their daily drinking dropped to 3.7% in 2004, but increased slightly to 4.3% in 2007. Twelfth graders showed a somewhat similar pattern of daily drinking with a long period of decline, followed by a somewhat earlier reversal, beginning in 1994. After 1998 their daily drinking rate actually declined a little, and then remained fairly level through 2007. Of the three groups, the 19- to 22-year-olds not in college have had the highest rate of current daily drinking over most of the past 28 years.

- ***Cigarette smoking*** among American college students (Figure 9-15a) declined modestly in the first half of the 1980s. Thirty-day prevalence fell from 26% to 22% between 1980 and 1984, remained fairly stable through 1990 (22%), then increased gradually but substantially, reaching 31% by 1999. It was not until 2000 that the first evidence of a decline in smoking among college students began to appear, two years after smoking had begun to decline among 12th graders. This lag no doubt reflects a cohort effect. The noncollege group showed little consistent change after the mid-1990s until evidence of gradual decline began to emerge sometime after 1999. Twelfth graders have shown a fairly steady decline since 1997, while college students have shown a pattern of decline since 1999, leaving the two groups at about the same level of smoking in 2007. Because the noncollege segment has shown only a moderate decline so far, their smoking rate is now much higher than in either of the other two groups.

  While smoking rates have consistently been lower among college students than the noncollege segment the trends for these two groups converged some after 1984, as smoking rates more or less stabilized among college students but continued to decline among young

[55]Schulenberg, J. E., & Maggs, J. L. (2002). A developmental perspective on alcohol use and heavy drinking during adolescence and the transition to young adulthood. *Journal of Studies on Alcohol, Supplement 14*, 54–70.

adults not in college (see Figure 9-15a). In fact, between 1989 and 1991, use began to rise among college students while continuing to decline among their peers. Both groups showed fairly parallel increases in smoking between about 1991 and 1999, after which use continued to increase among the noncollege segment, but began to decline among college students. (Twelfth graders exhibited an increase from 1992 to 1997, and their use has declined significantly since.) The popularity of Camel cigarettes among the college-bound, which we have reported elsewhere, may help to explain some of the narrowing of the gap between college students and their age peers.[56] The Joe Camel advertising and promotion campaign, commenced in the late 1980s and ended in the late 1990s, may have succeeded in initiating more college students (particularly male college students) to smoking than had been the case previously or since.

- For many drugs—***amphetamines***, ***sedatives*** (***barbiturates***), and ***tranquilizers***—differences between college students and their noncollege age peers narrowed over the years, particularly through the early 1990s. Much of this is due to general overall declines in usage rates during the 1980s, but may also reflect the increasing proportion of the age group going to college. Since then, the differences between these two groups have increased for sedatives (barbiturates) and tranquilizers as use in general has grown.

  The overall drug use trends among college students are also parallel, for the most part, to the trends among 12th graders; still, declines in many drugs over the decade of 1980 to 1990 were proportionately larger among college students, and for that matter, among all young adults of college age (i.e., modal ages 19–22), than among 12th graders. Despite parallel trends in the early 1990s, the 12th graders have shown a larger, and often earlier, increase in the use of a number of drugs in the years since; as indicated in *Volume I*, the 8th and 10th graders in secondary school showed increases a year earlier than the 12th graders. It is clear that this most recent upsurge, or what we have called a "relapse phase" in the illicit drug epidemic, did not originate on the nation's campuses, as did the original epidemic. It originated among secondary school students—and the younger ones at that—and has been carried up the age spectrum through generational replacement, at least in part. Put in more general terms, there is clear evidence of some important cohort effects at work here.

GENDER DIFFERENCES IN TRENDS AMONG COLLEGE STUDENTS

One trend that is not obvious from the figures included here is the slow rise in the proportion of college students who are female. Females constituted 50% of our 1980 sample of college students compared to 62% of our 2007 sample. Given that substantial gender differences exist in the use of some drugs, we have been concerned all along that apparent long-term trends in the levels of drug use among college students (and/or among their age peers not in college) might actually be attributable to changes in the gender composition of that population. For this reason, in particular, we have consistently presented separate trend lines for the male and female segments of the college

[56]Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (1999). *Cigarette brand preferences among adolescents* (Monitoring the Future Occasional Paper No. 45). Ann Arbor, MI: Institute for Social Research.

student population. Differences in the trends observed for the two genders, illustrated in the lower panels of Figures 9-1 through 9-15c, are discussed next.

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.

- Certain drug use measures showed a convergence between the genders as use rates declined to low levels. This has been true for the use of ***any illicit drug*** and ***any illicit drug other than marijuana***. ***Marijuana*** use was another example, with some convergence in the rates between 1980 and 1991 as overall use declined, and then some divergence between 1991 and 1999 as usage rates rose. After 2001, however, the two genders diverged somewhat, with use among males remaining essentially unchanged through 2007 and use among females decreasing (see Figure 9-3a). ***Daily marijuana*** use presents a clearer example, with the steep decline among males between 1980 and 1986 narrowing the gap between the genders substantially. Between 1986 and 1993 there was no further narrowing; but as use began to rise in the mid-1990s, a greater increase among college males widened the gap again through about 2000. Since then the gender gap has remained fairly stable (see Figure 9-3b).

- ***LSD*** use dropped more steeply among males from 1999 to 2005 than among females, bringing the genders close together at very low prevalence rates (Figure 9-6). Prior to that period of convergence, use had quite consistently been higher among males.

- Rates of ***ecstasy*** (***MDMA***) use have been quite similar for male and female college students since measures were first introduced in 1989, which means that the trends have been similar.

- After 1986, ***cocaine*** use, which had been substantially higher among males, dropped more steeply for males than for females in general and among male college students in particular, considerably narrowing the sizable gap between the genders (see Figure 9-9). Since 1991 both genders have moved in parallel, with males reporting somewhat higher usage rates.

- ***Amphetamine*** use (Figure 9-11) also showed some convergence in the early 1980s due to a greater decline among males. Since 1989 the trends have been quite parallel, with males generally having a slightly higher annual prevalence rate.

- Among college students the annual prevalence of ***alcohol*** use has been virtually identical for the two genders throughout the duration of the study (Figure 9-14a). Prior to 2000, the 30-day prevalence rate showed a modest difference, with males slightly higher (Figure 9-14b); but that modest difference disappeared by 2000 as drinking rose some among females. College males have consistently had considerably higher rates of daily drinking and binge drinking than college females (Figures 9-14c and 9-14d). If anything, the gender difference in ***daily drinking*** has expanded since 2000, with males increasing and females showing some net decrease. In 2007, the rates were 6.2% for college males versus 3.1% for college females.

- From 1988 through 1994, ***binge drinking*** among college females decreased some (from 37% to 31%); but binge drinking among college males declined more, from a high point in 1986 of 58% to a low of 47% in 1995 (see Figure 9-14d). Since 1998, there has been some closing of the gender gap in binge drinking, as the rate among college females has risen from 31% in 1998 to 36% in 2007, while it actually declined some from 52% to 49% among college males.

- Between 1980 and 1992, the 30-day prevalence of ***cigarette smoking*** was consistently higher among college females than males (Figure 9-15a). However, the gap in 30-day prevalence narrowed because use by female college students declined considerably between 1980 and 1989, while use by male college students did not decline. After 1989, the gap remained quite small and the genders reversed position, with college males catching up to, and passing, females in their rate of smoking by 1994 and then remaining higher through at least 2000. (A similar reversal had occurred among 12th graders a few years earlier, so this reversal probably reflected a cohort effect.) Both genders exhibited a considerable decrease in 30-day smoking between 1999 and 2003, leaving very little difference between them (22% for males, 23% for females), although the trend line for college males was irregular during this interval. In 2007, it appears that the males may be smoking at higher levels than the females, but the differences between the two genders are still very small.

  While the rise in smoking among college students was longer term and more gradual than in the other two groups, it nevertheless was substantial, rising by nearly half between 1989 (21%) and 1999 (31%). The increase in smoking after 1988 was sharper among college males than among college females, consistent with the notion that Camel cigarettes' promotion and advertising—which ended in the late 1990s as a part of the tobacco settlement—may have played a role in the overall increase. Camels proved considerably more popular among males, especially among those college-bound and from more educated families.[57]

[57]Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (1999). *Cigarette brand preferences among adolescents* (Monitoring the Future Occasional Paper No. 45). Ann Arbor, MI: Institute for Social Research.

TABLE 9-1

Trends in Lifetime Prevalence of Various Types of Drugs among College Students 1 to 4 Years beyond High School

(Entries are percentages.)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Approximate Weighted N =	*1040*	*1130*	*1150*	*1170*	*1110*	*1080*	*1190*	*1220*	*1310*	*1300*	*1400*	*1410*	*1490*	*1490*	*1410*	*1450*	*1450*	*1480*	*1440*	*1440*	*1350*	*1340*	*1260*	*1270*	*1400*	*1360*	*1280*	*1250*	
Any Illicit Drug[a]	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	45.9	45.5	45.5	47.4	49.0	52.9	53.2	53.7	53.6	51.8	53.9	52.2	52.3	50.6	50.5	-0.1
Any Illicit Drug[a] 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	24.3	22.0	24.5	22.7	24.4	24.8	25.5	25.8	26.3	26.9	27.6	28.0	26.5	26.3	25.3	-0.9
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	42.0	42.2	41.7	45.1	46.1	49.9	50.8	51.2	51.0	49.5	50.7	49.1	49.1	46.9	47.5	+0.6
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	14.8	12.0	13.8	11.4	12.4	12.8	12.4	12.9	9.6	7.7	9.7	8.5	7.1	7.4	6.3	-1.0
Hallucinogens[c]	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	11.8	10.0	13.0	12.6	13.8	15.2	14.8	14.4	14.8	13.6	14.5	12.0	11.0	10.6	9.1	-1.5
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	10.6	9.2	11.5	10.8	11.7	13.1	12.7	11.8	12.2	8.6	8.7	5.6	3.7	3.5	3.3	-0.2
Hallucinogens other than LSD[c]	11.6	9.0	10.6	8.3	9.2	8.1	7.8	6.8	6.2	6.2	6.0	6.0	5.7	5.4	4.4	6.5	6.5	7.5	8.7	8.8	8.2	10.7	11.0	12.8	10.1	10.6	10.1	8.5	-1.6
Ecstasy (MDMA)[d]	—	—	—	—	—	—	—	—	—	3.8	3.9	2.0	2.9	2.3	2.1	3.1	4.3	4.6	6.8	8.4	13.1	14.7	12.7	12.9	10.2	8.3	6.9	5.4	-1.5
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	6.3	5.0	5.5	5.0	5.6	8.1	8.4	9.1	8.6	8.2	9.2	9.5	8.8	7.7	8.5	+0.8
Crack[e]	—	—	—	—	—	—	—	3.3	3.4	2.4	1.4	1.5	1.7	1.3	1.0	1.8	1.2	1.4	2.2	2.4	2.5	2.0	1.9	3.1	2.0	1.7	2.3	1.3	-0.9
Other Cocaine[f]	—	—	—	—	—	—	—	18.1	14.2	16.0	10.2	9.0	7.6	6.3	4.6	5.2	4.6	5.0	7.4	7.8	8.1	8.3	8.6	8.5	9.3	8.1	6.2	8.0	+1.7
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	0.6	0.1	0.6	0.7	0.9	1.7	0.9	1.7	1.2	1.0	1.0	0.9	0.5	0.7	0.5	-0.2
Narcotics other than Heroin[g,n]	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	6.2	5.1	7.2	5.7	8.2	8.7	8.7	8.9	11.0	12.2	14.2	13.8	14.4	14.6	14.1	-0.4

(Table continued on next page.)

TABLE 9-1 (cont.)

Trends in Lifetime Prevalence of Various Types of Drugs among College Students 1 to 4 Years beyond High School

(Entries are percentages.)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Approximate Weighted N =	*1040*	*1130*	*1150*	*1170*	*1110*	*1080*	*1190*	*1220*	*1310*	*1300*	*1400*	*1410*	*1490*	*1490*	*1410*	*1450*	*1450*	*1480*	*1440*	*1440*	*1350*	*1340*	*1260*	*1270*	*1400*	*1360*	*1280*	*1250*	
Amphetamines[g]	29.5	29.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Amphetamines, Adj.[g,i]	—	—	30.1	27.8	27.8	25.4	22.3	19.8	17.7	14.6	13.2	13.0	10.5	10.1	9.2	10.7	9.5	10.6	10.6	11.9	12.3	12.4	11.9	12.3	12.7	12.3	10.7	11.2	+0.6
Methamphetamine[j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.1	5.1	5.3	5.0	5.8	5.2	4.1	2.9	1.9	-0.9
Crystal Methamphetamine (Ice)[j]	—	—	—	—	—	—	—	—	—	—	1.0	1.3	0.6	1.6	1.3	1.0	0.8	1.6	2.2	2.8	1.3	2.3	2.0	2.9	2.2	2.4	1.7	1.3	-0.4
Sedatives (Barbiturates)[g]	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	3.5	3.2	4.0	4.6	5.2	5.7	6.7	6.9	6.0	5.9	5.7	7.2	8.5	6.3	5.9	-0.4
Sedatives, Adj.[g,k]	13.7	14.2	14.1	12.2	10.8	9.3	8.0	6.1	4.7	4.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Methaqualone[g]	10.3	10.4	11.1	9.2	9.0	7.2	5.8	4.1	2.2	2.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tranquilizers[g,l]	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	6.3	4.4	5.4	5.4	6.9	7.7	8.2	8.8	9.7	10.7	11.0	10.6	11.9	10.0	9.1	-0.9
Alcohol[m]	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	89.3	88.2	88.5	88.4	87.3	88.5	88.0	86.6	86.1	86.0	86.2	84.6	86.6	84.7	83.1	-1.5
Been Drunk[n]	—	—	—	—	—	—	—	—	—	—	—	79.6	76.8	76.4	74.4	76.6	76.2	77.0	76.8	75.1	74.7	76.1	75.1	74.9	73.4	72.9	73.1	71.6	-1.5
Flavored Alcoholic Beverages[o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	79.0	84.5	80.9	80.6	-0.2
Cigarettes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids[p]	—	—	—	—	—	—	—	—	—	0.4	1.5	1.4	1.7	1.9	0.5	0.8	0.6	1.6	0.9	1.3	0.6	1.5	1.2	1.2	1.6	1.0	1.9	0.6	-1.4

Source. The Monitoring the Future study, the University of Michigan.

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.

"—" indicates data not available.

See footnotes on next page.

Footnotes for Tables 9-1 through 9-5

[a] "Any illicit drug" includes use of marijuana, hallucinogens, cocaine, heroin or other narcotics, amphetamines, sedatives (barbiturates), methaqualone (until 1990), or tranquilizers not under a doctor's orders.

[b]This drug was asked about in four of the five questionnaire forms in 1980–1989, in five of the six forms in 1990–1998, and in three of the six forms in 1999–2006. Total *N* in 2007 is approximately 650.

[c]In 2001 the question text was changed on three of the six questionnaire forms. "Other psychedelics" was changed to "other hallucinogens," and "shrooms" was added to the list of examples. Beginning in 2002 the remaining forms were changed to the new wording.

[d]This drug was asked about in two of the five questionnaire forms in 1989, in two of the six questionnaire forms in 1990–2001, and in three of the six questionnaire forms in 2002–2006. Total *N* in 2007 is approximately 650.

[e]This drug was asked about in one of the five questionnaires for annual use only in 1986, two of the five questionnaire forms in 1987–1989, in all six questionnaire forms in 1990–2001, and in five of the six questionnaire forms in 2002–2007. Total *N* in 2007 is approximately 1070.

[f]This drug was asked about in one of the five questionnaire forms in 1987–1989 and in four of six questionnaire forms in 1990–2007. Total *N* in 2007 is approximately 830.

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

[h]In 2002 the question text was changed on three of the six questionnaire forms. The list of examples of narcotics other than heroin was updated: Talwin, laudanum, and paregoric—all of which had negligible rates of use by 2001—were replaced by Vicodin, OxyContin, and Percocet. The 2002 data presented here are based on the changed forms only; *N* is three sixths of *N* indicated. In 2003 the remaining forms were changed to the new wording. The data are based on all forms in 2003 and beyond.

[i]Based on the data from the revised question, which attempts to exclude inappropriate reporting of nonprescription amphetamines.

[j]This drug was asked about in two of the six questionnaire forms. Total *N* in 2007 is approximately 420.

[k]"Sedatives, adjusted" data are a combination of barbiturate and methaqualone data.

[l]In 2001 the question text was changed on three of the six questionnaire forms. "Miltown" was replaced with "Xanax" in the list of examples. Beginning in 2002 the remaining forms were changed to the new wording.

[m]In 1993 and 1994, the question text was changed slightly in three of the six questionnaire forms to indicate that a "drink" meant "more than just a few sips." Because this revision resulted in rather little change in reported prevalence in the surveys of high school graduates, the data for all forms combined are used in order to provide the most reliable estimate of change. After 1994 the new question text was used in all six of the questionnaire forms.

[n]This drug was asked about in three of the six questionnaire forms. Total *N* in 2007 is approximately 630.

[o]This drug was asked about in one of the six questionnaire forms. Total *N* in 2007 is approximately 210.

[p]This drug was asked about in one of the five questionnaire forms in 1989 and in two of the six questionnaire forms in 1990–2007. Total *N* in 2007 is approximately 420.

[q]Daily use is defined as use on 20 or more occasions in the past 30 days except for cigarettes, for which actual daily use is measured, and for 5+ drinks, for which the prevalence of having five or more drinks in a row in the last two weeks is measured.

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

TABLE 9-2

Trends in Annual Prevalence of Various Types of Drugs among College Students 1 to 4 Years beyond High School

(Entries are percentages.)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Approximate Weighted N =	*1040*	*1130*	*1150*	*1170*	*1110*	*1080*	*1190*	*1220*	*1310*	*1300*	*1400*	*1410*	*1490*	*1490*	*1410*	*1450*	*1450*	*1480*	*1440*	*1440*	*1350*	*1340*	*1260*	*1270*	*1400*	*1360*	*1280*	*1250*	
Any Illicit Drug[a]	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	30.6	31.4	33.5	34.2	34.1	37.8	36.9	36.1	37.9	37.0	36.5	36.2	36.6	33.9	35.0	+1.1
Any Illicit Drug[a] 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	12.5	12.2	15.9	12.8	15.8	14.0	15.4	15.6	16.4	16.6	17.9	18.6	18.5	18.1	17.3	-0.8
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	27.9	29.3	31.2	33.1	31.6	35.9	35.2	34.0	35.6	34.7	33.7	33.3	33.3	30.2	31.8	+1.6
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	3.8	3.0	3.9	3.6	4.1	3.0	3.2	2.9	2.8	2.0	1.8	2.7	1.8	1.5	1.5	+0.1
Hallucinogens[c]	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	6.0	6.2	8.2	6.9	7.7	7.2	7.8	6.7	7.5	6.3	7.4	5.9	5.0	5.6	4.9	-0.7
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	5.1	5.2	6.9	5.2	5.0	4.4	5.4	4.3	4.0	2.1	1.4	1.2	0.7	1.4	1.3	-0.1
Hallucinogens other than LSD[c]	5.2	4.7	5.4	3.9	4.1	3.9	3.8	3.1	3.4	3.1	3.0	3.1	2.6	2.7	2.8	4.0	4.1	4.9	4.4	4.5	4.4	5.5	5.8	7.1	5.6	5.0	5.4	4.7	-0.7
Ecstasy (MDMA)[d]	—	—	—	—	—	—	—	—	—	2.3	2.3	0.9	2.0	0.8	0.5	2.4	2.8	2.4	3.9	5.5	9.1	9.2	6.8	4.4	2.2	2.9	2.6	2.2	-0.5
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	2.7	2.0	3.6	2.9	3.4	4.6	4.6	4.8	4.7	4.8	5.4	6.6	5.7	5.1	5.4	+0.3
Crack[e]	—	—	—	—	—	—	—	2.0	1.4	1.5	0.6	0.5	0.4	0.6	0.5	1.1	0.6	0.4	1.0	0.9	0.9	0.9	0.4	1.3	1.3	0.8	1.0	0.6	-0.4
Other Cocaine[f]	—	—	—	—	—	—	—	10.7	10.6	9.3	5.1	3.2	2.4	2.5	1.8	3.3	2.3	3.0	4.2	4.2	4.1	4.1	5.0	5.1	6.3	5.0	3.8	5.3	+1.5
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	0.1	0.1	0.3	0.4	0.3	0.6	0.2	0.5	0.4	0.1	0.2	0.4	0.3	0.3	0.2	-0.1
Narcotics other than Heroin[g,n]	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	2.5	2.4	3.8	3.1	4.2	4.2	4.3	4.5	5.7	7.4	8.7	8.2	8.4	8.8	7.7	-1.1
OxyContin[g,j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	2.2	2.5	2.1	3.0	2.8	-0.2
Vicodin[g,j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.9	7.5	7.4	9.6	7.6	6.7	-0.9

(Table continued on next page.)

TABLE 9-2 (cont.)

Trends in Annual Prevalence of Various Types of Drugs among College Students 1 to 4 Years beyond High School

(Entries are percentages.)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Approximate Weighted N =	*1040*	*1130*	*1150*	*1170*	*1110*	*1080*	*1190*	*1220*	*1310*	*1300*	*1400*	*1410*	*1490*	*1490*	*1410*	*1450*	*1450*	*1480*	*1440*	*1440*	*1350*	*1340*	*1260*	*1270*	*1400*	*1360*	*1280*	*1250*	
Amphetamines[g]	22.4	22.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Amphetamines, Adj.[g,i]	—	—	21.1	17.3	15.7	11.9	10.3	7.2	6.2	4.6	4.5	3.9	3.6	4.2	4.2	5.4	4.2	5.7	5.1	5.8	6.6	7.2	7.0	7.1	7.0	6.7	6.0	6.9	+0.9
Ritalin[g,j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.7	4.7	4.7	4.2	3.9	3.7	-0.2
Methamphetamine[j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.3	1.6	2.4	1.2	2.6	2.9	1.7	1.2	0.4	-0.8
Crystal Methamphetamine (Ice)[j]	—	—	—	—	—	—	—	—	—	—	0.1	0.1	0.2	0.7	0.8	1.1	0.4	0.8	1.0	0.5	0.5	0.6	0.8	0.9	1.1	1.4	0.6	0.7	+0.1
Sedatives (Barbiturates)[g]	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	1.5	1.2	2.0	2.3	3.0	2.5	3.2	3.7	3.8	3.7	4.1	4.2	3.9	3.4	3.6	+0.2
Sedatives, Adj.[g,k]	8.3	8.0	8.0	4.5	3.5	2.5	2.6	1.7	1.5	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Methaqualone[g]	7.2	6.5	6.6	3.1	2.5	1.4	1.2	0.8	0.5	0.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tranquilizers[g,l]	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	2.4	1.8	2.9	2.8	3.8	3.9	3.8	4.2	5.1	6.7	6.9	6.7	6.4	5.8	5.5	-0.2
Rohypnol[j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.7	0.4	0.3	0.1	0.2	0.1	-0.1
GHB[j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.6	0.3	0.7	0.4	*	0.1	+0.1
Ketamine[j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.3	1.0	1.5	0.5	0.9	0.2	-0.6
Alcohol[m]	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	85.1	82.7	83.2	83.0	82.4	84.6	83.6	83.2	83.0	82.9	81.7	81.2	83.0	82.1	80.9	-1.2
Been Drunk[n]	—	—	—	—	—	—	—	—	—	—	—	69.1	67.3	65.6	63.1	62.1	64.2	66.8	67.0	65.4	64.7	68.8	66.0	64.7	67.1	64.2	66.2	64.8	-1.4
Flavored Alcoholic Beverages[o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	63.2	67.0	63.5	62.6	-0.8
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	38.8	37.6	39.3	41.4	43.6	44.3	44.5	41.3	39.0	38.3	35.2	36.7	36.0	30.9	30.7	-0.2
Steroids[p]	—	—	—	—	—	—	—	—	—	0.4	0.5	0.6	0.2	0.9	0.2	0.4	0.2	0.7	0.2	0.9	0.1	0.6	0.5	0.3	0.6	0.5	0.8	0.6	-0.2

Source. The Monitoring the Future study, the University of Michigan.

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.

"*" indicates a prevalence rate of less than 0.05%.

"—" indicates data not available.

See relevant footnotes at the end of Table 9-1.

TABLE 9-3

Trends in 30-Day Prevalence of Various Types of Drugs among College Students 1 to 4 Years beyond High School

(Entries are percentages.)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Approximate Weighted N =	*1040*	*1130*	*1150*	*1170*	*1110*	*1080*	*1190*	*1220*	*1310*	*1300*	*1400*	*1410*	*1490*	*1490*	*1410*	*1450*	*1450*	*1480*	*1440*	*1440*	*1350*	*1340*	*1260*	*1270*	*1400*	*1360*	*1280*	*1250*	
Any Illicit Drug[a]	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	15.1	16.0	19.1	17.6	19.2	19.7	21.6	21.5	21.9	21.5	21.4	21.2	19.5	19.2	19.3	+0.1
Any Illicit Drug[a] 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	5.4	4.6	6.3	4.5	6.8	6.1	6.4	6.9	7.5	7.8	8.2	9.1	8.2	8.2	8.1	-0.1
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	14.2	15.1	18.6	17.5	17.7	18.6	20.7	20.0	20.2	19.7	19.3	18.9	17.1	16.7	16.8	+0.1
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	1.3	0.6	1.6	0.8	0.7	0.6	1.5	0.9	0.4	0.7	0.4	0.4	0.3	0.4	0.1	-0.3
Hallucinogens[c]	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	2.5	2.1	3.3	1.9	2.1	2.1	2.0	1.4	1.8	1.2	1.8	1.3	1.2	0.9	1.3	+0.4
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	1.6	1.8	2.5	0.9	1.1	1.5	1.2	0.9	1.0	0.2	0.2	0.2	0.1	0.3	0.3	0.0
Hallucinogens other than LSD[c]	1.9	1.2	1.4	1.0	1.2	0.7	1.2	0.8	0.8	1.1	0.8	0.6	0.7	1.1	0.8	1.6	1.2	1.2	0.7	1.2	0.8	0.8	1.1	1.7	1.2	1.1	0.7	1.1	+0.4
Ecstasy (MDMA)[d]	—	—	—	—	—	—	—	—	—	0.3	0.6	0.2	0.4	0.3	0.2	0.7	0.7	0.8	0.8	2.1	2.5	1.5	0.7	1.0	0.7	0.8	0.6	0.4	-0.3
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	0.7	0.6	0.7	0.8	1.6	1.6	1.2	1.4	1.9	1.6	1.9	2.4	1.8	1.8	1.7	-0.1
Crack[e]	—	—	—	—	—	—	1.3	0.4	0.5	0.2	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.1	0.3	0.4	0.4	0.1	*	0.1	+0.1
Other Cocaine[f]	—	—	—	—	—	—	—	3.5	3.2	3.2	1.0	1.0	0.9	0.6	0.3	0.8	0.6	1.3	1.5	1.0	0.9	1.5	1.4	1.9	2.2	1.8	1.3	1.6	+0.4
Heroin	0.3	*	*	*	*	*	*	0.1	0.1	0.1	*	0.1	*	*	*	0.1	*	0.2	0.1	0.1	0.2	0.1	*	*	0.1	0.1	0.2	0.1	0.0
Narcotics other than Heroin[g,n]	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	0.7	0.4	1.2	0.7	1.3	1.1	1.0	1.7	1.7	3.2	2.3	3.0	3.1	3.1	2.2	-0.8

(Table continued on next page.)

TABLE 9-3 (cont.)

Trends in 30-Day Prevalence of Various Types of Drugs among College Students 1 to 4 Years beyond High School

(Entries are percentages.)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Approximate Weighted N =	*1040*	*1130*	*1150*	*1170*	*1110*	*1080*	*1190*	*1220*	*1310*	*1300*	*1400*	*1410*	*1490*	*1490*	*1410*	*1450*	*1450*	*1480*	*1440*	*1440*	*1350*	*1340*	*1260*	*1270*	*1400*	*1360*	*1280*	*1250*	
Amphetamines[g]	13.4	12.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Amphetamines, Adj.[g,i]	—	—	9.9	7.0	5.5	4.2	3.7	2.3	1.8	1.3	1.4	1.0	1.1	1.5	1.5	2.2	0.9	2.1	1.7	2.3	2.9	3.3	3.0	3.1	3.2	2.9	2.5	3.1	+0.6
Methamphetamine[j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.2	0.2	0.5	0.2	0.6	0.2	0.1	0.2	0.1	-0.1
Crystal Methamphetamine (Ice)[j]	—	—	—	—	—	—	—	—	—	—	*	*	*	0.3	0.5	0.3	0.1	0.2	0.3	*	*	0.1	*	0.3	0.1	0.2	*	0.1	+0.1
Sedatives (Barbiturates)[g]	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	0.4	0.4	0.5	0.8	1.2	1.1	1.1	1.1	1.5	1.7	1.7	1.5	1.3	1.3	1.4	+0.1
Sedatives, Adj.[g,k]	3.8	3.4	2.5	1.1	1.0	0.7	0.6	0.6	0.6	0.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Methaqualone[g]	3.1	3.0	1.9	0.7	0.5	0.3	0.1	0.2	0.1	0.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tranquilizers[g,l]	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	0.4	0.4	0.5	0.7	1.2	1.3	1.1	2.0	1.5	3.0	2.8	2.7	2.2	2.1	1.8	-0.3
Alcohol[m]	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	70.1	67.8	67.5	67.0	65.8	68.1	69.6	67.4	67.0	68.9	66.2	67.7	67.9	65.4	66.6	+1.2
Been Drunk[n]	—	—	—	—	—	—	—	—	—	—	—	45.0	45.0	43.8	42.8	37.9	40.3	46.4	44.3	44.6	43.9	44.7	44.4	40.4	47.4	43.1	47.6	46.8	-0.8
Flavored Alcoholic Beverages[o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	34.0	30.9	26.2	27.5	+1.3
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	24.5	23.5	26.8	27.9	28.3	30.0	30.6	28.2	25.7	26.7	22.5	24.3	23.8	19.2	19.9	+0.7
Steroids[p]	—	—	—	—	—	—	—	—	—	*	0.2	0.3	0.2	0.2	0.2	0.1	*	0.2	0.2	0.4	*	0.3	*	0.1	*	*	*	0.1	+0.1

Source. The Monitoring the Future study, the University of Michigan.

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.

"*" indicates a prevalence rate of less than 0.05%.

"—" indicates data not available.

See relevant footnotes at the end of Table 9-1.

TABLE 9-4

Trends in 30-Day Prevalence of Daily Use of Various Types of Drugs among College Students 1 to 4 Years beyond High School

(Entries are percentages.)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Approximate Weighted N =	*1040*	*1130*	*1150*	*1170*	*1110*	*1080*	*1190*	*1220*	*1310*	*1300*	*1400*	*1410*	*1490*	*1490*	*1410*	*1450*	*1450*	*1480*	*1440*	*1440*	*1350*	*1340*	*1260*	*1270*	*1400*	*1360*	*1280*	*1250*	
Marijuana[q]	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	1.9	1.8	3.7	2.8	3.7	4.0	4.0	4.6	4.5	4.1	4.7	4.5	4.0	4.3	3.5	-0.8
Cocaine[q]	0.2	*	0.3	0.1	0.4	0.1	0.1	0.1	0.1	*	*	*	*	*	0.1	*	*	*	*	*	*	*	*	*	*	0.1	0.1	*	-0.1
Amphetamines[g,q]	0.5	0.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Amphetamines, Adj.[g,i,q]	—	—	0.3	0.2	0.2	*	0.1	0.1	*	*	*	0.1	*	0.1	0.1	0.1	*	0.2	0.1	0.1	0.1	0.2	0.1	0.3	0.2	0.2	0.4	0.1	-0.3
Alcohol[m]																													
Daily[q]	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	3.9	3.7	3.0	3.2	4.5	3.9	4.5	3.6	4.7	5.0	4.3	3.7	4.6	4.8	4.3	-0.5
Been Drunk[n,q]	—	—	—	—	—	—	—	—	—	—	—	0.5	0.2	0.3	0.8	0.5	0.1	1.3	0.8	1.0	0.7	0.5	0.8	1.1	0.8	0.5	0.6	0.7	+0.2
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	40.2	40.2	38.6	38.3	40.7	38.9	40.0	39.3	40.9	40.1	38.5	41.7	40.1	40.2	41.1	+0.9
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	15.2	13.2	15.8	15.9	15.2	18.0	19.3	17.8	15.0	15.9	13.8	13.8	12.4	9.2	9.3	+0.1
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	8.9	8.0	10.2	8.5	9.1	11.3	11.0	10.1	7.8	7.9	7.6	6.8	6.7	4.9	4.3	-0.5

Source. The Monitoring the Future study, the University of Michigan.

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.

"*" indicates a prevalence rate of less than 0.05%.

"—" indicates data not available.

See relevant footnotes at the end of Table 9-1.

TABLE 9-5

Trends in Lifetime, Annual, and 30-Day Prevalence of an Illicit Drug Use Index[a] among College Students 1 to 4 Years beyond High School, by Gender

	1980[r]	1981[r]	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2006–2007 change
Percentage who used in lifetime																													
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	45.9	45.5	45.5	47.4	49.0	52.9	53.2	53.7	53.6	51.8	53.9	52.2	52.3	50.6	50.5	-0.1
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	45.7	49.5	47.3	50.3	52.1	54.4	58.4	54.4	53.9	54.3	54.1	54.9	54.2	55.0	52.3	-2.7
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	46.0	42.6	44.3	45.6	46.7	52.0	49.6	53.2	53.5	50.2	53.7	50.6	51.3	47.8	49.4	+1.6
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	24.3	22.0	24.5	22.7	24.4	24.8	25.5	25.8	26.3	26.9	27.6	28.0	26.5	26.3	25.3	-0.9
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	24.3	24.6	26.6	25.0	27.3	27.3	29.4	28.9	27.0	30.4	27.6	31.1	29.0	29.2	26.5	-2.7
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	24.3	20.1	22.9	21.2	22.2	23.3	22.8	23.5	25.9	24.6	27.5	26.2	25.1	24.4	24.6	+0.2
Percentage who used in last 12 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	30.6	31.4	33.5	34.2	34.1	37.8	36.9	36.1	37.9	37.0	36.5	36.2	36.6	33.9	35.0	+1.1
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	32.6	33.9	36.1	36.6	38.3	40.1	42.5	38.0	38.8	39.5	39.2	40.9	40.7	39.2	38.0	-1.2
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	29.1	29.5	31.7	32.7	31.1	36.4	33.2	34.7	37.3	35.4	34.8	33.4	34.2	30.6	33.1	+2.5
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	12.5	12.2	15.9	12.8	15.8	14.0	15.4	15.6	16.4	16.6	17.9	18.6	18.5	18.1	17.3	-0.8
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	15.0	14.9	19.5	15.1	18.1	17.0	19.0	18.6	17.2	19.2	19.3	22.1	21.1	22.6	19.0	-3.6
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	10.5	10.2	13.3	11.3	14.1	12.1	12.8	13.5	15.8	15.0	17.1	16.5	16.9	15.2	16.3	+1.1
Percentage who used in last 30 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	15.1	16.0	19.1	17.6	19.2	19.7	21.6	21.5	21.9	21.5	21.4	21.2	19.5	19.2	19.3	+0.1
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	16.0	20.5	23.7	20.6	23.4	23.1	26.7	24.0	25.0	25.1	22.8	26.1	22.9	23.4	22.7	-0.7
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	14.5	12.7	15.7	15.8	16.2	17.6	18.1	19.6	19.8	19.3	20.5	18.4	17.5	16.6	17.1	+0.6
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	5.4	4.6	6.3	4.5	6.8	6.1	6.4	6.9	7.5	7.8	8.2	9.1	8.2	8.2	8.1	-0.1
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	7.3	6.2	8.8	6.1	7.8	8.6	7.5	8.2	9.0	8.4	8.1	11.3	10.3	10.3	9.5	-0.8
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	3.8	3.4	4.5	3.4	6.1	4.6	5.6	6.0	6.4	7.4	8.3	7.8	7.0	6.9	7.2	+0.4
Approximate Weighted N																													
All Respondents	1040	1130	1150	1170	1110	1080	1190	1220	1310	1300	1400	1410	1490	1490	1410	1450	1450	1480	1440	1440	1350	1340	1260	1270	1400	1360	1280	1250	
Males	520	530	550	550	540	490	540	520	560	580	620	640	680	660	590	610	560	630	570	590	560	540	490	480	520	500	500	470	
Females	520	600	610	620	570	600	650	700	750	720	780	770	810	830	820	840	890	860	880	850	790	800	770	790	880	860	780	770	

Source. The Monitoring the Future study, the University of Michigan.

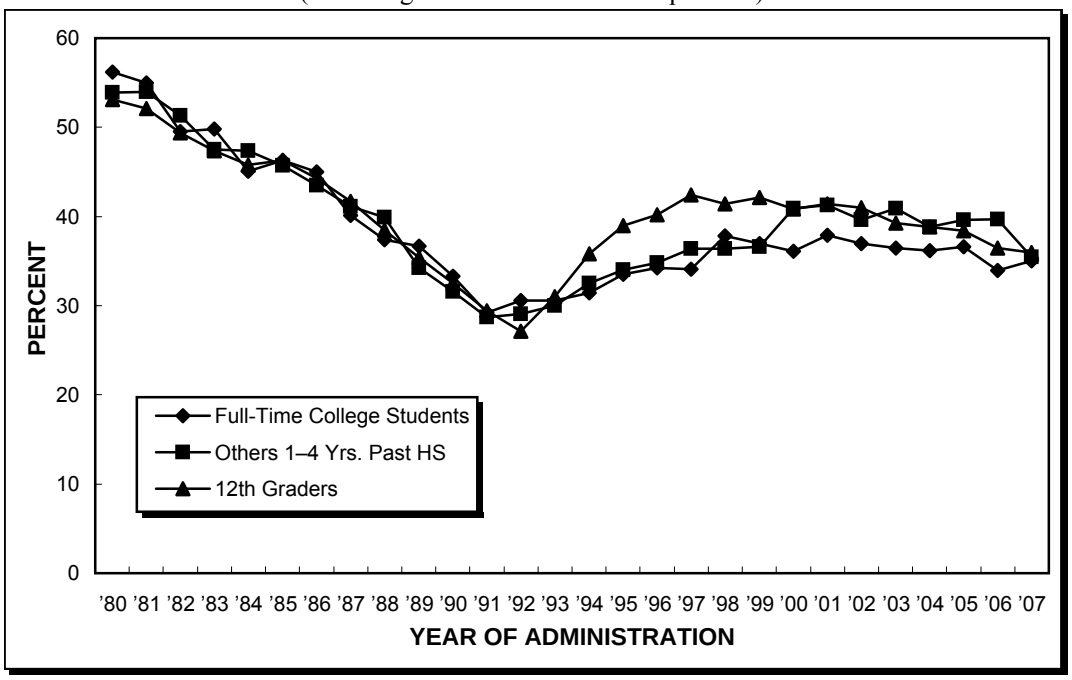
Notes. Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

See relevant footnotes at the end of Table 9-1.

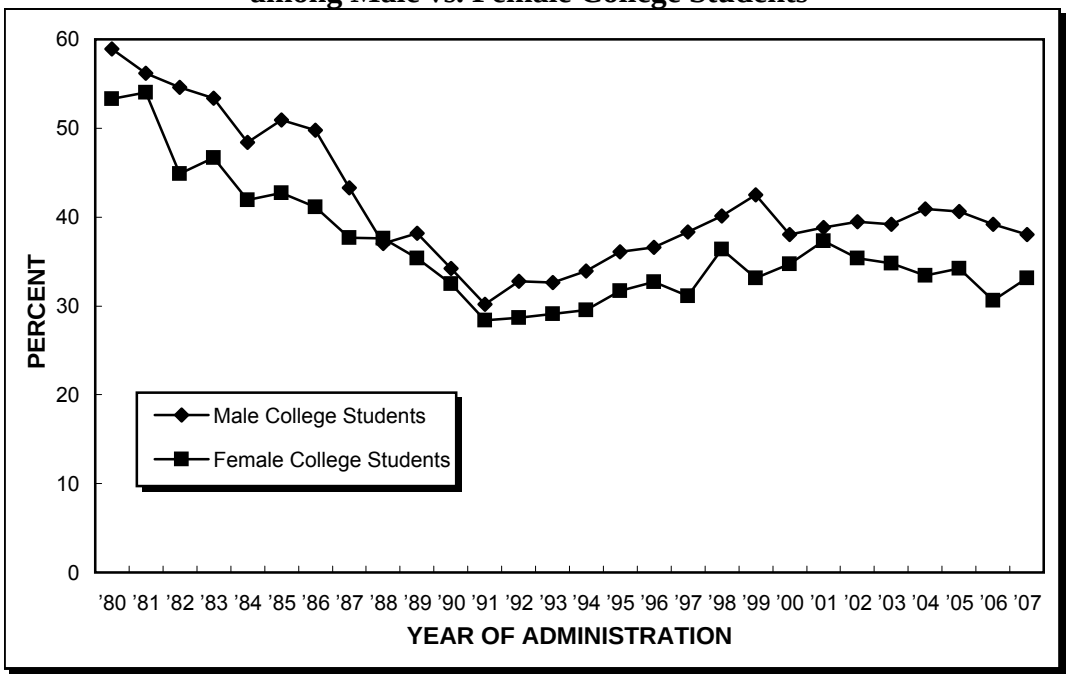
FIGURE 9-1

Any Illicit Drug: Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



Any Illicit Drug: Trends in Annual Prevalence among Male vs. Female College Students



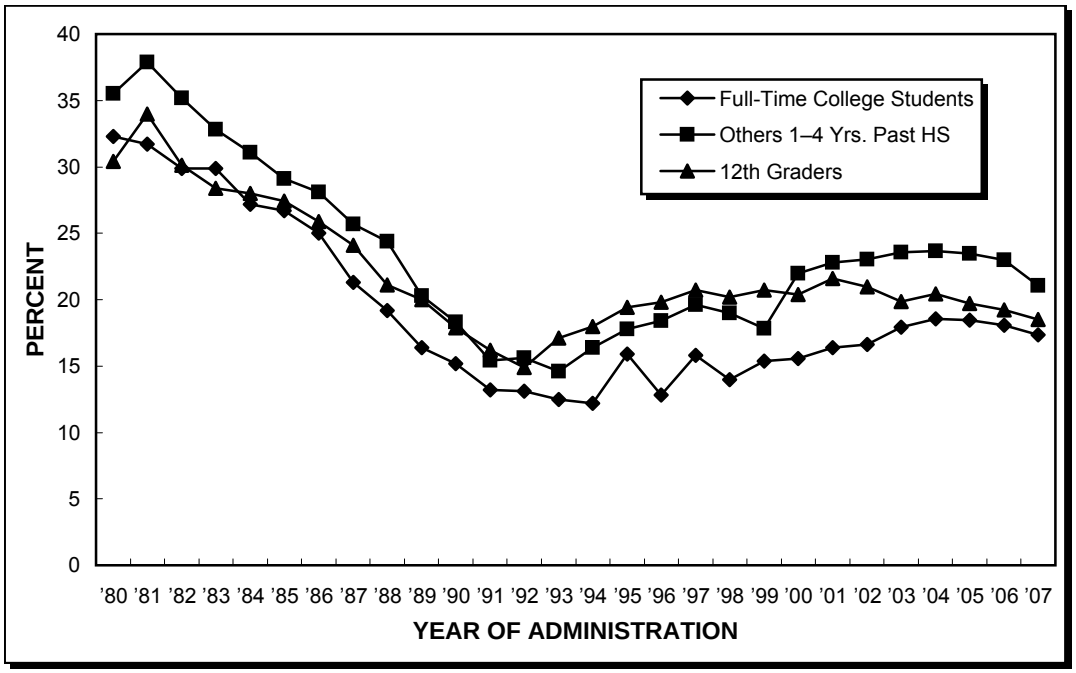
Source. The Monitoring the Future study, the University of Michigan.

Note. "Others" refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

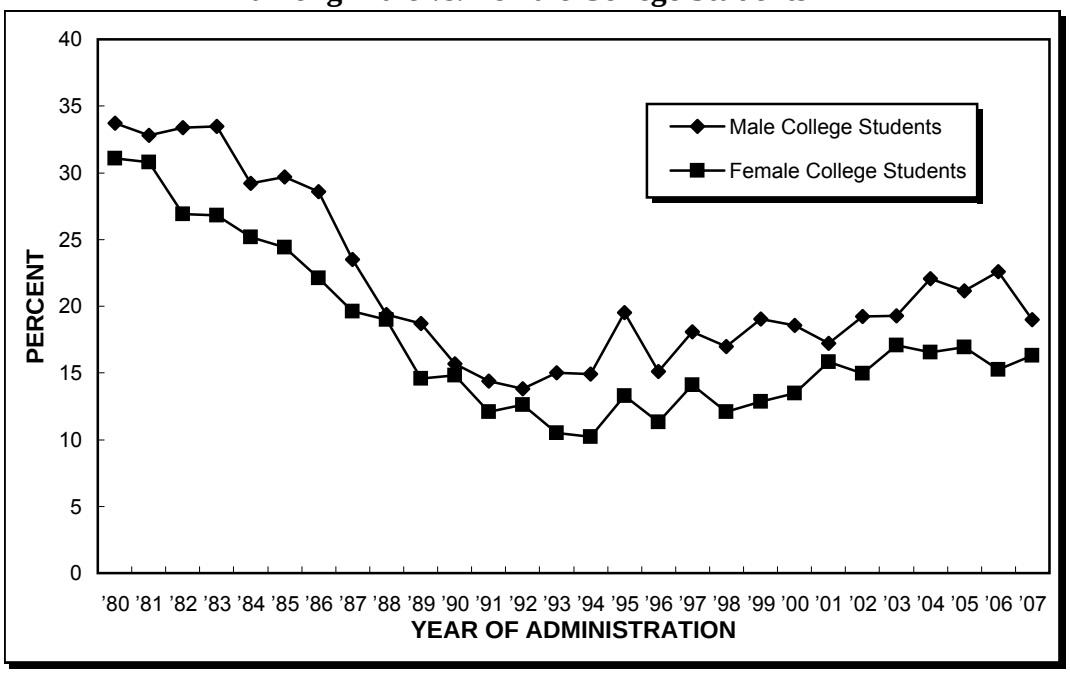
FIGURE 9-2

Any Illicit Drug other than Marijuana: Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



Any Illicit Drug other than Marijuana: Trends in Annual Prevalence among Male vs. Female College Students



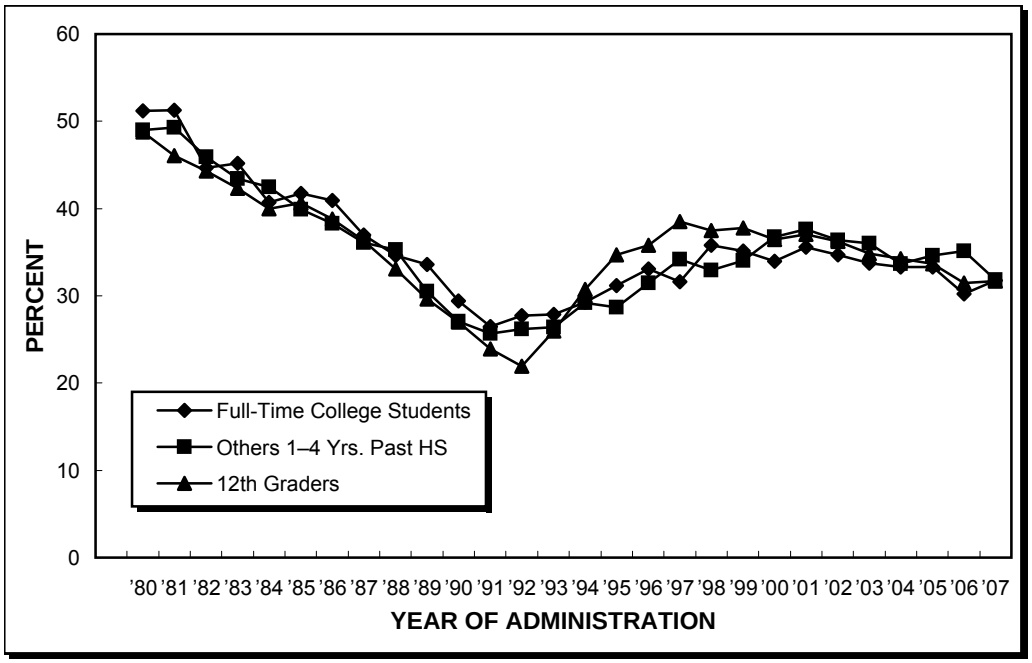
Source. The Monitoring the Future study, the University of Michigan.

Note. "Others" refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

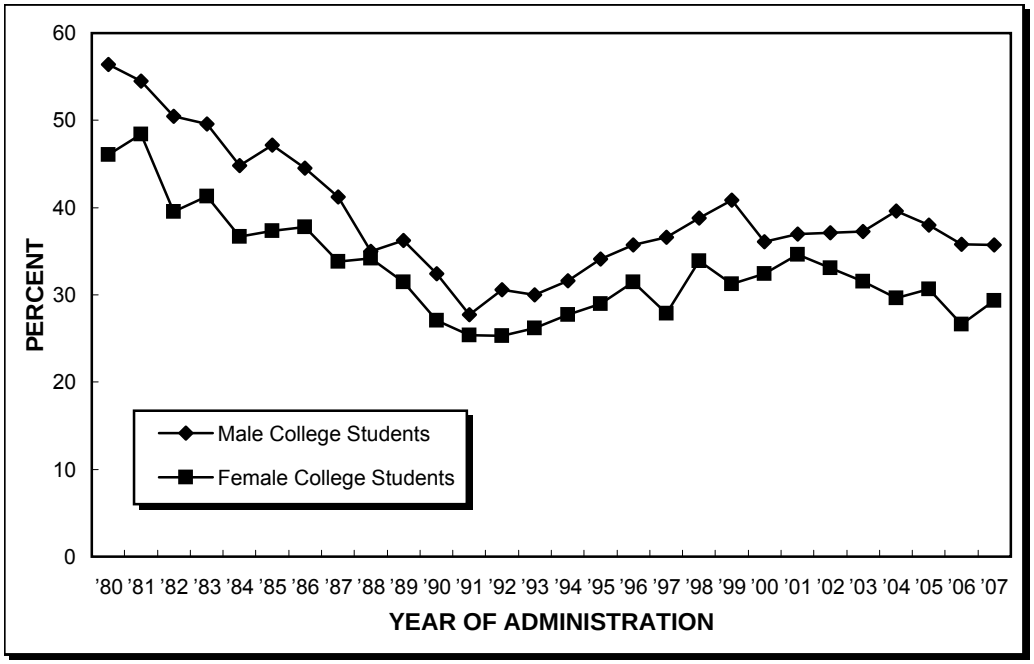
FIGURE 9-3a

Marijuana: Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



Marijuana: Trends in Annual Prevalence among Male vs. Female College Students



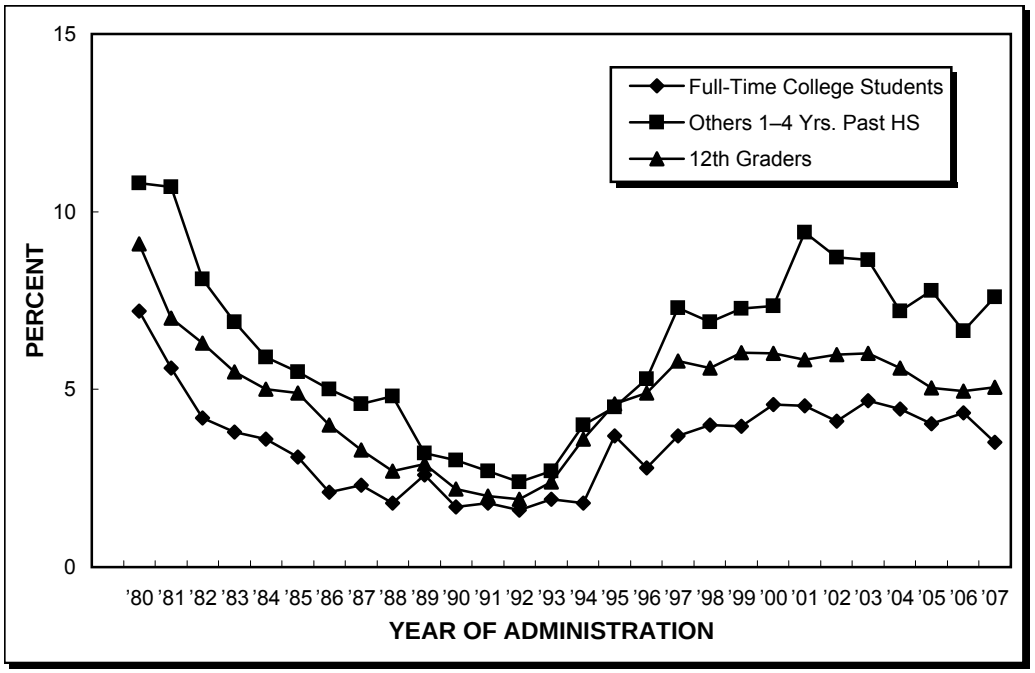
Source. The Monitoring the Future study, the University of Michigan.

Note. "Others" refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

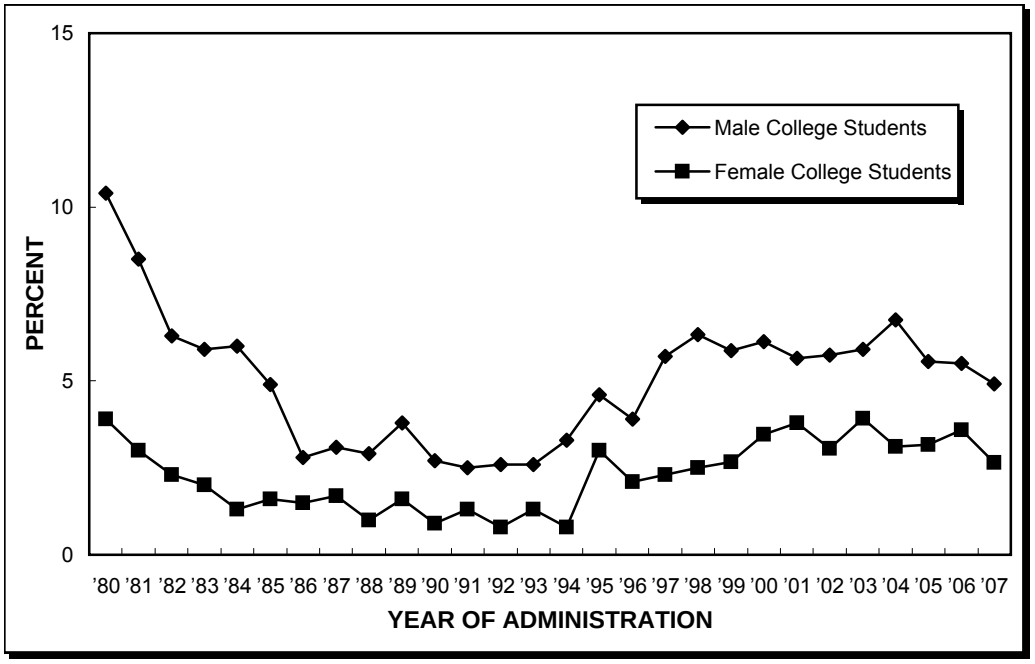
FIGURE 9-3b

Marijuana: Trends in 30-Day Prevalence of Daily Use among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



Marijuana: Trends in 30-Day Prevalence of Daily Use among Male vs. Female College Students



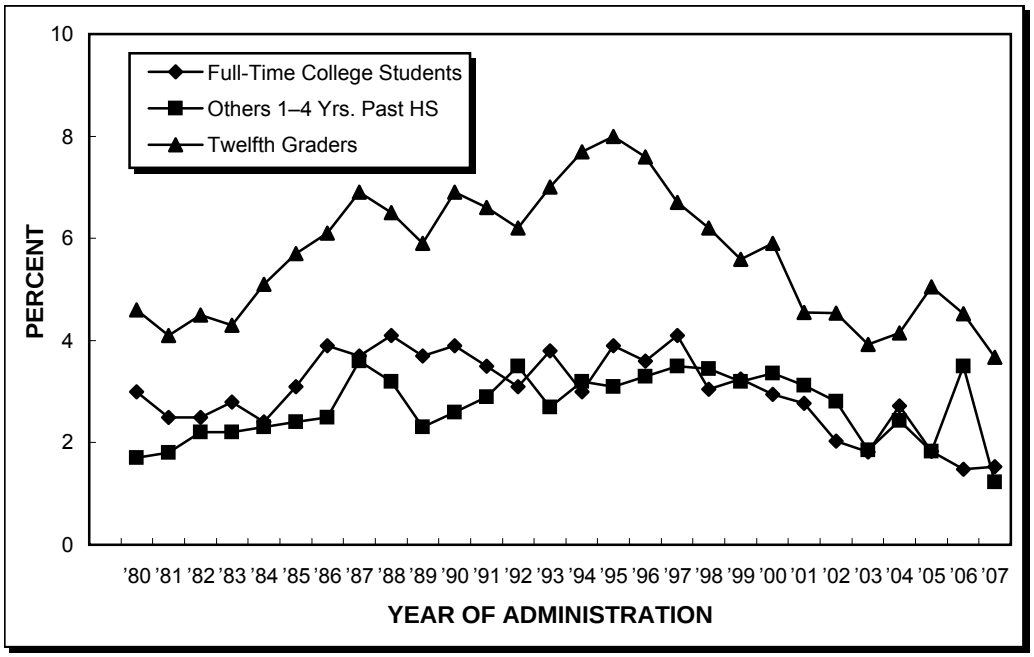
Source. The Monitoring the Future study, the University of Michigan.

Note. "Others" refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

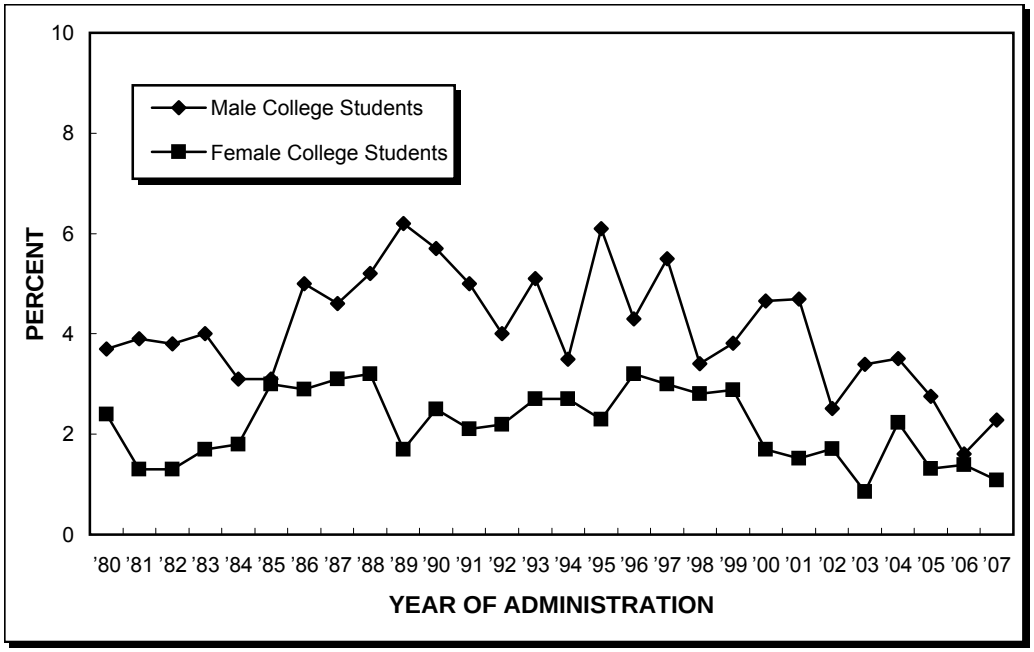
FIGURE 9-4

Inhalants:[a] Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



Inhalants:[a] Trends in Annual Prevalence among Male vs. Female College Students



Source. The Monitoring the Future study, the University of Michigan.

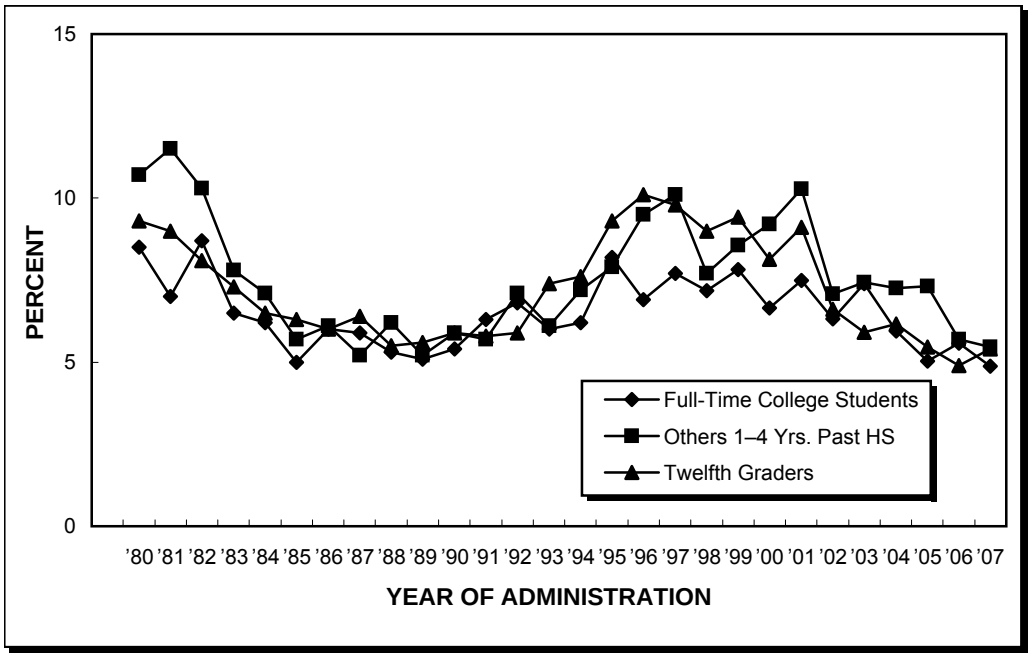
Note. "Others" refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

[a]Unadjusted for the possible underreporting of amyl and butyl nitrites.

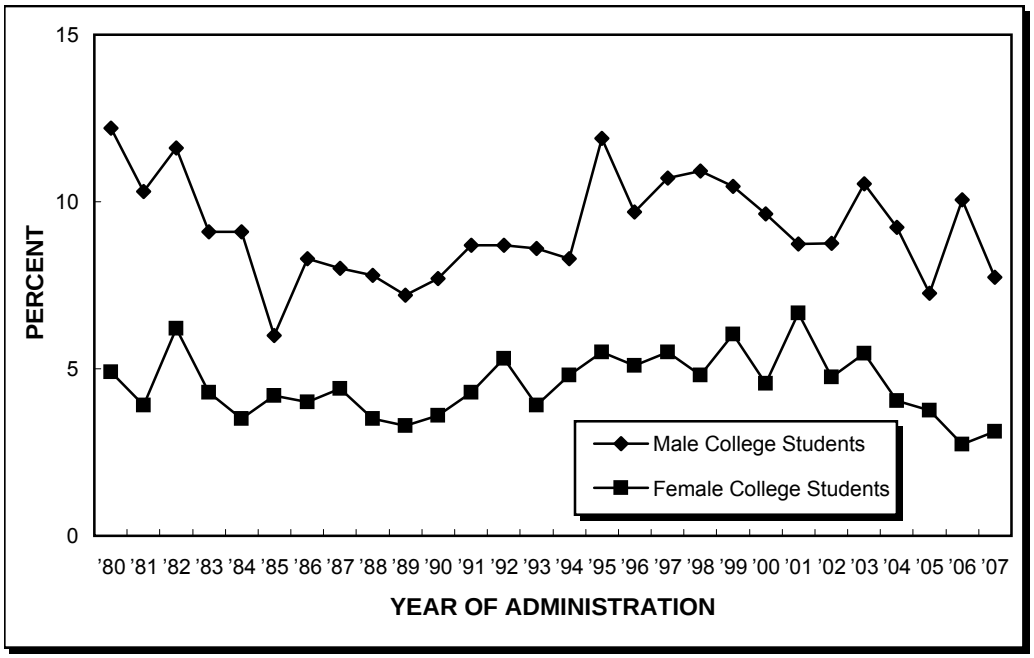
FIGURE 9-5

Hallucinogens:[a] Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



Hallucinogens:[a] Trends in Annual Prevalence among Male vs. Female College Students



Source. The Monitoring the Future study, the University of Michigan.

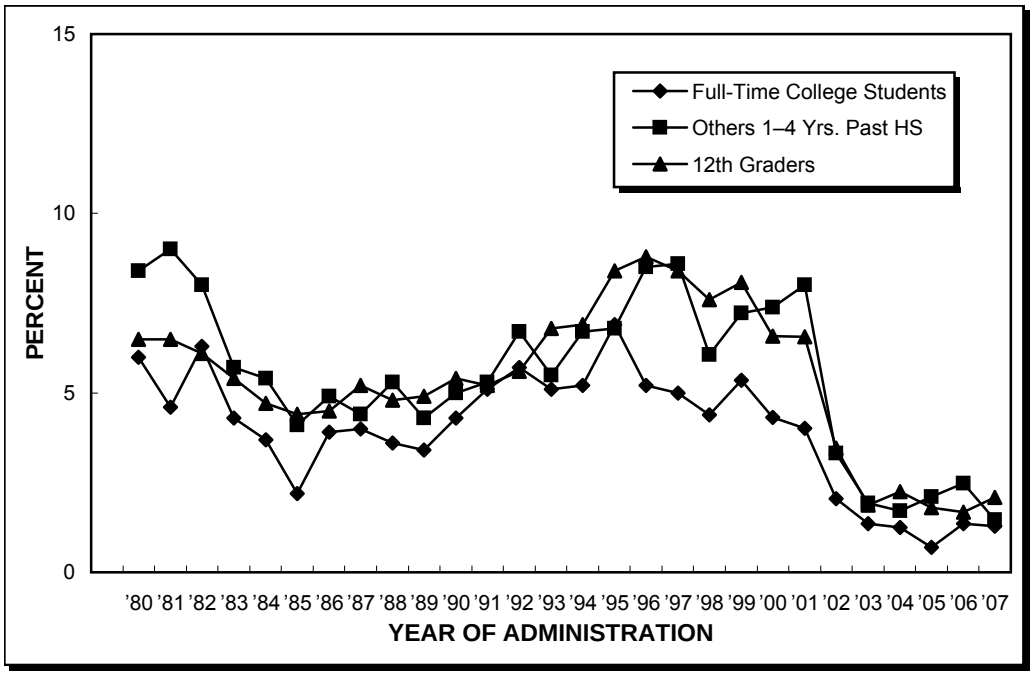
Note. "Others" refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

[a]Unadjusted for the possible underreporting of PCP.

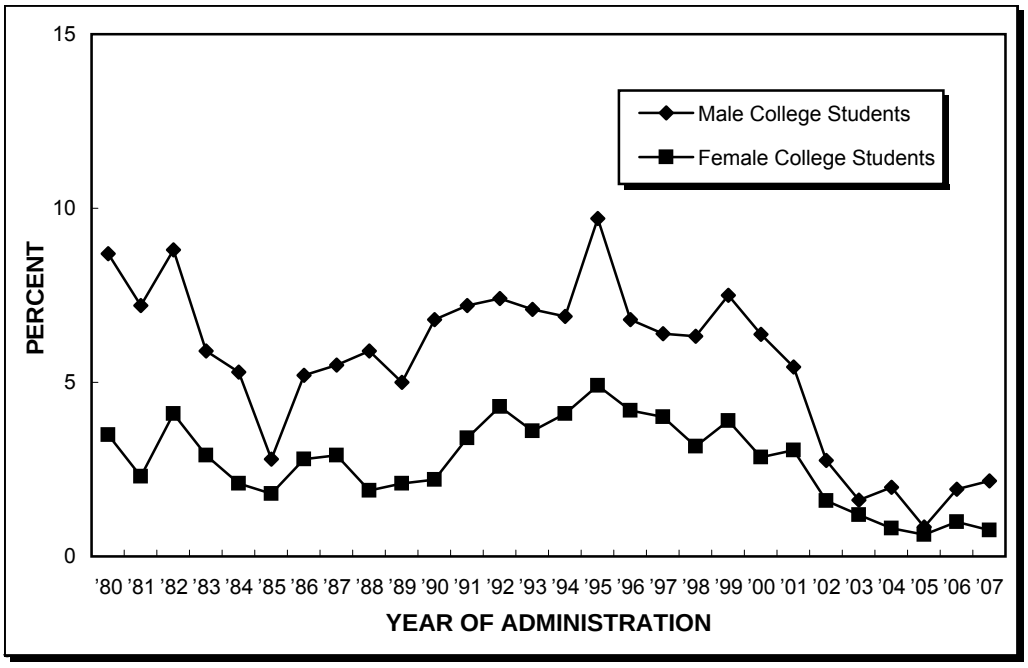
FIGURE 9-6

LSD: Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



LSD: Trends in Annual Prevalence among Male vs. Female College Students



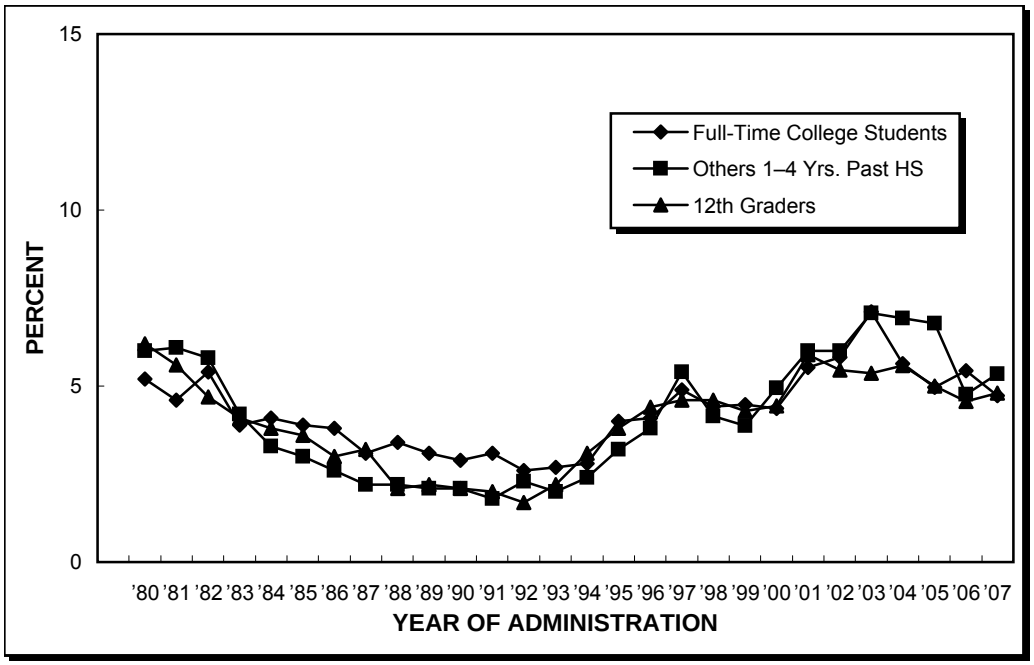
Source. The Monitoring the Future study, the University of Michigan.

Note. "Others" refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

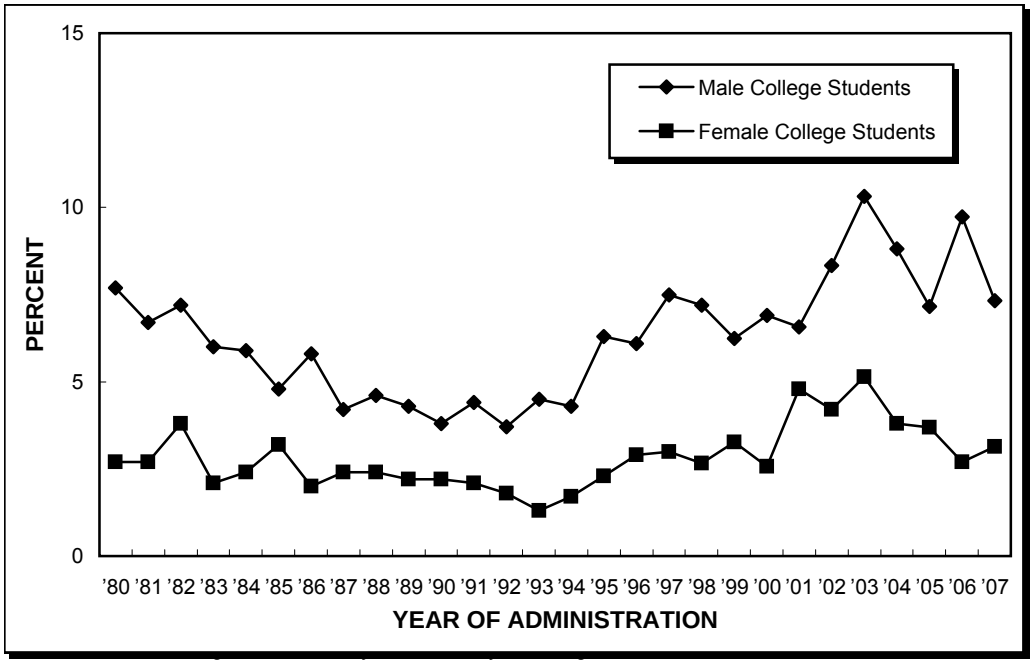
FIGURE 9-7

Hallucinogens other than LSD:[a] Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



Hallucinogens other than LSD:[a] Trends in Annual Prevalence among Male vs. Female College Students



Source. The Monitoring the Future study, the University of Michigan.

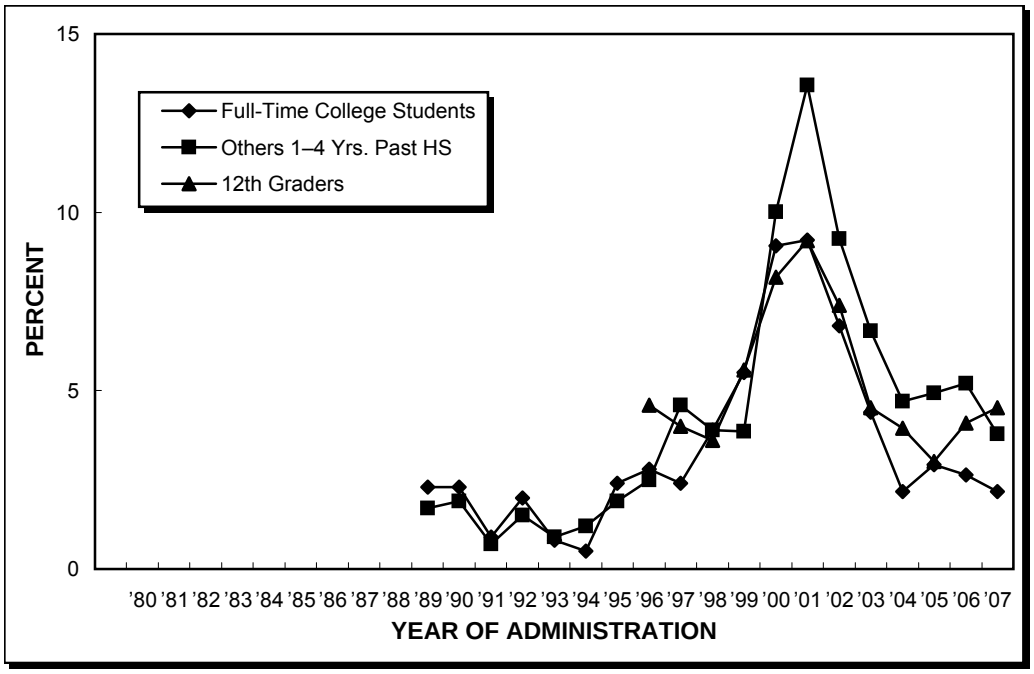
Note. "Others" refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

[a]Unadjusted for the possible underreporting of PCP.

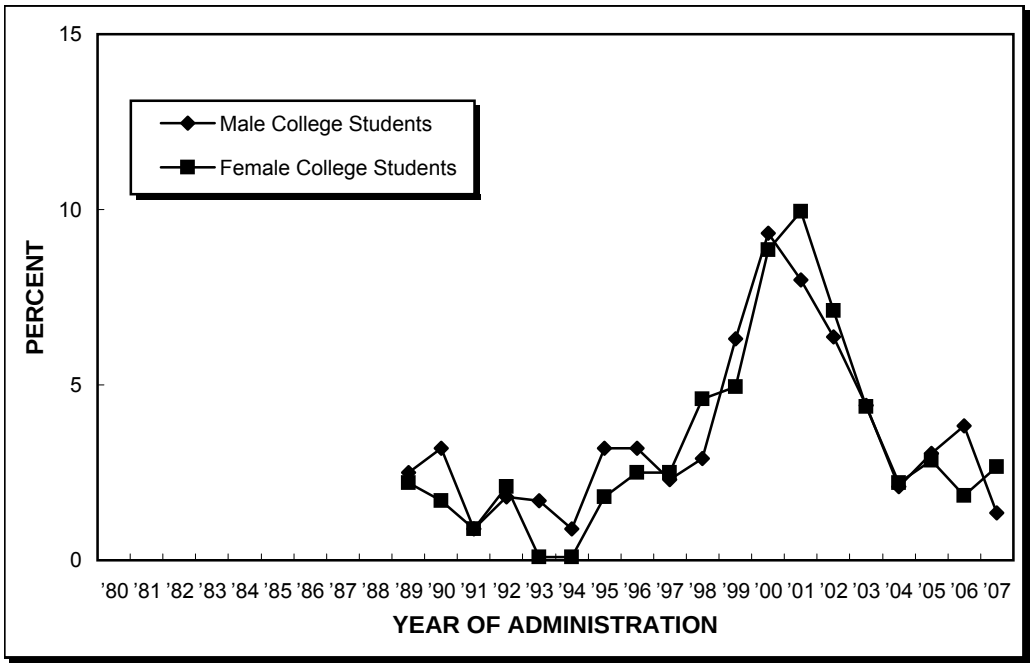
FIGURE 9-8

Ecstasy (MDMA): Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



Ecstasy (MDMA): Trends in Annual Prevalence among Male vs. Female College Students



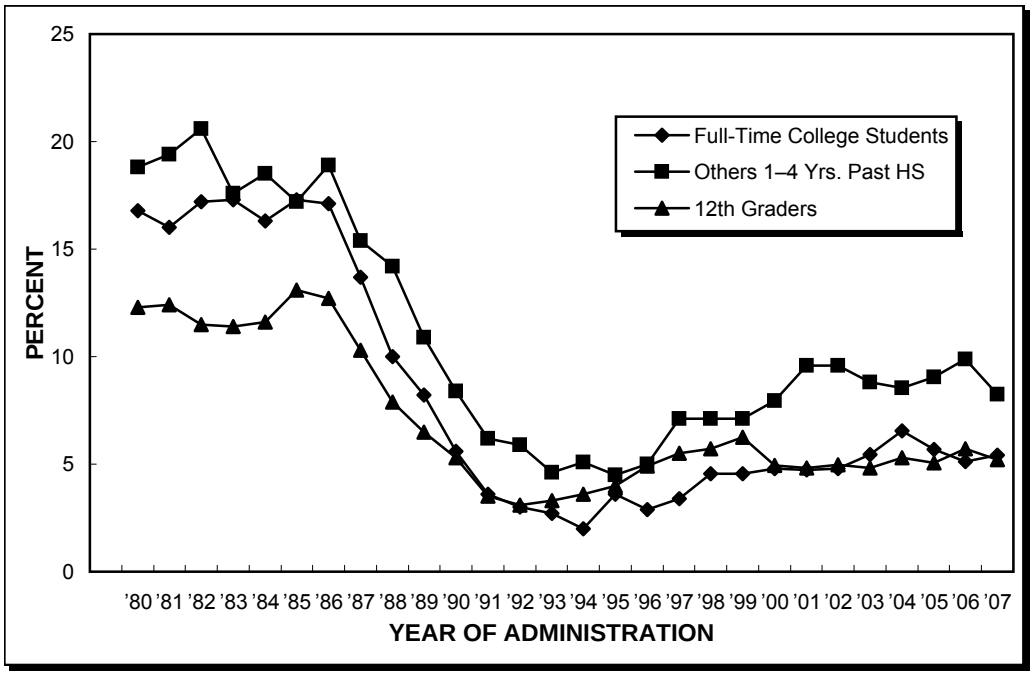
Source. The Monitoring the Future study, the University of Michigan.

Note. "Others" refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

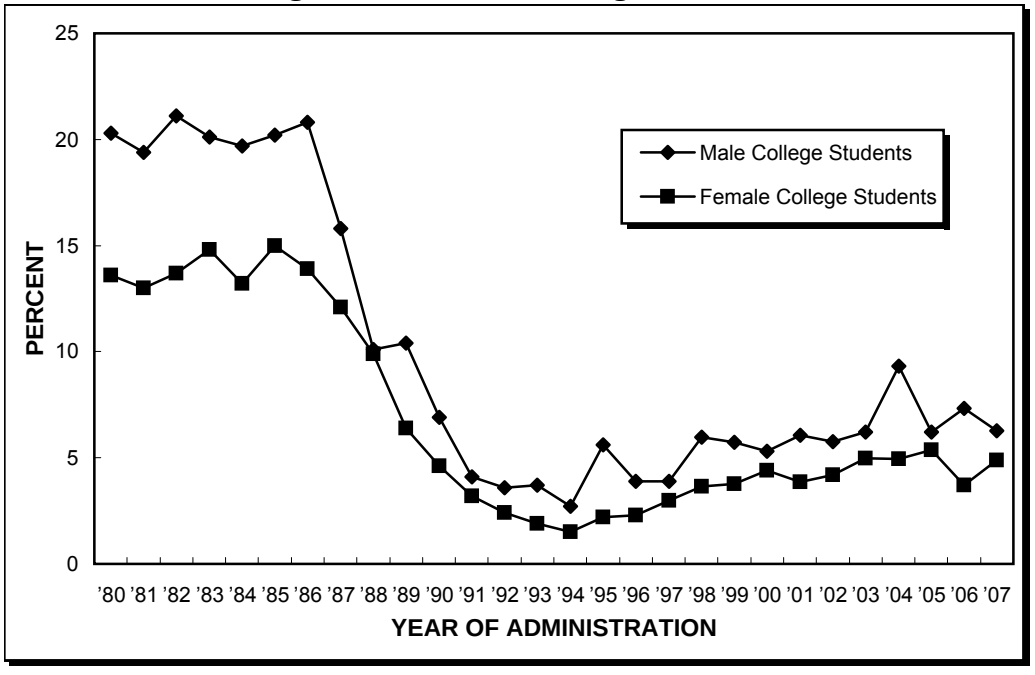
FIGURE 9-9

Cocaine: Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



Cocaine: Trends in Annual Prevalence among Male vs. Female College Students



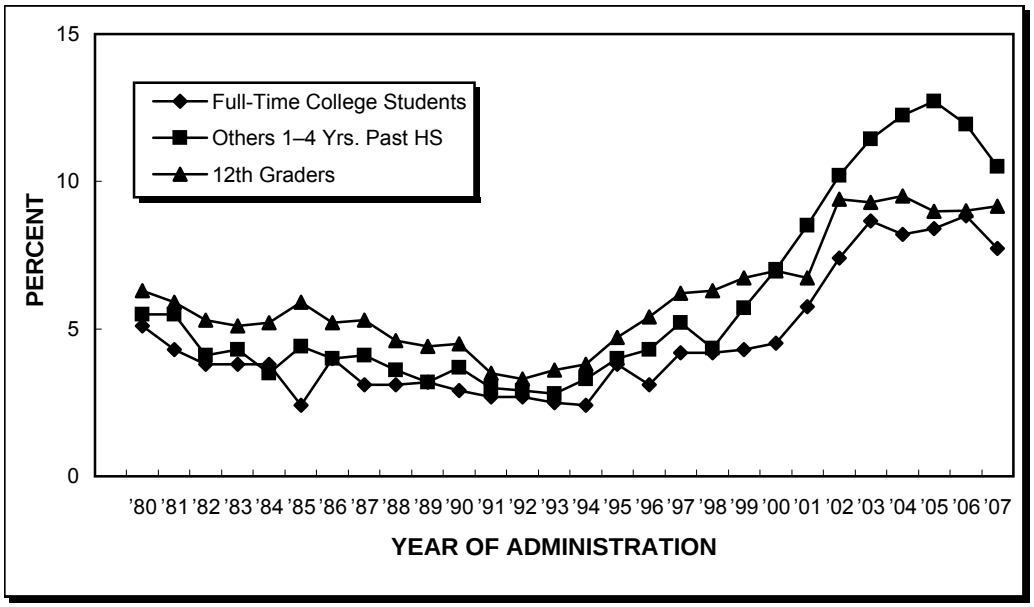
Source. The Monitoring the Future study, the University of Michigan.

Note. "Others" refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

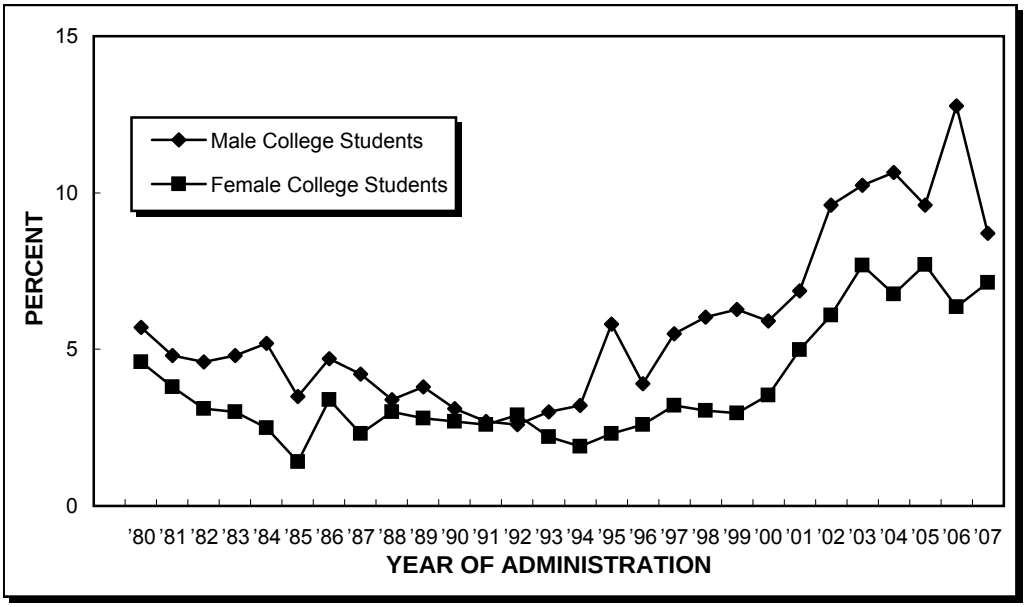
FIGURE 9-10a

Narcotics other than Heroin:[a] Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



Narcotics other than Heroin:[a] Trends in Annual Prevalence among Male vs. Female College Students



Source. The Monitoring the Future study, the University of Michigan.

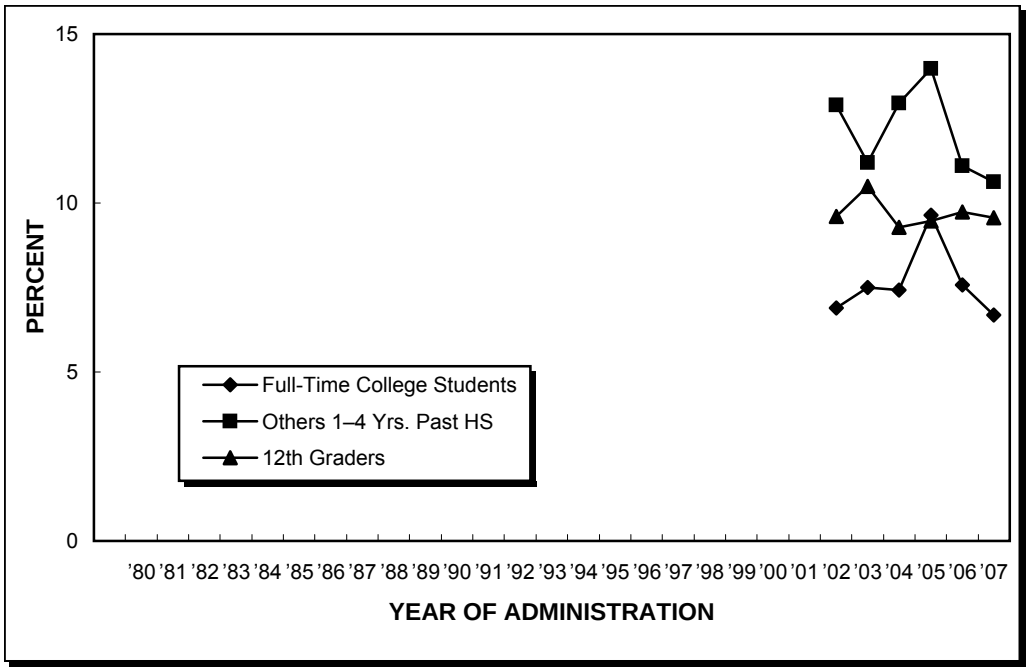
Note. "Others" refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

[a]In 2002 the question text was changed on half of the questionnaire forms. The list of examples of narcotics other than heroin was updated: Talwin, laudanum, and paregoric—all of which had negligible rates of use by 2001—were replaced by Vicodin, OxyContin, and Percocet. The 2002 data presented here are based on the changed forms only. In 2003 the remaining forms were changed to the new wording.

FIGURE 9-10b

Vicodin: Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)

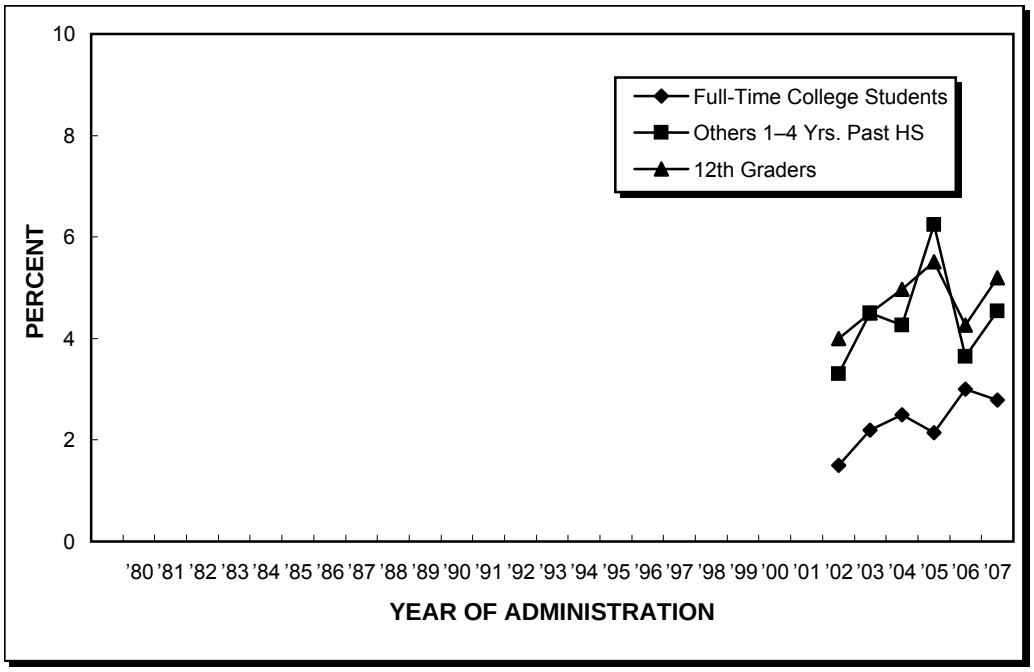


Source. The Monitoring the Future study, the University of Michigan.

Note. "Others" refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

FIGURE 9-10c
OxyContin: Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)

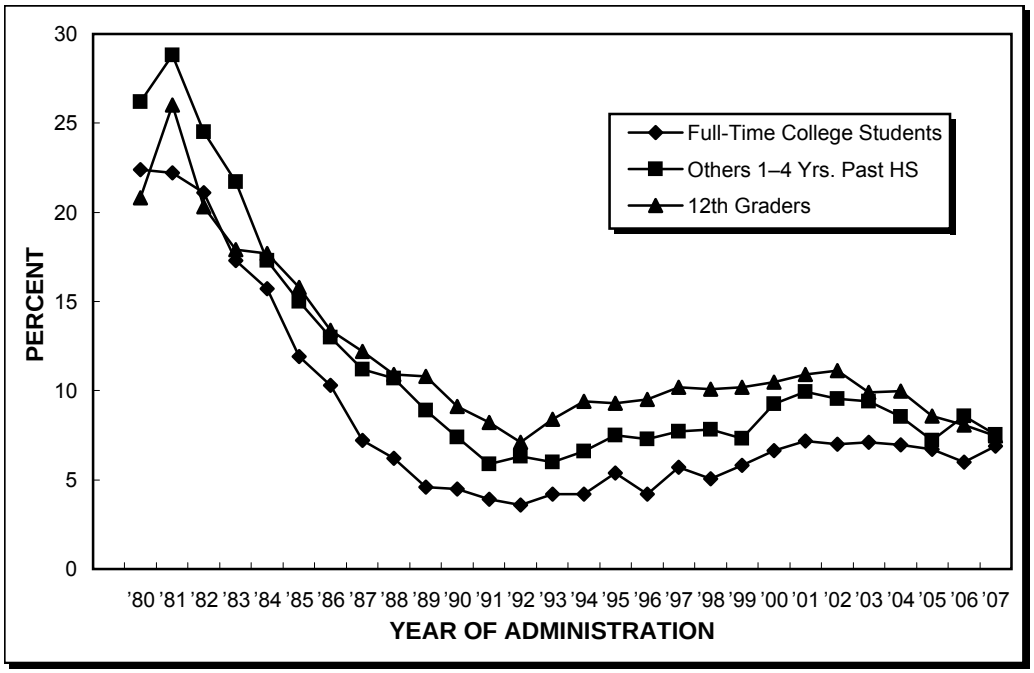


Source. The Monitoring the Future study, the University of Michigan.
Note. "Others" refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

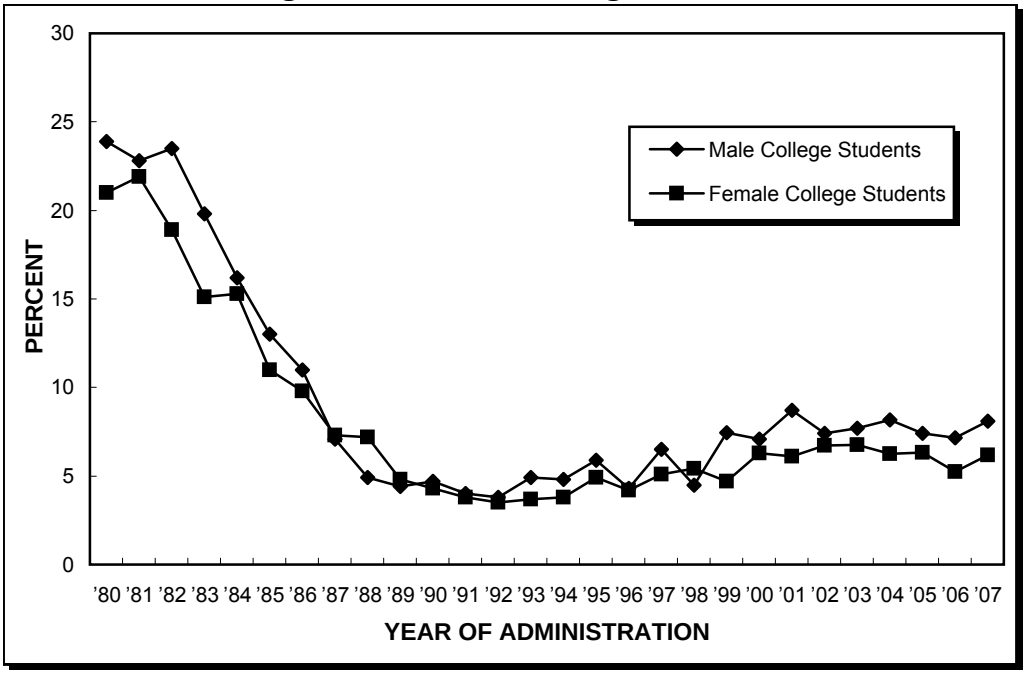
FIGURE 9-11

Amphetamines: Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



Amphetamines: Trends in Annual Prevalence among Male vs. Female College Students



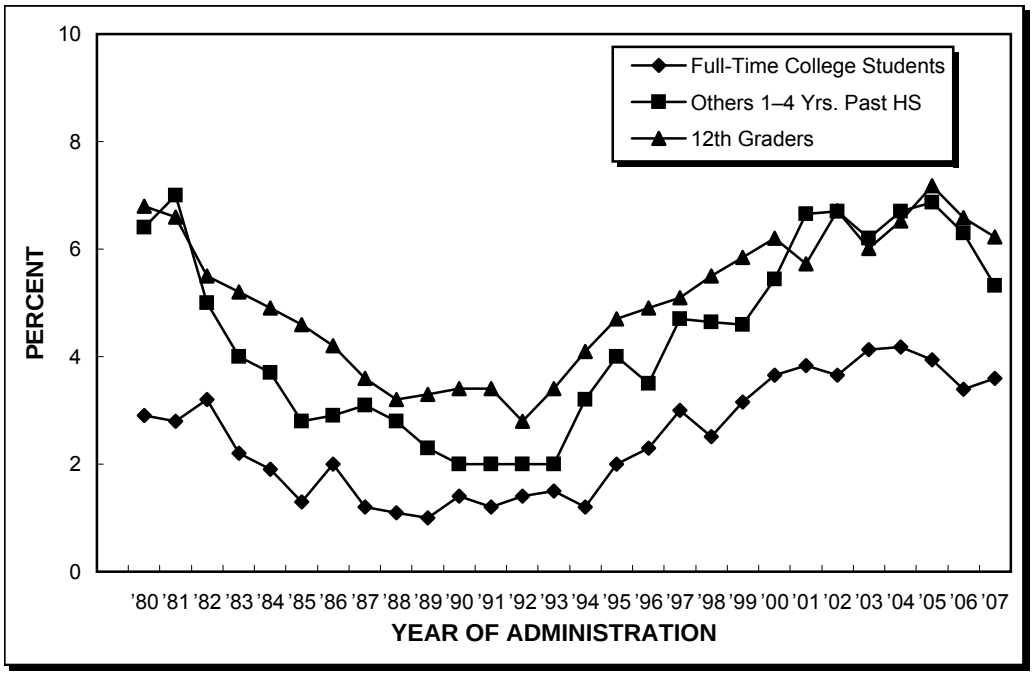
Source. The Monitoring the Future study, the University of Michigan.

Note. "Others" refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

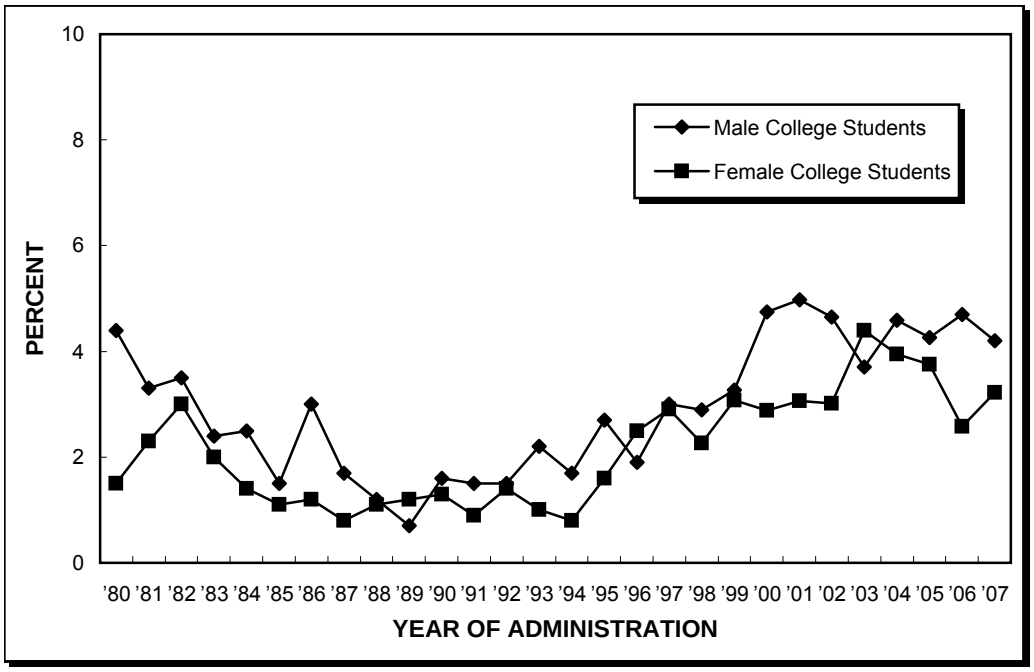
FIGURE 9-12

Sedatives (Barbiturates): Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



Sedatives (Barbiturates): Trends in Annual Prevalence among Male vs. Female College Students



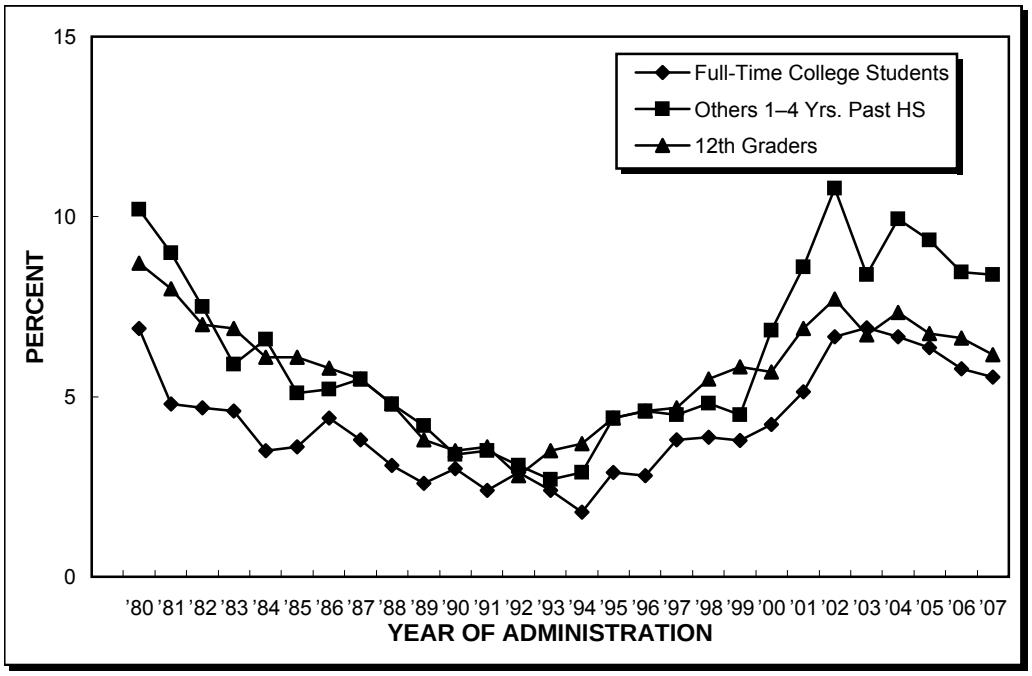
Source. The Monitoring the Future study, the University of Michigan.

Note. "Others" refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

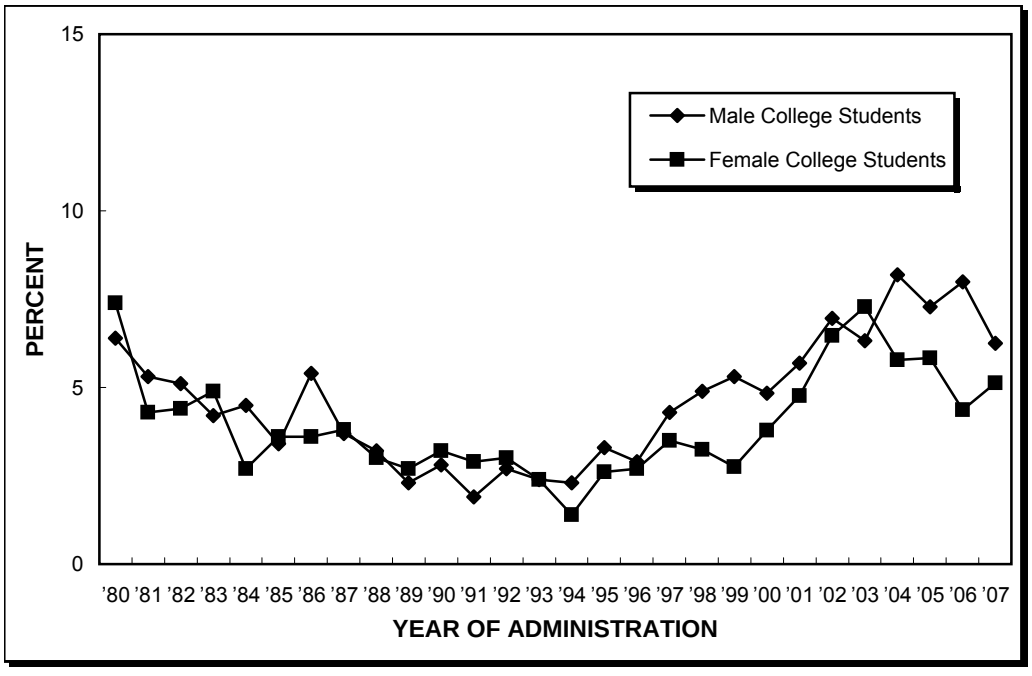
FIGURE 9-13

Tranquilizers: Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



Tranquilizers: Trends in Annual Prevalence among Male vs. Female College Students



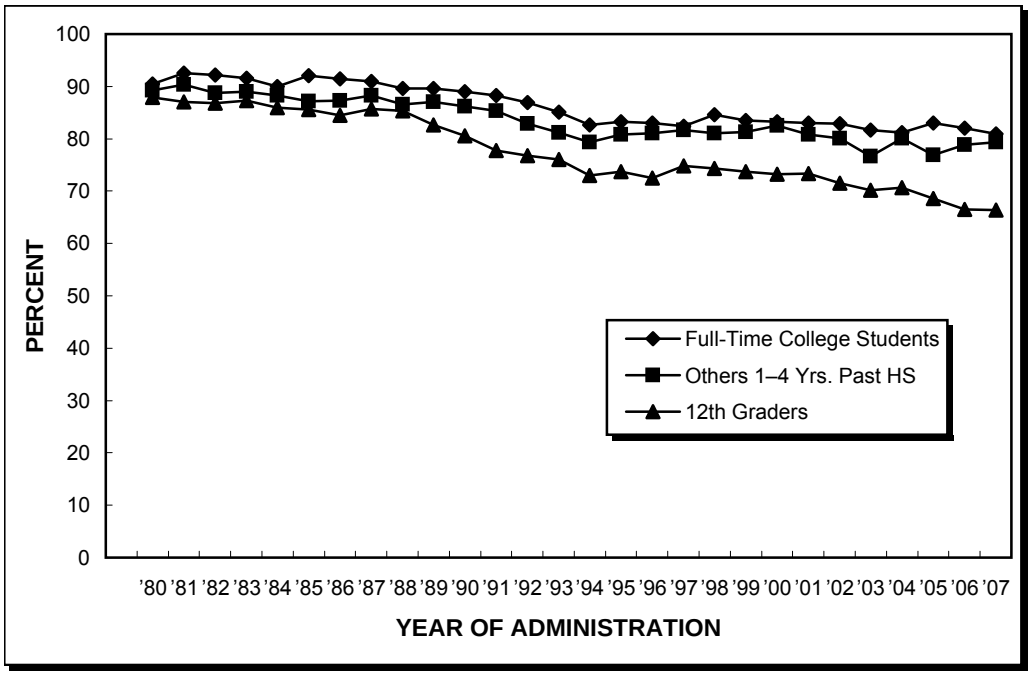
Source. The Monitoring the Future study, the University of Michigan.

Note. "Others" refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

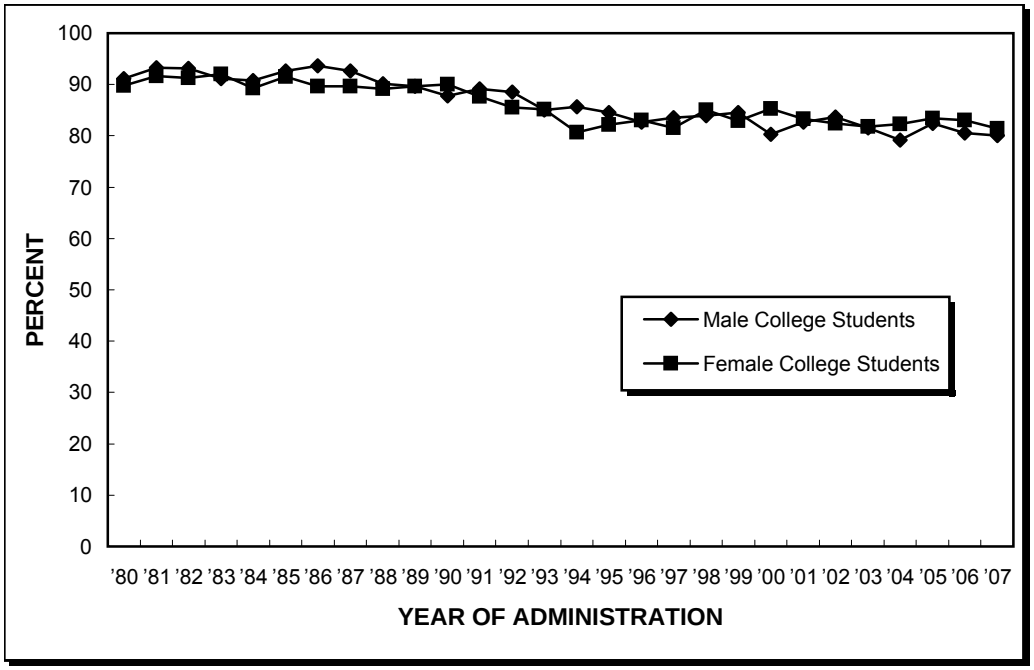
FIGURE 9-14a

Alcohol: Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



Alcohol: Trends in Annual Prevalence among Male vs. Female College Students



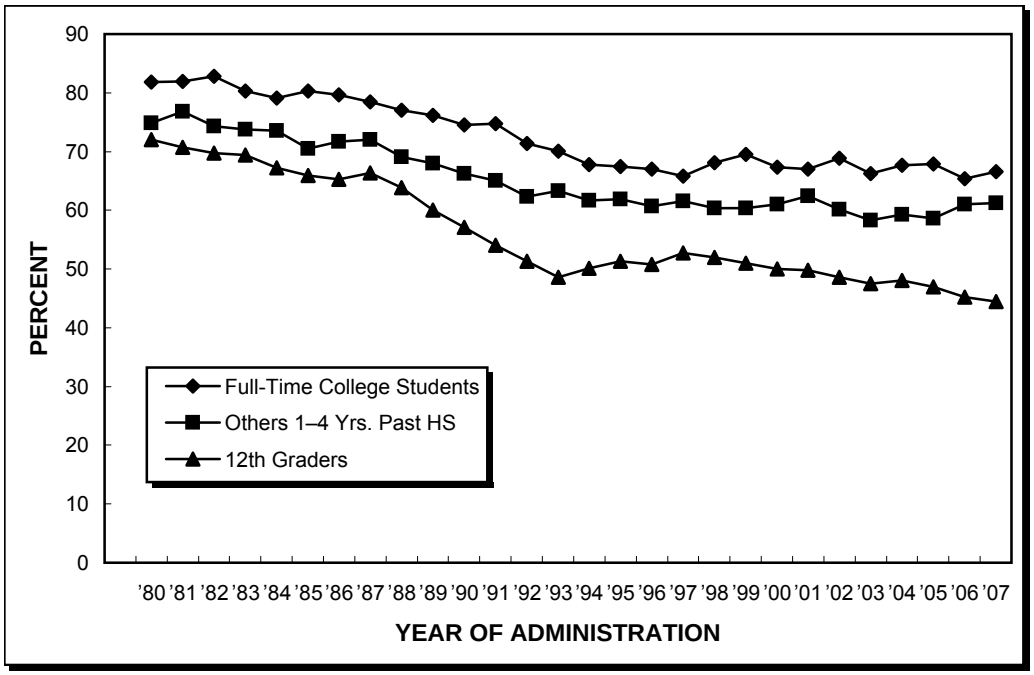
Source. The Monitoring the Future study, the University of Michigan.

Note. "Others" refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

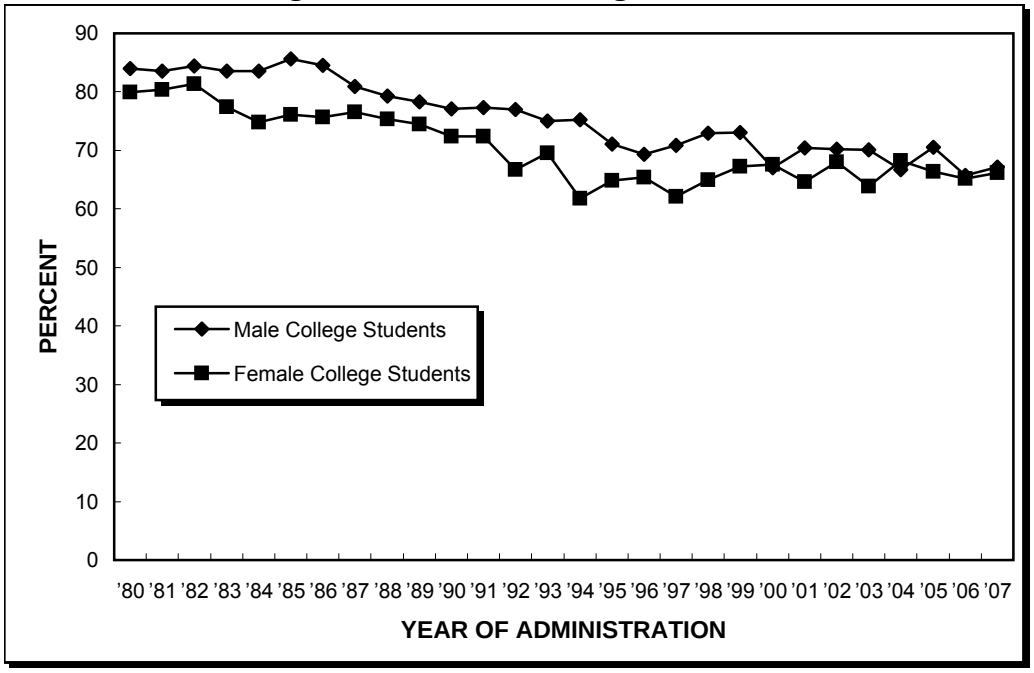
FIGURE 9-14b

Alcohol: Trends in 30-Day Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



Alcohol: Trends in 30-Day Prevalence among Male vs. Female College Students



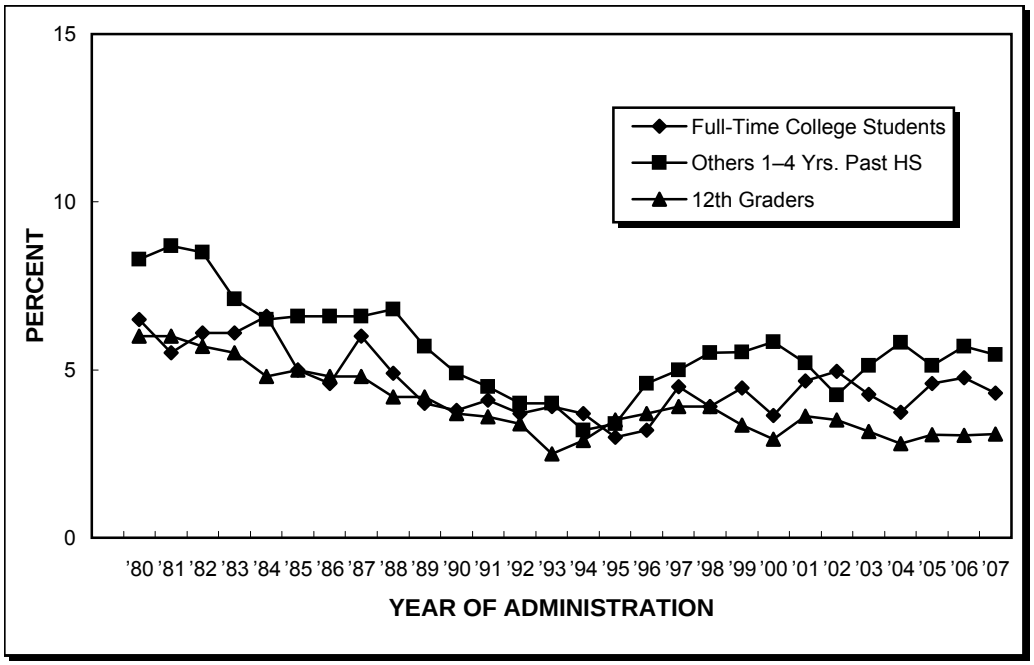
Source. The Monitoring the Future study, the University of Michigan.

Note. "Others" refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

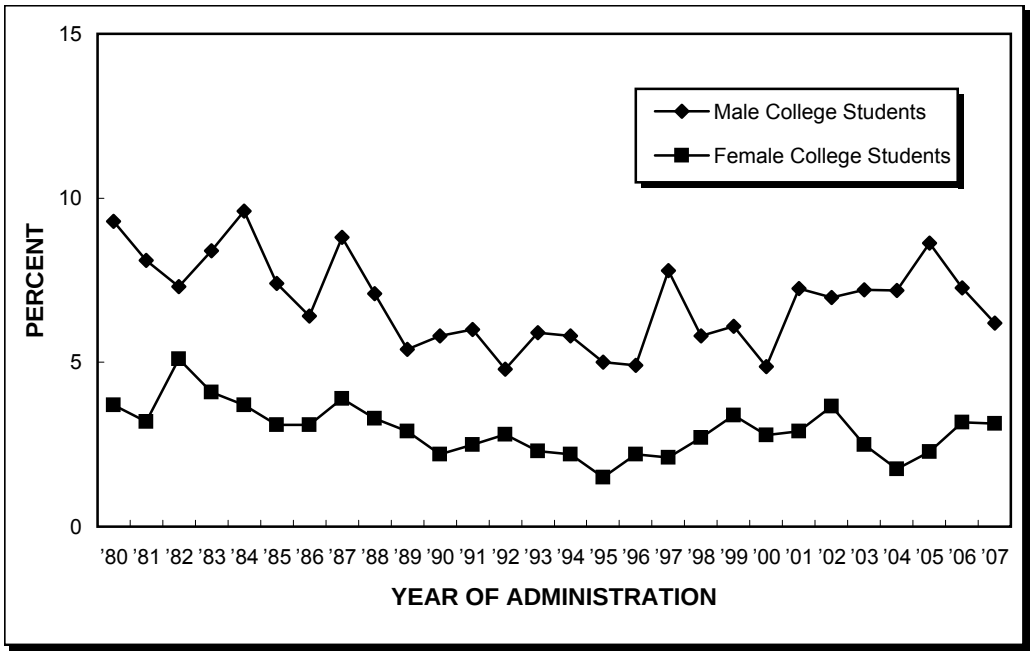
FIGURE 9-14c

Alcohol: Trends in 30-Day Prevalence of Daily Use among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



Alcohol: Trends in 30-Day Prevalence of Daily Use among Male vs. Female College Students



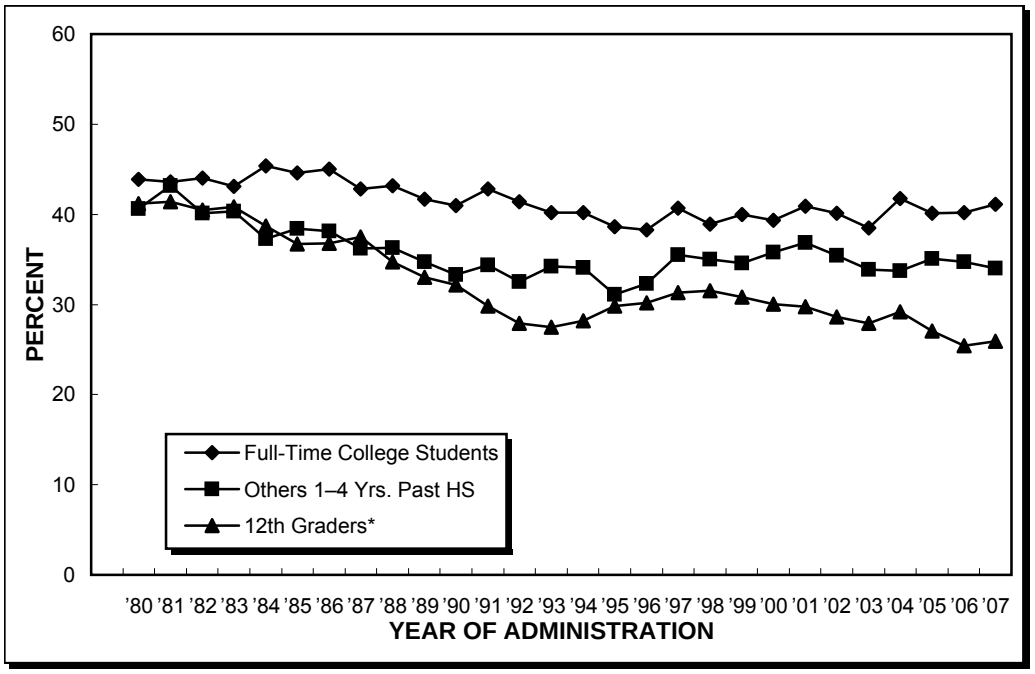
Source. The Monitoring the Future study, the University of Michigan.

Note. "Others" refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

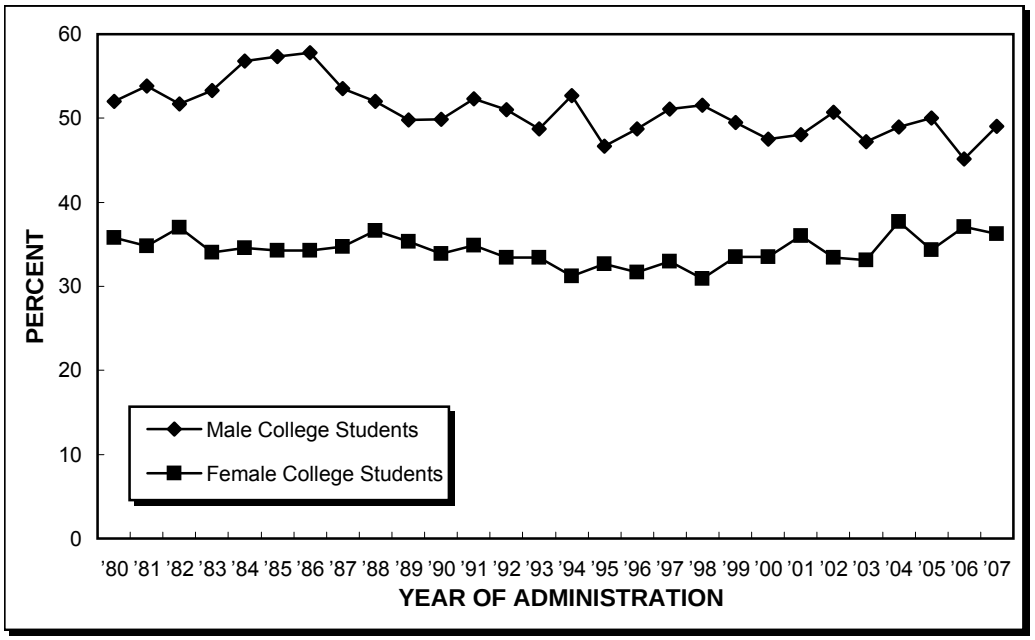
FIGURE 9-14d

Alcohol: Trends in 2-Week Prevalence of 5 or More Drinks in a Row among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



Alcohol: Trends in 2-Week Prevalence of 5 or More Drinks in a Row among Male vs. Female College Students



Source. The Monitoring the Future study, the University of Michigan.

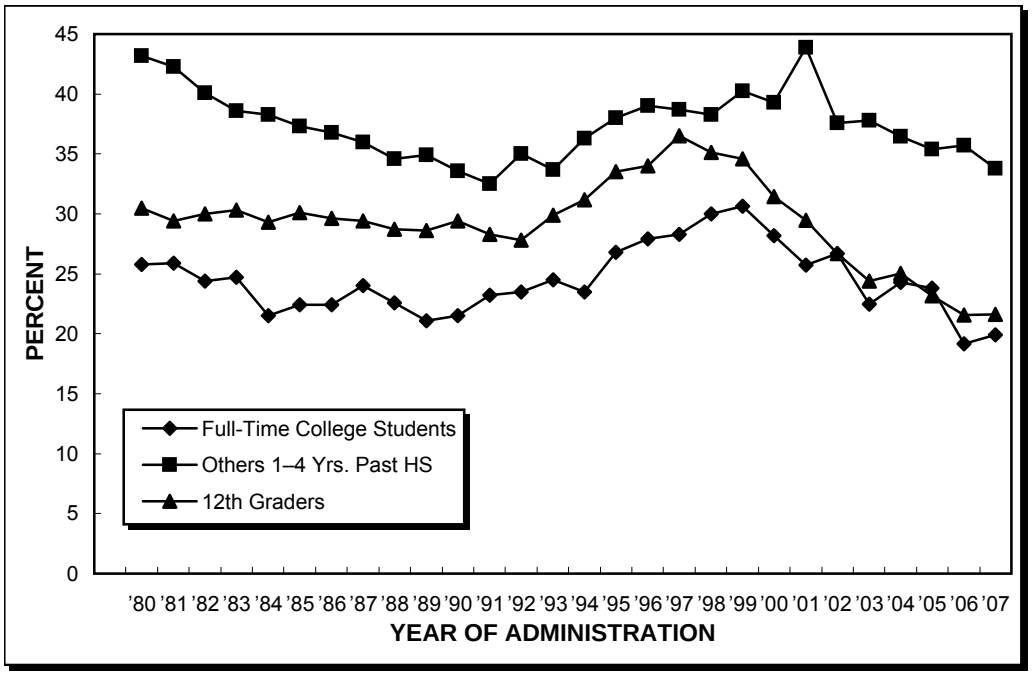
Note. "Others" refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

[a]Due to a coding error for 18-year-olds, previous versions of this figure contained a value that was slightly off for the measure of five or more drinks in a row for 2005. This has been corrected here.

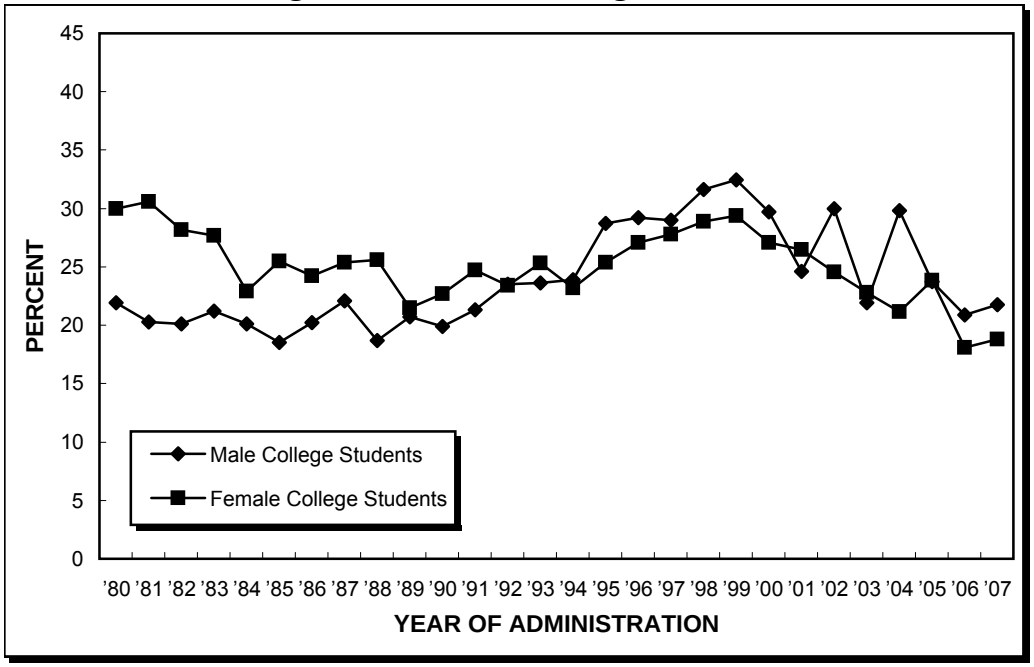
FIGURE 9-15a

Cigarettes: Trends in 30-Day Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



Cigarettes: Trends in 30-Day Prevalence among Male vs. Female College Students



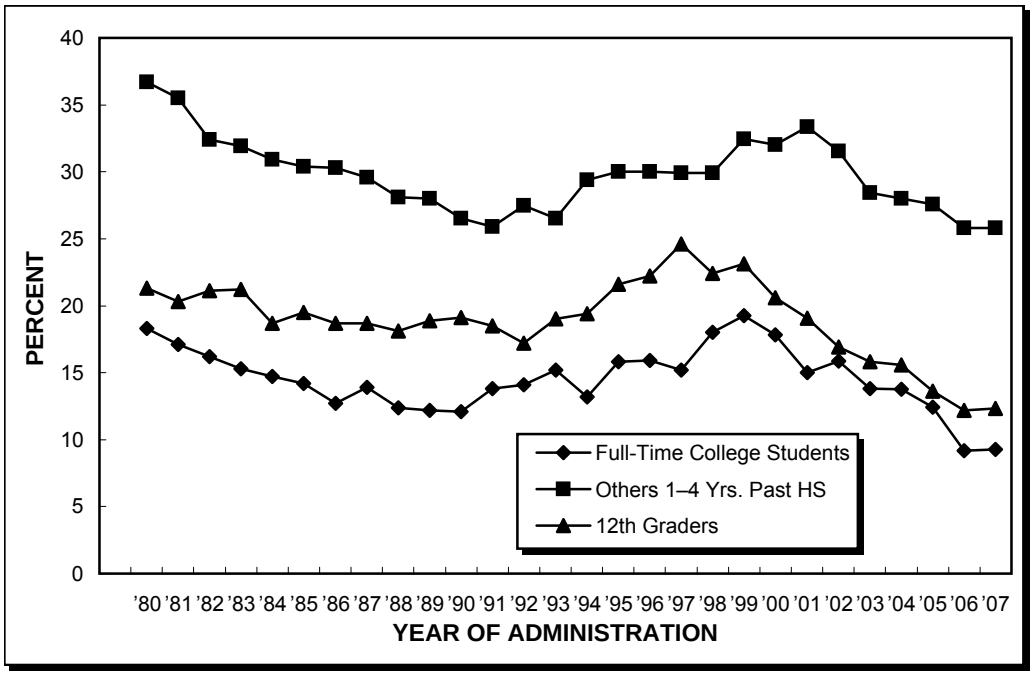
Source. The Monitoring the Future study, the University of Michigan.

Note. "Others" refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

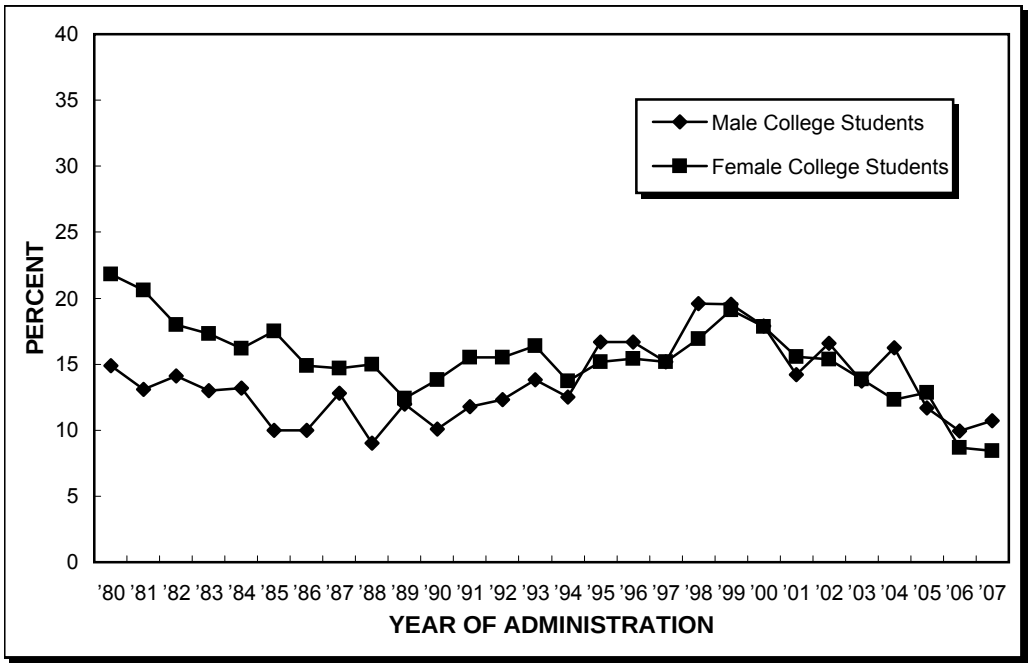
FIGURE 9-15b

Cigarettes: Trends in 30-Day Prevalence of Daily Use among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



Cigarettes: Trends in 30-Day Prevalence of Daily Use among Male vs. Female College Students



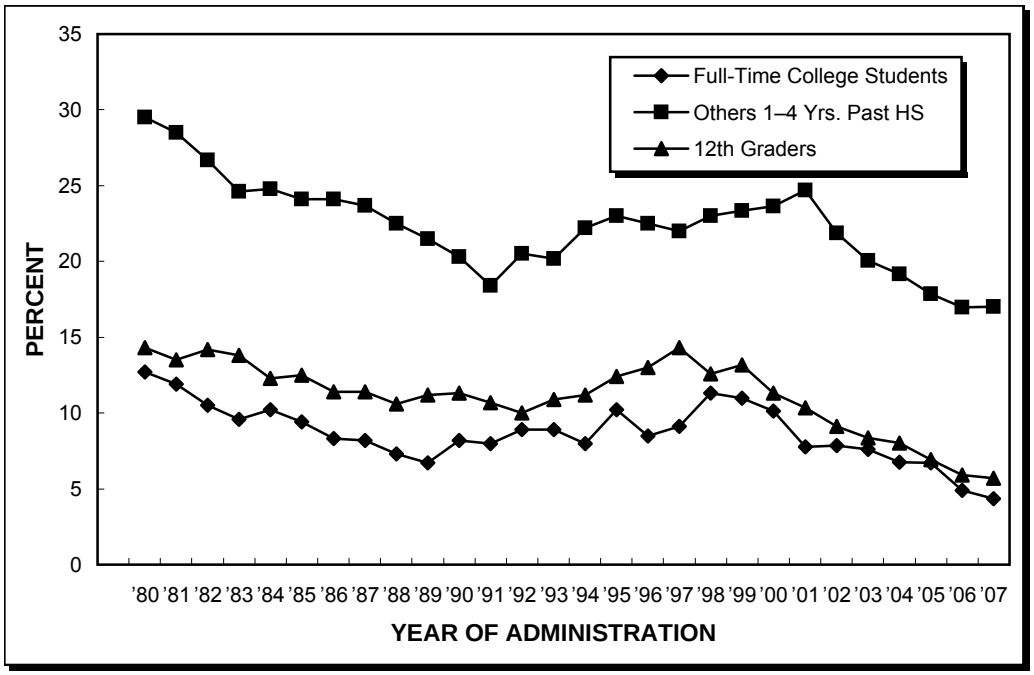
Source. The Monitoring the Future study, the University of Michigan.

Note. "Others" refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

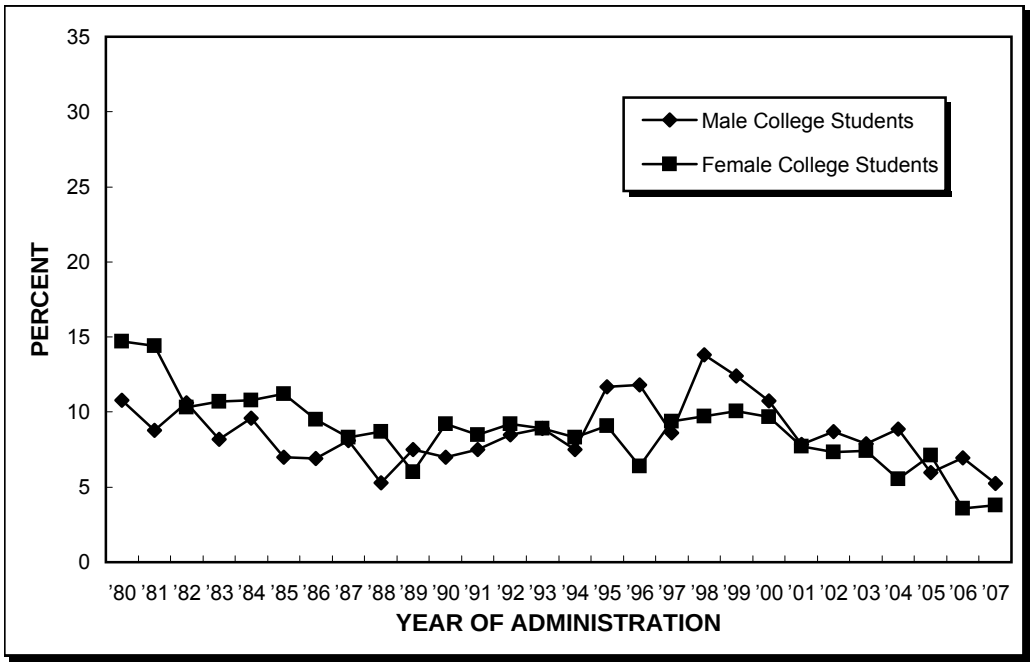
FIGURE 9-15c

Cigarettes: Trends in 30-Day Prevalence of Smoking a Half Pack or More per Day among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



Cigarettes: Trends in 30-Day Prevalence of Smoking a Half Pack or More per Day among Male vs. Female College Students



Source. The Monitoring the Future study, the University of Michigan.

Note. "Others" refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

Chapter 10

RISK AND PROTECTIVE BEHAVIORS RELATED TO HIV/AIDS

Over the past two and a half decades, the spread of the human immunodeficiency virus (HIV), which leads to the acquired immunodeficiency syndrome (AIDS), has become an extremely serious public health concern. Certain behaviors that put people at heightened risk of contracting and spreading HIV are connected to drug abuse—in particular drug use by injection, and specifically when it involves needle sharing. Another behavior related to heightened risk is having multiple sex partners, which itself is a behavior correlated with drug use. Further, both drug abuse and having multiple sex partners tend to be more prevalent among young adults. A considerable literature has evolved based on studies of special populations at high risk, but relatively little information exists on these behaviors as they occur in the general population. Whatever changes occur in the proportions of American young adults choosing to engage in these risk and risk-reduction behaviors will have important consequences for the course of the nation's AIDS epidemic.

MTF is uniquely suited to address many of the key gaps in the literature concerning HIV/AIDS-related risk and protective behaviors. Most of the features that make MTF an important epidemiologic and etiologic study of drug use also make it an important study for tracking HIV/AIDS-related behaviors: it is population-based, prospective, cohort-sequential, and has especially rich measures of drug use with which to study how drug use relates directly (through injection drug use) and indirectly (through engaging in risky sex while high). Accordingly, in 2004 a set of questions was added to two of the six questionnaire forms used in the MTF follow-up surveys of 21- to 30-year-olds. One of the purposes of limiting the new questions to two forms was to determine whether the inclusion of these sensitive items would adversely affect response rates from panel respondents. Fortunately, no decrement in response rates associated with the inclusion of these questions was seen. Therefore, the same set of questions was added to an additional form in the 2007 survey, raising the case count by about half from what it had been in 2004–2006.[58]

The added questions ask about both risk *and* protective behaviors. The *risk factor* variables include lifetime and 12-month frequency of injecting drugs without a doctor's order; lifetime and 12-month prevalence of using a needle that respondents "knew (or suspected) had been used by someone else" before they used it; number of sex partners the respondent has had during the 12 months prior to the survey; and whether those partners had been exclusively male, exclusively female, or both male and female. All of these factors are associated with the risk of contracting HIV and also of transmitting HIV to others.

[58]When we added this new form to the set containing the column of questions on risk and protective behaviors for the transmission of HIV, we compared its results with those from the other two forms to make sure that there was not a systematic difference among them. The results proved highly comparable across forms, which is reassuring for trend estimation based on an increasing number of forms used.

The *protective behaviors* include lifetime and 12-month prevalence of being tested for HIV, actually getting the results of the most recent HIV test (because some people who take a test fail to obtain the results), and the frequency of condom use in the prior 12 months. We also ask about lifetime and 12-month prevalence of donating blood or blood plasma. If individuals who engage in high-risk behaviors refrain from donating blood, that would be protective of others by reducing the likelihood of HIV getting into the nation's blood supply.

LIMITATIONS

Of course, there are certain limitations to the present study for attempting to quantify these risk and protective behaviors in the general population. Perhaps the major limitation derives from the sample under study, because MTF does not include the 15% or so of each class cohort that leaves school before graduating from high school. So, although our coverage includes the great majority of the population of interest (young adults who recently entered their 20s), an important and on average somewhat more deviant segment of the population is not covered (high school dropouts). Also, panel attrition is a limitation, as discussed in chapter 3. Techniques have been used here to help compensate for the effects of panel attrition, as will be described below.

These limitations likely lower the estimates of risk behaviors from what their values would be if the entire population of 21- through 30-year-olds in the United States could be surveyed, but it is difficult to quantify by how much. (We believe that we do a better job of characterizing the original target population, which is high school graduates.) However, because the school dropout rates have changed little over the life of the study, and the panel retention rates tend to change very slowly, we believe that the *trend* estimates—which ultimately will be among the most important results for policy purposes—will be little affected by these omissions from the sample, particularly given our procedures for compensating for panel loss.

Because of the sensitivity of some of the behaviors covered in this section of the questionnaire, one might reasonably ask about the validity of the data reported. Recognizing this potential problem, we provided an introduction to this section in the questionnaire explaining why these questions are important in helping us to increase our understanding of the HIV/AIDS epidemic, re-emphasizing the protections of confidentiality by reminding respondents that their answers are never connected with their names, and inviting respondents to leave blank any questions that they "do not wish to answer." The decrement in response rates between the preceding nonsensitive questions and those in this section was very small—on the order of about one percentage point for five questions, two percentage points for two questions, and just under three percentage points for one question—suggesting that the great majority of respondents felt willing and able to answer these questions. One of the questions with a 3% decrement asked about the use of condoms. We believe that the slightly higher rate may be due to high variability in use of condoms, making the question difficult to answer. Further, females having only female partners likely felt this question was not applicable to them, and they had a considerably higher than average missing data rate on this question. The question on needle sharing had the second highest increment in nonresponse (2.2 percentage points), but 1.2 percentage points of that increment are attributable to respondents who previously had no history of drug injection simply

skipping this question—a logical response. Thus the corrected increment in nonresponse for this question was also around one percentage point.

SAMPLE SIZES AND TREND ESTIMATION

We have been collecting data on these behaviors for only four years, so the emphasis here remains on establishing the prevalence and, when available, the frequency of these behaviors in the population in the period 2004 through 2007 combined. Having four years of data is valuable because of the low rate of prevalence (and therefore, numbers of cases) for some of these behaviors—and in particular for the intersection of some of these behaviors—because it increases the precision of these estimates. Because the intersection of some of these behaviors is of particular importance, an attempt will be made to look at some of the bivariate associations among them, though the low numbers of cases still limit the conclusions that can be reached at this time. As time passes, the case counts will cumulate and allow more detailed analyses.

It should be noted that we also examined the data for each of the four years separately to look for signs of change in prevalence levels, and did not find evidence of systematic trending in any of the risk or protective behaviors under study here. It seems unlikely that there would be rapid changes in these kinds of behaviors in the general population; however, even gradual change could be quite important, so starting this year, we are providing tabular information on trend results. Moreover, it is encouraging that the univariate distributions on the answers regarding these various behaviors replicate quite well across years, which provides powerful evidence of the reliability of our estimates.

ADJUSTING FOR THE EFFECTS OF PANEL ATTRITION

In chapter 3 we described the procedures used to adjust the substance use estimates to eliminate (insofar as possible) the effects of panel attrition—the loss of respondents in the follow-up data collections. In the case of substance use estimates, we have data on the prevalence and frequency of the same behaviors among all respondents when they were in their senior year of high school; this permits a *poststratification* procedure in which we reweight the obtained follow-up samples such that their reweighted distribution in *senior year* reproduces the original distribution obtained from the entire 12th-grade sample for the behavior under consideration.

However, measures of non-drug-using variables under consideration in this chapter were not included in the 12th-grade surveys, so that particular form of poststratification is unworkable. Instead, we have implemented a different type of poststratification reweighting procedure for the follow-up respondents in which we attempt to correct for their differential retention in the panels as a function of their demographic and other characteristics that *were* measured in 12th grade. For example, males have a somewhat lower retention rate than females, which means that their proportion in the attained follow-up sample is lower than it was in the original panel selected from 12th-grade participants in the in-school MTF survey. We are able to correct for that difference by up-weighting the data from all males who *did* continue in the panel study, so that

males will remain in the same proportion in the panel as they were when the panel was first selected.

Using this strategy, we *simultaneously* correct for differential attrition using multiple variables identified as being related to attrition. To do so, we calculate the retention rate for the various cells defined by the intersection of these variables and then weight the respondents in each cell by the reciprocal of the retention rate found for people who belong in that cell. That set of adjustments generates a newly *weighted* panel with distributions on the variables used in this procedure (e.g., gender or grade point average in high school) that reproduce those of the original sample when it was first surveyed in 12th grade. As a practical matter, the number of variables used in this procedure must be limited to some extent by the total sample size, lest certain cells become too small to be reliably reweighted.

The variables that we use for defining the cells are as follows: gender (male/female), ethnicity (White/non-White), grade point average in 12th grade (low/medium/high), and illicit drug use in 12th grade (none/marijuana only/any other illicit drug). The first two variables were prespecified, while the latter two were chosen from a larger set entered into a regression analysis because they increased the explained variance in the retention rate the most.

These four variables generate 36 nonoverlapping categories of individuals that can be reweighted to correct for differential rates of attrition among them. Retention rates in each of the 36 cells are then calculated based on the number of people in each cell in the *original* panel and the number who subsequently provided data at the follow-up; the participating members of each cell are assigned a new weight that is the reciprocal of the retention rate—that is, one divided by the retention rate. (So, for example, if White males with low grades and illegal drug use other than marijuana are represented in the retained panel at a 50% retention rate, each of the respondents in that cell would be given a weight of two.) This new weight is then multiplied by a separate individual weight that corrects for any differential probability in being selected into the panel originally.

With the resulting weight, we have a total weighted *N* (sample size) equal to the *original* panel size, not the actual *retained* panel, which means that we would be overstating the accuracy with which we are making prevalence estimates, for example; so, in a final step, all individual weights are then multiplied by the overall sample retention rate to bring the weighted sum of cases down to the actual number of individually weighted cases still in the panel. This entire correction procedure is carried out separately for each of the four years (2004, 2005, 2006, and 2007).

We consider this correction procedure to be appropriate in this circumstance, but we caution the reader that it is not possible to entirely correct for the effects of panel attrition for two reasons. First, specific to our relatively small sample for these measures, we cannot adjust for all measured variables that might predict retention, because we are limited as to the number of cells that can reasonably be generated to which to assign weights. (One advantage of using this procedure of intersections of variables defined as cells is that it takes into account any interactions among the predictor variables, such as an interaction of gender and race, for example.) Secondly, and more generally, even with a prediction model that accounts for nearly all of the variance in retention, there still could be some unmeasured characteristics that

differentiate the people in each cell who do and do not remain in the study. For example, we believe that people who become heroin or crack addicts after high school would be less likely to return questionnaires, given the disrupted lives that many of them live. Fortunately, people in these circumstances represent a very small proportion of the general population. And, as we stated earlier, one of the most important uses of these data will be to track *changes* historically in the major risk and protective behaviors in the general population, a purpose for which these data are well suited.

PREVALENCE/FREQUENCY OF RISK BEHAVIORS: 21- TO 30-YEAR-OLDS

In this section we present and discuss the prevalence and frequency of several risk behaviors measured among 21- to 30-year-olds in the 2004 through 2007 follow-up surveys combined. We begin by presenting data on the combined samples for all respondents (Total weighted N = 7,721) and for males and females separately (weighted Ns = 3,632 and 4,089, respectively). Then, because different configurations of sexual contacts may carry differential risks of HIV transmission, particularly if condoms are not used, we examine these behaviors separately. In theory we are able to distinguish six configurations of sex partners: males with females, males with males, males with partners of both genders, as well as females with males, females with females, and females with partners of both genders. However, the case counts turn out to be too small to make distinctions between the two categories that involve sexual contact with the same gender, either for male respondents or female respondents. Therefore, these two groups have been combined for reporting purposes for respondents of both genders. Thus the category corresponds to those having had sexual contact with partners of their own gender, whether or not they also had any cross-gender contacts.

Injection Drug Use

While not itself a vector of HIV transmission, the amount of illicit injection drug use determines the pool of eligible persons from which the high-risk behavior of needle sharing is drawn. The question to respondents reads, "On how many occasions (if any) have you taken any drugs by injection with a needle (like heroin, cocaine, amphetamines, or steroids) in your lifetime? Do not include anything you took under a doctor's orders." A sequel question asks about such behavior in the prior 12-month interval. Trends in the prevalence of these behaviors would be indicative of changes in the pool of persons at risk for *sharing* of needles.

- Table 10-1 shows that 1.6% of this sample reports having *ever* used any drug by injection without medical supervision, and there is a fair-sized gender difference—2.3% of males and 0.9% of females indicate such behavior. The percentages using on 40 or more occasions is 0.3% overall—0.4% for males and 0.3% for females. So a relatively limited segment—about 1 in every 62 respondents—has ever used an illicit drug by injection; a smaller proportion—about 1 in every 300 respondents—reports an extended pattern of use. Of course, even though these appear to be very low prevalence rates, they can still result in significant absolute numbers of users in the population. According to the 2000 census, there are nearly 40 million Americans ages 21 to 30, so 1% of them would represent almost 400,000 individuals.

- The proportions who have injected drugs during the *past 12 months* without medical supervision is considerably smaller: 0.5% overall—1 in every 200 respondents—including 0.8% of males and 0.2% of females. The proportions using 40 or more times in the past 12 months are 0.1% overall, 0.2% for males, and 0.1% for females.

Needle Sharing

The risk of catching or transmitting a number of bloodborne diseases, including HIV, emerges when injection drug use is combined with the sharing of needles. Immediately following the questions about injecting illicit drugs, discussed above, this question was asked about needle *sharing*: "Have you ever taken such drugs using a needle that you knew (or suspected) had been used by someone else before you used it?"

- The proportion who say they have ever shared needles in this way during their lifetime is 0.4% overall—0.5% of males and 0.4% of females.

- The proportion who say that they have shared needles in the prior 12 months is 0.1%, with 0.2% of males and 0.1% of females reporting such behavior.

- Thus, needle-sharing behavior appears to have a very low prevalence among high school graduates who are in the age range of 21 to 30, which puts severe limits on how much we can say about people in this category without having a considerably larger sample size. Again, it seems likely that this is an underestimate for the entire population in this age range due to the omission of high school dropouts, the likelihood that drug-addicted users would be more likely than average to leave the study, and the possibility that there may be some underreporting of this behavior. Nevertheless, it appears that this is a low-prevalence behavior for the entire age group. If the rate had turned out to be much higher, it would have been cause for alarm.

- Males appear more likely to have engaged in injecting drugs and to share needles, though the gender differences are not large.

Contacts with Multiple Partners

Having sexual relations with multiple partners is another class of behaviors that increases the risk of HIV transmission. The question used for obtaining information about this behavior was, "During the last 12 months, how many sex partners have you had? (This includes vaginal, oral, or anal sex.)" We believed that, for clarity, the nature of the sexual contacts to be included in the answers had to be specified; we included these three types of sexual activity because all can involve the transmission of HIV. The results based on the answers to this question are provided in Table 10-2.

- About one seventh (14%) of the 21- to 30-year-old respondents reported not having any sex partners during the prior 12 months—more males (16% or about one in six) than females (13% or about one in eight).

- The most common answer by far to this question was having just one partner during the year (62% overall), with a lower proportion of males (57%) than females (66%) giving this answer.

- That leaves about one quarter (24%) of the sample of young adults ages 21 to 30 reporting that they have had multiple (two or more) sex partners in the prior year—27% of males and 22% of females.

- While having even one sex partner is not without risk, the risk rises rapidly with an increased number of partners. About 10% reported that they had exactly two partners during the year (9.4% of males and 10.2% of females); 5.8% reported exactly three partners (6.7% of males and 5.1% of females); leaving about one in twelve (8.7%) reporting having four or more partners (11.3% of males and 6.5% of females). Very few report having more than 20 partners (0.1% of males and females).

- Thus, in addition to being more likely to inject drugs and share needles, males are also more likely to have had multiple sex partners.

Contacts with Partners of the Same Gender

Because males who have sexual contact with other males have been at particular risk of contracting and transmitting HIV, we also looked at subgroups by the different gender combinations. Only people reporting that they have had sexual contact with one or more partners in the prior year are asked the question: "During the last 12 months have your sex partner or partners been . . . ." The answer alternatives are: "exclusively male," "both male and female," and "exclusively female." See Table 10-2 for the results.

- Of the respondents having one or more sex partners in the prior 12 months, 95% of males reported that their partners were exclusively female, and almost exactly the same proportion (96%) of females indicated that their partners were exclusively male.

- That leaves 5.3% of the males indicating some sexual contact with other males during the last 12 months—4.2% saying that their partners were males exclusively and 1.0% saying that they had both male and female partners.

  (Note that because of the low prevalence rates for these behaviors, the weighted numbers of cases is limited: a total of 160 male respondents reported having any sexual contact with other males, 127 reported having sex exclusively with other males, and 33 reported having sex with both genders. For data on the numbers of sex partners each of these groups report, see Table 10-5.)

- Among females, 4.0% reported having any female sex partners, 2.2% of all female respondents indicated that their partners were exclusively female, and 1.8% indicated that their partners were of both genders.

(Again, note that the numbers of cases available for study are limited: 140 having any sexual contact with other females, 77 having sex with other females exclusively, and 63 having sex with both female and male partners.)

- Once more, males are at greater risk than females (a) because males are more likely to engage in same-gender sexual activities, and (b) because those activities almost certainly carry a greater likelihood of HIV transmission than the same-gender sexual activities in which females engage.

Number of Partners among Those with Same-Gender Partners

- We examined the number of partners reported as a function of the genders of those partners. For sexually active males who had sex exclusively with other males during the year (N = 127), about half (51%) reported that they had only one sex partner (data not shown in tables). (This compares with a single partner rate of 69% among the males who reported that they had contact exclusively with females.) About a fifth (20%) of males with exclusively male partners reported sexual contact with five or more partners, compared to 8% for males with exclusively female partners. Thus, although their proportion of the total population is small, and these particular findings are thus based on a small subsample, it still appears that appreciable numbers of young adult males are potentially placing themselves at considerable risk by having multiple sex partners.

- Among sexually active females who had contact exclusively with other females during the year (N = 77), 79% reported having only one partner, indicating a high level of monogamy in this group. (This rate is very close to the 76% who reported being monogamous among females who had male partners exclusively.) Again, these estimates are only suggestive given the very limited sample size involved.

- Individuals who have sexual relations with both genders carry the risk of spreading the infection across genders, making their behavior of particular importance. Unfortunately, the numbers of cases collected to date are too small for us to be able to report with any accuracy on their behaviors. (Weighted Ns = 63 for females and 33 for males reporting relations with partners of both genders in the prior 12 months). Future surveys will enhance these numbers considerably. What we can say for now, based on the 96 cases who report partners of both genders, is that the proportion reporting five or more partners appears to be quite high.

Needle Sharing among Those with Same-Gender Partners

- While it is possible to look at the intersection of needle sharing with having same-gender partners for both males and females, we have chosen not to report these data in Table 10-4 because of (a) the low number of cases for those having same-gender sexual contact, combined with (b) the very low rates of needle sharing. A very small number of cases can change the comparisons considerably and potentially generate misconceptions. As cases cumulate in future years, we hope to be able to make estimates of these important intersections. What we can say now is that the rate of sharing needles is very low in all

four of the partner groupings, with a slightly higher rate among those of both genders who report having any same-sex partners in the prior year.

Donating Blood

While donating blood carries no risk of *contracting* an HIV infection, because only new and sterile needles are used to draw blood from donors, it does present the possibility of *transmitting* HIV if the donor is infected.[59] The question of relevance here is to what extent do young adults who are at higher than average risk of carrying HIV donate blood? We begin with the overall prevalence of blood donation.

- The proportion of respondents saying that they have donated blood or blood plasma during their lifetime is 45% overall, with similar proportions for males and females (Table 10-3).

- Blood donation in the previous 12 months was reported by 11% overall—12% of males and 10% of females.

- Equal proportions of males who reported any male sex partner(s) during the previous 12 months (46% based on 160 weighted cases) and males who reported only female sex partners (47%) said they had *ever* donated blood (Table 10-6). Somewhat fewer of the men reporting any male sex partners said they donated blood *in the prior 12 months* (10%, versus 12% among males reporting only female partners), but the difference is not statistically significant. *Whether or not the difference is real, it is clear that by no means all individuals in this elevated risk group abstain from donating blood, as the Food and Drug Administration requires.* Indeed, their rate of blood donation is very similar to the rate for all males.

- There was an inadequate sample size to examine the intersection between needle sharing and blood donation because the numbers of respondents indicating shared needle use, either in their lifetime or in the past 12 months, were too small (*N*s = 31 and 8, respectively). In the future, by concatenating across years and having larger annual samples, we may be able to examine this intersection.

PREVALENCE OF PROTECTIVE BEHAVIORS

People can take various precautions to diminish their likelihood of contracting HIV and/or transmitting it to others. One, of course, is simply to avoid the high-risk behaviors already discussed, and to avoid donating blood if one is a male with a history of having male sex partners. Another is to use protection against viral transmission in the form of condom use during intercourse. A third approach—getting tested for HIV—increases the likelihood that an infected individual will receive appropriate treatment and also, if the diagnosis is positive, refrain from

[59]This risk has been dramatically reduced in recent years by the routine screening of donated blood for HIV. Still, the Red Cross estimates that, if someone first became infected with HIV within what they call the "window period," which they define as 12 to 16 days before donating blood, the infection might not be detected in the screening tests (http://www.wcredcross.org/bloodmobile/qa_aids.html). Further, the data presented here suggest that at least one high-risk group that is not supposed to donate blood has been doing so.

behaviors that put others at risk of contracting the virus. Blood donation has already been discussed; answers to the questions about condom use and HIV testing are discussed next.

Condom Use

Respondents who indicated that they had one or more sexual partners during the prior 12 months were asked, "When you had sexual intercourse during the last 12 months, how often were condoms used? (This includes vaginal and anal sex, but not oral sex.)" The answer alternatives were never, seldom, sometimes, most times, and always. Both genders responded to this question. (Respondents who reported no sex partners in the prior 12 months are excluded from the data presented here.)

- The majority (55%) of sexually active young adult respondents said that they "seldom" or "never" used condoms during the year—with 50% of males and 59% of females giving one of these answers (see Table 10-2). Indeed, a large proportion (41%) indicated that they did not use condoms at all during the prior 12 months—37% of the sexually active males and 45% of the sexually active females. The fact that more females are monogamous may help to explain their lower rate of condom use; however, their partners may or may not be monogamous, and if not the risk to the woman increases, possibly without her awareness.

- As might be expected, many of those not using condoms are respondents who had only one partner during the year (and indeed, perhaps many of these respondents were attempting to conceive a child). Among those reporting only one partner (the majority of all respondents), 52% said they did *not* use condoms at all (see Table 10-8). That statistic fell by more than half among those reporting two partners (to 20%), and by about half again among those reporting three or more partners (to 12%).

- Only about one third (32%) of sexually active young adults said that they used a condom "most times" or "always"—37% of males and 28% of females. This statistic rises considerably with the number of partners reported in the prior year, from 25% among those reporting only one partner, to 45% among those with two partners, 54% for those with three or four partners, and 56% for those with five or more partners.

- In sum, using condoms to prevent exposure to, and the transmission of, HIV (and many other sexually transmitted diseases) is considerably more prevalent among those who are at heightened risk both of exposure to, and transmission of, HIV due to the number of sexual partners that they have. That is the encouraging part of this finding. But, many public health experts will be quick to point out that even 56% using "most times" or "always" is far short of 100% using "always," which is the ideal condition from a public health point of view.

- There have been considerable efforts made in past years to encourage the use of condoms by men who have sexual relations with men, with the obvious intent being to stem the spread of HIV/AIDS in that population. While the numbers of such cases available here for analysis are quite limited (weighted N = 160), the results suggest that the use of condoms in this population is probably about equivalent to that in the population of men

reporting sex exclusively with women in the prior year—36% reporting never (versus 37% in the latter group) and 43% reporting "most times" or "always" (versus 37% in the latter group). The rate of condom use among men having sexual relations only with women is likely suppressed somewhat by the proportion seeking to conceive a child.

Getting Tested for HIV

Respondents were asked if they had ever been tested for HIV/AIDS; they were instructed not to include any testing that they may have undergone when they were donating blood or blood plasma.

- Less than half (44%) of all young adults in the age band 21 to 30 indicate that they have *ever* been tested for HIV outside of blood donation screening—37% of males and 50% of females.

- About one fifth of the age group (20%) say they have been tested in the *prior 12 months*—16% of males and 24% of females.

- Not all of those who took HIV tests, however, actually received their results. Asked if they received the results of their *most recent* HIV test, 7.7% of those who had ever been tested said that they had not—8.9% of males and 6.8% of females tested. Thus, females are somewhat more likely than males to engage in this protective behavior—including obtaining the results of the tests—even though they are at somewhat less risk than males of being exposed as a function of their drug injection rates and sexual practices.

- Because males having sexual contact with male partners are at heightened risk for contracting and transmitting HIV, we looked to see if HIV testing was more prevalent among them. While the number of cases is small (again, 160 weighted cases), the results are suggestive of increased vigilance in this population. Two thirds (65%) of males having exclusively male partners in the prior year indicated having been tested for HIV at some time, and nearly four in every ten (37%) said that they had been tested in just the past year. These rates compare to 40% and 17%, respectively, among males who have had female partners exclusively during the past year. Hardly any (3%) of the males reporting relations exclusively with other men in the past year said that they failed to get the results of their most recent test.

- While the numbers of cases available for study are very small for males reporting partners of *both* genders in the past year (weighted $N = 33$) and females reporting partners of both genders (weighted $N = 63$), both of these groups show considerably higher rates of getting tested for HIV than their counterparts who do not report having any same-gender partners. While only suggestive, given the limited sample sizes, these results are encouraging, because this group can cause cross-gender transmission of HIV, and because they tend to report having more partners than the other groups on average.

This has been a reporting of the *prevalence* of risk and protective behaviors associated with the spread of HIV among young adults in the general population, and of the *intersection* of these various risk and protective behaviors. We believe there is also considerable value in tracking

change in the prevalence of these risk and protective behaviors among young adults. While the numbers are still small, especially for estimating the intersection of some of the most rare behaviors like needle-sharing and having same-gender sex partners, ongoing data collections should allow us to monitor these behaviors and provide more in-depth consideration of important subgroups and correlates. Adding these questions to additional questionnaire forms will facilitate those efforts considerably.

TRENDS IN THE PREVALENCE OR FREQUENCY OF RISK BEHAVIORS

The 2007 data collection is the fourth to include this set of questions on risk and protective behaviors for the transmission of HIV. This year for the first time we are presenting trend data on these behaviors. We have chosen to present the data in the form of two-year moving averages in order to smooth the trend estimates and reduce fluctuations due primarily to sampling error. This is done by taking an arithmetic average of the results for the year labeled at the top of each column and the results from the prior year. As noted earlier, the sample size increased in 2007 due to the inclusion of this set of questions in an additional questionnaire form; but the 2006 and 2007 data are weighted equally in calculating the two-year moving average for 2007.

As can be seen in Tables 10-10 through 10-12, there has been very little movement over the three years for which estimates have been calculated in ***any of the risk behaviors*** under study. Indeed, there is a very high level of replication of the results from the several years surveyed, which is reassuring from the point of view of the reliability of these estimates.

Table 10-10 shows no systematic change over the interval 2005–2007 in the prevalence of frequency of lifetime or past-year ***drug injection rates***, nor in lifetime or past year prevalence rates for ***needle sharing*** among these 21- to 30-year-olds.

Table 10-11 shows no systematic change over the same interval (2005–2007) in the ***number of sex partners*** respondents report having in the prior year, and the differences by year in the prevalence of having more than one partner are not even close to being statistically significant.

The proportions of respondents reporting contact with ***partners of the same gender*** during the prior year showed no systematic change. Table 10-12 shows no systematic change in ***blood donation*** rates either.

TRENDS IN THE PREVALENCE OR FREQUENCY OF PROTECTIVE BEHAVIORS

Like the risk behaviors, the behaviors that can help to protect against the spread of HIV have shown very little change in the 2005–2007 interval. While there has been a gradual rise in the reported prevalence of ***condom use*** (Table 10-11) over the past two years that bears watching, it is not statistically significant. There has been no systematic change in the lifetime or annual prevalence of respondents ***getting tested for HIV/AIDS***, nor in the rate that those tested have ***secured the test results*** (Table 10-12).

It thus appears that movement in both the risk behaviors and the protective behaviors is going to be gradual.

TABLE 10-1
Injection Drug Use and Needle Sharing: Total and by Gender among Respondents of Modal Ages 21–30 in 2004–2007[a] Combined

(Entries are percentages.)

	Total	Male	Female
Lifetime Frequency of Injecting			
On how many occasions (if any) have you taken any drugs by injection with a needle (like heroin, cocaine, amphetamines, or steroids) in your lifetime? Do not include anything you took under a doctor's orders.			
0 Times	98.4	97.7	99.1
1–2	0.5	0.6	0.4
3–5	0.2	0.4	0.1
6–9	0.2	0.3	*
10–19	0.2	0.4	*
20–39	0.1	0.2	*
40+ Times	0.3	0.4	0.3
Weighted N =	*7719*	*3631*	*4088*
Annual Frequency of Injecting			
On how many occasions (if any) have you taken any drugs by injection with a needle (like heroin, cocaine, amphetamines, or steroids) during the last 12 months? Do not include anything you took under a doctor's orders.			
0 Times	99.5	99.2	99.8
1–2	0.1	0.2	0.1
3–5	*	*	*
6–9	0.1	0.1	*
10–19	0.1	0.2	*
20–39	*	*	*
40+ Times	0.1	0.2	0.1
Weighted N =	*7721*	*3632*	*4089*
Lifetime and Annual Needle Sharing			
Have you ever taken such drugs using a needle that you knew (or suspected) had been used by someone else before you used it?			
Yes, in the last 12 months	0.1	0.2	0.1
Yes, but not in the last 12 months	0.3	0.3	0.3
No, never	99.6	99.5	99.6
Weighted N =	*7642*	*3596*	*4046*

Source. The Monitoring the Future study, the University of Michigan.

"*" indicates a prevalence rate of less than 0.05%.

[a]In 2004–2006, the HIV questions were included in two questionnaire forms. In 2007, these questions were added to a third questionnaire form.

TABLE 10-2

Number of Partners, Gender of Partners, and Condom Use: Total and by Gender among Respondents of Modal Ages 21–30 in 2004–2007[a] Combined

(Entries are percentages.)

	Total	Male	Female
Number of Partners in Last 12 Months			
During the LAST 12 MONTHS, how many sex partners have you had? (This includes vaginal, oral, or anal sex.)			
None	14.0	15.7	12.5
One	61.6	56.9	65.8
Two	9.8	9.4	10.2
Three	5.8	6.7	5.1
Four	3.6	4.1	3.2
5–10	4.1	5.5	2.8
11–20	0.7	1.2	0.4
21–100	0.2	0.5	*
More than 100	0.1	0.1	0.1
Weighted N =	*7694*	*3623*	*4071*
Gender of Partners in Last 12 Months[b]			
During the LAST 12 MONTHS, have your sex partner or partners been …			
Exclusively male?	53.7	4.2	96.1
Both male and female?	1.4	1.1	1.8
Exclusively female?	44.9	94.7	2.2
Weighted N =	*6607*	*3048*	*3560*
Frequency of Condom Use in Last 12 Months[b]			
When you had sexual intercourse during the LAST 12 MONTHS, how often were condoms used? (This includes vaginal and anal sex, but not oral sex.)			
Never	41.2	36.5	45.3
Seldom	13.6	13.5	13.7
Sometimes	13.0	13.1	12.8
Most times	15.3	17.1	13.8
Always	16.9	19.8	14.4
Weighted N =	*6553*	*3030*	*3523*

Source. The Monitoring the Future study, the University of Michigan.

"*" indicates a prevalence rate of less than 0.05%.

[a]In 2004–2006, the HIV questions were included in two questionnaire forms. In 2007, these questions were added to a third questionnaire form.

[b]Percentages based on those reporting sex with one or more partners during the last 12 months. Those reporting no partners are omitted.

TABLE 10-3

Blood Donation and Test for HIV, Lifetime and Last 12 Months: Total and by Gender among Respondents of Modal Ages 21–30 in 2004–2007[a] Combined

(Entries are percentages.)

	Total	Male	Female
Blood Donation: Lifetime and Last 12 Months			
Have you ever donated blood or blood plasma?			
Yes, in the last 12 months	10.7	11.8	9.7
Yes, but not in the last 12 months	34.1	33.5	34.7
No, never	55.2	54.7	55.7
Weighted N =	*7765*	*3660*	*4105*
Test for HIV: Lifetime and Last 12 Months			
Have you ever been tested for HIV/AIDS? (Do not include tests that you may have had when donating blood or blood plasma.)			
Yes, in the last 12 months	20.3	16.2	23.9
Yes, but not in the last 12 months	23.7	21.2	25.9
No, never	56.0	62.6	50.2
Weighted N =	*7762*	*3656*	*4106*
Received HIV Test Results[b]			
Did you receive the results of your most recent HIV/AIDS test? (We don't want to know your test results.)			
Yes	92.3	91.1	93.2
No	7.7	8.9	6.8
Weighted N =	*3374*	*1356*	*2018*

Source. The Monitoring the Future study, the University of Michigan.

[a]In 2004–2006, the HIV questions were included in two questionnaire forms. In 2007, these questions were added to a third questionnaire form.

[b]Those respondents who report never having been tested for HIV are excluded from these percentages.

TABLE 10-4

Injection Drug Use and Needle Sharing by Gender of Partners in Last 12 Months among Respondents of Modal Ages 21–30 in 2004–2007[a] Combined

(Entries are percentages.)

	MALE RESPONDENTS		FEMALE RESPONDENTS	
	Gender of Partner(s)		Gender of Partner(s)	
	Female Only	M Only or M and F	Male Only	F Only or F and M
Lifetime Frequency of Injecting				
On how many occasions (if any) have you taken any drugs by injection with a needle (like heroin, cocaine, amphetamines, or steroids) in your lifetime? Do not include anything you took under a doctor's orders.				
0 Times	97.6	†	99.1	†
1–2	0.6	†	0.4	†
3–5	0.4	†	0.1	†
6–9	0.2	†	*	†
10–19	0.5	†	0.1	†
20–39	0.3	†	*	†
40+ Times	0.4	†	0.3	†
Weighted N =	*2878*	*159*	*3416*	*139*
Annual Frequency of Injecting				
On how many occasions (if any) have you taken any drugs by injection with a needle (like heroin, cocaine, amphetamines, or steroids) during the last 12 months? Do not include anything you took under a doctor's orders.				
0 Times	99.3	†	99.8	†
1–2	0.2	†	*	†
3–5	*	†	*	†
6–9	0.1	†	*	†
10–19	0.2	†	*	†
20–39	*	†	*	†
40+ Times	0.1	†	0.1	†
Weighted N =	*2879*	*159*	*3416*	*139*
Lifetime and Annual Needle Sharing				
Have you ever taken such drugs using a needle that you knew (or suspected) had been used by someone else before you used it?				
Yes, in the last 12 months	0.1	†	0.1	†
Yes, but not in the last 12 months	0.1	†	0.3	†
No, never	99.7	†	99.7	†
Weighted N =	*2853*	*159*	*3380*	*140*

Source. The Monitoring the Future study, the University of Michigan.

"†" indicates that the sample size is too limited to provide reliable estimates of the intersection of these two rare events.

"*" indicates a prevalence rate of less than 0.05%.

[a]In 2004–2006, the HIV questions were included in two questionnaire forms. In 2007, these questions were added to a third questionnaire form.

TABLE 10-5

Number of Partners and Condom Use by Gender of Partners in Last 12 Months among Respondents of Modal Ages 21–30 in 2004–2007[a] Combined

(Entries are percentages.)

	MALE RESPONDENTS		FEMALE RESPONDENTS	
	Gender of Partner(s)		Gender of Partner(s)	
	Female Only	M Only or M and F	Male Only	F Only or F and M
Number of Partners in Last 12 Months[b]				
During the LAST 12 MONTHS, how many sex partners have you had? (This includes vaginal, oral, or anal sex.)				
None	—	—	—	—
One	68.9	42.8	76.4	47.1
Two	11.1	12.9	11.4	16.5
Three	7.7	11.2	5.5	12.8
Four	4.6	9.5	3.4	10.1
5–10	6.1	14.8	2.8	10.7
11–20	1.1	5.7	0.4	1.6
21 or more partners	0.5	3.1	0.1	1.2
Weighted N =	*2877*	*160*	*3411*	*140*
Frequency of Condom Use in Last 12 Months[b]				
When you had sexual intercourse during the LAST 12 MONTHS, how often were condoms used? (This includes vaginal and anal sex, but not oral sex.)				
Never	36.6	36.0	44.9	†
Seldom	13.6	11.2	13.8	†
Sometimes	13.3	9.7	12.9	†
Most times	16.7	23.8	13.8	†
Always	19.9	19.4	14.5	†
Weighted N =	*2860*	*159*	*3383*	*133*

Source. The Monitoring the Future study, the University of Michigan.

"—" indicates "not applicable."

"†" indicates that the answers for the two subgroups comprising this category—females who in the last 12 months had sex only with other females, and females who had sex with both genders—are quite different for this question, and there are insufficient numbers of cases to make reliable estimates for either of the subgroups.

[a]In 2004–2006, the HIV questions were included in two questionnaire forms. In 2007, these questions were added to a third questionnaire form.

[b]Percentages based on those reporting sex with one or more partners during the last 12 months. Those reporting no partners are omitted.

TABLE 10-6

Blood Donation and Test for HIV, Lifetime and Last 12 Months by Gender of Partners in Last 12 Months among Respondents of Modal Ages 21–30 in 2004–2007[a] Combined

(Entries are percentages.)

	MALE RESPONDENTS		FEMALE RESPONDENTS	
	Gender of Partner(s)		Gender of Partner(s)	
	Female Only	M Only or M and F	Male Only	F Only or F and M
Blood Donation: Lifetime and Last 12 Months				
Have you ever donated blood or blood plasma?				
Yes, in the last 12 months	11.8	10.2	9.9	4.8
Yes, but not in the last 12 months	34.8	35.8	35.1	44.0
No, never	53.4	54.0	55.0	51.2
Weighted N =	*2881*	*160*	*3408*	*140*
Test for HIV: Lifetime and Last 12 Months				
Have you ever been tested for HIV/AIDS? (Do not include tests that you may have had when donating blood or blood plasma.)				
Yes, in the last 12 months	17.0	35.9	26.6	†
Yes, but not in the last 12 months	23.0	25.9	27.8	†
No, never	60.0	38.2	45.6	†
Weighted N =	*2878*	*159*	*3415*	*140*
Received HIV Test Results[b]				
Did you receive the results of your most recent HIV/AIDS test? (We don't want to know your test results.)				
Yes	91.8	92.4	93.5	†
No	8.2	7.6	6.5	†
Weighted N =	*1146*	*96*	*1835*	*76*

Source. The Monitoring the Future study, the University of Michigan.

"†" indicates that the answers for the two subgroups comprising this category—females who in the last 12 months had sex only with other females, and females who had sex with both genders—are quite different for this question, and there are insufficient numbers of cases to make reliable estimates for either of the subgroups.

[a]In 2004–2006, the HIV questions were included in two questionnaire forms. In 2007, these questions were added to a third questionnaire form.

[b]Those respondents who report never having been tested for HIV are excluded from these percentages.

TABLE 10-7
Injection Drug Use and Needle Sharing by Number of Partners in Last 12 Months among Respondents of Modal Ages 21–30 in 2004–2007[a] Combined

(Entries are percentages.)

	Number of Partners in Last 12 Months				
	None	One	Two	Three or Four	Five or More
Lifetime Frequency of Injecting					
On how many occasions (if any) have you taken any drugs by injection with a needle (like heroin, cocaine, amphetamines, or steroids) in your lifetime? Do not include anything you took under a doctor's orders.					
Total					
0 Times	99.1	98.7	98.4	97.5	94.1
1+ Times	0.9	1.3	1.6	2.5	5.9
Weighted N =	*1073*	*4733*	*756*	*720*	*394*
Males					
0 Times	98.7	98.1	97.7	96.9	92.3
1+ Times	1.3	1.9	2.3	3.1	7.7
Weighted N =	*568*	*2055*	*342*	*385*	*261*
Females					
0 Times	99.6	99.2	98.9	98.1	97.6
1+ Times	0.4	0.8	1.1	1.9	2.4
Weighted N =	*505*	*2678*	*414*	*335*	*133*
Annual Frequency of Injecting					
On how many occasions (if any) have you taken any drugs by injection with a needle (like heroin, cocaine, amphetamines, or steroids) during the last 12 months? Do not include anything you took under a doctor's orders.					
Total					
0 Times	99.6	99.8	99.6	98.9	96.7
1+ Times	0.4	0.2	0.4	1.1	3.3
Weighted N =	*1073*	*4735*	*756*	*720*	*394*
Males					
0 Times	99.6	99.7	99.6	98.3	95.6
1+ Times	0.4	0.3	0.4	1.7	4.4
Weighted N =	*568*	*2056*	*342*	*385*	*261*
Females					
0 Times	99.6	99.9	99.7	99.6	98.8
1+ Times	0.4	0.1	0.3	0.4	1.2
Weighted N =	*505*	*2679*	*414*	*335*	*133*
Needle Sharing: Lifetime and Last 12 Months					
Have you ever taken such drugs using a needle that you knew (or suspected) had been used by someone else before you used it?					
Total					
Yes, in the last 12 months	0.1	*	0.1	0.3	0.7
Yes, but not in the last 12 months	0.4	0.2	0.5	0.4	0.3
No, never	99.5	99.7	99.4	99.4	99.0
Weighted N =	*1055*	*4693*	*745*	*713*	*393*
Males					
Yes, in the last 12 months	0.1	0.1	*	0.4	0.9
Yes, but not in the last 12 months	0.8	0.1	0.6	0.4	0.1
No, never	99.0	99.8	99.4	99.2	99.0
Weighted N =	*557*	*2042*	*336*	*381*	*260*
Females					
Yes, in the last 12 months	*	*	0.2	0.1	0.4
Yes, but not in the last 12 months	*	0.3	0.5	0.4	0.6
No, never	100.0	99.7	99.3	99.5	99.0
Weighted N =	*498*	*2651*	*409*	*331*	*133*

Source. The Monitoring the Future study, the University of Michigan.

"*" indicates a prevalence rate of less than 0.05%.

[a]In 2004–2006, the HIV questions were included in two questionnaire forms. In 2007, these questions were added to a third questionnaire form.

TABLE 10-8

Gender of Partners and Condom Use by Number of Partners in Last 12 Months among Respondents of Modal Ages 21–30 in 2004–2007[a] Combined

(Entries are percentages.)

	Number of Partners in Last 12 Months				
	None	One	Two	Three or Four	Five or More
Gender of Partners in Last 12 Months[b]					
During the LAST 12 MONTHS, have your sex partner or partners been …					
Males					
Exclusively female	—	42.0	42.5	48.9	56.9
Exclusively male or both genders	—	1.5	2.7	4.6	9.6
Females					
Exclusively male	—	55.2	51.7	42.0	28.7
Exclusively female or both genders	—	1.4	3.1	4.5	4.8
Weighted N =	—	*4723*	*750*	*722*	*393*
Frequency of Condom Use in Last 12 Months[b]					
When you had sexual intercourse during the LAST 12 MONTHS, how often were condoms used? (This includes vaginal and anal sex, but not oral sex.)					
Total					
Never	—	51.7	19.5	11.8	11.2
Seldom	—	12.7	17.6	15.5	13.5
Sometimes	—	10.7	18.1	19.0	19.6
Most times	—	9.5	22.2	34.1	36.8
Always	—	15.4	22.6	19.5	18.9
Weighted N =	—	*4676*	*745*	*719*	*395*
Males					
Never	—	47.8	17.4	11.4	10.6
Seldom	—	13.4	15.3	14.0	11.8
Sometimes	—	11.0	15.3	18.3	19.1
Most times	—	10.4	25.6	32.6	35.1
Always	—	17.5	26.4	23.7	23.4
Weighted N =	—	*2032*	*340*	*387*	*262*
Females					
Never	—	54.7	21.3	12.4	12.4
Seldom	—	12.2	19.5	17.4	16.9
Sometimes	—	10.4	20.4	19.8	20.5
Most times	—	8.9	19.3	35.7	40.2
Always	—	13.9	19.4	14.7	10.1
Weighted N =	—	*2644*	*405*	*332*	*134*

Source. The Monitoring the Future study, the University of Michigan.

"—" indicates "not applicable."

[a]In 2004–2006, the HIV questions were included in two questionnaire forms. In 2007, these questions were added to a third questionnaire form.

[b]Percentages based on those reporting sex with one or more partners during the last 12 months. Those reporting no partners are omitted.

TABLE 10-9

Blood Donation and Test for HIV, Lifetime and Last 12 Months by Number of Partners in Last 12 Months among Respondents of Modal Ages 21–30 in 2004–2007[a] Combined

(Entries are percentages.)

	Number of Partners in Last 12 Months				
	None	One	Two	Three or Four	Five or More
Blood Donation: Lifetime and Last 12 Months					
Have you ever donated blood or blood plasma?					
Yes, in the last 12 months	11.2	10.5	12.2	9.8	11.1
Yes, but not in the last 12 months	28.2	36.0	28.1	36.1	38.3
No, never	60.6	53.5	59.7	54.0	50.7
Weighted N =	*1074*	*4729*	*755*	*721*	*396*
Test for HIV: Lifetime and Last 12 Months					
Have you ever been tested for HIV/AIDS? (Do not include tests that you may have had when donating blood or blood plasma.)					
Yes, in the last 12 months	6.7	19.0	31.8	30.0	34.2
Yes, but not in the last 12 months	11.0	27.5	21.7	22.1	20.4
No, never	82.4	53.5	46.5	47.9	45.5
Weighted N =	*1066*	*4730*	*752*	*723*	*396*
Received HIV Test Results[b]					
Did you receive the results of your most recent HIV/AIDS test? (We don't want to know your test results.)					
Yes	84.6	92.7	92.4	91.2	97.5
No	15.4	7.3	7.6	8.8	2.5
Weighted N =	*181*	*2177*	*398*	*375*	*214*

Source. The Monitoring the Future study, the University of Michigan.

[a]In 2004–2006, the HIV questions were included in two questionnaire forms. In 2007, these questions were added to a third questionnaire form.

[b]Those respondents who report never having been tested for HIV are excluded from these percentages.

TABLE 10-10
Trends[a] in Injection Drug Use and Needle Sharing: Total and by Gender among Respondents of Modal Ages 21–30

(Entries are percentages.)

	Total				Male				Female			
	2004	2005	2006	2007	2004	2005	2006	2007	2004	2005	2006	2007
Lifetime Frequency of Injecting												
On how many occasions (if any) have you taken any drugs by injection with a needle (like heroin, cocaine, amphetamines, or steroids) in your lifetime? Do not include anything you took under a doctor's orders.												
0 Times	__	98.5	98.5	98.3	__	97.9	97.7	97.4	__	99.1	99.2	99.0
1–2	__	0.5	0.5	0.6	__	0.6	0.6	0.7	__	0.3	0.5	0.5
3–5	__	0.2	0.2	0.3	__	0.2	0.3	0.5	__	0.2	0.1	0.1
6–9	__	0.1	0.2	0.2	__	0.1	0.3	0.4	__	*	*	*
10–19	__	0.3	0.2	0.2	__	0.5	0.4	0.4	__	*	*	0.1
20–39	__	0.1	0.1	0.1	__	0.2	0.2	0.3	__	*	*	*
40+ Times	__	0.4	0.3	0.3	__	0.5	0.5	0.4	__	0.3	0.2	0.2
Weighted N =	__	*3643*	*3441*	*4076*	__	*1727*	*1615*	*1904*	__	*1916*	*1826*	*2172*
Annual Frequency of Injecting												
On how many occasions (if any) have you taken any drugs by injection with a needle (like heroin, cocaine, amphetamines, or steroids) during the last 12 months? Do not include anything you took under a doctor's orders.												
0 Times	__	99.5	99.6	99.6	__	99.2	99.3	99.2	__	99.7	99.9	99.8
1–2	__	0.1	0.1	0.1	__	0.2	0.2	0.2	__	0.1	*	0.1
3–5	__	*	0.1	*	__	*	0.1	0.1	__	*	*	*
6–9	__	*	0.1	0.1	__	*	0.1	0.2	__	*	*	*
10–19	__	0.1	0.1	0.1	__	0.2	0.2	0.1	__	*	*	*
20–39	__	*	*	*	__	0.1	*	*	__	*	*	*
40+ Times	__	0.2	0.1	0.1	__	0.2	0.1	0.1	__	0.2	0.1	*
Weighted N =	__	*3644*	*3441*	*4077*	__	*1727*	*1615*	*1905*	__	*1917*	*1826*	*2172*
Needle Sharing: Lifetime and Last 12 Months												
Have you ever taken such drugs using a needle that you knew (or suspected) had been used by someone else before you used it?												
Yes, in the last 12 months	__	0.1	0.1	0.1	__	0.1	0.2	0.2	__	0.1	0.1	0.1
Yes, but not in the last 12 months	__	0.3	0.4	0.4	__	0.3	0.4	0.3	__	0.3	0.3	0.4
No, never	__	99.7	99.5	99.5	__	99.6	99.4	99.4	__	99.7	99.6	99.6
Weighted N =	__	*3610*	*3387*	*4032*	__	*1708*	*1582*	*1888*	__	*1902*	*1805*	*2144*

Source. The Monitoring the Future study, the University of Michigan.

"*" indicates a prevalence rate of less than 0.05%.

[a]Data presented in this table are two-year moving averages. The 2005 data is 2004 and 2005 combined; the 2006 data is 2005 and 2006 combined; the 2007 data is a simple average of 2006 and 2007, because these questions were included in two questionnaire forms in 2006 and three forms in 2007.

TABLE 10-11

Trends[a] in Number of Partners, Gender of Partners, and Condom Use: Total and by Gender among Respondents of Modal Ages 21–30

(Entries are percentages.)

	Total				Male				Female			
	2004	2005	2006	2007	2004	2005	2006	2007	2004	2005	2006	2007
Number of Partners in Last 12 Months												
During the LAST 12 MONTHS, how many sex partners have you had? (This includes vaginal, oral, or anal sex.)												
None	—	14.5	14.6	13.7	—	16.9	16.6	14.7	—	12.3	12.8	12.7
One	—	61.2	61.5	61.9	—	56.3	56.2	57.0	—	65.6	66.1	66.2
Two	—	10.1	9.3	9.5	—	10.1	8.7	8.9	—	10.2	9.8	10.1
Three	—	5.9	6.2	5.8	—	6.1	7.5	7.2	—	5.6	5.1	4.5
Four	—	3.2	3.4	4.0	—	3.5	4.3	4.8	—	2.9	2.6	3.3
5–10	—	3.9	4.1	4.2	—	5.2	5.3	5.8	—	2.7	3.0	2.8
11–20	—	0.9	0.7	0.6	—	1.5	0.9	0.9	—	0.4	0.5	0.4
21–100	—	0.2	0.2	0.2	—	0.4	0.4	0.5	—	0.1	*	*
More than 100	—	0.1	0.2	0.1	—	0.1	0.2	0.1	—	0.1	0.1	*
Weighted N =	—	*3628*	*3432*	*4066*	—	*1720*	*1611*	*1902*	—	*1908*	*1821*	*2163*
Gender of Partners in Last 12 Months[b]												
During the LAST 12 MONTHS, have your sex partner or partners been …												
Exclusively male?	—	53.4	54.0	54.0	—	3.9	4.3	4.6	—	95.8	96.0	96.3
Both male and female?	—	1.5	1.4	1.4	—	1.0	0.8	1.0	—	1.9	1.9	1.7
Exclusively female?	—	45.1	44.6	44.6	—	95.0	94.9	94.4	—	2.3	2.1	2.0
Weighted N =	—	*3103*	*2935*	*3504*	—	*1432*	*1344*	*1616*	—	*1672*	*1590*	*1888*
Frequency of Condom Use in Last 12 Months[b]												
When you had sexual intercourse during the LAST 12 MONTHS, how often were condoms used? (This includes vaginal and anal sex, but not oral sex.)												
Never	—	42.1	41.6	40.5	—	37.0	36.4	35.8	—	46.5	46.1	44.4
Seldom	—	13.7	13.2	13.6	—	13.7	12.8	13.3	—	13.7	13.5	13.7
Sometimes	—	12.4	13.3	13.5	—	12.8	13.0	13.3	—	12.0	13.5	13.7
Most times	—	15.5	15.2	15.2	—	17.8	18.0	16.8	—	13.5	12.9	13.9
Always	—	16.4	16.7	17.2	—	18.8	19.9	20.7	—	14.3	14.0	14.3
Weighted N =	—	*3076*	*2905*	*3476*	—	*1423*	*1330*	*1607*	—	*1653*	*1574*	*1869*

Source. The Monitoring the Future study, the University of Michigan.

"*" indicates a prevalence rate of less than 0.05%.

[a]Data presented in this table are two-year moving averages. The 2005 data is 2004 and 2005 combined; the 2006 data is 2005 and 2006 combined; the 2007 data is a simple average of 2006 and 2007, because these questions were included in two questionnaire forms in 2006 and three forms in 2007.

[b]Based on those reporting contact with one or more partners during the past year. Those reporting no partners are omitted.

TABLE 10-12

Trends[a] in Blood Donation and Test for HIV, Lifetime and Last 12 Months: Total and by Gender among Respondents of Modal Ages 21–30

(Entries are percentages.)

	Total				Male				Female			
	2004	2005	2006	2007	2004	2005	2006	2007	2004	2005	2006	2007
Blood Donation: Lifetime and Last 12 Months												
Have you ever donated blood or blood plasma?												
Yes, in the last 12 months	__	10.9	11.3	10.5	__	11.9	12.5	11.8	__	10.1	10.2	9.3
Yes, but not in the last 12 months	__	33.8	33.2	34.2	__	33.6	32.2	33.1	__	33.9	34.1	35.2
No, never	__	55.3	55.6	55.3	__	54.5	55.4	55.1	__	56.0	55.7	55.5
Weighted N =	__	*3669*	*3463*	*4096*	__	*1744*	*1629*	*1917*	__	*1926*	*1833*	*2179*
Test for HIV: Lifetime and Last 12 Months												
Have you ever been tested for HIV/AIDS? (Do not include tests that you may have had when donating blood or blood plasma.)												
Yes, in the last 12 months	__	20.4	19.6	20.1	__	16.7	16.0	16.0	__	23.7	22.9	23.8
Yes, but not in the last 12 months	__	24.0	23.9	23.5	__	21.2	20.8	21.2	__	26.5	26.6	25.5
No, never	__	55.7	56.5	56.4	__	62.2	63.2	62.8	__	49.8	50.6	50.7
Weighted N =	__	*3664*	*3459*	*4098*	__	*1738*	*1629*	*1919*	__	*1927*	*1830*	*2179*
Received HIV Test Results												
Did you receive the results of your most recent HIV/AIDS test? (We don't want to know your test results.)												
Yes	__	92.2	92.8	92.5	__	89.8	91.2	92.2	__	93.9	93.8	92.7
No	__	7.8	7.2	7.5	__	10.2	8.8	7.8	__	6.1	6.2	7.3
Weighted N =	__	*1610*	*1486*	*1764*	__	*655*	*591*	*701*	__	*955*	*895*	*1063*

Source. The Monitoring the Future study, the University of Michigan.

[a]Data presented in this table are two-year moving averages. The 2005 data is 2004 and 2005 combined; the 2006 data is 2005 and 2006 combined; the 2007 data is a simple average of 2006 and 2007, because these questions were included in two questionnaire forms in 2006 and three forms in 2007.

INDEX[60]

[60]This index comprises drugs and their variables mentioned in the text, figures, and selected tables.

Study Web site address:
http://www.monitoringthefuture.org

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