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U-M has a satellite uplink TV studio and an ISDN radio line for interviews.

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Note: Tables and figures associated with this release are available at myumi.ch/651AM.

Daily marijuana use among U.S. college students highest since 1980

ANN ARBOR—Daily marijuana use among the nation's college students is on the rise, surpassing daily cigarette smoking for the first time in 2014.

A series of national surveys of U.S. college students, as part of the University of Michigan's Monitoring the Future study, shows that marijuana use has been growing slowly on the nation's campuses since 2006.

Daily or near-daily marijuana use was reported by 5.9 percent of college students in 2014—the highest rate since 1980, the first year that complete college data were available in the study. This rate of use is up from 3.5 percent in 2007. In other words, one in every 17 college students is smoking marijuana on a daily or near-daily basis, defined as use on 20 or more occasions in the prior 30 days.

Other measures of marijuana use have also shown an increase: The percent using marijuana once or more in the prior 30 days rose from 17 percent in 2006 to 21 percent in 2014. Use in the prior 12 months rose from 30 percent in 2006 to 34 percent in 2014. Both of these measures leveled in 2014.

"It's clear that for the past seven or eight years there has been an increase in marijuana use among the nation's college students," said Lloyd Johnston, the principal investigator of the study. "And this largely parallels an increase we have been seeing among high school seniors."

Much of this increase may be due to the fact that marijuana use at any level has come to be seen as dangerous by fewer adolescents and young adults. For example, while 55 percent of all 19-to-22-year-old high school graduates saw regular marijuana use as dangerous in 2006, only 35 percent saw it as dangerous by 2014.

The study also found that the proportion of college students using any illicit drug, including marijuana, in the prior 12 months rose from 34 percent in 2006 to 41 percent in 2013 before falling off some to 39 percent in 2014. That seven-year increase was driven primarily by the increase in marijuana use, though marijuana was not the only drug on the rise.

The proportion of college students using any illicit drug other than marijuana in the prior 12 months increased from 15 percent in 2008—the recent low point—to 21 percent in 2014, including a continuing increase in 2014. The increase appears attributable mostly to college students' increased use of amphetamines (without a doctor's orders) and use of ecstasy.

These and other results about drug use come from Monitoring the Future, an annual survey that has been reporting on U.S. college students' substance use of all kinds for 35 years. The study began in 1980 and is conducted by the U-M Institute for Social Research with funding from the National Institute on Drug Abuse, one of the National Institutes of Health.

College students' nonmedical use of amphetamines in the prior 12 months nearly doubled between 2008 (when 5.7 percent said they used) and 2012 (when 11.1 percent used), before leveling at 10.1 percent in 2014.

"It seems likely that this increase in amphetamine use on the college campus resulted from more students using these drugs to try to improve their studies and test performance," Johnston said.

Their age-peer high school graduates not in college had higher-reported amphetamine use for many years (1983–2008), but after 2010, college students have had the higher rate of use.

"Fortunately, their use of these drugs appears to have leveled among college students, at least," he said.

Ecstasy (MDMA, sometimes called Molly), had somewhat of a comeback in use among college students from 2007 through 2012, with past 12-month use more than doubling from 2.2 percent in 2007 to 5.8 percent in 2012, before leveling. Previously, ecstasy had fallen from favor among college students. By 2004, it had fallen to quite low levels and then remained at low levels through 2007.

Past-year use of cocaine showed a statistically significant increase from 2.7 percent in 2013 to 4.4 percent in 2014.

"We are being cautious in interpreting this one-year increase, which we do not see among high school students; but we do see some increase in cocaine use in other young adult age bands, so there may in fact be an increase in cocaine use beginning to occur," Johnston said. "There is some more welcome news for parents as they send their children off to college this fall. Perhaps the most important is that five out of every 10 college students have not used any illicit drug in the past year, and more than three quarters have not used any in the prior month."

In addition, the use of synthetic marijuana (also called K-2 or spice) has been dropping sharply since its use was first measured in 2011. At that time, 7.4 percent of college students indicated having used synthetic marijuana in the prior 12 months; by 2014 the rate had fallen to just 0.9 percent, including a significant decline in use in 2014. One reason for the decline in synthetic drug use is that an increasing number of young people see it as dangerous.

Likewise, college students' use of salvia—a hallucinogenic plant which became popular in recent years—fell from an annual prevalence of 5.8 percent in 2009 to just 1.1 percent in 2014.

The nonmedical use of narcotic drugs—which has accounted for an increasing number of deaths in recent years according to official statistics—actually has been declining among college students, falling from 8.8 percent reporting past-year use in 2006 down to 4.8 percent by 2014. This is a particularly welcome improvement from a public health point of view, note the investigators.

There is no evidence of a shift over from narcotic drugs to heroin use in this population. Use of heroin has been very low among college students over the past five years or so—lower than it was in the late 1990s and early 2000s.

The non-medical use of tranquilizers by college students has fallen by nearly half since 2003, when 6.9 percent reported past-year use, to 2014, when 3.5 percent did.

The use of LSD and other hallucinogenic drugs, once popular in this age group, remains at low levels of use on campus, with past-year usage rates at 2.2 percent and 3.2 percent, respectively. And use of the so-called club drugs (Ketamine, GHB, Rohypnol) remains very low. Further, the use of so-called bath salts (synthetic stimulants often sold over the counter) never caught on among college students, who have a negligible rate of use.

In sum, quite a number of drugs have been fading in popularity on U.S. college campuses in recent years, and a similar pattern is found among youth who do not attend college. Two of the newer drugs, synthetic marijuana and salvia, have shown steep declines in use. Other drugs are showing more gradual declines, including narcotic drugs other than heroin, sedatives and tranquilizers—all used nonmedically—as well as inhalants and hallucinogens.

On the other hand, past-year and past-month marijuana use increased from 2006 through 2013 before leveling; and daily marijuana use continues to grow, reaching the highest level seen in the past 35 years in 2014 (5.9 percent). Amphetamine use grew fairly sharply on campus between 2008 and 2012, and it then stabilized at high levels not seen since the mid-1980s.

Ecstasy use has made somewhat of a rebound since the recent low observed among college students in 2007. Cocaine use among college students is well below the 1980s and 1990s rates, but the significant increase in 2014 among college students suggests a need to watch this drug carefully in the future.

ALCOHOL AND TOBACCO

Use of a number of licit drugs is also covered in the MTF surveys, including alcoholic beverages and various tobacco products.

While 63 percent of college students in 2014 said that they have had an alcoholic beverage at least once in the prior 30 days, that figure is down a bit from 67 percent in 2000 and down considerably from 82 percent in 1981. The proportion of the nation's college students saying they have been drunk in the past 30 days was 43 percent in 2014, down some from 48 percent in 2006.

Occasions of heavy or binge drinking—here defined as having five or more drinks in a row on at least one occasion in the prior two weeks—have consistently had a higher prevalence among college students than among their fellow high school classmates who are not in college.

Still, between 1980 and 2014, college students' rates of such drinking declined 9 percentage points from 44 percent to 35 percent, while their noncollege peers declined 12 percentage points from 41 percent to 29 percent, and high school seniors' rates declined 22 percentage points from 41 percent to 19 percent.

Of particular concern is the extent of extreme binge drinking in college, first defined as having 10 or more drinks in a row at least once in the prior two weeks, and then defined as having 15 or more drinks in a row in that same time interval. Based on the combined years 2005–2014, the estimates for these two behaviors among college students are 13 percent and 5 percent, respectively.

"Despite the modest improvements in drinking alcohol at college, there are still a sizable number of students who consume alcohol at particularly dangerous levels," Johnston said.

Cigarette smoking continued to decline among the nation's college students in 2014, when 13 percent said they had smoked one or more cigarettes in the prior 30 days, down from 14 percent in 2013 and from the recent high of 31 percent in 1999—a decline of more than half. As for daily smoking, only 5 percent indicated smoking at that level, compared with 19 percent in 1999—a drop of nearly three fourths in the number of college students smoking daily.

"These declines in smoking at college are largely the result of fewer of these students smoking when they were still in high school," Johnston said. "Nevertheless, it is particularly good news that their smoking rates have fallen so substantially."

Unfortunately, the appreciable declines in cigarette smoking have been accompanied by some increases in the use of other forms of tobacco or nicotine. Smoking tobacco using a hookah (a type of water pipe) in the prior 12 months rose substantially among college students, from 26 percent in 2013 to 33 percent in 2014.

In 2014, the use of e-cigarettes in the past 30 days stood at 9.7 percent, while use of flavored little cigars stood at 9.8 percent, of regular little cigars at 8.6 percent and of large cigars at 8.4 percent. The study will continue tracking the extent to which these alternate forms of tobacco use are changing in popularity, not only among college students, but also among their age peers not in college and among secondary school students.

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The Monitoring the Future study is now in its 41st year and has surveyed nationally representative samples of full-time college students one to four years beyond high school each year for 35 years, starting in 1980. The annual samples of college students have ranged between 1,000 and 1,500 per year.

MTF is an investigator-initiated research undertaking, conceived and conducted by a group of research professors at the University of Michigan's Institute for Social Research (listed as authors below) and funded under a series of peer-reviewed, competitive research grants from the National Institute on Drug Abuse.

MTF also conducts an annual national survey of high school seniors, from which a random, nationally representative sub-sample is drawn for follow-up by mail in future years. Follow-up respondents one to four years past high school and who report being enrolled in college full-time comprise the college student sample. They are not drawn from particular colleges or universities, which helps to make the sample more representative of the wide range of two- and four-year institutions of higher education.

The findings presented here are drawn from Chapters 8 and 9 in the newly published monograph cited below:

Johnston, L.D., O'Malley, P.M, Bachman, J.G., Schulenberg, J.E. & Miech, R. A. (2015). Monitoring the Future national survey results on drug use. 1975-2014: Volume 2, College students and adults ages 19-55. Ann Arbor: Institute for Social Research. The University of Michigan, 416 pp. Available at myumi.ch/J7G22.

FIGURE 1
ANY ILLICIT DRUG
Trends in Annual Prevalence among College Students
1 to 4 Years beyond High School

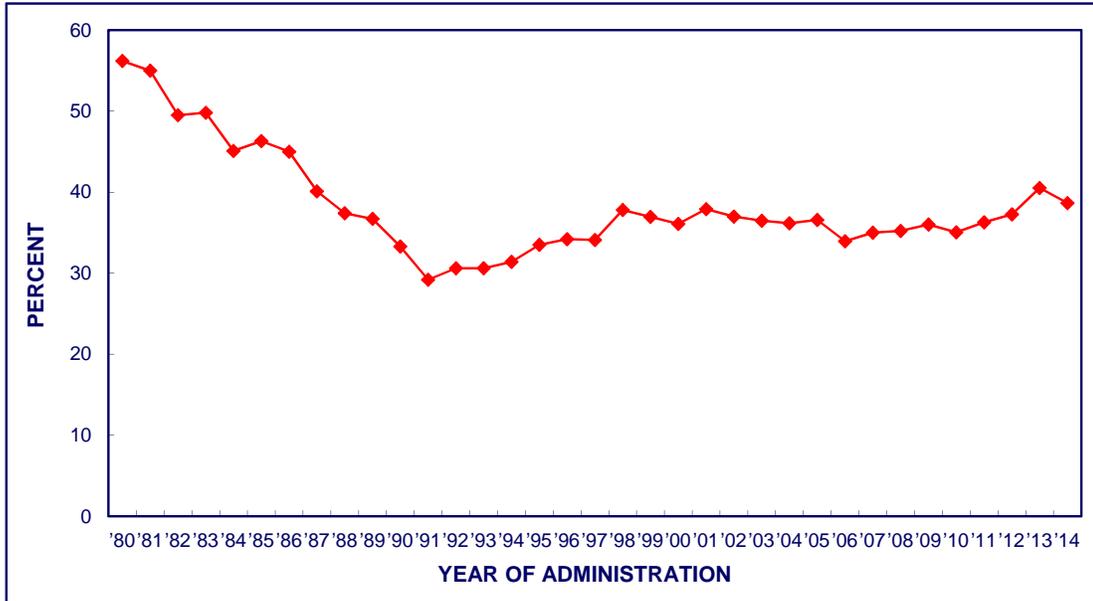
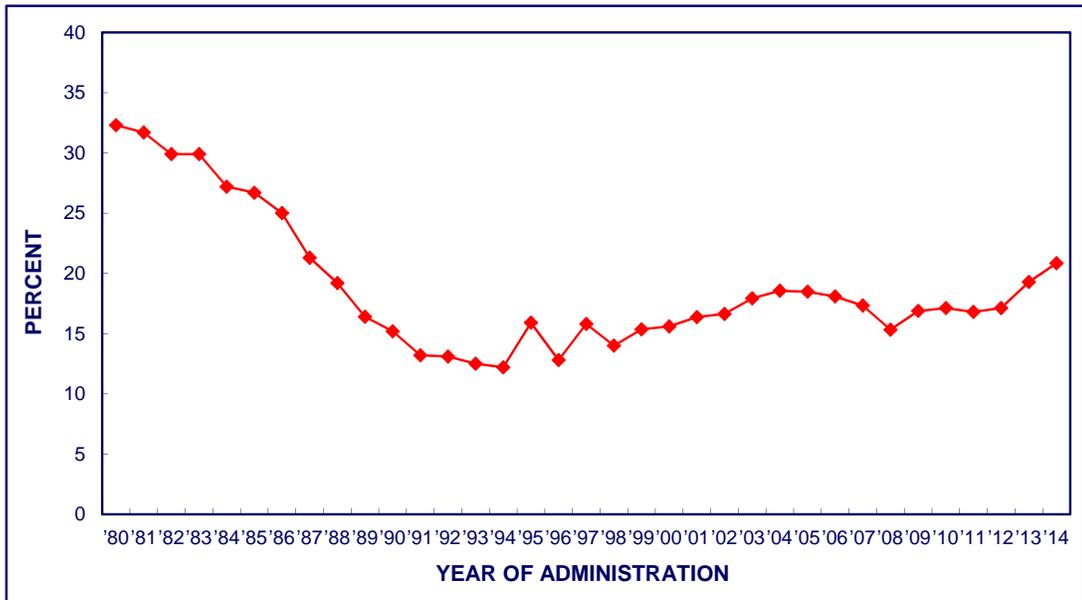


FIGURE 2
ANY ILLICIT DRUG OTHER THAN MARIJUANA
Trends in Annual Prevalence among College Students
1 to 4 Years beyond High School



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

FIGURE 3
MARIJUANA
Trends in Annual Prevalence among College Students
1 to 4 Years beyond High School

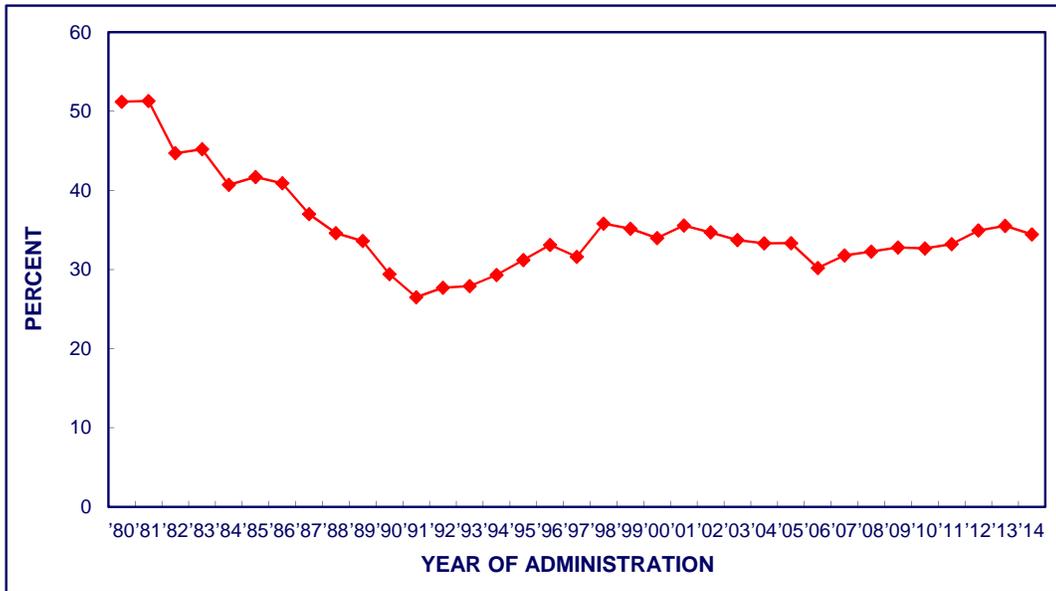
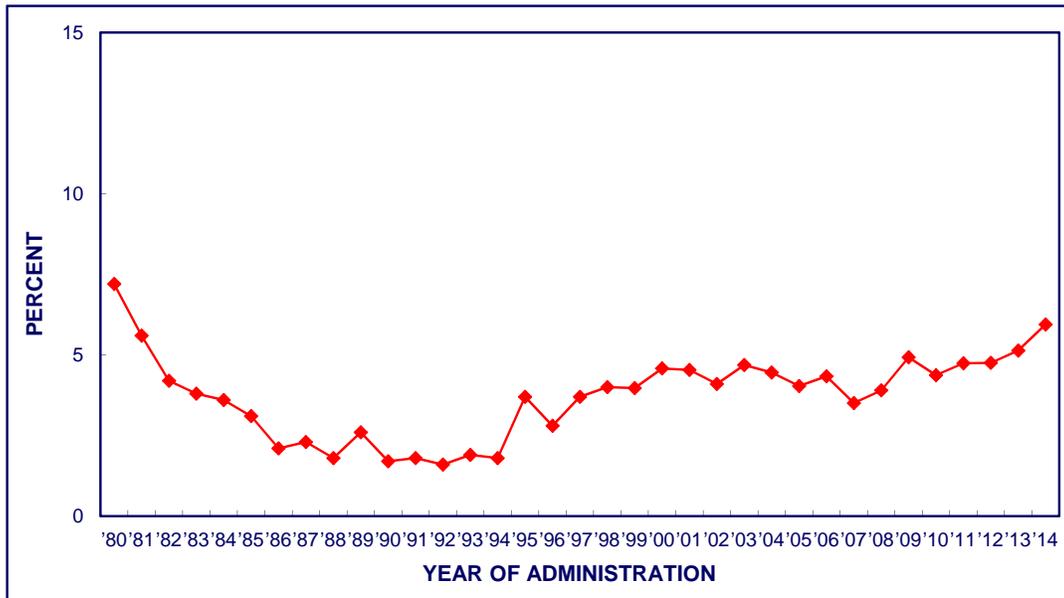


FIGURE 4
MARIJUANA
Trends in 30-Day Prevalence of Daily Use among College Students
1 to 4 Years beyond High School



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

FIGURE 5
AMPHETAMINES
Trends in Annual Prevalence among College Students
1 to 4 Years beyond High School

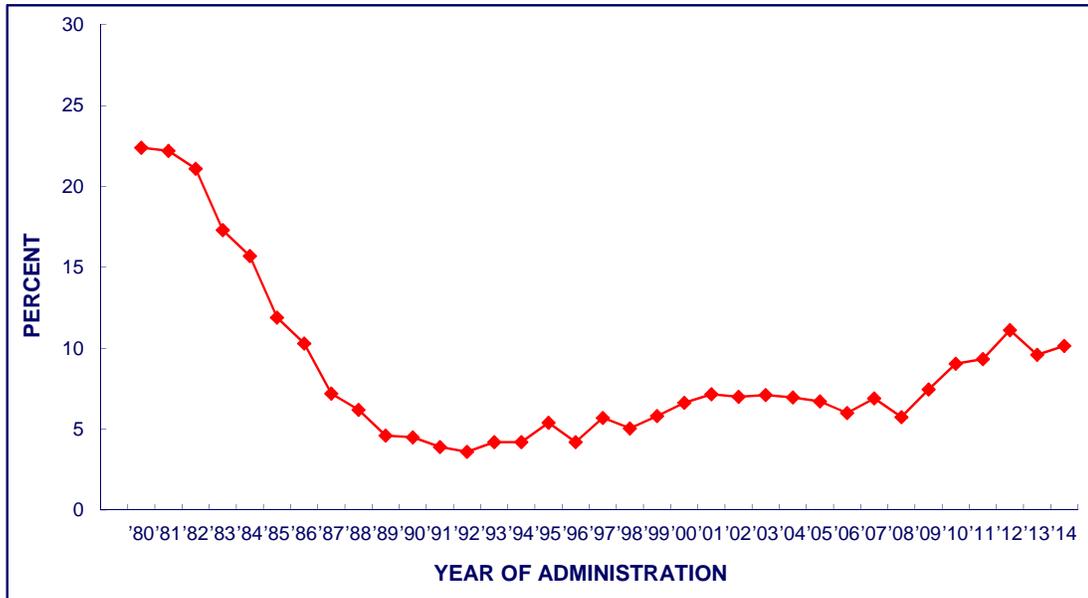
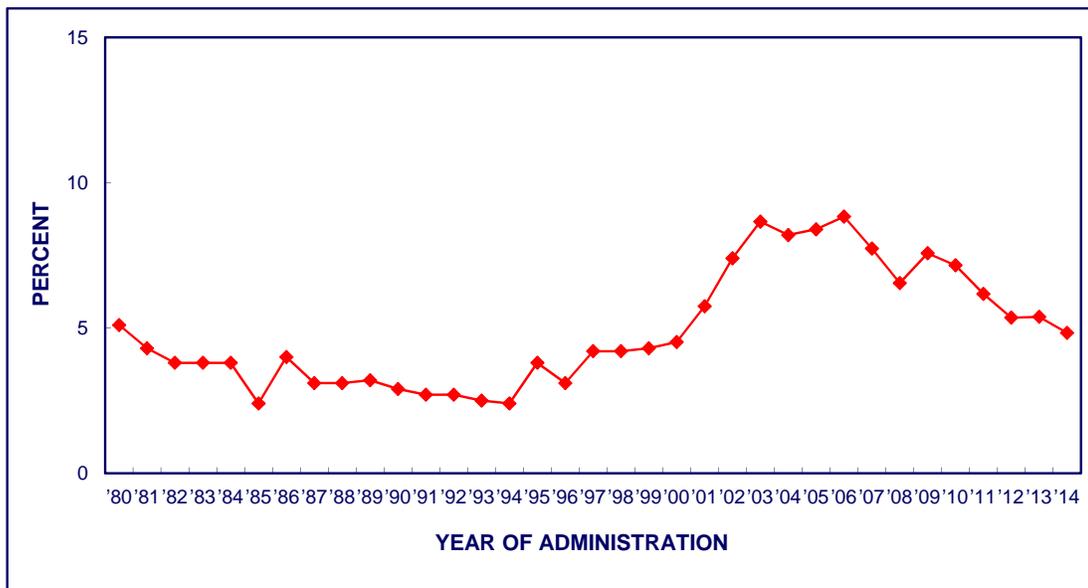


FIGURE 6
NARCOTICS OTHER THAN HEROIN
Trends in Annual Prevalence among College Students
1 to 4 Years beyond High School



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

FIGURE 7
ECSTASY (MDMA)
Trends in Annual Prevalence among College Students
1 to 4 Years beyond High School

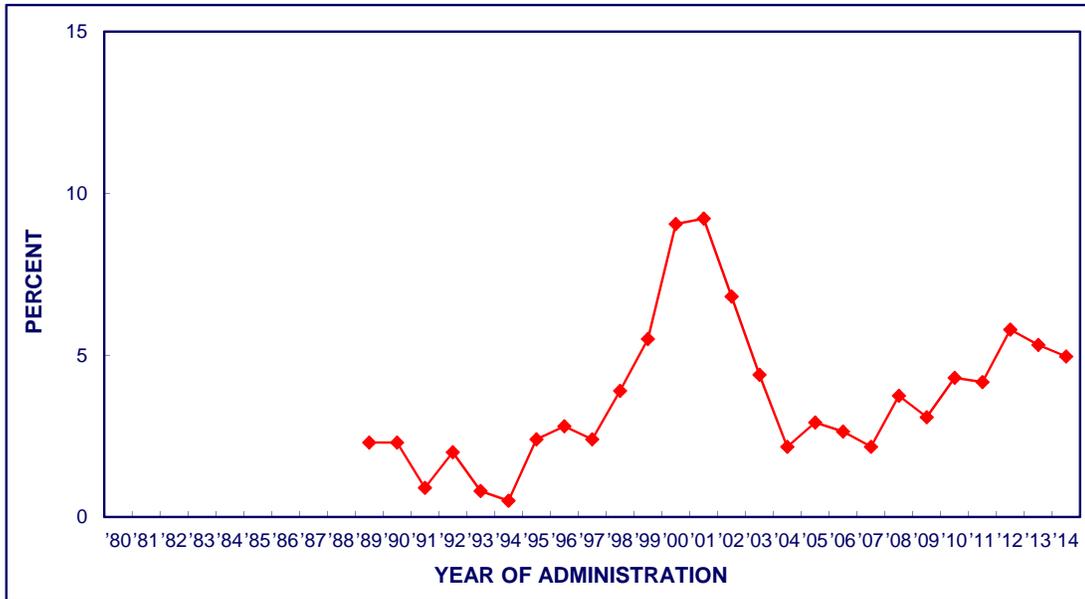
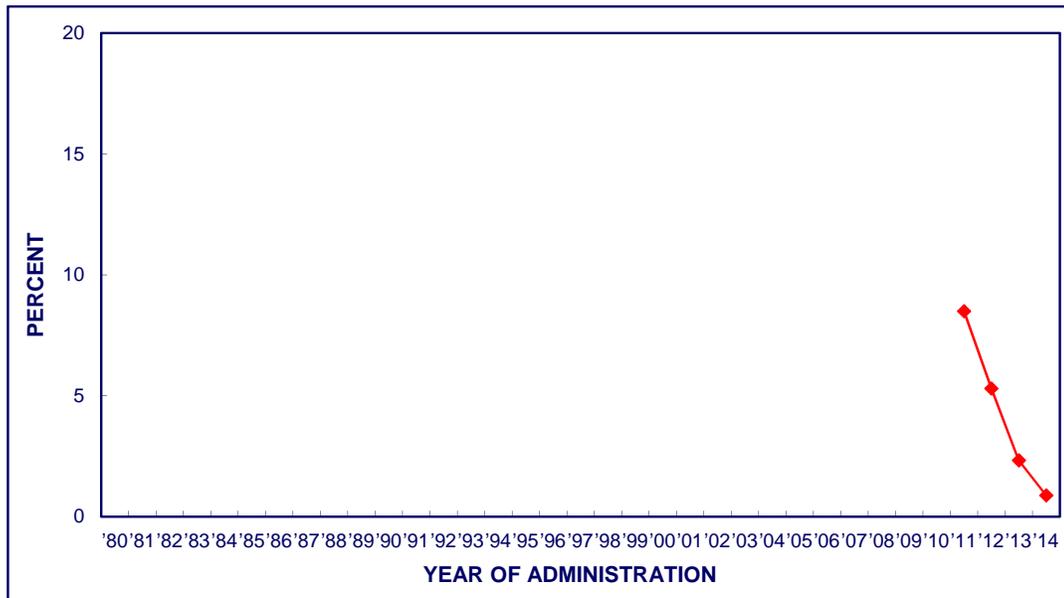


FIGURE 8
SYNTHETIC MARIJUANA
Trends in Annual Prevalence among College Students
1 to 4 Years beyond High School



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

TABLE 1
Annual Prevalence of Use for Various Types of Illicit Drugs, 2014
Among Full-Time College Students
1 to 4 Years beyond High School
by Gender
(Entries are percentages.)

	Total	Males	Females
Any Illicit Drug ^a	38.6	39.2	38.2
Marijuana	34.4	37.3	32.3
Any Illicit Drug other than Marijuana ^a	20.8	21.8	20.1
Amphetamines, Adjusted ^{f,g}	10.1	12.0	8.8
Adderall ^{b,f}	9.6	11.1	8.6
Ecstasy (MDMA) ^b	5.0	5.9	4.3
Narcotics other than Heroin ^f	4.8	5.2	4.6
Cocaine	4.4	5.6	3.6
Other Cocaine ^d	4.1	5.1	3.4
Hallucinogens ^c	4.0	6.1	2.5
Tranquilizers ^f	3.5	4.1	3.1
Hallucinogens other than LSD ^c	3.2	5.4	1.6
Sedatives (Barbiturates) ^f	3.1	2.9	3.2
Vicodin ^{b,f}	2.8	2.9	2.7
LSD ^c	2.2	3.1	1.6
Ritalin ^{b,f}	1.6	2.6	1.0
OxyContin ^{b,f}	1.3	1.0	1.4
Synthetic Marijuana ^b	0.9	2.0	0.1
Crack ^c	0.8	0.5	1.0
Steroids ^e	0.5	1.0	0.2
GHB ^e	0.2	0.3	0.2
Bath Salts (synthetic stimulants) ^b	0.2	*	0.3
Ketamine ^e	0.1	0.3	*
Methamphetamine ^e	0.1	*	0.2
Heroin	*	0.1	*
Crystal Methamphetamine (Ice) ^e	*	*	*
<i>Approximate Weighted N =</i>			
	1,030	440	590

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

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

See footnotes following Table 5.

TABLE 2
Annual Prevalence of Use for Alcohol and Tobacco, 2014
Among Full-Time College Students
1 to 4 Years beyond High School
by Gender

(Entries are percentages.)

	<u>Total</u>	<u>Males</u>	<u>Females</u>
Alcohol	76.1	75.9	76.2
Flavored Alcoholic Beverages ^h	64.2	56.2	69.6
Been Drunk ^b	60.5	59.4	61.2
Alcoholic Beverages containing Caffeine ^e	32.8	39.3	28.2
Tobacco using a Hookah ^b	32.7	34.4	31.6
Small Cigars ^e	24.2	33.4	17.8
Cigarettes	22.6	24.5	21.3
Snus ^e	5.0	10.3	1.4
Dissolvable Tobacco ^e	0.5	1.3	*
<i>Approximate Weighted N = 1,030</i>			

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

Notes. ' * ' indicates a prevalence rate of less than 0.05%.

See footnotes following Table 5.

TABLE 3
Thirty-Day Prevalence of Use for Various Types of Drugs, 2014
Among Full-Time College Students
1 to 4 Years beyond High School
by Gender

(Entries are percentages.)

	<u>Total</u>	<u>Males</u>	<u>Females</u>
Marijuana	20.8	23.5	18.8
Amphetamines, Adjusted ^{f,g}	4.8	6.7	3.4
Alcohol	63.1	64.5	62.0
Been Drunk ^b	42.6	45.5	40.4
Cigarettes	12.9	16.4	10.3
E-cigarettes ^h	9.7	9.1	10.1
Large Cigars ^h	8.4	10.3	7.0
Flavored Little Cigars ^h	9.8	16.8	4.8
Regular Little Cigars ^h	8.6	13.7	5.1
<i>Approximate Weighted N =</i>	<i>1,030</i>	<i>440</i>	<i>590</i>

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

Notes. ' * ' indicates a prevalence rate of less than 0.05%.

See footnotes following Table 5.

TABLE 4
Thirty-Day Prevalence of Dailyⁱ Use for Various Types of Drugs, 2014
Among Full-Time College Students
1 to 4 Years beyond High School
by Gender

(Entries are percentages.)

	<u>Total</u>	<u>Males</u>	<u>Females</u>
Marijuana	5.9	8.7	3.9
Cigarettes	5.2	5.7	4.8
Alcohol	4.3	5.4	3.5
<i>Approximate Weighted N =</i>	<i>1,030</i>	<i>440</i>	<i>590</i>

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

Notes. ' * ' indicates a prevalence rate of less than 0.05%.

See footnotes following Table 5.

TABLE 5
Two-Week Prevalence of Binge Drinking, 2014
Among Full-Time College Students
1 to 4 Years beyond High School
by Gender

(Entries are percentages.)

	Total	Males	Females
5+ Drinks in a Row	35.4	43.3	29.6
<i>Approximate Weighted N =</i>	<i>1,030</i>	<i>440</i>	<i>590</i>
10+ Drinks in a Row*	12.9	22.0	7.4
15+ Drinks in a Row*	4.9	9.5	1.9
<i>Approximate Weighted N =</i>	<i>2,043</i>	<i>803</i>	<i>1,240</i>

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

Notes. ' * ' indicates a prevalence rate of less than 0.05%.

See footnotes on the following page.

*Due to limited sample size, numbers for 10+ drinks in a row and 15+ drinks in a row is based on data for years 2005-2014 combined.

Footnotes for Tables 1 through 5

^aUse 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.

^bThis drug was asked about in three of the six questionnaire forms. Total *N* in 2014 for college students is approximately 520.

^cThis drug was asked about in five of the six questionnaire forms. Total *N* in 2014 for college students is approximately 860.

^dThis drug was asked about in four of the six questionnaire forms. Total *N* in 2014 for college students is approximately 690.

^eThis drug was asked about in two of the six questionnaire forms. Total *N* in 2014 for college students is approximately 340.

^fOnly drug use that was not under a doctor's orders is included here.

^gBased on the data from the revised question, which attempts to exclude inappropriate reporting of nonprescription amphetamines.

^hThis drug was asked about in one of the six questionnaire forms. Total *N* in 2014 for college students is approximately 170.

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