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## Teen smoking continues to decline in 2013

ANN ARBOR—Smoking among teens in grades 8, 10 and 12 continued to decline in 2013—a positive trend since most smokers begin their habit in adolescence—according to the latest survey results from the nationwide Monitoring the Future study.

Based on annual surveys of 40,000 to 50,000 students in about 400 secondary schools, the researchers found that the percentage of students saying that they smoked at all in the prior 30 days fell for the three grades combined, from 10.6 percent to 9.6 percent—a statistically significant drop.

"This year's decline means that the number of youngsters actively smoking has dropped by almost one-tenth over just the past year, and it follows a decline of about the same magnitude last year," said Lloyd Johnston, the principal investigator of the study. "Since the peak year in 1997, the proportion of students currently smoking has dropped by two thirds—an extremely important development for the health and longevity of this generation of Americans."

Such a reduction can translate eventually into preventing thousands of premature deaths as well as tens of thousands of serious diseases, he said. More than 400,000 Americans per year are estimated to die prematurely as a result of smoking cigarettes.

An increase in the federal tax on tobacco products, instituted in 2009, may have contributed to the recent declines in smoking in this age group, according to the investigators.

The Monitoring the Future study, which has been tracking teen smoking in the United States for nearly four decades, found that between 2012 and 2013 the percentage of students reporting any cigarette smoking in the prior 30 days (called 30-day prevalence) has decreased among 8th graders from 4.9 percent to 4.5 percent, among 10th graders from 10.8 percent to 9.1 percent, and among 12th graders from 17.1 percent to 16.3 percent (the decline in 30-day prevalence between 2012 and 2013 is statistically significant for 10th graders and for all three grades combined; longer term declines, like teen smoking, across the past five years are highly statistically significant in all grades.)

"While the improvements in the smoking numbers for just this one year are important, of course, the longer term declines are much more so," Johnston said. "Since teen smoking reached a peak around 1996-1997, the rates of current (past 30-day) smoking have fallen by nearly 80 percent among 8th graders, 70 percent among 10th graders and over 50 percent among 12th graders. Further, the proportional declines in *daily* smoking are even larger."

One important cause of these declines in current smoking is that many fewer young people today have ever started to smoke. In 1996, 49 percent of 8th graders said they had tried cigarettes, but

by 2013 only 15 percent said they had done so—a drop of seven-tenths in smoking initiation over the past 17 years. Further, the initiation of smoking continues to fall significantly among students.

These estimates come from the study's national surveys of students in about 400 secondary schools each year. The study was designed and is directed by a team of research professors at the University of Michigan's Institute for Social Research, and since its inception has been funded through research grants from the National Institute on Drug Abuse—one of the National Institutes of Health.

***Perceived Availability.*** Students in 8th and 10th grades are asked how difficult they think it would be for them to get cigarettes, if they wanted them. This *perceived availability* has shown a substantial decline since 1996, one that has continued into 2013. The 8th graders have shown the sharpest decline—from 77 percent saying they could get cigarettes "fairly easily" or "very easily" in 1996 to 50 percent today. Perceived availability among 10th graders fell from about 90 percent to 70 percent over the same interval.

"Although some real progress has been made in reducing the availability of cigarettes to those who are underage—particularly to the youngest teens—it is clear that the majority of teens still think they can get cigarettes fairly easily," Johnston said.

***Attitudes and Beliefs about Smoking.*** Nearly two thirds of 8th graders and about three quarters of 10th and 12th graders said they see a great risk of harm to the user from pack-a-day smoking. These figures have increased substantially since the mid-1990s, when perceived risk was at its recent lowest levels. The 2012 figures were the highest ever recorded for all three grade levels; however, perceived risk did not continue to rise in 2013. The percentages of teens saying that they personally *disapprove* of smoking were also at the highest levels seen in this study in 2012—89 percent, 86 percent and 84 percent for grades 8, 10 and 12 respectively—but this attitude has shown no further increase in 2013 either.

Other attitudes toward smoking and smokers have changed in important ways, especially during much of the period of decline in cigarette use. These changes include increases in preferring to date nonsmokers (currently around 78 percent of teens report this preference, down very slightly from last year), strongly disliking being around people who are smoking, thinking that becoming a smoker reflects poor judgment, and believing that smoking is a dirty habit. All of these negative attitudes about smoking and smokers rose to high levels by 2007, but they have either leveled or begun to reverse since then (Table 3).

"The halt in the increases in perceived risk and disapproval of smoking are not good signs, nor is the softening in other attitudes related to smoking," Johnston said. "As a result, future progress in lowering teen smoking rates is likely to depend on there being further changes in the external environment—such as raising cigarette taxes, further limiting where smoking is permitted, bringing back broad-based anti-smoking ad campaigns, and making quit-smoking programs more available."

## **Other Tobacco Products**

At the same time that cigarette smoking has been receding among young people, a number of other forms of tobacco consumption are being introduced into the market. Public health professionals worry that, with aggressive marketing and fewer federal controls, these other forms of tobacco consumption will begin to offset the hard-won gains in cigarette smoking.

***Smokeless Tobacco.*** The use of smokeless tobacco (which includes snuff, plug, dipping tobacco, chewing tobacco, and more recently, "snus") also is assessed in the study ("snus" is singular and rhymes with "goose"). From the mid-1990s to the early 2000s, there was a substantial decline in the use of smokeless tobacco among teens—30-day prevalence fell by one third to one half in all grades—but the declines ended and a rebound in use developed from the mid-2000s through 2010.

After 2010, however, there were modest declines in all three grades for a couple of years, although they did not continue into 2013 (none of the changes for smokeless tobacco use in 2013 is statistically significant at any grade level). Thirty-day prevalence rates are now down by nearly two thirds (63 percent) from their peaks in the mid-1990s among 8th graders, and by nearly four-tenths among 10th graders and one third among 12th graders. Thirty-day prevalence rates for smokeless tobacco use in 2013 are 2.8 percent, 6.4 percent and 8.1 percent among 8th, 10th and 12th graders, respectively. The rates in each of the three grades are considerably higher for boys (3.8 percent, 11.1 percent and 14.6 percent) than for girls (1.9 percent, 2.0 percent and 1.4 percent).

Perceived risk, which MTF has shown to be an important determinant of trends for many forms of substance use, including cigarette use, also appears to have played an important role in the decline of smokeless tobacco use. In all three grades, perceived risk for smokeless tobacco rose fairly steadily from 1995 through 2004, as use was falling.

However, there was not a great deal of fall-off in perceived risk subsequently, between 2004 and 2010, suggesting that other factors may have led to the increases in smokeless tobacco use in that time interval. These factors might include increased promotion of these products, a proliferation of types of smokeless tobacco products available and increased restrictions on places where cigarette smoking is permitted.

The leveling in smokeless use since 2010 may be attributable, at least in part, to the 2009 increase in federal taxes on tobacco. However, perceived risk for smokeless tobacco declined significantly in 2012 in the lower grades and has fallen again in 2013—this time in all three grades—which the investigators believe could portend a future rise in use.

***Hookahs and Small Cigars.*** Two of the latest developments to raise public health concern are the smoking of tobacco by using hookah (pronounced "WHO-ka") water pipes, and the smoking of small or little cigars. The concern is that as cigarette smoking continues to decline among adolescents, they will be enticed to smoke tobacco in these other forms, which still carry serious health risks.

Questions about these forms of tobacco use in the prior 12 months (annual prevalence) were included in the survey of 12th graders for the first time in 2010, when 17.1 percent of 12th graders said that they had used a hookah to smoke tobacco in the prior 12 months. This rate has risen to 21.4 percent by 2013, including a significant 3.1 percentage-point increase in 2013. Only about 9 percent of 12th-grade students in 2013 reported smoking with a hookah more than five times during the year, suggesting a considerable amount of light or experimental use. Males had only a slightly higher annual prevalence rate than females—22 percent versus 21 percent.

Smoking small cigars is about as prevalent a behavior as hookah smoking, with 12th graders having an annual prevalence of 20 percent in 2013. This is unchanged from 2011 and 2012 and is lower than the first reading on these products in 2010 (23 percent). Only 12 percent of 12th-grade students in 2012 or 2013 indicate use on more than two occasions during the year, and only 2 percent indicate using them more than 20 times. There is a larger gender difference for this form of tobacco use than for hookah smoking, with an annual prevalence of 27 percent among male 12th graders compared to 15 percent among females.

"We are continuing to monitor these two forms of tobacco consumption to see if they represent a growing problem among youth, and we will be examining their use among young adults, as well," Johnston said.

One important development is that some manufacturers have slightly raised the weight of their small cigars in order to remove them from FDA oversight under current law, he said. A number are flavored, for example, which is likely to make them more attractive to young people. And the slight rise in weight substantially lowers the federal tax.

***Snus and Dissolvable Tobacco.*** In 2011, questions were introduced dealing with two more recent forms of tobacco use—snus and dissolvable tobacco. The question about snus—a moist form of snuff that is placed under the upper lip—asks on how many occasions in the past 12 months the student "...used snus (a small packet of tobacco that is put in the mouth)." Among 12th graders in 2011, 7.9 percent reported having used snus in the last 12 months—a rate that remained essentially unchanged in 2012 (7.9 percent) and 2013 (7.7 percent). The proportion using more than two times is 5.3 percent in both 2012 and 2013.

Clearly, snus has made some inroads among 12th graders, but that seems to be abating, Johnston said. In 2012, the question about use of snus was added to the questionnaires administered to 8th and 10th graders, and in 2013 a significant decline in use is evident among 10th graders (down 1.7 percentage points to 5.2 percent). The pattern of use by subgroups of 12th-grade students follows the pattern for all smokeless products generally, with use much higher among males (14.6 percent versus 1.4 percent among females).

The question about dissolvable tobacco products asks on how many occasions in the past 12 months the student "... used dissolvable tobacco products (Ariva, Stonewall, Orbs)." These products, in the form of pellets, strips or sticks, actually dissolve in the mouth, unlike other forms of chewing tobacco. Among 12th graders in 2011, only 1.5 percent reported having used in the prior 12 months. In 2012 it was 1.6 percent, and in 2013 it was 1.9 percent. Since the question was introduced for the lower grades in 2012, the annual prevalence rates in 2013 show little

change, currently at 1.1 percent for grade 8 and 1.2 percent for grade 10. It appears that these products have not yet made significant inroads among secondary school students.

Tables and figures associated with this release may be accessed at:

<http://www.monitoringthefuture.org/data/data.html>

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Monitoring the Future has been funded under a series of competing, investigator-initiated research grants from the National Institute on Drug Abuse, one of the National Institutes of Health. The lead investigators, in addition to Lloyd Johnston, are Patrick O'Malley, Jerald Bachman, John Schulenberg, and Richard Miech—all research professors at the University of Michigan's Institute for Social Research. Surveys of nationally representative samples of American high school seniors were begun in 1975, making the class of 2013 the 39th such class surveyed. Surveys of 8th and 10th graders were added to the design in 1991, making the 2013 nationally representative samples the 23rd such classes surveyed. The 2013 samples total 41,675 students located in 389 secondary schools. The samples are drawn separately at each grade level to be representative of students in that grade in public and private secondary schools across the coterminous United States.

The findings summarized here will be published in January in a forthcoming volume: Johnston, L. D., O'Malley, P. M., Miech, R.A., Bachman, J. G., & Schulenberg, J. E. (2014). *Monitoring the Future national results on adolescent drug use: Overview of key findings, 2013*. Ann Arbor, Mich.: Institute for Social Research, the University of Michigan. The content presented here is solely the responsibility of the authors and does not necessarily represent the official views of the National Institute on Drug Abuse, or the National Institutes of Health.

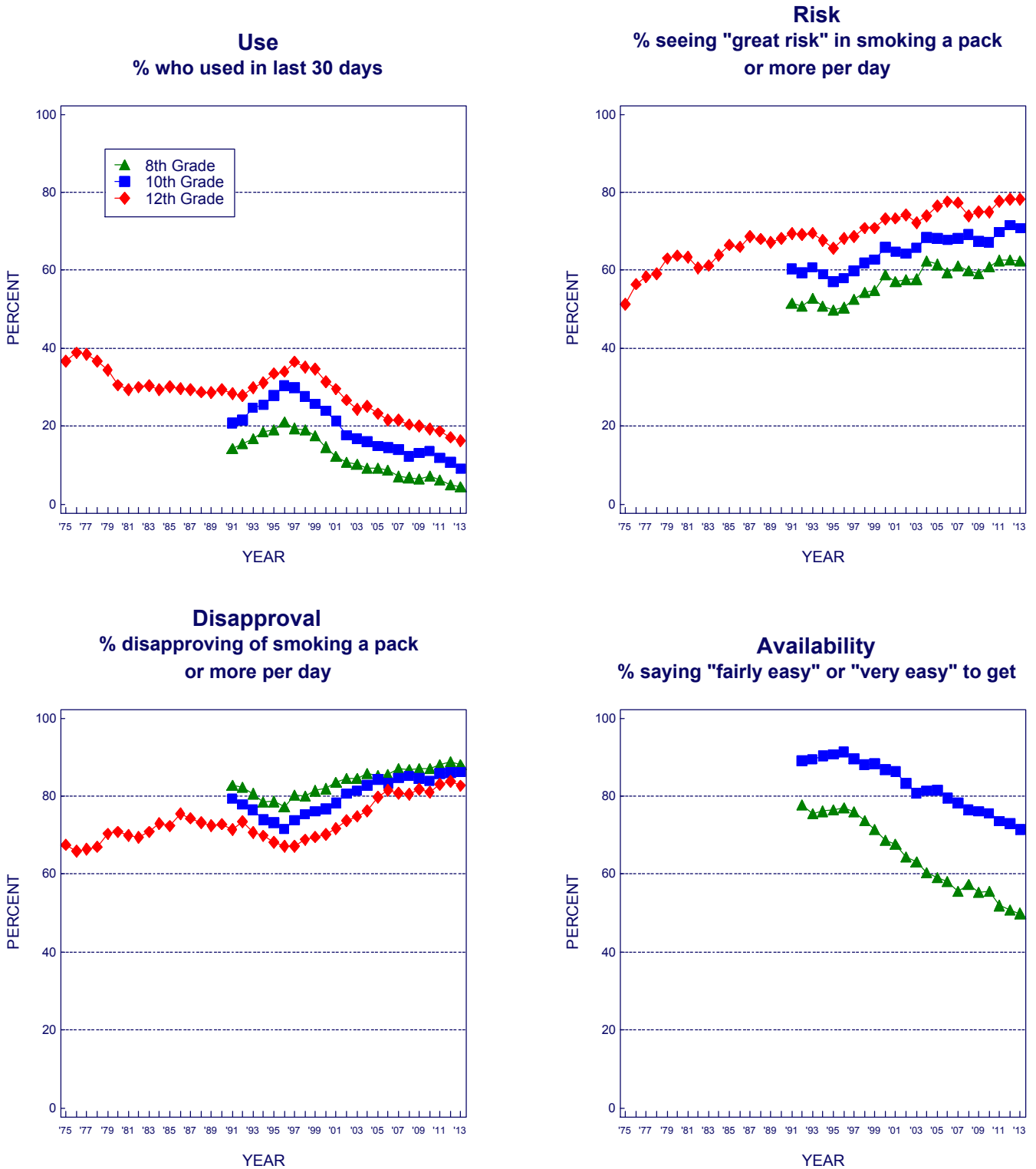
This year's findings on drug use are presented in a separate companion press release to this one:

<http://www.monitoringthefuture.org/press.html>

**FIGURE 1**

**Cigarettes: Trends in 30-Day Use, Risk, Disapproval, and Availability**

Grades 8, 10, and 12

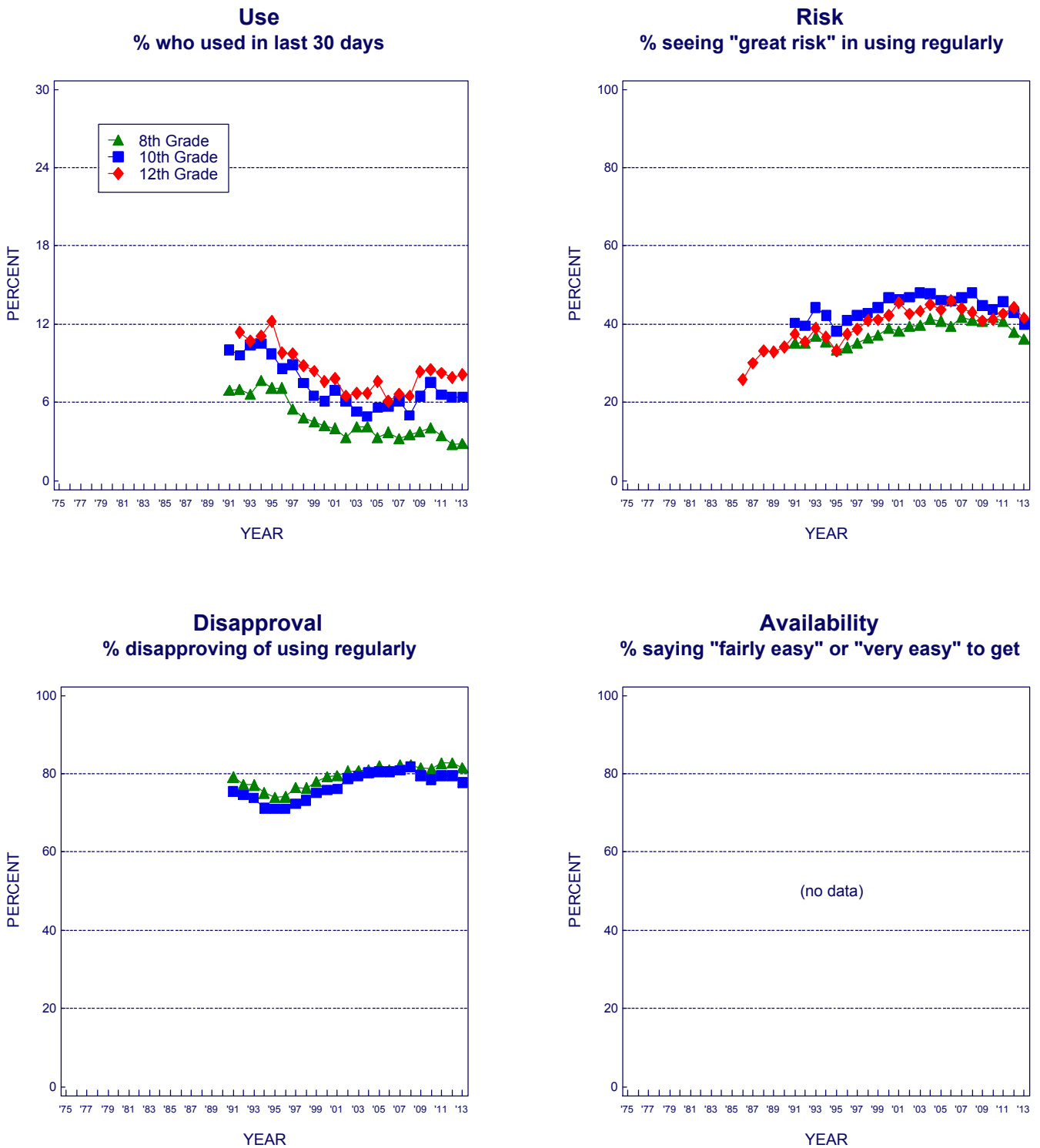


Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 2**

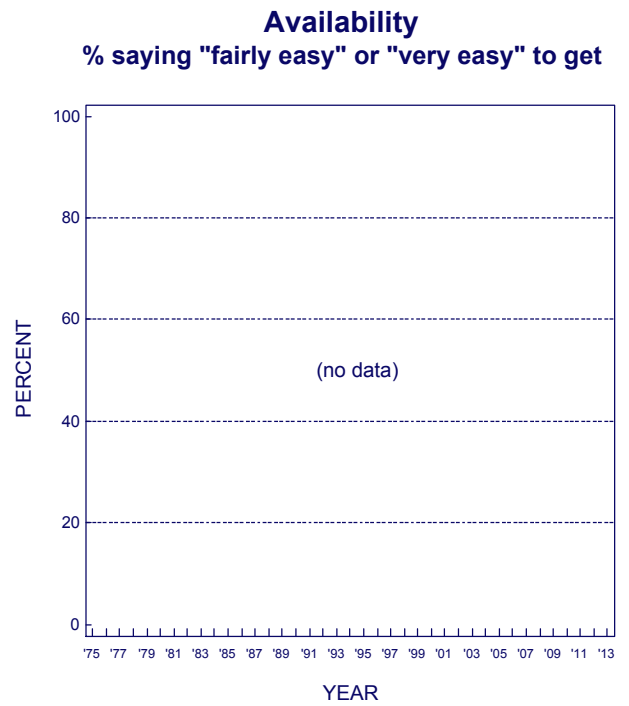
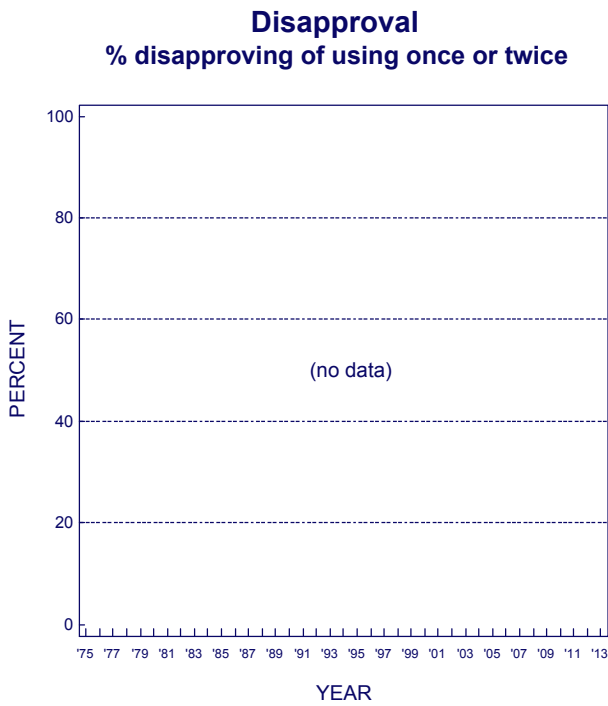
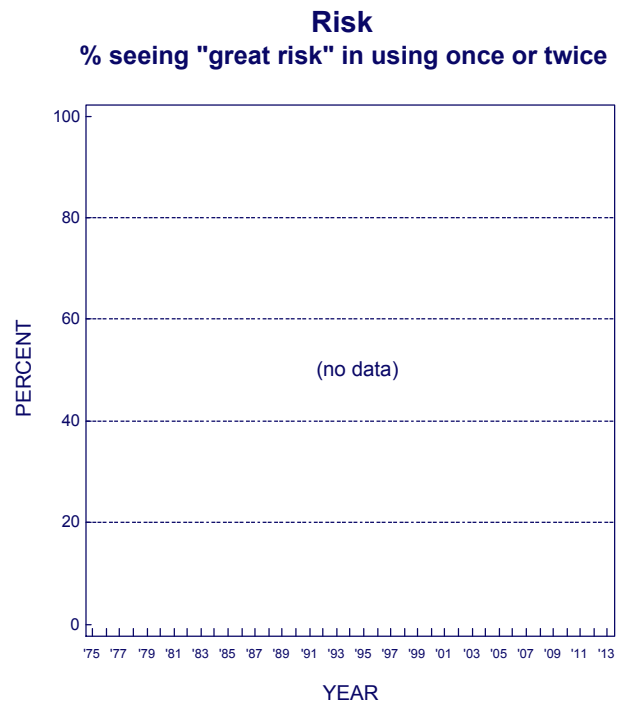
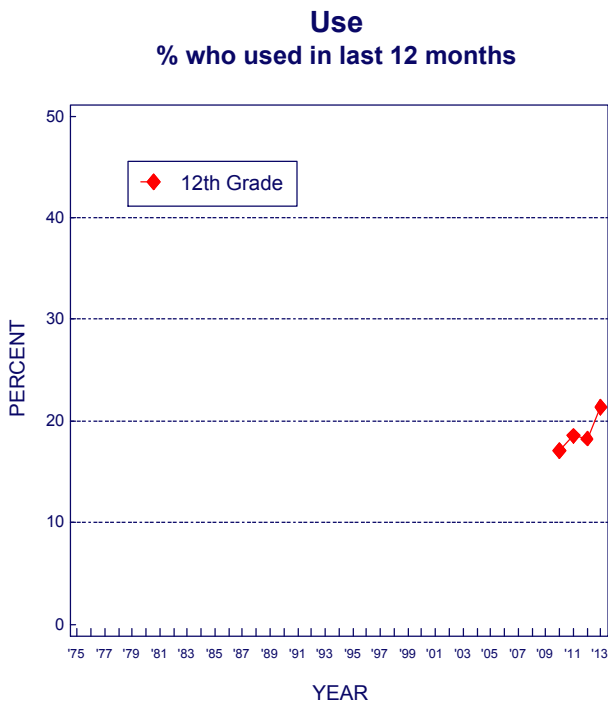
**Smokeless Tobacco: Trends in 30-Day Use, Risk, and Disapproval**

Grades 8, 10, and 12



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

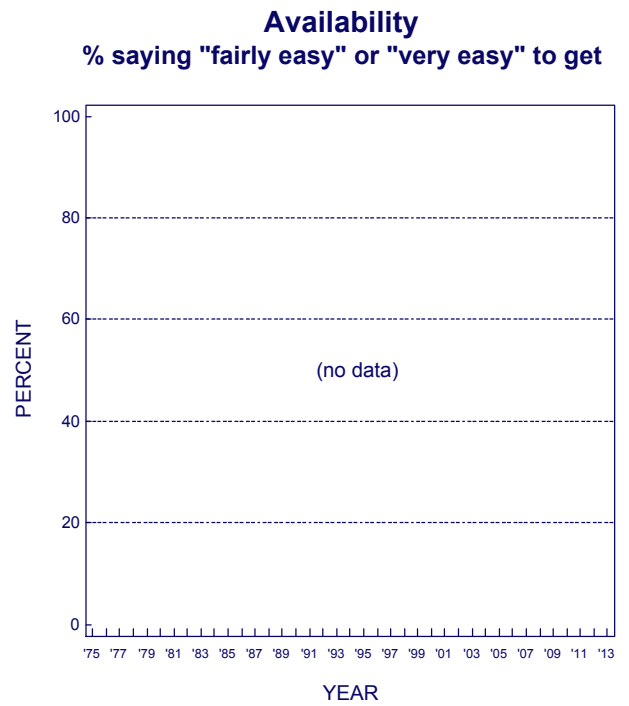
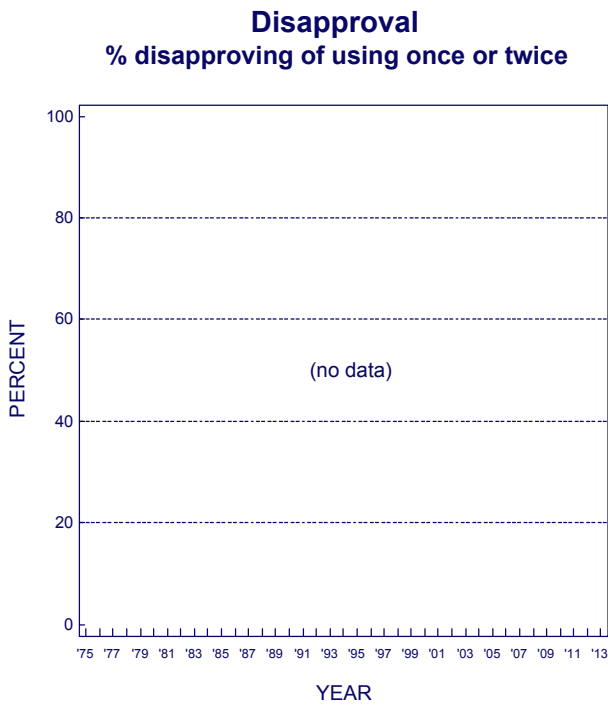
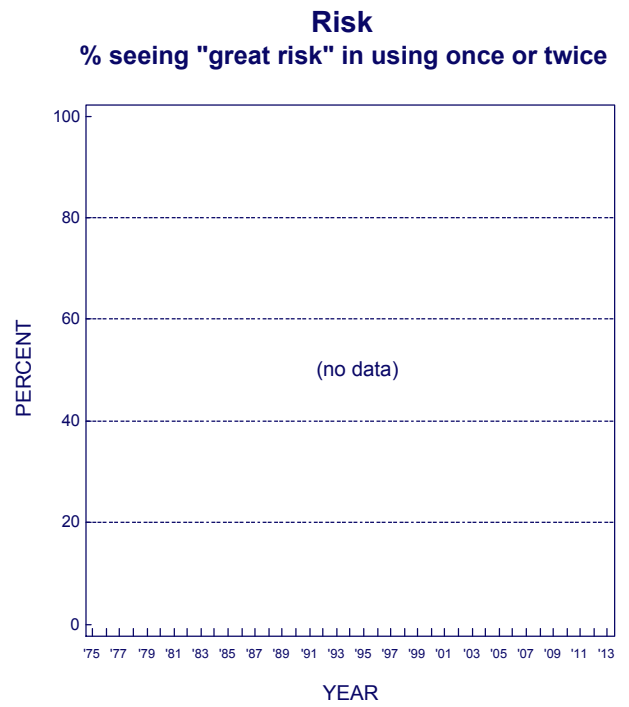
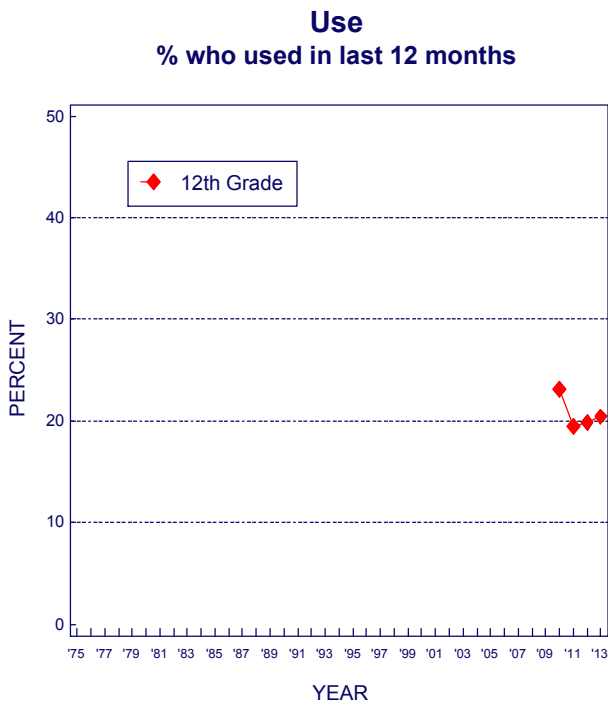
**FIGURE 3**  
**Tobacco using a Hookah: Trends in Annual Use**  
 Grades 8, 10, and 12



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



**FIGURE 4**  
**Small Cigars: Trends in Annual Use**  
 Grades 8, 10, and 12



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

**TABLE 1**  
**Trends in Prevalence of Use of CIGARETTES in Grades 8, 10, and 12**  
 (Entries are percentages.)

	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	→ (Years cont.)
<b>Lifetime</b>																					
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	44.0	45.2	45.3	46.1	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	55.1	53.5	56.3	56.9	
12th Grade	73.6	75.4	75.7	75.3	74.0	71.0	71.0	70.1	70.6	69.7	68.8	67.6	67.2	66.4	65.7	64.4	63.1	61.8	61.9	62.0	
<b>30-Day</b>																					
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.3	15.5	16.7	18.6	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20.8	21.5	24.7	25.4	
12th Grade	36.7	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	
<b>Daily</b>																					
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.2	7.0	8.3	8.8	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12.6	12.3	14.2	14.6	
12th Grade	26.9	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	
<b>1/2 Pack+ per Day</b>																					
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.1	2.9	3.5	3.6	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.5	6.0	7.0	7.6	
12th Grade	17.9	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	
<b>Approximate Ns</b>																					
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17,500	18,600	18,300	17,300	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14,800	14,800	15,300	15,800	
12th Grade	9,400	15,400	17,100	17,800	15,500	15,900	17,500	17,700	16,300	15,900	16,000	15,200	16,300	16,300	16,700	15,200	15,000	15,800	16,300	15,400	

(Table continued on next page.)

**TABLE 1 (cont.)**  
**Trends in Prevalence of Use of CIGARETTES in Grades 8, 10, and 12**  
(Entries are percentages.)

	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	2012– 2013 change
<b>Lifetime</b>																				
8th Grade	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	20.5	20.1	20.0	18.4	15.5	14.8	-0.8
10th Grade	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	31.7	32.7	33.0	30.4	27.7	25.7	-2.1 s
12th Grade	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	44.7	43.6	42.2	40.0	39.5	38.1	-1.4
<b>30-Day</b>																				
8th Grade	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	6.8	6.5	7.1	6.1	4.9	4.5	-0.5
10th Grade	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	12.3	13.1	13.6	11.8	10.8	9.1	-1.7 s
12th Grade	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	20.4	20.1	19.2	18.7	17.1	16.3	-0.9
<b>Daily</b>																				
8th Grade	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	3.1	2.7	2.9	2.4	1.9	1.8	-0.1
10th Grade	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	5.9	6.3	6.6	5.5	5.0	4.4	-0.5
12th Grade	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	11.4	11.2	10.7	10.3	9.3	8.5	-0.8
<b>1/2 Pack+ per Day</b>																				
8th Grade	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	1.2	1.0	0.9	0.7	0.6	0.7	+0.1
10th Grade	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	2.0	2.4	2.4	1.9	1.5	1.5	0.0
12th Grade	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	5.4	5.0	4.7	4.3	4.0	3.4	-0.6
<b>Approximate Ns</b>																				
8th Grade	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	15,700	15,000	15,300	16,000	15,100	14,600	
10th Grade	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	15,100	15,900	15,200	14,900	15,000	12,900	
12th Grade	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	14,000	13,700	14,400	14,100	13,700	12,600	

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

Notes. Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.

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

**TABLE 2**  
**Trends in Availability and Attitudes about Smoking 1 or More Packs**  
**of Cigarettes per Day for Grades 8, 10, and 12**

(Entries are percentages.)

	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	→ (Years cont.)	
<b>Perceived Risk<sup>a</sup></b>																						
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	51.6	50.8	52.7	50.8		
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	60.3	59.3	60.7	59.0		
12th Grade	51.3	56.4	58.4	59.0	63.0	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		
<b>Disapproval<sup>b</sup></b>																						
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	82.8	82.3	80.6	78.4		
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	79.4	77.8	76.5	73.9		
12th Grade	67.5	65.9	66.4	67.0	70.3	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		
<b>Availability<sup>c</sup></b>																						
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	77.8	75.5	76.1	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	89.1	89.4	90.3	
<b>Approximate Ns</b>																						
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17,500	18,600	18,300	17,300		
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14,800	14,800	15,300	15,800		
12th Grade	2,800	2,900	3,100	3,800	3,300	3,200	3,600	3,600	3,300	3,300	3,300	3,000	3,300	3,300	2,800	2,600	2,600	2,700	2,800	2,600		

(Table continued on next page.)

**TABLE 2 (cont.)**  
**Trends in Availability and Attitudes about Smoking 1 or More Packs**  
**of Cigarettes per Day for Grades 8, 10, and 12**

(Entries are percentages.)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2012– 2013 change
<b>Perceived Risk<sup>a</sup></b>																				
8th Grade	49.8	50.4	52.6	54.3	54.8	58.8	57.1	57.5	57.7	62.4	61.5	59.4	61.1	59.8	59.1	60.9	62.5	62.6	62.4	-0.2
10th Grade	57.0	57.9	59.9	61.9	62.7	65.9	64.7	64.3	65.7	68.4	68.1	67.7	68.2	69.1	67.3	67.2	69.8	71.6	70.8	-0.8
12th Grade	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	74.0	74.9	75.0	77.7	78.2	78.2	0.0
<b>Disapproval<sup>b</sup></b>																				
8th Grade	78.6	77.3	80.3	80.0	81.4	81.9	83.5	84.6	84.6	85.7	85.3	85.6	87.0	86.7	87.1	87.0	88.0	88.8	88.0	-0.8
10th Grade	73.2	71.6	73.8	75.3	76.1	76.7	78.2	80.6	81.4	82.7	84.3	83.2	84.7	85.2	84.5	83.9	85.8	86.0	86.1	+0.1
12th Grade	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	80.5	81.8	81.0	83.0	83.7	82.6	-1.1
<b>Availability<sup>c</sup></b>																				
8th Grade	76.4	76.9	76.0	73.6	71.5	68.7	67.7	64.3	63.1	60.3	59.1	58.0	55.6	57.4	55.3	55.5	51.9	50.7	49.9	-0.9
10th Grade	90.7	91.3	89.6	88.1	88.3	86.8	86.3	83.3	80.7	81.4	81.5	79.5	78.2	76.5	76.1	75.6	73.6	72.9	71.4	-1.5 s
<b>Approximate Ns</b>																				
8th Grade	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	15,700	15,000	15,300	16,000	15,100	14,600	
10th Grade	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	15,100	15,900	15,200	14,900	15,000	12,900	
12th Grade	2,600	2,400	2,600	2,500	2,300	2,100	2,100	2,200	2,400	2,400	2,500	2,400	2,400	2,300	2,300	2,400	2,400	2,300	2,100	

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

Notes. Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.

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

<sup>a</sup>The question text was: How much do you think people risk harming themselves (physically or in other ways) if they smoke one or more packs of cigarettes per day? Answer alternatives were: (1) No risk, (2) Slight risk, (3) Moderate risk, (4) Great risk, and (5) Can't say, drug unfamiliar. The percentage saying great risk is shown. For 8th and 10th graders: Beginning in 1999, perceived risk data based on two of four forms; N is two thirds of N indicated.

<sup>b</sup>The question text was: Do you disapprove of people smoking one or more packs of cigarettes per day? Answer alternatives were: (1) Don't disapprove, (2) Disapprove, and (3) Strongly disapprove. For 8th and 10th graders, there was another category—Can't say, drug unfamiliar—which was included in the calculation of these percentages. The percentage saying they disapprove or strongly disapprove is shown. For 8th and 10th graders: Beginning in 1999, disapproval data based on two of four forms; N is two thirds of N indicated.

<sup>c</sup>The question text was: How difficult do you think it would be for you to get cigarettes, if you wanted some? Answer alternatives were: (1) Probably impossible, (2) Very difficult, (3) Fairly difficult, (4) Fairly easy, (5) Very easy, and (8) Can't say, drug unfamiliar (included in the calculation of these percentages). The percentage saying cigarettes are fairly easy or very easy to get is shown. In 1992 only, availability data based on one of two forms; N is one half of N indicated. The question was not asked of 12th graders.

**TABLE 3**  
**Trends in Various Attitudes toward Cigarette Use for Grades 8, 10, and 12**

	Percentage who report mostly agree or agree																						
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>I would prefer to date people who don't smoke</b>																							
8th Grade	77.8	76.0	75.2	74.1	73.6	70.9	72.3	74.5	76.9	77.2	79.4	80.6	79.6	81.0	81.2	81.2	82.8	82.6	81.3	81.5	81.7	83.7	80.9
10th Grade	75.9	76.4	74.3	71.6	71.6	69.1	68.2	71.8	73.0	75.2	75.4	76.3	76.7	79.5	79.6	80.4	80.9	80.0	79.9	78.9	80.1	80.2	77.3
12th Grade	74.0	72.3	70.4	69.0	66.0	66.0	63.9	66.0	64.4	70.0	68.5	72.3	71.8	72.0	74.8	76.7	76.6	75.2	74.9	73.3	74.7	77.5	75.4
<b>Smoking is a dirty habit</b>																							
8th Grade	71.4	70.8	70.3	68.4	68.4	67.9	67.7	68.2	70.0	70.8	72.3	74.1	71.6	74.3	73.7	74.8	75.8	75.0	73.6	72.4	72.9	75.1	72.0
10th Grade	70.7	71.0	69.2	67.5	68.0	66.6	65.8	68.3	68.7	70.8	70.3	71.2	70.5	71.7	72.0	73.7	72.7	72.0	72.1	71.7	71.4	71.3	69.5
12th Grade	71.6	73.1	71.8	68.0	68.2	67.5	70.0	70.5	69.7	73.5	71.6	74.5	73.3	72.6	74.9	77.1	76.7	73.5	73.4	73.1	72.4	73.0	70.7
<b>I think that becoming a smoker reflects poor judgment</b>																							
8th Grade	62.2	60.9	59.7	58.7	59.3	57.0	57.6	58.8	60.0	60.9	63.1	64.3	63.7	64.1	64.6	65.5	66.1	64.5	63.9	62.5	61.6	63.3	59.3
10th Grade	57.5	59.0	57.3	54.2	53.7	52.9	50.1	53.9	54.7	56.5	55.4	59.3	56.8	58.8	59.4	61.5	60.3	60.6	59.6	59.1	57.4	57.2	54.8
12th Grade	61.0	60.7	59.4	58.1	55.1	54.9	56.2	54.7	55.5	58.9	57.2	59.8	56.6	56.0	60.3	61.9	61.7	58.1	57.7	54.4	55.5	54.1	52.3
<b>I strongly dislike being near people who are smoking</b>																							
8th Grade	53.8	52.1	52.9	51.1	49.7	45.7	46.6	48.5	48.7	50.1	52.2	54.0	54.4	57.0	55.7	55.4	56.8	57.9	55.9	55.2	56.9	59.0	58.6
10th Grade	50.7	50.9	50.0	47.7	46.0	42.6	41.6	44.4	44.0	46.5	46.7	49.1	51.2	52.6	52.3	55.2	53.7	53.5	52.9	52.2	53.9	55.8	54.6
12th Grade	48.9	49.4	48.6	47.4	44.2	42.3	38.3	41.0	39.3	41.3	43.3	47.4	47.6	46.5	47.8	49.7	50.2	47.9	48.7	49.1	49.5	52.4	50.7
<b>I personally don't mind being around people who are smoking</b>																							
8th Grade	29.5	31.1	31.1	32.8	34.2	37.8	34.8	34.7	32.9	31.6	30.7	29.1	27.8	27.6	26.8	27.7	27.3	25.6	25.8	27.1	25.1	25.0	24.7
10th Grade	33.1	35.0	35.1	36.8	38.5	42.8	41.1	39.7	38.8	38.1	35.5	34.7	32.2	30.0	30.4	30.8	30.4	29.2	30.4	30.3	28.6	28.9	28.9
12th Grade	33.1	34.5	33.0	35.5	37.0	39.1	41.8	38.6	41.3	39.6	39.7	35.0	33.5	32.7	35.1	32.0	31.3	31.5	31.6	32.4	31.4	30.0	30.8
<b>The harmful effects of cigarettes have been exaggerated</b>																							
8th Grade	19.9	21.8	22.4	24.4	23.1	25.3	22.4	23.8	22.7	21.6	21.4	22.0	20.5	22.1	20.4	21.1	20.8	20.9	21.2	22.3	20.5	21.4	21.2
10th Grade	16.4	17.9	18.8	18.9	19.3	20.0	19.5	20.1	19.3	18.8	17.3	18.0	19.5	17.8	17.5	17.4	18.3	18.5	18.6	17.8	18.1	18.3	19.2
12th Grade	13.8	13.0	13.6	14.9	14.4	12.8	14.0	13.4	14.5	16.8	15.8	12.7	13.1	13.1	13.1	14.1	14.2	14.5	15.0	12.8	13.8	14.4	14.0
<b>Smokers know how to enjoy life more than nonsmokers</b>																							
8th Grade	4.9	5.0	5.4	6.3	5.9	6.7	5.4	5.8	6.1	5.4	5.5	5.2	5.3	5.9	5.4	5.7	5.1	5.2	5.6	6.7	5.6	5.8	6.0
10th Grade	3.5	3.9	4.2	4.1	4.2	4.6	3.7	4.7	4.2	4.7	4.5	4.1	4.8	4.4	4.0	4.4	4.2	5.0	5.2	5.7	5.3	5.5	5.8
12th Grade	3.6	3.3	3.5	3.8	4.0	3.5	3.2	3.8	4.3	3.7	5.5	4.1	3.5	3.5	3.4	3.8	3.2	4.2	3.9	8.1	7.7	3.9	5.7

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

Notes. For 8th graders: Ns range from 6,433 to 8,005. For 10th graders: Ns range from 6,135 to 7,807. For 12th graders: Ns range from 1,795 to 3,112.

**TABLE 4**  
**Trends in Prevalence of Use of SMOKELESS TOBACCO in Grades 8, 10, and 12**

(Entries are percentages.)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	→ (Years cont.)
<b>Lifetime</b>																					
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	22.2	20.7	18.7	19.9	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28.2	26.6	28.1	29.2	
12th Grade	—	—	—	—	—	—	—	—	—	—	—	31.4	32.2	30.4	29.2	—	—	32.4	31.0	30.7	
<b>30-Day</b>																					
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.9	7.0	6.6	7.7	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.0	9.6	10.4	10.5	
12th Grade	—	—	—	—	—	—	—	—	—	—	—	11.5	11.3	10.3	8.4	—	—	11.4	10.7	11.1	
<b>Daily</b>																					
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.6	1.8	1.5	1.9	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.3	3.0	3.3	3.0	
12th Grade	—	—	—	—	—	—	—	—	—	—	—	4.7	5.1	4.3	3.3	—	—	4.3	3.3	3.9	
<b>Approximate Ns</b>																					
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17,500	18,600	18,300	17,300	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14,800	14,800	15,300	15,800	
12th Grade	—	—	—	—	—	—	—	—	—	—	—	15,200	16,300	16,300	16,700	—	15,000	15,800	16,300	15,400	

(Table continued on next page.)

**TABLE 4 (cont.)**  
**Trends in Prevalence of Use of SMOKELESS TOBACCO in Grades 8, 10, and 12**  
(Entries are percentages.)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2012– 2013 change
<b>Lifetime</b>																				
8th Grade	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	9.8	9.6	9.9	9.7	8.1	7.9	-0.2
10th Grade	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	12.2	15.2	16.8	15.6	15.4	14.0	-1.5
12th Grade	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	15.6	16.3	17.6	16.9	17.4	17.2	-0.2
<b>30-Day</b>																				
8th Grade	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	3.5	3.7	4.1	3.5	2.8	2.8	+0.1
10th Grade	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	5.0	6.5	7.5	6.6	6.4	6.4	0.0
12th Grade	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	6.5	8.4	8.5	8.3	7.9	8.1	+0.2
<b>Daily</b>																				
8th Grade	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	0.8	0.8	0.9	0.8	0.5	0.5	0.0
10th Grade	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	1.4	1.9	2.5	1.7	2.0	1.9	-0.2
12th Grade	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	2.7	2.9	3.1	3.1	3.2	3.0	-0.2
<b>Approximate Ns</b>																				
8th Grade	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	15,700	15,000	15,300	16,000	15,100	14,600	
10th Grade	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	15,100	15,900	15,200	14,900	15,000	12,900	
12th Grade	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	14,000	13,700	14,400	14,100	13,700	12,600	

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

Notes. Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding. For 8th and 10th graders: 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: Data based on one form; *N* is one fifth of *N* indicated in 1986–1988 and one sixth of *N* indicated beginning in 1989. The prevalence of use of smokeless tobacco was not asked of 12th graders in 1990 and 1991. Prior to 1990 the prevalence-of-use question on smokeless tobacco was located near the end of one 12th-grade questionnaire form, whereas after 1991 the question was placed earlier and in a different form. This shift could explain the discontinuities between the corresponding data. For all grades: In 2011 snus and dissolvable tobacco were added to the list of examples. An examination of the data did not show any effect from the wording change.



**TABLE 5**  
**Trends in Attitudes about Regular Smokeless Tobacco Use for Grades 8, 10, and 12**

(Entries are percentages.)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	→ (Years cont.)
<b>Perceived Risk <sup>a</sup></b>																					
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	35.1	35.1	36.9	35.5	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	40.3	39.6	44.2	42.2	
12th Grade	—	—	—	—	—	—	—	—	—	—	—	25.8	30.0	33.2	32.9	34.2	37.4	35.5	38.9	36.6	
<b>Disapproval <sup>b</sup></b>																					
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	79.1	77.2	77.1	75.1	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	75.4	74.6	73.8	71.2	
<b>Approximate Ns</b>																					
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17,500	18,600	18,300	17,300	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14,800	14,800	15,300	15,800	
12th Grade	—	—	—	—	—	—	—	—	—	—	—	3,000	3,300	3,300	2,800	2,600	2,600	2,700	2,800	2,600	

(Table continued on next page.)

**TABLE 5 (cont.)**  
**Trends in Attitudes about Regular Smokeless Tobacco Use for Grades 8, 10, and 12**

(Entries are percentages.)

	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	2012– 2013 change
<b>Perceived Risk <sup>a</sup></b>																				
8th Grade	33.5	34.0	35.2	36.5	37.1	39.0	38.2	39.4	39.7	41.3	40.8	39.5	41.8	41.0	40.8	41.8	40.8	37.8	36.2	-1.6
10th Grade	38.2	41.0	42.2	42.8	44.2	46.7	46.2	46.9	48.0	47.8	46.1	45.9	46.7	48.0	44.7	43.7	45.7	42.9	40.0	-2.9 ss
12th Grade	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	42.9	40.8	41.2	42.6	44.3	41.6	-2.7
<b>Disapproval <sup>b</sup></b>																				
8th Grade	74.0	74.1	76.5	76.3	78.0	79.2	79.4	80.6	80.7	81.0	82.0	81.0	82.3	82.1	81.5	81.2	82.6	82.7	81.5	-1.2
10th Grade	71.0	71.0	72.3	73.2	75.1	75.8	76.1	78.7	79.4	80.2	80.5	80.5	80.9	81.8	79.5	78.5	79.5	79.5	77.7	-1.8
<b>Approximate Ns</b>																				
8th Grade	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	15,700	15,000	15,300	16,000	15,100	14,600	
10th Grade	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	15,100	15,900	15,200	14,900	15,000	12,900	
12th Grade	2,600	2,400	2,600	2,500	2,300	2,100	2,100	2,200	2,400	2,400	2,500	2,400	2,400	2,300	2,300	2,400	2,400	2,300	2,100	

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

Notes. Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. ' — ' indicates data not available. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

<sup>a</sup>The question text was: How much do you think people risk harming themselves (physically or in other ways) if they use smokeless tobacco regularly? Answer alternatives were: (1) No risk, (2) Slight risk, (3) Moderate risk, (4) Great risk, and (5) Can't say, drug unfamiliar. The percentage saying great risk is shown.

<sup>b</sup>The question text was: Do you disapprove of people using smokeless tobacco regularly? Answer alternatives were: (1) Don't disapprove, (2) Disapprove, and (3) Strongly disapprove.

For 8th and 10th graders, there was another category—Can't say, drug unfamiliar—which was included in the calculation of these percentages. For 8th and 10th graders only: Data based on two of four forms beginning in 2012; N is two thirds of N indicated. The percentage saying they disapprove or strongly disapprove is shown. This question was not asked of 12th graders.

**TABLE 6**  
**CIGARETTES: Trends in 30-Day Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 30 days																							2012– 2013 change
	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	
<i>Approximate weighted N =</i>	<i>17,500</i>	<i>18,600</i>	<i>18,300</i>	<i>17,300</i>	<i>17,500</i>	<i>17,800</i>	<i>18,600</i>	<i>18,100</i>	<i>16,700</i>	<i>16,700</i>	<i>16,200</i>	<i>15,100</i>	<i>16,500</i>	<i>17,000</i>	<i>16,800</i>	<i>16,500</i>	<i>16,100</i>	<i>15,700</i>	<i>15,000</i>	<i>15,300</i>	<i>16,000</i>	<i>15,100</i>	<i>14,600</i>	
<b>Total</b>	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	6.8	6.5	7.1	6.1	4.9	4.5	-0.5
<b>Gender:</b>																								
Male	15.5	14.9	17.2	19.3	18.8	20.6	19.1	18.0	16.7	14.3	12.2	11.0	9.6	8.3	8.7	8.1	7.5	6.7	6.7	7.4	6.2	4.6	4.0	-0.6
Female	13.1	15.9	16.3	17.9	19.0	21.1	19.5	19.8	17.7	14.7	12.0	10.4	10.6	9.9	9.7	8.9	6.4	6.7	6.0	6.8	5.7	4.9	4.7	-0.2
<b>College Plans:</b>																								
None or under 4 years	29.2	31.9	34.1	36.6	36.5	39.2	40.0	40.1	40.3	34.7	30.0	29.3	27.8	25.6	26.7	23.2	23.9	21.1	19.5	22.8	18.2	17.3	15.0	-2.3
Complete 4 years	11.8	13.1	14.3	16.1	16.8	18.2	16.9	16.5	14.5	12.2	10.0	8.9	8.3	7.4	7.4	7.1	5.4	5.5	5.3	5.7	5.1	3.9	3.8	-0.2
<b>Region:</b>																								
Northeast	13.7	14.4	15.0	17.8	18.6	22.1	18.0	15.6	15.7	13.7	11.4	9.1	7.7	7.2	7.8	6.7	3.7	5.9	5.6	6.0	4.4	4.2	3.5	-0.7
Midwest	15.5	16.5	16.3	18.5	20.9	23.2	20.0	22.3	21.3	17.1	12.0	11.0	12.2	10.8	9.5	9.3	7.8	8.1	7.0	8.6	6.4	3.9	4.4	+0.5
South	15.7	17.0	18.2	19.5	19.4	21.1	21.0	21.1	18.7	14.7	14.3	13.0	11.7	10.3	11.6	10.9	8.6	7.7	7.7	8.5	6.8	6.9	5.8	-1.1
West	10.0	12.2	16.4	18.0	16.5	17.1	17.1	15.1	12.1	12.2	9.3	7.5	7.0	7.4	6.3	5.7	5.8	5.2	4.6	4.0	6.1	3.0	3.0	0.0
<b>Population Density:</b>																								
Large MSA	12.8	15.0	14.1	15.5	16.5	19.4	15.8	16.4	12.7	12.1	9.3	7.5	7.7	7.7	6.7	6.4	4.7	5.2	4.2	4.8	4.0	3.6	2.5	-1.1
Other MSA	14.9	15.3	17.8	20.7	19.4	21.4	19.7	17.7	16.0	13.1	11.6	10.6	9.8	8.9	9.8	8.8	7.6	7.5	6.9	7.6	7.0	5.1	4.3	-0.8
Non-MSA	14.8	16.4	17.9	17.8	21.5	22.1	22.8	24.8	26.1	21.1	16.9	14.9	14.4	11.6	11.8	11.6	9.5	7.9	8.5	9.2	7.7	6.9	8.0	+1.2
<b>Parental Education:<sup>a</sup></b>																								
1.0–2.0 (Low)	26.2	24.1	23.3	26.1	25.3	26.5	26.9	26.7	26.6	22.0	20.3	20.3	17.5	15.8	16.6	14.7	13.8	12.1	10.5	11.4	9.2	7.6	6.3	-1.3
2.5–3.0	16.4	16.9	19.8	20.6	22.7	24.4	22.4	23.9	23.5	19.6	16.4	14.5	14.8	12.2	13.4	12.5	10.2	8.7	8.8	10.2	9.8	7.4	6.5	-0.8
3.5–4.0	13.9	14.9	17.4	20.1	20.8	21.4	20.9	21.4	17.0	14.7	12.6	10.5	9.6	9.6	10.5	8.8	7.8	7.3	7.1	8.0	6.3	5.7	5.6	-0.1
4.5–5.0	10.1	13.3	12.5	14.9	14.9	18.4	16.2	14.2	12.3	10.2	8.3	7.8	6.7	6.7	5.9	5.5	3.9	4.7	4.4	4.9	3.9	3.0	2.4	-0.6
5.5–6.0 (High)	11.3	11.5	13.3	15.1	14.5	17.3	15.3	13.8	12.2	9.8	6.9	5.8	6.0	5.2	4.3	4.8	2.4	4.1	3.5	2.9	3.1	2.6	2.9	+0.2
<b>Race/Ethnicity (2-year average):<sup>b</sup></b>																								
White	—	16.2	17.8	18.9	20.7	22.7	22.8	21.5	20.1	17.7	14.7	12.0	10.9	10.0	9.4	9.3	8.1	7.2	7.3	7.6	7.2	5.8	4.7	-1.1
African American	—	5.3	6.6	8.7	8.9	9.6	10.9	10.6	10.7	9.6	8.2	7.7	6.9	6.9	7.1	6.0	5.1	4.6	4.4	4.3	4.1	4.0	3.5	-0.5
Hispanic	—	16.7	18.3	21.3	21.6	19.6	19.1	20.1	20.5	16.6	13.0	12.8	11.9	10.1	9.0	8.8	8.0	7.0	6.5	6.7	6.9	5.5	4.0	-1.5

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

Notes. Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding. See Table S1 for the number of subgroup cases. See appendix B for definition of variables in table.

<sup>a</sup>Parental education is an average score of mother's education and father's education. See appendix B for details.

<sup>b</sup>To derive percentages for each racial subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates. See appendix B for details on how race/ethnicity is defined.

**TABLE 7**  
**CIGARETTES: Trends in 30-Day Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 30 days																						2012–2013	
	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>change</u>
<i>Approximate weighted N =</i>	<i>14,800</i>	<i>14,800</i>	<i>15,300</i>	<i>15,800</i>	<i>17,000</i>	<i>15,600</i>	<i>15,500</i>	<i>15,000</i>	<i>13,600</i>	<i>14,300</i>	<i>14,000</i>	<i>14,300</i>	<i>15,800</i>	<i>16,400</i>	<i>16,200</i>	<i>16,200</i>	<i>16,100</i>	<i>15,100</i>	<i>15,900</i>	<i>15,200</i>	<i>14,900</i>	<i>15,000</i>	<i>12,900</i>	
<b>Total</b>	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	12.3	13.1	13.6	11.8	10.8	9.1	-1.7 s
<b>Gender:</b>																								
Male	20.8	20.6	24.6	26.6	27.7	30.1	28.2	26.2	25.2	23.8	20.9	16.7	16.2	16.2	14.5	13.4	14.6	12.7	13.7	15.0	13.4	12.0	10.5	-1.5
Female	20.7	22.2	24.5	23.9	27.9	30.8	31.1	29.1	25.8	23.6	21.5	18.6	17.0	15.7	15.1	15.5	13.3	11.9	12.5	12.1	10.0	9.6	7.5	-2.1 s
<b>College Plans:</b>																								
None or under 4 years	36.5	35.0	41.9	42.2	46.3	46.2	47.2	45.2	44.0	38.6	38.1	33.3	33.0	33.1	29.4	32.7	30.1	30.1	29.0	32.5	28.5	27.6	23.3	-4.2
Complete 4 years	17.3	18.6	21.0	21.7	24.7	27.8	26.8	24.5	22.7	21.5	18.5	15.1	14.0	13.6	12.9	12.1	11.8	10.0	11.3	11.3	9.9	9.0	7.4	-1.6 s
<b>Region:</b>																								
Northeast	22.4	21.9	27.1	24.5	27.8	31.7	29.3	30.1	28.0	23.9	18.1	15.9	16.6	16.6	14.9	11.8	13.1	10.1	11.1	12.1	12.2	10.9	7.2	-3.7 s
Midwest	22.9	24.3	26.0	28.8	30.1	32.5	31.7	29.5	30.2	27.1	24.2	19.2	18.4	14.6	16.2	18.1	17.1	14.5	12.9	14.5	11.8	9.7	9.3	-0.4
South	21.2	19.8	24.0	25.7	30.8	33.4	32.2	29.8	26.3	25.5	23.5	19.6	18.2	20.4	16.4	15.6	14.4	14.0	16.7	15.4	13.8	13.6	11.8	-1.8
West	16.7	20.2	21.2	20.1	19.6	20.8	23.2	19.6	17.5	16.8	15.0	14.1	12.5	10.9	10.9	10.9	11.1	9.6	10.1	11.1	8.5	7.6	6.9	-0.7
<b>Population Density:</b>																								
Large MSA	19.7	21.6	22.5	22.3	23.3	26.2	26.6	22.5	22.9	23.1	17.3	14.2	13.1	12.0	11.7	11.5	12.1	10.3	11.4	11.1	9.5	8.4	5.8	-2.6 s
Other MSA	20.3	20.3	23.8	26.3	28.9	31.1	28.9	26.6	25.0	21.3	20.5	17.6	16.6	16.6	14.7	13.3	13.9	12.3	13.0	13.5	11.5	10.2	9.5	-0.8
Non-MSA	22.7	23.7	28.2	26.7	31.3	33.9	34.9	35.7	30.4	29.4	27.6	22.6	22.4	20.4	19.8	22.4	17.2	15.4	16.1	17.5	15.7	15.4	13.0	-2.4
<b>Parental Education: <sup>a</sup></b>																								
1.0–2.0 (Low)	23.5	28.4	29.5	26.4	30.9	28.7	28.2	28.0	30.5	29.3	22.5	21.4	23.4	19.3	16.4	20.4	17.5	15.7	18.2	18.8	14.6	15.4	12.8	-2.6
2.5–3.0	24.1	23.3	28.0	29.1	33.2	33.8	33.2	33.0	29.6	26.8	25.7	22.4	21.2	19.9	19.7	19.7	18.4	15.8	16.5	18.6	16.2	14.4	13.6	-0.8
3.5–4.0	20.4	20.6	24.8	26.0	27.8	31.6	30.9	27.3	26.0	25.3	21.1	17.4	16.2	17.8	15.7	15.5	14.7	13.9	13.8	15.1	12.7	11.2	10.2	-1.0
4.5–5.0	18.5	19.5	20.1	22.6	25.9	28.7	28.5	25.7	22.4	21.2	18.9	15.1	13.4	12.6	12.5	10.8	11.3	9.6	10.9	10.0	8.6	9.6	6.0	-3.6 sss
5.5–6.0 (High)	18.5	18.9	21.4	20.7	21.8	27.8	24.6	22.5	21.4	19.1	17.1	12.7	11.6	10.8	10.8	10.0	9.7	7.8	8.9	7.7	8.0	7.1	4.9	-2.2 s
<b>Race/Ethnicity (2-year average): <sup>b</sup></b>																								
White	—	24.1	26.0	27.8	29.7	32.9	34.4	33.2	30.8	28.2	25.7	22.4	20.0	18.7	17.6	16.6	16.2	15.1	14.4	14.7	14.3	12.9	11.4	-1.5
African American	—	6.6	7.5	9.8	11.5	12.2	12.8	13.7	12.5	11.1	11.1	9.8	8.9	9.2	8.7	8.0	7.1	6.5	6.8	6.7	7.1	6.7	5.3	-1.4
Hispanic	—	18.3	20.5	19.4	21.4	23.7	23.0	21.3	21.1	19.6	16.8	14.3	13.2	13.9	13.5	12.1	10.5	11.1	12.1	12.2	10.5	8.3	8.3	0.0

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

Notes. Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding. See Table S2 for the number of subgroup cases. See appendix B for definition of variables in table.

<sup>a</sup>Parental education is an average score of mother's education and father's education. See appendix B for details.

<sup>b</sup>To derive percentages for each racial subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates. See appendix B for details on how race/ethnicity is defined.

**TABLE 8**  
**CIGARETTES: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days																				→ (Years cont.)
<i>Approximate weighted N =</i>	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	
<b>Total</b>	9,400	15,400	17,100	17,800	15,500	15,900	17,500	17,700	16,300	15,900	16,000	15,200	16,300	16,300	16,700	15,200	15,000	15,800	16,300	15,400	
	36.7	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	
<b>Gender:</b>																					
Male																					
	37.2	37.7	36.6	34.5	31.2	26.8	26.5	26.8	28.0	25.9	28.2	27.9	27.0	28.0	27.7	29.1	29.0	29.2	30.7	32.9	
Female																					
	35.9	39.1	39.6	38.1	37.1	33.4	31.6	32.6	31.6	31.9	31.4	30.6	31.4	28.9	29.0	29.2	27.5	26.1	28.7	29.2	
<b>College Plans:</b>																					
None or under 4 years																					
	—	46.3	46.2	44.6	43.0	39.6	38.1	38.7	38.0	37.9	40.5	38.5	39.7	37.5	38.0	37.5	38.1	38.6	37.3	40.9	
Complete 4 years																					
	—	29.8	29.4	27.4	26.0	22.3	22.3	22.1	23.3	22.7	22.8	24.0	24.3	24.4	24.1	25.4	24.2	23.8	27.3	28.0	
<b>Region:</b>																					
Northeast																					
	40.1	41.8	43.0	40.6	37.0	34.1	31.5	32.1	34.6	33.5	34.2	35.2	34.1	31.2	29.4	31.9	30.5	29.6	34.2	33.2	
Midwest																					
	39.5	41.3	40.5	39.0	36.6	31.5	32.4	33.5	33.2	31.4	34.1	32.5	31.7	31.1	34.9	34.0	34.6	31.7	33.2	36.2	
South																					
	36.2	39.1	37.6	35.7	35.4	31.8	28.9	29.4	28.7	28.6	25.6	26.1	26.0	28.0	26.4	26.1	25.4	26.4	29.0	30.7	
West																					
	26.3	28.3	27.7	27.3	24.8	21.2	21.8	20.4	21.8	22.9	26.3	23.3	26.6	23.9	22.7	25.1	23.2	22.8	22.9	24.0	
<b>Population Density:</b>																					
Large MSA																					
	39.7	40.4	40.9	37.5	33.4	31.2	30.6	32.1	30.8	31.3	31.9	30.8	29.3	26.9	25.9	27.9	26.2	25.6	29.5	29.0	
Other MSA																					
	35.1	35.9	36.1	34.3	33.5	29.7	27.4	27.8	29.1	28.2	28.5	28.0	28.2	28.3	28.2	29.6	29.3	26.9	29.8	31.1	
Non-MSA																					
	36.7	40.9	39.2	39.4	36.4	30.9	30.9	31.2	31.5	29.3	30.8	31.0	31.8	31.4	32.2	30.4	28.6	31.5	30.3	33.8	
<b>Parental Education: <sup>a</sup></b>																					
1.0–2.0 (Low)																					
	37.2	43.2	39.6	38.1	38.1	32.7	32.5	32.6	32.7	33.6	32.3	28.6	28.8	28.1	25.4	26.3	31.3	27.1	26.5	26.2	
2.5–3.0																					
	37.0	41.2	40.8	39.3	35.9	34.2	31.7	32.0	32.2	31.8	32.3	32.3	31.4	29.9	30.8	30.8	28.7	30.3	30.4	32.8	
3.5–4.0																					
	31.9	35.3	37.3	34.0	33.3	28.0	28.2	29.0	28.0	28.1	29.7	29.7	28.8	27.8	29.4	29.3	28.4	27.8	29.9	31.4	
4.5–5.0																					
	32.3	35.0	33.0	32.6	30.1	25.7	26.0	25.5	27.8	25.2	27.7	26.4	27.6	28.6	27.0	29.1	26.9	25.8	30.1	32.0	
5.5–6.0 (High)																					
	26.8	30.8	32.8	31.9	29.6	24.0	22.5	25.1	25.5	23.7	22.6	26.7	29.3	27.8	26.3	28.6	27.1	25.5	30.5	30.4	
<b>Race/Ethnicity (2-year average): <sup>b</sup></b>																					
White																					
	—	—	38.3	37.6	36.0	33.0	30.5	30.7	31.3	31.2	31.3	31.9	32.1	32.2	32.2	32.3	32.2	31.8	33.2	35.2	
African American																					
	—	—	36.7	32.7	30.2	26.8	23.7	21.8	21.2	19.3	18.1	16.9	14.2	13.3	12.6	12.2	10.6	8.7	9.5	10.9	
Hispanic																					
	—	—	35.7	32.8	26.8	22.6	23.2	24.7	24.7	25.3	25.5	23.7	22.7	21.9	20.6	21.7	24.0	25.0	24.2	23.6	

(Table continued on next page.)

**TABLE 8 (cont.)**  
**CIGARETTES: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days																			2012– 2013 change	
	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>		
<i>Approximate weighted N =</i>	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	14,000	13,700	14,400	14,100	13,700	12,600		
<b>Total</b>	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	20.4	20.1	19.2	18.7	17.1	16.3	-0.9	
<b>Gender:</b>																					
Male	34.5	34.9	37.3	36.3	35.4	32.8	29.7	27.4	26.2	25.3	24.8	22.4	23.1	21.5	22.1	21.9	21.5	19.3	18.4	-0.8	
Female	32.0	32.4	35.2	33.3	33.5	29.7	28.7	25.5	22.1	24.1	20.7	20.1	19.6	19.1	17.6	15.7	15.1	14.5	13.2	-1.4	
<b>College Plans:</b>																					
None or under 4 years	43.5	45.0	45.7	46.7	44.9	43.6	40.8	37.5	36.2	36.8	34.8	32.9	32.4	32.4	31.2	31.2	32.2	27.9	28.9	+1.1	
Complete 4 years	29.9	30.8	33.1	31.3	31.4	27.3	25.9	23.6	20.8	21.6	20.0	18.6	19.0	17.6	17.3	16.3	15.6	14.7	13.0	-1.7	
<b>Region:</b>																					
Northeast	34.4	38.5	40.6	35.9	34.2	33.1	30.3	27.3	25.0	25.9	22.0	23.1	23.8	19.7	18.9	18.2	17.8	18.8	17.0	-1.8	
Midwest	37.8	37.7	39.3	40.0	37.8	35.6	35.9	31.7	27.3	28.3	26.8	23.6	24.7	22.1	25.7	21.5	21.8	21.0	16.5	-4.5	
South	33.5	33.2	35.0	34.3	36.2	29.6	25.9	27.2	24.3	24.6	24.6	23.2	21.9	22.4	20.0	20.5	18.4	15.6	18.6	+2.9	
West	26.5	24.4	30.5	29.1	27.6	28.1	25.2	19.4	20.7	20.1	17.5	15.0	15.8	15.8	14.7	15.3	16.4	13.9	12.1	-1.8	
<b>Population Density:</b>																					
Large MSA	33.9	32.1	34.9	32.9	30.0	27.4	27.3	24.8	18.9	20.8	20.8	20.7	19.9	18.8	17.7	18.7	17.2	15.8	14.5	-1.3	
Other MSA	31.7	32.6	35.7	34.2	35.0	31.5	28.2	26.2	25.1	26.3	22.6	20.3	20.8	19.5	19.1	17.9	18.1	15.6	15.5	-0.1	
Non-MSA	36.2	38.2	40.0	39.7	38.7	36.3	34.3	30.1	30.4	27.6	27.4	25.3	25.9	24.3	25.5	23.1	22.3	23.1	20.9	-2.2	
<b>Parental Education:<sup>a</sup></b>																					
1.0–2.0 (Low)	31.2	31.5	31.2	32.3	33.0	31.3	24.8	20.9	23.5	21.0	19.1	21.1	20.5	18.5	19.9	17.0	18.2	17.0	18.2	+1.2	
2.5–3.0	35.0	35.5	36.5	36.0	37.3	32.2	31.5	28.9	27.0	28.7	27.3	24.7	24.7	22.4	23.2	21.6	22.4	19.0	18.2	-0.8	
3.5–4.0	33.2	33.2	35.6	36.7	35.0	32.8	30.3	28.6	24.3	26.3	24.8	22.9	21.6	21.3	21.0	20.9	19.6	20.1	18.5	-1.6	
4.5–5.0	32.6	34.5	37.5	34.2	32.4	30.2	29.3	25.0	22.6	23.8	21.8	19.2	20.5	18.6	18.0	17.5	15.9	15.7	14.1	-1.5	
5.5–6.0 (High)	34.0	32.9	38.5	33.1	34.4	27.4	25.0	25.3	21.0	19.9	18.0	17.4	18.4	19.2	15.3	12.8	14.3	11.2	9.5	-1.7	
<b>Race/Ethnicity (2-year average):<sup>b</sup></b>																					
White	36.6	38.1	40.7	41.7	40.1	37.9	35.3	32.5	29.4	28.2	27.6	25.9	24.9	24.7	23.9	22.9	22.2	21.2	19.4	-1.8	
African American	12.9	14.2	14.3	14.9	14.9	14.3	13.3	12.1	10.0	10.1	10.7	10.5	10.8	10.3	9.8	10.1	9.7	8.6	9.6	+1.0	
Hispanic	25.1	25.4	25.9	26.6	27.3	27.7	23.8	21.3	19.0	18.5	17.1	16.0	15.3	15.0	15.7	15.0	14.3	13.2	12.4	-0.8	

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

Notes. Level of significance of difference between the two most recent classes:  $s = .05$ ,  $ss = .01$ ,  $sss = .001$ . '—' indicates data not available. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding. See Table S3 for the number of subgroup cases. See appendix B for definition of variables in table.

<sup>a</sup>Parental education is an average score of mother's education and father's education. See appendix B for details.

<sup>b</sup>To derive percentages for each racial subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates. See appendix B for details on how race/ethnicity is defined.

**TABLE 9**  
**SMOKELESS TOBACCO: Trends in 30-Day Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 30 days																						2012– 2013 change	
	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	
<i>Approximate weighted N =</i>	<i>17,500</i>	<i>18,600</i>	<i>18,300</i>	<i>17,300</i>	<i>17,500</i>	<i>17,800</i>	<i>18,600</i>	<i>18,100</i>	<i>16,700</i>	<i>16,700</i>	<i>16,200</i>	<i>15,100</i>	<i>16,500</i>	<i>17,000</i>	<i>16,800</i>	<i>16,500</i>	<i>16,100</i>	<i>15,700</i>	<i>15,000</i>	<i>15,300</i>	<i>16,000</i>	<i>15,100</i>	<i>14,600</i>	
<b>Total</b>	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	3.5	3.7	4.1	3.5	2.8	2.8	+0.1
<b>Gender:</b>																								
Male	12.7	12.5	10.9	12.8	11.8	11.4	9.9	8.1	6.9	6.7	6.9	5.4	6.7	6.4	5.3	5.3	4.7	5.5	6.3	6.3	4.9	4.0	3.8	-0.2
Female	1.4	2.0	2.7	2.4	2.9	2.9	1.5	1.5	2.1	1.8	1.4	1.3	1.8	1.7	1.5	2.1	1.7	1.5	1.4	1.9	1.9	1.5	1.9	+0.4
<b>College Plans:</b>																								
None or under 4 years	12.7	17.1	15.5	16.7	15.4	16.4	12.6	13.9	13.2	11.4	14.6	10.2	12.8	12.3	10.8	11.3	8.9	12.7	11.1	14.0	11.1	11.5	9.2	-2.3
Complete 4 years	6.1	5.5	5.3	6.5	6.0	5.6	4.6	3.8	3.5	3.4	2.9	2.6	3.3	3.2	2.4	2.9	2.7	2.7	3.1	3.2	2.8	2.1	2.4	+0.3
<b>Region:</b>																								
Northeast	5.0	4.9	3.4	6.1	5.4	4.9	3.2	2.7	2.5	2.7	3.7	2.7	3.1	3.4	1.4	2.9	1.5	2.5	3.2	3.9	2.9	2.6	1.8	-0.8
Midwest	7.1	7.5	7.2	7.1	7.6	8.3	6.8	4.3	5.3	4.8	4.0	3.9	3.5	4.2	3.2	4.0	2.9	3.4	3.0	4.8	3.3	2.1	1.4	-0.7
South	9.5	9.3	8.0	9.9	8.7	8.1	6.7	6.9	5.9	5.8	5.4	4.1	5.9	5.5	5.3	4.6	4.1	5.2	5.6	5.0	4.3	3.6	4.7	+1.0
West	3.5	4.4	6.3	6.0	5.0	5.9	4.1	3.9	2.9	1.9	2.1	1.5	2.5	2.0	1.4	2.2	2.8	1.8	1.8	1.9	2.6	2.0	2.0	-0.1
<b>Population Density:</b>																								
Large MSA	4.8	4.2	3.3	4.6	4.1	4.2	3.6	2.9	1.8	2.4	2.4	1.5	2.6	1.9	1.3	1.9	1.9	2.8	2.5	2.3	1.8	1.4	1.7	+0.3
Other MSA	6.2	6.9	6.8	6.4	6.7	7.1	4.7	4.1	3.9	3.9	3.5	2.9	3.7	3.6	2.8	3.1	3.1	3.1	3.6	4.7	3.7	3.1	2.6	-0.5
Non-MSA	10.4	10.3	9.9	13.0	11.2	10.6	9.0	8.5	8.9	7.0	7.0	6.2	6.9	7.7	7.0	7.1	5.3	5.4	5.8	5.0	5.4	4.2	4.9	+0.7
<b>Parental Education: <sup>a</sup></b>																								
1.0–2.0 (Low)	11.4	7.8	9.4	8.9	10.6	6.3	8.3	5.4	6.6	7.4	5.0	4.5	6.8	6.9	5.7	5.9	4.9	5.4	5.3	5.2	6.6	4.2	4.1	-0.2
2.5–3.0	8.4	8.5	7.5	8.4	9.9	8.8	6.0	5.1	5.7	5.2	5.4	5.1	5.1	6.0	4.9	3.9	3.7	5.1	5.5	6.0	4.2	3.8	3.5	-0.3
3.5–4.0	6.7	7.0	7.5	8.7	7.0	7.2	6.5	5.9	4.5	4.5	3.7	3.2	4.1	3.5	3.1	3.7	3.1	3.8	4.9	4.1	3.3	3.2	3.7	+0.4
4.5–5.0	4.8	7.0	5.2	6.1	5.0	6.8	4.8	4.4	3.3	2.9	2.5	2.4	3.1	3.2	2.4	3.1	2.5	2.4	2.9	3.3	2.7	2.0	1.6	-0.4
5.5–6.0 (High)	6.1	4.6	4.9	6.8	5.8	5.9	3.7	3.9	3.1	3.0	4.2	2.5	2.7	2.9	1.8	3.4	2.3	2.3	1.4	2.5	1.5	1.4	1.8	+0.4
<b>Race/Ethnicity (2-year average): <sup>b</sup></b>																								
White	—	8.3	8.0	8.1	8.9	8.8	7.6	6.1	5.4	5.2	4.8	4.1	3.9	4.4	4.2	3.7	3.8	3.9	4.4	4.9	4.6	3.6	3.1	-0.5
African American	—	1.8	2.7	3.2	2.6	2.2	2.6	2.3	2.3	2.7	2.2	1.6	2.7	3.0	2.0	2.1	2.3	2.4	2.6	2.2	1.8	1.8	2.2	+0.4
Hispanic	—	4.2	4.0	5.0	5.7	5.2	4.6	4.5	4.6	3.7	3.3	4.0	4.7	4.0	2.6	3.1	2.9	2.4	2.5	2.6	3.2	3.1	2.4	-0.7

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

Notes. Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding. See Table S1 for the number of subgroup cases. See appendix B for definition of variables in table. Data based on one of two forms in 1991–1996 and on two of four forms beginning in 1997; N is one half of N indicated in Table S1. In 2011 snus and dissolvable tobacco were added to the list of examples.

<sup>a</sup>Parental education is an average score of mother's education and father's education. See appendix B for details.

<sup>b</sup>To derive percentages for each racial subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates. See appendix B for details on how race/ethnicity is defined.

**TABLE 10**  
**SMOKELESS TOBACCO: Trends in 30-Day Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 30 days																						2012– 2013 change	
	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	
<i>Approximate weighted N =</i>	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	15,100	15,900	15,200	14,900	15,000	12,900	
<b>Total</b>	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	5.0	6.5	7.5	6.6	6.4	6.4	0.0
<b>Gender:</b>																								
Male	18.7	18.1	19.3	19.2	17.2	15.0	14.9	13.8	12.2	11.4	12.7	9.9	9.6	9.0	9.7	10.2	10.2	8.2	11.1	13.0	11.5	11.2	11.1	-0.2
Female	1.3	1.8	2.0	2.1	2.1	2.3	2.7	1.7	1.3	1.3	1.6	2.1	1.3	1.0	1.6	1.2	2.0	2.0	2.0	2.0	1.9	1.9	2.0	+0.1
<b>College Plans:</b>																								
None or under 4 years	16.9	17.5	20.2	19.9	20.3	16.3	18.5	17.8	13.2	13.9	16.0	13.6	13.0	12.2	13.3	14.9	14.0	14.6	17.5	21.8	17.9	16.8	18.6	+1.8
Complete 4 years	8.4	8.0	8.4	8.5	7.8	7.2	7.2	5.7	5.4	4.8	5.4	4.8	4.1	3.9	4.5	4.5	5.0	3.8	5.3	5.8	5.2	5.3	5.1	-0.2
<b>Region:</b>																								
Northeast	8.6	5.3	8.0	9.0	7.6	6.8	9.3	6.5	5.2	4.6	4.9	4.7	4.5	5.1	4.6	4.5	5.9	3.3	6.6	6.7	5.6	4.3	6.4	+2.1
Midwest	11.0	9.6	10.0	10.0	11.0	9.5	7.1	7.9	8.1	6.2	7.0	4.8	4.9	3.7	5.7	7.5	6.3	7.2	7.7	9.2	6.4	7.9	6.9	-0.9
South	11.6	11.4	11.8	11.7	10.9	10.2	10.2	9.5	7.9	7.7	9.6	8.3	7.5	7.3	7.0	6.0	8.3	6.5	7.7	9.1	7.9	8.1	6.9	-1.2
West	7.8	10.9	11.1	10.9	7.7	6.0	8.2	4.6	4.0	4.5	3.0	5.1	3.5	3.0	4.5	4.1	3.3	2.2	3.3	4.0	5.4	4.0	5.4	+1.4
<b>Population Density:</b>																								
Large MSA	5.9	6.4	6.5	6.2	5.9	5.5	4.2	3.7	4.6	5.6	4.1	4.5	3.7	3.0	3.2	3.9	4.1	3.4	4.8	5.1	4.6	3.6	5.1	+1.5
Other MSA	9.2	9.3	10.1	10.9	9.2	8.4	8.3	5.7	5.3	4.3	5.7	6.1	4.8	4.3	5.3	5.3	5.8	4.4	6.3	7.0	6.1	6.3	5.3	-1.0
Non-MSA	14.7	13.3	14.1	13.9	15.0	12.2	14.7	15.1	11.3	9.8	12.5	8.2	9.2	9.0	9.4	9.6	9.9	8.7	9.3	12.1	10.2	10.5	11.2	+0.7
<b>Parental Education: <sup>a</sup></b>																								
1.0–2.0 (Low)	6.6	10.1	10.9	9.4	9.6	8.1	9.0	6.8	7.2	7.4	6.9	6.7	7.4	3.7	4.4	7.4	6.1	5.0	7.9	6.5	6.4	7.2	5.6	-1.7
2.5–3.0	12.1	11.0	12.2	12.5	10.4	9.7	9.4	8.2	7.0	6.4	8.9	8.1	5.0	5.8	6.7	7.1	6.9	6.5	7.4	9.1	8.8	7.7	8.4	+0.6
3.5–4.0	10.6	10.5	10.9	10.2	10.9	8.3	10.3	8.6	7.3	6.3	7.1	5.5	4.9	5.2	6.0	5.7	6.4	5.4	7.4	8.7	7.2	7.5	6.9	-0.5
4.5–5.0	9.3	7.6	9.9	9.8	9.8	8.5	7.2	6.9	6.1	6.2	5.7	5.4	5.7	4.4	5.6	4.9	6.1	4.6	5.4	7.0	5.2	6.1	5.9	-0.2
5.5–6.0 (High)	8.6	8.1	7.0	8.9	6.0	7.7	8.3	5.2	4.8	4.0	4.8	5.2	4.3	4.4	3.8	5.3	4.8	2.9	5.6	6.0	5.3	3.8	5.3	+1.5
<b>Race/Ethnicity (2-year average): <sup>b</sup></b>																								
White	—	11.4	12.0	12.5	12.0	11.0	10.4	10.0	8.7	7.5	7.5	7.8	6.9	6.1	6.6	6.9	7.3	7.3	7.5	9.1	9.1	8.0	8.1	0.0
African American	—	2.9	2.3	2.3	2.5	2.5	2.8	2.3	1.6	2.0	3.2	2.6	2.5	2.7	2.5	3.2	3.3	2.8	2.6	2.3	2.2	2.3	2.2	-0.1
Hispanic	—	6.2	6.1	4.3	3.6	4.0	4.6	4.8	4.8	4.5	4.0	4.0	4.1	3.3	3.1	3.4	2.7	2.6	2.9	2.8	3.4	4.4	3.4	-1.0

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

Notes. Level of significance of difference between the two most recent classes:  $s = .05$ ,  $ss = .01$ ,  $sss = .001$ . '—' indicates data not available. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding. See Table S2 for the number of subgroup cases. See appendix B for definition of variables in table. Data based on one of two forms in 1991–1996 and on two of four forms beginning in 1997;  $N$  is one half of  $N$  indicated in Table S2. In 2011 snus and dissolvable tobacco were added to the list of examples.

<sup>a</sup>Parental education is an average score of mother's education and father's education. See appendix B for details.

<sup>b</sup>To derive percentages for each racial subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates. See appendix B for details on how race/ethnicity is defined.



**TABLE 11**  
**SMOKELESS TOBACCO: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days																			→ (Years cont.)
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990 <sup>a</sup>	1991 <sup>a</sup>	1992	1993	1994
<i>Approximate weighted N =</i>	—	—	—	—	—	—	—	—	—	—	—	15,200	16,300	16,300	16,700	—	—	15,800	16,300	15,400
<b>Total</b>	—	—	—	—	—	—	—	—	—	—	—	11.5	11.3	10.3	8.4	—	—	11.4	10.7	11.1
<b>Gender:</b>																				
Male	—	—	—	—	—	—	—	—	—	—	—	22.3	22.8	19.9	15.9	—	—	20.8	19.7	20.3
Female	—	—	—	—	—	—	—	—	—	—	—	1.6	0.7	1.7	1.2	—	—	2.0	2.3	2.6
<b>College Plans:</b>																				
None or under 4 years	—	—	—	—	—	—	—	—	—	—	—	14.5	15.5	13.1	9.6	—	—	18.0	14.9	15.8
Complete 4 years	—	—	—	—	—	—	—	—	—	—	—	9.8	9.0	8.8	7.7	—	—	9.4	9.4	9.3
<b>Region:</b>																				
Northeast	—	—	—	—	—	—	—	—	—	—	—	9.5	7.3	5.9	5.0	—	—	8.2	9.6	12.0
Midwest	—	—	—	—	—	—	—	—	—	—	—	13.5	11.3	10.8	8.3	—	—	12.3	13.6	14.7
South	—	—	—	—	—	—	—	—	—	—	—	12.2	13.7	12.1	9.8	—	—	12.5	11.1	9.7
West	—	—	—	—	—	—	—	—	—	—	—	9.3	11.7	10.9	9.1	—	—	11.1	7.0	8.5
<b>Population Density:</b>																				
Large MSA	—	—	—	—	—	—	—	—	—	—	—	9.0	6.4	7.7	6.8	—	—	5.9	7.1	7.5
Other MSA	—	—	—	—	—	—	—	—	—	—	—	8.9	10.5	8.5	7.6	—	—	11.1	9.9	11.3
Non-MSA	—	—	—	—	—	—	—	—	—	—	—	17.1	17.5	16.1	11.7	—	—	16.9	15.0	14.7
<b>Parental Education:</b> <sup>b</sup>																				
1.0–2.0 (Low)	—	—	—	—	—	—	—	—	—	—	—	8.6	11.7	10.7	5.3	—	—	14.9	7.0	12.3
2.5–3.0	—	—	—	—	—	—	—	—	—	—	—	14.4	11.5	10.7	7.0	—	—	12.4	11.6	12.9
3.5–4.0	—	—	—	—	—	—	—	—	—	—	—	11.5	12.1	10.6	9.0	—	—	12.4	10.8	9.8
4.5–5.0	—	—	—	—	—	—	—	—	—	—	—	10.4	11.7	11.8	10.2	—	—	8.0	13.3	11.1
5.5–6.0 (High)	—	—	—	—	—	—	—	—	—	—	—	7.7	8.1	7.2	8.4	—	—	10.6	7.8	10.2
<b>Race/Ethnicity (2-year average):</b> <sup>c</sup>																				
White	—	—	—	—	—	—	—	—	—	—	—	—	12.9	12.0	10.6	—	—	—	13.8	13.8
African American	—	—	—	—	—	—	—	—	—	—	—	—	2.1	4.5	4.5	—	—	—	2.0	1.9
Hispanic	—	—	—	—	—	—	—	—	—	—	—	—	4.4	5.2	5.1	—	—	—	6.0	5.4

(Table continued on next page.)

**TABLE 11 (cont.)**  
**SMOKELESS TOBACCO: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days																		2012– 2013 change	
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012		2013
<i>Approximate weighted N =</i>	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	14,000	13,700	14,400	14,100	13,700	12,600	
<b>Total</b>	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	6.5	8.4	8.5	8.3	7.9	8.1	+0.2
<b>Gender:</b>																				
Male	23.6	19.5	18.7	15.6	15.5	14.4	14.2	12.2	12.5	12.2	12.7	11.0	11.9	11.8	15.8	15.7	14.2	13.5	14.6	+1.1
Female	1.8	1.1	1.2	1.5	1.3	1.3	1.6	1.2	1.0	1.6	1.9	1.5	1.2	1.0	1.7	1.7	1.8	1.6	1.4	-0.2
<b>College Plans:</b>																				
None or under 4 years	18.7	17.6	16.9	14.3	10.5	15.8	13.0	10.8	12.8	11.9	15.2	13.4	11.7	12.4	14.2	14.4	17.5	15.0	16.1	+1.1
Complete 4 years	9.9	7.6	7.4	7.1	7.6	5.4	6.1	4.8	4.8	4.9	5.4	4.1	5.3	5.0	7.3	7.3	6.4	6.0	6.2	+0.2
<b>Region:</b>																				
Northeast	9.6	8.4	6.9	2.6	4.3	5.3	5.4	5.3	6.3	5.1	8.0	5.3	5.3	7.5	7.1	7.6	8.2	7.1	5.6	-1.5
Midwest	16.7	12.6	13.4	11.8	8.9	11.1	9.9	7.8	5.7	7.4	10.5	7.0	9.1	7.2	14.1	12.2	7.8	10.5	11.2	+0.7
South	11.9	9.2	9.0	10.5	10.7	7.3	8.5	7.9	7.9	8.4	7.5	7.5	7.9	6.1	7.1	7.8	8.9	7.7	9.3	+1.5
West	8.6	8.5	9.1	7.3	7.0	6.3	6.2	3.9	6.0	4.3	4.0	3.4	2.8	5.6	4.6	6.7	7.7	5.9	5.2	-0.7
<b>Population Density:</b>																				
Large MSA	12.5	8.6	6.5	4.7	4.9	4.2	4.4	3.4	3.4	3.8	4.3	4.8	3.9	2.6	4.4	5.9	5.3	6.4	7.1	+0.7
Other MSA	9.5	7.4	7.4	7.7	8.5	7.9	8.0	5.7	6.9	5.6	7.8	4.6	6.8	6.2	7.7	7.9	8.4	6.4	7.4	+1.0
Non-MSA	16.7	15.3	17.9	16.1	11.7	11.4	11.5	11.9	10.4	12.1	11.3	10.9	10.1	11.8	15.0	13.8	12.4	14.1	11.4	-2.7
<b>Parental Education:<sup>b</sup></b>																				
1.0–2.0 (Low)	9.8	6.3	5.8	6.1	5.4	4.3	6.3	4.1	9.3	6.1	5.3	4.9	5.3	3.4	2.8	6.1	2.2	5.3	7.9	+2.7
2.5–3.0	11.5	10.4	10.7	9.0	9.1	9.9	7.5	5.6	5.9	8.8	9.7	8.0	9.8	7.2	10.4	8.2	9.3	10.0	7.9	-2.1
3.5–4.0	12.8	9.1	10.4	9.8	8.8	8.9	8.6	7.4	6.5	4.6	7.8	6.4	5.3	6.8	9.4	8.7	8.2	8.5	6.7	-1.8
4.5–5.0	12.8	11.4	9.1	9.6	8.5	6.2	6.2	7.3	7.6	7.9	8.0	6.1	6.6	6.5	7.7	9.8	9.9	8.4	10.5	+2.1
5.5–6.0 (High)	11.6	8.1	9.9	7.4	7.9	5.7	10.3	4.6	6.2	5.4	3.7	3.5	5.8	6.3	8.7	7.5	6.3	4.7	7.7	+3.0
<b>Race/Ethnicity (2-year average):<sup>c</sup></b>																				
White	13.8	13.0	12.2	11.8	11.0	10.5	10.3	9.7	8.5	8.2	8.7	8.8	8.3	8.6	10.5	12.1	11.8	11.3	11.0	-0.3
African American	2.1	2.7	2.2	1.4	1.5	1.5	1.2	1.0	1.0	0.6	0.3	0.5	1.8	2.0	1.5	2.2	1.8	1.0	2.4	+1.4
Hispanic	7.6	8.1	5.3	4.3	3.9	3.8	3.2	2.6	3.1	3.9	4.9	3.8	2.7	2.3	2.5	3.7	3.9	2.5	2.3	-0.3

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

Notes. Level of significance of difference between the two most recent classes:  $s = .05$ ,  $ss = .01$ ,  $sss = .001$ . '—' indicates data not available. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding. See Table S3 for the number of subgroup cases. See appendix B for definition of variables in table. Data based on one of six forms;  $N$  is one sixth of  $N$  indicated in Table S3. In 2011 snus and dissolvable tobacco were added to the list of examples.

**Caution: Limited sample sizes (see Notes above). Use caution in interpreting subgroup trends.**

<sup>a</sup>Prevalence of smokeless tobacco use was not asked of 12th graders in 1990 and 1991. Prior to 1990 the prevalence-of-use question on smokeless tobacco was located near the end of one 12th-grade questionnaire form, whereas after 1991 the question was placed earlier and in a different form. This shift could explain the discontinuities between the corresponding data.

<sup>b</sup>Parental education is an average score of mother's education and father's education. See appendix B for details.

<sup>c</sup>To derive percentages for each racial subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates. See appendix B for details on how race/ethnicity is defined.

**TABLE 12**  
**Trends in Annual Prevalence of Use of Other Tobacco Products**  
**for Grades 8, 10, and 12**

(Entries are percentages.)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2012– 2013 change
<b>Bidis <sup>a,b</sup></b>															
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	1.9	1.5	1.4	—	—	—	—
<b>Kreteks <sup>a,c</sup></b>															
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	6.8	5.5	4.6	2.9	3.0	1.6	-1.4 s
<b>Tobacco using a Hookah <sup>d</sup></b>															
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	17.1	18.5	18.3	21.4	+3.1 s
<b>Small cigars <sup>d</sup></b>															
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	23.1	19.5	19.9	20.4	+0.5
<b>Dissolvable Tobacco Products <sup>a,d</sup></b>															
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	1.0	1.1	+0.1
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	1.6	1.2	-0.4
12th Grade	—	—	—	—	—	—	—	—	—	—	—	1.5	1.6	1.9	+0.2
<b>Snus <sup>a,d</sup></b>															
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	2.4	2.0	-0.4
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	6.9	5.2	-1.7 s
12th Grade	—	—	—	—	—	—	—	—	—	—	—	7.9	7.9	7.7	-0.2
<b>Approximate Ns</b>															
8th Grade	16,700	16,200	15,100	16,500	17,000	16,800	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	
10th Grade	14,300	14,000	14,300	15,800	16,400	16,200	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	
12th Grade	12,800	12,800	12,900	14,600	14,600	14,700	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	

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

Notes. Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.

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

<sup>a</sup>For 8th and 10th graders only: Data based on one of four forms; N is one third of N indicated. For 12th grade Bidis only: In 2000 the question was asked in two of six forms; N is two sixths of N indicated. In 2001 the question was moved from one of the two forms to another; N is two sixths of N indicated.

<sup>b</sup>For 12th grade only: Data based on two of six forms; N is two sixths of N indicated.

<sup>c</sup>For 12th grade only: Data based on two of six forms in 2001-2008; N is two sixths of N indicated. Beginning in 2009 data based on one of six forms; N is one sixth of N indicated.

<sup>d</sup>For 12th grade only: Data based on one of six forms; N is one sixth of N indicated.