

# **monitoring the future occasional paper series**

**Paper 94**

***DEMOGRAPHIC SUBGROUP TRENDS AMONG ADOLESCENTS  
IN THE USE OF VARIOUS LICIT AND ILLICIT DRUGS  
1975–2019***

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Vaping Nicotine	30-Day.....	746
Vaping Marijuana	30-Day.....	747
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Non-Stimulant-Type ADHD Drugs	Lifetime.....	790
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# INTRODUCTION

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This occasional paper presents national demographic subgroup data for the 1975-2019 Monitoring the Future (MTF) national survey results on 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders' use of drugs, alcohol, and tobacco. MTF is funded by the National Institute on Drug Abuse at the National Institutes of Health under a series of investigator-initiated, competitive research grants to the University of Michigan. The study covers all major classes of illicit and licit psychoactive drugs for an array of population subgroups. The 2018 subgroup data presented here accompany the [\*Monitoring the Future National Survey Results on Drug Use: 1975-2019: Overview, Key Findings on Adolescent Drug Use\*](#)<sup>1</sup> and the [\*Monitoring the Future National Survey Results on Drug Use, 1975-2018: Volume I, Secondary School Students\*](#).<sup>2</sup> Prior to 2014 subgroup data were available in tabular form only in Appendices B and D of the relevant year's *Volume I*.<sup>3</sup> Since 2014, the MTF subgroup definitions and data have been presented in this series of occasional papers, in both tables and figures to facilitate the examination and interpretation of trend data.

*The Overview of Key Findings* presents trends in prevalence, perceived risk, disapproval, and perceived availability for most drugs under study and a brief description of subgroup differences. *Volume I* contains a description of MTF's design and purposes, as well as extended reporting on substance use of all kinds—licit and illicit—and a number of related factors, such as attitudes and beliefs about drugs, age of initiation, noncontinuation of drug use, perceived availability, relevant conditions in the social environment, history of daily marijuana use, use of drugs for the treatment of ADHD, and sources of prescription drugs used outside of medical supervision.

The trends offered here in tabular and graphic forms cover demographic subgroups based on:

- Gender
- College plans
- Region of the country
- Population density
- Education level of the parents (a proxy for socioeconomic level)
- Racial/ethnic identification

Detailed descriptions of the demographic categories are provided in the section starting on page 385 of this paper.

The graphs and tables in this occasional paper present trend data for 8<sup>th</sup>-, 10<sup>th</sup>-, and 12<sup>th</sup>-grade respondents separately. Data for 12<sup>th</sup> grade begins with 1975, the first year in which a nationally representative sample of high school seniors was surveyed. Data for 8<sup>th</sup> and 10<sup>th</sup> grades begin with 1991, when the study's nationally representative annual surveys were expanded to include those lower grade levels.

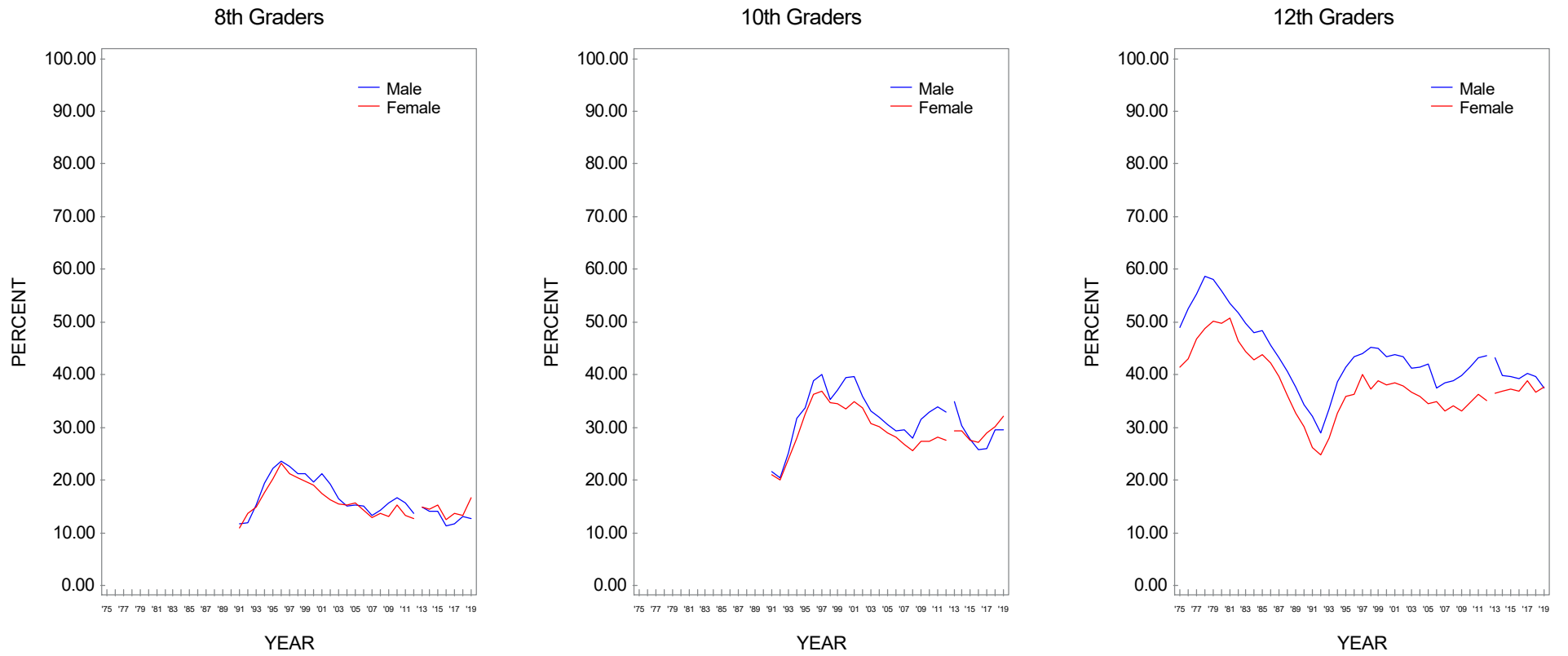
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<sup>1</sup>Johnston, L. D., Miech, R. A., O'Malley, P. M., Bachman, J. G., Schulenberg, J. E., & Patrick, M. E. (2020). *Monitoring the Future national survey results on drug use, 1975-2019: Overview, key findings on adolescent drug use*. Ann Arbor: Institute for Social Research, The University of Michigan.

<sup>2</sup>Miech, R. A., Johnston, L. D., O'Malley, P. M., Bachman, J. G., Schulenberg, J. E., & Patrick, M. E. (2019). *Monitoring the Future national survey results on drug use, 1975-2018: Volume I, Secondary school students*. Ann Arbor: Institute for Social Research, The University of Michigan.

<sup>3</sup>Johnston, L. D., O'Malley, P. M., Bachman, J. G., Schulenberg, J. E., & Miech, R. A. (2016 and preceding years). *Monitoring the Future national survey results on drug use, 1975-2015: Volume I, Secondary school students*. Ann Arbor: Institute for Social Research, The University of Michigan.

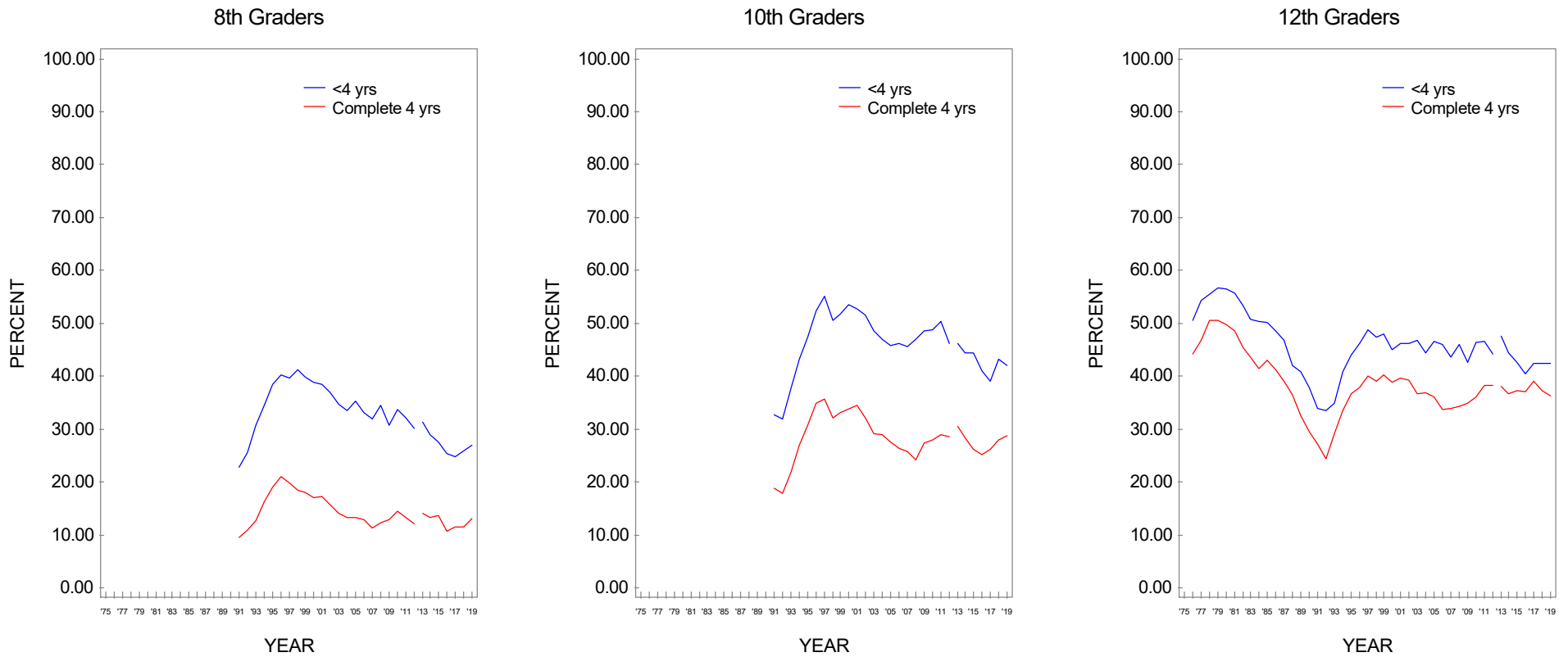
**FIGURE 1**  
**Any Illicit Drug:\* Trends in Annual Prevalence by Gender**



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

\*Beginning in 2013, a revised set of questions on amphetamine use were introduced. Data for any illicit drug are affected by these changes.

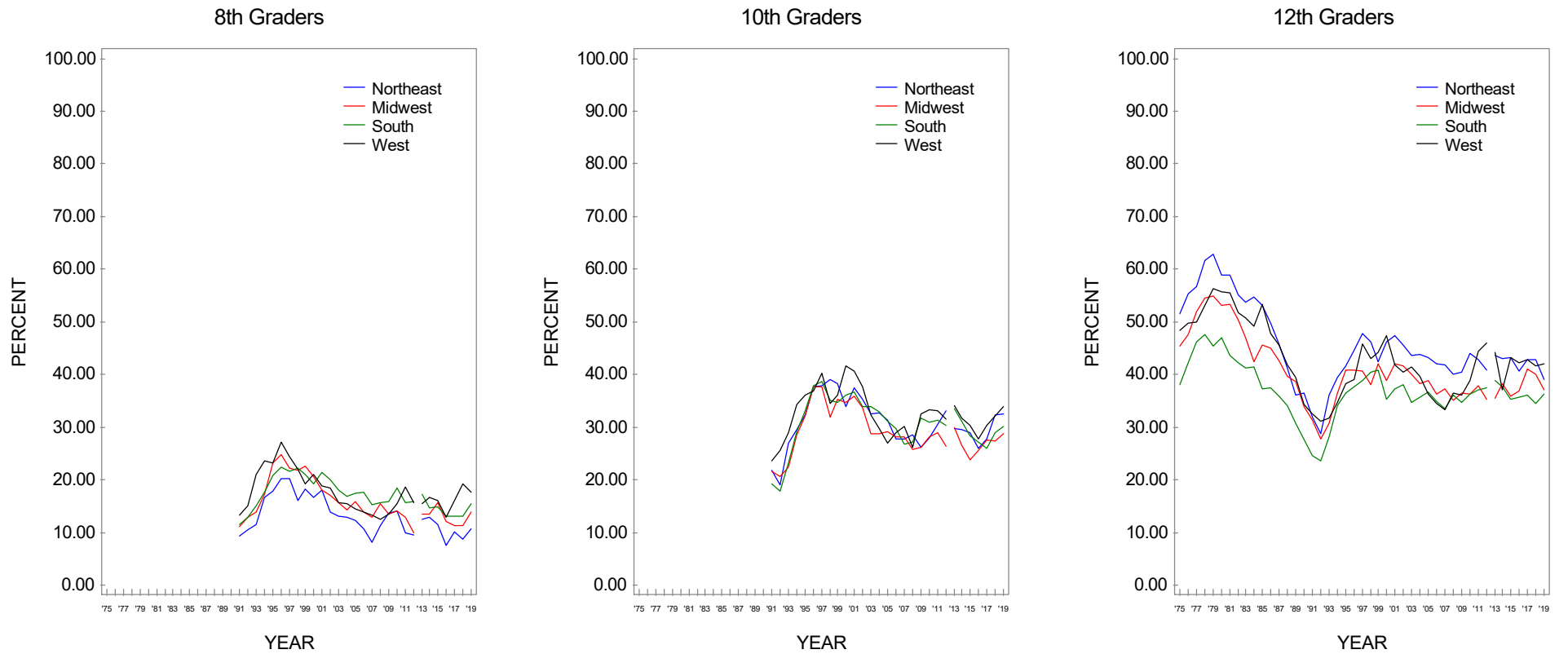
**FIGURE 2**  
**Any Illicit Drug:\* Trends in Annual Prevalence by College Plans**



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

\*Beginning in 2013, a revised set of questions on amphetamine use were introduced. Data for any illicit drug are affected by these changes.

**FIGURE 3**  
**Any Illicit Drug:\* Trends in Annual Prevalence by Region**

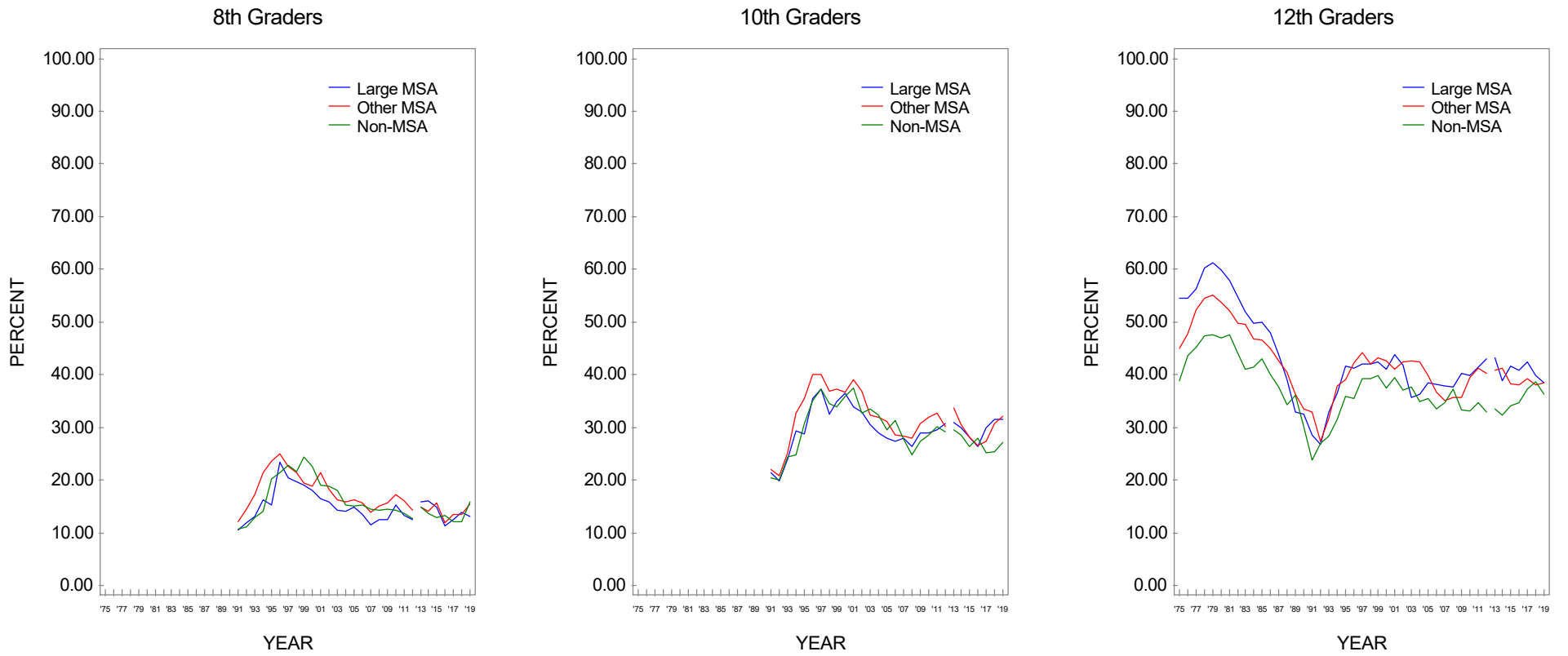


Source. The Monitoring the Future study, the University of Michigan.

\*Beginning in 2013, a revised set of questions on amphetamine use were introduced. Data for any illicit drug are affected by these changes.



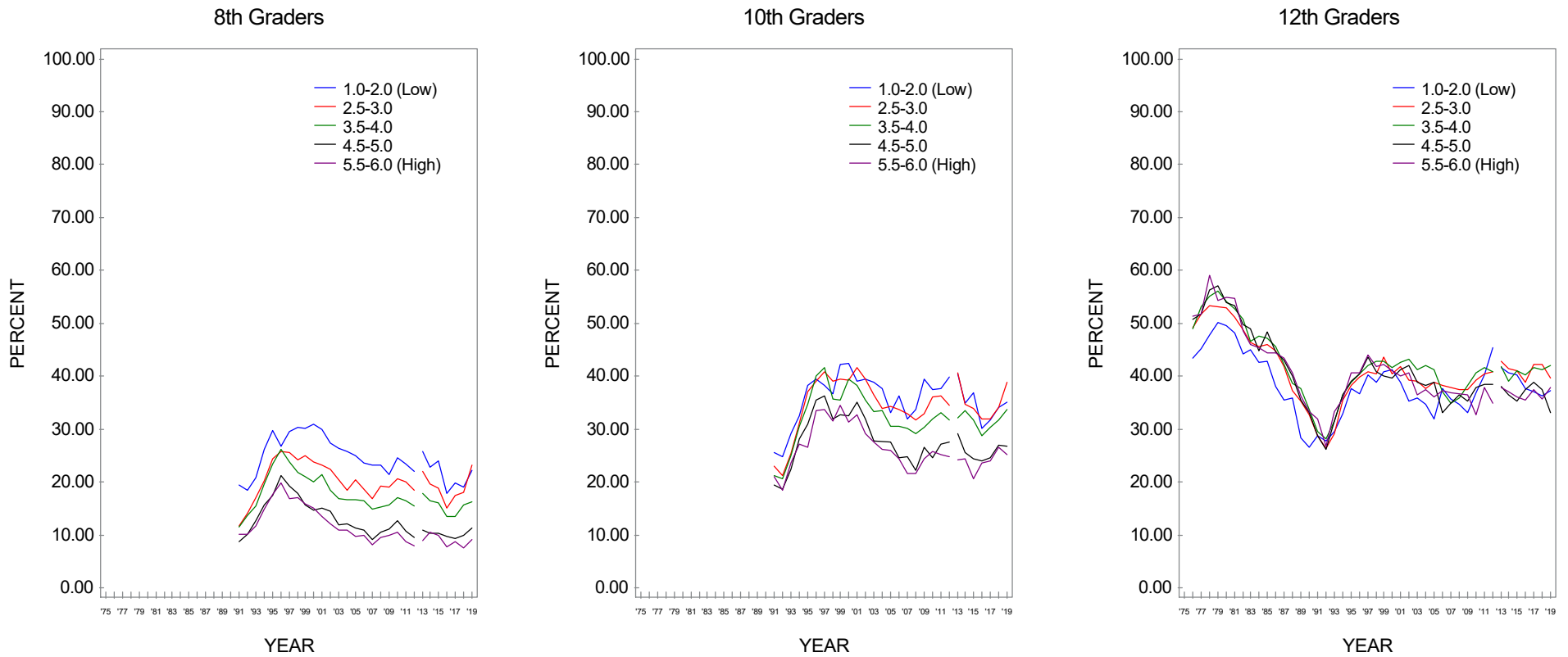
**FIGURE 4**  
**Any Illicit Drug:\* Trends in Annual Prevalence by Population Density**



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

\*Beginning in 2013, a revised set of questions on amphetamine use were introduced. Data for any illicit drug are affected by these changes.

**FIGURE 5**  
**Any Illicit Drug:\* Trends in Annual Prevalence by Average Education Level of Parents\*\***

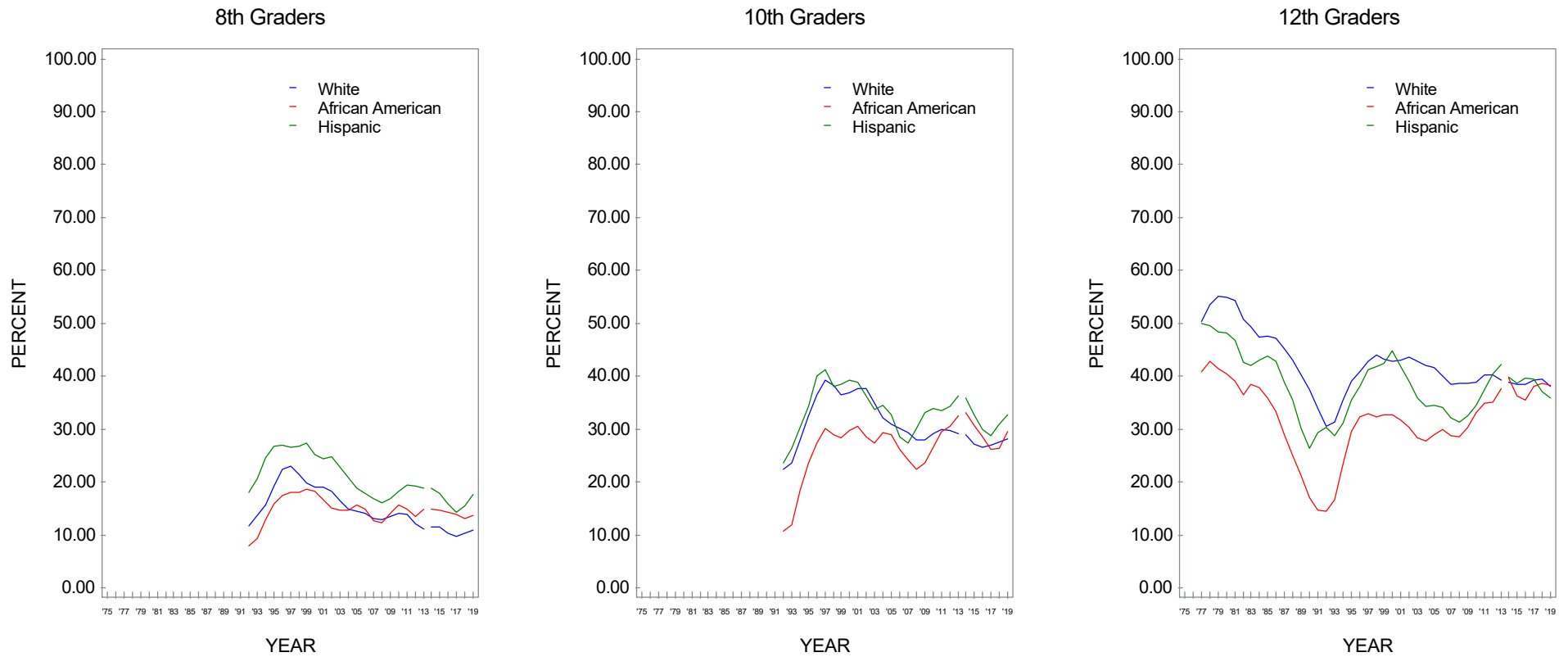


Source. The Monitoring the Future study, the University of Michigan.

\*Beginning in 2013, a revised set of questions on amphetamine use were introduced. Data for any illicit drug are affected by these changes.

\*\*Parental education is an average score of mother's education and father's education.

**FIGURE 6**  
**Any Illicit Drug\*: Trends in Annual Prevalence by Race/Ethnicity\*\***

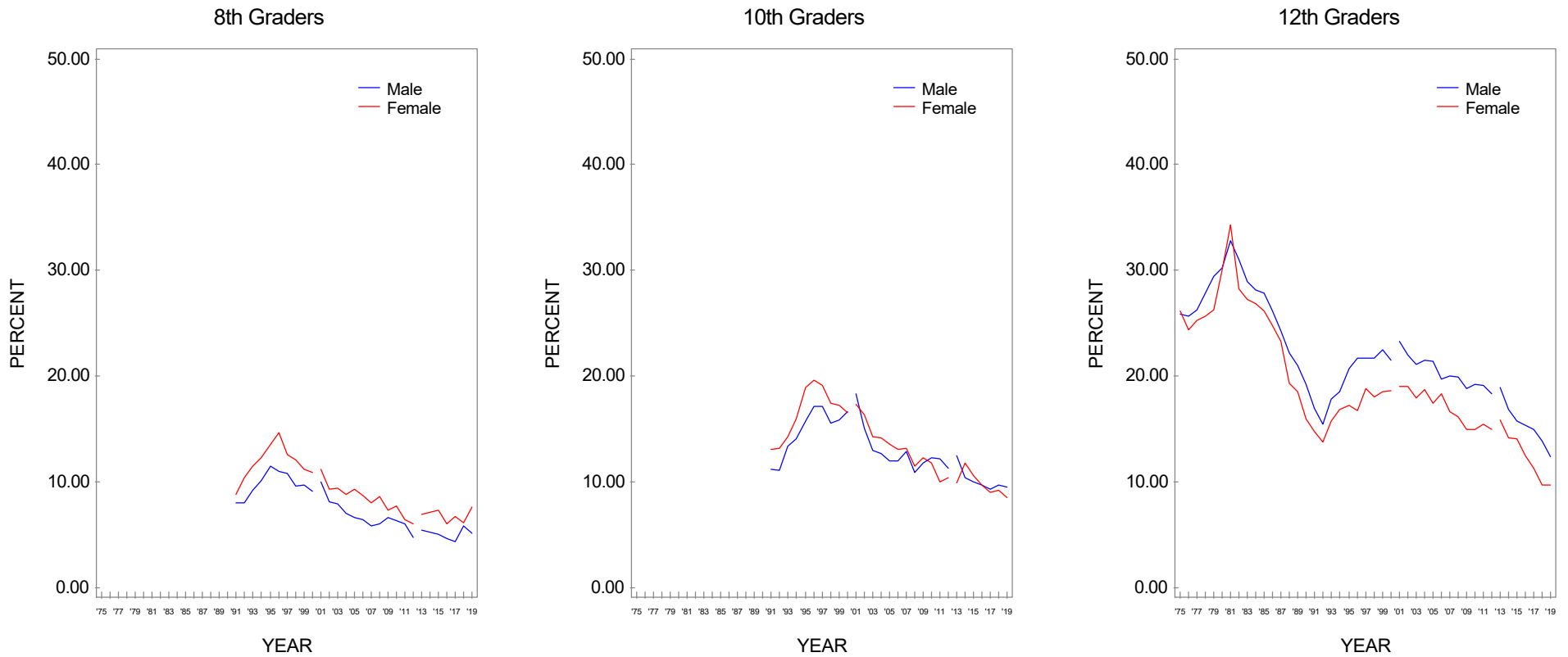


Source. The Monitoring the Future study, the University of Michigan.

\*Beginning in 2013, a revised set of questions on amphetamine use were introduced. Data for any illicit drug are affected by these changes.

\*\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

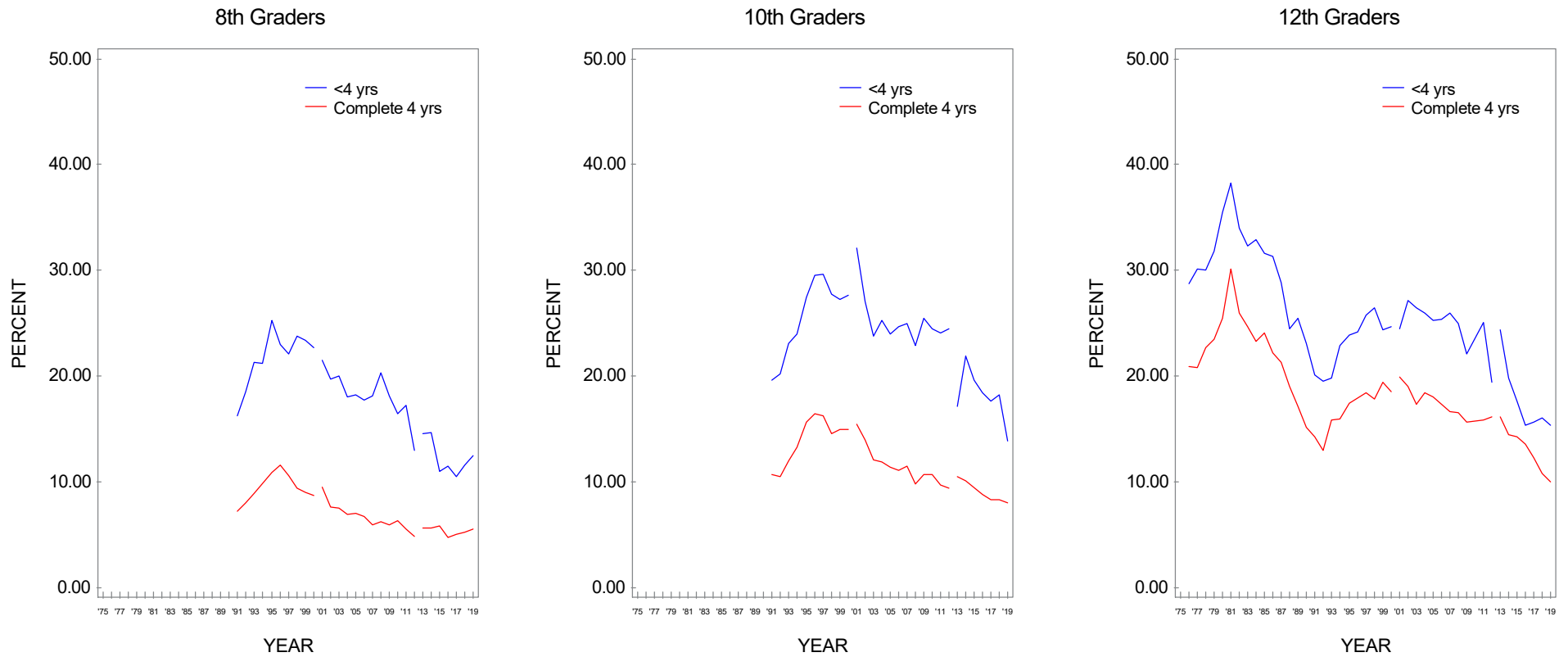
**FIGURE 7**  
**Any Illicit Drug other than Marijuana:\* Trends in Annual Prevalence by Gender**



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

\*Beginning in 2001, revised sets of questions on other hallucinogen and tranquilizer use were introduced. Beginning in 2013, a revised set of questions on amphetamines were introduced. Data for any illicit drug other than marijuana are affected by these changes.

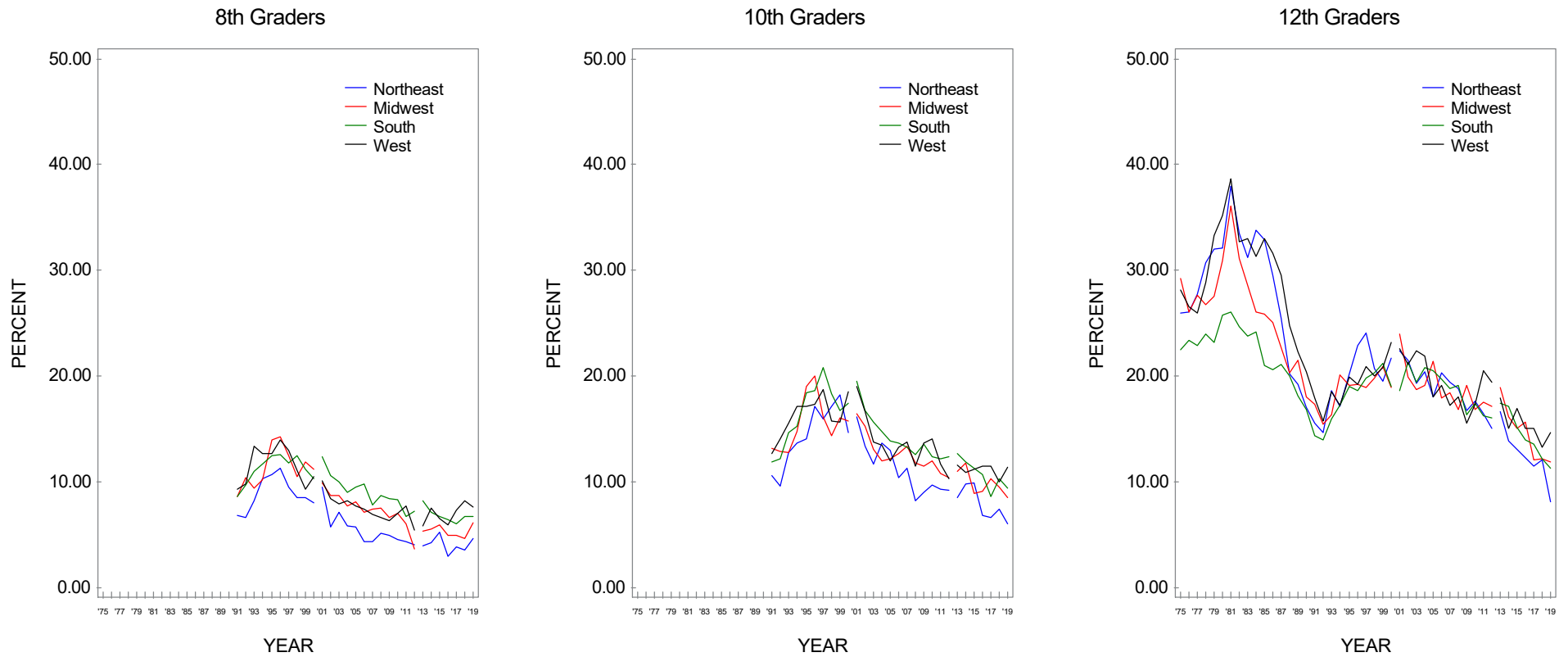
**FIGURE 8**  
**Any Illicit Drug other than Marijuana:\* Trends in Annual Prevalence by College Plans**



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

\*Beginning in 2001, revised sets of questions on other hallucinogen and tranquilizer use were introduced. Beginning in 2013, a revised set of questions on amphetamines were introduced. Data for any illicit drug other than marijuana are affected by these changes.

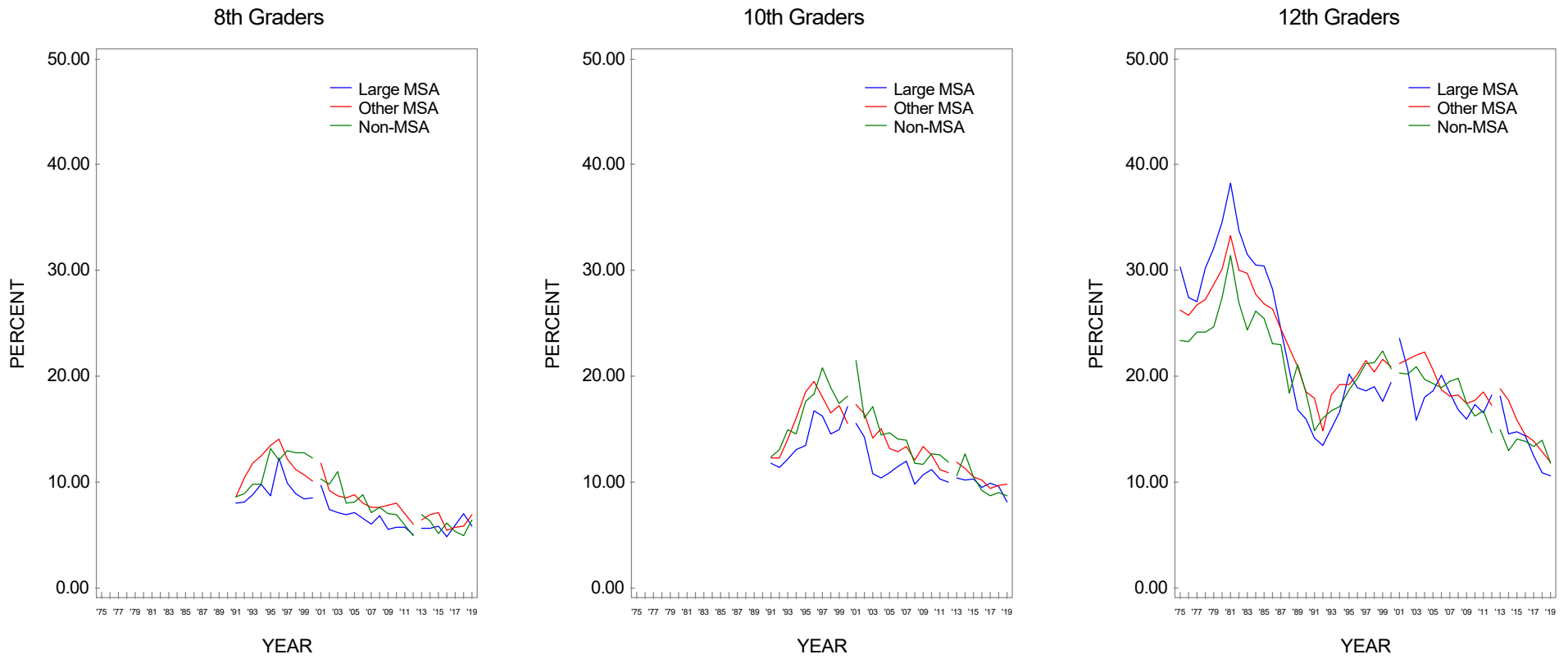
**FIGURE 9**  
**Any Illicit Drug other than Marijuana:\* Trends in Annual Prevalence by Region**



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

\*Beginning in 2001, revised sets of questions on other hallucinogen and tranquilizer use were introduced. Beginning in 2013, a revised set of questions on amphetamines were introduced. Data for any illicit drug other than marijuana are affected by these changes.

**FIGURE 10**  
**Any Illicit Drug other than Marijuana:\* Trends in Annual Prevalence by Population Density**

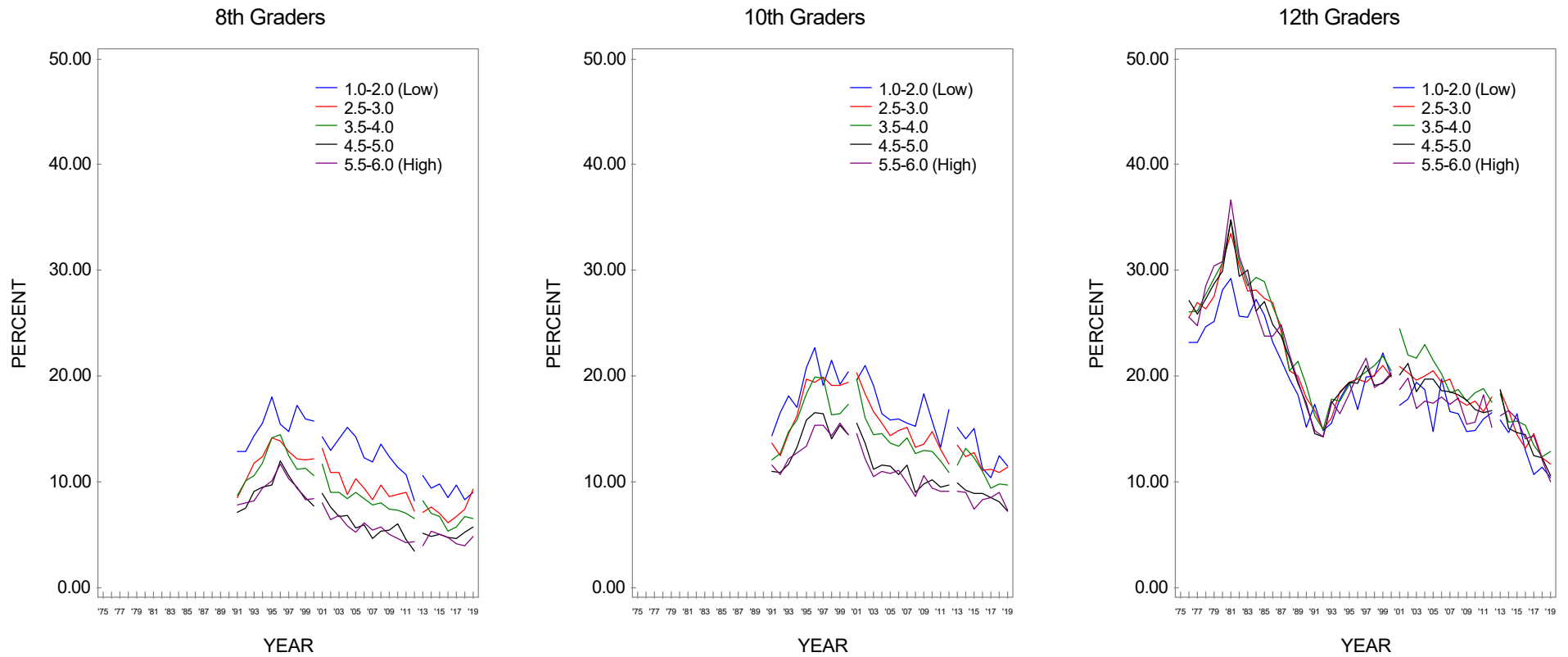


Source. The Monitoring the Future study, the University of Michigan.

\*Beginning in 2001, revised sets of questions on other hallucinogen and tranquilizer use were introduced. Beginning in 2013, a revised set of questions on amphetamines were introduced. Data for any illicit drug other than marijuana are affected by these changes.

**FIGURE 11**

**Any Illicit Drug other than Marijuana:\* Trends in Annual Prevalence by Average Education Level of Parents\*\***



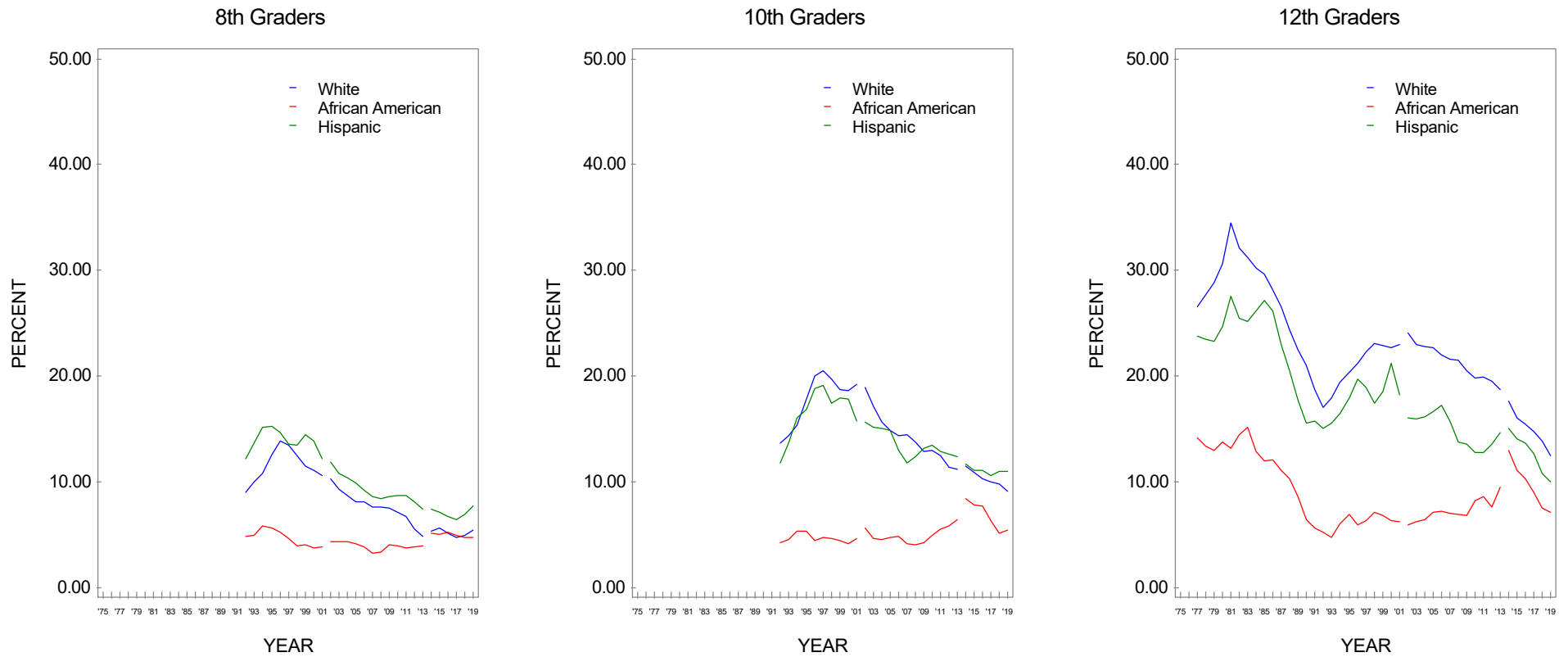
Source. The Monitoring the Future study, the University of Michigan.

\*Beginning in 2001, revised sets of questions on other hallucinogen and tranquilizer use were introduced. Beginning in 2013, a revised set of questions on amphetamines were introduced. Data for any illicit drug other than marijuana are affected by these changes.

\*\*Parental education is an average score of mother's education and father's education.



**FIGURE 12**  
**Any Illicit Drug other than Marijuana:\* Trends in Annual Prevalence by Race/Ethnicity\*\***

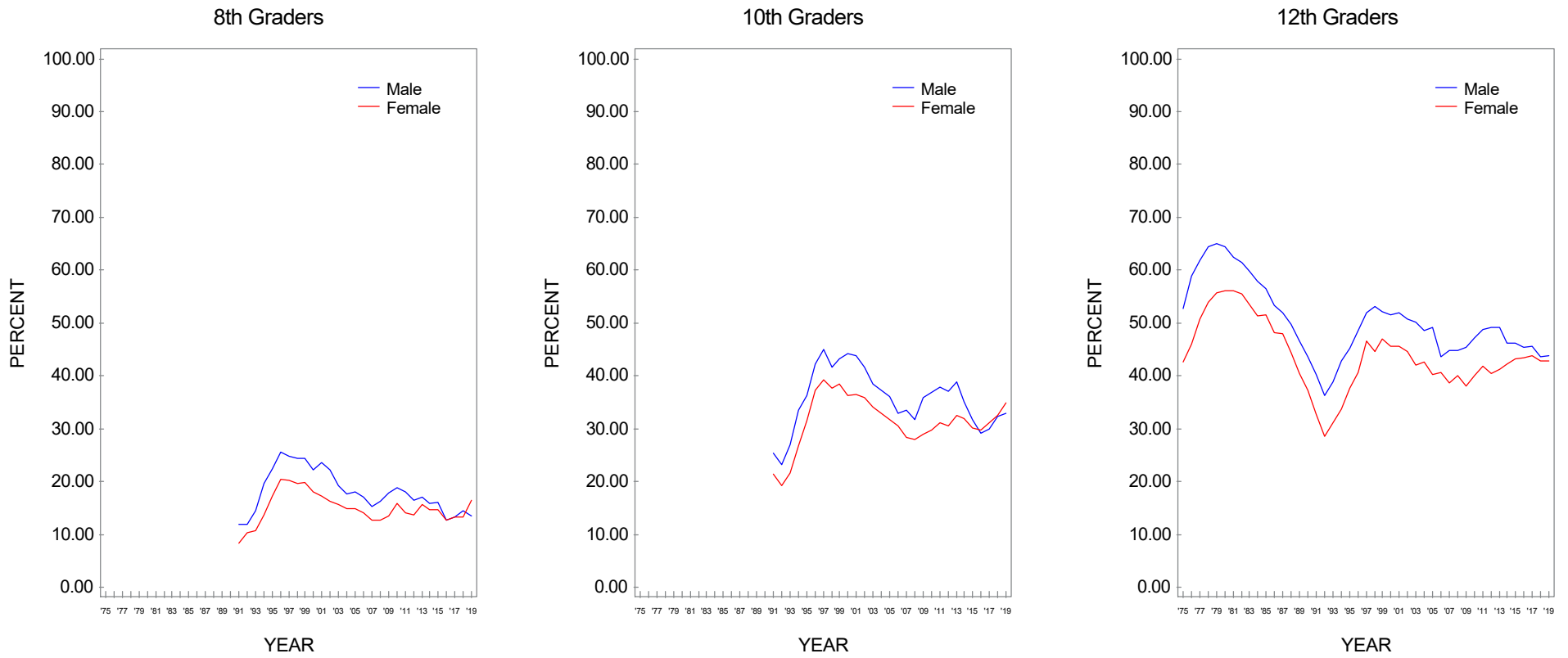


Source. The Monitoring the Future study, the University of Michigan.

\*Beginning in 2001, revised sets of questions on other hallucinogen and tranquilizer use were introduced. Beginning in 2013, a revised set of questions on amphetamines were introduced. Data for any illicit drug other than marijuana are affected by these changes.

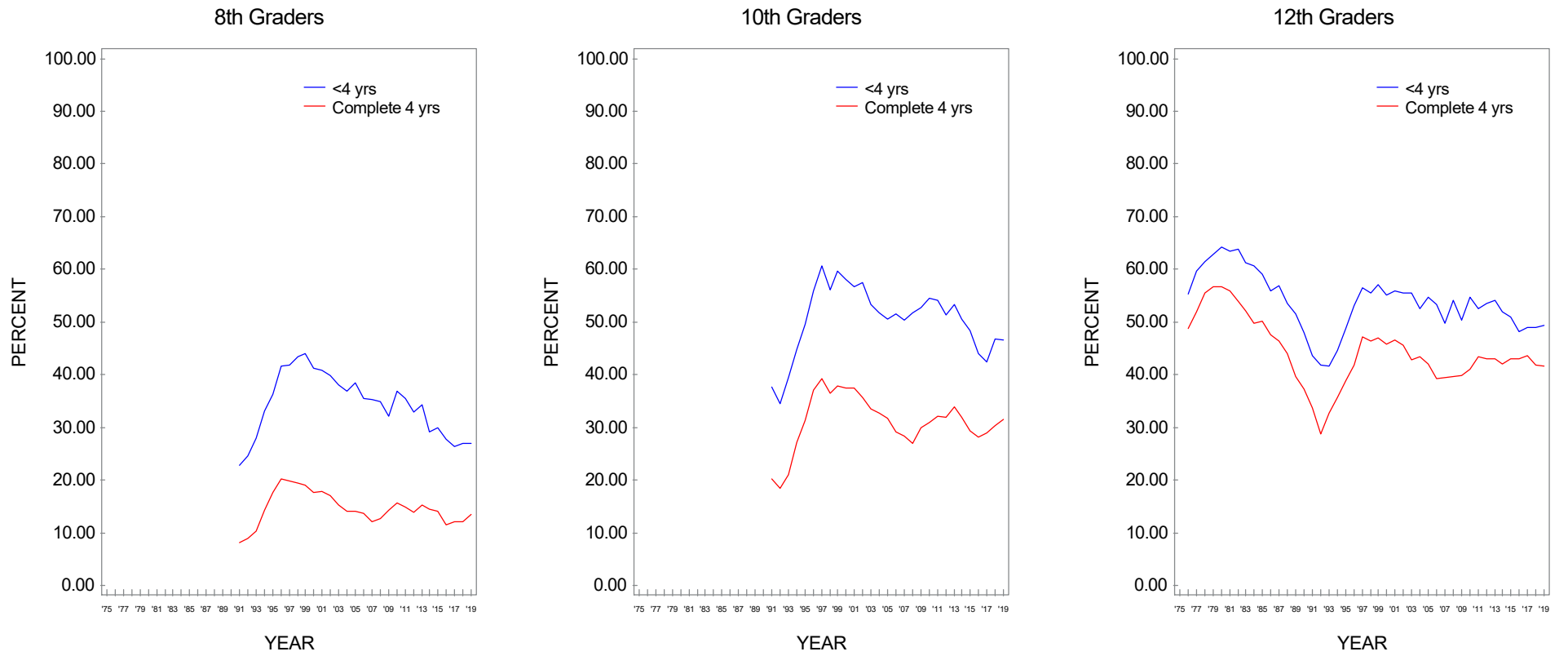
\*\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 13**  
**Marijuana: Trends in Lifetime Prevalence by Gender**



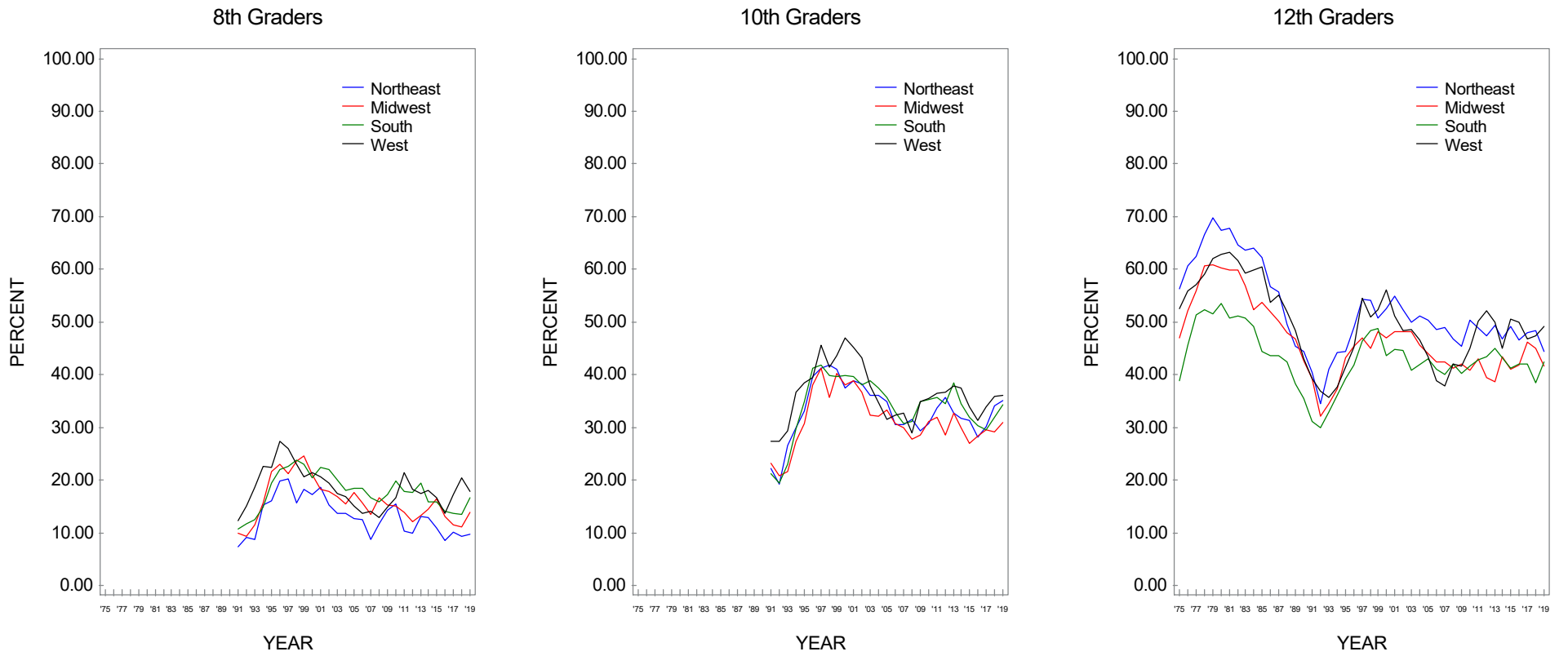
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 14**  
**Marijuana: Trends in Lifetime Prevalence by College Plans**



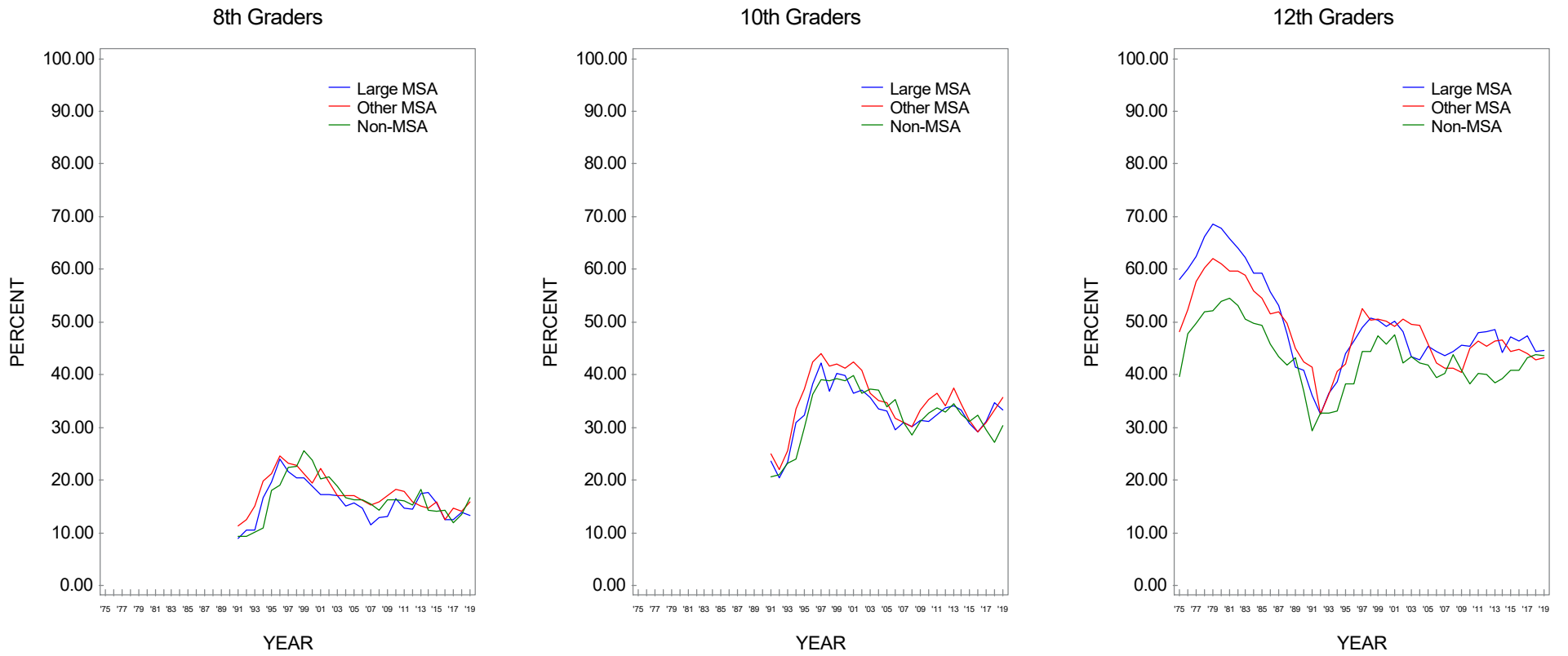
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 15**  
**Marijuana: Trends in Lifetime Prevalence by Region**



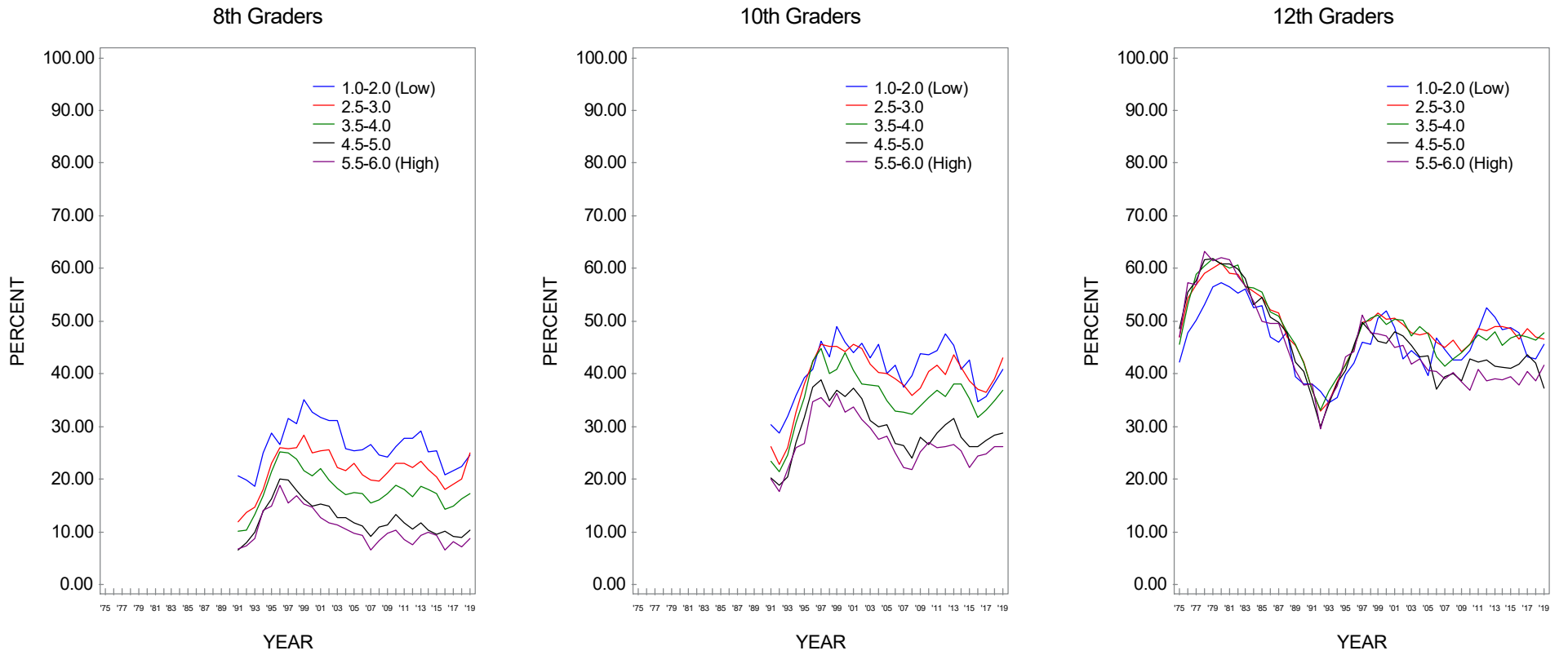
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 16**  
**Marijuana: Trends in Lifetime Prevalence by Population Density**



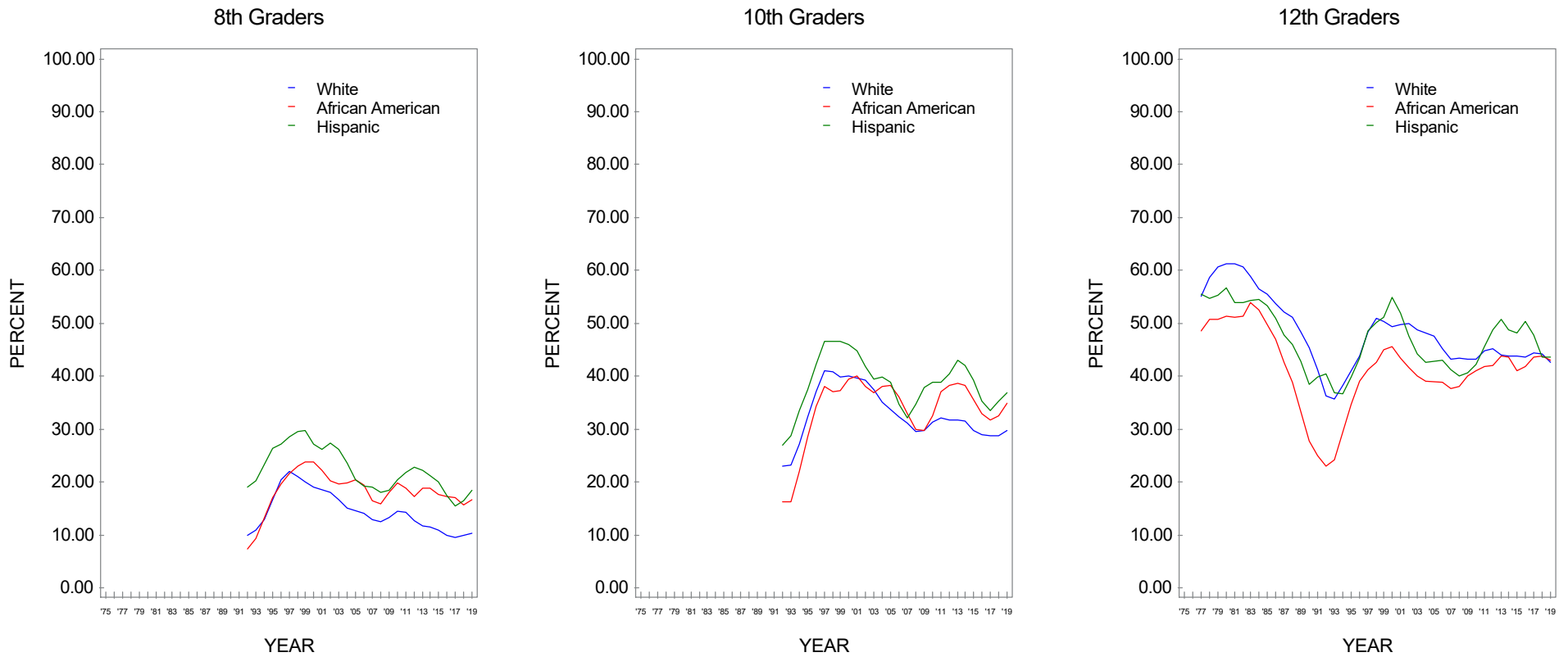
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 17**  
**Marijuana: Trends in Lifetime Prevalence by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*Parental education is an average score of mother's education and father's education.

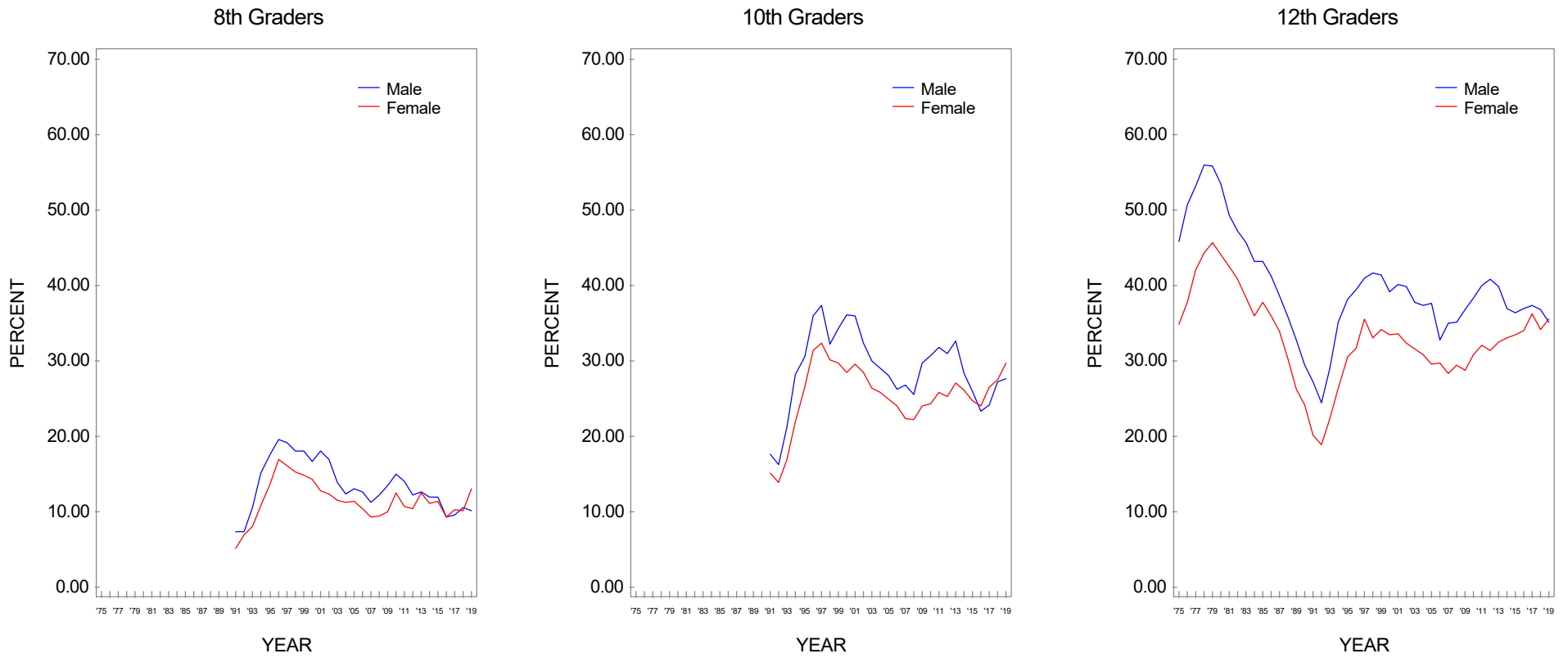
**FIGURE 18**  
**Marijuana: Trends in Lifetime Prevalence by Race/Ethnicity\***



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

\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

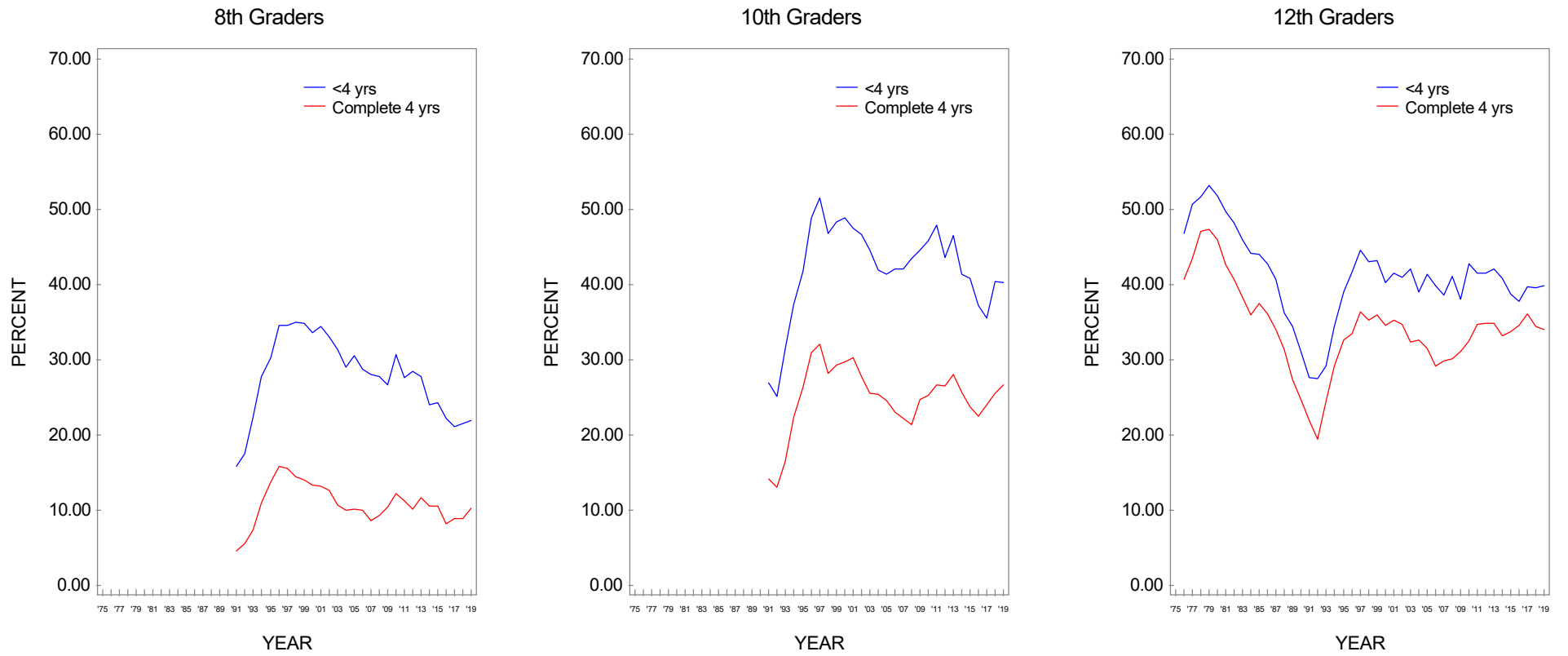
**FIGURE 19**  
**Marijuana: Trends in Annual Prevalence by Gender**



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

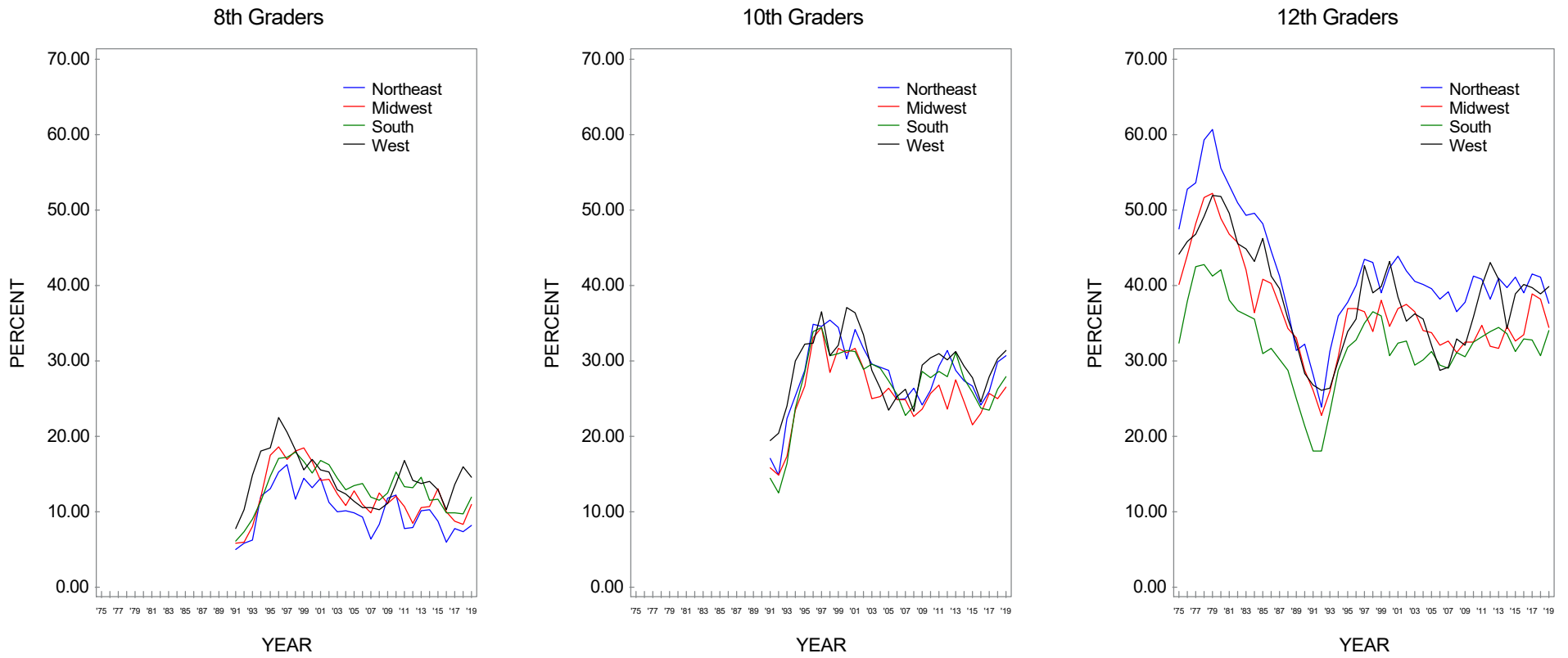


**FIGURE 20**  
**Marijuana: Trends in Annual Prevalence by College Plans**



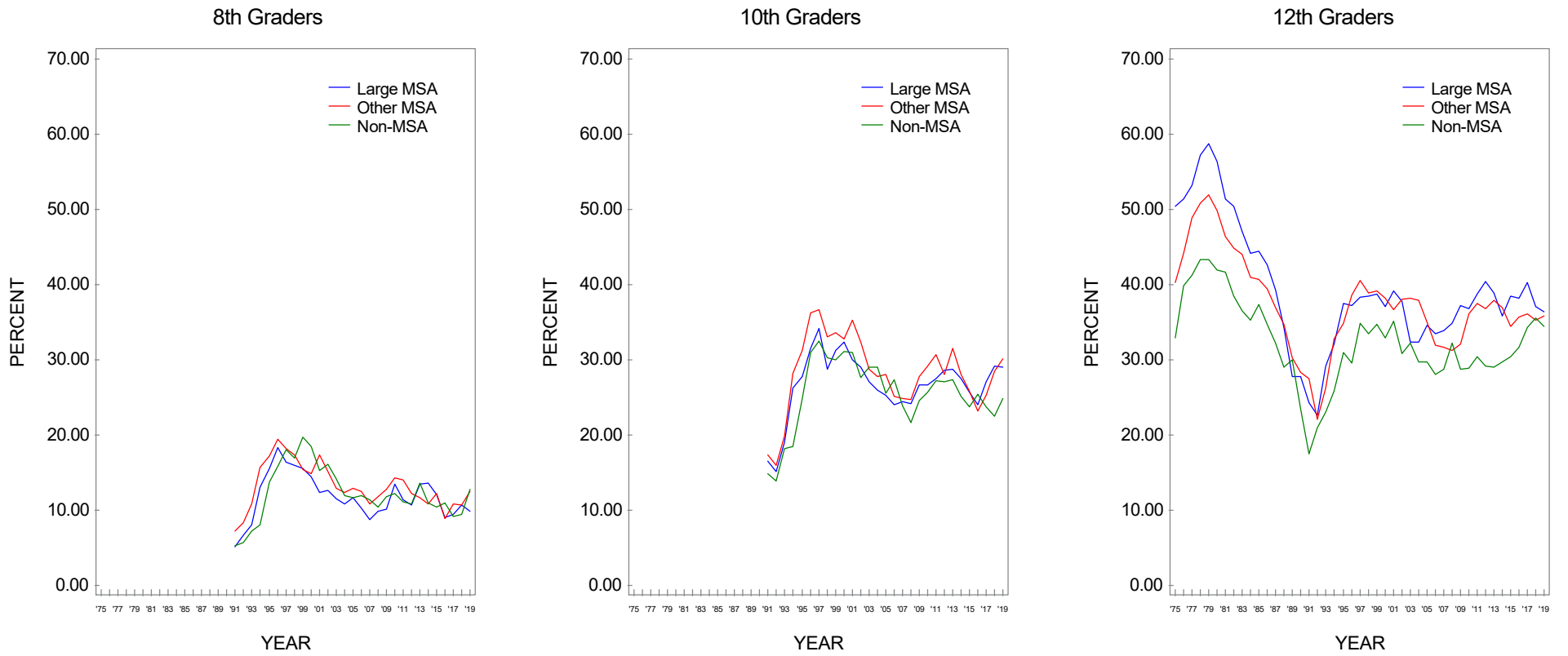
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 21**  
**Marijuana: Trends in Annual Prevalence by Region**



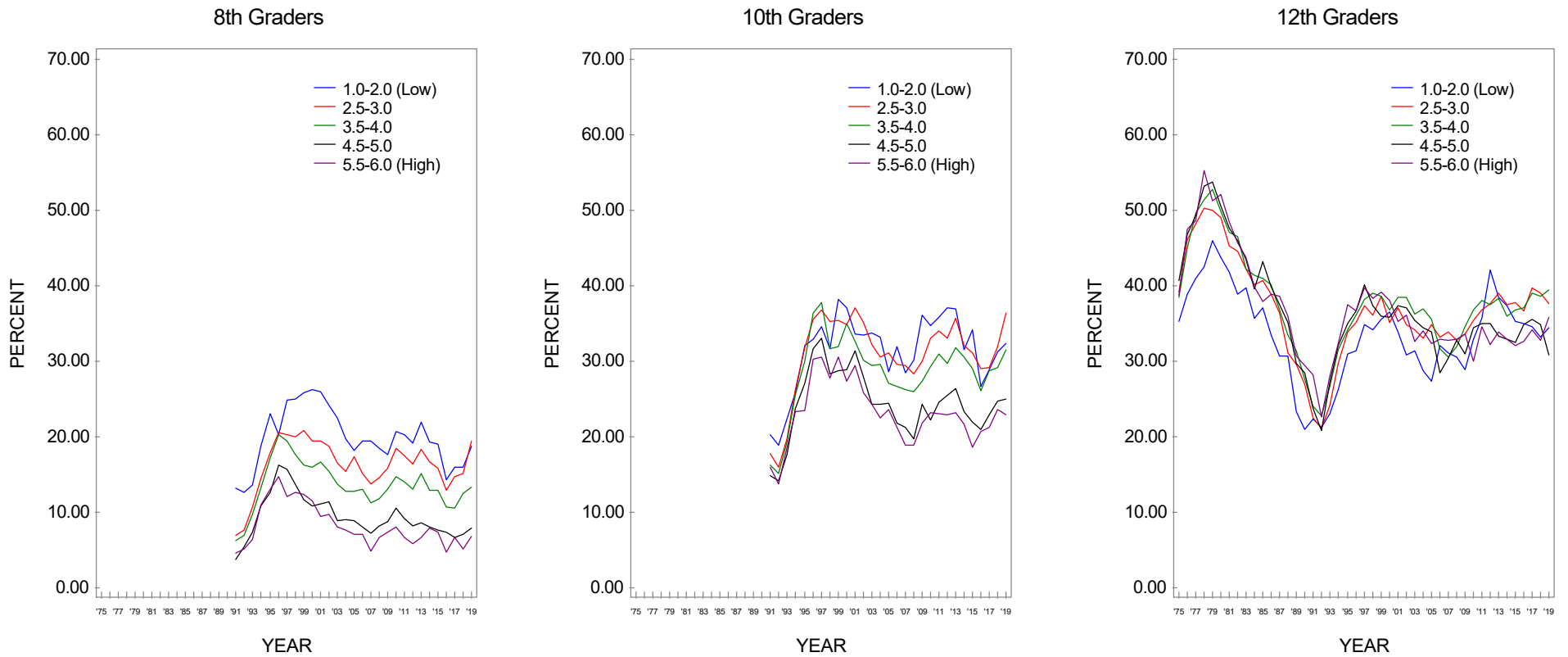
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 22**  
**Marijuana: Trends in Annual Prevalence by Population Density**



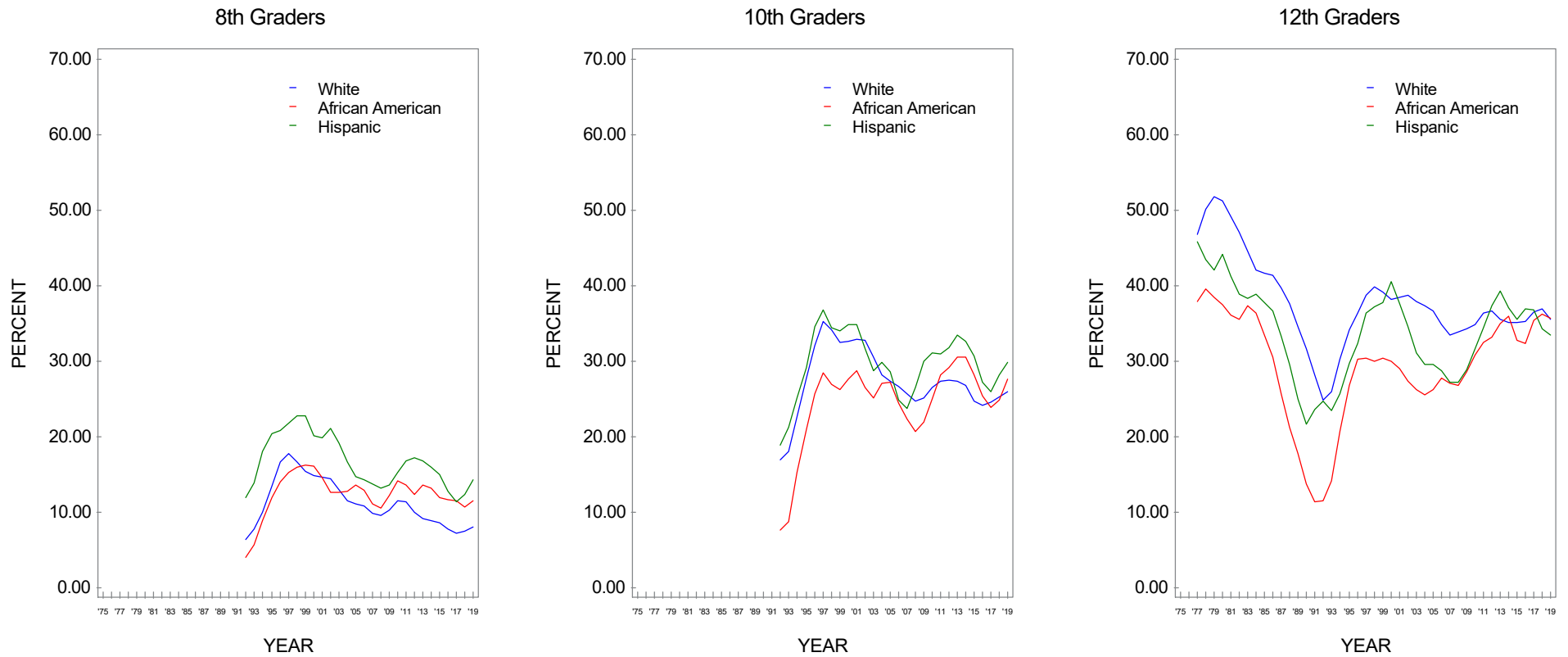
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 23**  
**Marijuana: Trends in Annual Prevalence by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*Parental education is an average score of mother's education and father's education.

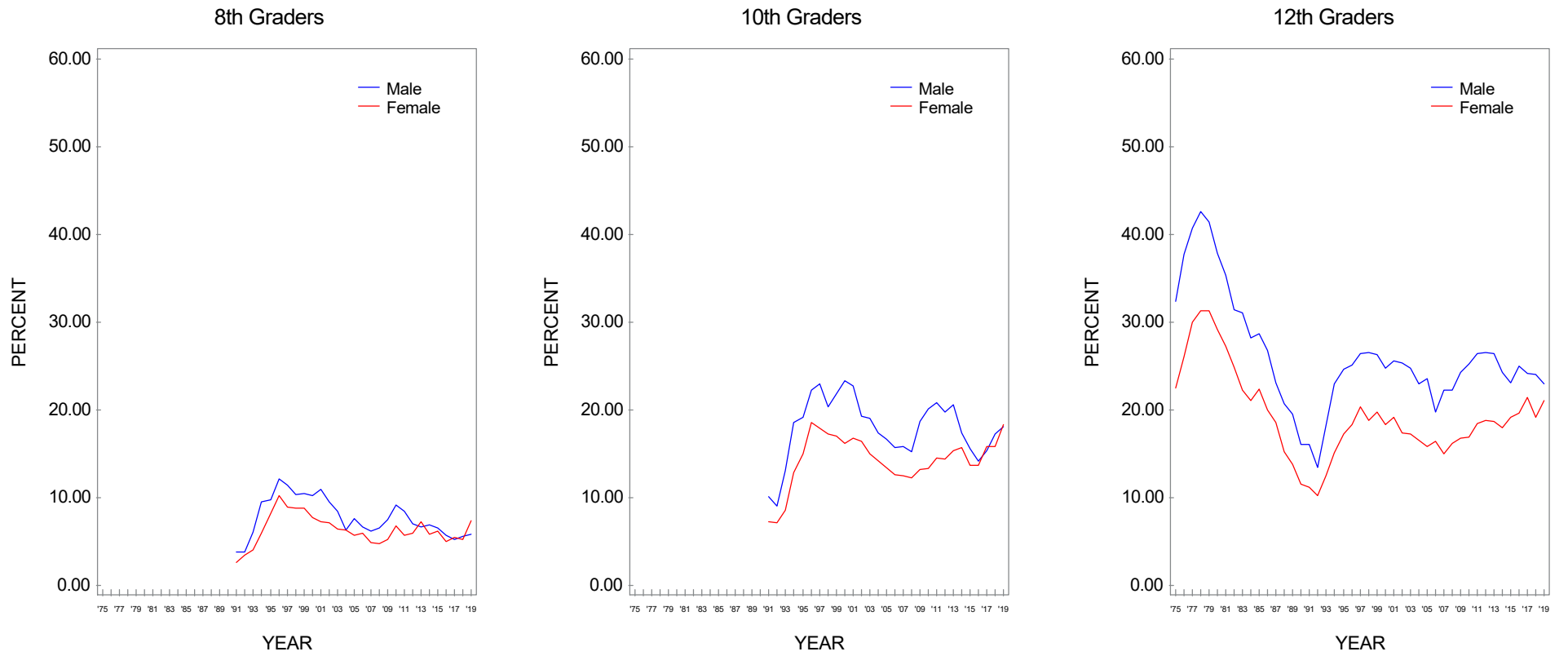
**FIGURE 24**  
**Marijuana: Trends in Annual Prevalence by Race/Ethnicity\***



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

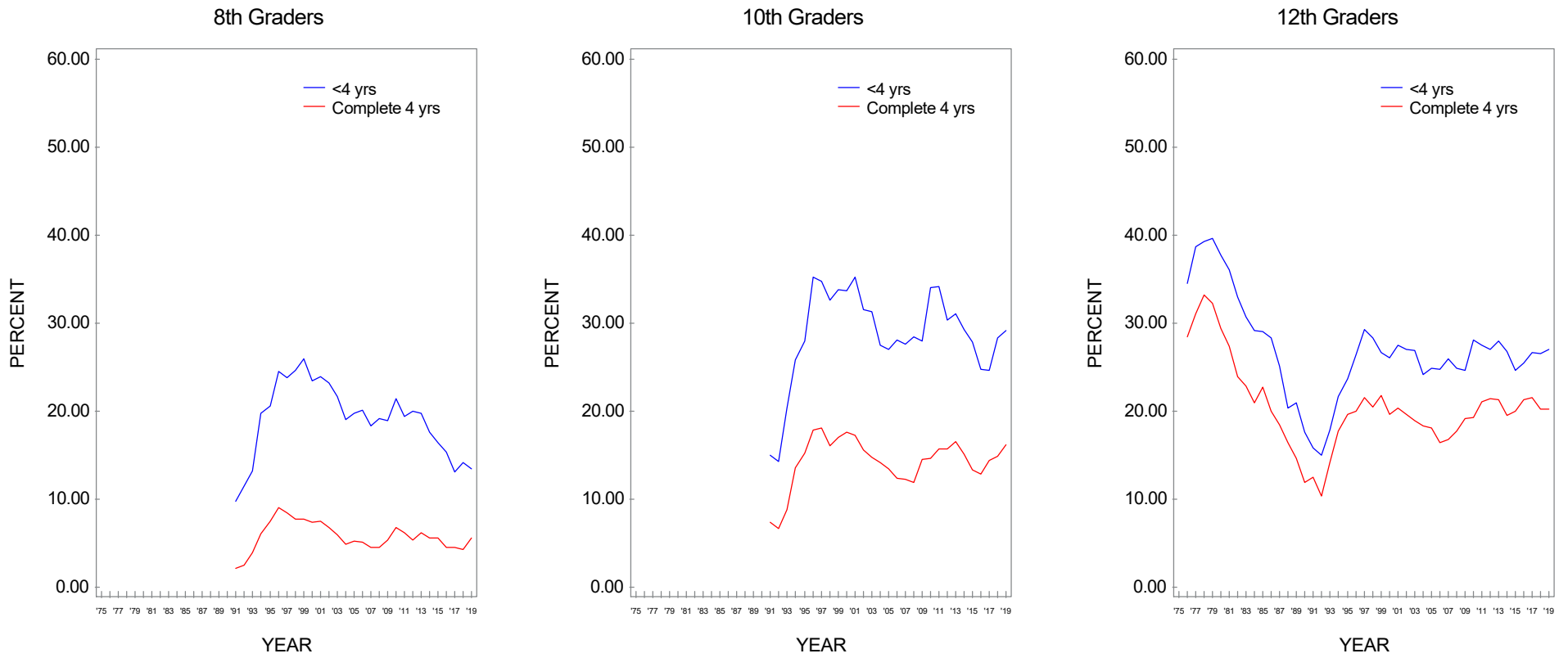
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 25**  
**Marijuana: Trends in 30-Day Prevalence by Gender**



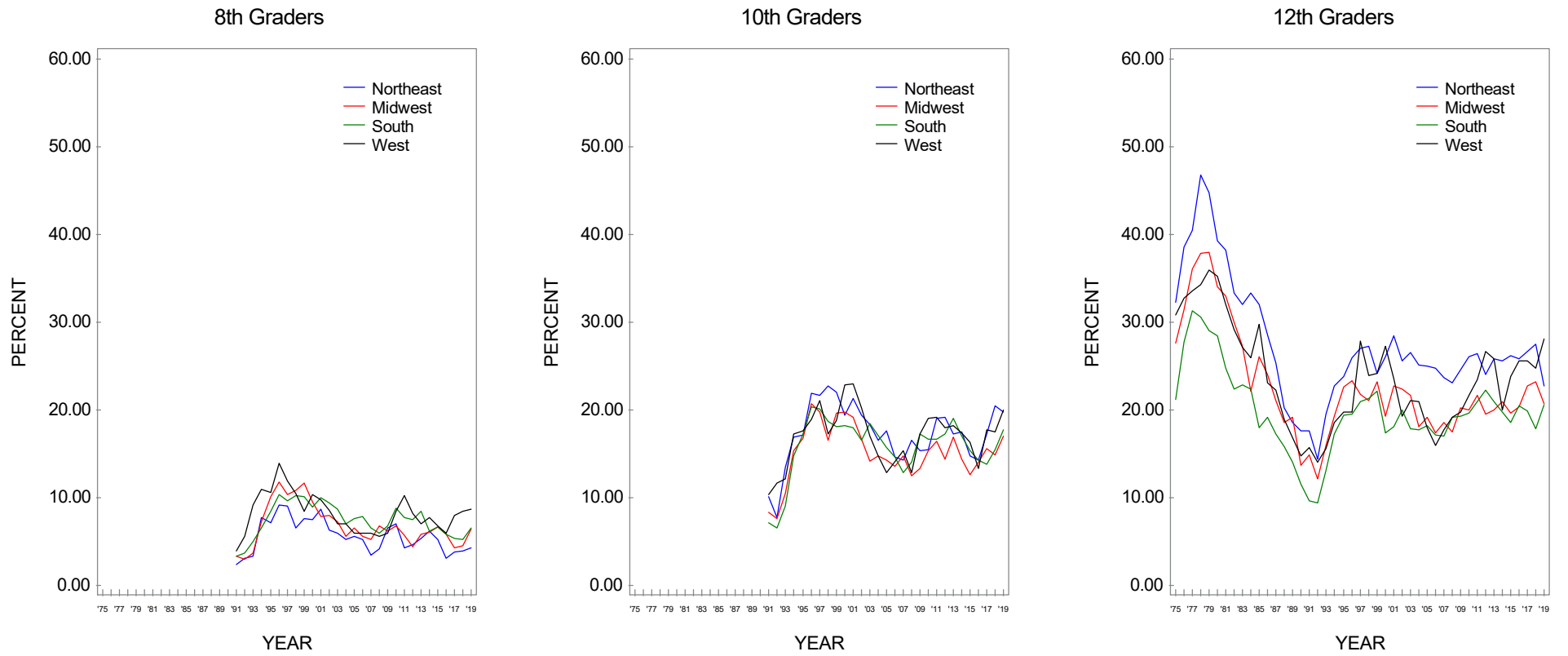
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 26**  
**Marijuana: Trends in 30-Day Prevalence by College Plans**



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

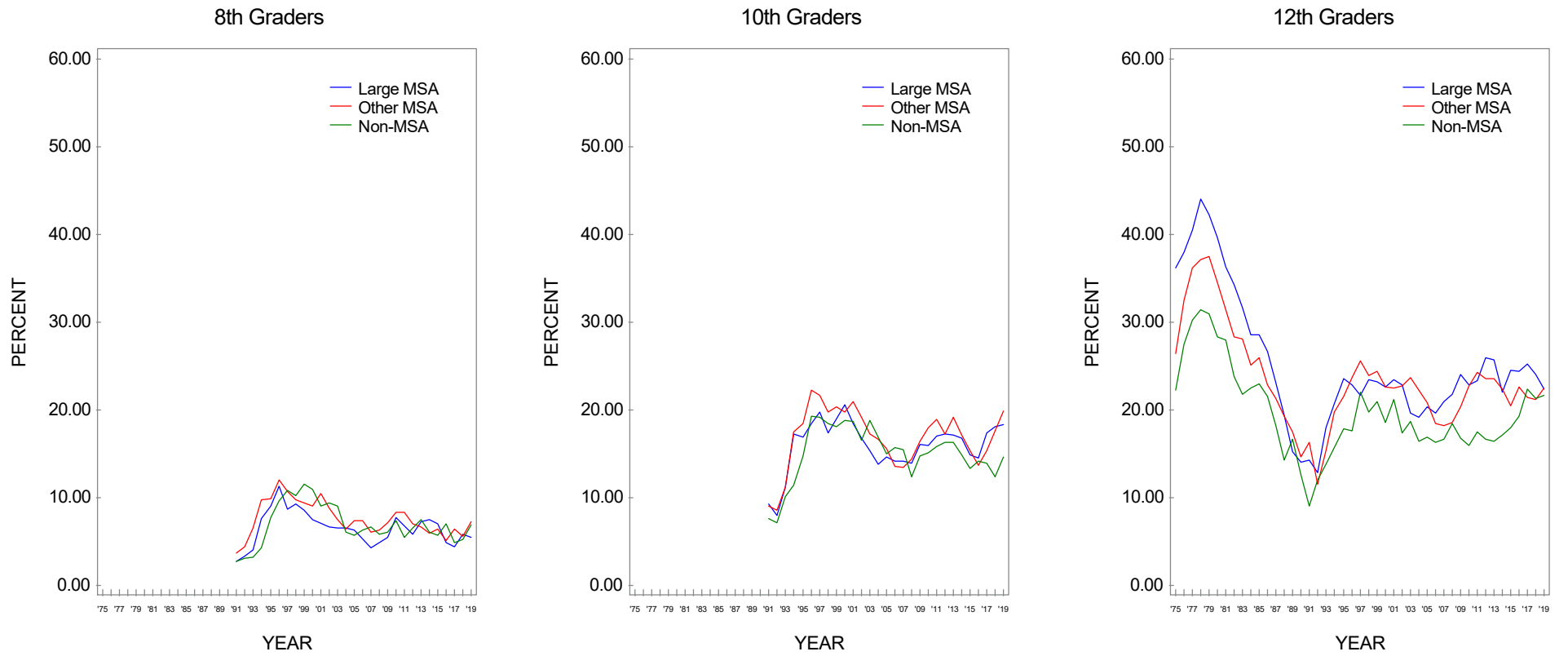
**FIGURE 27**  
**Marijuana: Trends in 30-Day Prevalence by Region**



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

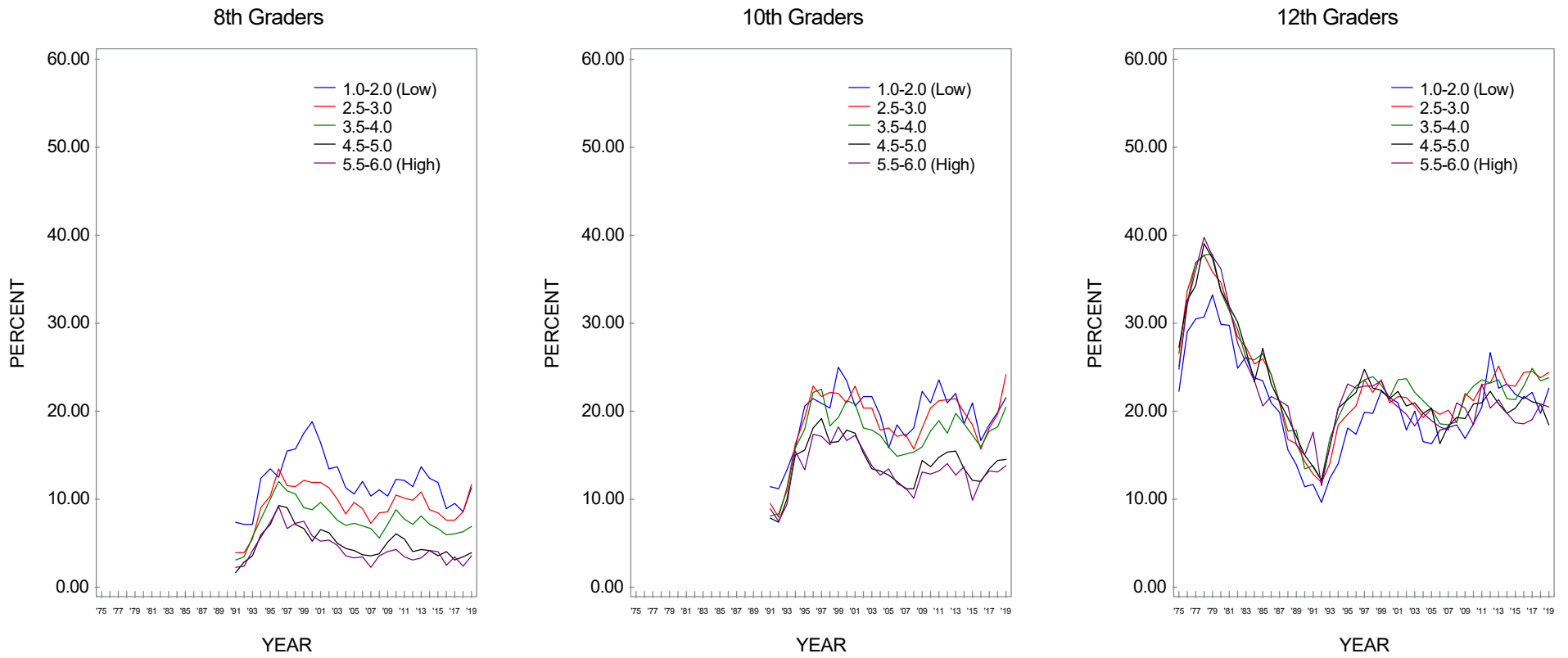


**FIGURE 28**  
**Marijuana: Trends in 30-Day Prevalence by Population Density**



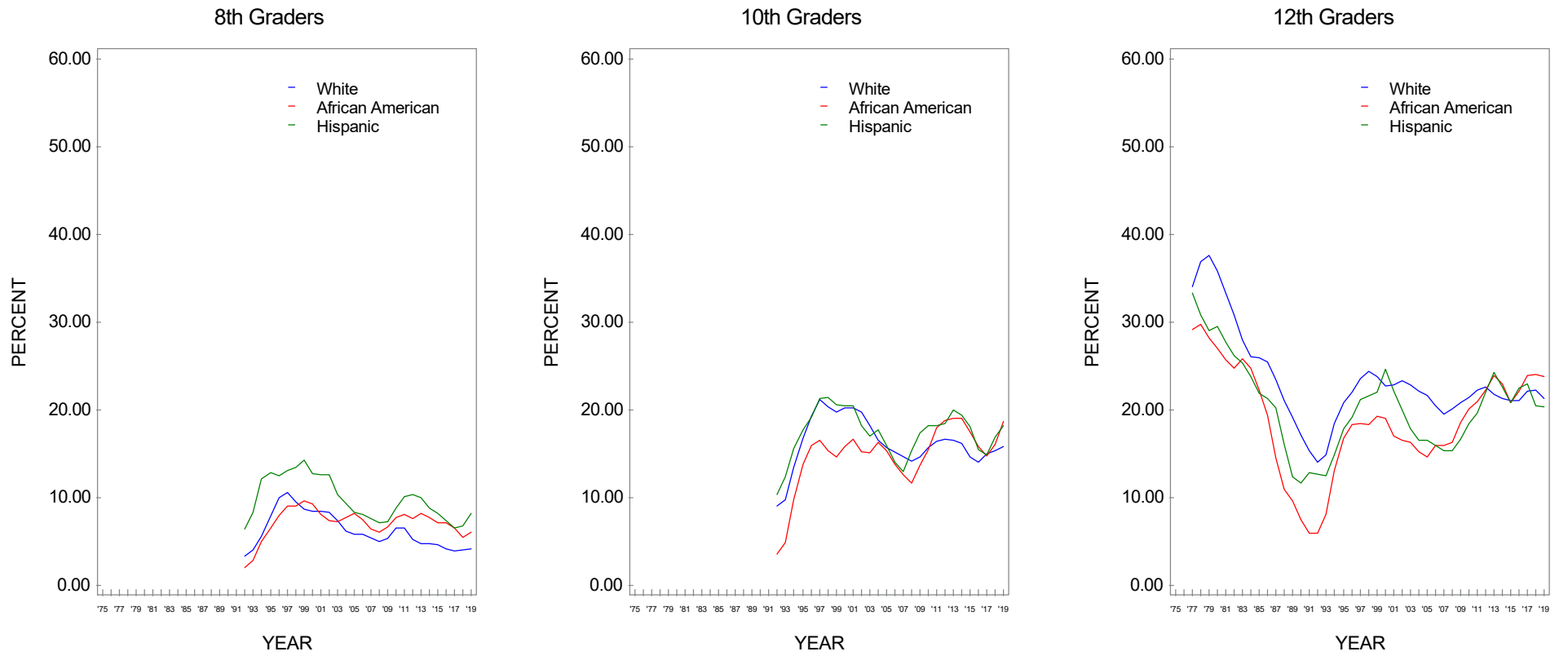
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 29**  
**Marijuana: Trends in 30-Day Prevalence by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*Parental education is an average score of mother's education and father's education.

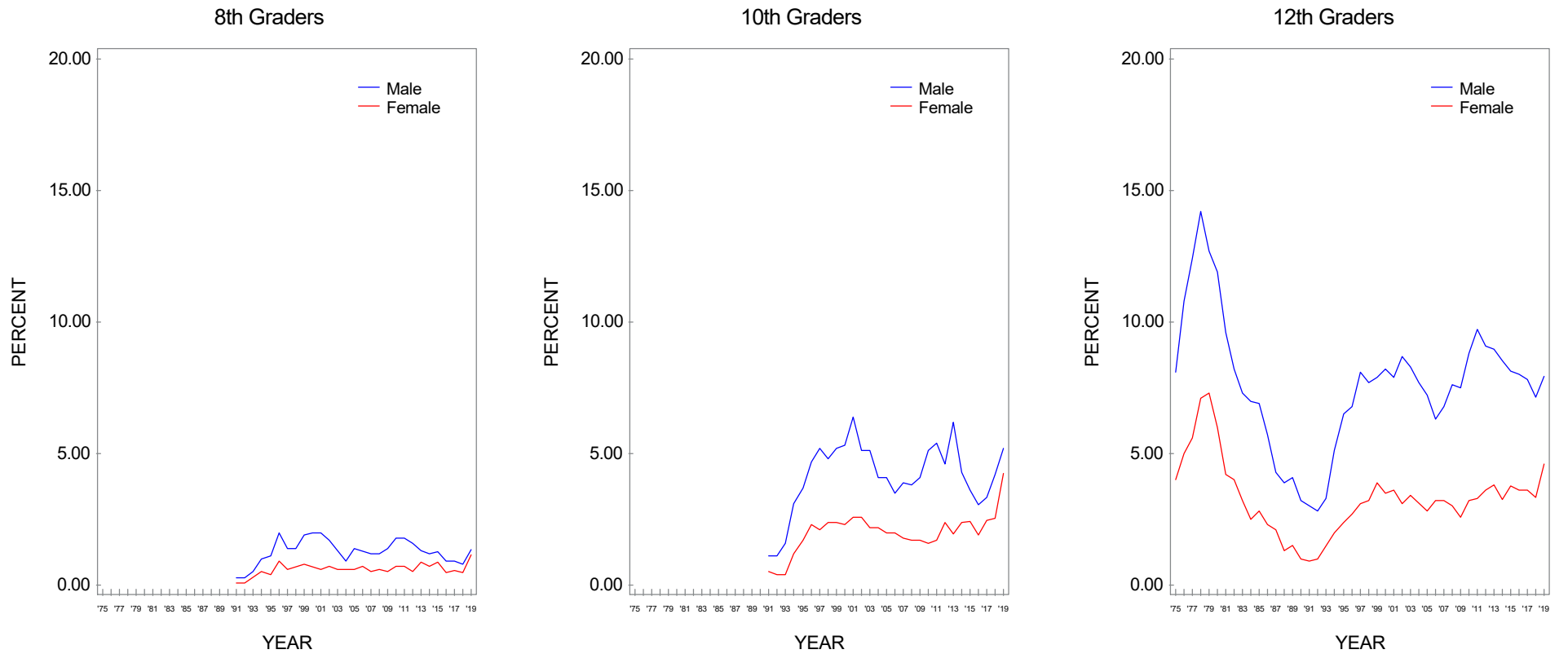
**FIGURE 30**  
**Marijuana: Trends in 30-Day Prevalence by Race/Ethnicity\***



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

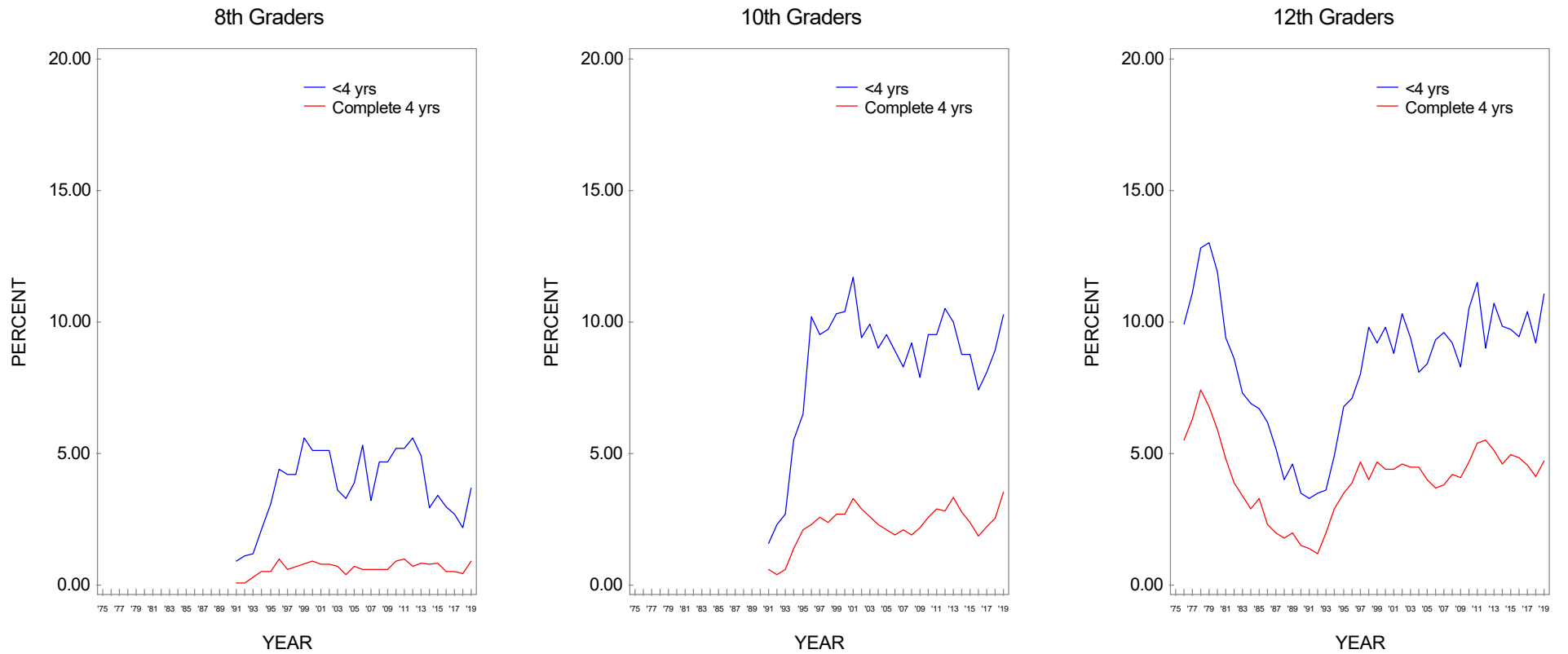
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 31**  
**Marijuana: Trends in 30-Day Prevalence of Daily Use by Gender**



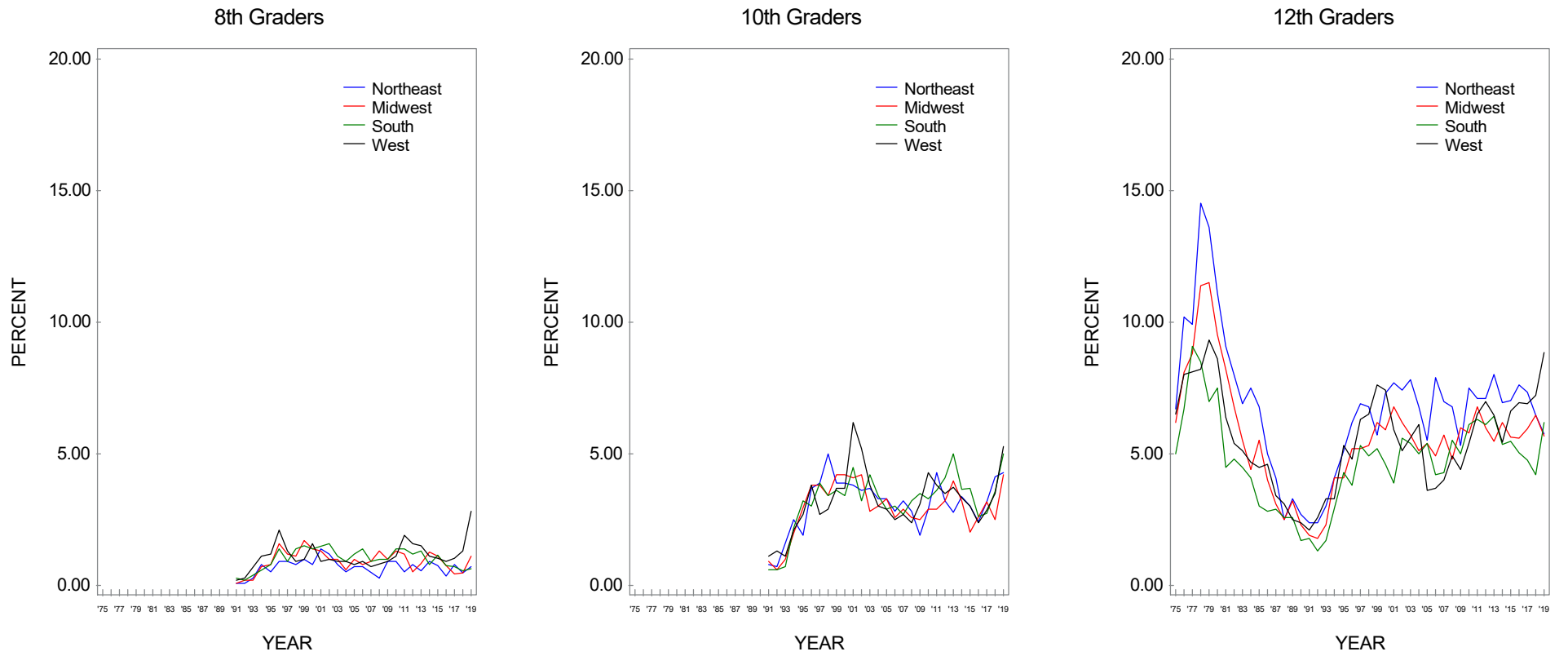
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 32**  
**Marijuana: Trends in 30-Day Prevalence of Daily Use by College Plans**



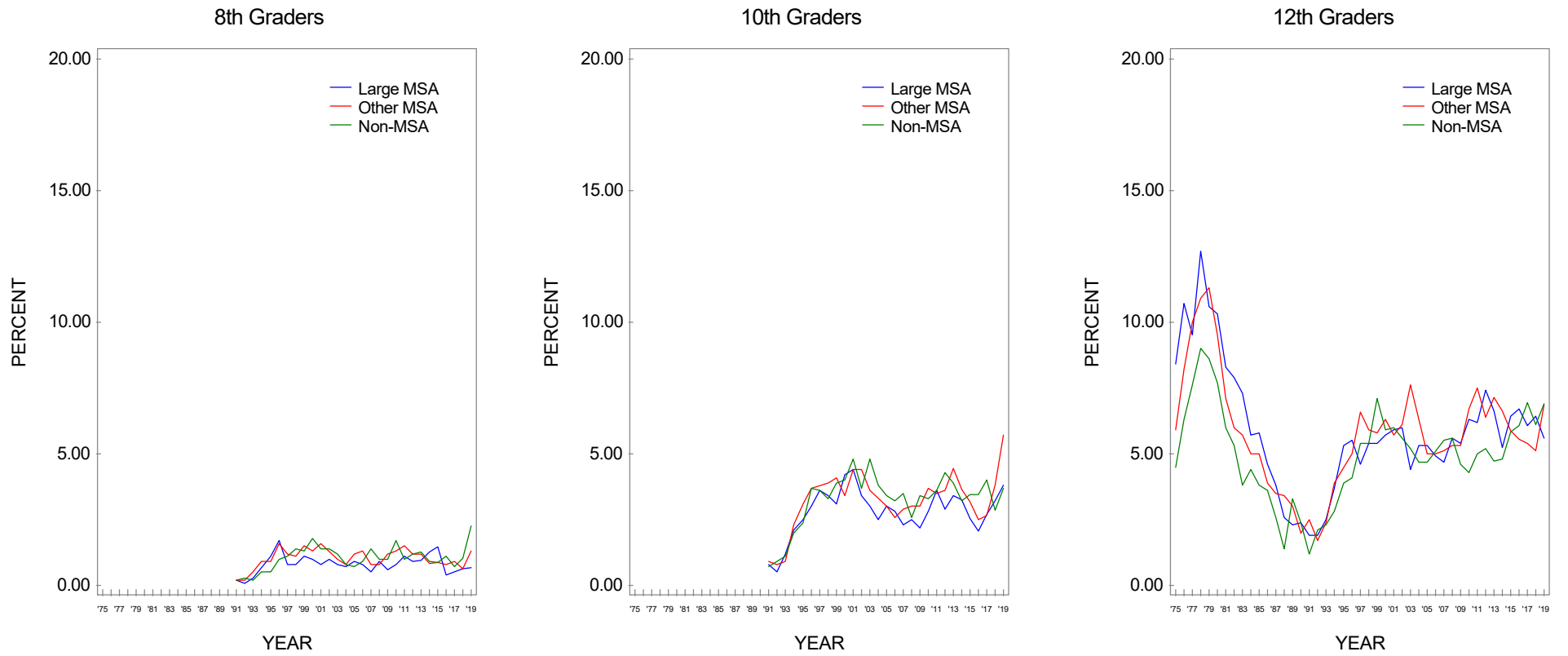
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 33**  
**Marijuana: Trends in 30-Day Prevalence of Daily Use by Region**



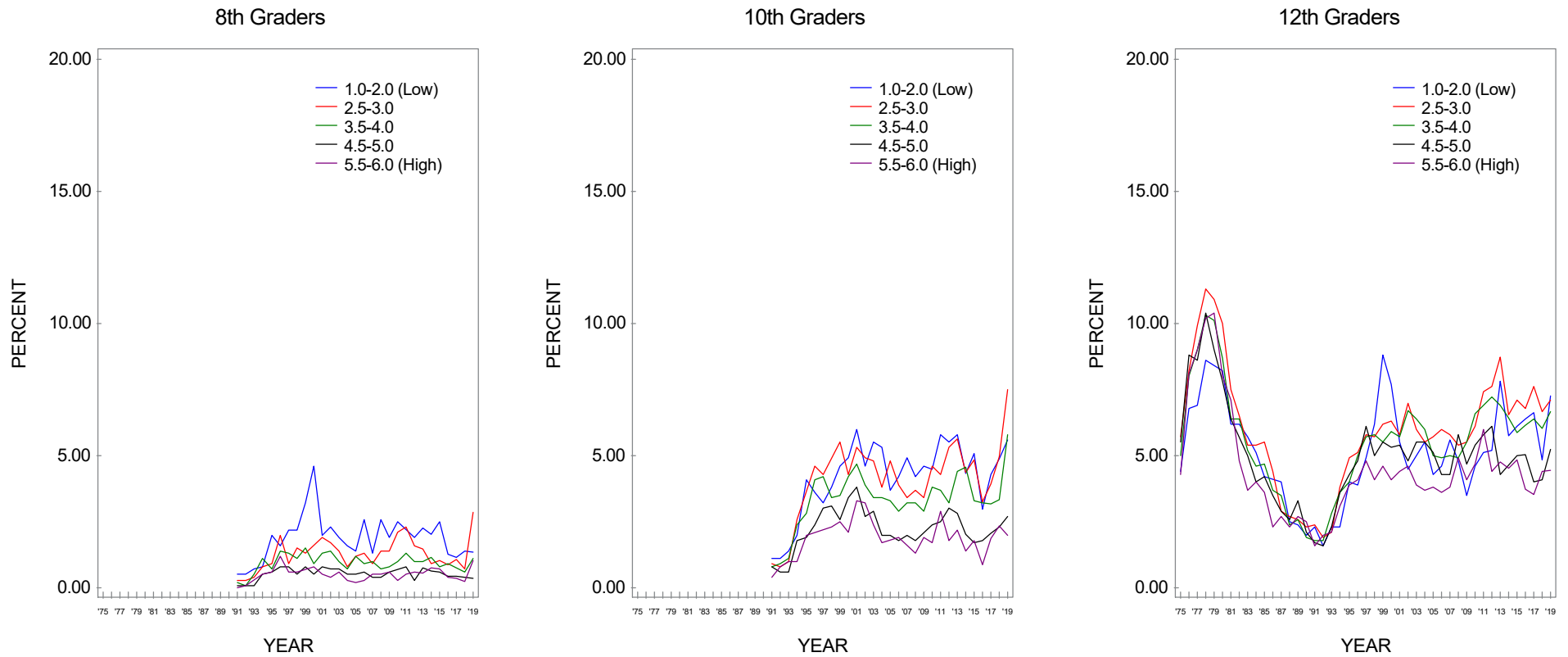
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 34**  
**Marijuana: Trends in 30-Day Prevalence of Daily Use by Population Density**



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

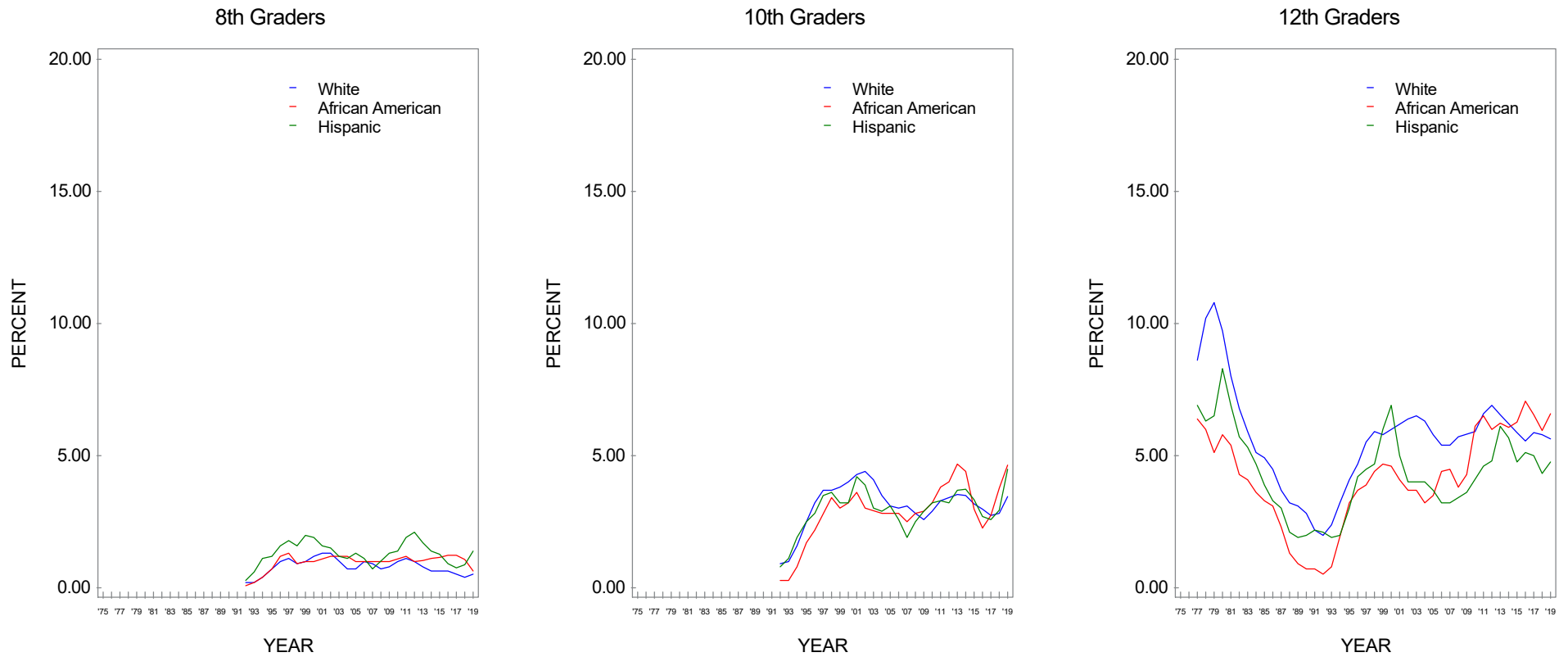
**FIGURE 35**  
**Marijuana: Trends 30-Day Prevalence of Daily Use by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*Parental education is an average score of mother's education and father's education.



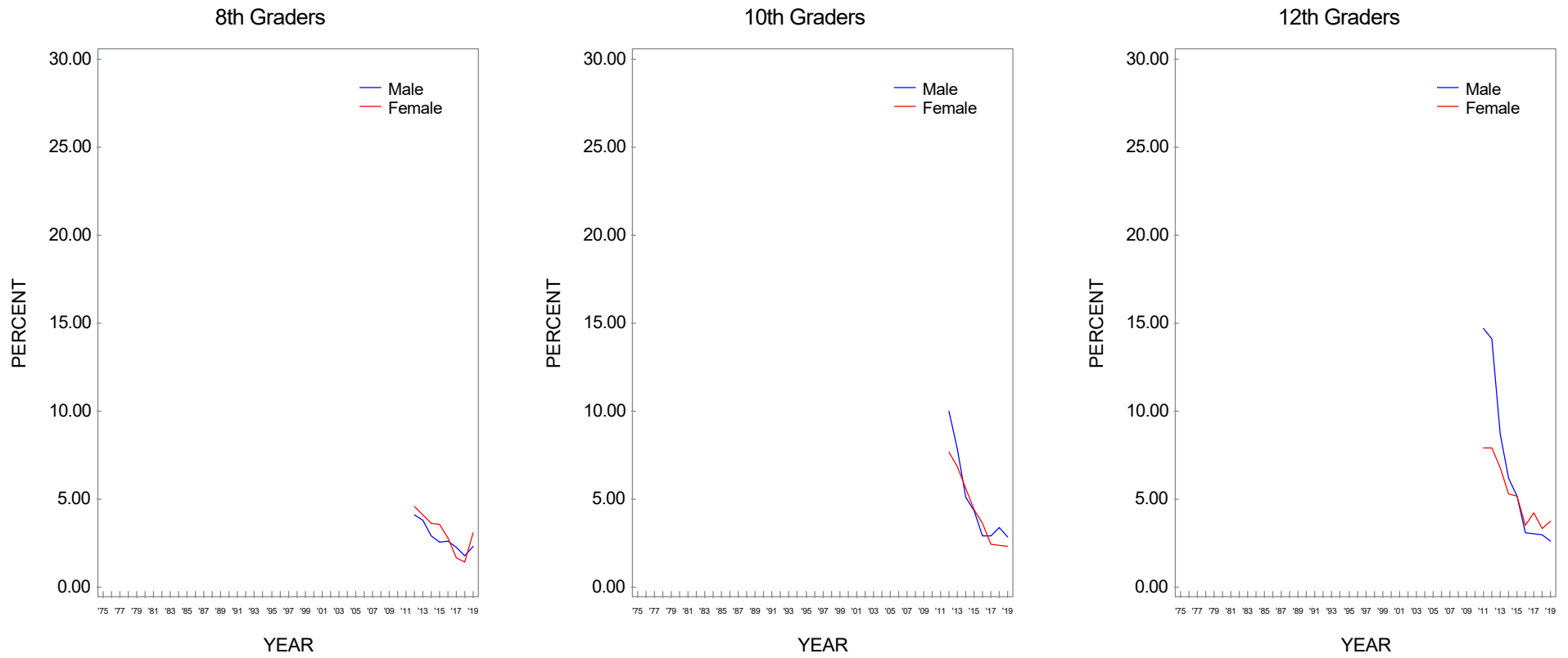
**FIGURE 36**  
**Marijuana: Trends in 30-Day Prevalence of Daily Use by Race/Ethnicity\***



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

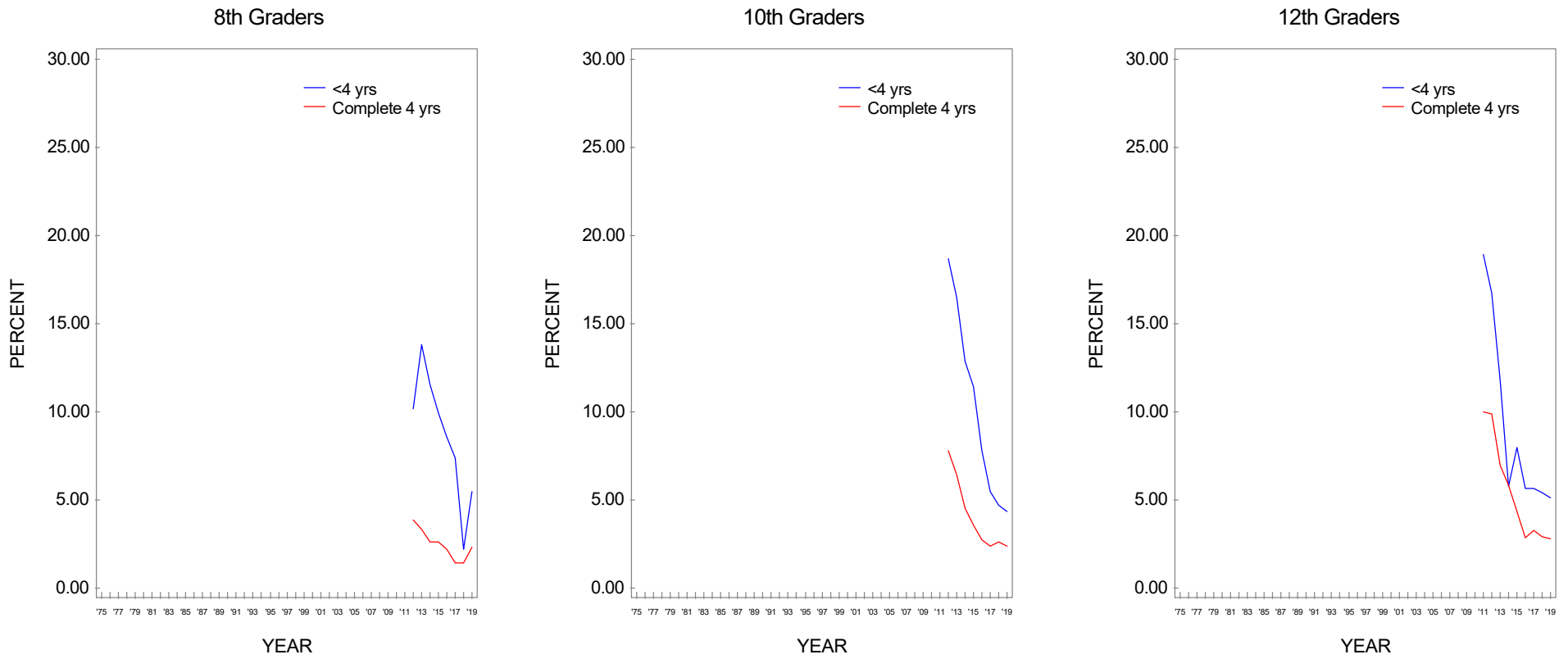
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 37**  
**Synthetic Marijuana: Trends in Annual Prevalence by Gender**



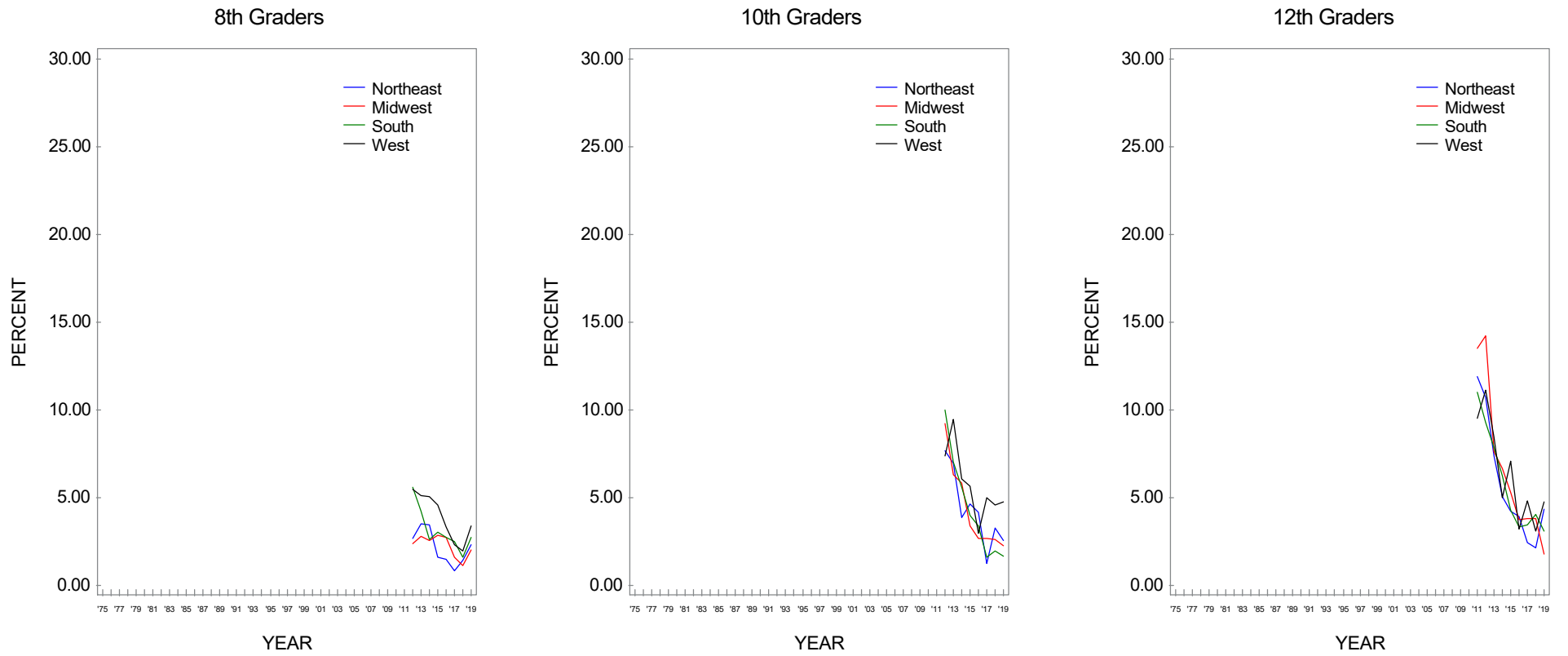
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 38**  
**Synthetic Marijuana: Trends in Annual Prevalence by College Plans**



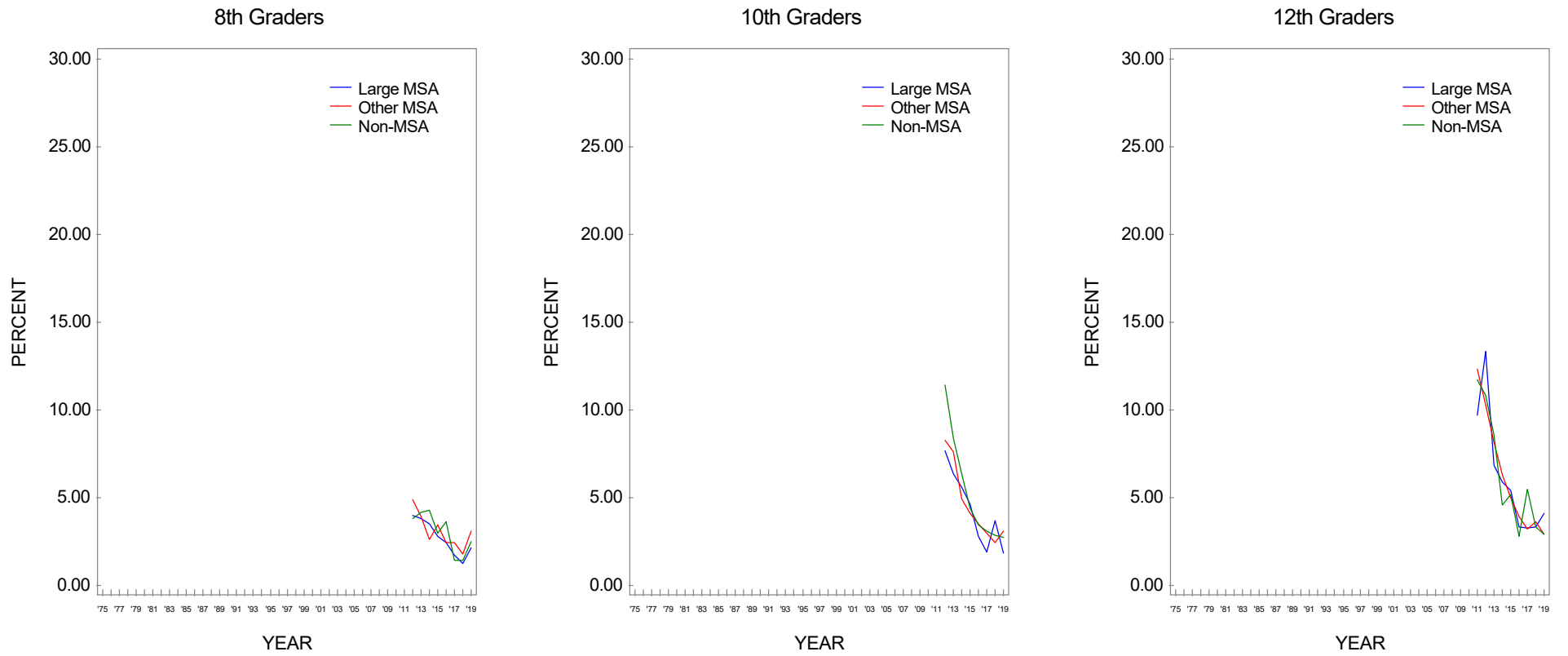
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 39**  
**Synthetic Marijuana: Trends in Annual Prevalence by Region**



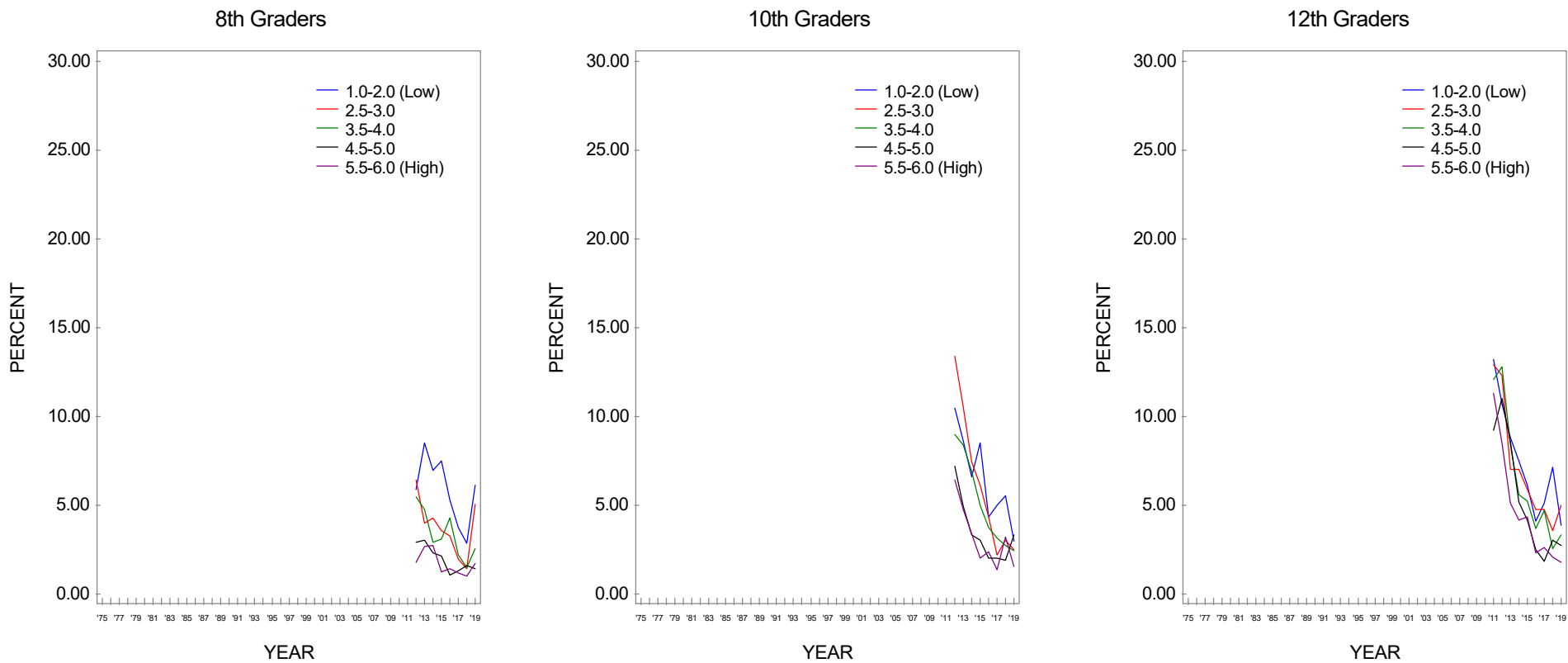
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 40**  
**Synthetic Marijuana: Trends in Annual Prevalence by Population Density**



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

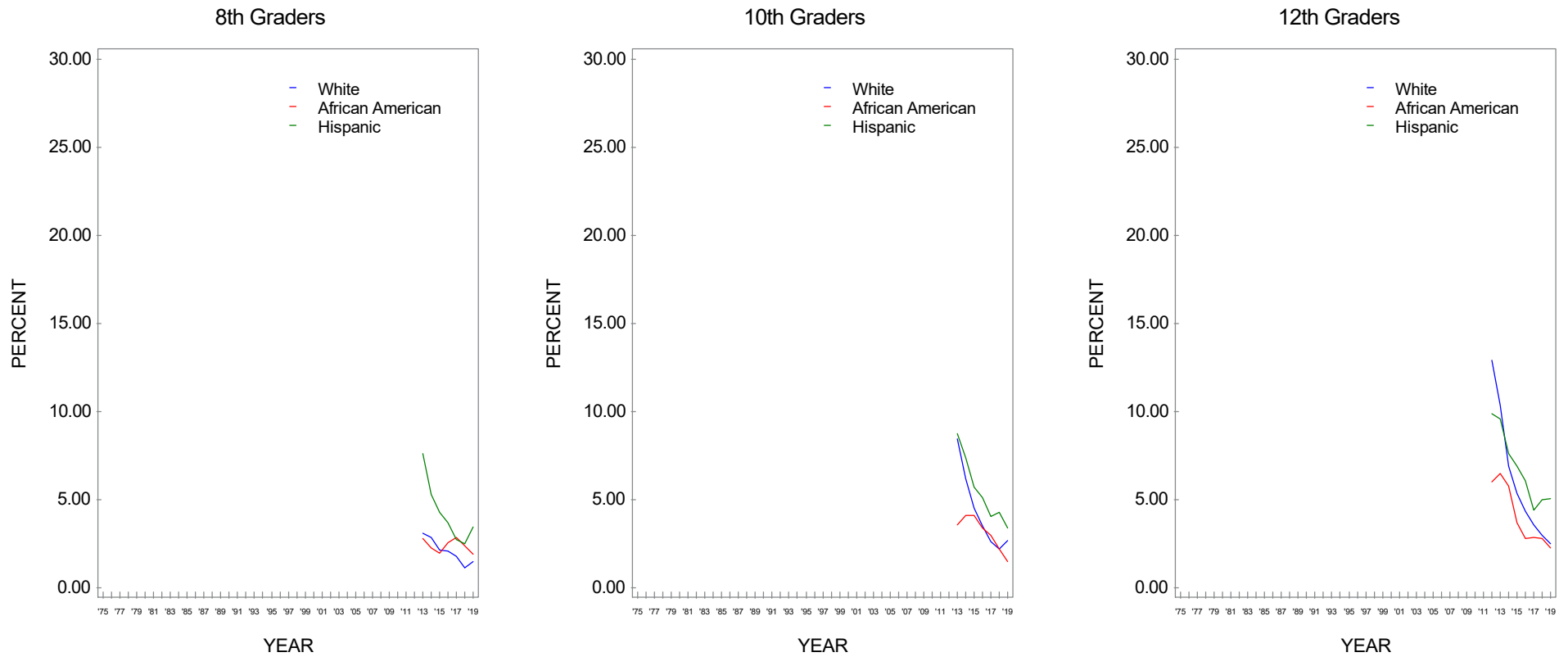
**FIGURE 41**  
**Synthetic Marijuana: Trends Annual Prevalence by Average Education Level of Parents\***



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

\*Parental education is an average score of mother's education and father's education.

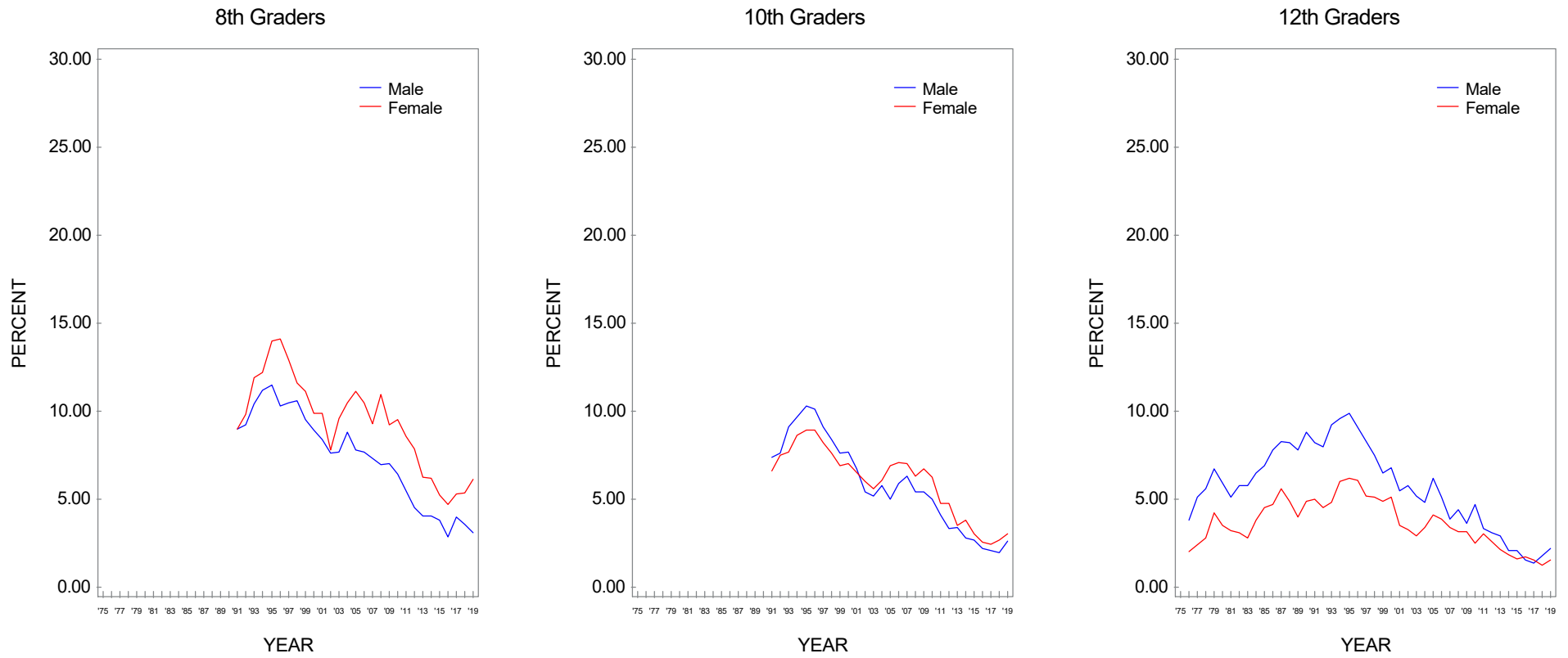
**FIGURE 42**  
**Synthetic Marijuana: Trends in Annual Prevalence by Race/Ethnicity\***



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

\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

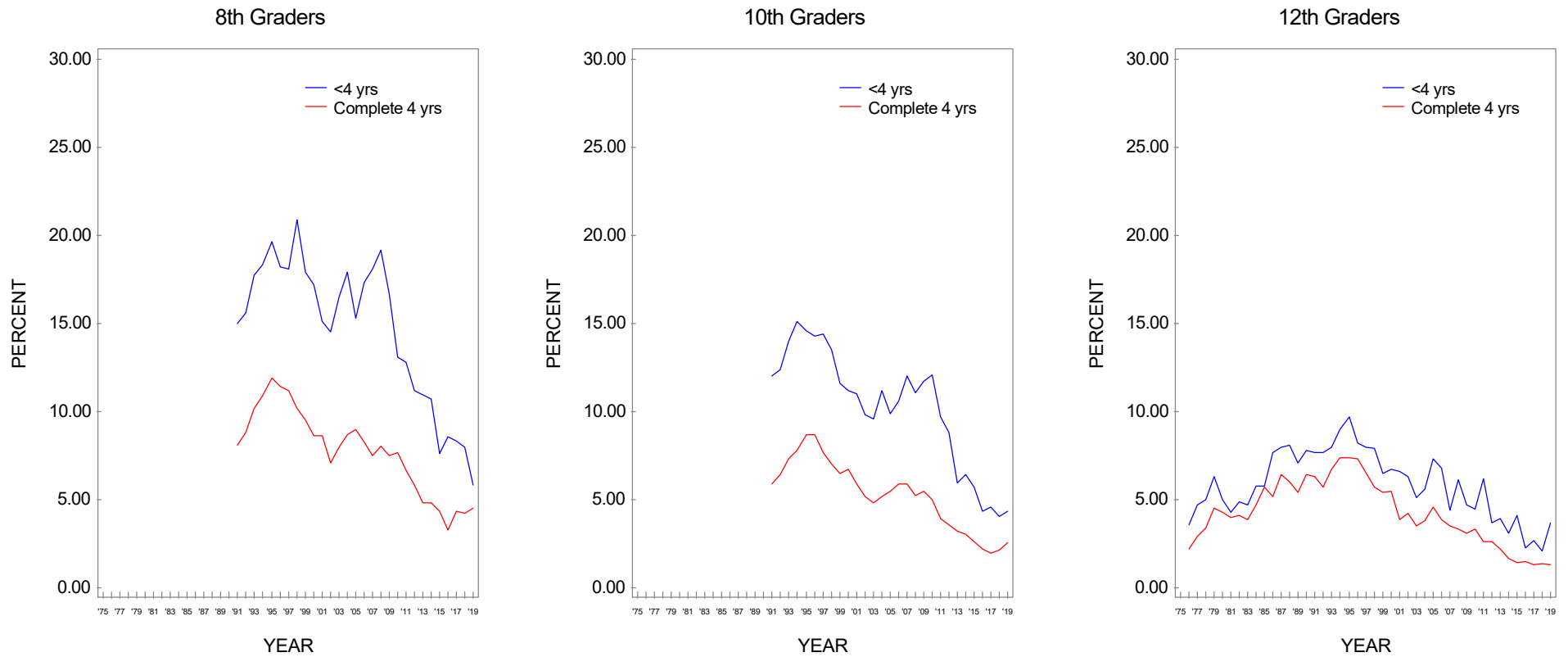
**FIGURE 43**  
**Inhalants: Trends in Annual Prevalence by Gender**



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

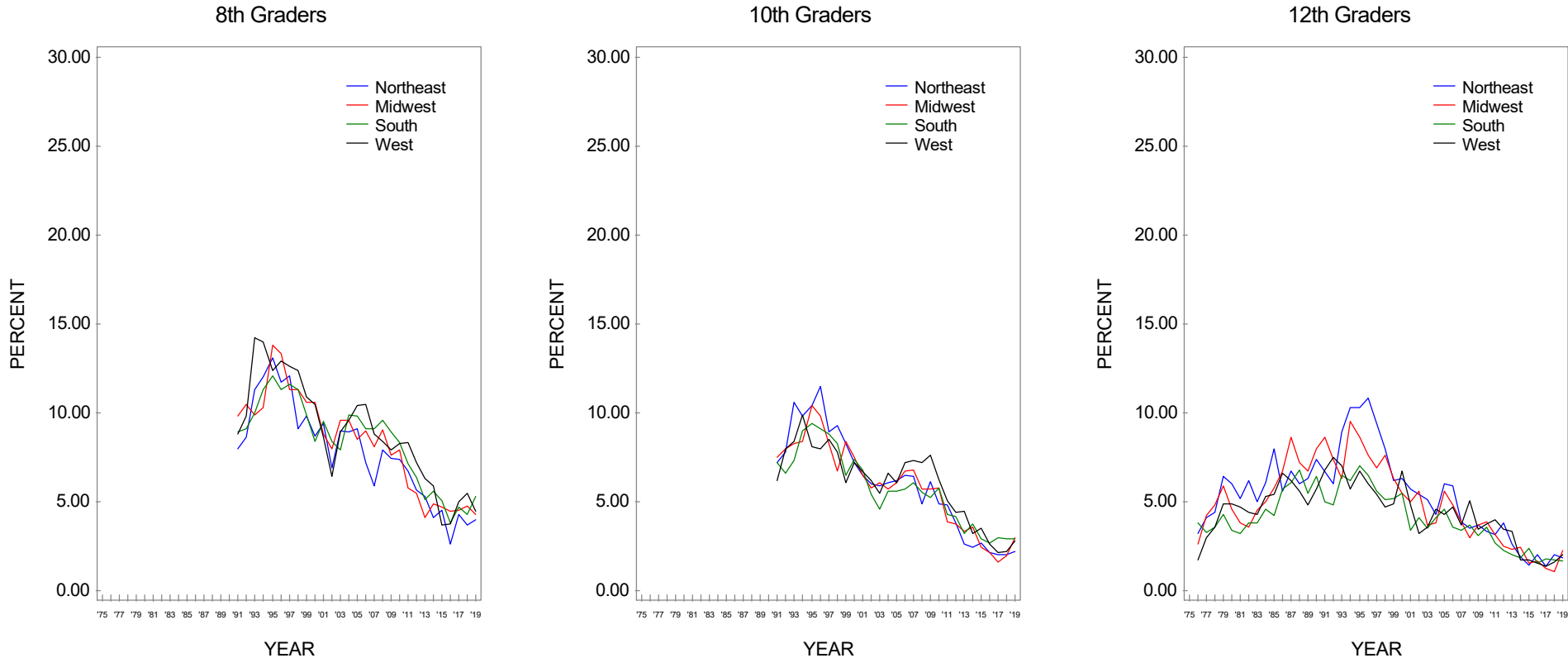


**FIGURE 44**  
**Inhalants: Trends in Annual Prevalence by College Plans**



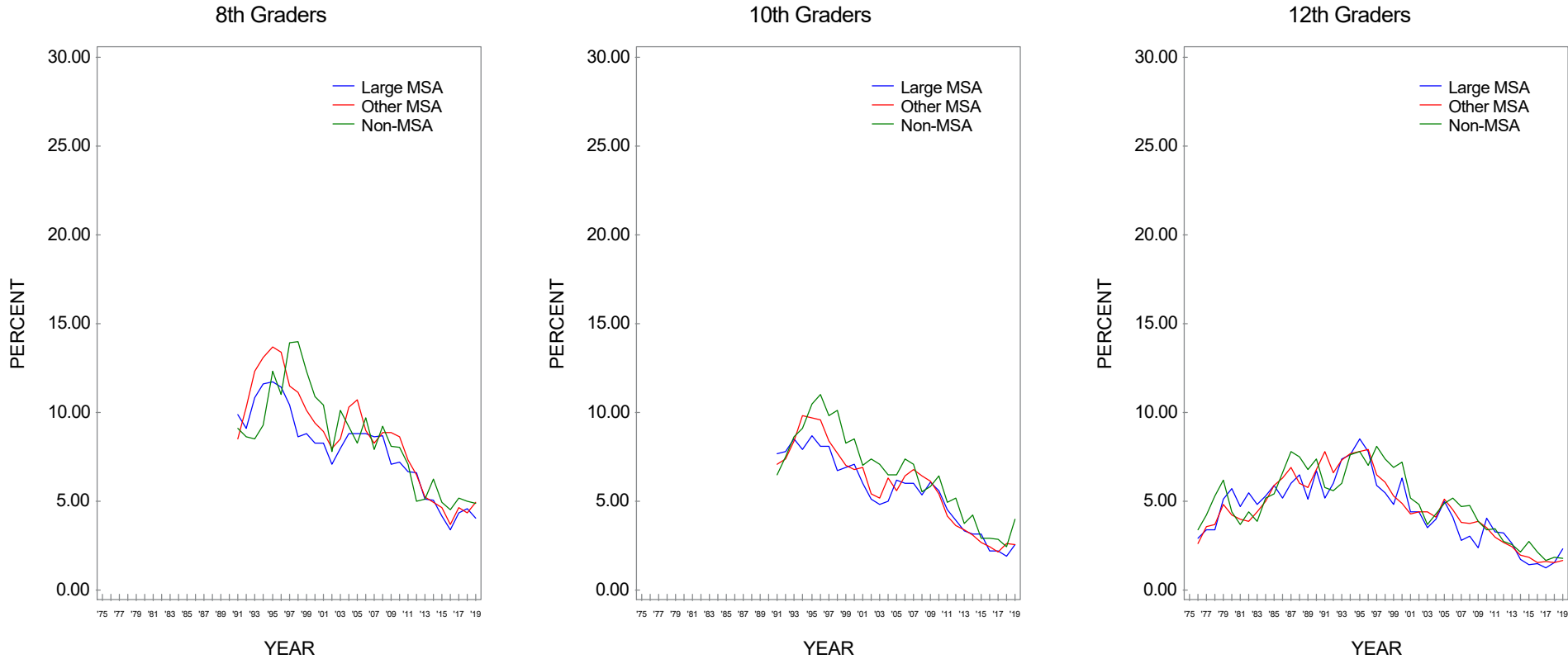
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 45**  
**Inhalants: Trends in Annual Prevalence by Region**



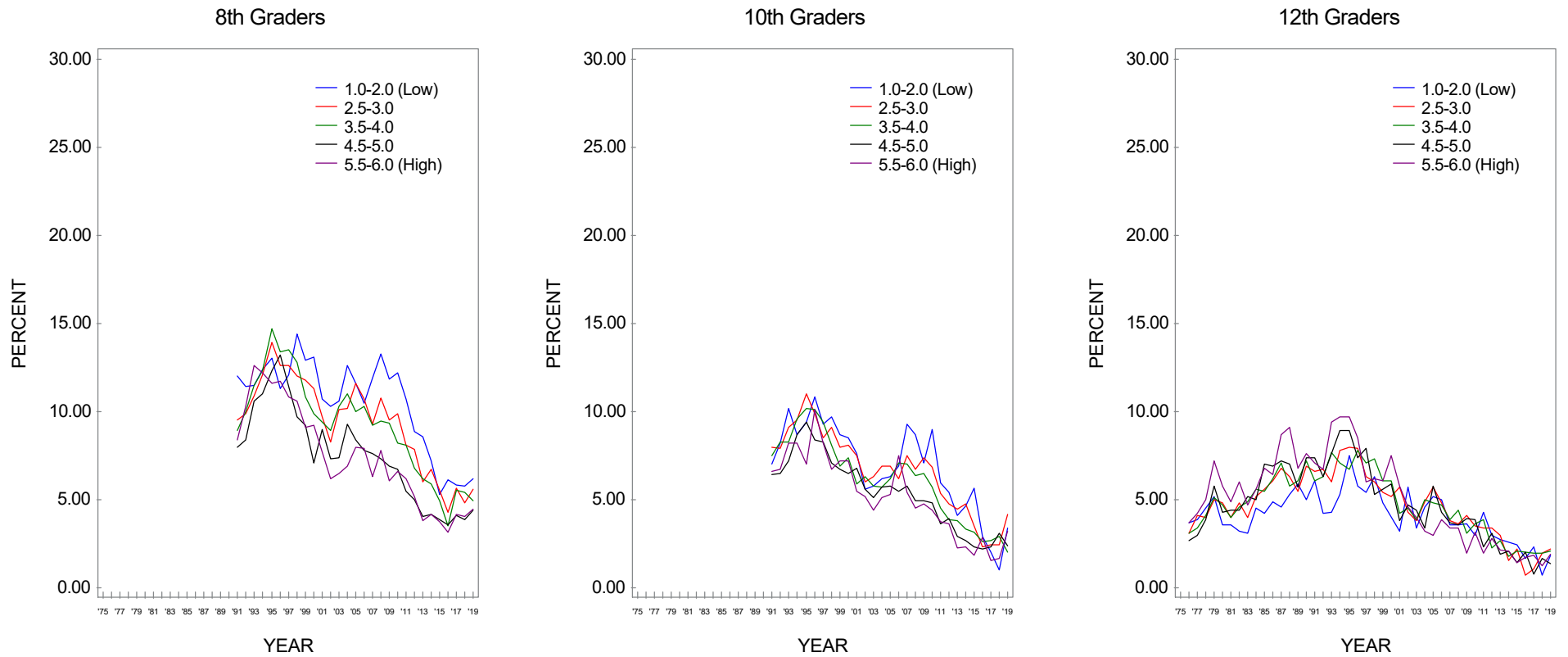
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 46**  
**Inhalants: Trends in Annual Prevalence by Population Density**



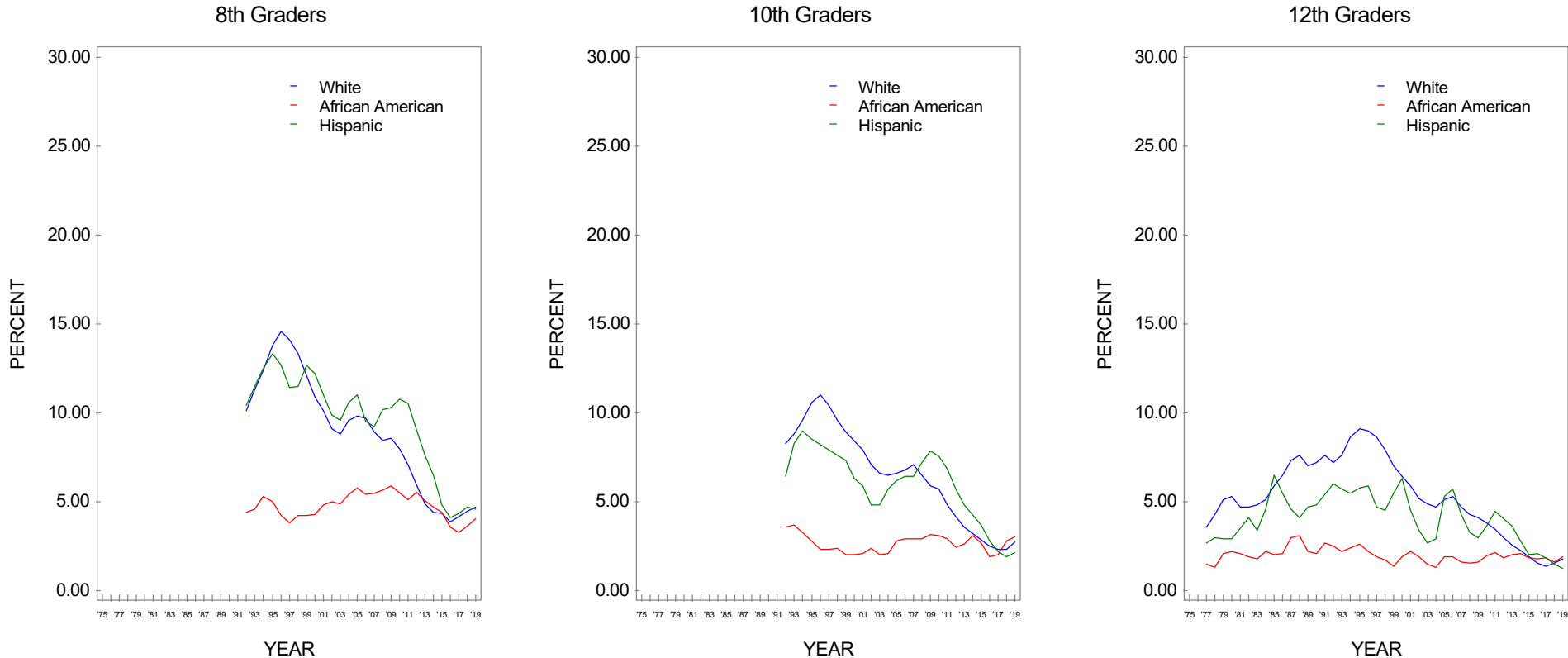
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 47**  
**Inhalants: Trends in Annual Prevalence by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*Parental education is an average score of mother's education and father's education.

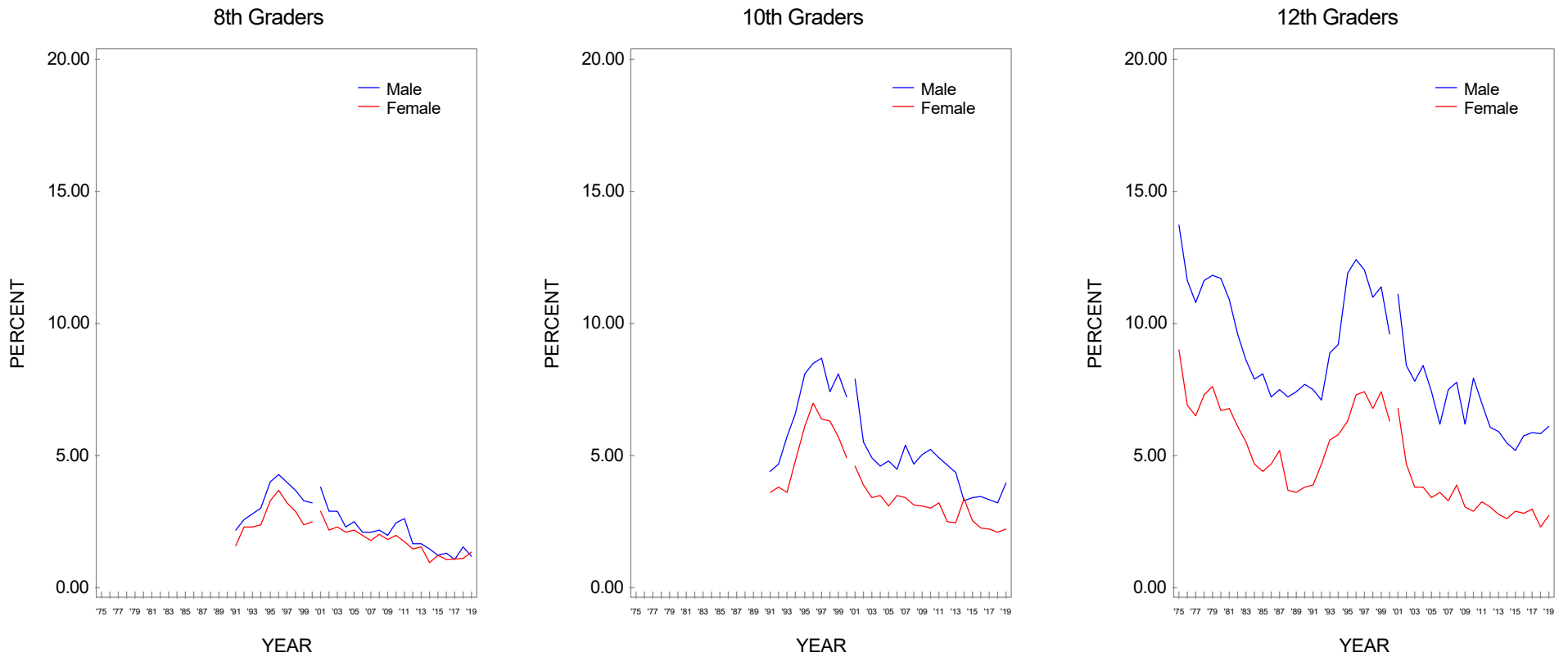
**FIGURE 48**  
**Inhalants: Trends in Annual Prevalence by Race/Ethnicity\***



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

\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

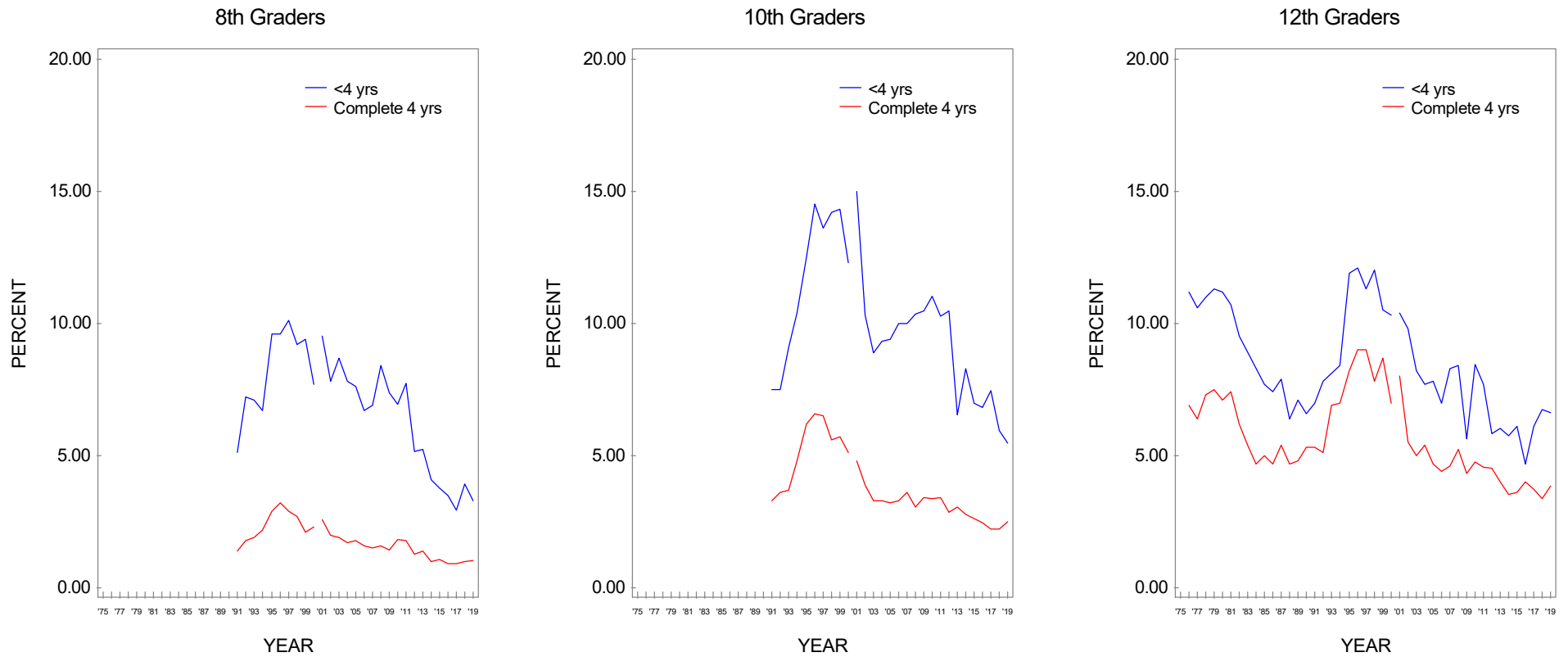
**FIGURE 49**  
**Hallucinogens:\* Trends in Annual Prevalence by Gender**



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

\*Beginning in 2001, a revised set of questions on other hallucinogen use was introduced. Other psychedelics was changed to other hallucinogens, and shrooms was added to the list of examples. Data for hallucinogens are affected by these changes.

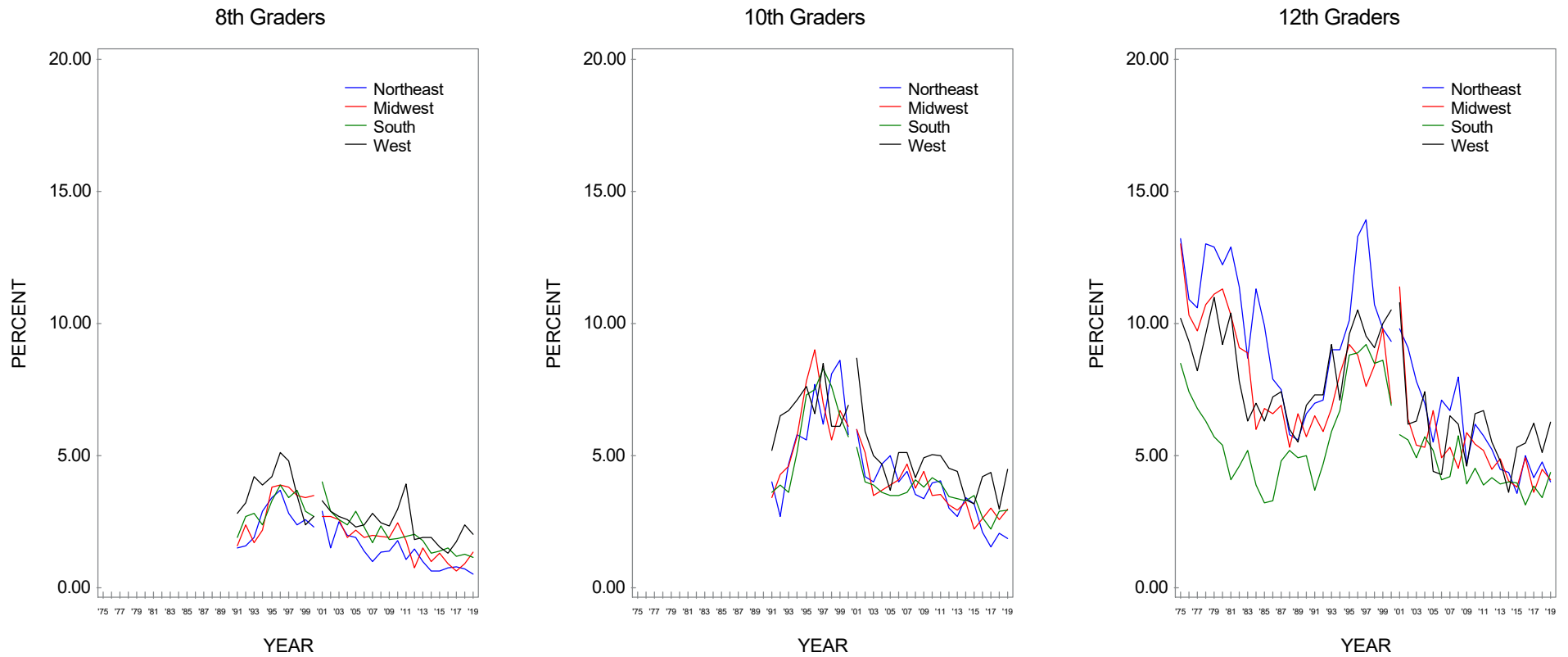
**FIGURE 50**  
**Hallucinogens:\* Trends in Annual Prevalence by College Plans**



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

\*Beginning in 2001, a revised set of questions on other hallucinogen use was introduced. Other psychedelics was changed to other hallucinogens, and shrooms was added to the list of examples. Data for hallucinogens are affected by these changes.

**FIGURE 51**  
**Hallucinogens:\* Trends in Annual Prevalence by Region**

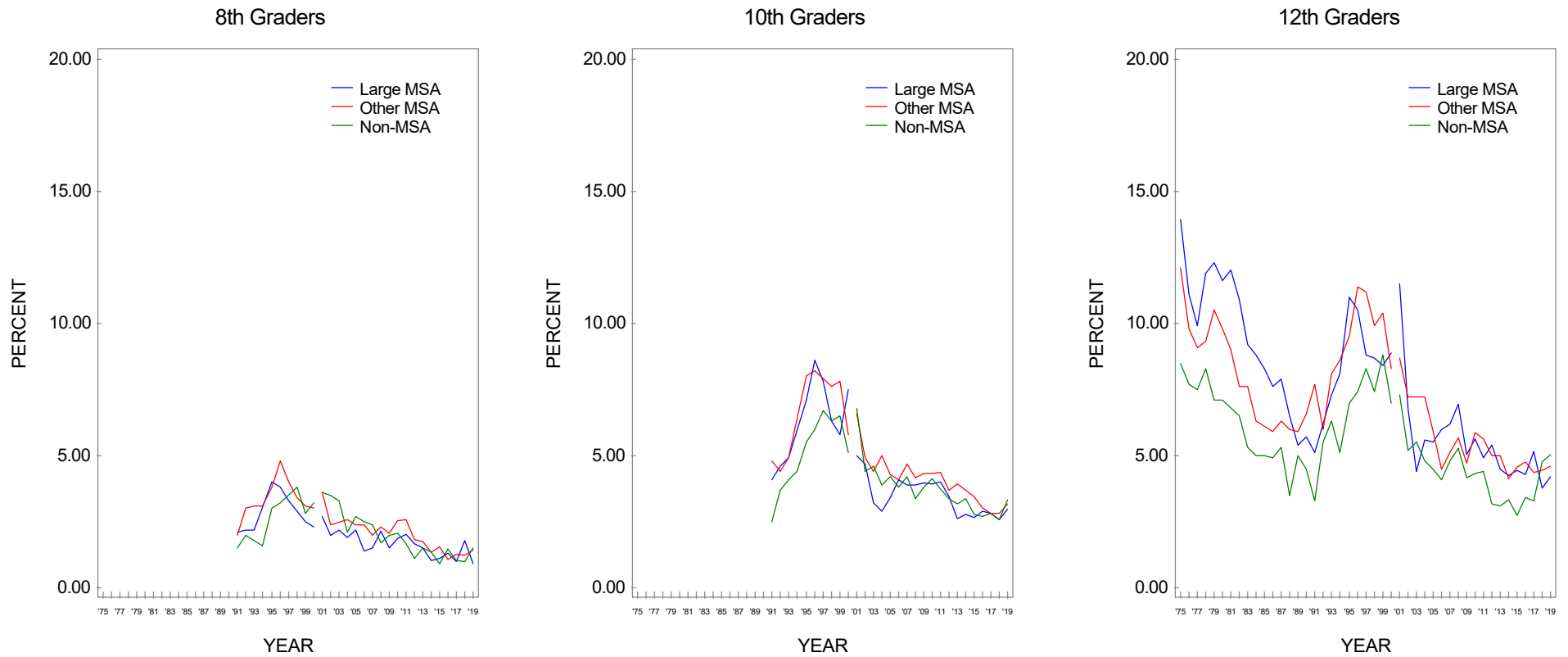


Source. The Monitoring the Future study, the University of Michigan.

\*Beginning in 2001, a revised set of questions on other hallucinogen use was introduced. Other psychedelics was changed to other hallucinogens, and shrooms was added to the list of examples. Data for hallucinogens are affected by these changes.



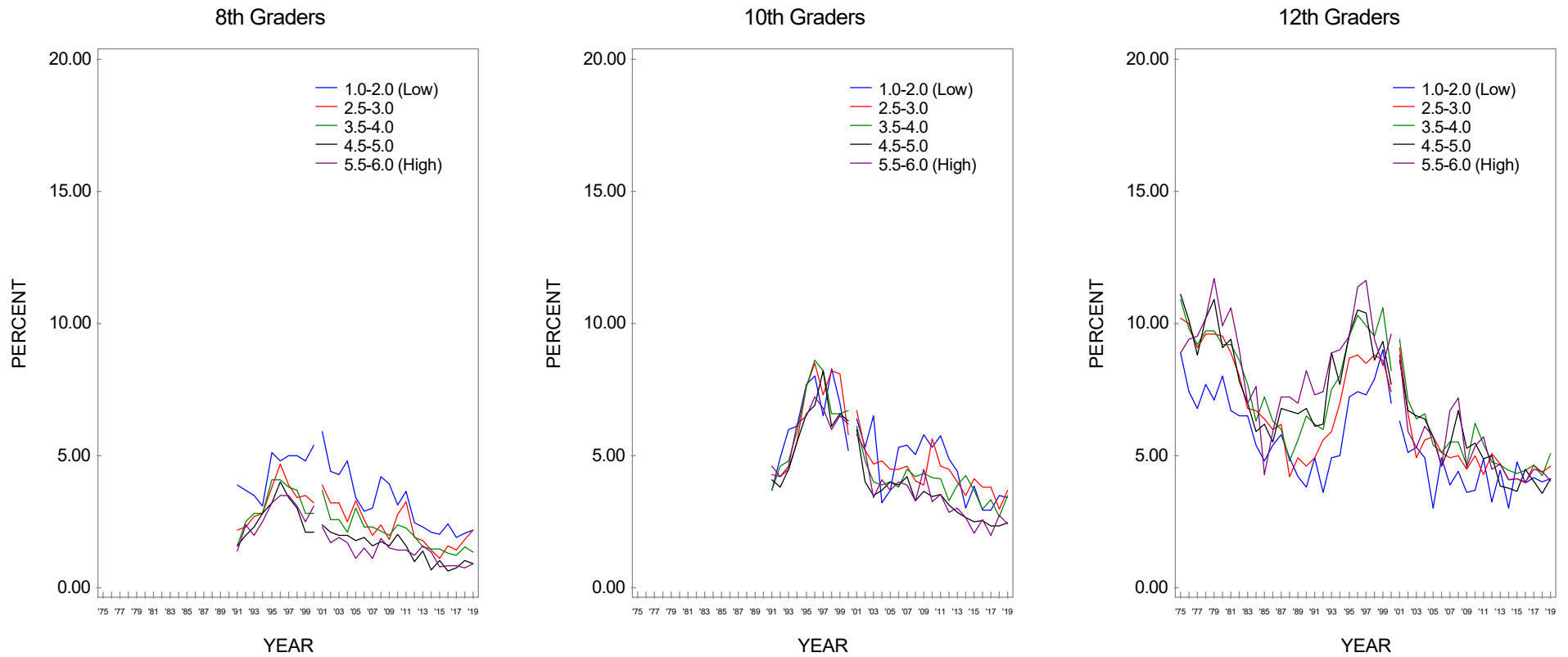
**FIGURE 52**  
**Hallucinogens:\* Trends in Annual Prevalence by Population Density**



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

\*Beginning in 2001, a revised set of questions on other hallucinogen use was introduced. Other psychedelics was changed to other hallucinogens, and shrooms was added to the list of examples. Data for hallucinogens are affected by these changes.

**FIGURE 53**  
**Hallucinogens:\* Trends in Annual Prevalence by Average Education Level of Parents\*\***

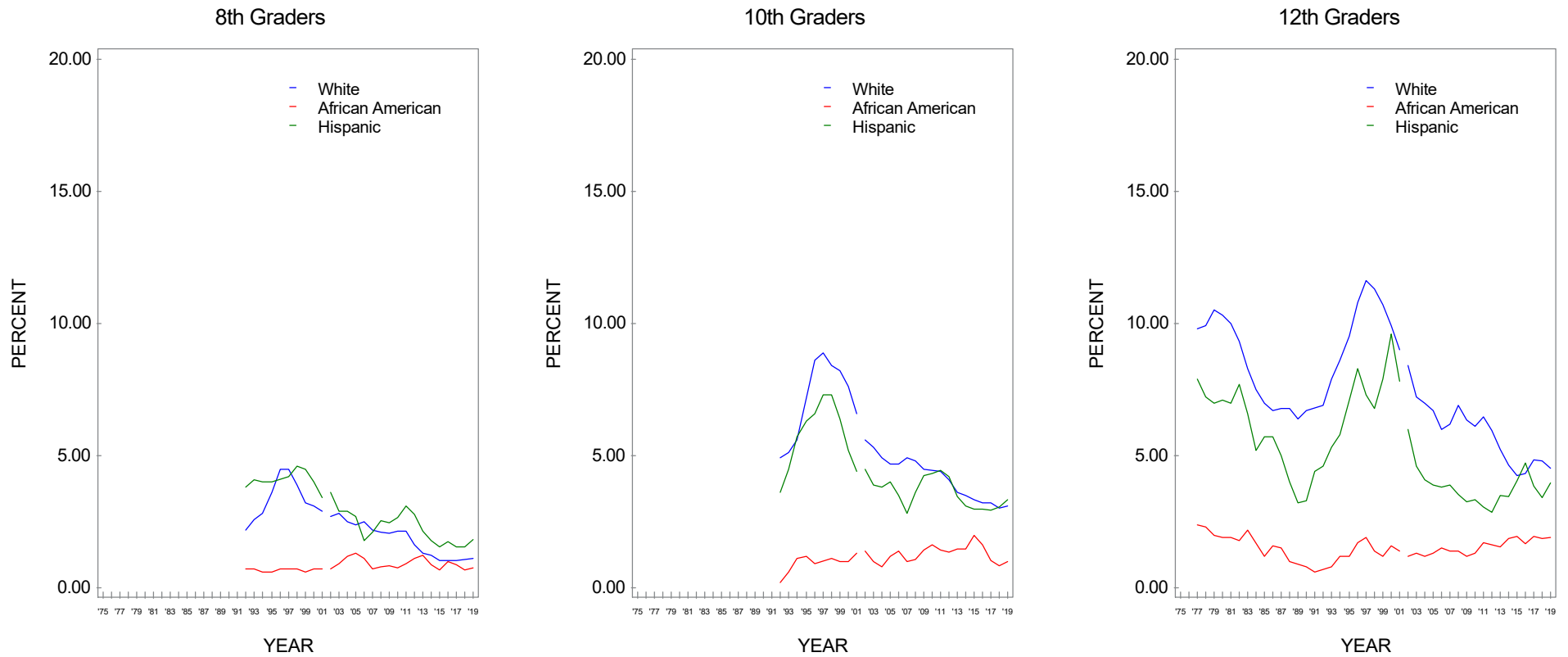


Source. The Monitoring the Future study, the University of Michigan.

\*Beginning in 2001, a revised set of questions on other hallucinogen use was introduced. Other psychedelics was changed to other hallucinogens, and shrooms was added to the list of examples. Data for hallucinogens are affected by these changes.

\*\*Parental education is an average score of mother's education and father's education.

**FIGURE 54**  
**Hallucinogens:\* Trends in Annual Prevalence by Race/Ethnicity\*\***

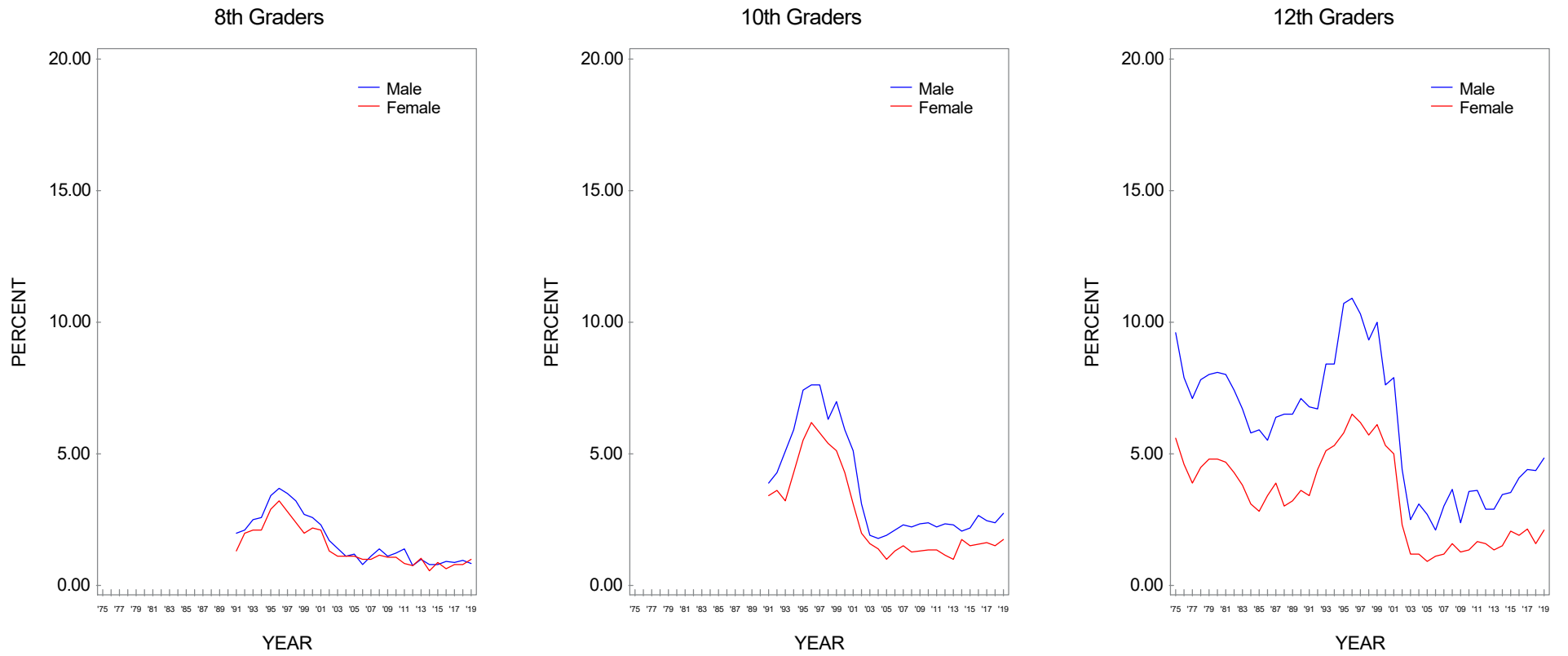


Source. The Monitoring the Future study, the University of Michigan.

\*Beginning in 2001, a revised set of questions on other hallucinogen use was introduced. Other psychedelics was changed to other hallucinogens, and shrooms was added to the list of examples. Data for hallucinogens are affected by these changes.

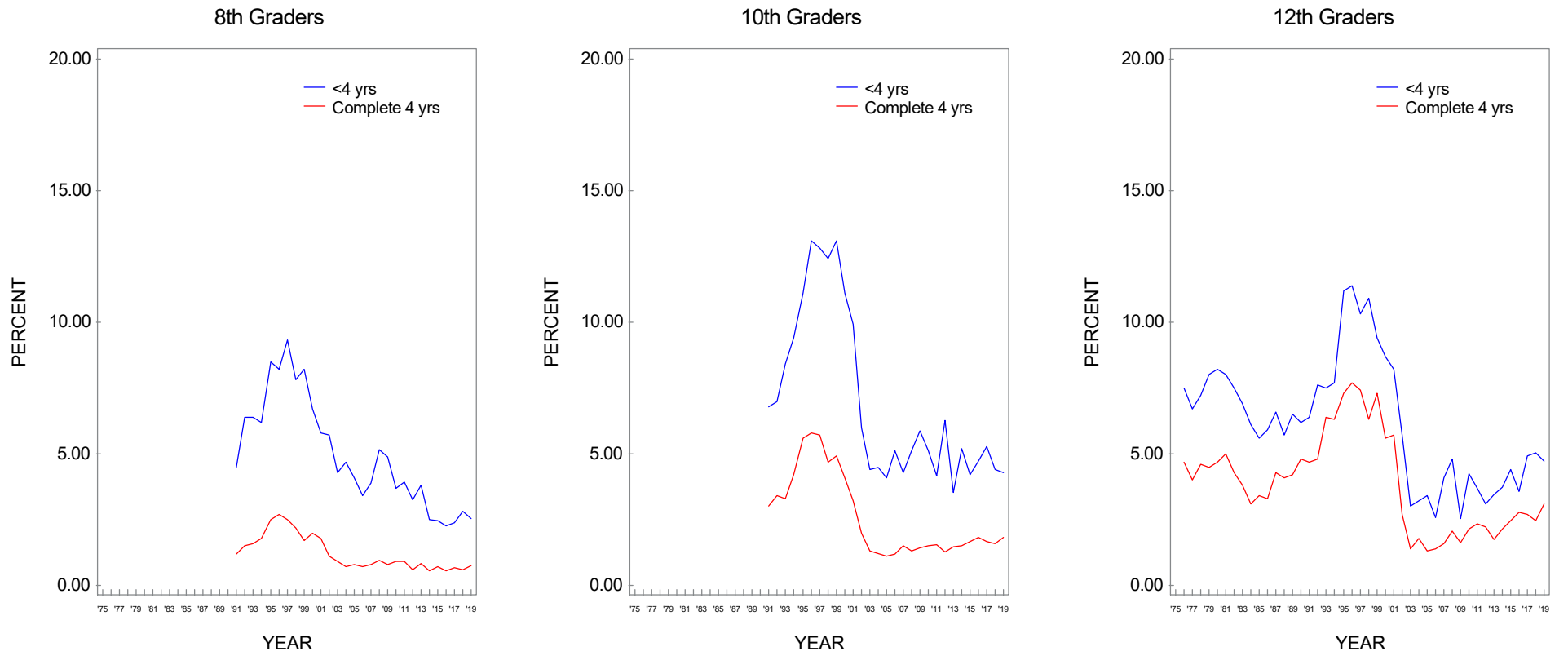
\*\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 55**  
**LSD: Trends in Annual Prevalence by Gender**



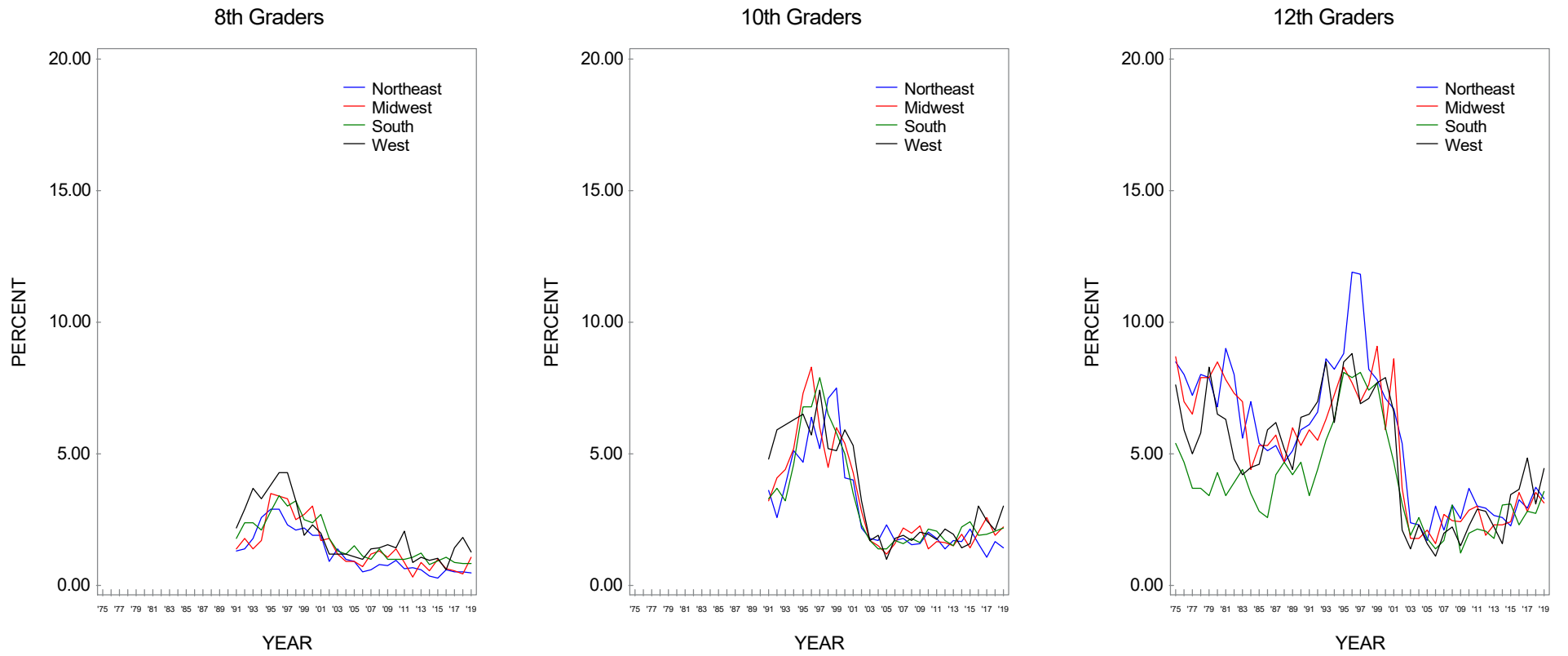
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 56**  
**LSD: Trends in Annual Prevalence by College Plans**



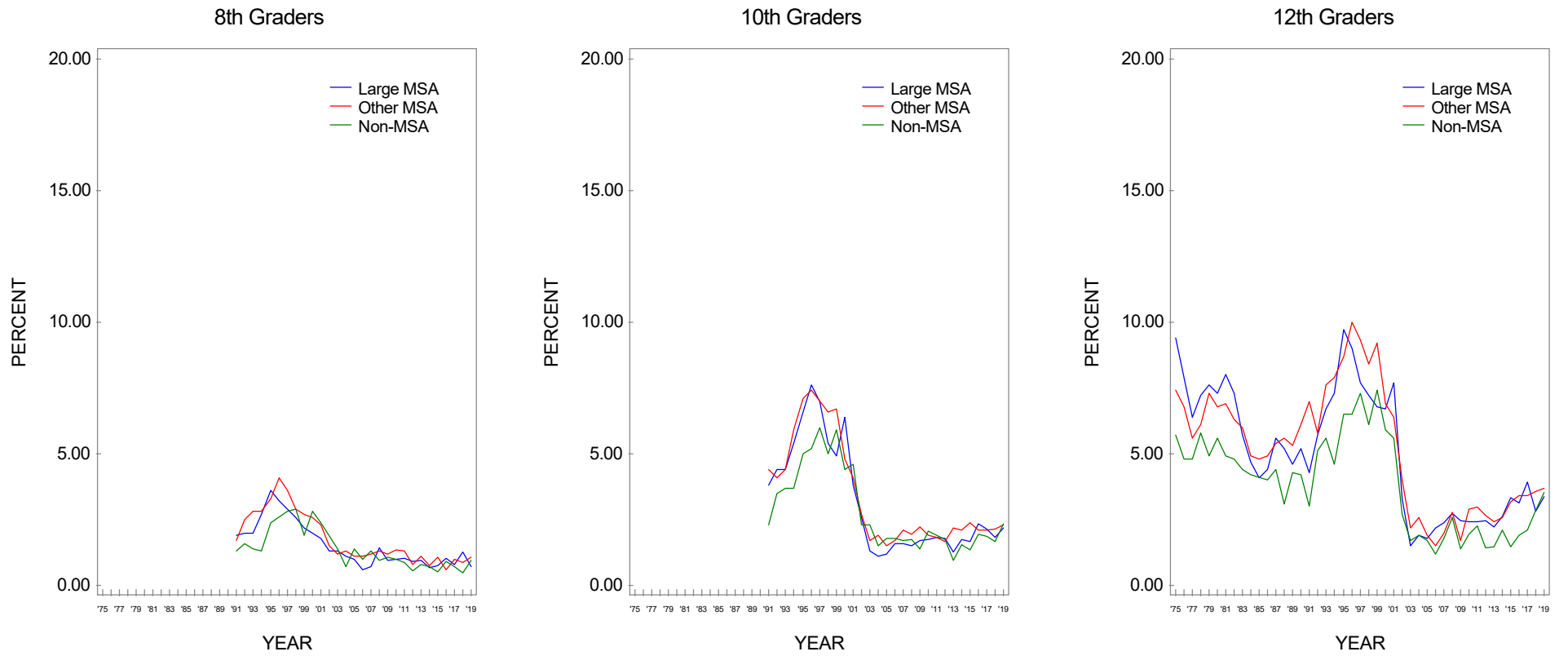
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 57**  
**LSD: Trends in Annual Prevalence by Region**



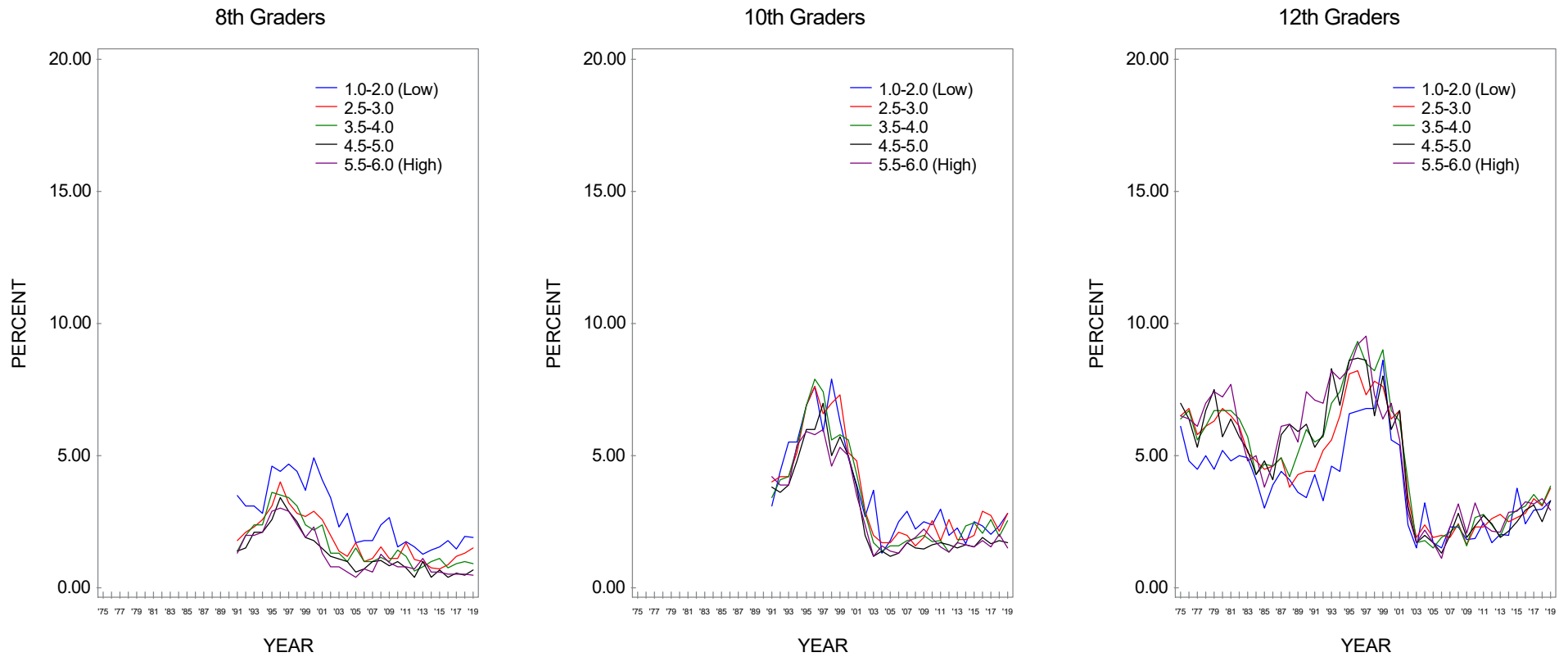
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 58**  
**LSD: Trends in Annual Prevalence by Population Density**



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

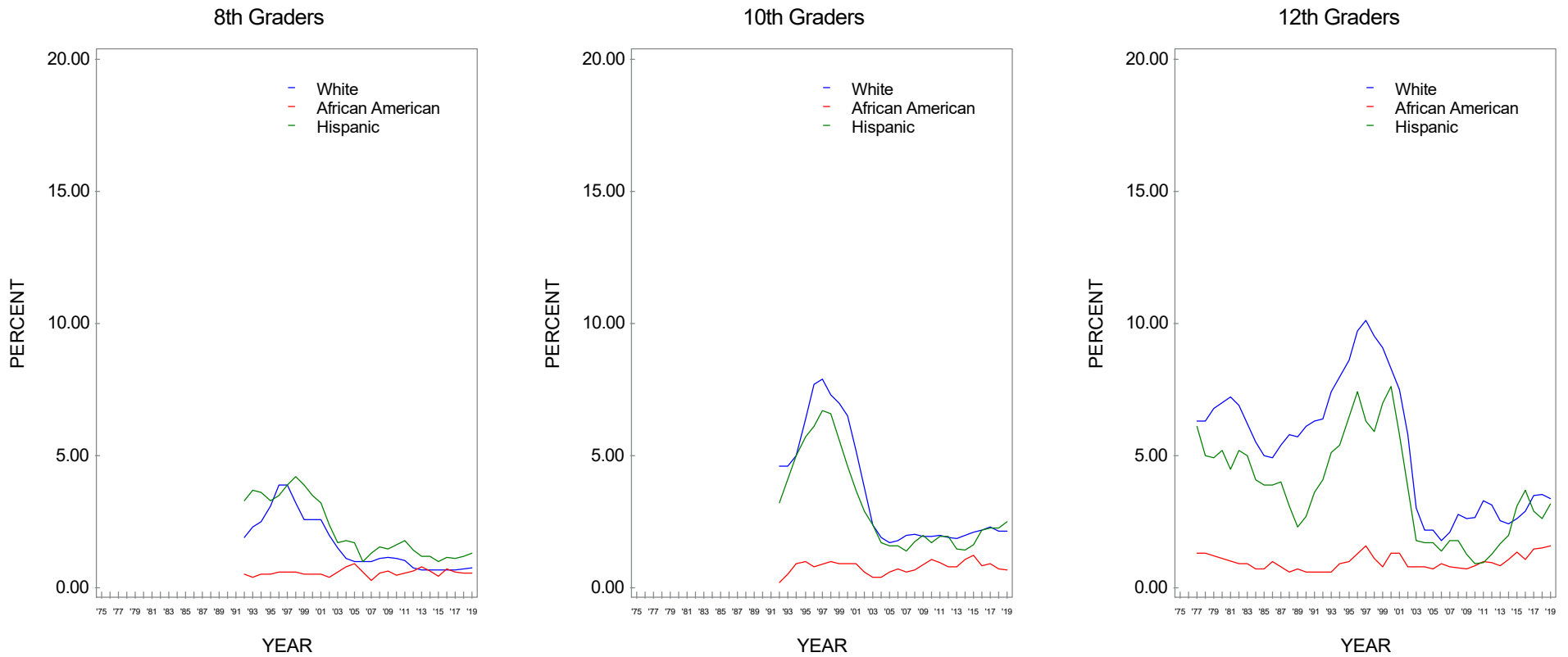
**FIGURE 59**  
**LSD: Trends in Annual Prevalence by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*Parental education is an average score of mother's education and father's education.



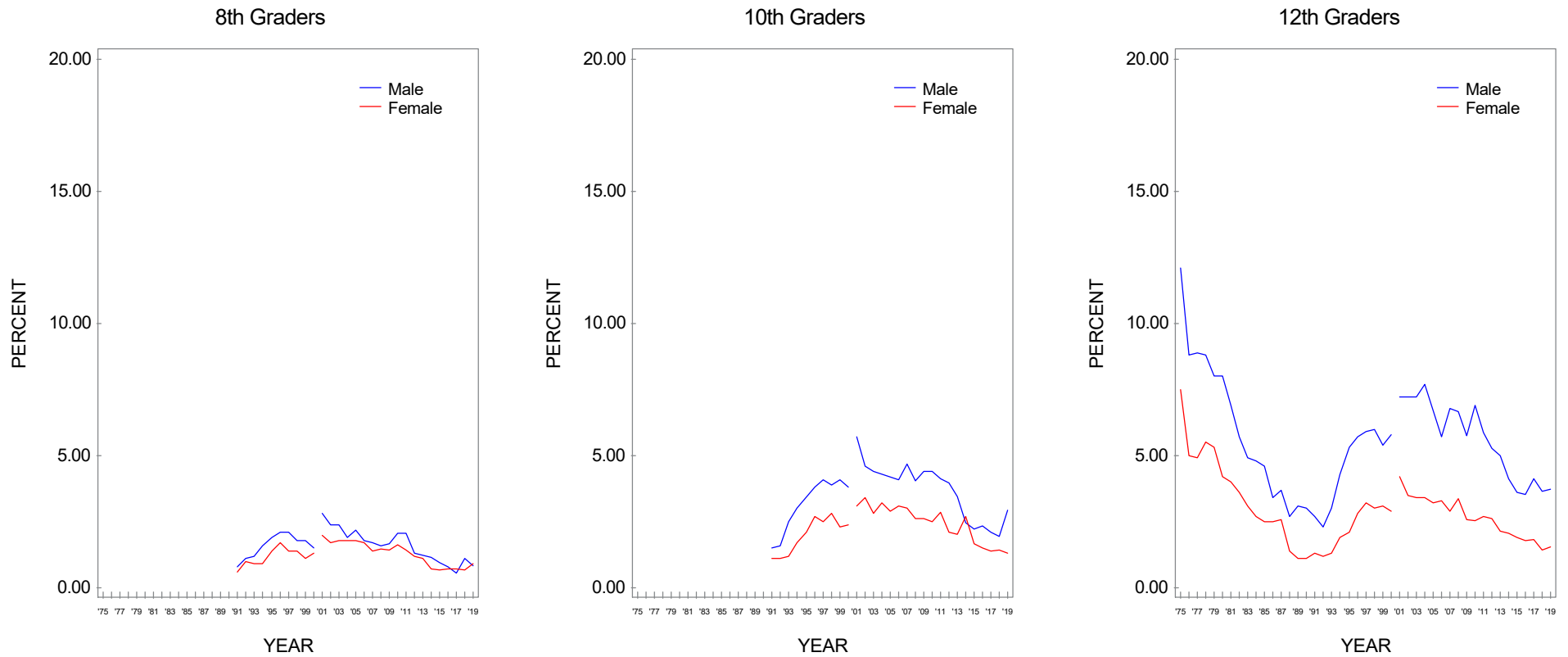
**FIGURE 60**  
**LSD: Trends in Annual Prevalence by Race/Ethnicity\***



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

\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

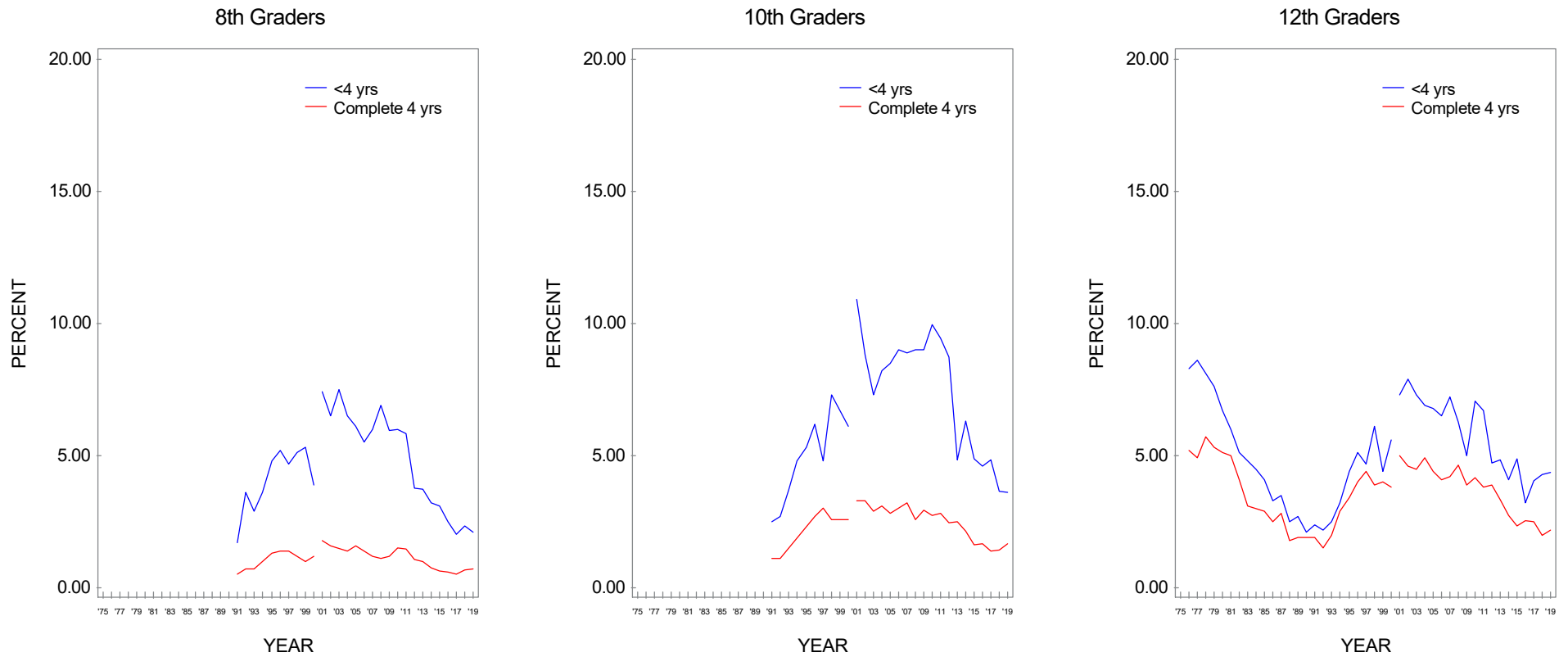
**FIGURE 61**  
**Hallucinogens other than LSD:\* Trends in Annual Prevalence by Gender**



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

\*Beginning in 2001, a revised set of questions on other hallucinogen use was introduced. Other psychedelics was changed to other hallucinogens, and shrooms was added to the list of examples.

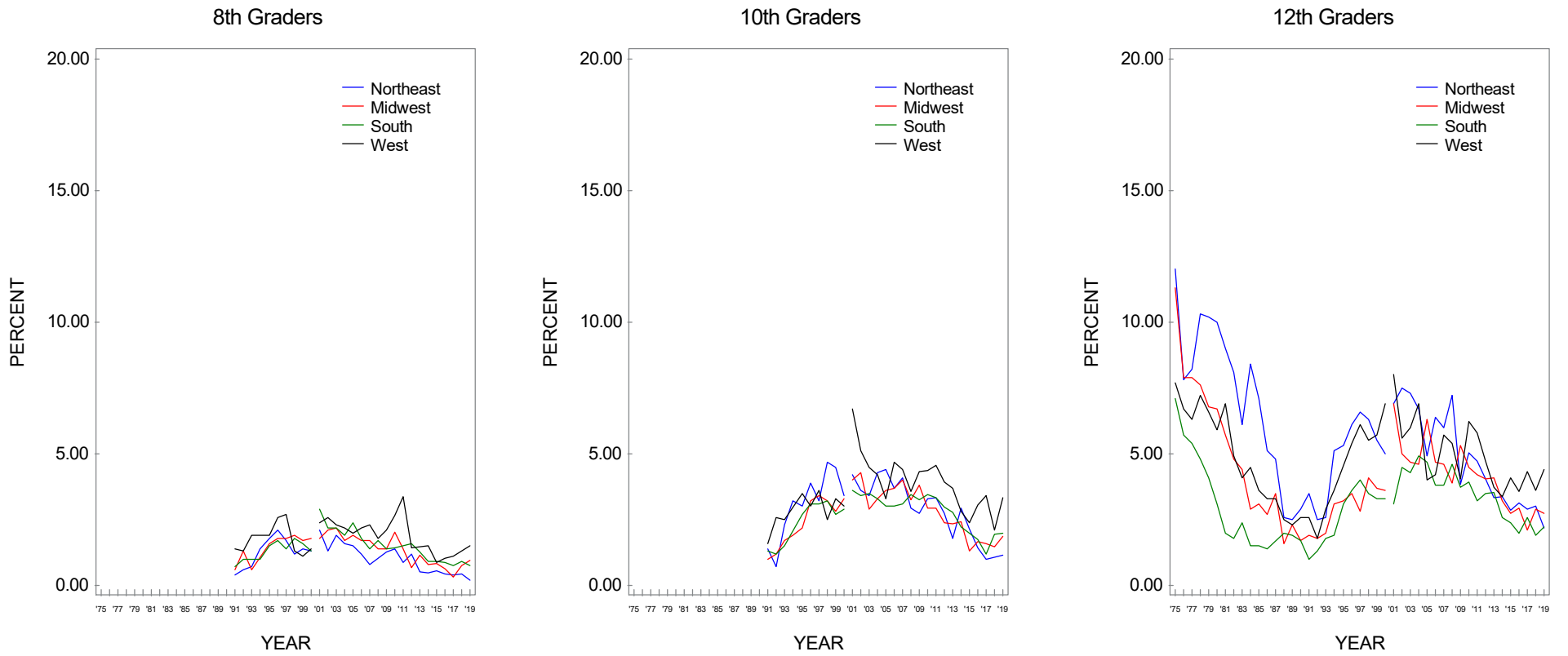
**FIGURE 62**  
**Hallucinogens other than LSD:\* Trends in Annual Prevalence by College Plans**



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

\*Beginning in 2001, a revised set of questions on other hallucinogen use was introduced. Other psychedelics was changed to other hallucinogens, and shrooms was added to the list of examples.

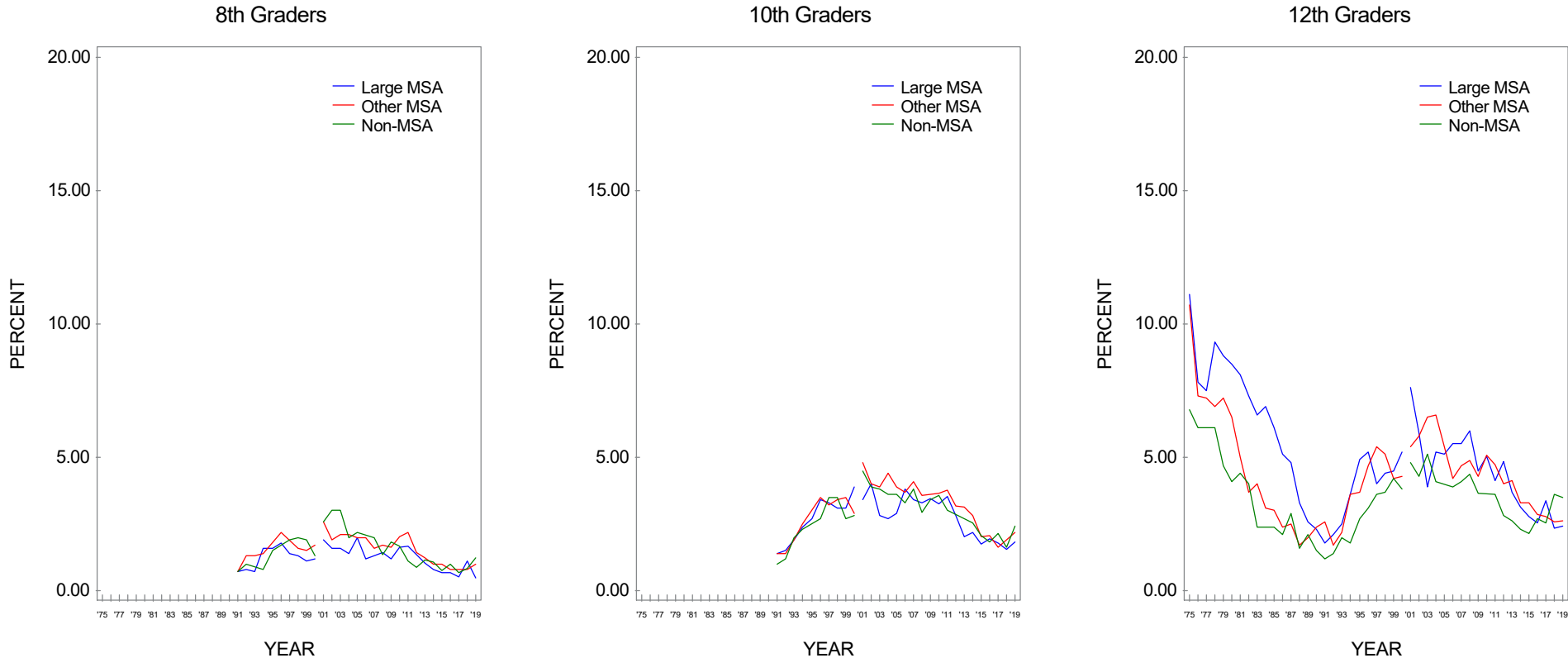
**FIGURE 63**  
**Hallucinogens other than LSD:\* Trends in Annual Prevalence by Region**



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

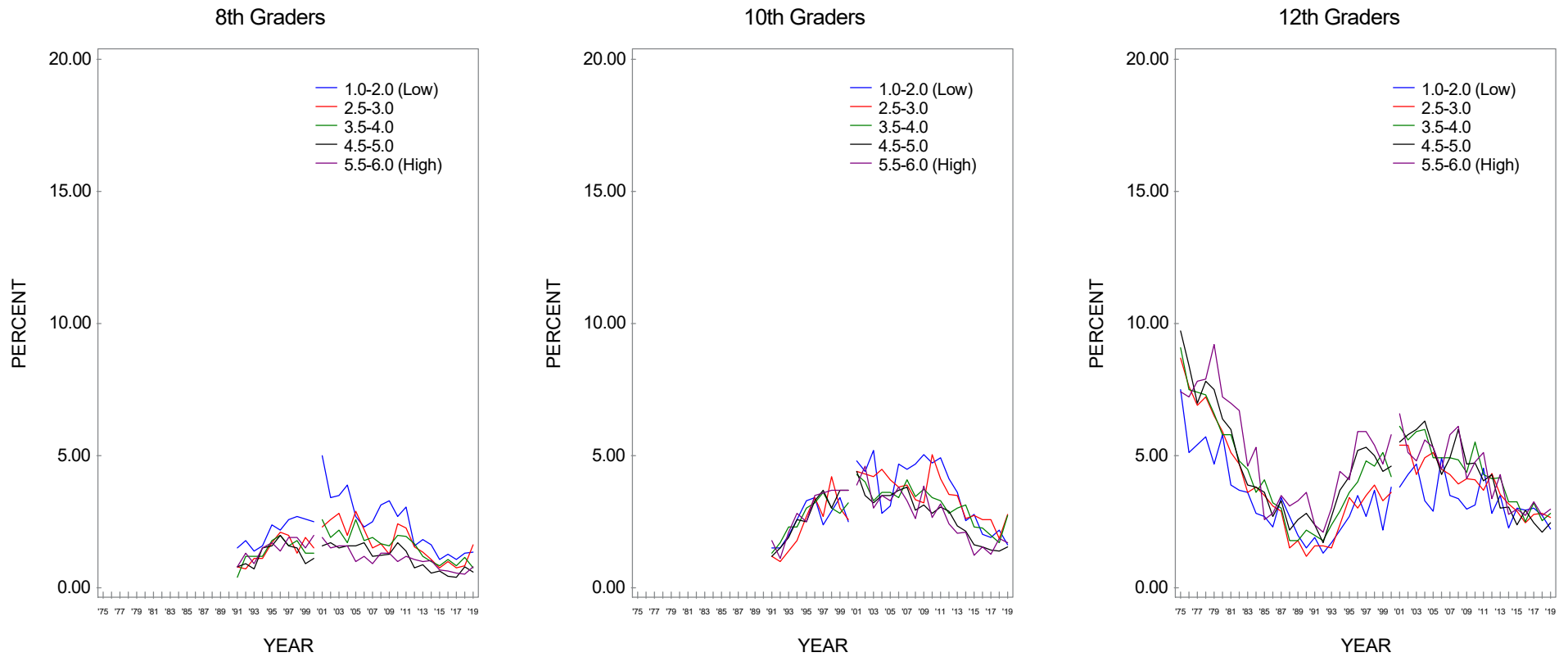
\*Beginning in 2001, a revised set of questions on other hallucinogen use was introduced. Other psychedelics was changed to other hallucinogens, and shrooms was added to the list of examples.

**FIGURE 64**  
**Hallucinogens other than LSD:\* Trends in Annual Prevalence by Population Density**



Source. The Monitoring the Future study, the University of Michigan.  
 \*Beginning in 2001, a revised set of questions on other hallucinogen use was introduced. Other psychedelics was changed to other hallucinogens, and shrooms was added to the list of examples.

**FIGURE 65**  
**Hallucinogens other than LSD:\* Trends in Annual Prevalence by Average Education Level of Parents\*\***

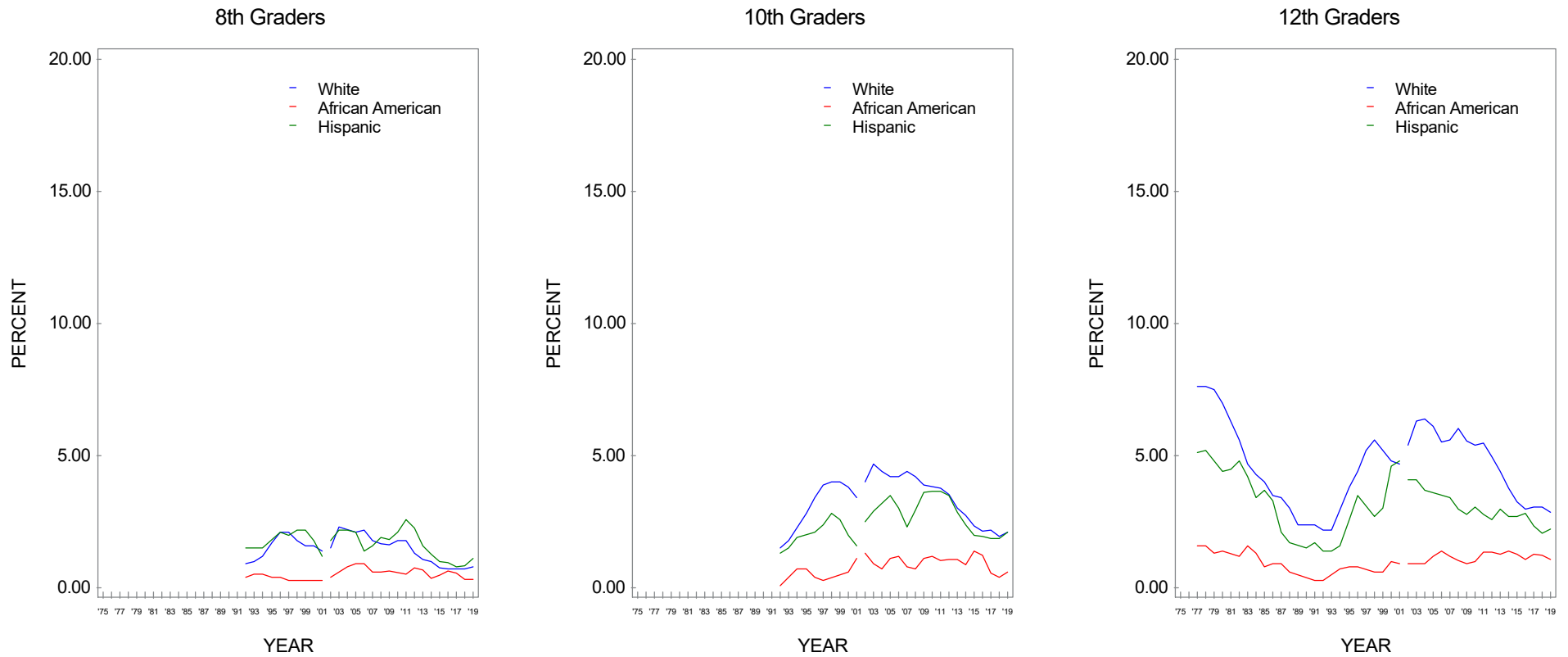


Source. The Monitoring the Future study, the University of Michigan.

\*Beginning in 2001, a revised set of questions on other hallucinogen use was introduced. Other psychedelics was changed to other hallucinogens, and shrooms was added to the list of examples.

\*\*Parental education is an average score of mother's education and father's education.

**FIGURE 66**  
**Hallucinogens other than LSD:\* Trends in Annual Prevalence by Race/Ethnicity\*\***

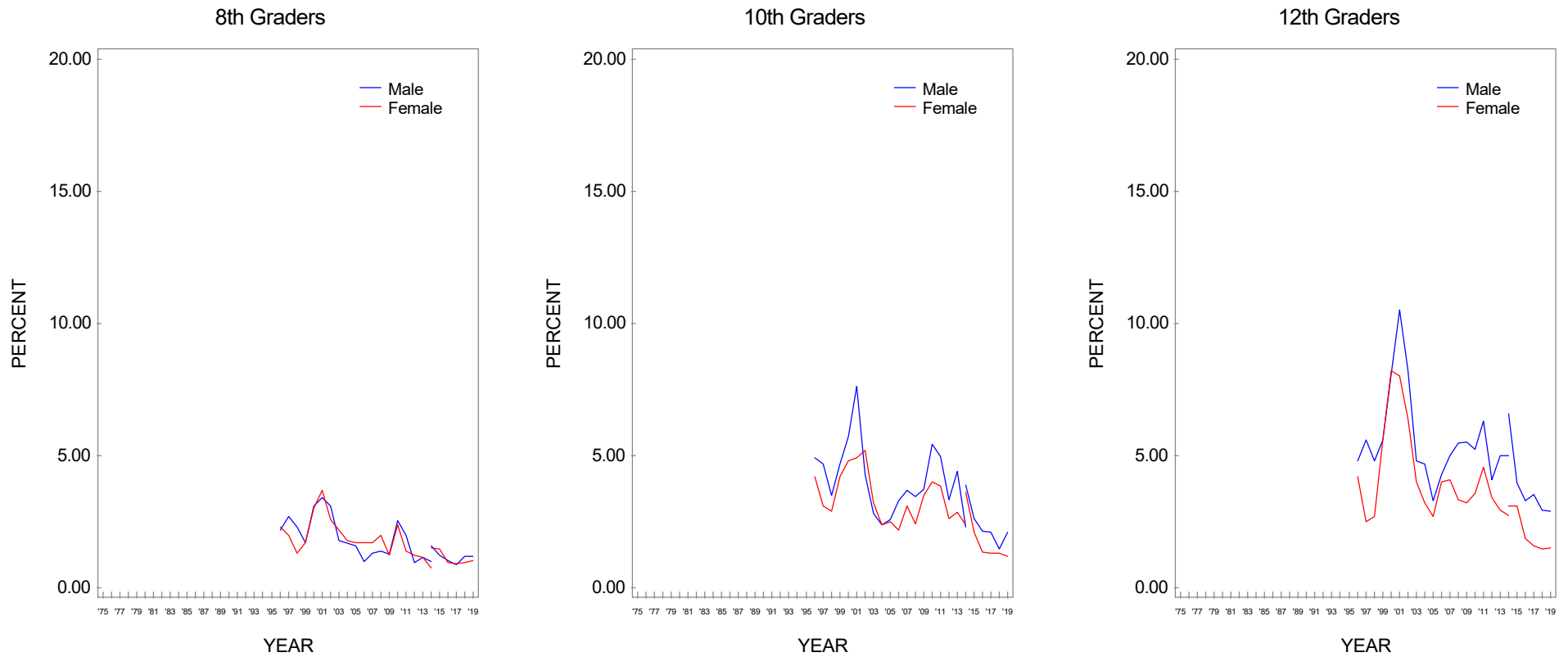


Source. The Monitoring the Future study, the University of Michigan.

\*Beginning in 2001, a revised set of questions on other hallucinogen use was introduced. Other psychedelics was changed to other hallucinogens, and shrooms was added to the list of examples.

\*\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 67**  
**MDMA (Ecstasy, Molly)\*: Trends in Annual Prevalence by Gender**

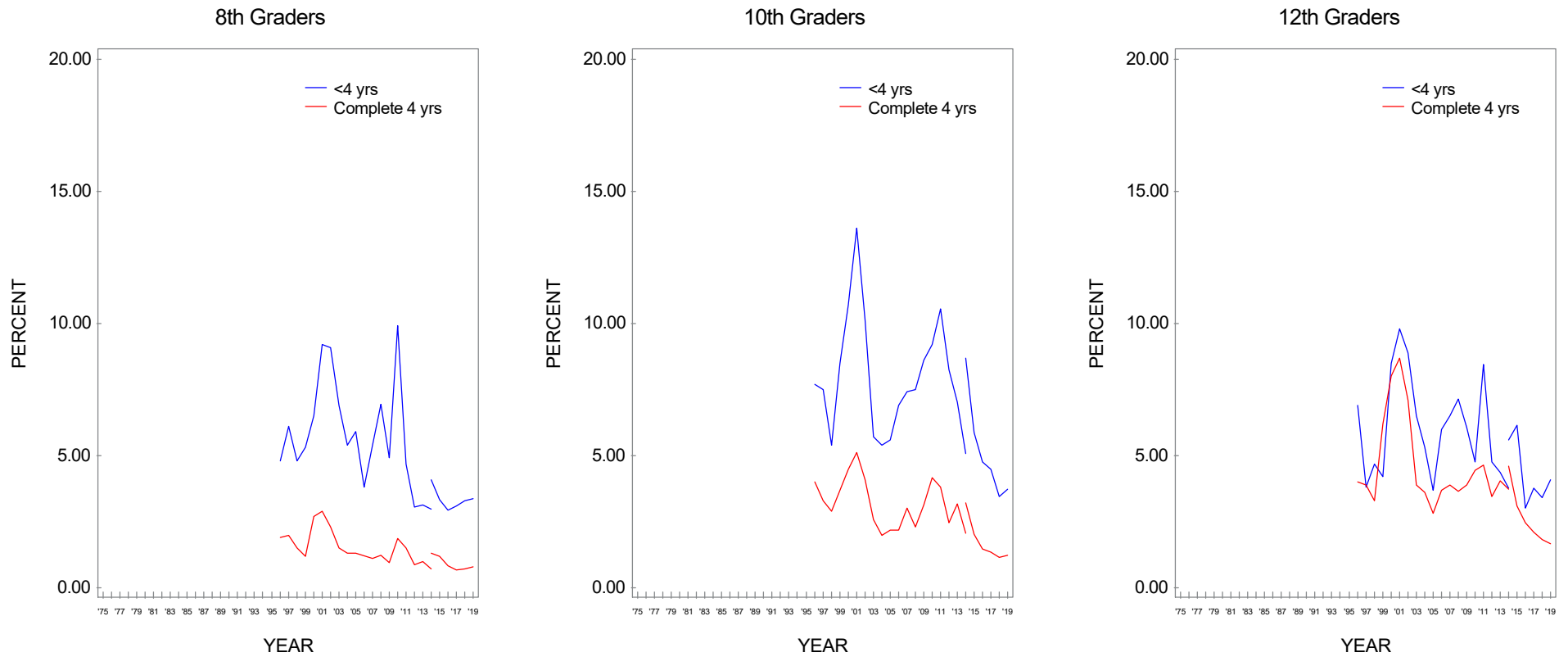


Source. The Monitoring the Future study, the University of Michigan.

\*In 2014, the question was changed in some of the questionnaire forms to include molly in the list of examples. In 2015, it was changed in the remaining forms. Data is presented here for both versions of the question.



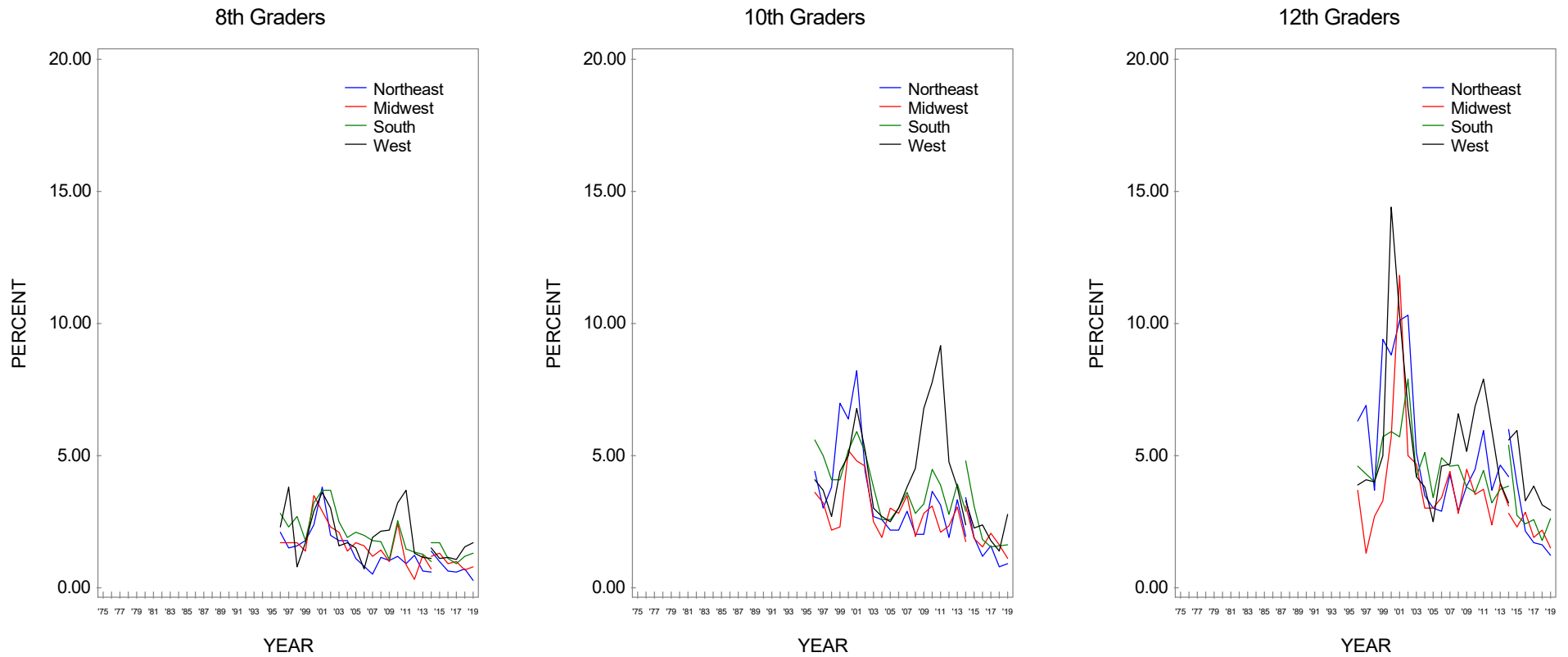
**FIGURE 68**  
**MDMA (Ecstasy, Molly)\*: Trends in Annual Prevalence by College Plans**



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

\*In 2014, the question was changed in some of the questionnaire forms to include molly in the list of examples. In 2015, it was changed in the remaining forms. Data is presented here for both versions of the question.

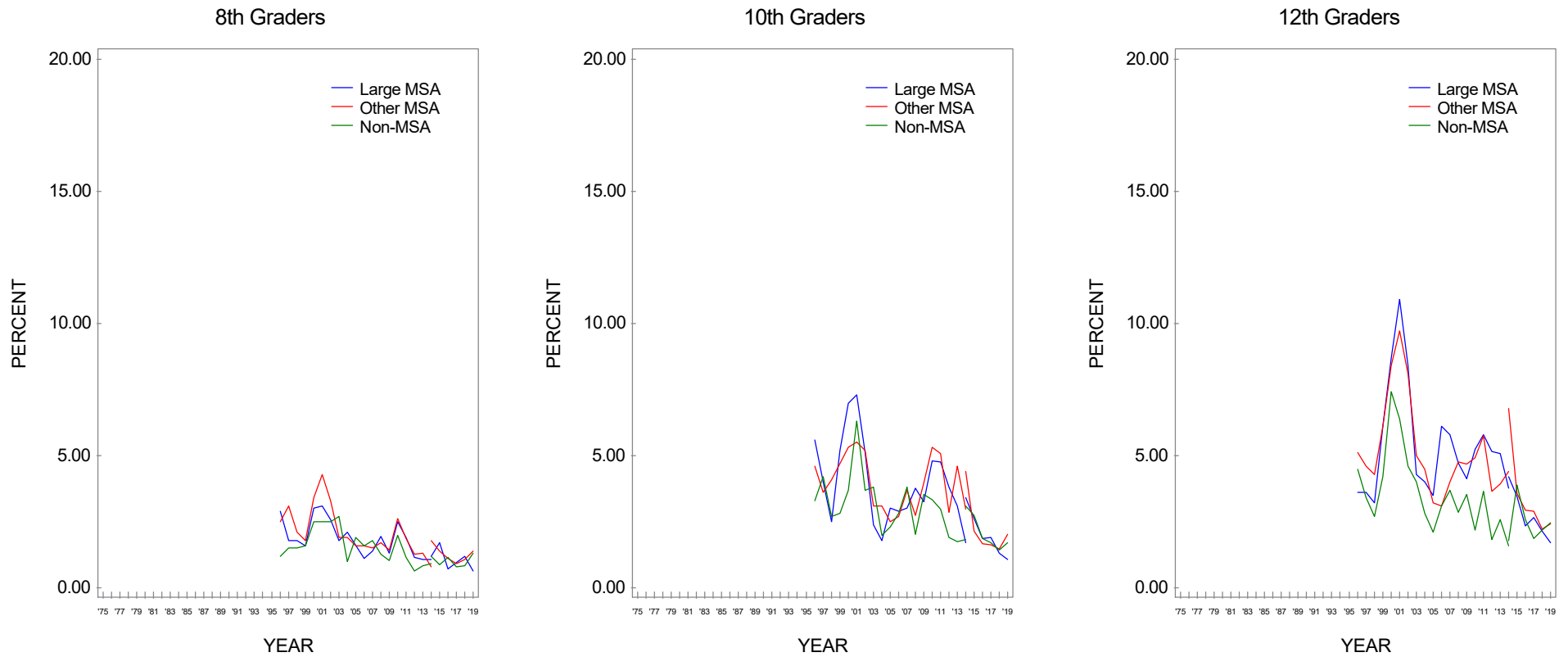
**FIGURE 69**  
**MDMA (Ecstasy, Molly)\*: Trends in Annual Prevalence by Region**



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

\*In 2014, the question was changed in some of the questionnaire forms to include molly in the list of examples. In 2015, it was changed in the remaining forms. Data is presented here for both versions of the question.

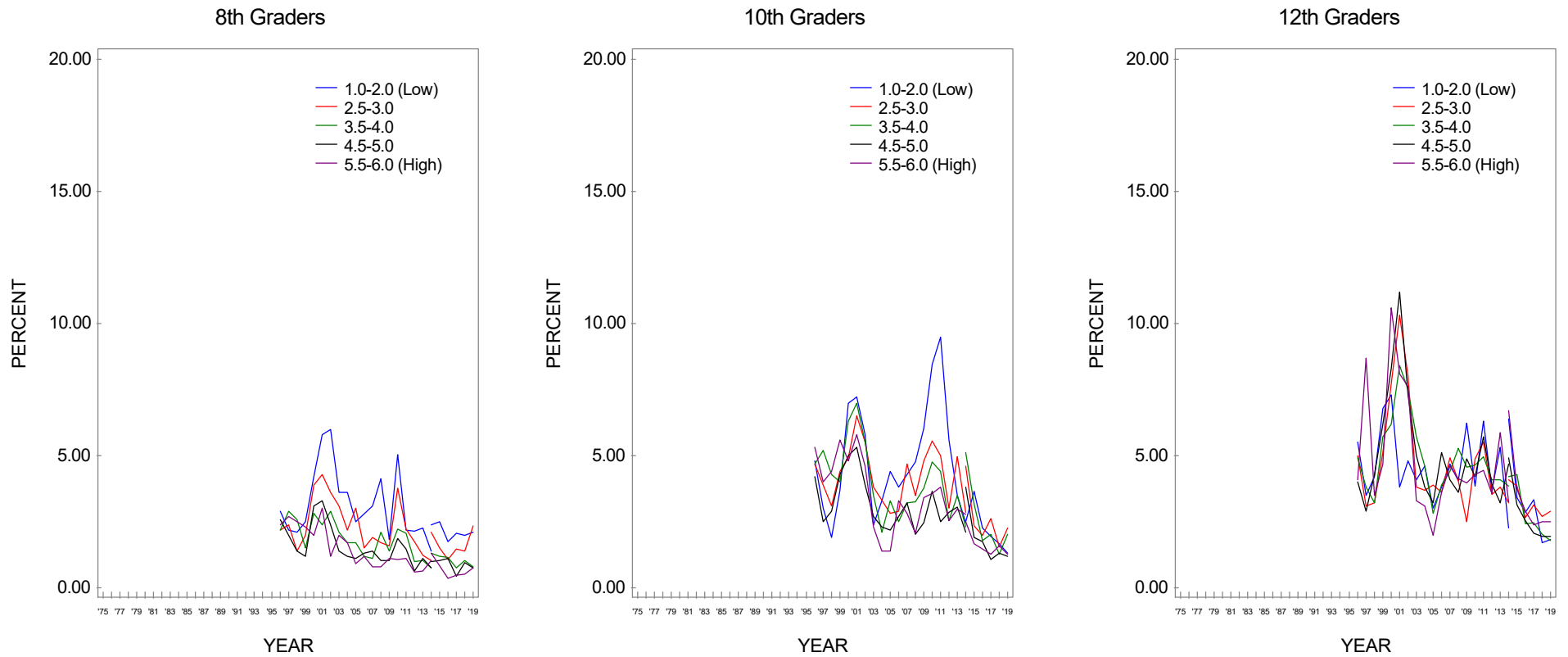
**FIGURE 70**  
**MDMA (Ecstasy, Molly)\*: Trends in Annual Prevalence by Population Density**



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

\*In 2014, the question was changed in some of the questionnaire forms to include molly in the list of examples. In 2015, it was changed in the remaining forms. Data is presented here for both versions of the question.

**FIGURE 71**  
**MDMA (Ecstasy, Molly)\*: Trends in Annual Prevalence by Average Education Level of Parents\*\***

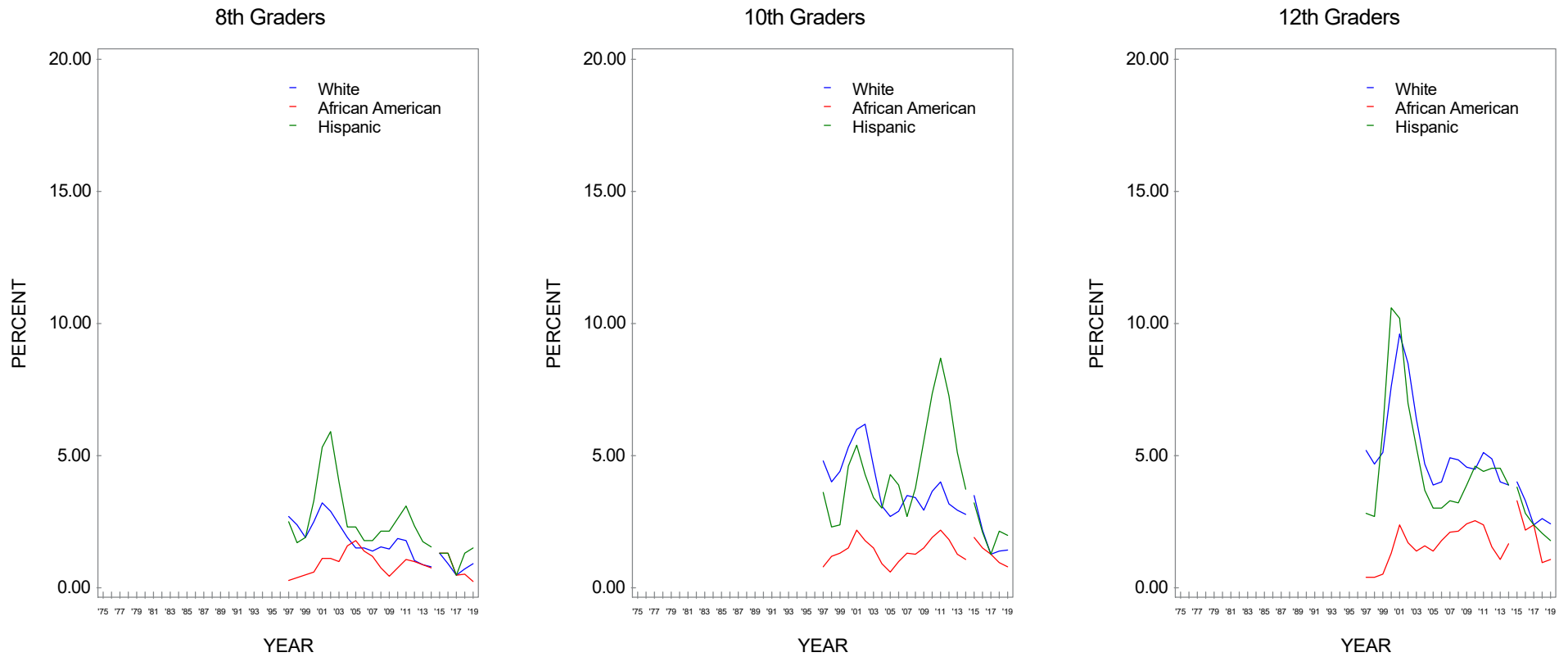


Source. The Monitoring the Future study, the University of Michigan.

\*In 2014, the question was changed in some of the questionnaire forms to include molly in the list of examples. In 2015, it was changed in the remaining forms. Data is presented here for both versions of the question.

\*\*Parental education is an average score of mother's education and father's education.

**FIGURE 72**  
**MDMA (Ecstasy, Molly)\*: Trends in Annual Prevalence by Race/Ethnicity\*\***

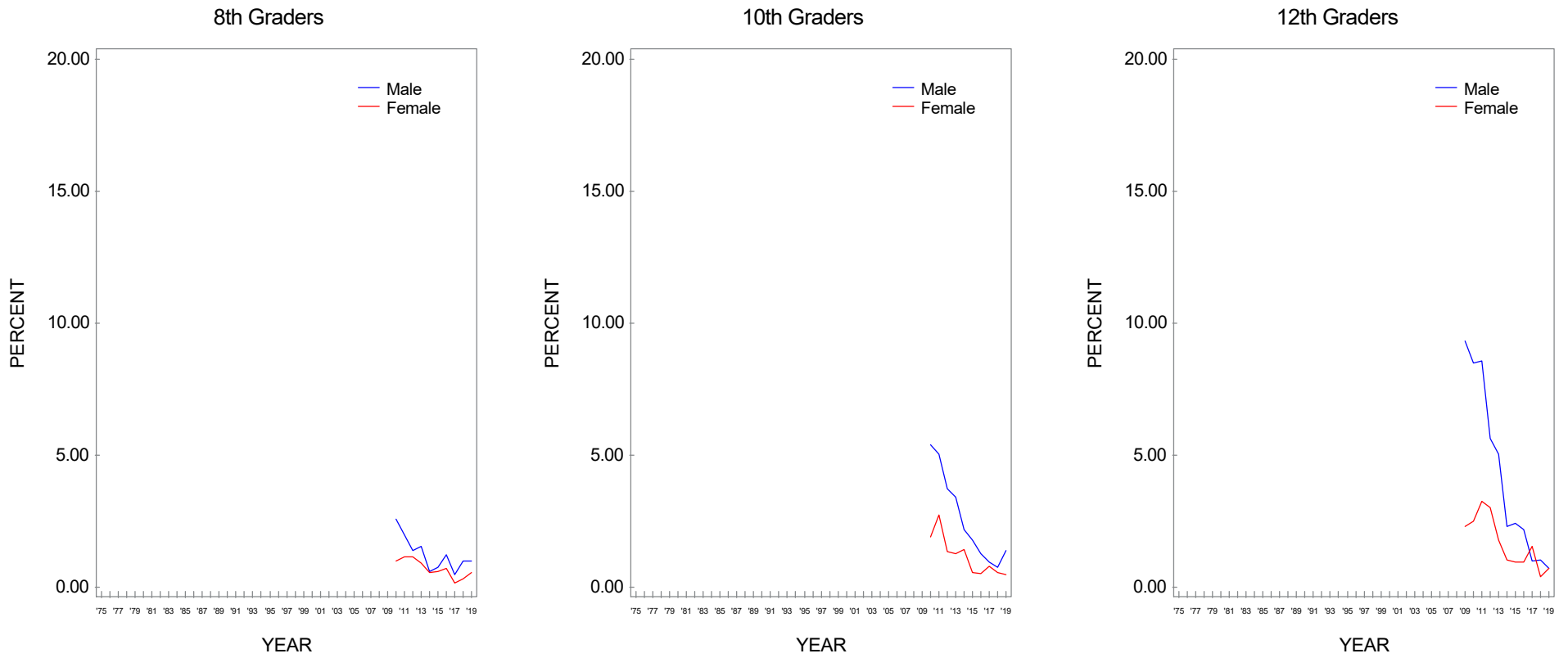


Source. The Monitoring the Future study, the University of Michigan.

\*In 2014, the question was changed in some of the questionnaire forms to include molly in the list of examples. In 2015, it was changed in the remaining forms. Data is presented here for both versions of the question.

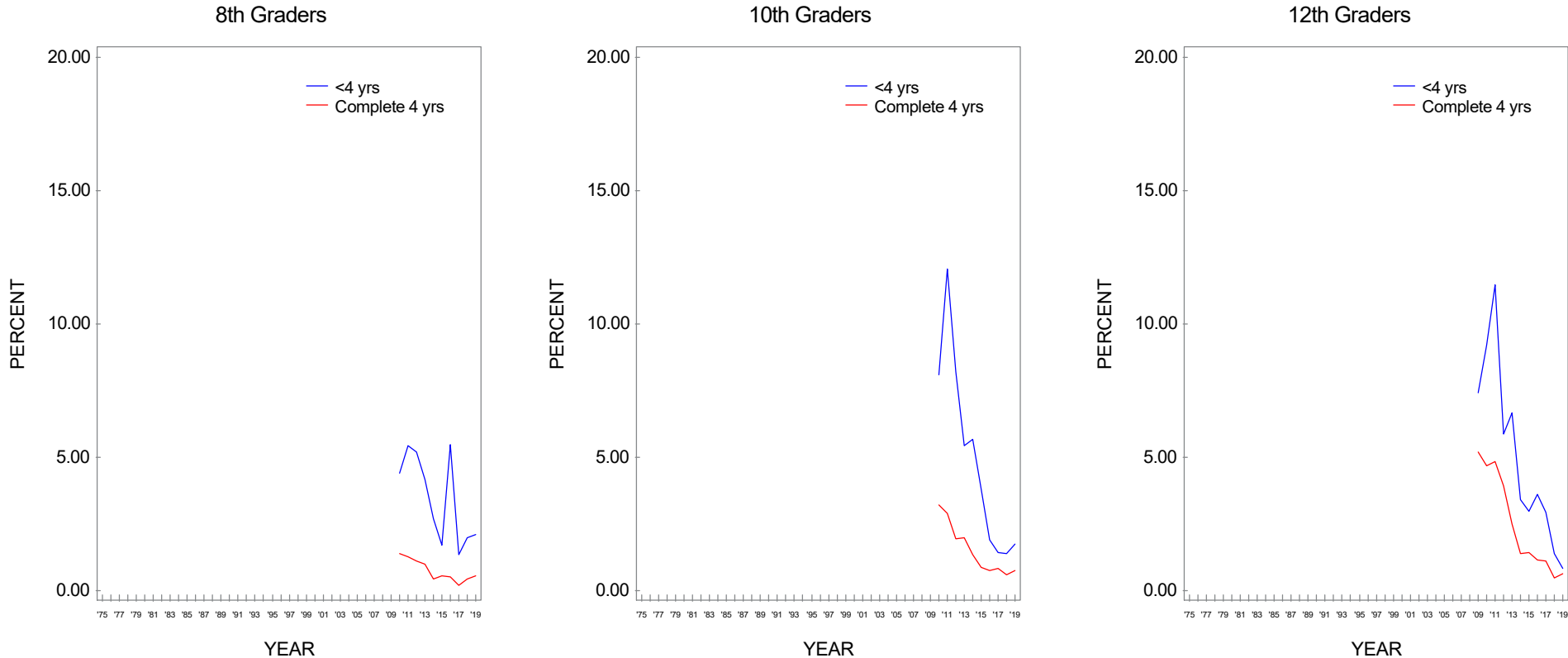
\*\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 73**  
**Salvia: Trends in Annual Prevalence by Gender**



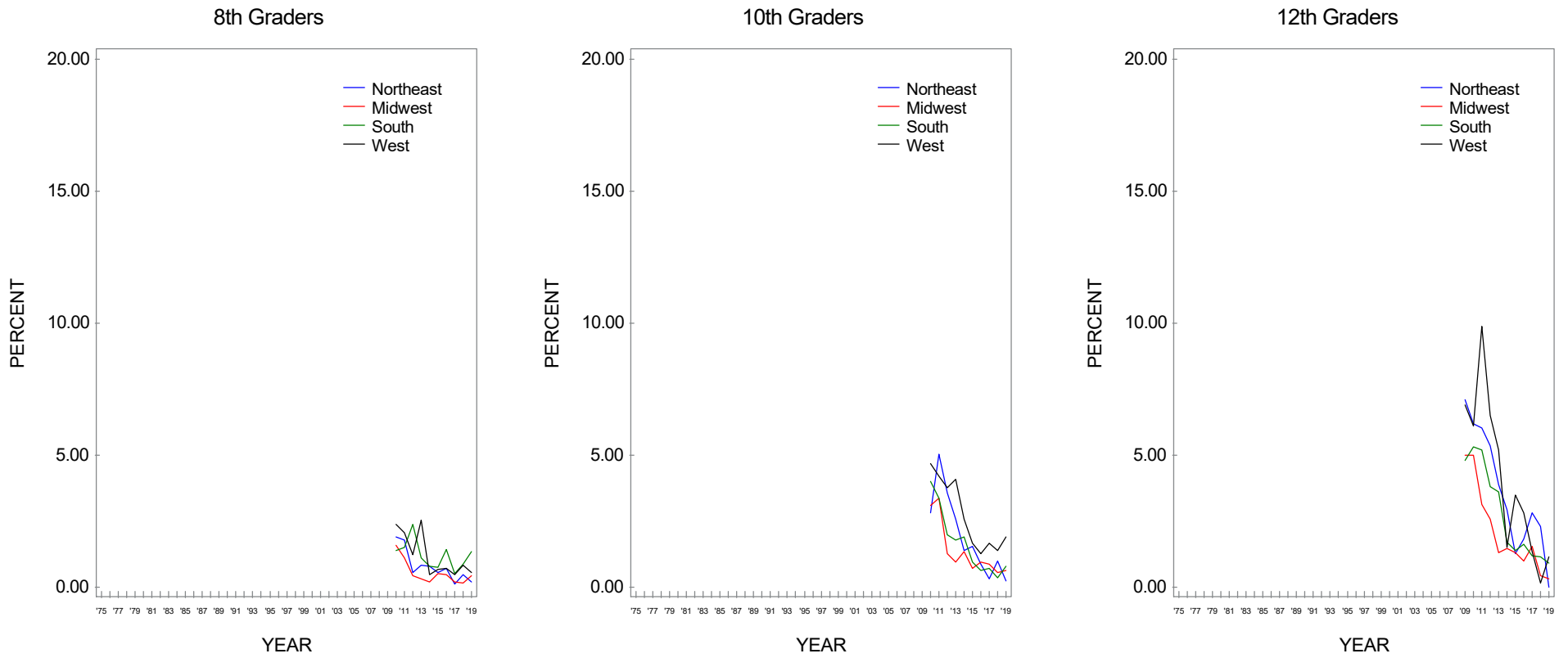
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 74**  
**Salvia: Trends in Annual Prevalence by College Plans**



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

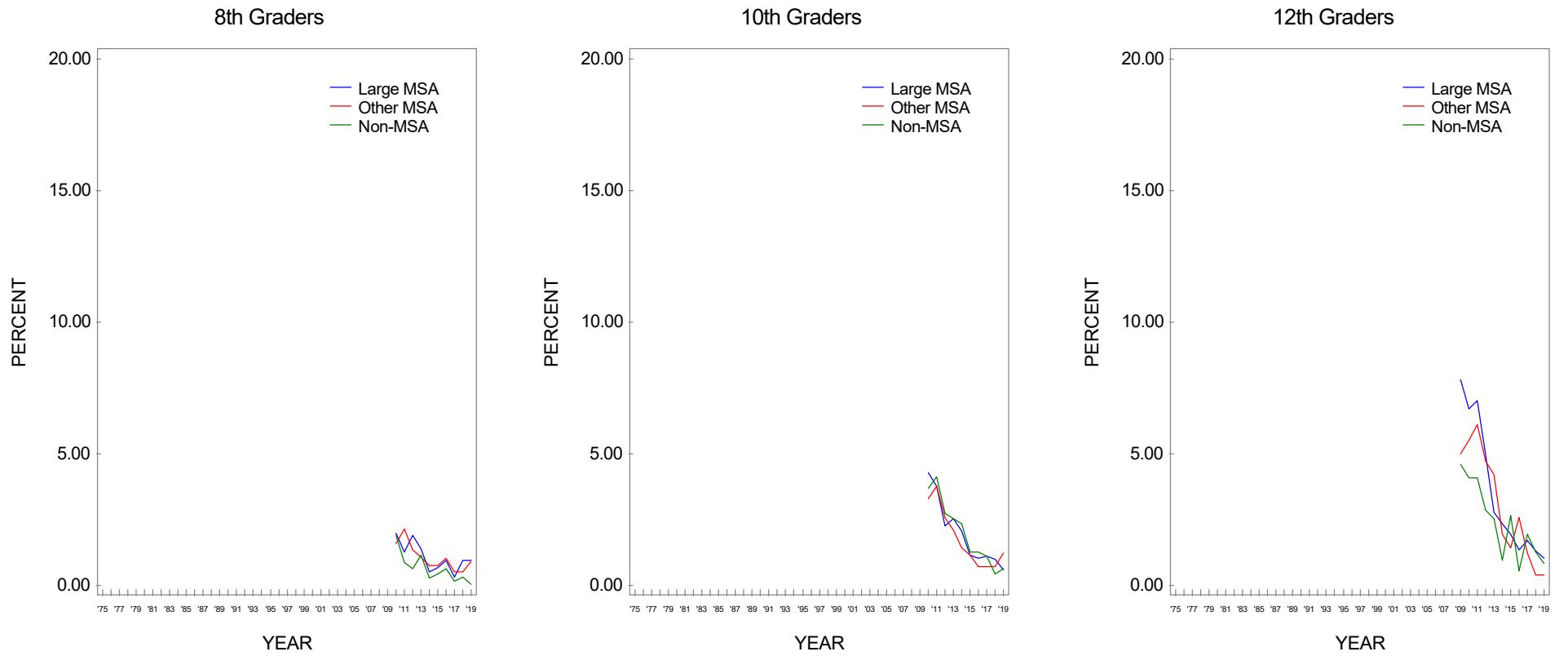
**FIGURE 75**  
**Salvia: Trends in Annual Prevalence by Region**



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

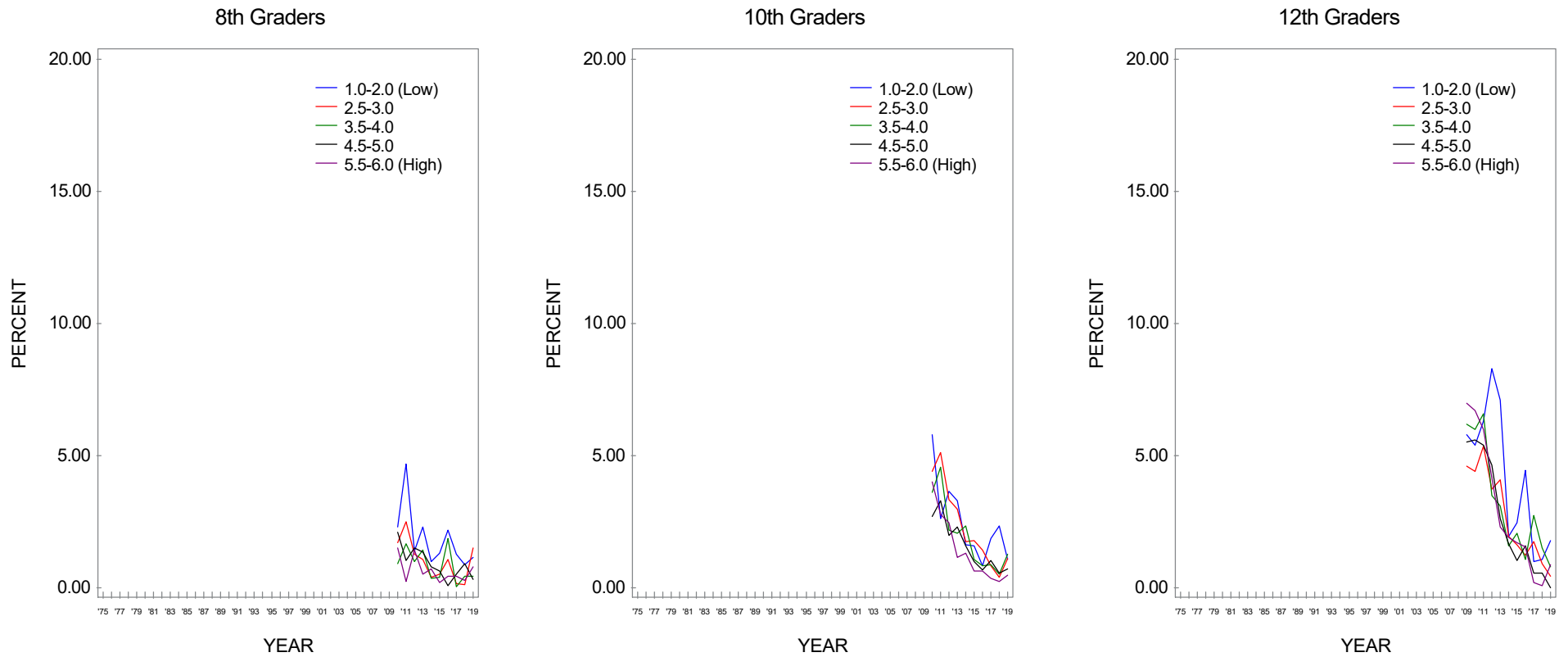


**FIGURE 76**  
**Salvia: Trends in Annual Prevalence by Population Density**



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

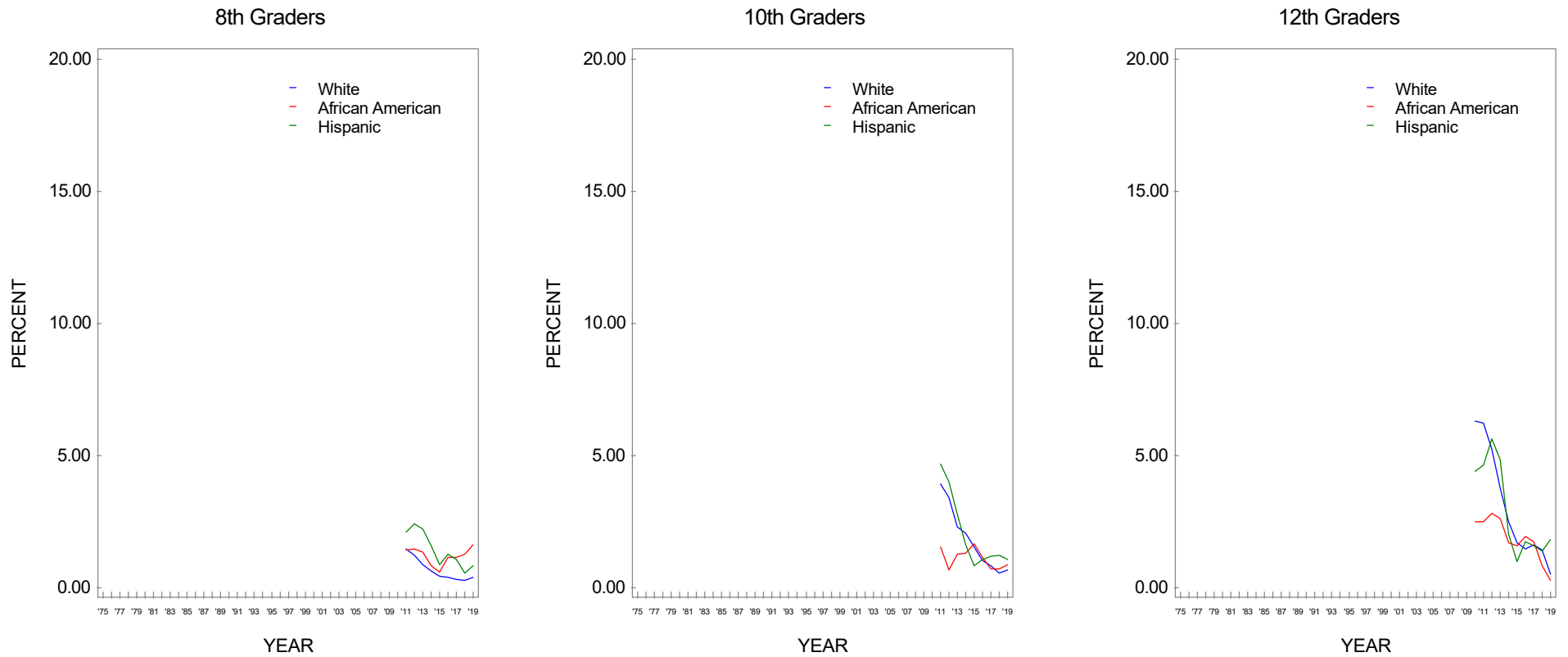
**FIGURE 77**  
**Salvia: Trends in Annual Prevalence by Average Education Level of Parents\***



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

\*Parental education is an average score of mother's education and father's education.

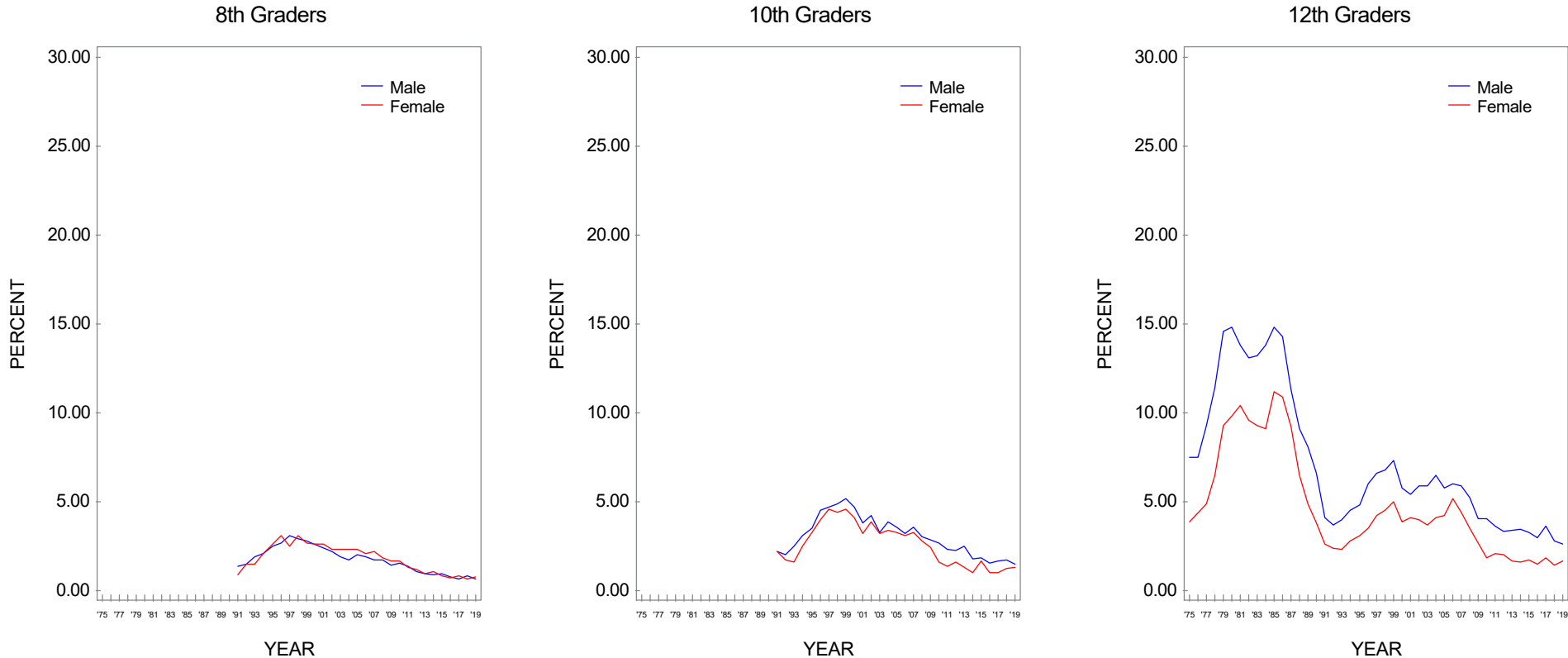
**FIGURE 78**  
**Salvia: Trends in Annual Prevalence by Race/Ethnicity\***



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

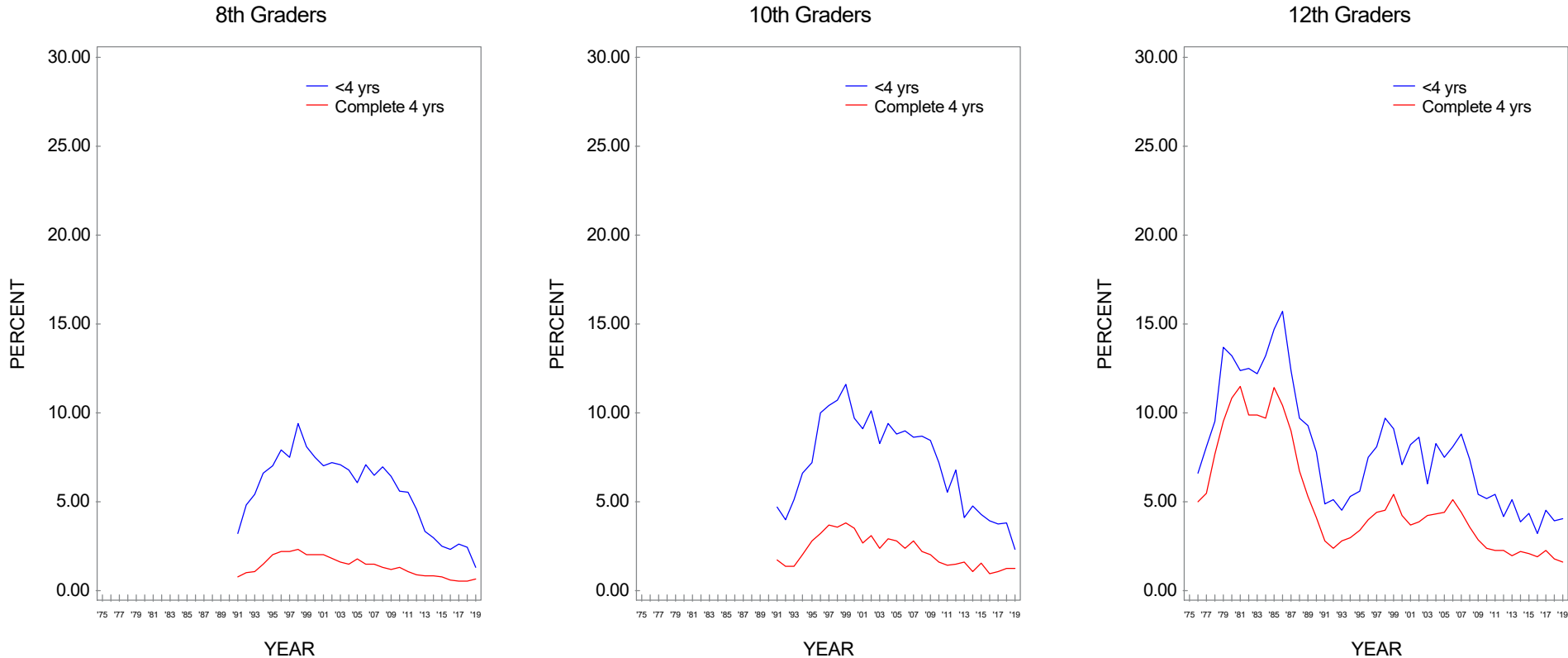
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 79**  
**Cocaine\*: Trends in Annual Prevalence by Gender**



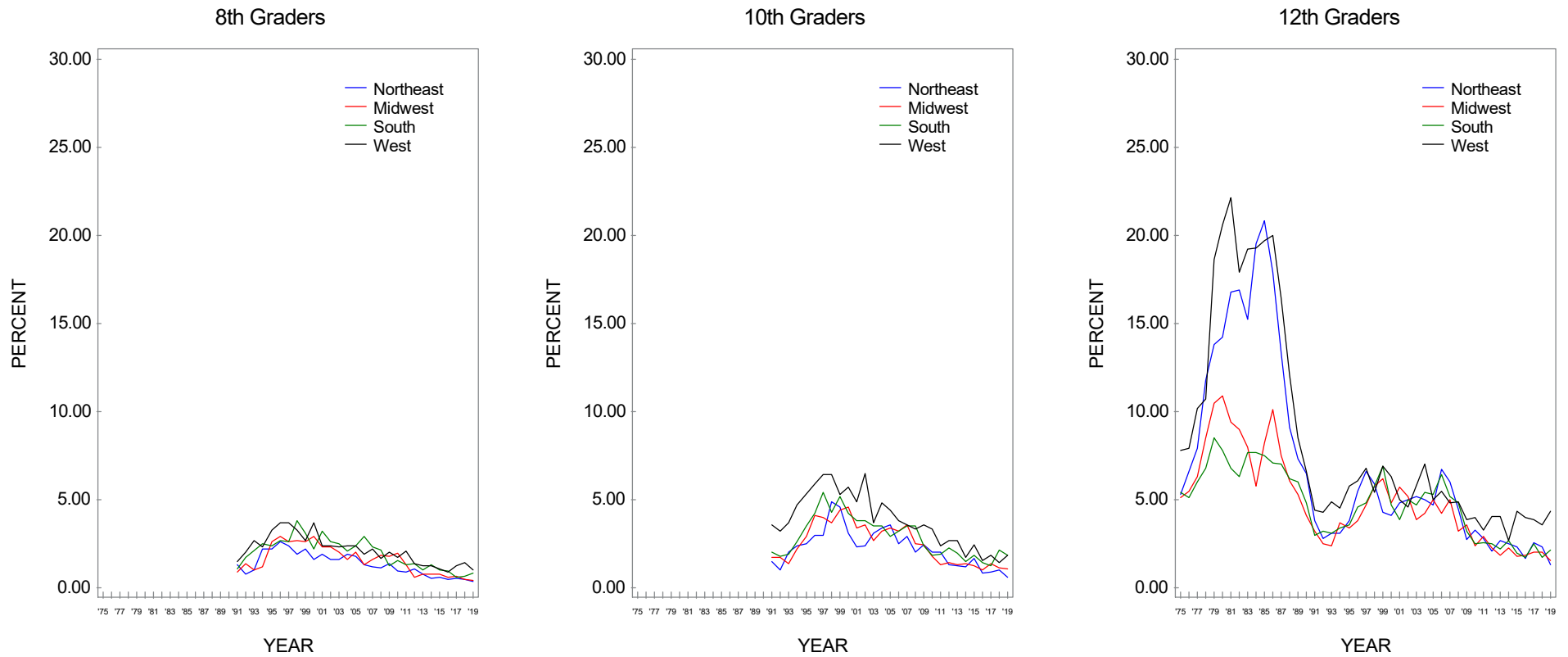
Source. The Monitoring the Future study, the University of Michigan.  
 \*Cocaine in any form.

**FIGURE 80**  
**Cocaine\*: Trends in Annual Prevalence by College Plans**



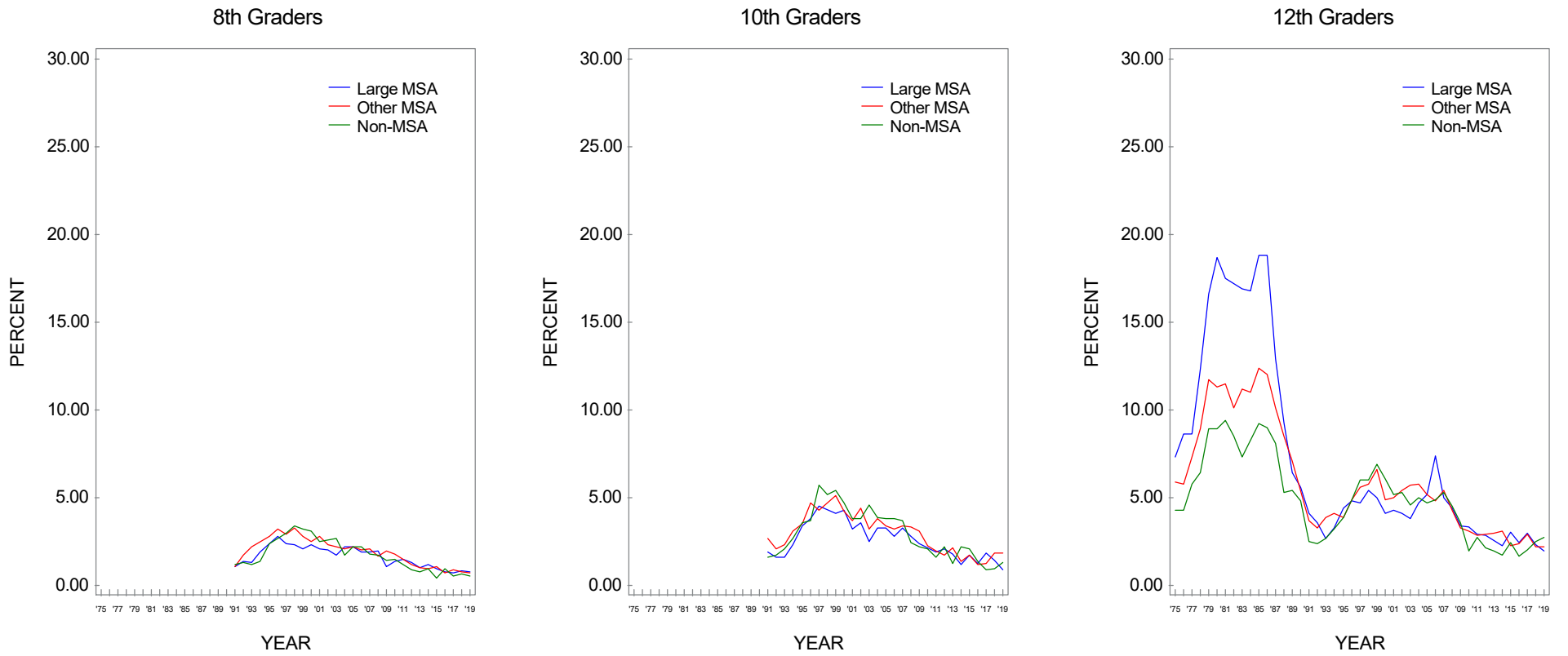
Source. The Monitoring the Future study, the University of Michigan.  
 \*Cocaine in any form.

**FIGURE 81**  
**Cocaine\*: Trends in Annual Prevalence by Region**



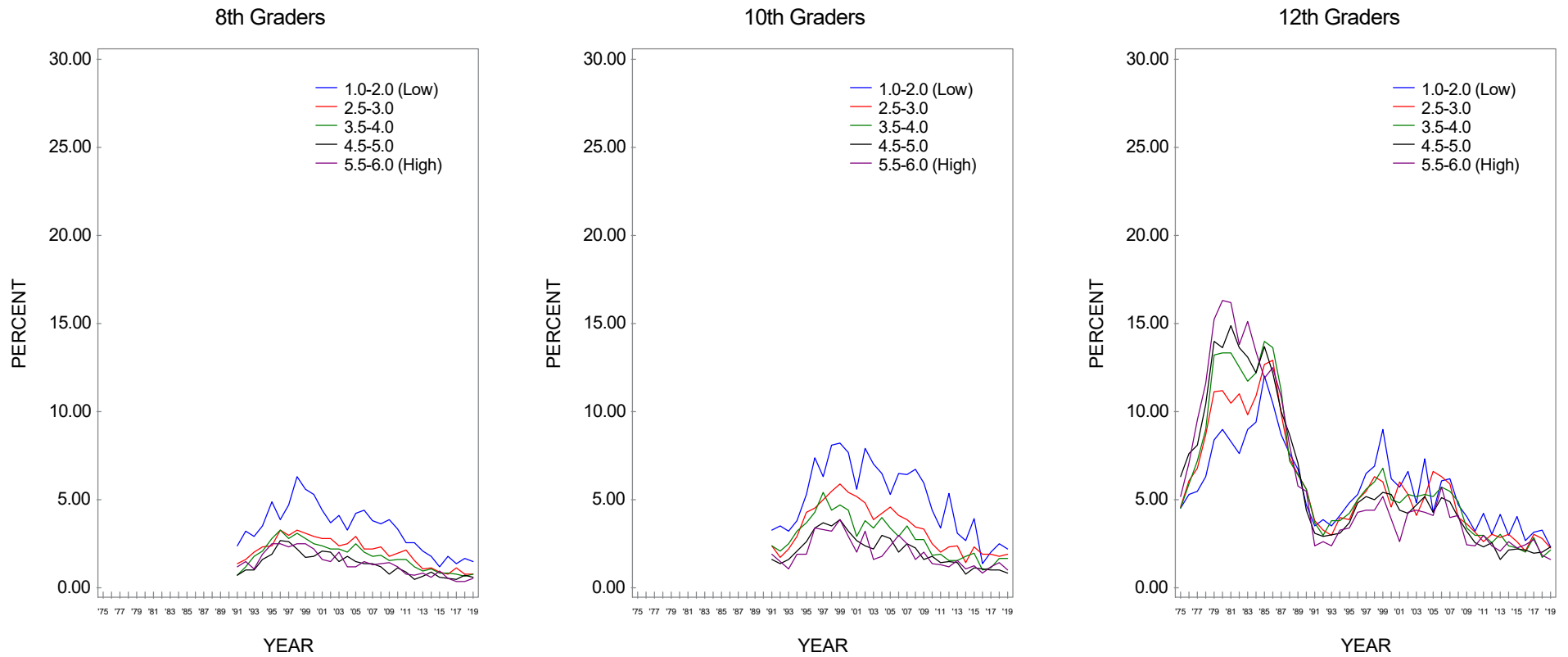
Source. The Monitoring the Future study, the University of Michigan.  
 \*Cocaine in any form.

**FIGURE 82**  
**Cocaine\*: Trends in Annual Prevalence by Population Density**



Source. The Monitoring the Future study, the University of Michigan.  
 \*Cocaine in any form.

**FIGURE 83**  
**Cocaine\*: Trends in Annual Prevalence by Average Education Level of Parents\*\***



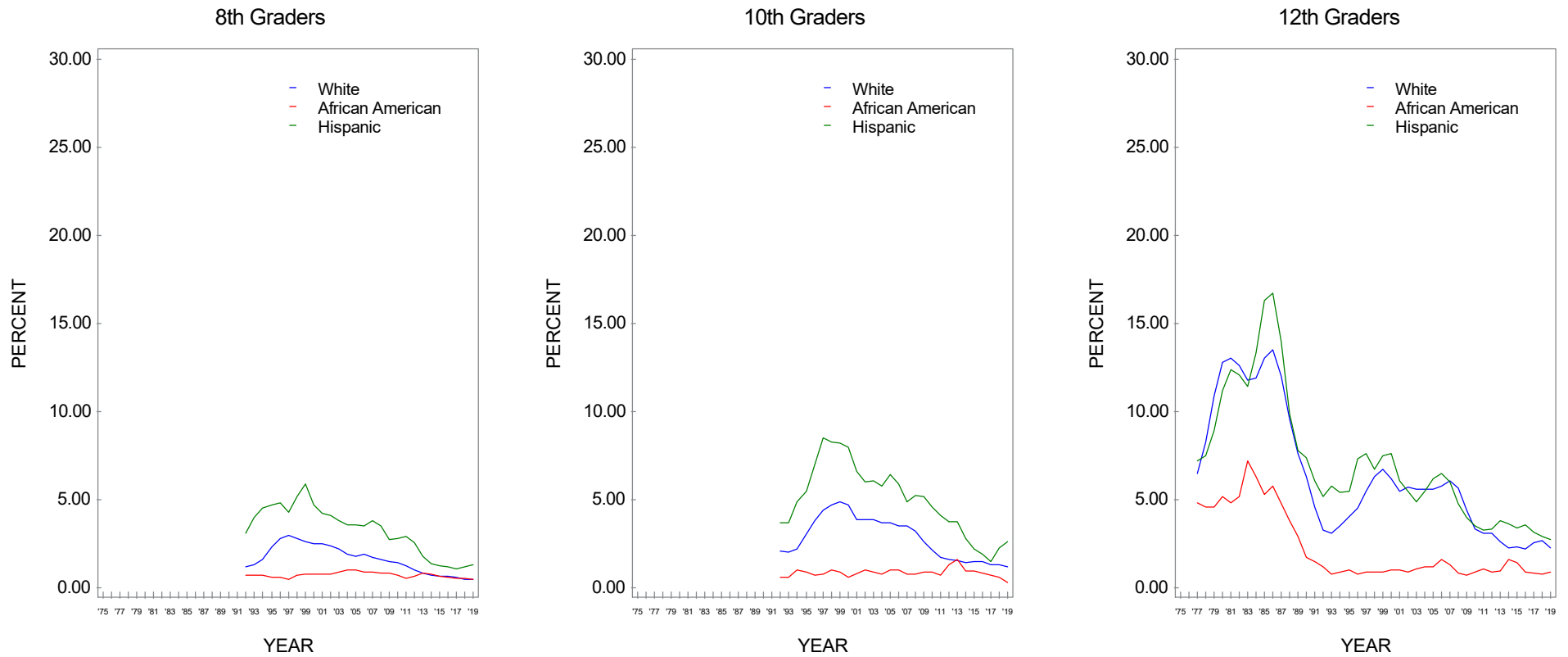
Source. The Monitoring the Future study, the University of Michigan.

\*Cocaine in any form.

\*\*Parental education is an average score of mother's education and father's education.



**FIGURE 84**  
**Cocaine\*: Trends in Annual Prevalence by Race/Ethnicity\*\***

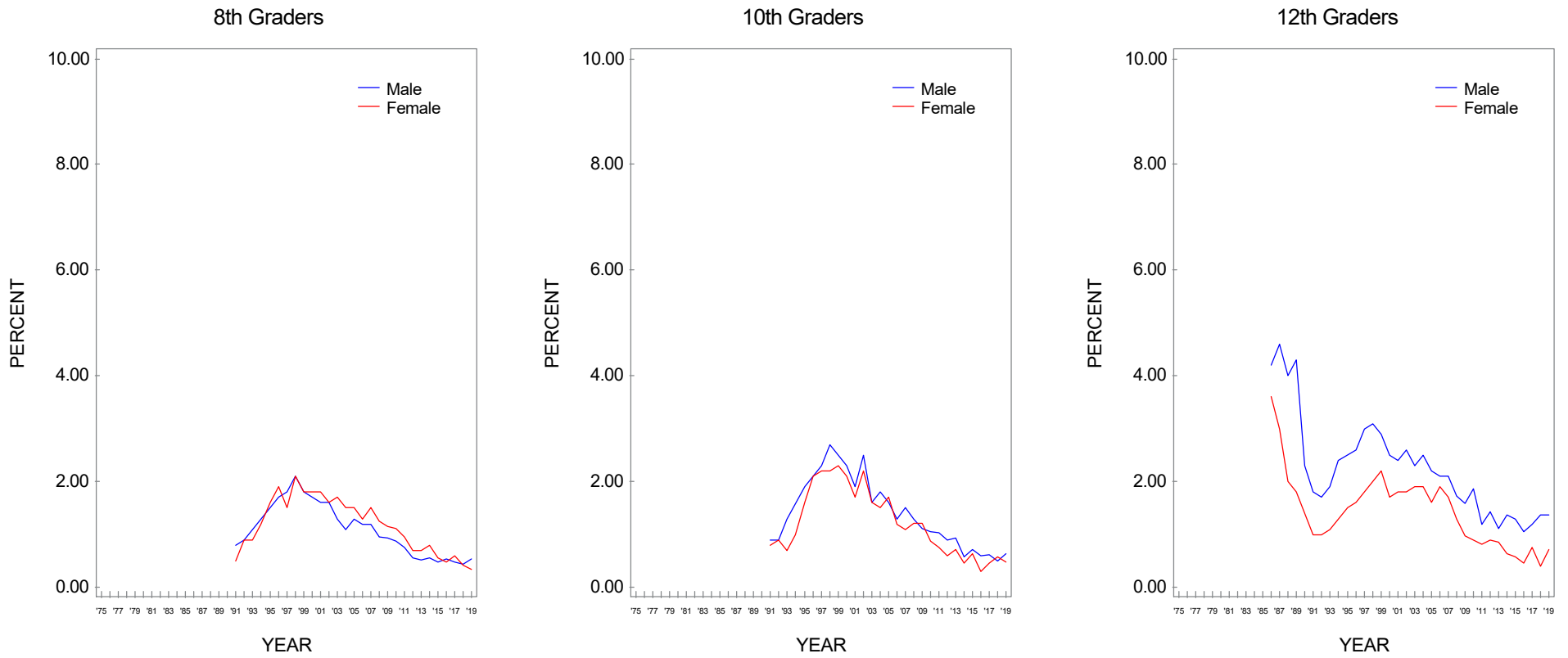


Source. The Monitoring the Future study, the University of Michigan.

\*Cocaine in any form.

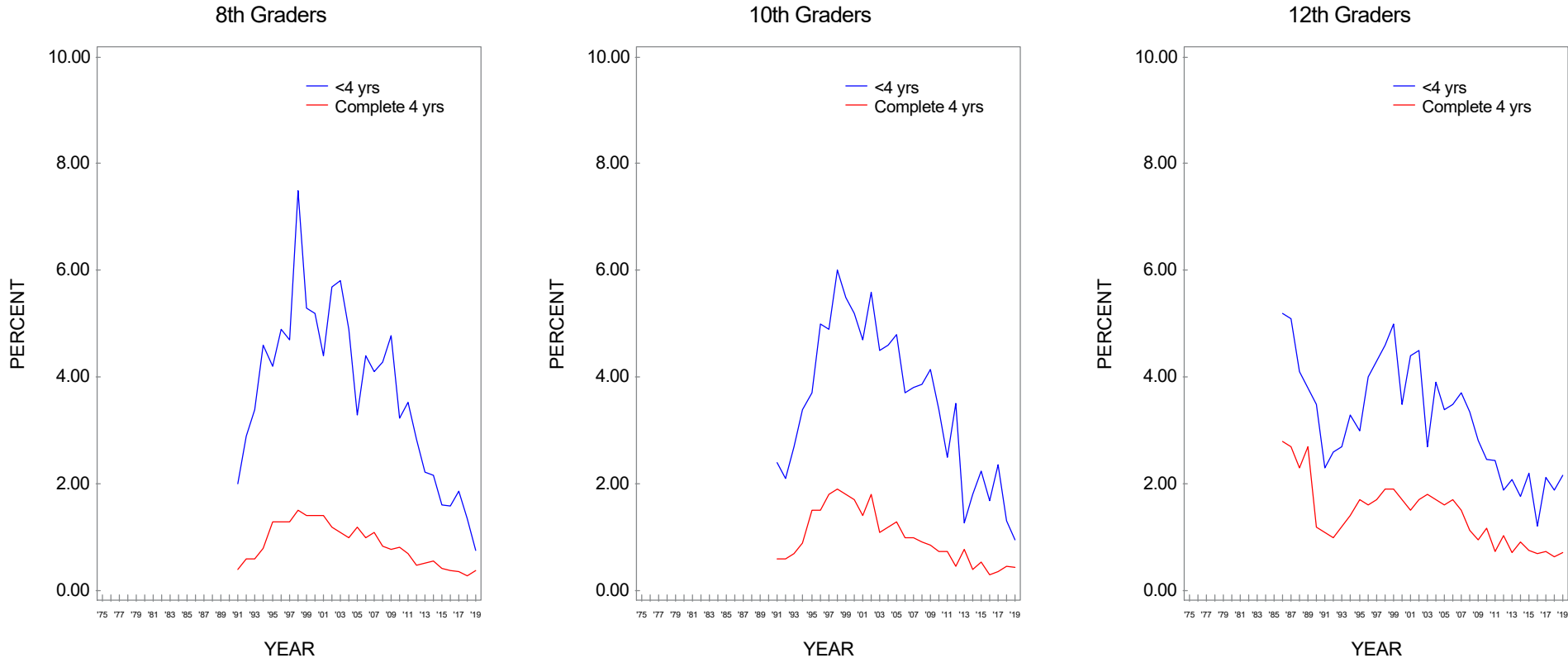
\*\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 85**  
**Crack: Trends in Annual Prevalence by Gender**



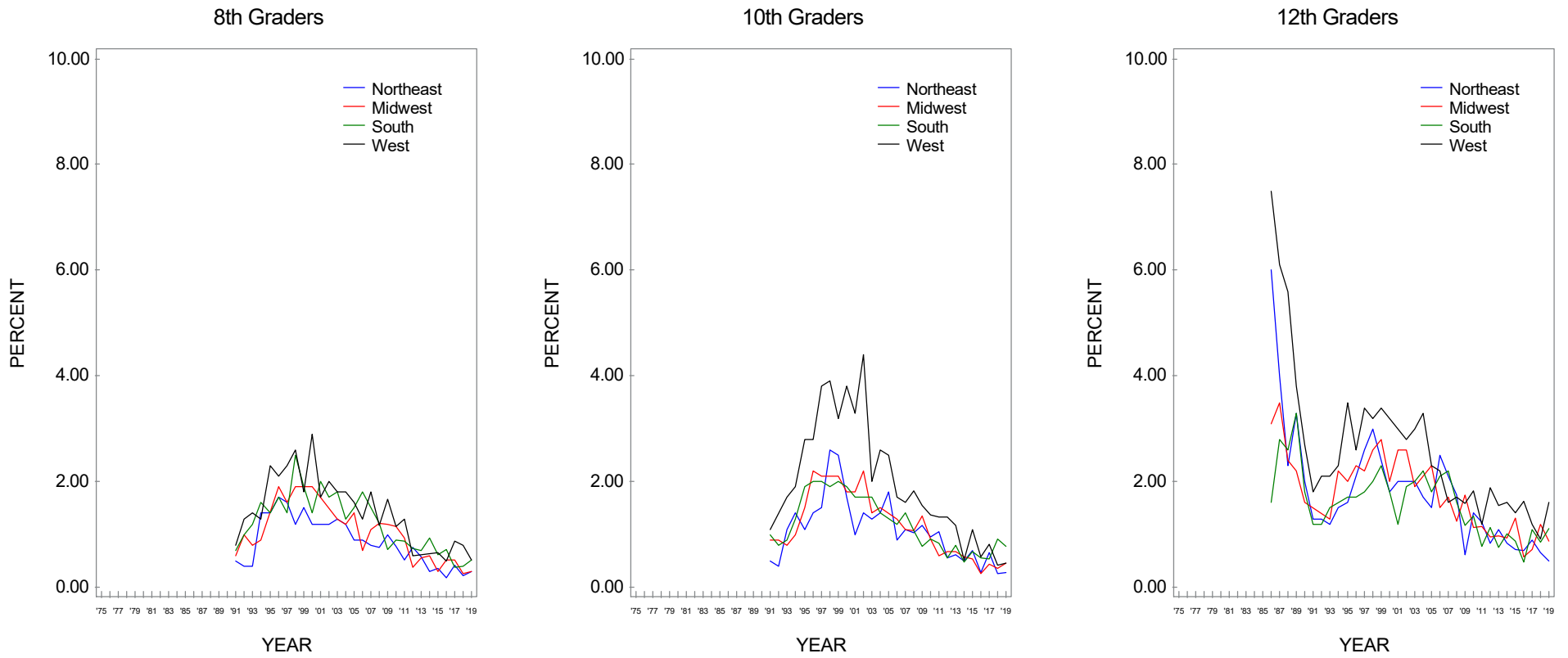
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 86**  
**Crack: Trends in Annual Prevalence by College Plans**



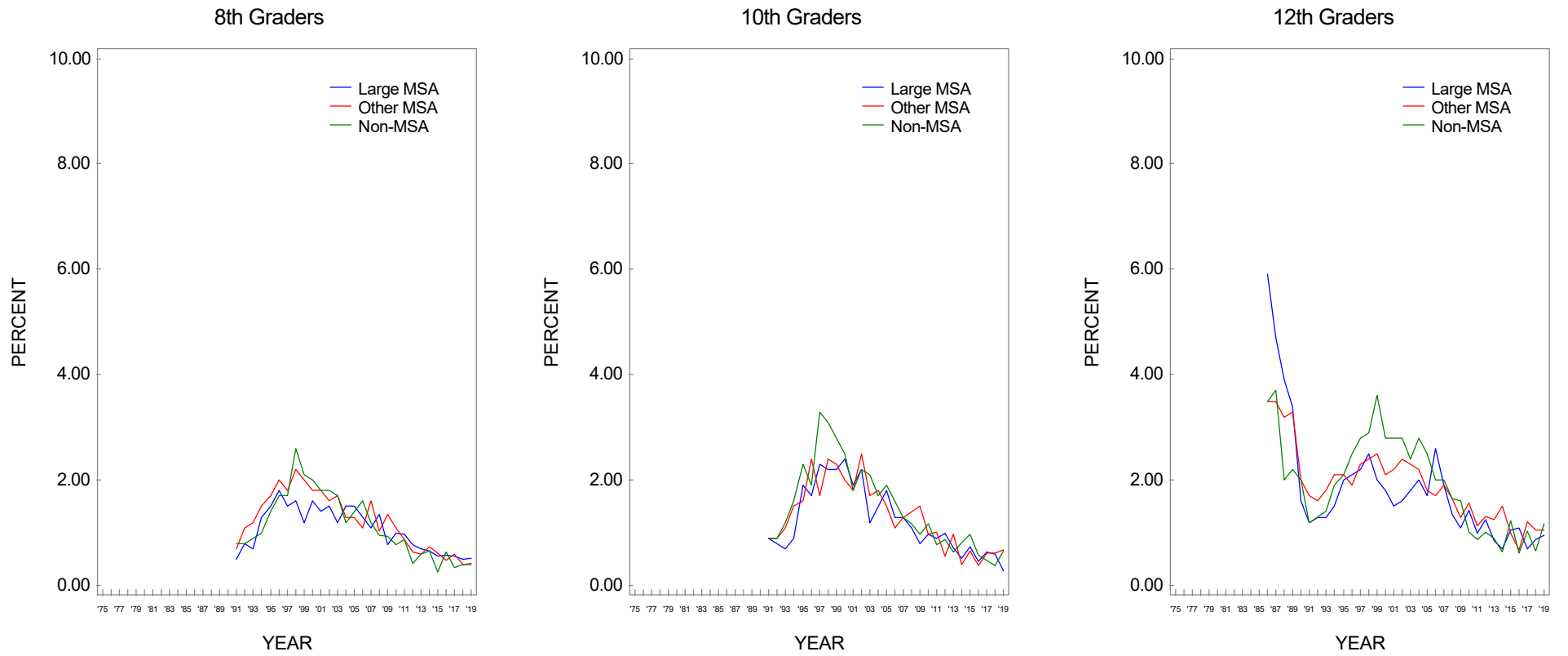
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 87**  
**Crack: Trends in Annual Prevalence by Region**



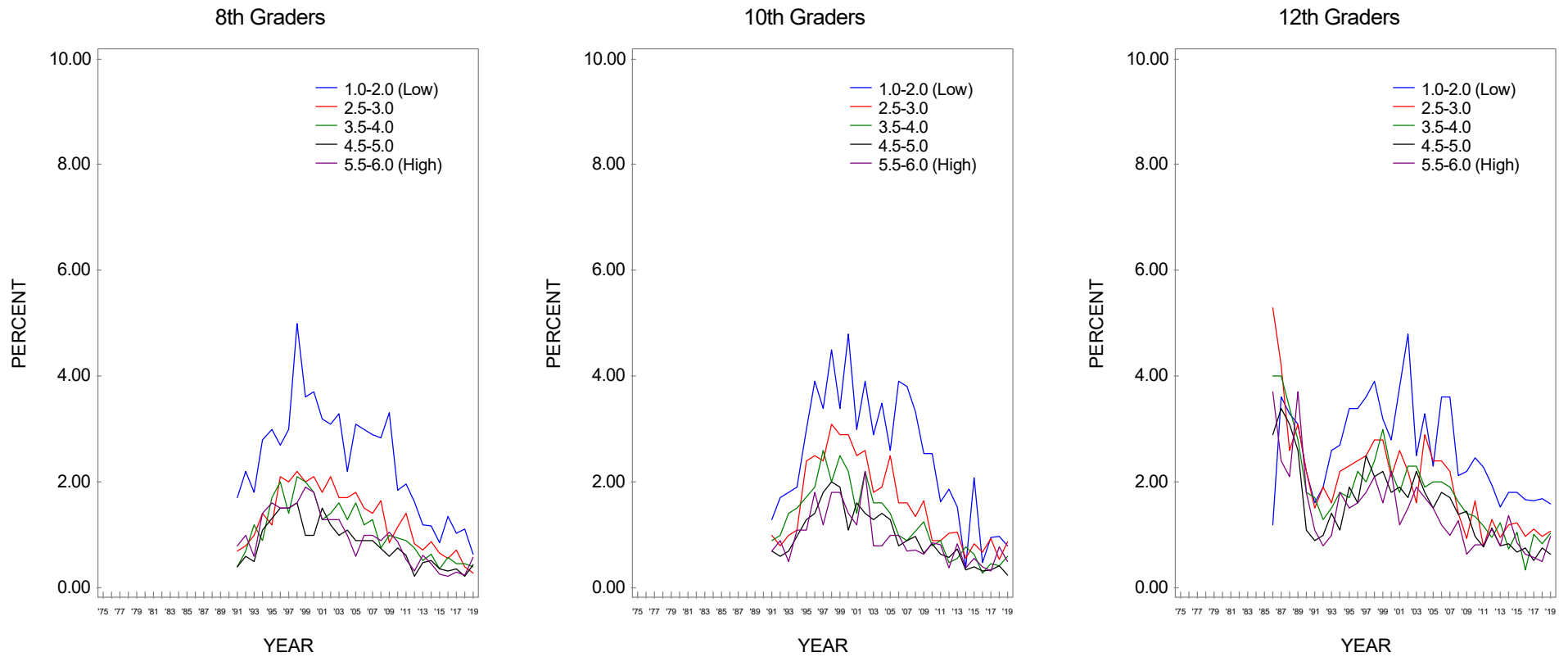
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 88**  
**Crack: Trends in Annual Prevalence by Population Density**



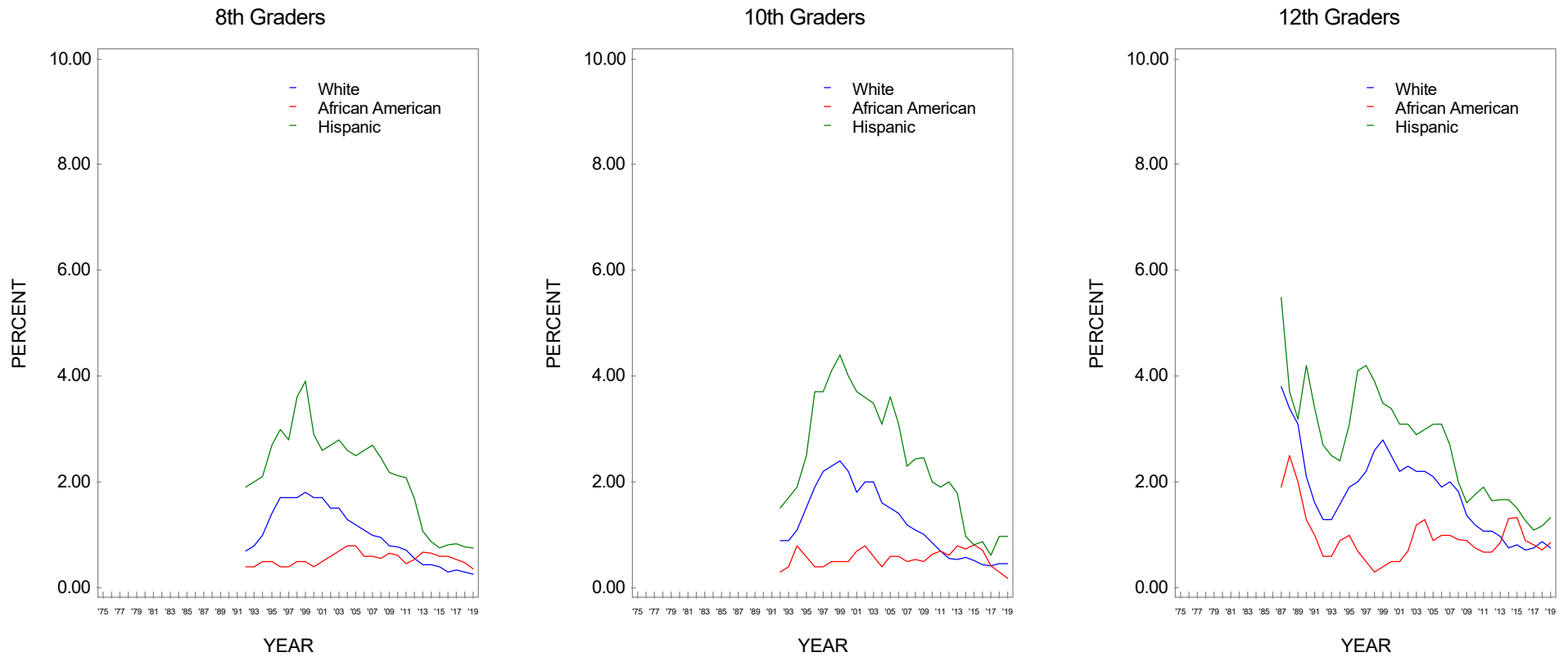
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 89**  
**Crack: Trends in Annual Prevalence by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*Parental education is an average score of mother's education and father's education.

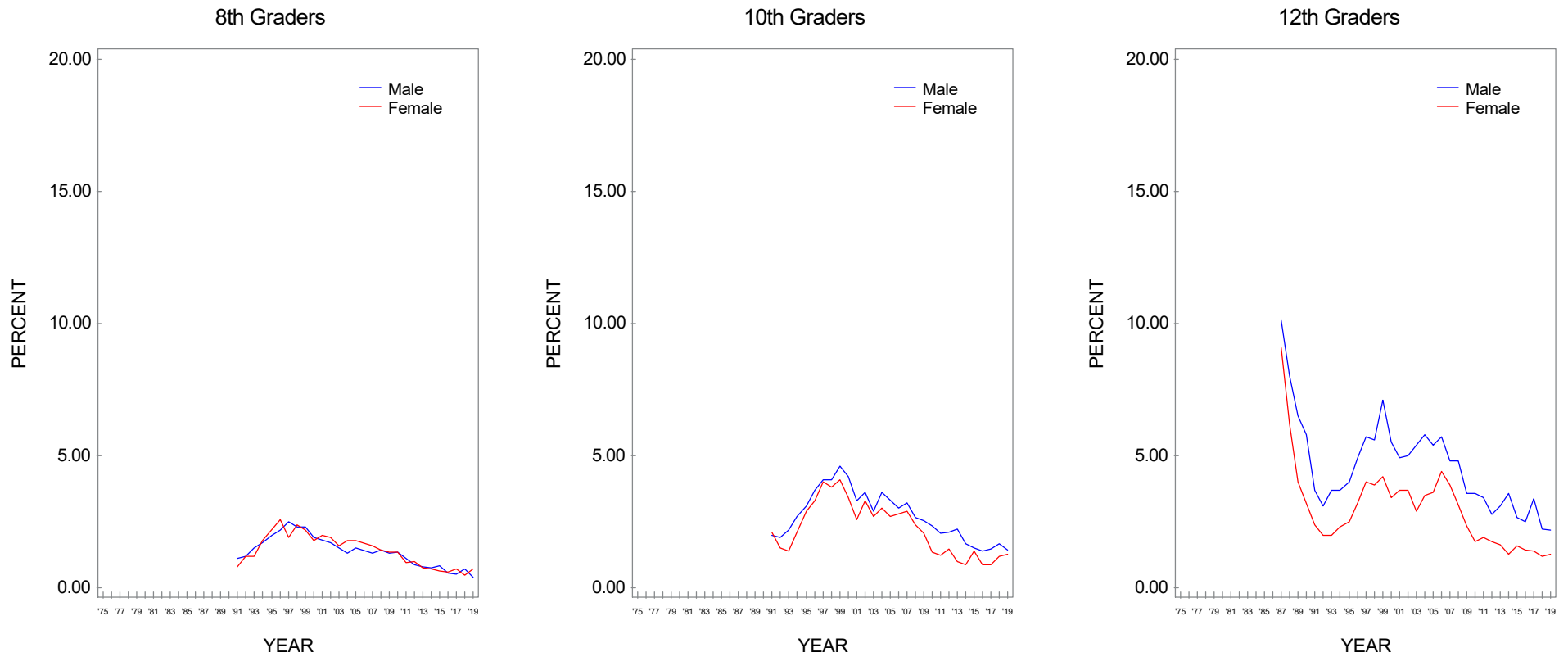
**FIGURE 90**  
**Crack: Trends in Annual Prevalence by Race/Ethnicity\***



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

\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

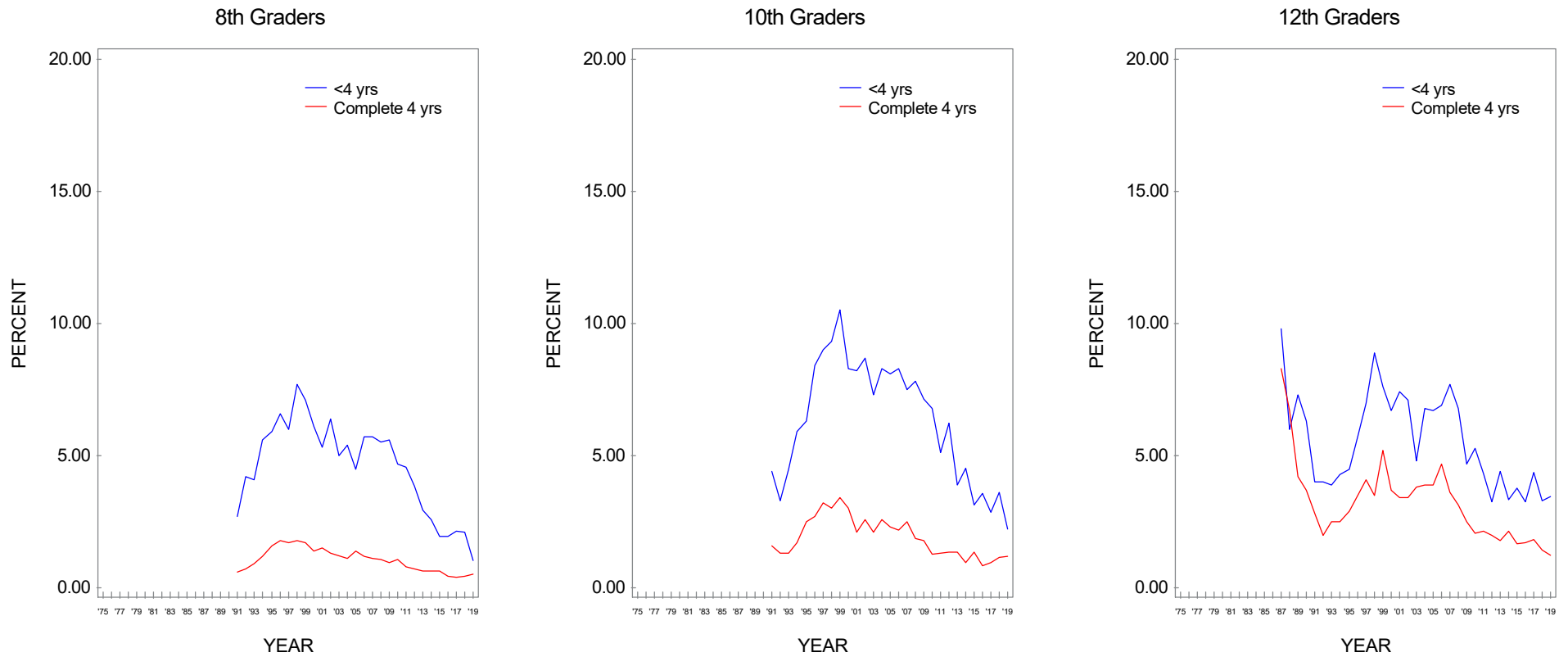
**FIGURE 91**  
**Cocaine other than Crack\*: Trends in Annual Prevalence by Gender**



Source. The Monitoring the Future study, the University of Michigan.  
 \*Almost entirely powder cocaine for many years.

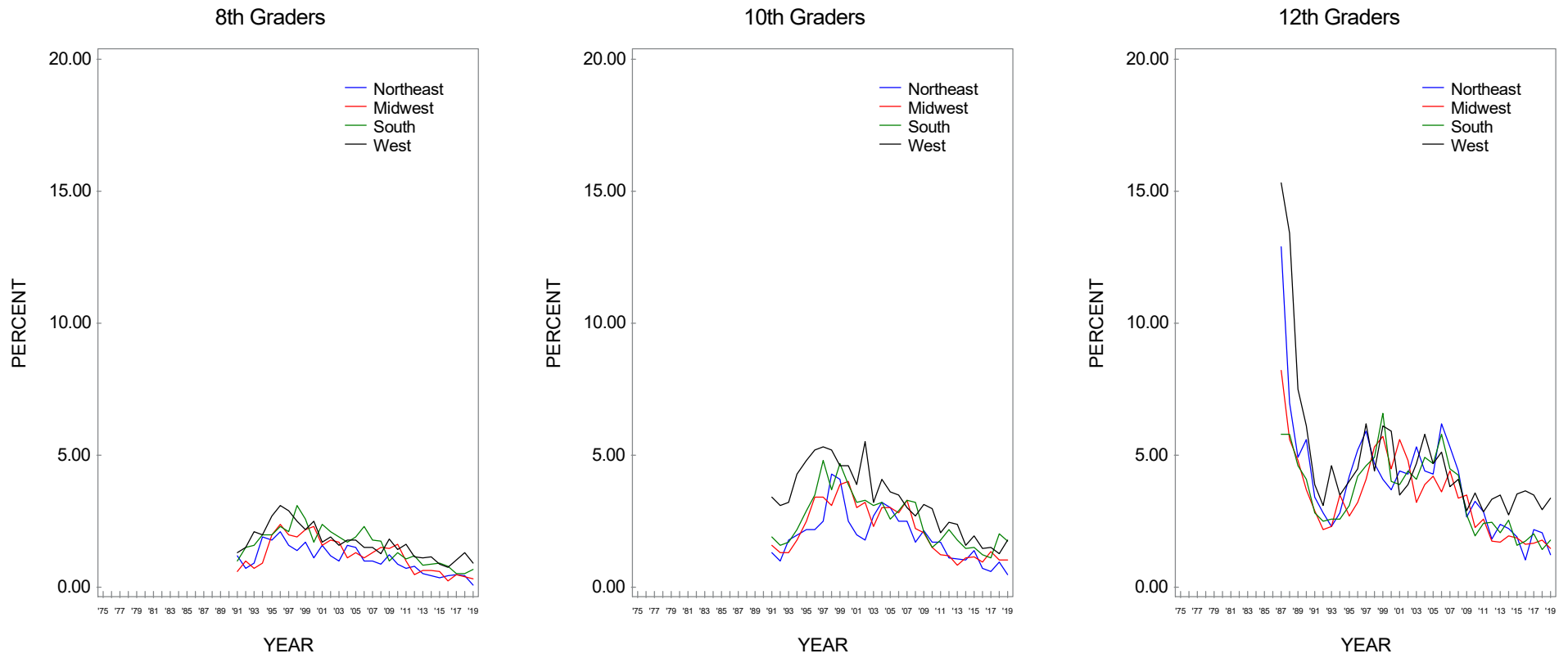


**FIGURE 92**  
**Cocaine other than Crack\*: Trends in Annual Prevalence by College Plans**



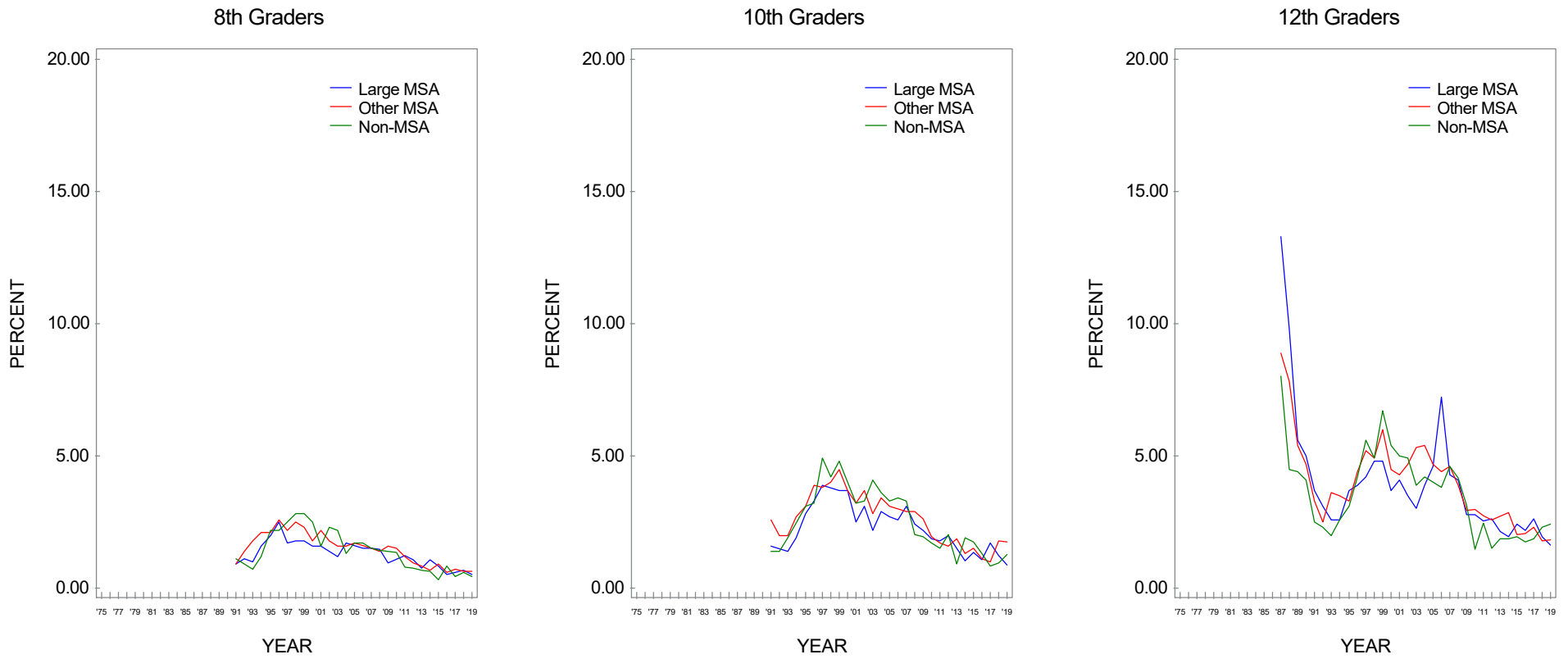
Source. The Monitoring the Future study, the University of Michigan.  
 \*Almost entirely powder cocaine for many years.

**FIGURE 93**  
**Cocaine other than Crack\*: Trends in Annual Prevalence by Region**



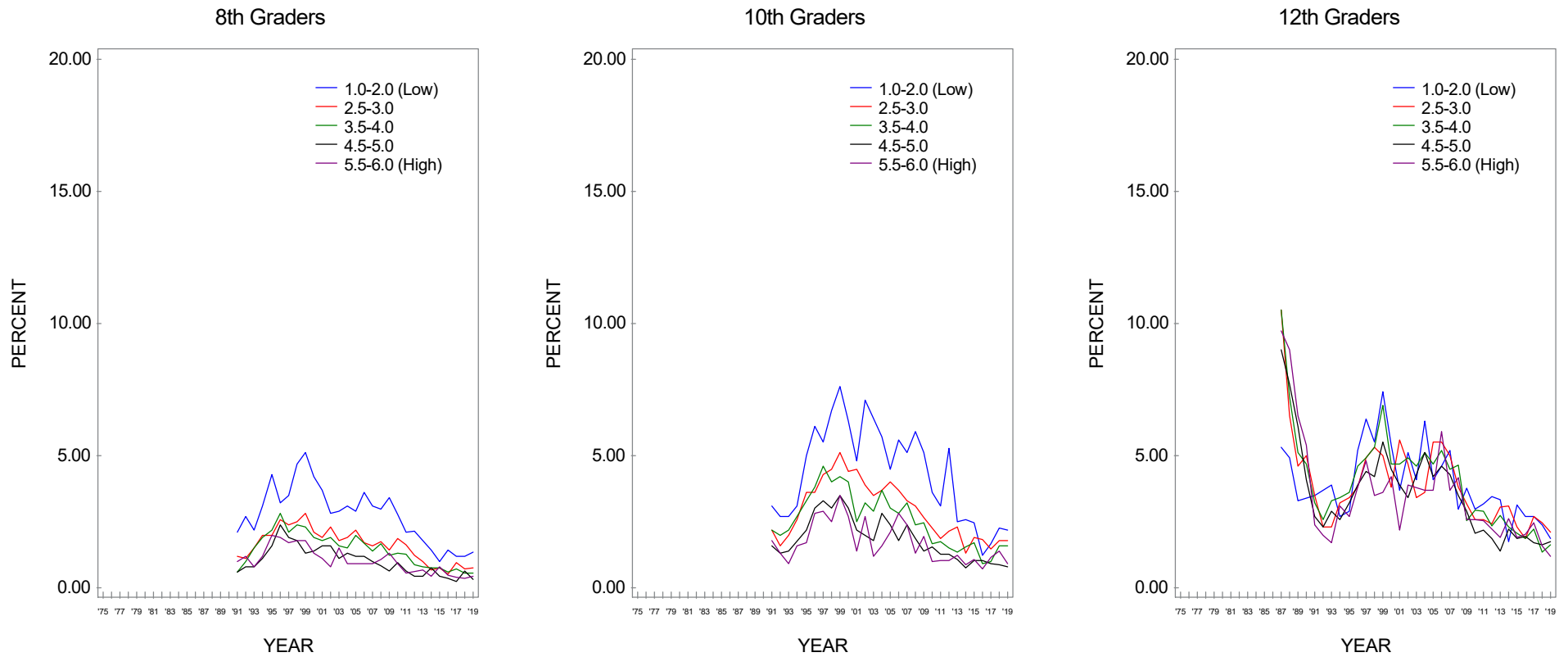
Source. The Monitoring the Future study, the University of Michigan.  
 \*Almost entirely powder cocaine for many years.

**FIGURE 94**  
**Cocaine other than Crack\*: Trends in Annual Prevalence by Population Density**



Source. The Monitoring the Future study, the University of Michigan.  
 \*Almost entirely powder cocaine for many years.

**FIGURE 95**  
**Cocaine other than Crack\*: Trends in Annual Prevalence by Average Education Level of Parents\*\***

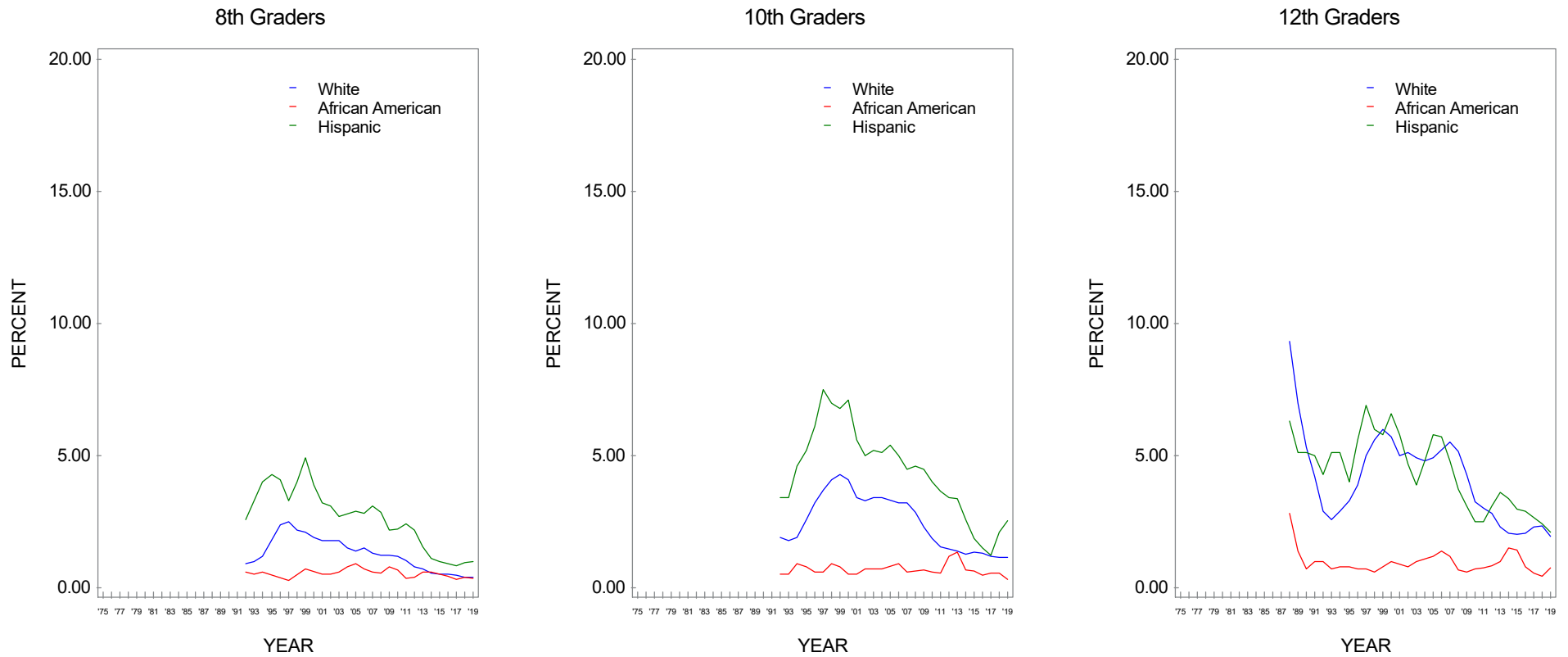


Source. The Monitoring the Future study, the University of Michigan.

\*Almost entirely powder cocaine for many years.

\*\*Parental education is an average score of mother's education and father's education.

**FIGURE 96**  
**Cocaine other than Crack\*: Trends in Annual Prevalence by Race/Ethnicity\*\***

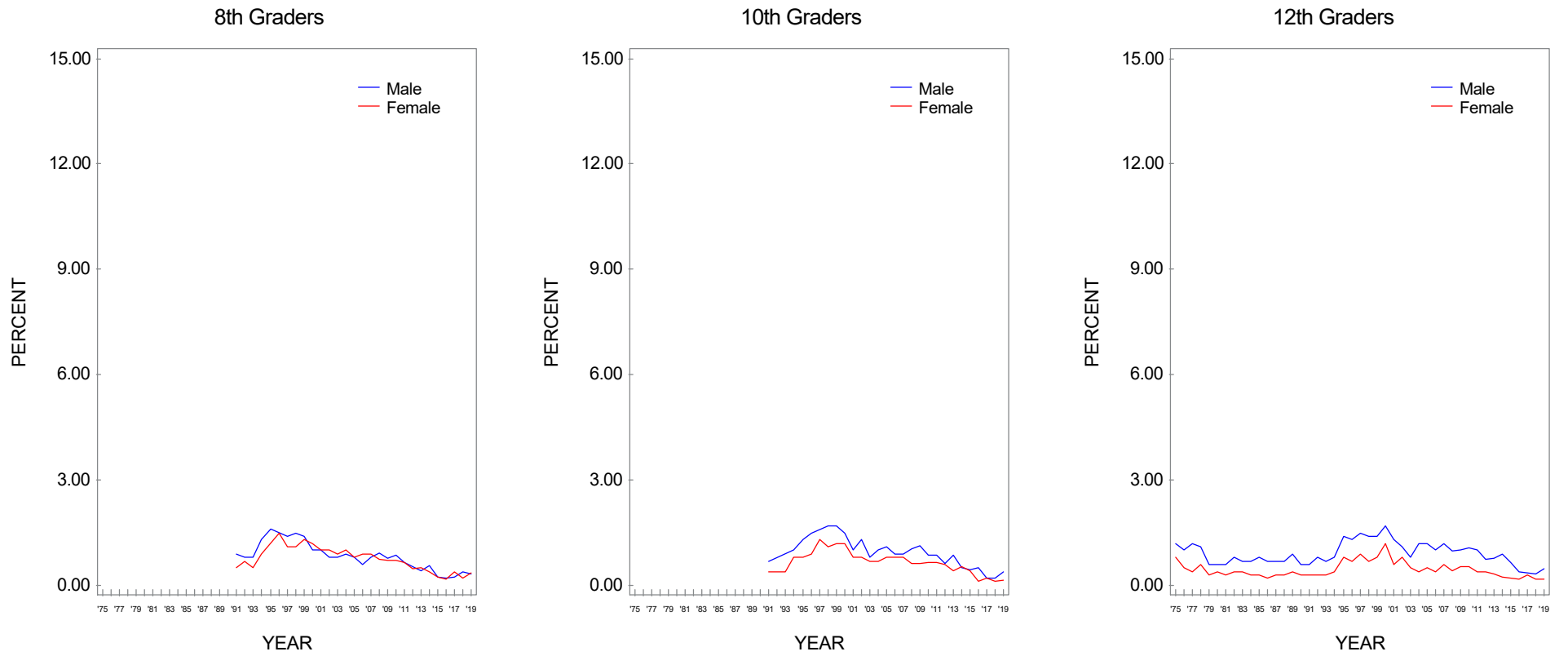


Source. The Monitoring the Future study, the University of Michigan.

\*Almost entirely powder cocaine for many years.

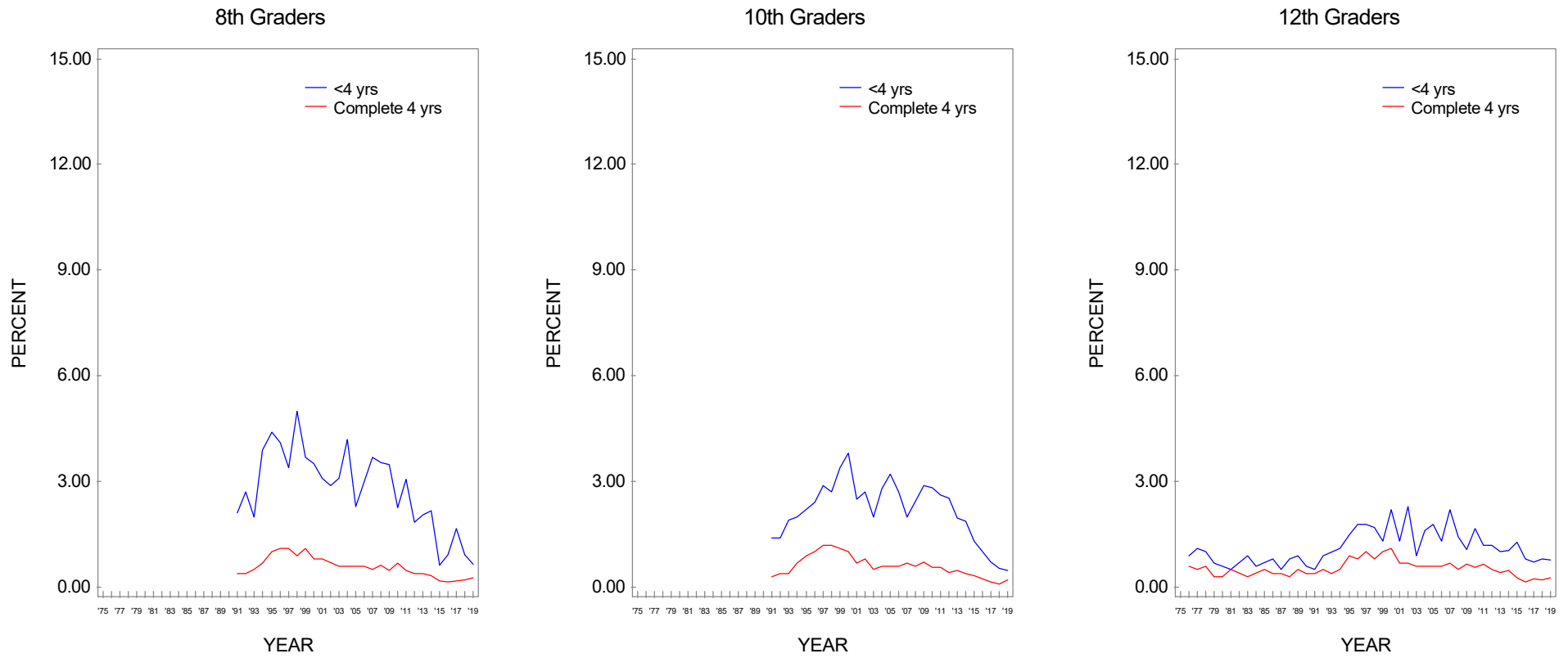
\*\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 97**  
**Heroin: Trends in Annual Prevalence by Gender**



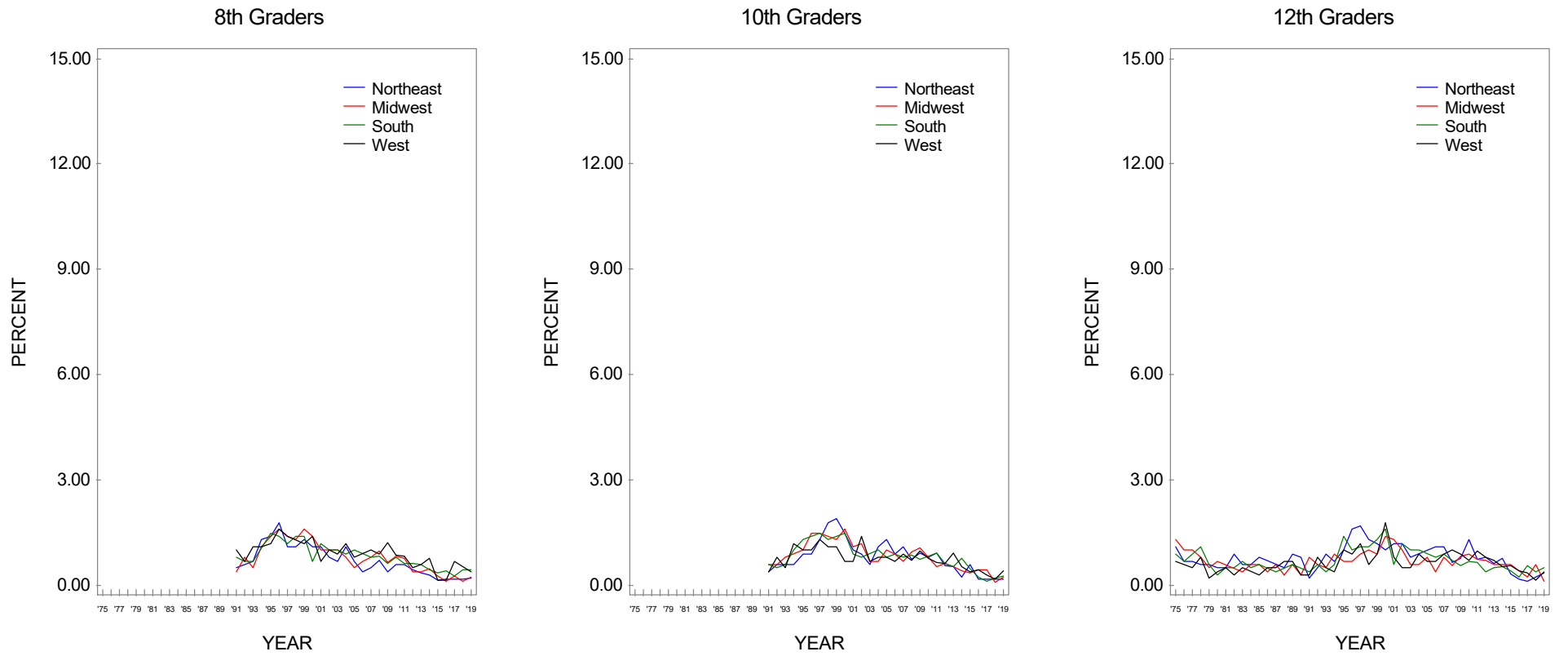
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 98**  
**Heroin: Trends in Annual Prevalence by College Plans**



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

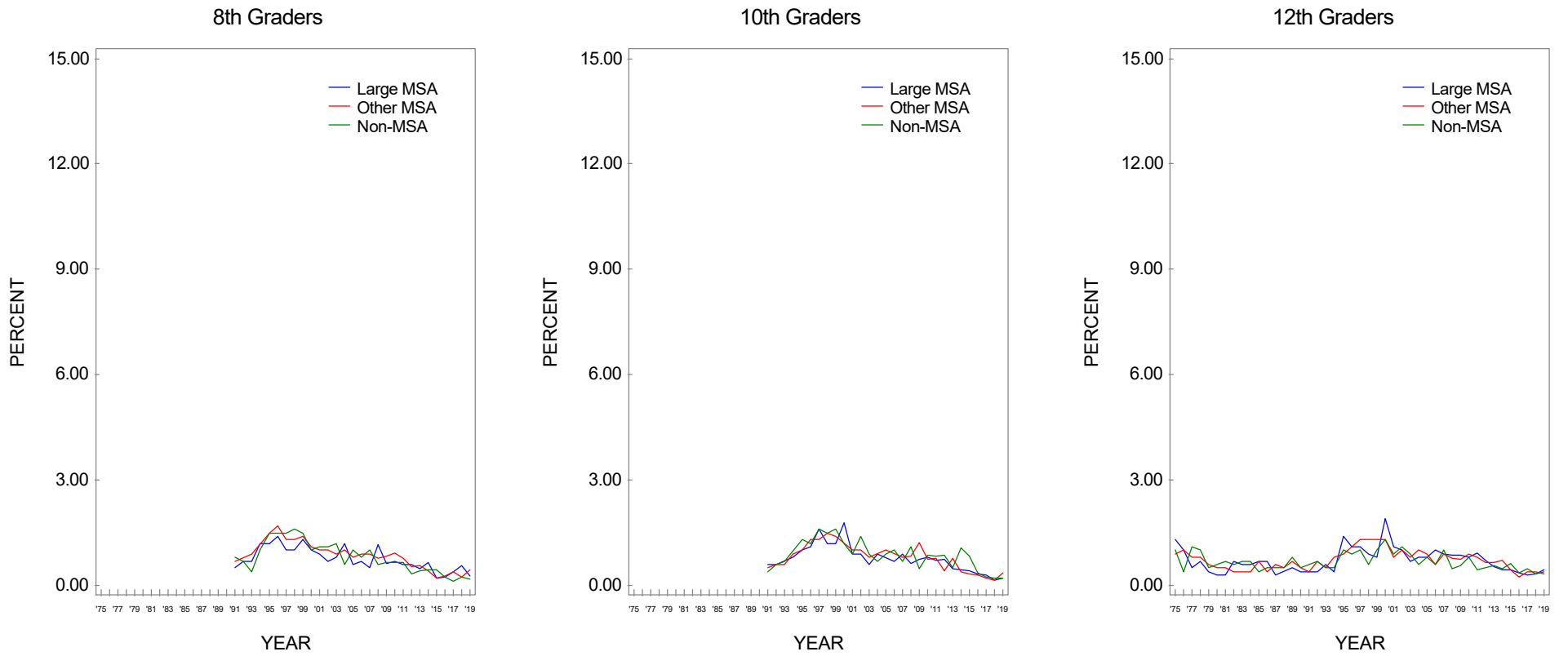
**FIGURE 99**  
**Heroin: Trends in Annual Prevalence by Region**



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

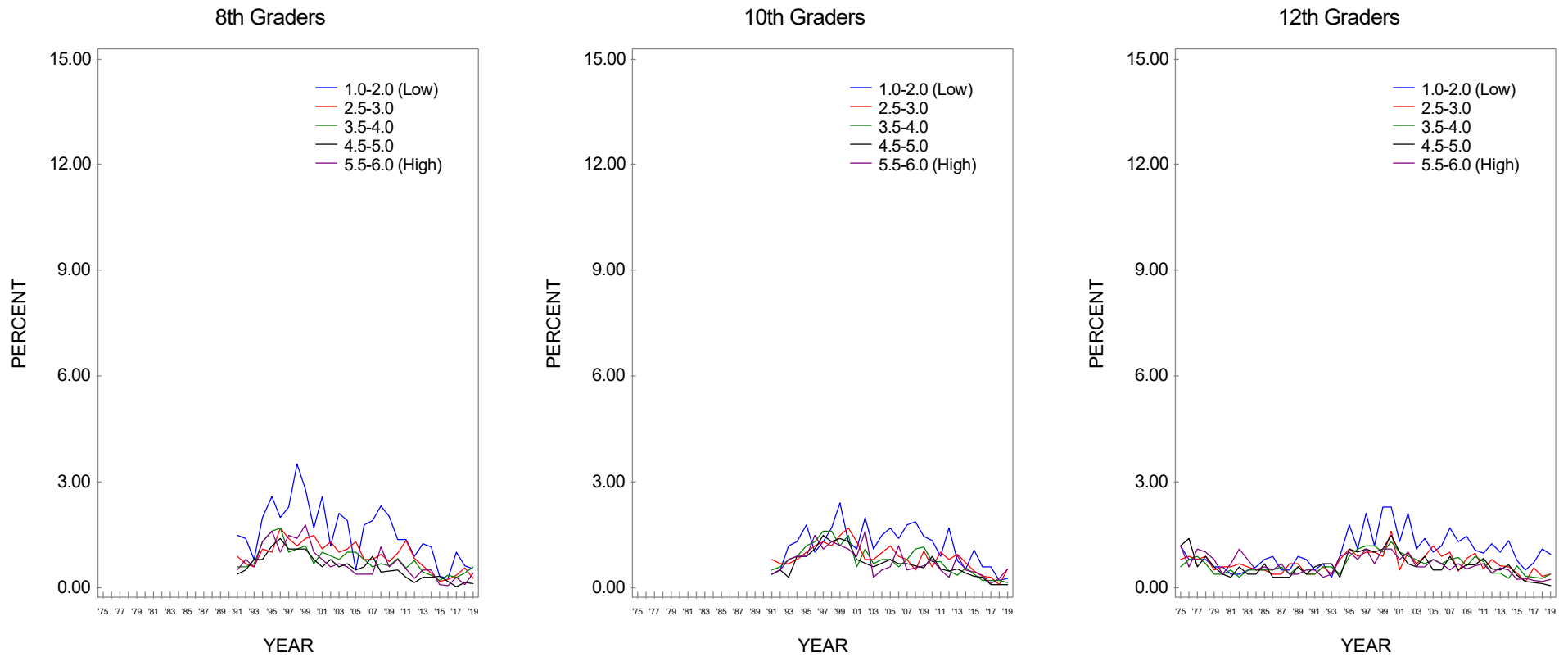


**FIGURE 100**  
**Heroin: Trends in Annual Prevalence by Population Density**



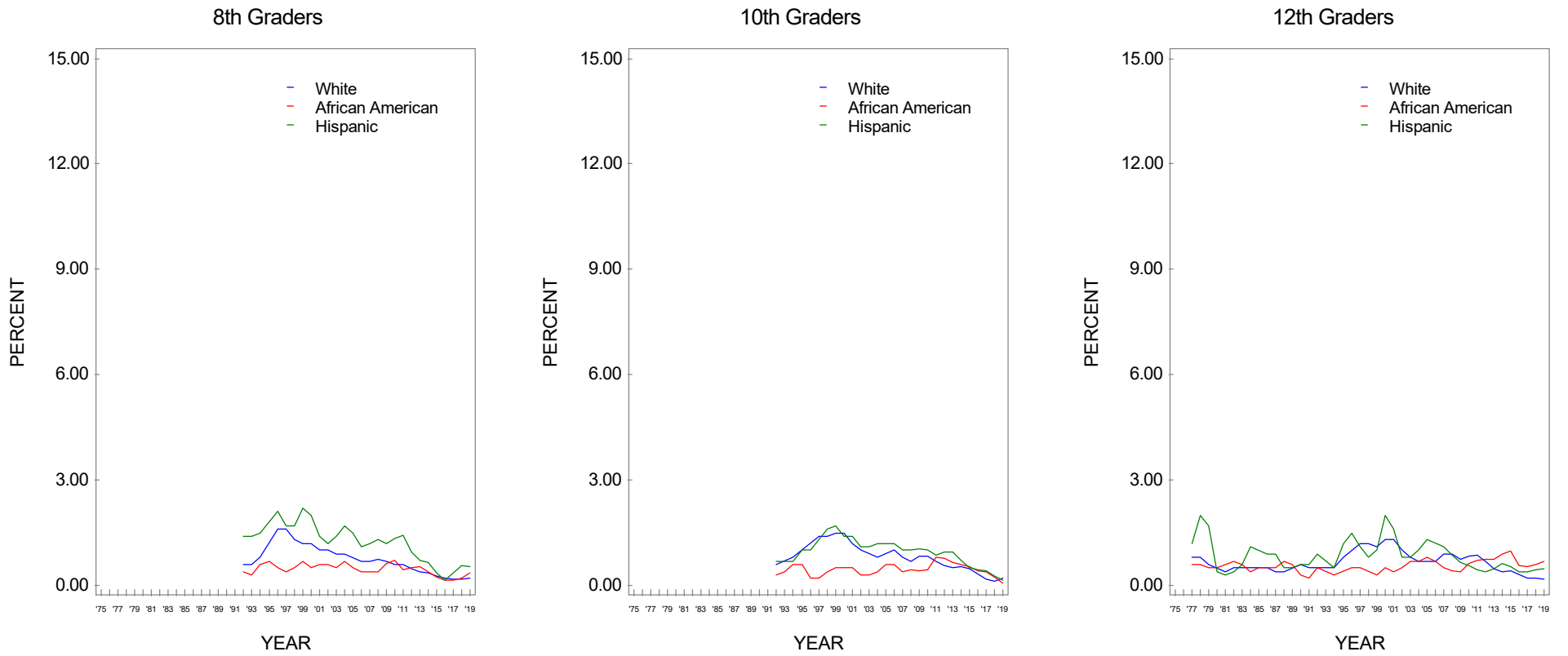
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 101**  
**Heroin: Trends in Annual Prevalence by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*Parental education is an average score of mother's education and father's education.

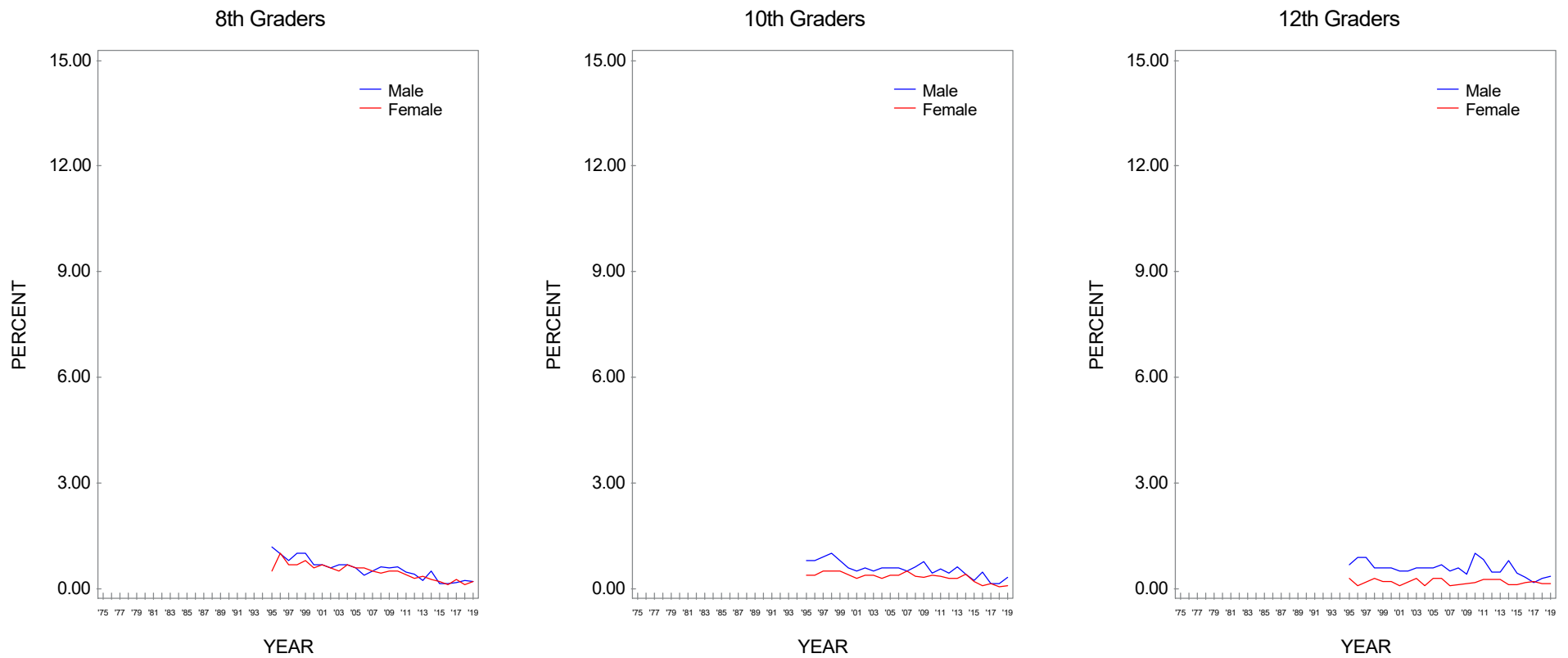
**FIGURE 102**  
**Heroin: Trends in Annual Prevalence by Race/Ethnicity\***



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

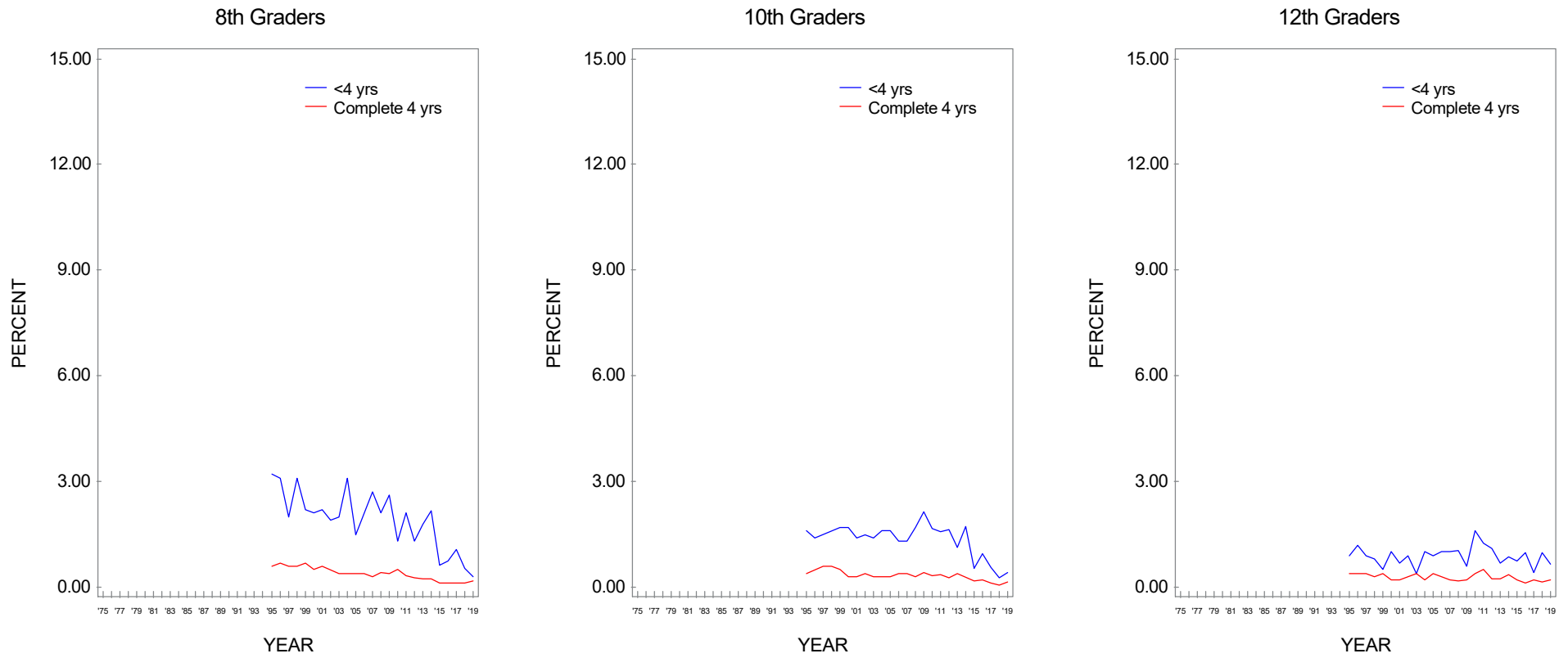
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 103**  
**Heroin with a Needle: Trends in Annual Prevalence by Gender**



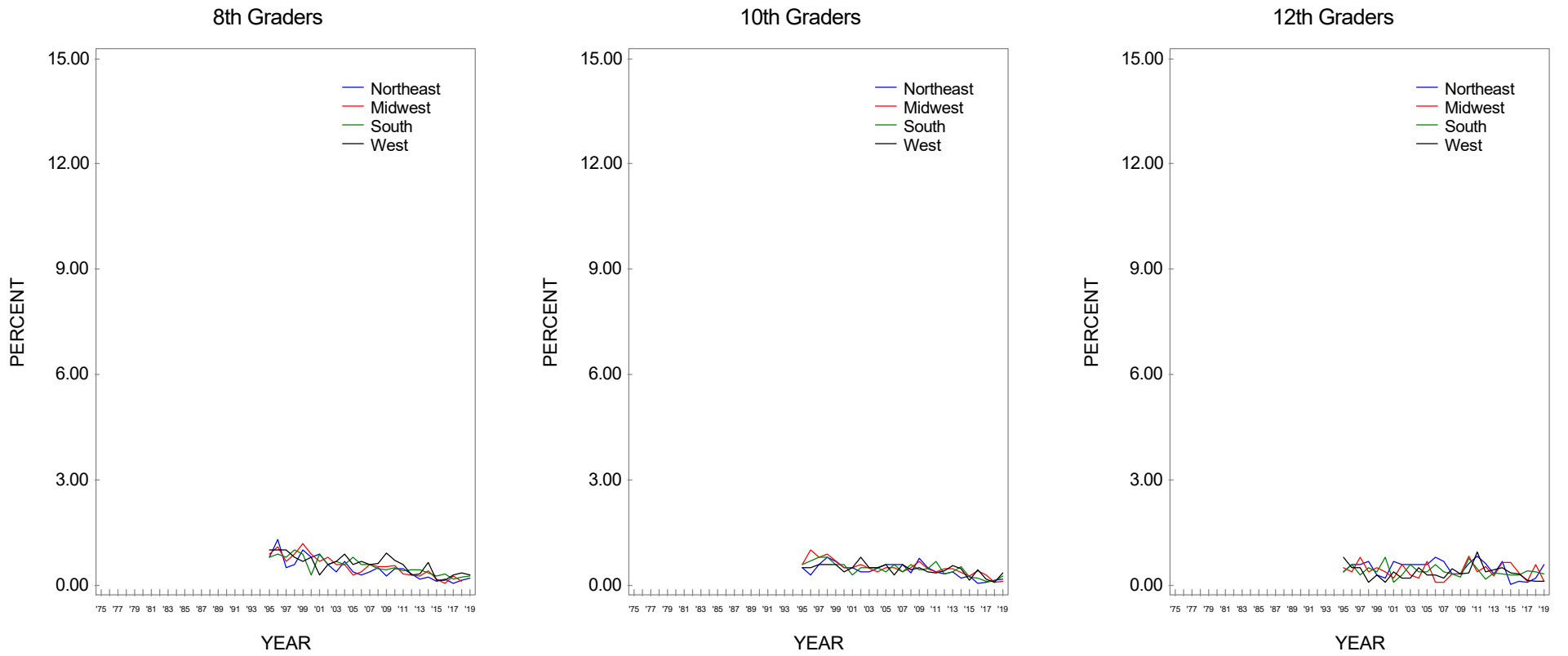
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 104**  
**Heroin with a Needle: Trends in Annual Prevalence by College Plans**



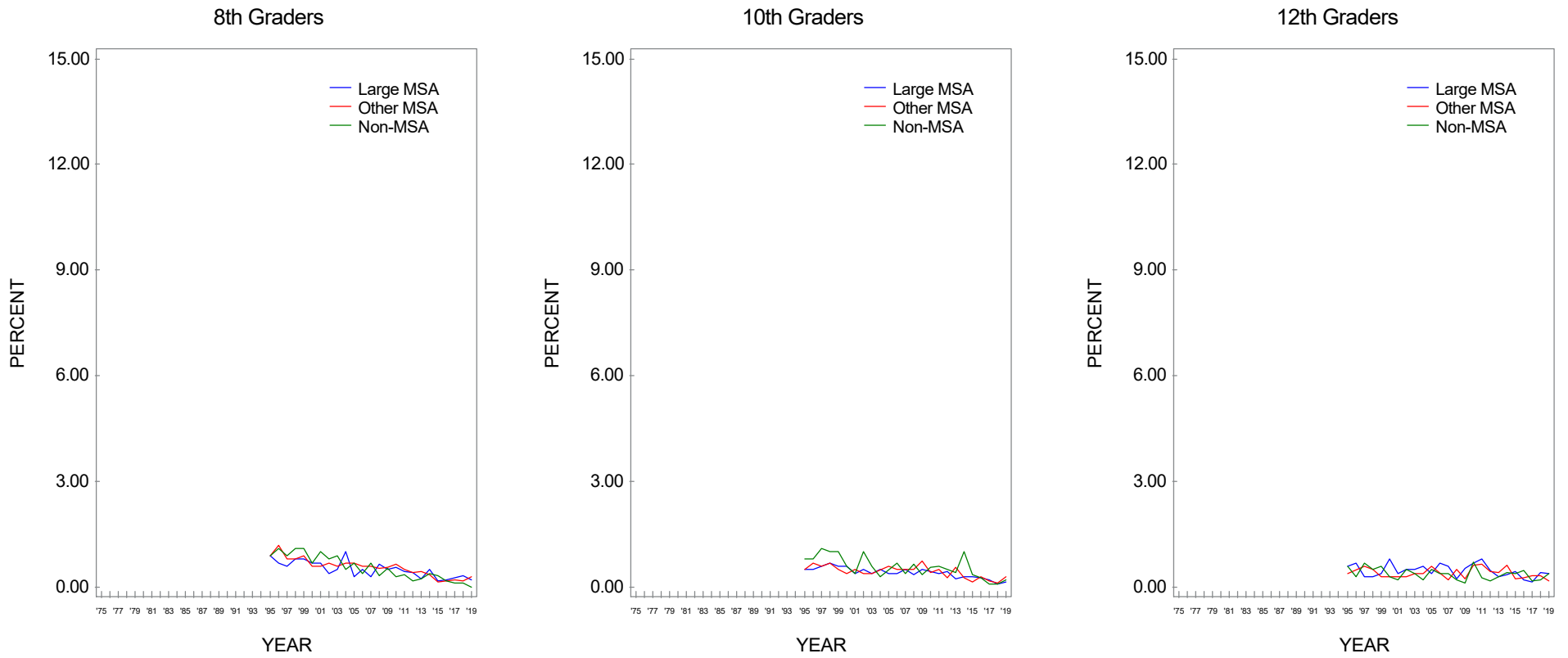
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 105**  
**Heroin with a Needle: Trends in Annual Prevalence by Region**



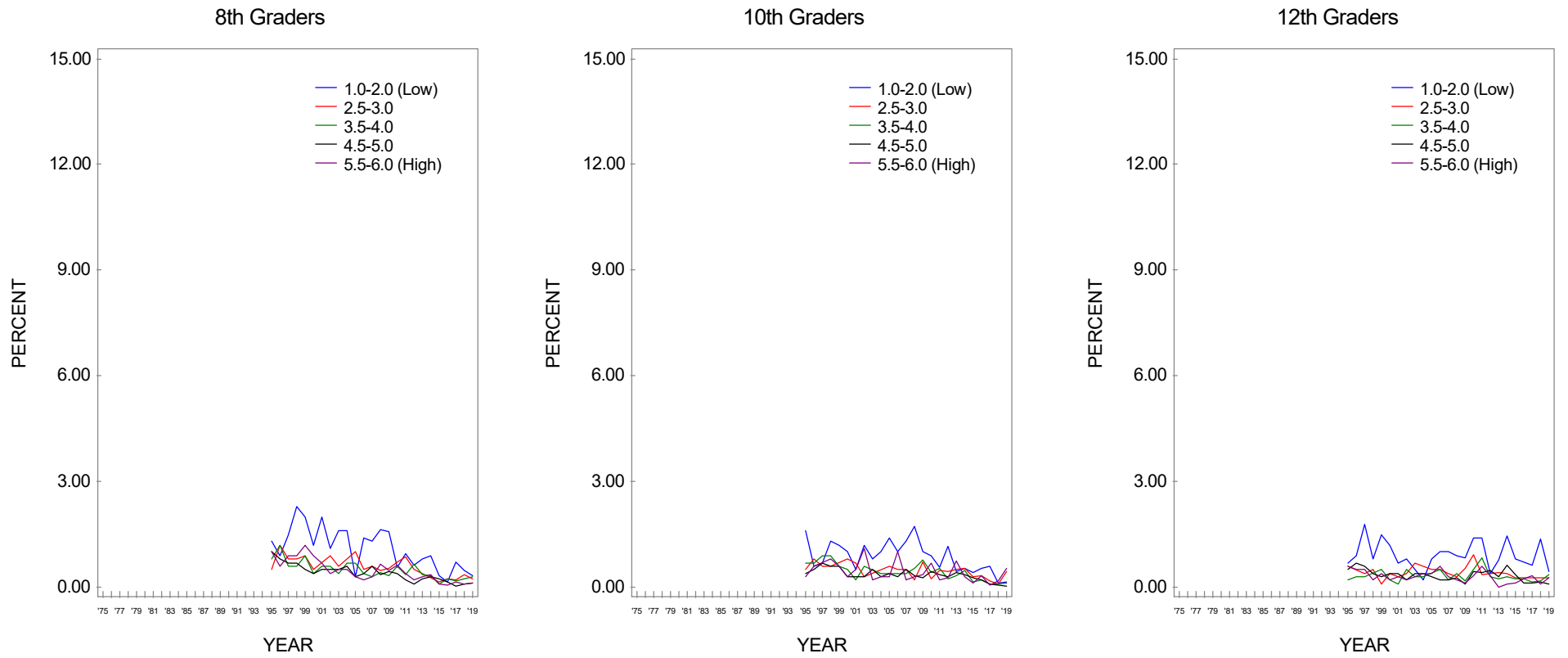
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 106**  
**Heroin with a Needle: Trends in Annual Prevalence by Population Density**



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

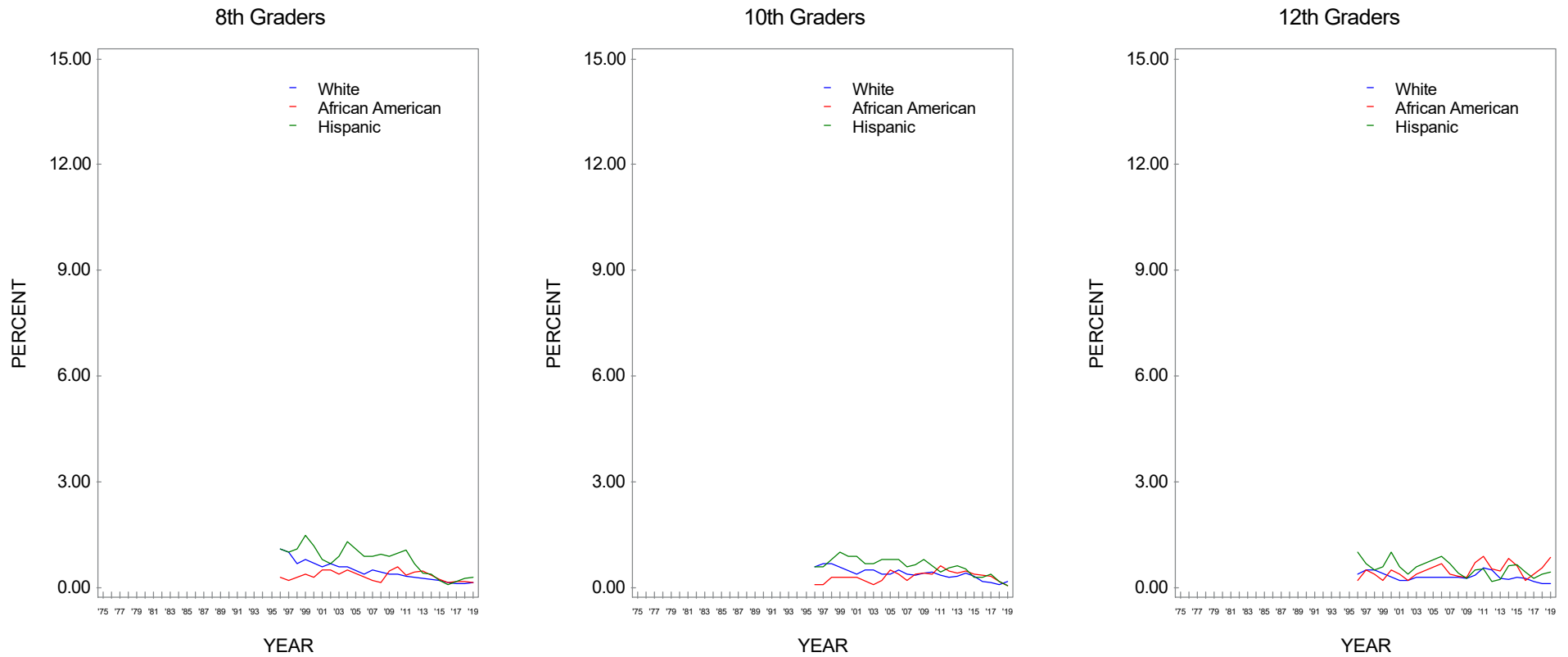
**FIGURE 107**  
**Heroin with a Needle: Trends in Annual Prevalence by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*Parental education is an average score of mother's education and father's education.



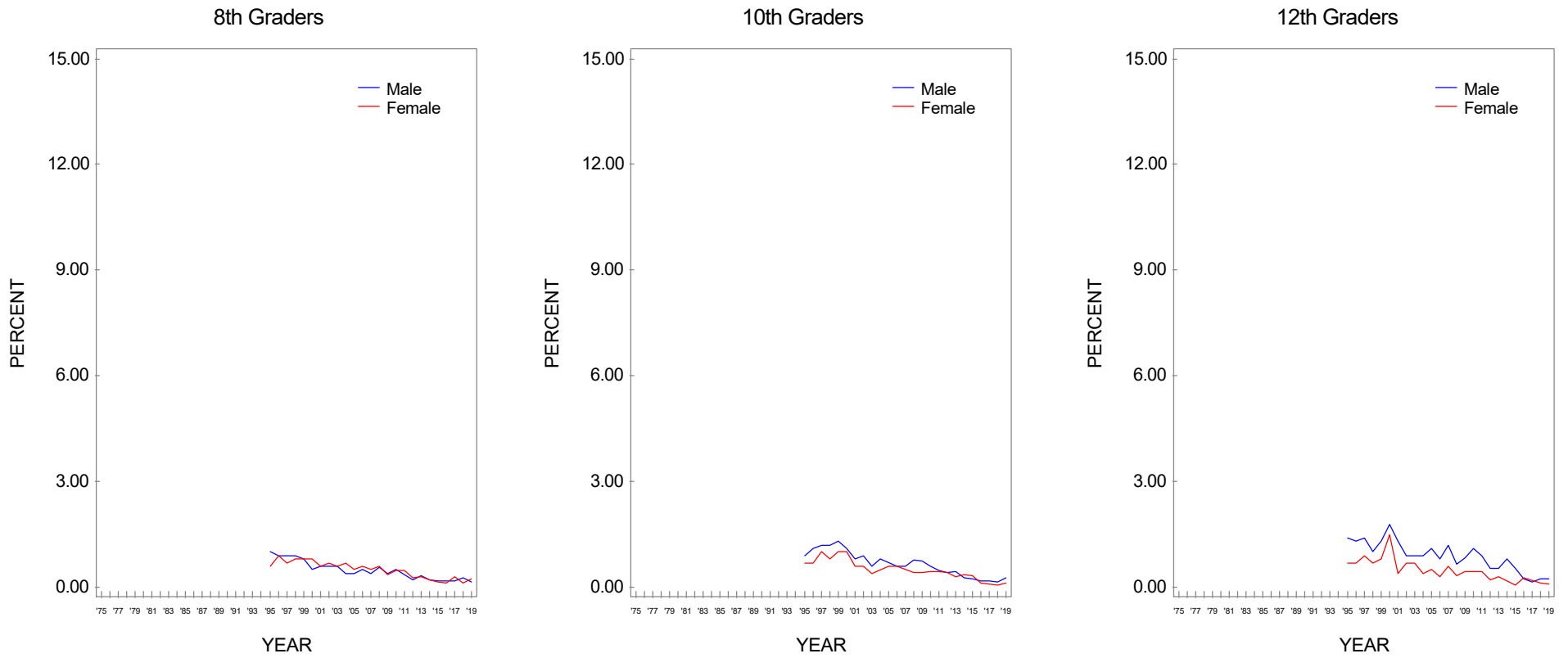
**FIGURE 108**  
**Heroin with a Needle: Trends in Annual Prevalence by Race/Ethnicity\***



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

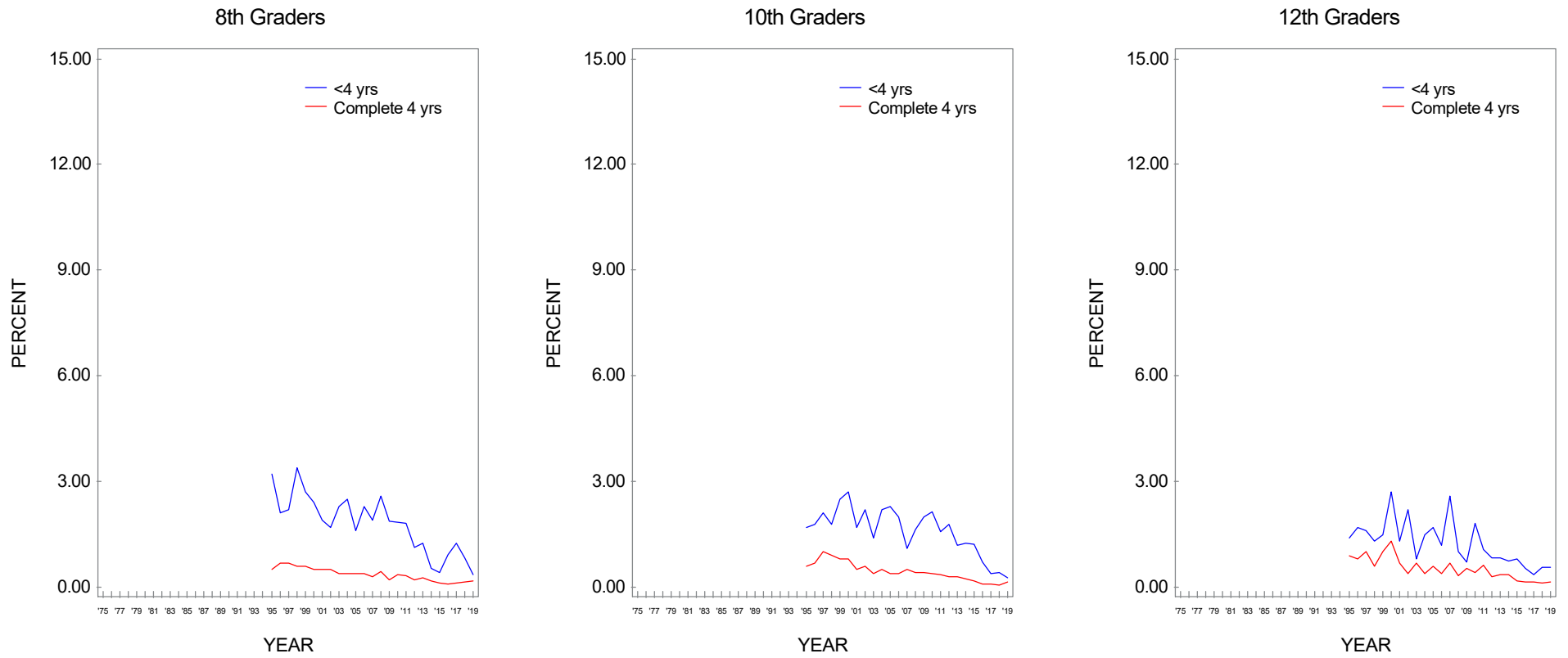
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 109**  
**Heroin without a Needle: Trends in Annual Prevalence by Gender**



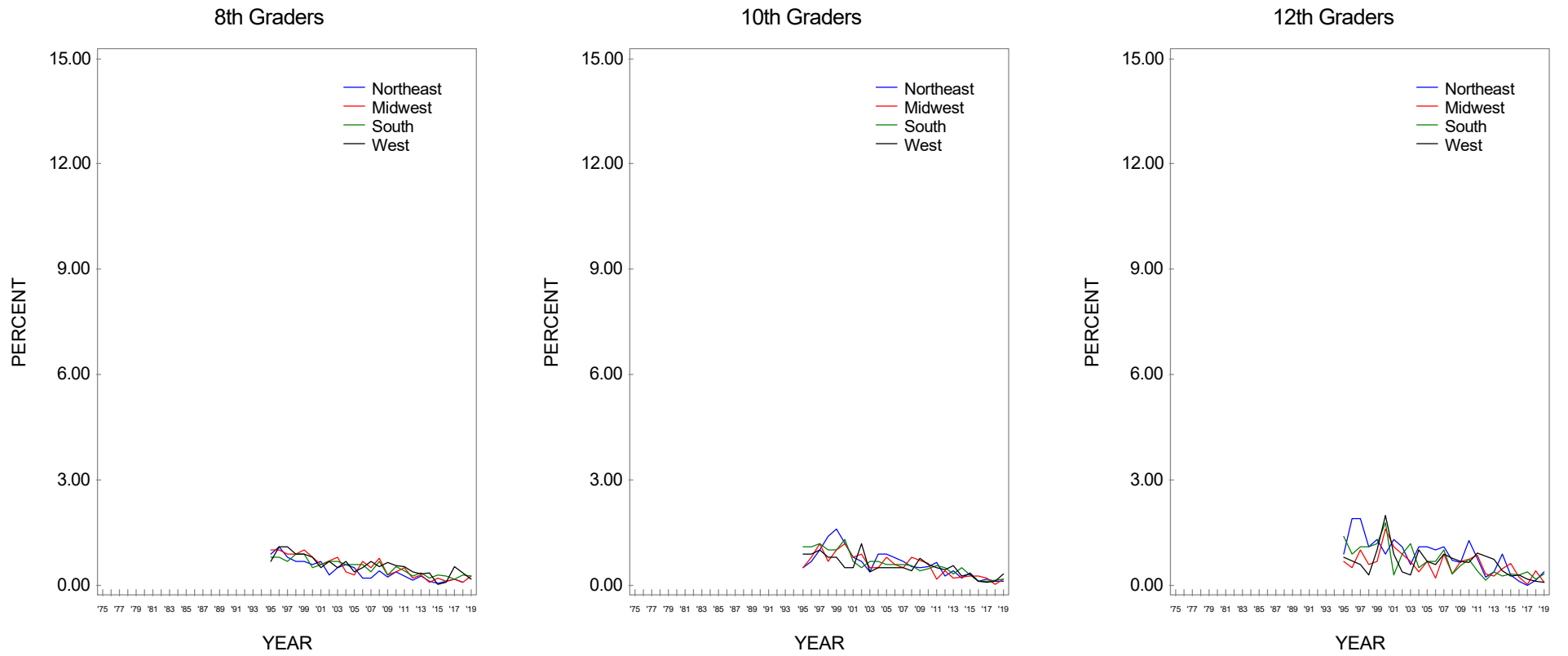
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 110**  
**Heroin without a Needle: Trends in Annual Prevalence by College Plans**



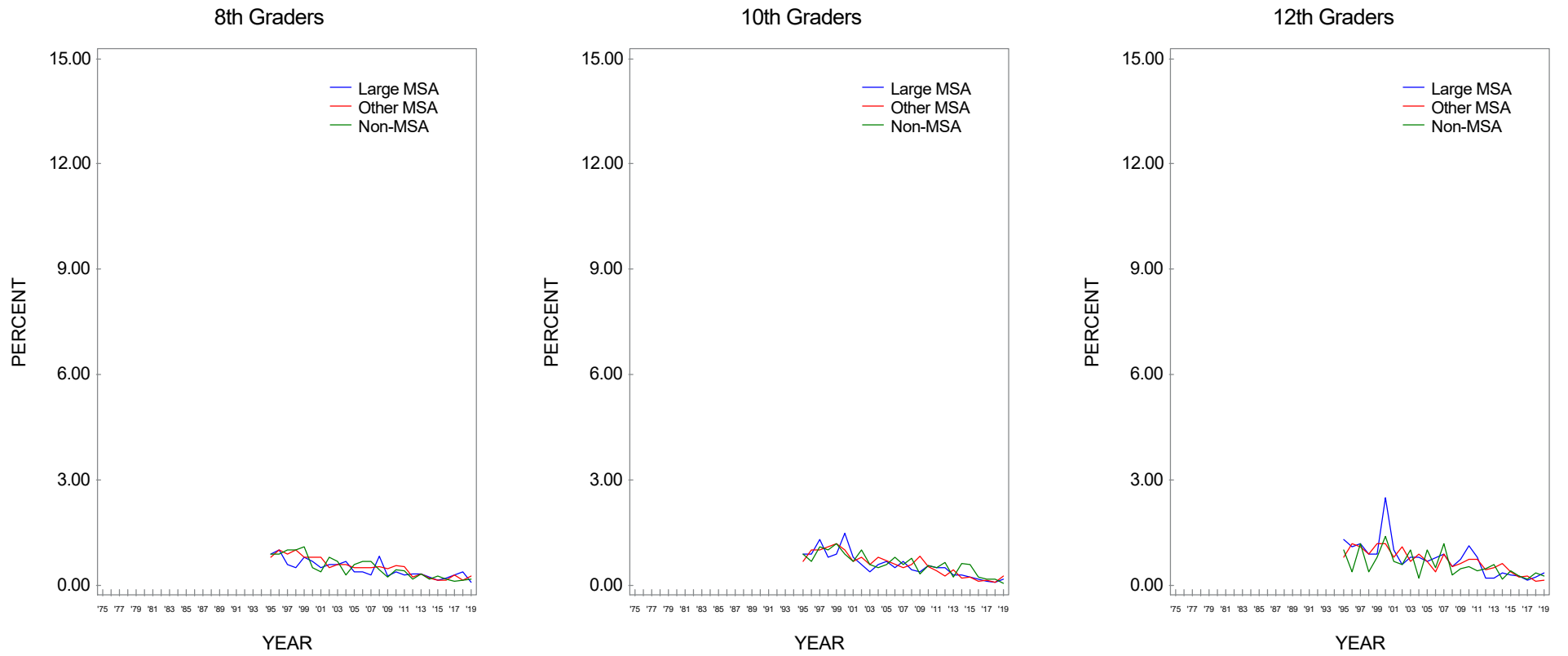
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 111**  
**Heroin without a Needle: Trends in Annual Prevalence by Region**



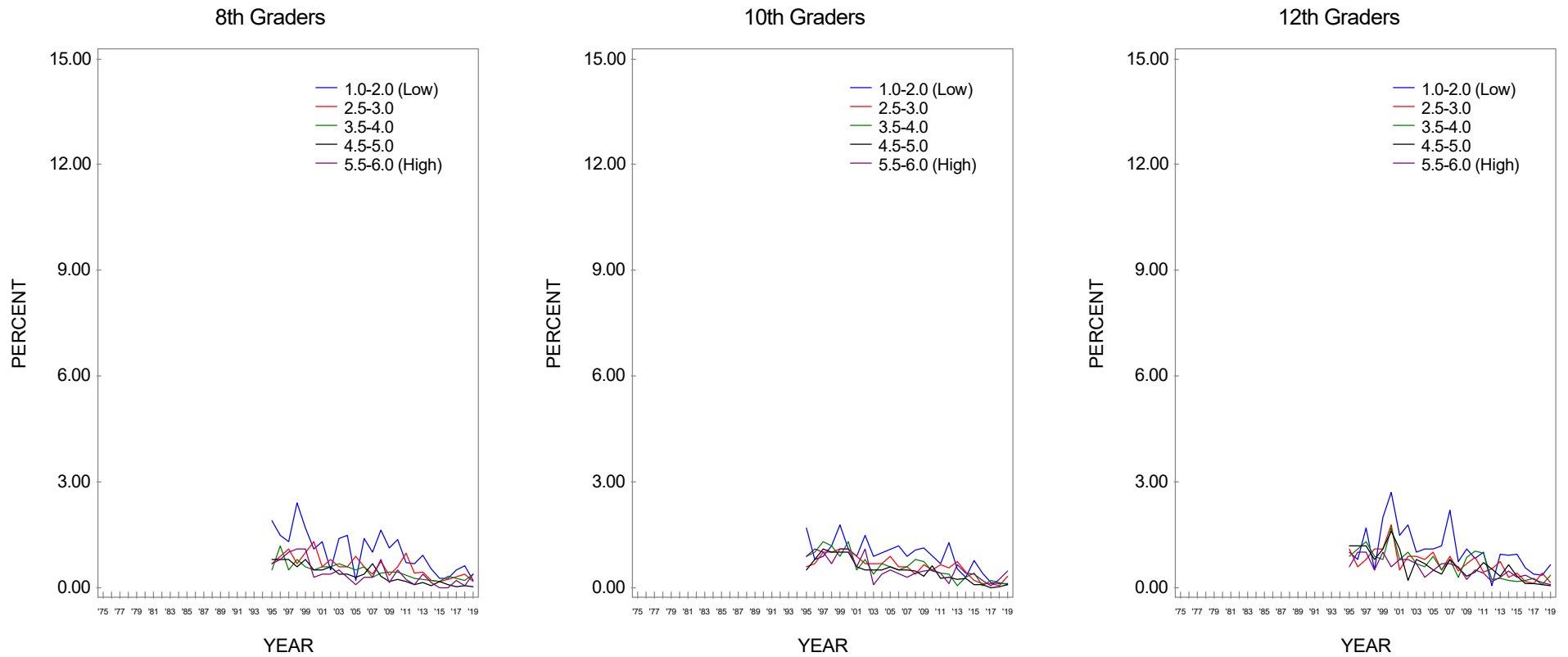
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 112**  
**Heroin without a Needle: Trends in Annual Prevalence by Population Density**



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

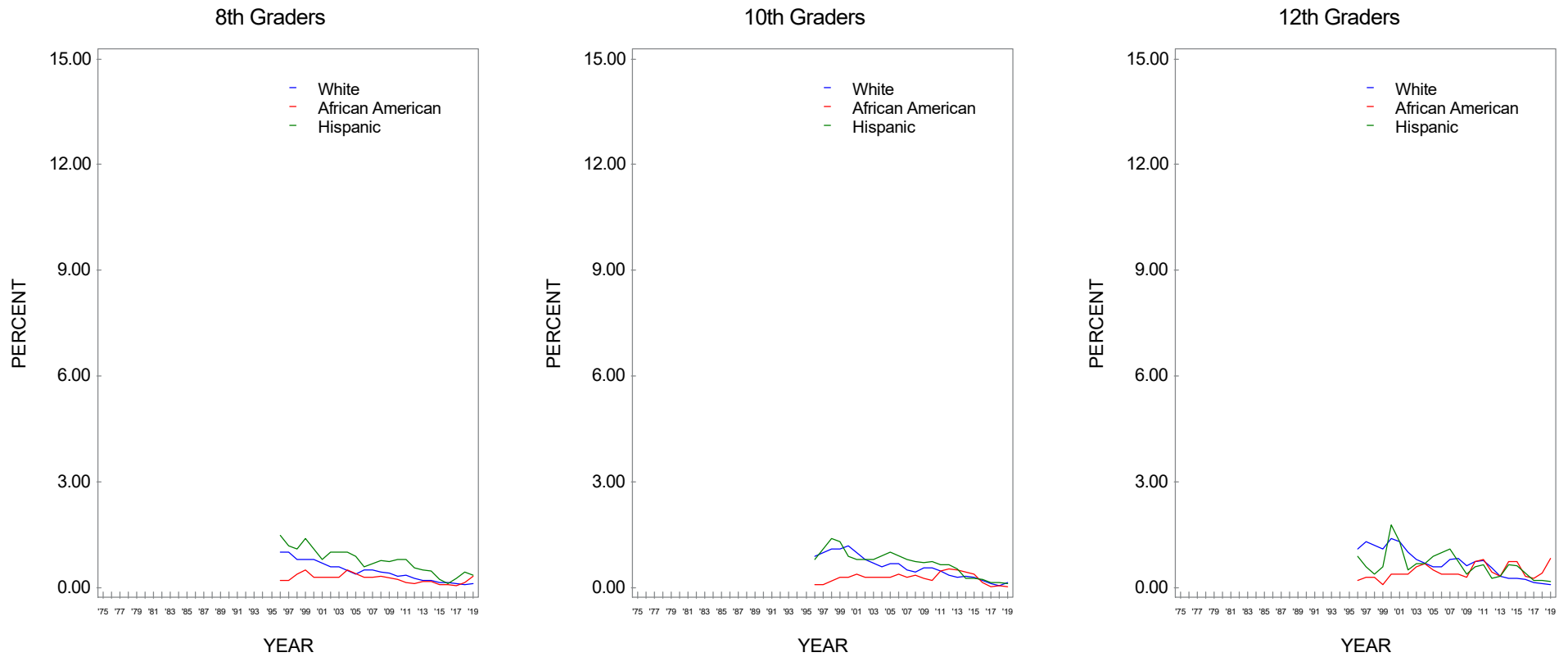
**FIGURE 113**  
**Heroin without a Needle: Trends in Annual Prevalence by Average Education Level of Parents\***



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

\*Parental education is an average score of mother's education and father's education.

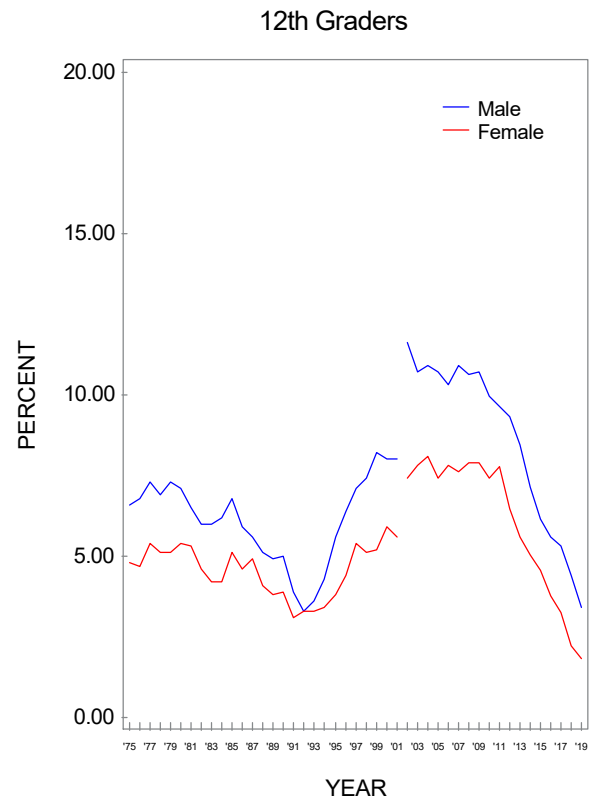
**FIGURE 114**  
**Heroin without a Needle: Trends in Annual Prevalence by Race/Ethnicity\***



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

\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 115**  
**Narcotics other than Heroin:\* Trends in Annual Prevalence by Gender**

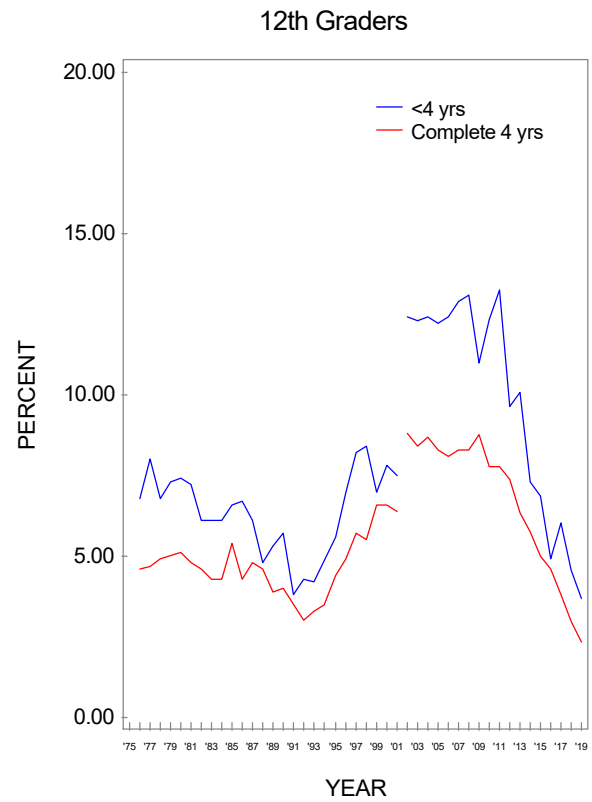


Source. The Monitoring the Future study, the University of Michigan.

\*Beginning in 2002, a revised set of questions on use of narcotics other than heroin was introduced. Talwin, laudanum, and paregoric were replaced with Vicodin, OxyContin, and Percocet.



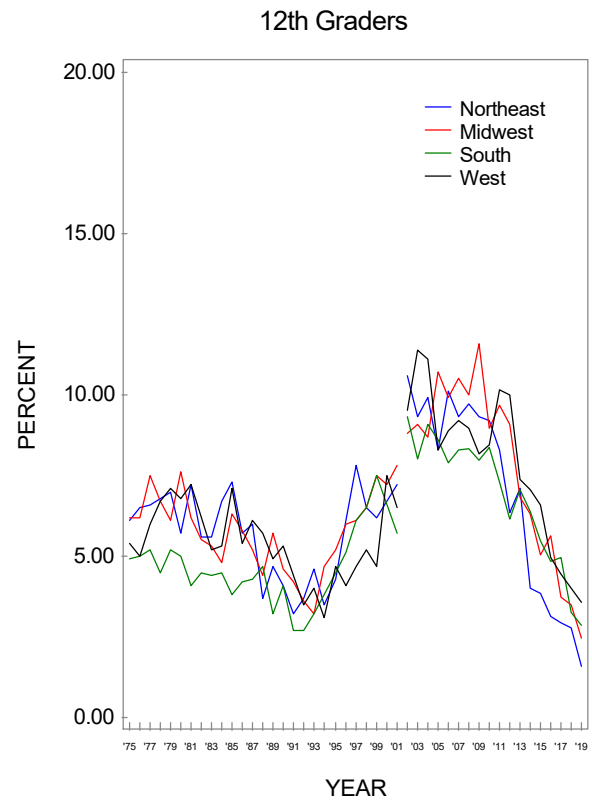
**FIGURE 116**  
**Narcotics other than Heroin:\* Trends in Annual Prevalence by College Plans**



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

\*Beginning in 2002, a revised set of questions on use of narcotics other than heroin was introduced. Talwin, laudanum, and paregoric were replaced with Vicodin, OxyContin, and Percocet.

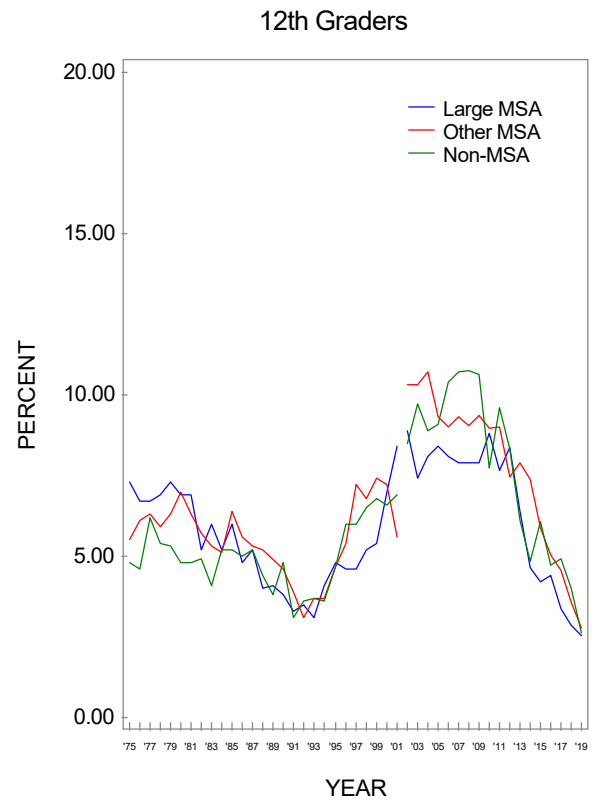
**FIGURE 117**  
**Narcotics other than Heroin:\* Trends in Annual Prevalence by Region**



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

\*Beginning in 2002, a revised set of questions on use of narcotics other than heroin was introduced. Talwin, laudanum, and paregoric were replaced with Vicodin, OxyContin, and Percocet.

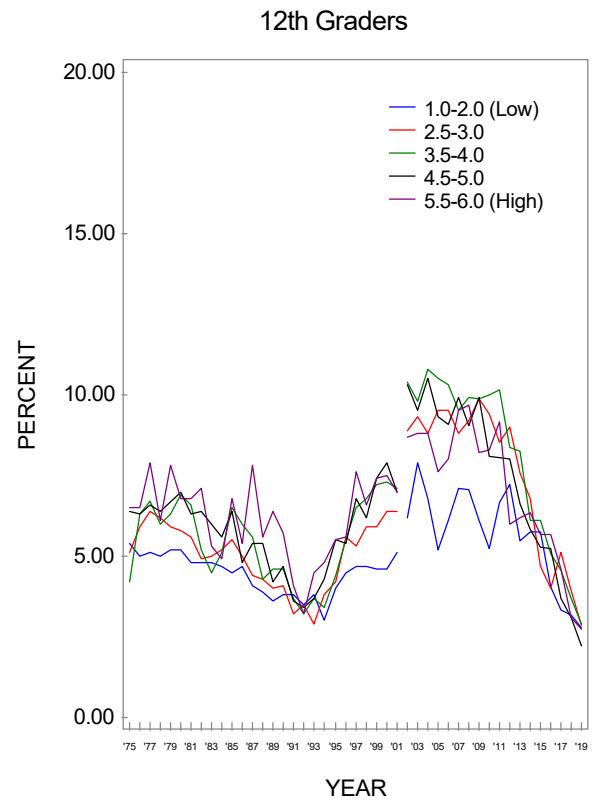
**FIGURE 118**  
**Narcotics other than Heroin:\* Trends in Annual Prevalence by Population Density**



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

\*Beginning in 2002, a revised set of questions on use of narcotics other than heroin was introduced. Talwin, laudanum, and paregoric were replaced with Vicodin, OxyContin, and Percocet.

**FIGURE 119**  
**Narcotics other than Heroin:\* Trends in Annual Prevalence by Average Education Level of Parents\*\***

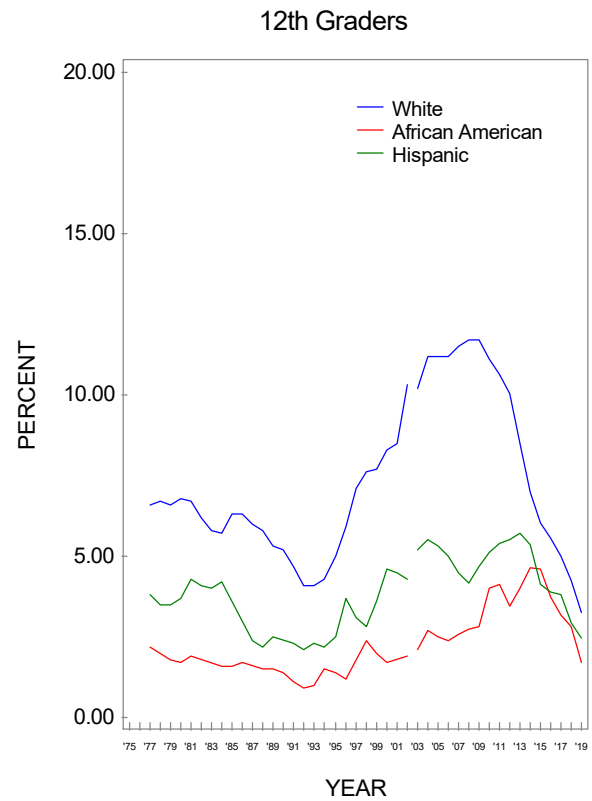


Source. The Monitoring the Future study, the University of Michigan.

\*Beginning in 2002, a revised set of questions on use of narcotics other than heroin was introduced. Talwin, laudanum, and paregoric were replaced with Vicodin, OxyContin, and Percocet.

\*\*Parental education is an average score of mother's education and father's education.

**FIGURE 120**  
**Narcotics other than Heroin:\* Trends in Annual Prevalence by Race/Ethnicity\*\***

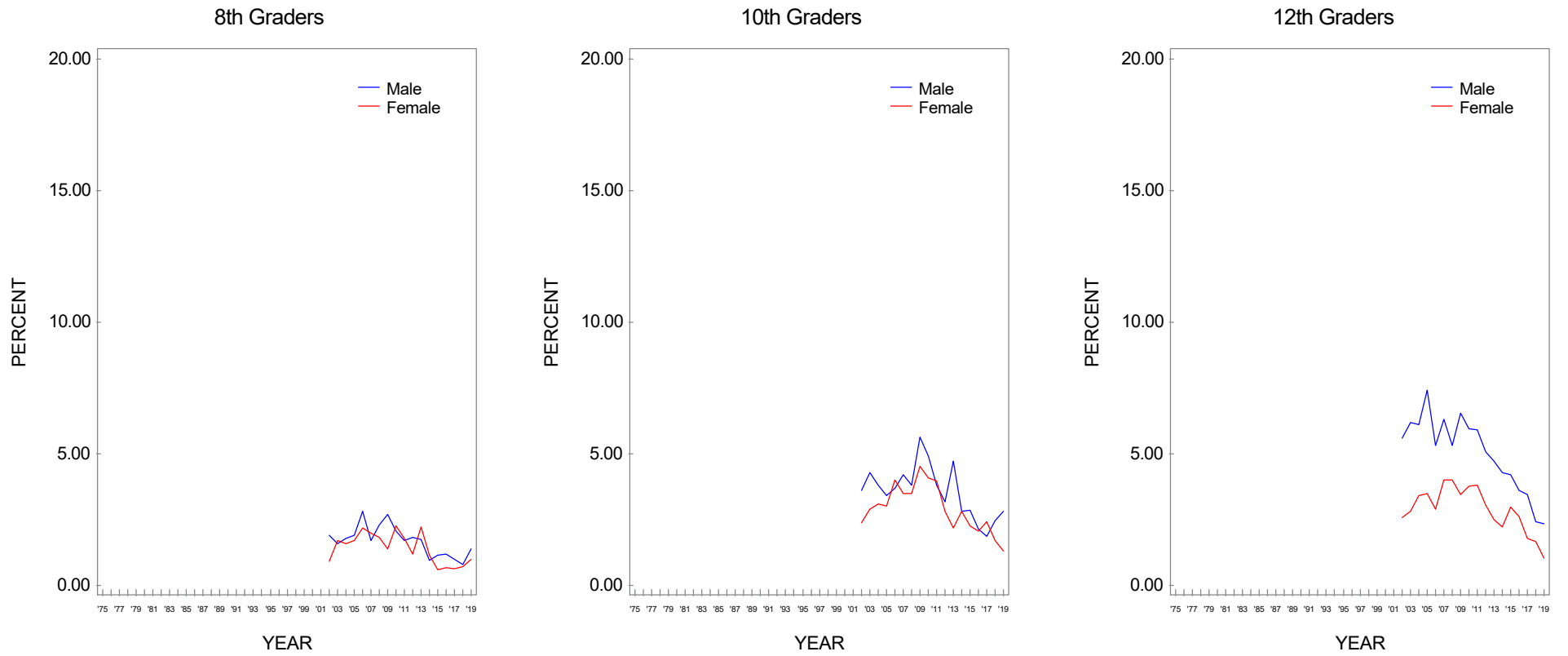


Source. The Monitoring the Future study, the University of Michigan.

\*Beginning in 2002, a revised set of questions on use of narcotics other than heroin was introduced. Talwin, laudanum, and paregoric were replaced with Vicodin, OxyContin, and Percocet.

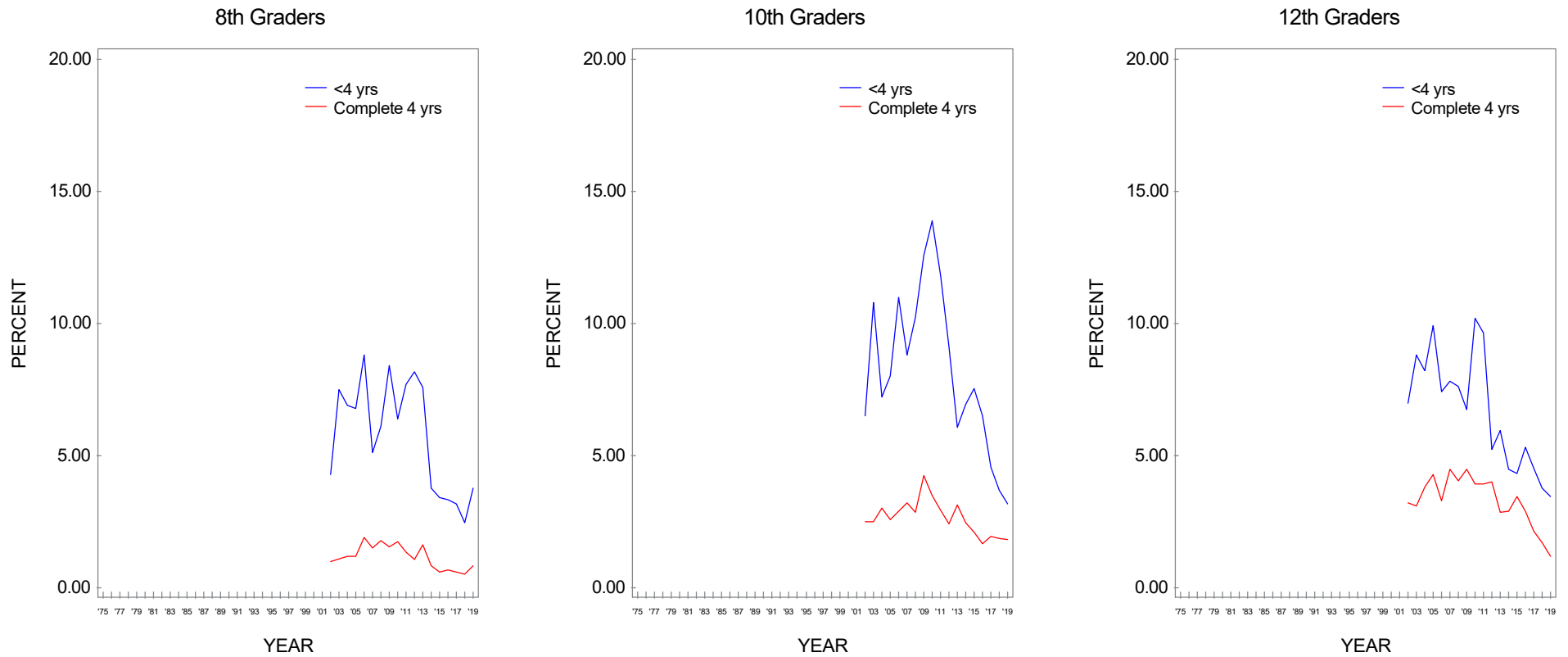
\*\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 121**  
**OxyContin: Trends in Annual Prevalence by Gender**



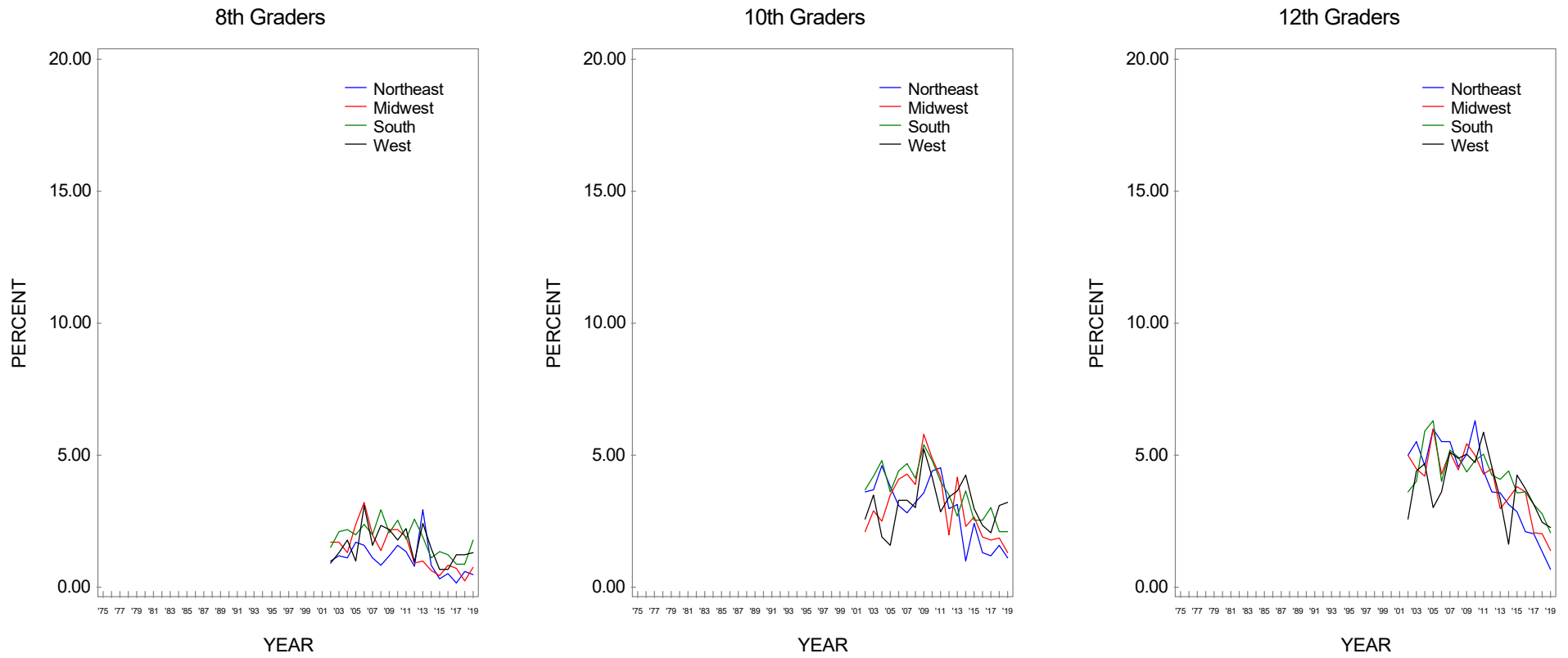
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 122**  
**OxyContin: Trends in Annual Prevalence by College Plans**



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

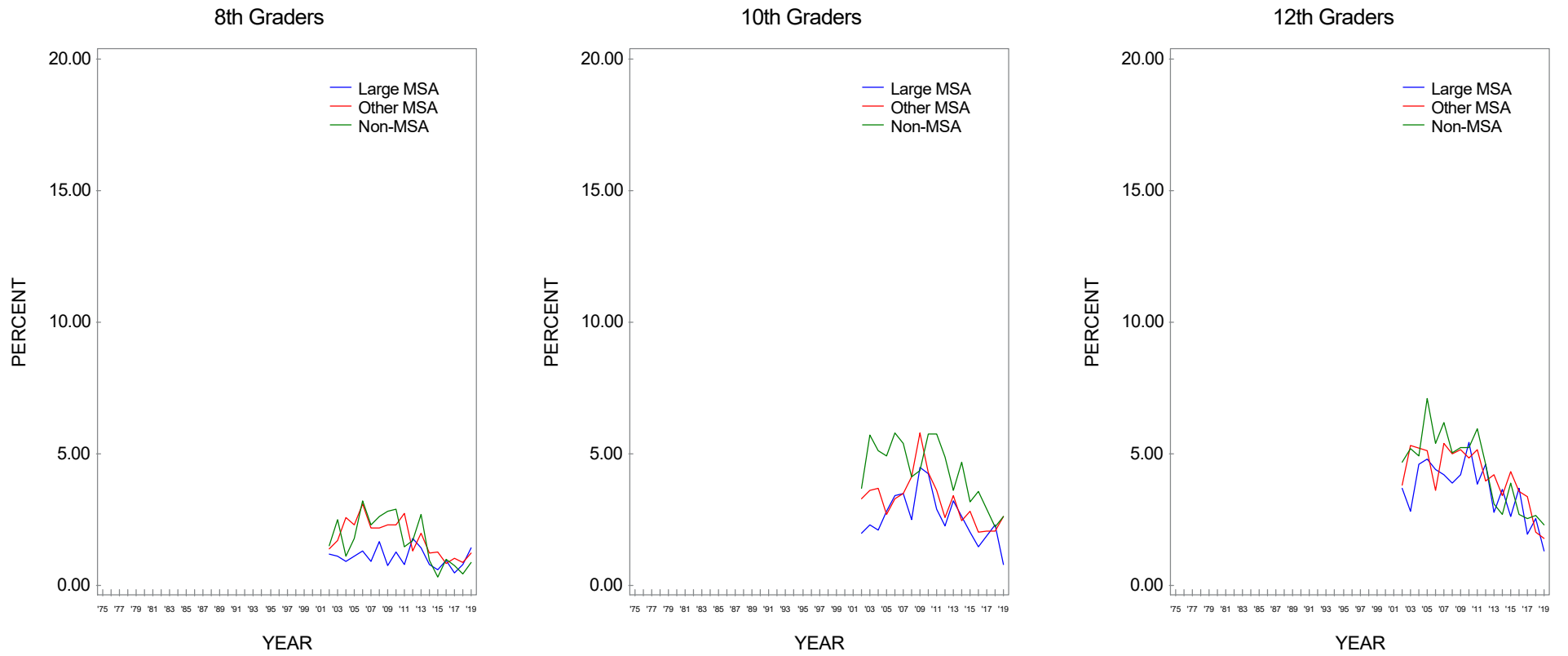
**FIGURE 123**  
**OxyContin: Trends in Annual Prevalence by Region**



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

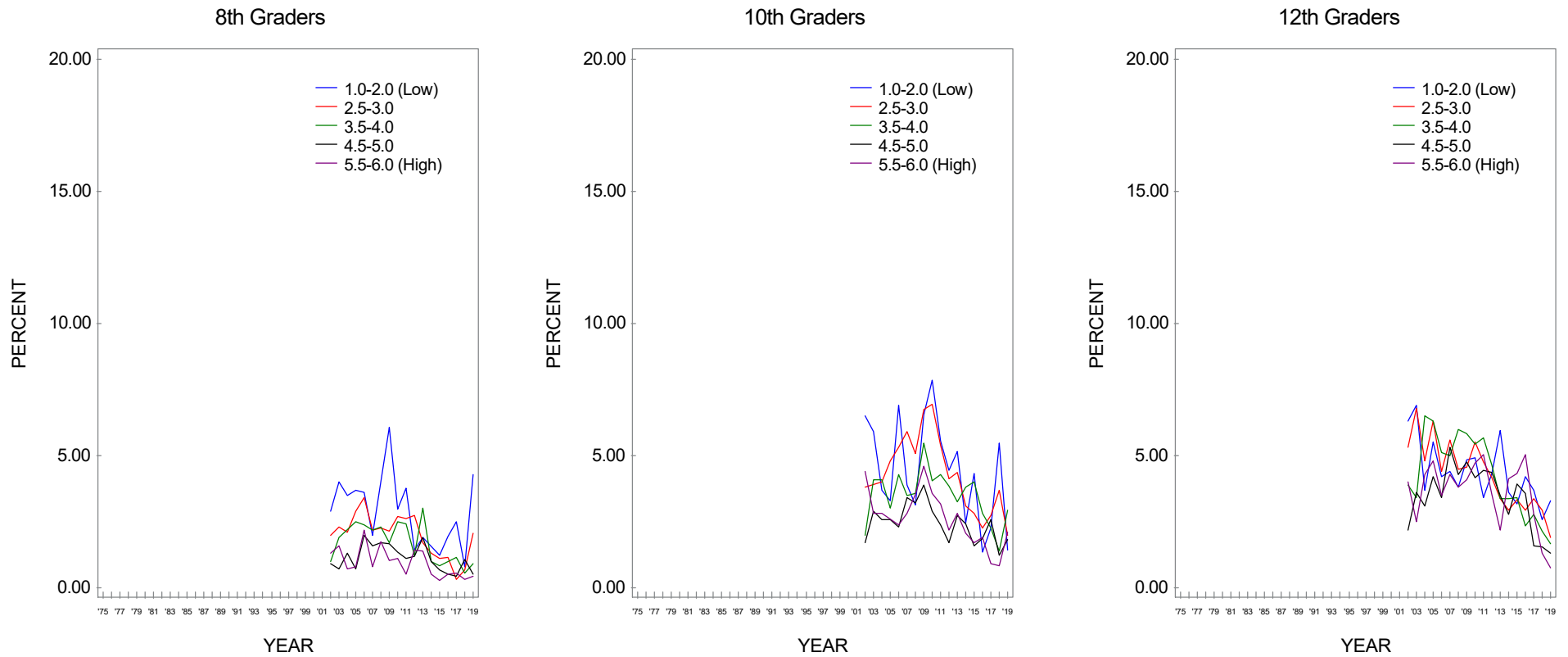


**FIGURE 124**  
**OxyContin: Trends in Annual Prevalence by Population Density**



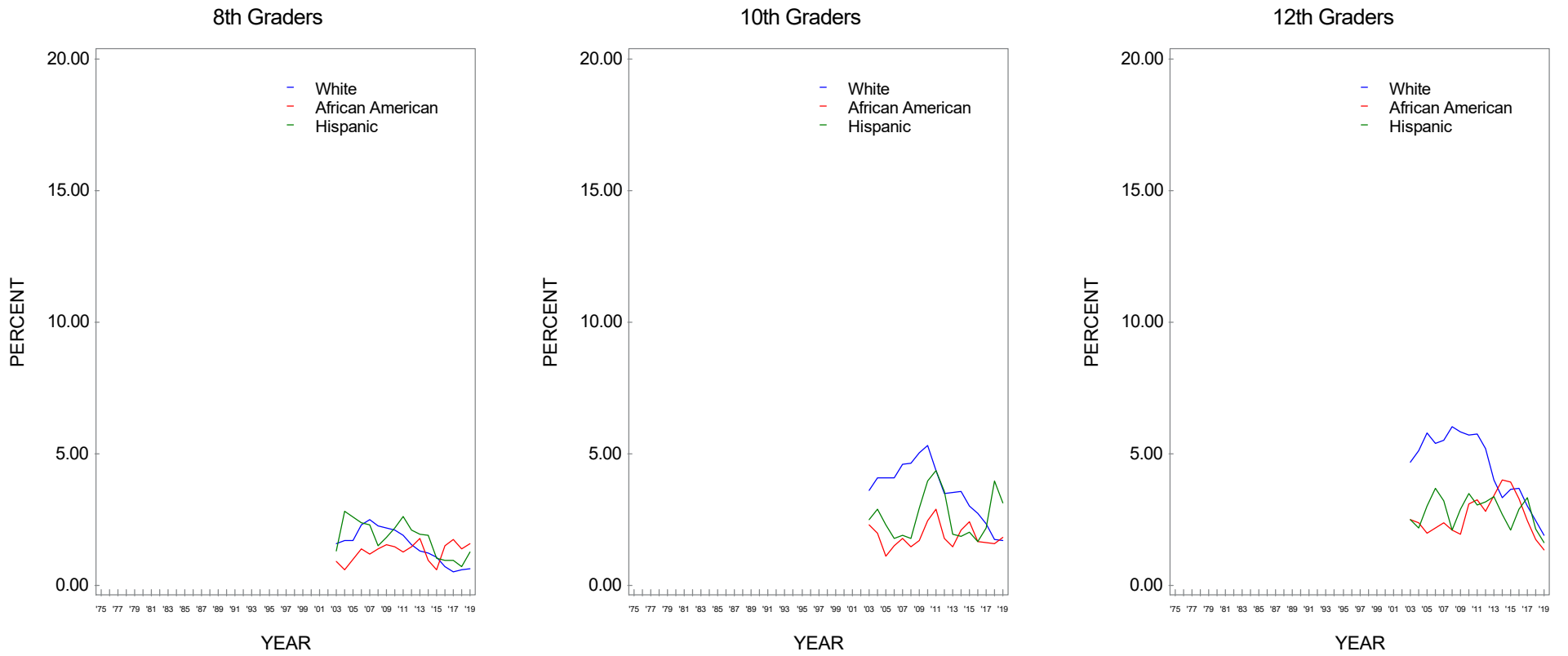
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 125**  
**OxyContin: Trends in Annual Prevalence by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*Parental education is an average score of mother's education and father's education.

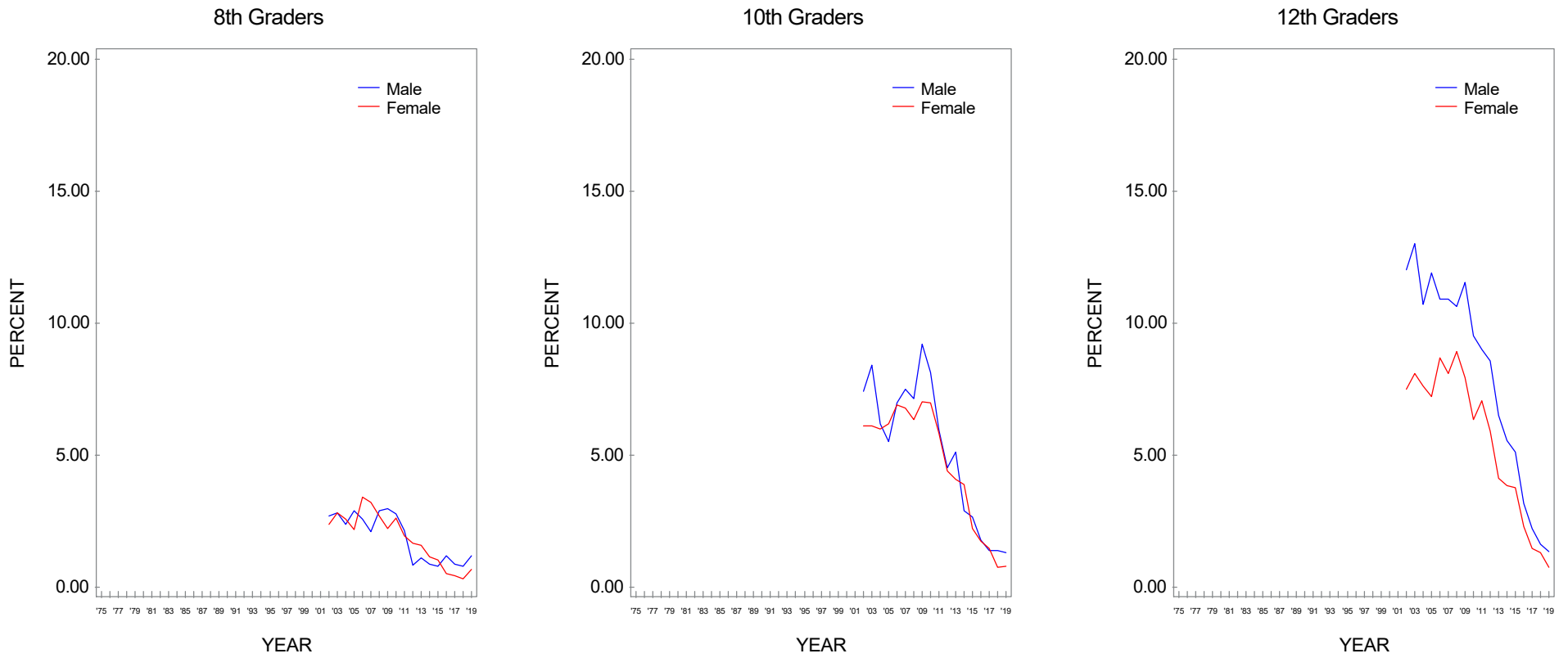
**FIGURE 126**  
**OxyContin: Trends in Annual Prevalence by Race/Ethnicity\***



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

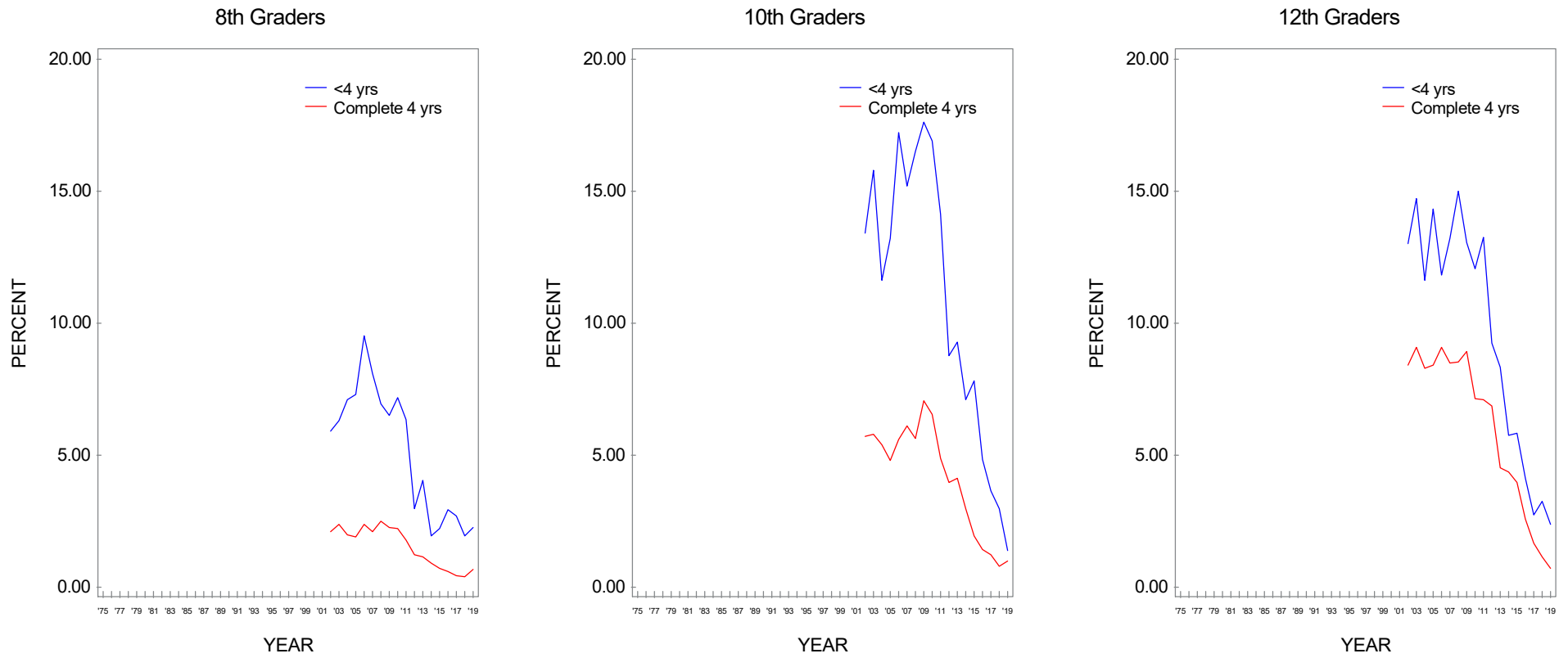
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 127**  
**Vicodin: Trends in Annual Prevalence by Gender**



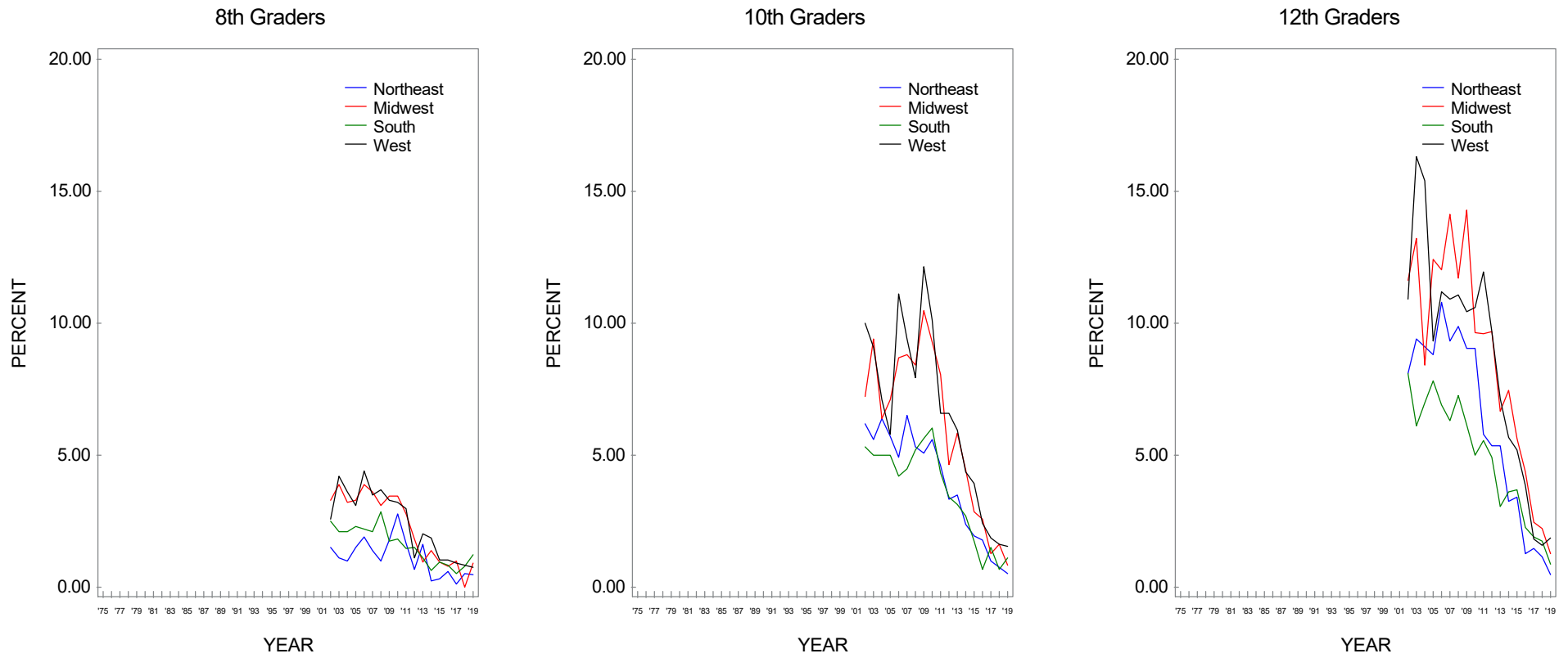
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 128**  
**Vicodin: Trends in Annual Prevalence by College Plans**



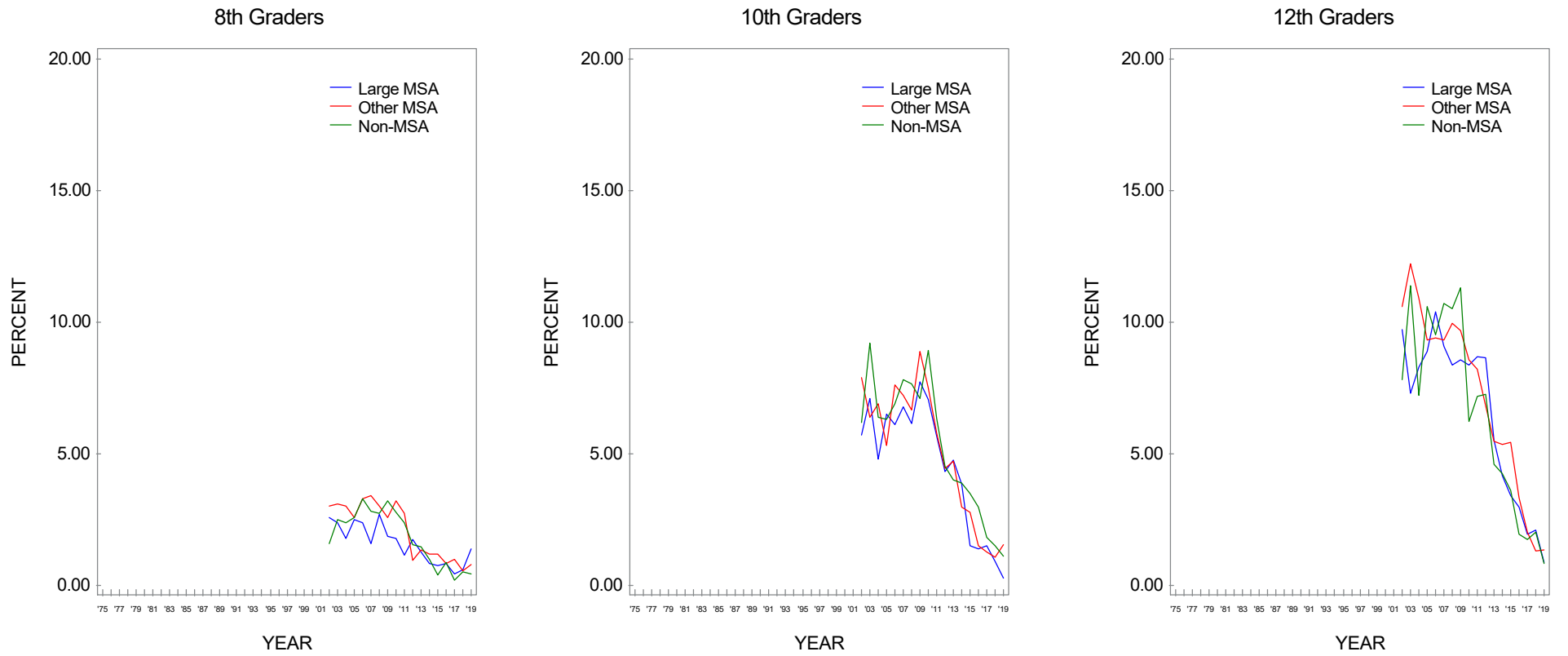
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 129**  
**Vicodin: Trends in Annual Prevalence by Region**



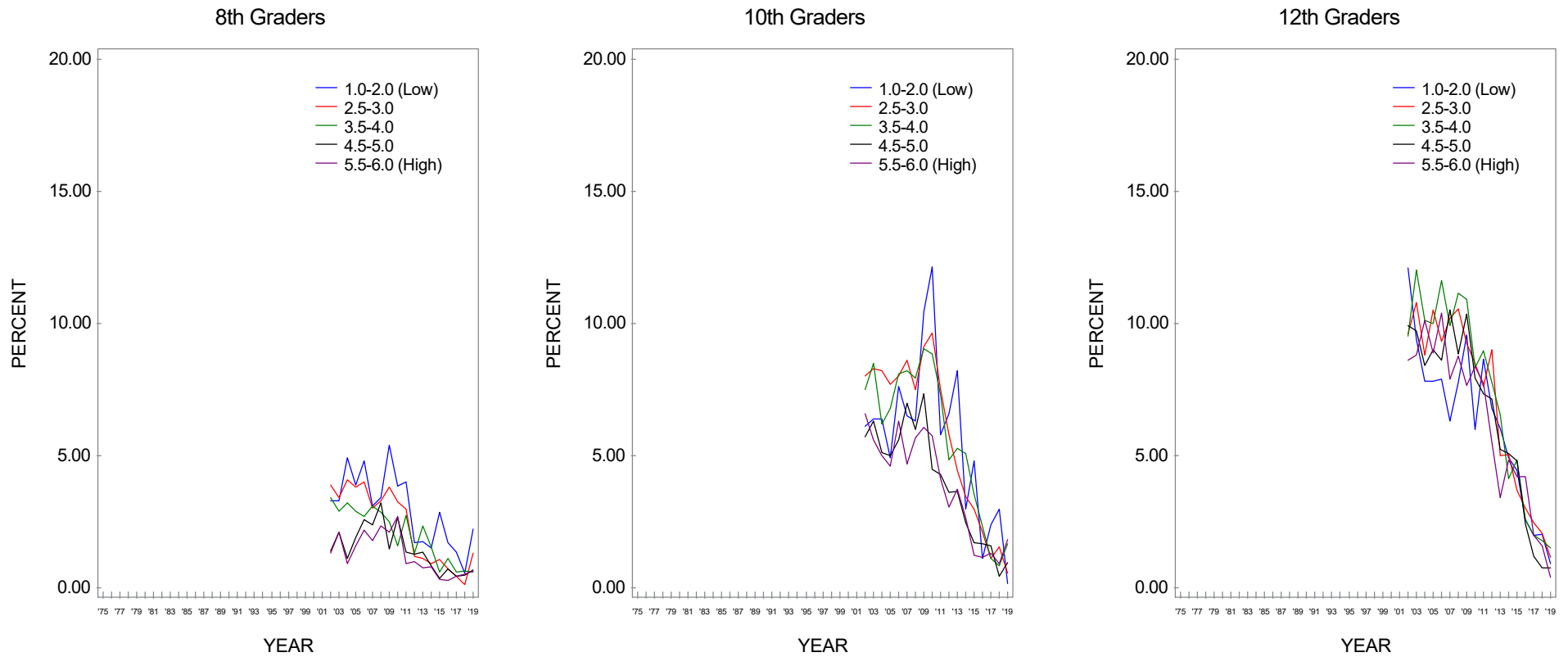
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 130**  
**Vicodin: Trends in Annual Prevalence by Population Density**



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

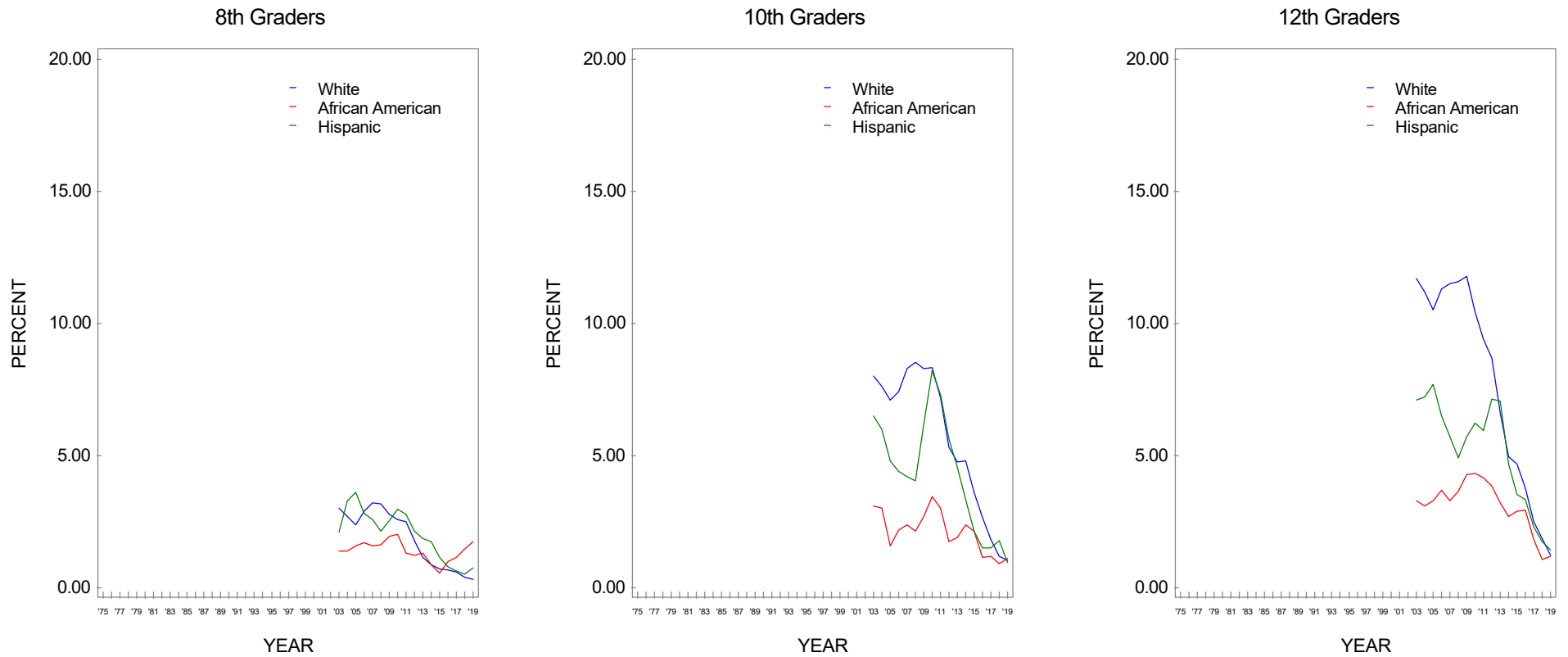
**FIGURE 131**  
**Vicodin: Trends in Annual Prevalence by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*Parental education is an average score of mother's education and father's education.



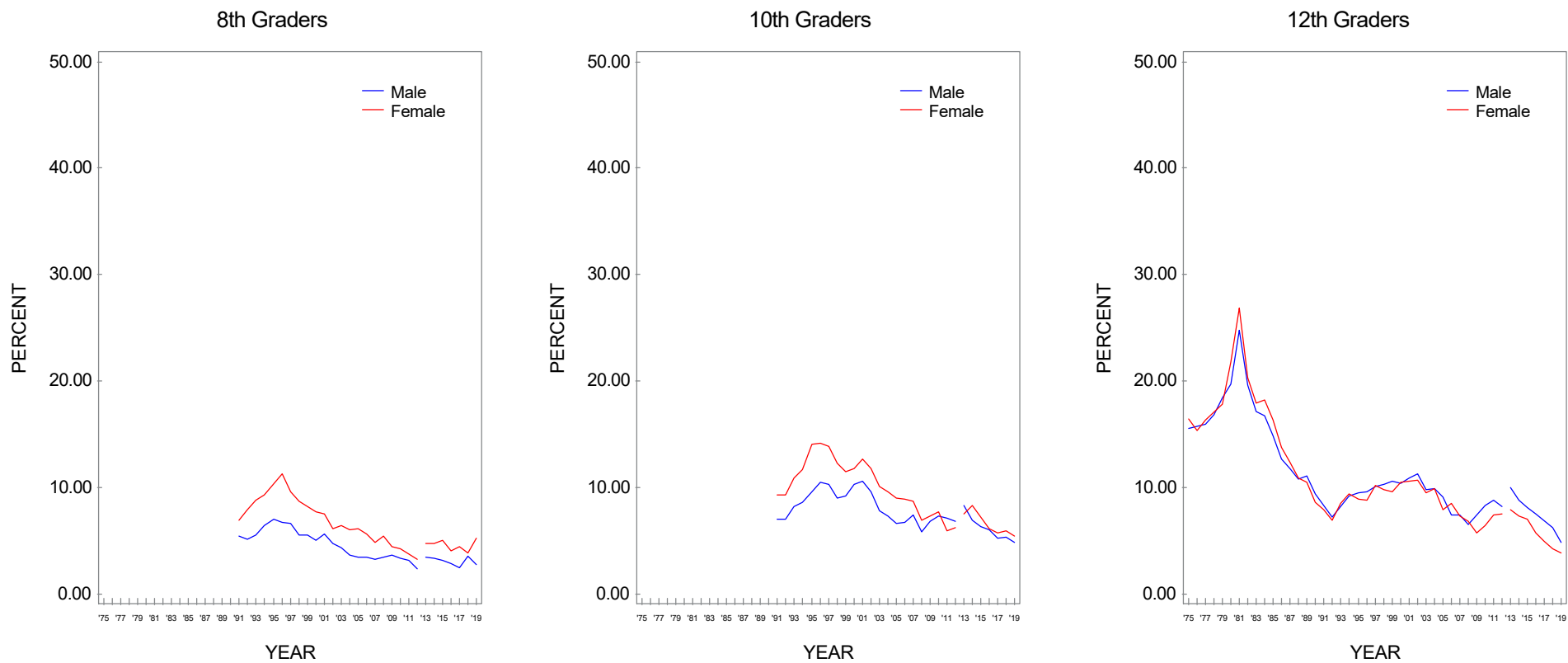
**FIGURE 132**  
**Vicodin: Trends in Annual Prevalence by Race/Ethnicity\***



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

\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

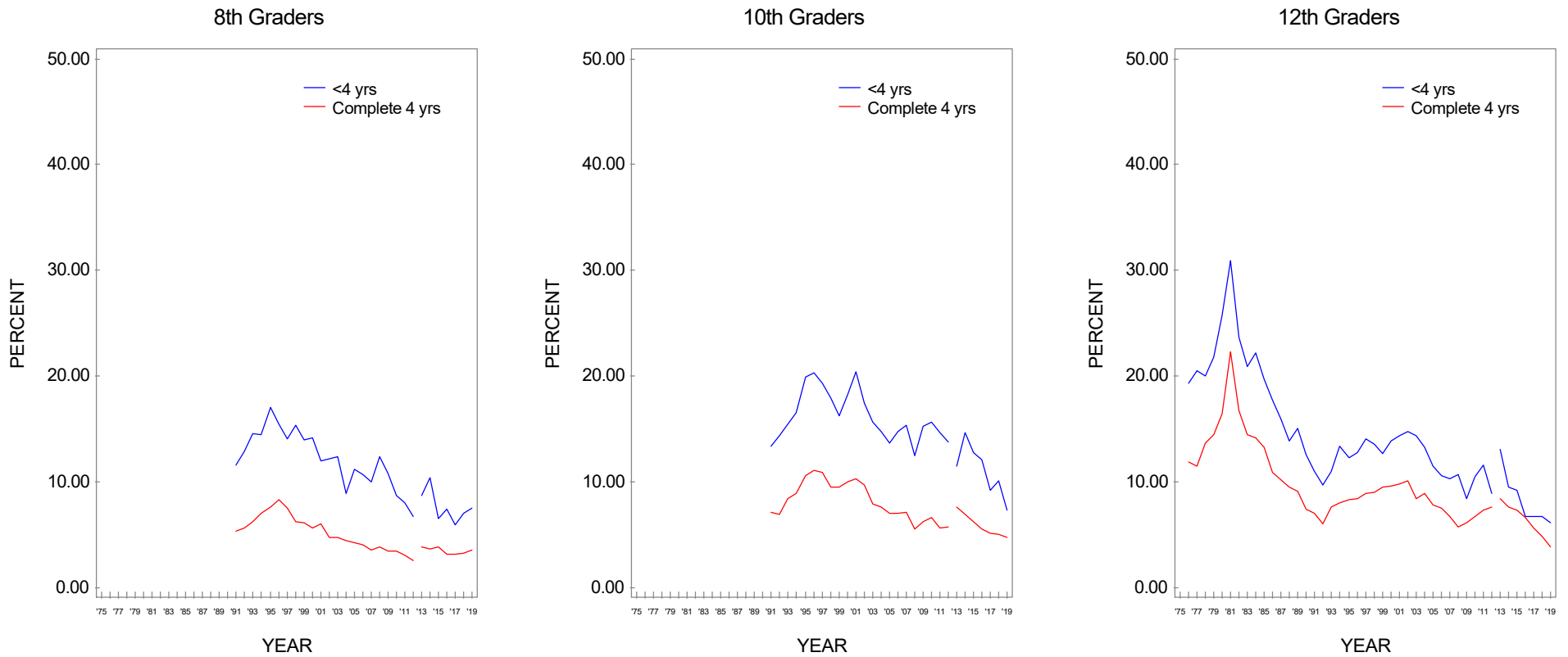
**FIGURE 133**  
**Amphetamines:\* Trends in Annual Prevalence by Gender**



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

\*After 1982, the question about amphetamine use was revised to further clarify that nonprescription stimulants should not be included in the answers.

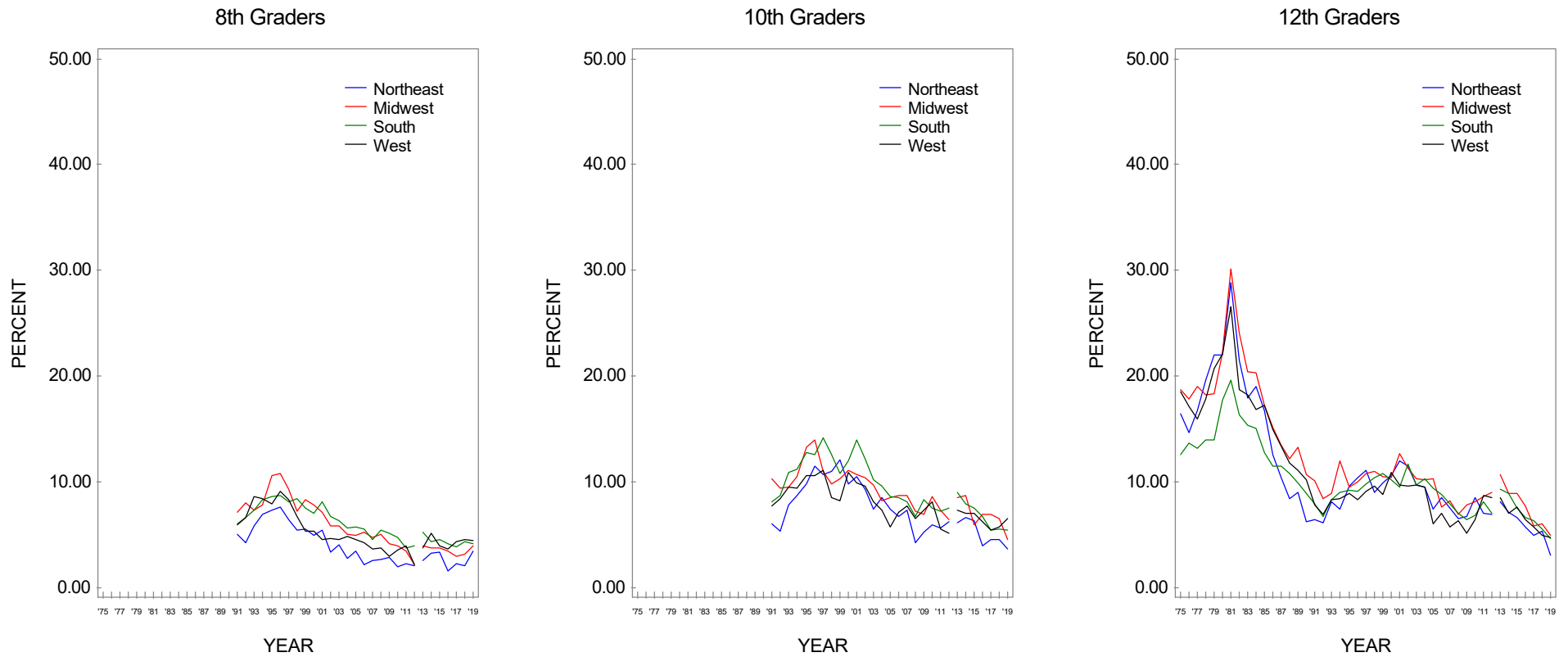
**FIGURE 134**  
**Amphetamines:\* Trends in Annual Prevalence by College Plans**



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

\*After 1982, the question about amphetamine use was revised to further clarify that nonprescription stimulants should not be included in the answers.

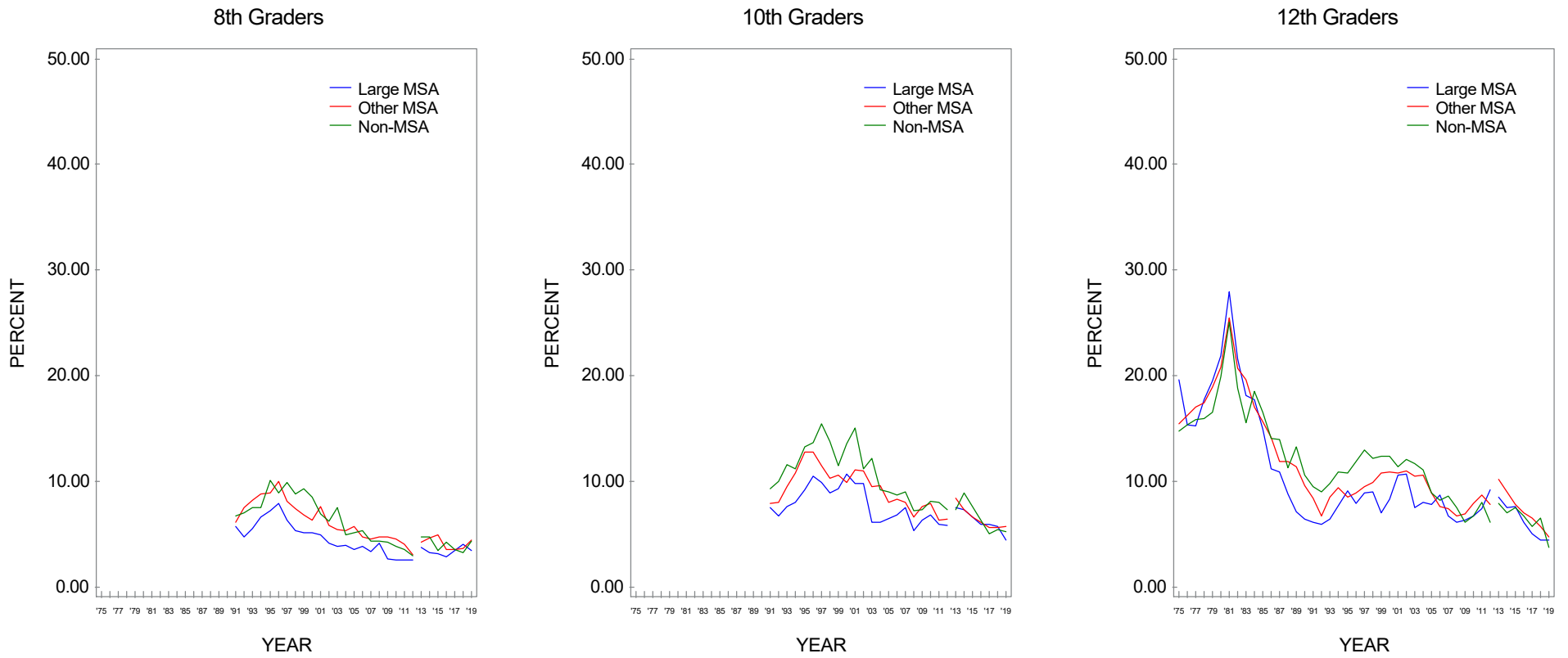
**FIGURE 135**  
**Amphetamines:\* Trends in Annual Prevalence by Region**



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

\*After 1982, the question about amphetamine use was revised to further clarify that nonprescription stimulants should not be included in the answers.

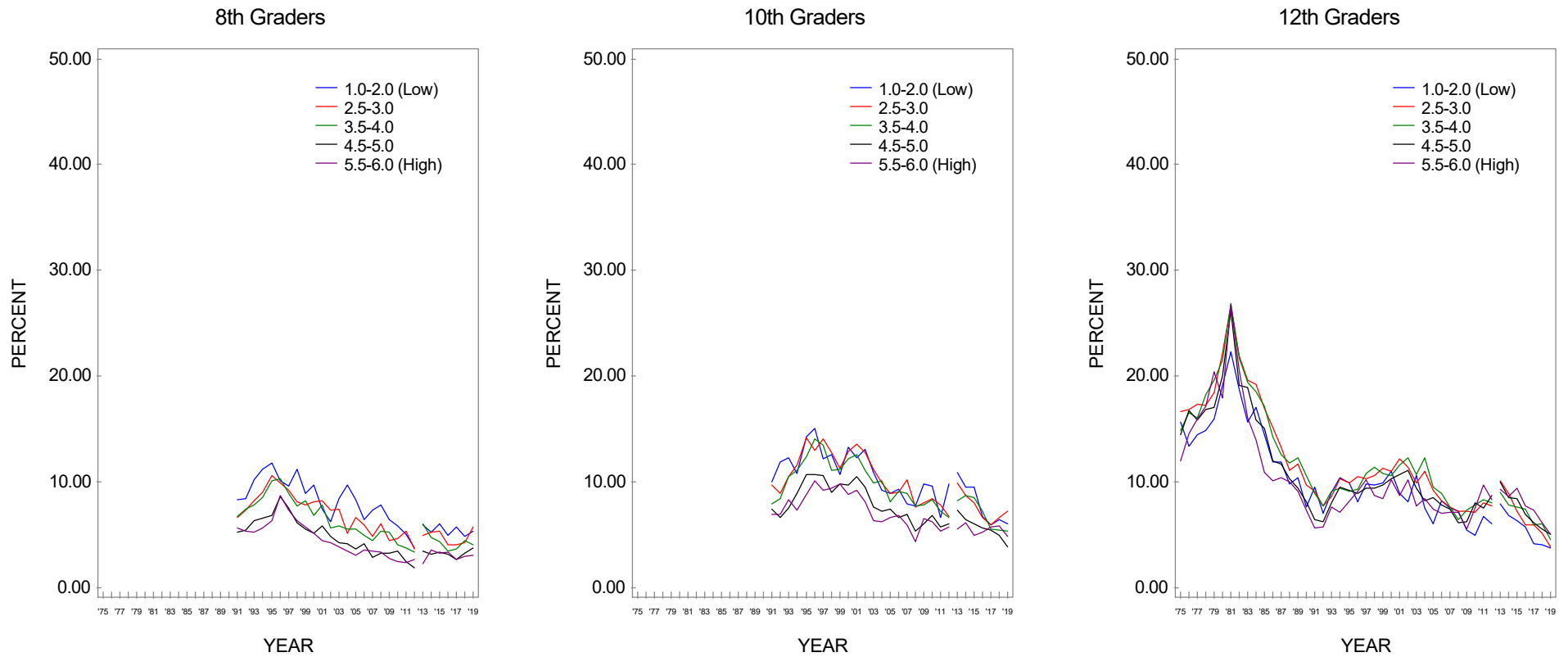
**FIGURE 136**  
**Amphetamines:\* Trends in Annual Prevalence by Population Density**



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

\*After 1982, the question about amphetamine use was revised to further clarify that nonprescription stimulants should not be included in the answers.

**FIGURE 137**  
**Amphetamines:\* Trends in Annual Prevalence by Average Education Level of Parents\*\***

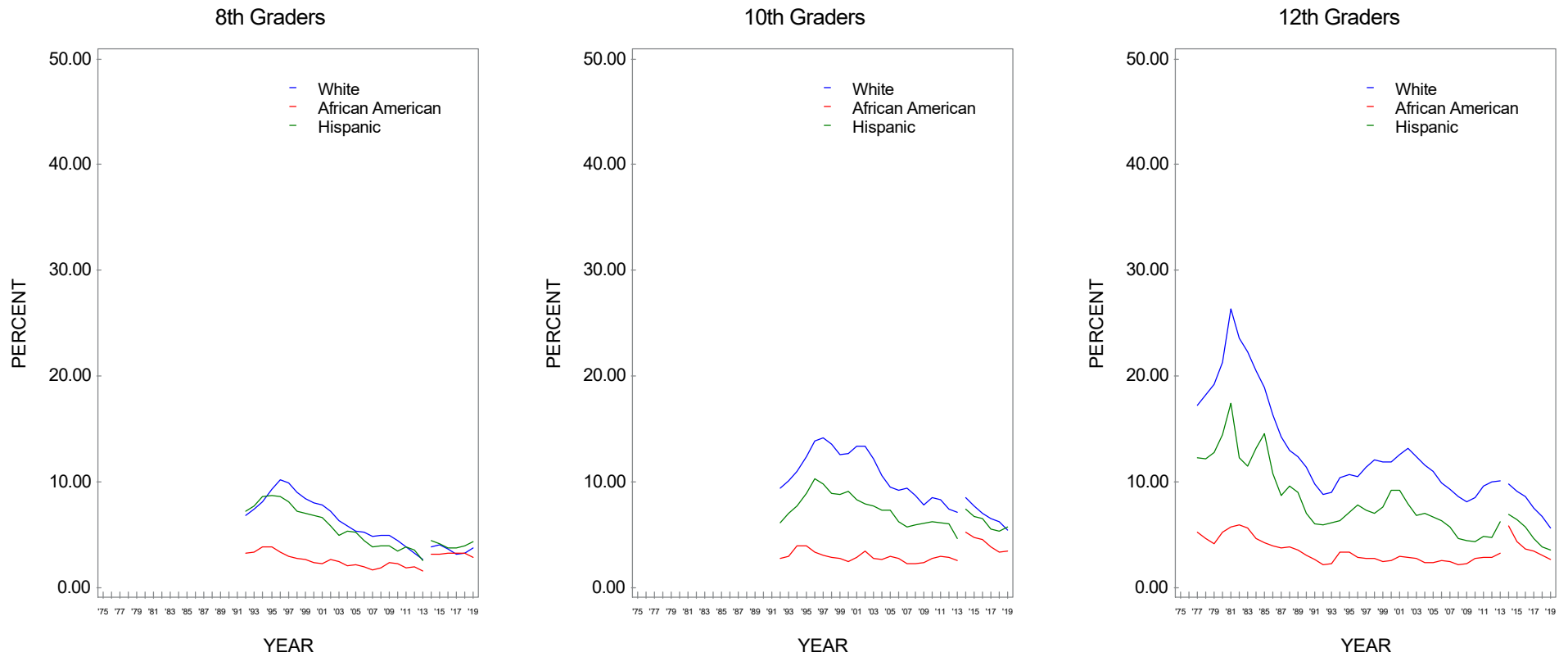


Source. The Monitoring the Future study, the University of Michigan.

\*After 1982, the question about amphetamine use was revised to further clarify that nonprescription stimulants should not be included in the answers.

\*\*Parental education is an average score of mother's education and father's education.

**FIGURE 138**  
**Amphetamines:\* Trends in Annual Prevalence by Race/Ethnicity\*\***

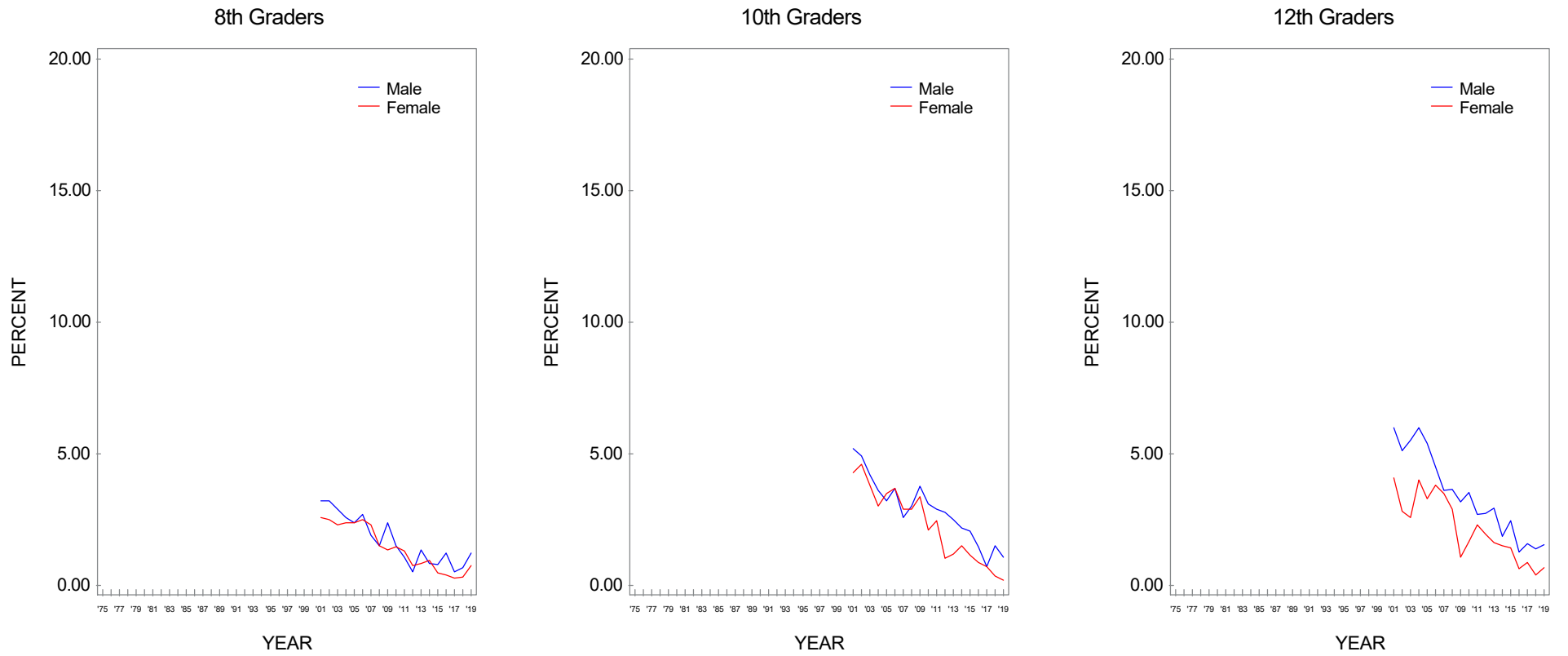


Source. The Monitoring the Future study, the University of Michigan.

\*After 1982, the question about amphetamine use was revised to further clarify that nonprescription stimulants should not be included in the answers.

\*\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

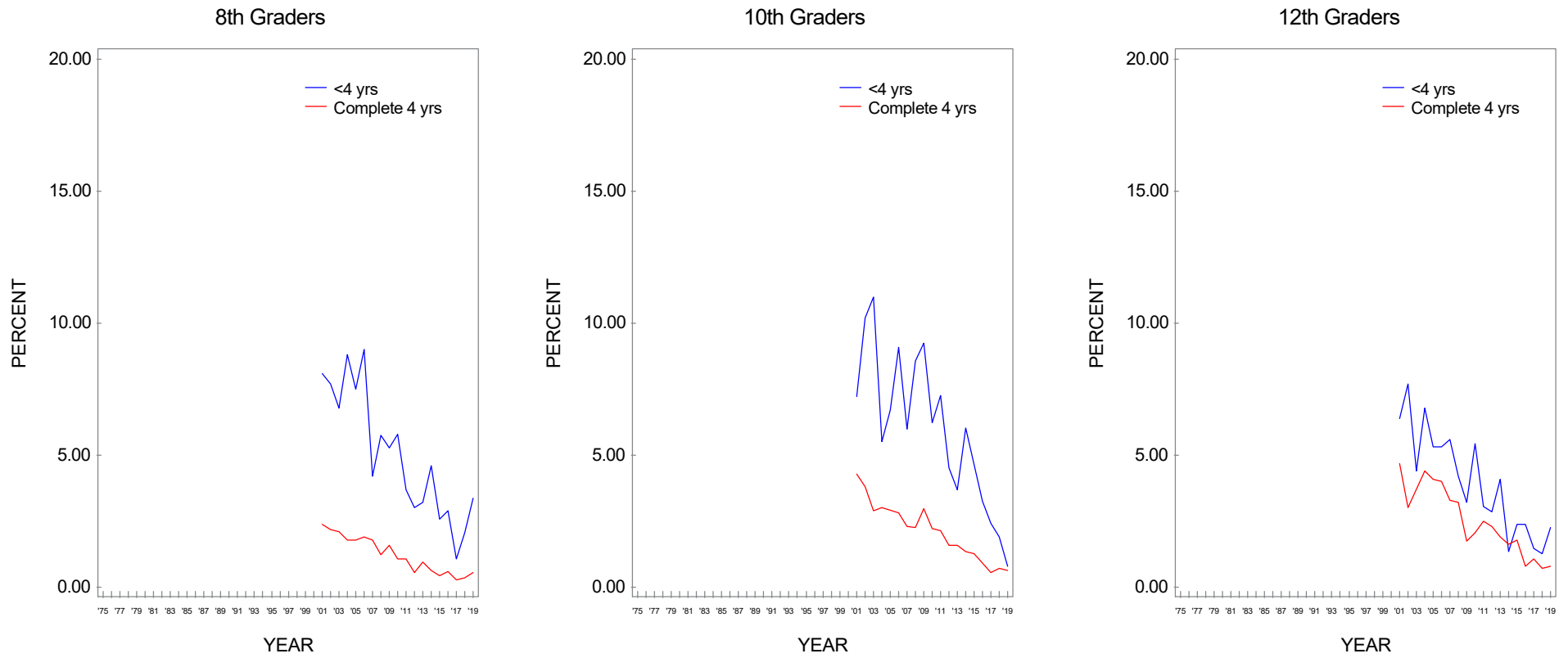
**FIGURE 139**  
**Ritalin: Trends in Annual Prevalence by Gender**



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

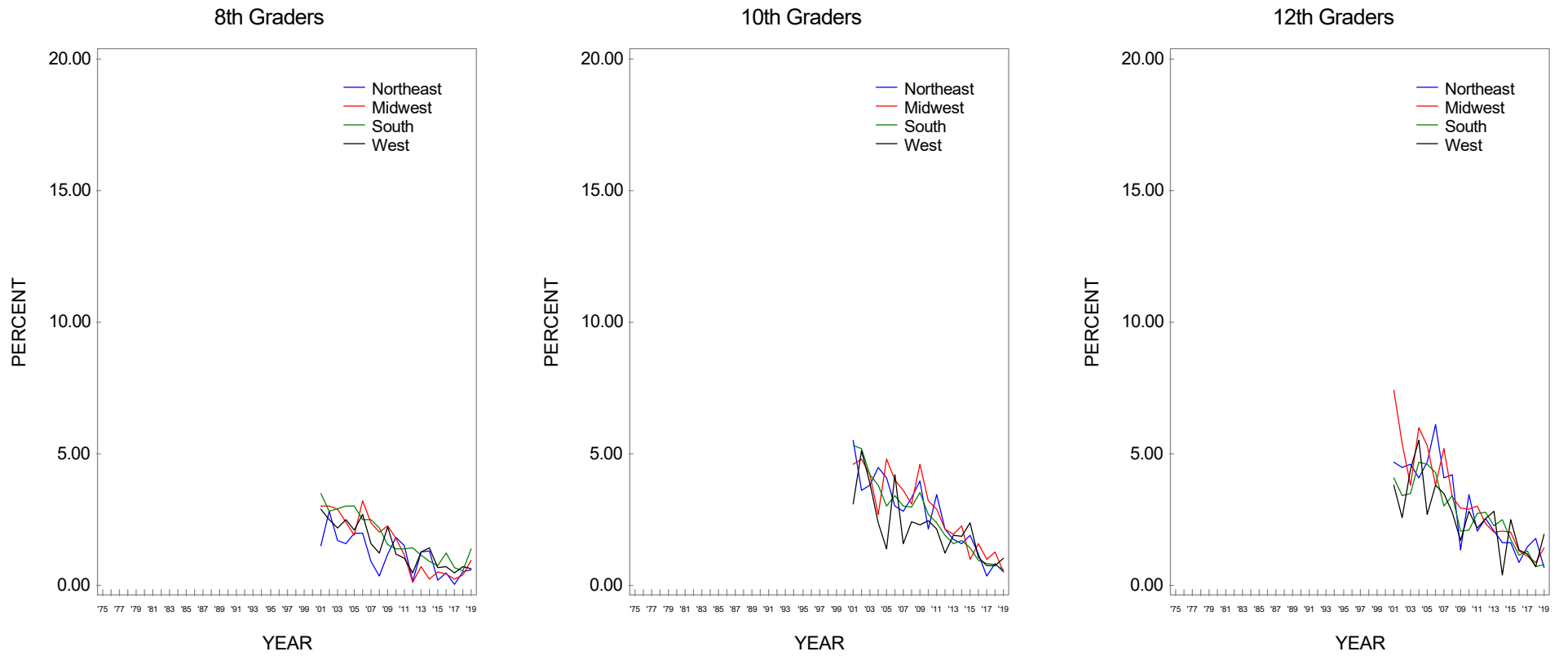


**FIGURE 140**  
**Ritalin: Trends in Annual Prevalence by College Plans**



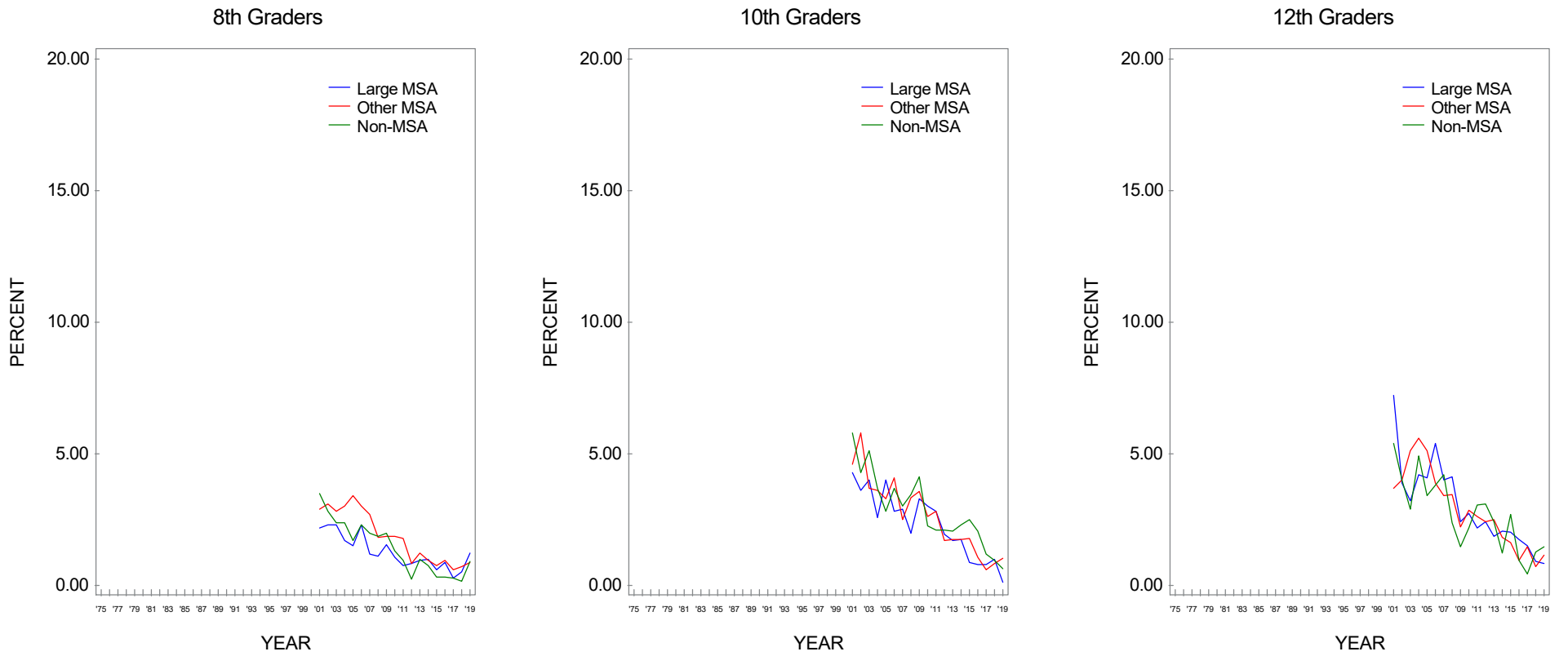
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 141**  
**Ritalin: Trends in Annual Prevalence by Region**



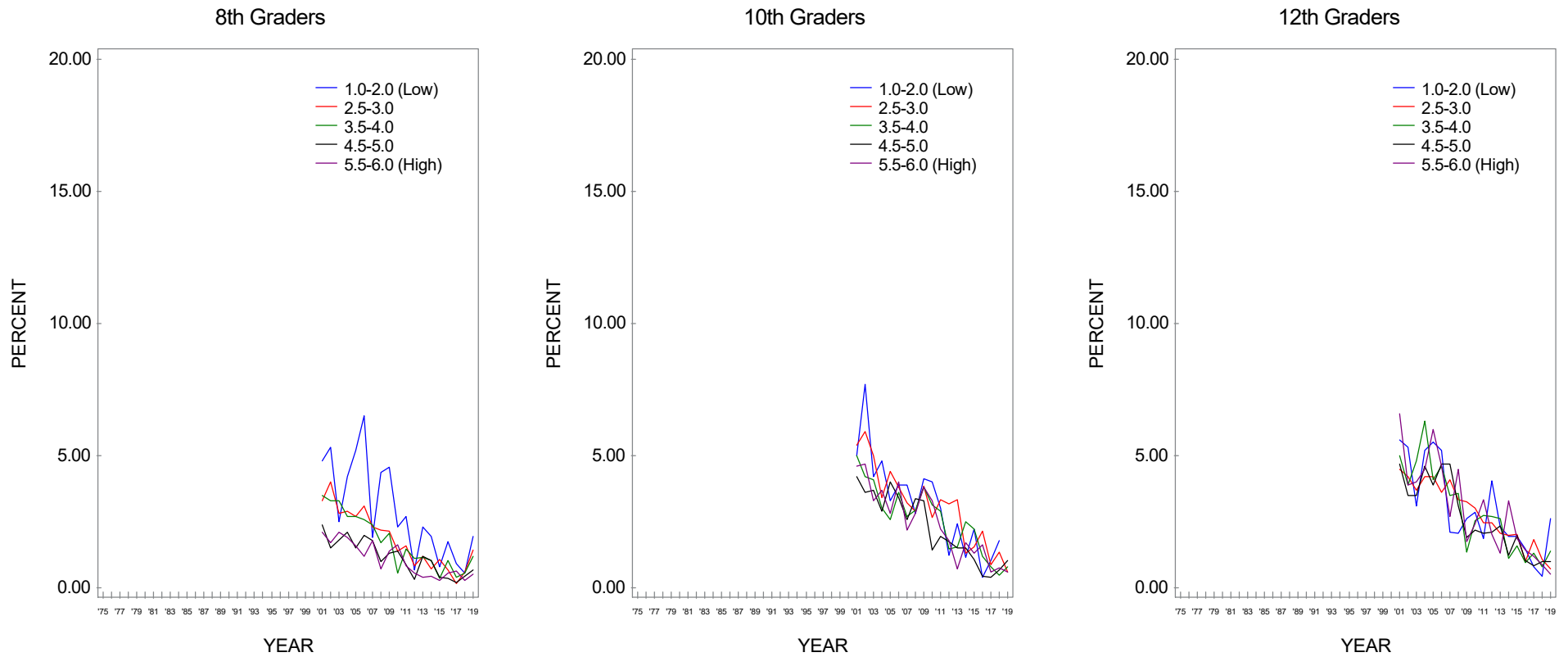
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 142**  
**Ritalin: Trends in Annual Prevalence by Population Density**



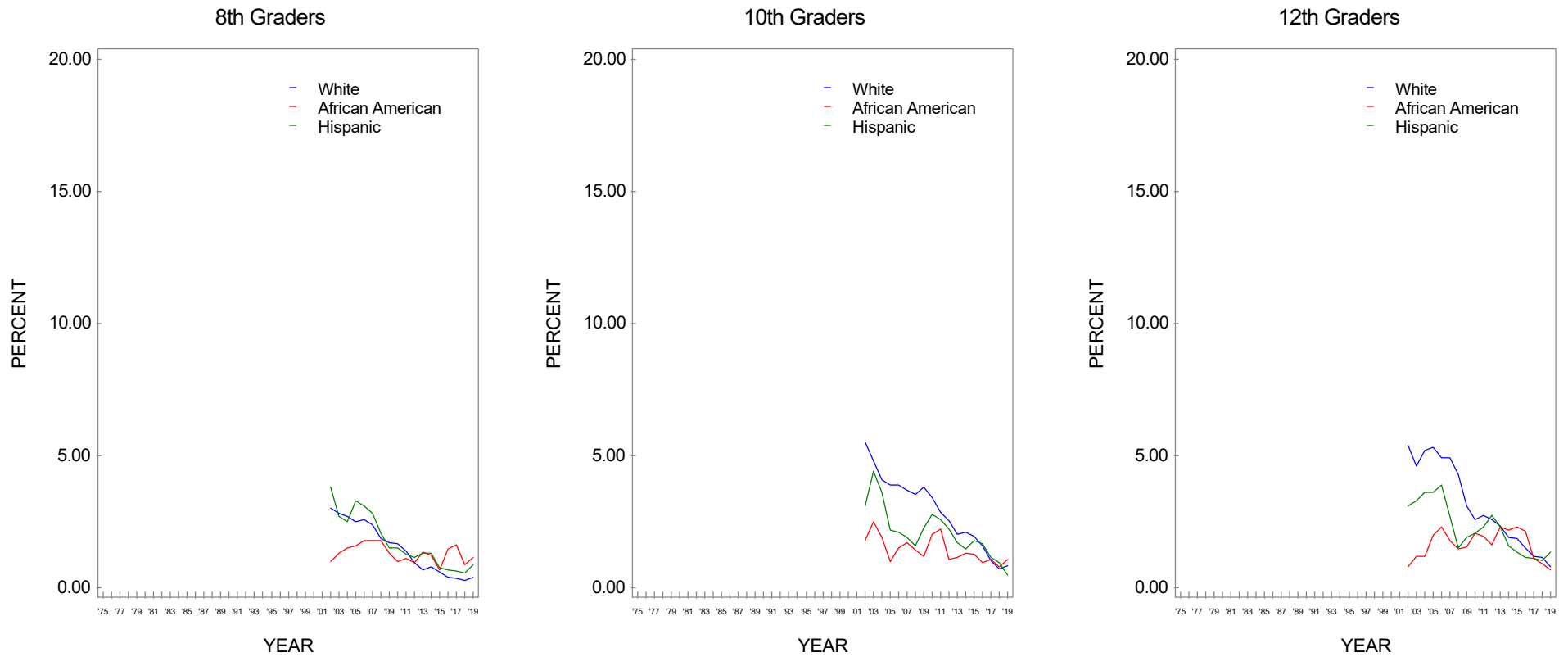
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 143**  
**Ritalin: Trends in Annual Prevalence by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*Parental education is an average score of mother's education and father's education.

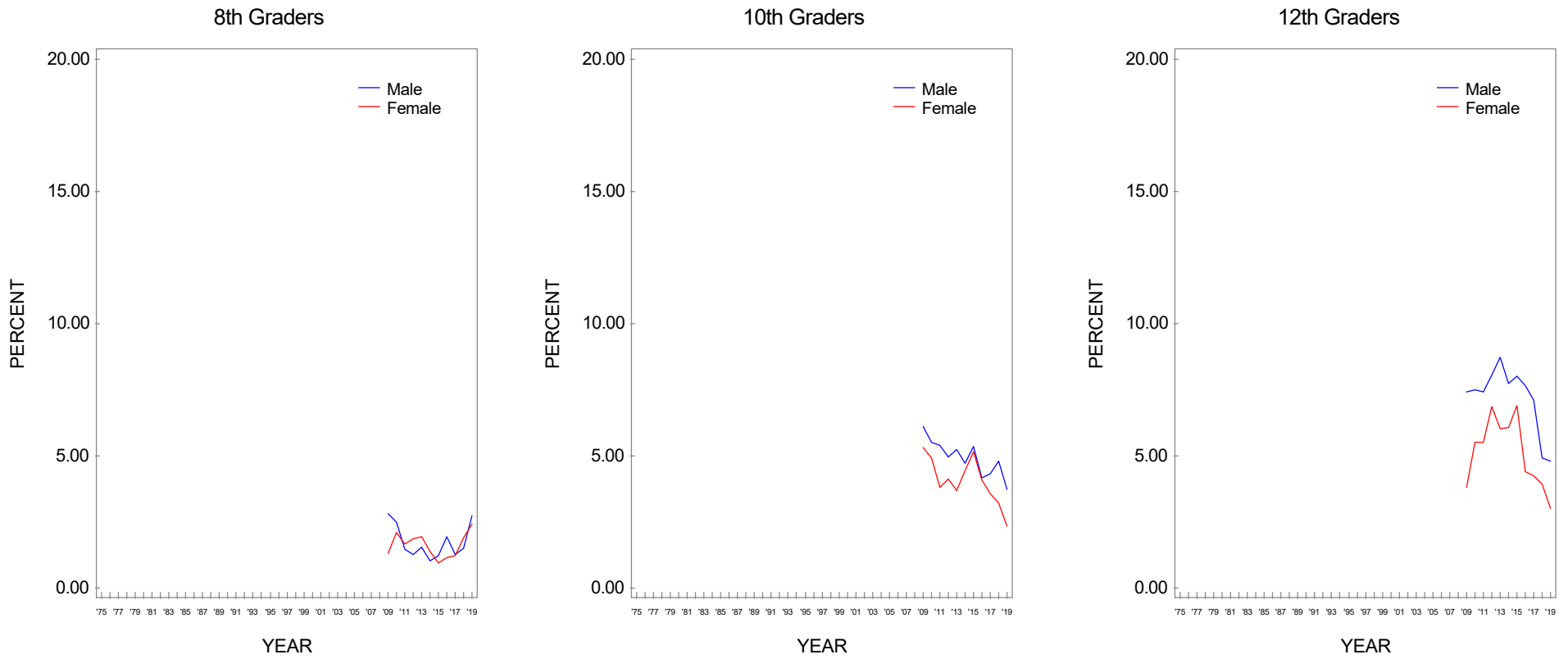
**FIGURE 144**  
**Ritalin: Trends in Annual Prevalence by Race/Ethnicity\***



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

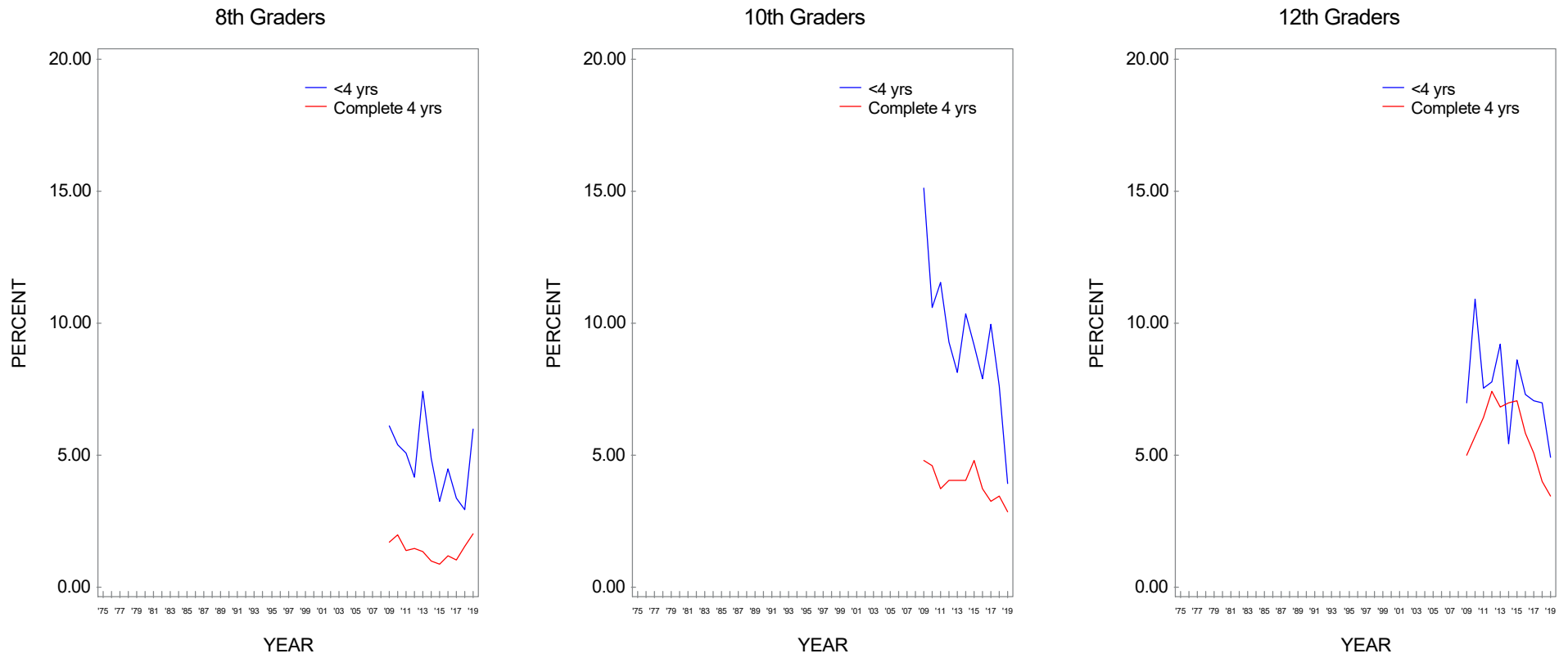
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 145**  
**Adderall: Trends in Annual Prevalence by Gender**



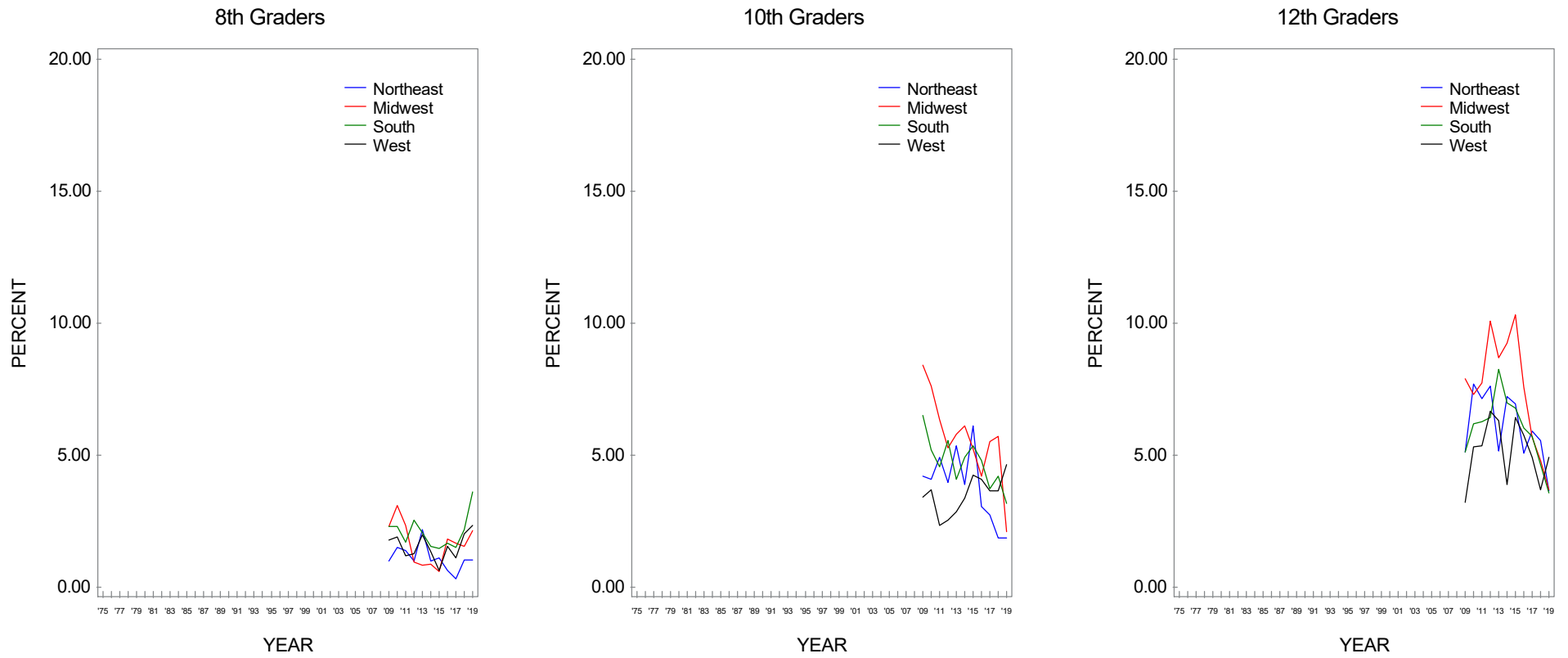
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 146**  
**Adderall: Trends in Annual Prevalence by College Plans**



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

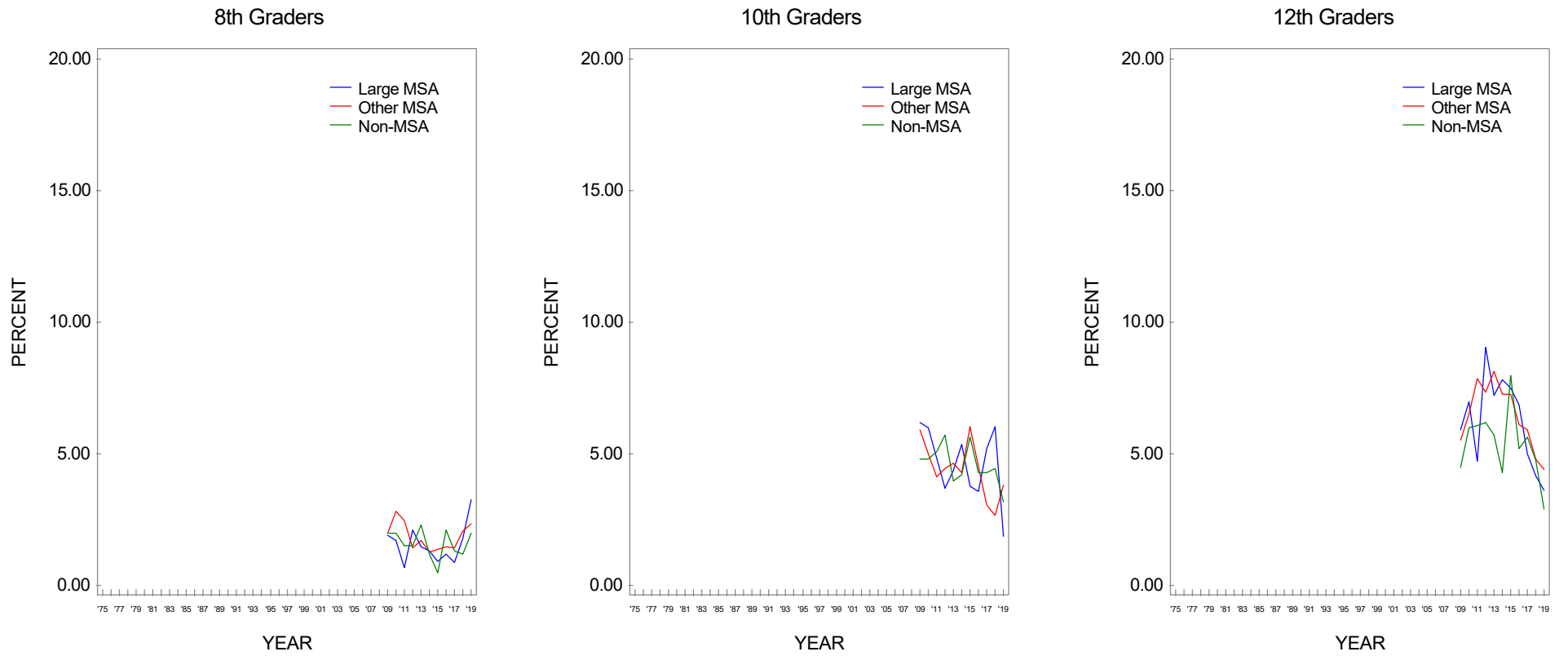
**FIGURE 147**  
**Adderall: Trends in Annual Prevalence by Region**



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

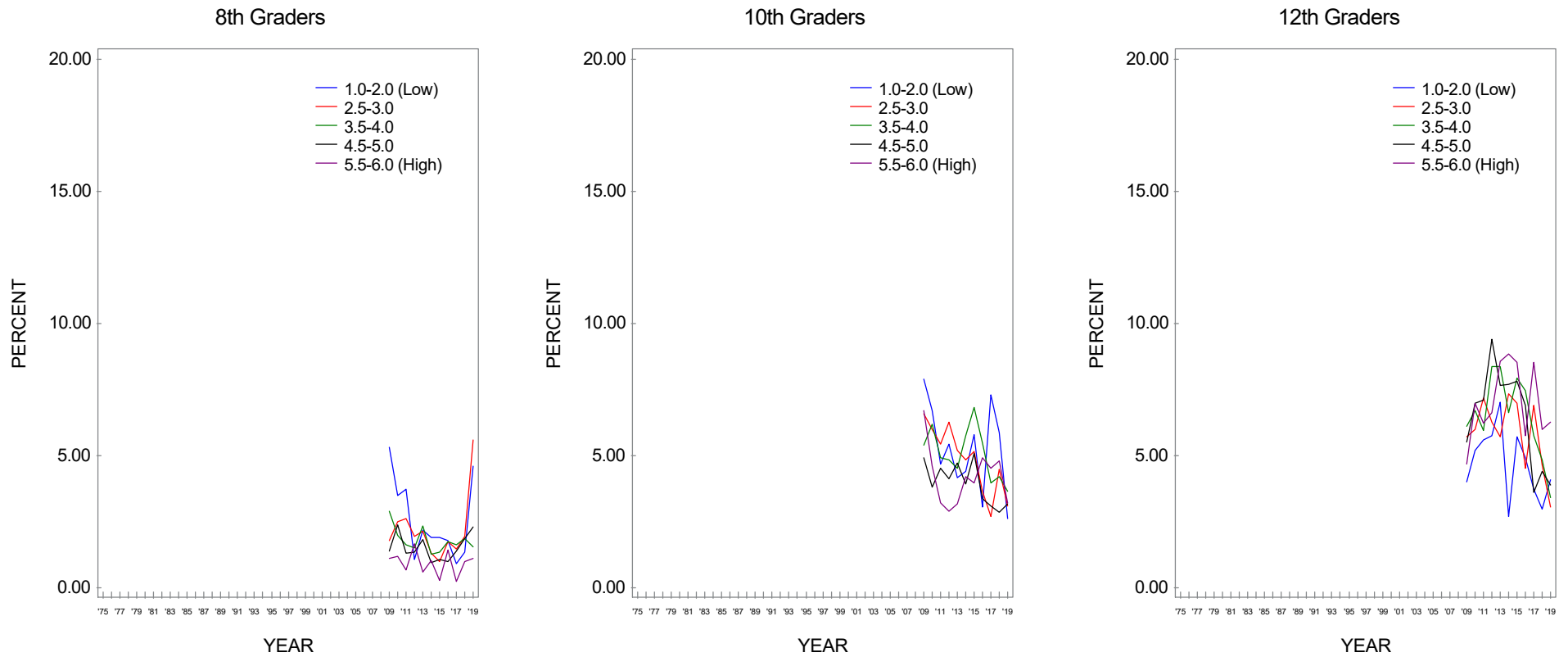


**FIGURE 148**  
**Adderall: Trends in Annual Prevalence by Population Density**



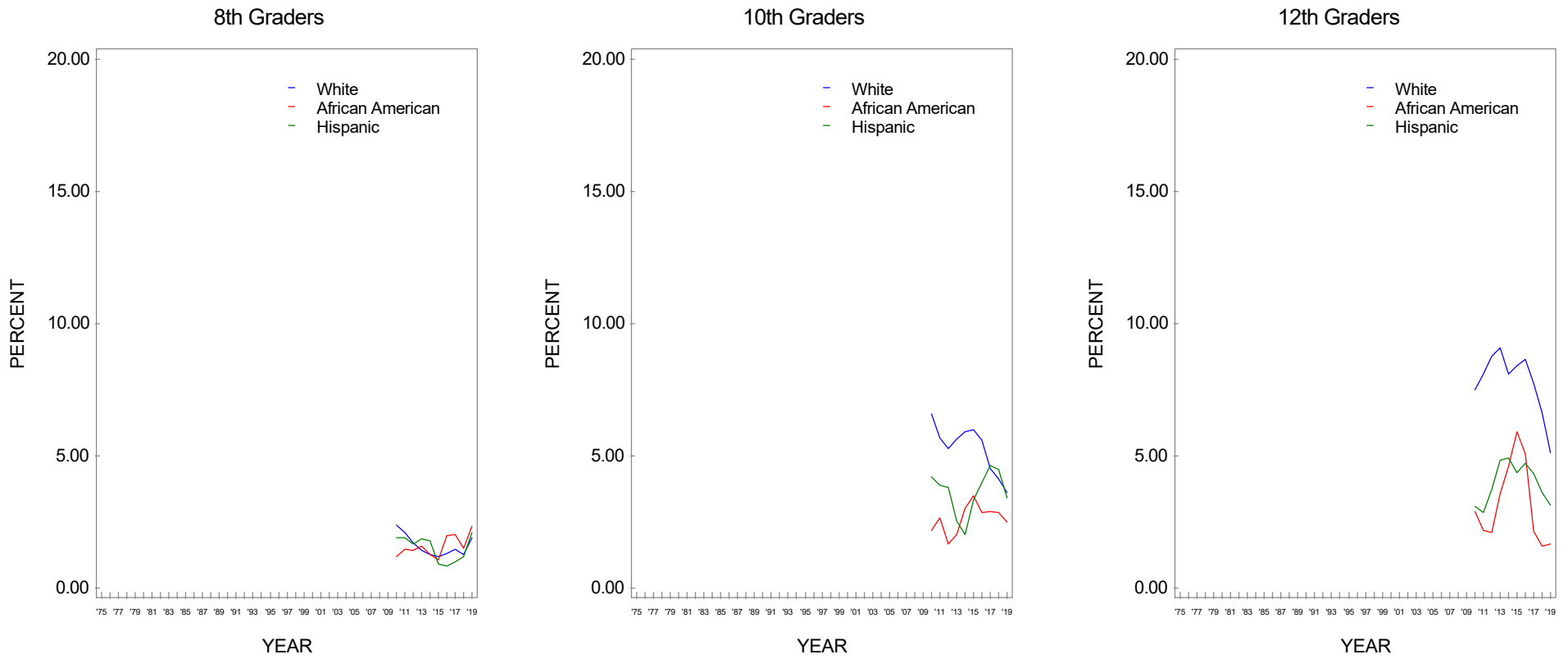
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 149**  
**Adderall: Trends in Annual Prevalence by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*Parental education is an average score of mother's education and father's education.

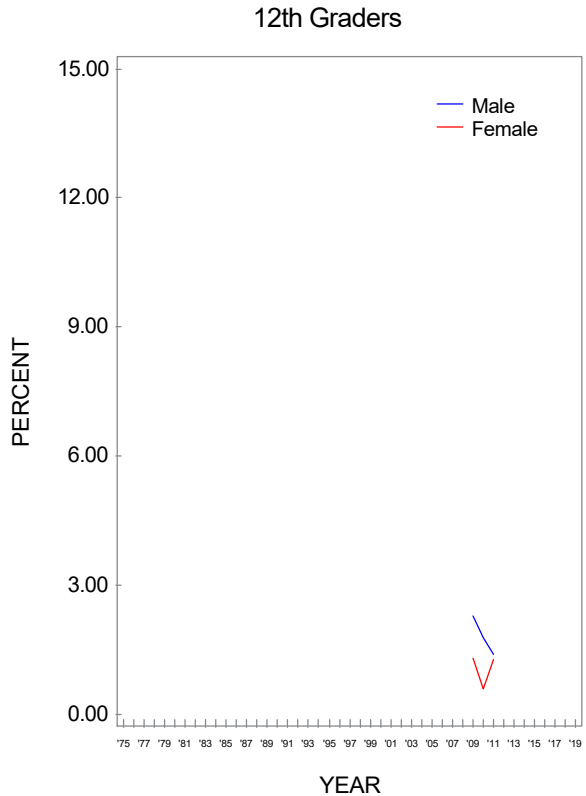
**FIGURE 150**  
**Adderall: Trends in Annual Prevalence by Race/Ethnicity\***



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

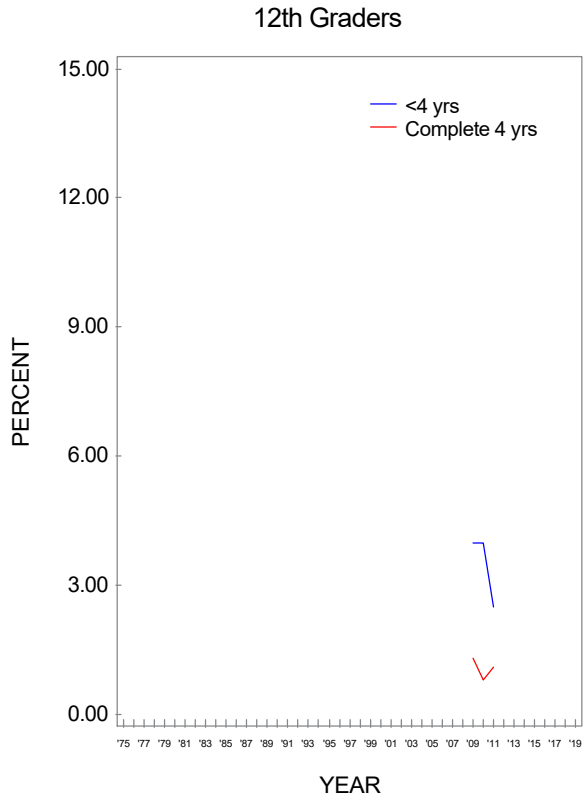
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 151**  
**Provigil:\* Trends in Annual Prevalence by Gender**



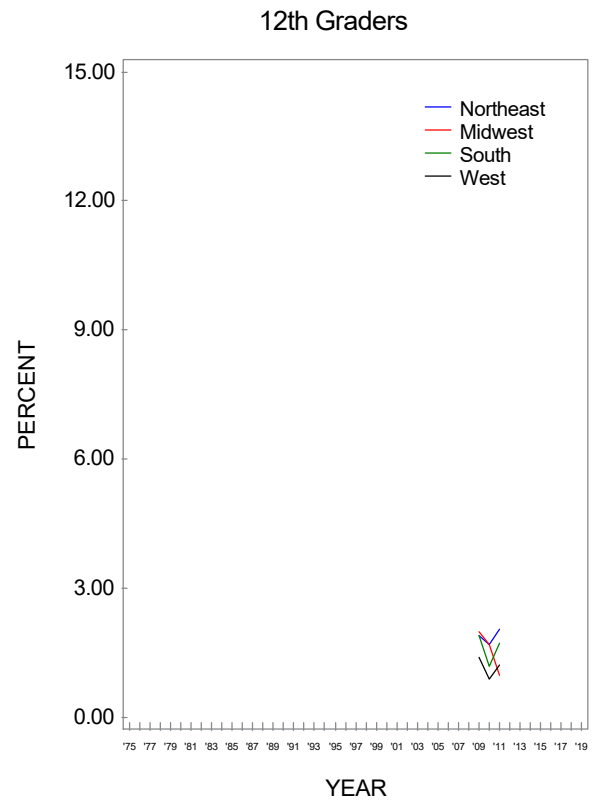
Source. The Monitoring the Future study, the University of Michigan.  
\*Question discontinued in 2012.

**FIGURE 152**  
**Provigil:\* Trends in Annual Prevalence by College Plans**



Source. The Monitoring the Future study, the University of Michigan.  
\*Question discontinued in 2012.

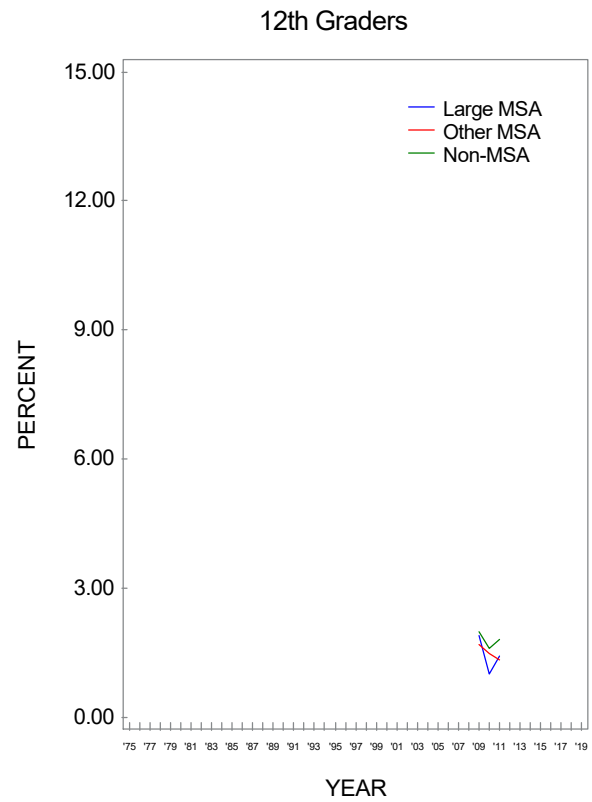
**FIGURE 153**  
**Provigil:\* Trends in Annual Prevalence by Region**



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

\*Question discontinued in 2012.

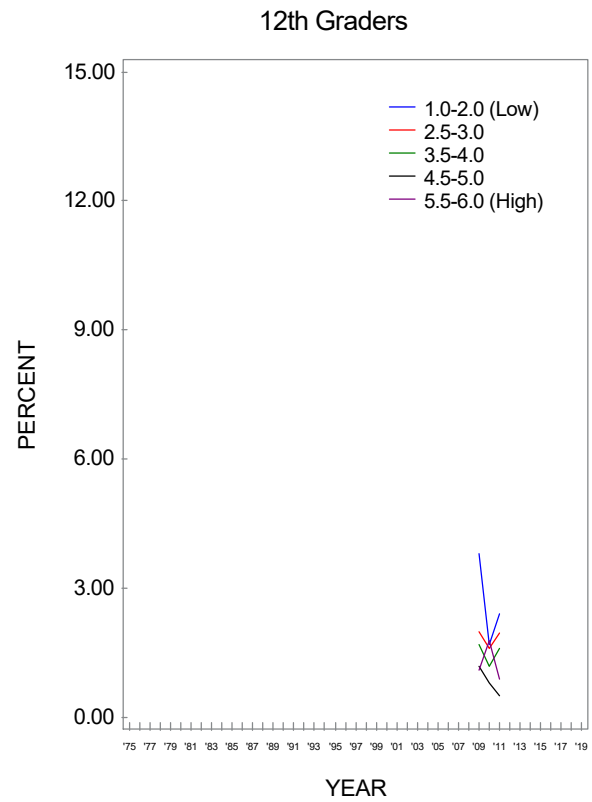
**FIGURE 154**  
**Provigil:\* Trends in Annual Prevalence by Population Density**



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

\*Question discontinued in 2012.

**FIGURE 155**  
**Provigil:\* Trends in Annual Prevalence by Average Education Level of Parents\*\***



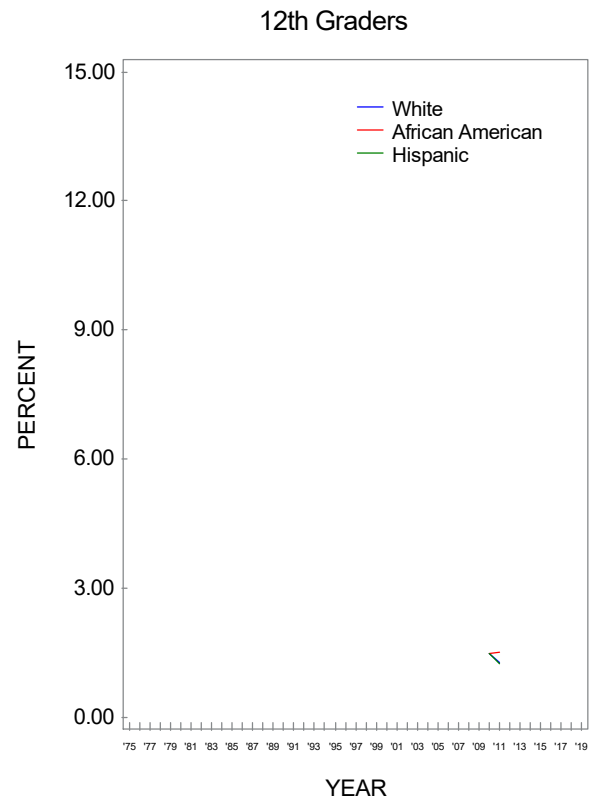
Source. The Monitoring the Future study, the University of Michigan.

\*Question discontinued in 2012.

\*\*Parental education is an average score of mother's education and father's education.



**FIGURE 156**  
**Provigil:\* Trends in Annual Prevalence by Race/Ethnicity\*\***

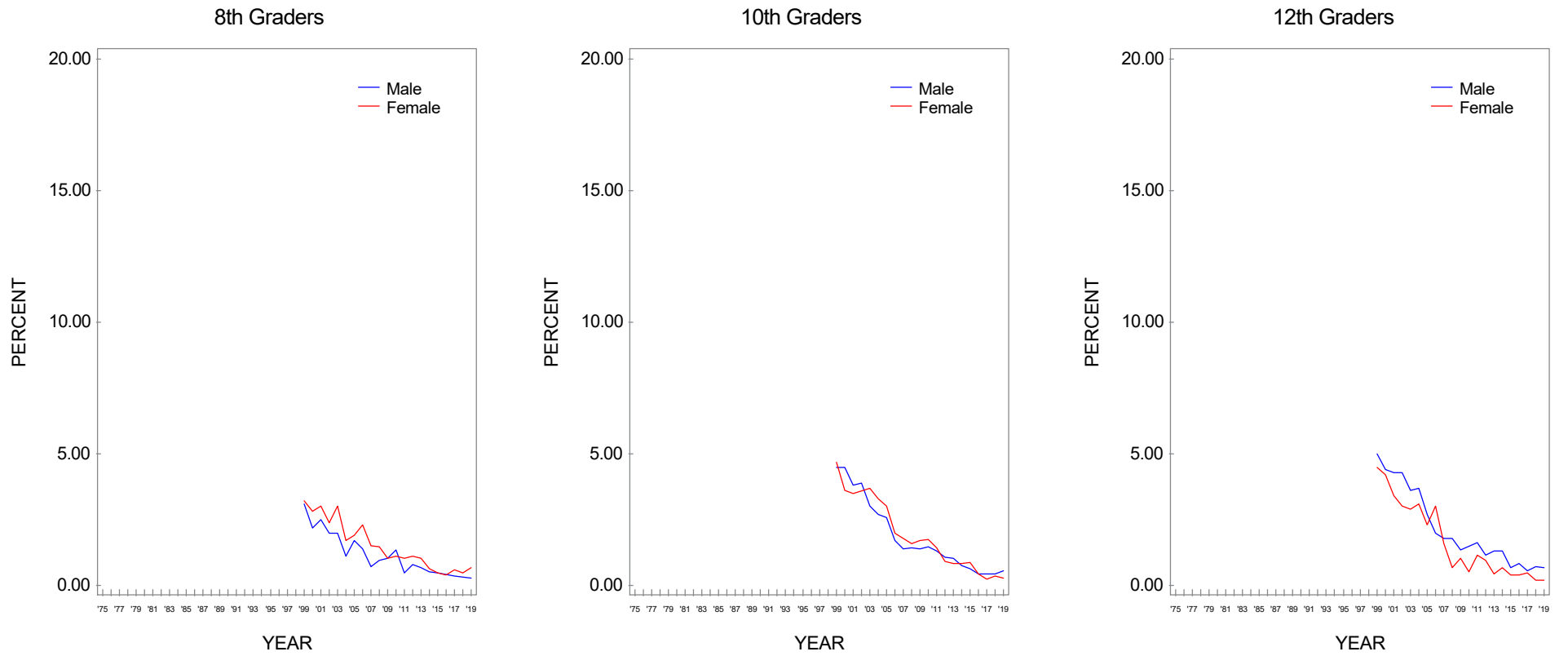


Source. The Monitoring the Future study, the University of Michigan.

\*Question discontinued in 2012.

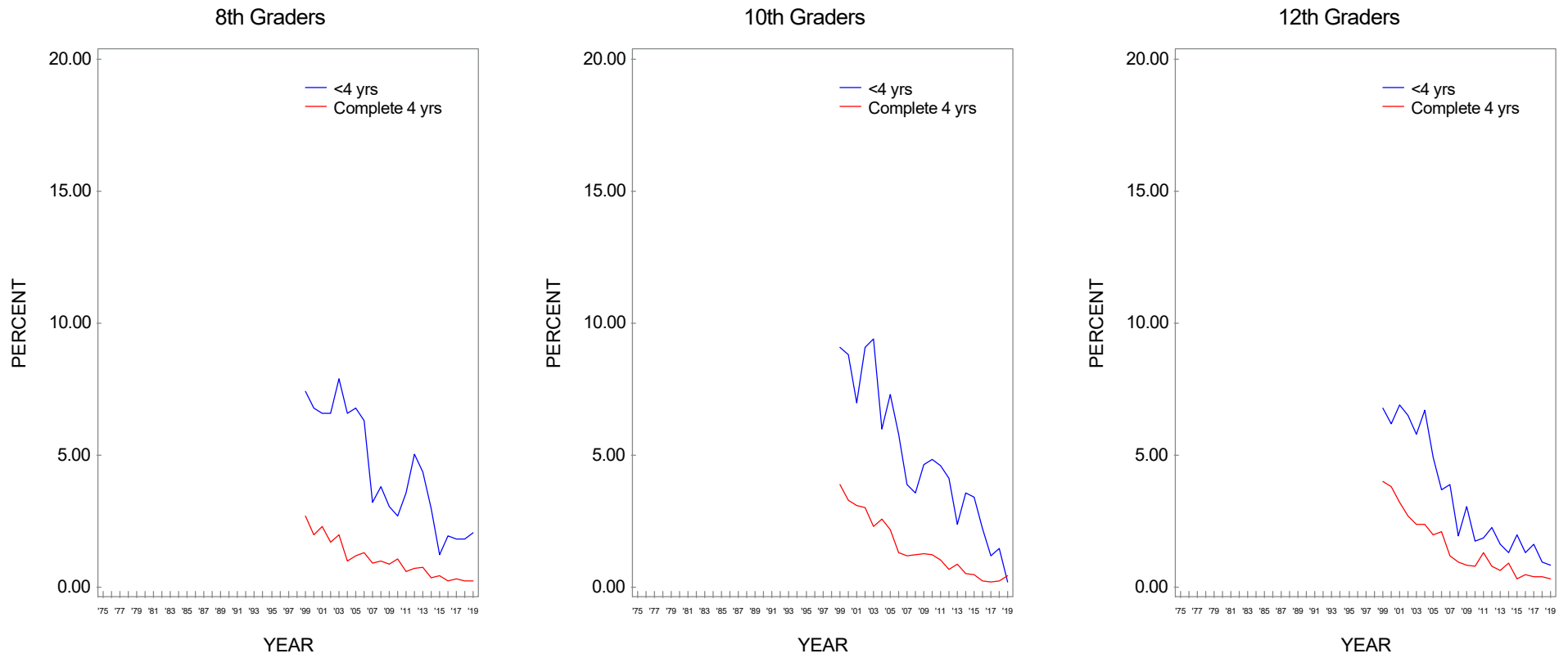
\*\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 157**  
**Methamphetamine: Trends in Annual Prevalence by Gender**



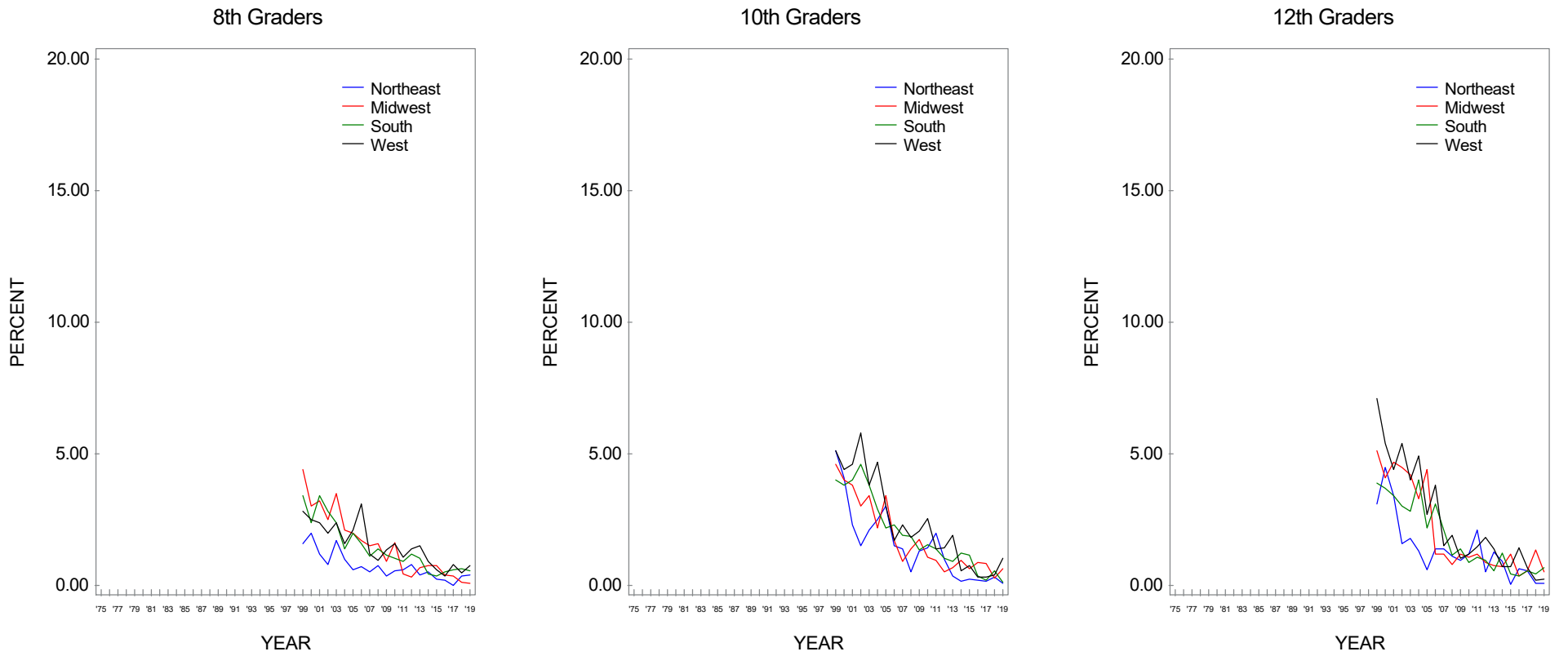
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 158**  
**Methamphetamine: Trends in Annual Prevalence by College Plans**



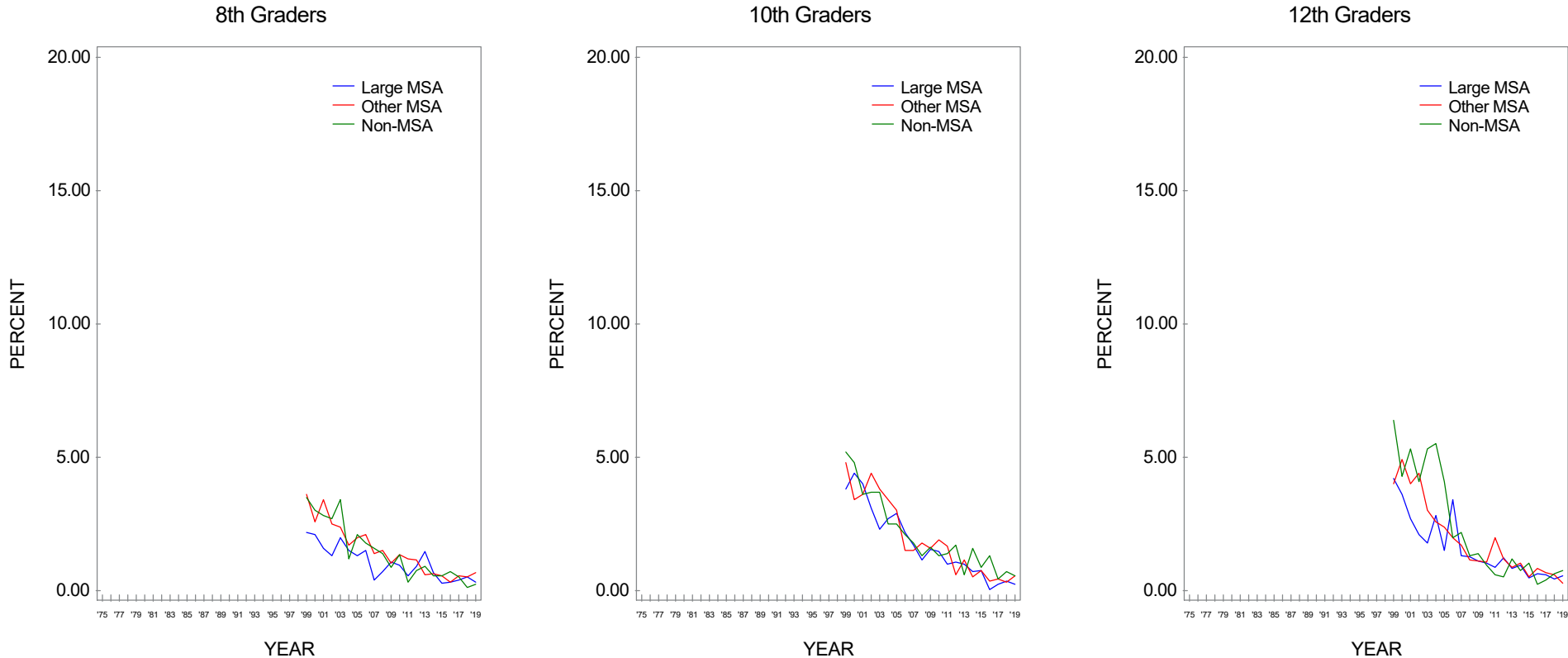
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 159**  
**Methamphetamine: Trends in Annual Prevalence by Region**



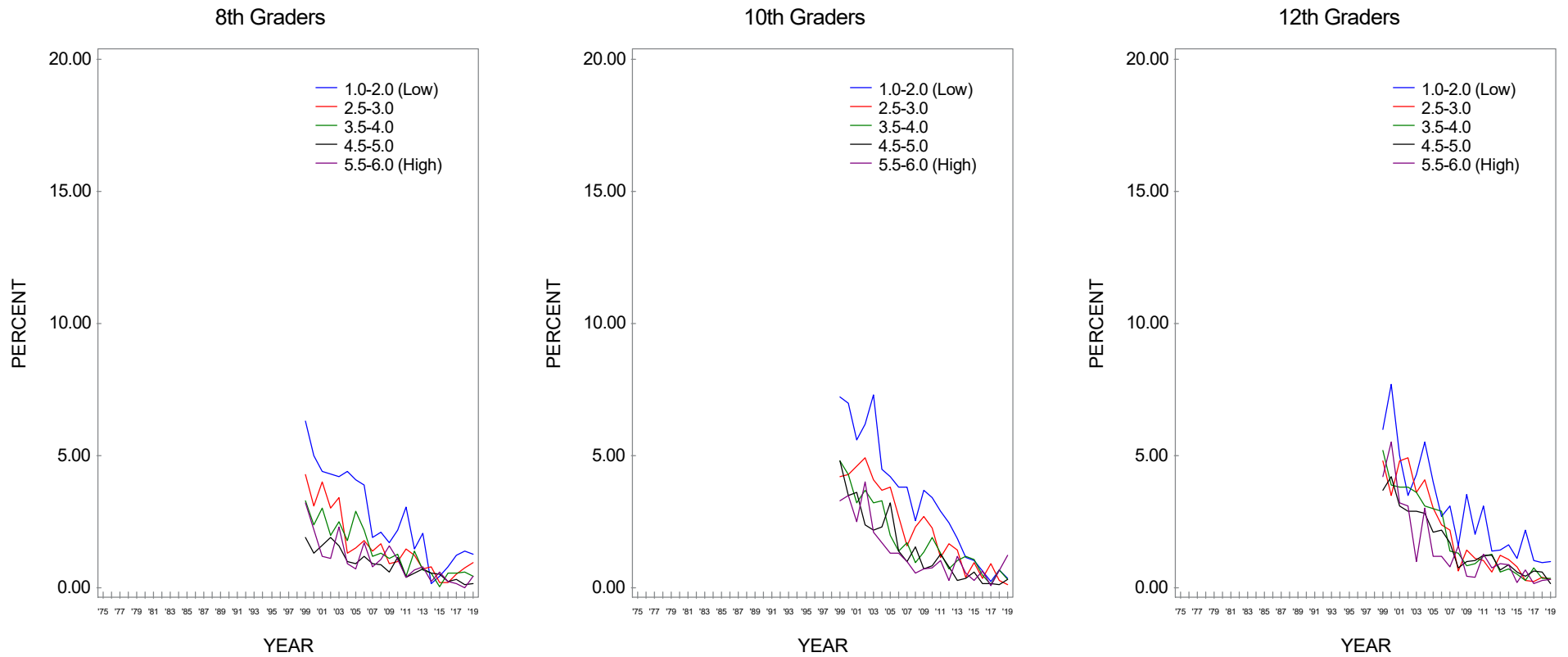
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 160**  
**Methamphetamine: Trends in Annual Prevalence by Population Density**



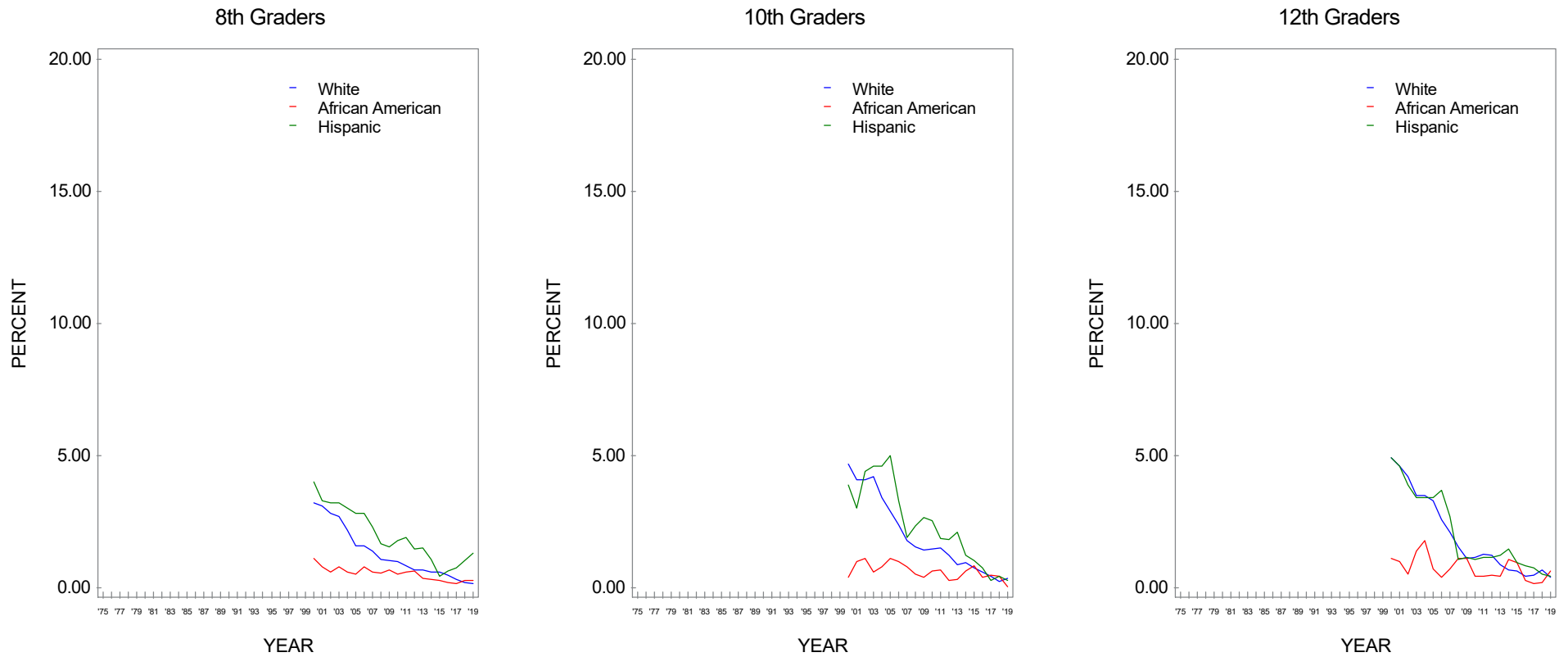
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 161**  
**Methamphetamine: Trends in Annual Prevalence by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*Parental education is an average score of mother's education and father's education.

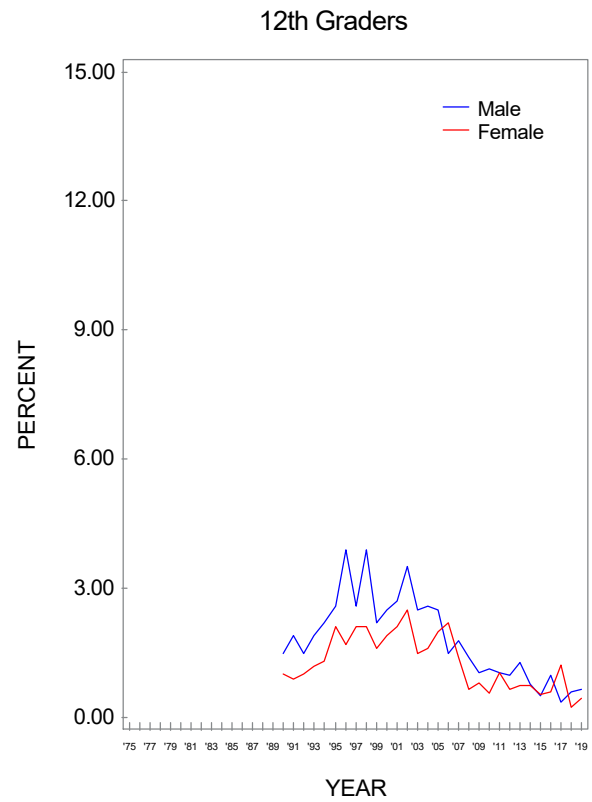
**FIGURE 162**  
**Methamphetamine: Trends in Annual Prevalence by Race/Ethnicity\***



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

\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

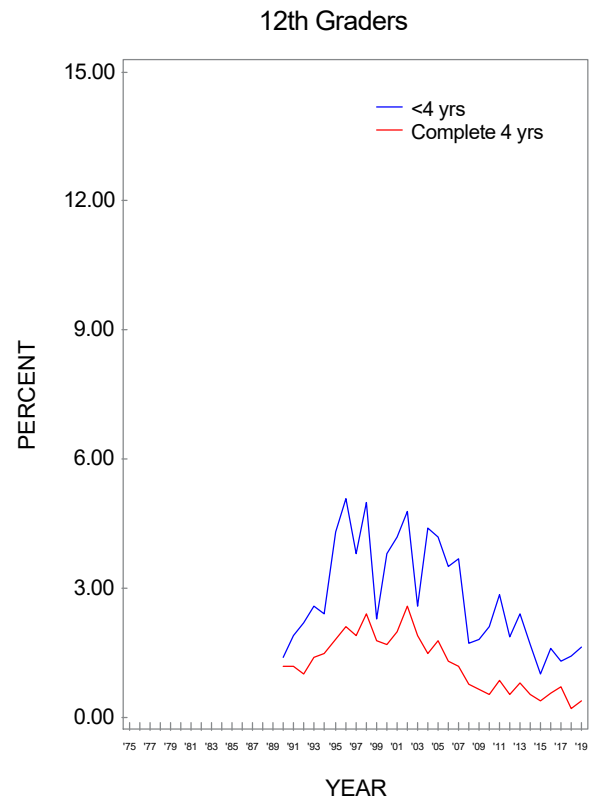
**FIGURE 163**  
**Crystal Methamphetamine (Ice): Trends in Annual Prevalence by Gender**



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

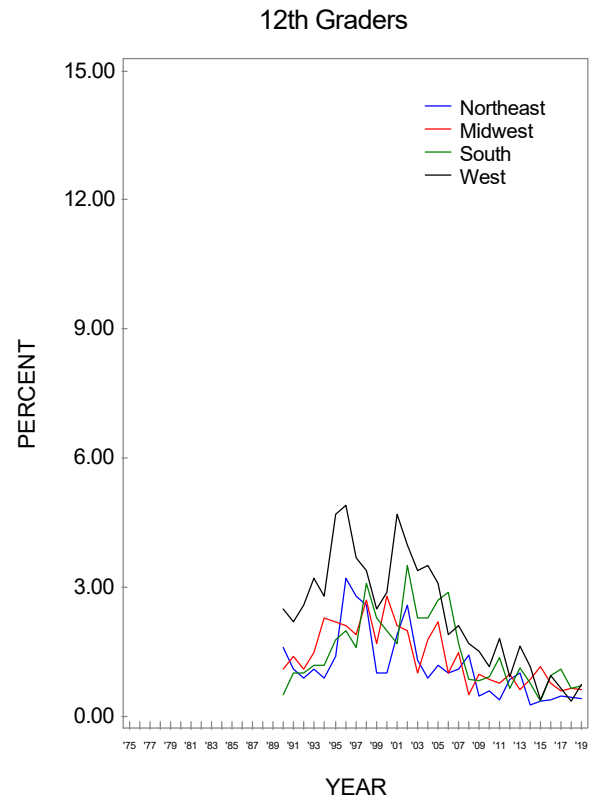


**FIGURE 164**  
**Crystal Methamphetamine (Ice): Trends in Annual Prevalence by College Plans**



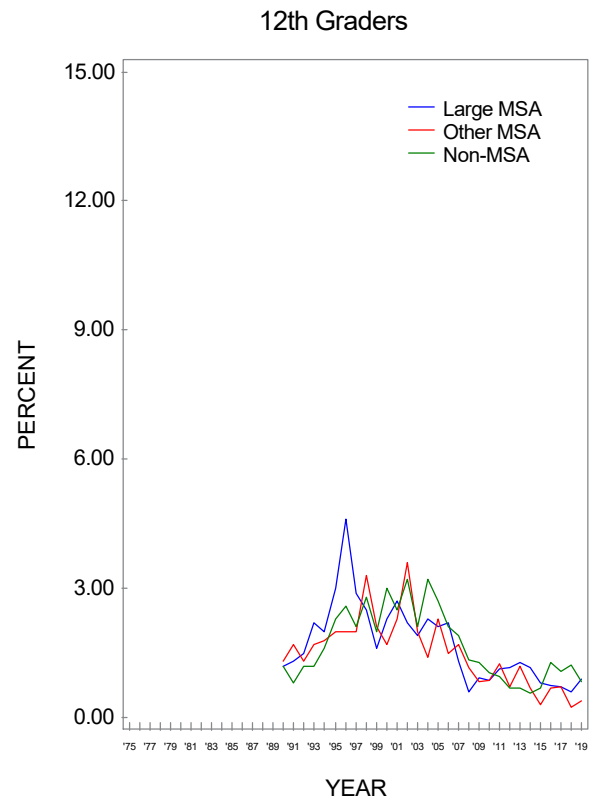
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 165**  
**Crystal Methamphetamine (Ice): Trends in Annual Prevalence by Region**



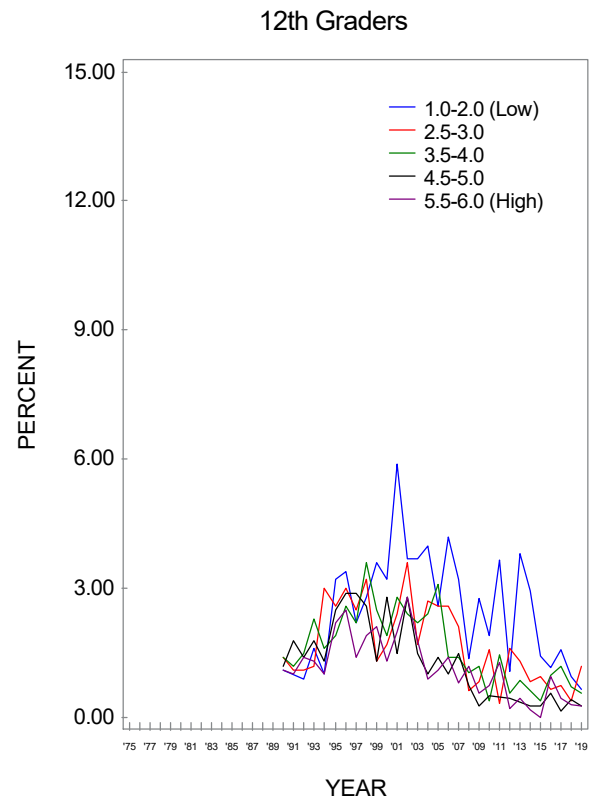
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 166**  
**Crystal Methamphetamine (Ice): Trends in Annual Prevalence by Population Density**



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

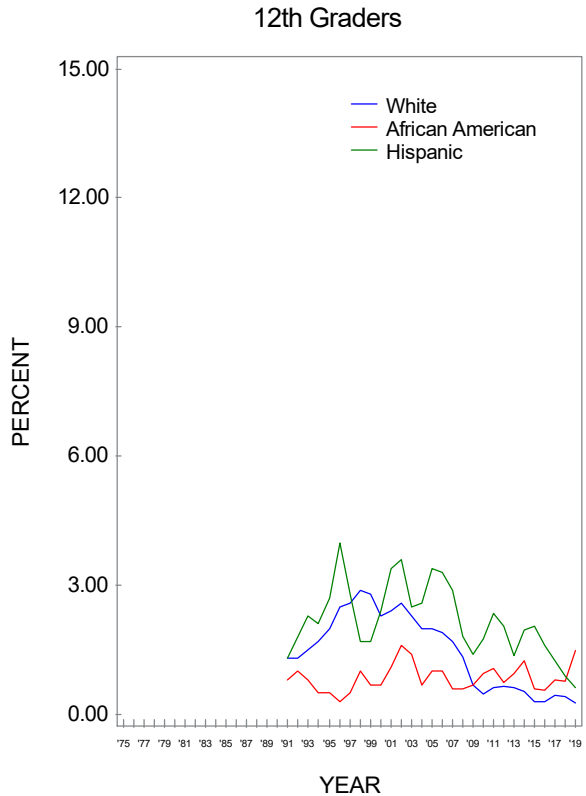
**FIGURE 167**  
**Crystal Methamphetamine (Ice): Trends in Annual Prevalence by Average Education Level of Parents\***



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

\*Parental education is an average score of mother's education and father's education.

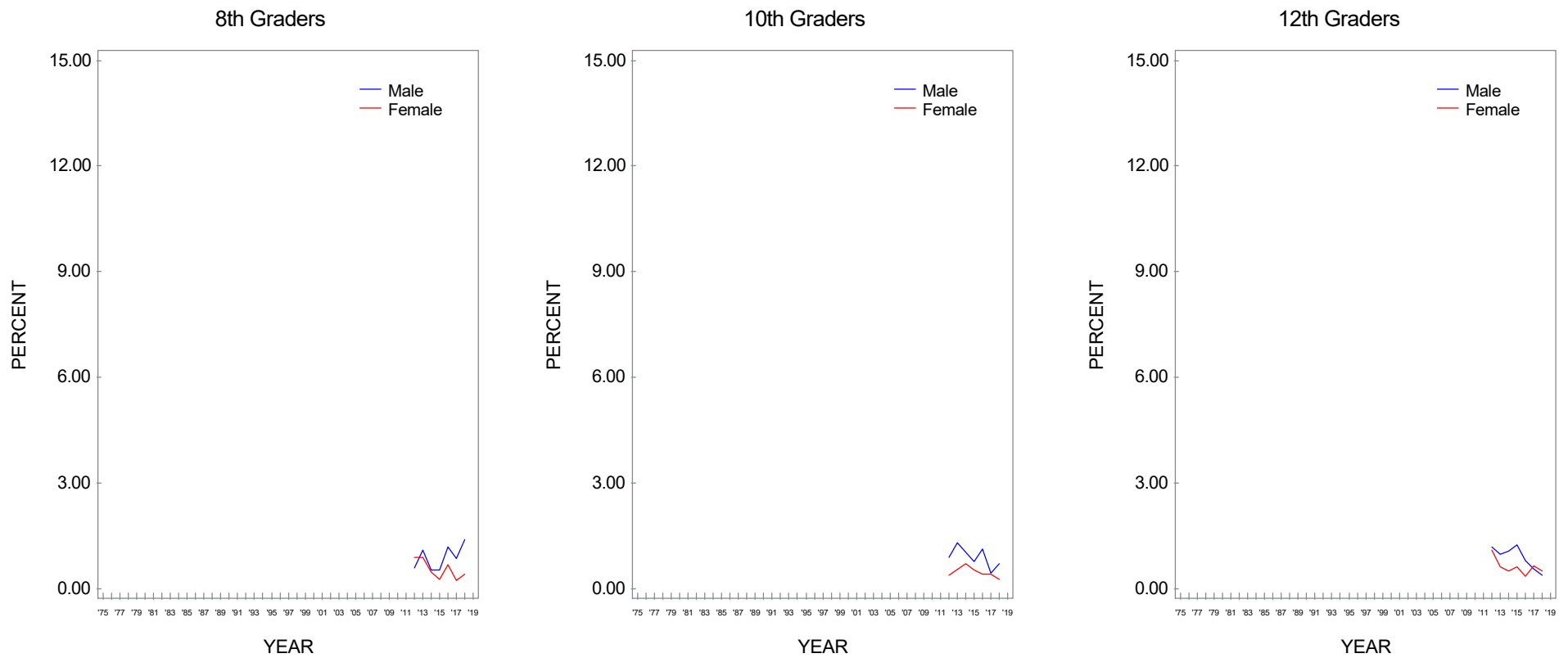
**FIGURE 168**  
**Crystal Methamphetamine (Ice): Trends in Annual Prevalence by Race/Ethnicity\***



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

\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

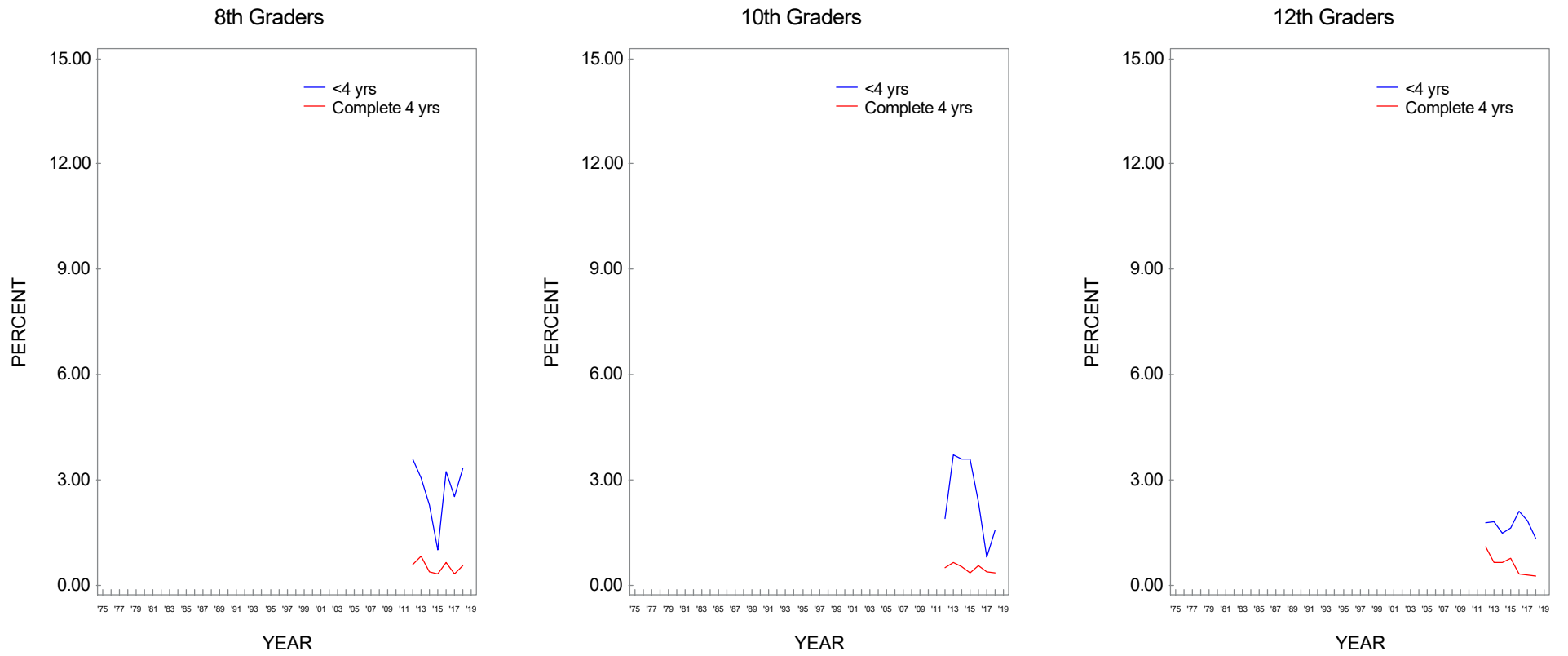
**FIGURE 169**  
**Bath Salts (Synthetic Stimulants):\* Trends in Annual Prevalence by Gender**



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

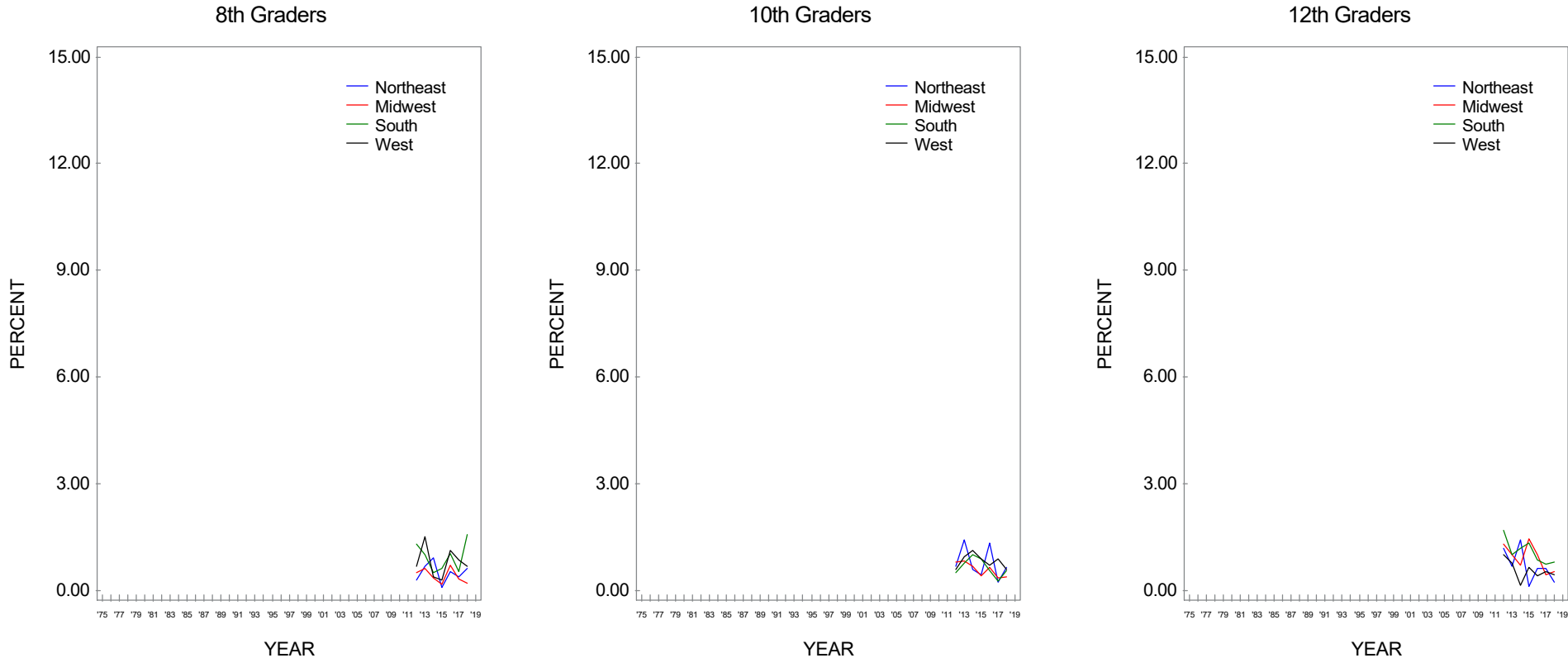
\*Question discontinued in 2019.

**FIGURE 170**  
**Bath Salts (Synthetic Stimulants): Trends in Annual Prevalence by College Plans**



Source. The Monitoring the Future study, the University of Michigan.  
 \*Question discontinued in 2019.

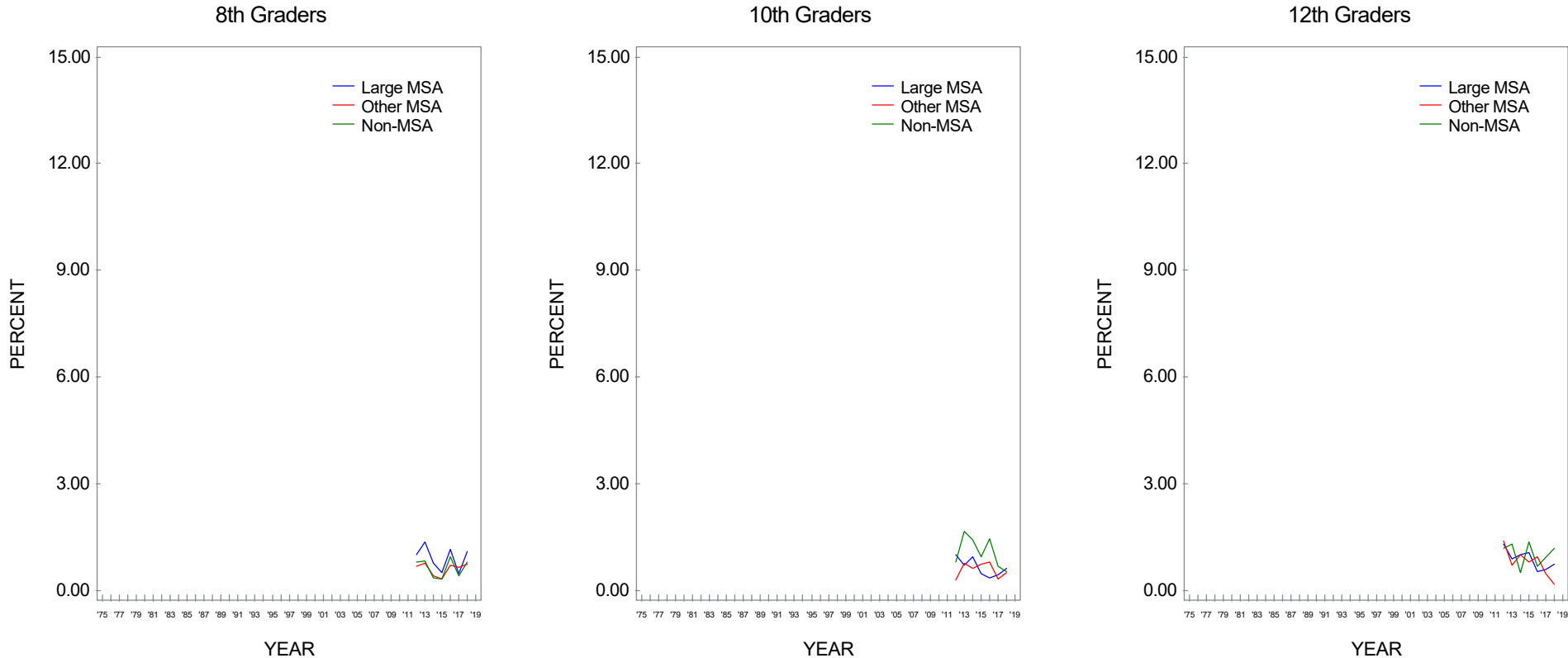
**FIGURE 171**  
**Bath Salts (Synthetic Stimulants):\* Trends in Annual Prevalence by Region**



Source. The Monitoring the Future study, the University of Michigan.  
 \*Question discontinued in 2019.

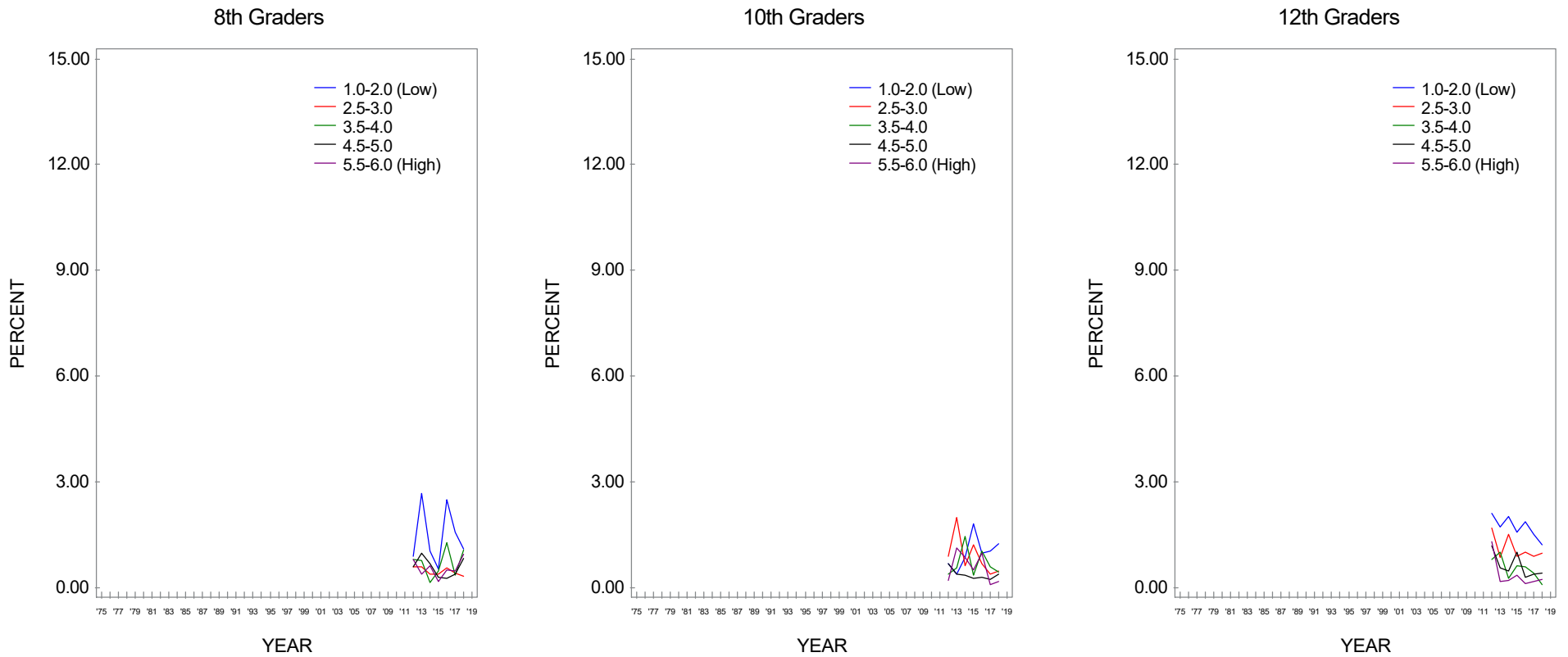


**FIGURE 172**  
**Bath Salts (Synthetic Stimulants):\* Trends in Annual Prevalence by Population Density**



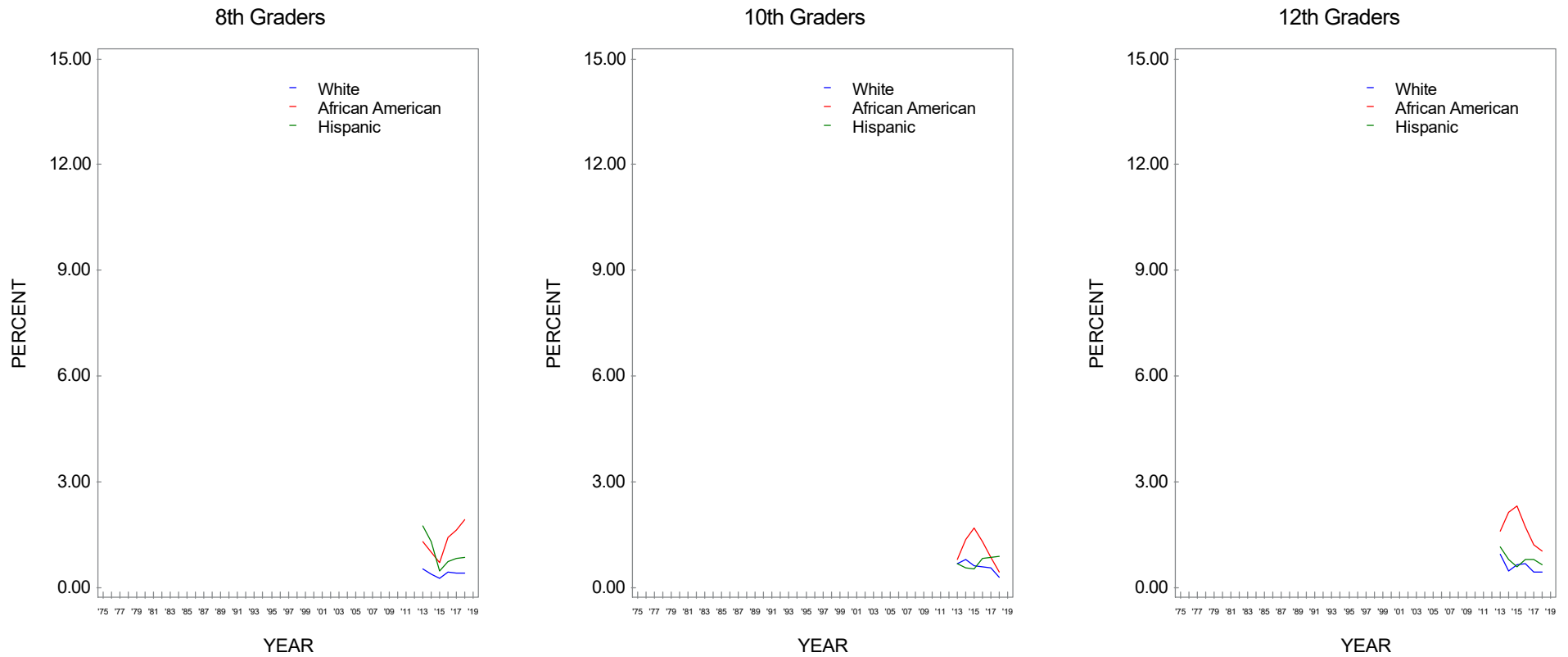
Source. The Monitoring the Future study, the University of Michigan.  
 \*Question discontinued in 2019.

**FIGURE 173**  
**Bath Salts (Synthetic Stimulants):\* Trends in Annual Prevalence by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*Parental education is an average score of mother's education and father's education.  
 \*Question discontinued in 2019.

**FIGURE 174**  
**Bath Salts (Synthetic Stimulants):\* Trends in Annual Prevalence by Race/Ethnicity\*\***

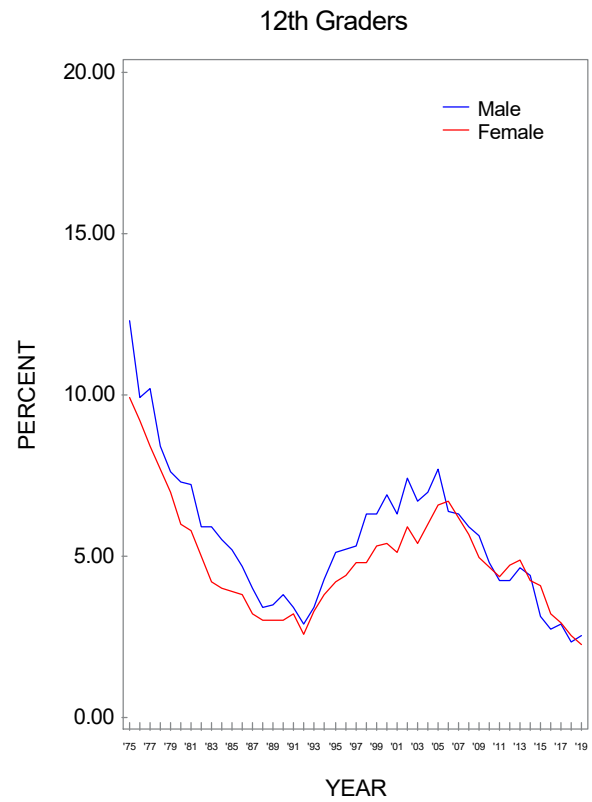


Source. The Monitoring the Future study, the University of Michigan.

\*Question discontinued in 2019.

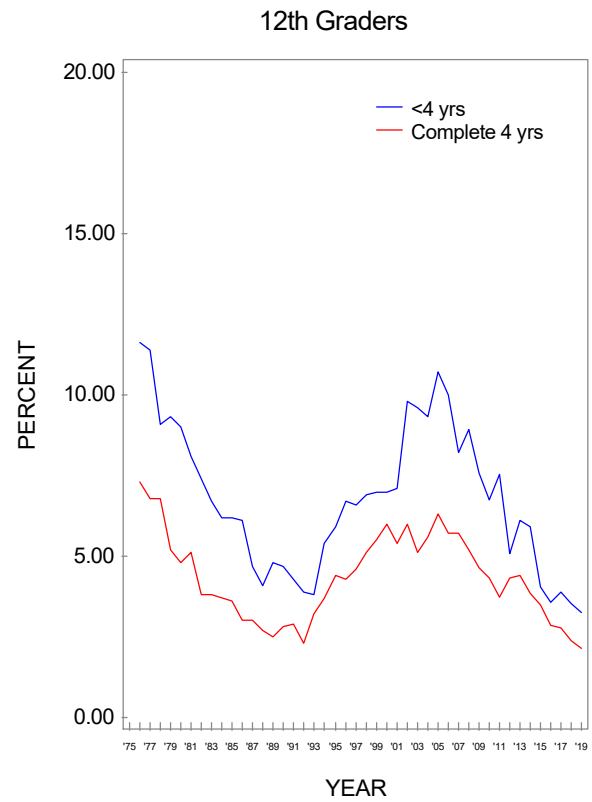
\*\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 175**  
**Sedatives (Barbiturates): Trends in Annual Prevalence by Gender**



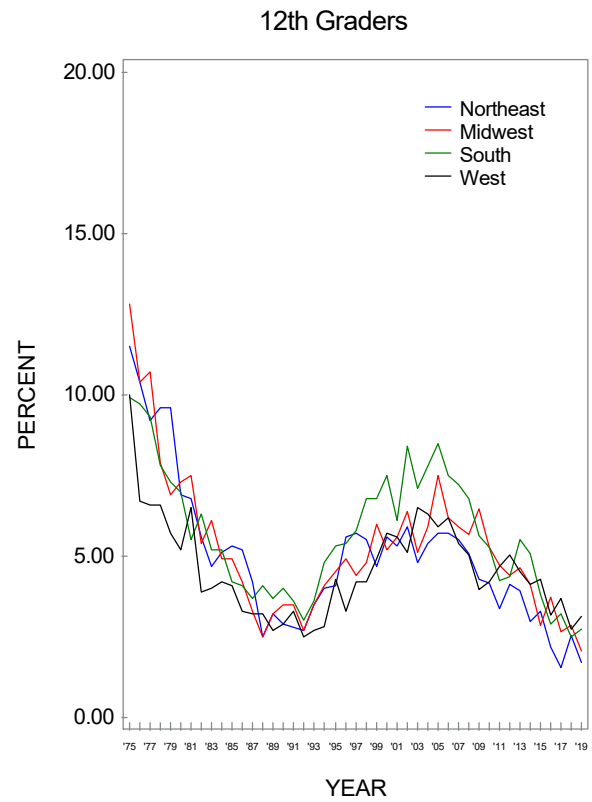
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 176**  
**Sedatives (Barbiturates): Trends in Annual Prevalence by College Plans**



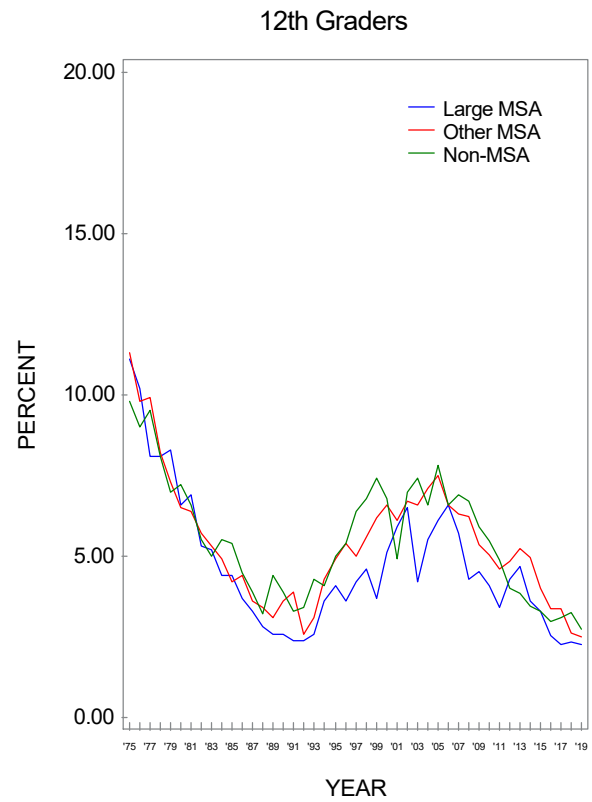
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 177**  
**Sedatives (Barbiturates): Trends in Annual Prevalence by Region**



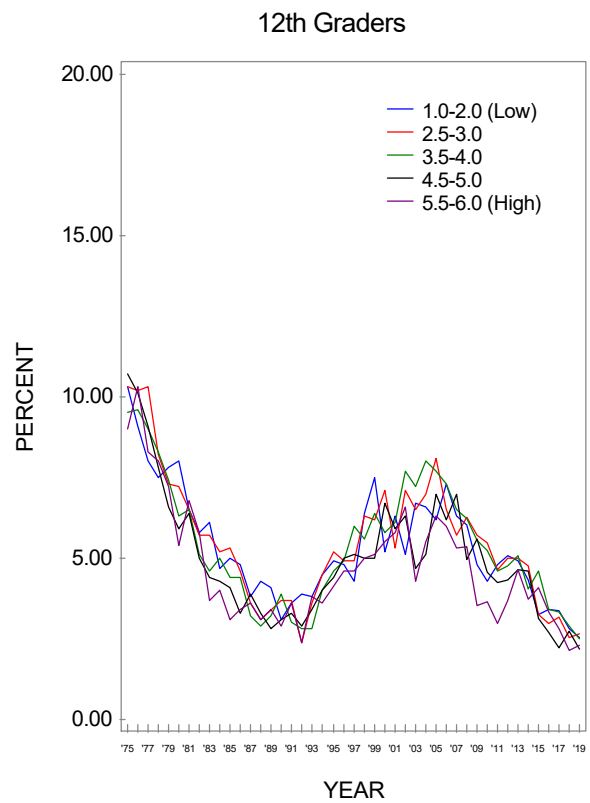
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 178**  
**Sedatives (Barbiturates): Trends in Annual Prevalence by Population Density**



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

**FIGURE 179**  
**Sedatives (Barbiturates): Trends in Annual Prevalence by Average Education Level of Parents\***

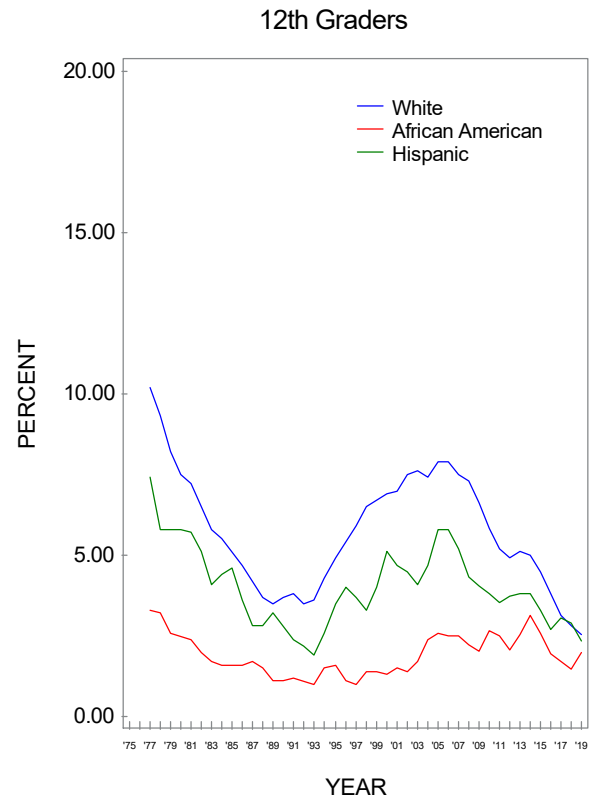


Source. The Monitoring the Future study, the University of Michigan.

\*Parental education is an average score of mother's education and father's education.



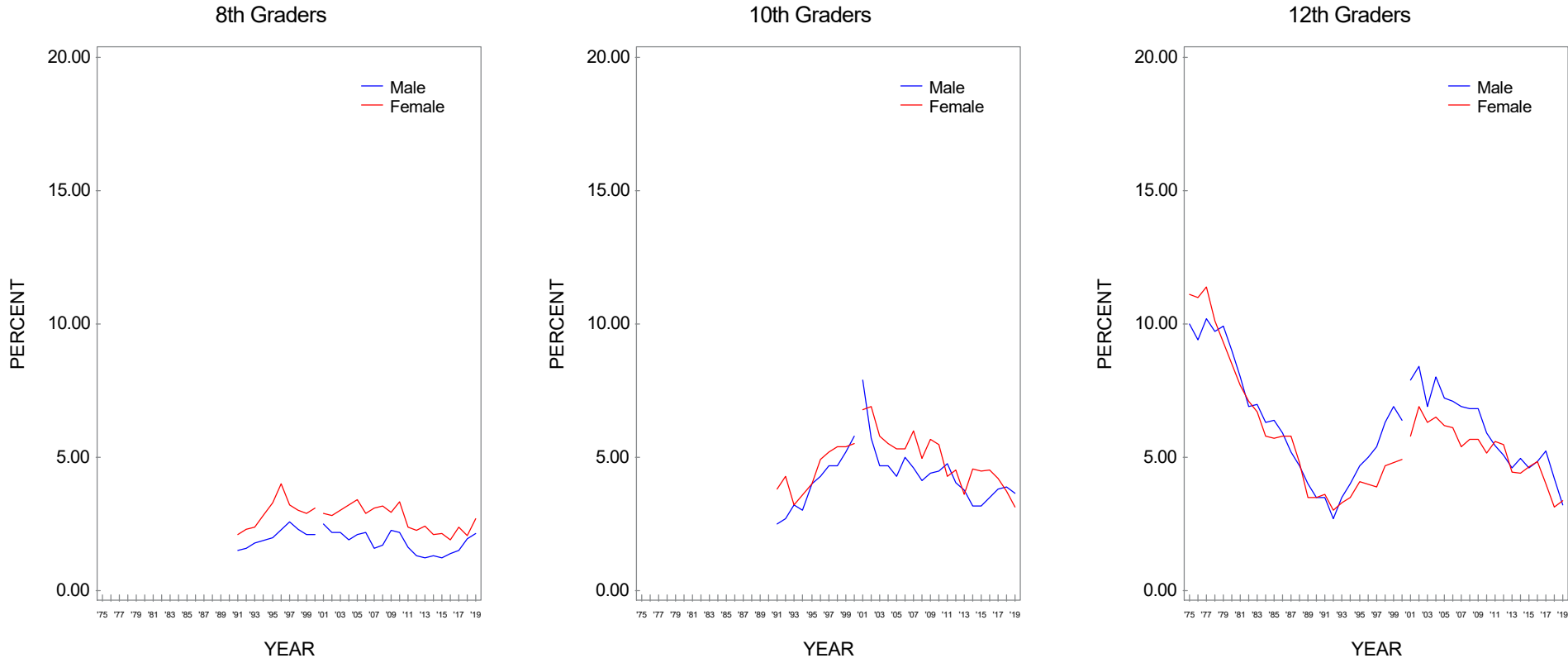
**FIGURE 180**  
**Sedatives (Barbiturates): Trends in Annual Prevalence by Race/Ethnicity\***



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

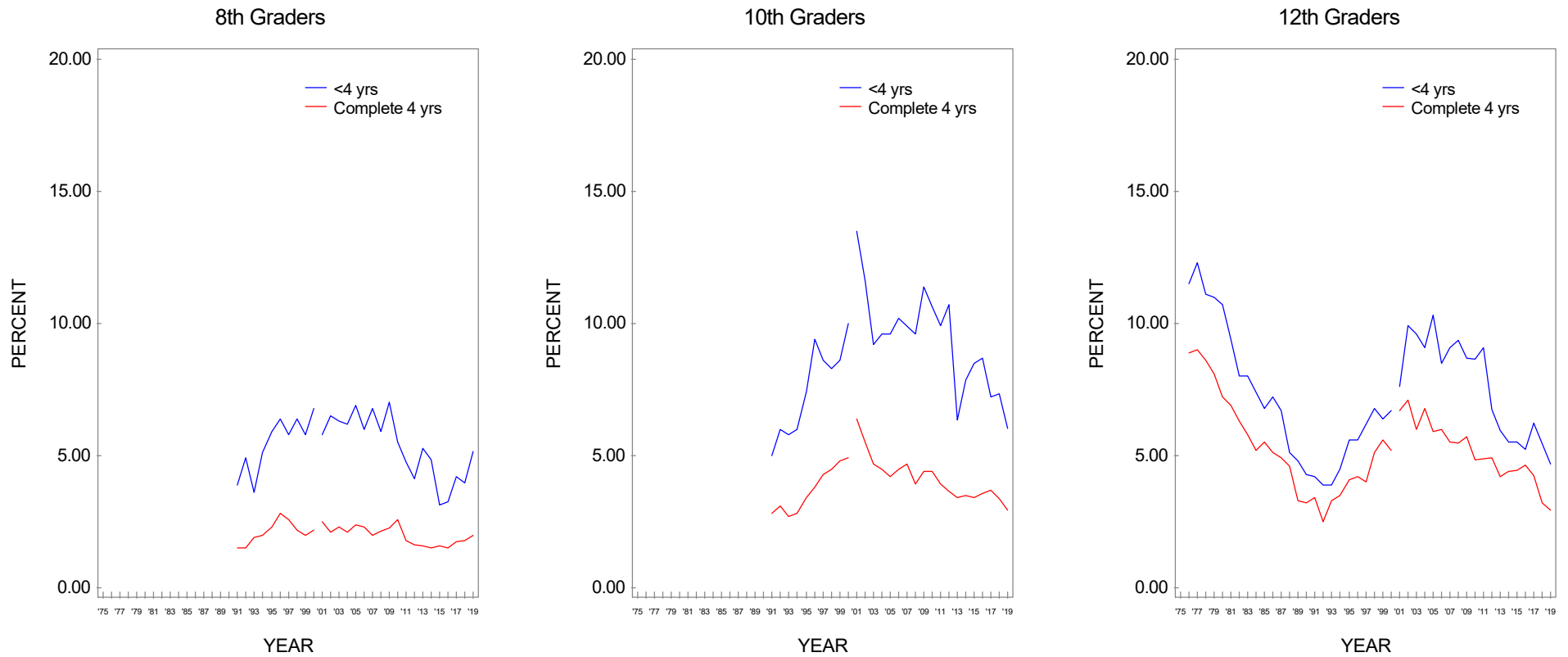
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 181**  
**Tranquilizers:\* Trends in Annual Prevalence by Gender**



Source. The Monitoring the Future study, the University of Michigan.  
 \*Beginning in 2001, a revised set of questions on tranquilizer use was introduced in which Miltown was replaced with Xanax.

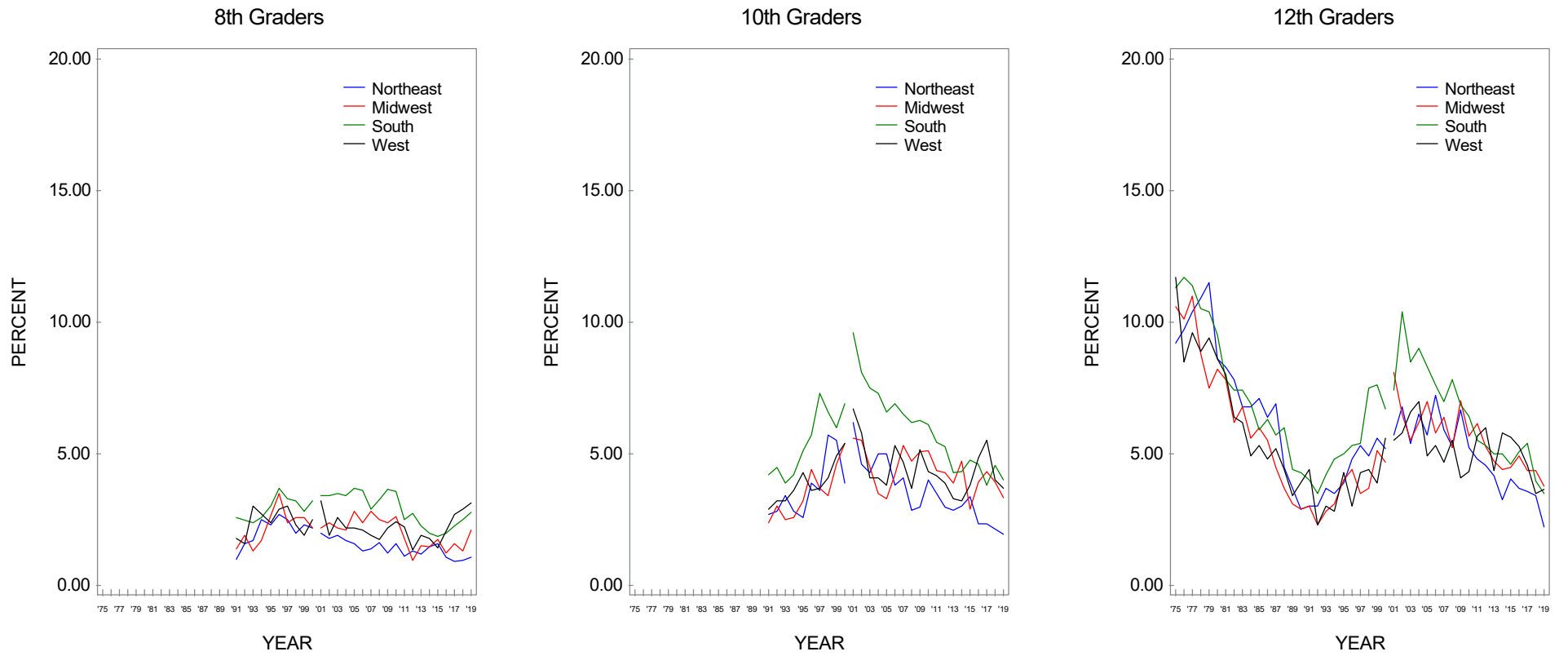
**FIGURE 182**  
**Tranquilizers:\* Trends in Annual Prevalence by College Plans**



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

\*Beginning in 2001, a revised set of questions on tranquilizer use was introduced in which Miltown was replaced with Xanax.

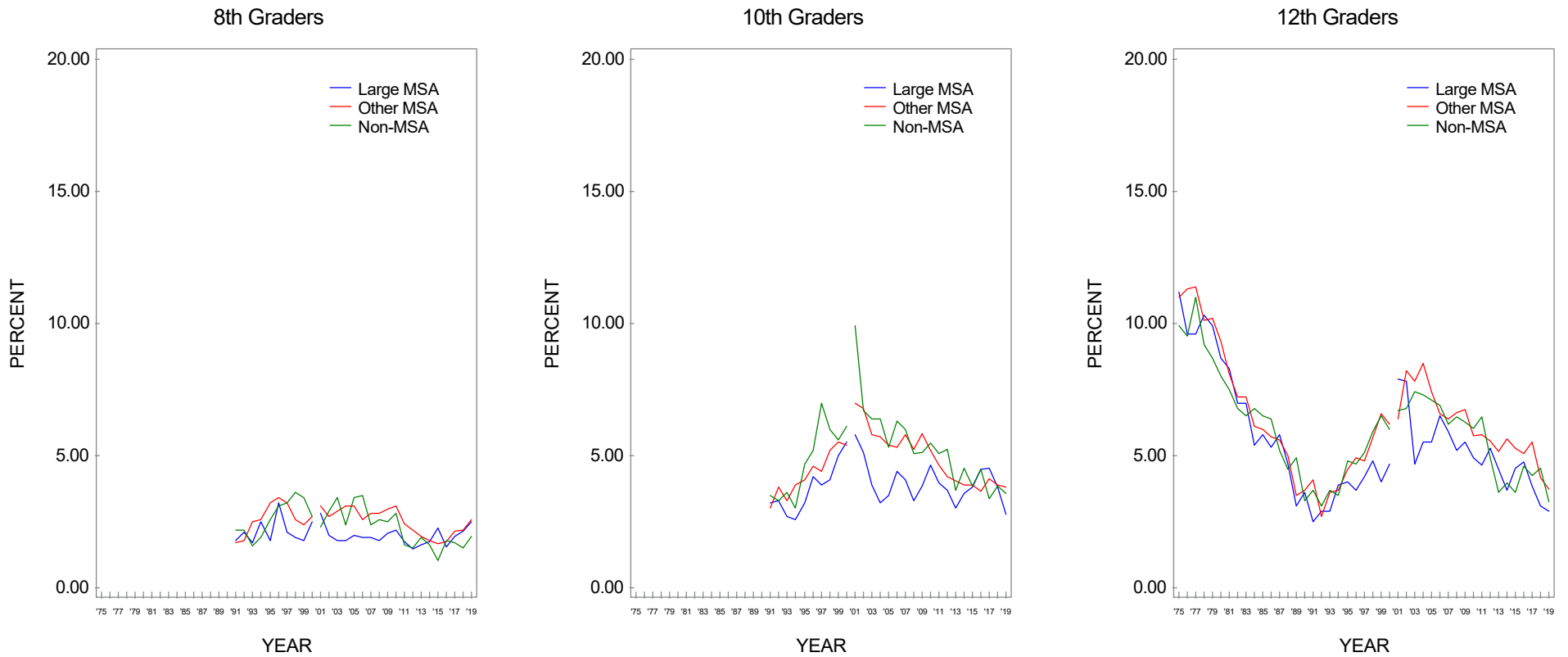
**FIGURE 183**  
**Tranquilizers:\* Trends in Annual Prevalence by Region**



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

\*Beginning in 2001, a revised set of questions on tranquilizer use was introduced in which Miltown was replaced with Xanax.

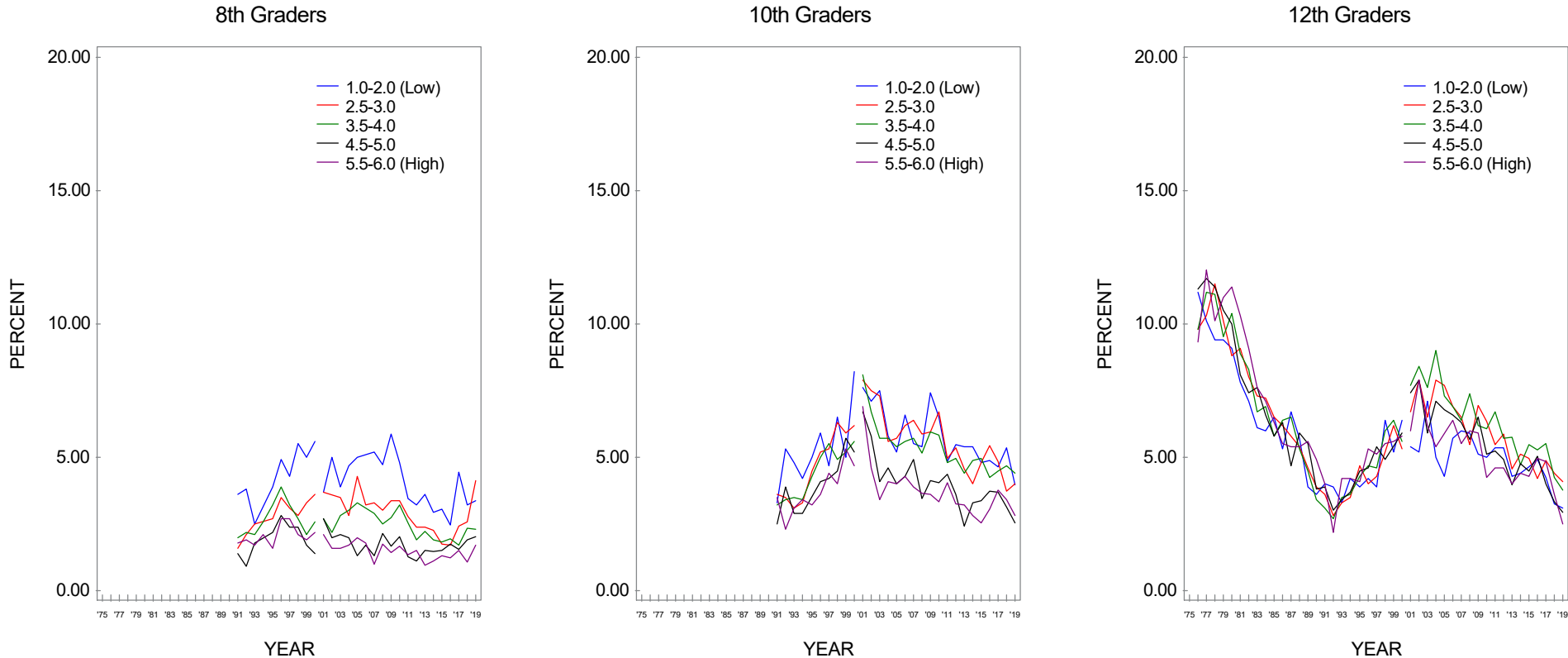
**FIGURE 184**  
**Tranquilizers:\* Trends in Annual Prevalence by Population Density**



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

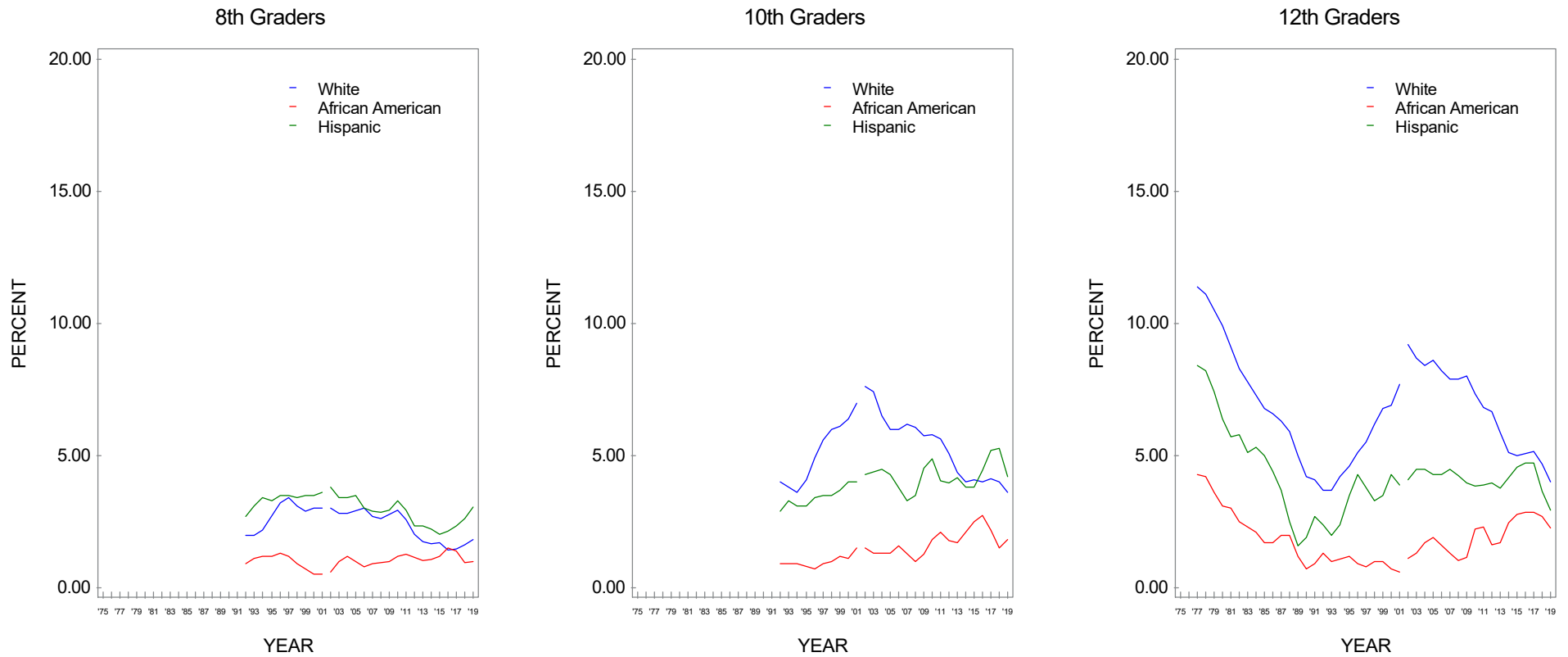
\*Beginning in 2001, a revised set of questions on tranquilizer use was introduced in which Miltown was replaced with Xanax.

**FIGURE 185**  
**Tranquilizers:\* Trends in Annual Prevalence by Average Education Level of Parents\*\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*Beginning in 2001, a revised set of questions on tranquilizer use was introduced in which Miltown was replaced with Xanax.  
 \*\*Parental education is an average score of mother's education and father's education.

**FIGURE 186**  
**Tranquilizers:\* Trends in Annual Prevalence by Race/Ethnicity\*\***

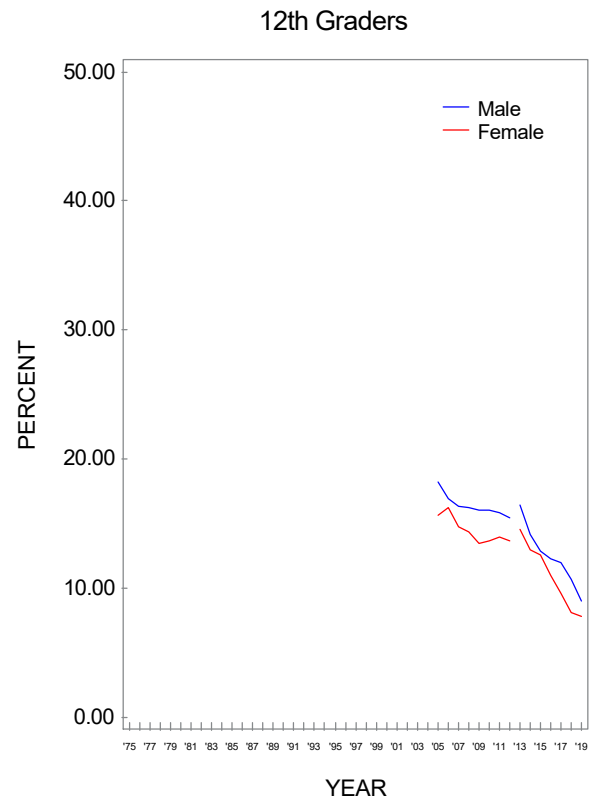


Source. The Monitoring the Future study, the University of Michigan.

\*Beginning in 2001, a revised set of questions on tranquilizer use was introduced in which Miltown was replaced with Xanax.

\*\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 187**  
**Any Prescription Drug:\* Trends in Annual Prevalence by Gender**

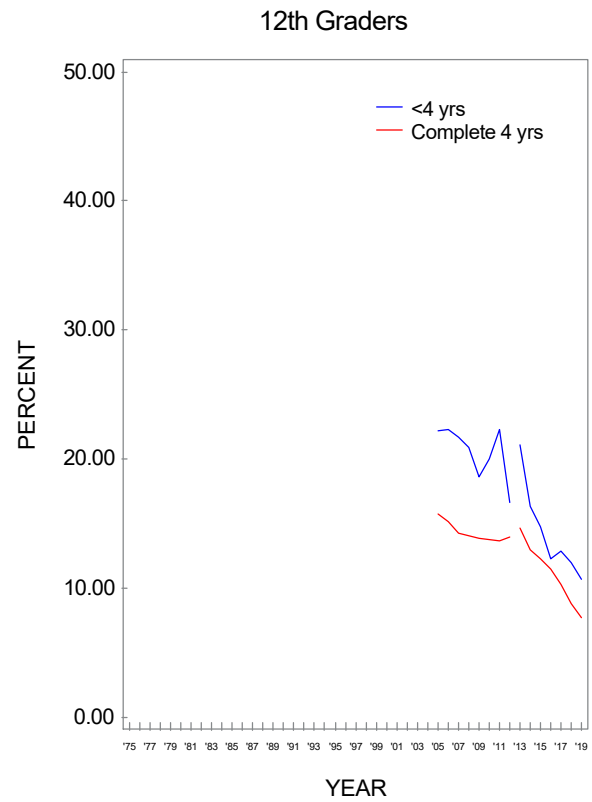


Source. The Monitoring the Future study, the University of Michigan.

\*The use of any prescription drug includes use of any of the following: amphetamines, sedatives (barbiturates), narcotics other than heroin, or tranquilizers without a doctor telling you to use them. Beginning in 2013, a revised set of questions on amphetamine use was introduced



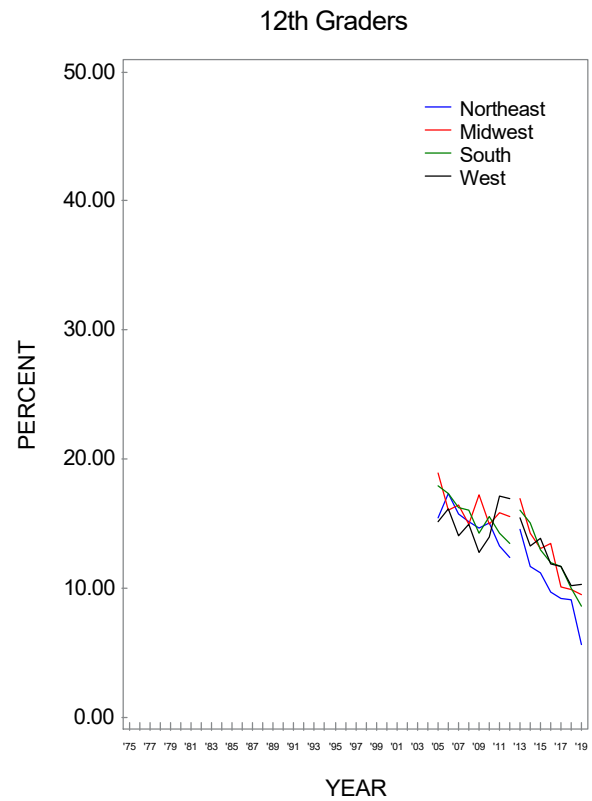
**FIGURE 188**  
**Any Prescription Drug:\* Trends in Annual Prevalence by College Plans**



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

\*The use of any prescription drug includes use of any of the following: amphetamines, sedatives (barbiturates), narcotics other than heroin, or tranquilizers without a doctor telling you to use them. Beginning in 2013, a revised set of questions on amphetamine use was introduced

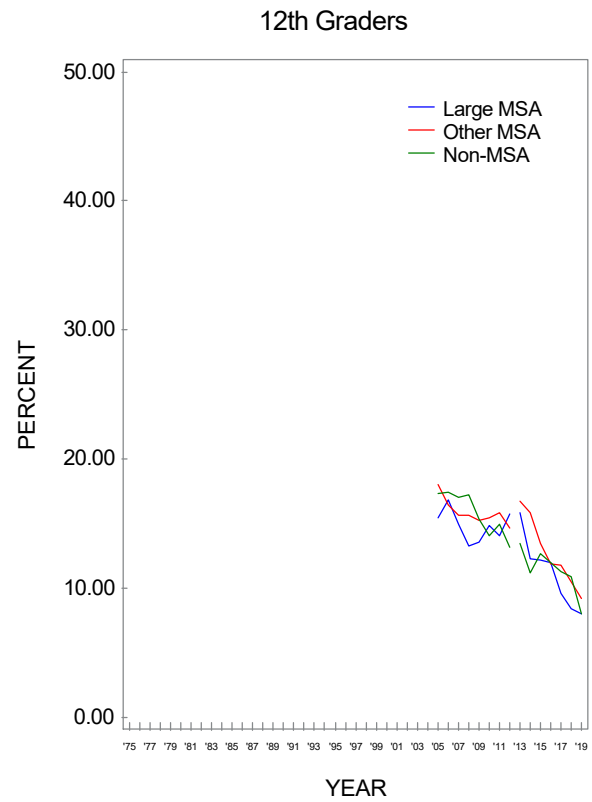
**FIGURE 189**  
**Any Prescription Drug:\* Trends in Annual Prevalence by Region**



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

\*The use of any prescription drug includes use of any of the following: amphetamines, sedatives (barbiturates), narcotics other than heroin, or tranquilizers without a doctor telling you to use them. Beginning in 2013, a revised set of questions on amphetamine use was introduced

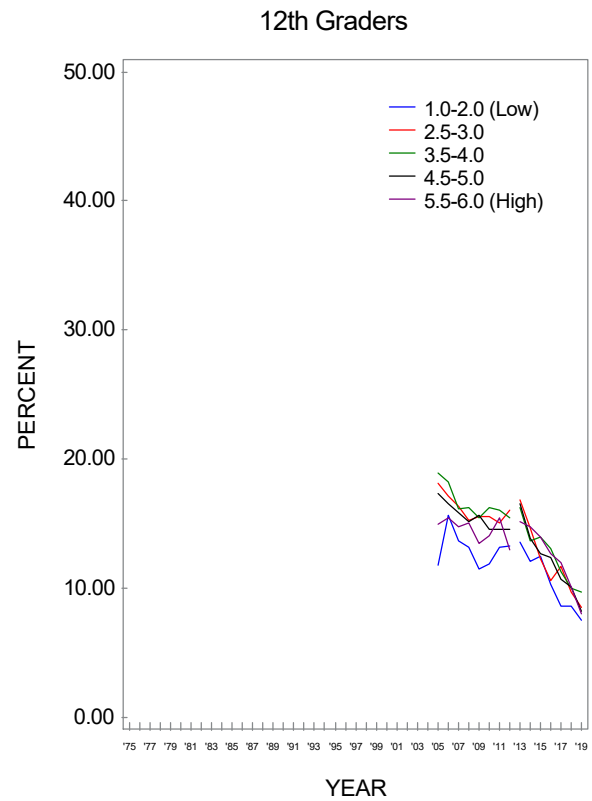
**FIGURE 190**  
**Any Prescription Drug:\* Trends in Annual Prevalence by Population Density**



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

\*The use of any prescription drug includes use of any of the following: amphetamines, sedatives (barbiturates), narcotics other than heroin, or tranquilizers without a doctor telling you to use them. Beginning in 2013, a revised set of questions on amphetamine use was introduced

**FIGURE 191**  
**Any Prescription Drug:\* Trends in Annual Prevalence by Average Education Level of Parents\*\***

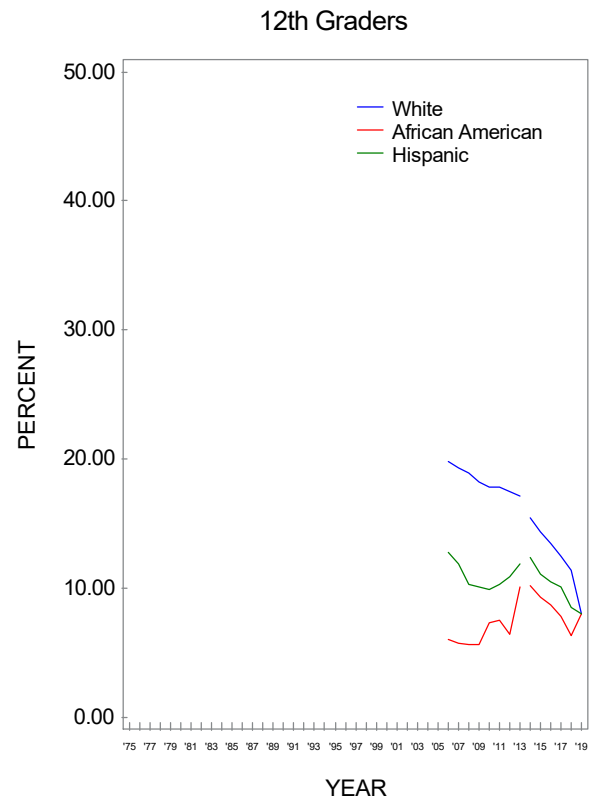


Source. The Monitoring the Future study, the University of Michigan.

\*The use of any prescription drug includes use of any of the following: amphetamines, sedatives (barbiturates), narcotics other than heroin, or tranquilizers without a doctor telling you to use them. Beginning in 2013, a revised set of questions on amphetamine use was introduced

\*\*Parental education is an average score of mother's education and father's education.

**FIGURE 192**  
**Any Prescription Drug:\* Trends in Annual Prevalence by Race/Ethnicity\*\***

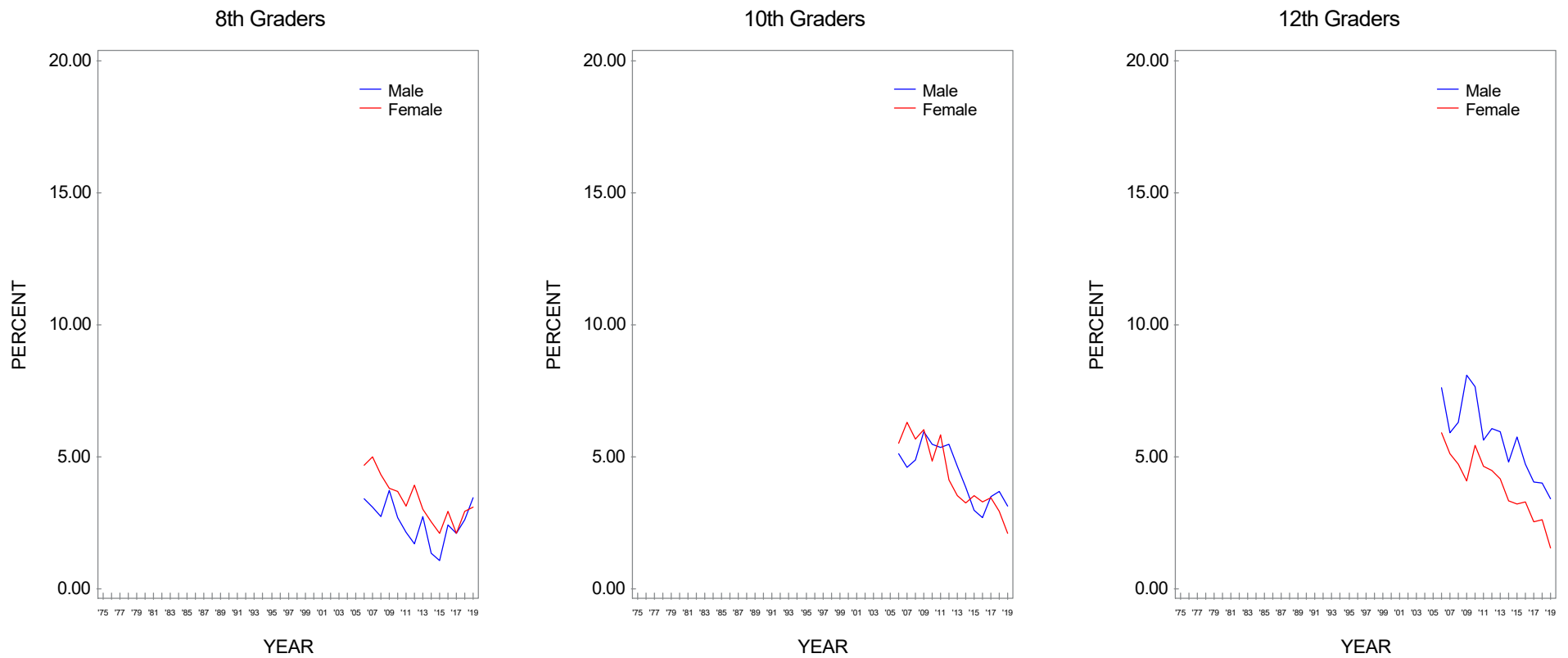


Source. The Monitoring the Future study, the University of Michigan.

\*The use of any prescription drug includes use of any of the following: amphetamines, sedatives (barbiturates), narcotics other than heroin, or tranquilizers without a doctor telling you to use them. Beginning in 2013, a revised set of questions on amphetamine use was introduced

\*\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

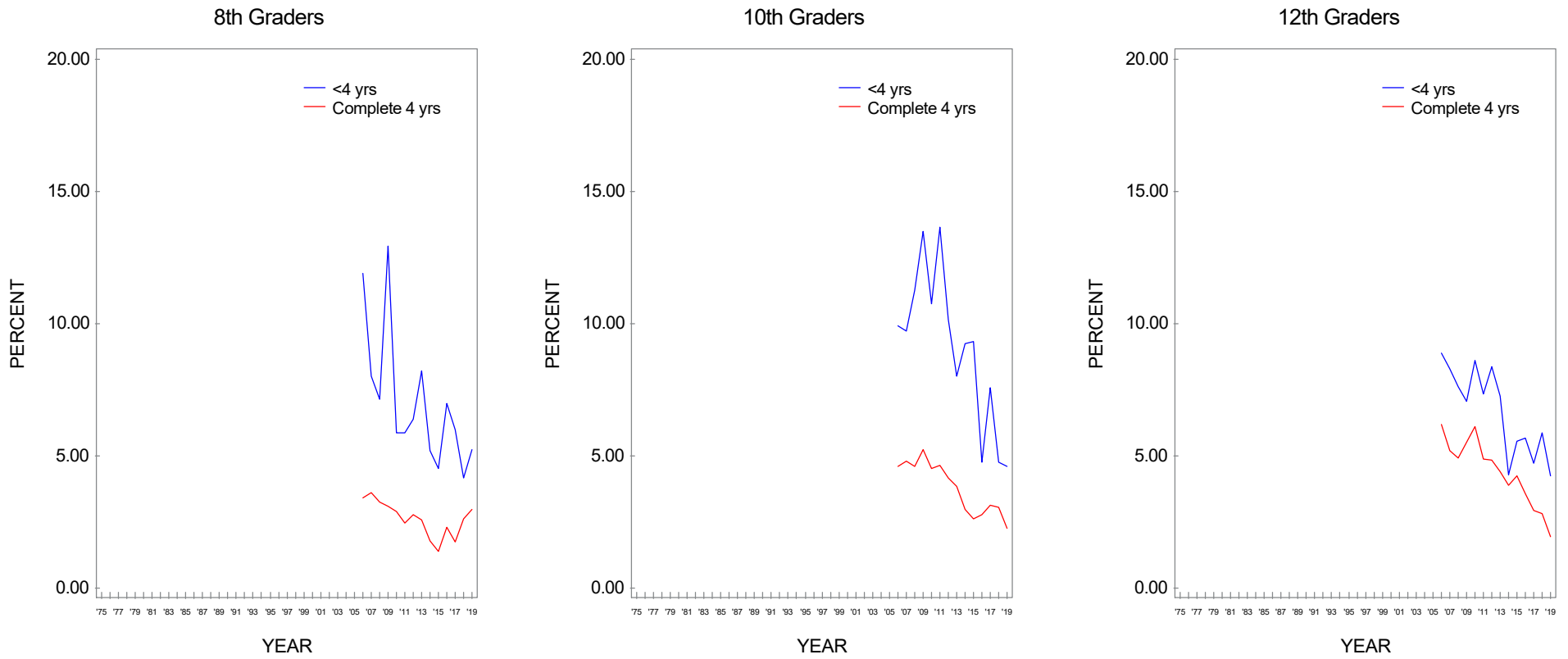
**FIGURE 193**  
**Over-the-Counter Cough/Cold Medicines:\* Trends in Annual Prevalence by Gender**



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

\*Taken to get high.

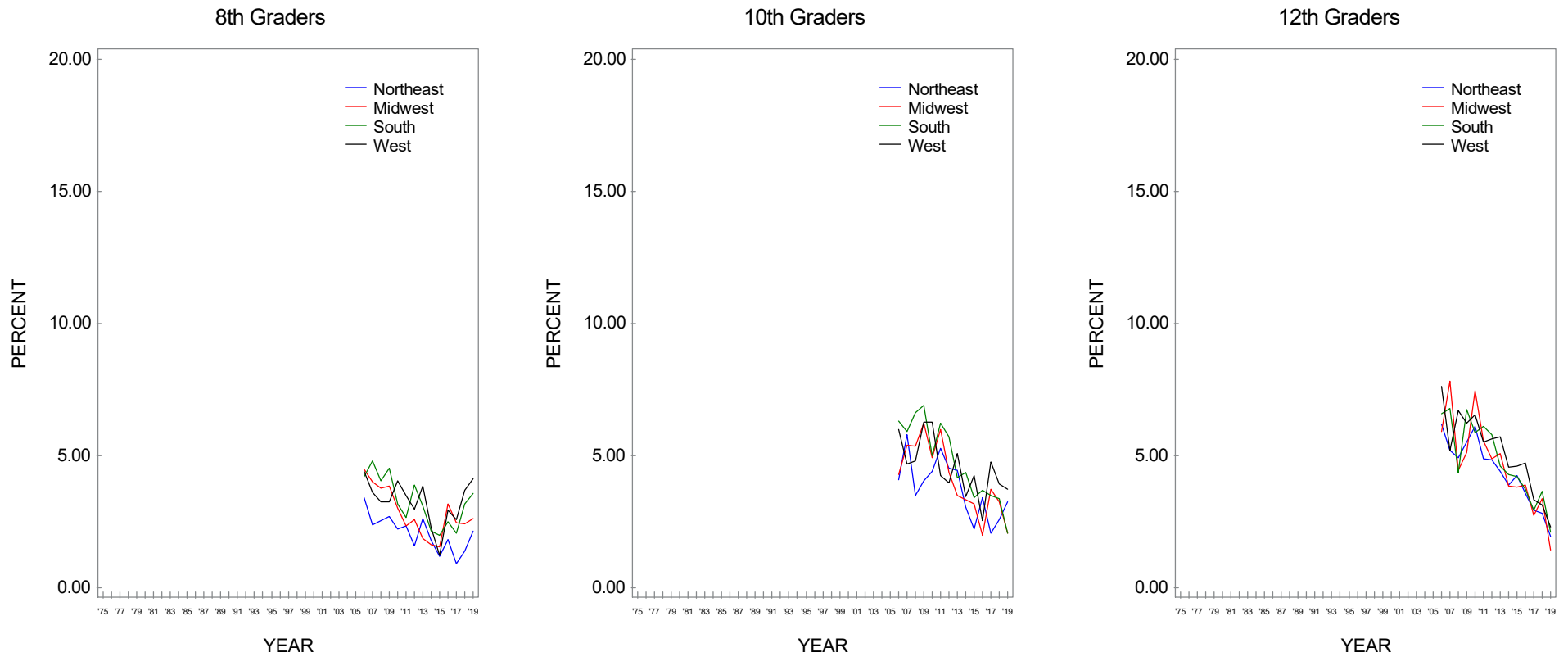
**FIGURE 194**  
**Over-the-Counter Cough/Cold Medicines:\* Trends in Annual Prevalence by College Plans**



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

\*Taken to get high.

**FIGURE 195**  
**Over-the-Counter Cough/Cold Medicines:\* Trends in Annual Prevalence by Region**

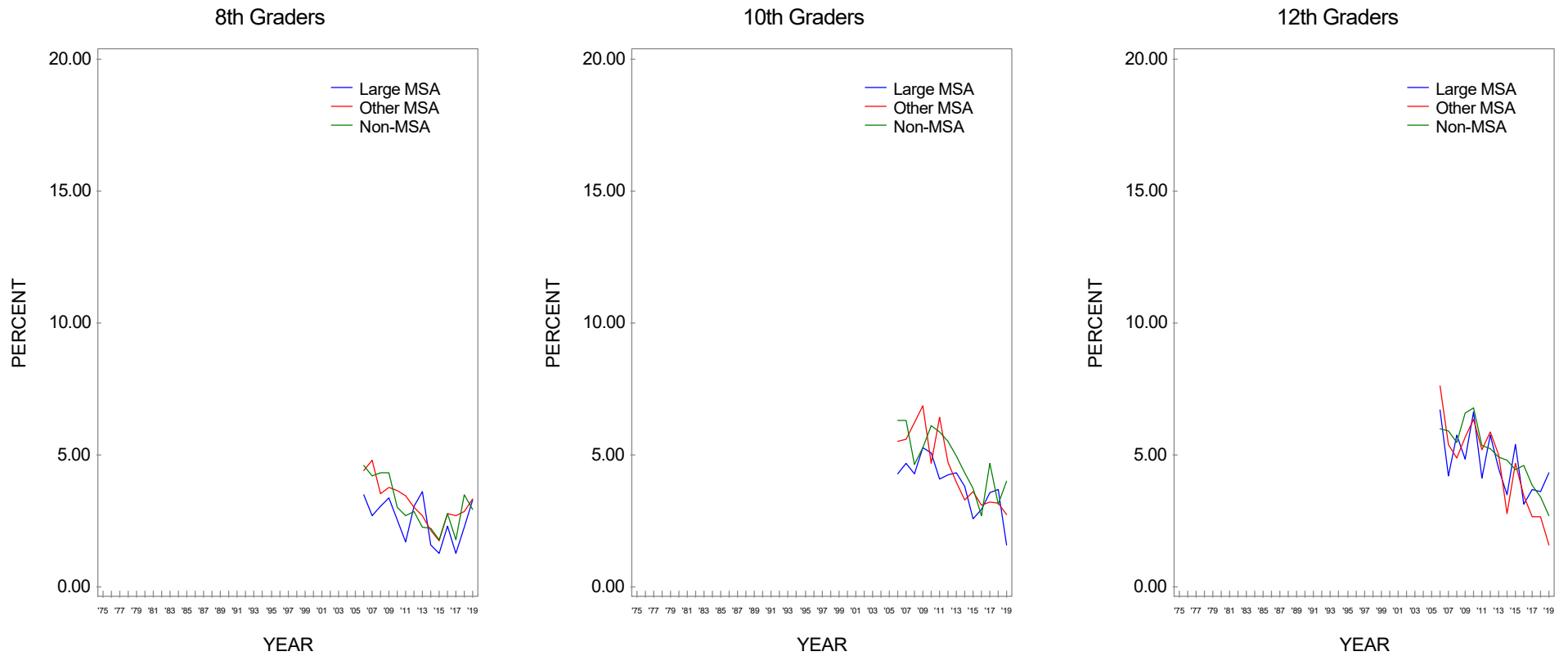


Source. The Monitoring the Future study, the University of Michigan.

\*Taken to get high.



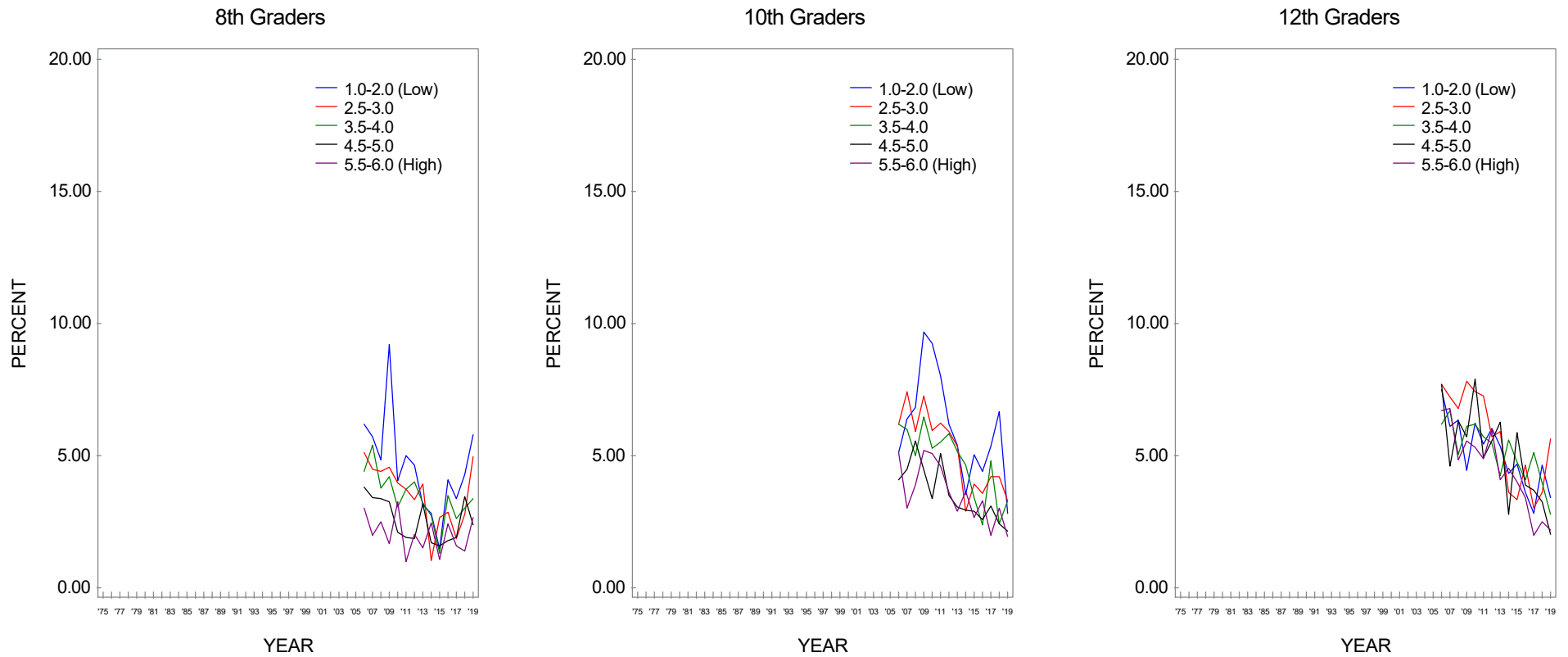
**FIGURE 196**  
**Over-the-Counter Cough/Cold Medicines:\* Trends in Annual Prevalence by Population Density**



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

\*Taken to get high.

**FIGURE 197**  
**Over-the-Counter Cough/Cold Medicines:\* Trends in Annual Prevalence by Average Education Level of Parents\*\***

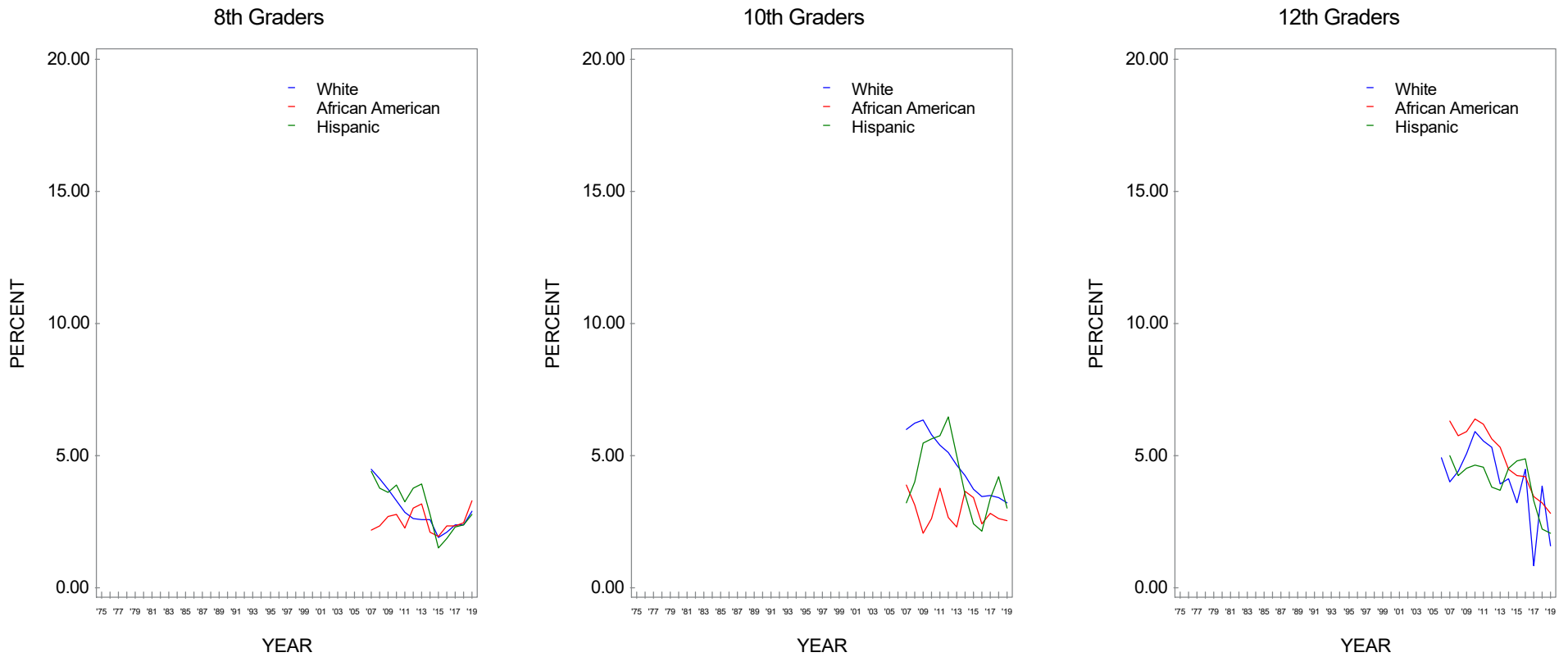


Source. The Monitoring the Future study, the University of Michigan.

\*Taken to get high.

\*\*Parental education is an average score of mother's education and father's education.

**FIGURE 198**  
**Over-the-Counter Cough/Cold Medicines:\* Trends in Annual Prevalence by Race/Ethnicity\*\***

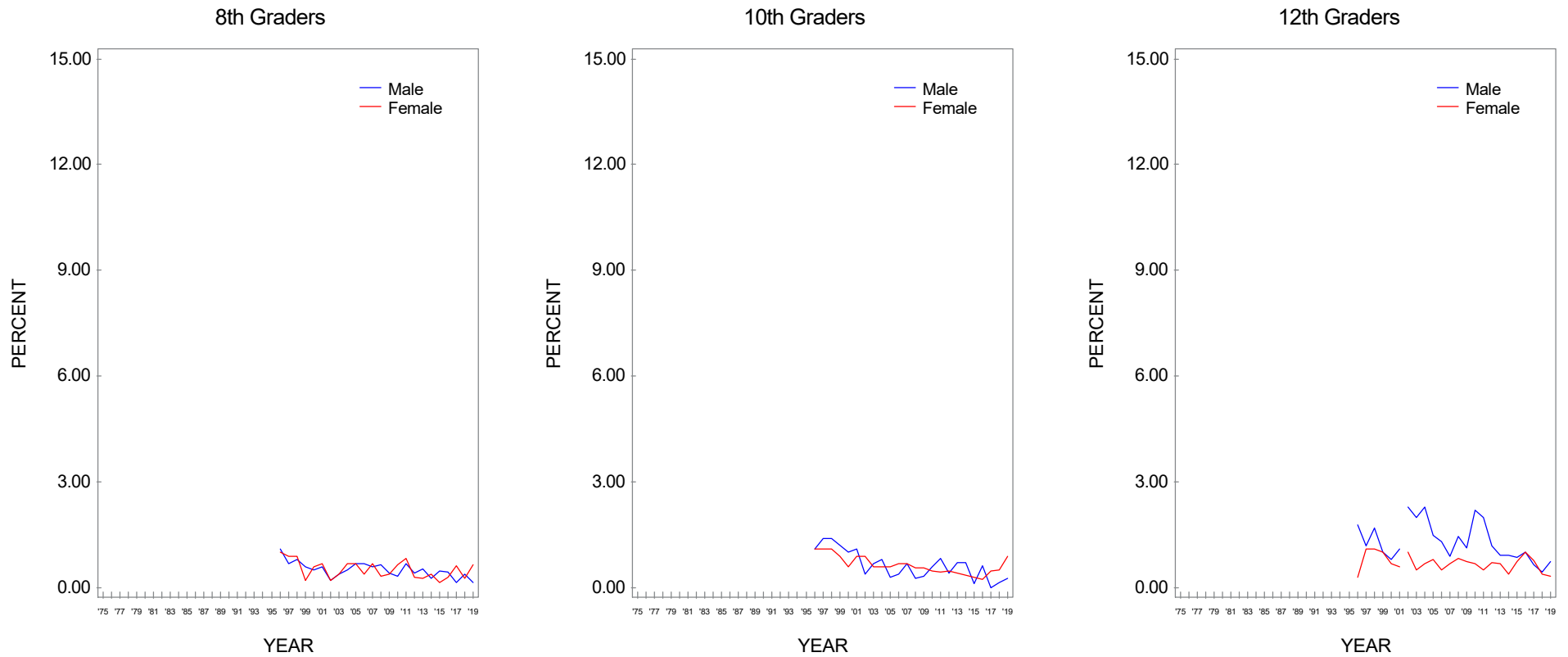


Source. The Monitoring the Future study, the University of Michigan.

\*Taken to get high.

\*\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

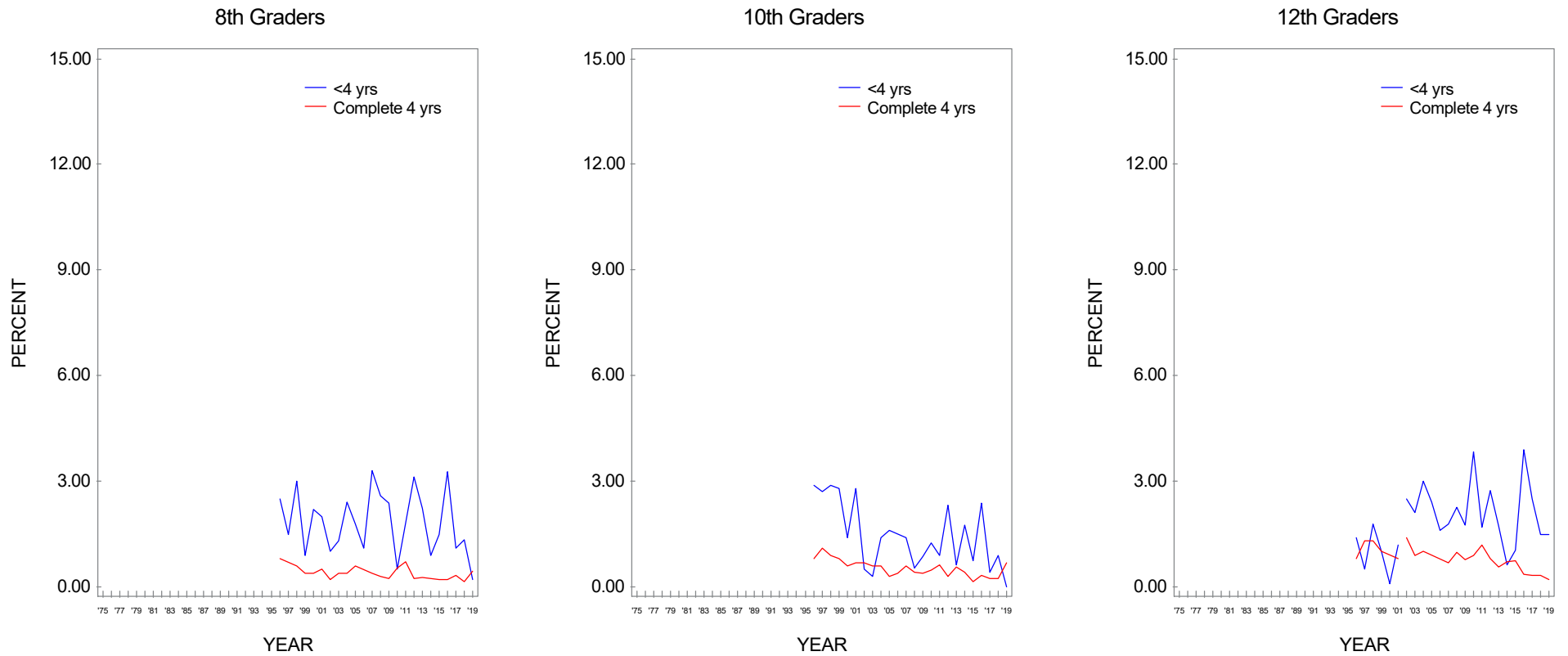
**FIGURE 199**  
**Rohypnol:\* Trends in Annual Prevalence by Gender**



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

\*For 12th grade only, the 2001 and 2002 data are not comparable due to changes in the questionnaire forms.

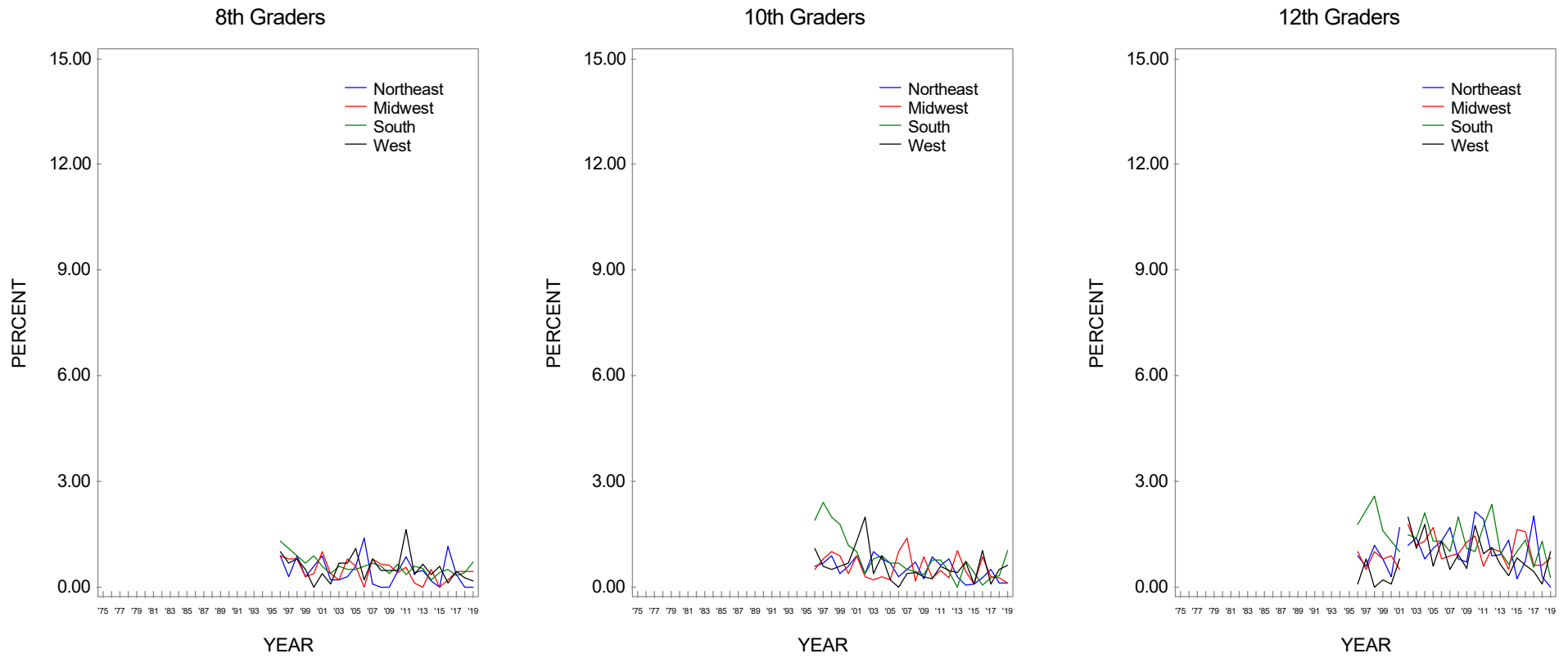
**FIGURE 200**  
**Rohypnol:\* Trends in Annual Prevalence by College Plans**



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

\*For 12th grade only, the 2001 and 2002 data are not comparable due to changes in the questionnaire forms.

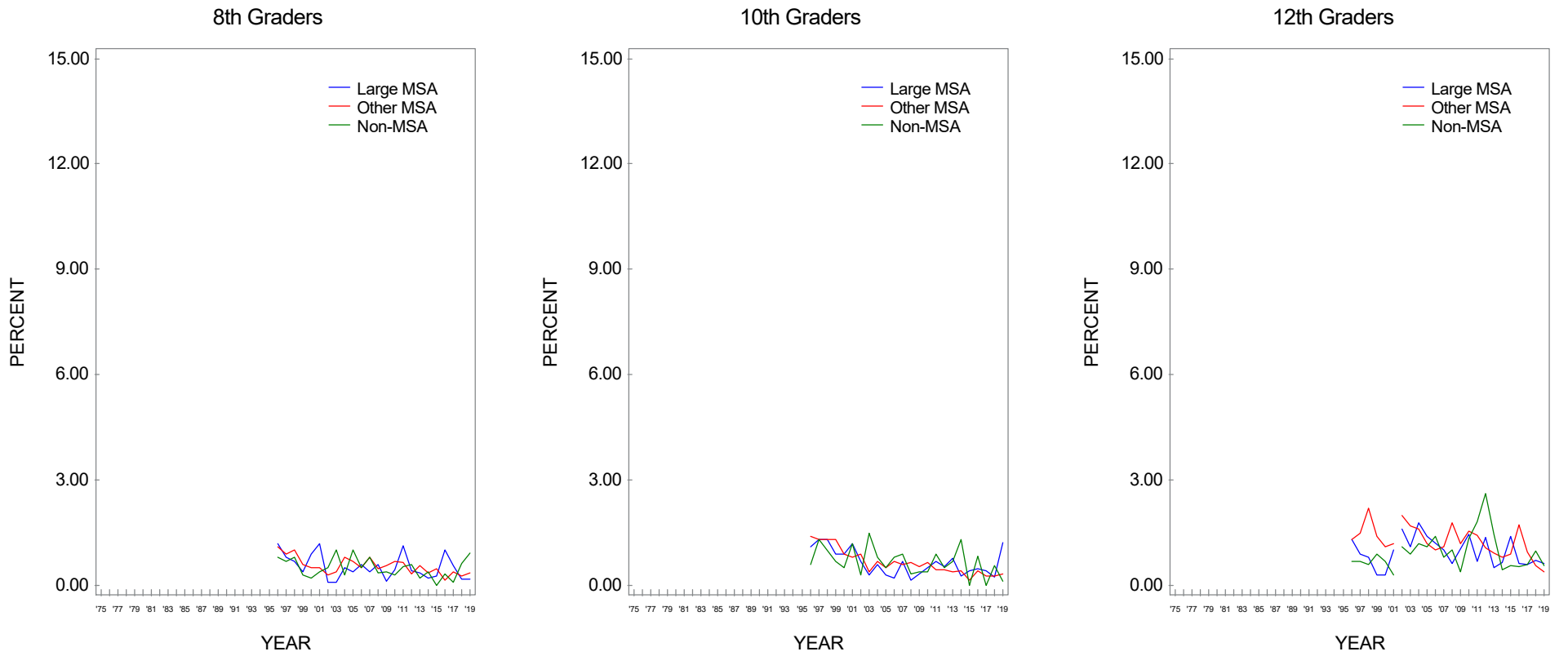
**FIGURE 201**  
**Rohypnol:\* Trends in Annual Prevalence by Region**



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

\*For 12th grade only, the 2001 and 2002 data are not comparable due to changes in the questionnaire forms.

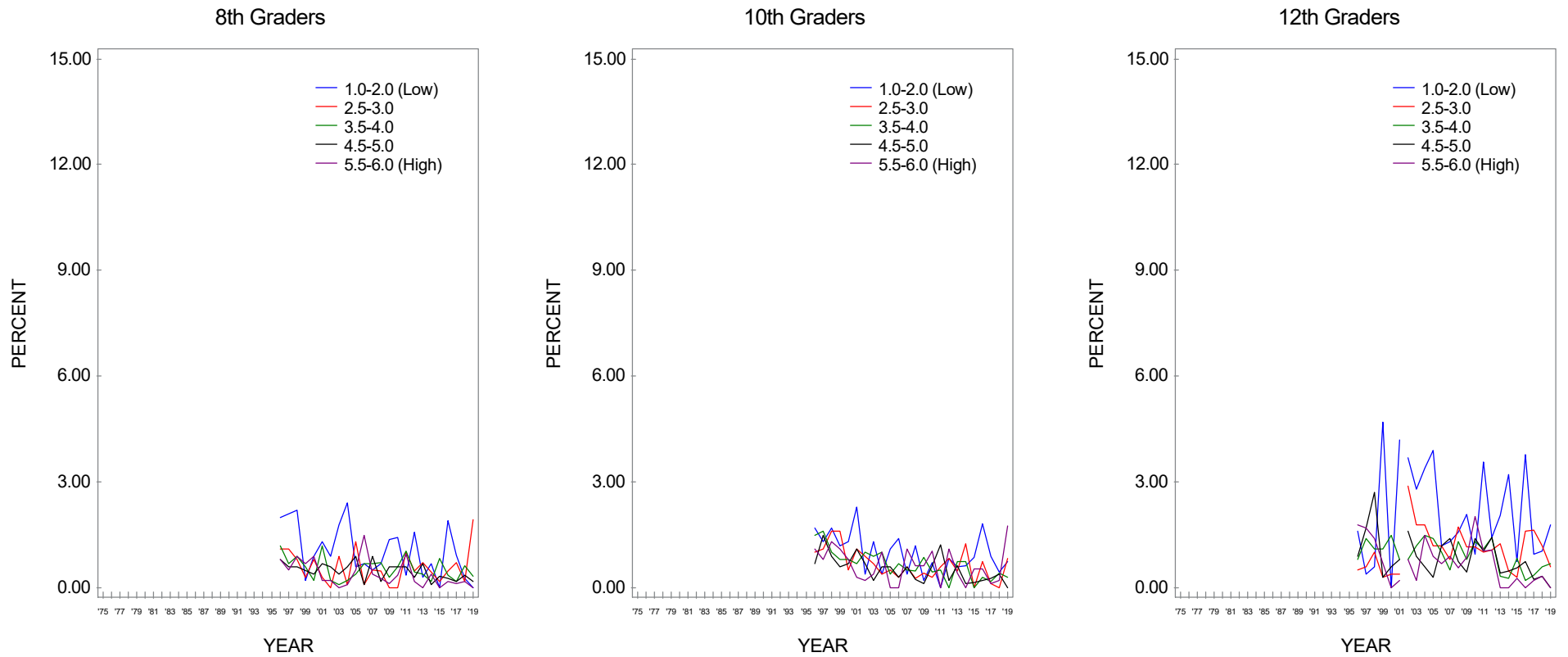
**FIGURE 202**  
**Rohypnol:\* Trends in Annual Prevalence by Population Density**



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

\*For 12th grade only, the 2001 and 2002 data are not comparable due to changes in the questionnaire forms.

**FIGURE 203**  
**Rohypnol:\* Trends in Annual Prevalence by Average Education Level of Parents\*\***



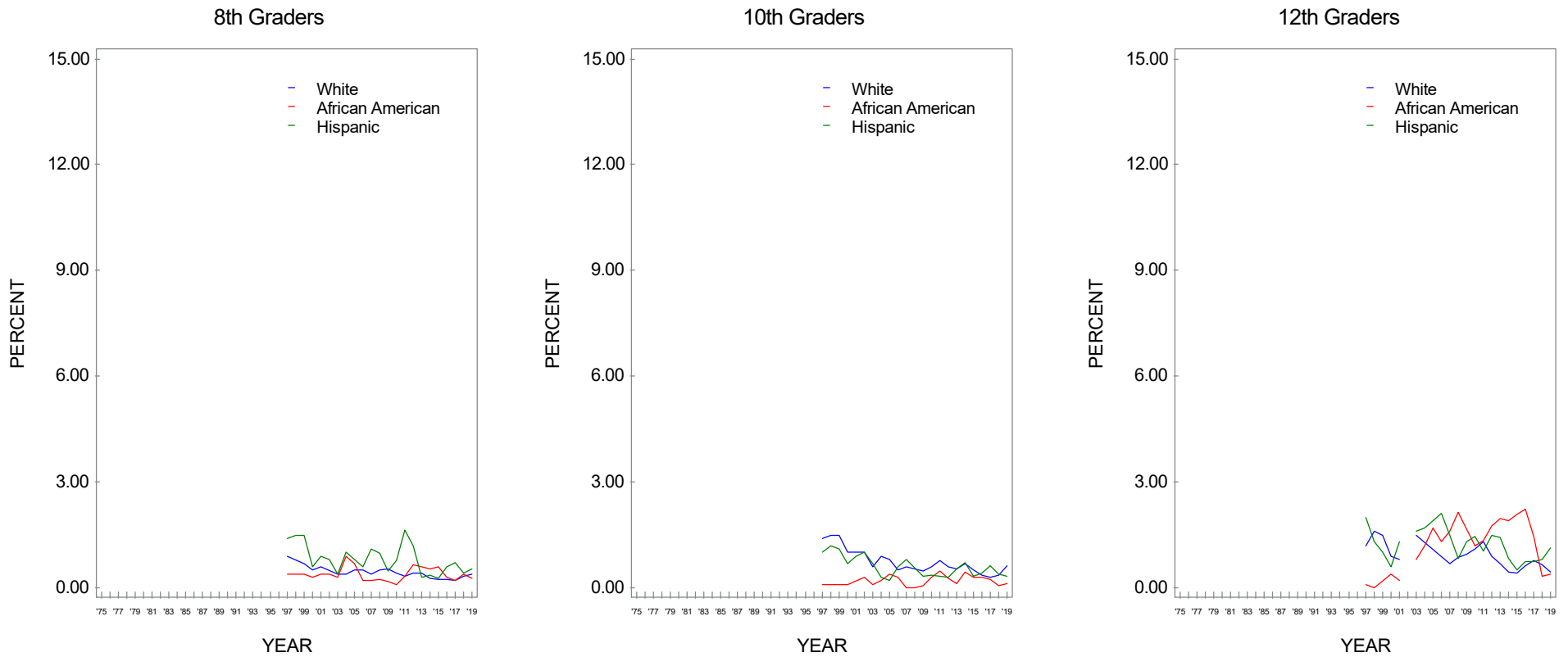
Source. The Monitoring the Future study, the University of Michigan.

\*For 12th grade only, the 2001 and 2002 data are not comparable due to changes in the questionnaire forms.

\*\*Parental education is an average score of mother's education and father's education.



**FIGURE 204**  
**Rohypnol:\* Trends in Annual Prevalence by Race/Ethnicity\*\***

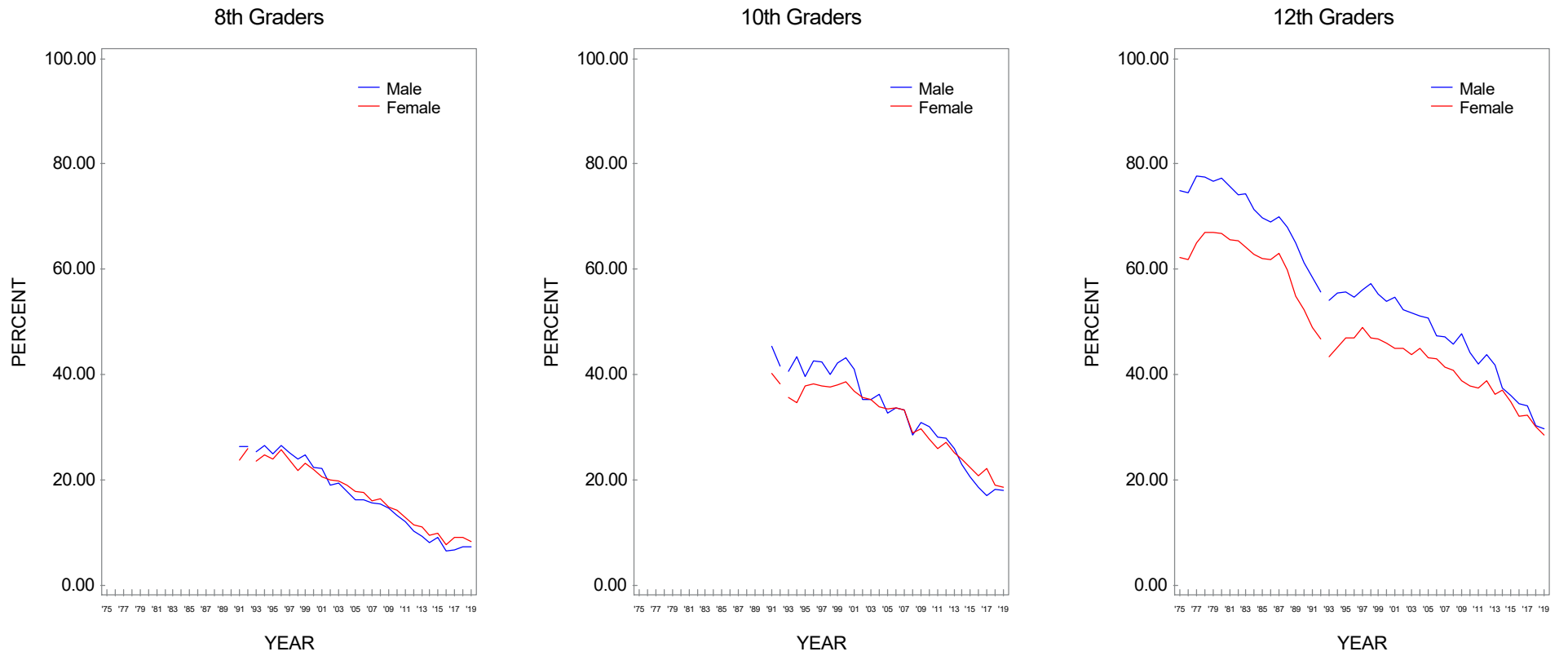


Source. The Monitoring the Future study, the University of Michigan.

\*For 12th grade only, the 2001 and 2002 data are not comparable due to changes in the questionnaire forms.

\*\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

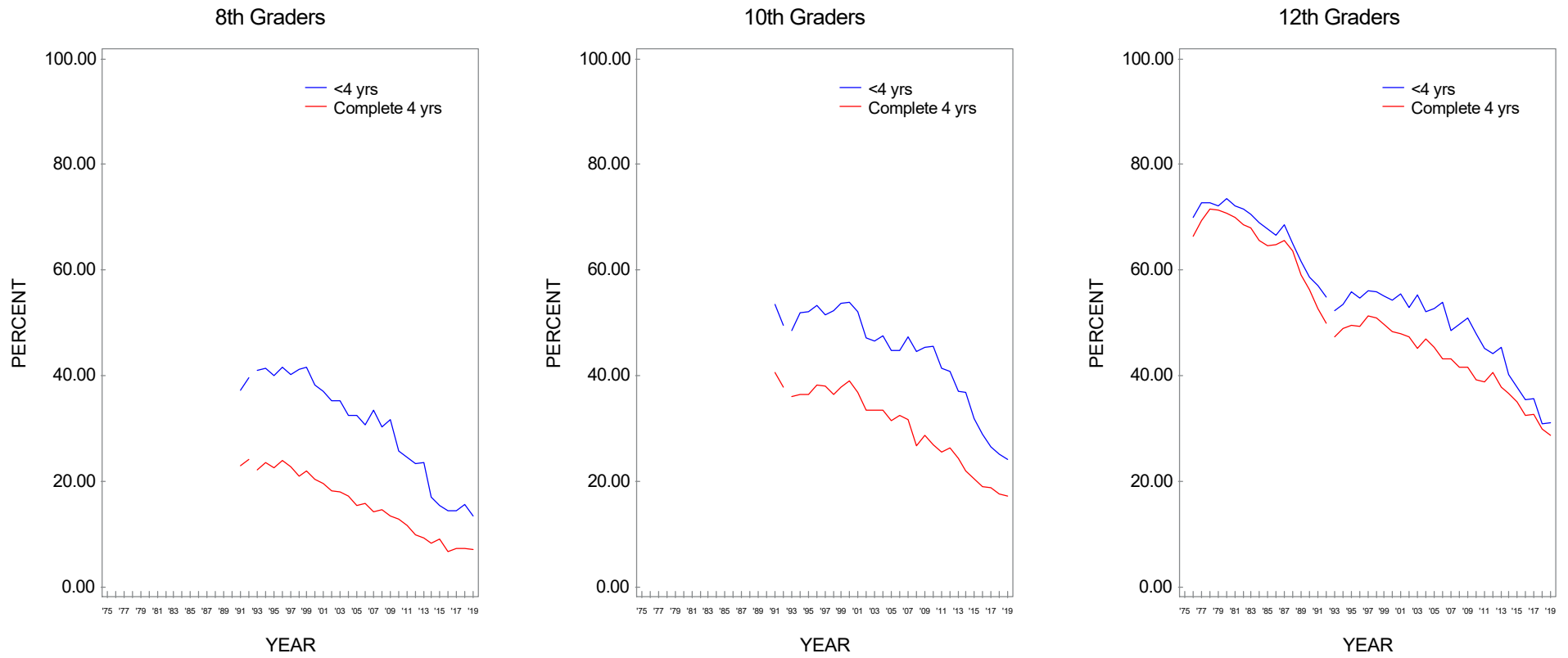
**FIGURE 205**  
**Alcohol:\* Trends in 30-Day Prevalence by Gender**



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

\*Beginning in 1993, a revised set of questions on alcohol use was introduced that indicated that a drink meant more than a few sips.

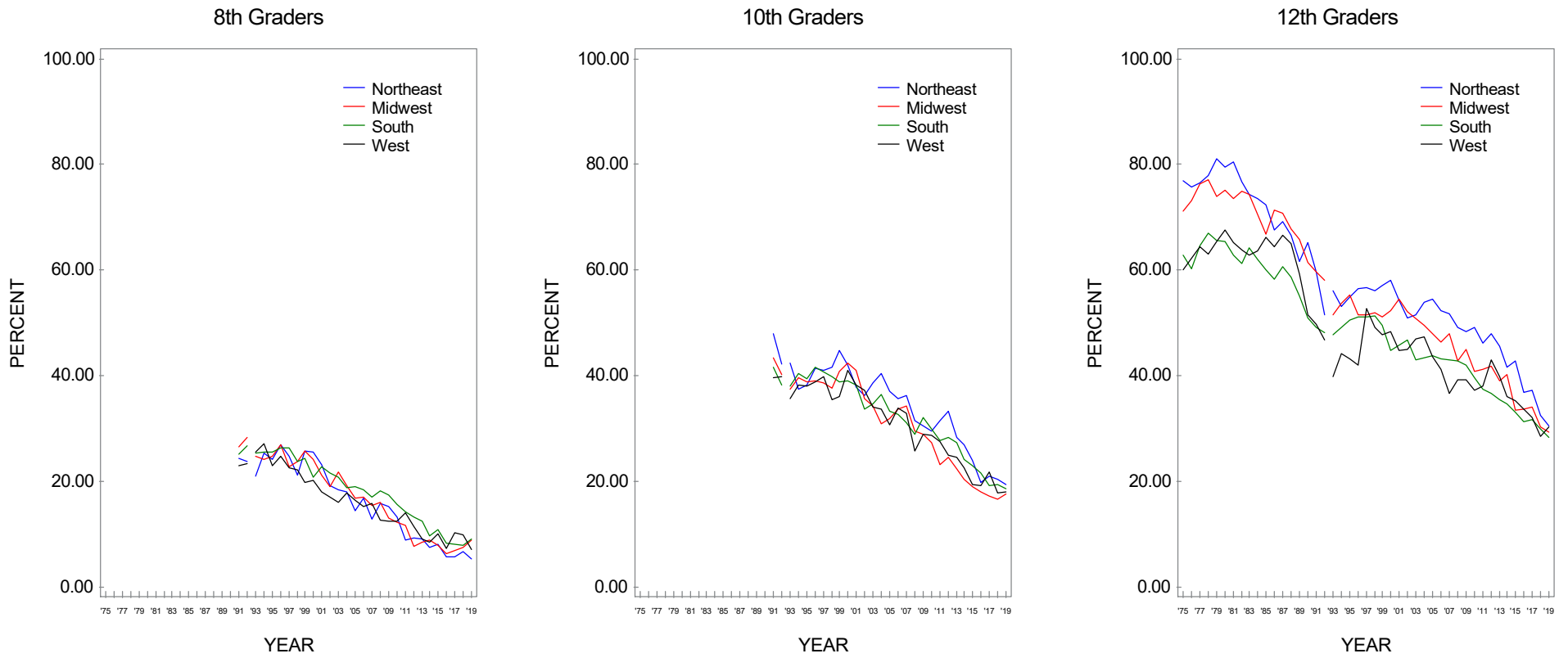
**FIGURE 206**  
**Alcohol:\* Trends in 30-Day Prevalence by College Plans**



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

\*Beginning in 1993, a revised set of questions on alcohol use was introduced that indicated that a drink meant more than a few sips.

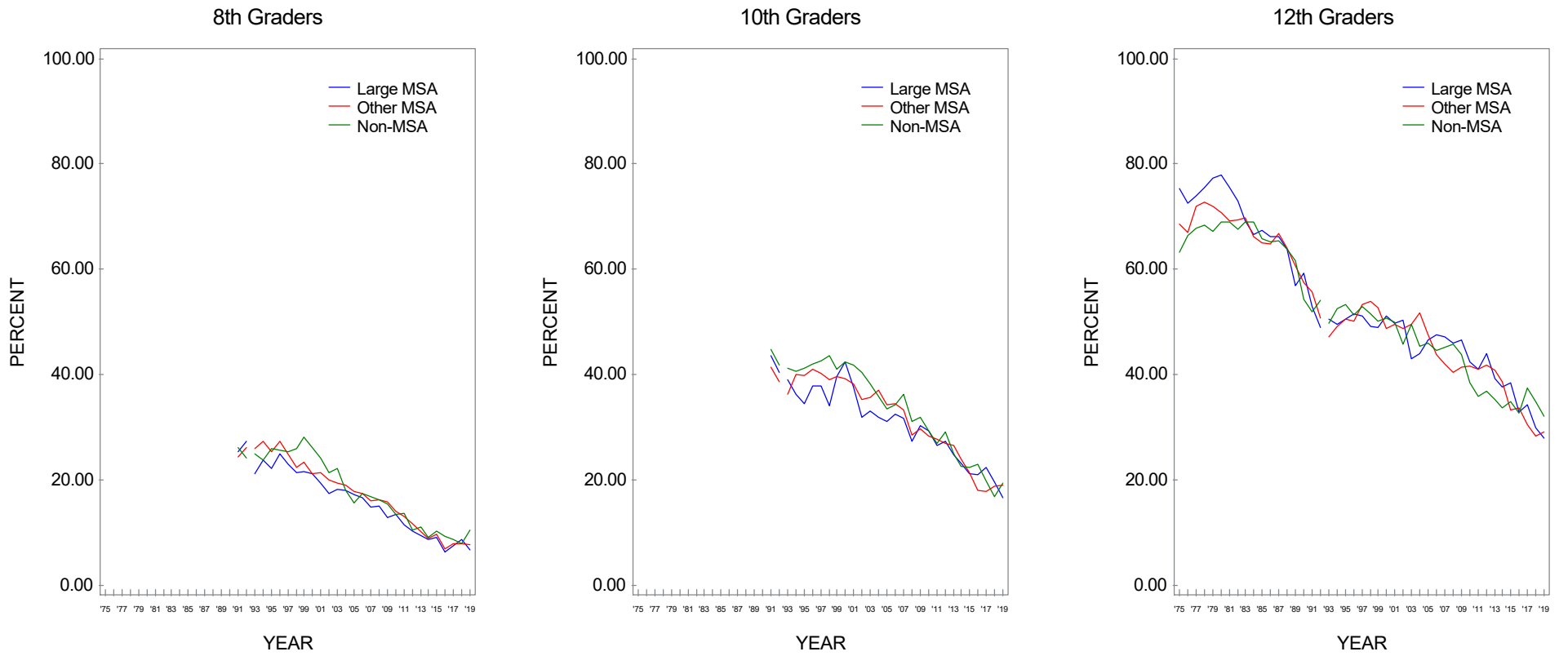
**FIGURE 207**  
**Alcohol:\* Trends in 30-Day Prevalence by Region**



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

\*Beginning in 1993, a revised set of questions on alcohol use was introduced that indicated that a drink meant more than a few sips.

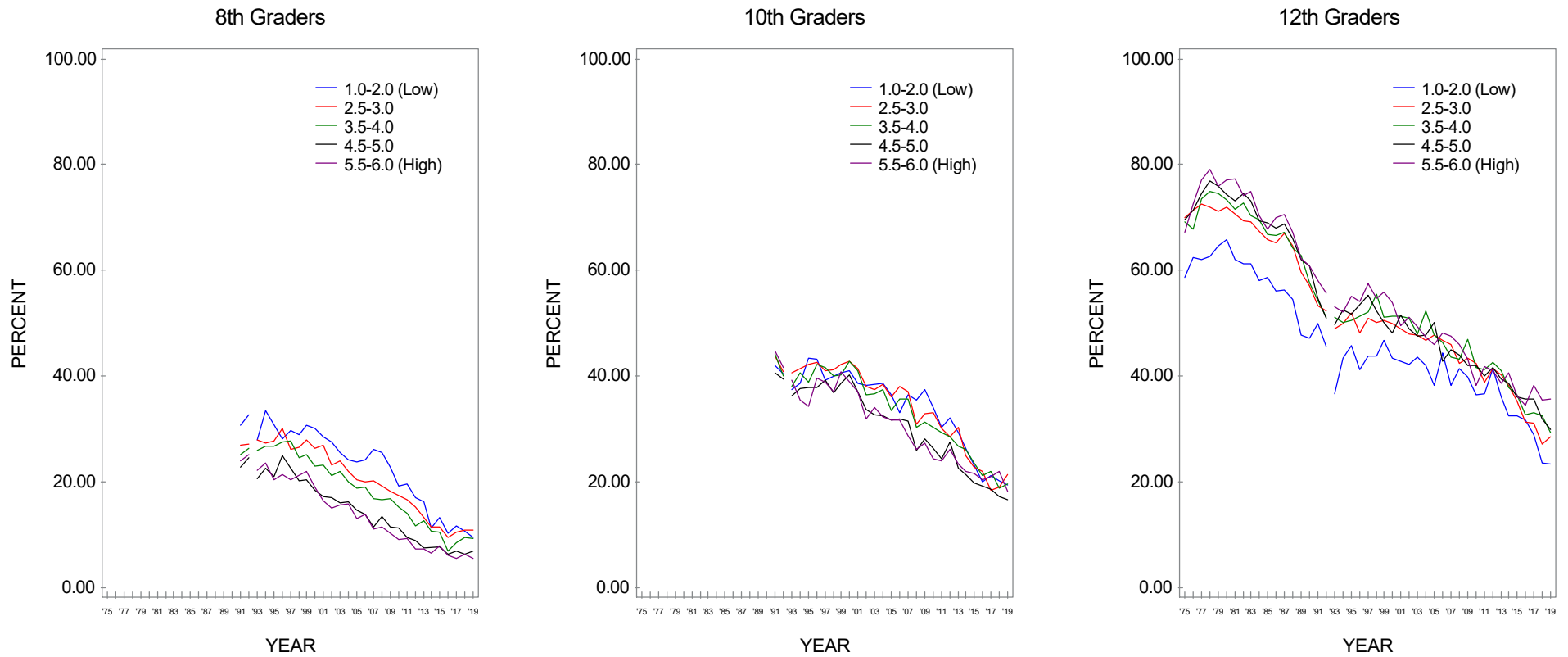
**FIGURE 208**  
**Alcohol:\* Trends in 30-Day Prevalence by Population Density**



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

\*Beginning in 1993, a revised set of questions on alcohol use was introduced that indicated that a drink meant more than a few sips.

**FIGURE 209**  
**Alcohol:\* Trends in 30-Day Prevalence by Average Education Level of Parents\*\***

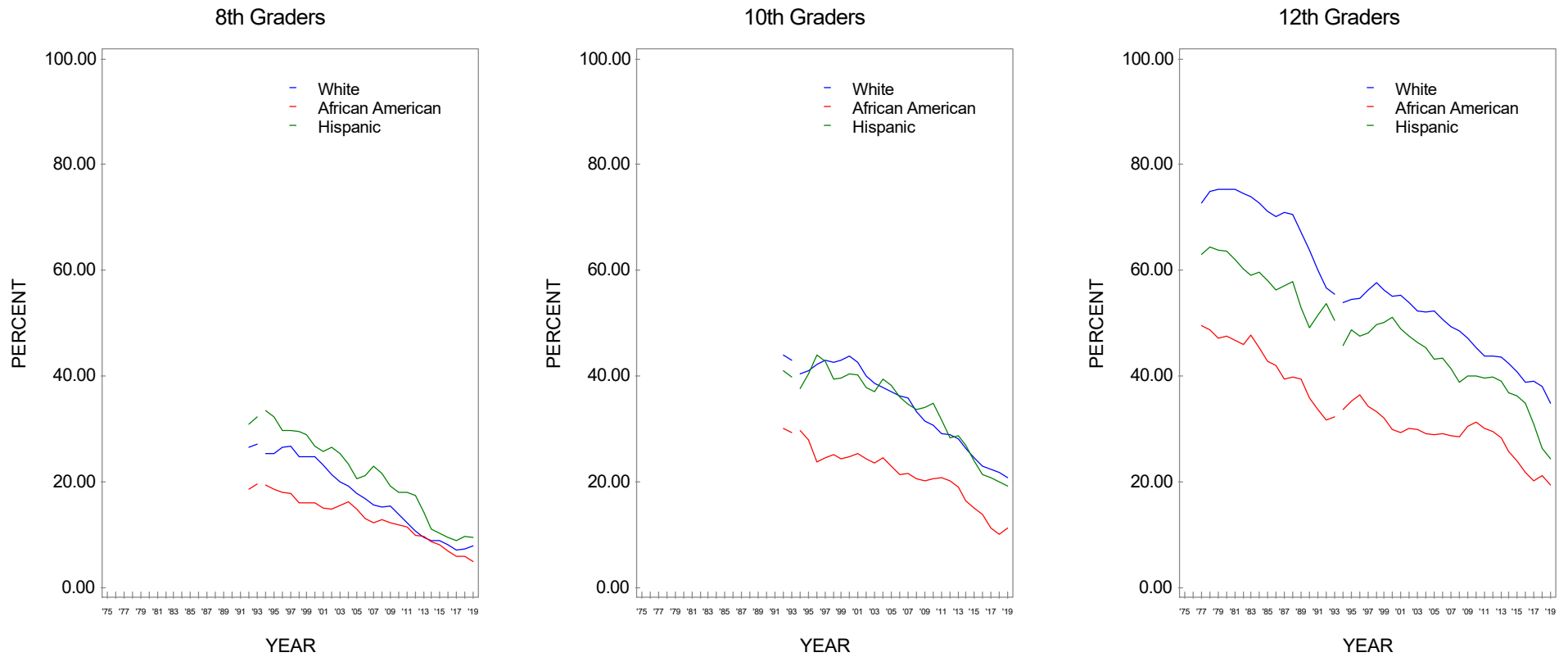


Source. The Monitoring the Future study, the University of Michigan.

\*Beginning in 1993, a revised set of questions on alcohol use was introduced that indicated that a drink meant more than a few sips.

\*\*Parental education is an average score of mother's education and father's education.

**FIGURE 210**  
**Alcohol:\* Trends in 30-Day Prevalence by Race/Ethnicity\*\***

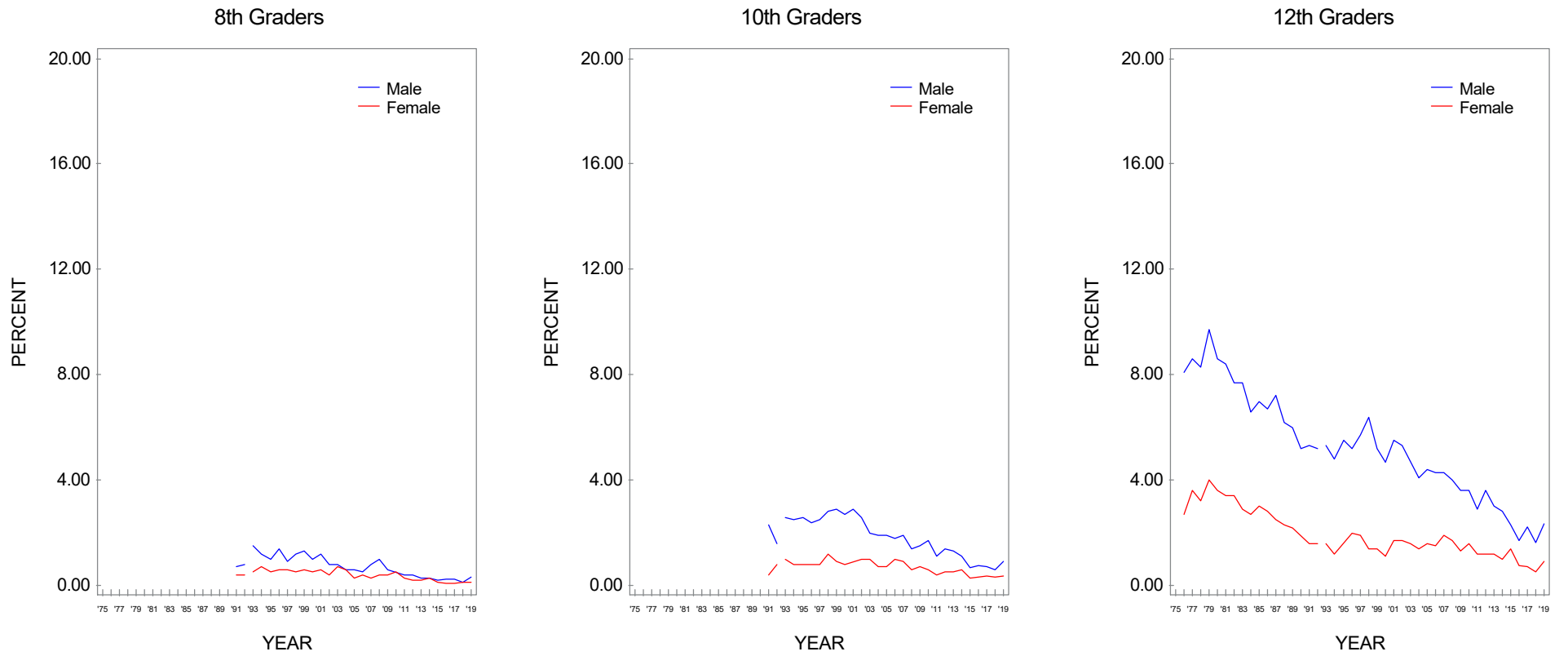


Source. The Monitoring the Future study, the University of Michigan.

\*Beginning in 1993, a revised set of questions on alcohol use was introduced that indicated that a drink meant more than a few sips.

\*\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 211**  
**Alcohol:\* Trends in Daily Prevalence by Gender**

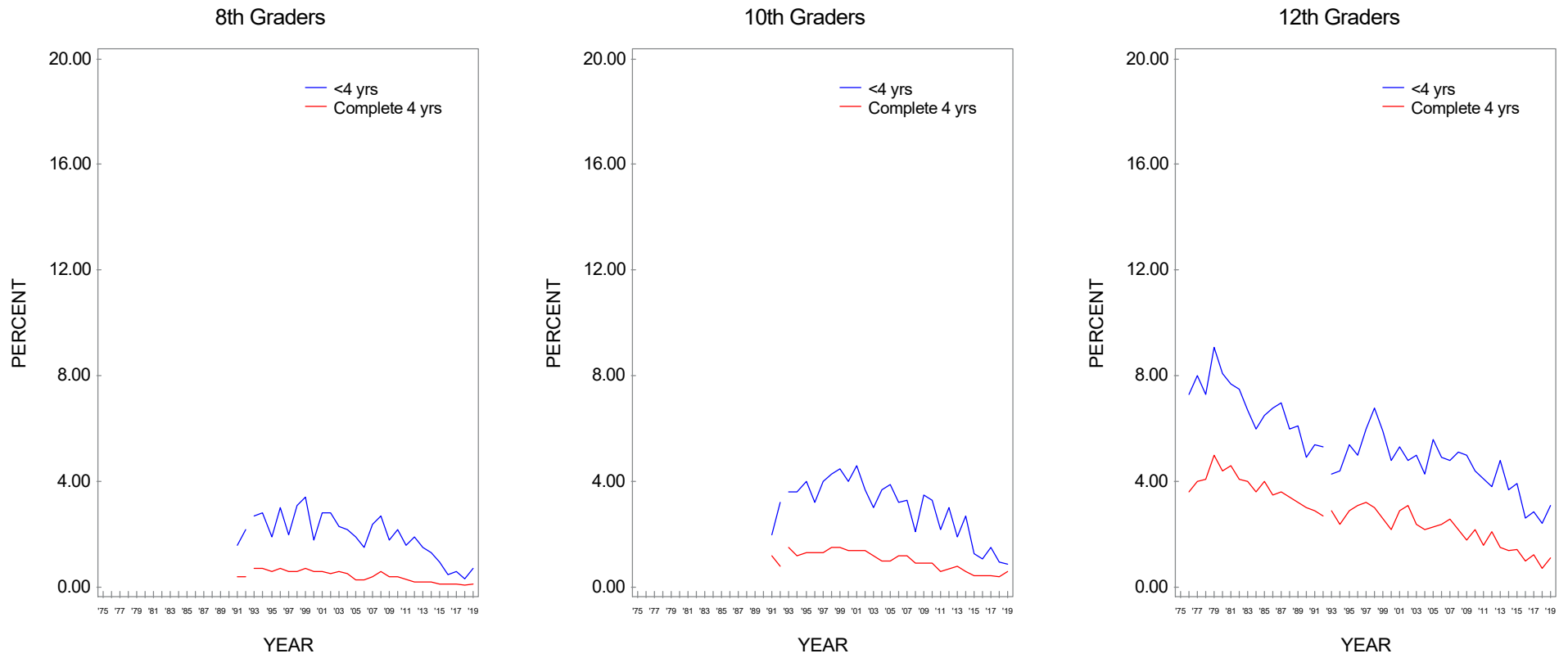


Source. The Monitoring the Future study, the University of Michigan.

\*Beginning in 1993, a revised set of questions on alcohol use was introduced that indicated that a drink meant more than a few sips.



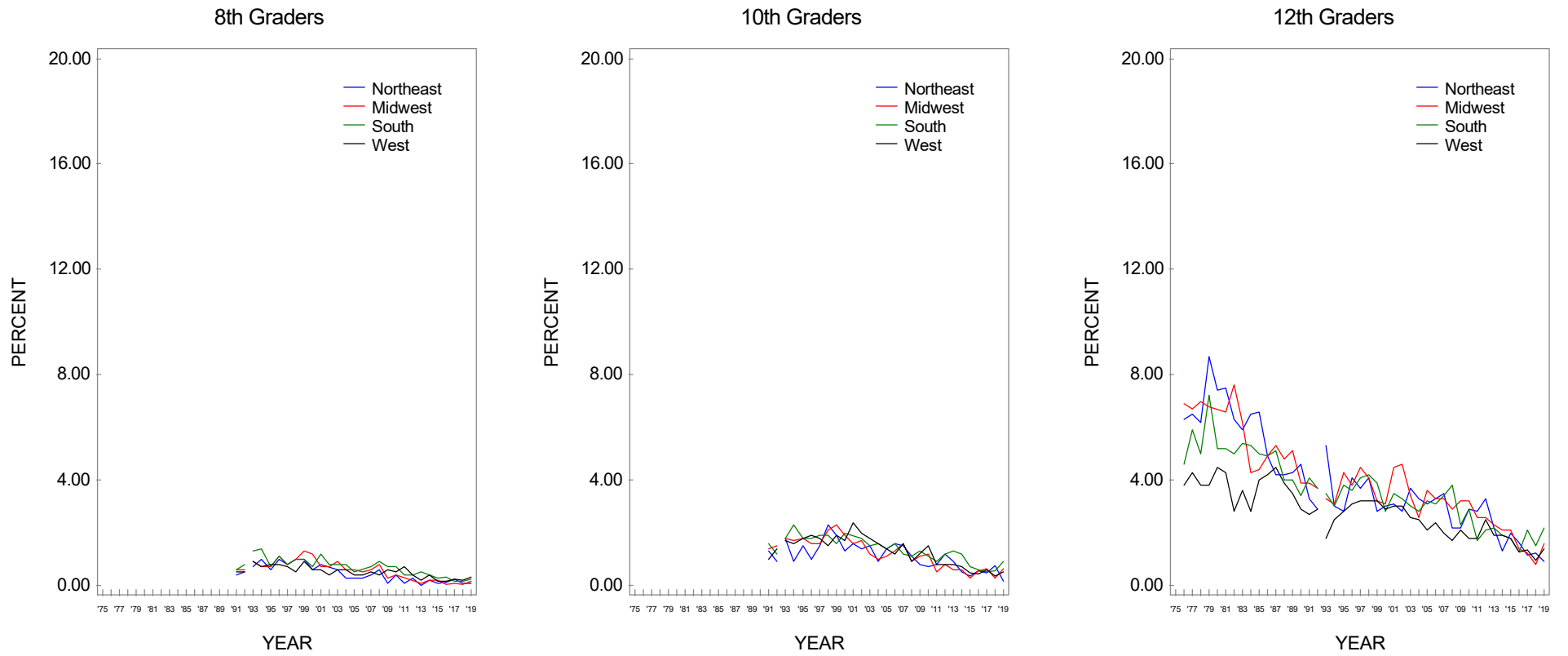
**FIGURE 212**  
**Alcohol:\* Trends in Daily Prevalence by College Plans**



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

\*Beginning in 1993, a revised set of questions on alcohol use was introduced that indicated that a drink meant more than a few sips.

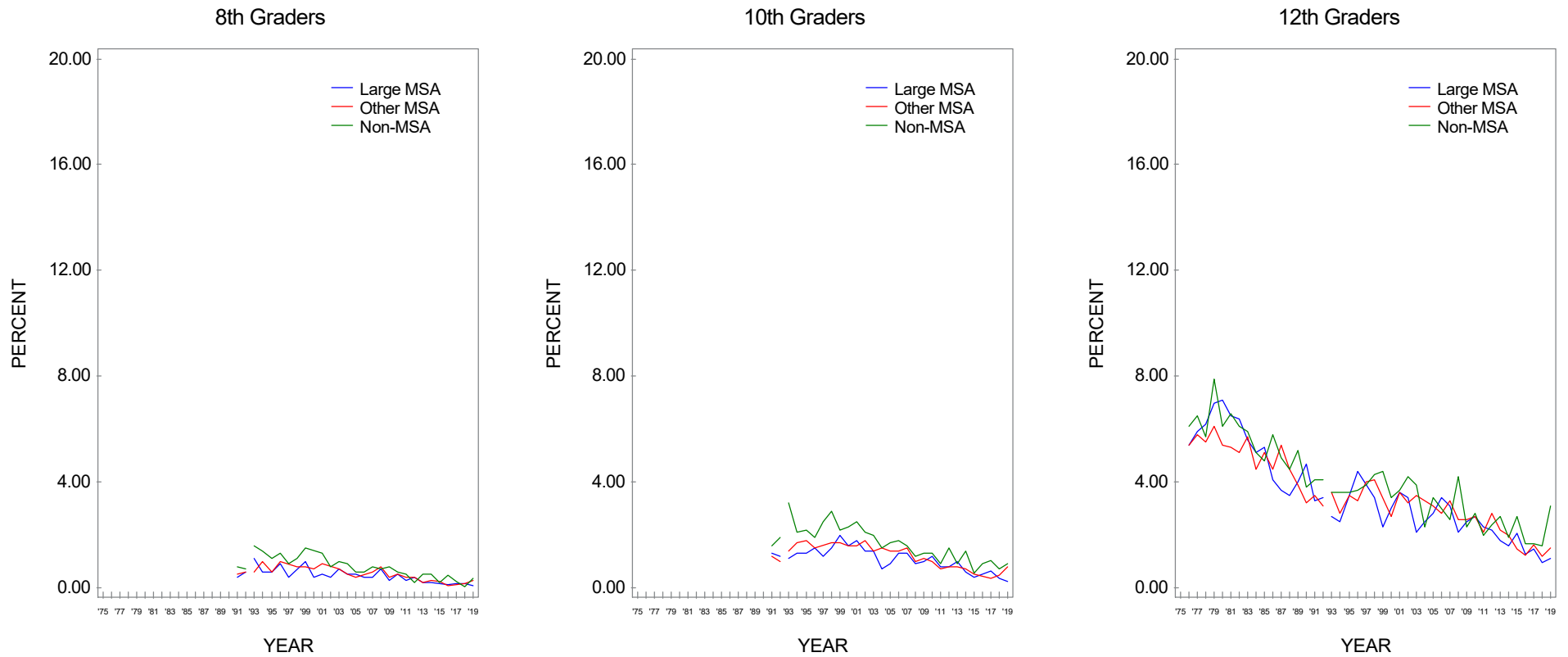
**FIGURE 213**  
**Alcohol:\* Trends in Daily Prevalence by Region**



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

\*Beginning in 1993, a revised set of questions on alcohol use was introduced that indicated that a drink meant more than a few sips.

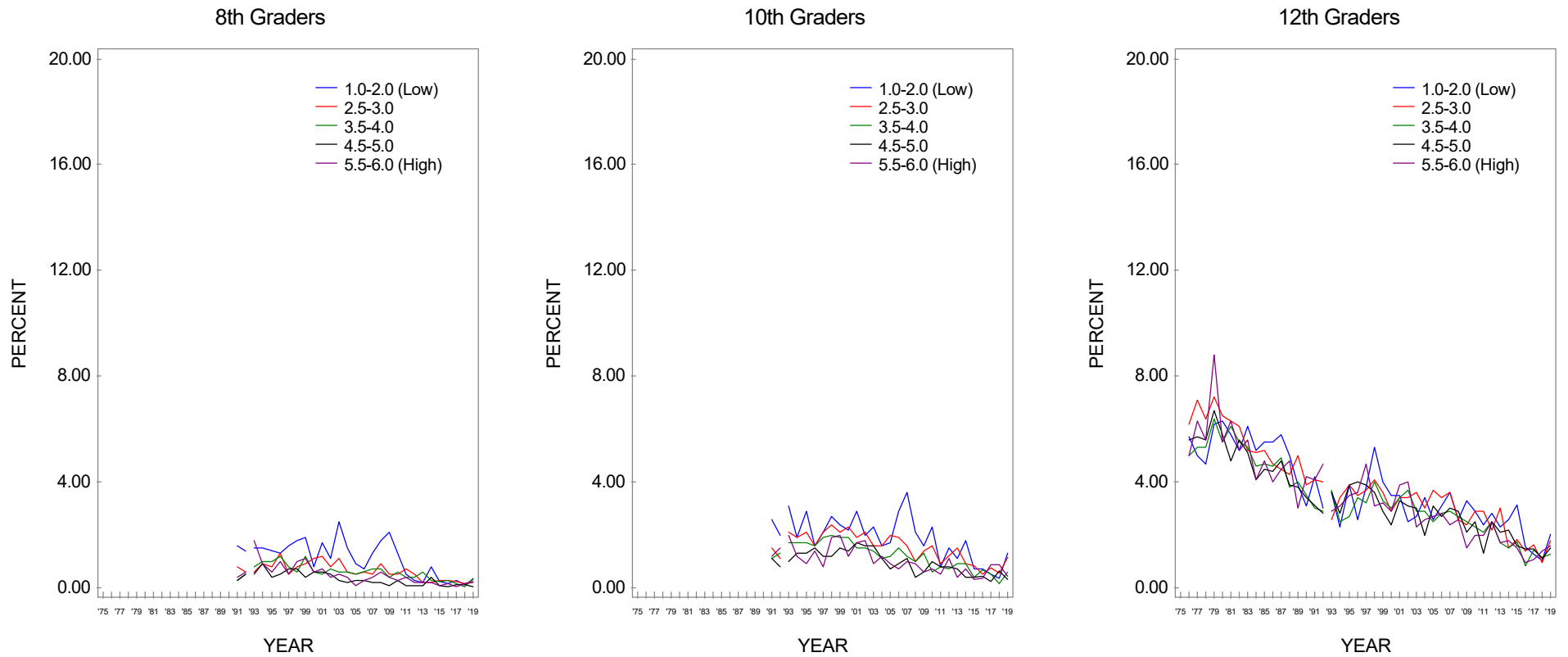
**FIGURE 214**  
**Alcohol:\* Trends in Daily Prevalence by Population Density**



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

\*Beginning in 1993, a revised set of questions on alcohol use was introduced that indicated that a drink meant more than a few sips.

**FIGURE 215**  
**Alcohol:\* Trends in Daily Prevalence by Average Education Level of Parents\*\***

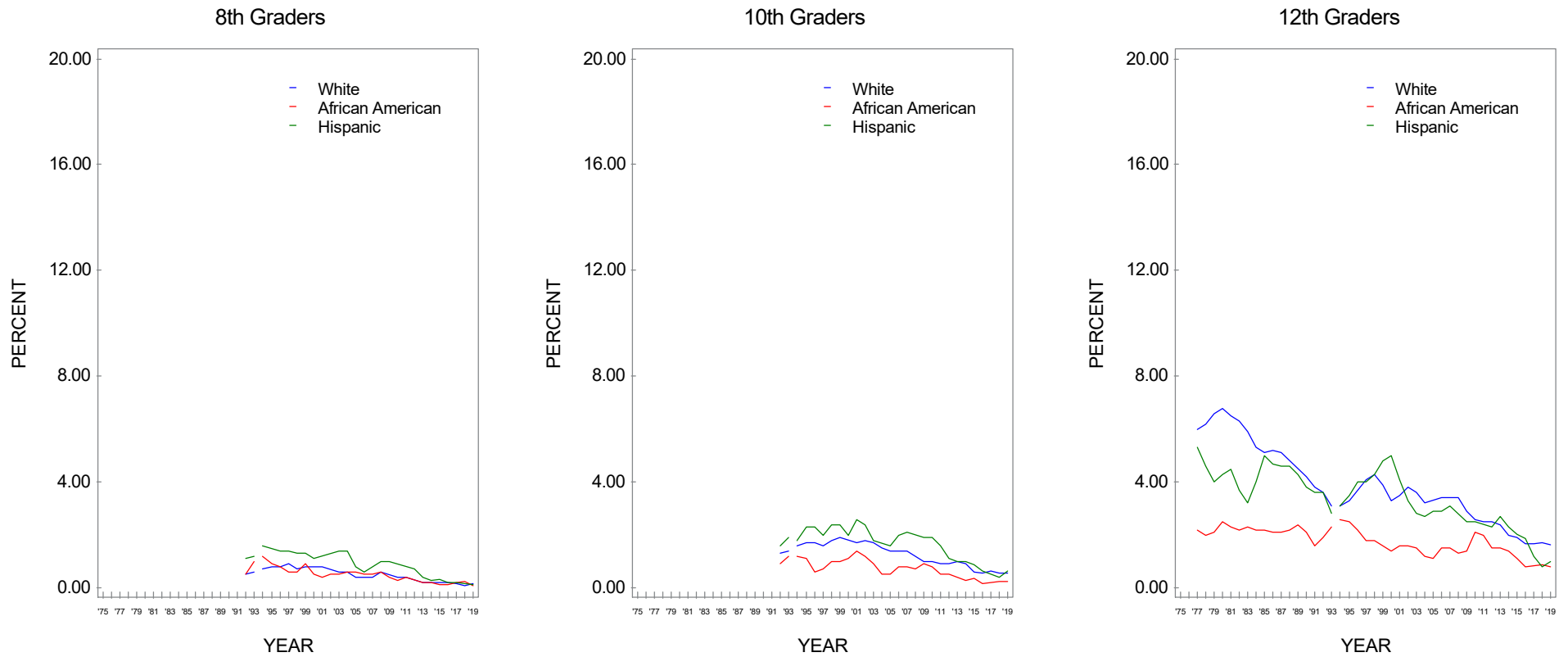


Source. The Monitoring the Future study, the University of Michigan.

\*Beginning in 1993, a revised set of questions on alcohol use was introduced that indicated that a drink meant more than a few sips.

\*\*Parental education is an average score of mother's education and father's education.

**FIGURE 216**  
**Alcohol:\* Trends in Daily Prevalence by Race/Ethnicity\*\***

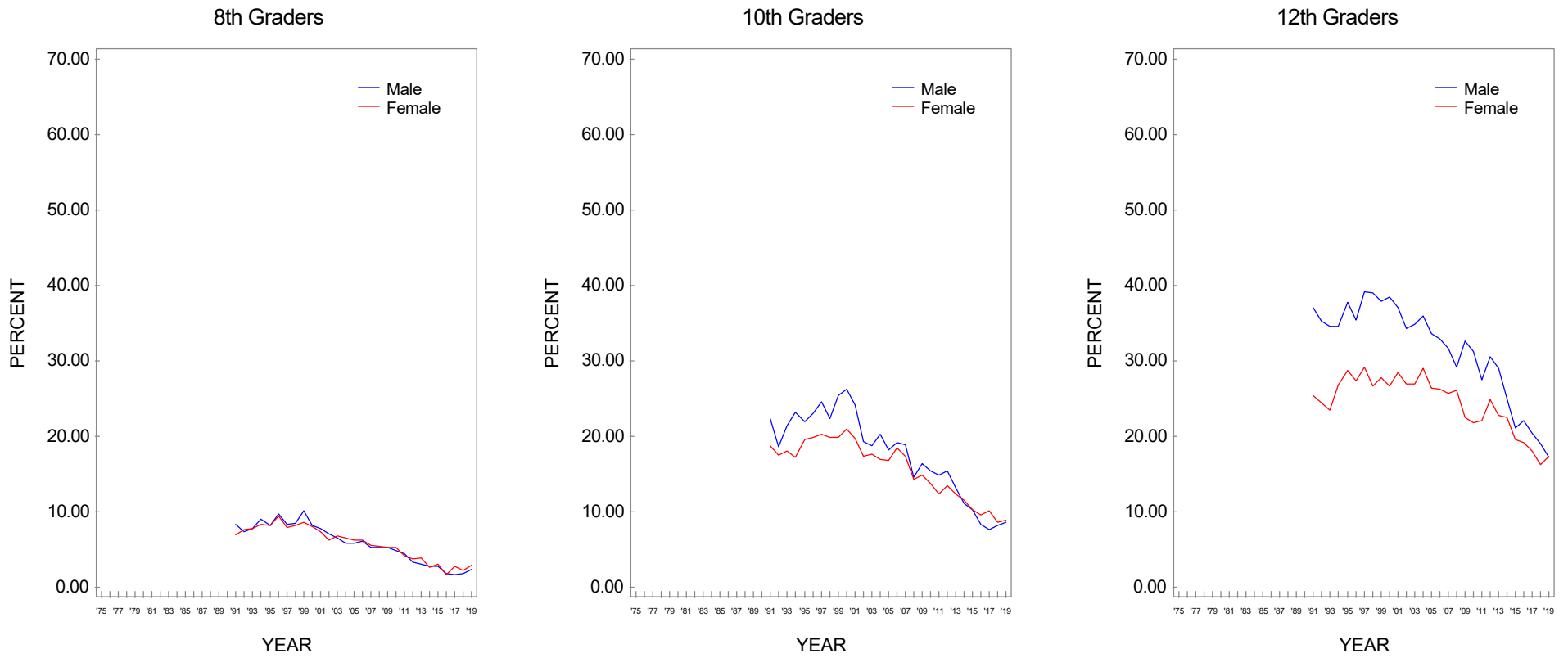


Source. The Monitoring the Future study, the University of Michigan.

\*Beginning in 1993, a revised set of questions on alcohol use was introduced that indicated that a drink meant more than a few sips.

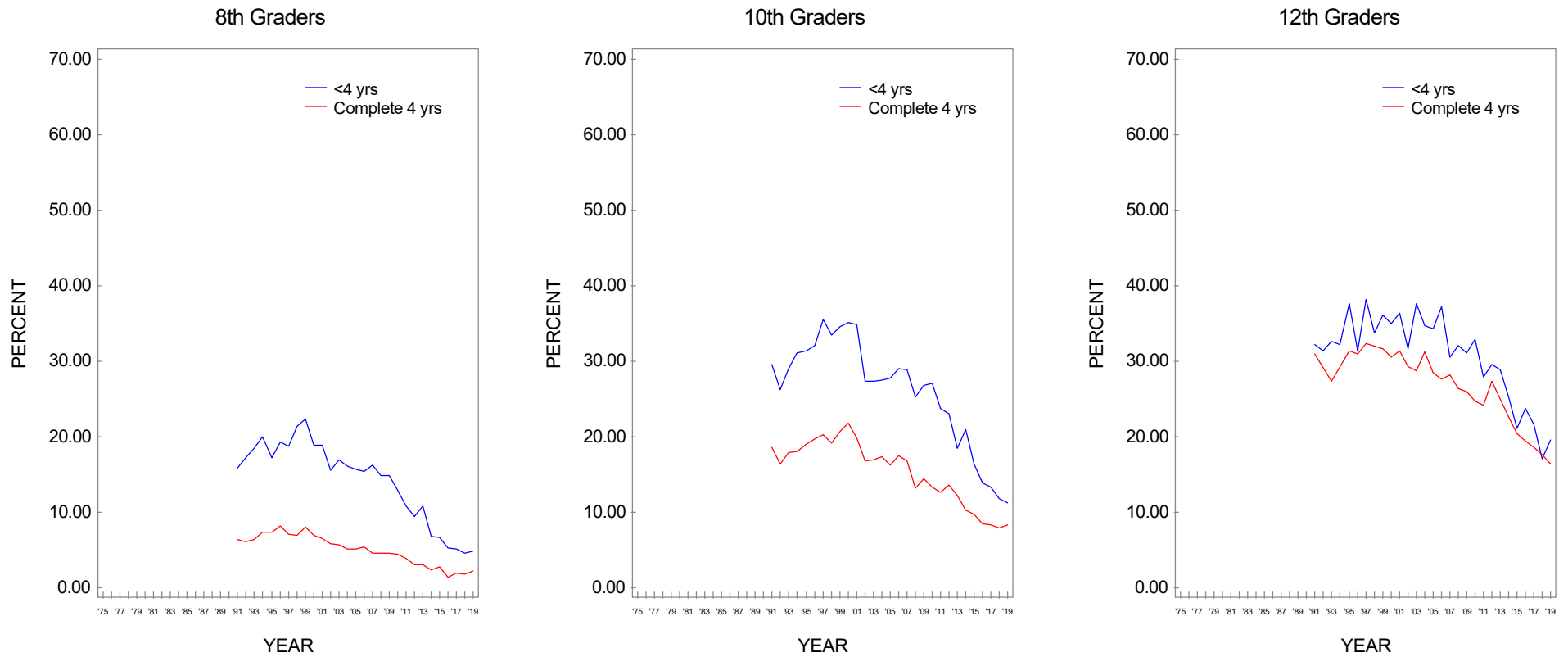
\*\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 217**  
**Alcohol: Trends in 30-Day Prevalence of Having Been Drunk by Gender**



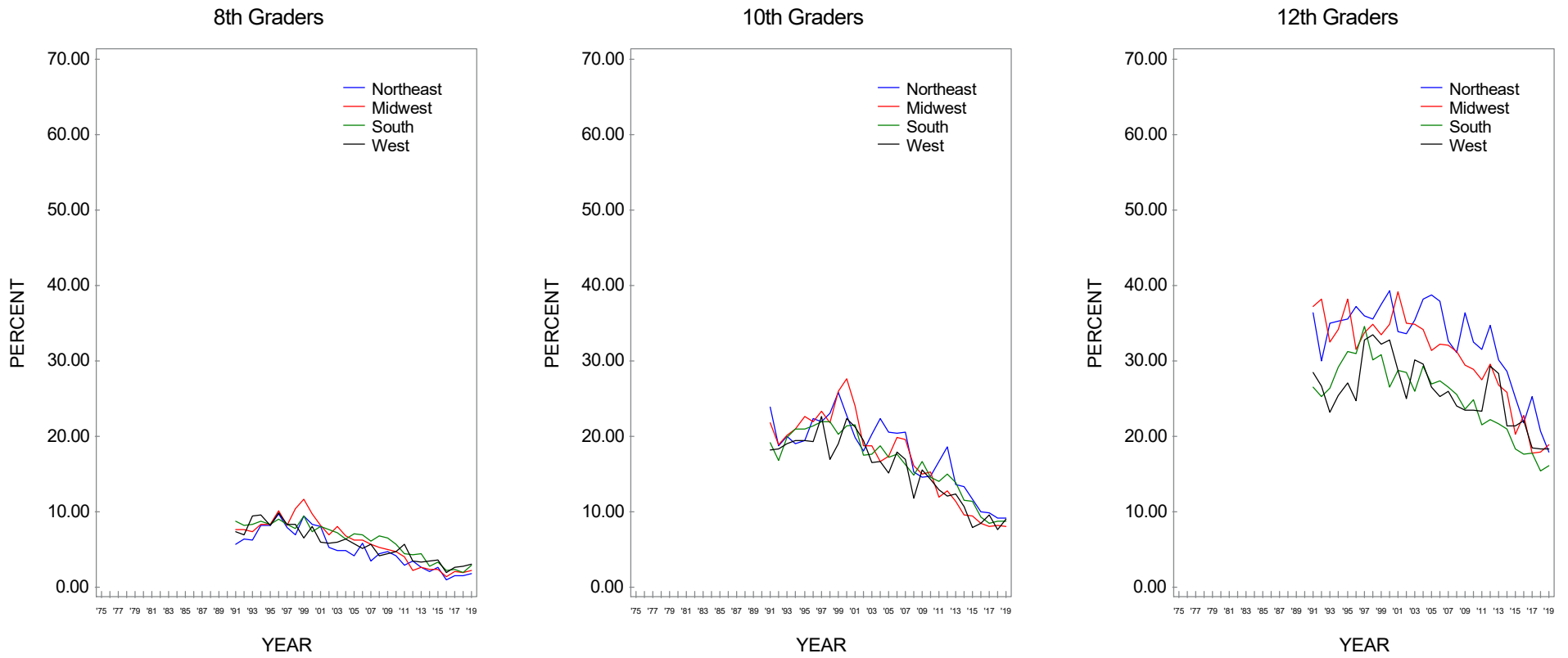
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 218**  
**Alcohol: Trends in 30-Day Prevalence of Having Been Drunk by College Plans**



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

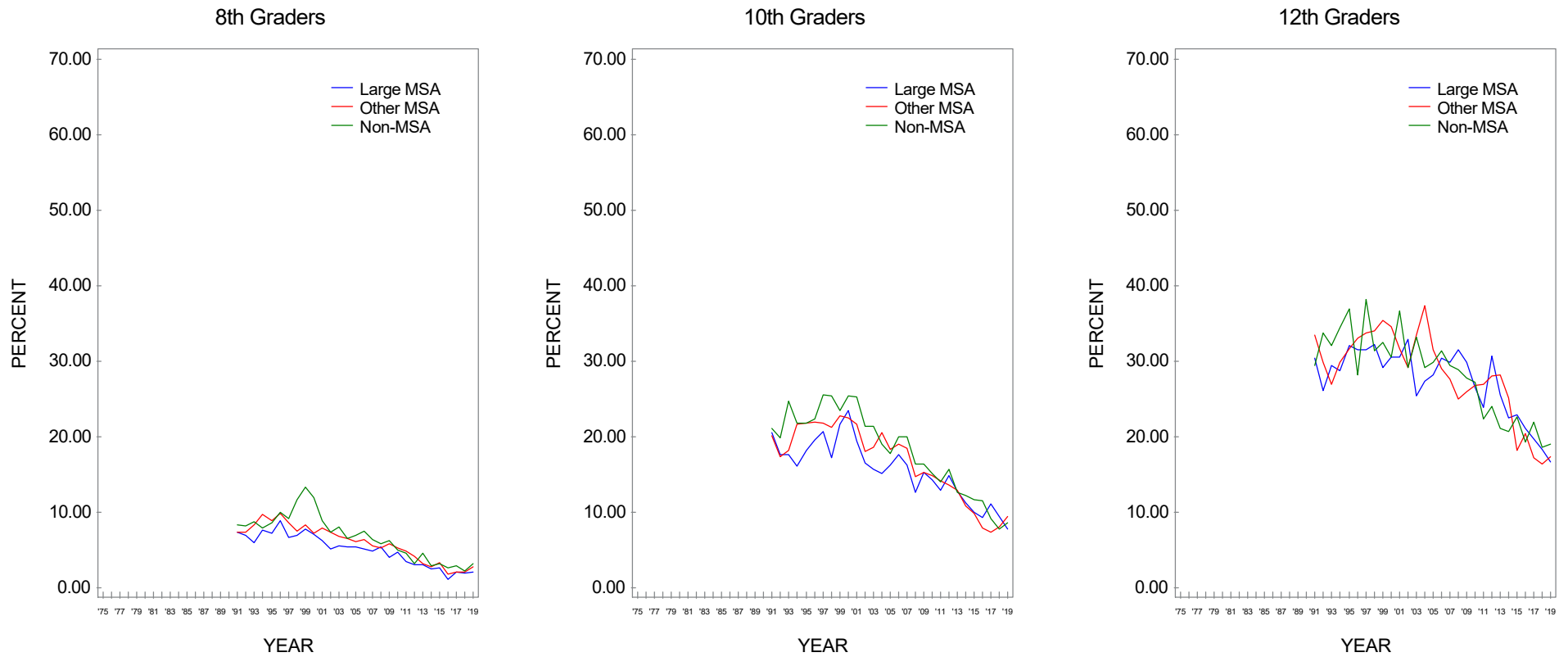
**FIGURE 219**  
**Alcohol: Trends in 30-Day Prevalence of Having Been Drunk by Region**



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



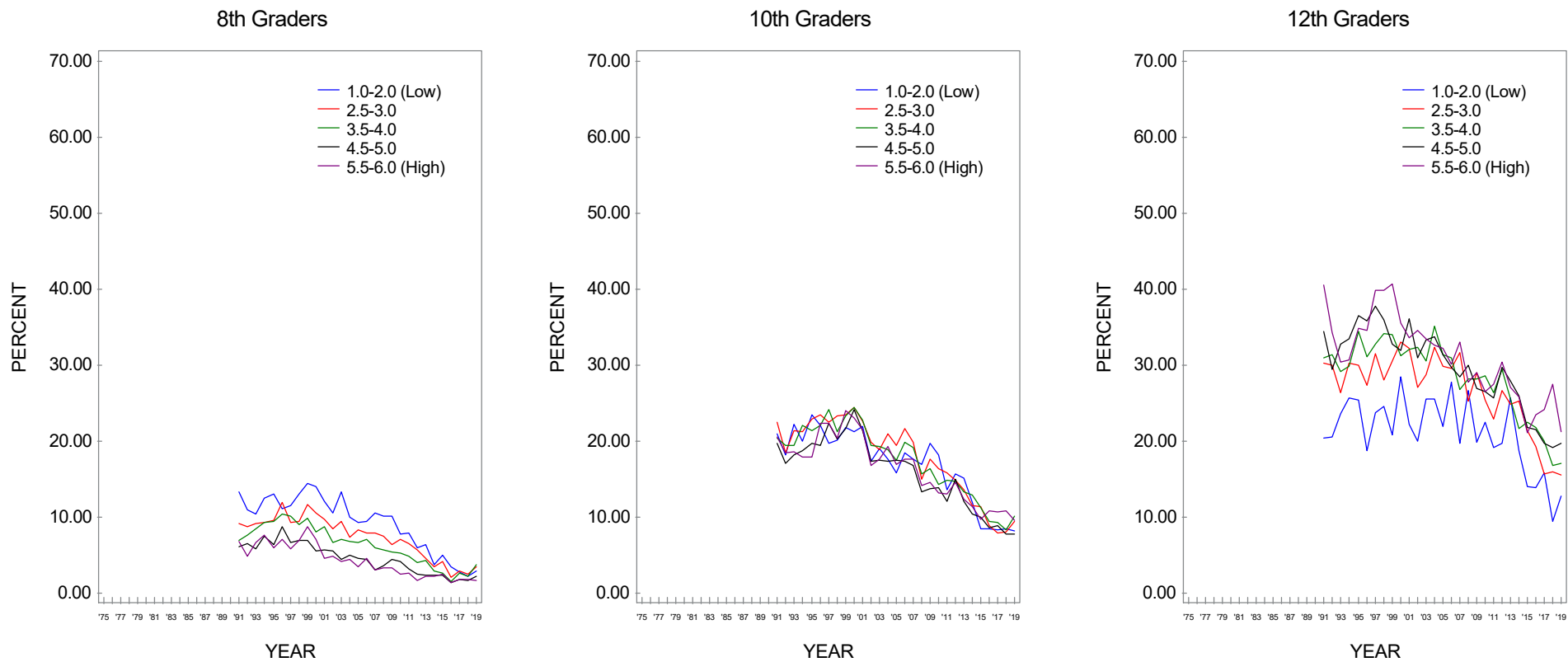
**FIGURE 220**  
**Alcohol: Trends in 30-Day Prevalence of Having Been Drunk by Population Density**



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

**FIGURE 221**

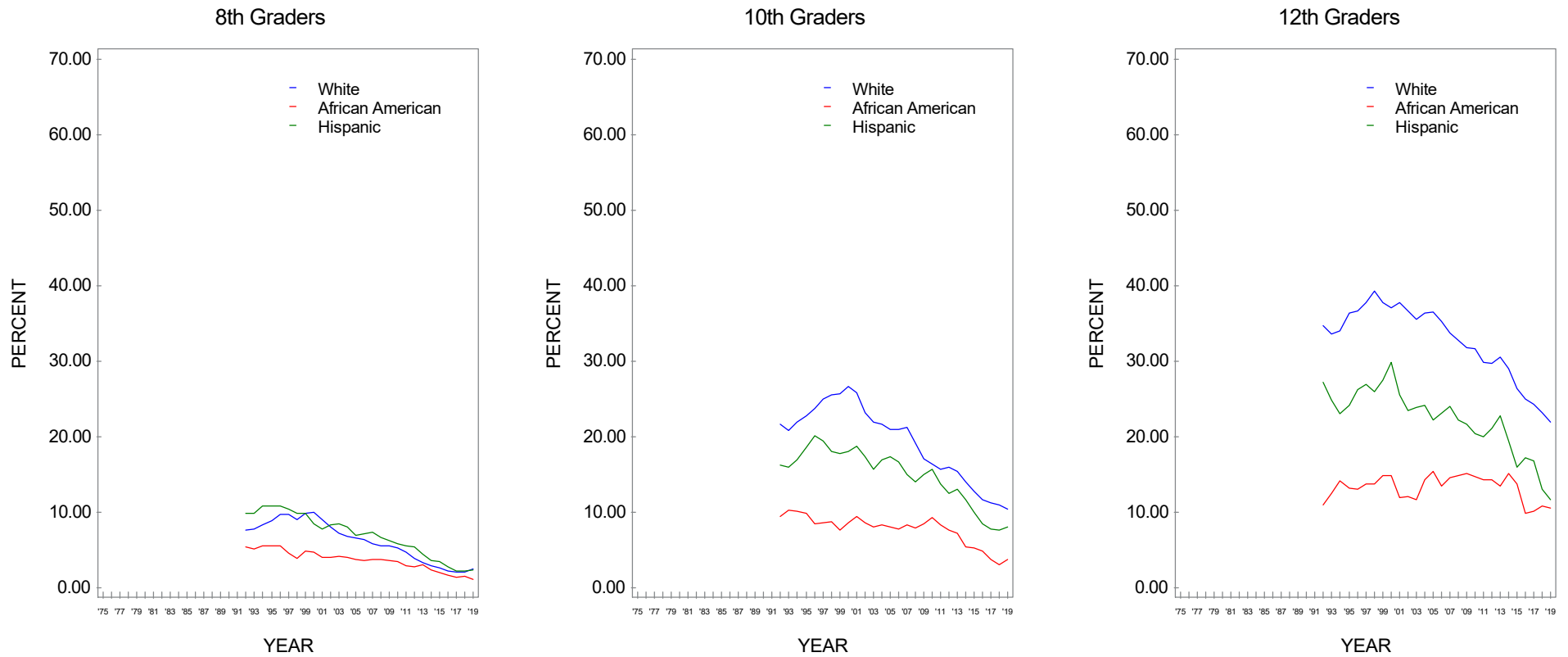
**Alcohol: Trends in 30-Day Prevalence of Having Been Drunk by Average Education Level of Parents\***



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

\*Parental education is an average score of mother's education and father's education.

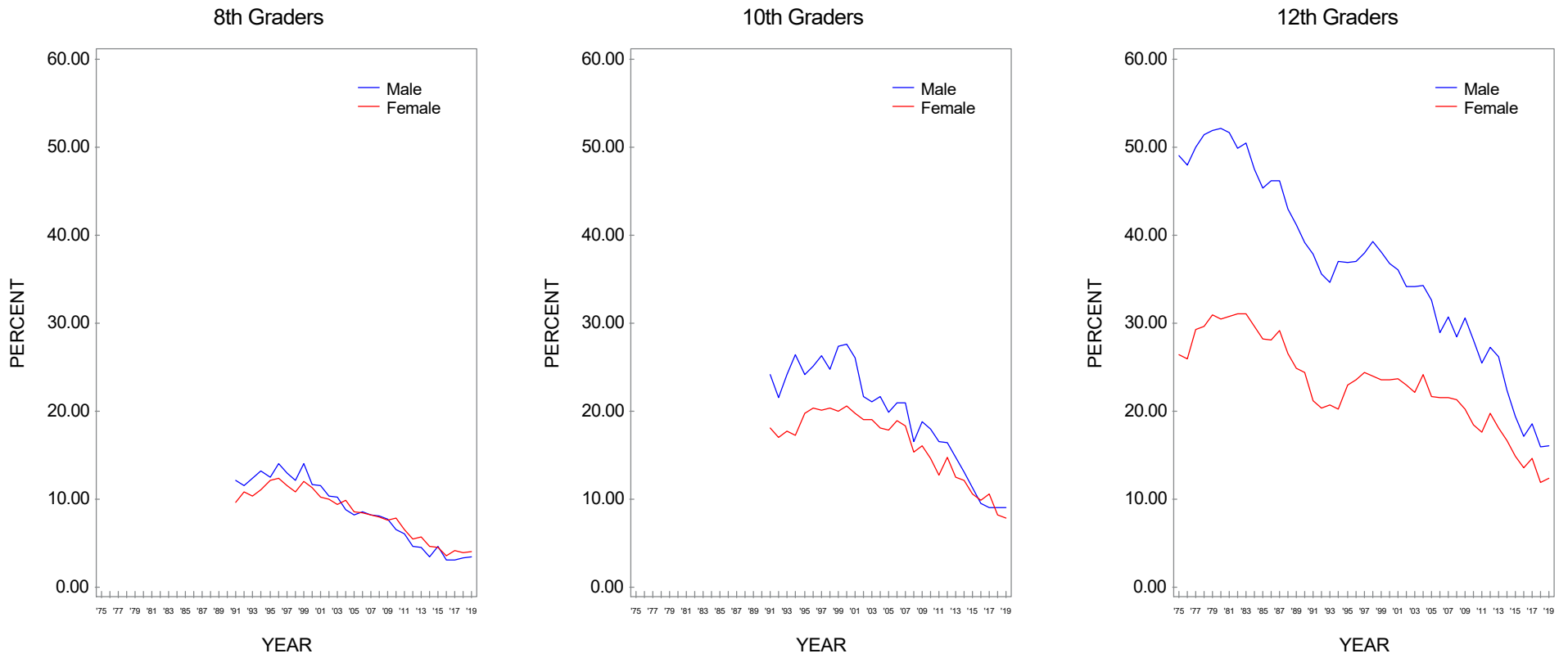
**FIGURE 222**  
**Alcohol: Trends in 30-Day Prevalence of Having Been Drunk by Race/Ethnicity\***



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

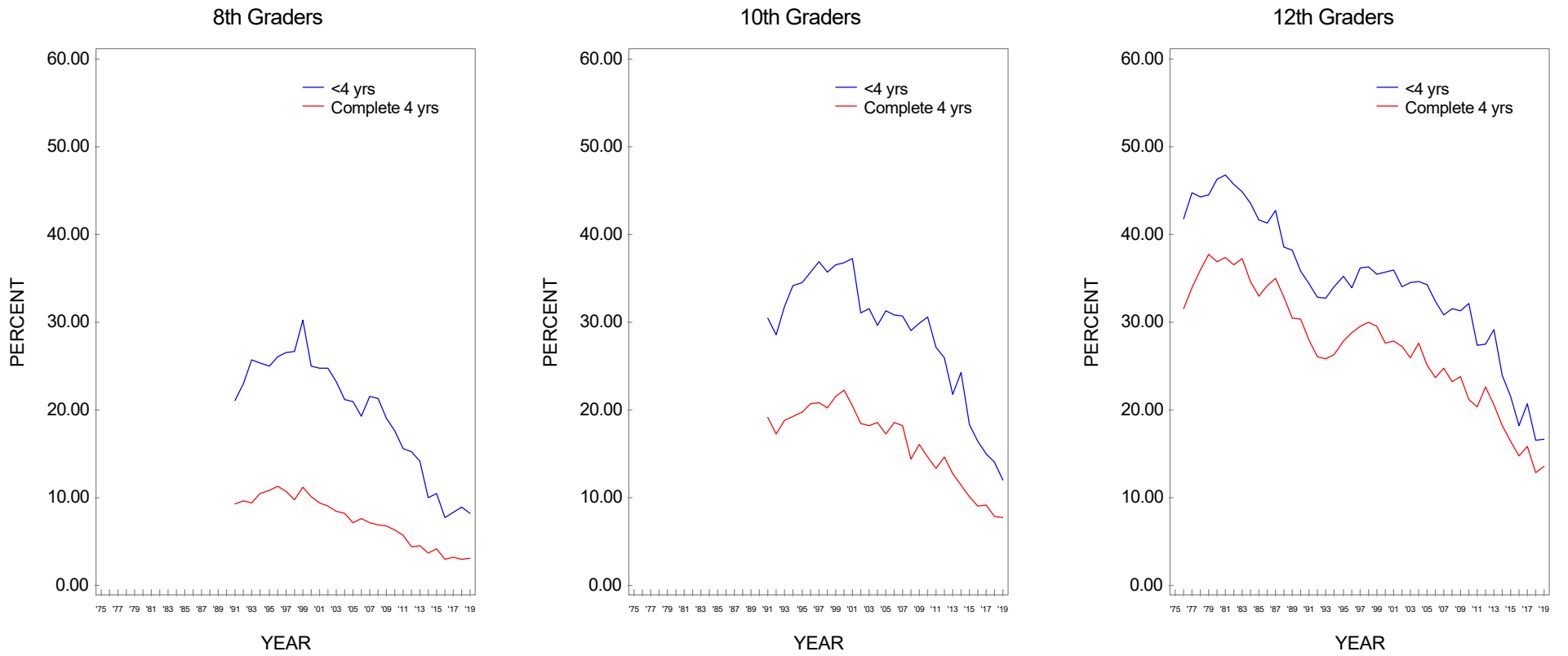
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 223**  
**Binge Drinking: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Gender**



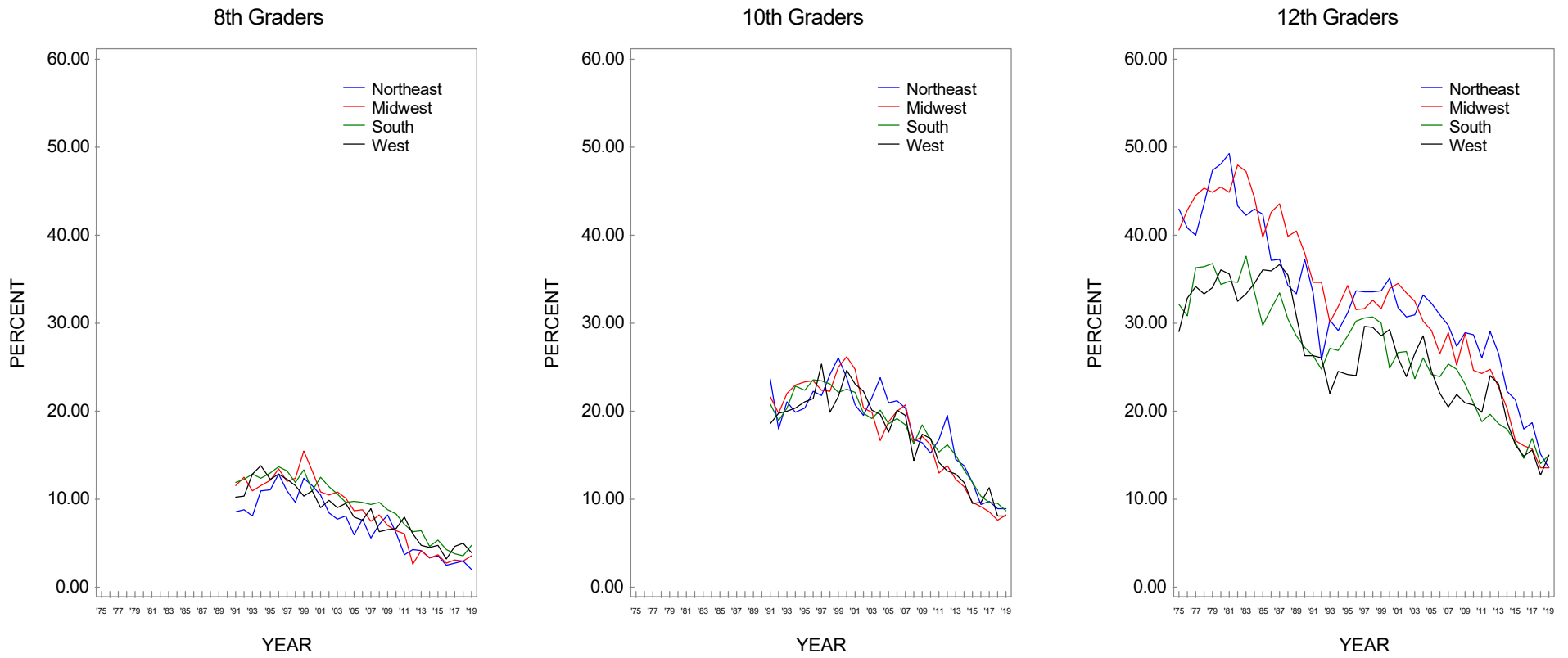
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 224**  
**Binge Drinking: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by College Plans**



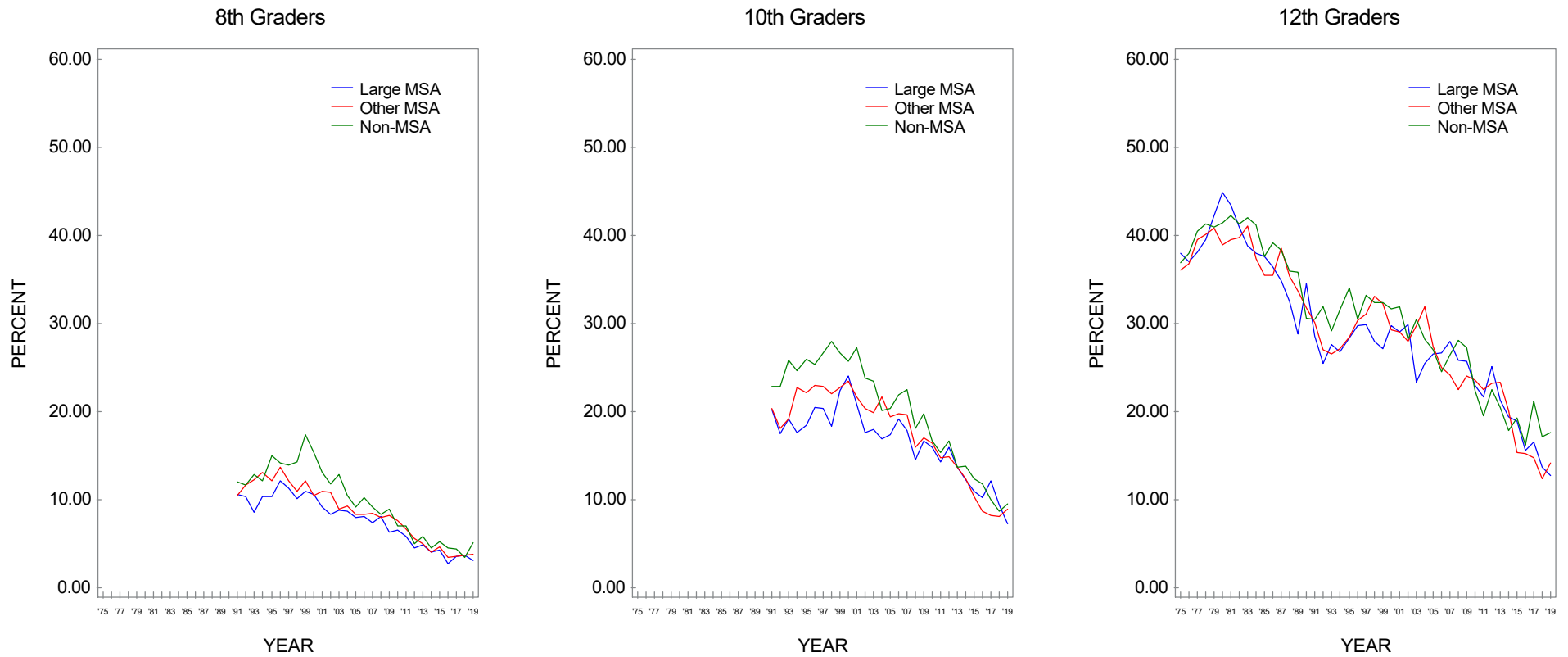
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 225**  
**Binge Drinking: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Region**



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

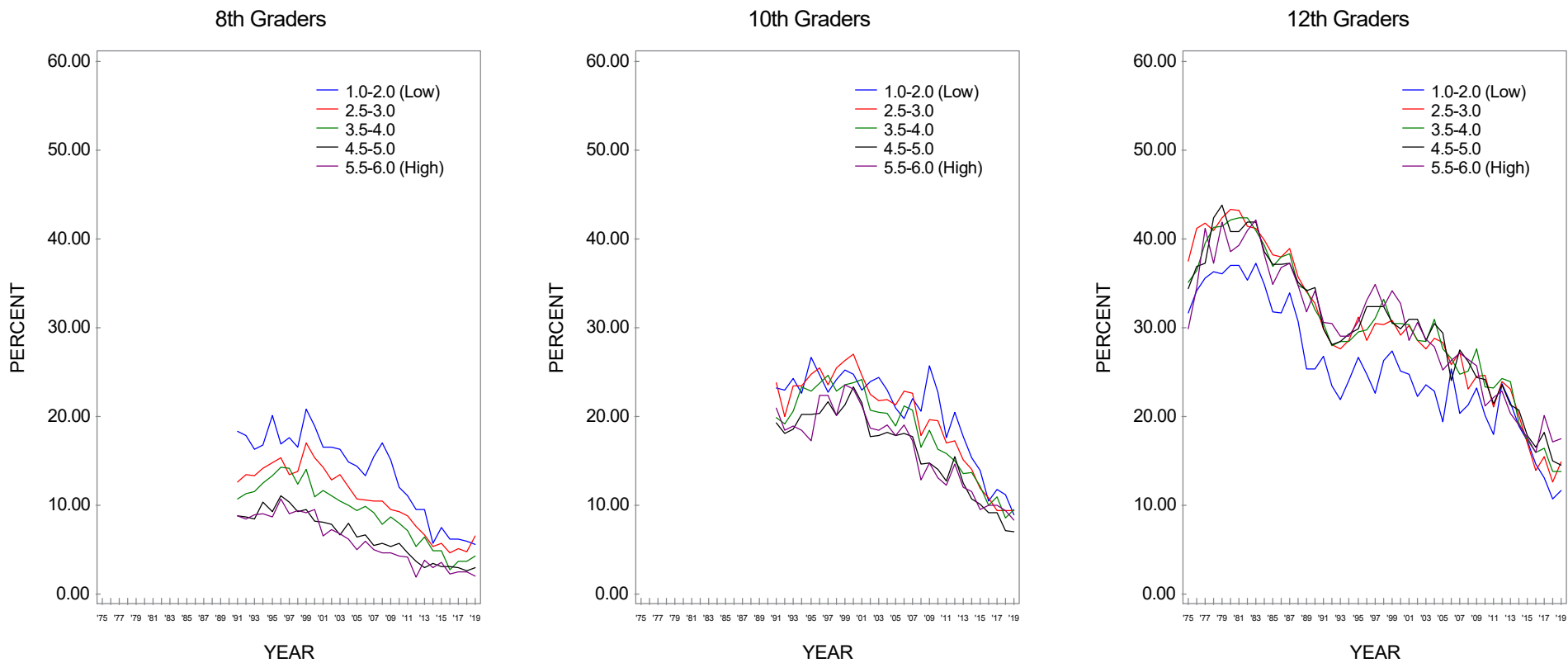
**FIGURE 226**  
**Binge Drinking: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Population Density**



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

**FIGURE 227**

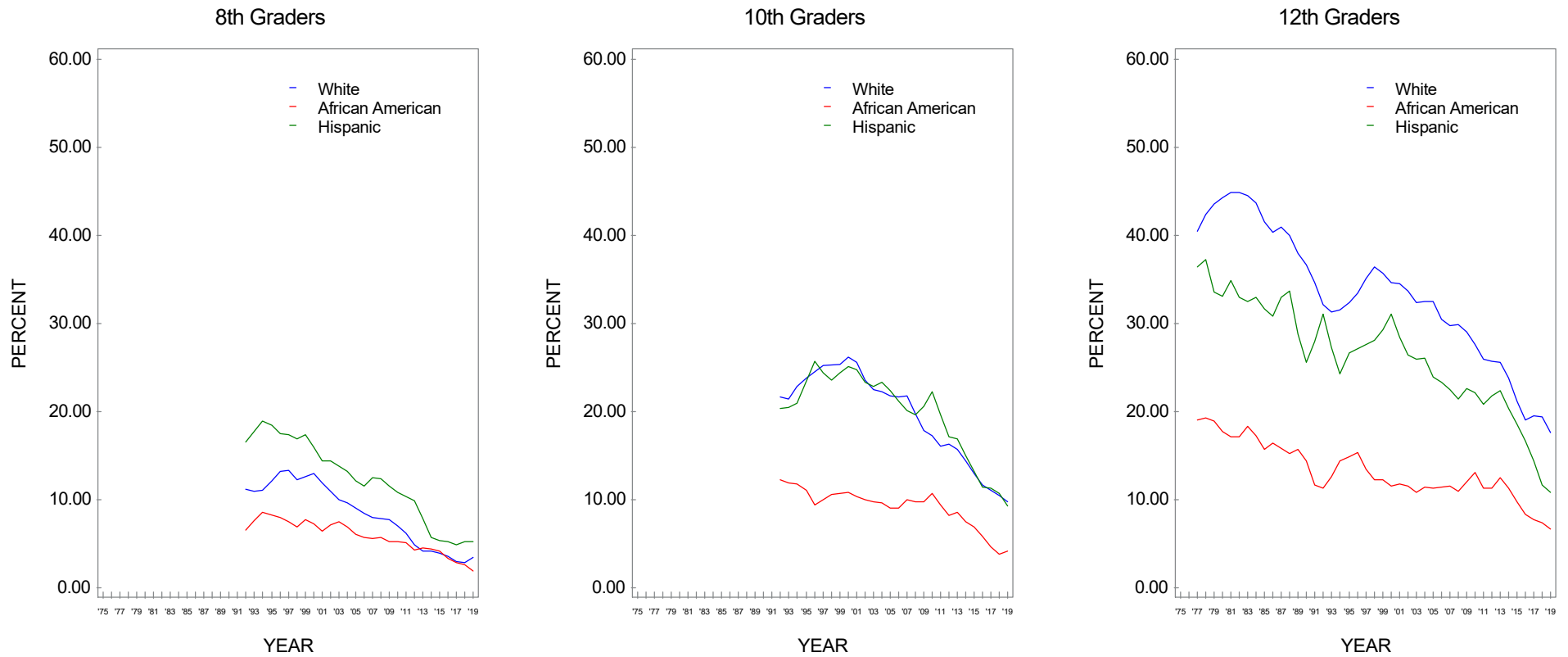
**Binge Drinking: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
\*Parental education is an average score of mother's education and father's education.



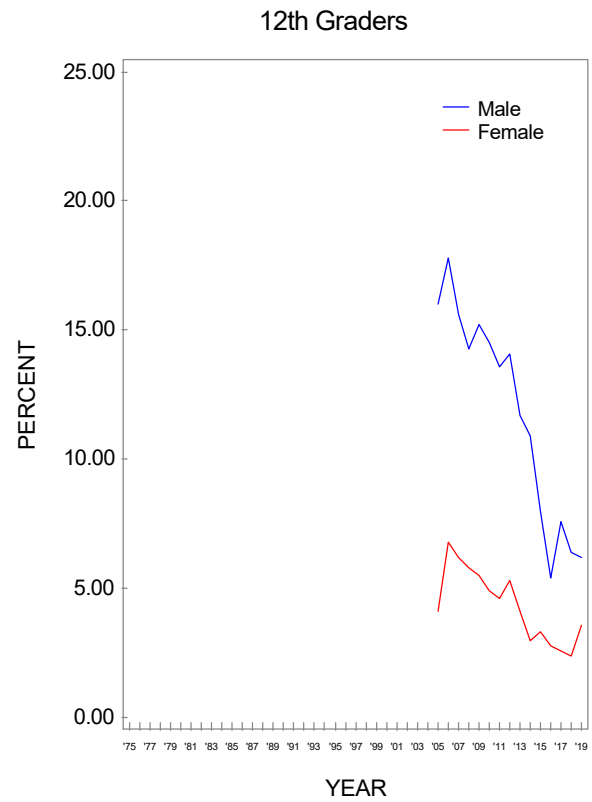
**FIGURE 228**  
**Binge Drinking: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Race/Ethnicity\***



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

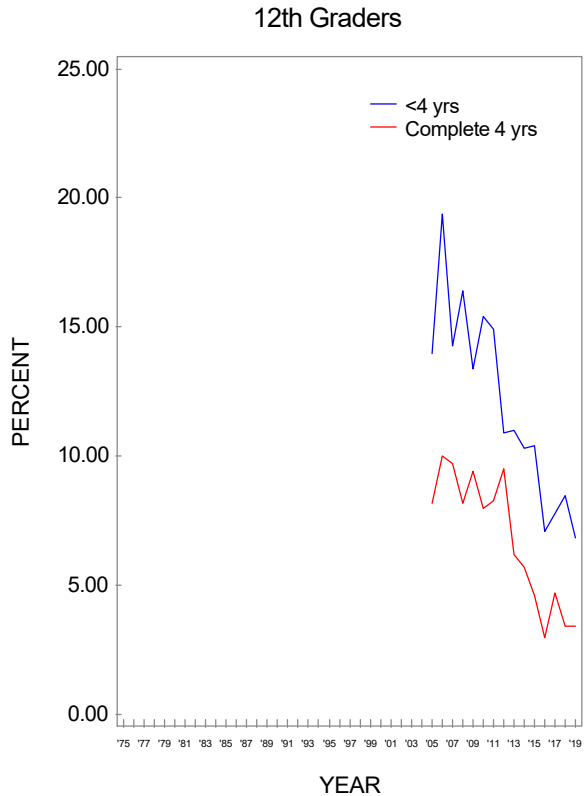
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 229**  
**Binge Drinking: Trends in 2-Week Prevalence of 10 or More Drinks in a Row by Gender**



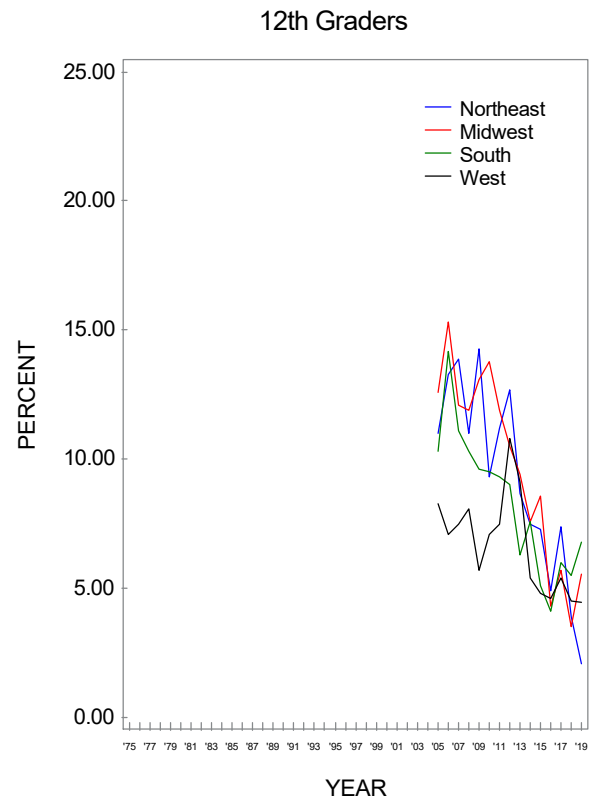
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 230**  
**Binge Drinking: Trends in 2-Week Prevalence of 10 or More Drinks in a Row by College Plans**



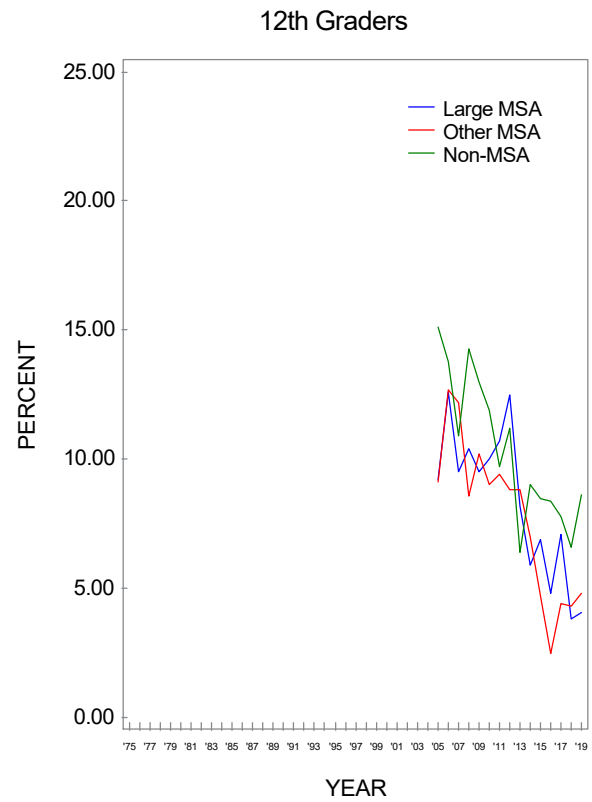
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 231**  
**Binge Drinking: Trends in 2-Week Prevalence of 10 or More Drinks in a Row by Region**



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

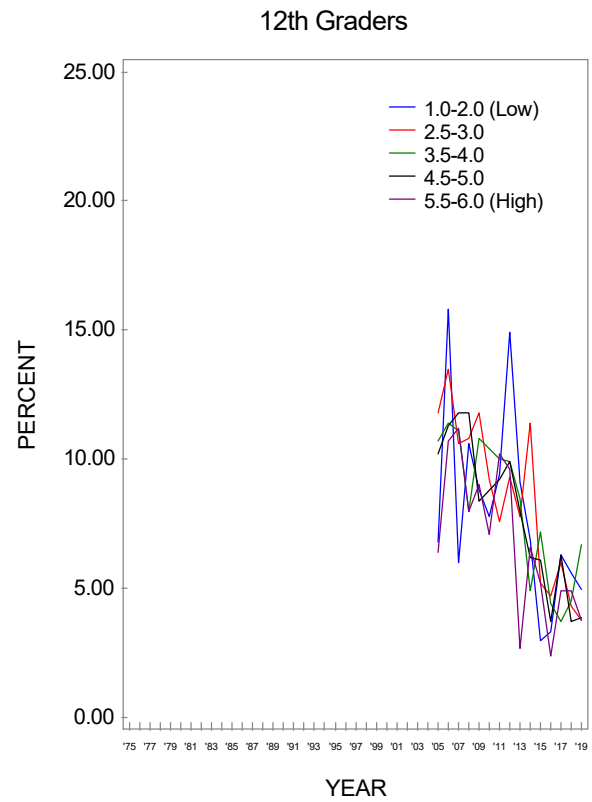
**FIGURE 232**  
**Binge Drinking: Trends in 2-Week Prevalence of 10 or More Drinks in a Row by Population Density**



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

**FIGURE 233**

**Binge Drinking: Trends in 2-Week Prevalence of 10 or More Drinks in a Row by Average Education Level of Parents\***

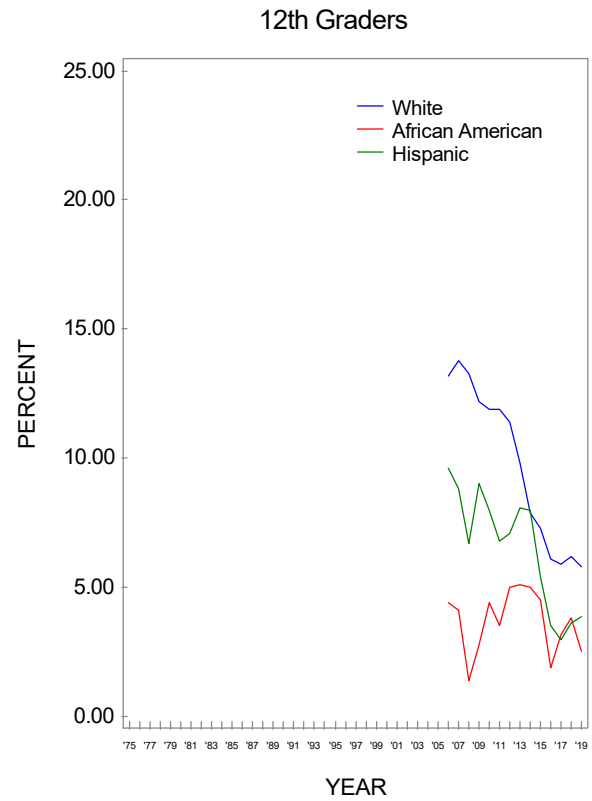


Source. The Monitoring the Future study, the University of Michigan.

\*Parental education is an average score of mother's education and father's education.

**FIGURE 234**

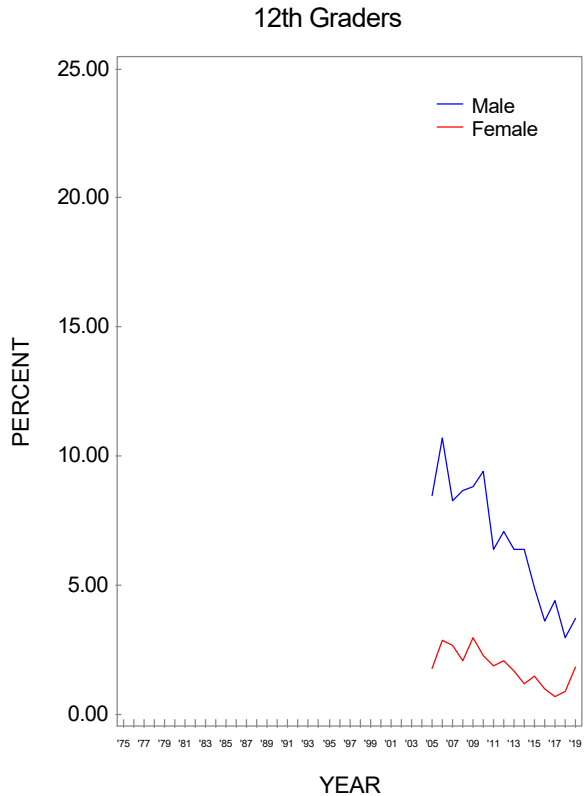
**Binge Drinking: Trends in 2-Week Prevalence of 10 or More Drinks in a Row by Race/Ethnicity\***



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

\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

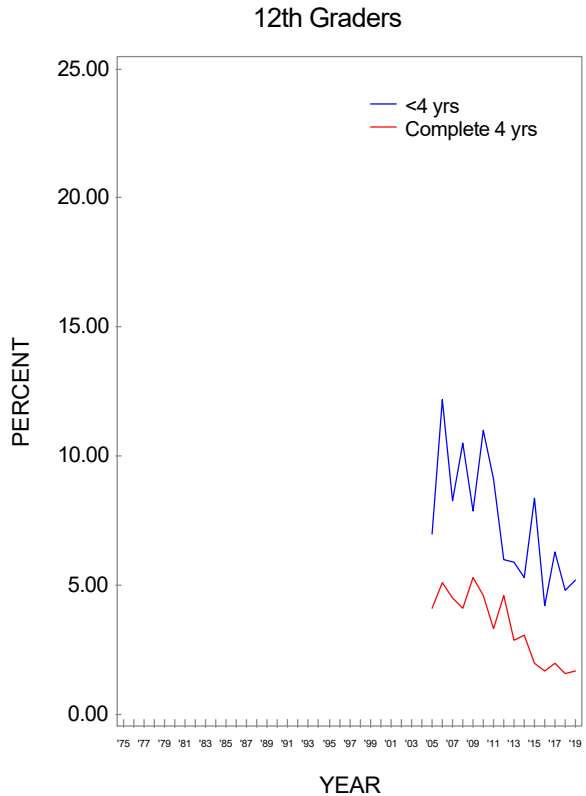
**FIGURE 235**  
**Binge Drinking: Trends in 2-Week Prevalence of 15 or More Drinks in a Row by Gender**



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

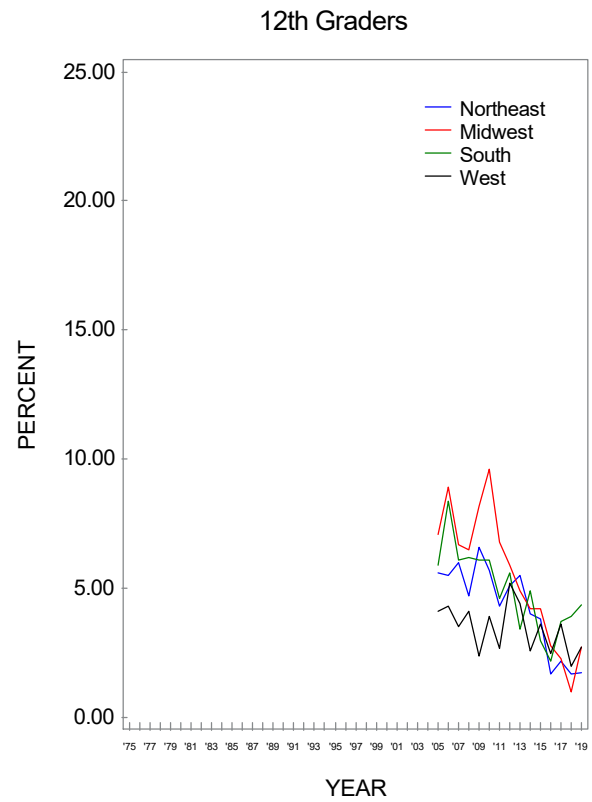


**FIGURE 236**  
**Binge Drinking: Trends in 2-Week Prevalence of 15 or More Drinks in a Row by College Plans**



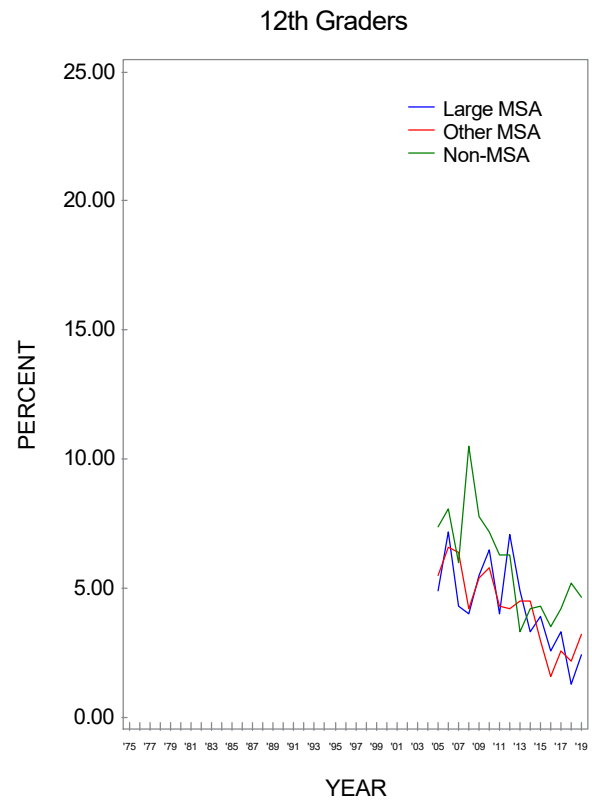
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 237**  
**Binge Drinking: Trends in 2-Week Prevalence of 15 or More Drinks in a Row by Region**



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

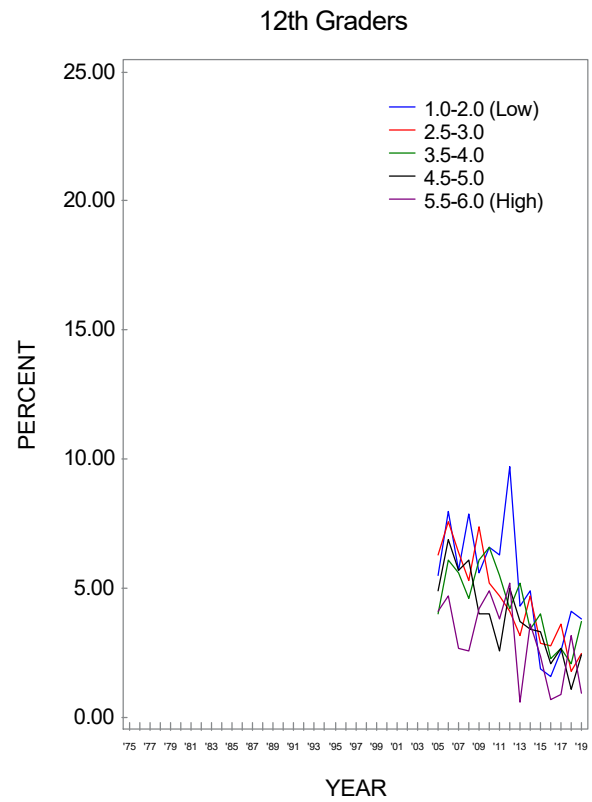
**FIGURE 238**  
**Binge Drinking: Trends in 2-Week Prevalence of 15 or More Drinks in a Row by Population Density**



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

**FIGURE 239**

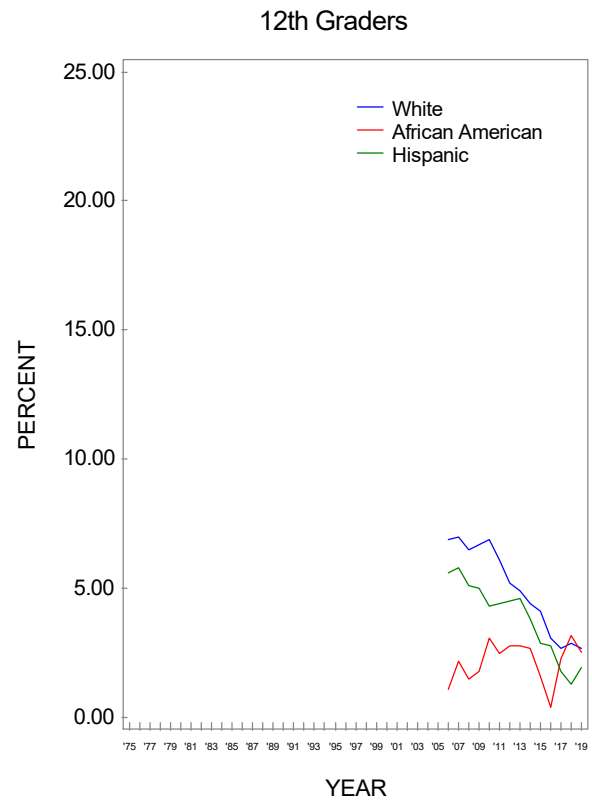
**Binge Drinking: Trends in 2-Week Prevalence of 15 or More Drinks in a Row by Average Education Level of Parents\***



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

\*Parental education is an average score of mother's education and father's education.

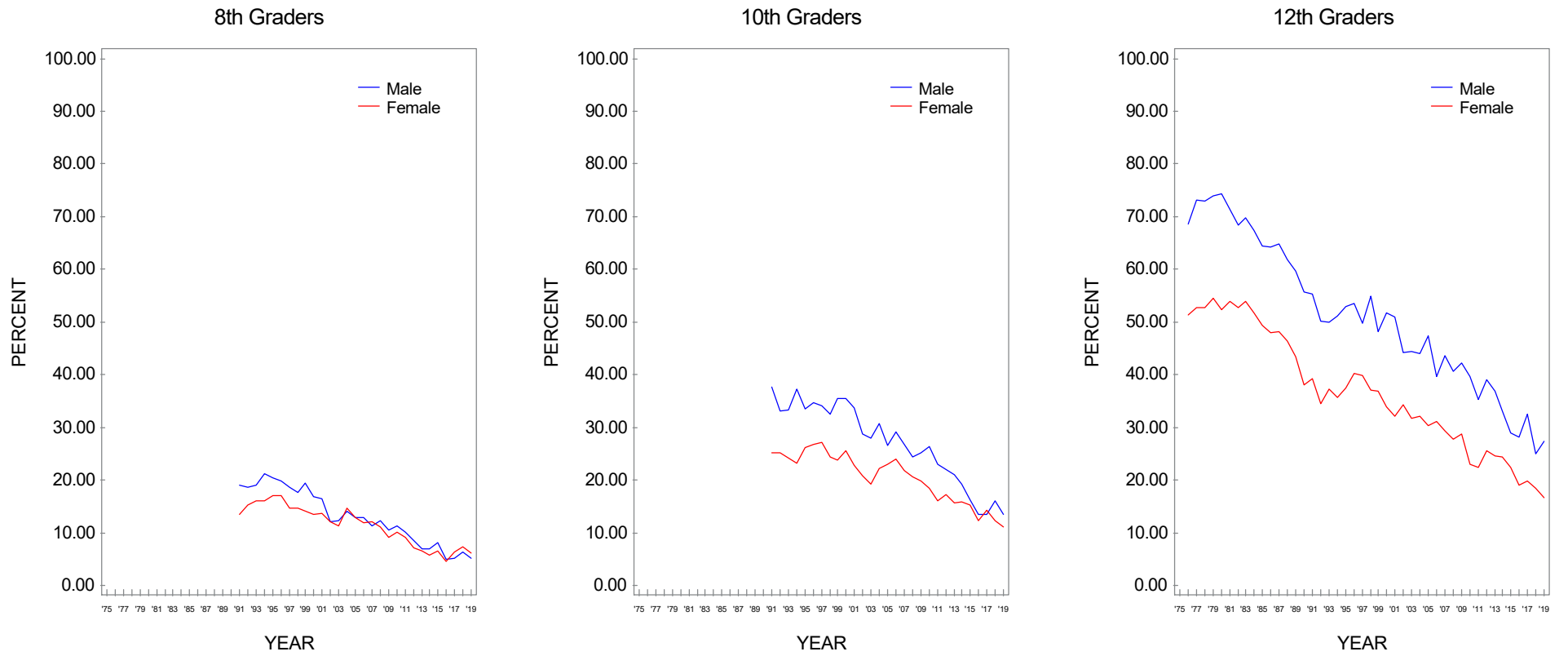
**FIGURE 240**  
**Binge Drinking: Trends in 2-Week Prevalence of 15 or More Drinks in a Row by Race/Ethnicity\***



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

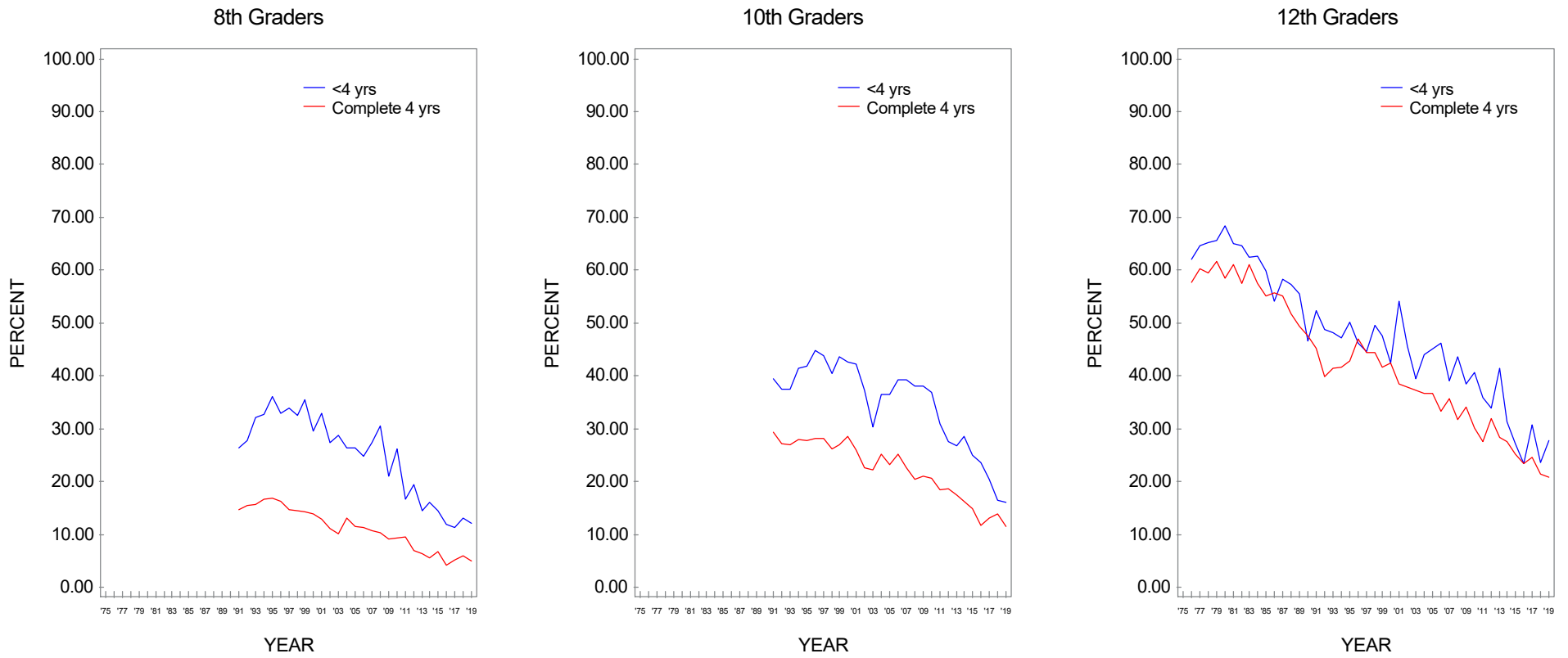
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 241**  
**Beer: Trends in 30-Day Prevalence by Gender**



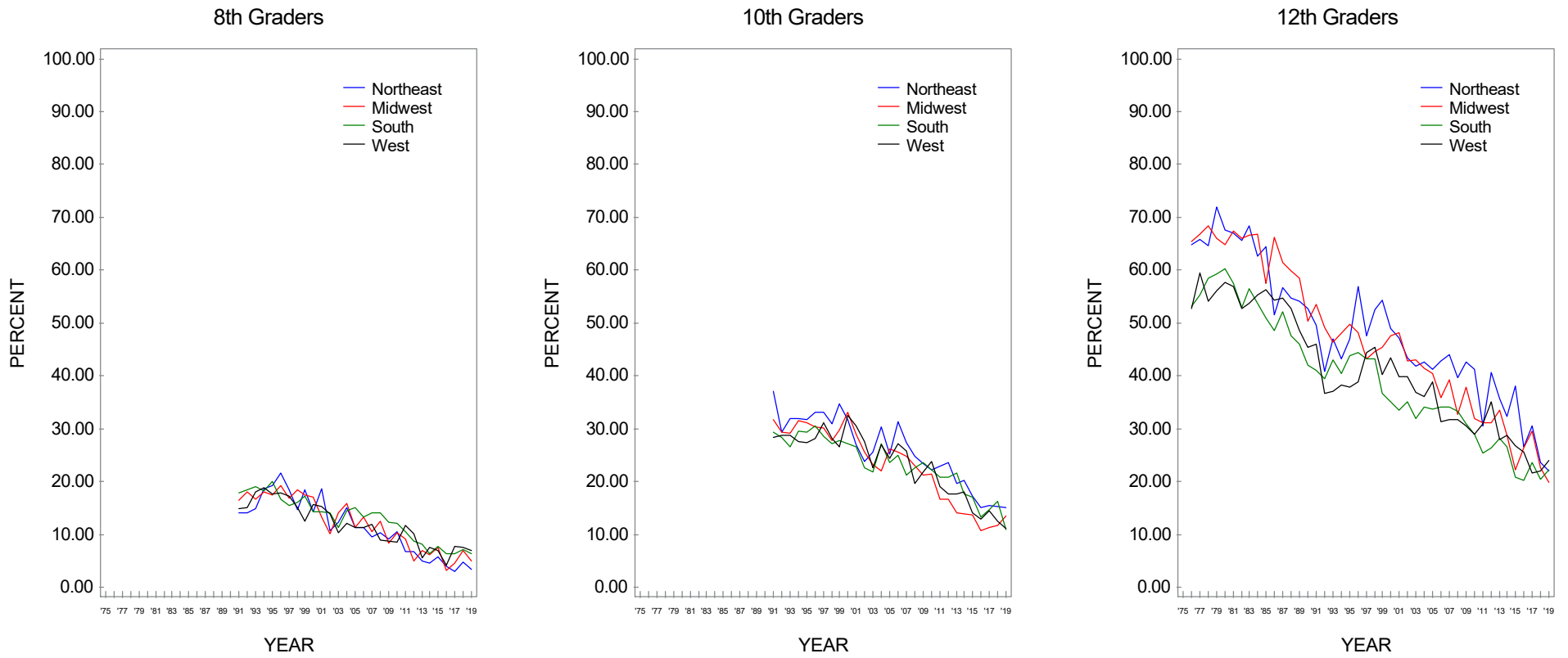
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 242**  
**Beer: Trends in 30-Day Prevalence by College Plans**



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

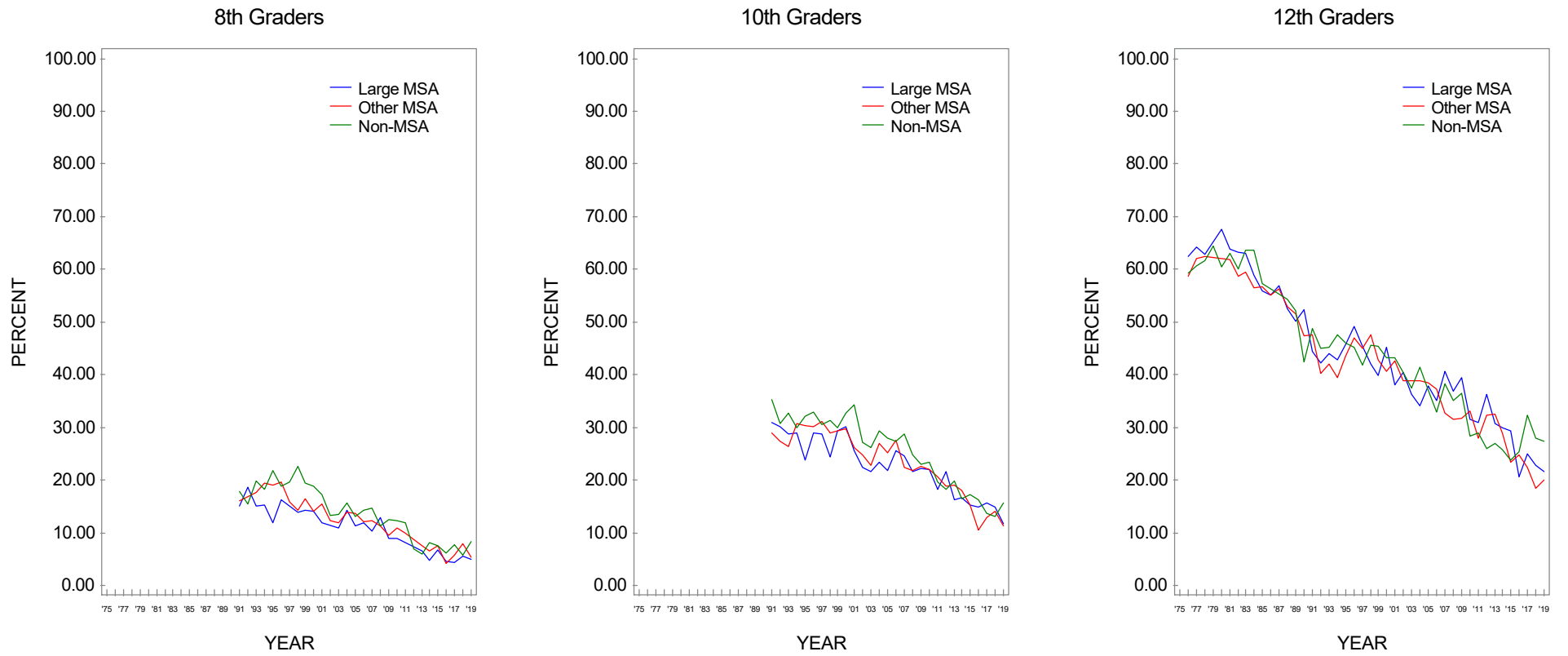
**FIGURE 243**  
**Beer: Trends in 30-Day Prevalence by Region**



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

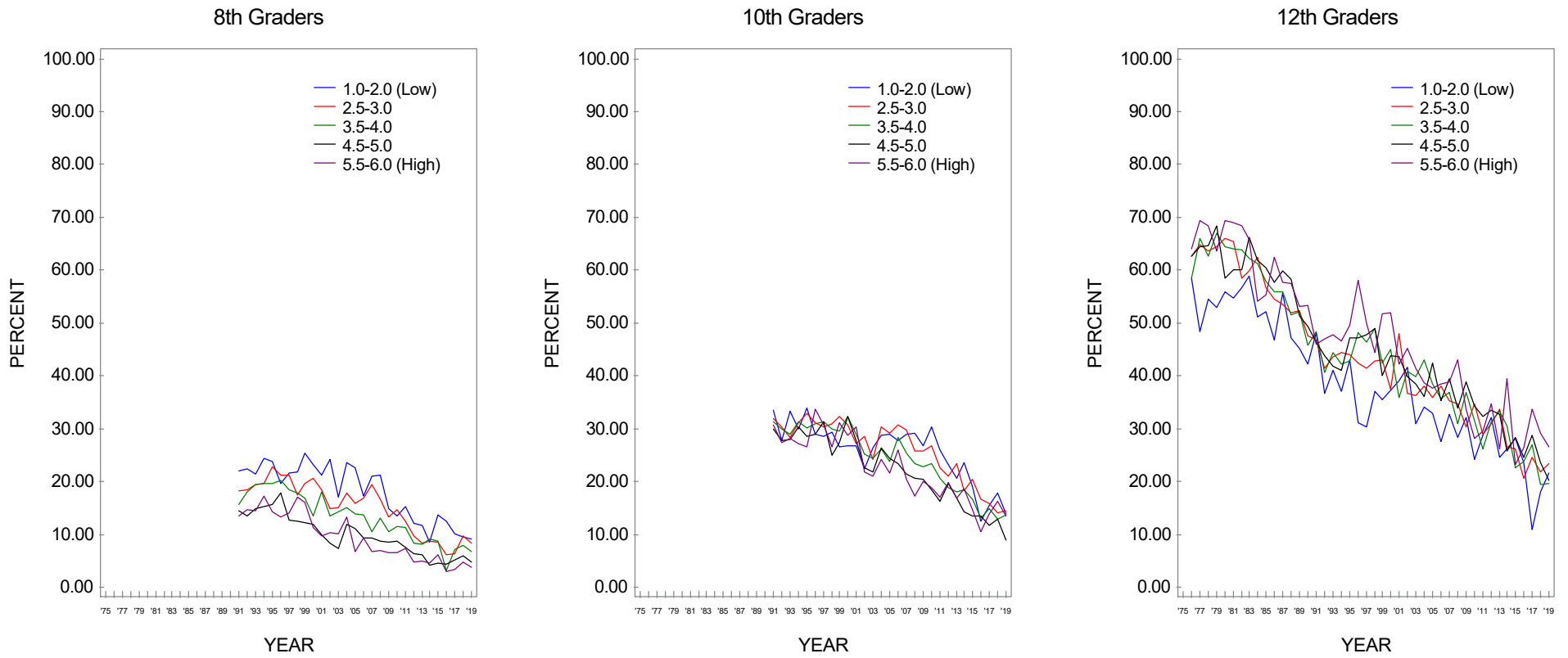


**FIGURE 244**  
**Beer: Trends in 30-Day Prevalence by Population Density**



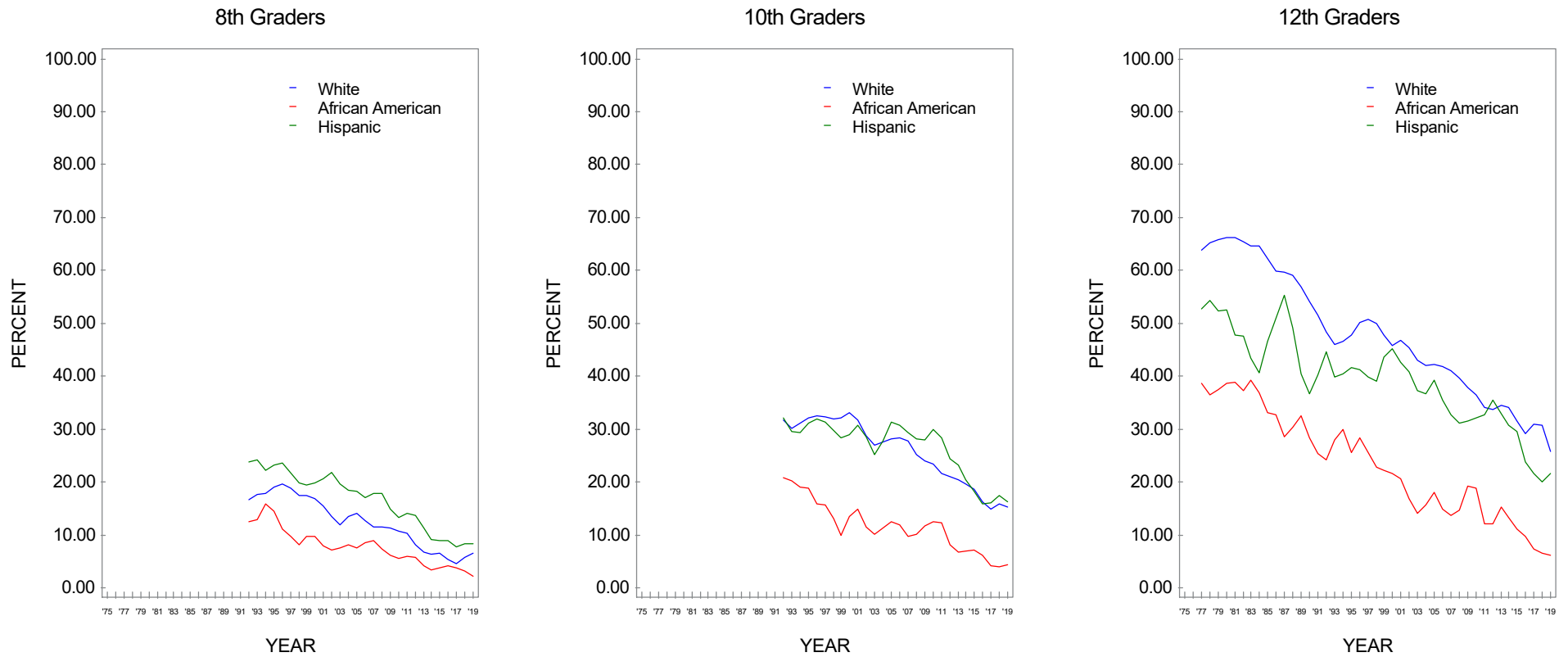
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 245**  
**Beer: Trends in 30-Day Prevalence by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*Parental education is an average score of mother's education and father's education.

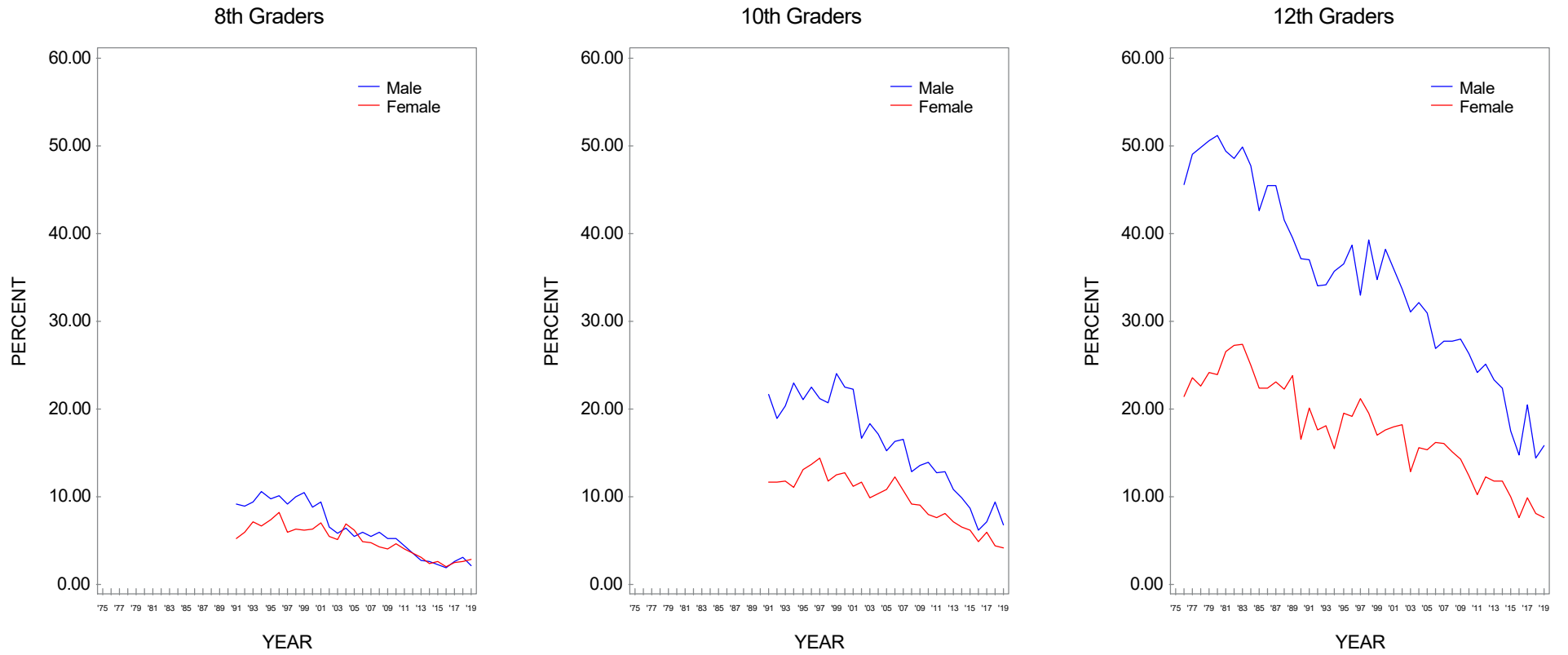
**FIGURE 246**  
**Beer: Trends in 30-Day Prevalence by Race/Ethnicity\***



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

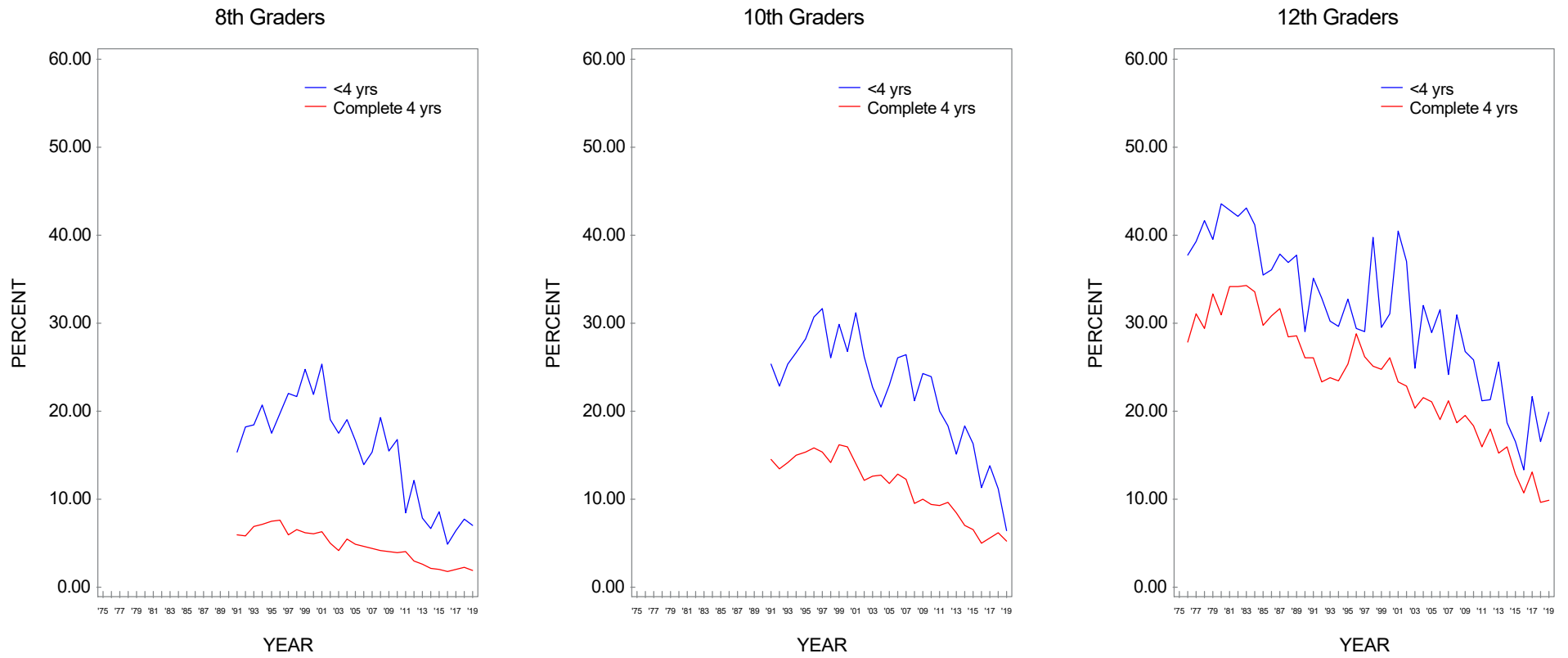
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 247**  
**Beer: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Gender**



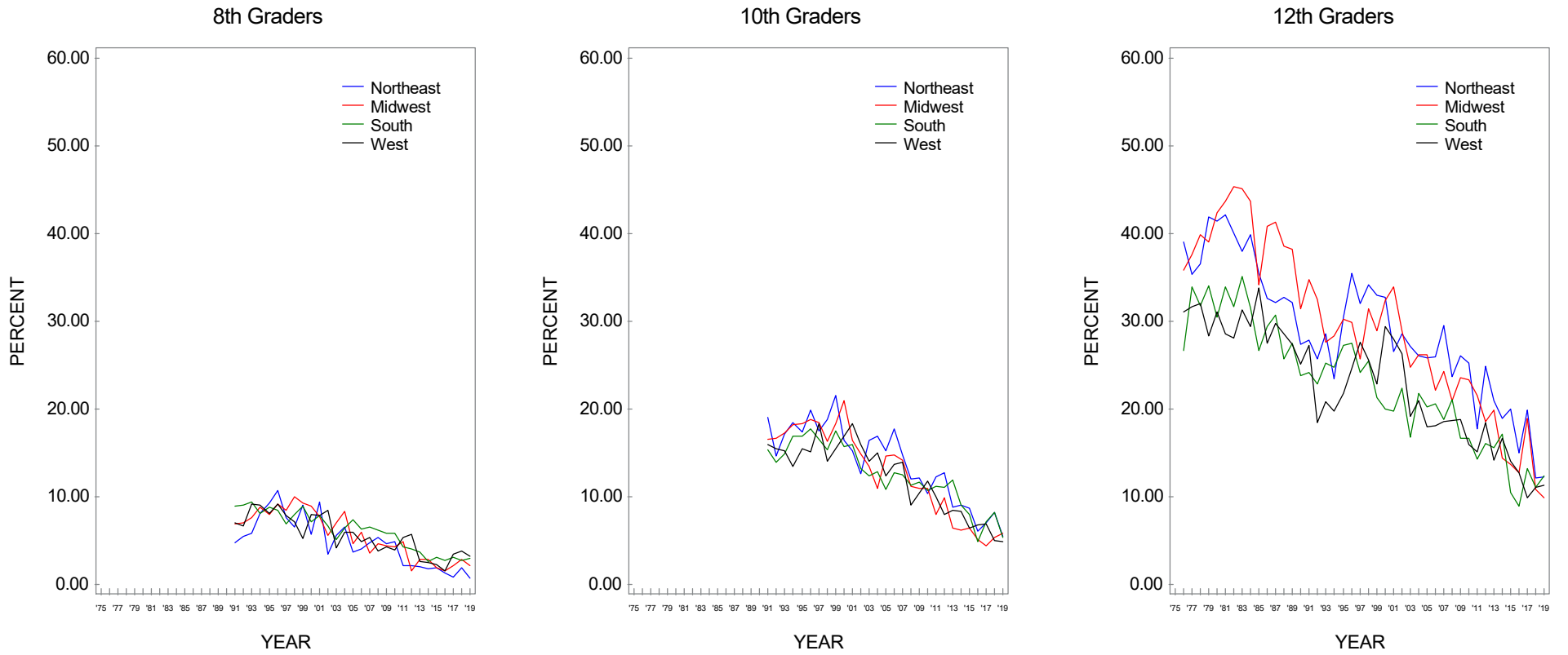
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 248**  
**Beer: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by College Plans**



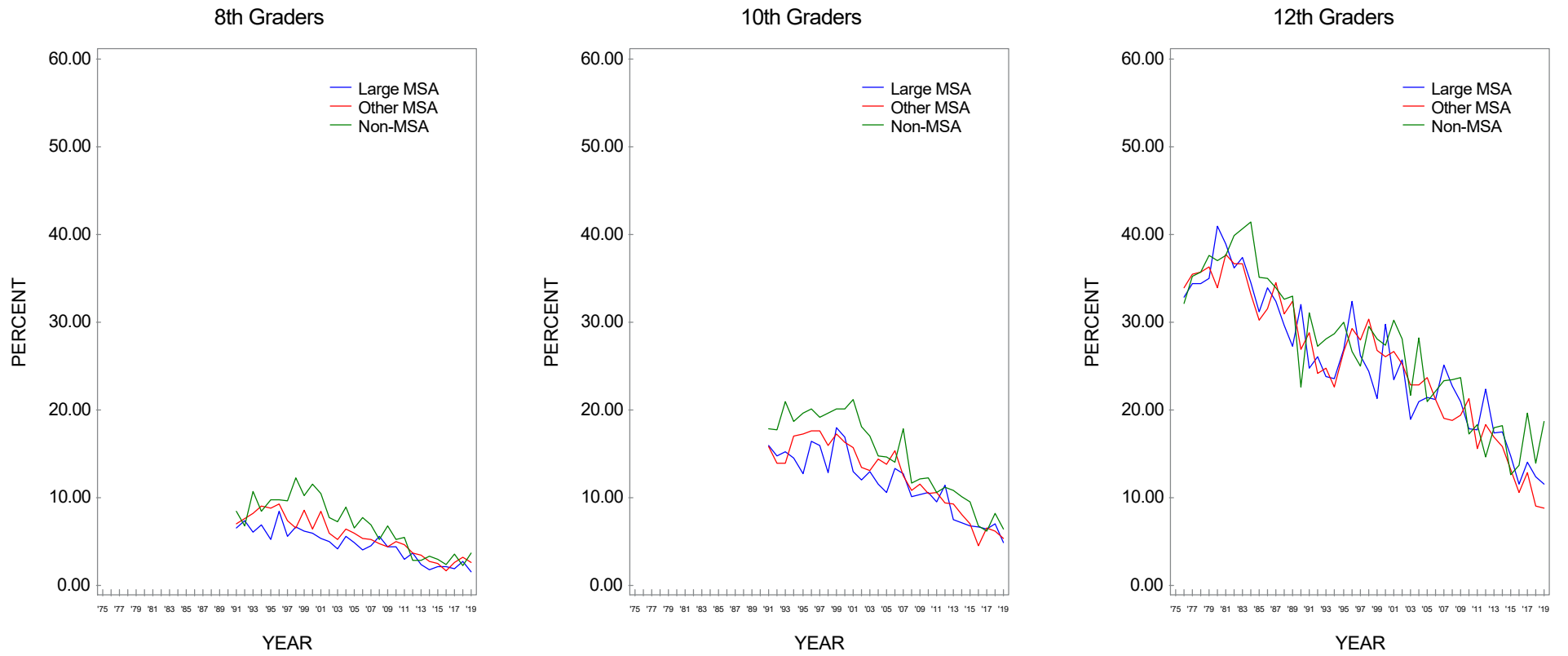
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 249**  
**Beer: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Region**



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

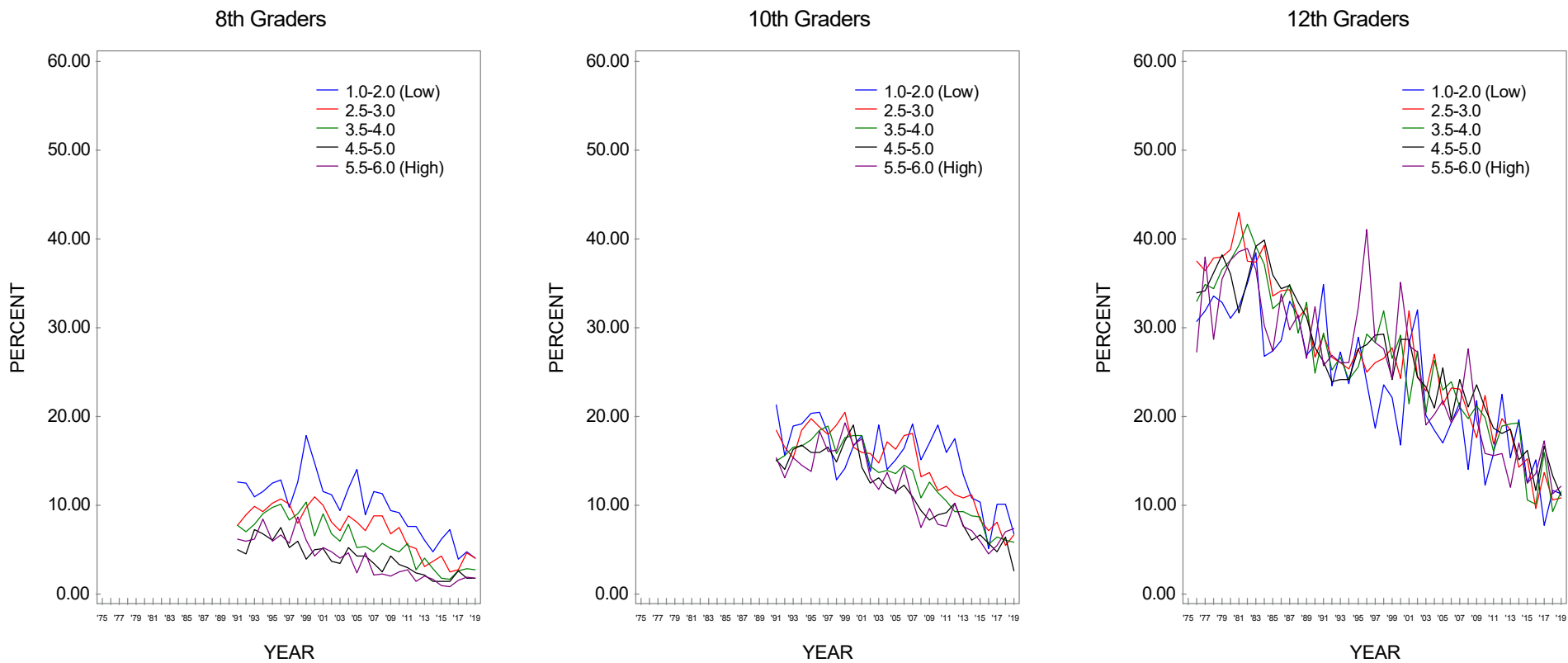
**FIGURE 250**  
**Beer: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Population Density**



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

**FIGURE 251**

**Beer: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Average Education Level of Parents\***

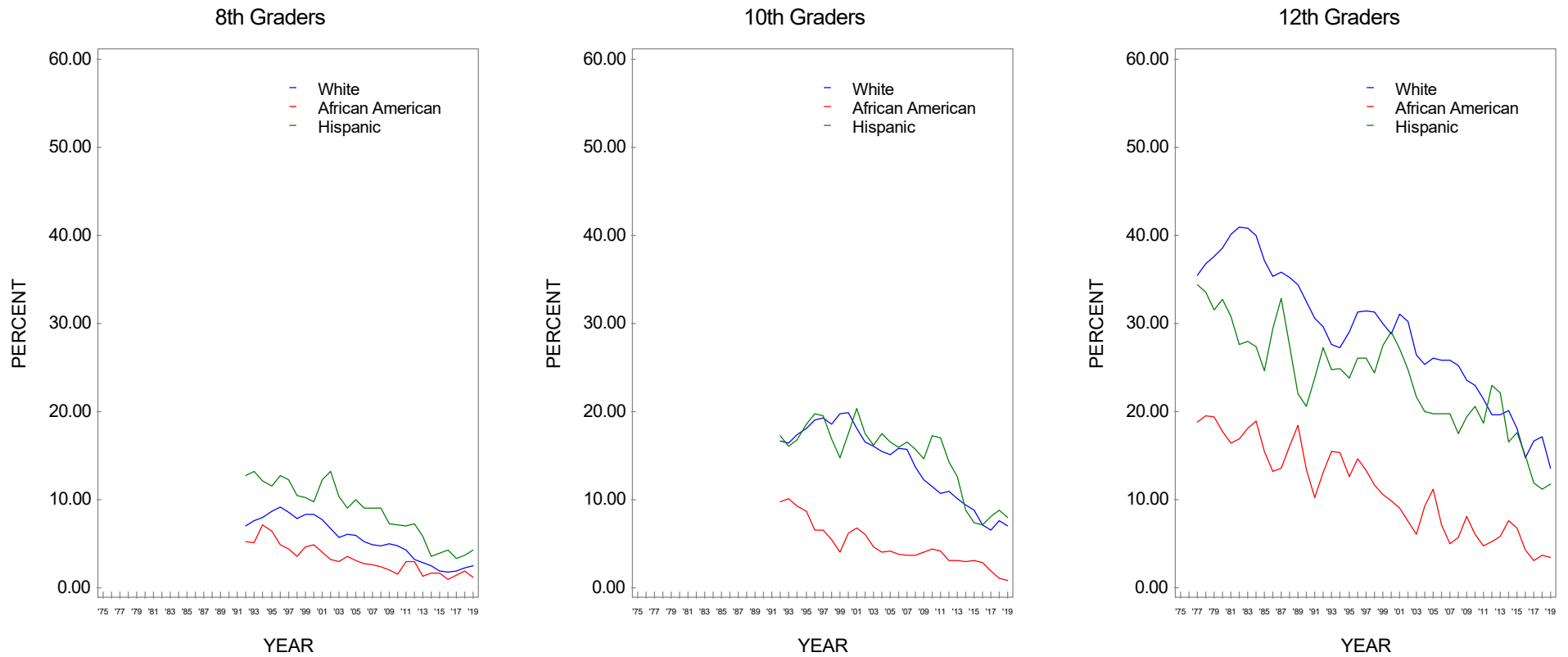


Source. The Monitoring the Future study, the University of Michigan.

\*Parental education is an average score of mother's education and father's education.



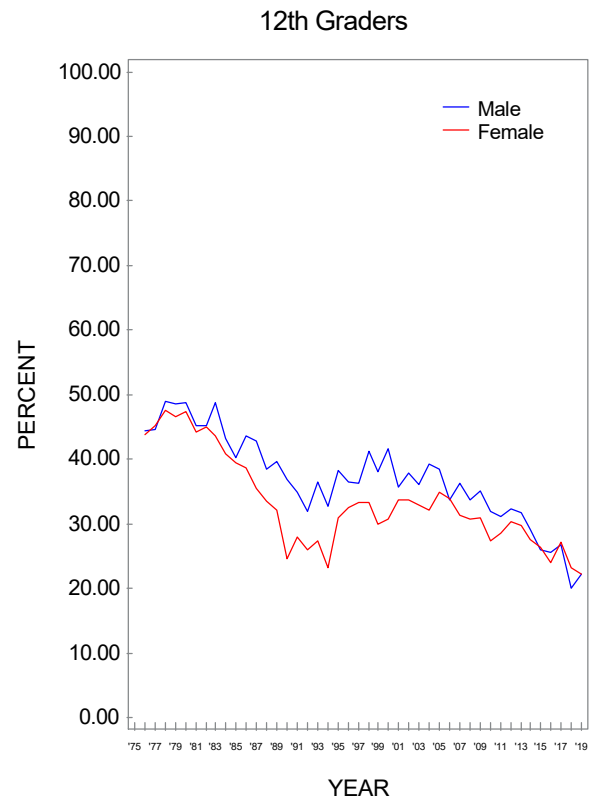
**FIGURE 252**  
**Beer: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Race/Ethnicity\***



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

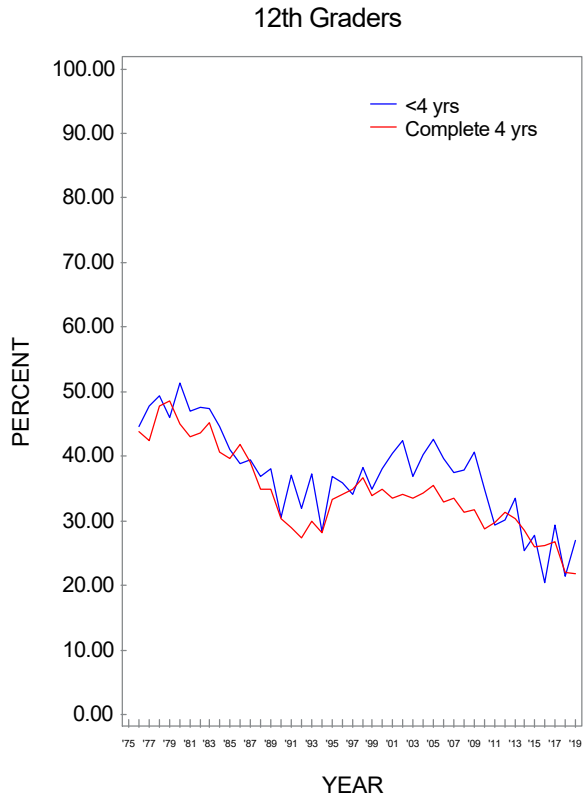
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 253**  
**Liquor: Trends in 30-Day Prevalence by Gender**



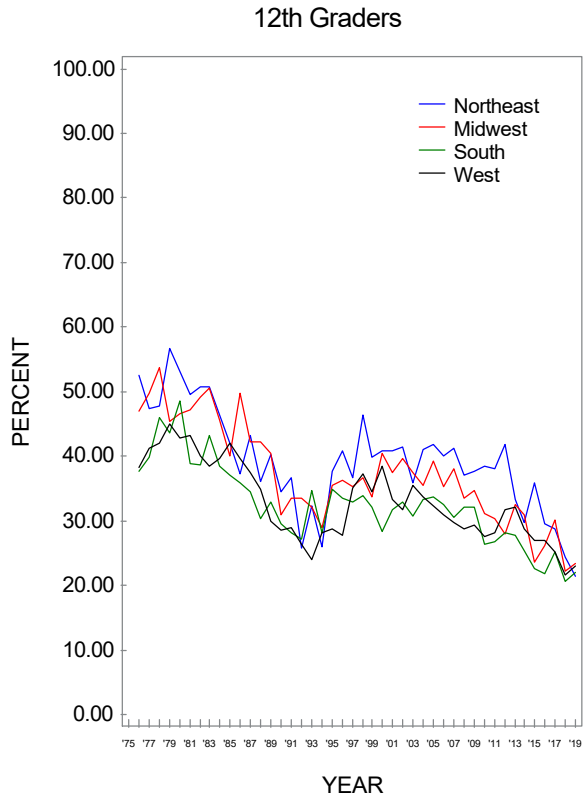
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 254**  
**Liquor: Trends in 30-Day Prevalence by College Plans**



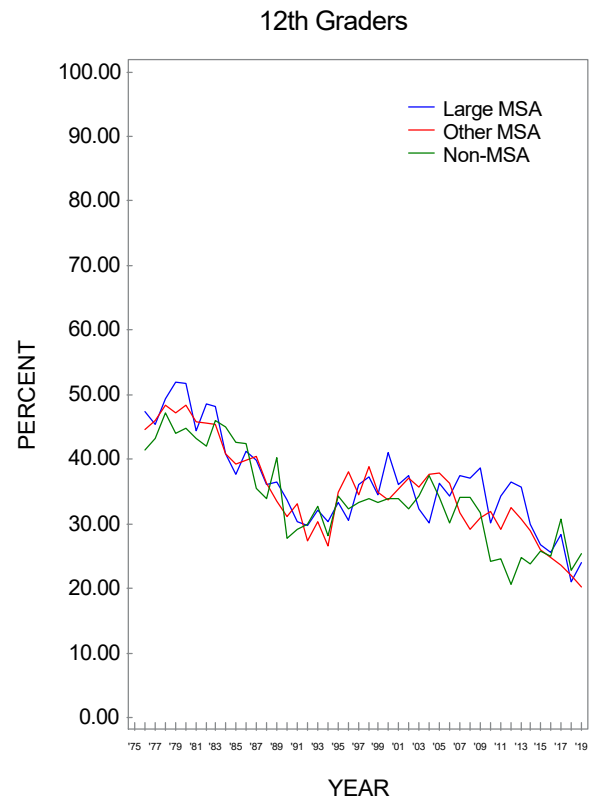
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 255**  
**Liquor: Trends in 30-Day Prevalence by Region**



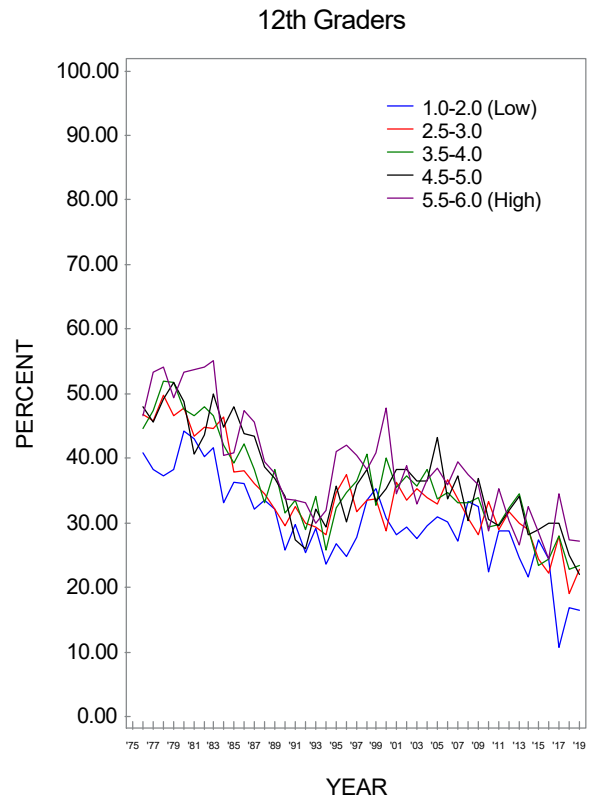
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 256**  
**Liquor: Trends in 30-Day Prevalence by Population Density**



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

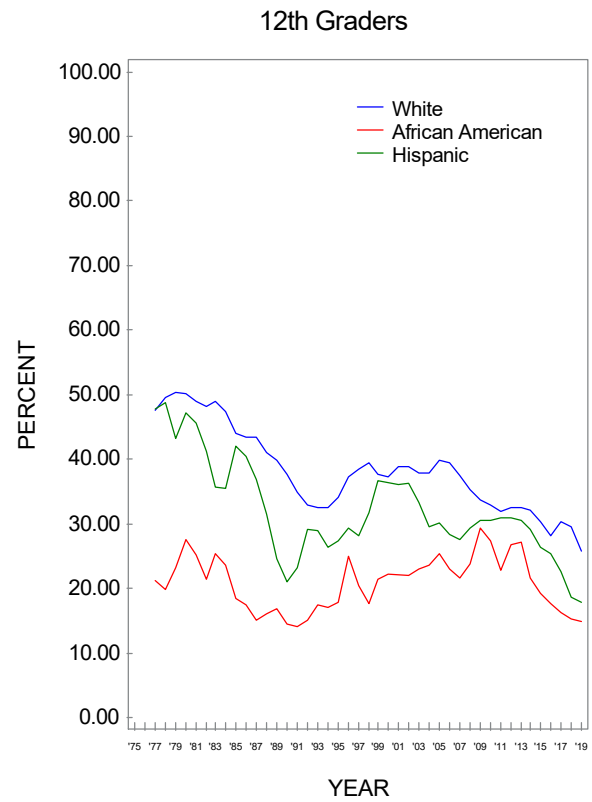
**FIGURE 257**  
**Liquor: Trends in 30-Day Prevalence by Average Education Level of Parents\***



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

\*Parental education is an average score of mother's education and father's education.

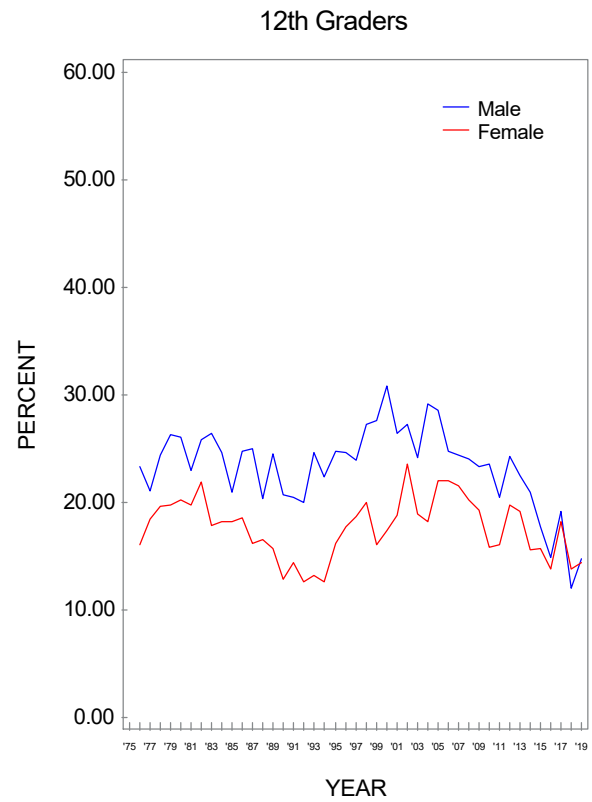
**FIGURE 258**  
**Liquor: Trends in 30-Day Prevalence by Race/Ethnicity\***



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

\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

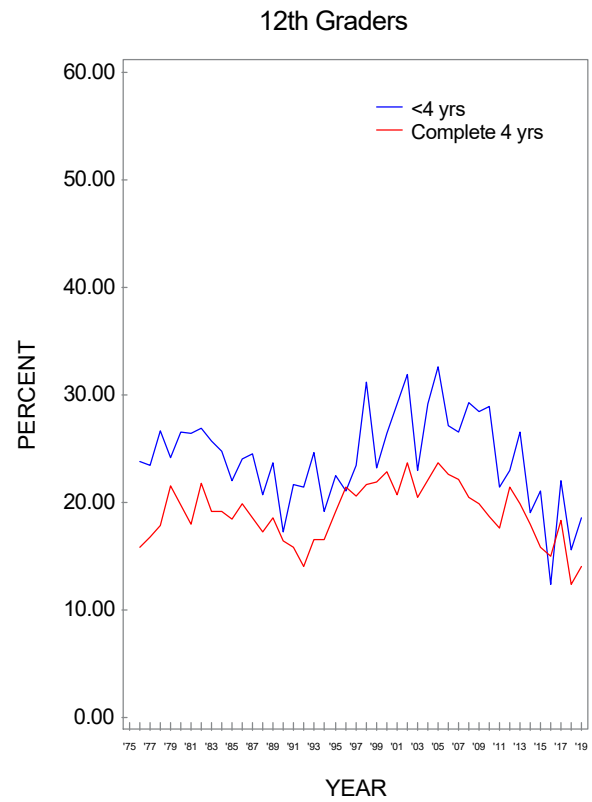
**FIGURE 259**  
**Liquor: Trends in 2-Week Prevalence of Having 5 or More Drinks in a Row by Gender**



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

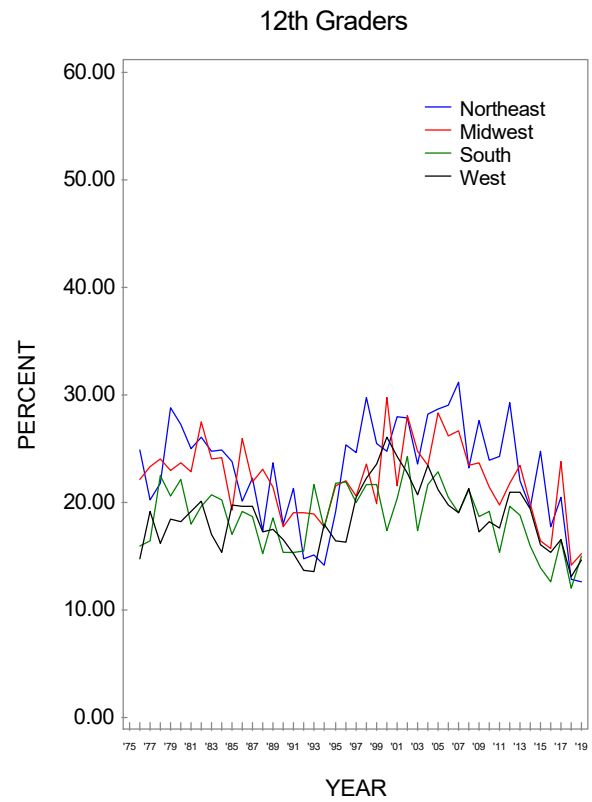


**FIGURE 260**  
**Liquor: Trends in 2-Week Prevalence of Having 5 or More Drinks in a Row by College Plans**



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

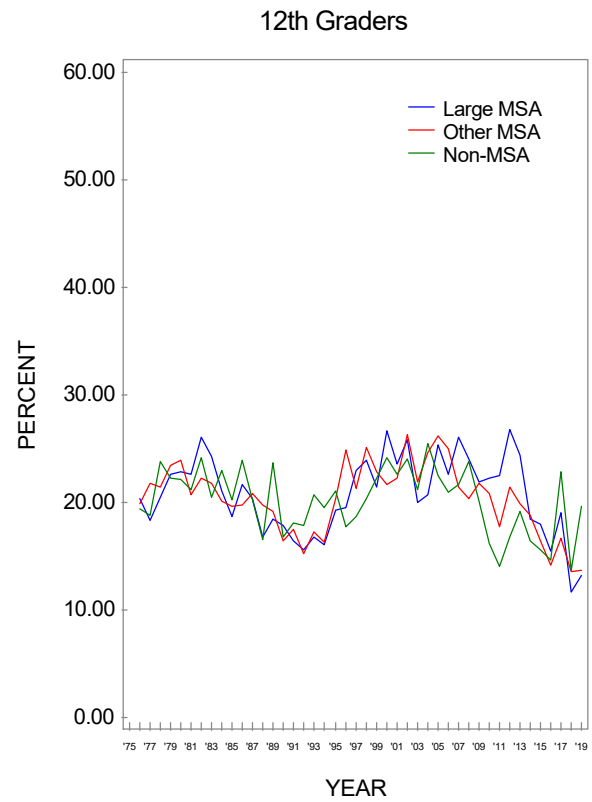
**FIGURE 261**  
**Liquor: Trends in 2-Week Prevalence of Having 5 or More Drinks in a Row by Region**



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

**FIGURE 262**

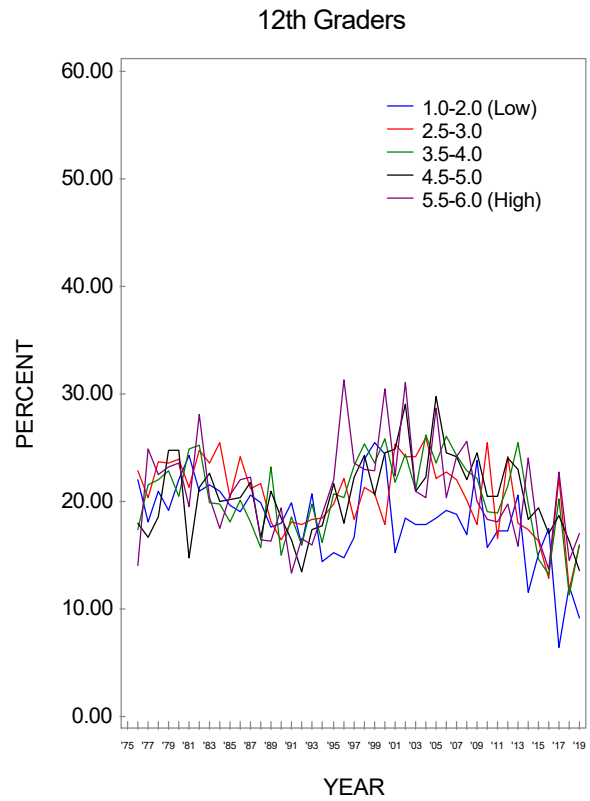
**Liquor: Trends in 2-Week Prevalence of Having 5 or More Drinks in a Row by Population Density**



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

**FIGURE 263**

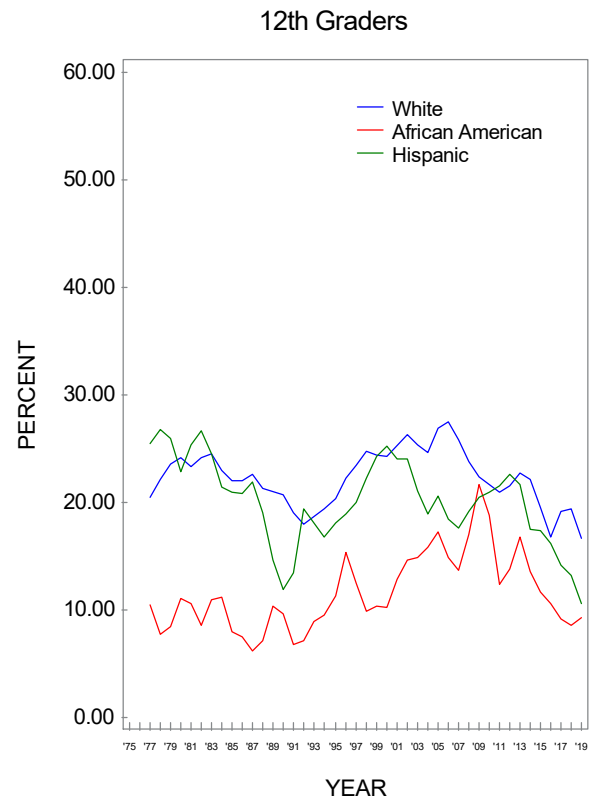
**Liquor: Trends in 2-Week Prevalence of Having 5 or More Drinks in a Row by Average Education Level of Parents\***



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

\*Parental education is an average score of mother's education and father's education.

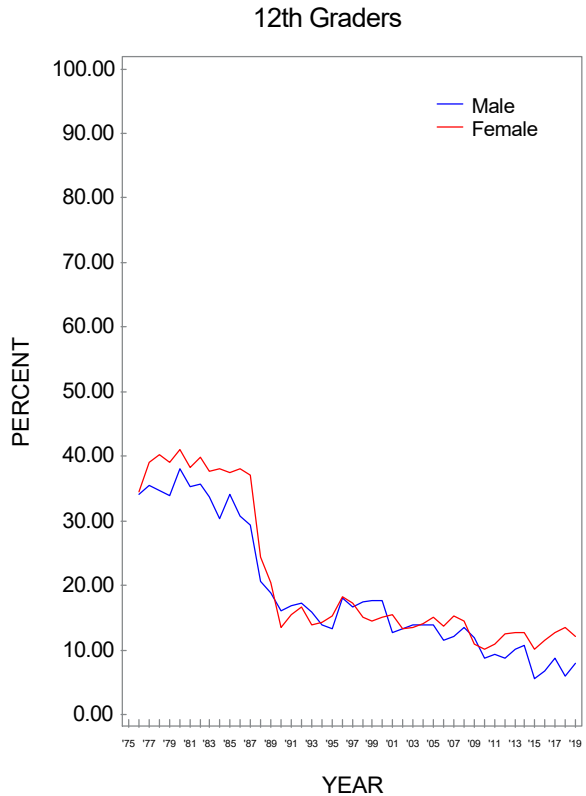
**FIGURE 264**  
**Liquor: Trends in 2-Week Prevalence of Having 5 or More Drinks in a Row by Race/Ethnicity\***



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

\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

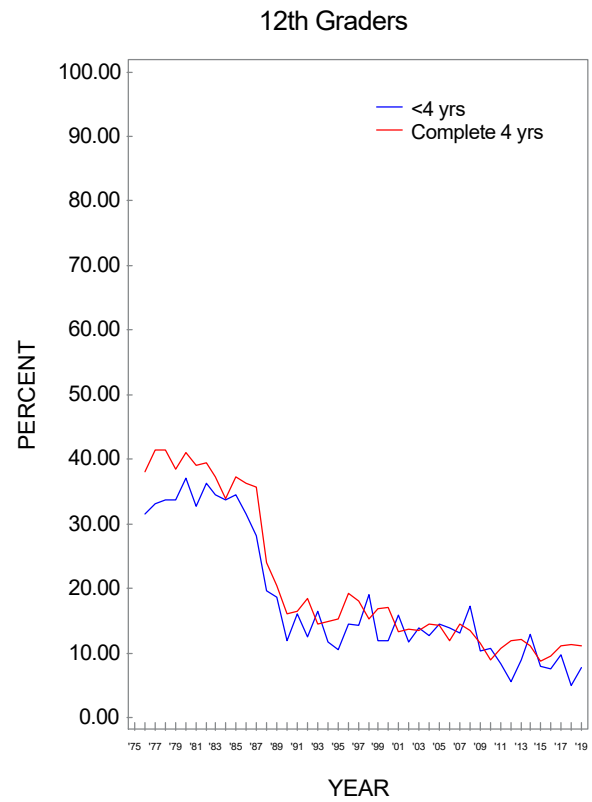
**FIGURE 265**  
**Wine:\* Trends in 30-Day Prevalence by Gender**



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

\*In the 1988 questionnaires, a question on the use of wine coolers was added. This change may account for the discontinuity between the 1987 and 1988 use rates for wine.

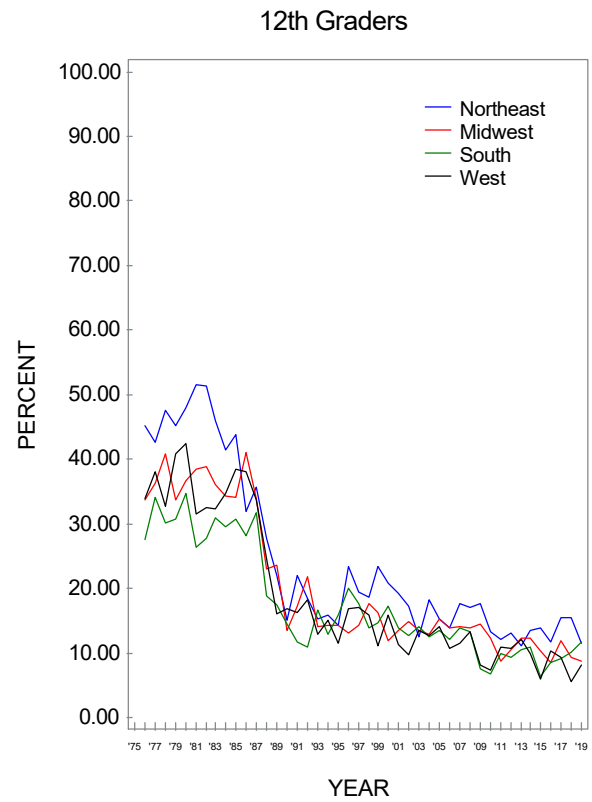
**FIGURE 266**  
**Wine:\* Trends in 30-Day Prevalence by College Plans**



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

\*In the 1988 questionnaires, a question on the use of wine coolers was added. This change may account for the discontinuity between the 1987 and 1988 use rates for wine.

**FIGURE 267**  
**Wine:\* Trends in 30-Day Prevalence by Region**

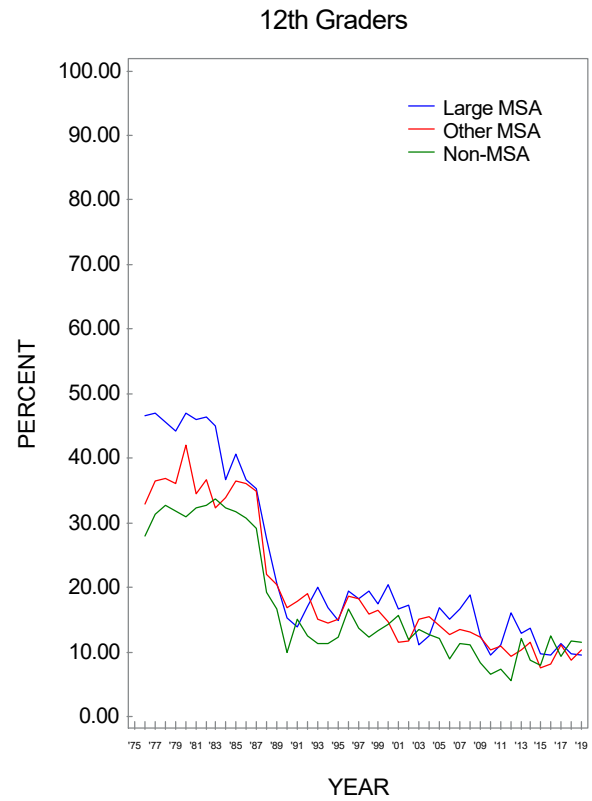


Source. The Monitoring the Future study, the University of Michigan.

\*In the 1988 questionnaires, a question on the use of wine coolers was added. This change may account for the discontinuity between the 1987 and 1988 use rates for wine.



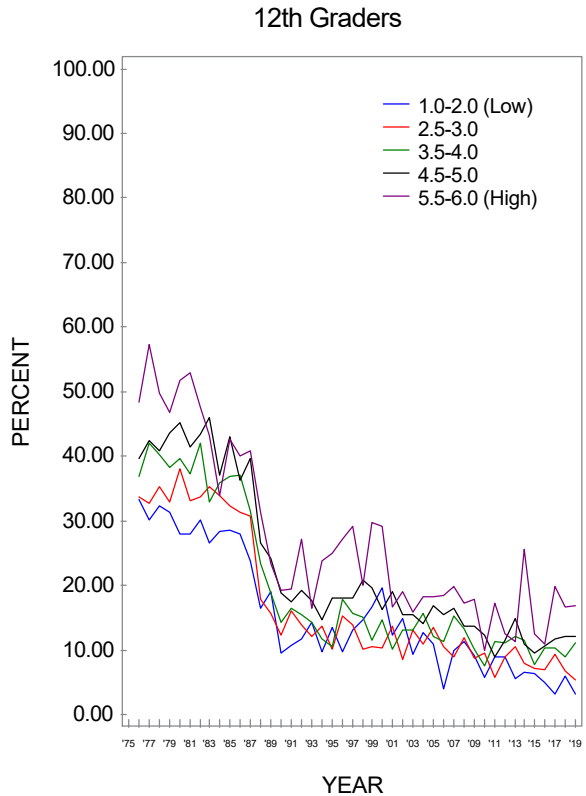
**FIGURE 268**  
**Wine:\* Trends in 30-Day Prevalence by Population Density**



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

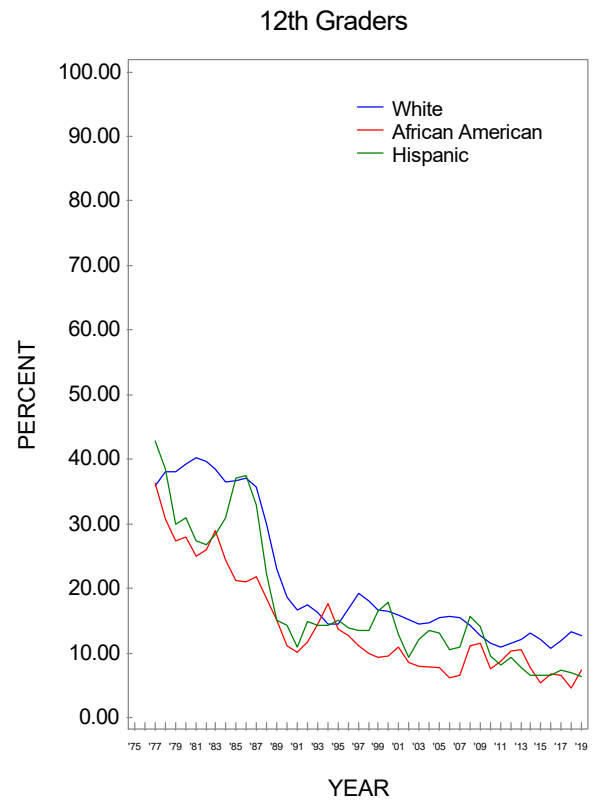
\*In the 1988 questionnaires, a question on the use of wine coolers was added. This change may account for the discontinuity between the 1987 and 1988 use rates for wine.

**FIGURE 269**  
**Wine:\* Trends in 30-Day Prevalence by Average Education Level of Parents\*\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*In the 1988 questionnaires, a question on the use of wine coolers was added. This change may account for the discontinuity between the 1987 and 1988 use rates for wine.  
 \*\*Parental education is an average score of mother's education and father's education.

**FIGURE 270**  
**Wine:\* Trends in 30-Day Prevalence by Race/Ethnicity\*\***

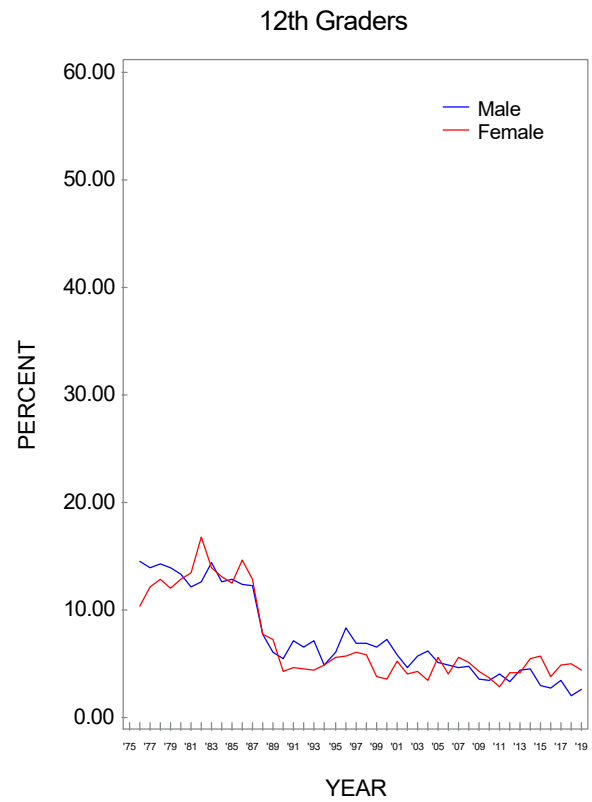


Source. The Monitoring the Future study, the University of Michigan.

\*In the 1988 questionnaires, a question on the use of wine coolers was added. This change may account for the discontinuity between the 1987 and 1988 use rates for wine.

\*\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 271**  
**Wine:\* Trends in 2-Week Prevalence of Having 5 or More Drinks in a Row by Gender**

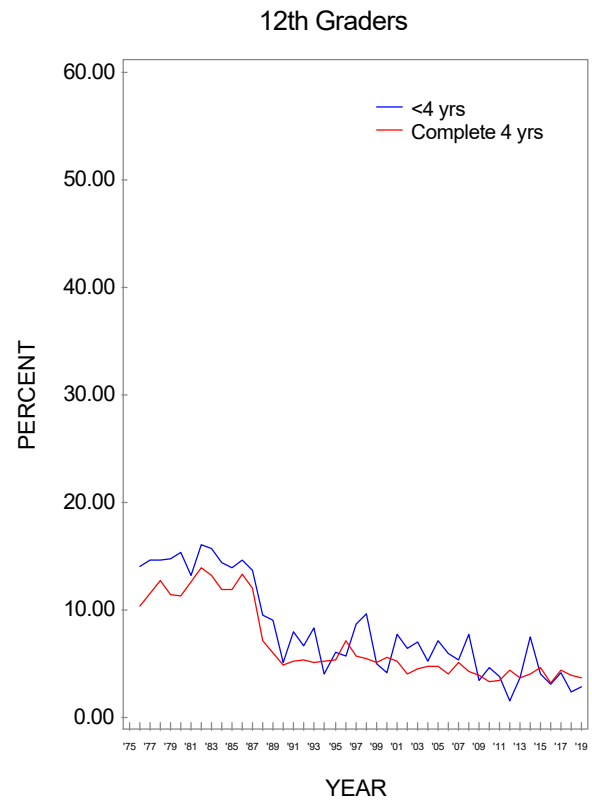


Source. The Monitoring the Future study, the University of Michigan.

\*In the 1988 questionnaires, a question on the use of wine coolers was added. This change may account for the discontinuity between the 1987 and 1988 use rates for wine.

**FIGURE 272**

**Wine:\* Trends in 2-Week Prevalence of Having 5 or More Drinks in a Row by College Plans**

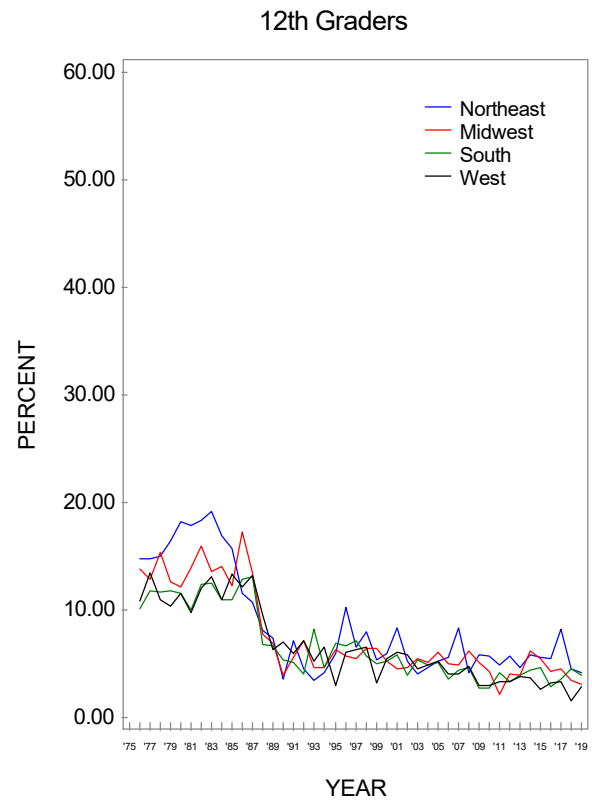


Source. The Monitoring the Future study, the University of Michigan.

\*In the 1988 questionnaires, a question on the use of wine coolers was added. This change may account for the discontinuity between the 1987 and 1988 use rates for wine.

**FIGURE 273**

**Wine:\* Trends in 2-Week Prevalence of Having 5 or More Drinks in a Row by Region**

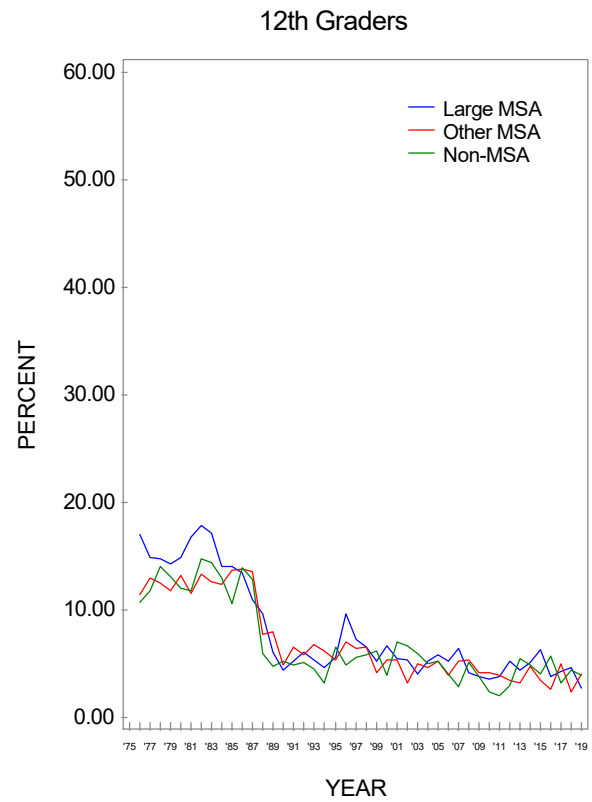


Source. The Monitoring the Future study, the University of Michigan.

\*In the 1988 questionnaires, a question on the use of wine coolers was added. This change may account for the discontinuity between the 1987 and 1988 use rates for wine.

**FIGURE 274**

**Wine:\* Trends in 2-Week Prevalence of Having 5 or More Drinks in a Row by Population Density**

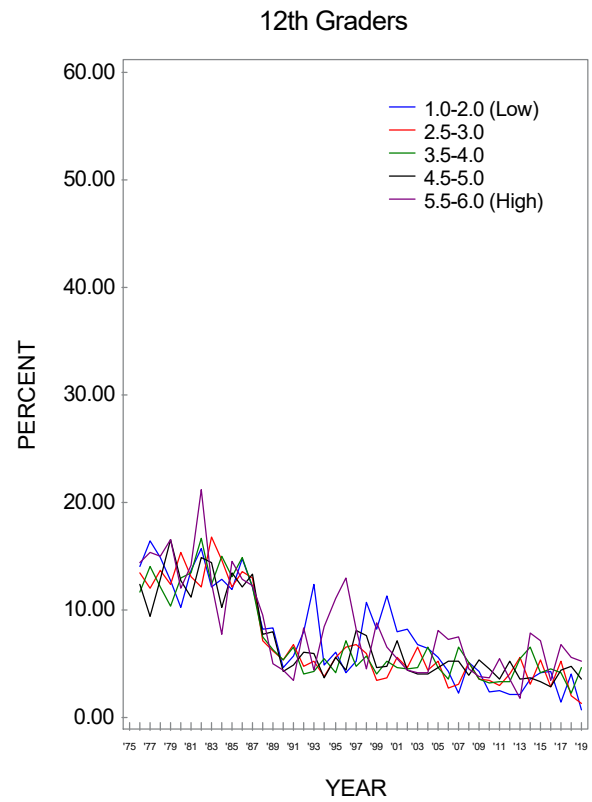


Source. The Monitoring the Future study, the University of Michigan.

\*In the 1988 questionnaires, a question on the use of wine coolers was added. This change may account for the discontinuity between the 1987 and 1988 use rates for wine.

**FIGURE 275**

**Wine:\* Trends in 2-Week Prevalence of Having 5 or More Drinks in a Row by Average Education Level of Parents\*\***



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

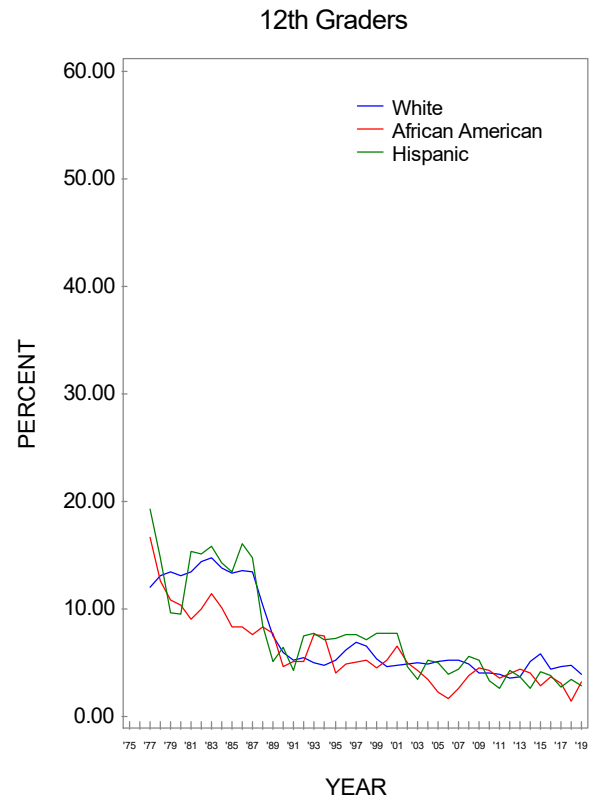
\*In the 1988 questionnaires, a question on the use of wine coolers was added. This change may account for the discontinuity between the 1987 and 1988 use rates for wine.

\*\*Parental education is an average score of mother's education and father's education.



**FIGURE 276**

**Wine:\* Trends in 2-Week Prevalence of Having 5 or More Drinks in a Row by Race/Ethnicity\*\***

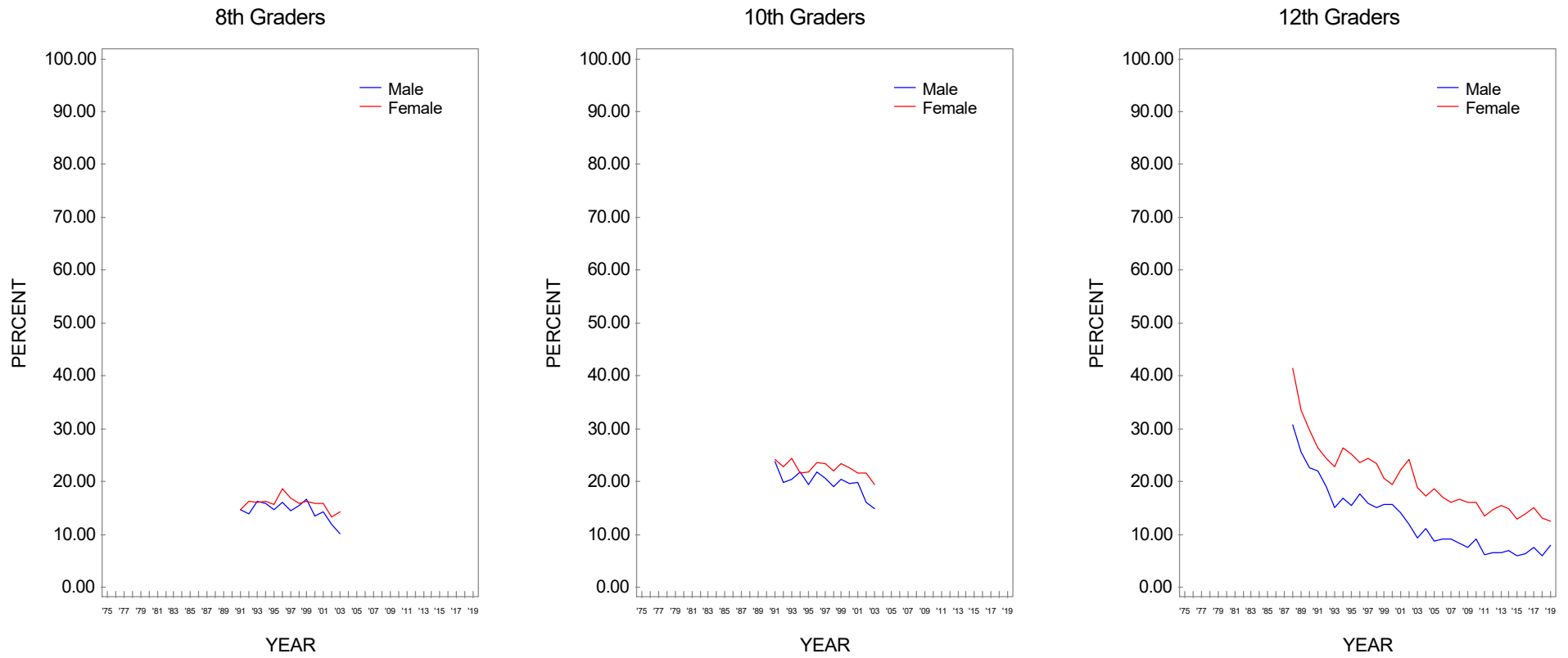


Source. The Monitoring the Future study, the University of Michigan.

\*In the 1988 questionnaires, a question on the use of wine coolers was added. This change may account for the discontinuity between the 1987 and 1988 use rates for wine.

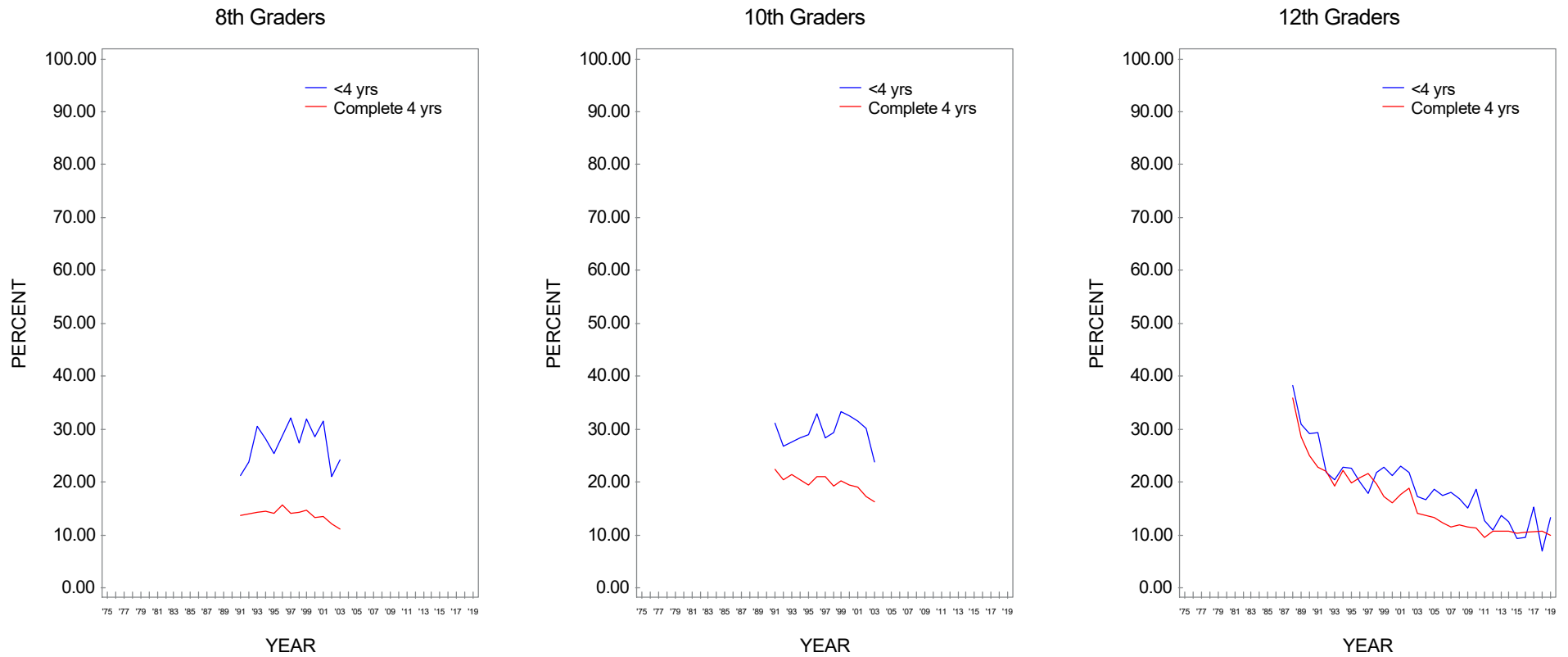
\*\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 277**  
**Wine Coolers:\* Trends in 30-Day Prevalence by Gender**



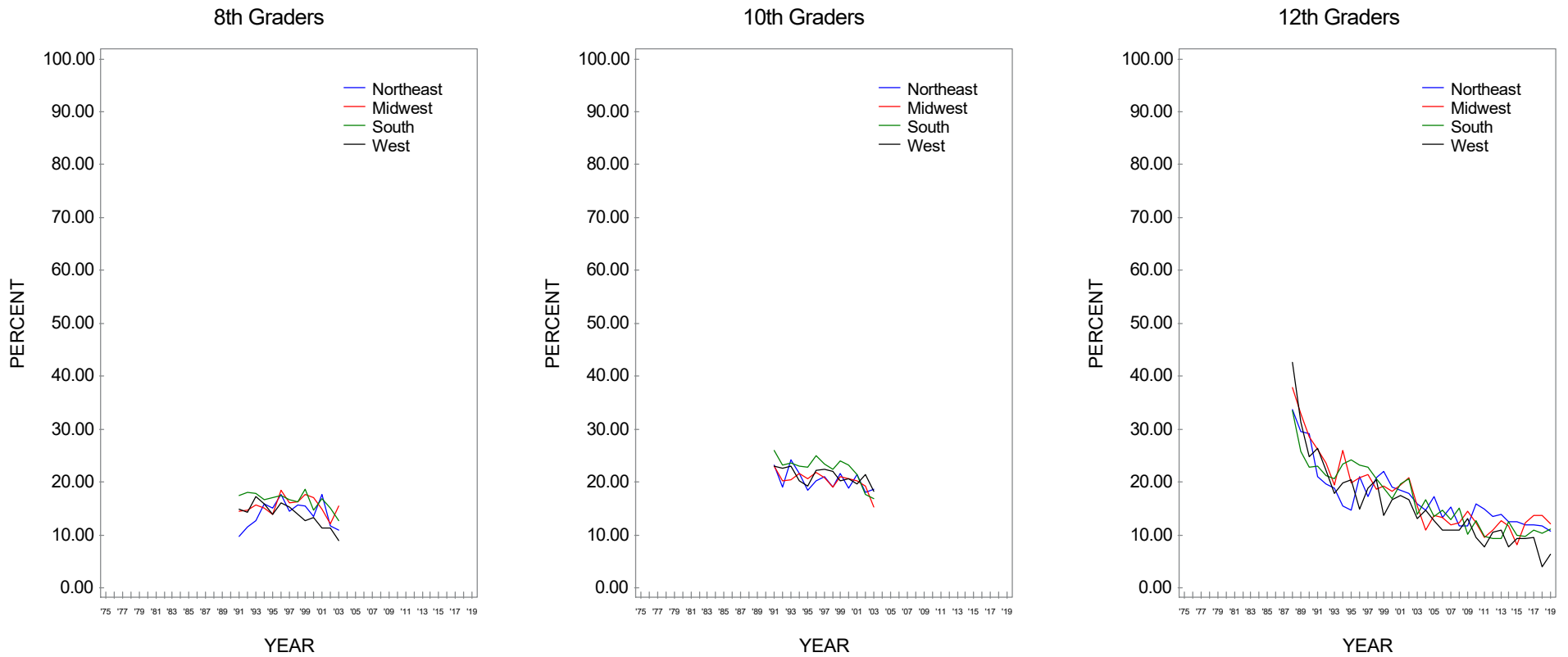
Source. The Monitoring the Future study, the University of Michigan.  
 \*Question discontinued for 8th and 10th graders in 2004.

**FIGURE 278**  
**Wine Coolers:\* Trends in 30-Day Prevalence by College Plans**



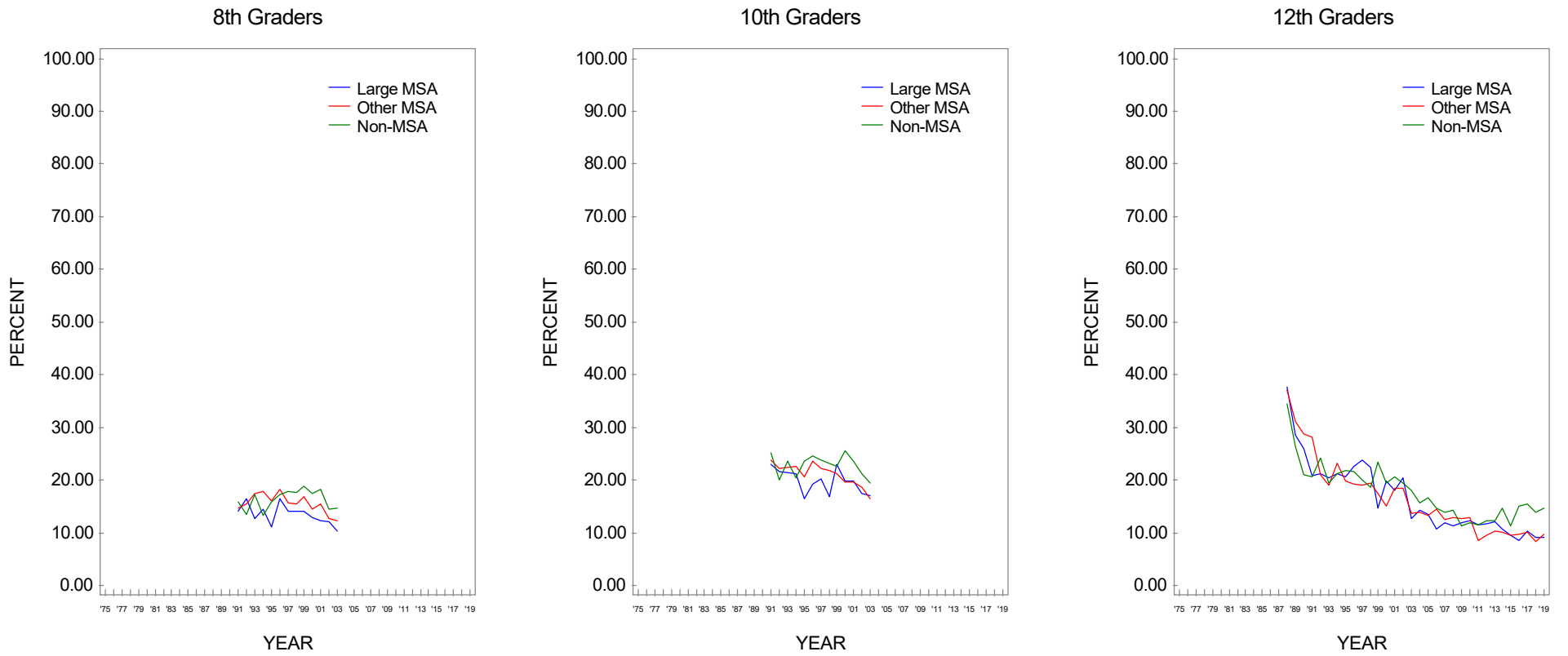
Source. The Monitoring the Future study, the University of Michigan.  
 \*Question discontinued for 8th and 10th graders in 2004.

**FIGURE 279**  
**Wine Coolers:\* Trends in 30-Day Prevalence by Region**



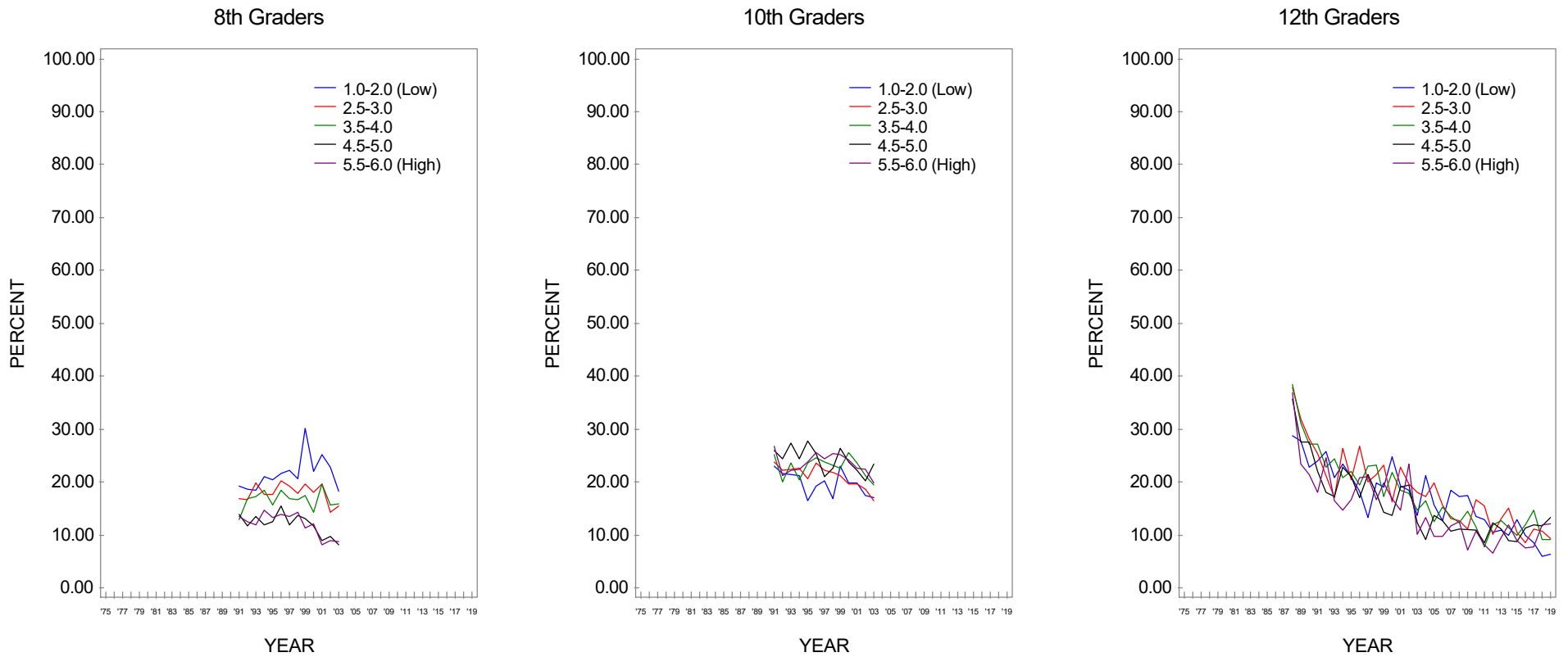
Source. The Monitoring the Future study, the University of Michigan.  
 \*Question discontinued for 8th and 10th graders in 2004.

**FIGURE 280**  
**Wine Coolers:\* Trends in 30-Day Prevalence by Population Density**



Source. The Monitoring the Future study, the University of Michigan.  
 \*Question discontinued for 8th and 10th graders in 2004.

**FIGURE 281**  
**Wine Coolers:\* Trends in 30-Day Prevalence by Average Education Level of Parents\*\***

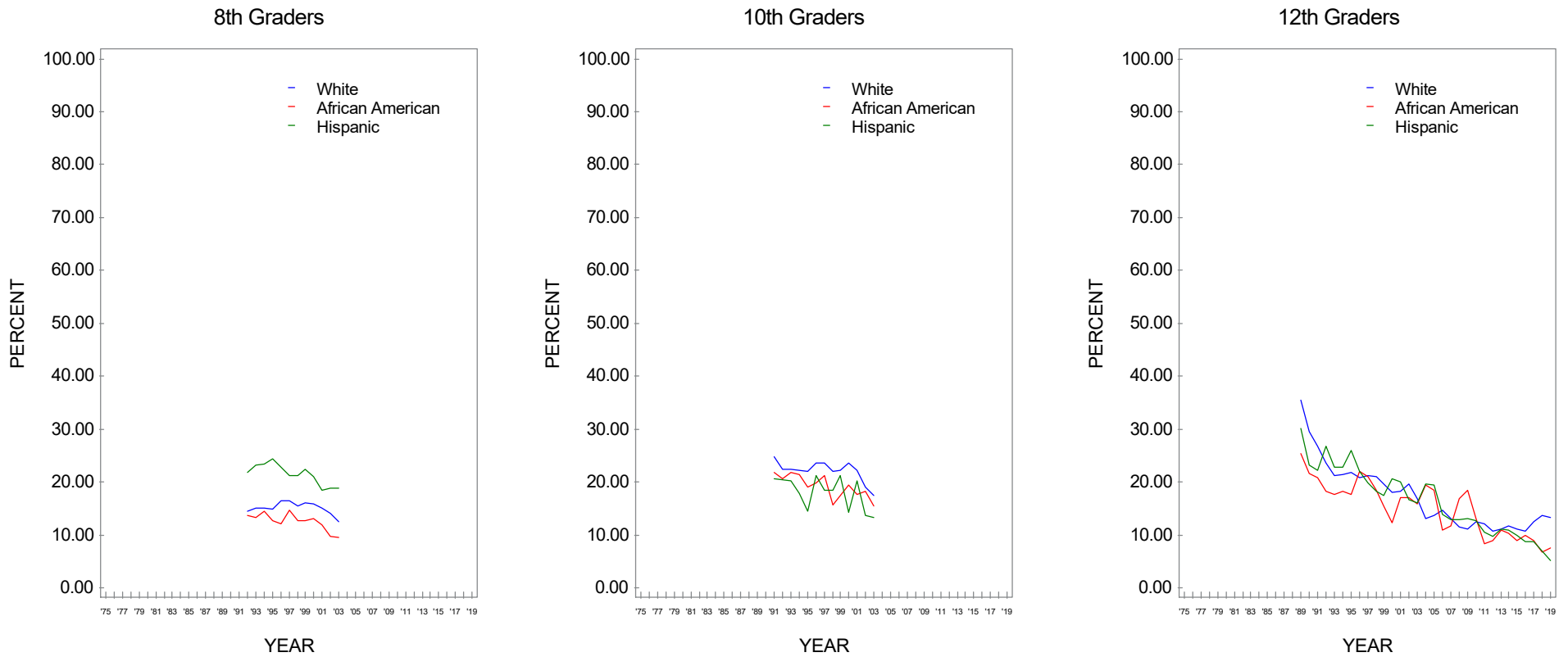


Source. The Monitoring the Future study, the University of Michigan.

\*Question discontinued for 8th and 10th graders in 2004.

\*\*Parental education is an average score of mother's education and father's education.

**FIGURE 282**  
**Wine Coolers:\* Trends in 30-Day Prevalence by Race/Ethnicity\*\***

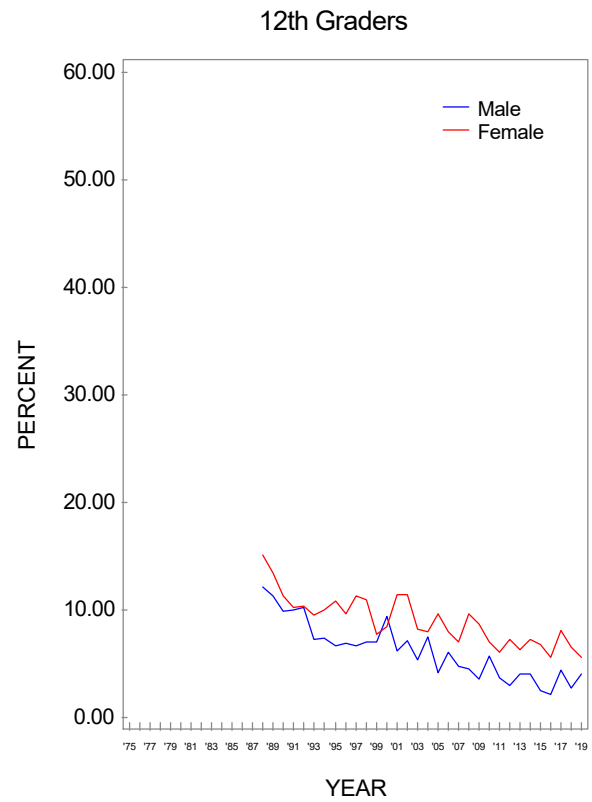


Source. The Monitoring the Future study, the University of Michigan.

\*Question discontinued for 8th and 10th graders in 2004.

\*\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

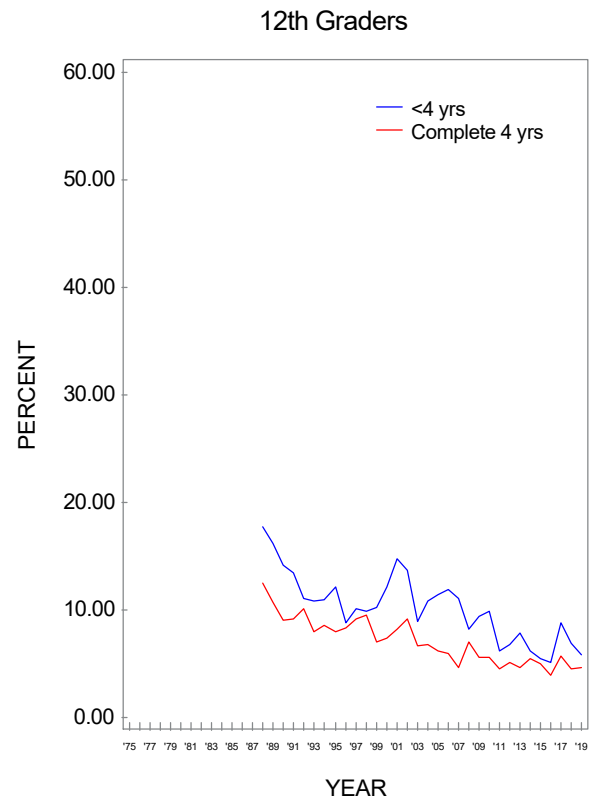
**FIGURE 283**  
**Wine Coolers: Trends in 2-Week Prevalence of Having 5 or More Drinks in a Row by Gender**



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



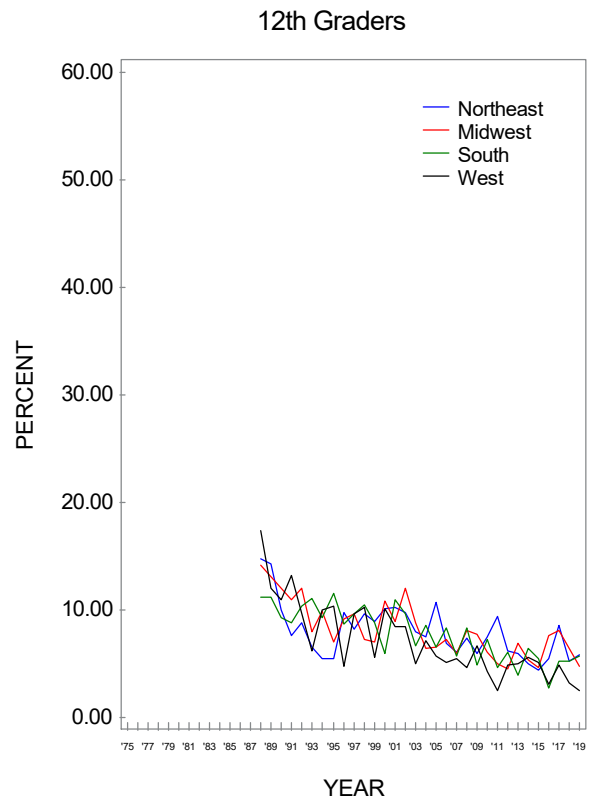
**FIGURE 284**  
**Wine Coolers: Trends in 2-Week Prevalence of Having 5 or More Drinks in a Row by College Plans**



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

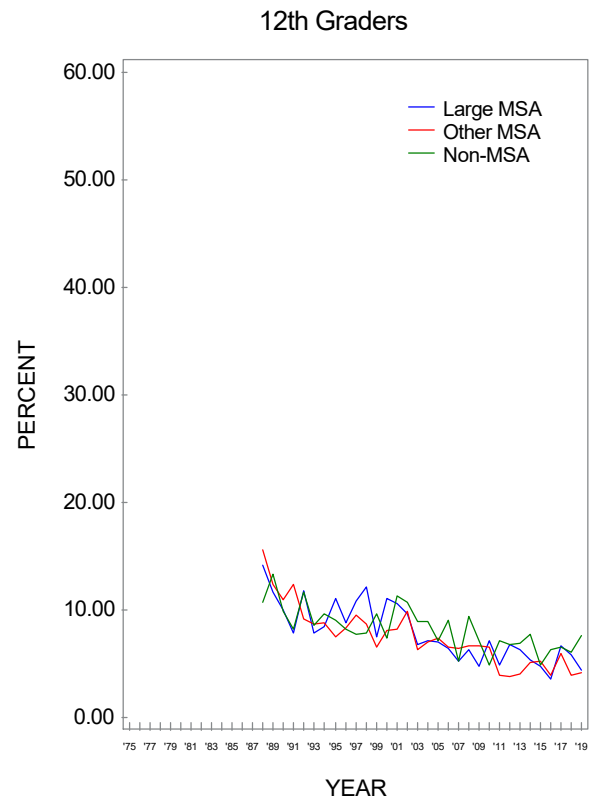
**FIGURE 285**

**Wine Coolers: Trends in 2-Week Prevalence of Having 5 or More Drinks in a Row by Region**



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

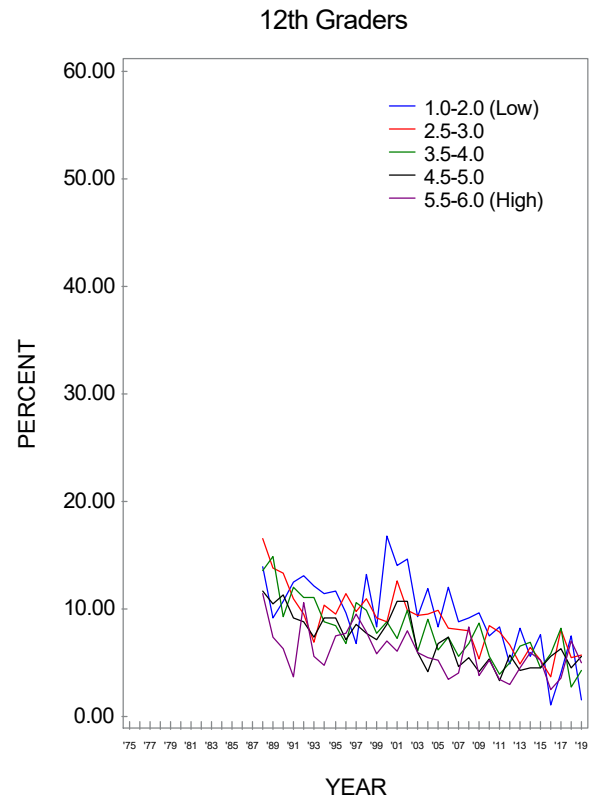
**FIGURE 286**  
**Wine Coolers: Trends in 2-Week Prevalence of Having 5 or More Drinks in a Row by Population Density**



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

**FIGURE 287**

**Wine Coolers: Trends in 2-Week Prevalence of Having 5 or More Drinks in a Row by Average Education Level of Parents\***

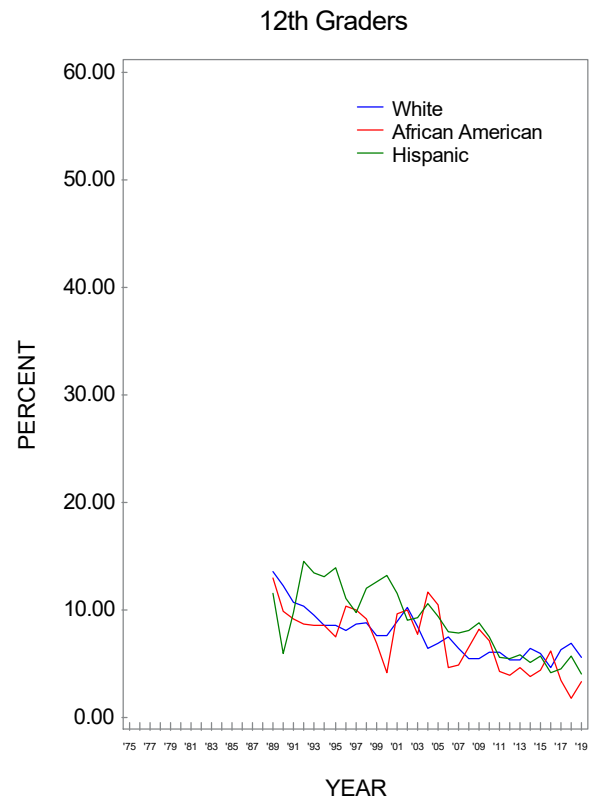


Source. The Monitoring the Future study, the University of Michigan.

\*Parental education is an average score of mother's education and father's education.

**FIGURE 288**

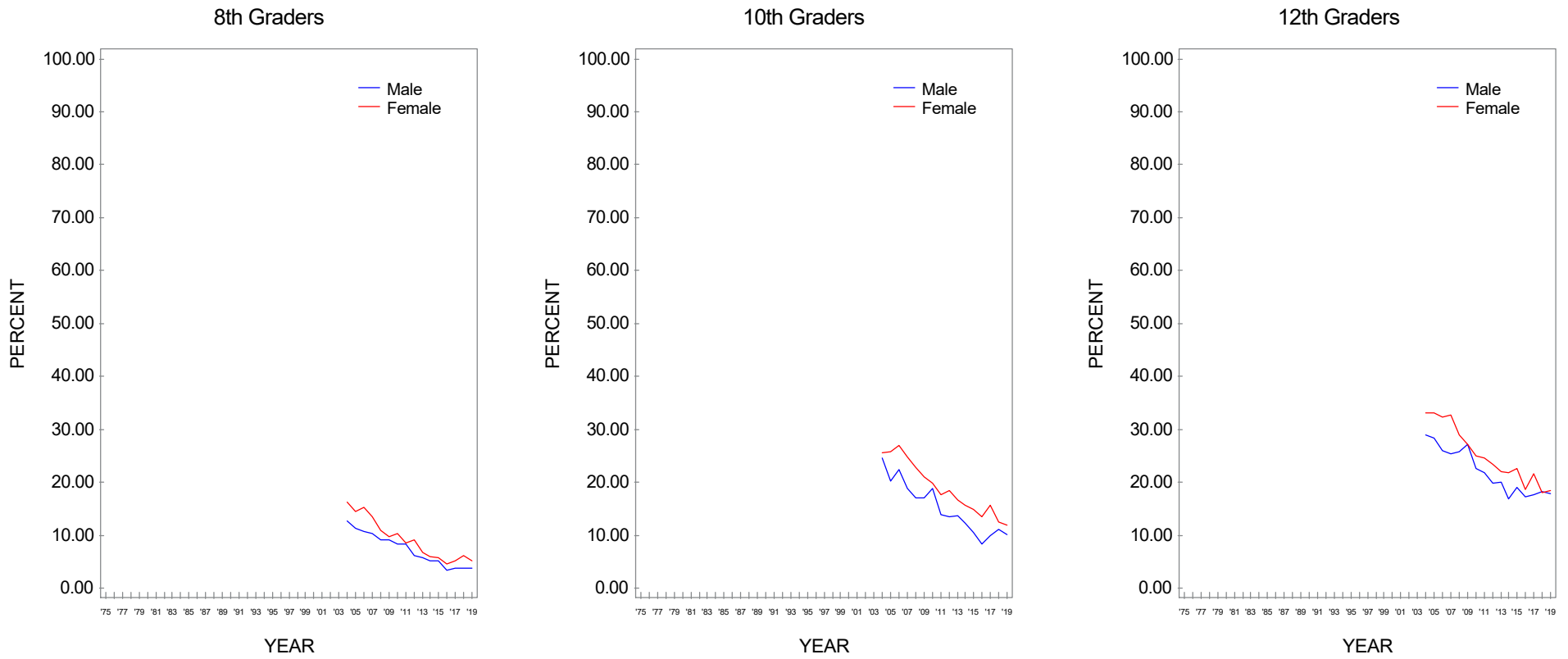
**Wine Coolers: Trends in 2-Week Prevalence of Having 5 or More Drinks in a Row by Race/Ethnicity\***



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

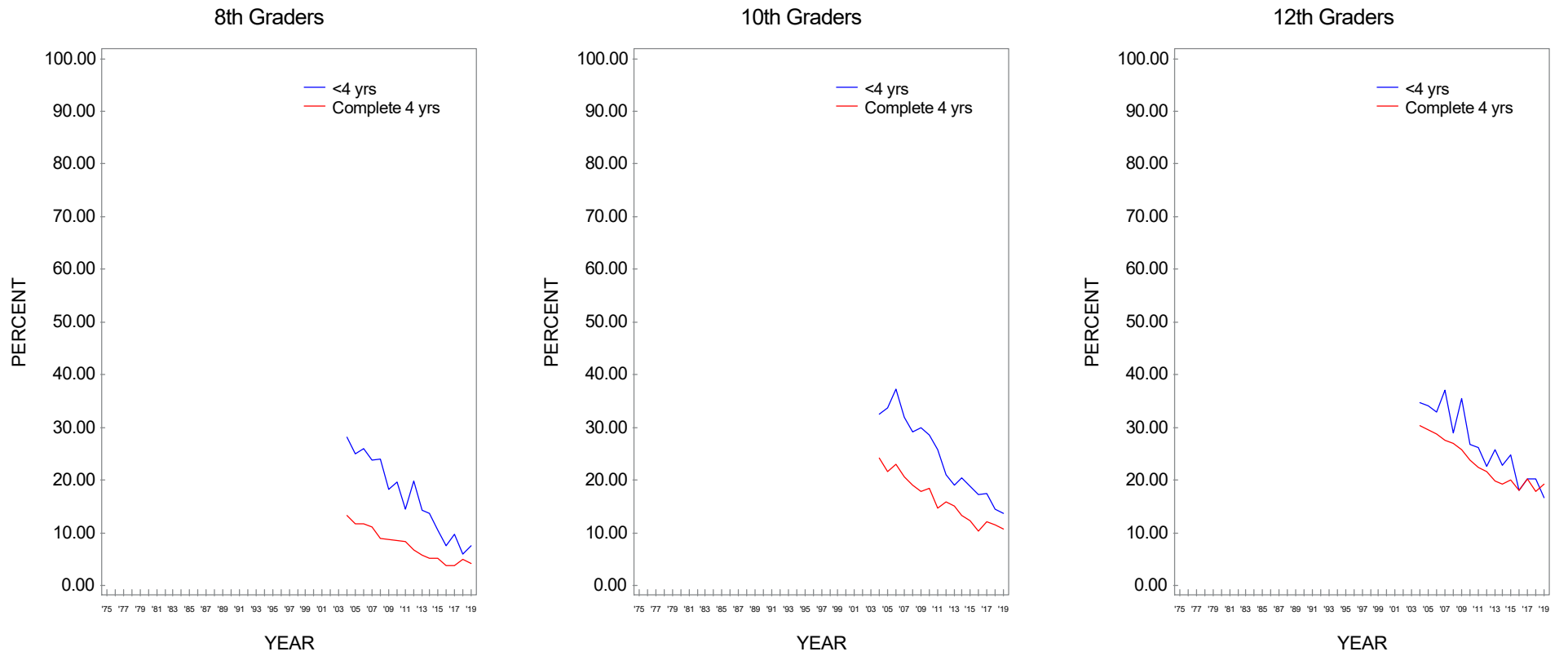
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 289**  
**Flavored Alcoholic Beverages: Trends in 30-Day Prevalence by Gender**



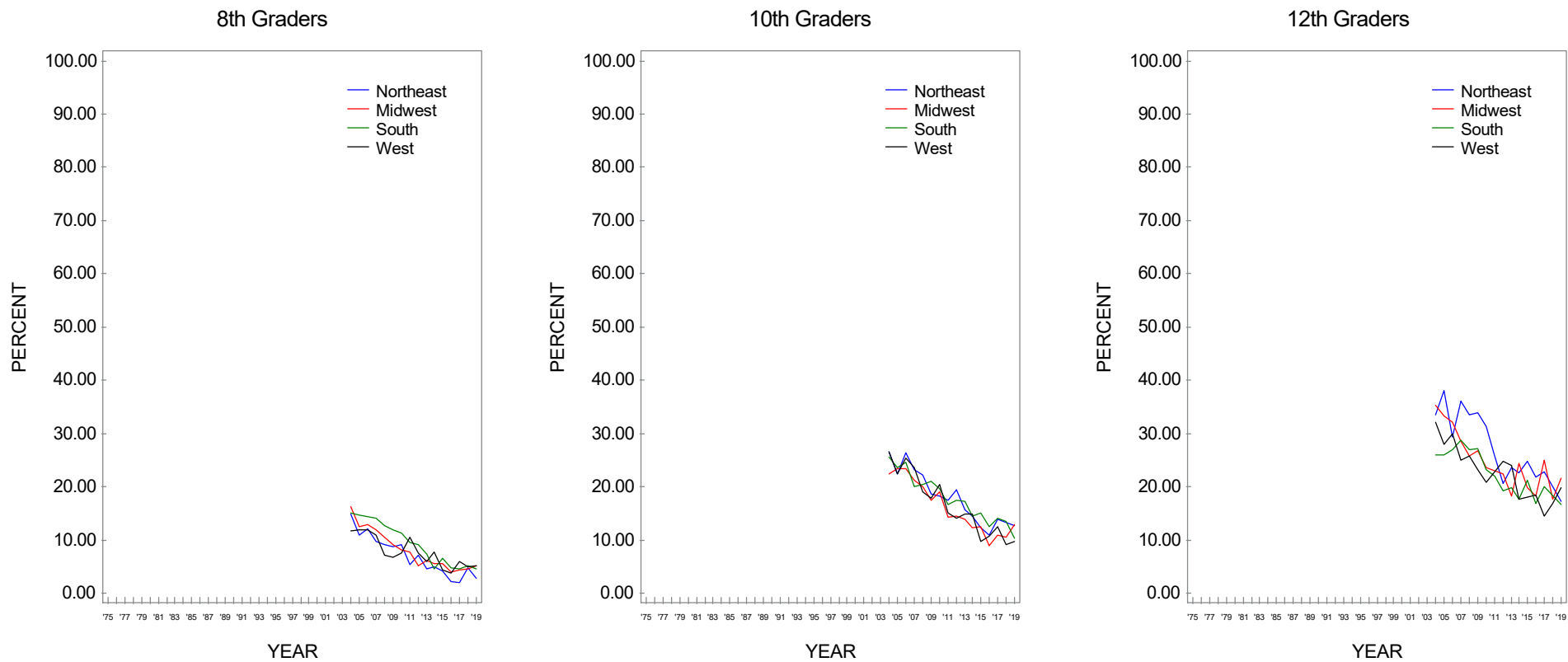
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 290**  
**Flavored Alcoholic Beverages: Trends in 30-Day Prevalence by College Plans**



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

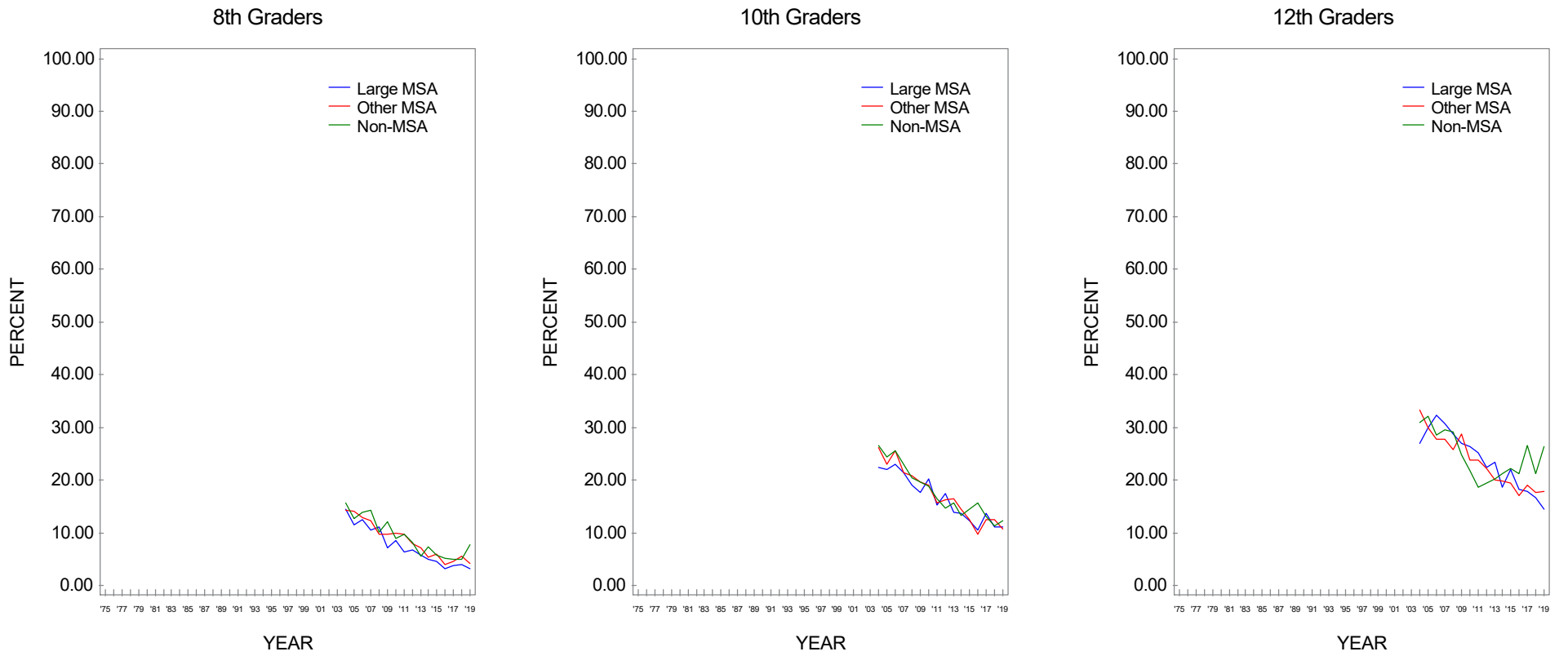
**FIGURE 291**  
**Flavored Alcoholic Beverages: Trends in 30-Day Prevalence by Region**



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

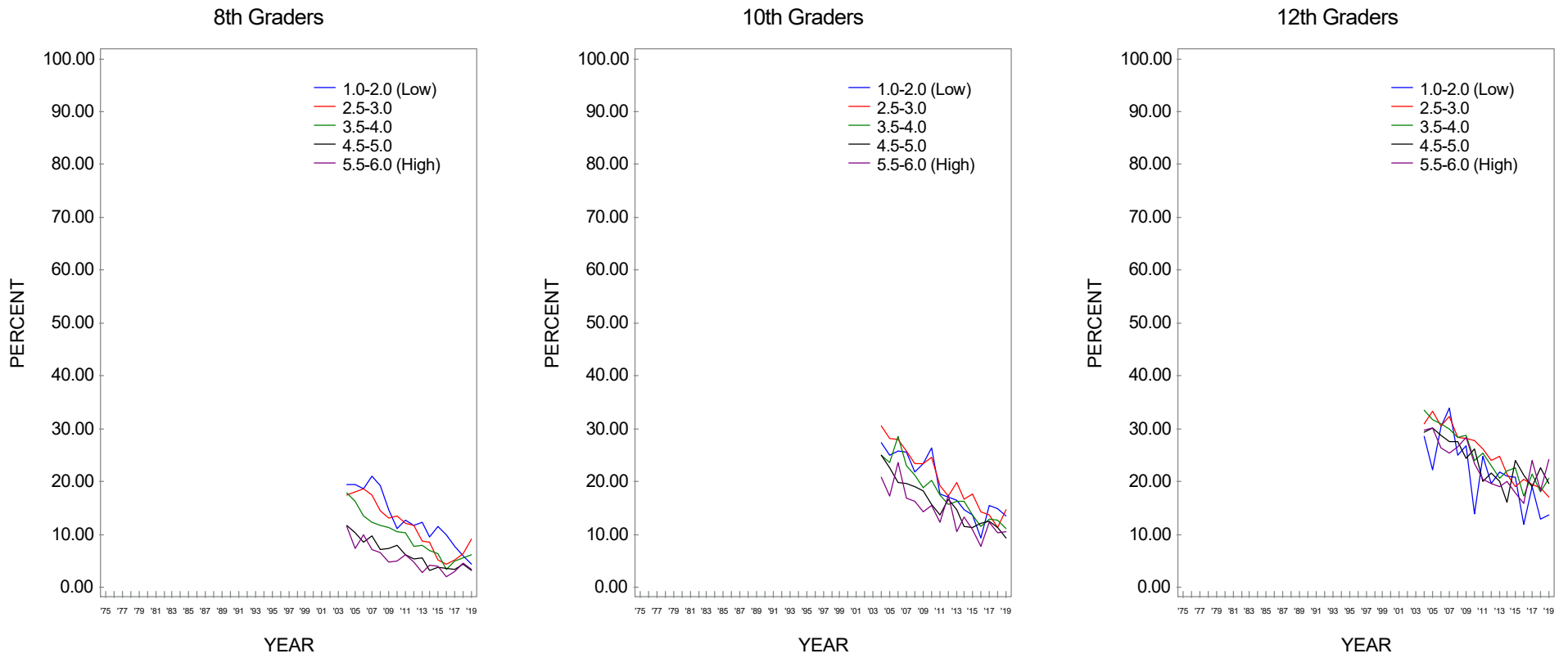


**FIGURE 292**  
**Flavored Alcoholic Beverages: Trends in 30-Day Prevalence by Population Density**



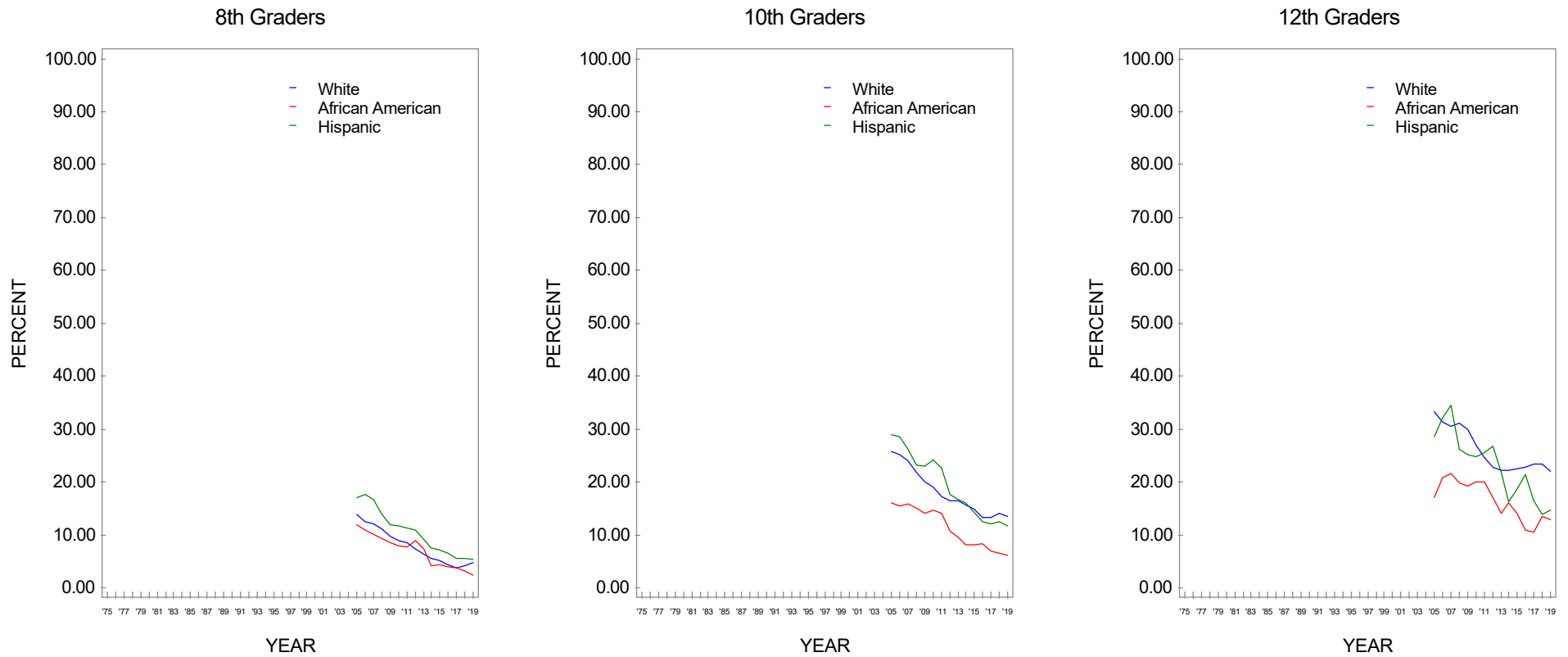
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 293**  
**Flavored Alcoholic Beverages: Trends in 30-Day Prevalence by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*Parental education is an average score of mother's education and father's education.

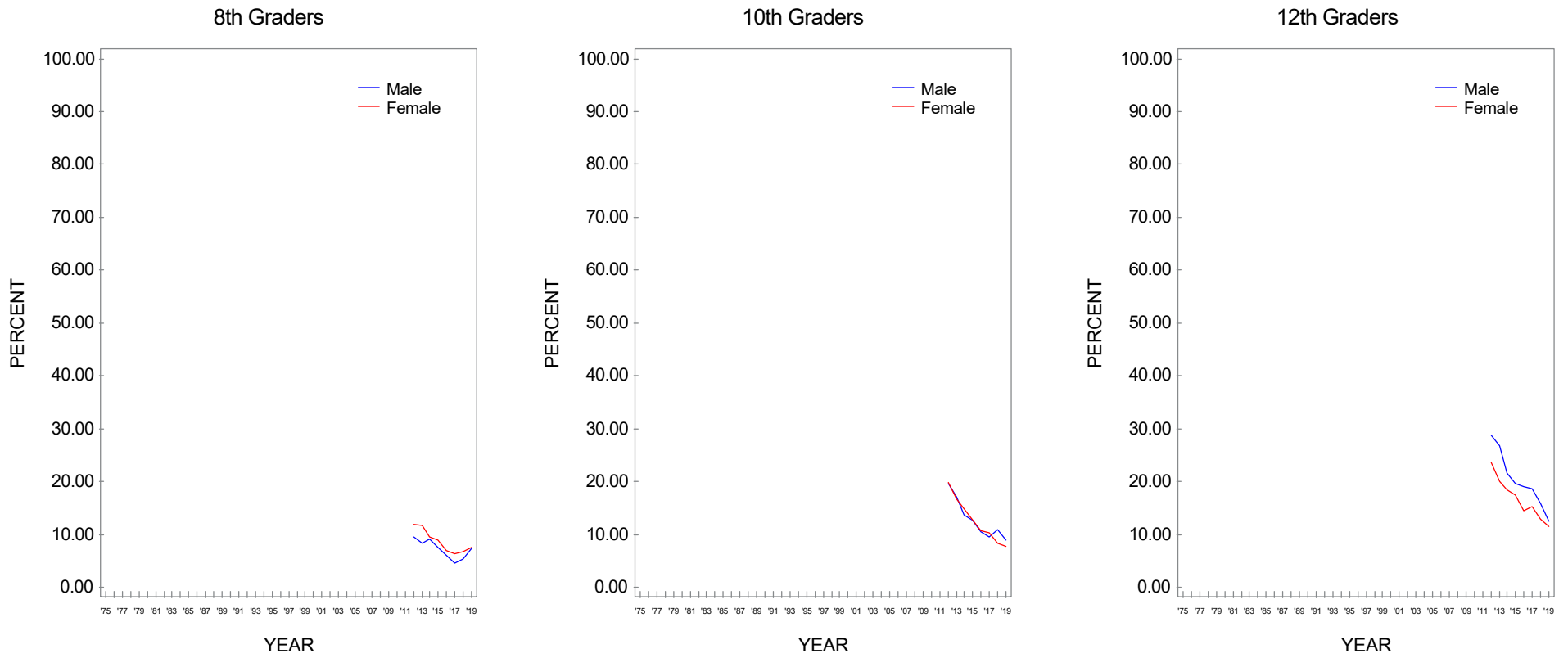
**FIGURE 294**  
**Flavored Alcoholic Beverages: Trends in 30-Day Prevalence by Race/Ethnicity\***



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

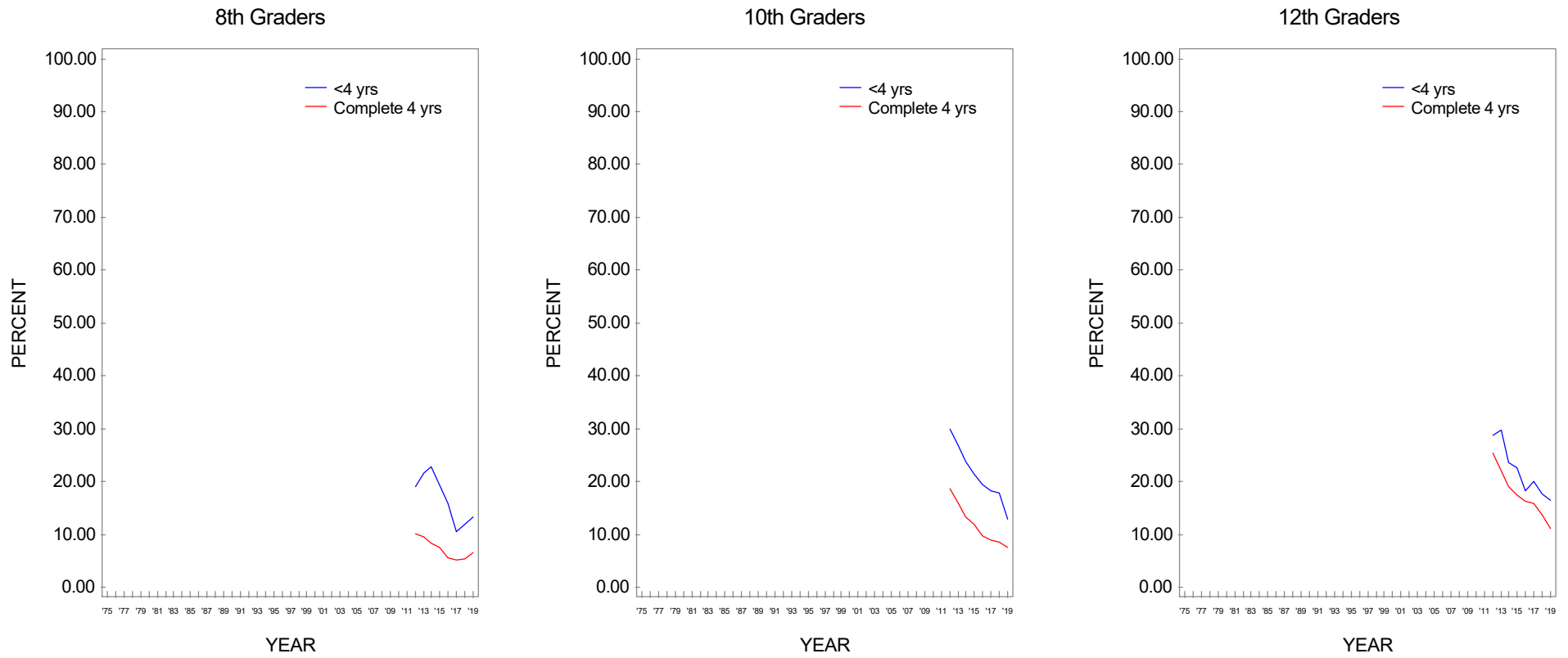
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 295**  
**Alcoholic Beverages containing Caffeine: Trends in Annual Prevalence by Gender**



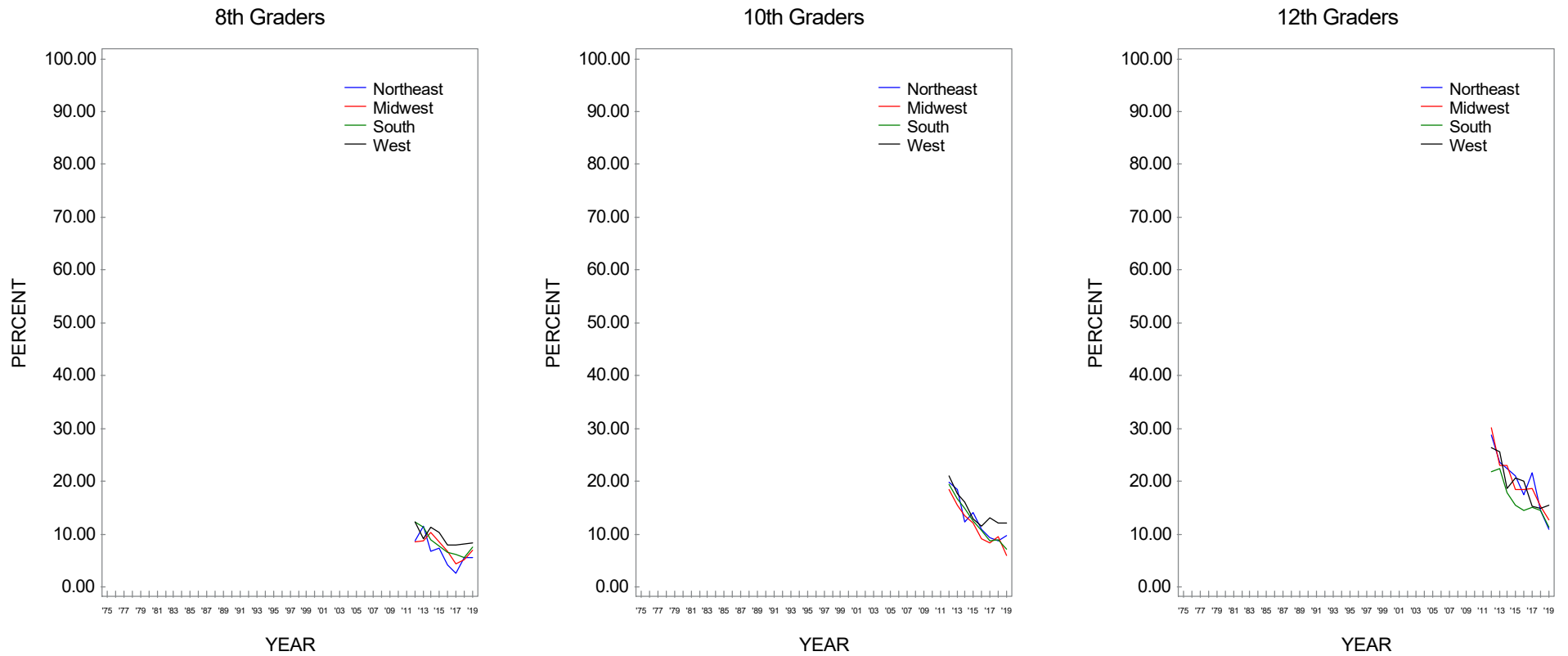
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 296**  
**Alcoholic Beverages containing Caffeine: Trends in Annual Prevalence by College Plans**



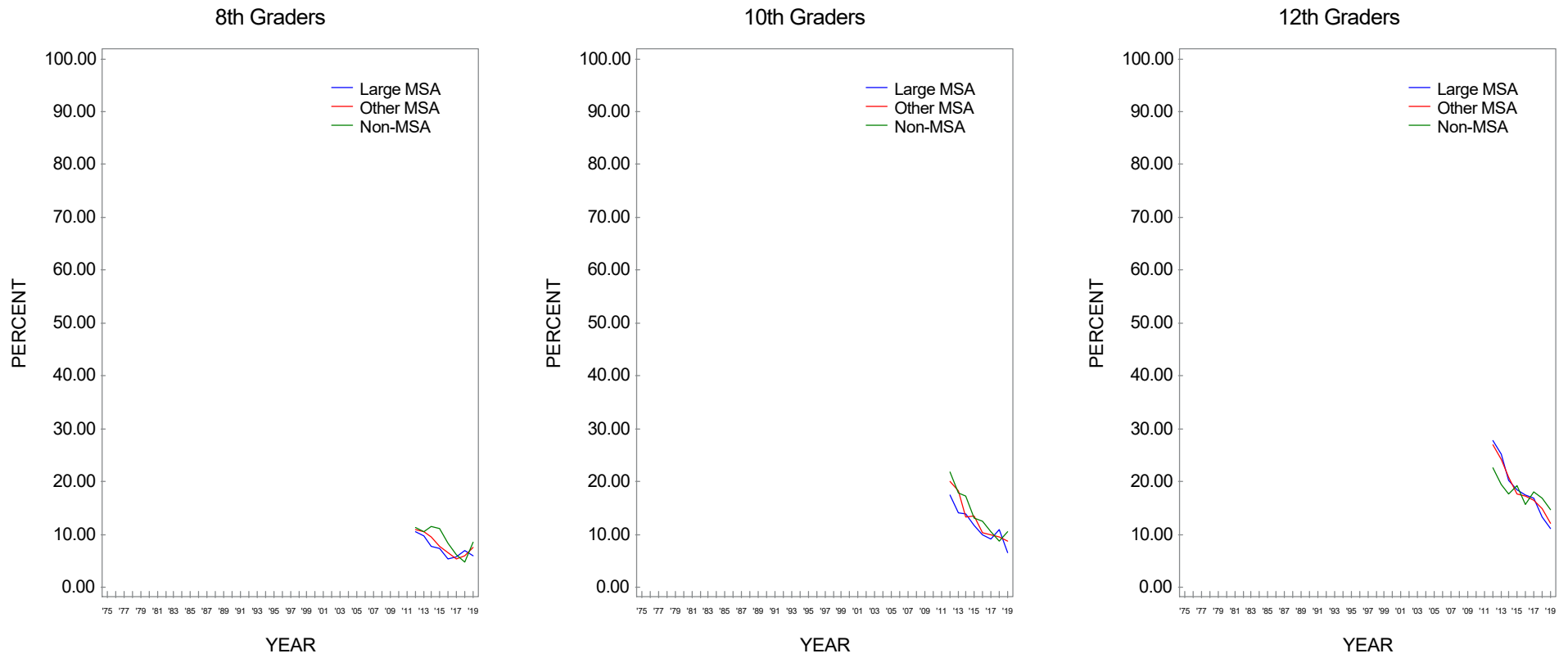
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 297**  
**Alcoholic Beverages containing Caffeine: Trends in Annual Prevalence by Region**



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

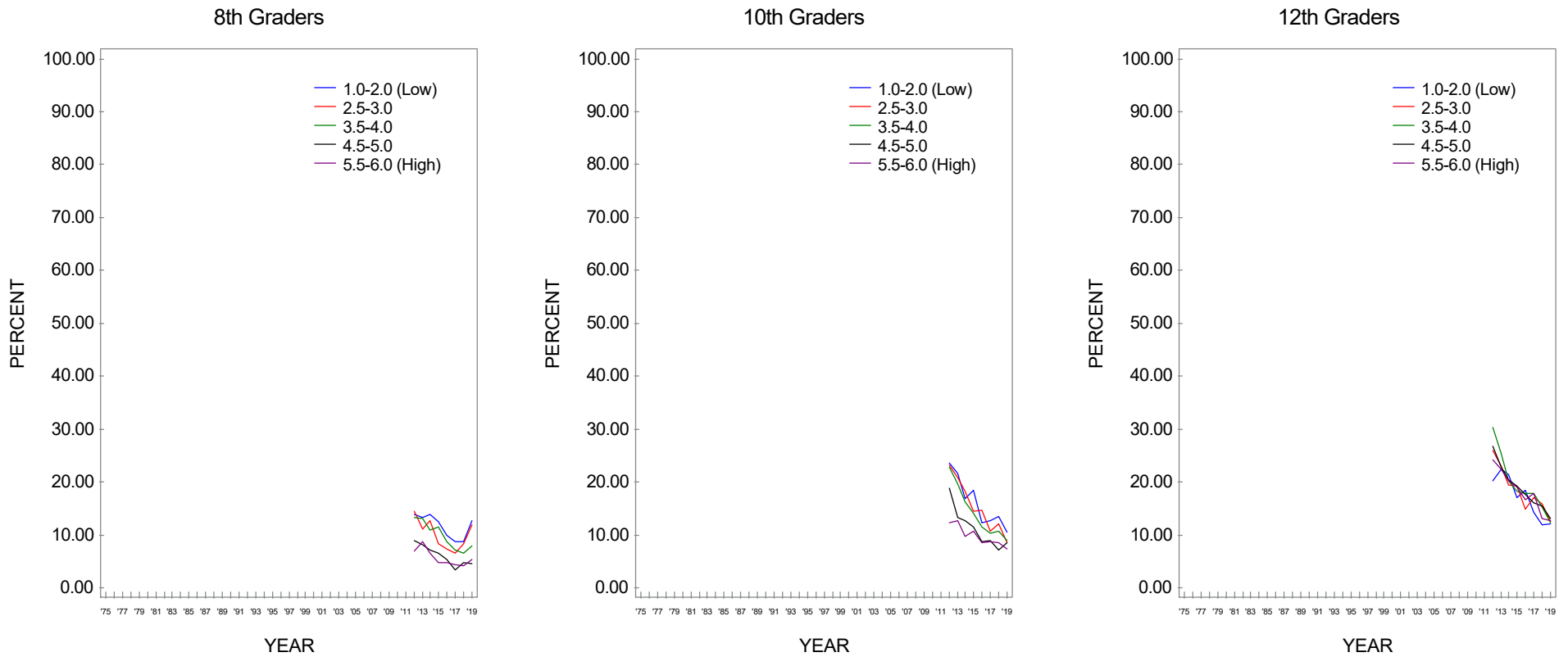
**FIGURE 298**  
**Alcoholic Beverages containing Caffeine: Trends in Annual Prevalence by Population Density**



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

**FIGURE 299**

**Alcoholic Beverages containing Caffeine: Trends in Annual Prevalence by Average Education Level of Parents\***

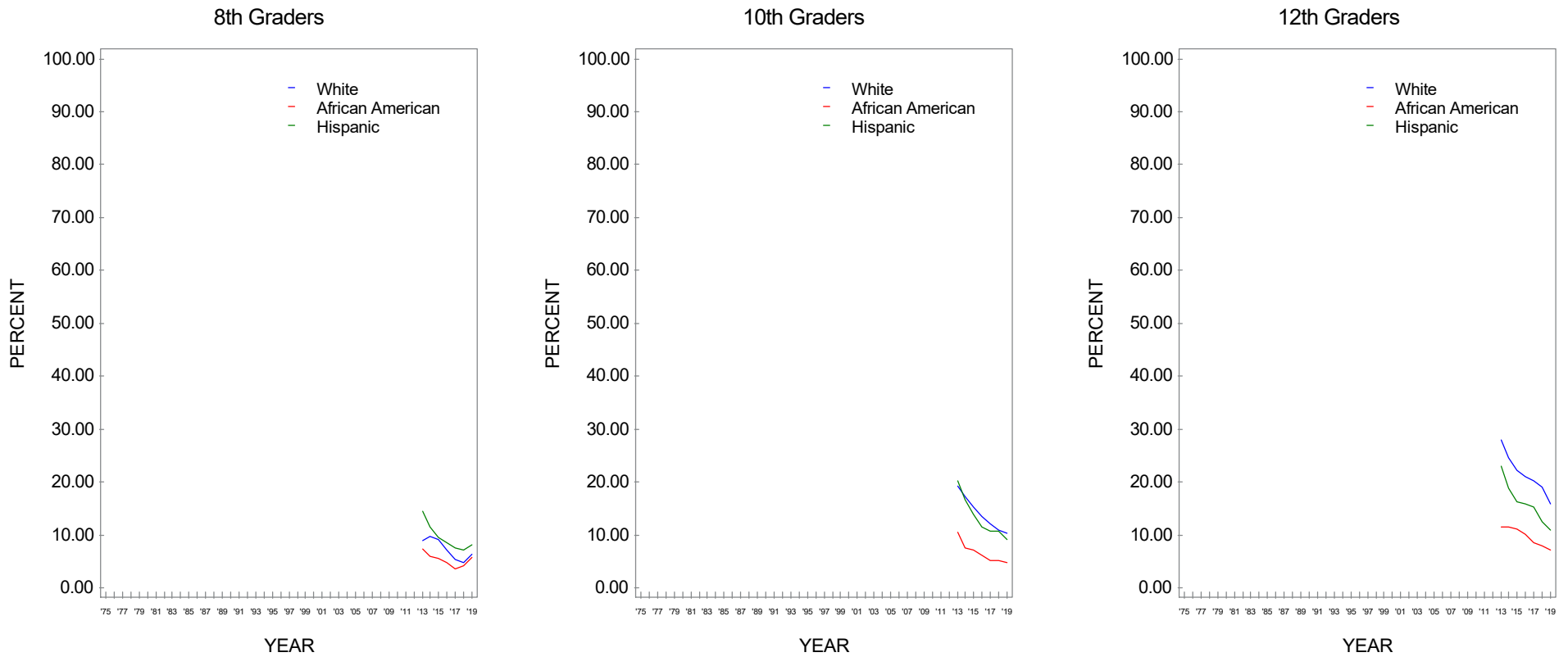


Source. The Monitoring the Future study, the University of Michigan.

\*Parental education is an average score of mother's education and father's education.



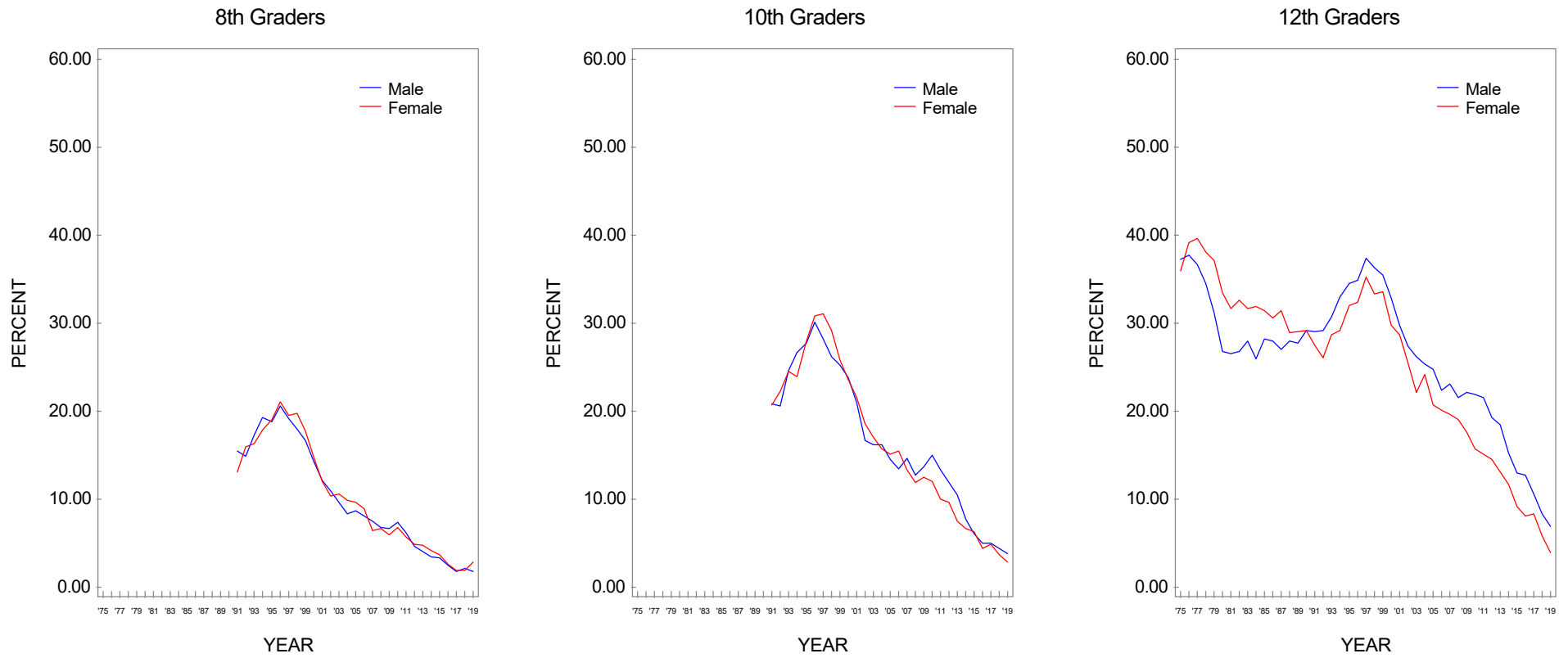
**FIGURE 300**  
**Alcoholic Beverages containing Caffeine: Trends in Annual Prevalence by Race/Ethnicity\***



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

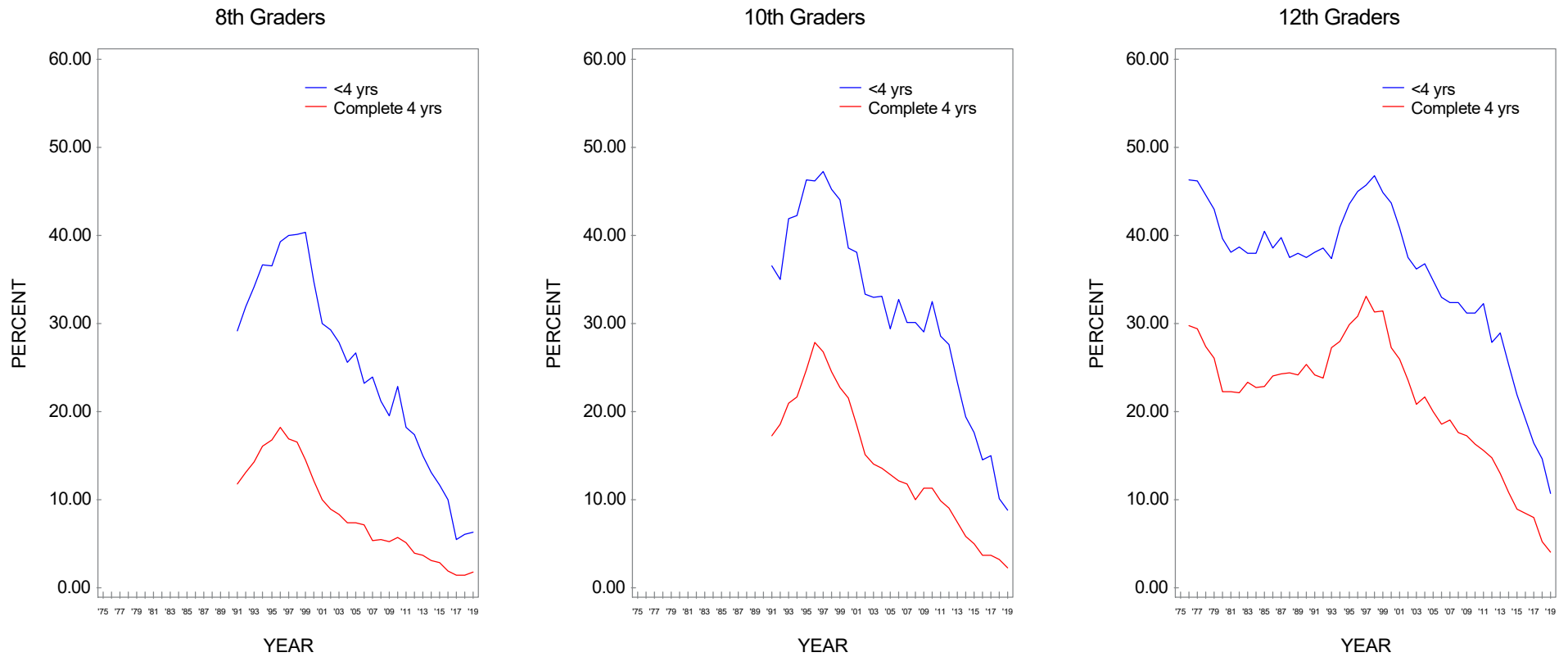
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 301**  
**Cigarettes: Trends in 30-Day Prevalence by Gender**



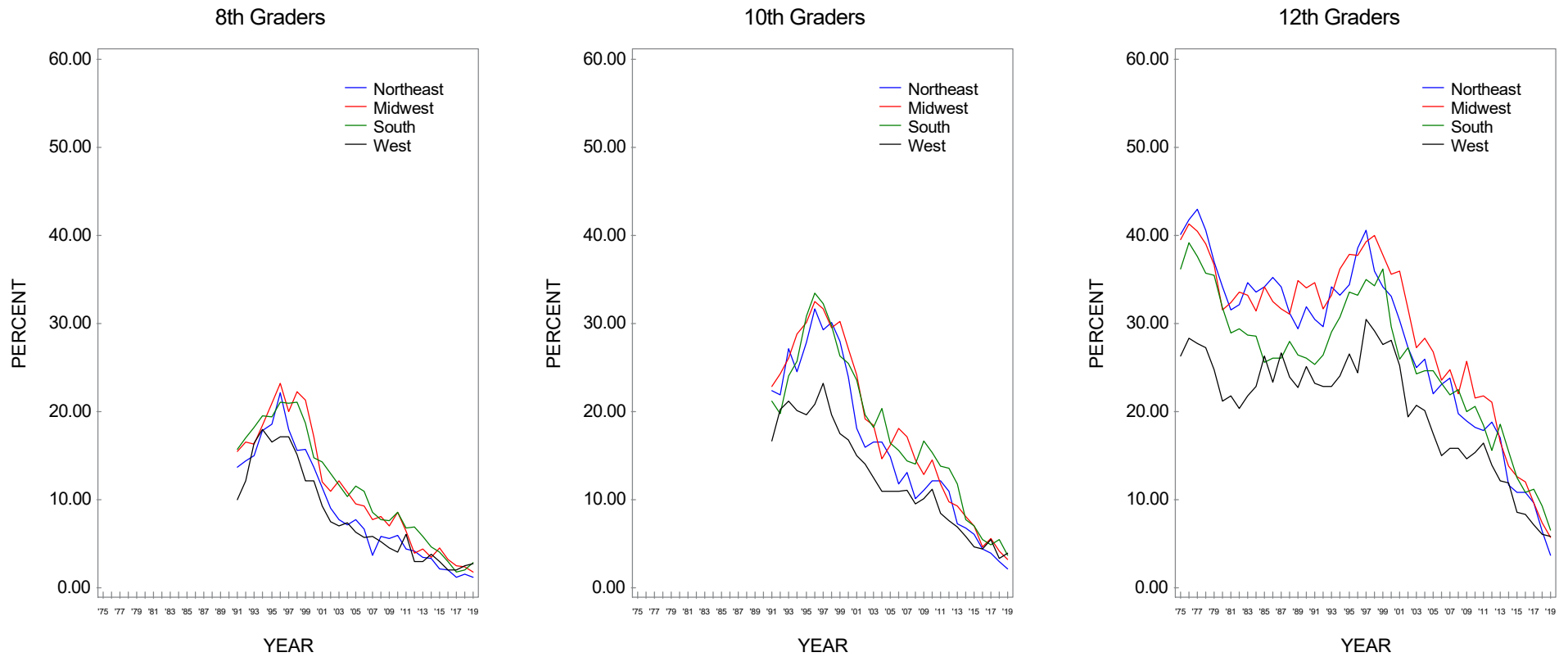
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 302**  
**Cigarettes: Trends in 30-Day Prevalence by College Plans**



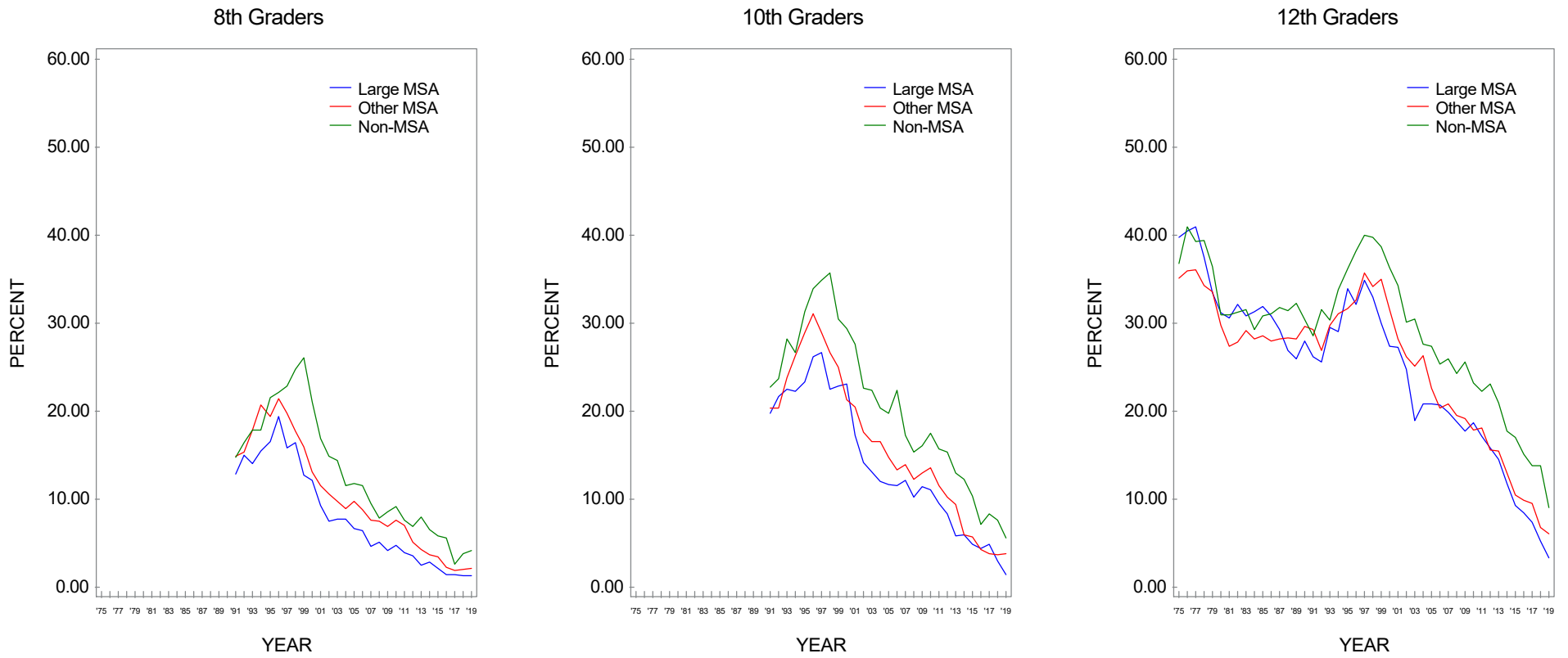
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 303**  
**Cigarettes: Trends in 30-Day Prevalence by Region**



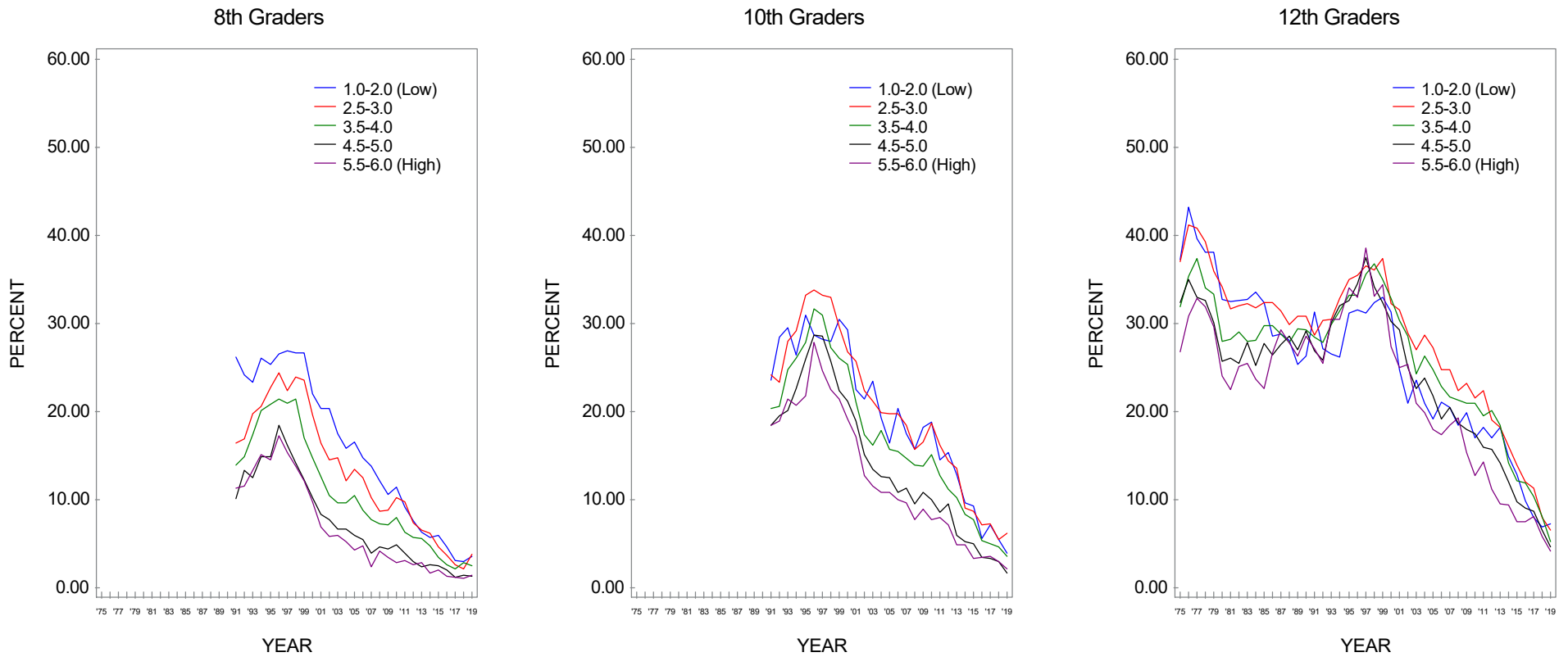
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 304**  
**Cigarettes: Trends in 30-Day Prevalence by Population Density**



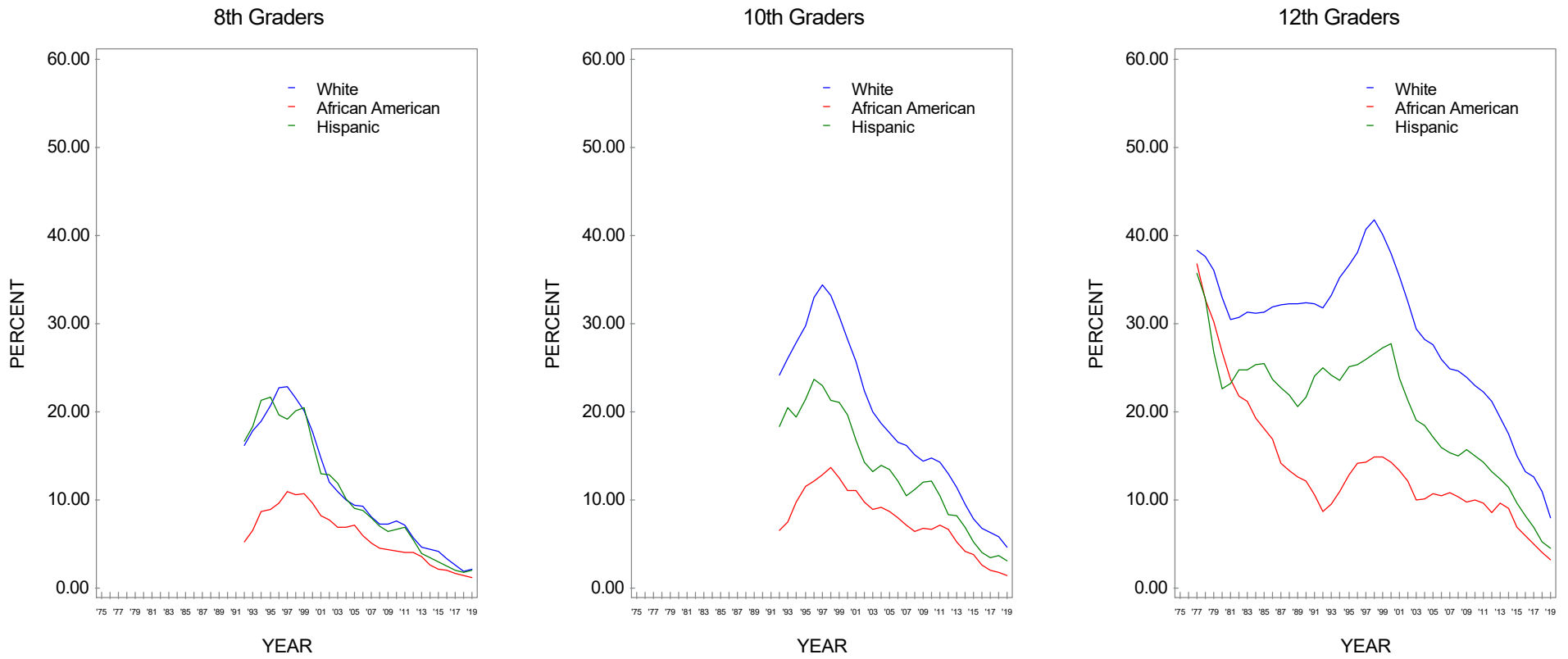
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 305**  
**Cigarettes: Trends in 30-Day Prevalence by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*Parental education is an average score of mother's education and father's education.

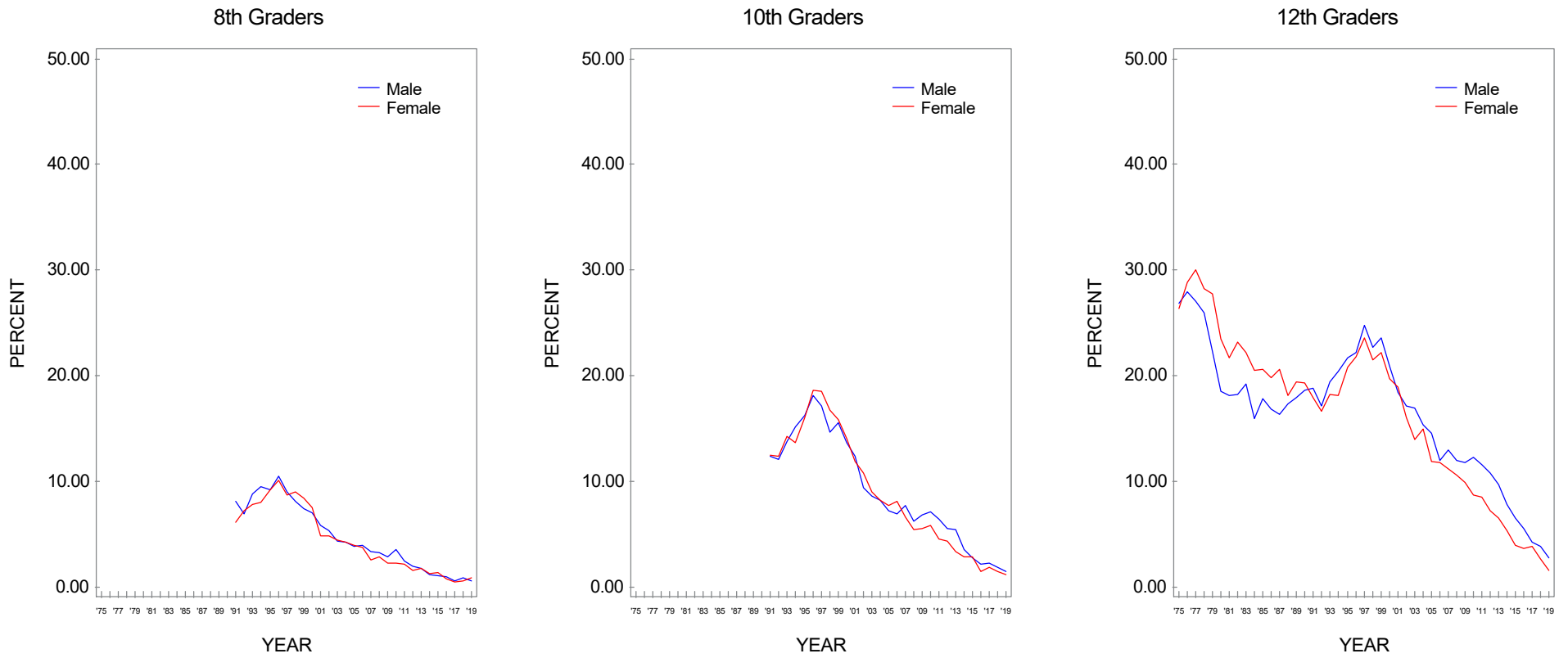
**FIGURE 306**  
**Cigarettes: Trends in 30-Day Prevalence by Race/Ethnicity\***



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

\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

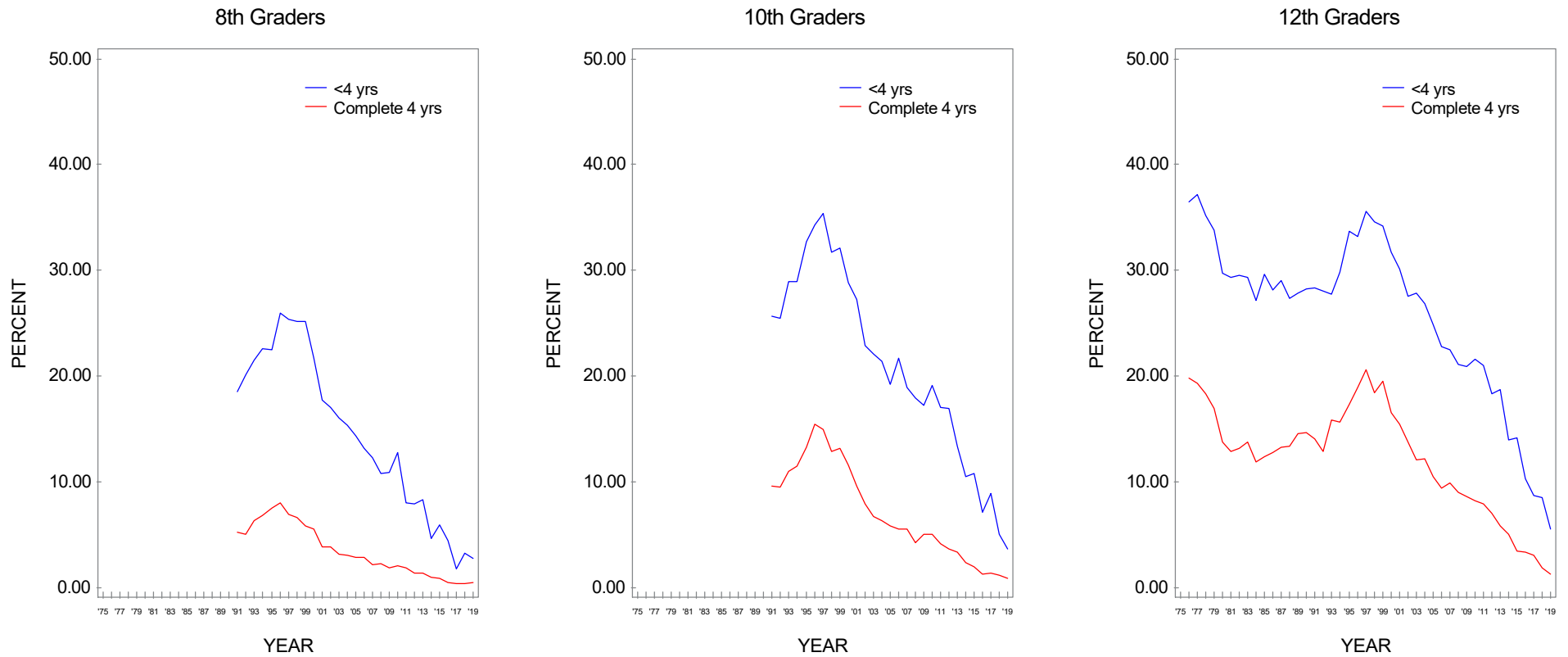
**FIGURE 307**  
**Cigarettes: Trends in 30-Day Prevalence of Daily Use by Gender**



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

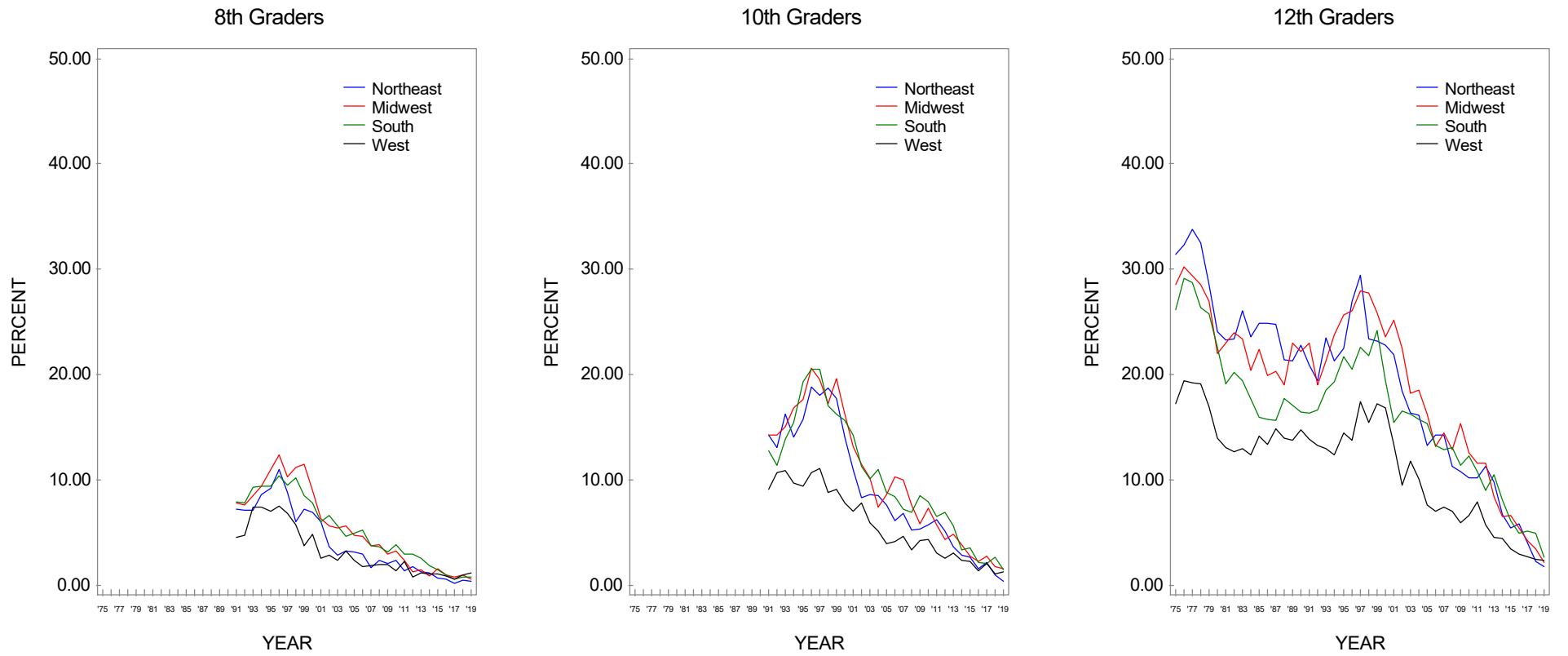


**FIGURE 308**  
**Cigarettes: Trends in 30-Day Prevalence of Daily Use by College Plans**



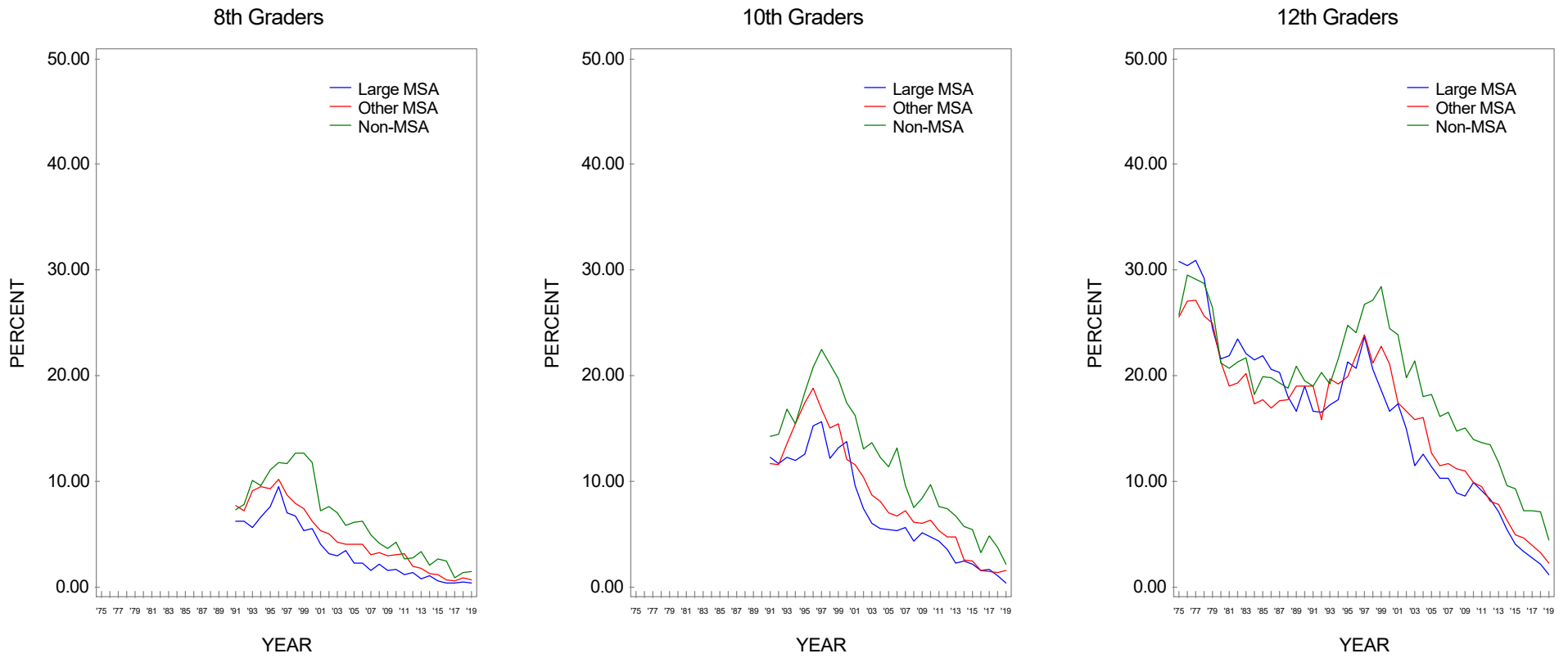
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 309**  
**Cigarettes: Trends in 30-Day Prevalence of Daily Use by Region**



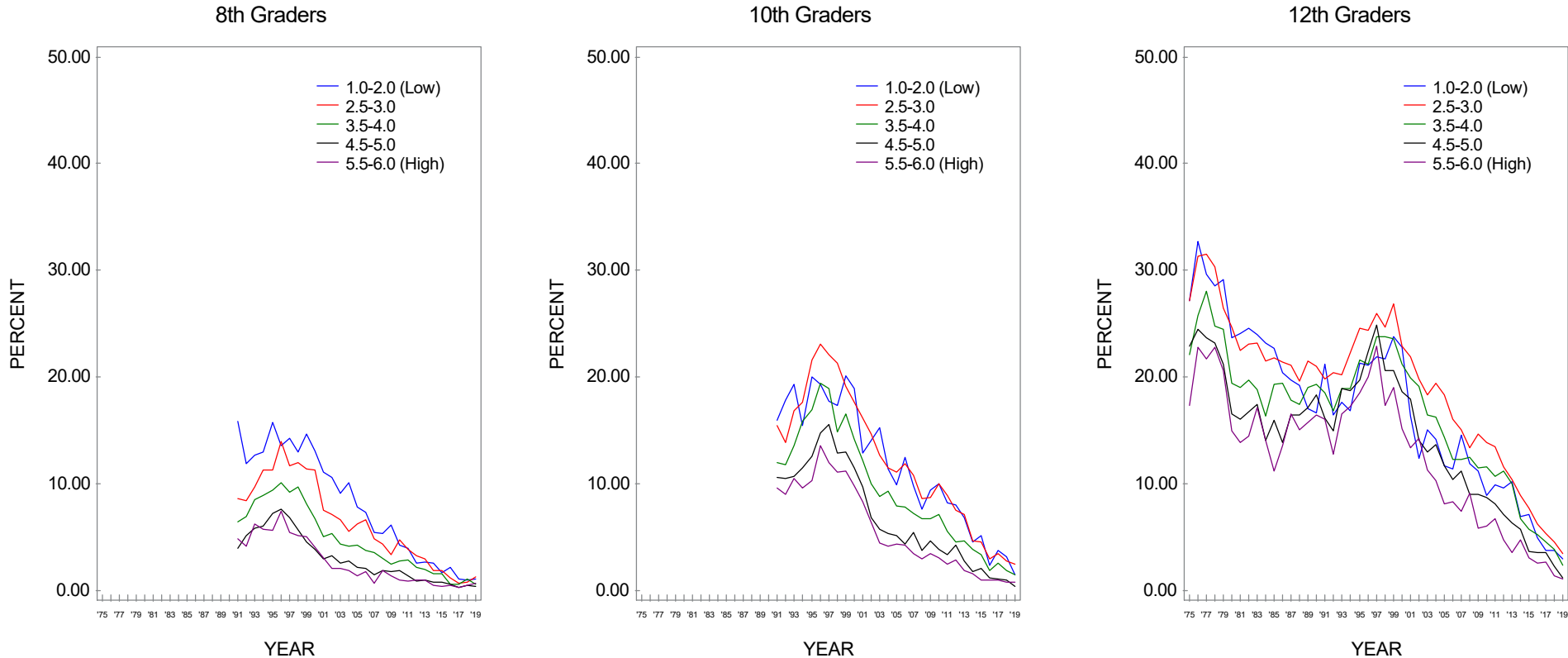
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 310**  
**Cigarettes: Trends in 30-Day Prevalence of Daily Use by Population Density**



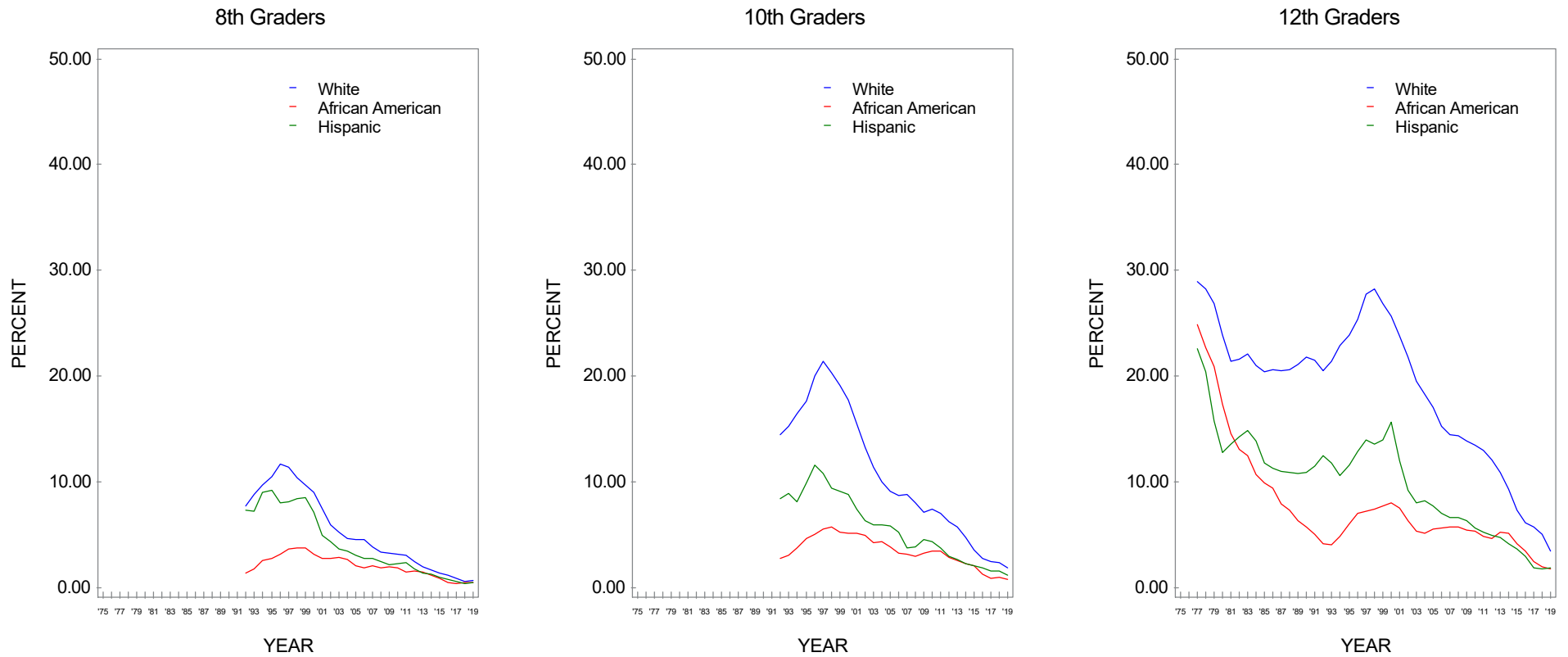
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 311**  
**Cigarettes: Trends in 30-Day Prevalence of Daily Use by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*Parental education is an average score of mother's education and father's education.

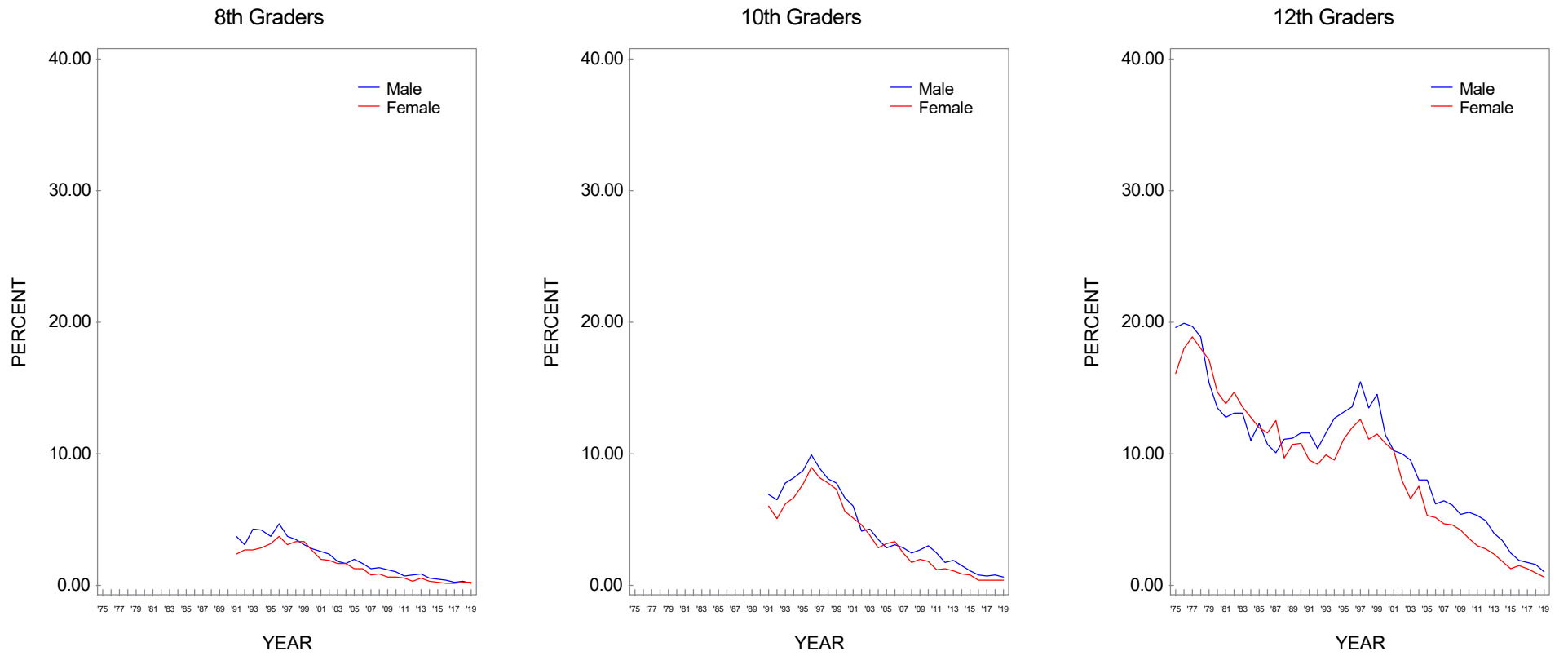
**FIGURE 312**  
**Cigarettes: Trends in 30-Day Prevalence of Daily Use by Race/Ethnicity\***



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

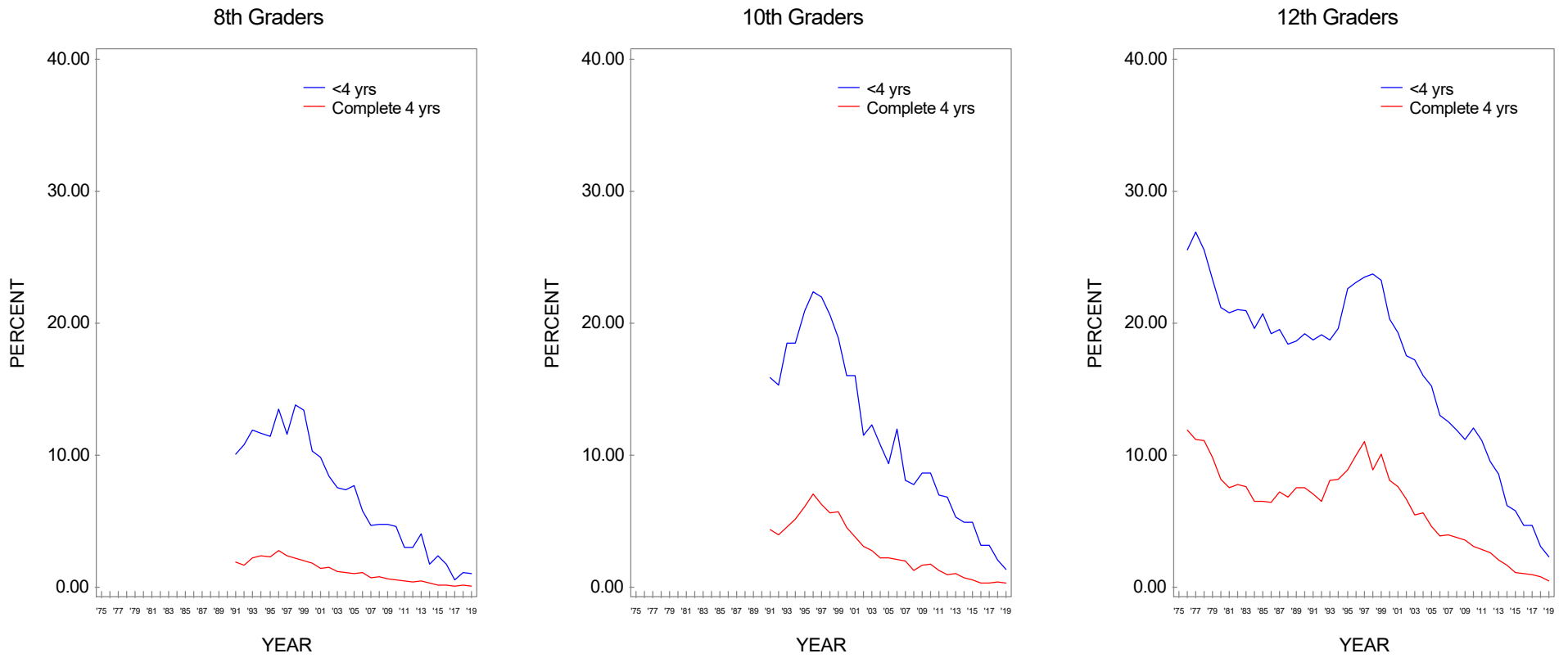
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 313**  
**Cigarettes: Trends in 30-Day Prevalence of Use of Half Pack a Day or More by Gender**



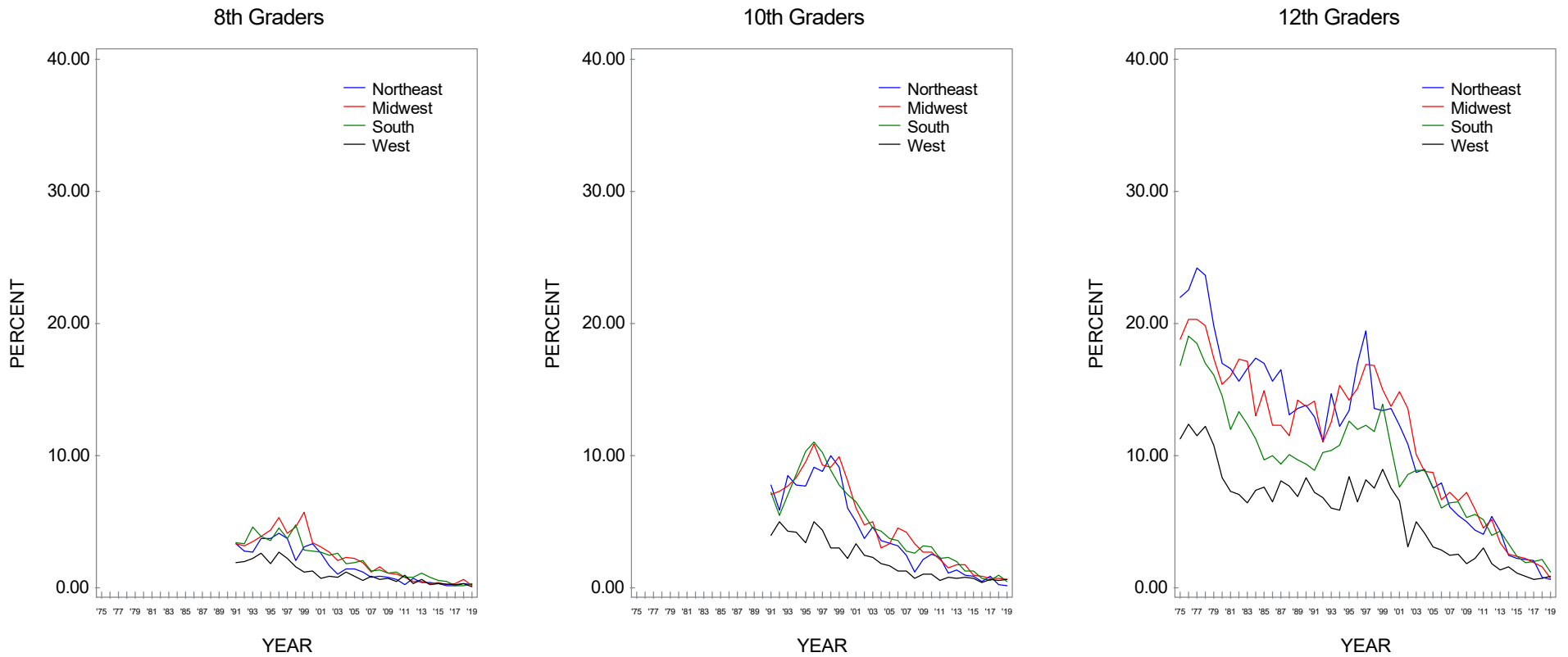
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 314**  
**Cigarettes: Trends in 30-Day Prevalence of Use of Half Pack a Day or More by College Plans**



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

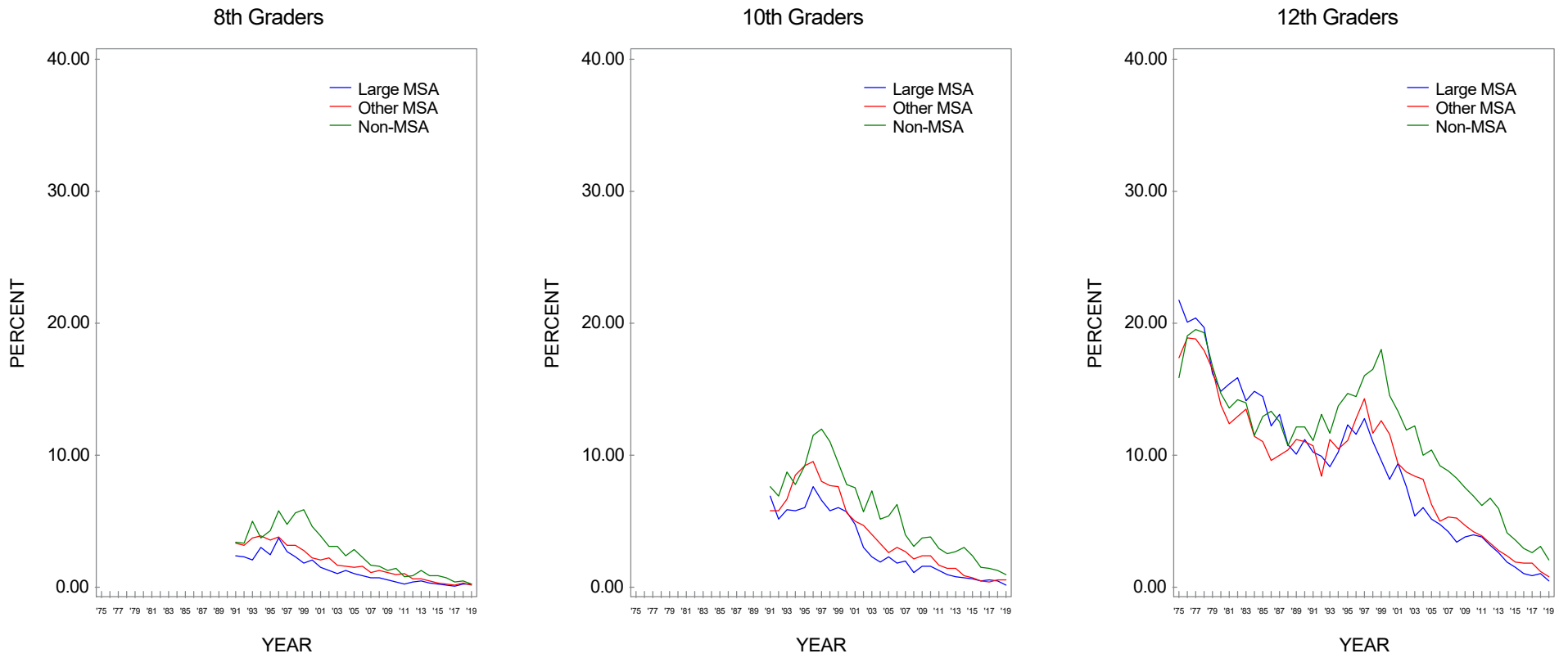
**FIGURE 315**  
**Cigarettes: Trends in 30-Day Prevalence of Use of Half Pack a Day or More by Region**



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



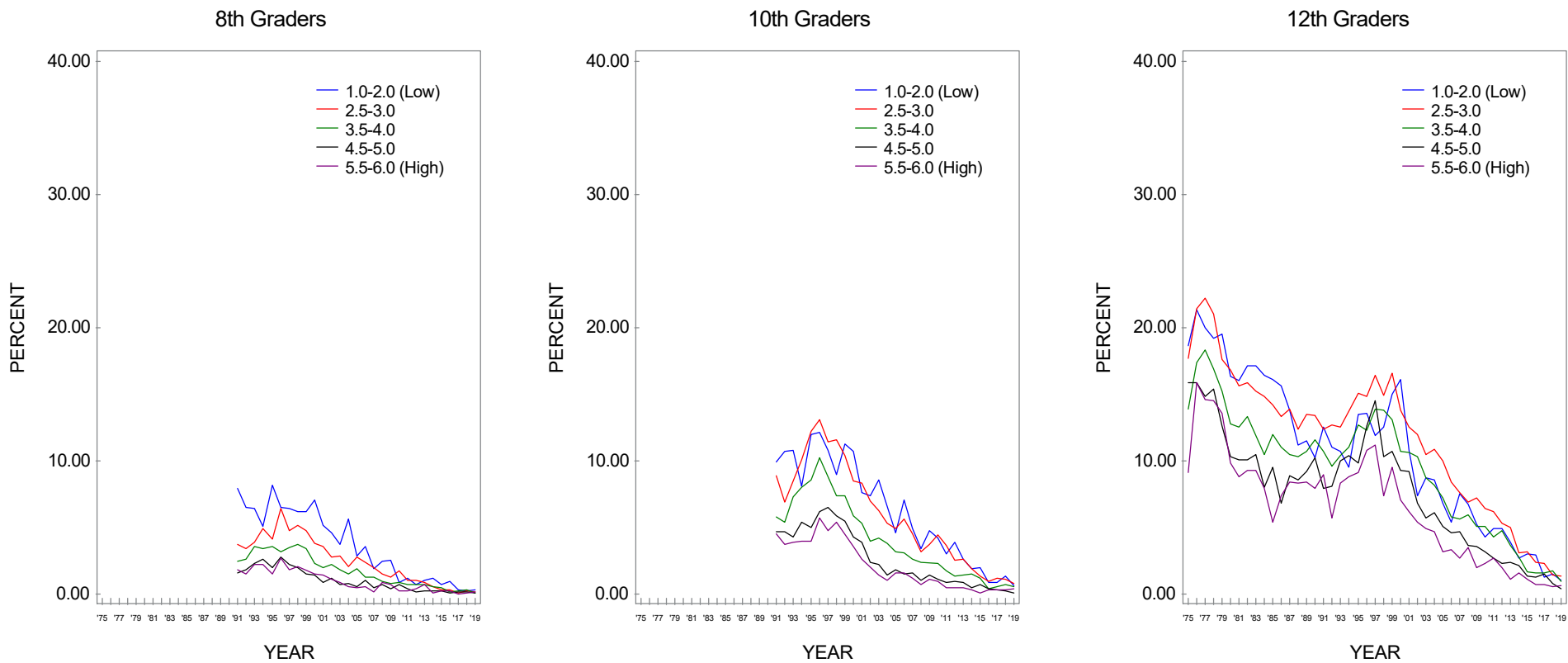
**FIGURE 316**  
**Cigarettes: Trends in 30-Day Prevalence of Use of Half Pack a Day or More by Population Density**



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

**FIGURE 317**

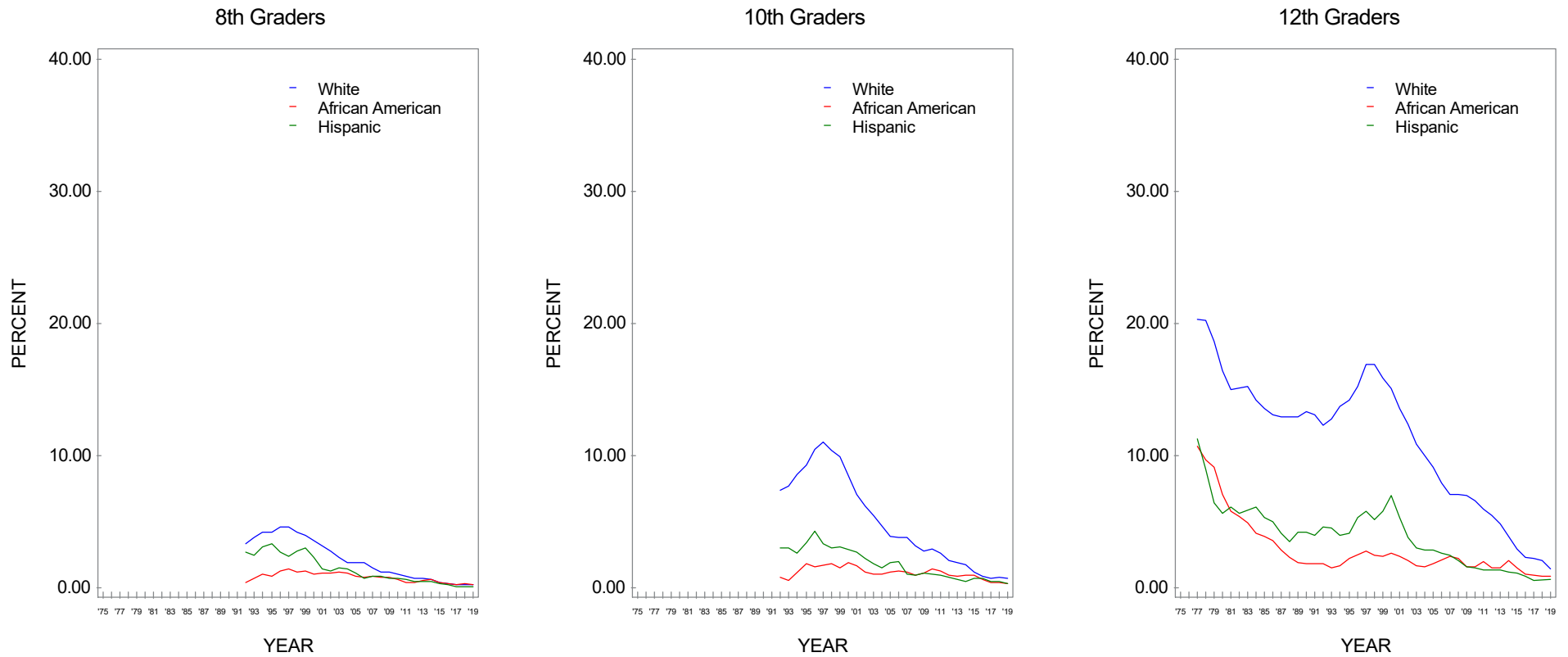
**Cigarettes: Trends in 30-Day Prevalence of Use of Half Pack a Day or More by Average Education Level of Parents\***



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

\*Parental education is an average score of mother's education and father's education.

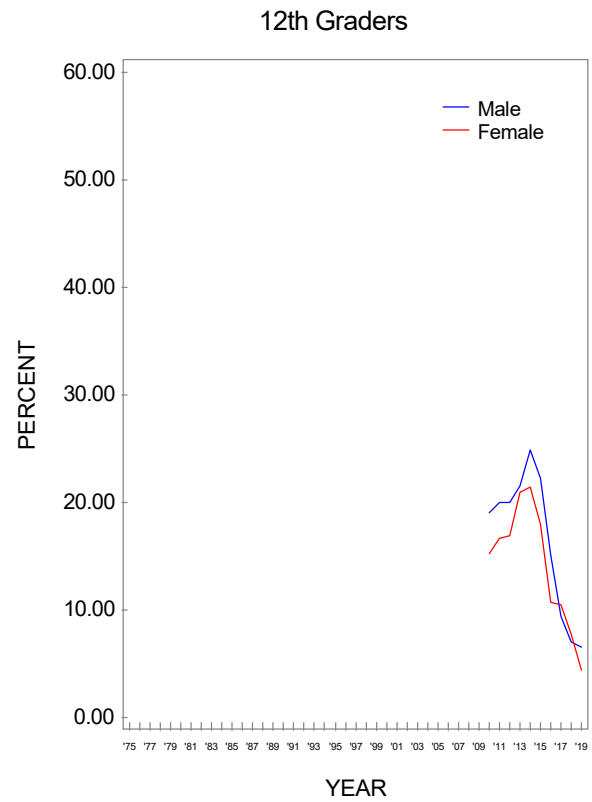
**FIGURE 318**  
**Cigarettes: Trends in 30-Day Prevalence of Use of Half Pack a Day or More by Race/Ethnicity\***



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

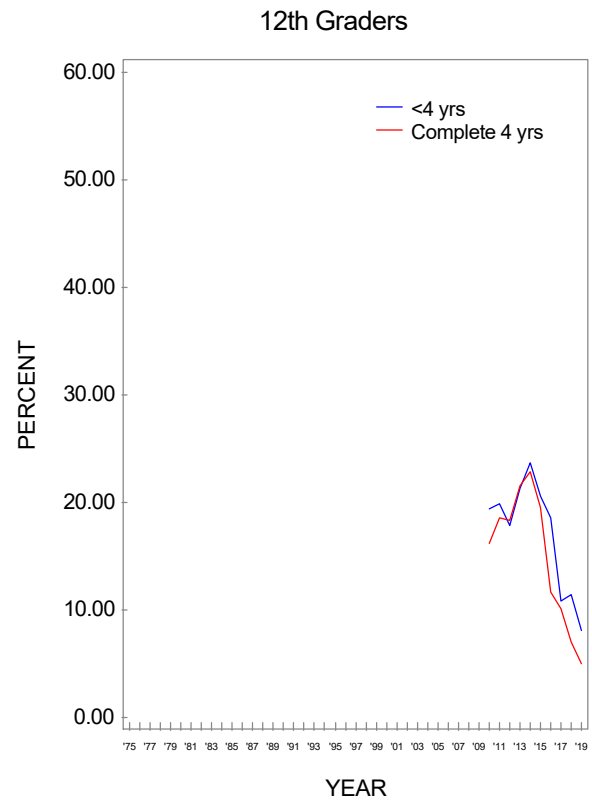
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 319**  
**Tobacco using a Hookah: Trends in Annual Prevalence by Gender**



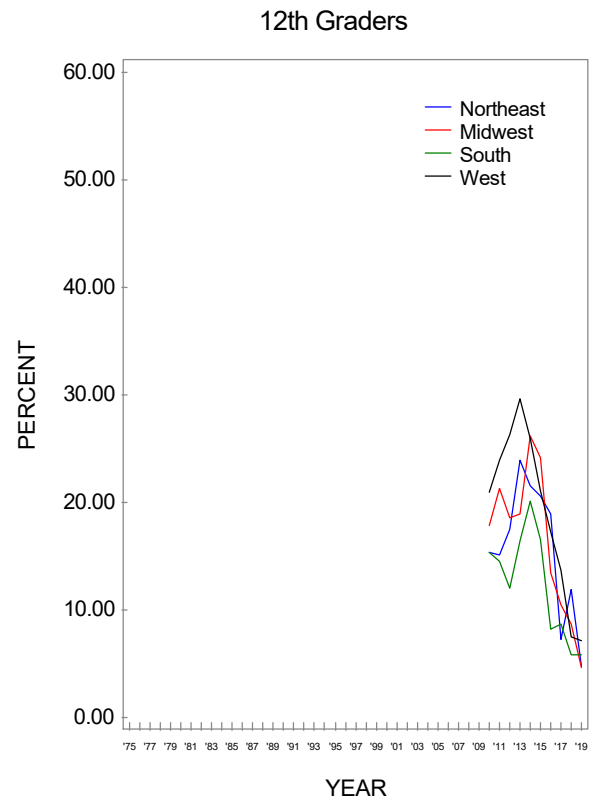
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 320**  
**Tobacco using a Hookah: Trends in Annual Prevalence by College Plans**



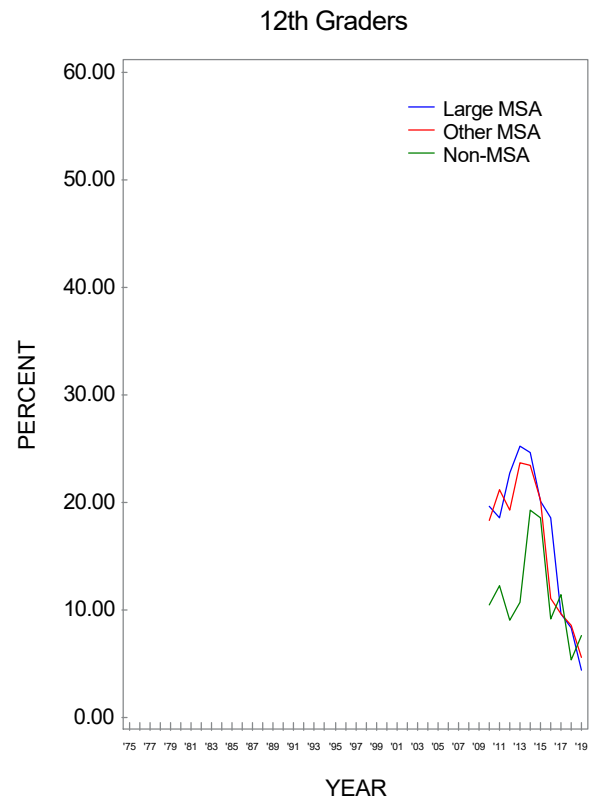
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 321**  
**Tobacco using a Hookah: Trends in Annual Prevalence by Region**



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

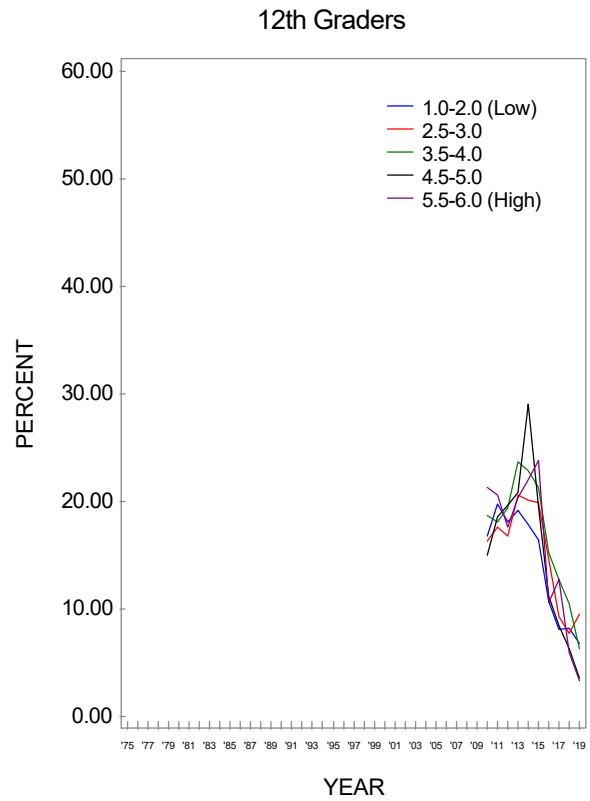
**FIGURE 322**  
**Tobacco using a Hookah: Trends in Annual Prevalence by Population Density**



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

**FIGURE 323**

**Tobacco using a Hookah: Trends in Annual Prevalence by Average Education Level of Parents\***

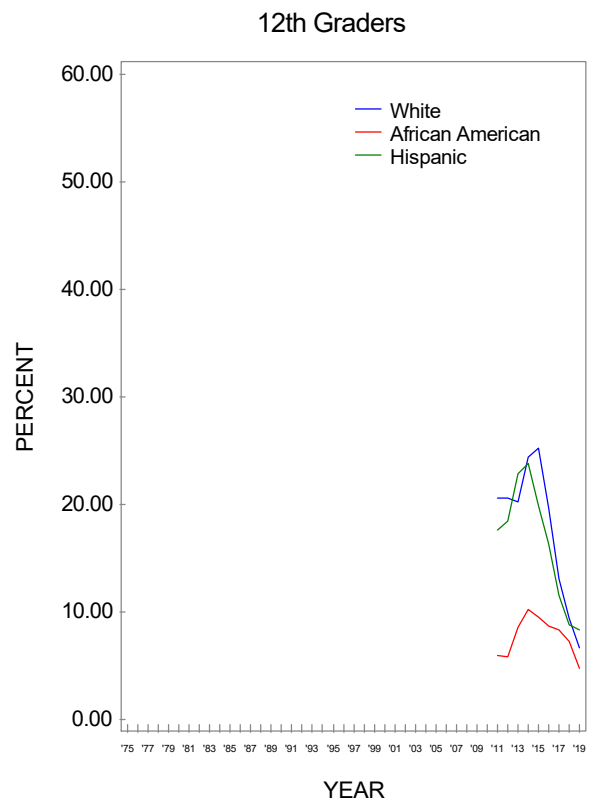


Source. The Monitoring the Future study, the University of Michigan.

\*Parental education is an average score of mother's education and father's education.



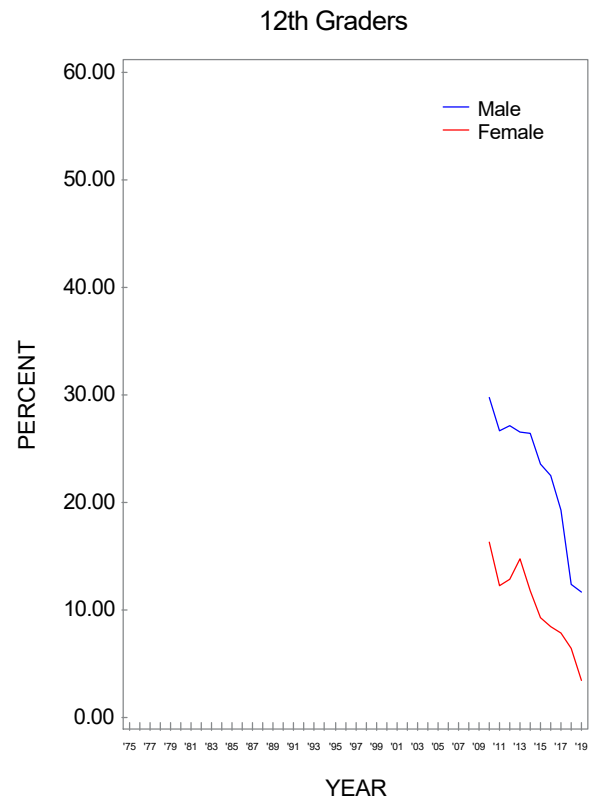
**FIGURE 324**  
**Tobacco using a Hookah: Trends in Annual Prevalence by Race/Ethnicity\***



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

\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

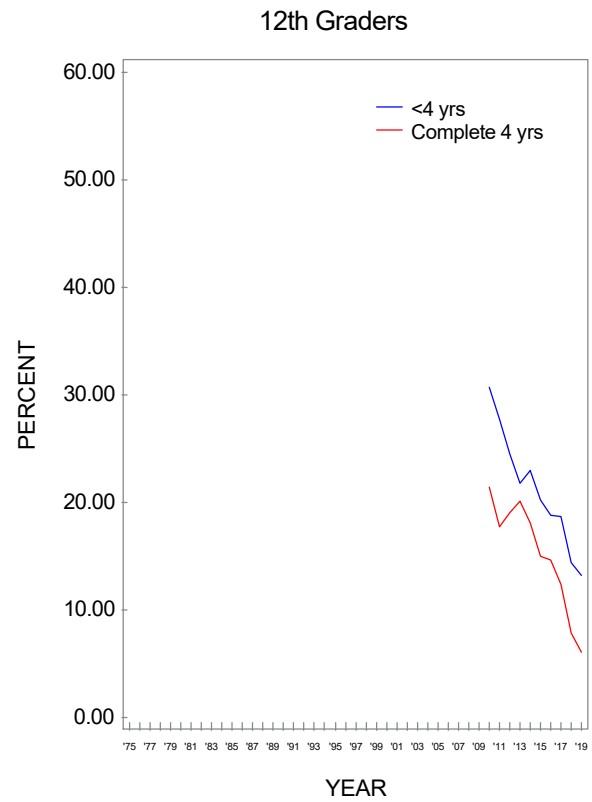
**FIGURE 325**  
**Small Cigars\*: Trends in Annual Prevalence by Gender**



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

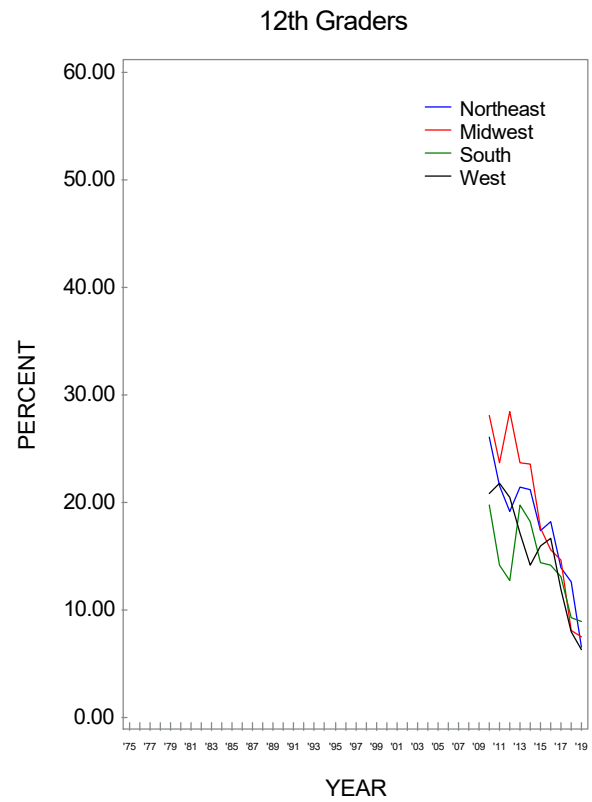
\*Question text is: During the last 12 months, on how many occasions have you smoked small cigars?

**FIGURE 326**  
**Small Cigars: Trends in Annual Prevalence by College Plans**



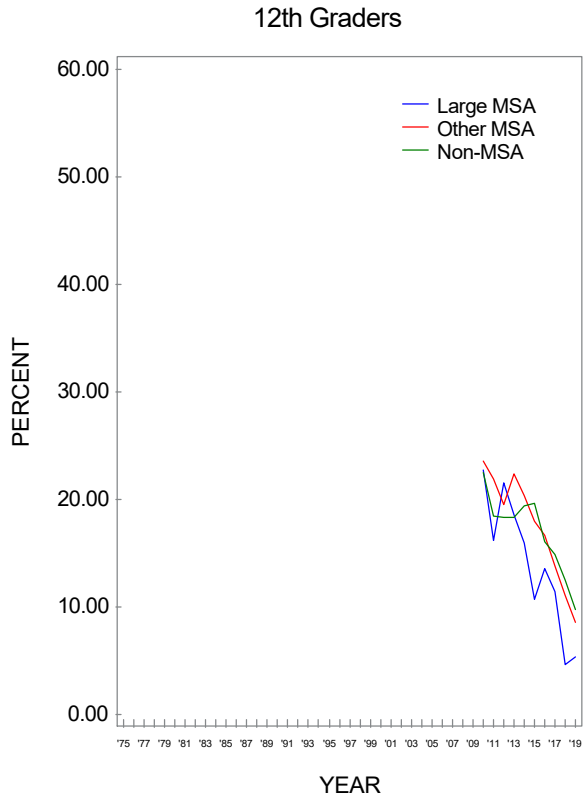
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 327**  
**Small Cigars: Trends in Annual Prevalence by Region**



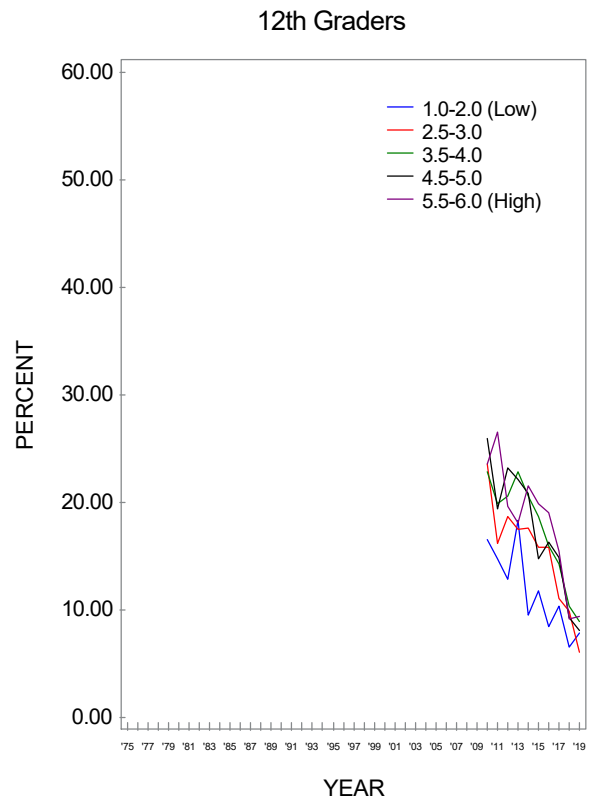
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 328**  
**Small Cigars: Trends in Annual Prevalence by Population Density**



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

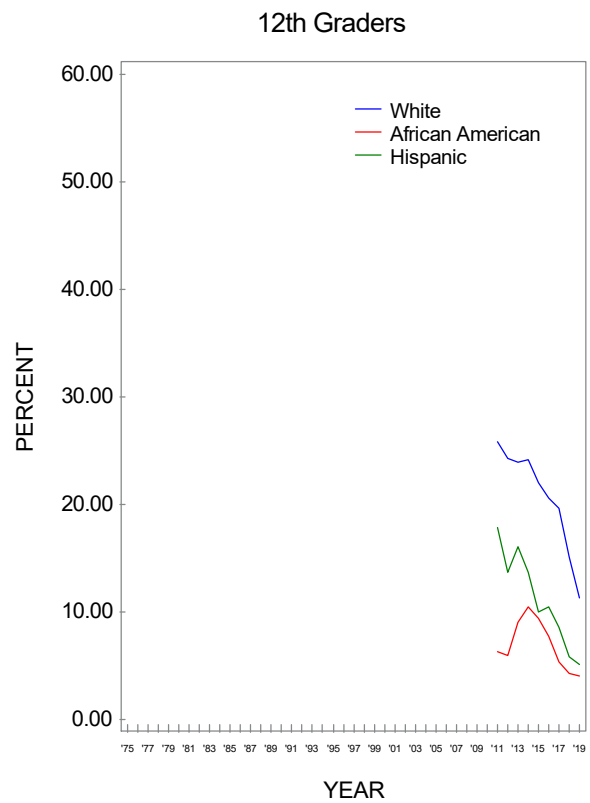
**FIGURE 329**  
**Small Cigars: Trends in Annual Prevalence by Average Education Level of Parents\***



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

\*Parental education is an average score of mother's education and father's education.

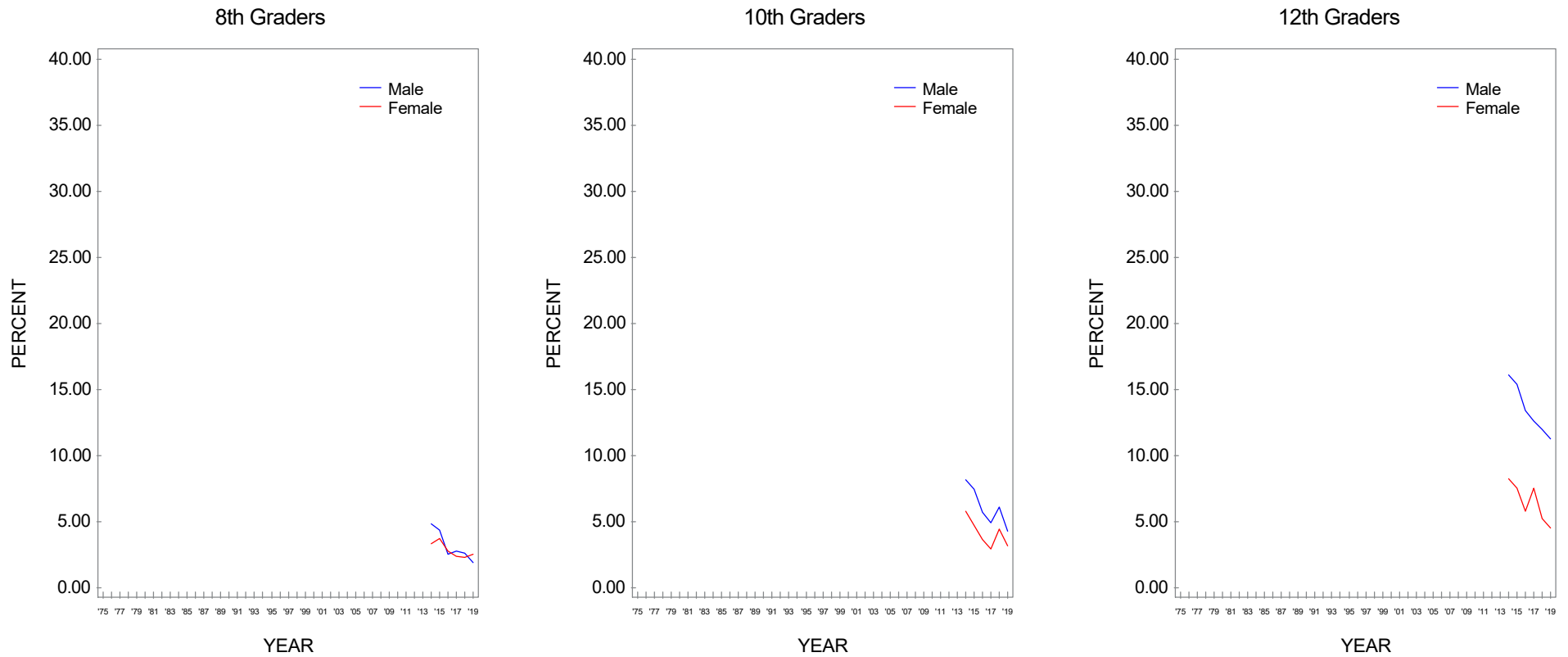
**FIGURE 330**  
**Small Cigars: Trends in Annual Prevalence by Race/Ethnicity\***



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

\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 331**  
**Flavored Little Cigars\*: Trends in 30-Day Prevalence by Gender**

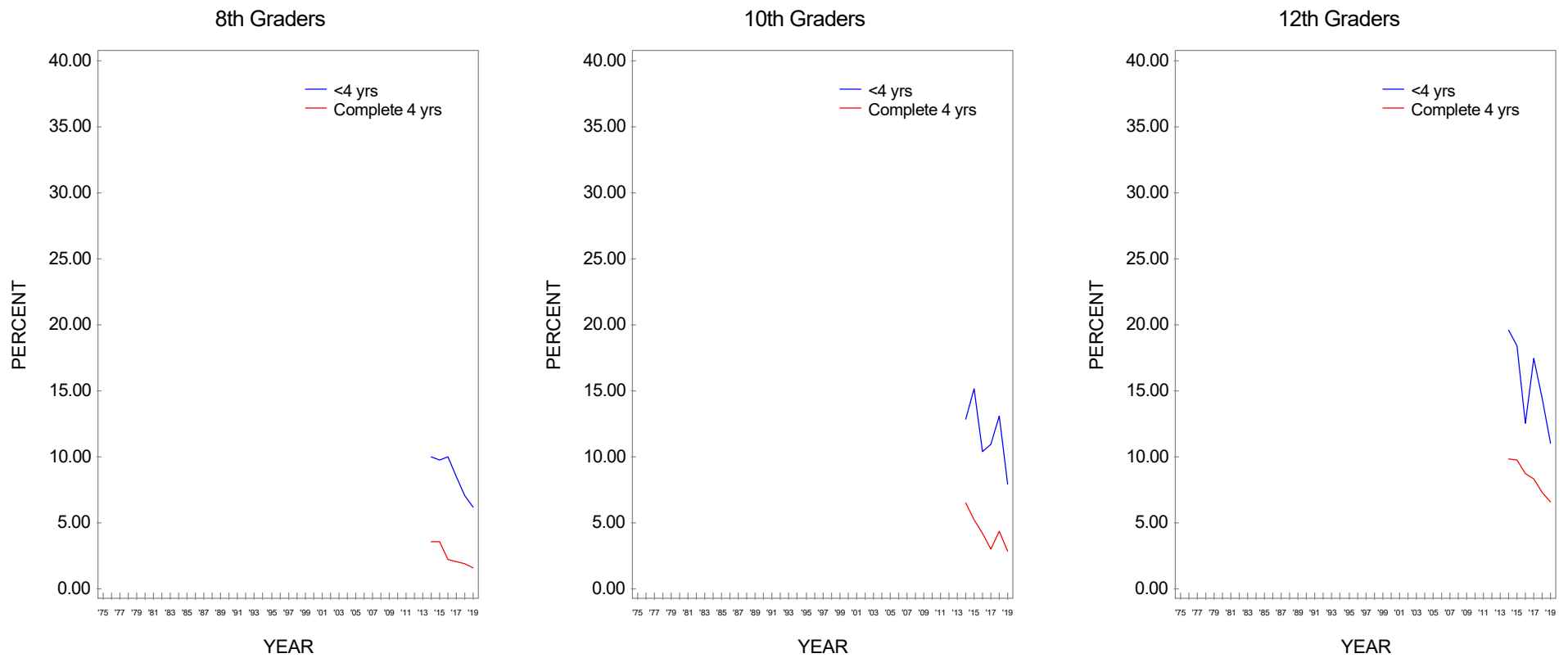


Source. The Monitoring the Future study, the University of Michigan.

\*Question text is: During the last 30 days, on how many days (if any) have you smoked flavored little cigars or cigarillos?

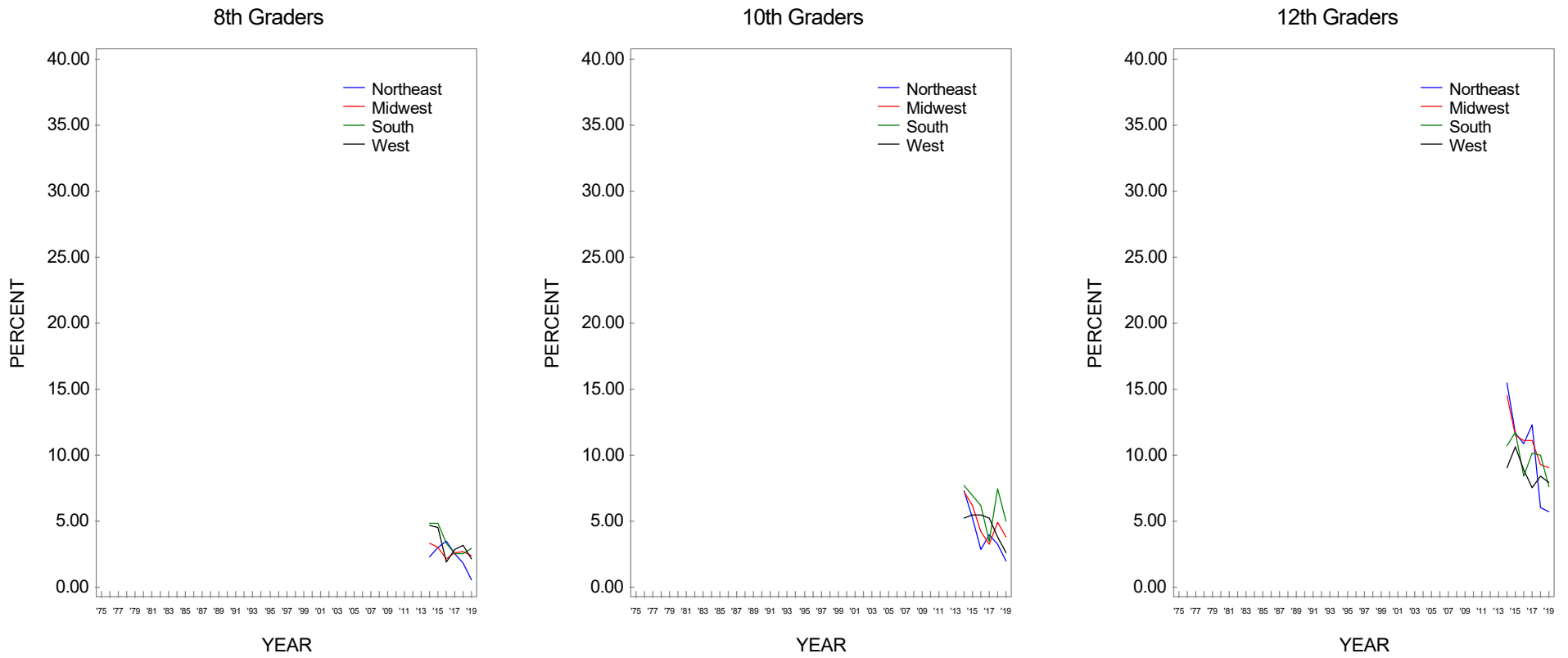


**FIGURE 332**  
**Flavored Little Cigars: Trends in 30-Day Prevalence by College Plans**



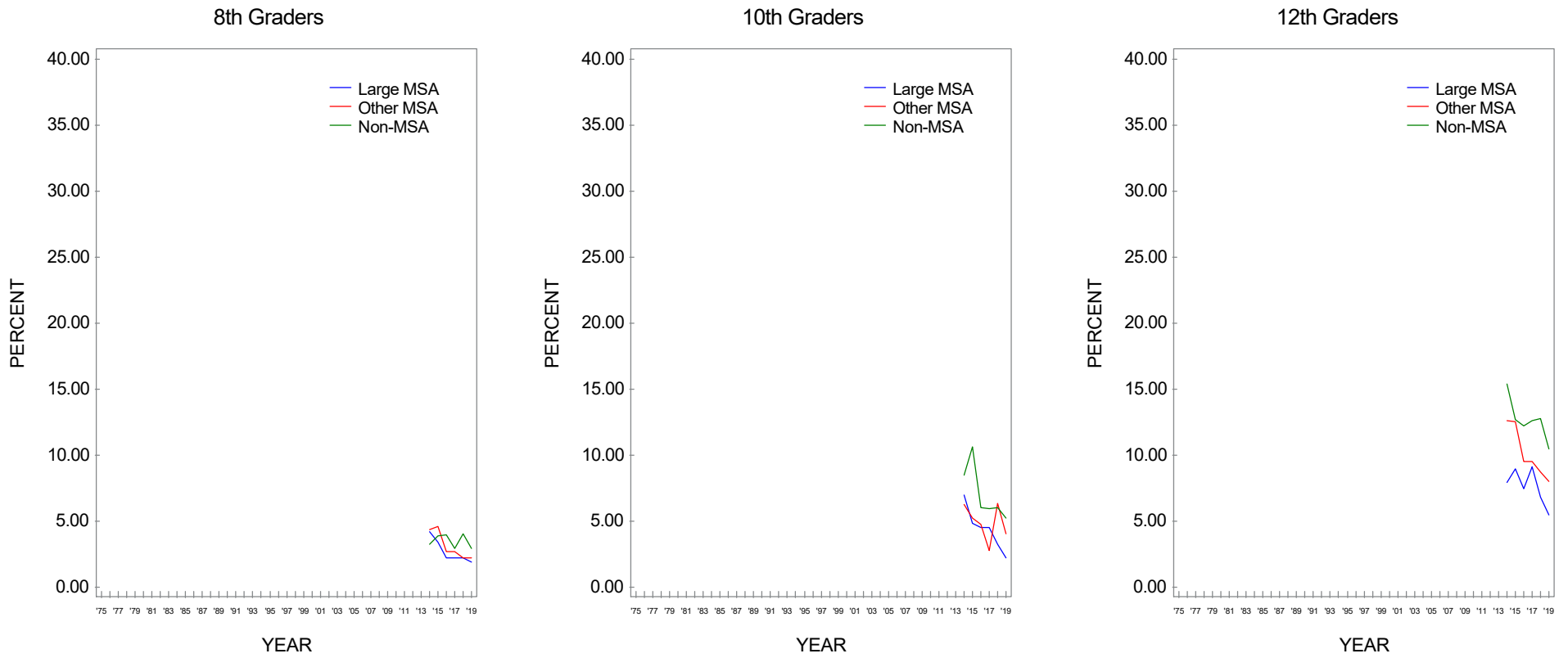
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 333**  
**Flavored Little Cigars: Trends in 30-Day Prevalence by Region**



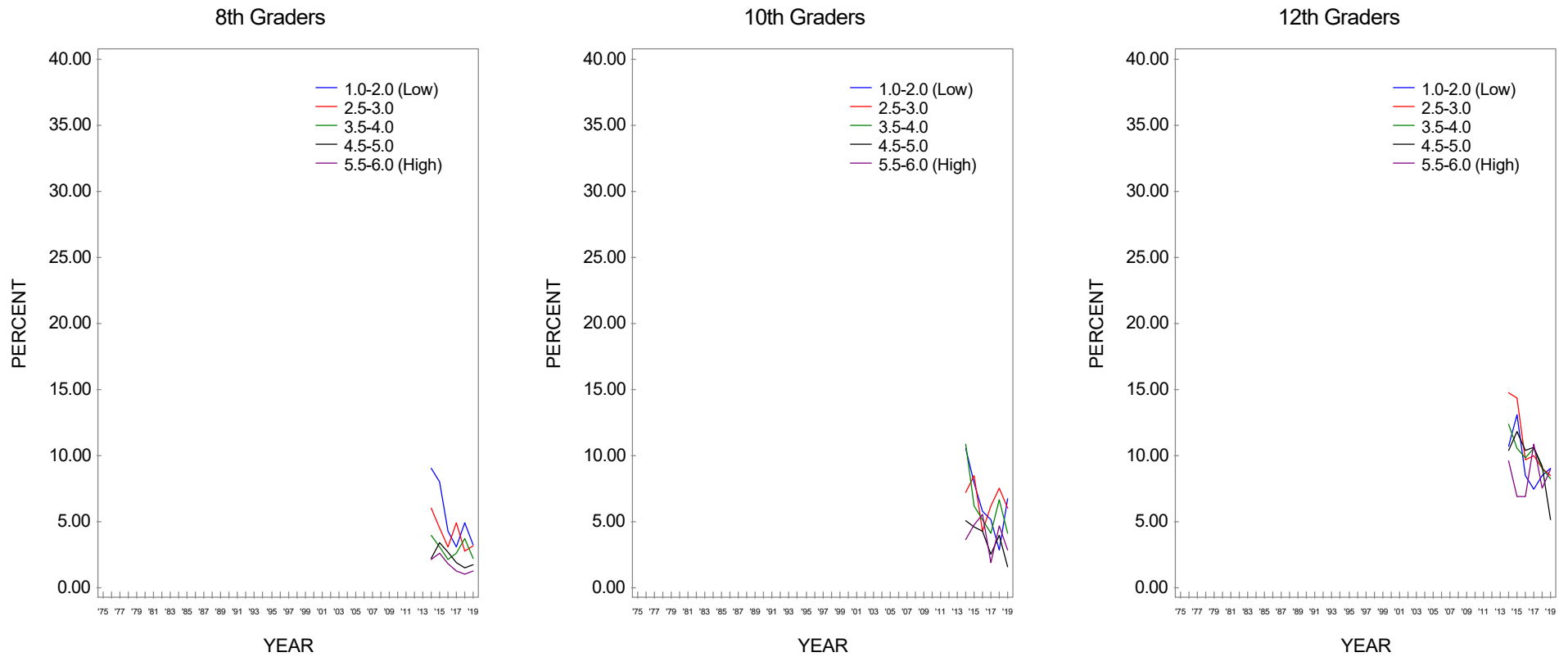
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 334**  
**Flavored Little Cigars: Trends in 30-Day Prevalence by Population Density**



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

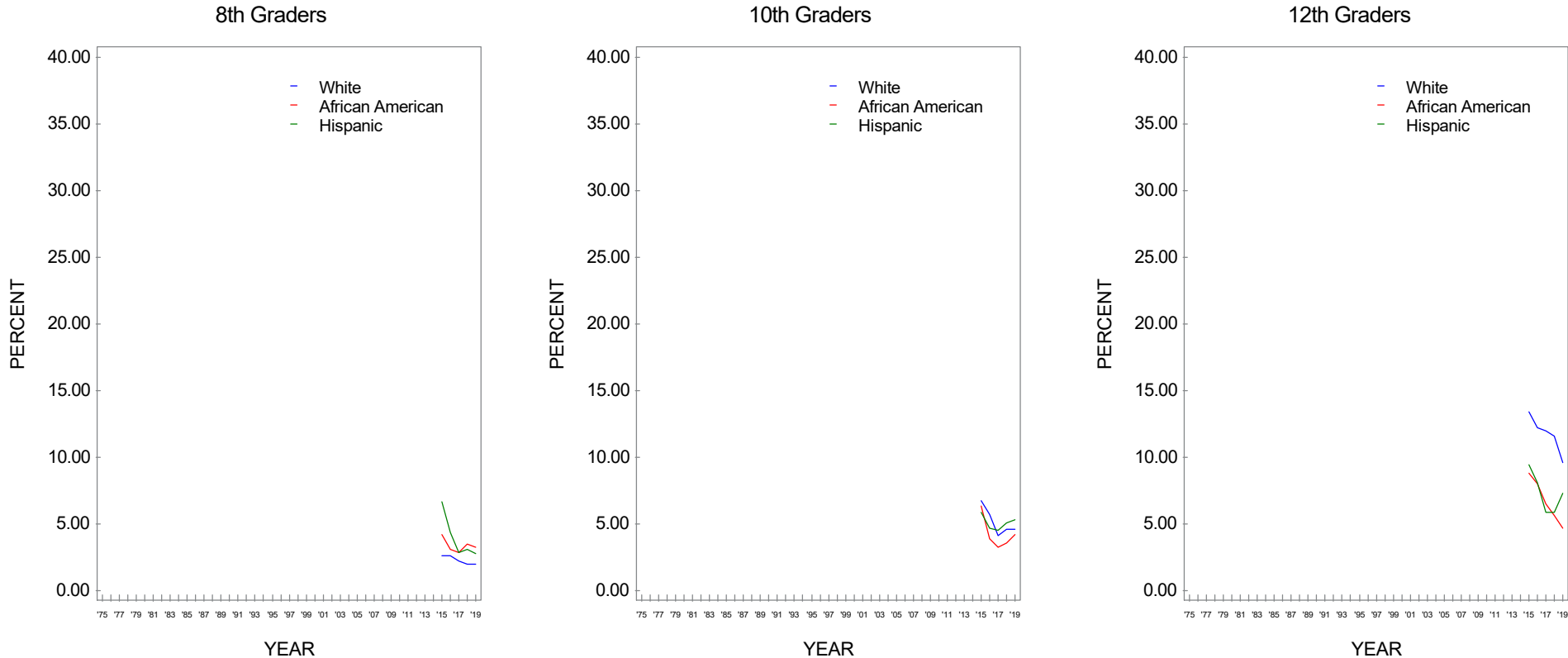
**FIGURE 335**  
**Flavored Little Cigars: Trends in 30-Day Prevalence by Average Education Level of Parents\***



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

\*Parental education is an average score of mother's education and father's education.

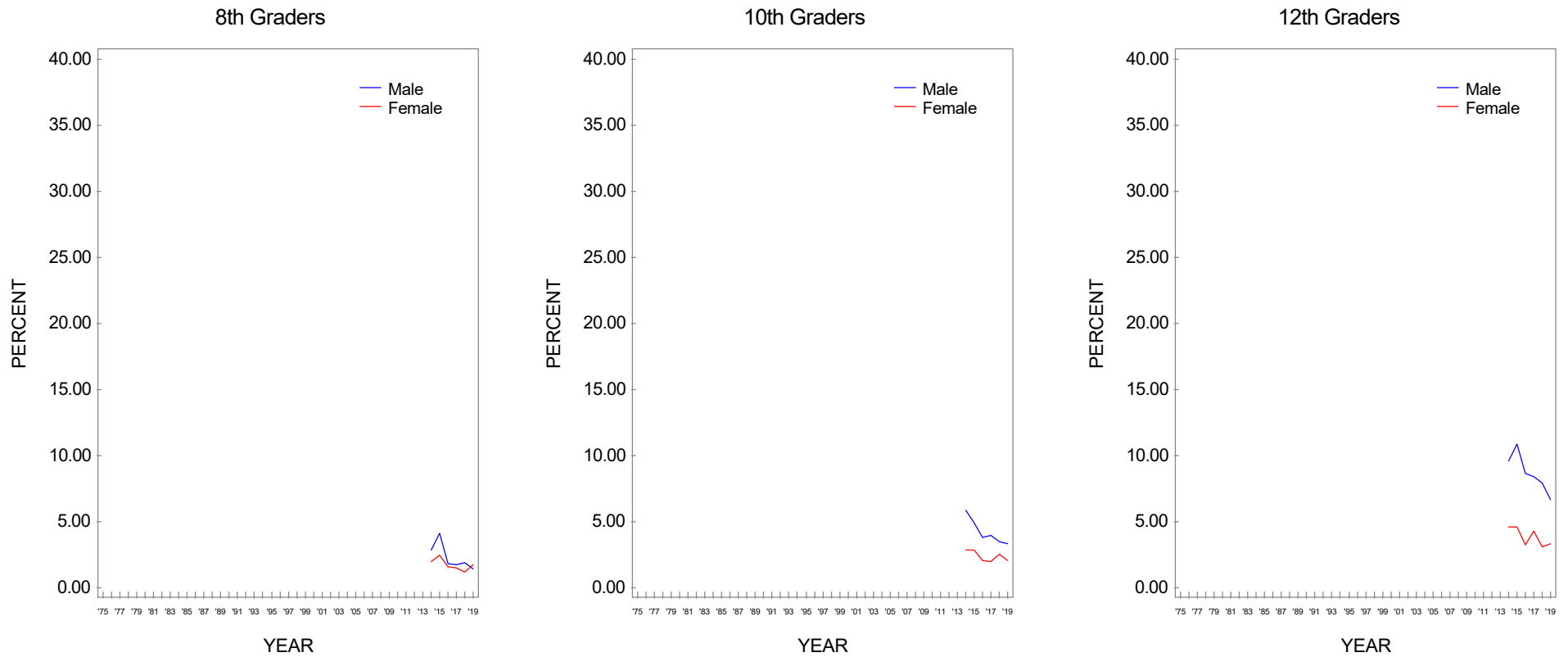
**FIGURE 336**  
**Flavored Little Cigars: Trends in 30-Day Prevalence by Race/Ethnicity\***



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

\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

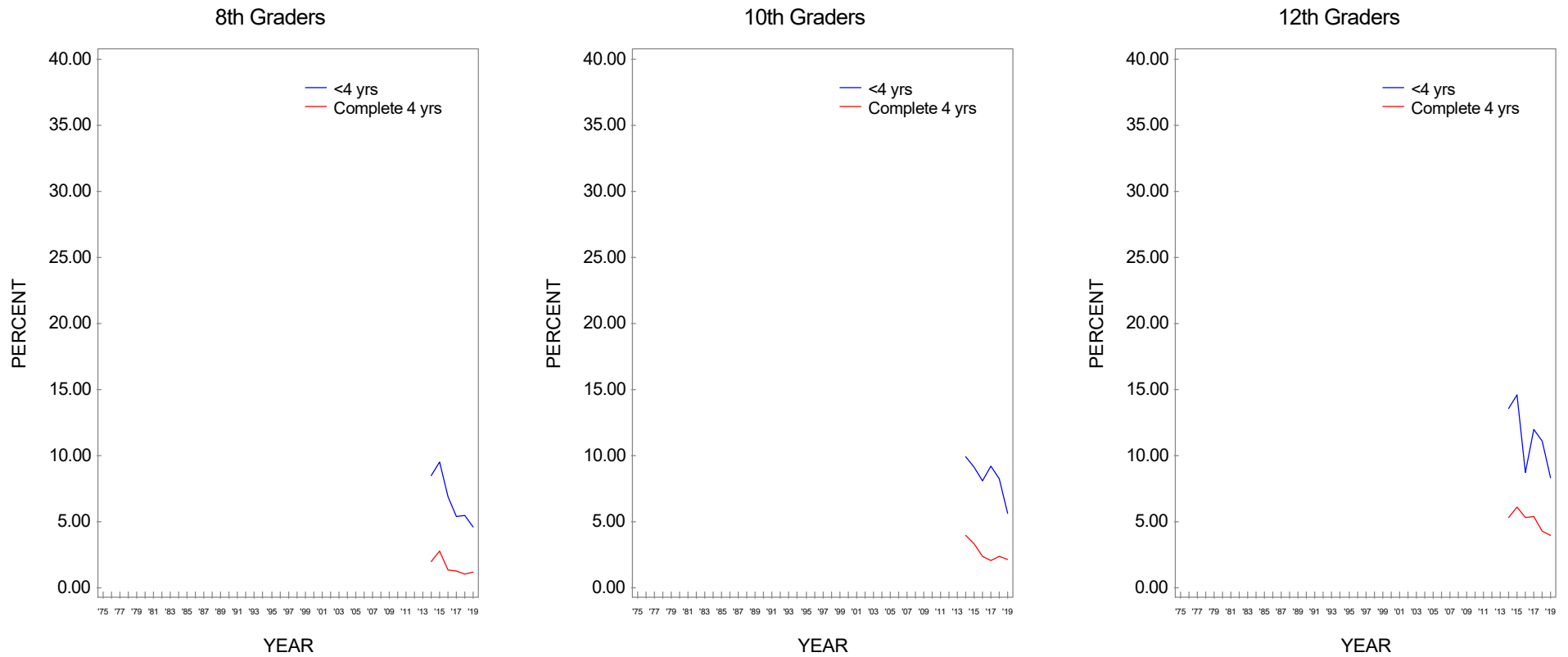
**FIGURE 337**  
**Regular Little Cigars\*: Trends in 30-Day Prevalence by Gender**



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

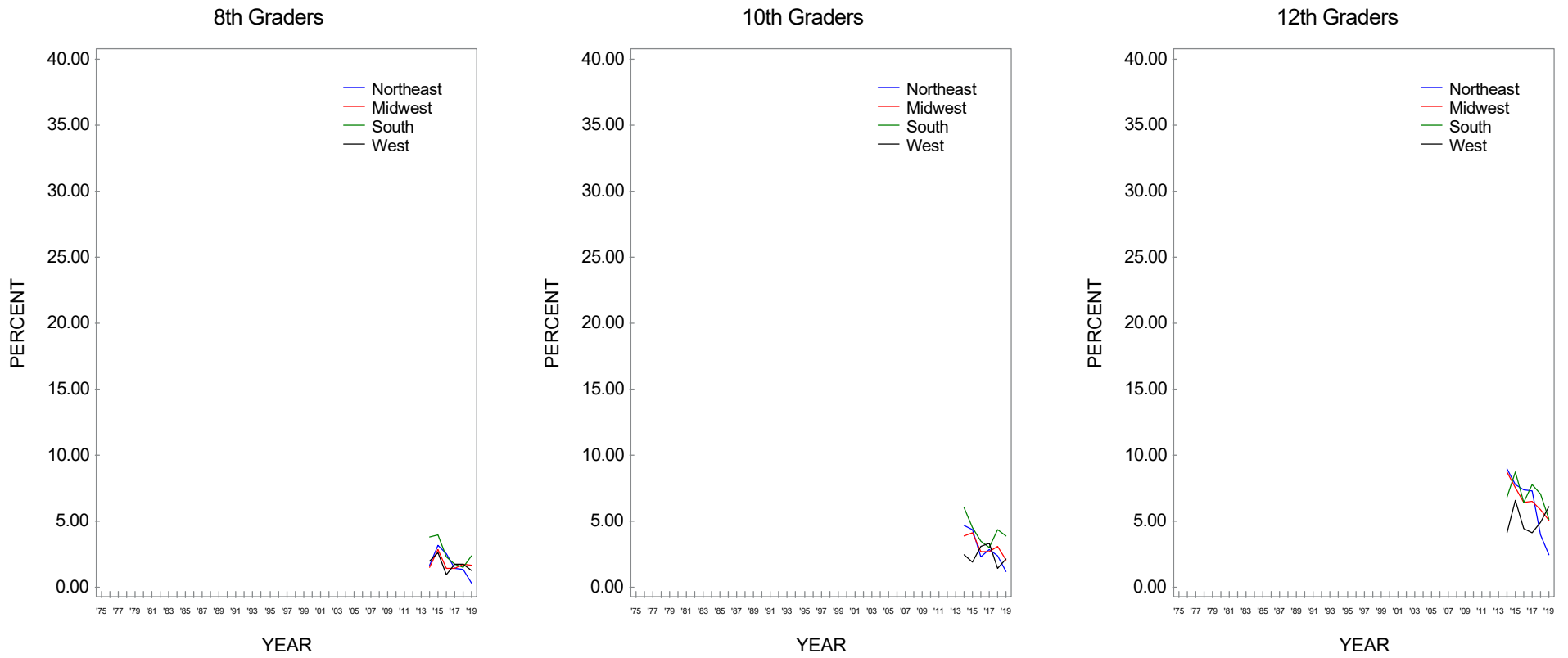
\*Question text is: During the last 30 days, on how many days (if any) have you smoked regular little cigars or cigarillos?

**FIGURE 338**  
**Regular Little Cigars: Trends in 30-Day Prevalence by College Plans**



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

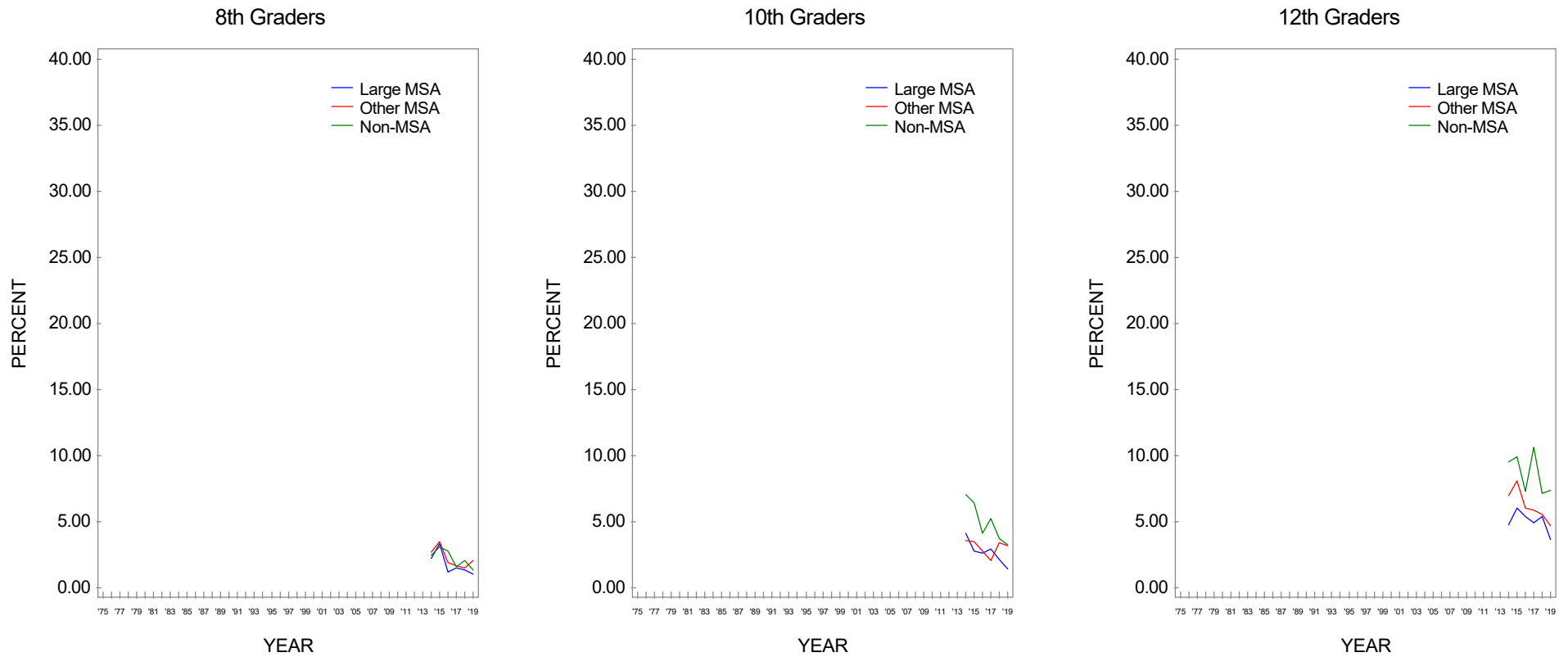
**FIGURE 339**  
**Regular Little Cigars: Trends in 30-Day Prevalence by Region**



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

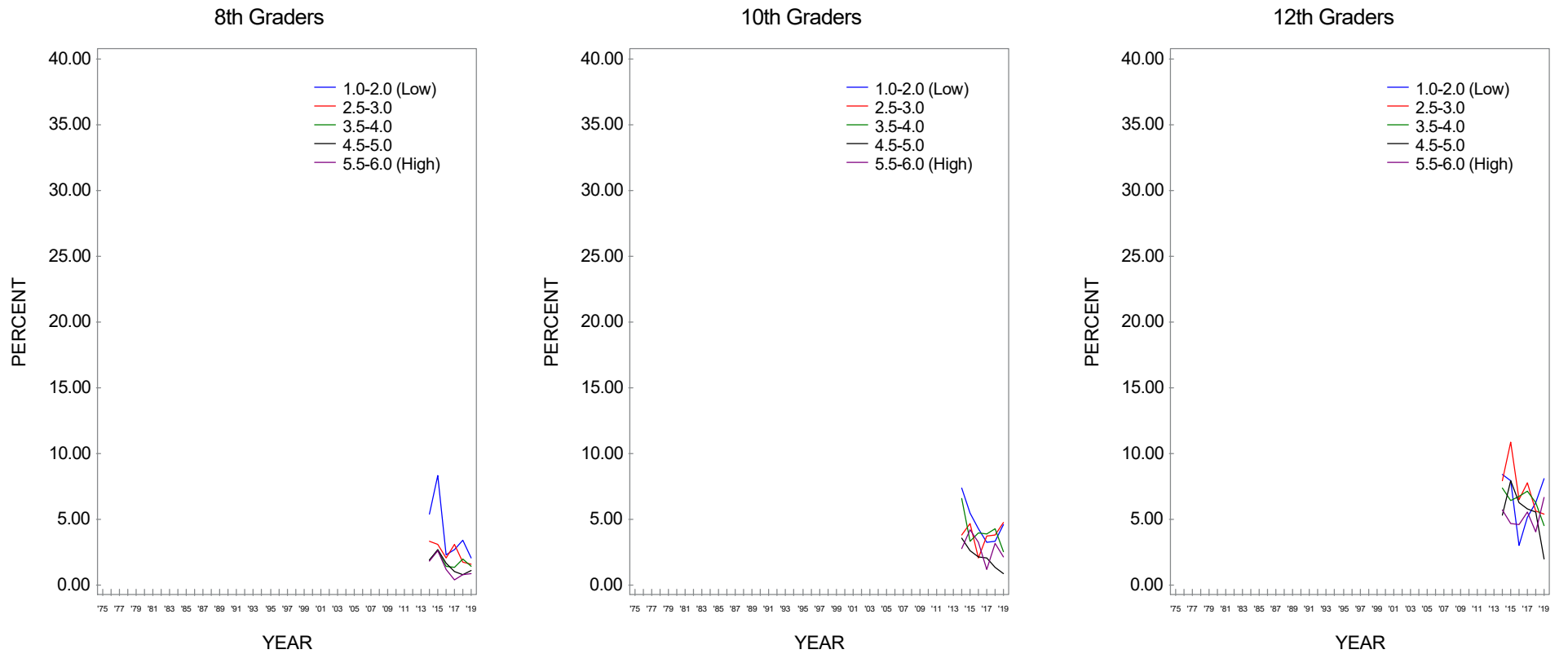


**FIGURE 340**  
**Regular Little Cigars: Trends in 30-Day Prevalence by Population Density**



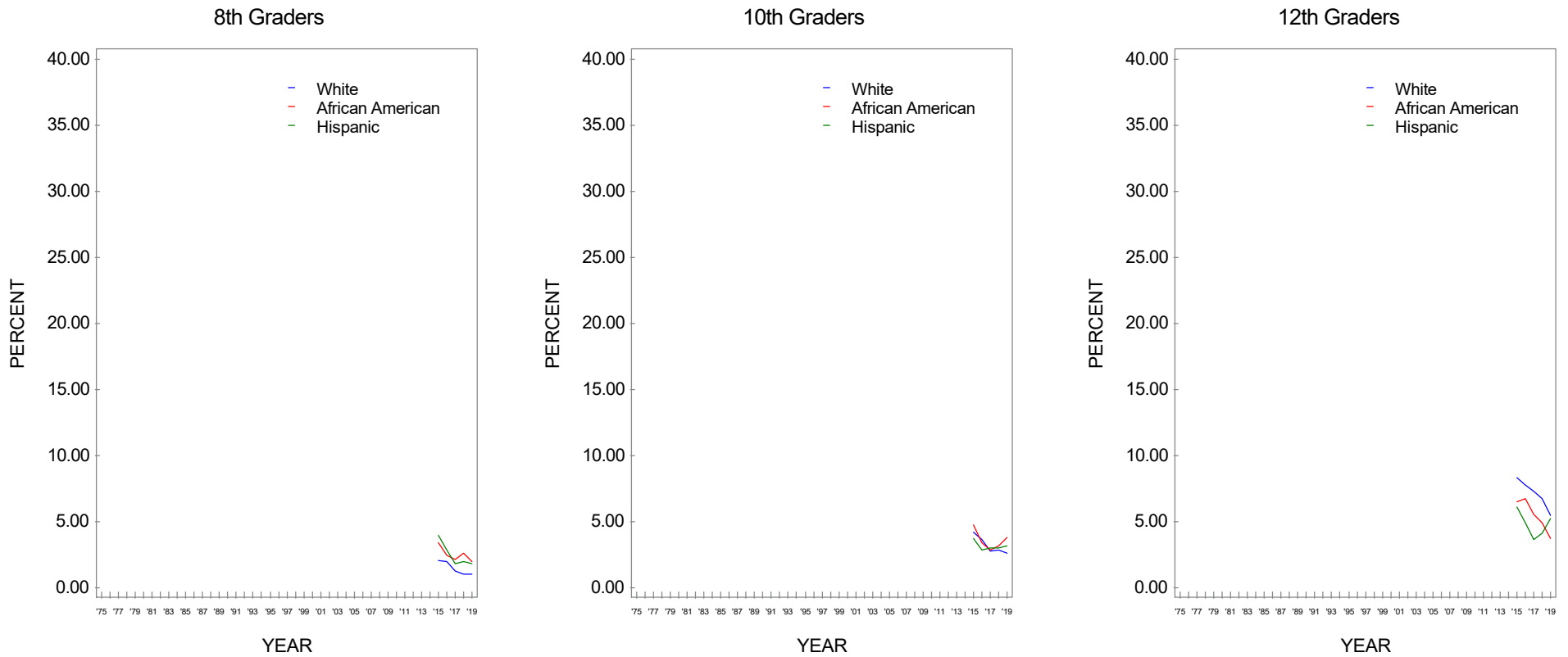
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 341**  
**Regular Little Cigars: Trends in 30-Day Prevalence by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*Parental education is an average score of mother's education and father's education.

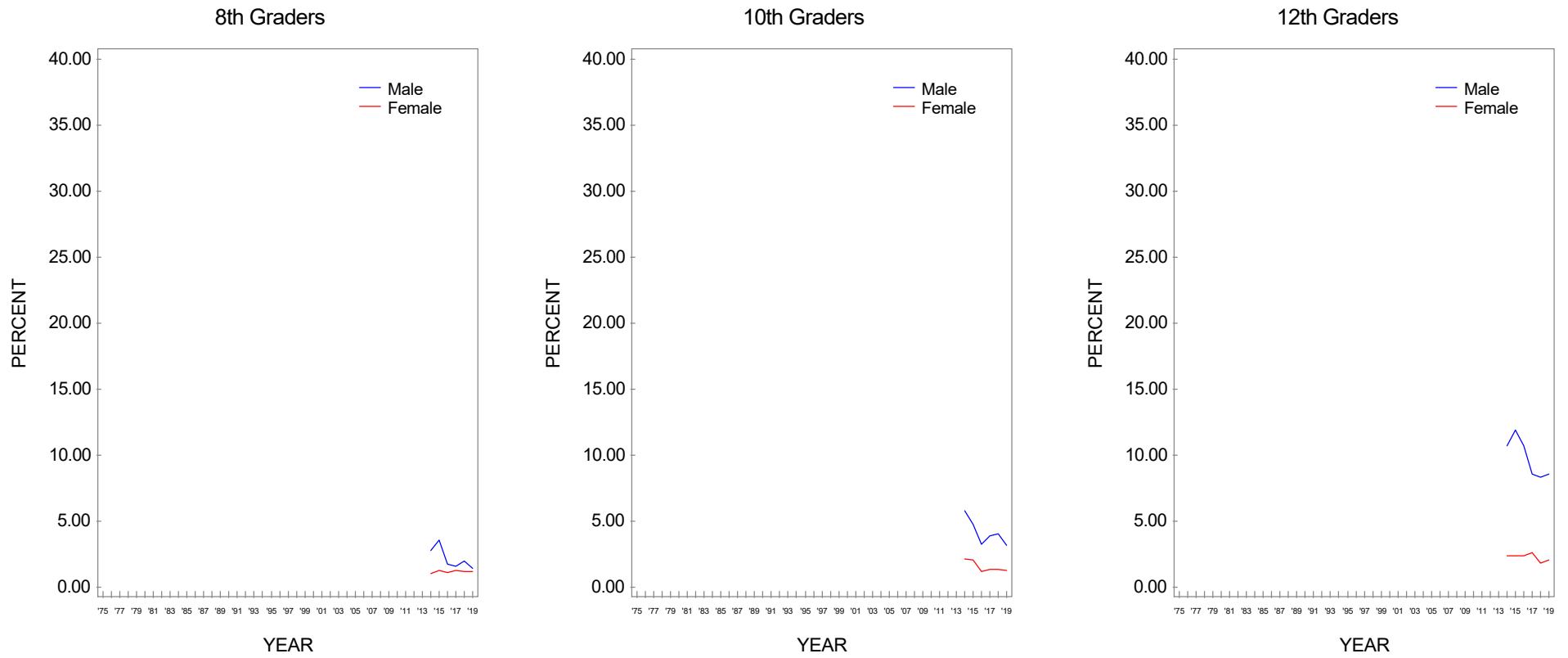
**FIGURE 342**  
**Regular Little Cigars: Trends in 30-Day Prevalence by Race/Ethnicity\***



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

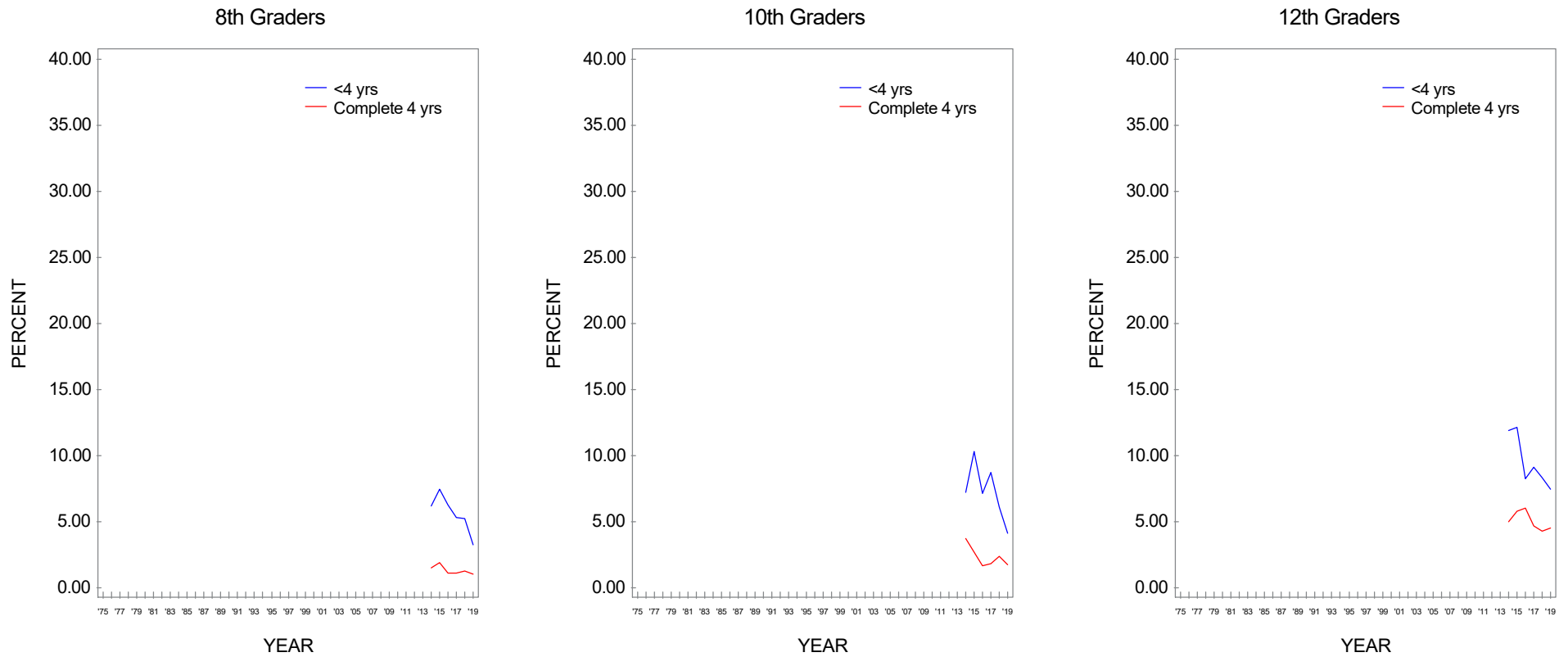
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 343**  
**Large Cigars: Trends in 30-Day Prevalence by Gender**



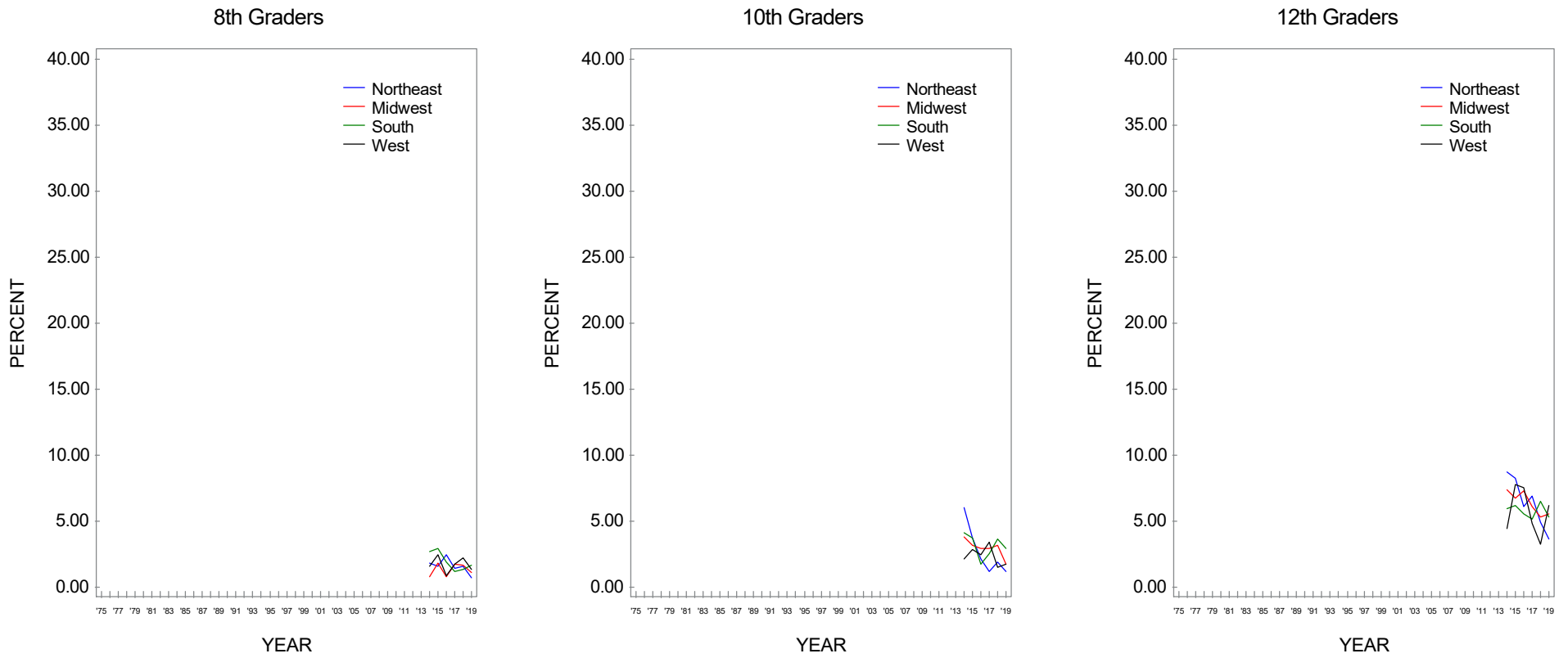
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 344**  
**Large Cigars: Trends in 30-Day Prevalence by College Plans**



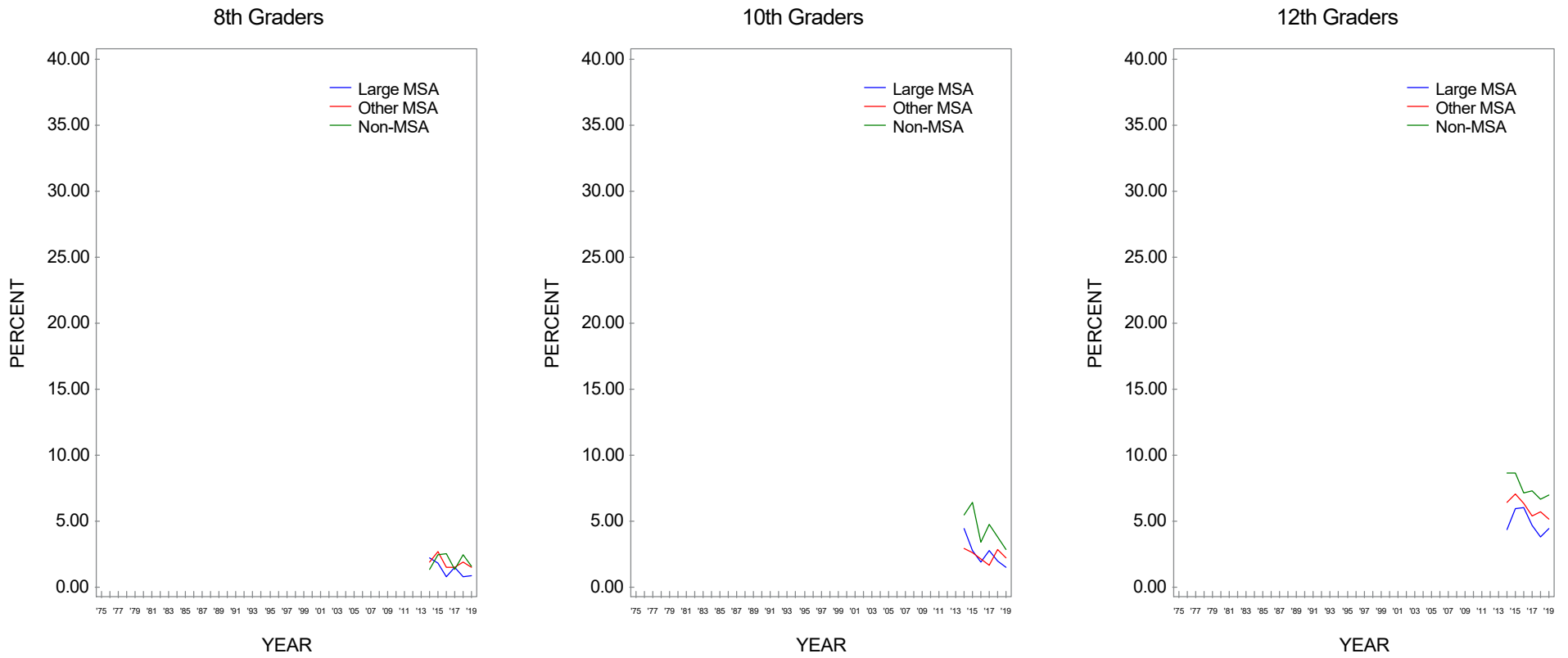
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 345**  
**Large Cigars: Trends in 30-Day Prevalence by Region**



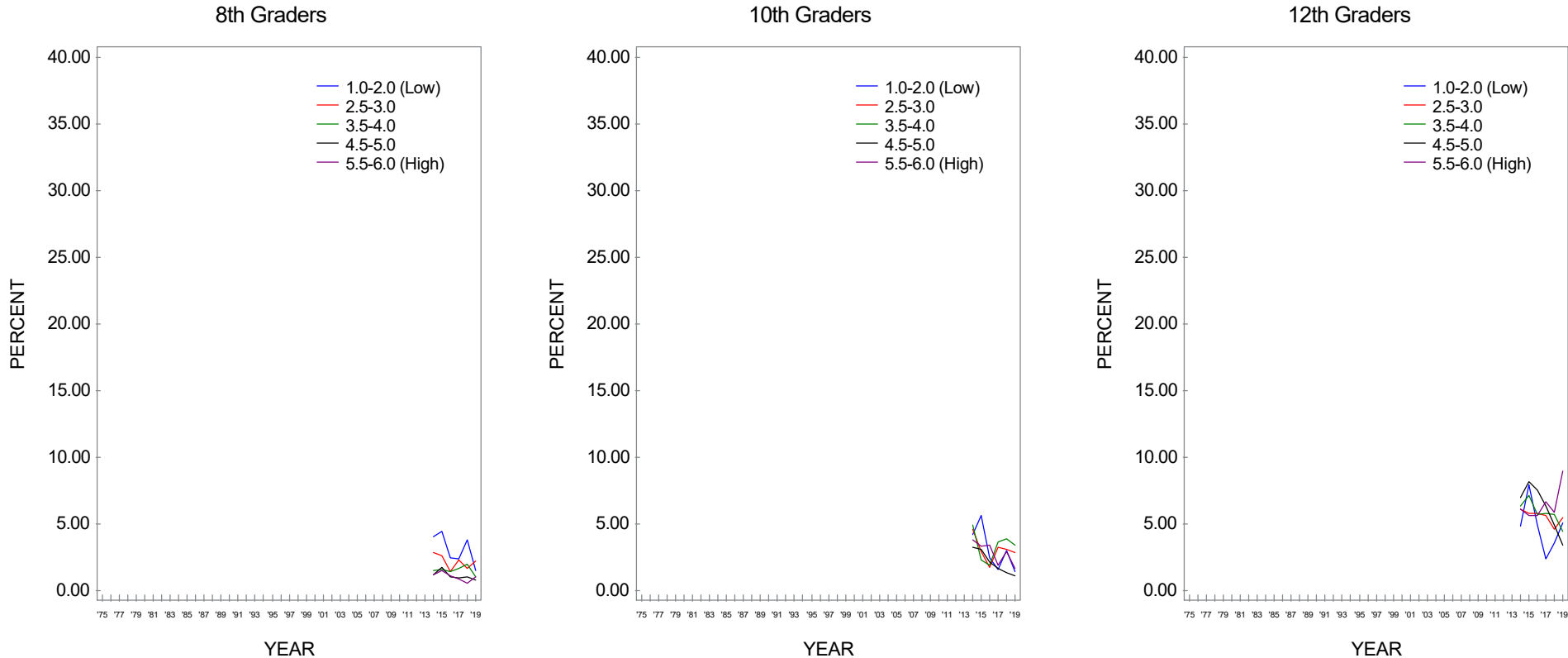
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 346**  
**Large Cigars: Trends in 30-Day Prevalence by Population Density**



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

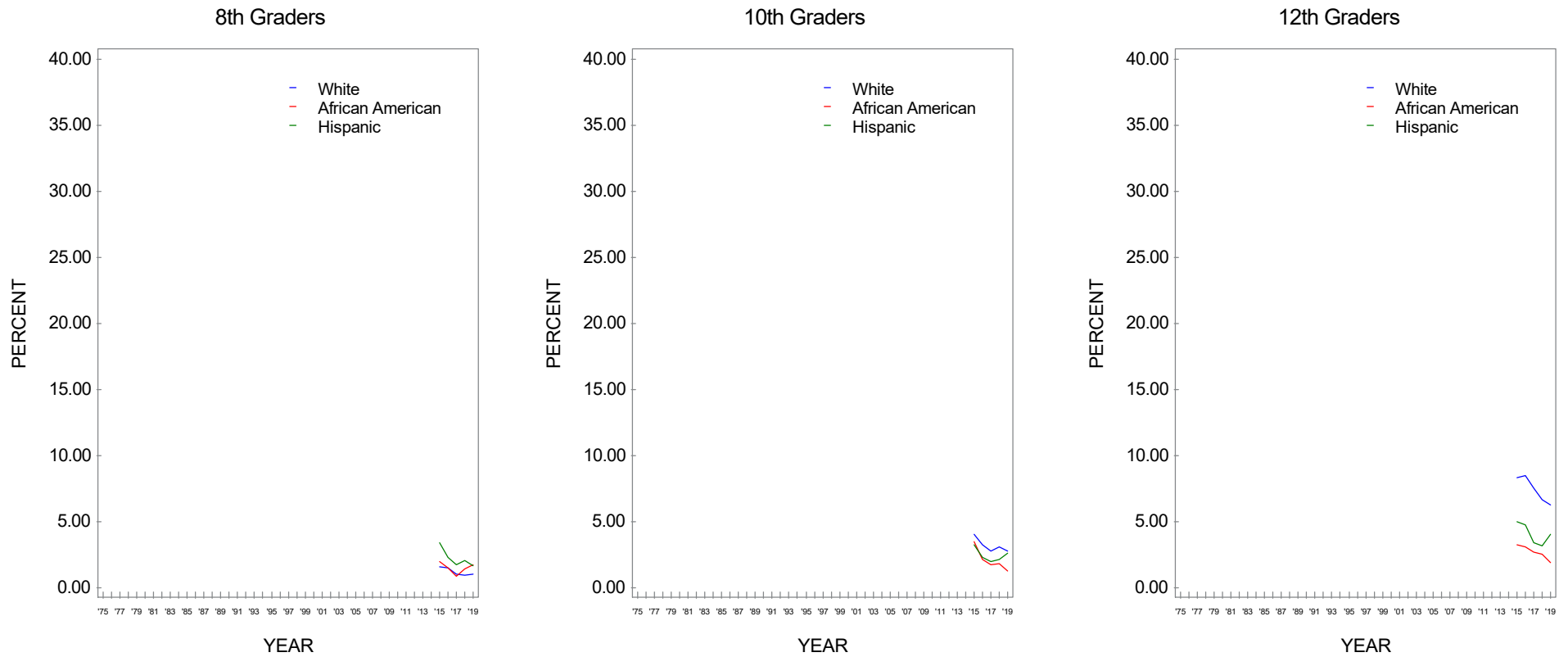
**FIGURE 347**  
**Large Cigars: Trends in 30-Day Prevalence by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*Parental education is an average score of mother's education and father's education.



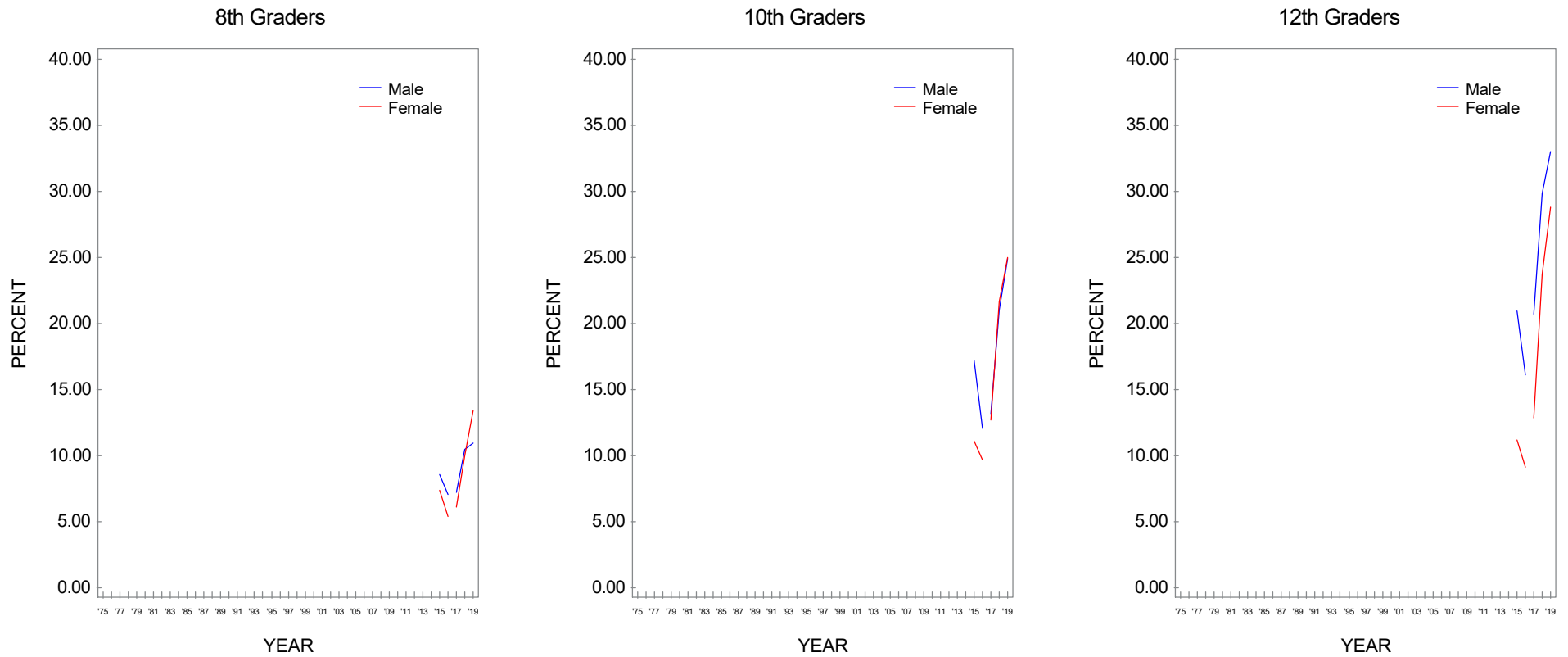
**FIGURE 348**  
**Large Cigars: Trends in 30-Day Prevalence by Race/Ethnicity\***



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

\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

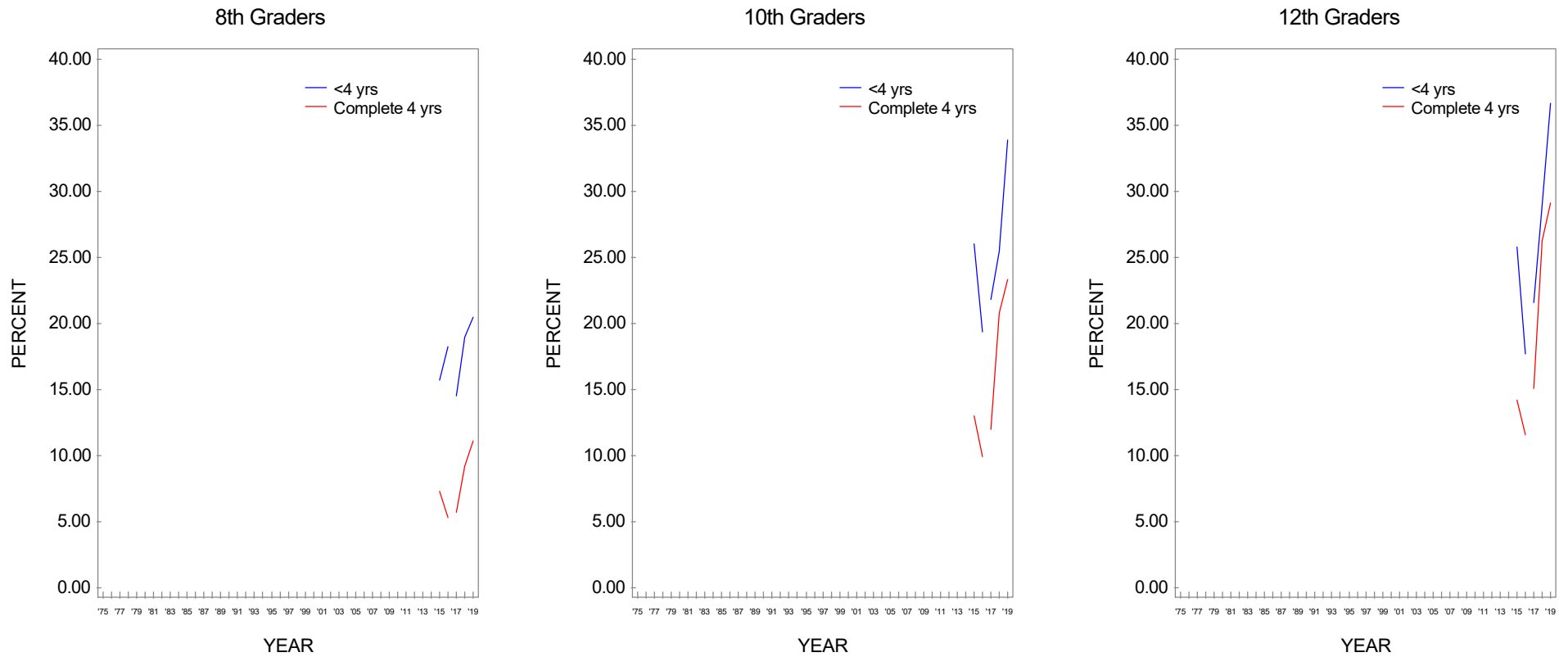
**FIGURE 349**  
**Any Vaping\*: Trends in 30-Day Prevalence by Gender**



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

\*In 2017, the surveys switched from asking about vaping in general to asking separately about vaping nicotine, marijuana, and vaping just flavoring. Beginning in 2017, data presented are based on these new questions showing vaping of any of those substances.

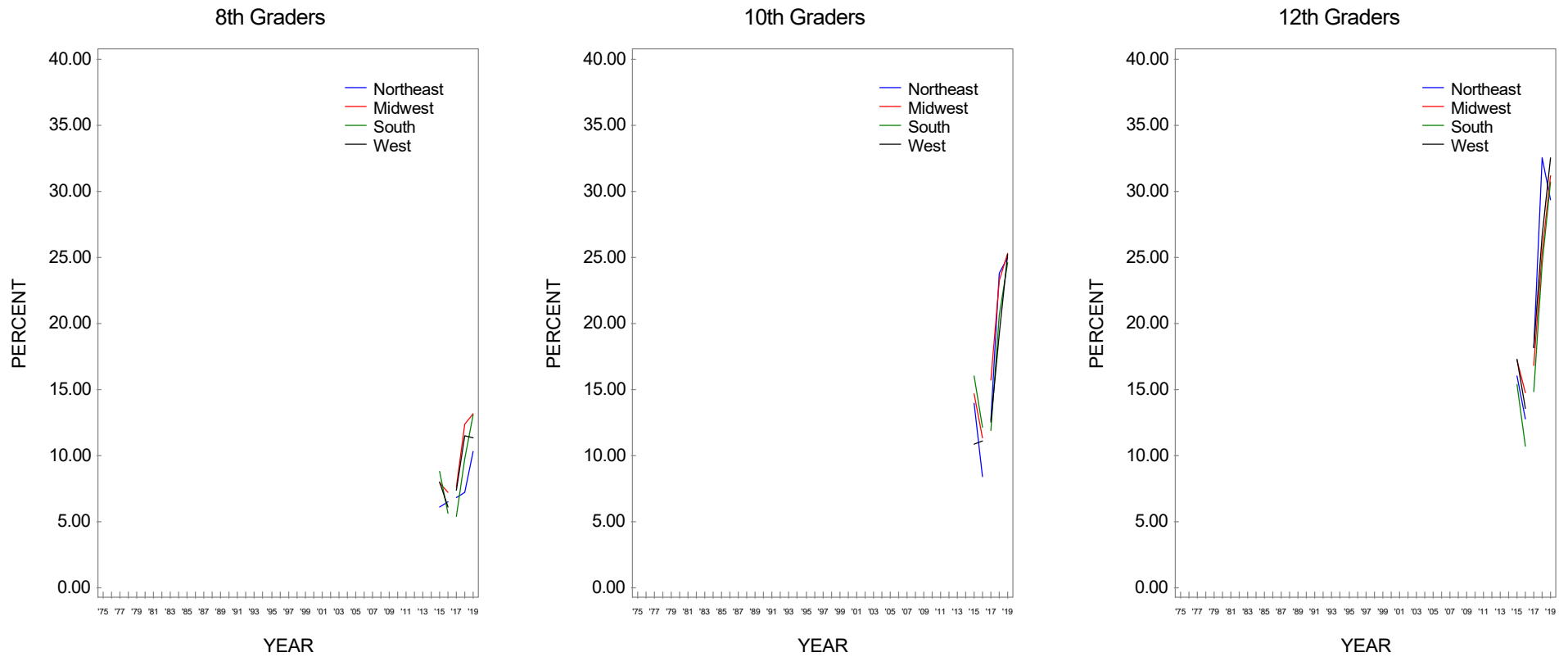
**FIGURE 350**  
**Any Vaping\*: Trends in 30-Day Prevalence by College Plans**



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

\*In 2017, the surveys switched from asking about vaping in general to asking separately about vaping nicotine, marijuana, and vaping just flavoring. Beginning in 2017, data presented are based on these new questions showing vaping of any of those substances.

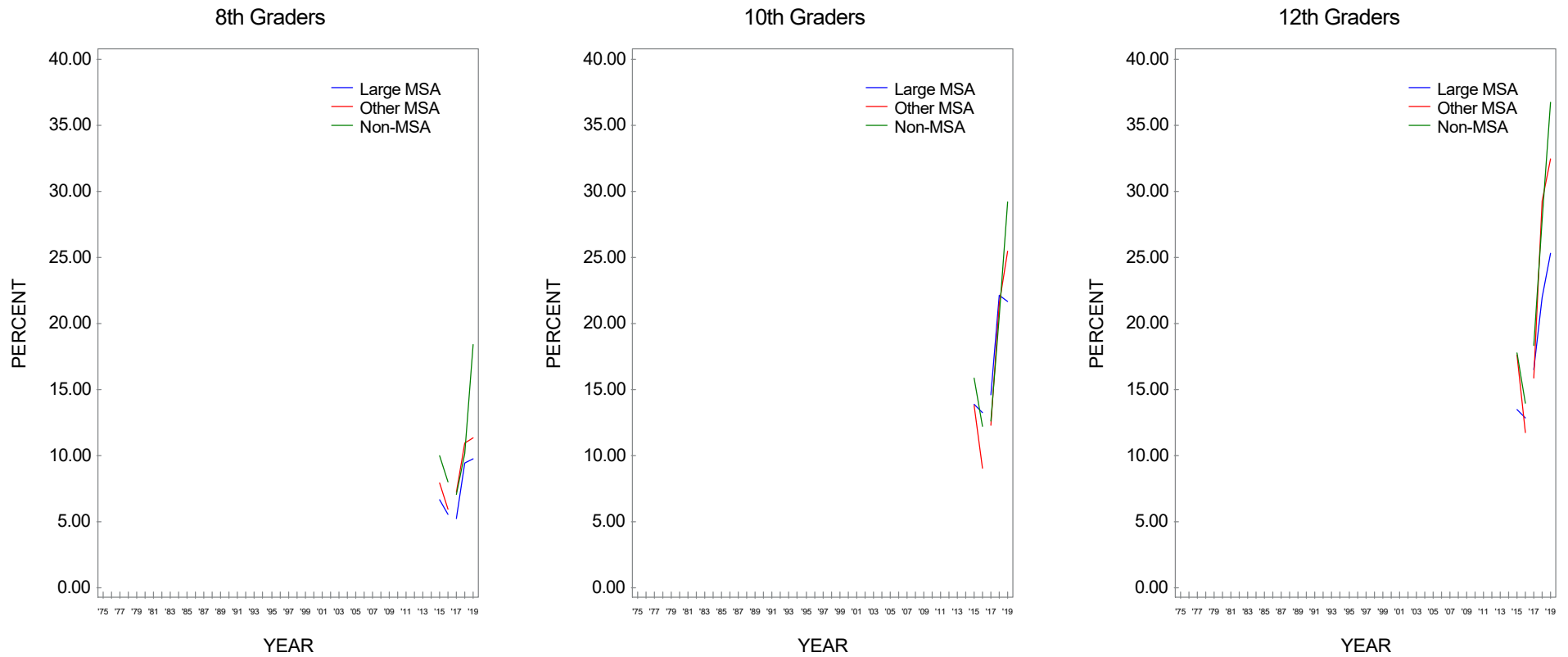
**FIGURE 351**  
**Any Vaping\*: Trends in 30-Day Prevalence by Region**



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

\*In 2017, the surveys switched from asking about vaping in general to asking separately about vaping nicotine, marijuana, and vaping just flavoring. Beginning in 2017, data presented are based on these new questions showing vaping of any of those substances.

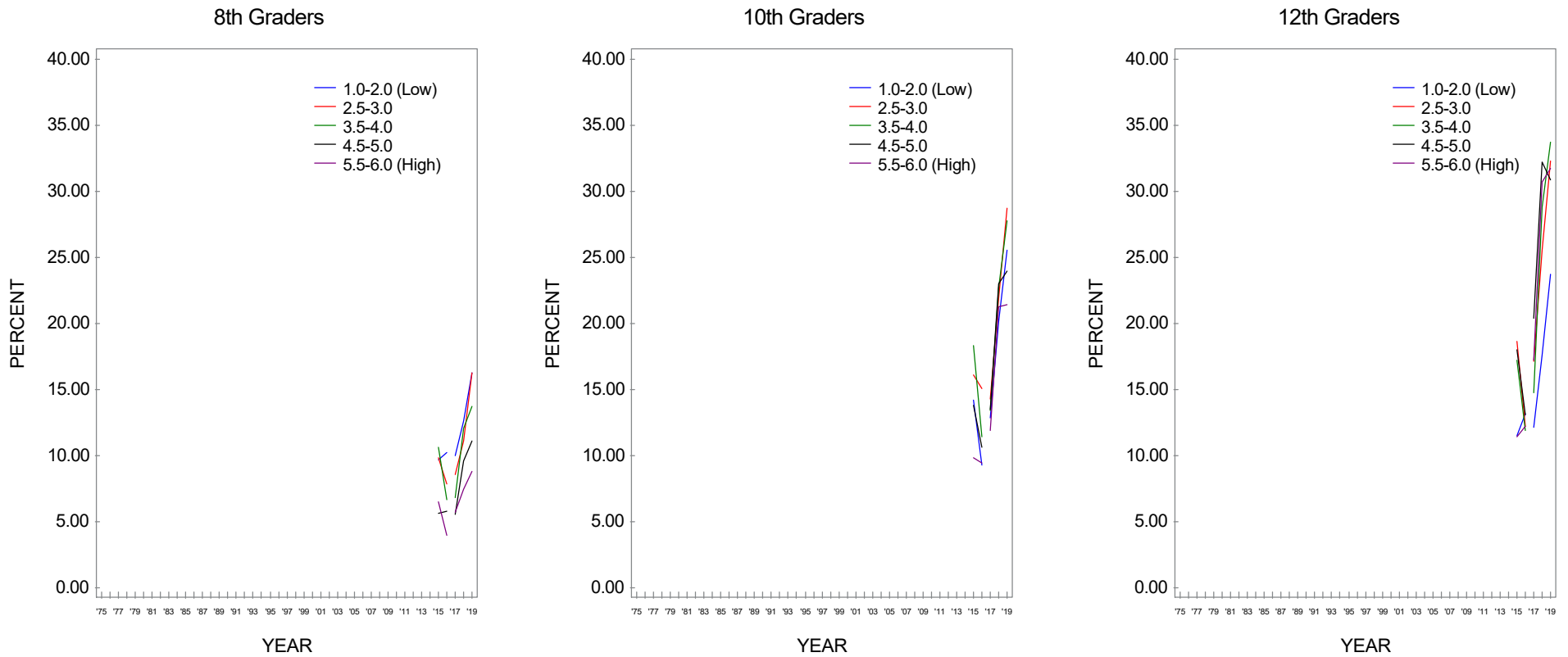
**FIGURE 352**  
**Any Vaping\*: Trends in 30-Day Prevalence by Population Density**



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

\*In 2017, the surveys switched from asking about vaping in general to asking separately about vaping nicotine, marijuana, and vaping just flavoring. Beginning in 2017, data presented are based on these new questions showing vaping of any of those substances.

**FIGURE 353**  
**Any Vaping\*: Trends in 30-Day Prevalence by Average Education Level of Parents\*\***

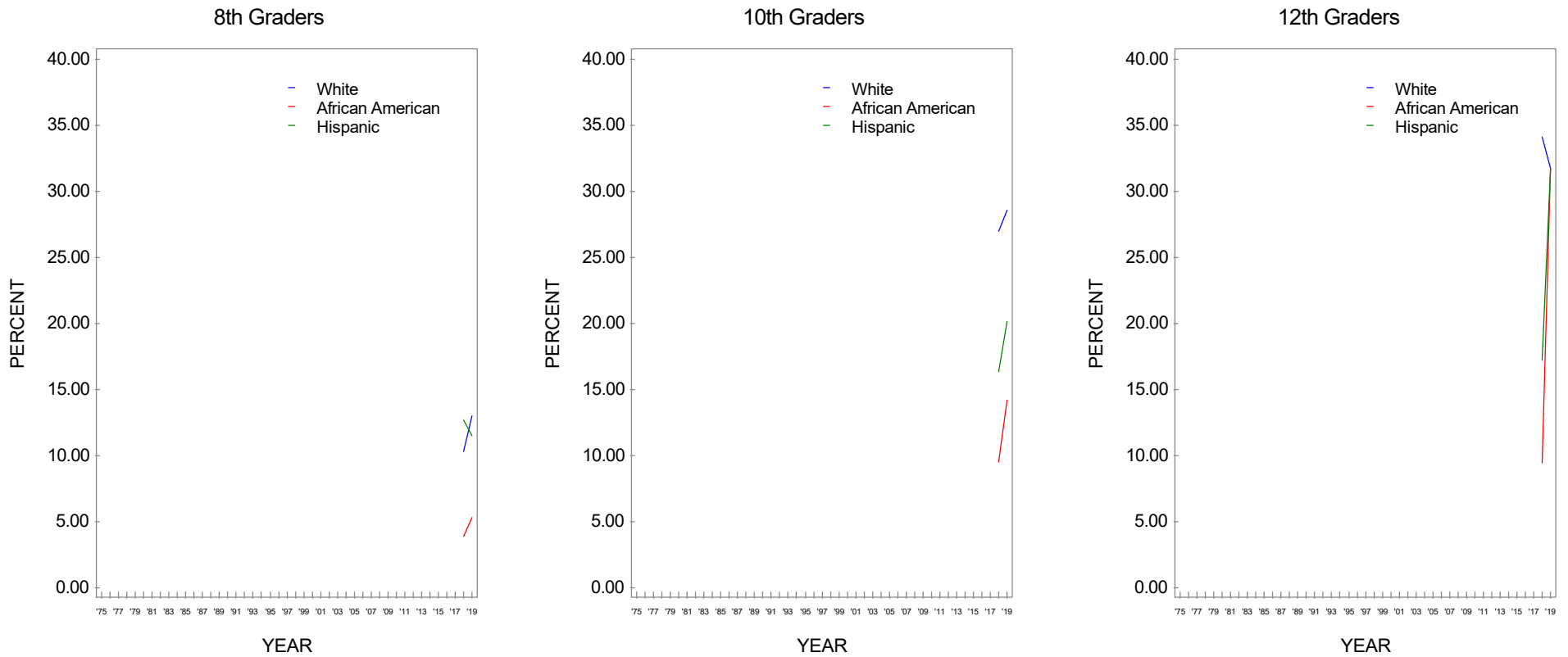


Source. The Monitoring the Future study, the University of Michigan.

\*In 2017, the surveys switched from asking about vaping in general to asking separately about vaping nicotine, marijuana, and vaping just flavoring. Beginning in 2017, data presented are based on these new questions showing vaping of any of those substances.

\*\*Parental education is an average score of mother's education and father's education.

**FIGURE 354**  
**Any Vaping\*: Trends in 30-Day Prevalence by Race/Ethnicity\*\***

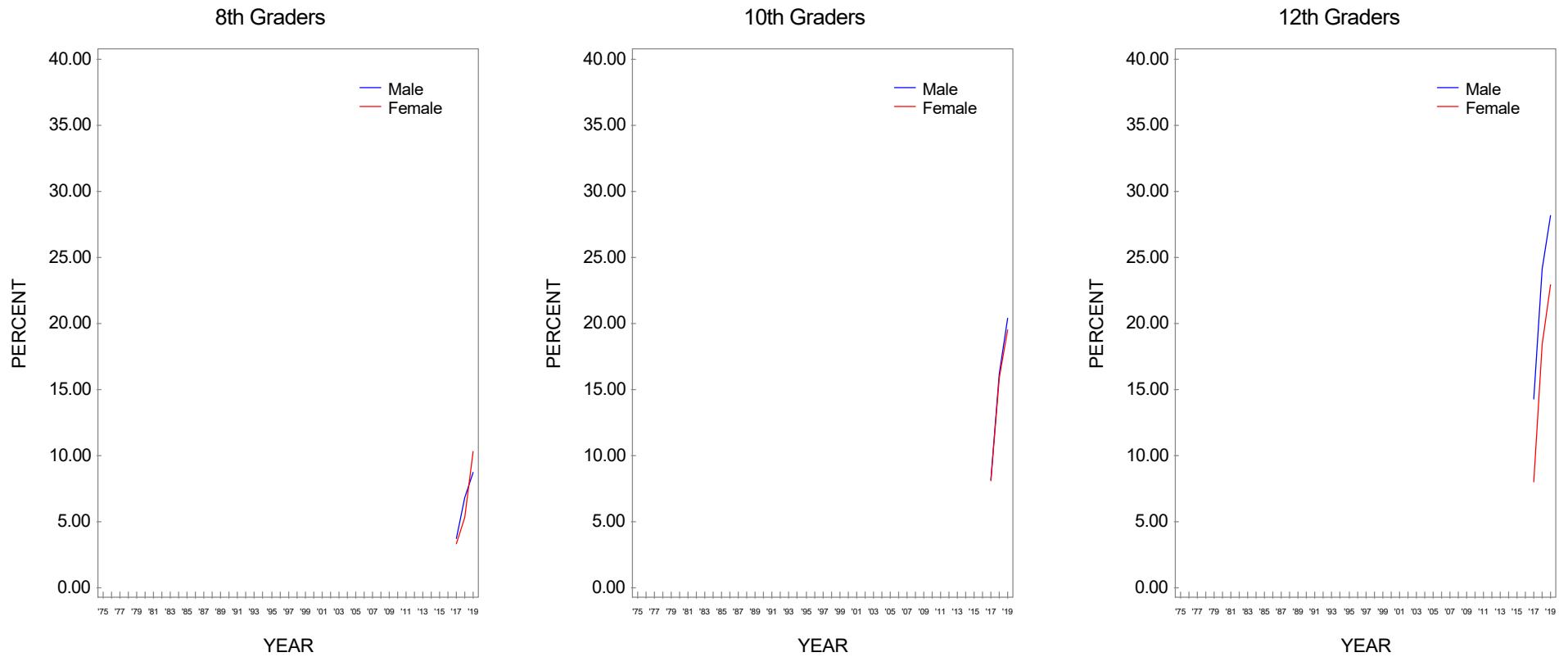


Source. The Monitoring the Future study, the University of Michigan.

\*In 2017, the surveys switched from asking about vaping in general to asking separately about vaping nicotine, marijuana, and vaping just flavoring. Beginning in 2017, data presented are based on these new questions showing vaping of any of those substances.

\*\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

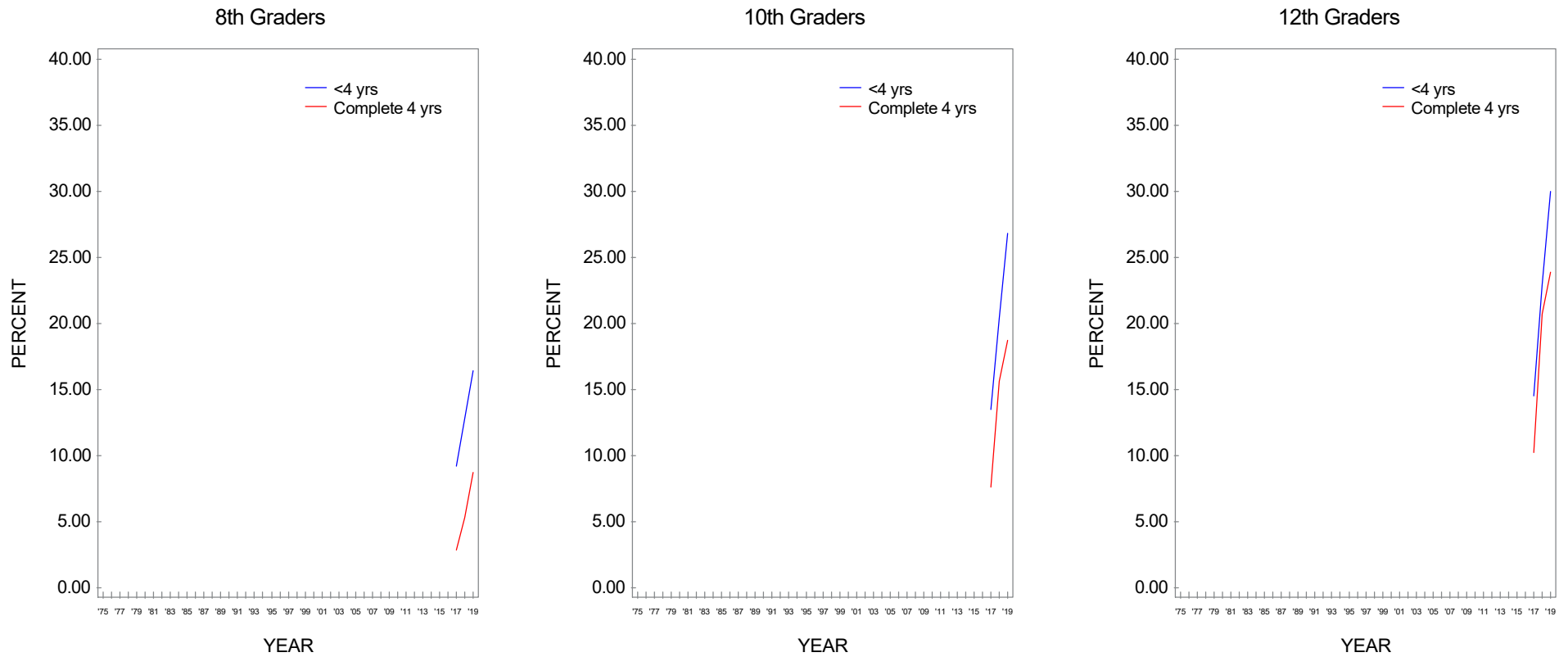
**FIGURE 355**  
**Vaping Nicotine: Trends in 30-Day Prevalence by Gender**



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

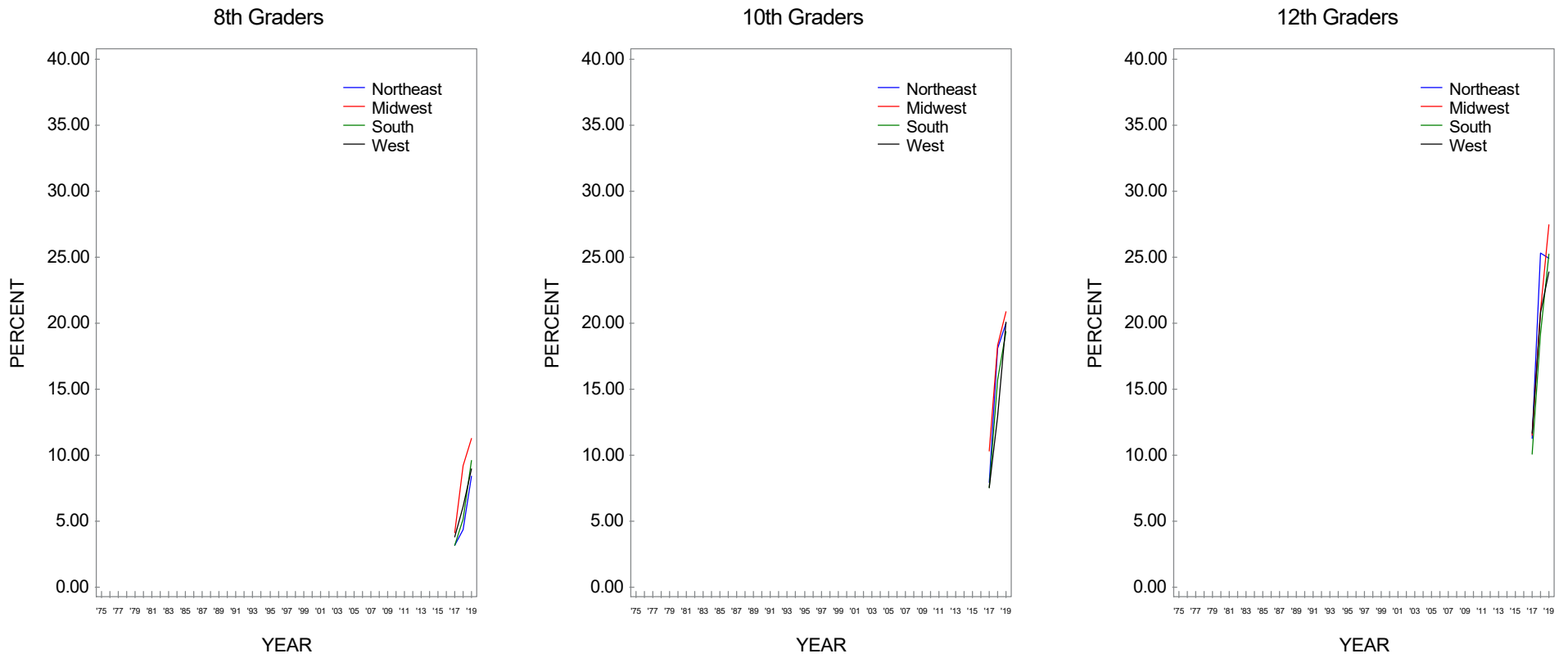


**FIGURE 356**  
**Vaping Nicotine: Trends in 30-Day Prevalence by College Plans**



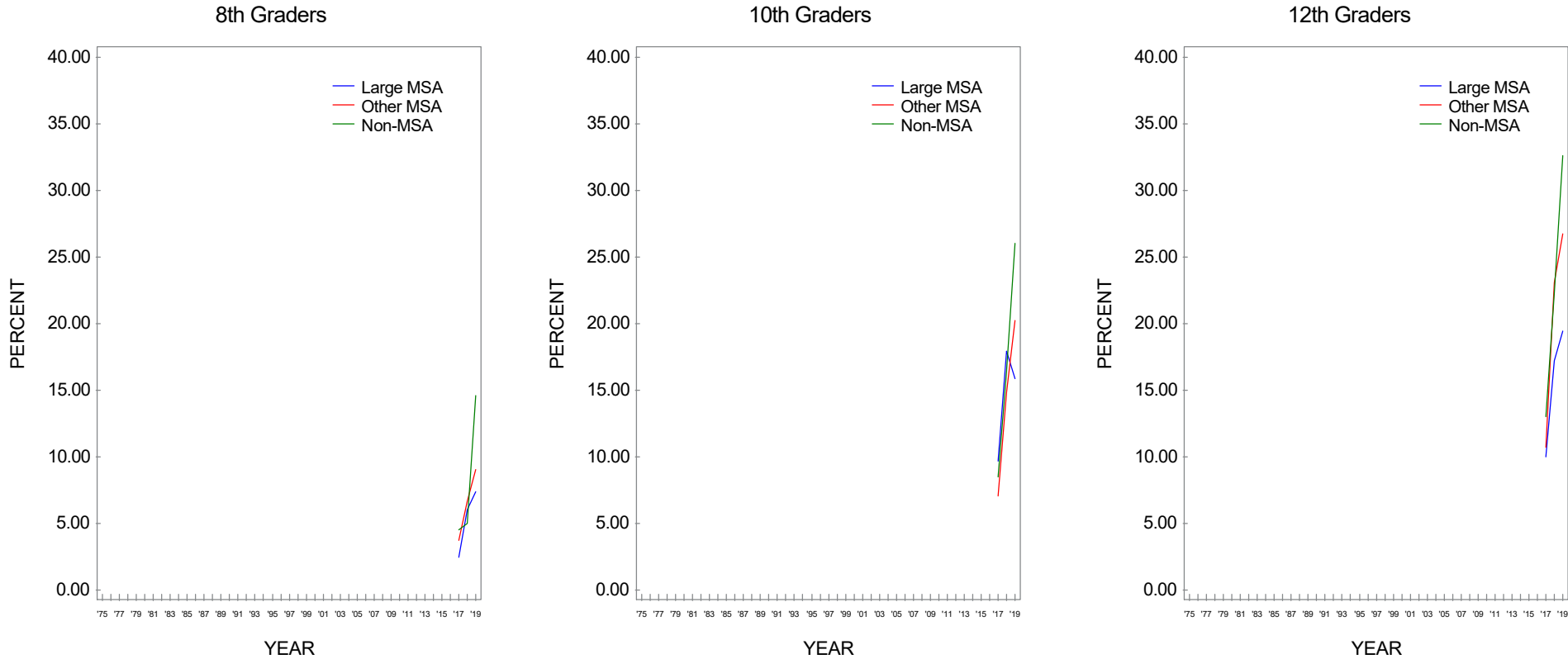
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 357**  
**Vaping Nicotine: Trends in 30-Day Prevalence by Region**



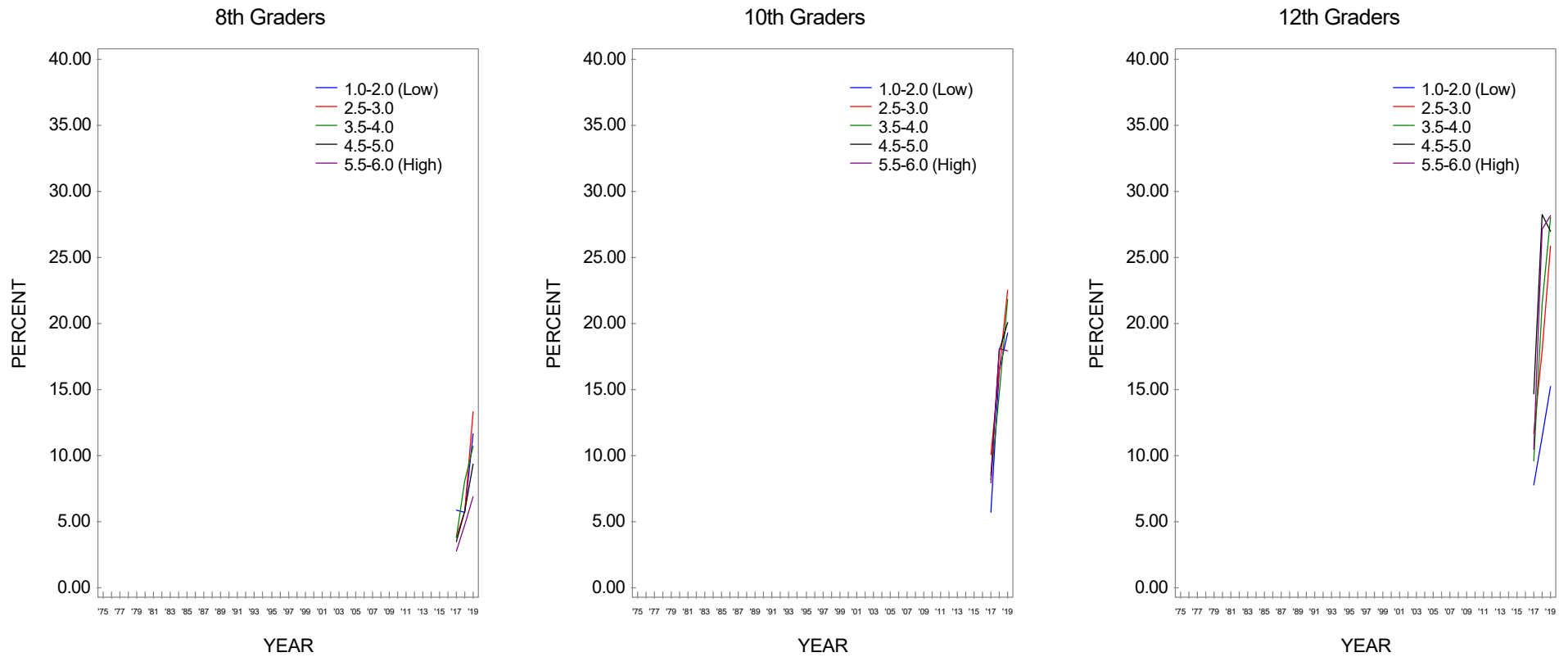
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 358**  
**Vaping Nicotine: Trends in 30-Day Prevalence by Population Density**



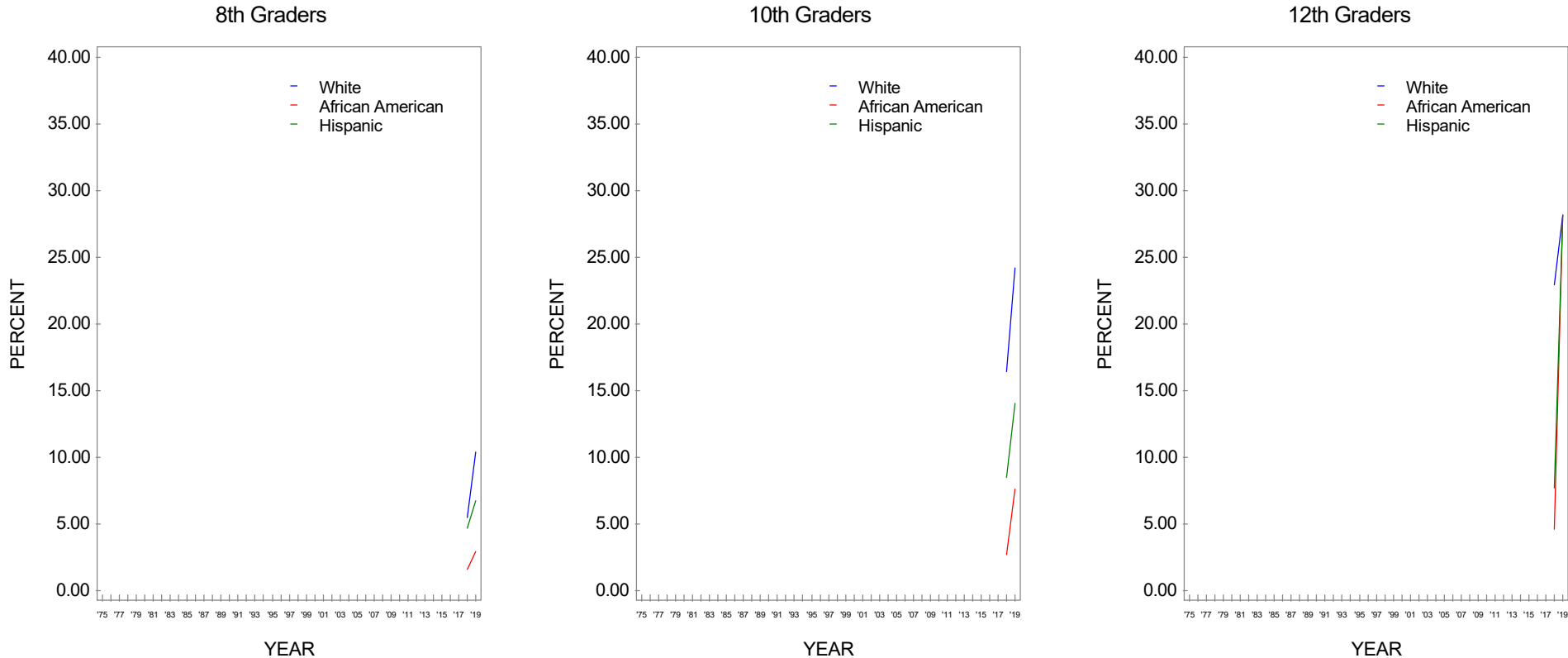
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 359**  
**Vaping Nicotine: Trends in 30-Day Prevalence by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*Parental education is an average score of mother's education and father's education.

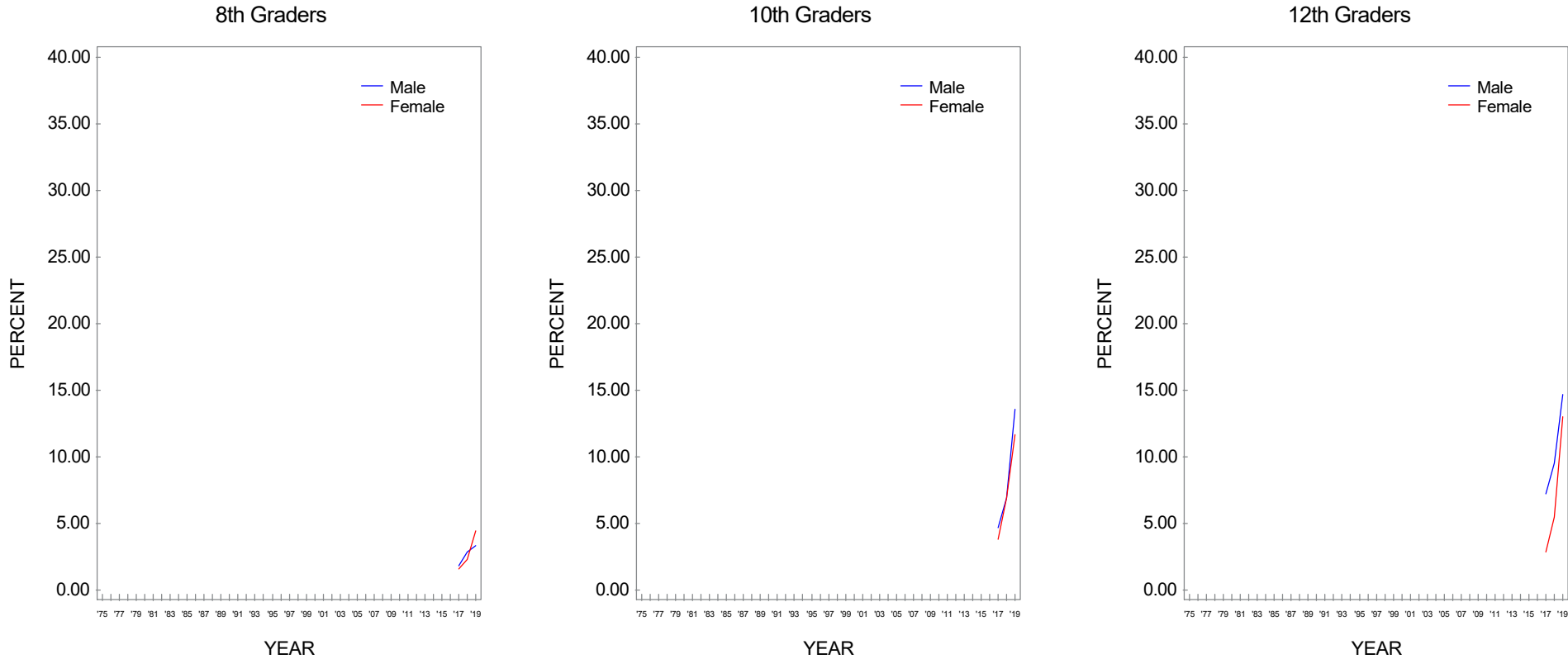
**FIGURE 360**  
**Vaping Nicotine: Trends in 30-Day Prevalence by Race/Ethnicity\***



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

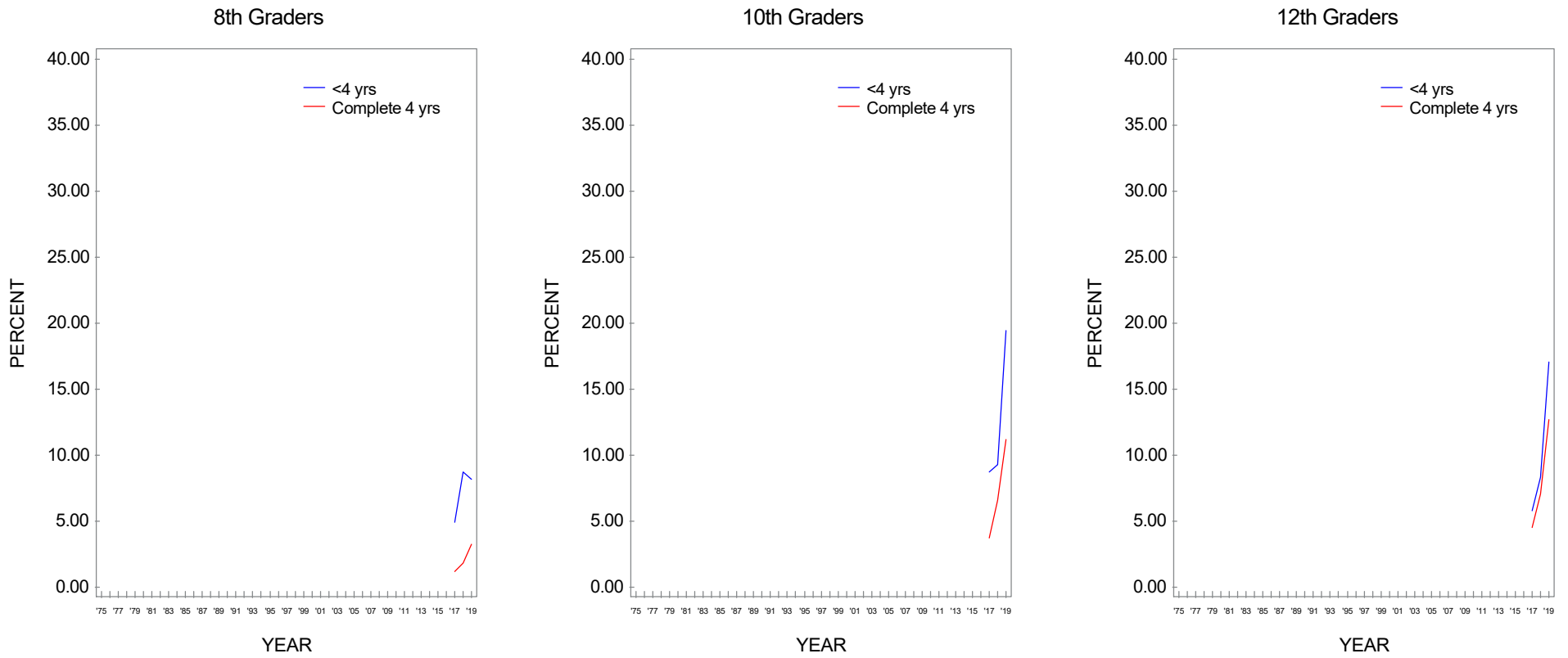
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 361**  
**Vaping Marijuana: Trends in 30-Day Prevalence by Gender**



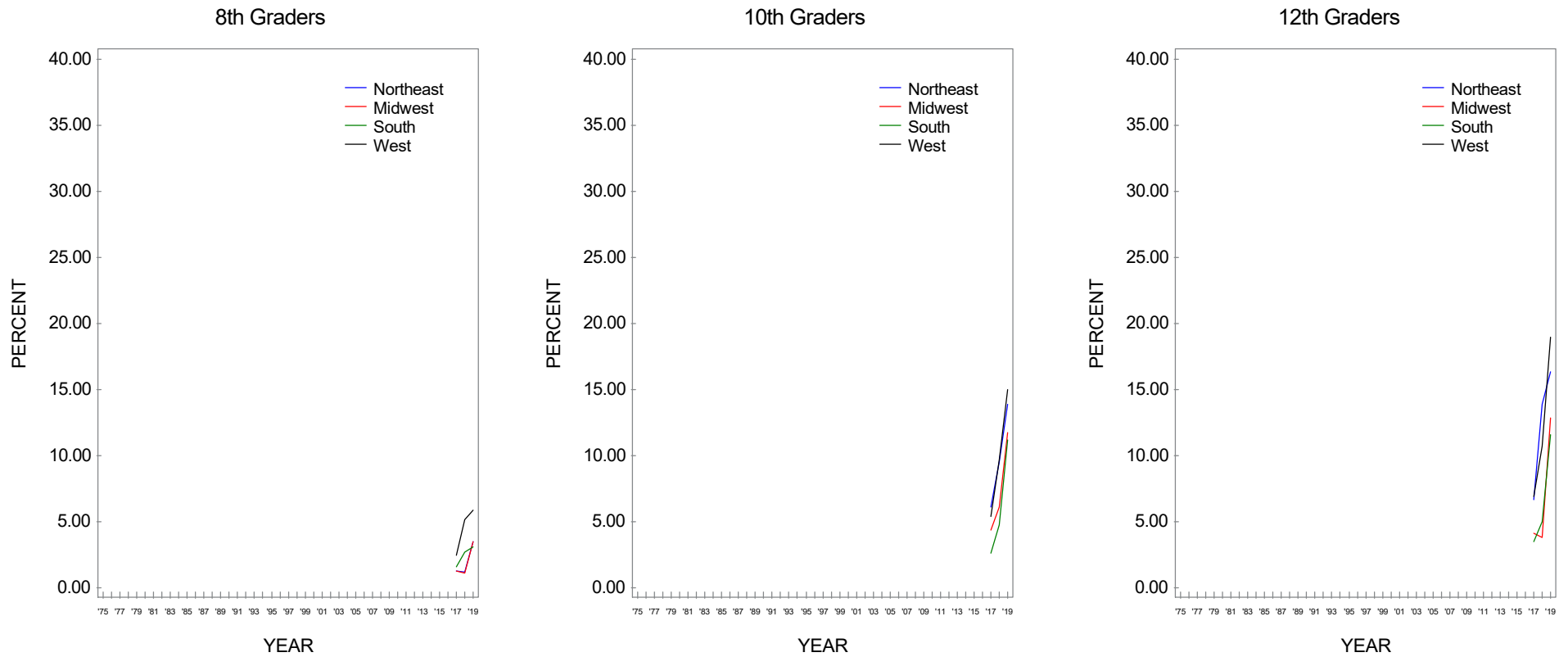
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 362**  
**Vaping Marijuana: Trends in 30-Day Prevalence by College Plans**



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

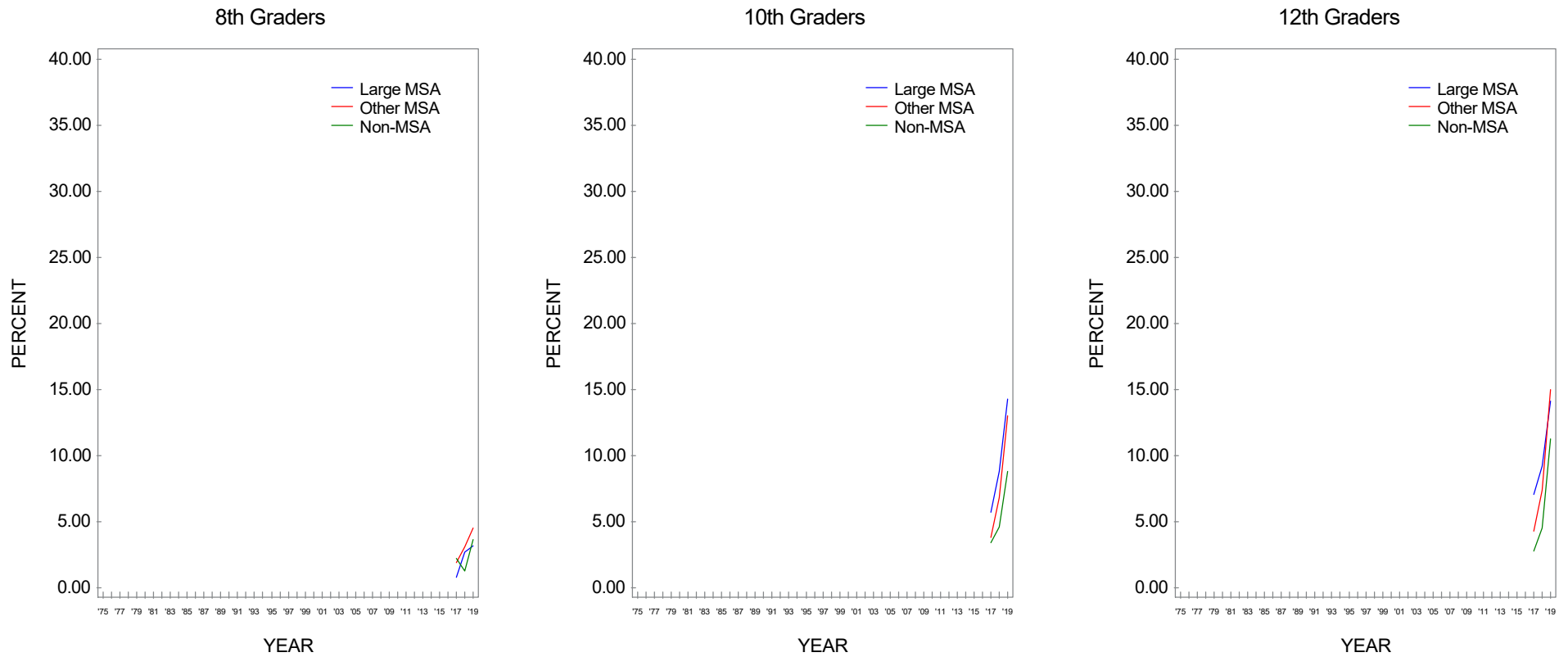
**FIGURE 363**  
**Vaping Marijuana: Trends in 30-Day Prevalence by Region**



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

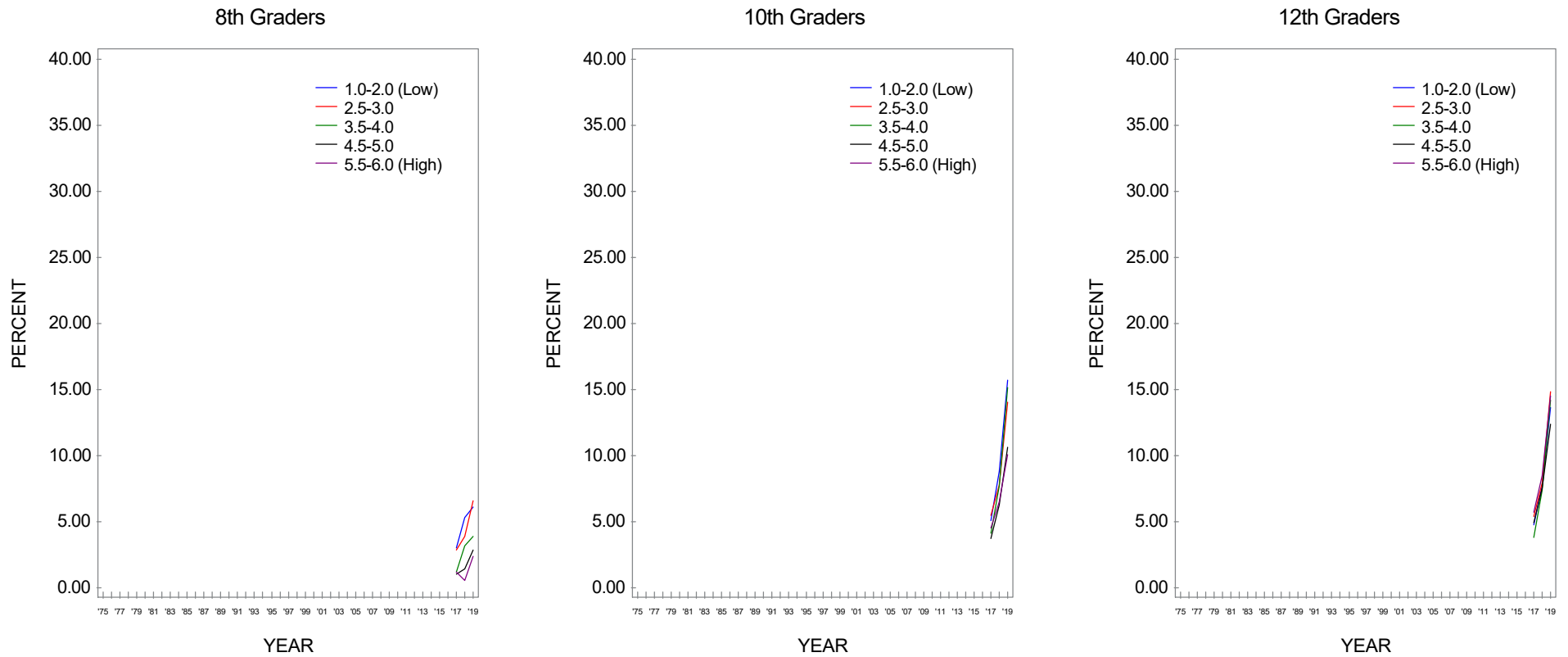


**FIGURE 364**  
**Vaping Marijuana: Trends in 30-Day Prevalence by Population Density**



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

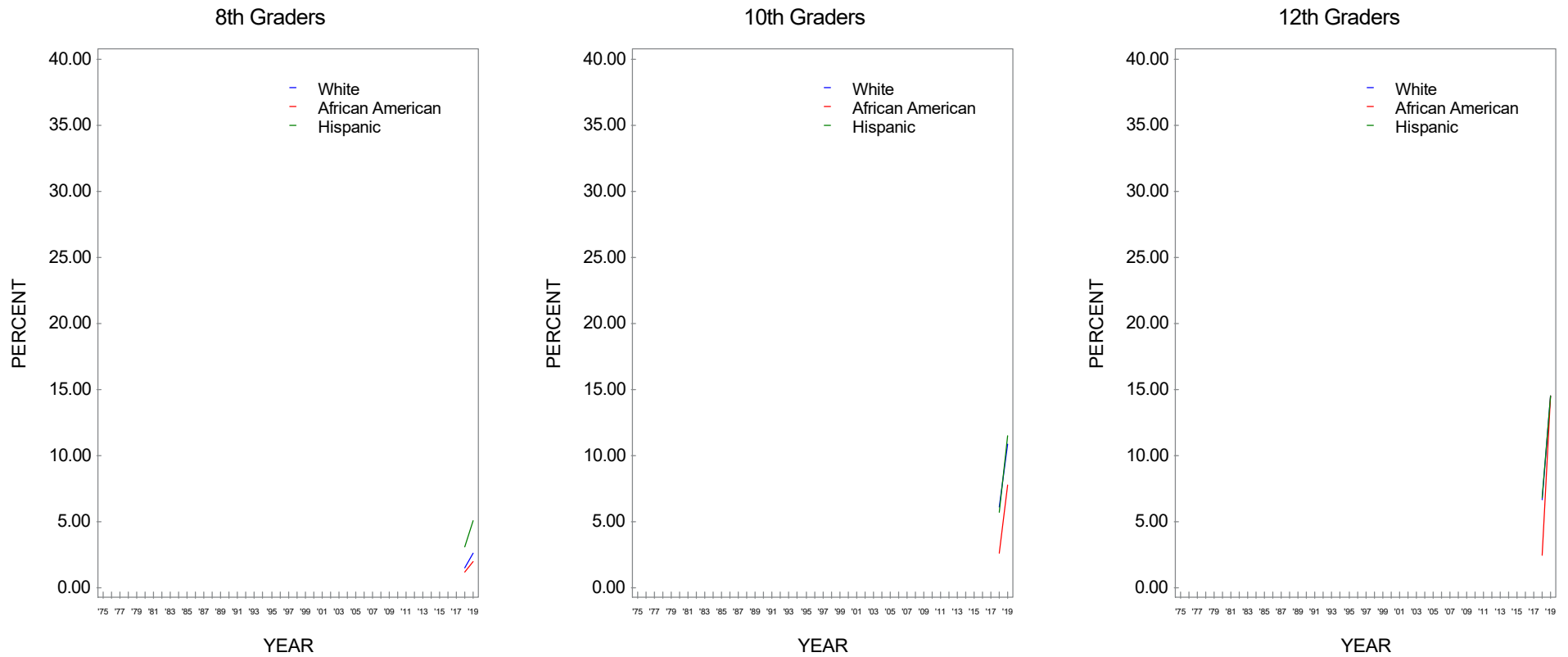
**FIGURE 365**  
**Vaping Marijuana: Trends in 30-Day Prevalence by Average Education Level of Parents\***



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

\*Parental education is an average score of mother's education and father's education.

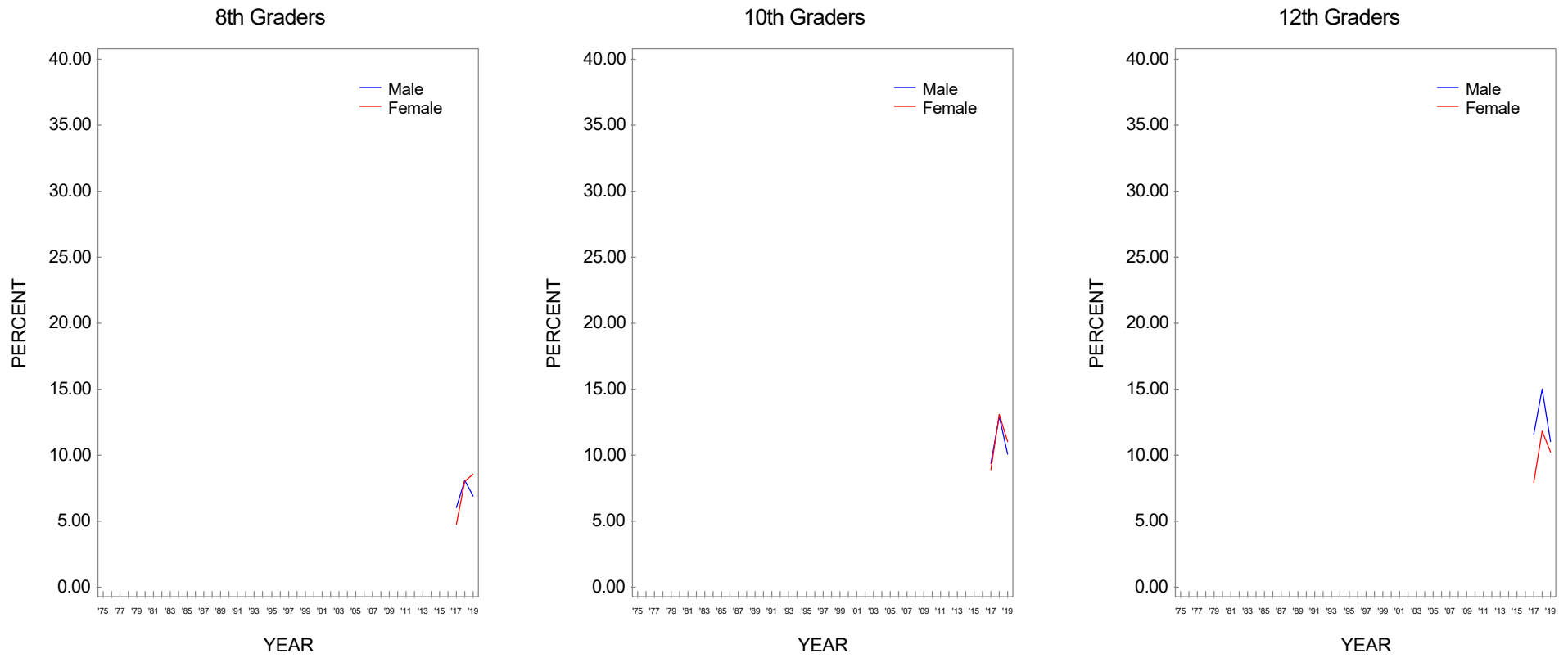
**FIGURE 366**  
**Vaping Marijuana: Trends in 30-Day Prevalence by Race/Ethnicity\***



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

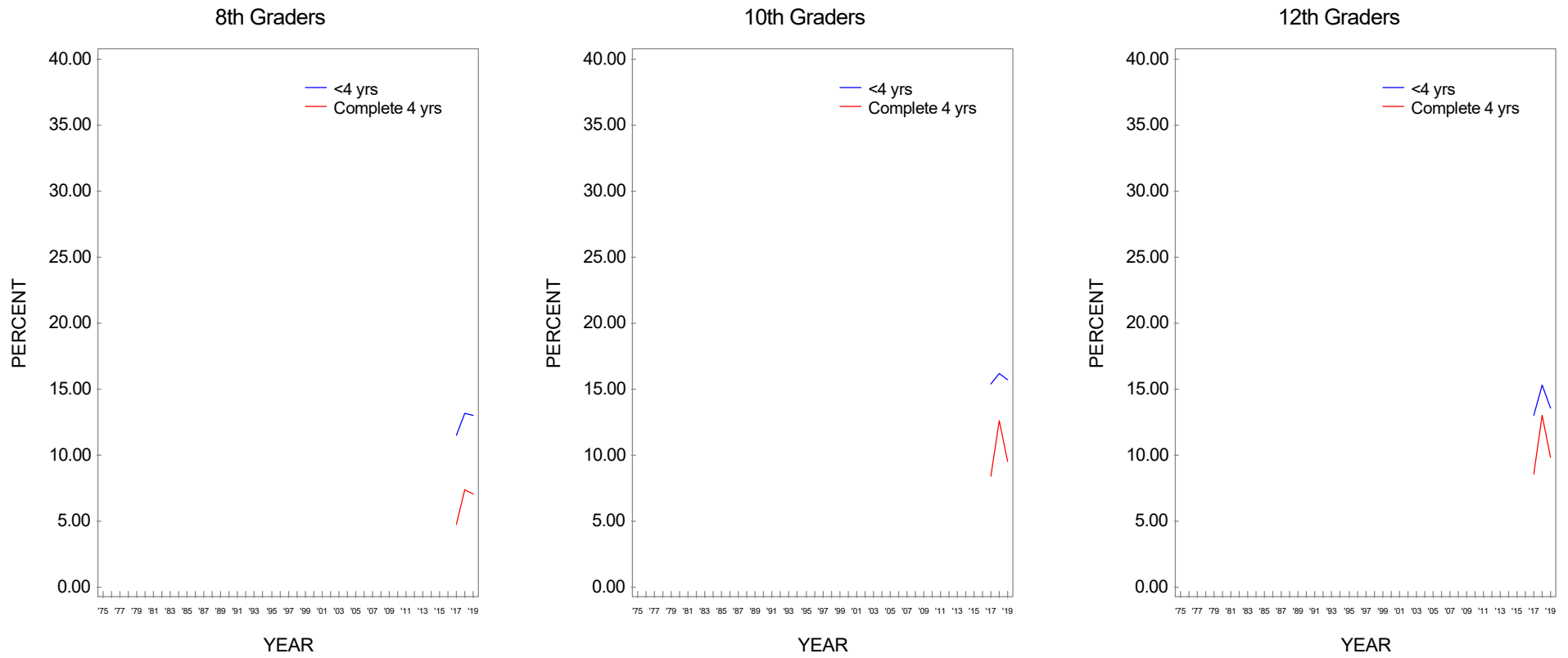
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 367**  
**Vaping Just Flavoring: Trends in 30-Day Prevalence by Gender**



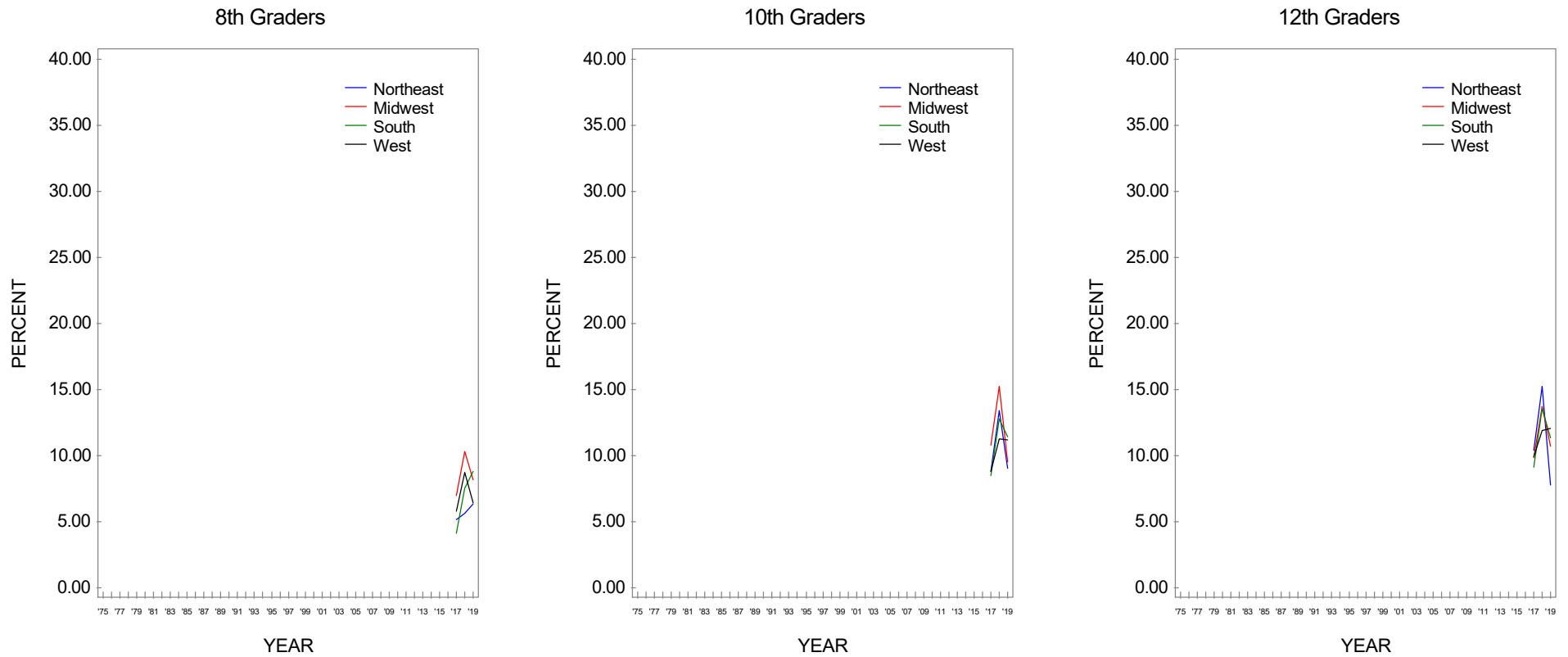
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 368**  
**Vaping Just Flavoring: Trends in 30-Day Prevalence by College Plans**



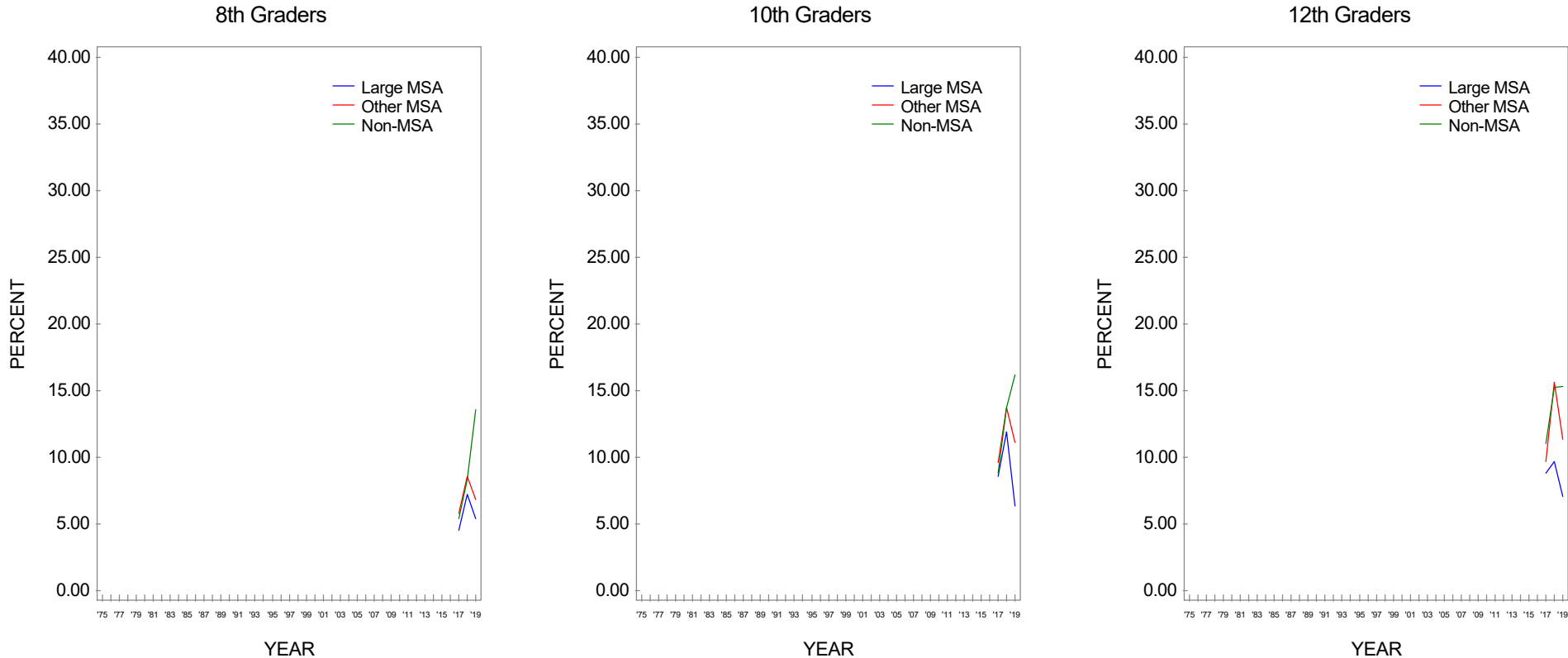
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 369**  
**Vaping Just Flavoring: Trends in 30-Day Prevalence by Region**



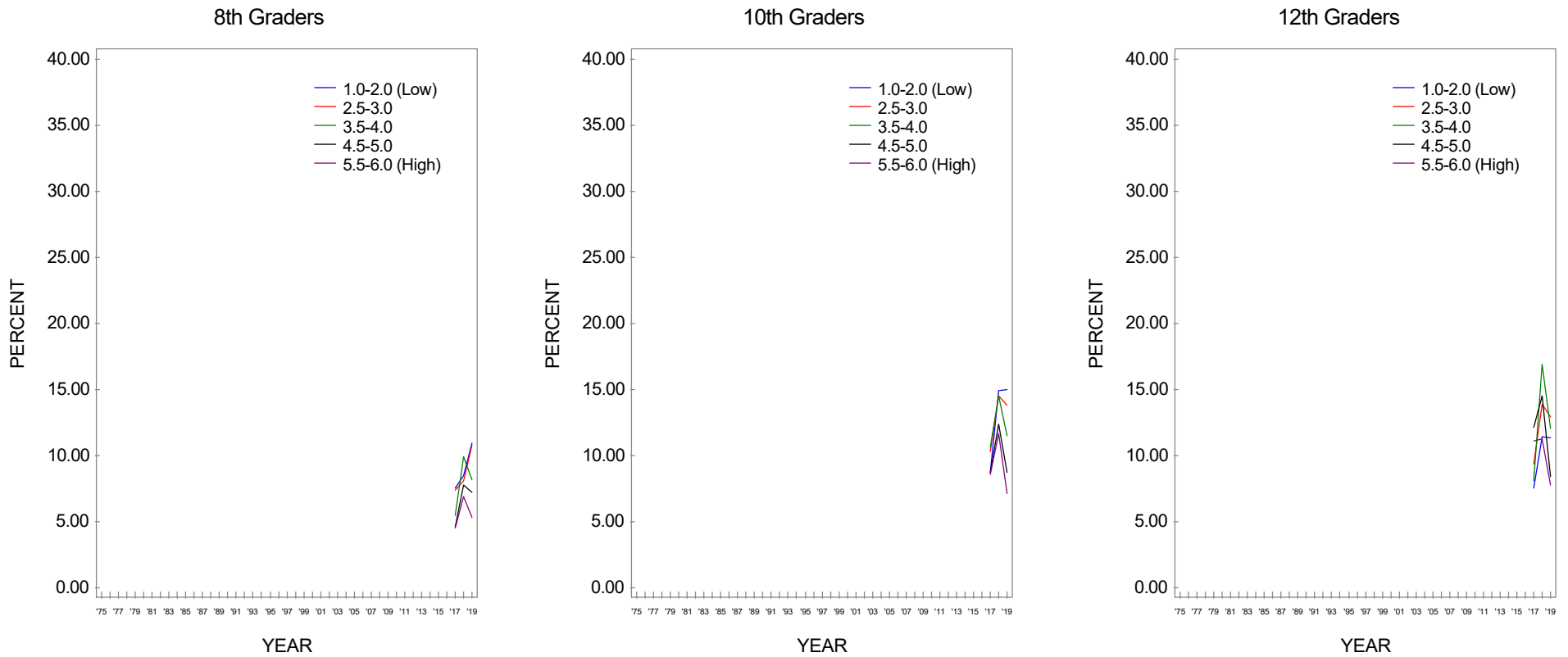
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 370**  
**Vaping Just Flavoring: Trends in 30-Day Prevalence by Population Density**



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

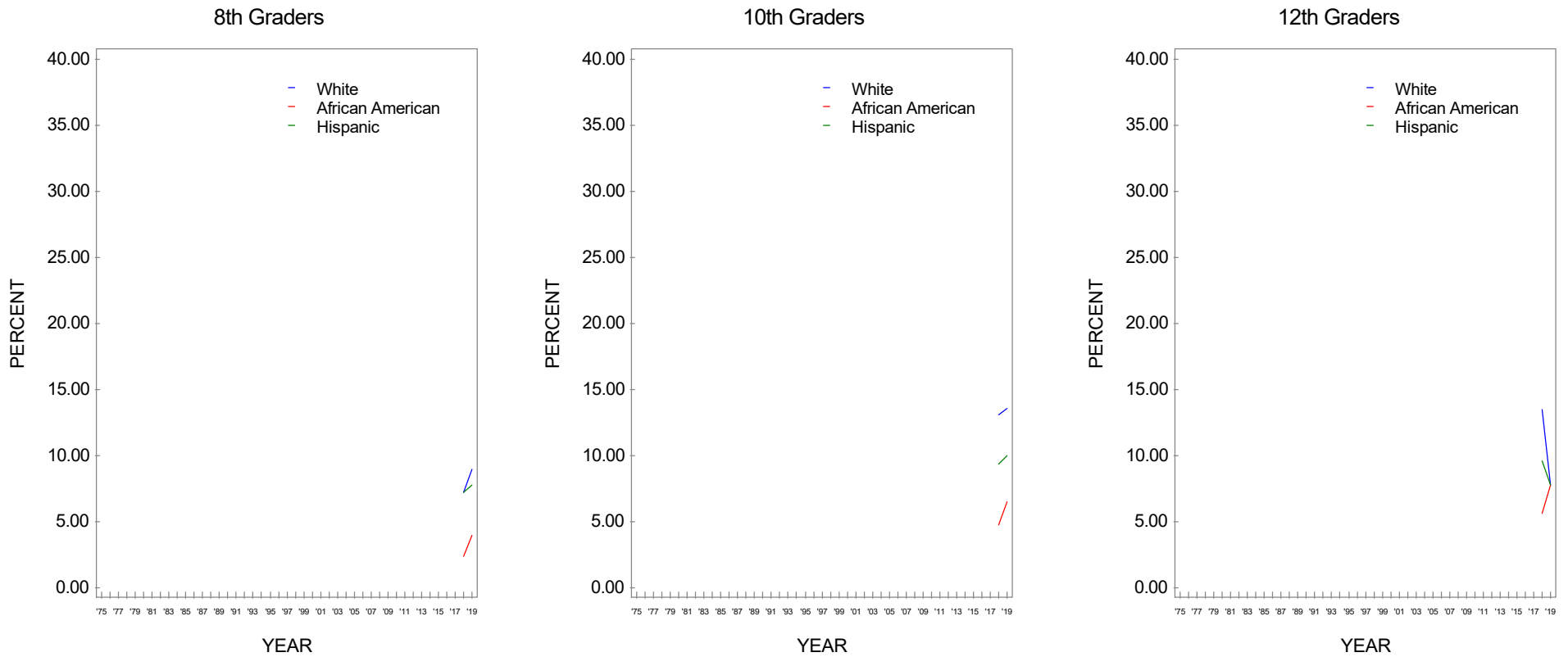
**FIGURE 371**  
**Vaping Just Flavoring: Trends in 30-Day Prevalence by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*Parental education is an average score of mother's education and father's education.



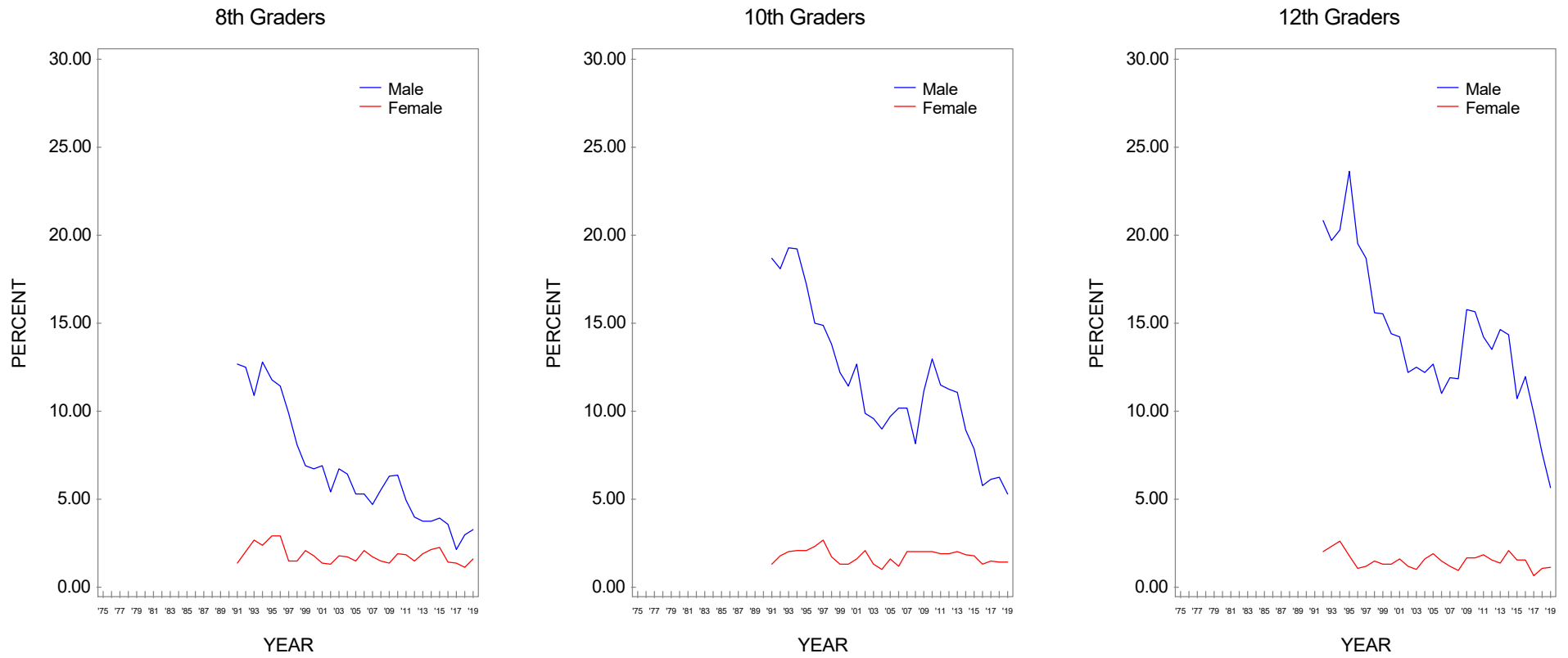
**FIGURE 372**  
**Vaping Just Flavoring: Trends in 30-Day Prevalence by Race/Ethnicity\***



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

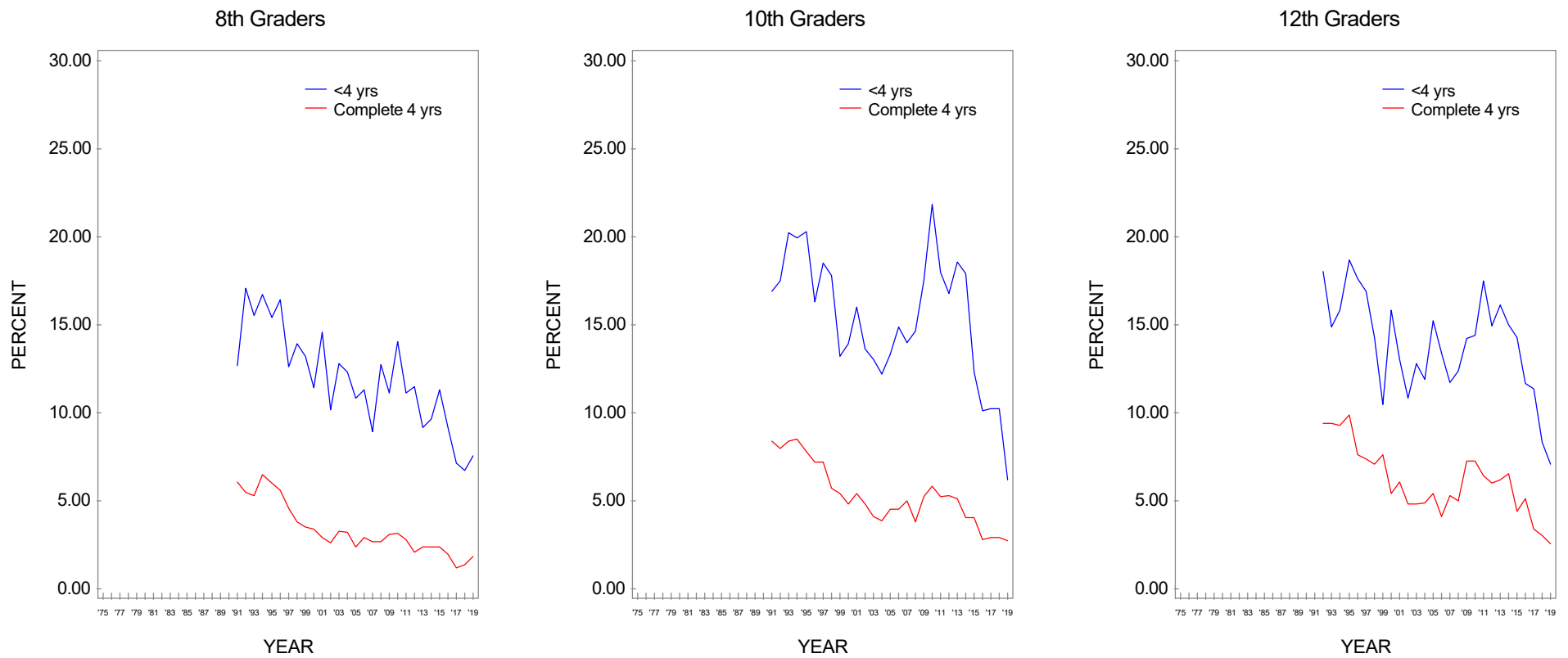
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 373**  
**Smokeless Tobacco: Trends in 30-Day Prevalence by Gender**



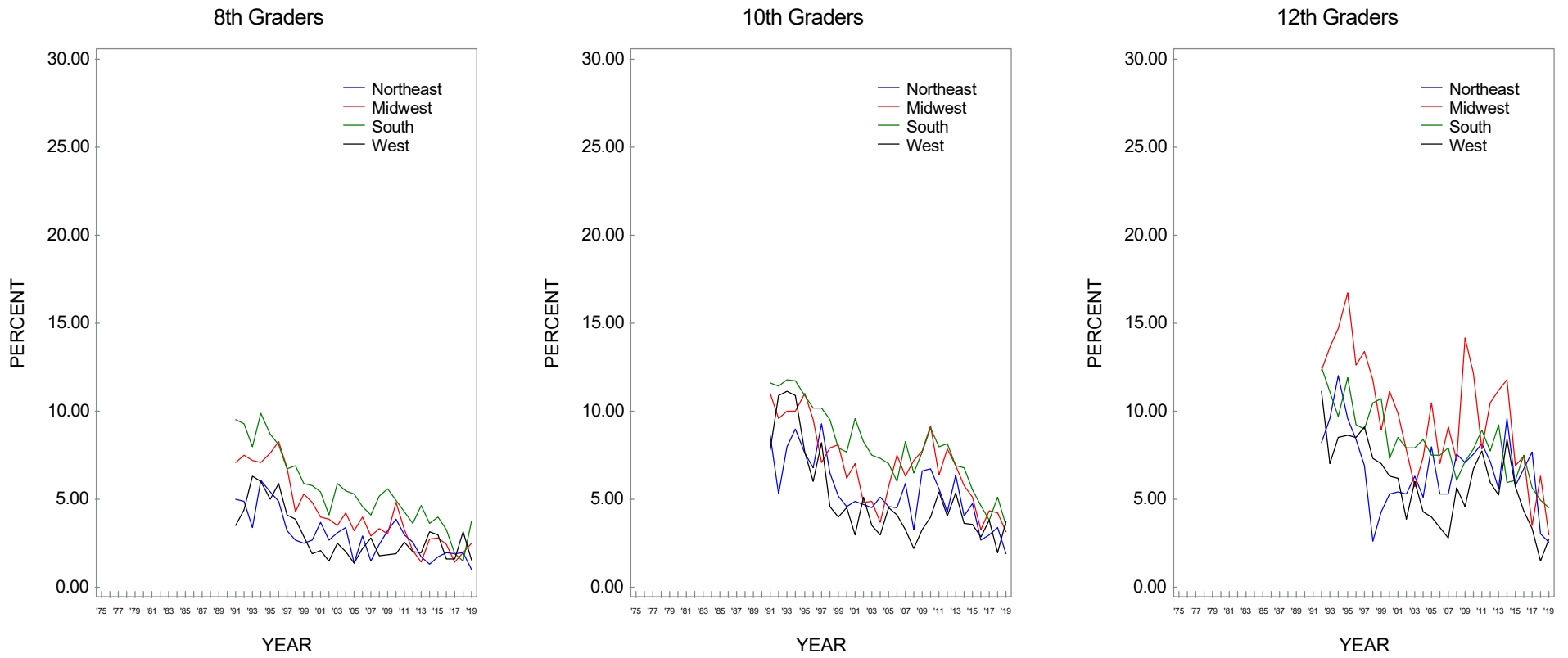
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 374**  
**Smokeless Tobacco: Trends in 30-Day Prevalence by College Plans**



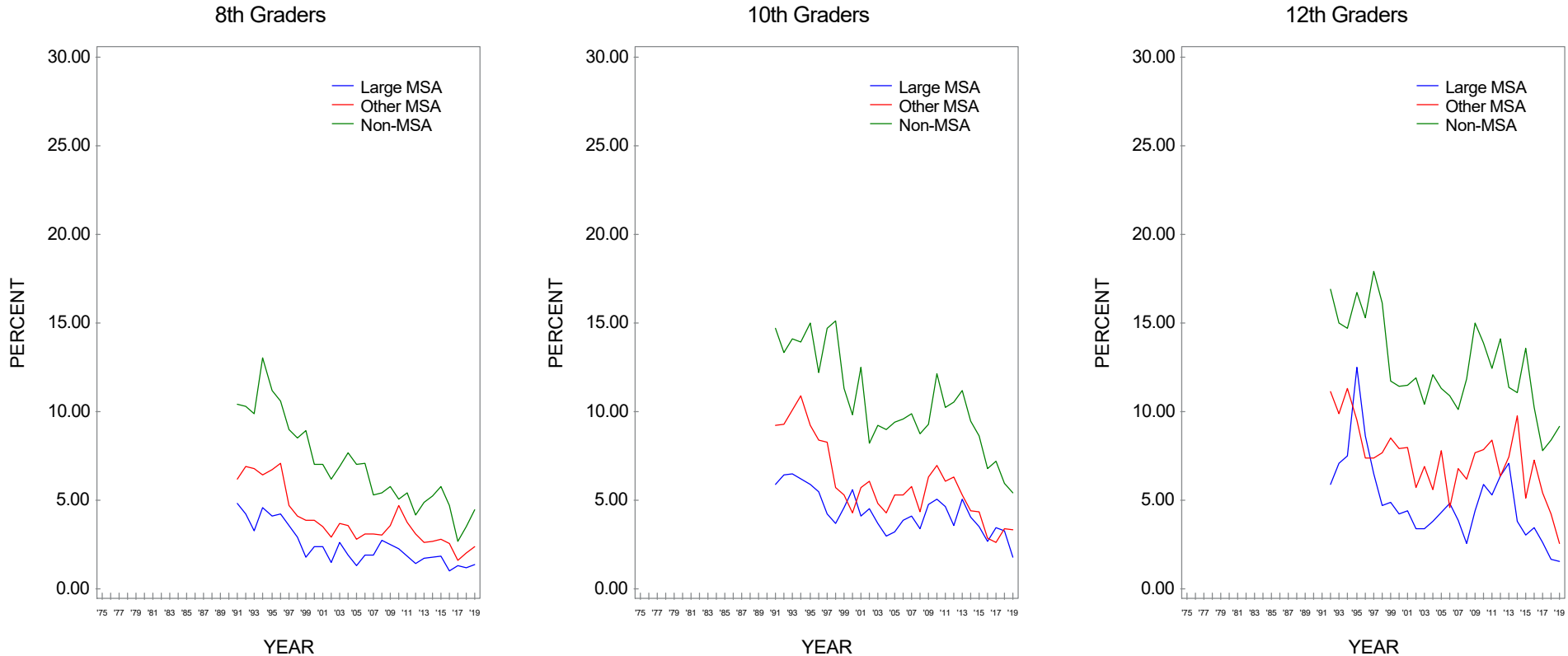
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 375**  
**Smokeless Tobacco: Trends in 30-Day Prevalence by Region**



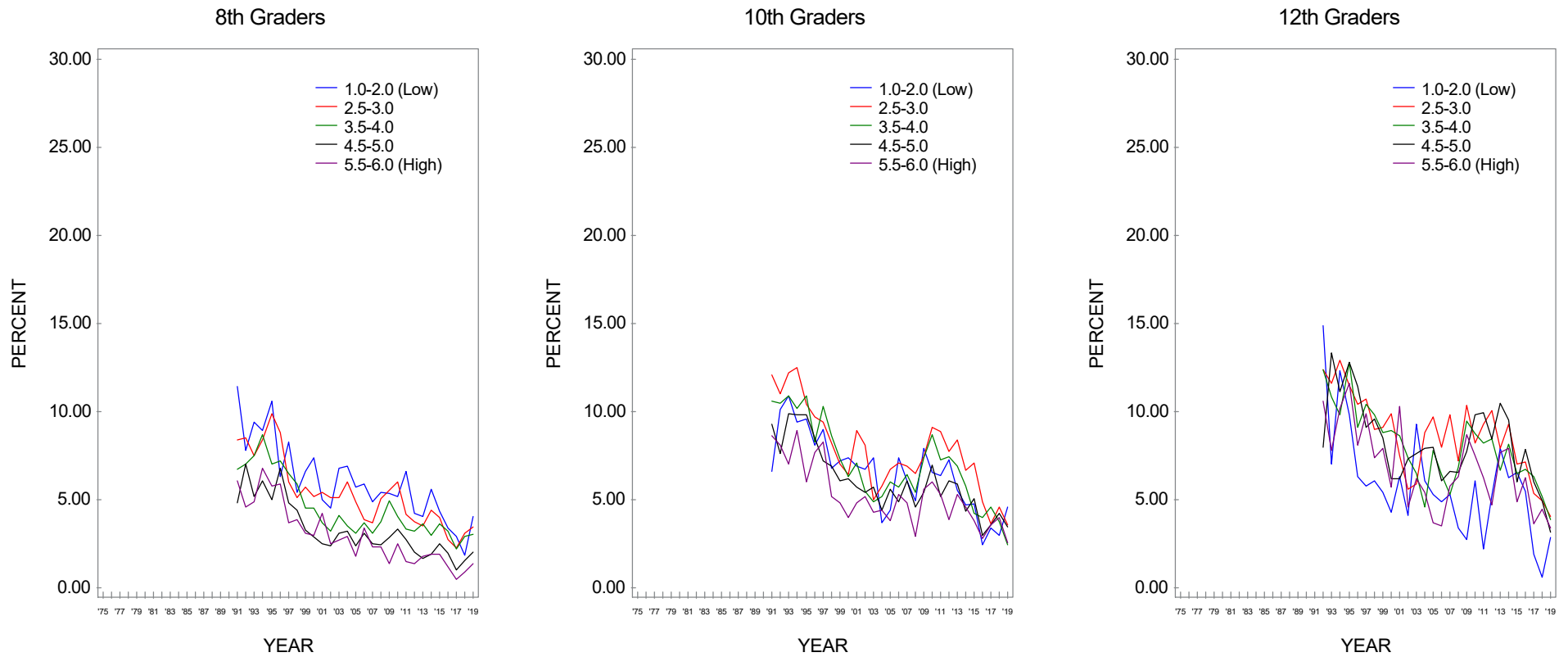
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 376**  
**Smokeless Tobacco: Trends in 30-Day Prevalence by Population Density**



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

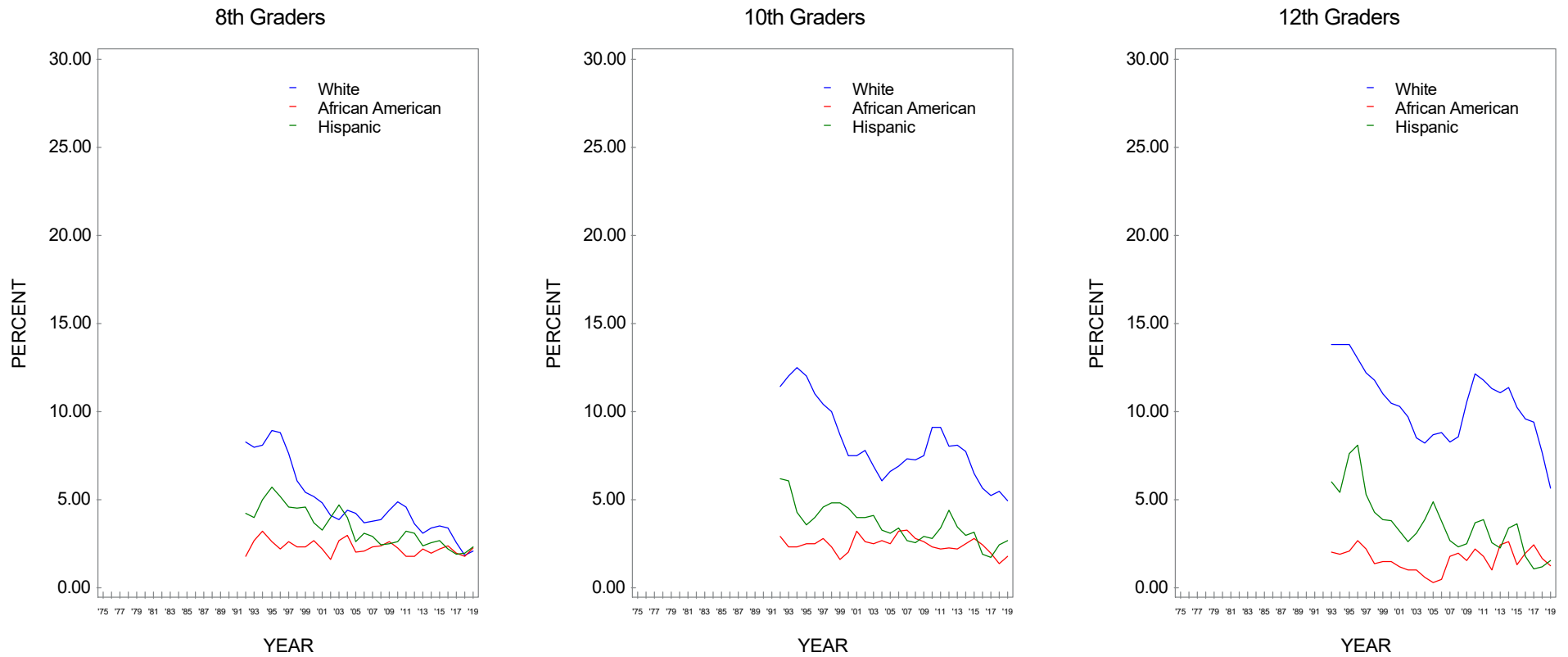
**FIGURE 377**  
**Smokeless Tobacco: Trends in 30-Day Prevalence by Average Education Level of Parents\***



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

\*Parental education is an average score of mother's education and father's education.

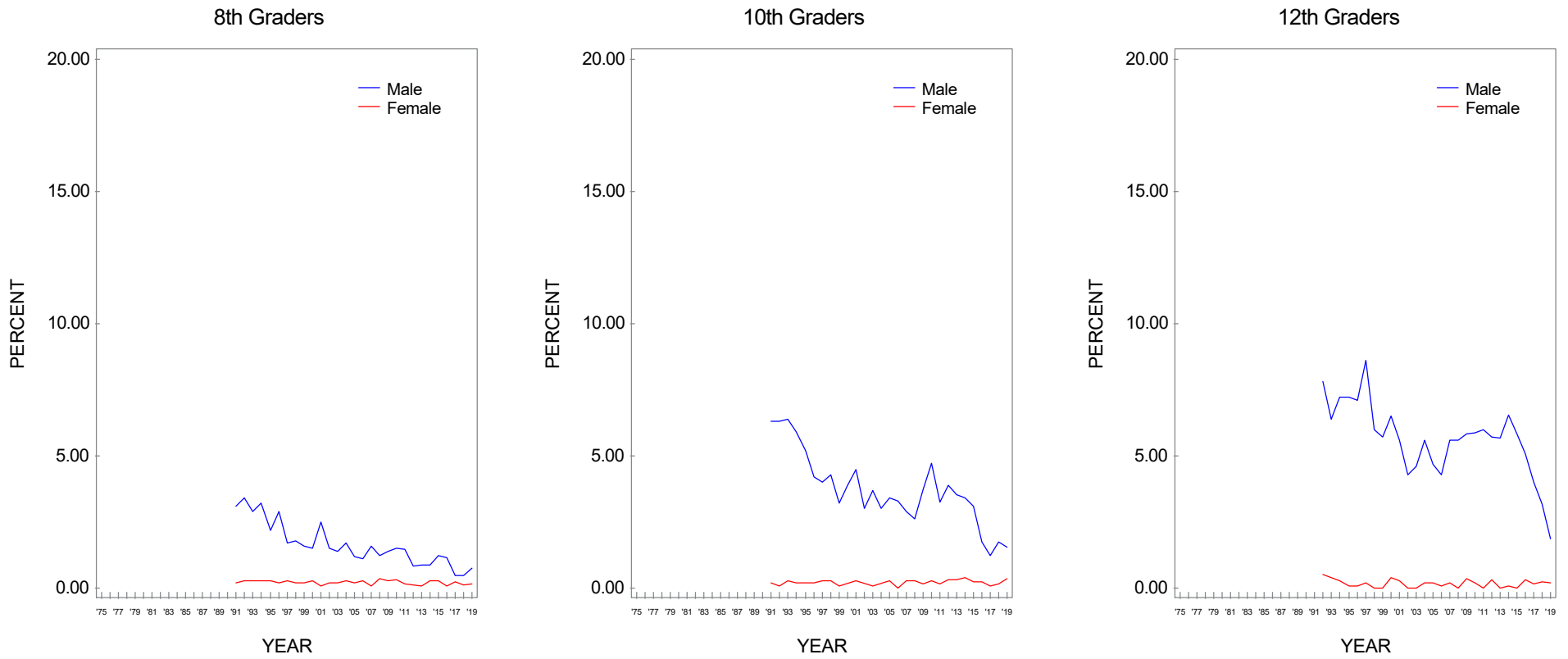
**FIGURE 378**  
**Smokeless Tobacco: Trends in 30-Day Prevalence by Race/Ethnicity\***



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

\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

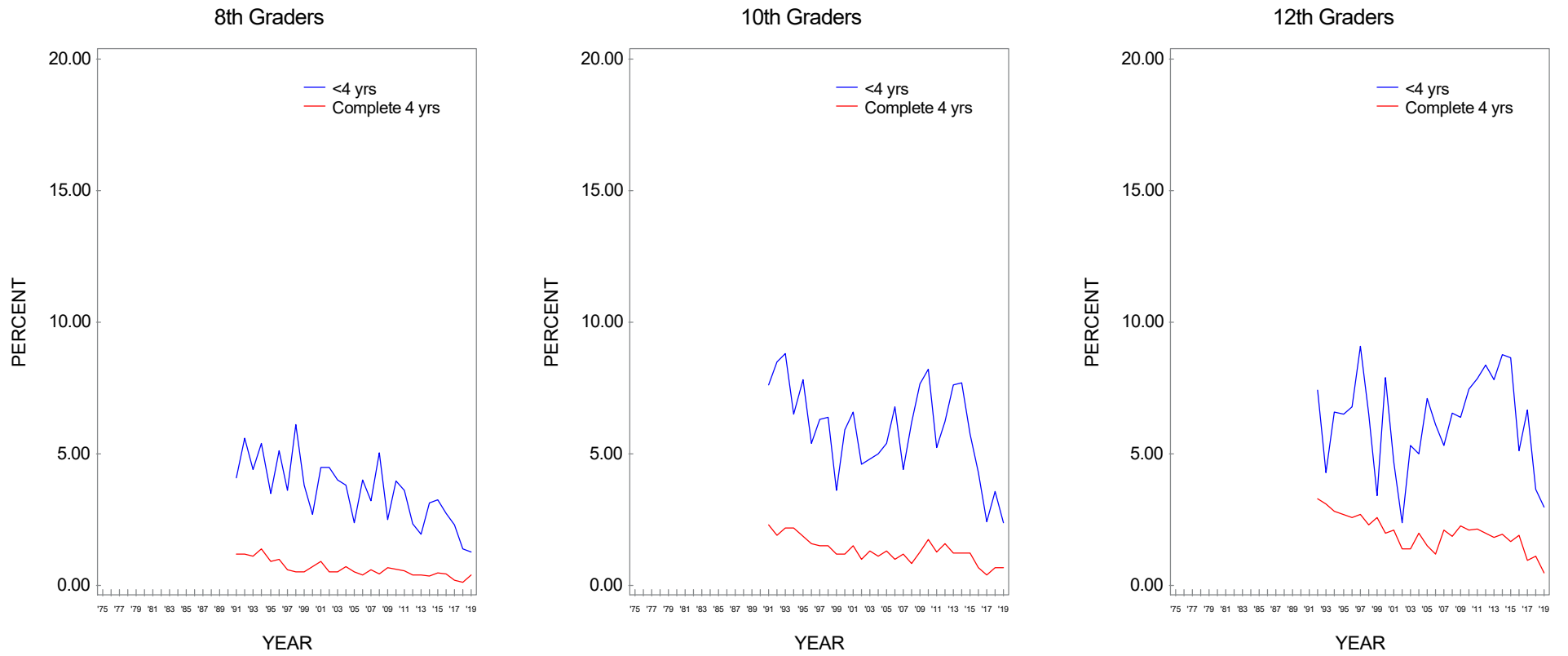
**FIGURE 379**  
**Smokeless Tobacco: Trends in 30-Day Prevalence of Daily Use by Gender**



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

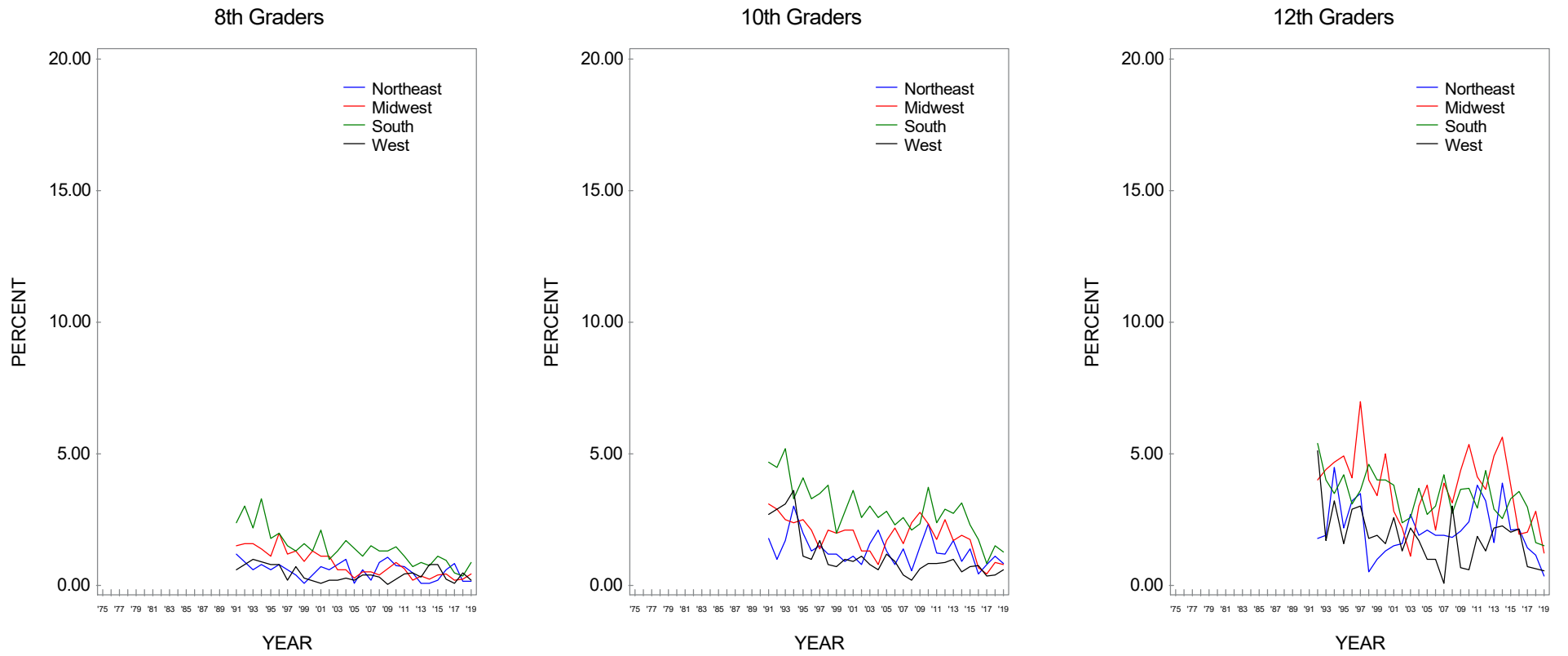


**FIGURE 380**  
**Smokeless Tobacco: Trends in 30-Day Prevalence of Daily Use by College Plans**



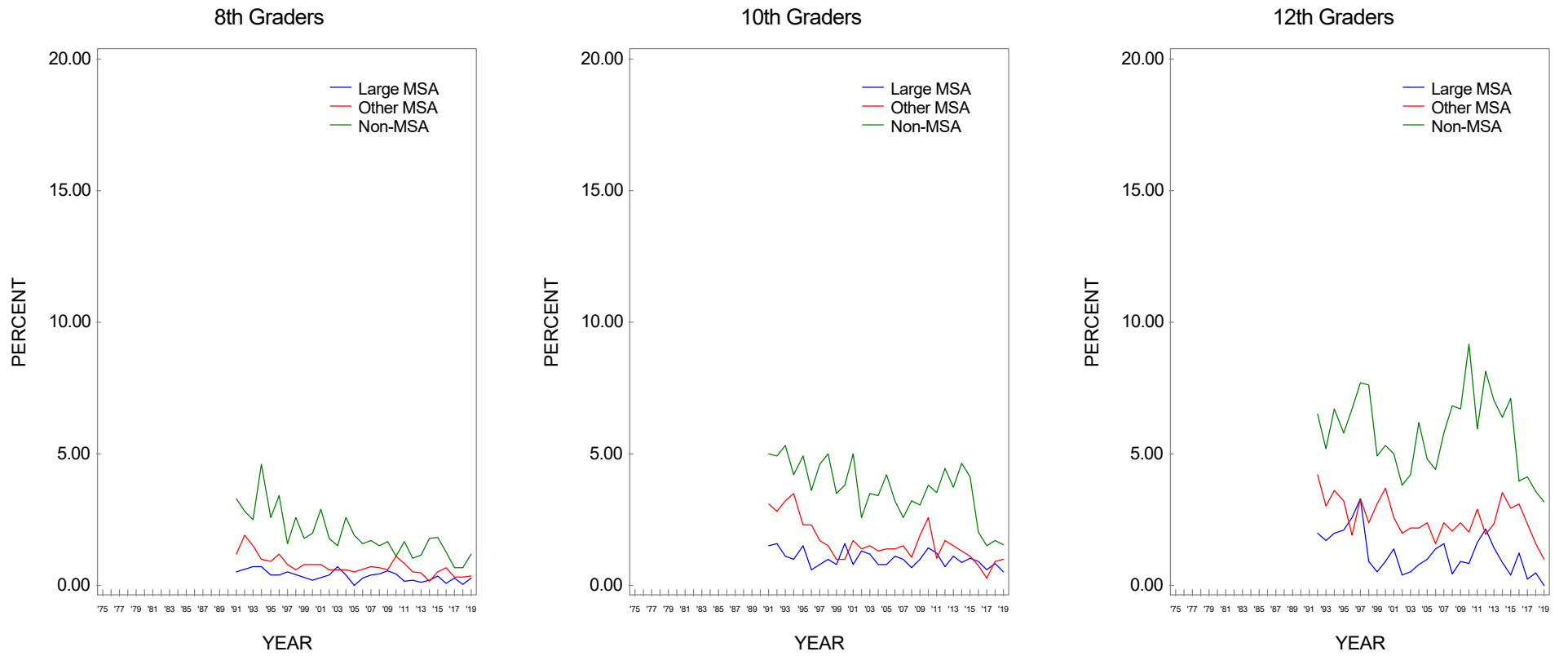
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 381**  
**Smokeless Tobacco: Trends in 30-Day Prevalence of Daily Use by Region**



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

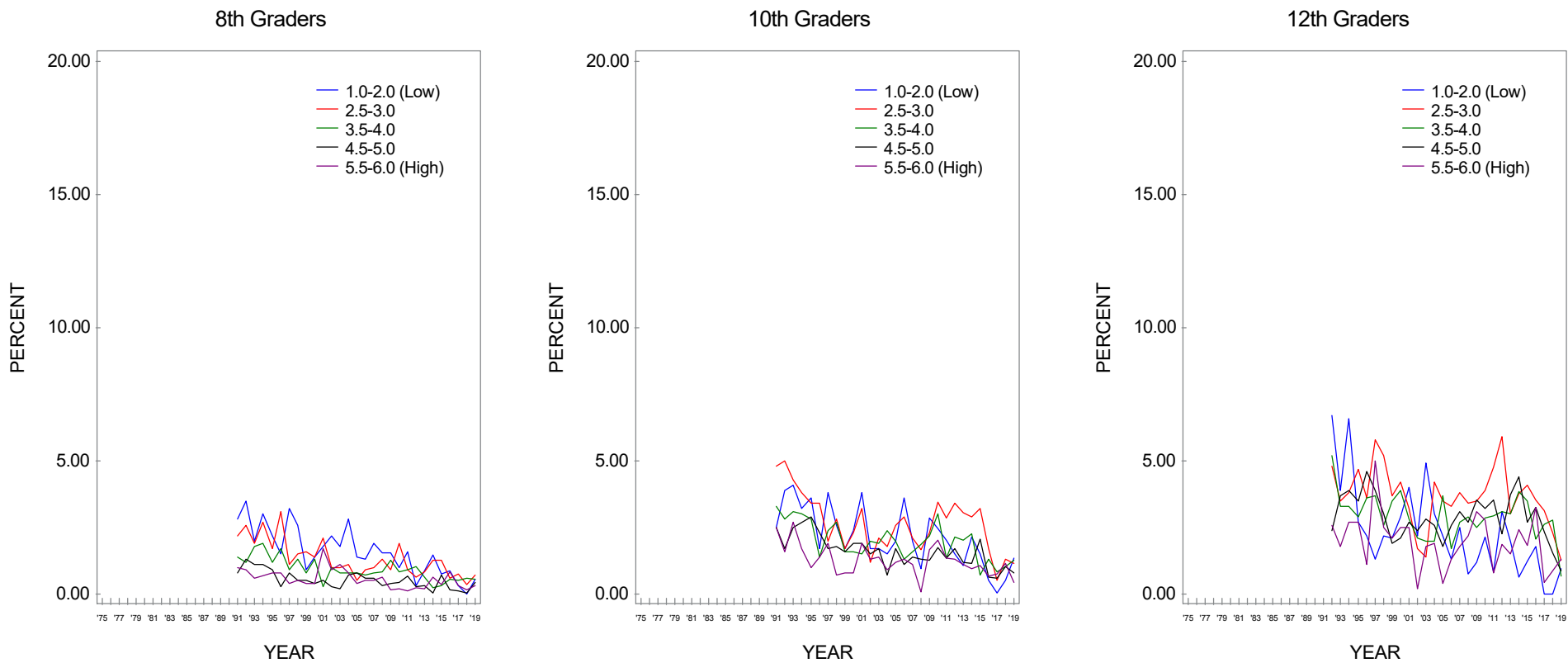
**FIGURE 382**  
**Smokeless Tobacco: Trends in 30-Day Prevalence of Daily Use by Population Density**



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

**FIGURE 383**

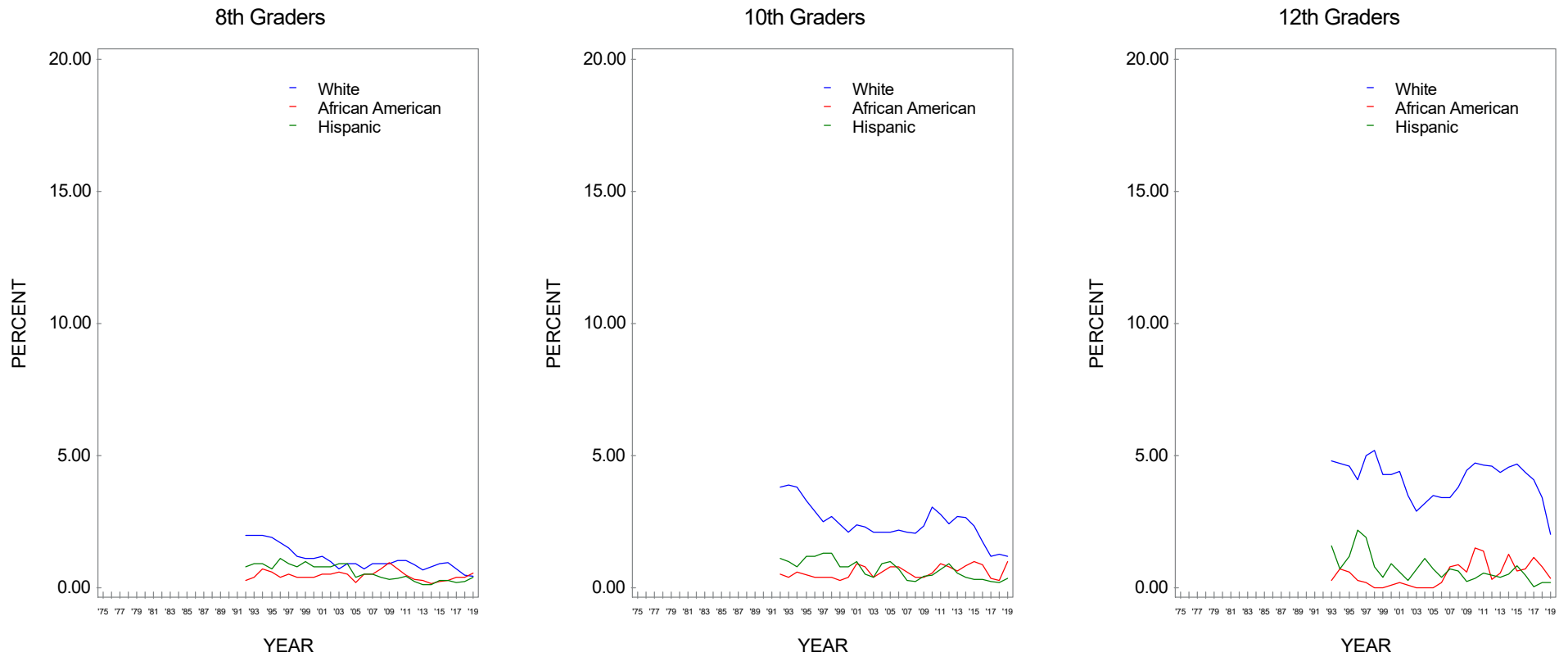
**Smokeless Tobacco: Trends in 30-Day Prevalence of Daily Use by Average Education Level of Parents\***



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

\*Parental education is an average score of mother's education and father's education.

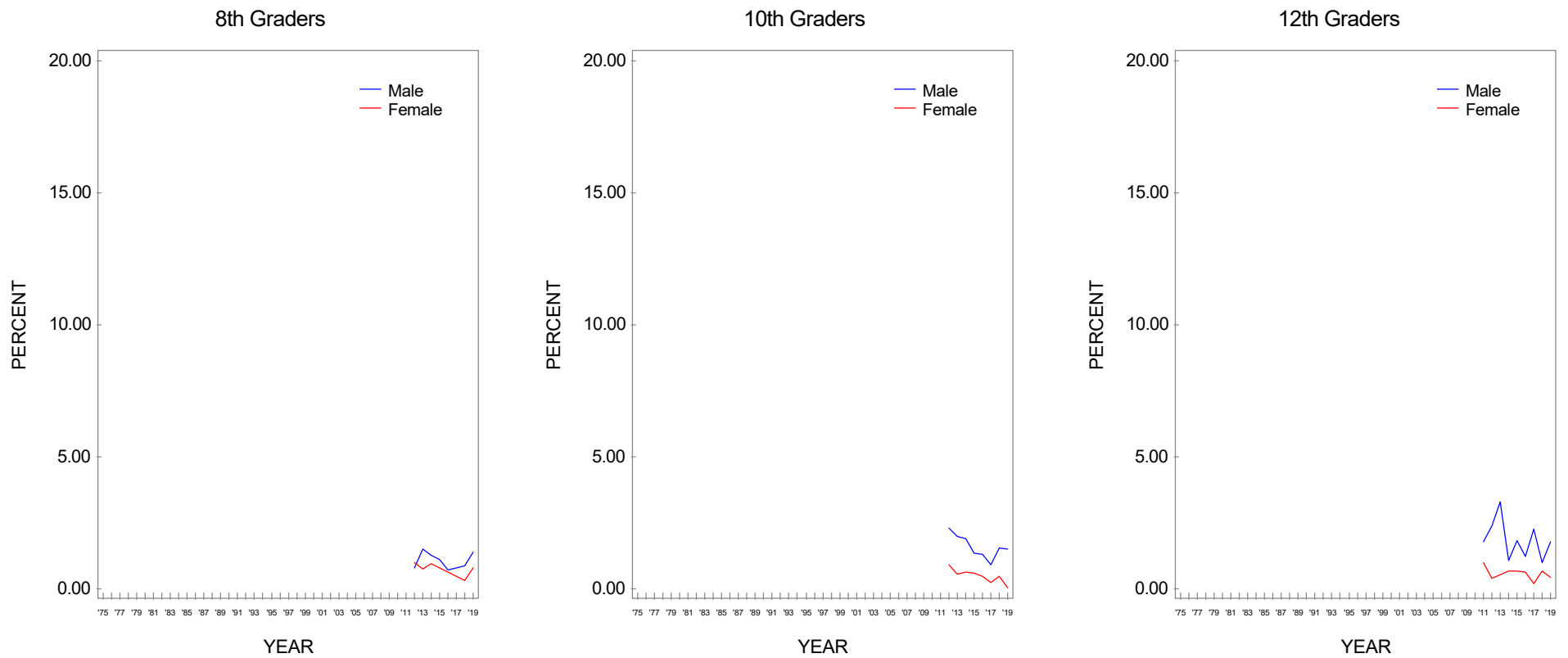
**FIGURE 384**  
**Smokeless Tobacco: Trends in 30-Day Prevalence of Daily Use by Race/Ethnicity\***



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

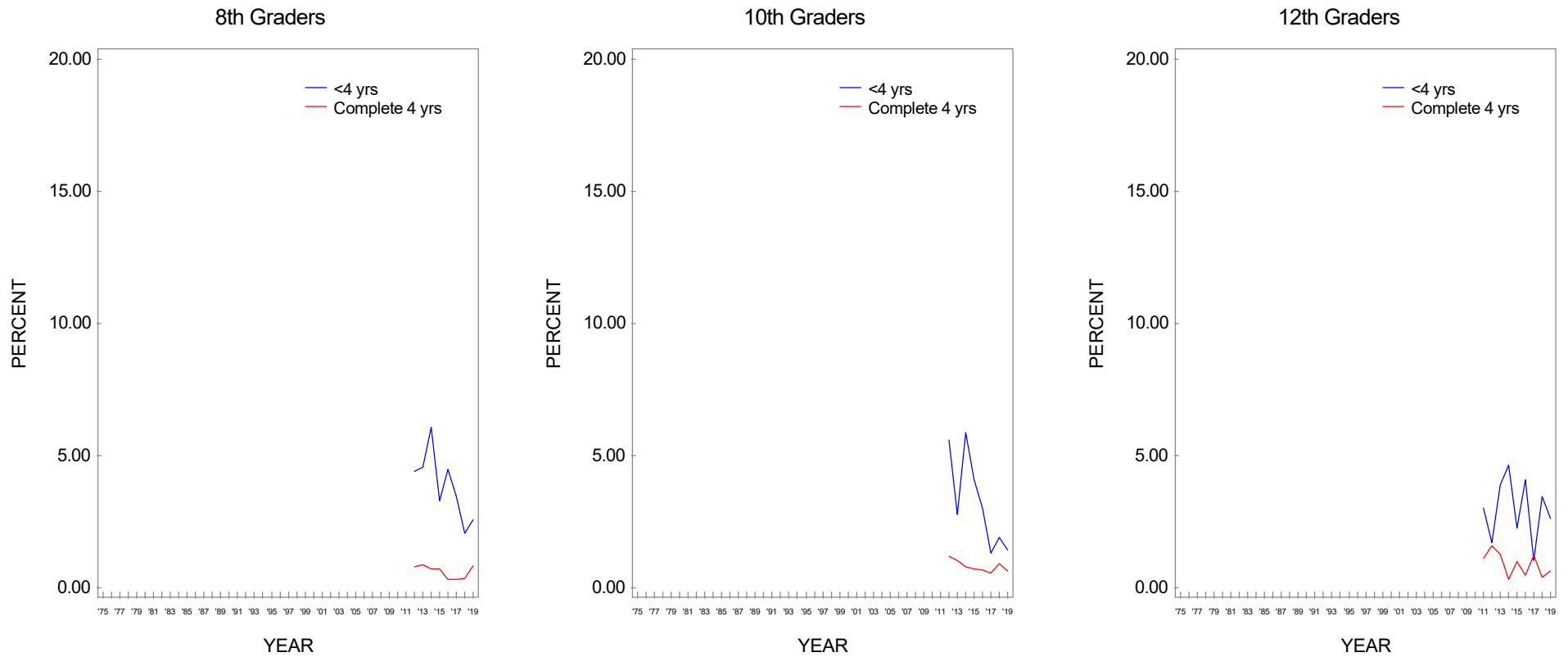
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 385**  
**Dissolvable Tobacco Products: Trends in Annual Prevalence by Gender**



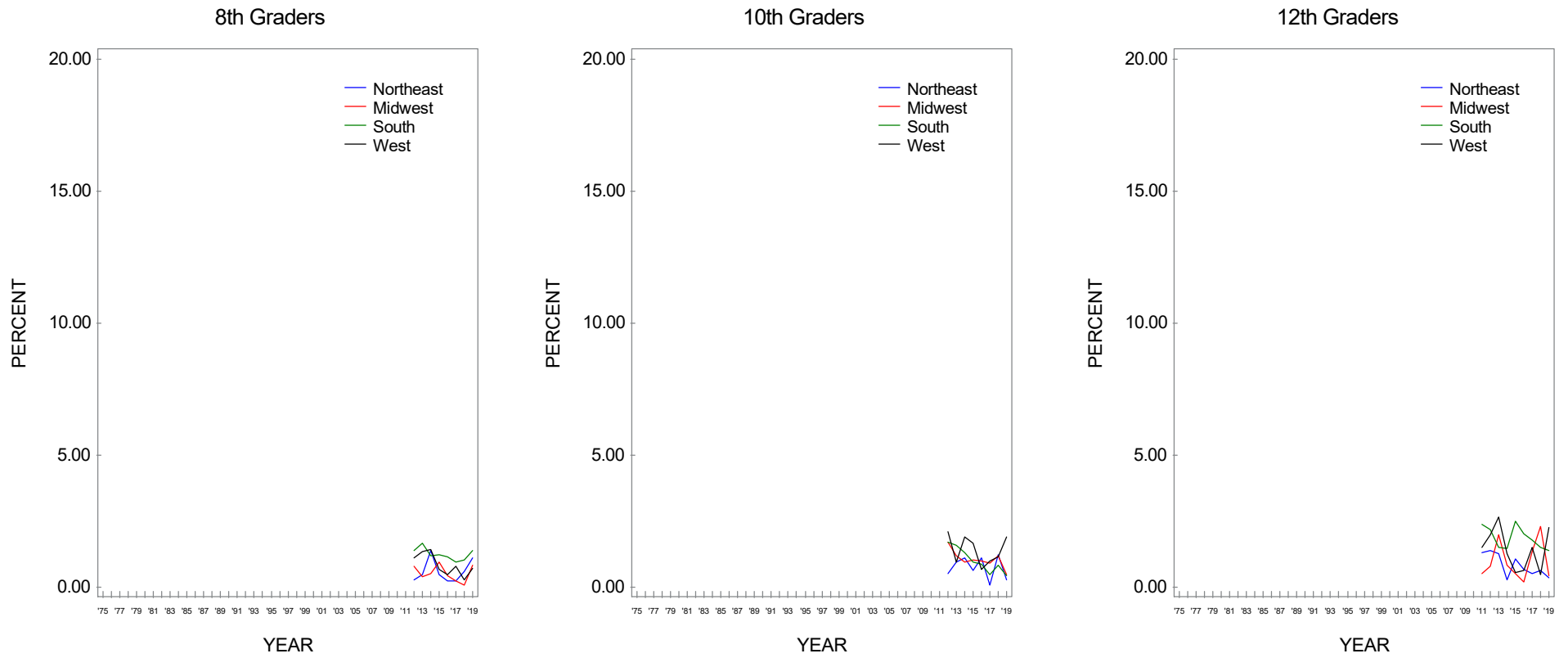
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 386**  
**Dissolvable Tobacco Products: Trends in Annual Prevalence by College Plans**



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

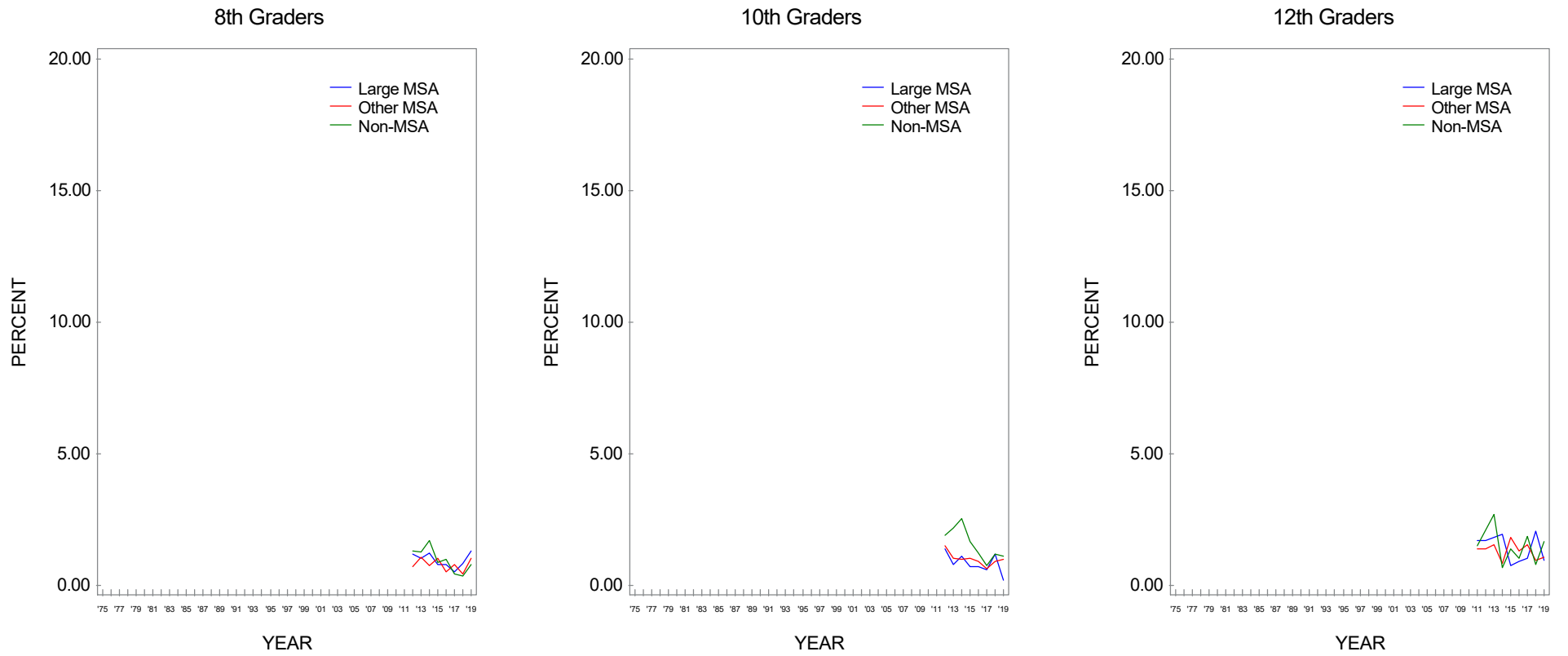
**FIGURE 387**  
**Dissolvable Tobacco Products: Trends in Annual Prevalence by Region**



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



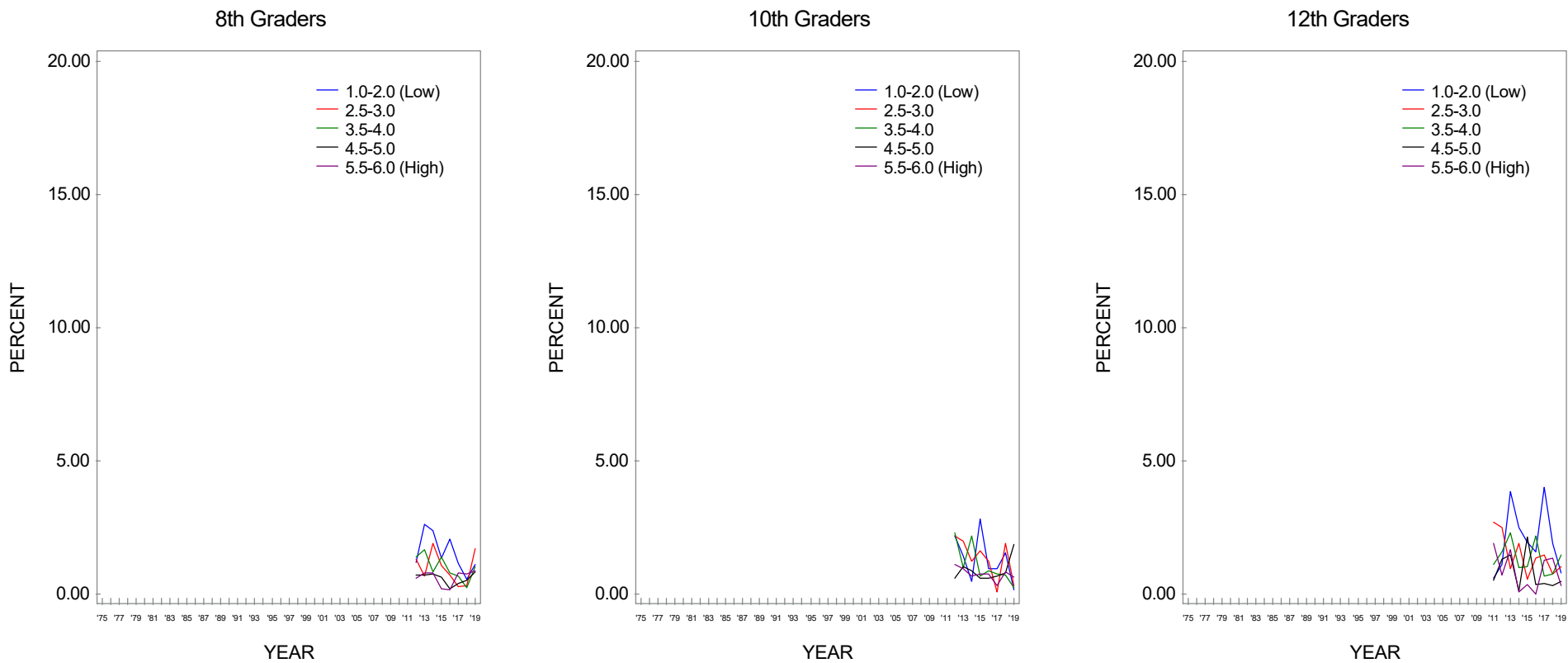
**FIGURE 388**  
**Dissolvable Tobacco Products: Trends in Annual Prevalence by Population Density**



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

**FIGURE 389**

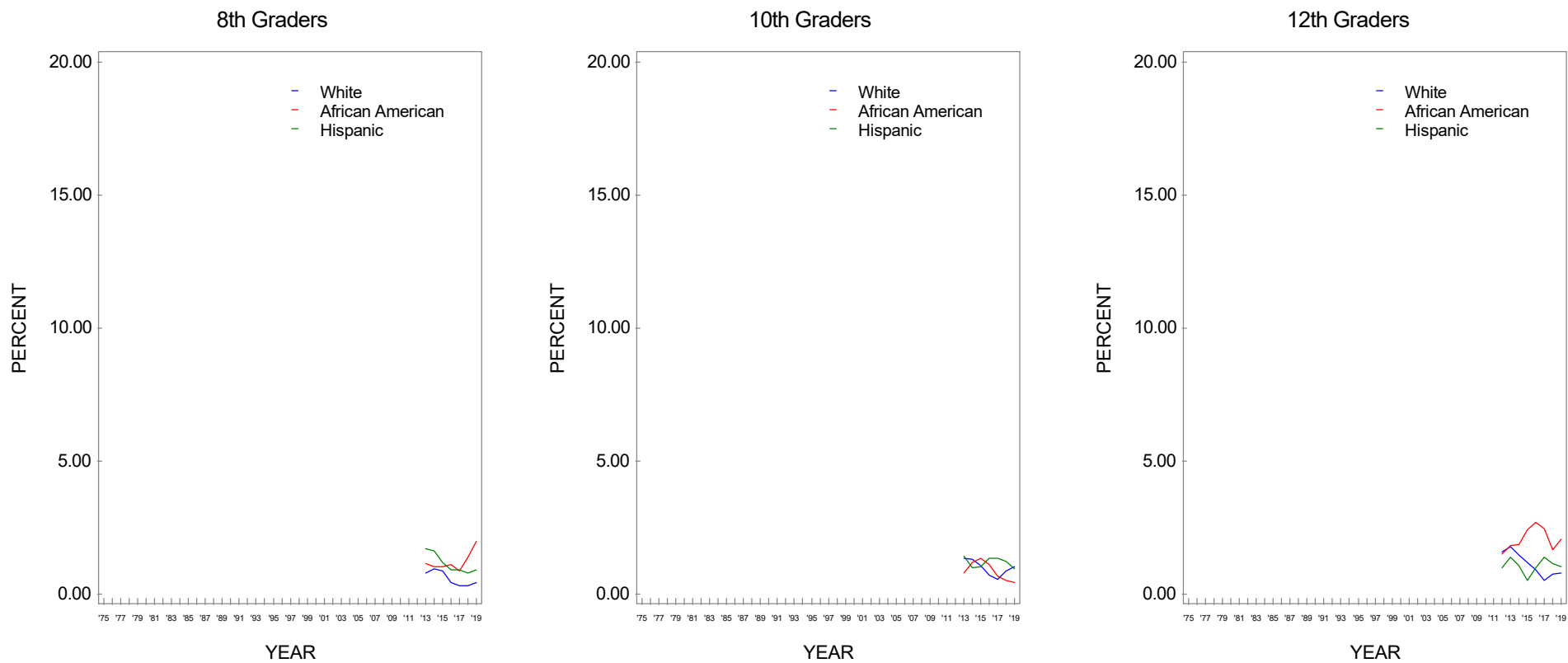
**Dissolvable Tobacco Products: Trends in Annual Prevalence by Average Education Level of Parents\***



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

\*Parental education is an average score of mother's education and father's education.

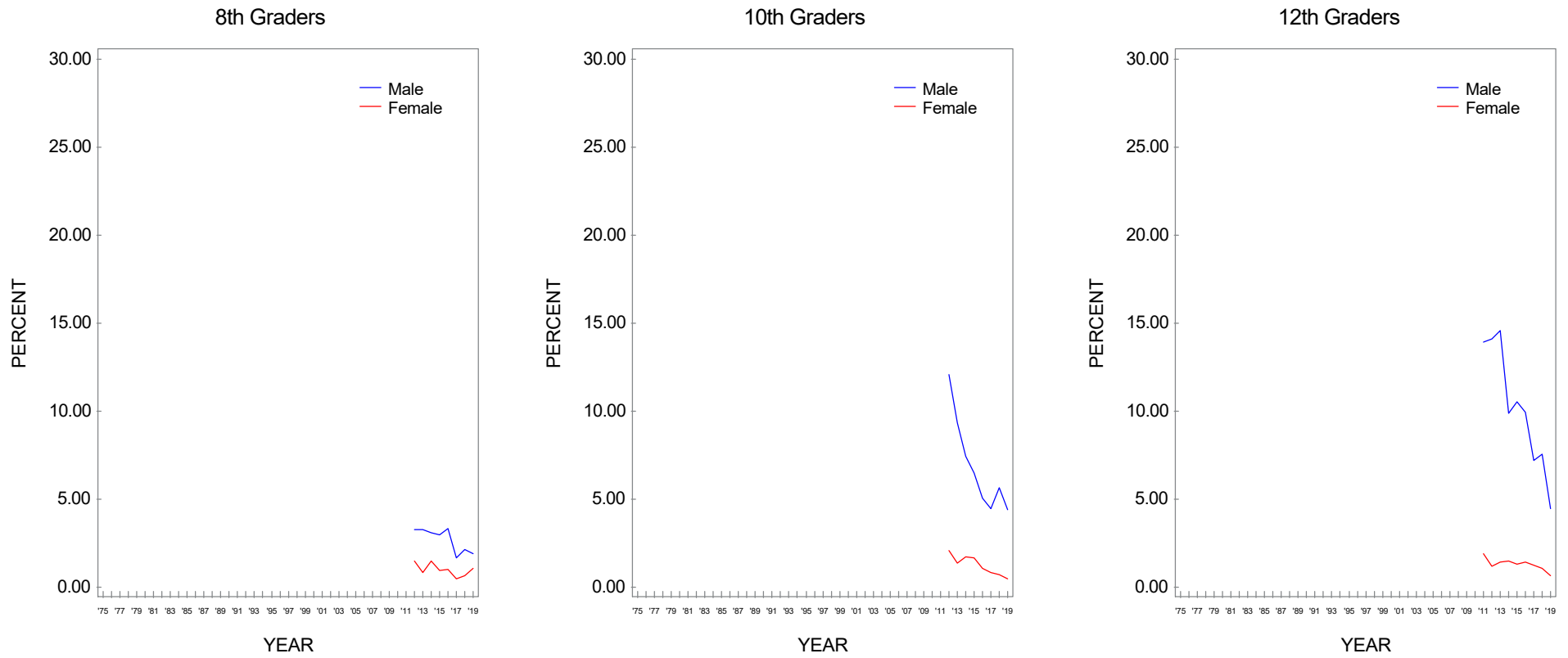
**FIGURE 390**  
**Dissolvable Tobacco Products: Trends in Annual Prevalence by Race/Ethnicity\***



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

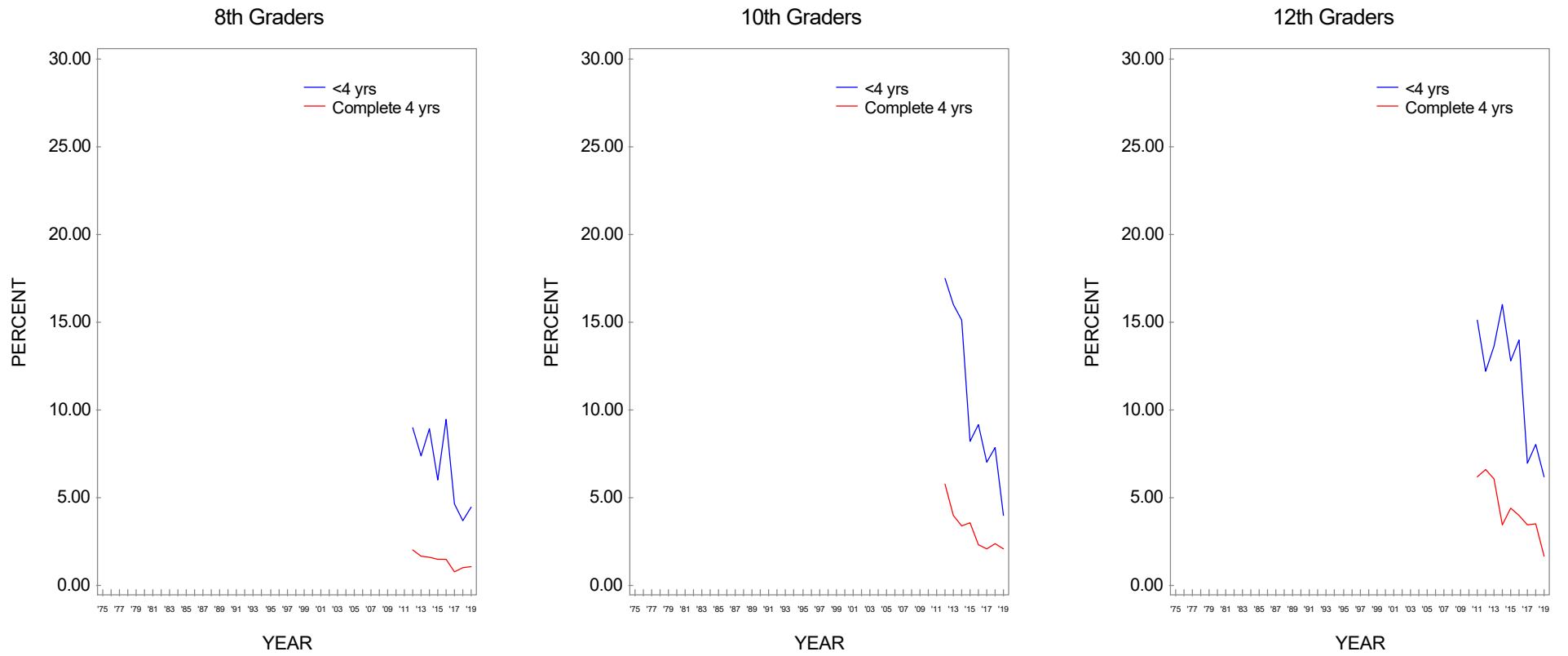
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 391**  
**Snus: Trends in Annual Prevalence by Gender**



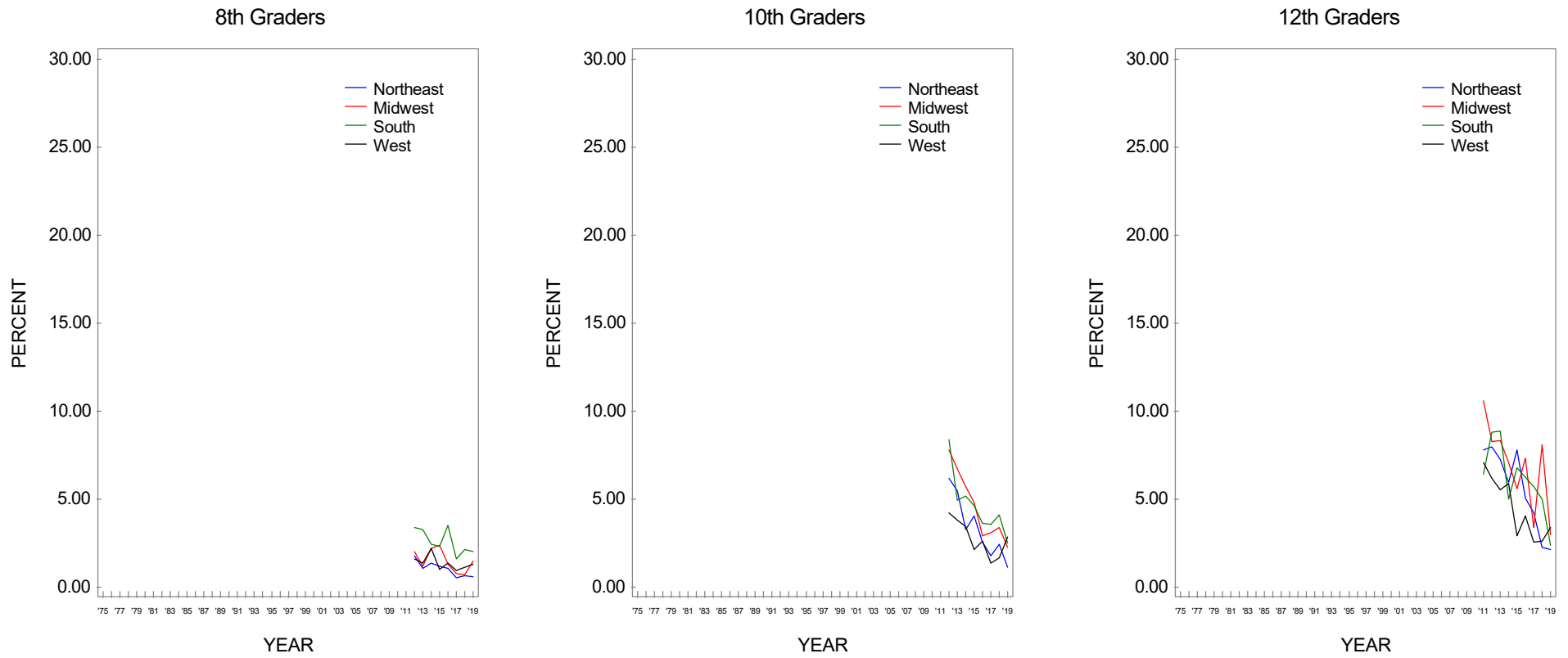
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 392**  
**Snus: Trends in Annual Prevalence by College Plans**



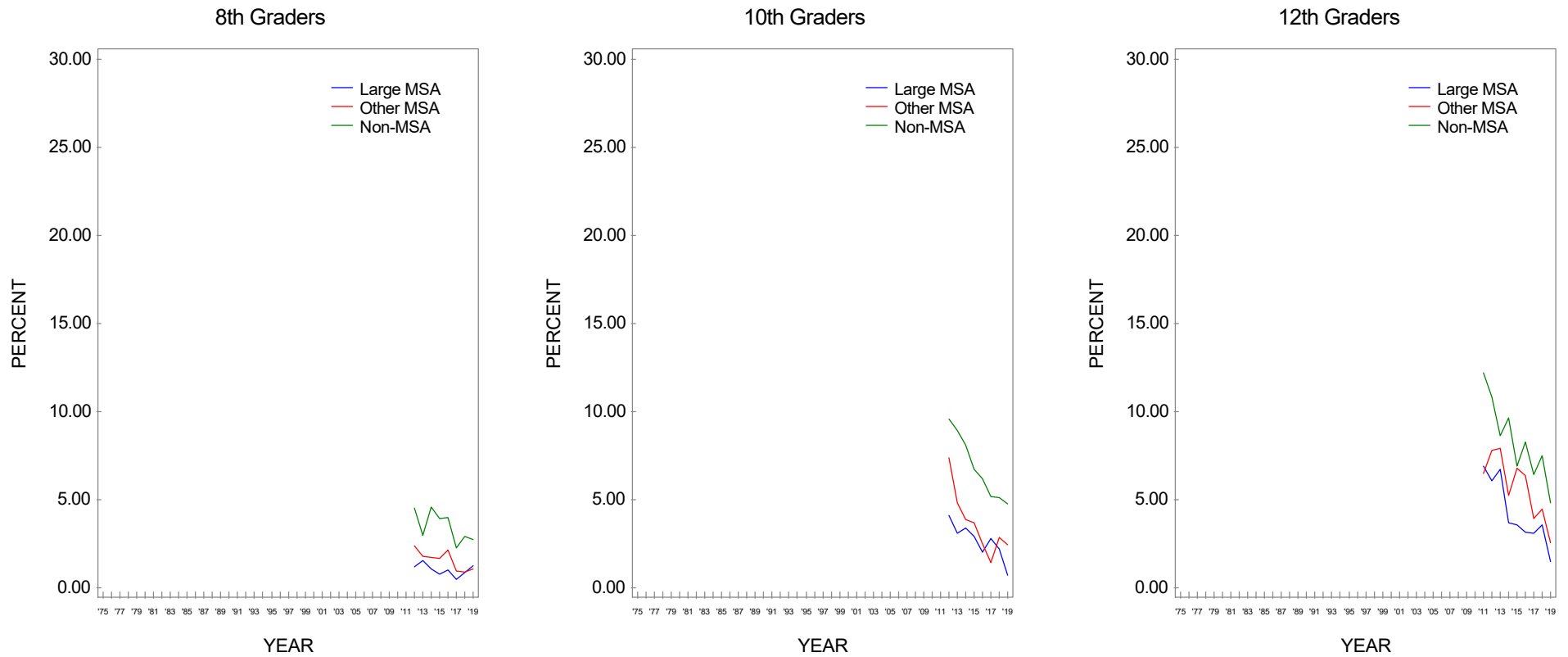
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 393**  
**Snus: Trends in Annual Prevalence by Region**



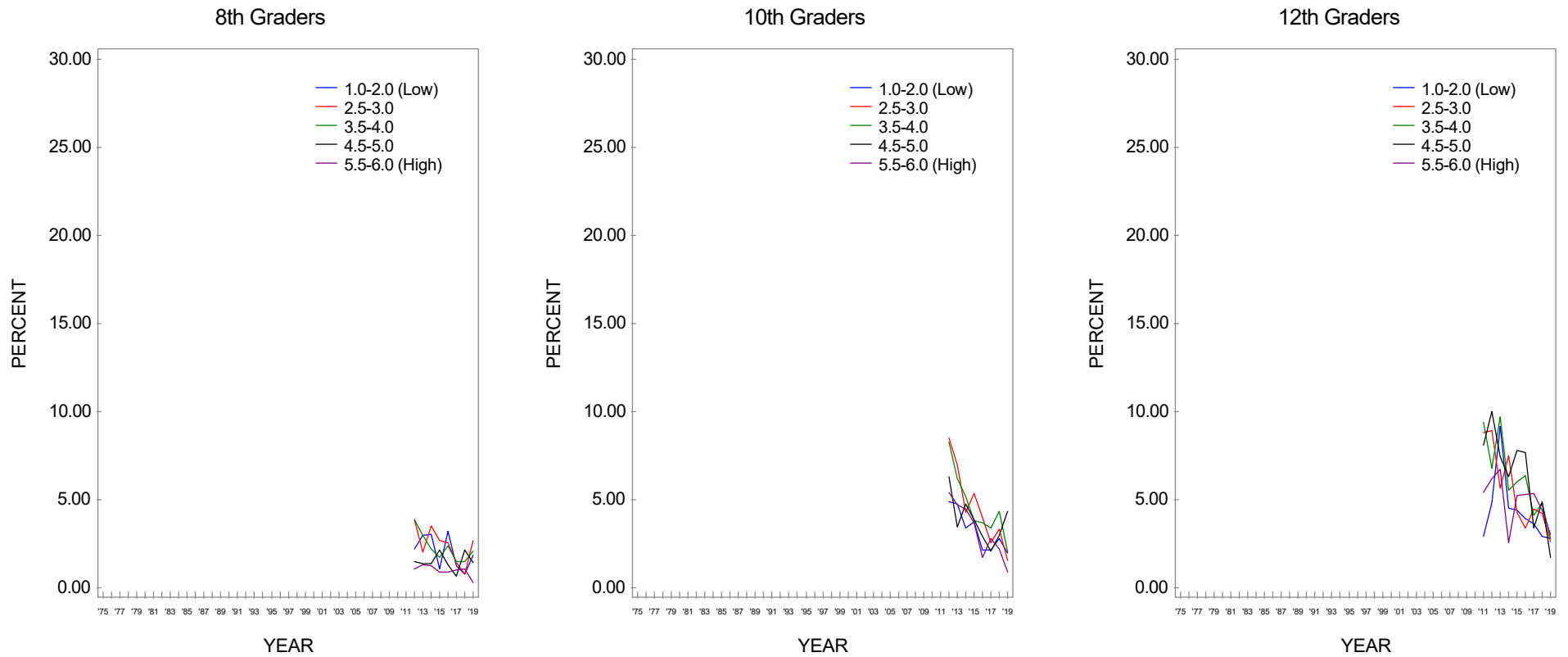
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 394**  
**Snus: Trends in Annual Prevalence by Population Density**



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

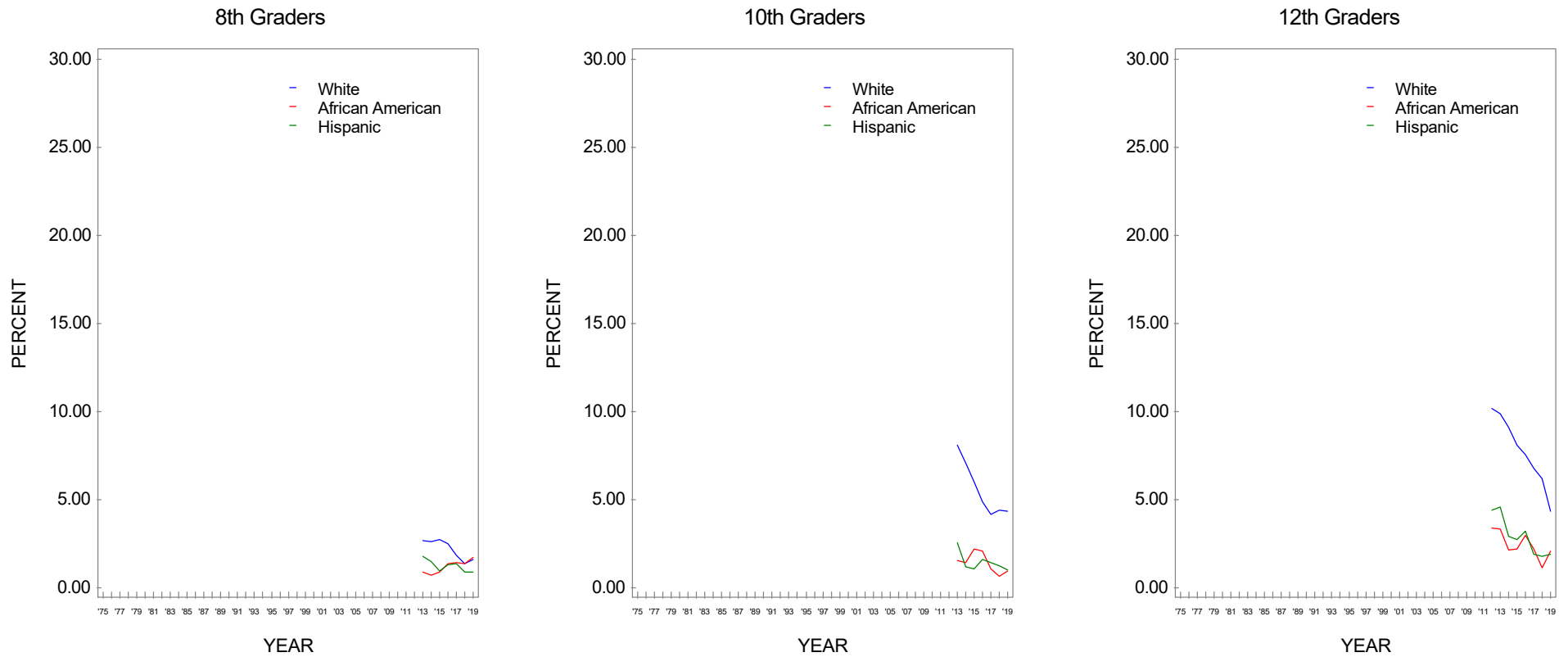
**FIGURE 395**  
**Snus: Trends in Annual Prevalence by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*Parental education is an average score of mother's education and father's education.



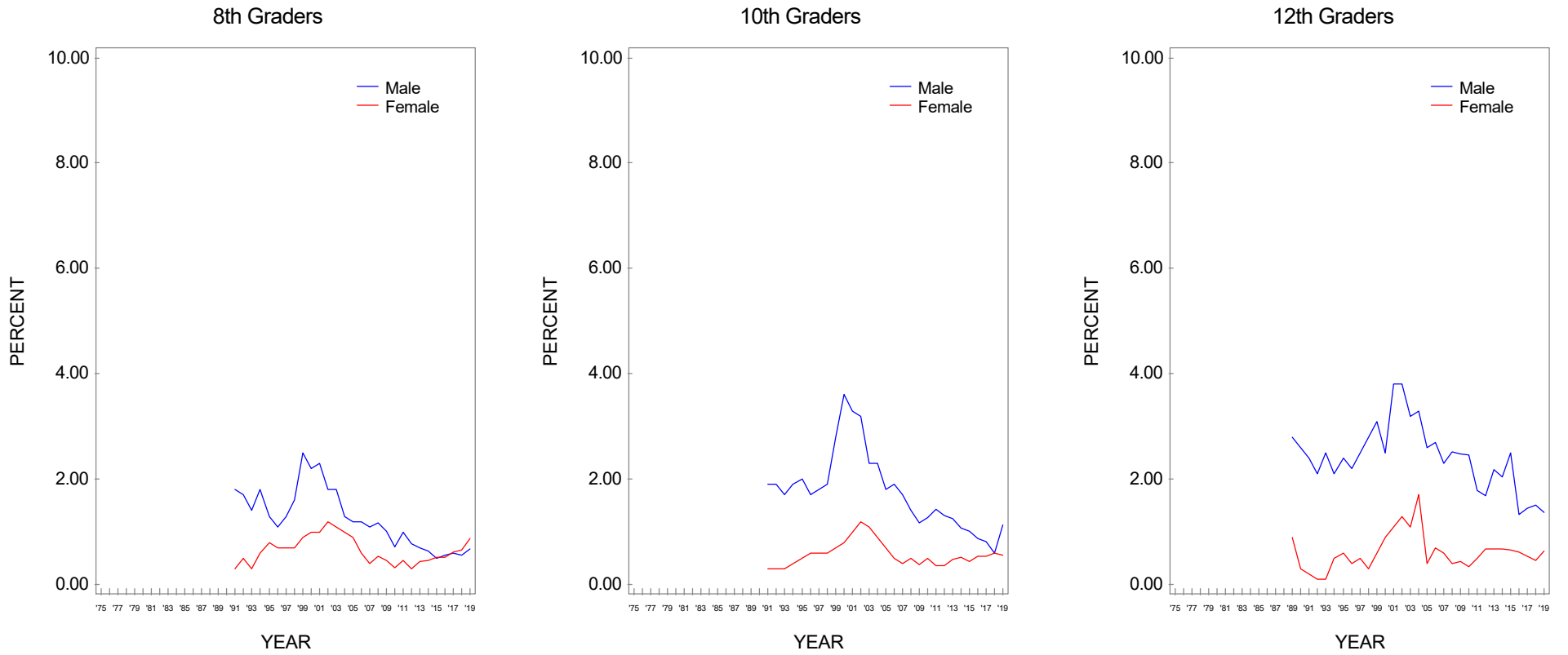
**FIGURE 396**  
**Snus: Trends in Annual Prevalence by Race/Ethnicity\***



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

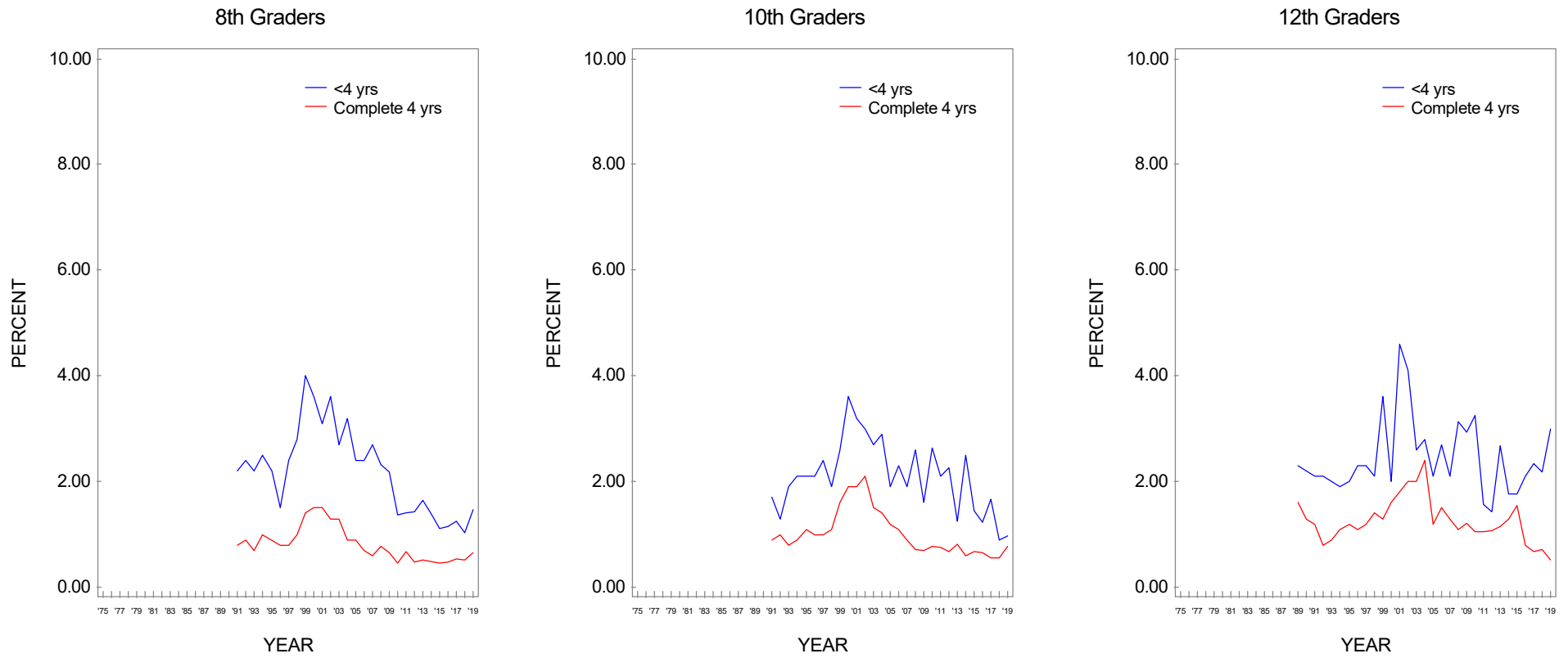
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 397**  
**Steroids: Trends in Annual Prevalence by Gender**



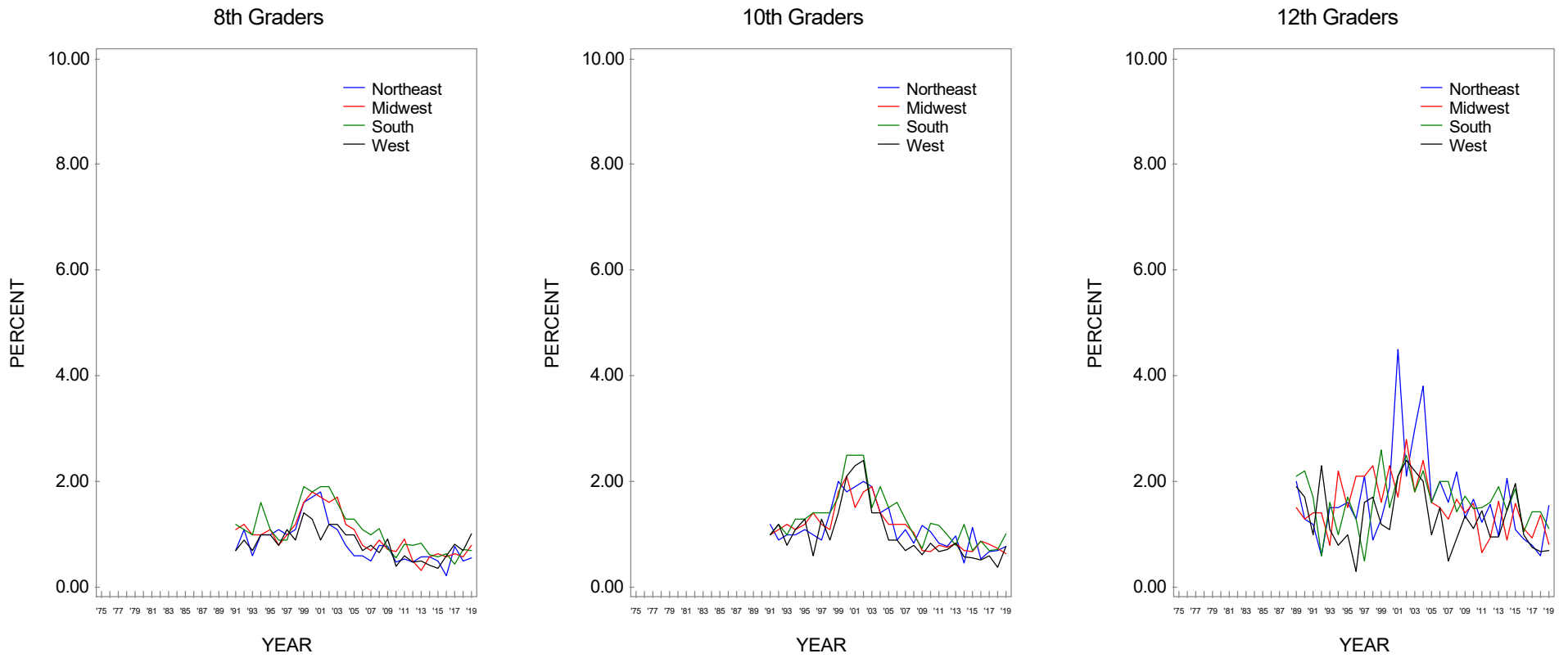
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 398**  
**Steroids: Trends in Annual Prevalence by College Plans**



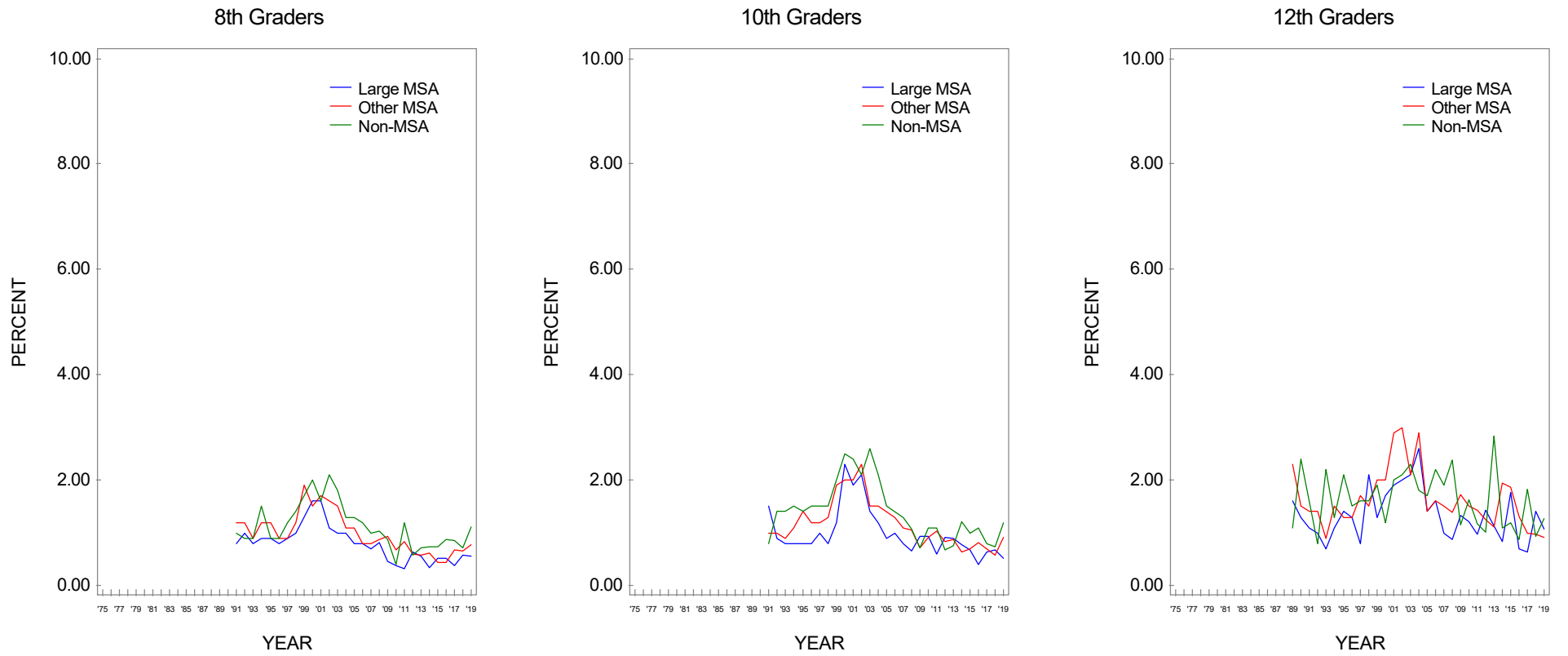
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 399**  
**Steroids: Trends in Annual Prevalence by Region**



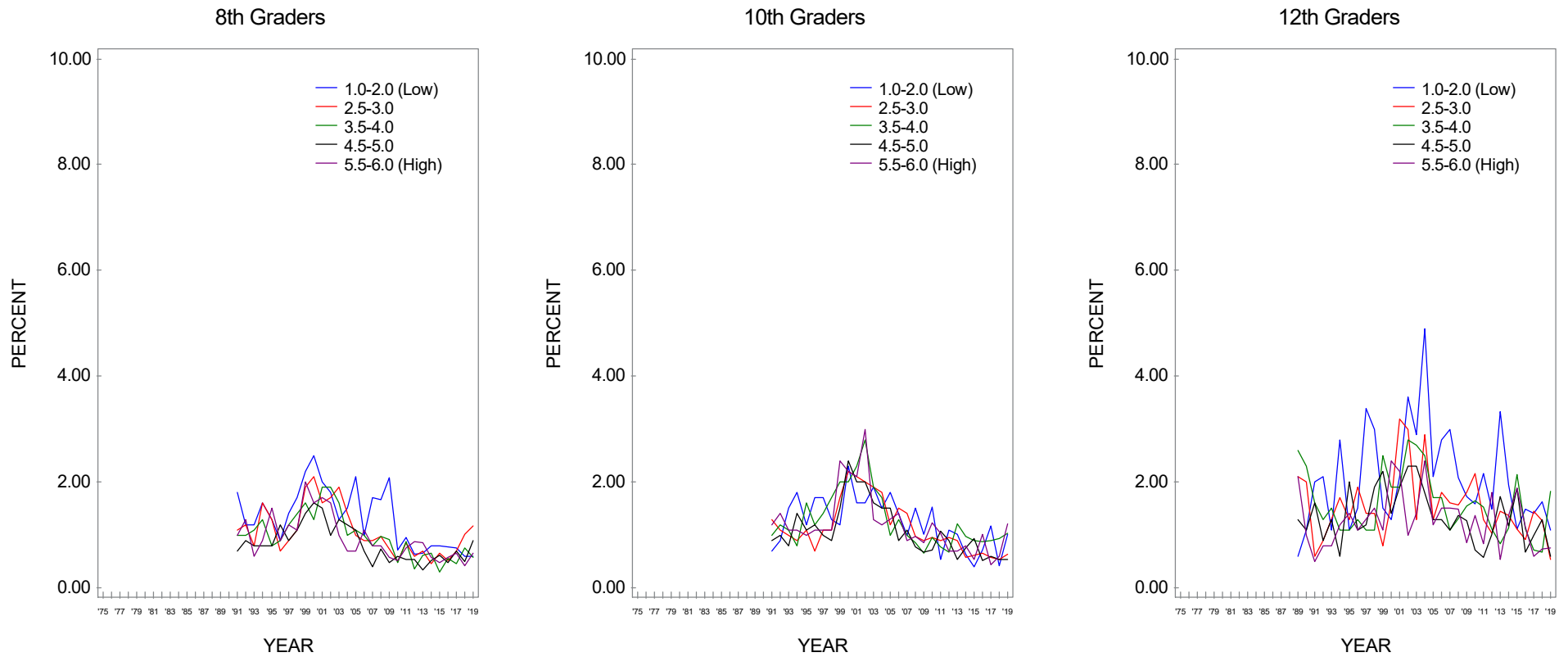
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 400**  
**Steroids: Trends in Annual Prevalence by Population Density**



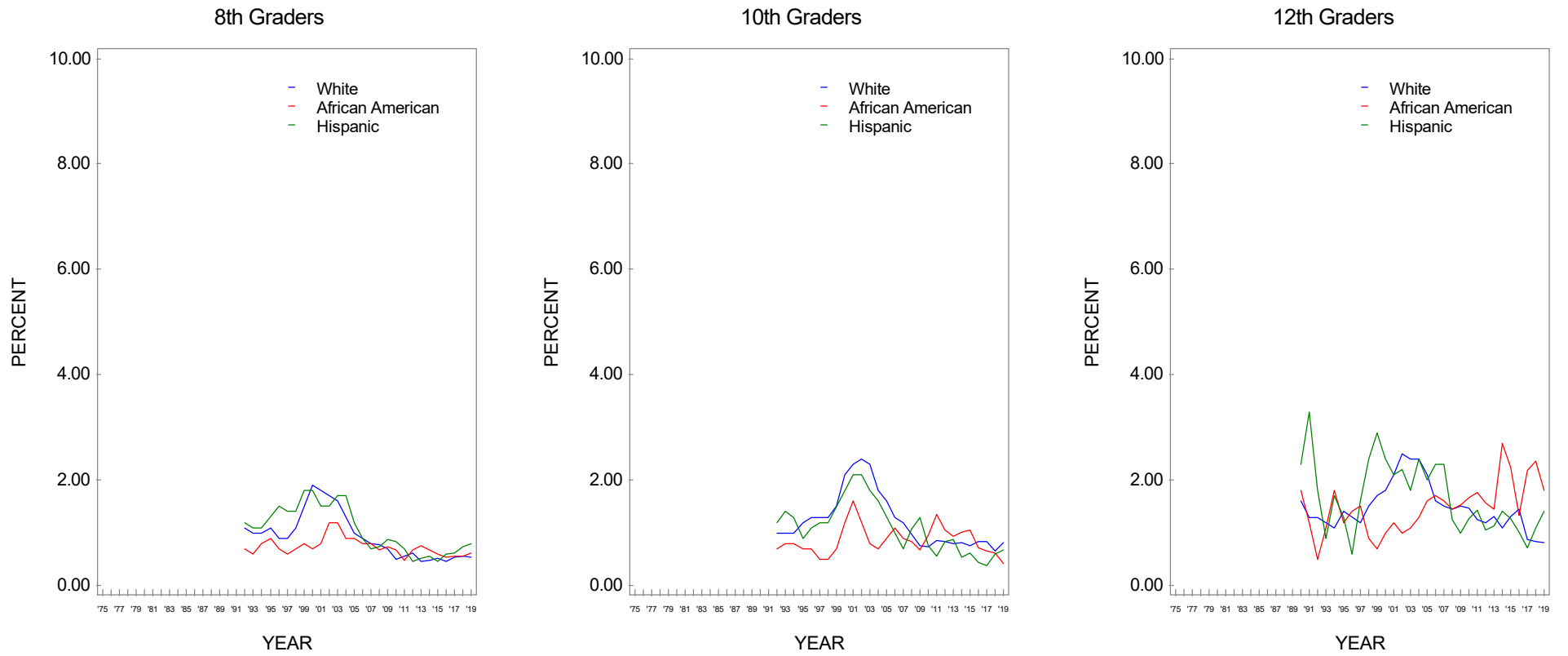
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 401**  
**Steroids: Trends in Annual Prevalence by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
 \*Parental education is an average score of mother's education and father's education.

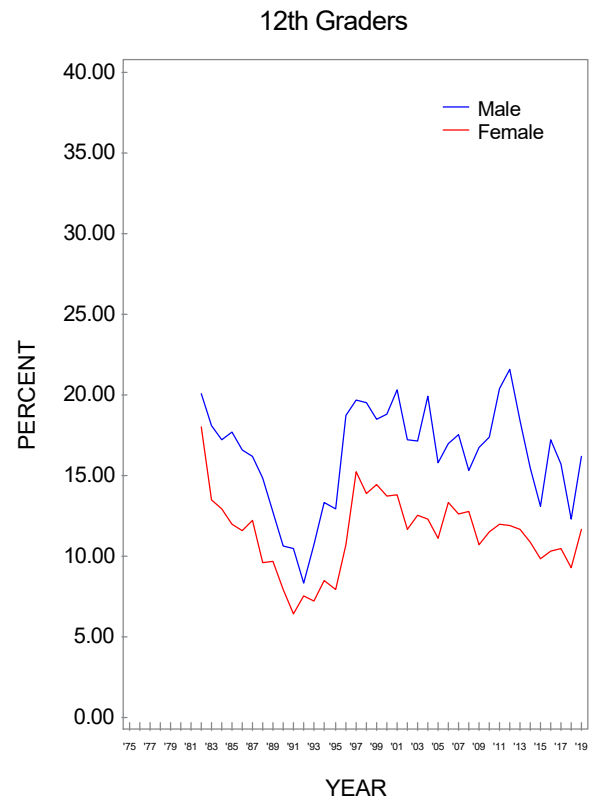
**FIGURE 402**  
**Steroids: Trends in Annual Prevalence by Race/Ethnicity\***



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

\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

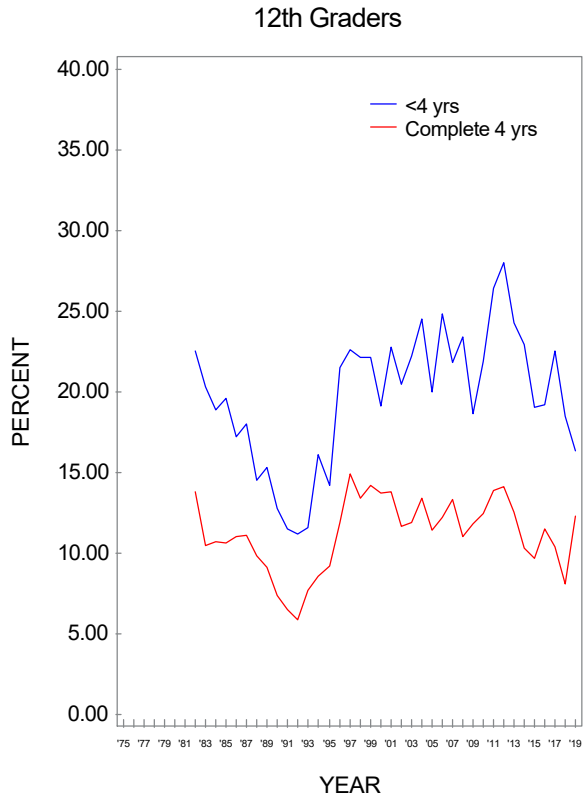
**FIGURE 403**  
**Marijuana: Trends in Lifetime Prevalence of Daily Use for Month or More by Gender**



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

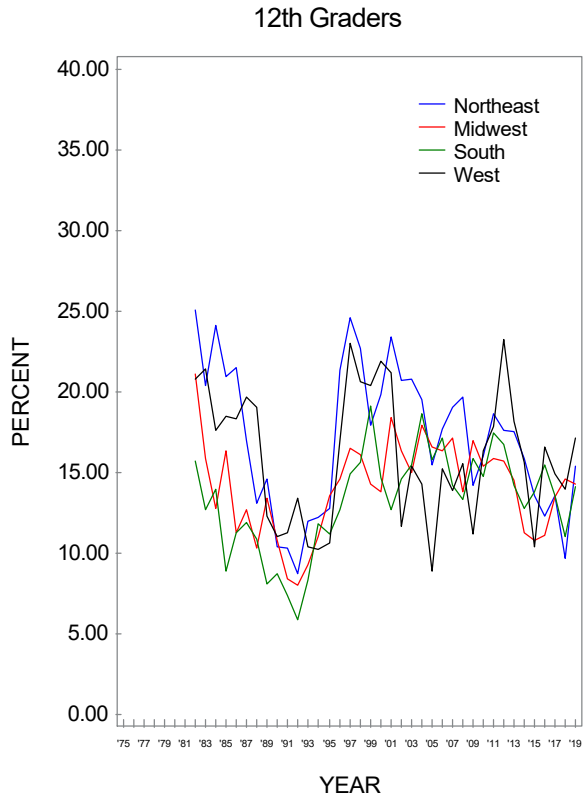


**FIGURE 404**  
**Marijuana: Trends in Lifetime Prevalence of Daily Use for Month or More by College Plans**



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

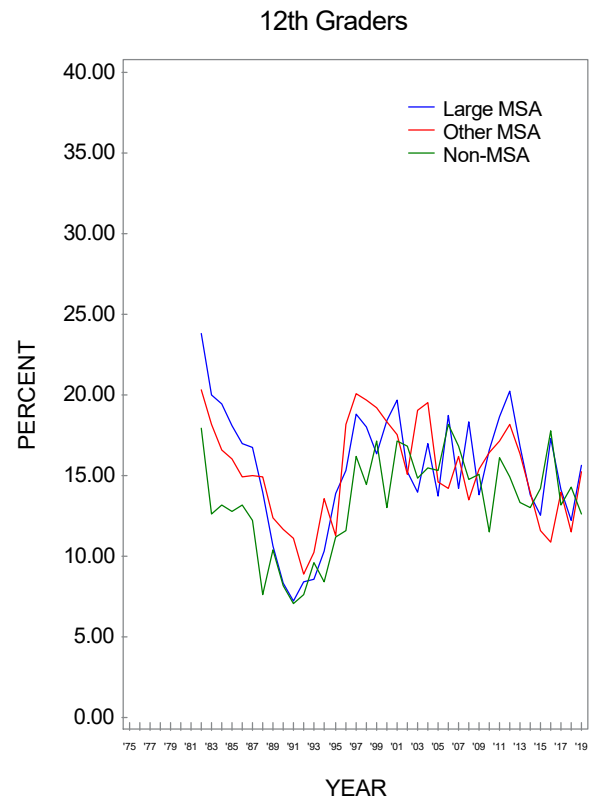
**FIGURE 405**  
**Marijuana: Trends in Lifetime Prevalence of Daily Use for Month or More by Region**



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

**FIGURE 406**

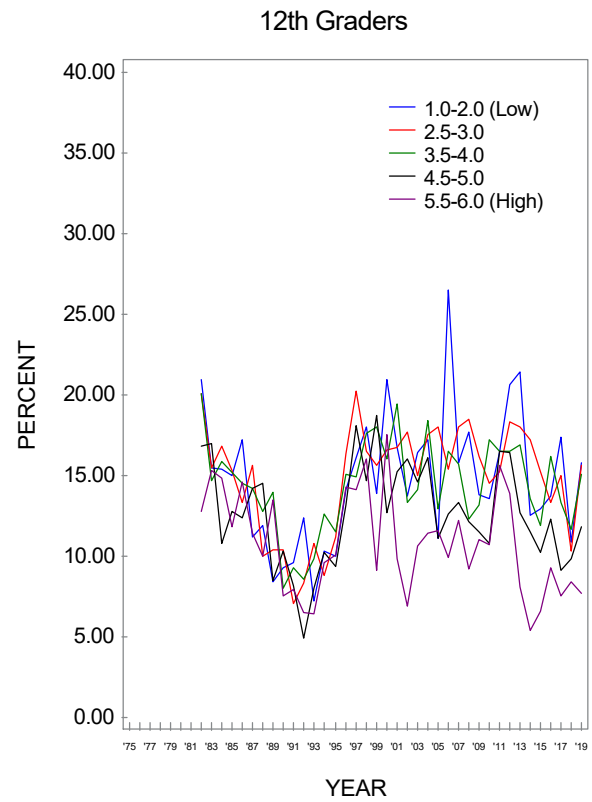
**Marijuana: Trends in Lifetime Prevalence of Daily Use for Month or More by Population Density**



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

**FIGURE 407**

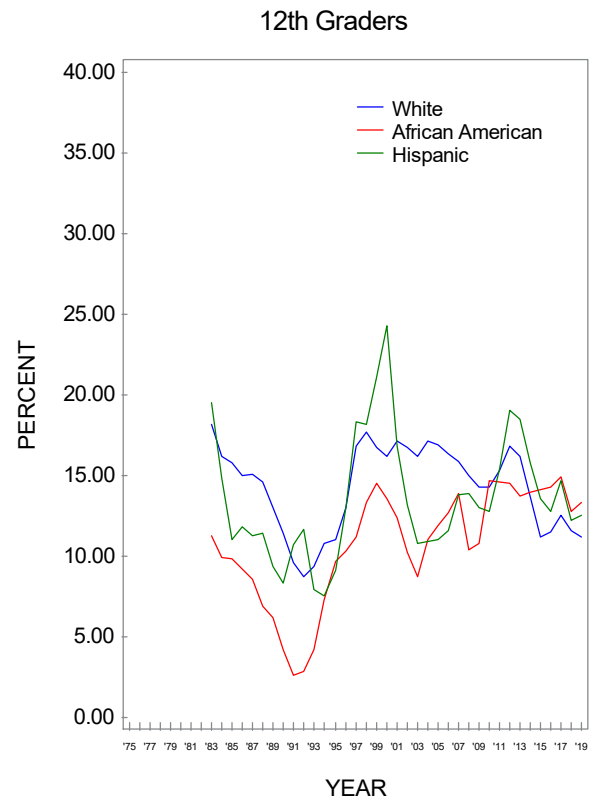
**Marijuana: Trends in Lifetime Prevalence of Daily Use for Month or More by Average Education Level of Parents\***



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

\*Parental education is an average score of mother's education and father's education.

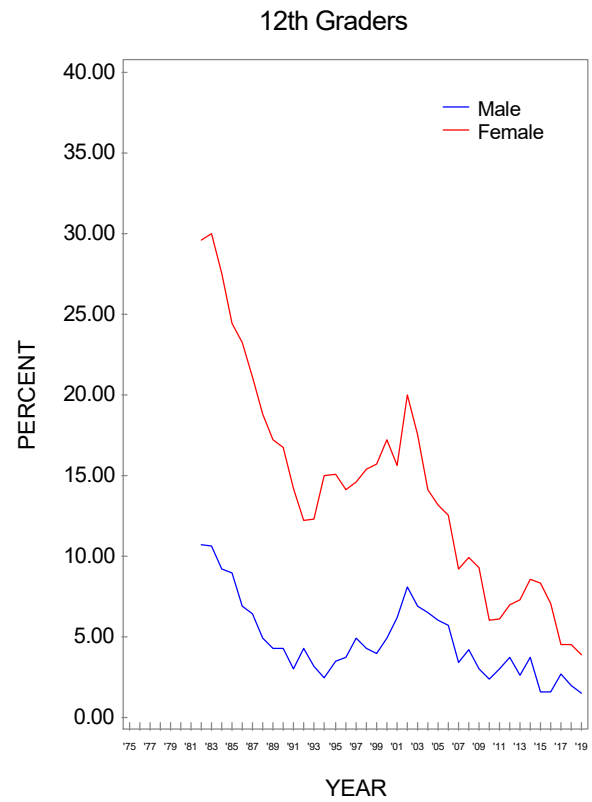
**FIGURE 408**  
**Marijuana: Trends in Lifetime Prevalence of Daily Use for Month or More by Race/Ethnicity\***



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

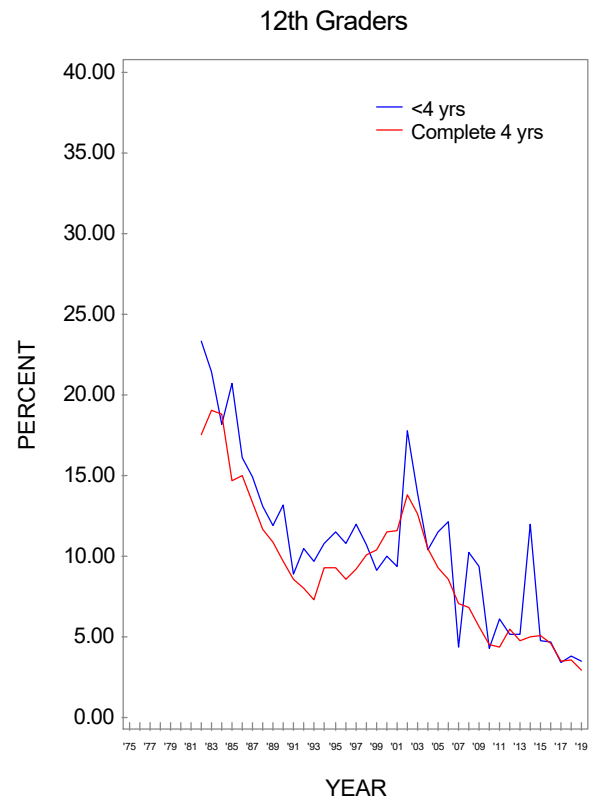
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 409**  
**Nonprescription Diet Pills: Trends in Annual Prevalence by Gender**



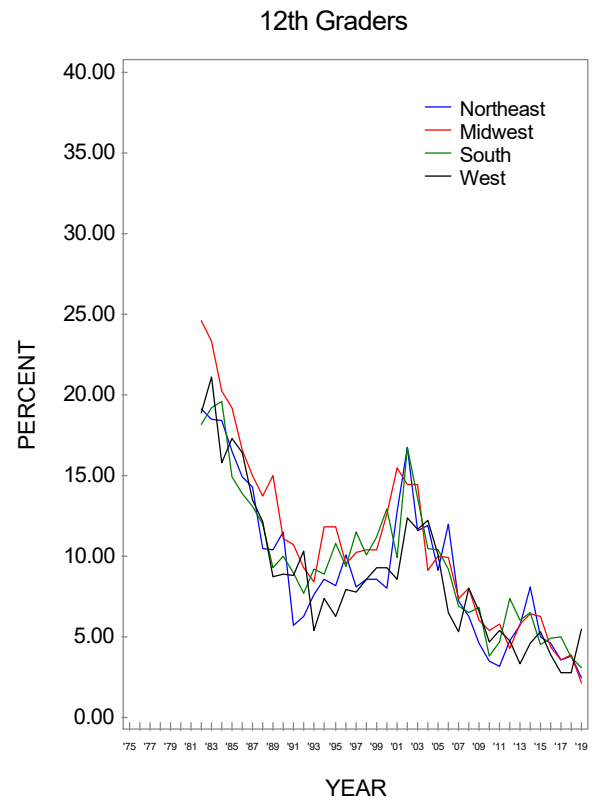
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 410**  
**Nonprescription Diet Pills: Trends in Annual Prevalence by College Plans**



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

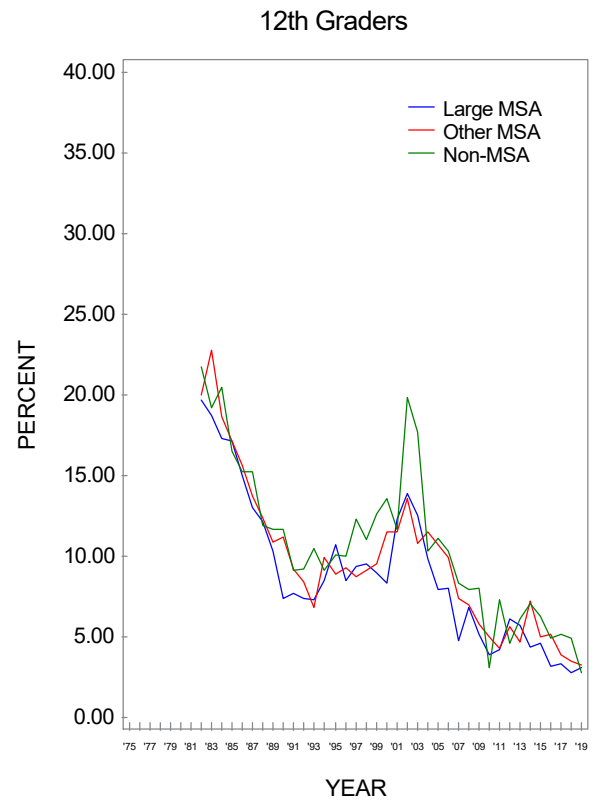
**FIGURE 411**  
**Nonprescription Diet Pills: Trends in Annual Prevalence by Region**



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



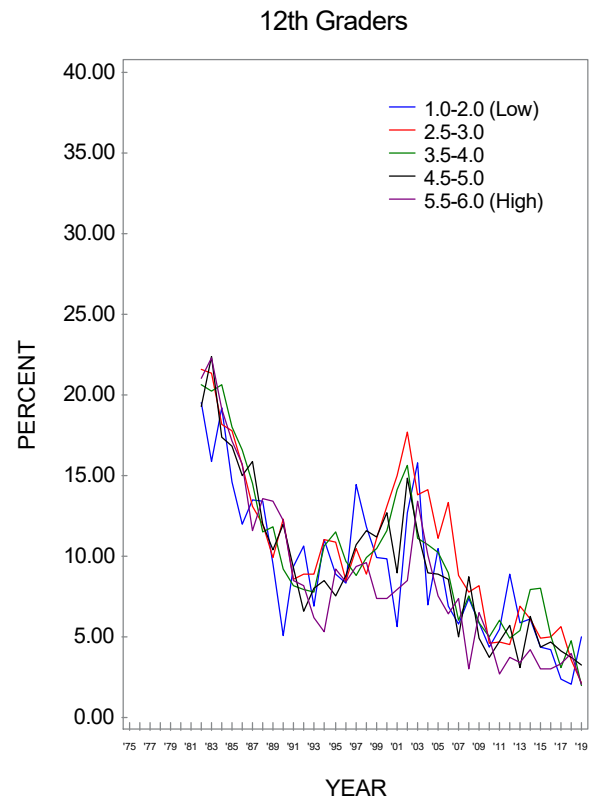
**FIGURE 412**  
**Nonprescription Diet Pills: Trends in Annual Prevalence by Population Density**



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

**FIGURE 413**

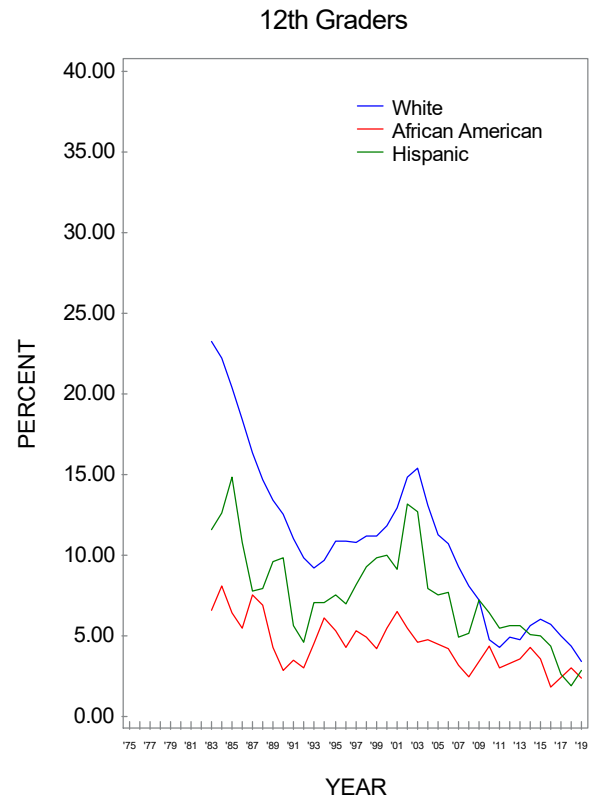
**Nonprescription Diet Pills: Trends in Annual Prevalence by Average Education Level of Parents\***



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

\*Parental education is an average score of mother's education and father's education.

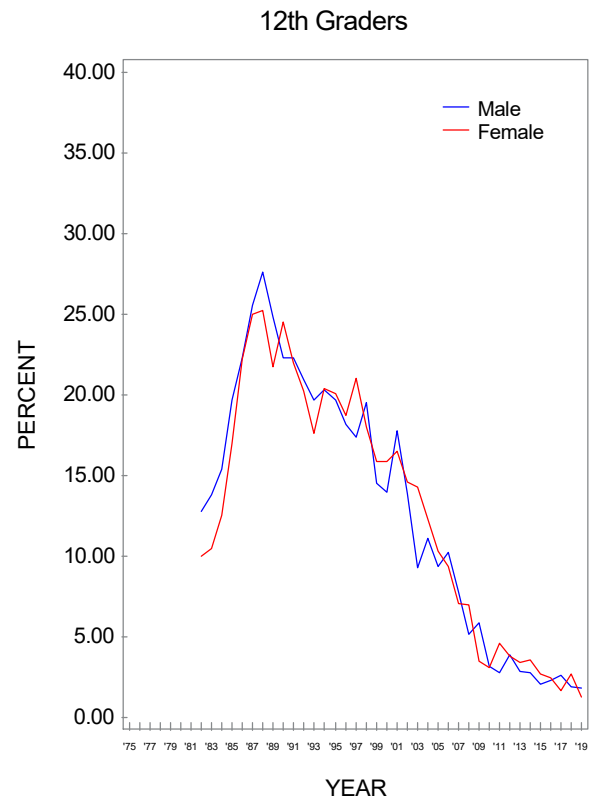
**FIGURE 414**  
**Nonprescription Diet Pills: Trends in Annual Prevalence by Race/Ethnicity\***



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

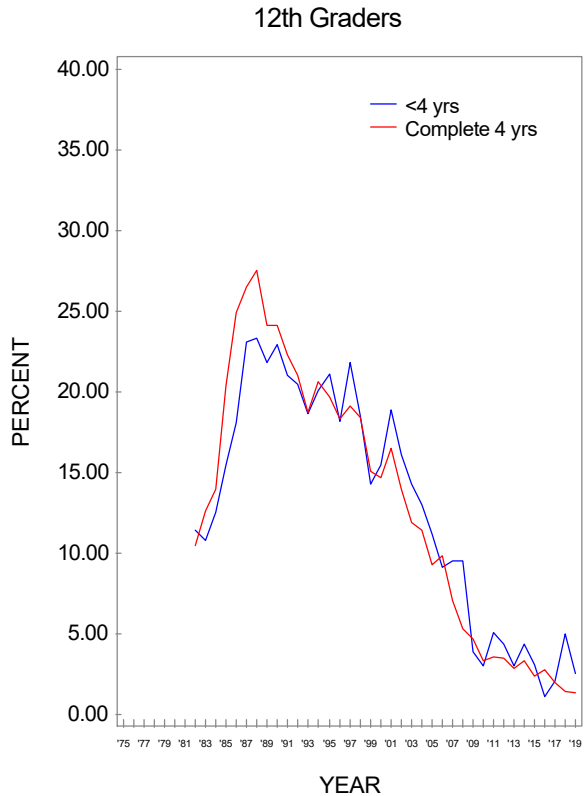
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 415**  
**Nonprescription Stay-Awake Pills: Trends in Annual Prevalence by Gender**



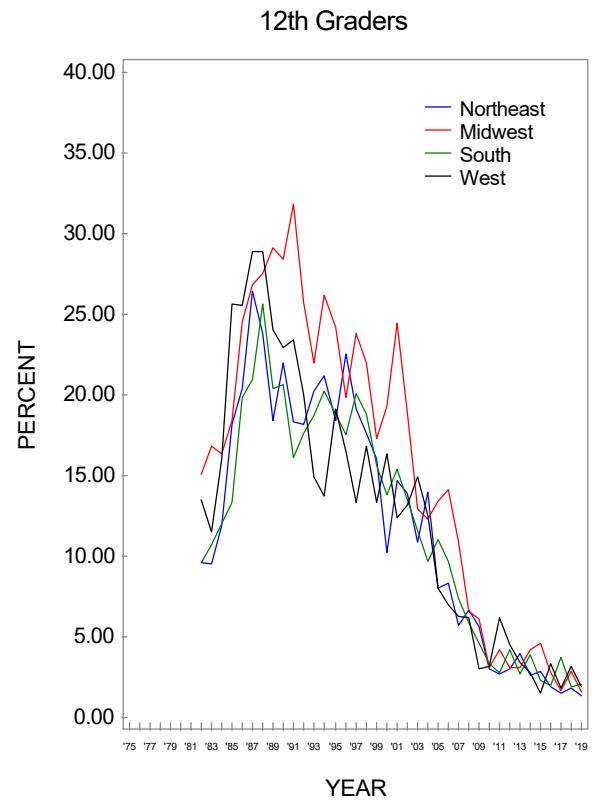
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 416**  
**Nonprescription Stay-Awake Pills: Trends in Annual Prevalence by College Plans**



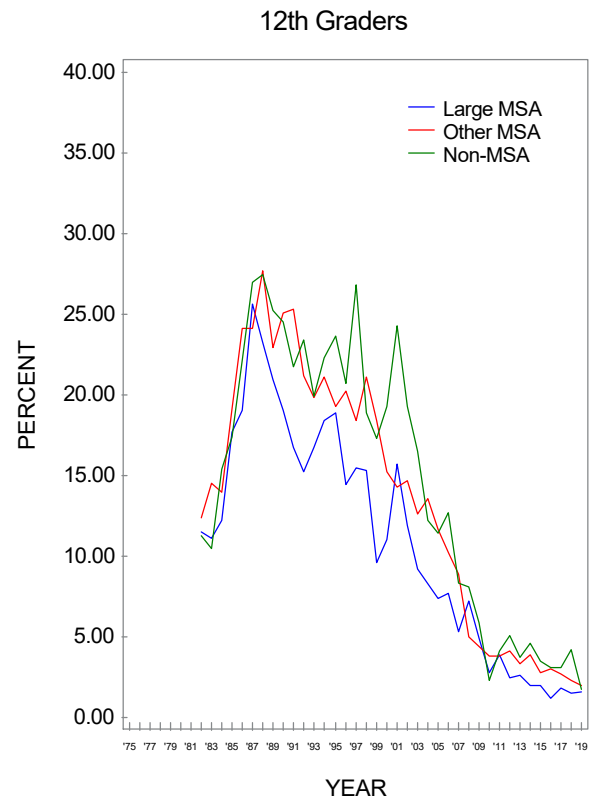
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 417**  
**Nonprescription Stay-Awake Pills: Trends in Annual Prevalence by Region**



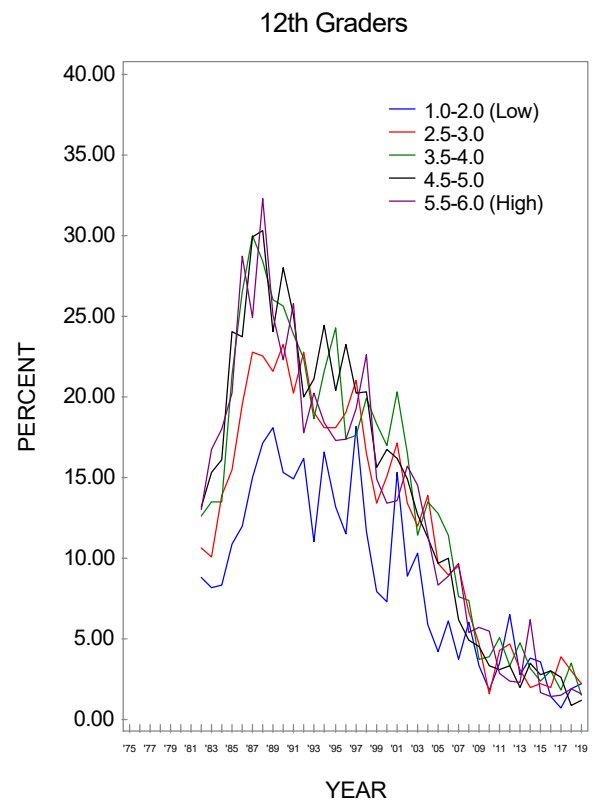
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 418**  
**Nonprescription Stay-Awake Pills: Trends in Annual Prevalence by Population Density**



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

**FIGURE 419**  
**Nonprescription Stay-Awake Pills: Trends in Annual Prevalence by Average Education Level of Parents\***

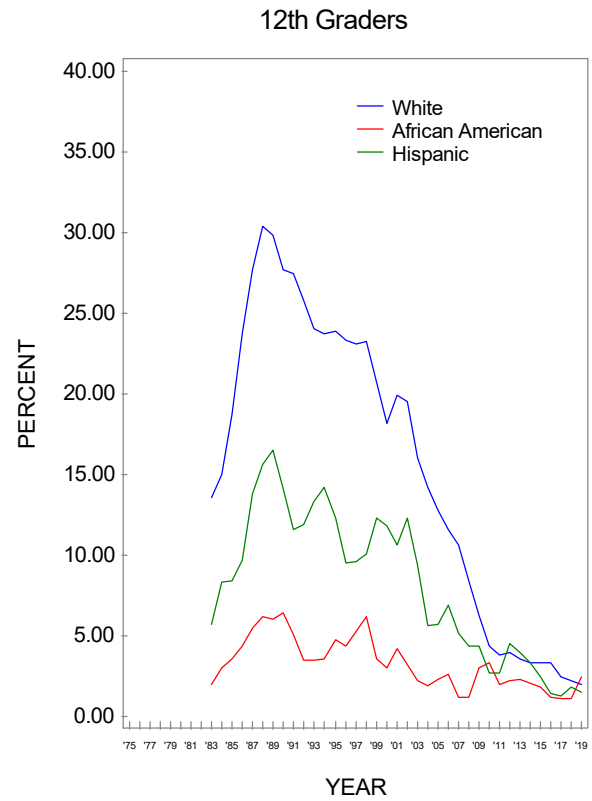


Source. The Monitoring the Future study, the University of Michigan.

\*Parental education is an average score of mother's education and father's education.



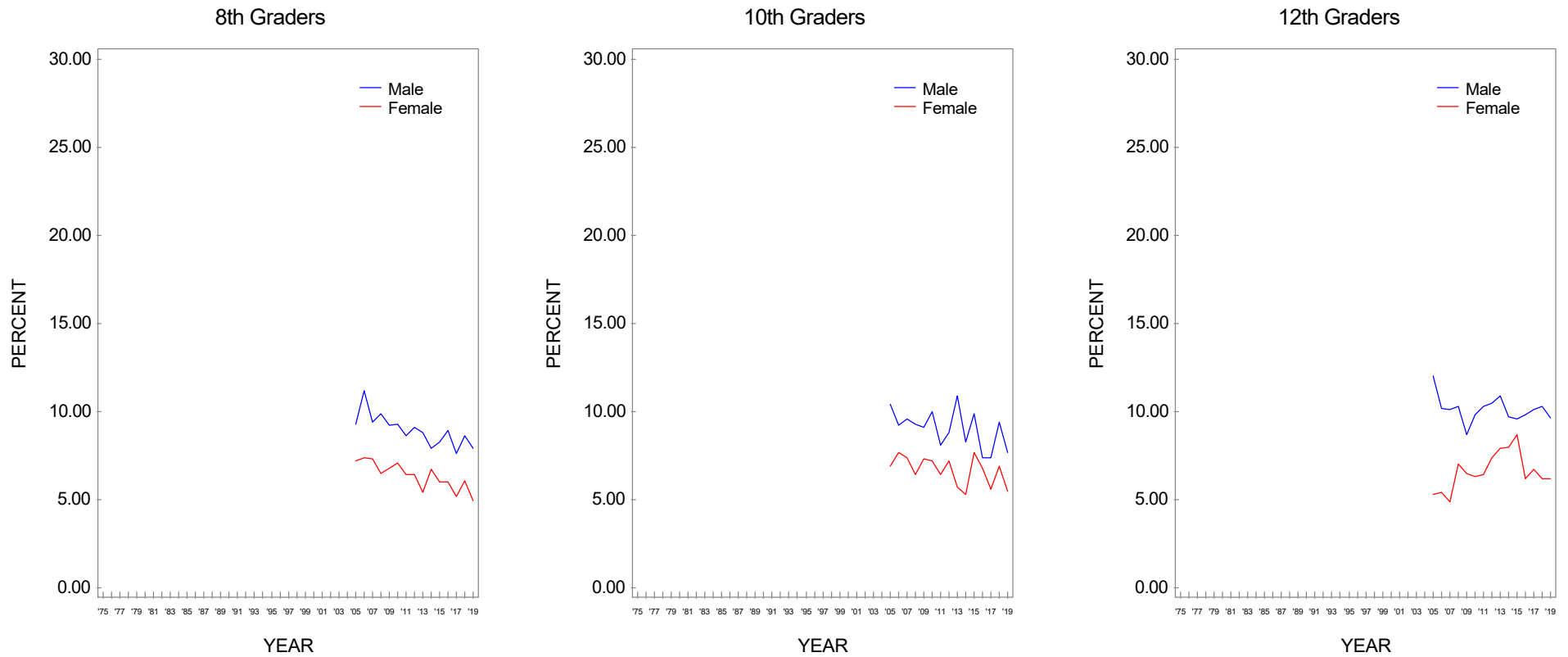
**FIGURE 420**  
**Nonprescription Stay-Awake Pills: Trends in Annual Prevalence by Race/Ethnicity\***



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

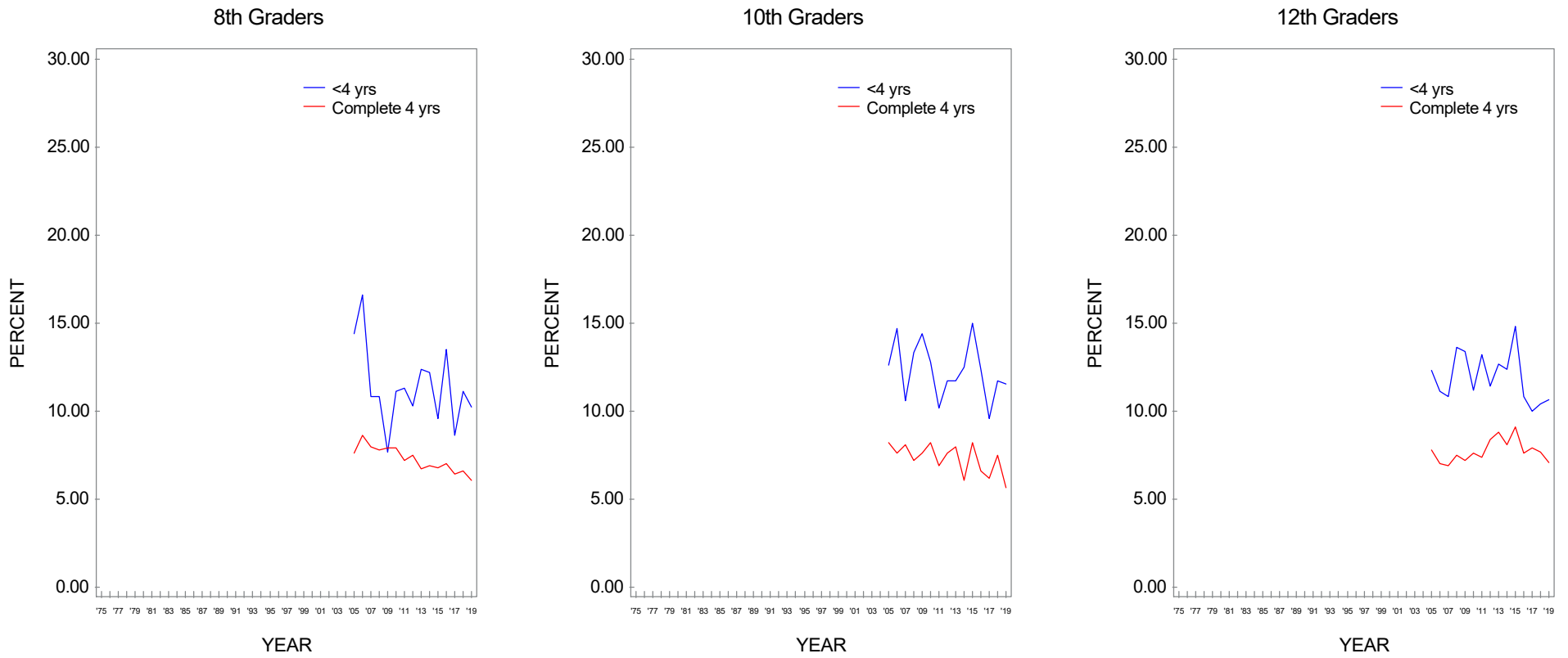
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 421**  
**Stimulant-Type ADHD Drugs: Trends in Lifetime Prevalence of Legal Use by Gender**



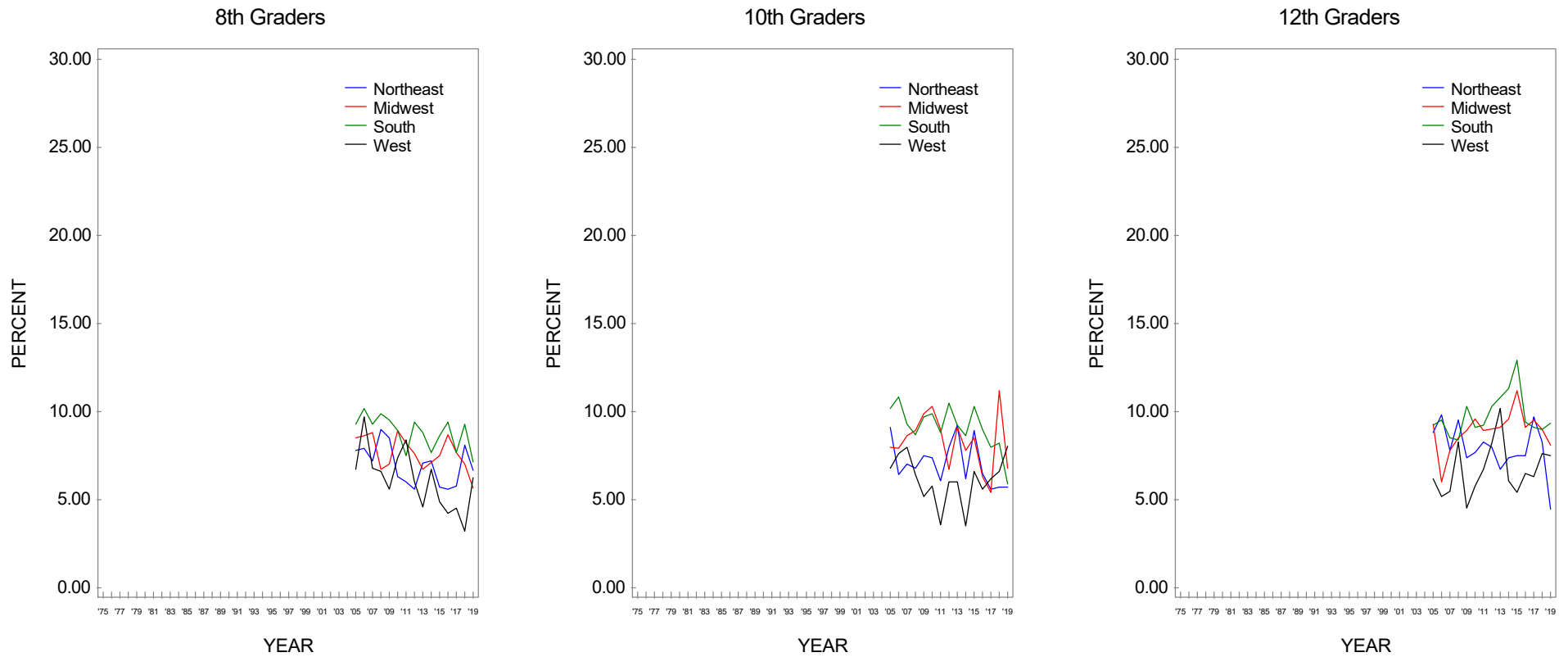
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 422**  
**Stimulant-Type ADHD Drugs: Trends in Lifetime Prevalence of Legal Use by College Plans**



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

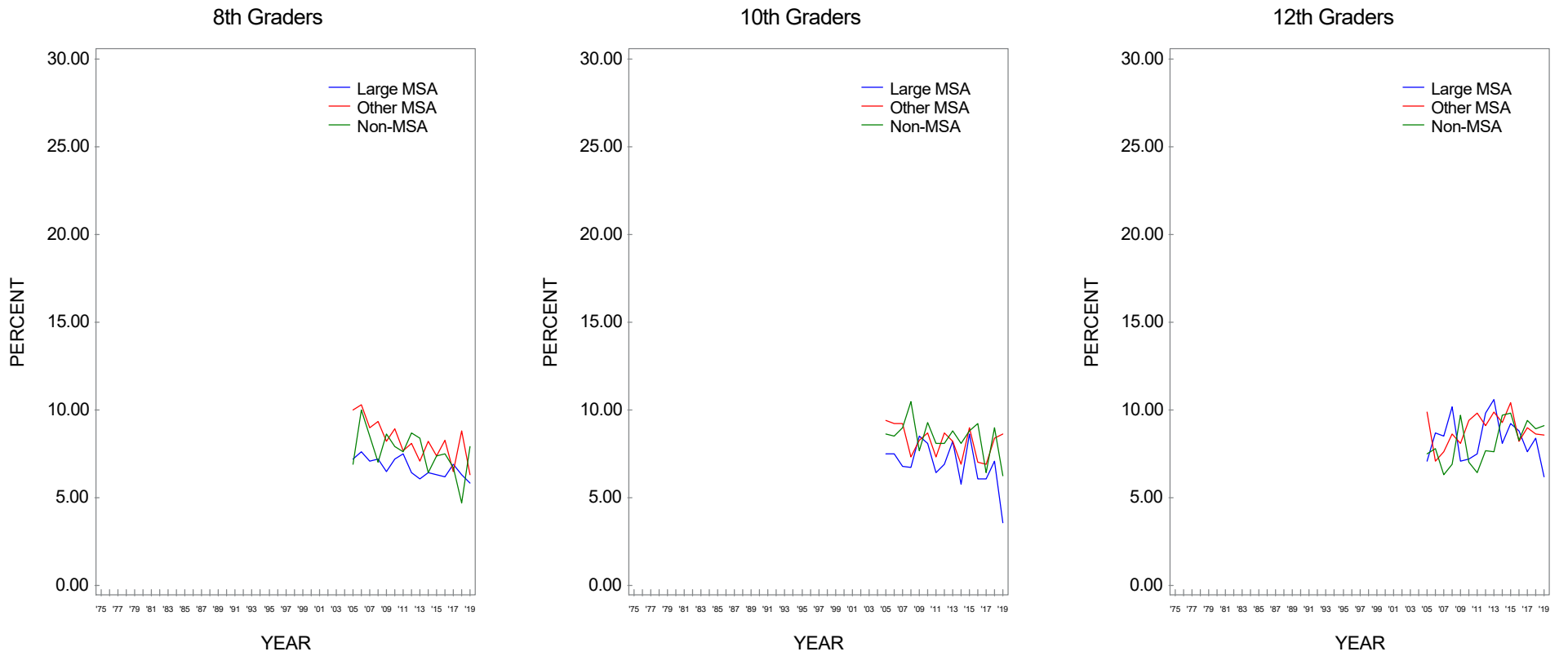
**FIGURE 423**  
**Stimulant-Type ADHD Drugs: Trends in Lifetime Prevalence of Legal Use by Region**



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

**FIGURE 424**

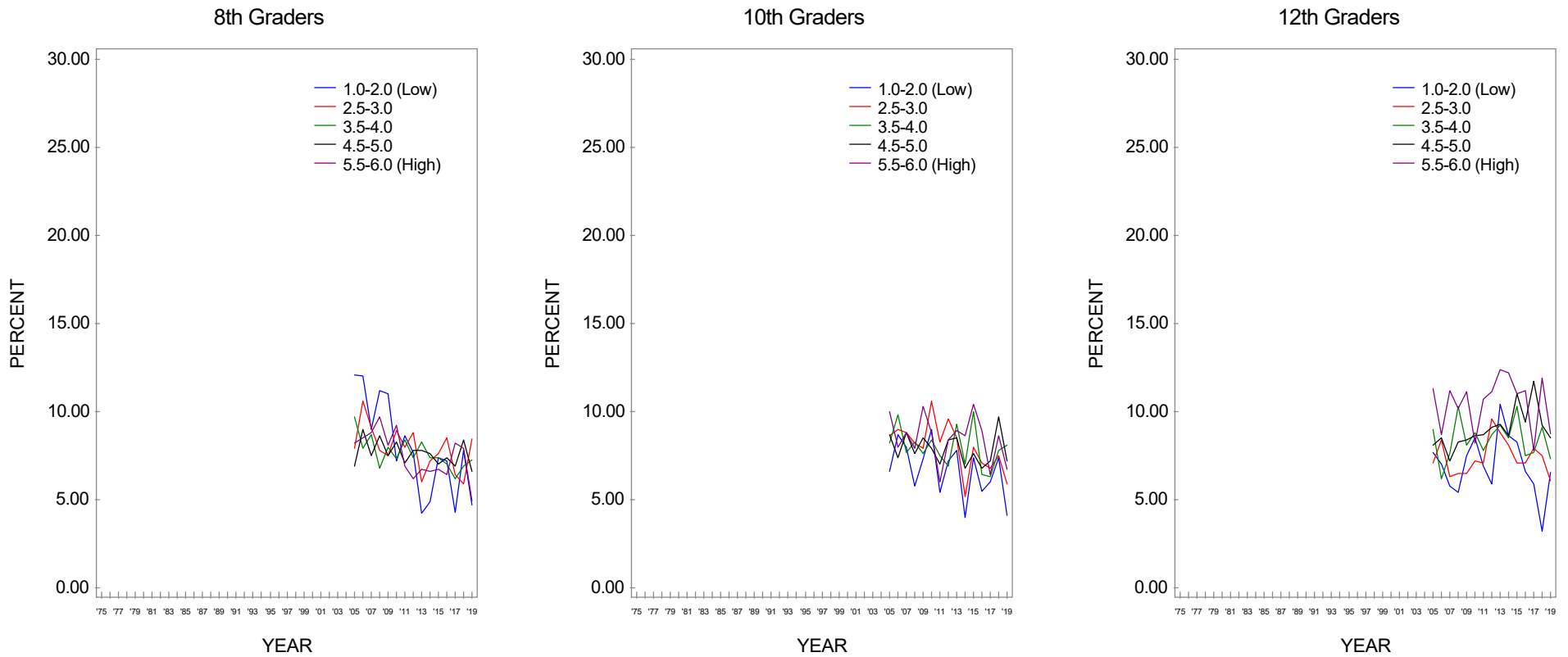
**Stimulant-Type ADHD Drugs: Trends in Lifetime Prevalence of Legal Use by Population Density**



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

**FIGURE 425**

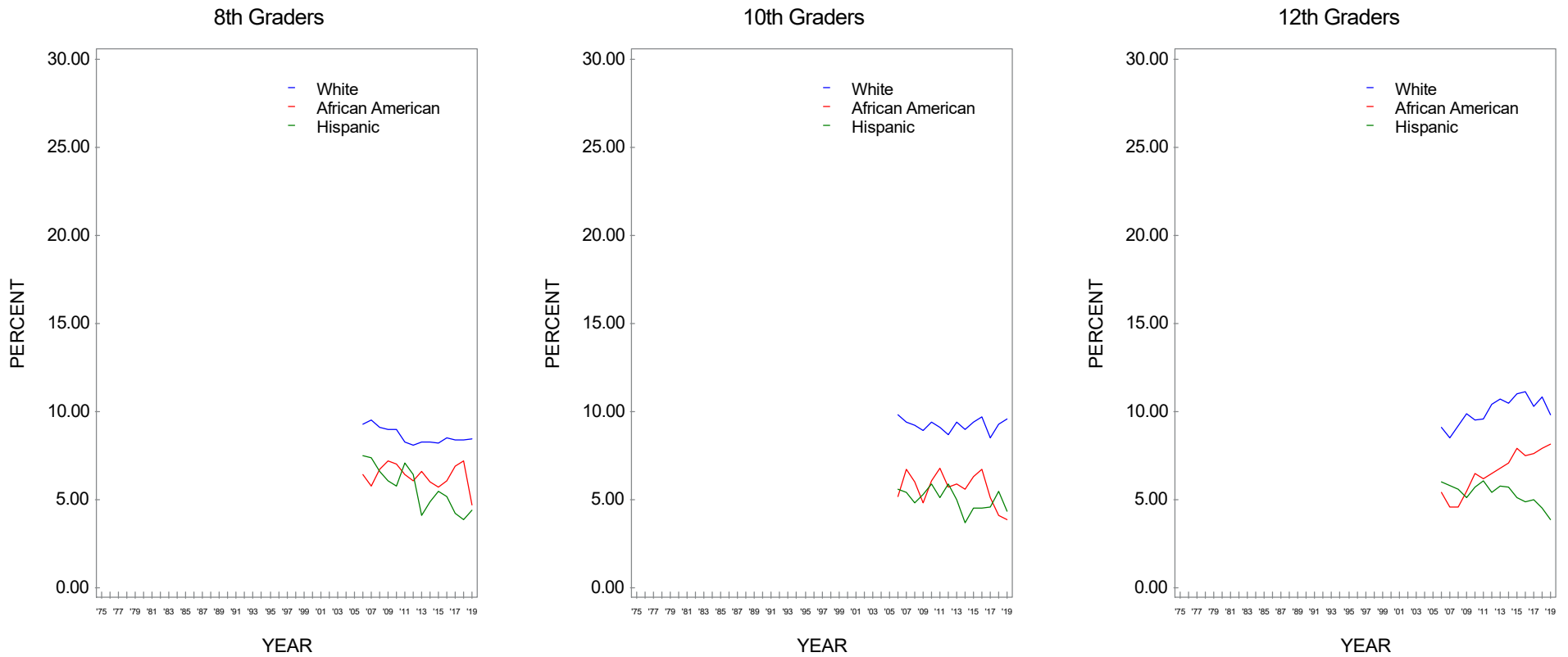
**Stimulant-Type ADHD Drugs: Trends in Lifetime Prevalence of Legal Use by Average Education Level of Parents\***



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

\*Parental education is an average score of mother's education and father's education.

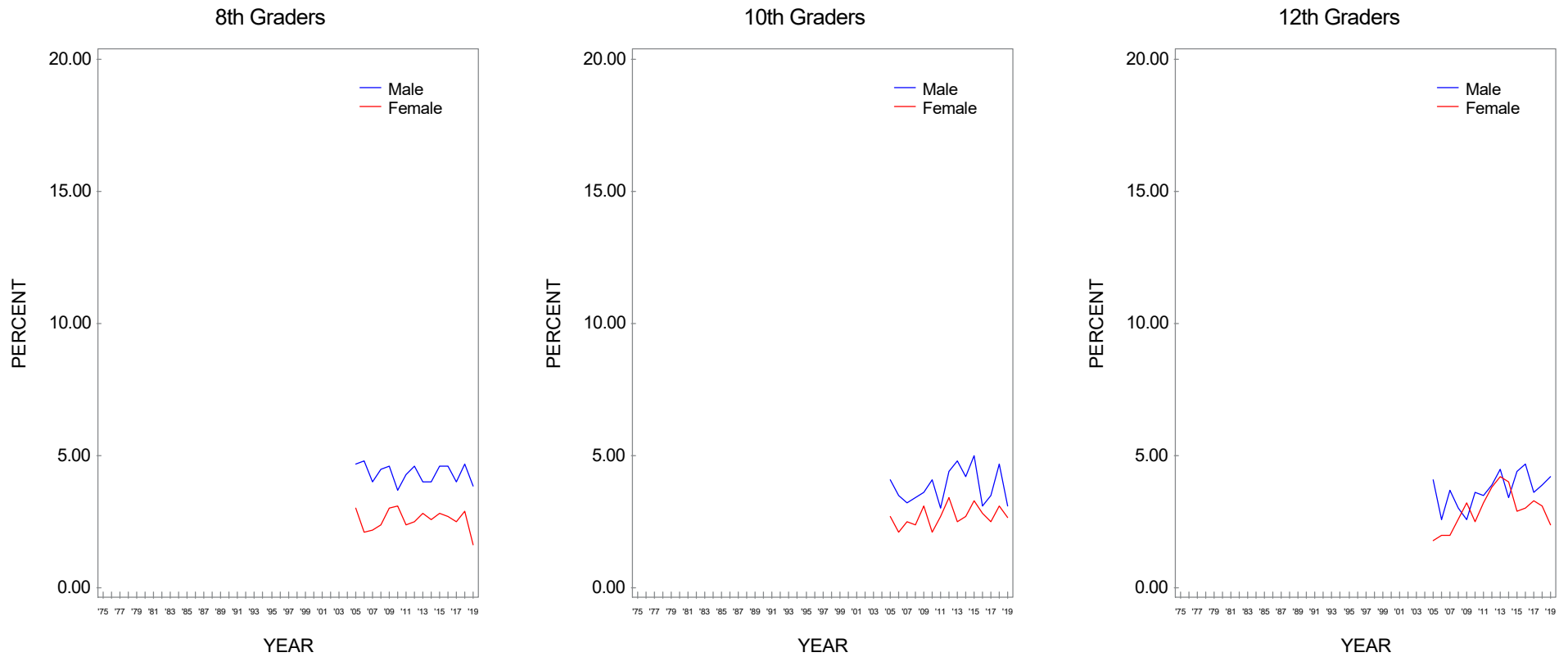
**FIGURE 426**  
**Stimulant-Type ADHD Drugs: Trends in Lifetime Prevalence of Legal Use by Race/Ethnicity\***



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

\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

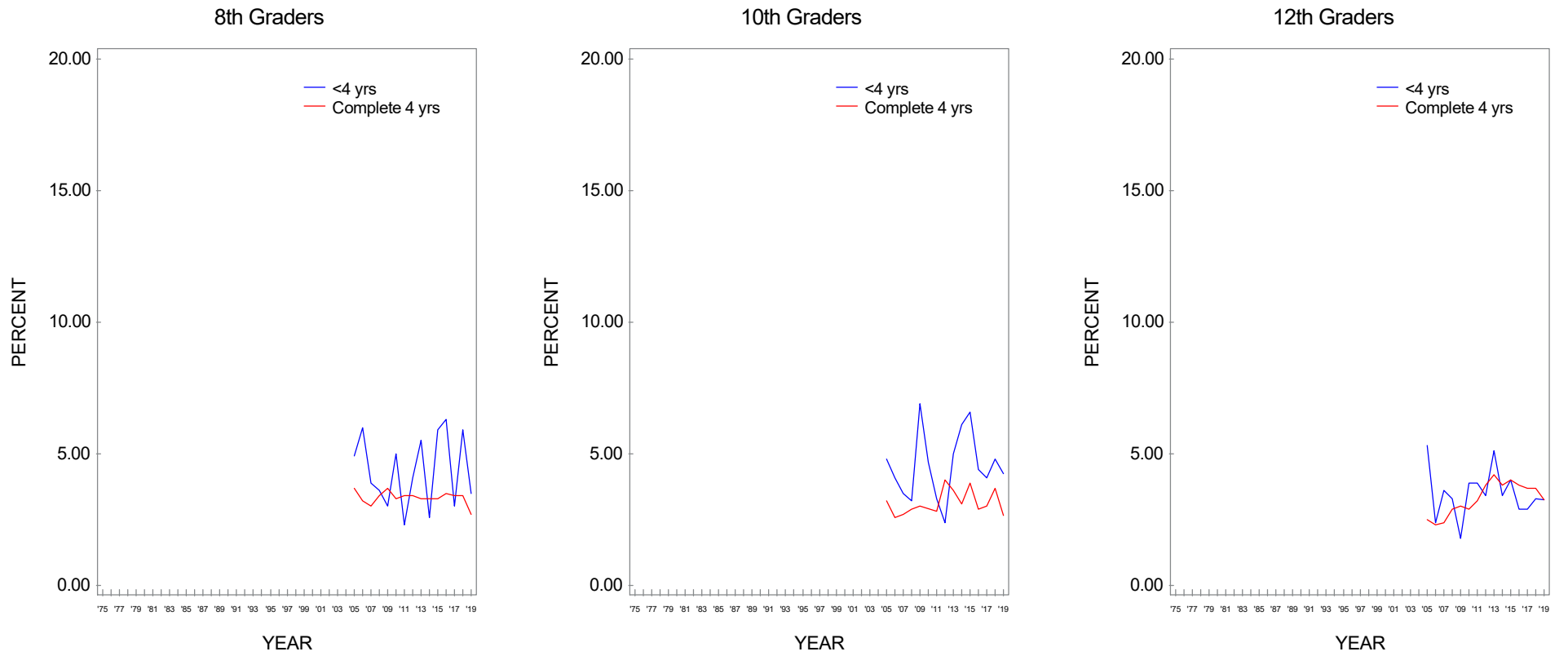
**FIGURE 427**  
**Stimulant-Type ADHD Drugs: Trends in Current Prevalence of Legal Use by Gender**



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

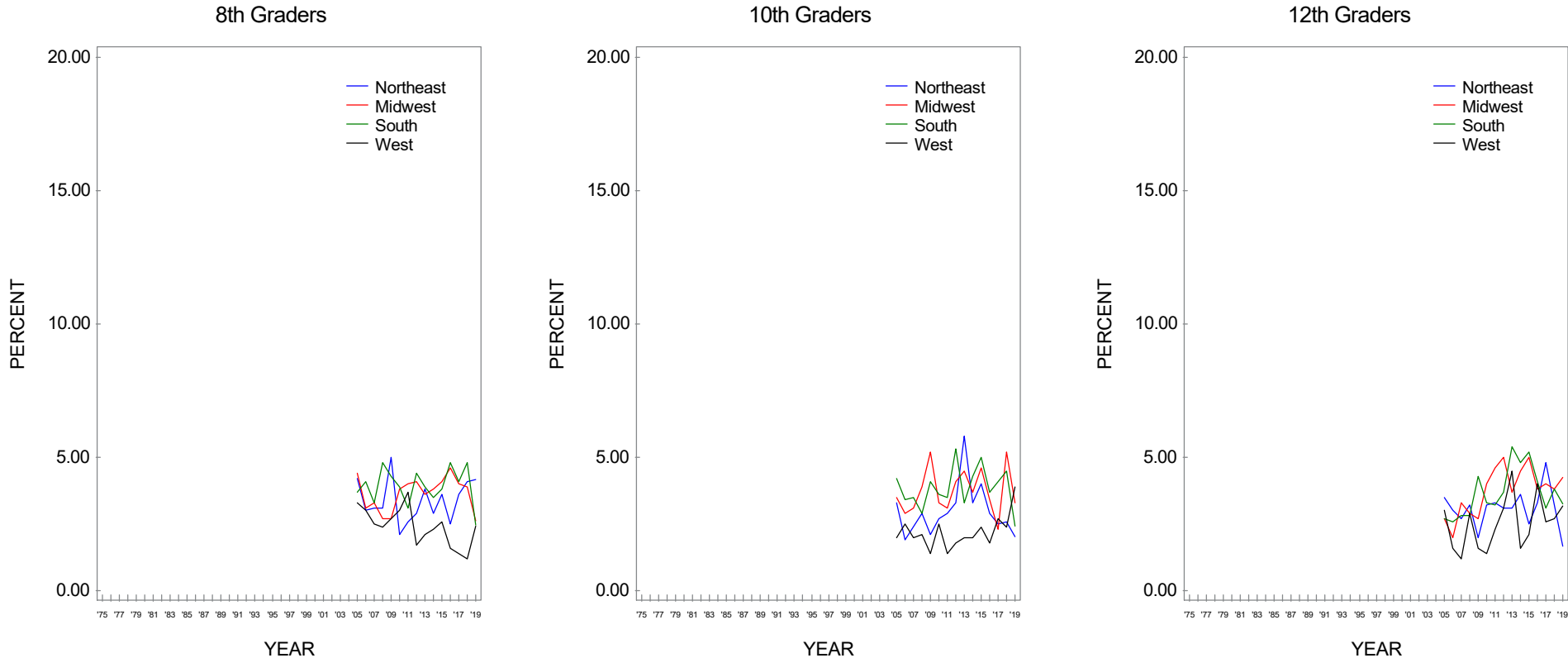


**FIGURE 428**  
**Stimulant-Type ADHD Drugs: Trends in Current Prevalence of Legal Use by College Plans**



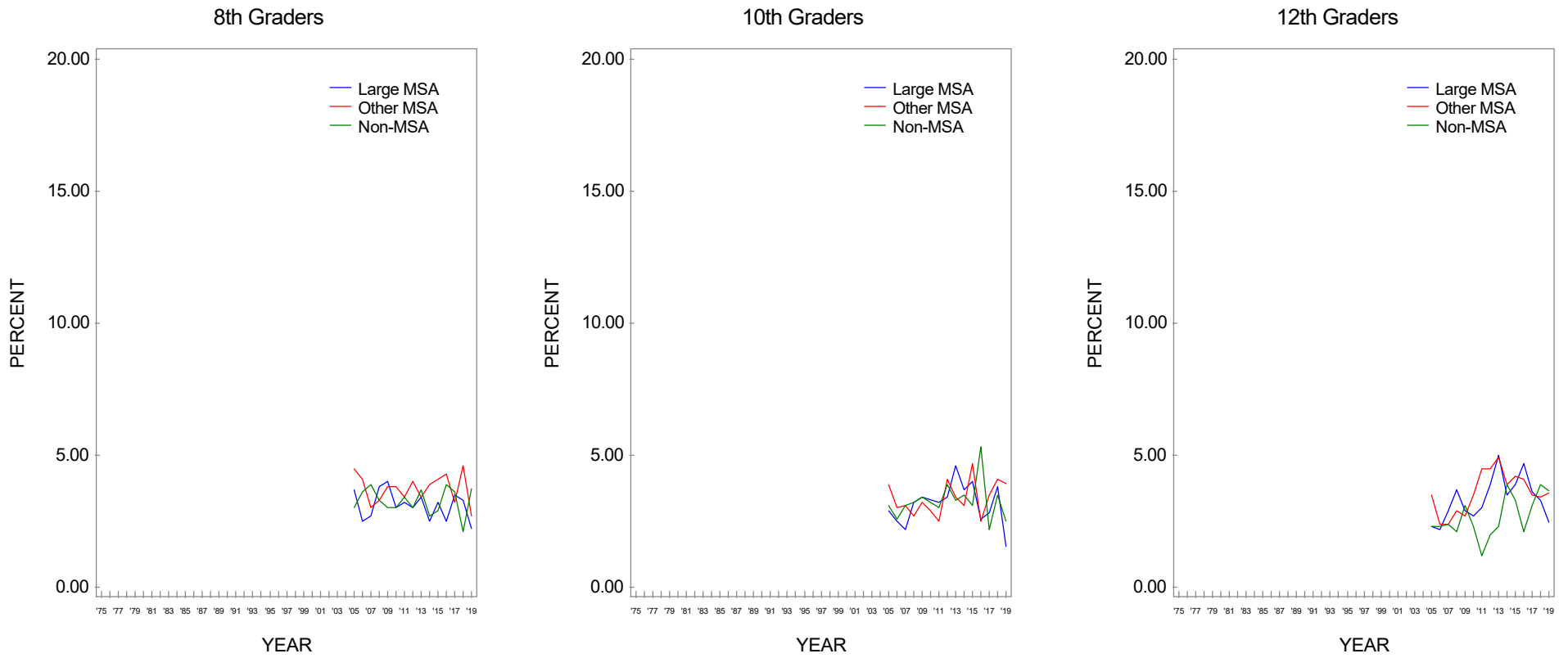
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 429**  
**Stimulant-Type ADHD Drugs: Trends in Current Prevalence of Legal Use by Region**



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

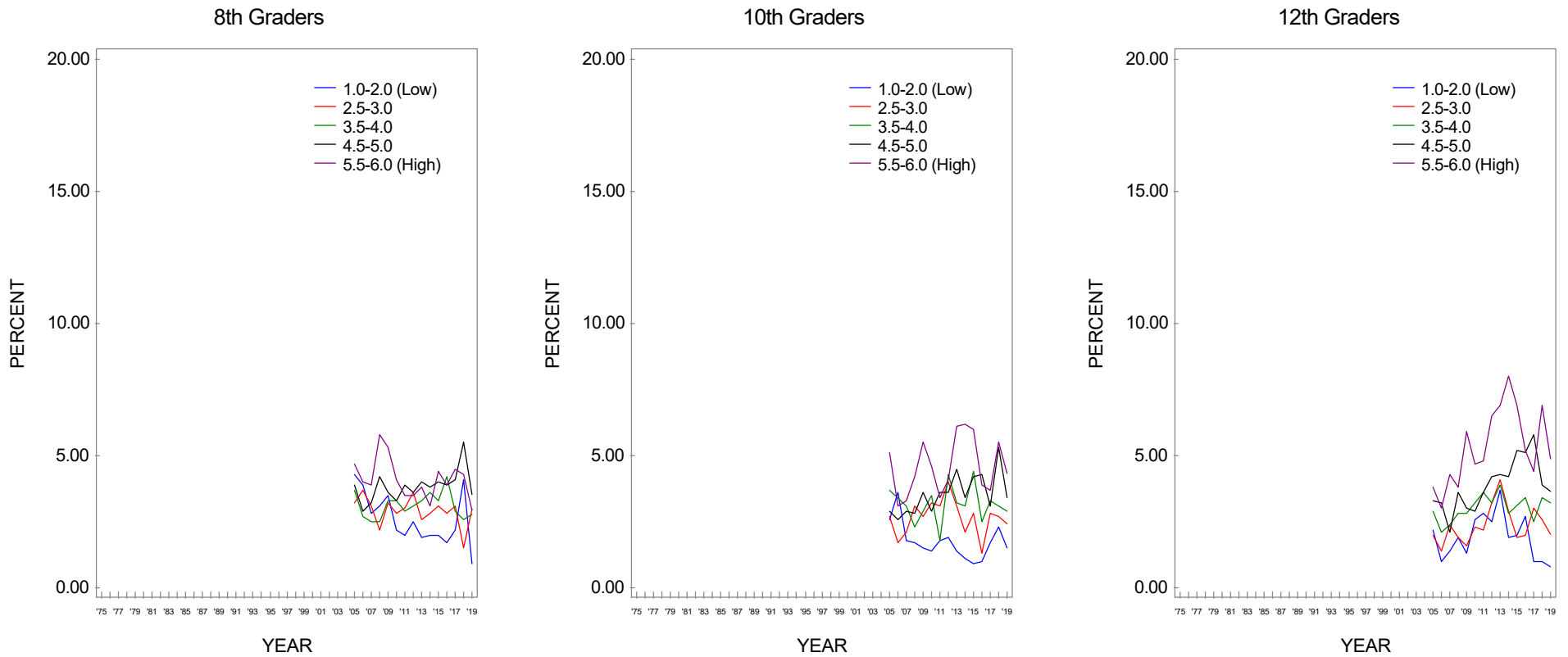
**FIGURE 430**  
**Stimulant-Type ADHD Drugs: Trends in Current Prevalence of Legal Use by Population Density**



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

**FIGURE 431**

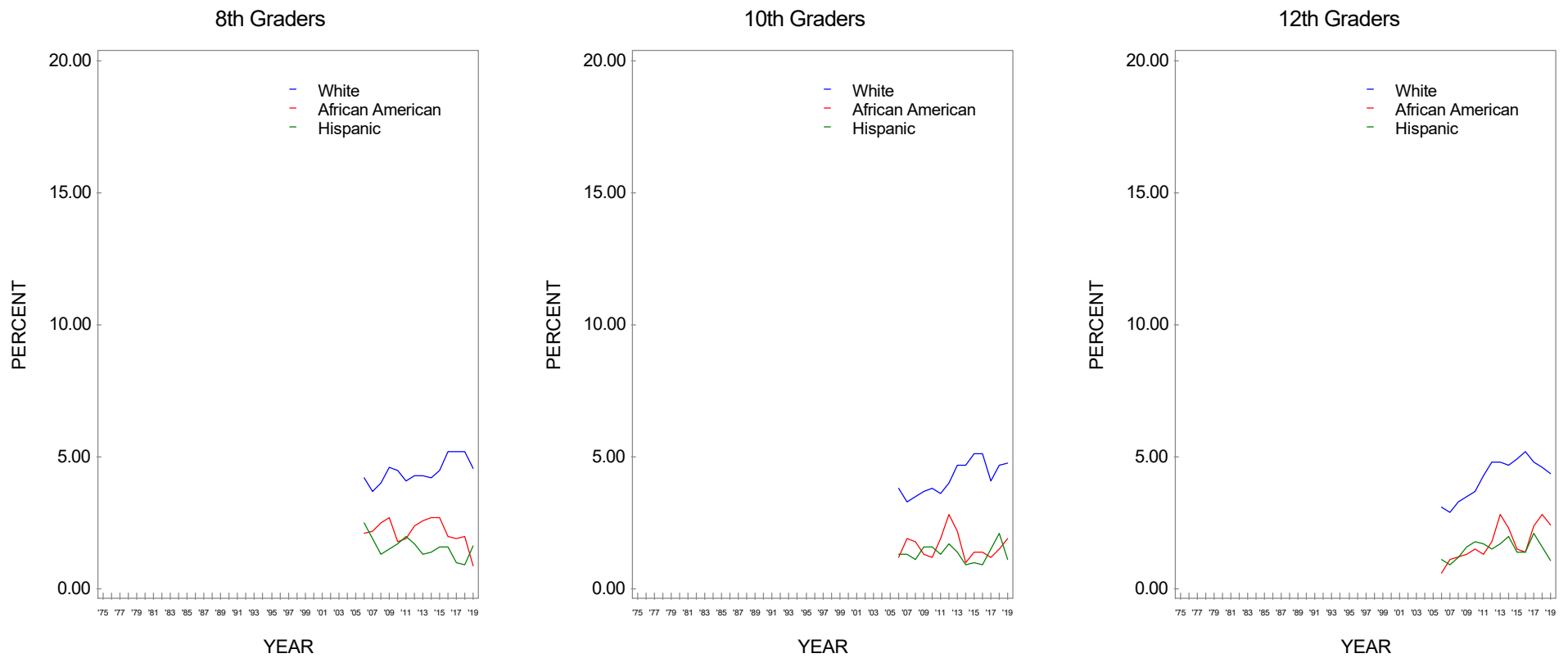
**Stimulant-Type ADHD Drugs: Trends in Current Prevalence of Legal Use by Average Education Level of Parents\***



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

\*Parental education is an average score of mother's education and father's education.

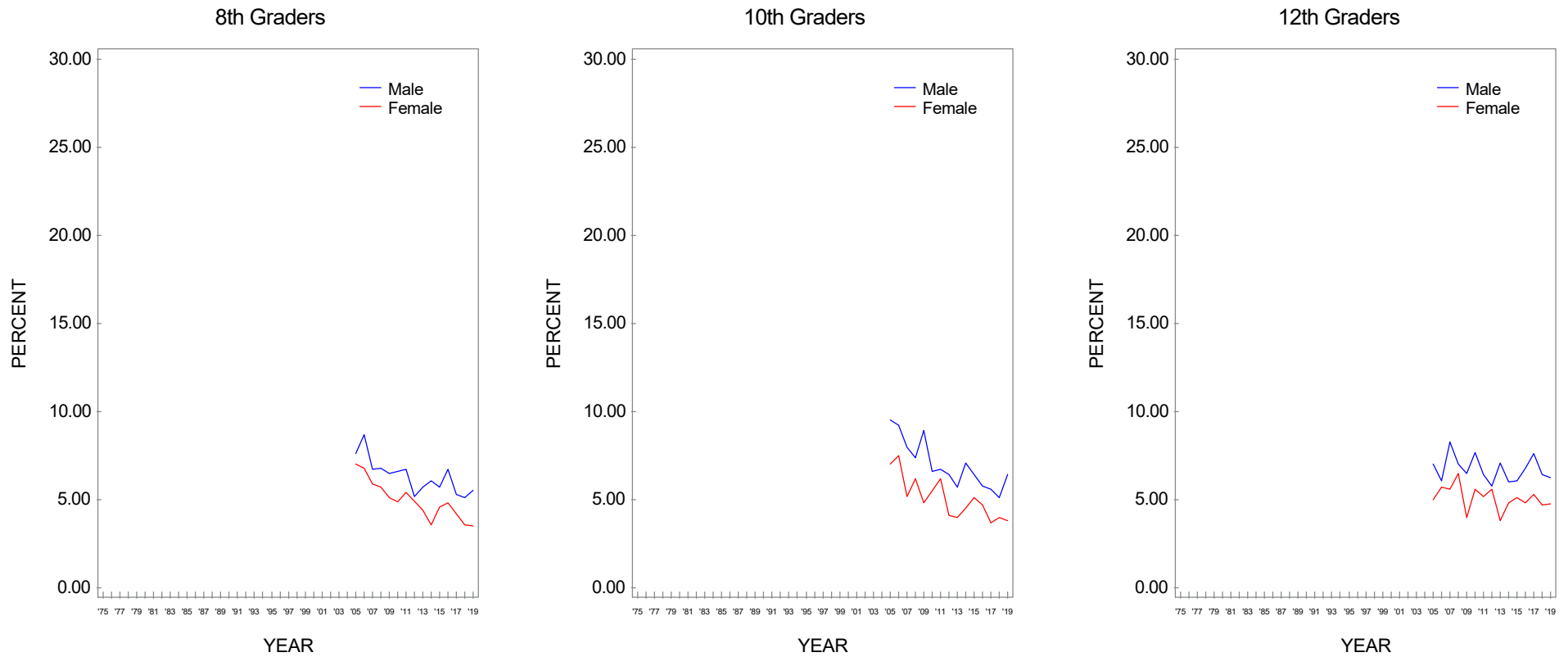
**FIGURE 432**  
**Stimulant-Type ADHD Drugs: Trends in Current Prevalence of Legal Use by Race/Ethnicity\***



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

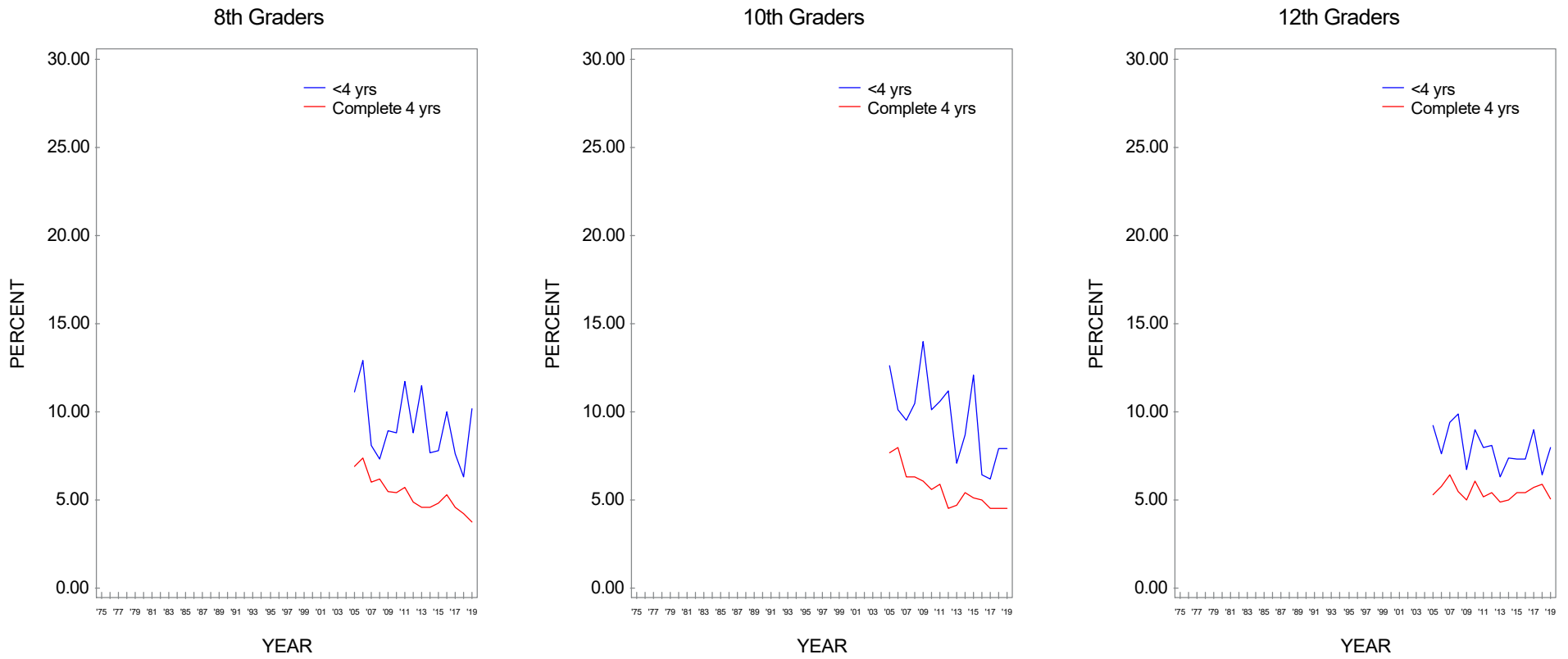
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 433**  
**Non-Stimulant-Type ADHD Drugs: Trends in Lifetime Prevalence of Legal Use by Gender**



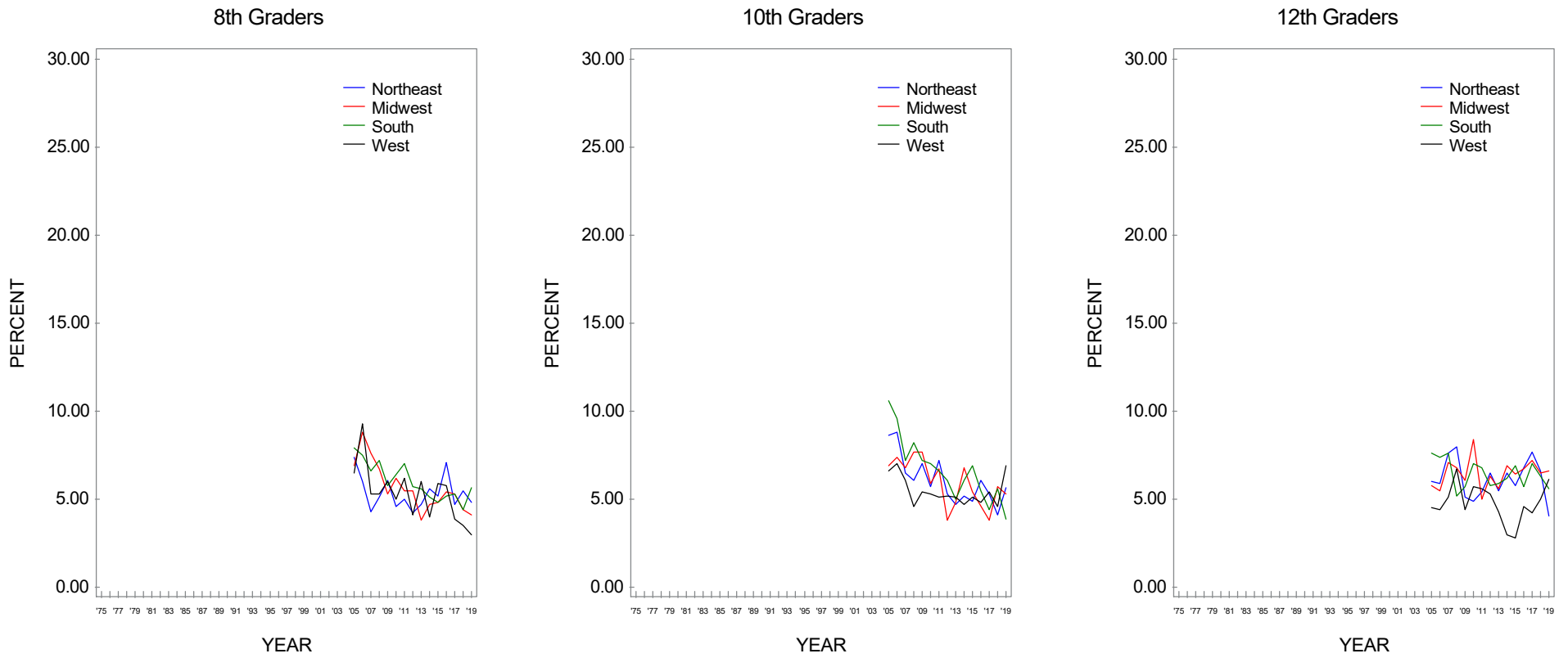
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 434**  
**Non-Stimulant-Type ADHD Drugs: Trends in Lifetime Prevalence of Legal Use by College Plans**



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

**FIGURE 435**  
**Non-Stimulant-Type ADHD Drugs: Trends in Lifetime Prevalence of Legal Use by Region**

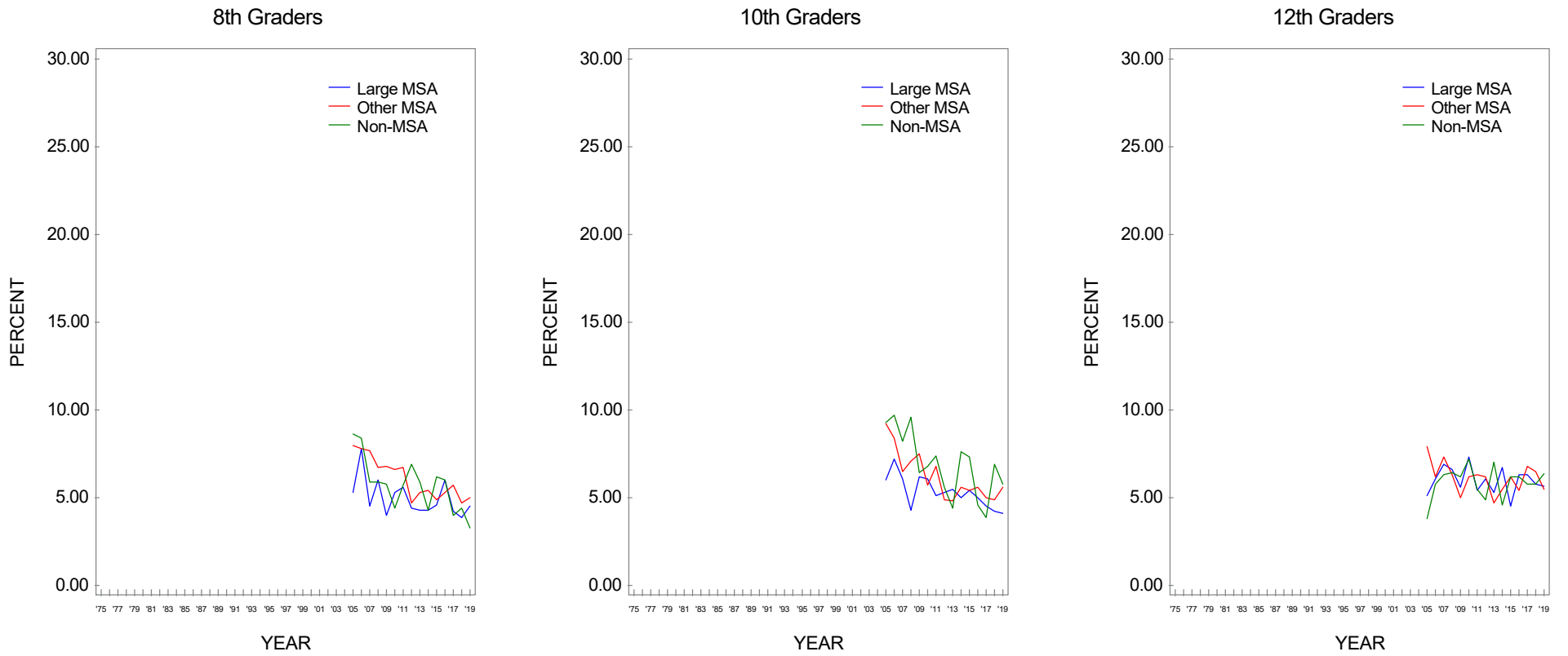


Source. The Monitoring the Future study, the University of Michigan.



**FIGURE 436**

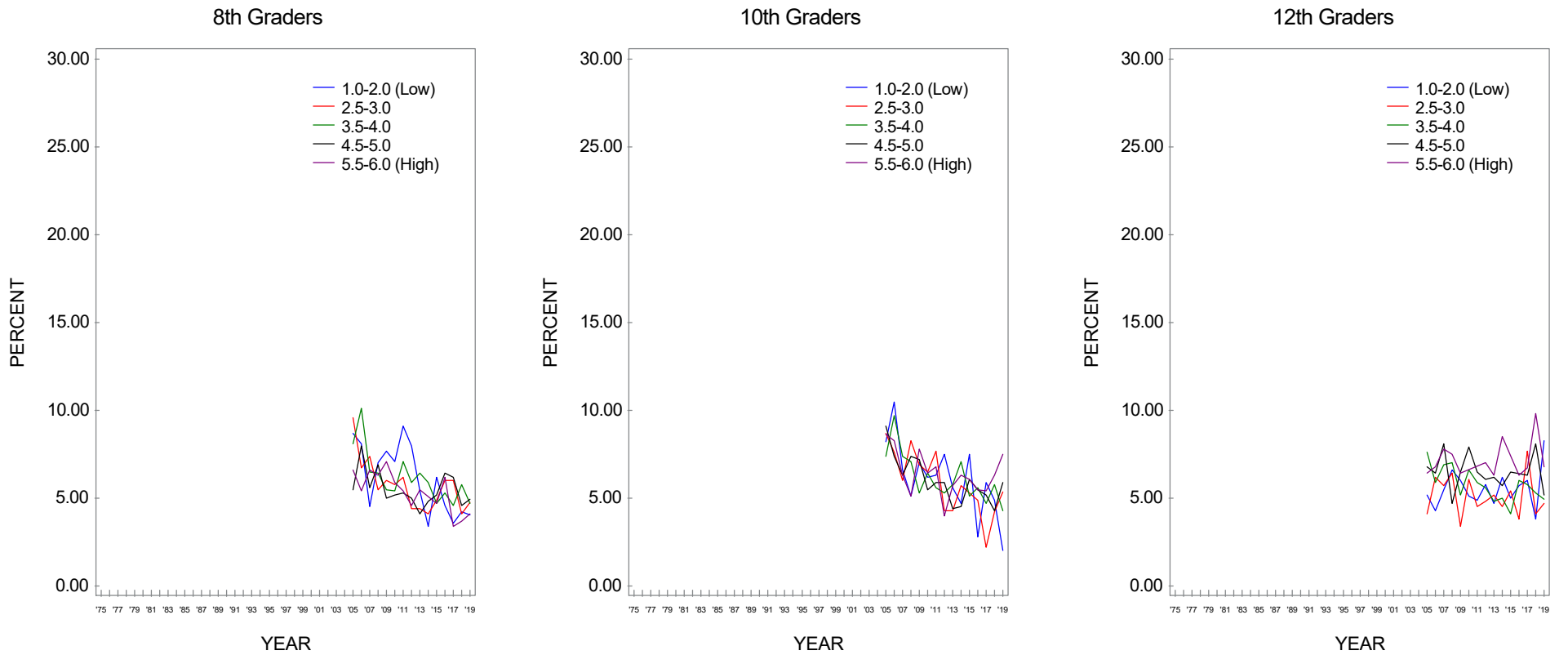
**Non-Stimulant-Type ADHD Drugs: Trends in Lifetime Prevalence of Legal Use by Population Density**



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

**FIGURE 437**

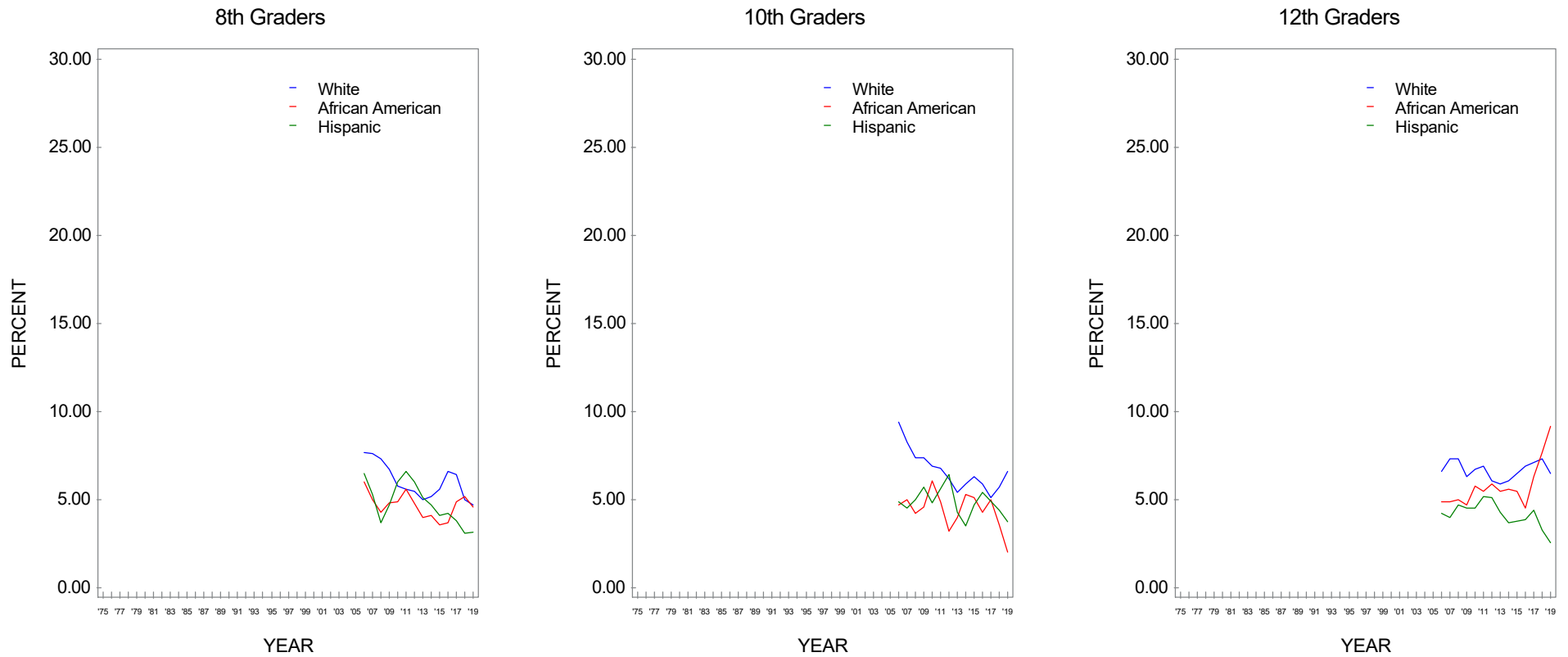
**Non-Stimulant-Type ADHD Drugs: Trends in Lifetime Prevalence of Legal Use by Average Education Level of Parents\***



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

\*Parental education is an average score of mother's education and father's education.

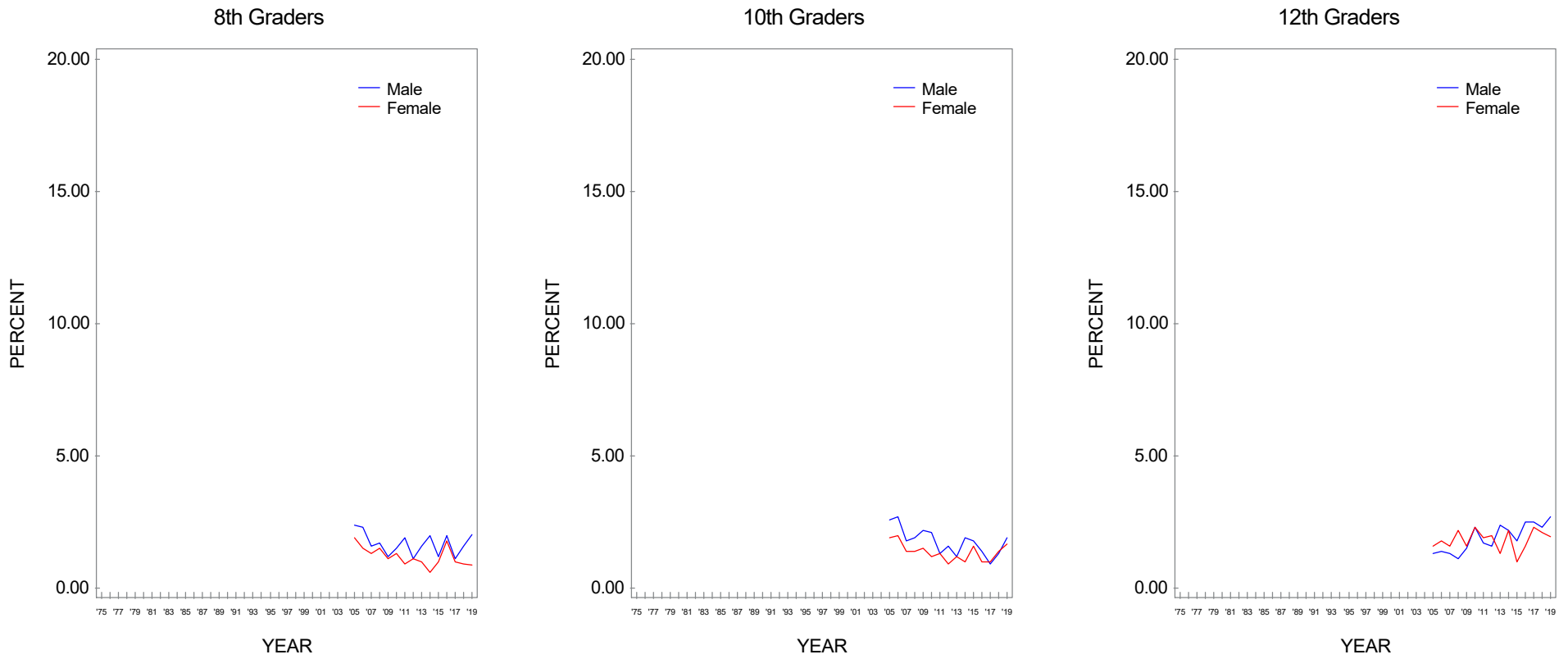
**FIGURE 438**  
**Non-Stimulant-Type ADHD Drugs: Trends in Lifetime Prevalence of Legal Use by Race/Ethnicity\***



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

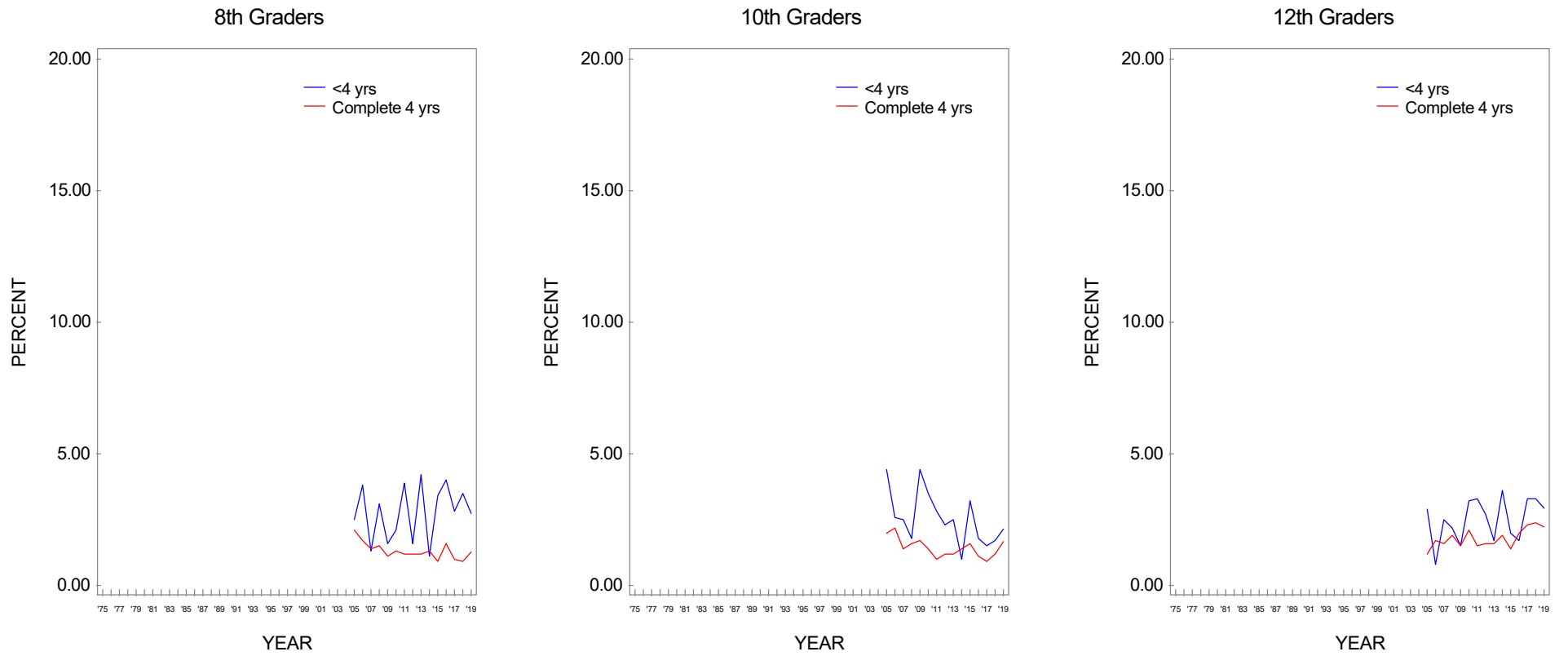
\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 439**  
**Non-Stimulant-Type ADHD Drugs: Trends in Current Prevalence of Legal Use by Gender**



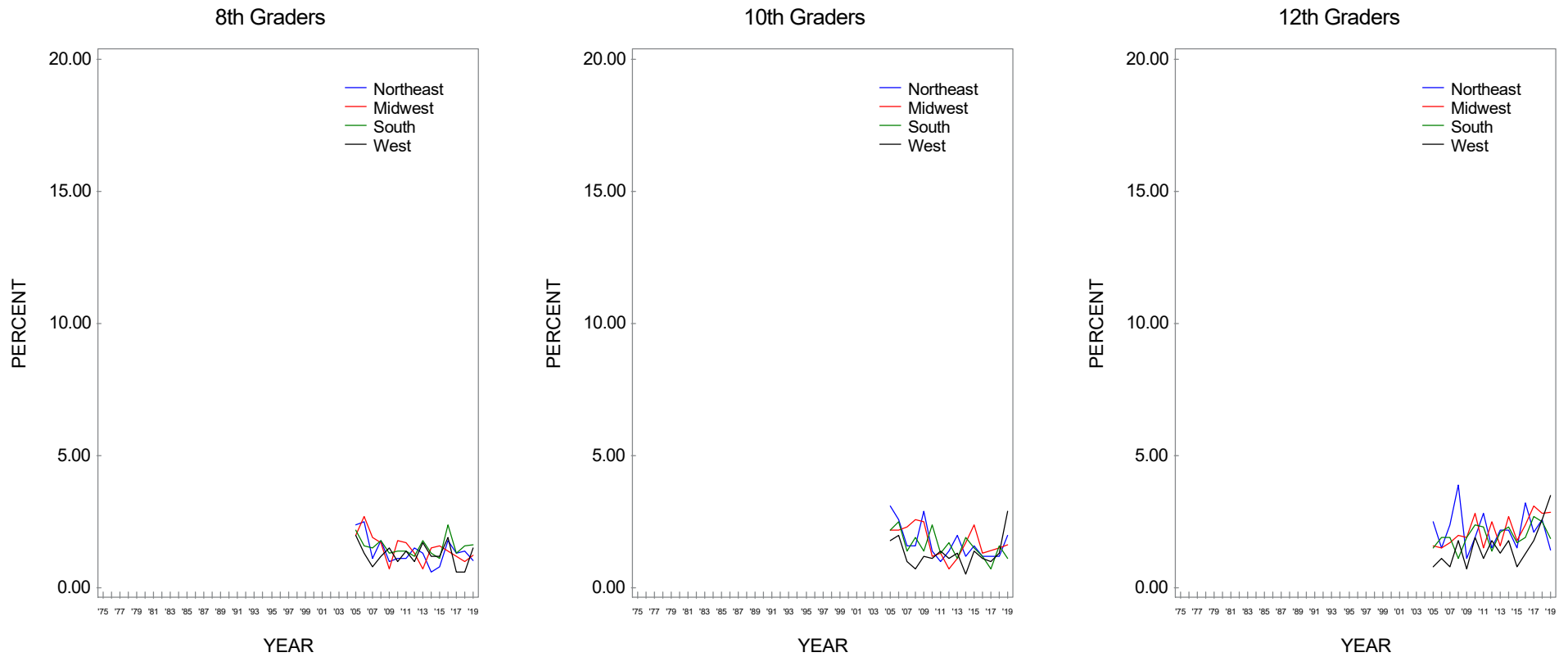
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 440**  
**Non-Stimulant-Type ADHD Drugs: Trends in Current Prevalence of Legal Use by College Plans**



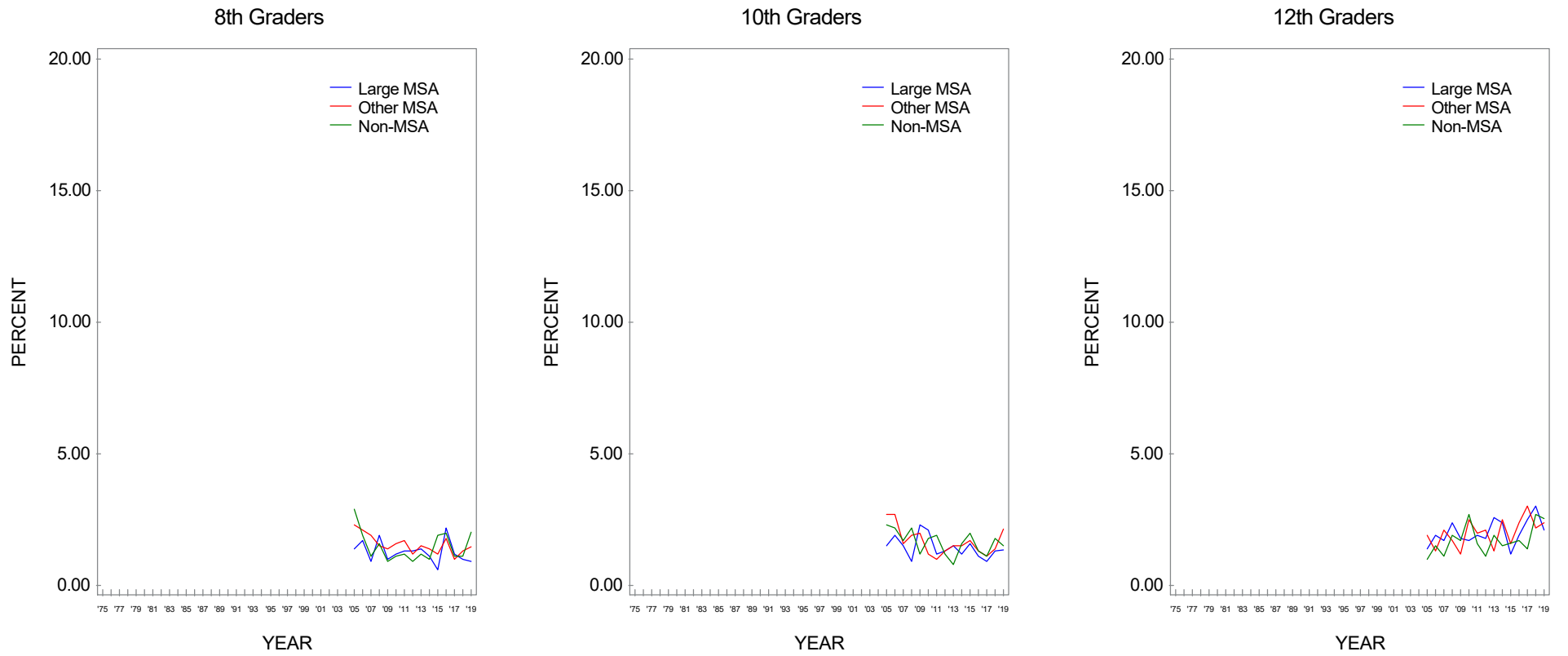
Source. The Monitoring the Future study, the University of Michigan.

**FIGURE 441**  
**Non-Stimulant-Type ADHD Drugs: Trends in Current Prevalence of Legal Use by Region**



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

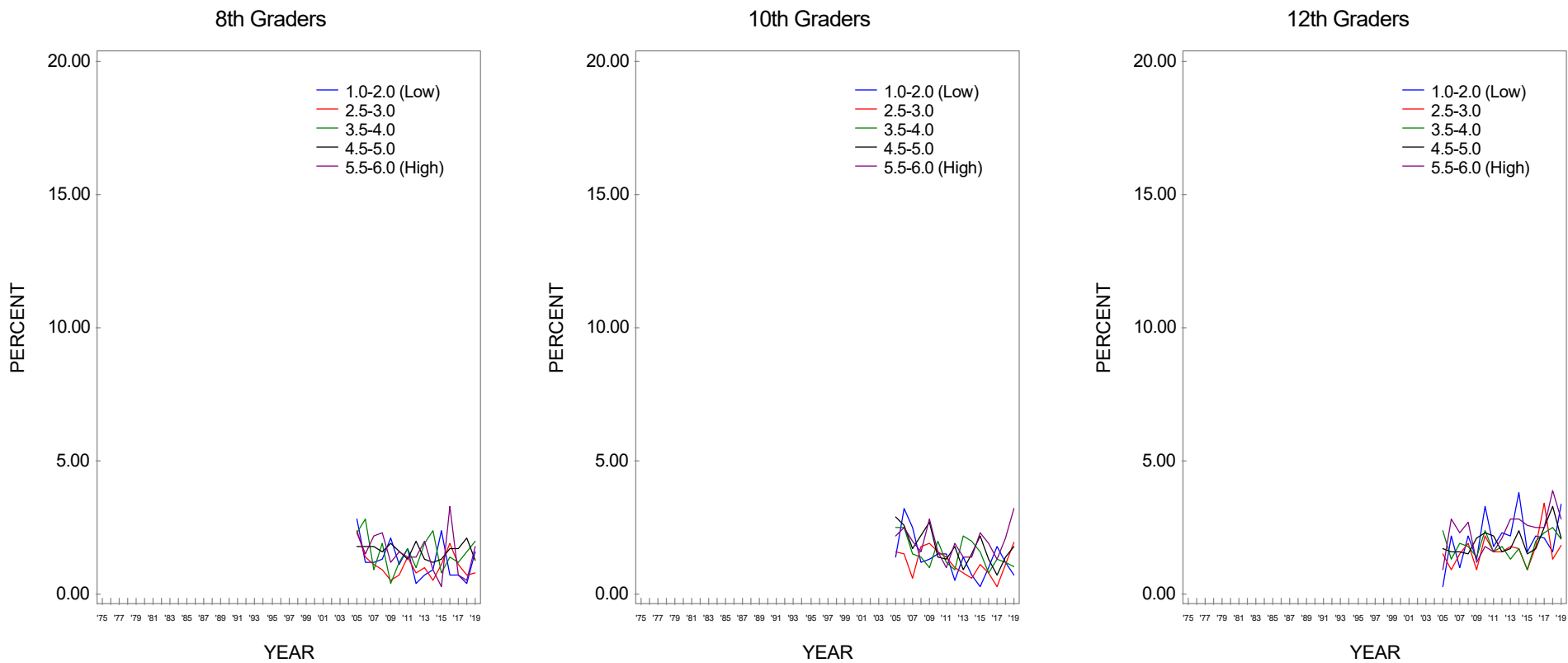
**FIGURE 442**  
**Non-Stimulant-Type ADHD Drugs: Trends in Current Prevalence of Legal Use by Population Density**



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

**FIGURE 443**

**Non-Stimulant-Type ADHD Drugs: Trends in Current Prevalence of Legal Use by Average Education Level of Parents\***

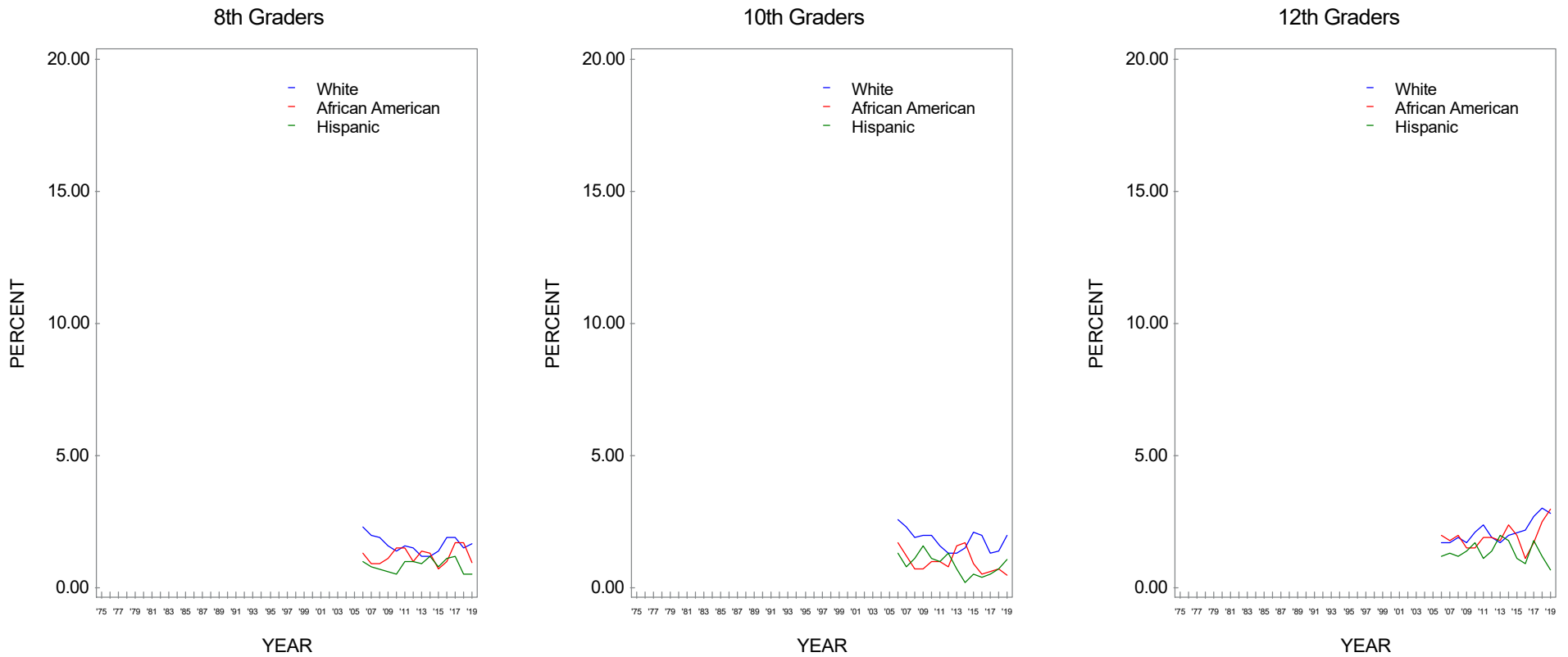


Source. The Monitoring the Future study, the University of Michigan.

\*Parental education is an average score of mother's education and father's education.



**FIGURE 444**  
**Non-Stimulant-Type ADHD Drugs: Trends in Current Prevalence of Legal Use by Race/Ethnicity\***

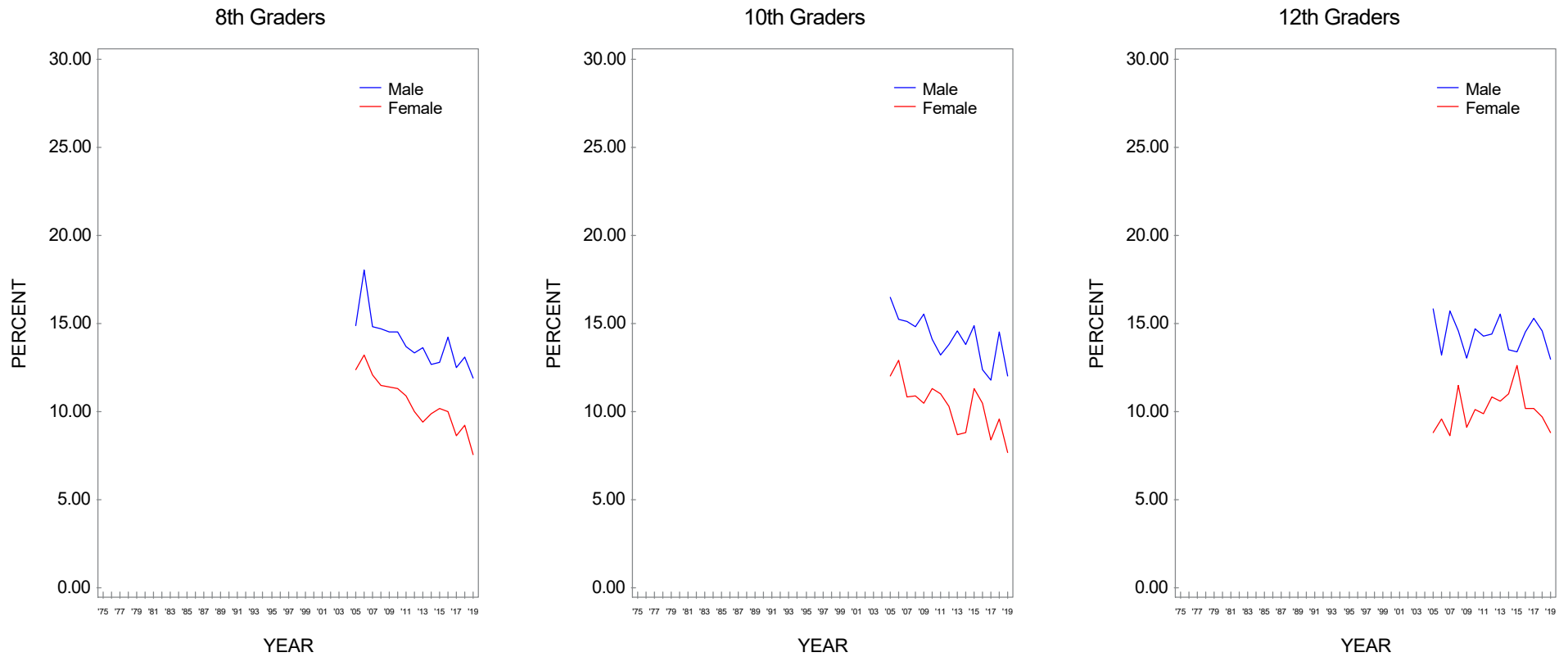


Source. The Monitoring the Future study, the University of Michigan.

\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 445**

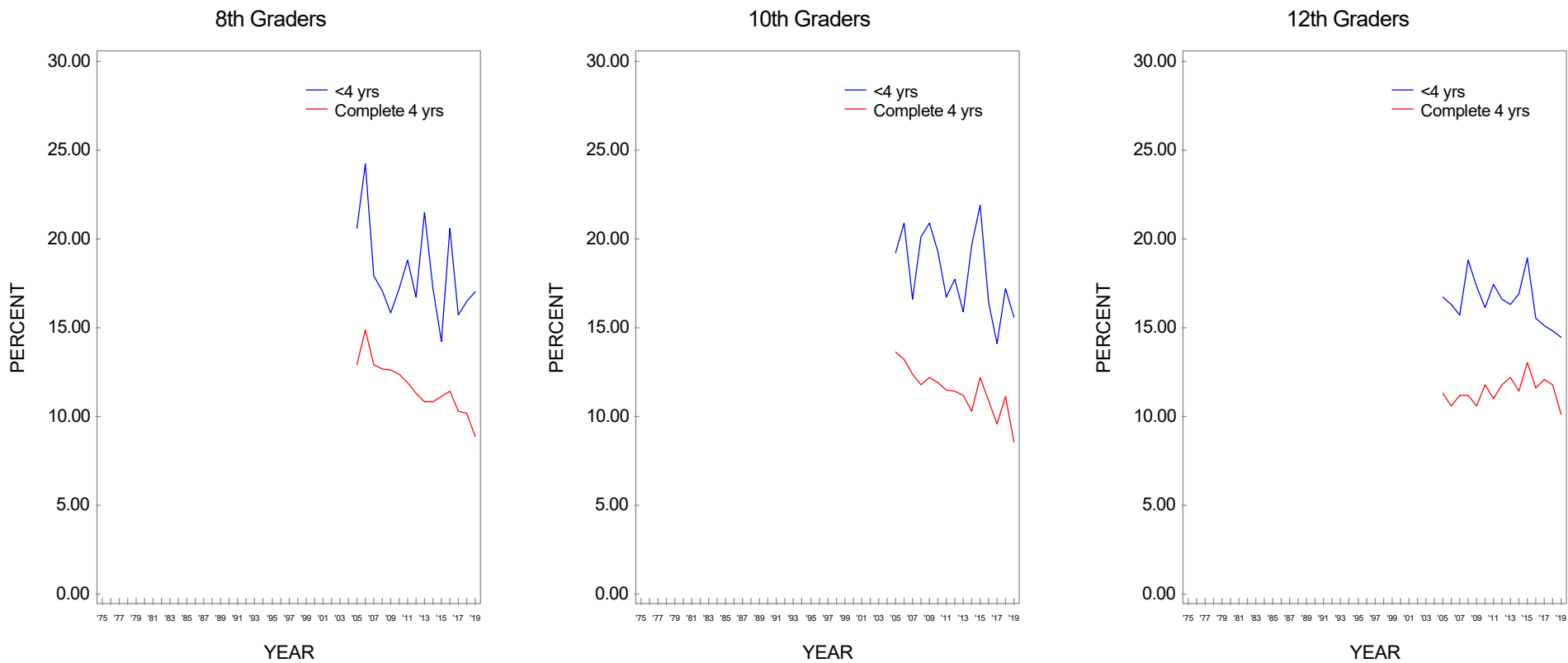
**Either Stimulant-Type or Non-Stimulant-Type ADHD Drugs: Trends in Lifetime Prevalence of Legal Use by Gender**



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

**FIGURE 446**

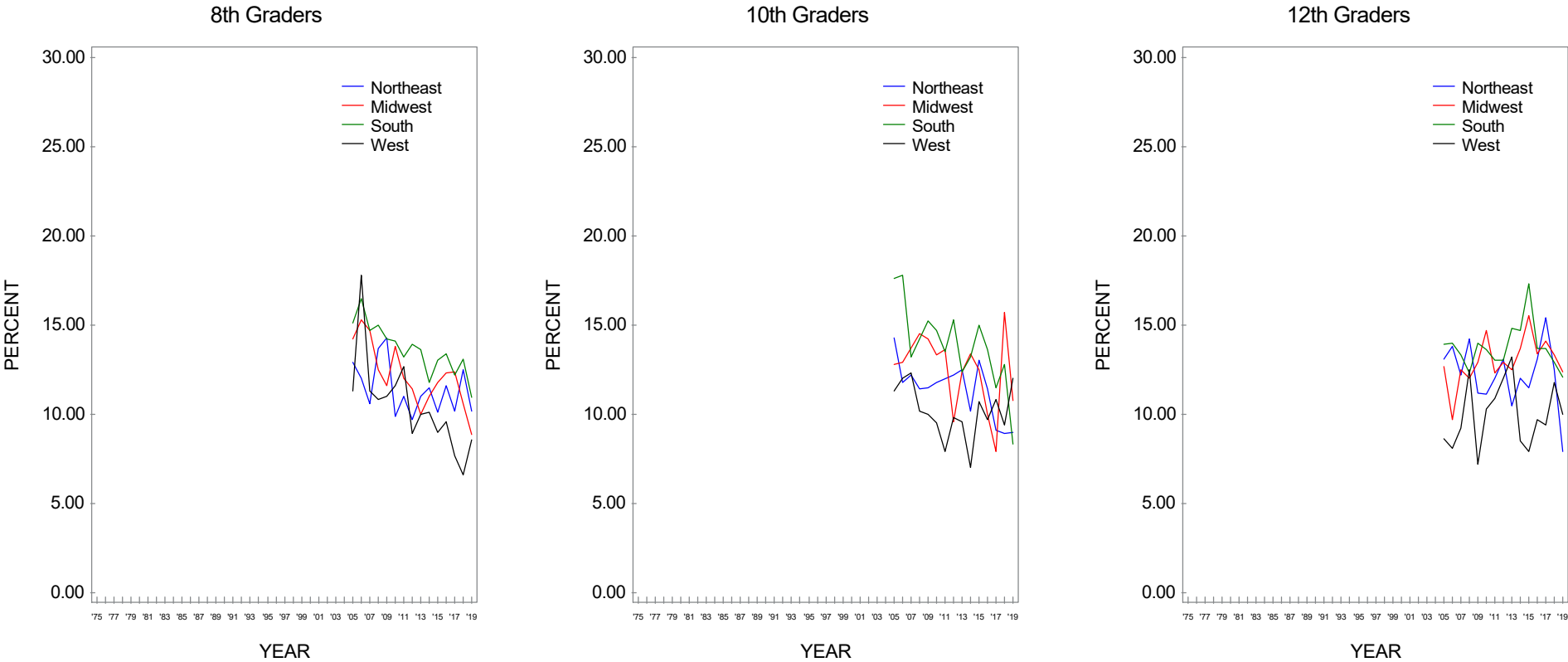
**Either Stimulant-Type or Non-Stimulant-Type ADHD Drugs: Trends in Lifetime Prevalence of Legal Use by College Plans**



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

**FIGURE 447**

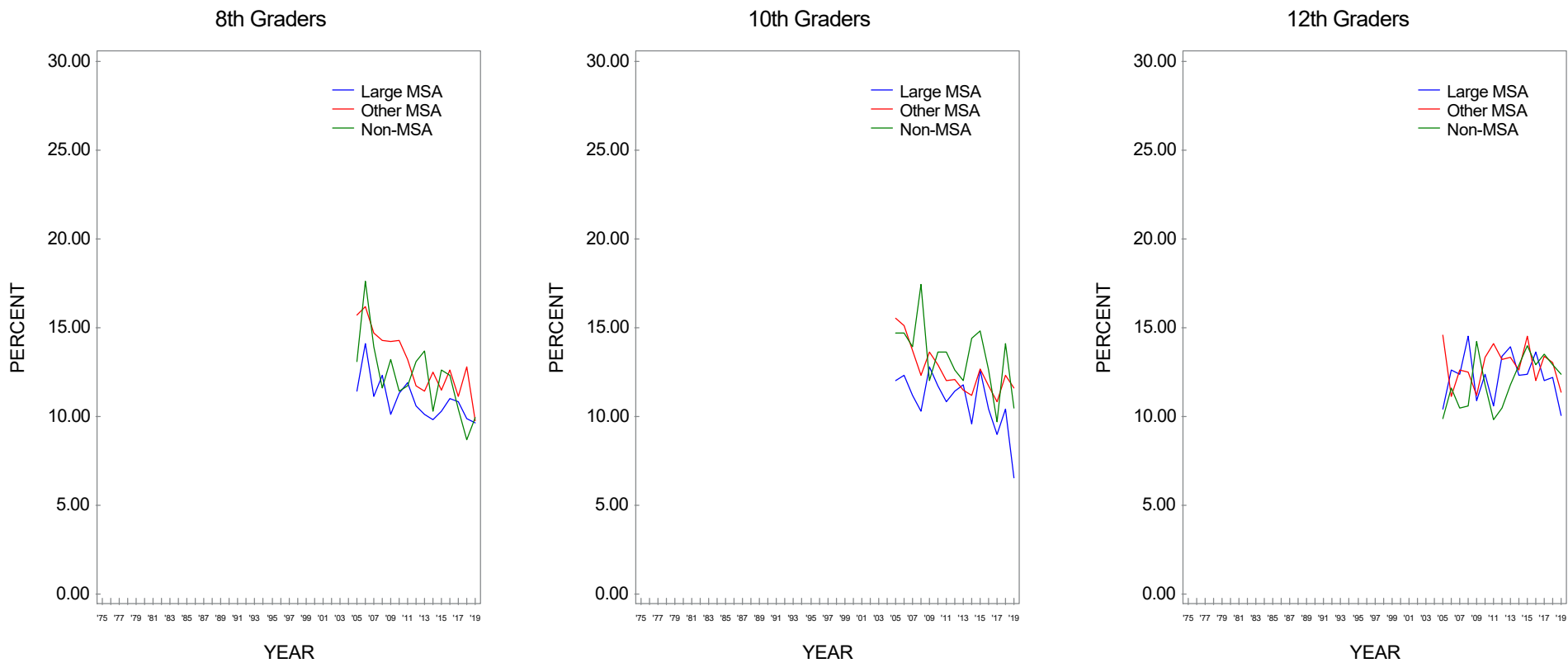
**Either Stimulant-Type or Non-Stimulant-Type ADHD Drugs: Trends in Lifetime Prevalence of Legal Use by Region**



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

**FIGURE 448**

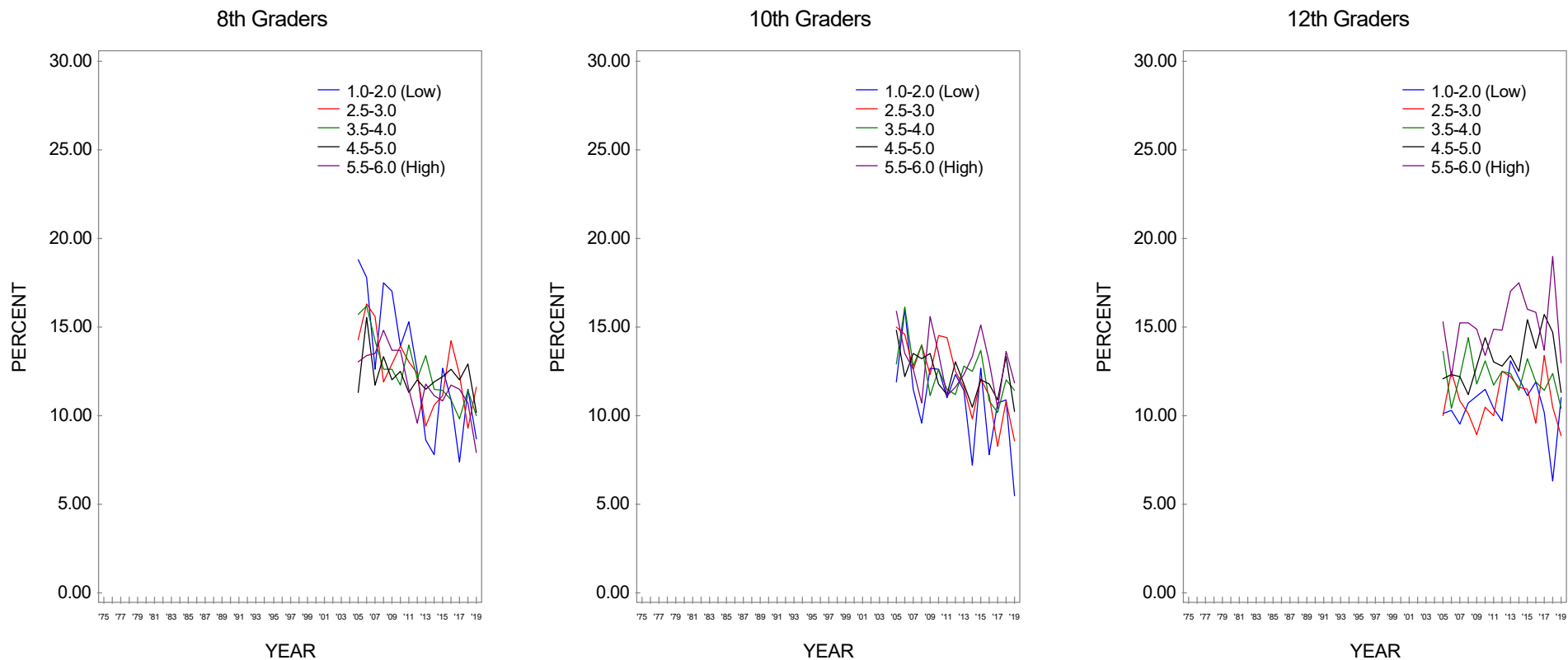
**Either Stimulant-Type or Non-Stimulant-Type ADHD Drugs: Trends in Lifetime Prevalence of Legal Use by Population Density**



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

**FIGURE 449**

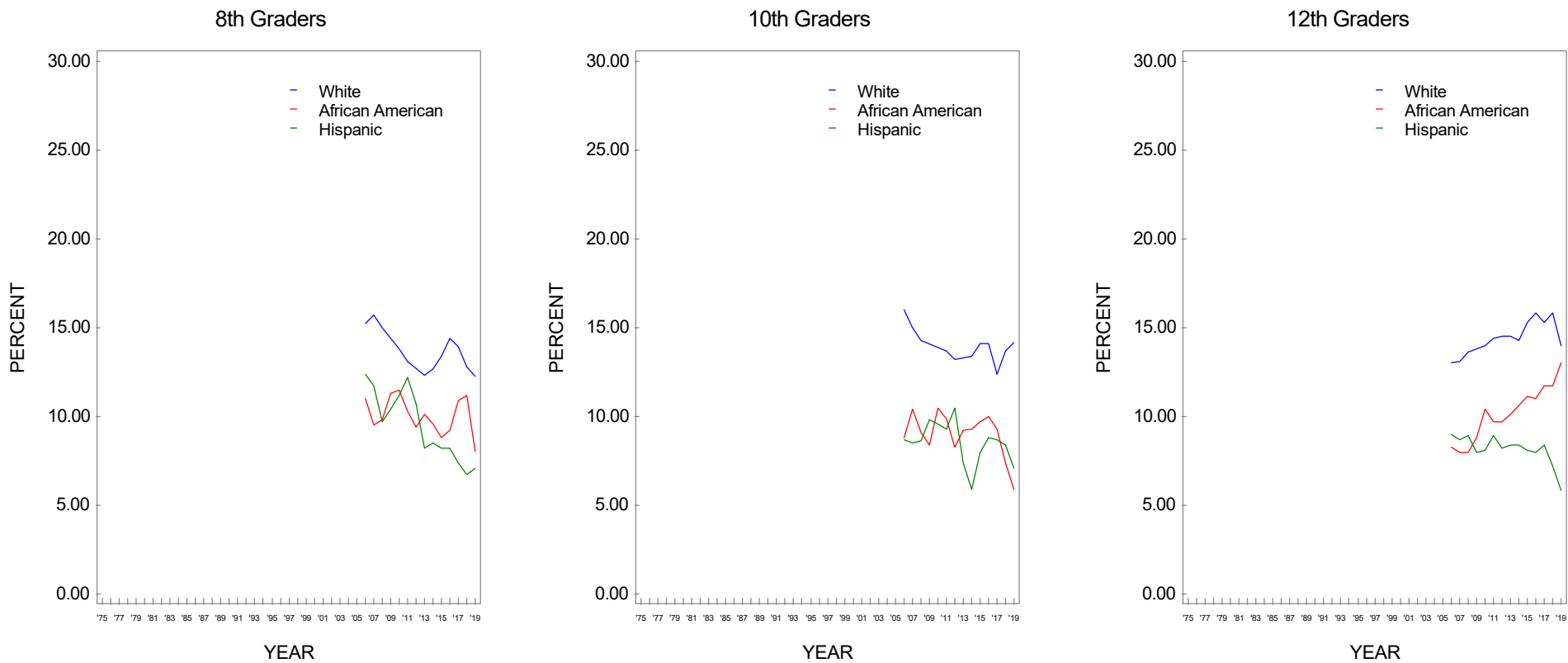
**Either Stimulant-Type or Non-Stimulant-Type ADHD Drugs: Trends in Lifetime Prevalence of Legal Use by Average Education Level of Parents\***



Source. The Monitoring the Future study, the University of Michigan.  
\*Parental education is an average score of mother's education and father's education.

**FIGURE 450**

**Either Stimulant-Type or Non-Stimulant-Type ADHD Drugs: Trends in Lifetime Prevalence of Legal Use by Race/Ethnicity\***

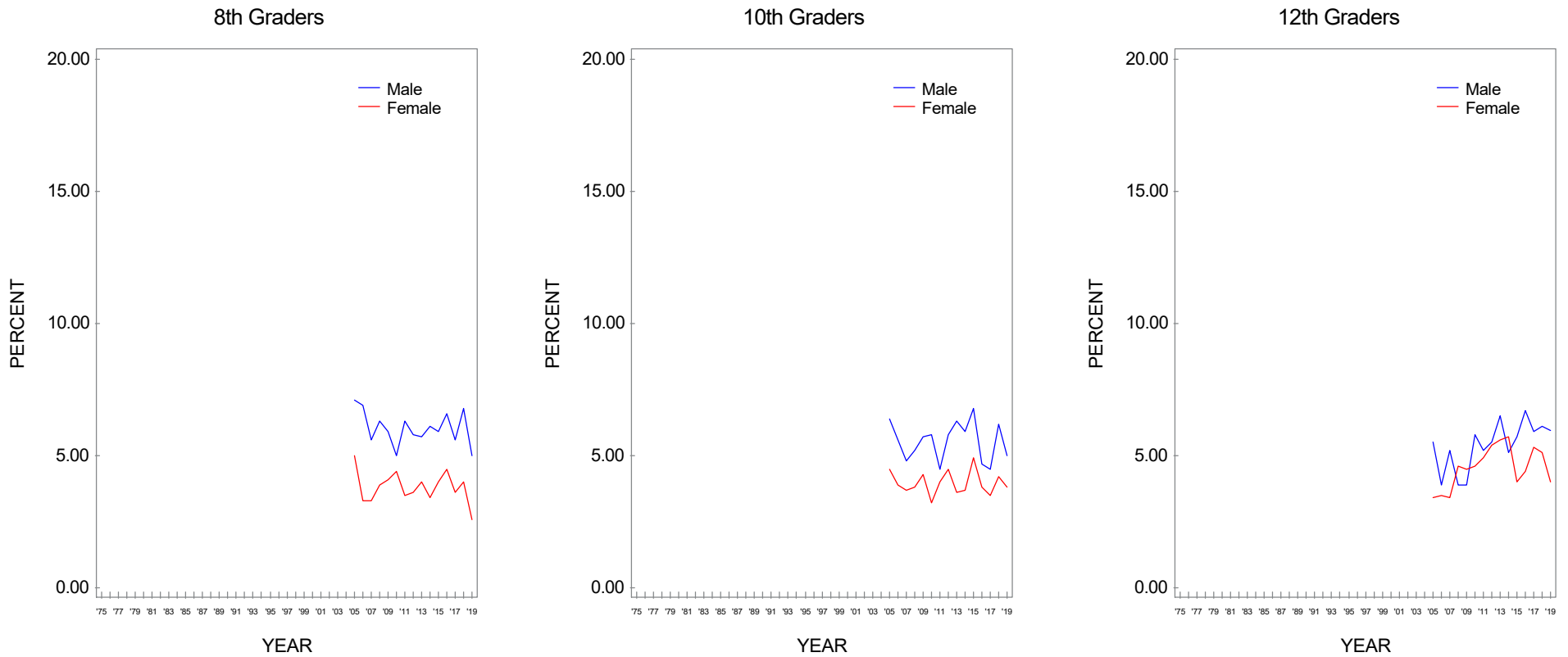


Source. The Monitoring the Future study, the University of Michigan.

\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

**FIGURE 451**

**Either Stimulant-Type or Non-Stimulant-Type ADHD Drugs: Trends in Current Prevalence of Legal Use by Gender**

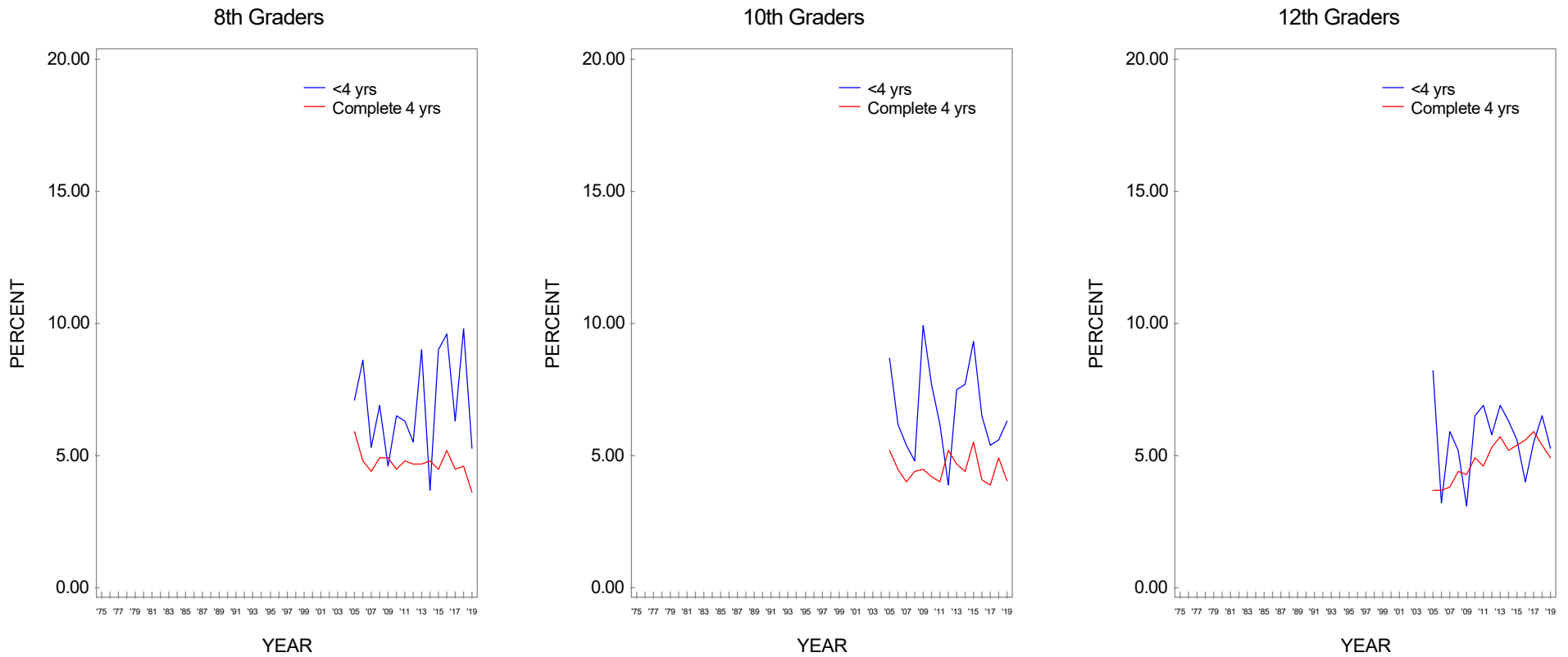


Source. The Monitoring the Future study, the University of Michigan.



**FIGURE 452**

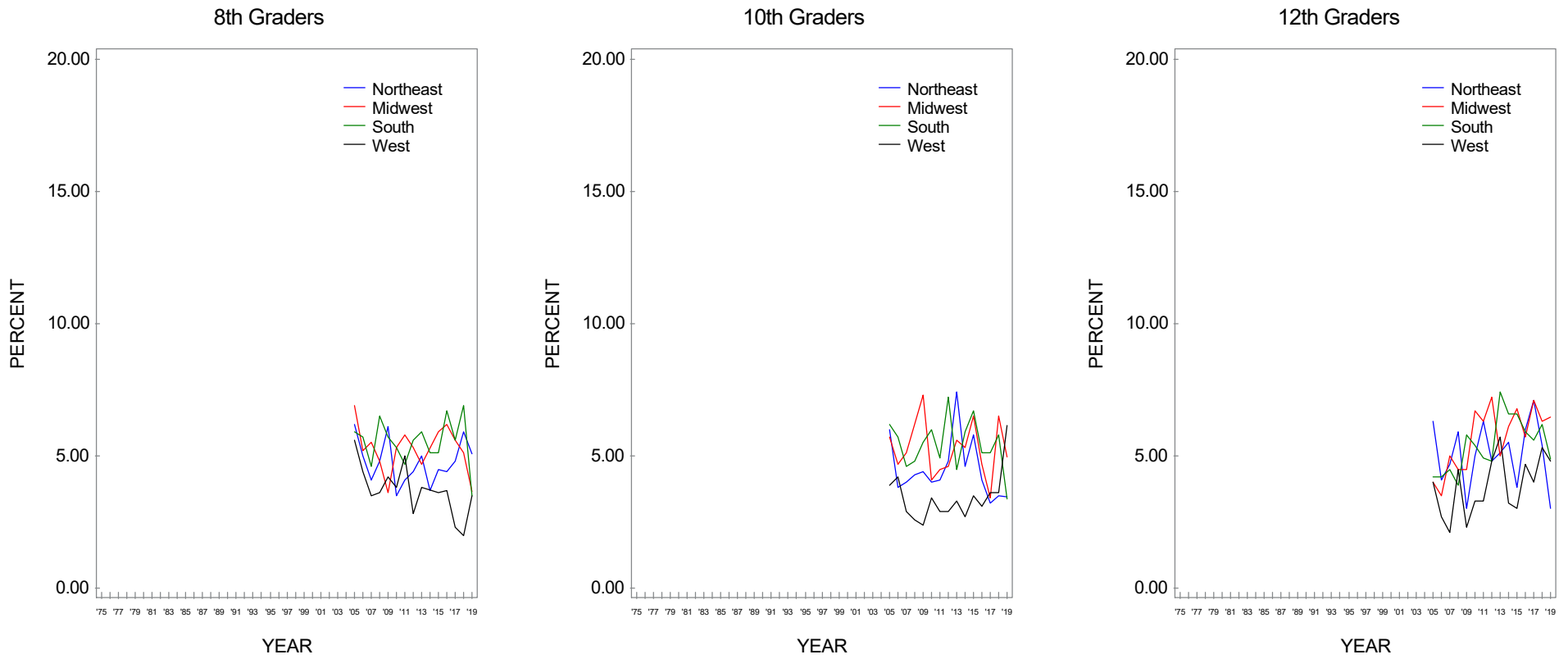
**Either Stimulant-Type or Non-Stimulant-Type ADHD Drugs: Trends in Current Prevalence of Legal Use by College Plans**



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

**FIGURE 453**

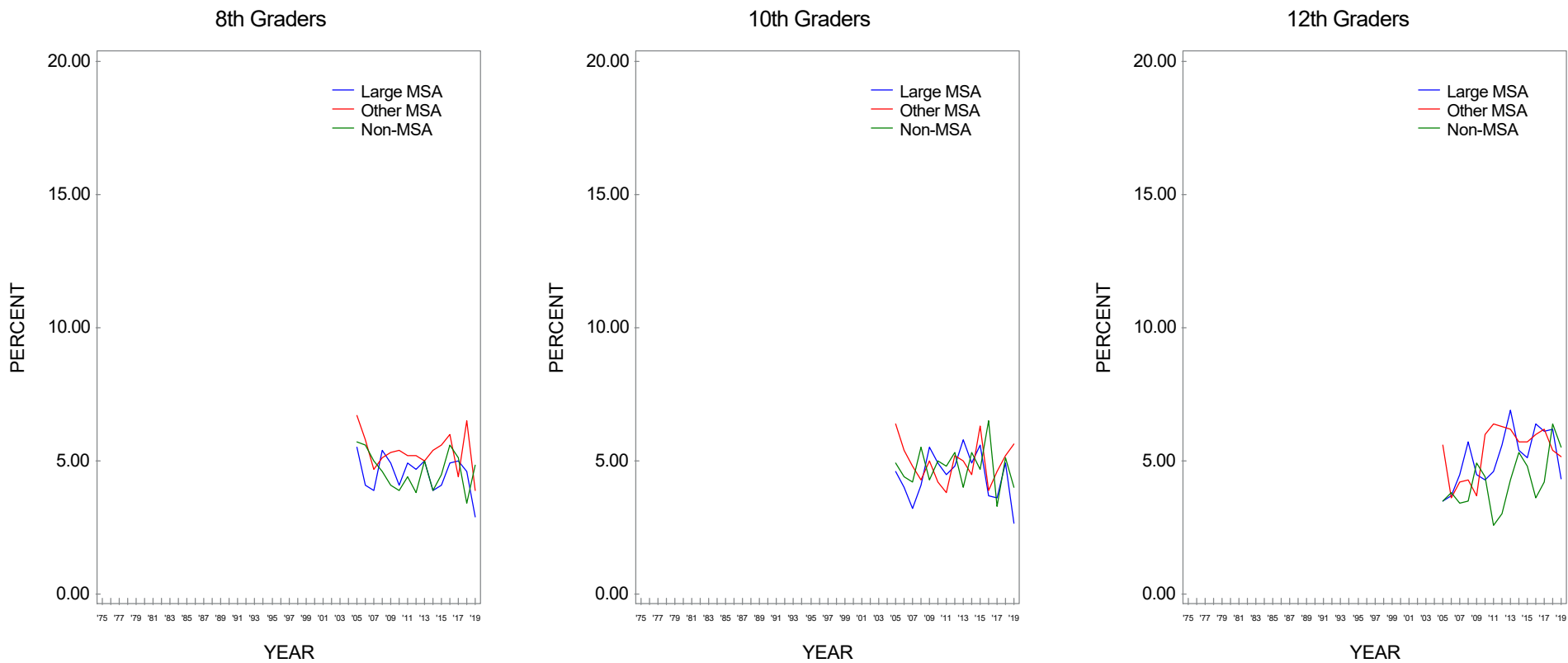
**Either Stimulant-Type or Non-Stimulant-Type ADHD Drugs: Trends in Current Prevalence of Legal Use by Region**



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

**FIGURE 454**

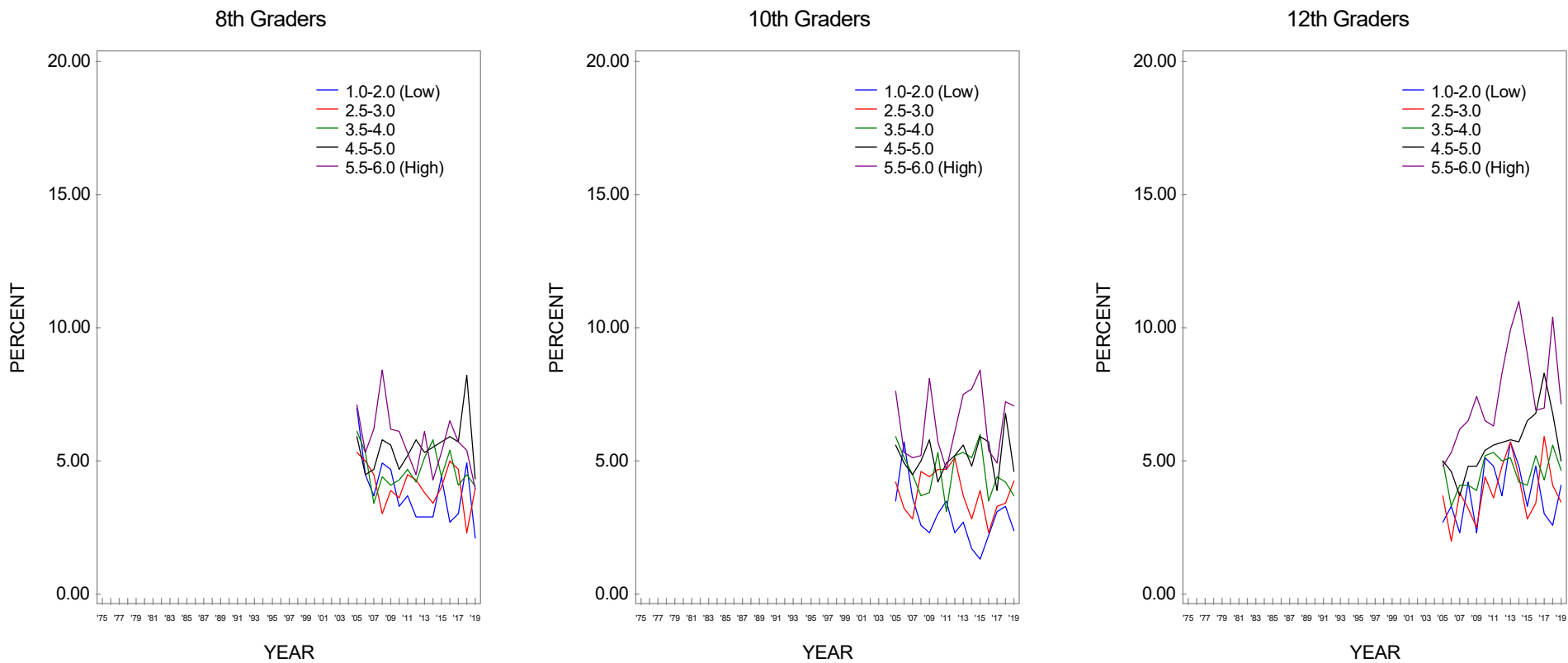
**Either Stimulant-Type or Non-Stimulant-Type ADHD Drugs: Trends in Current Prevalence of Legal Use by Population Density**



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

**FIGURE 455**

**Either Stimulant-Type or Non-Stimulant-Type ADHD Drugs: Trends in Current Prevalence of Legal Use by Average Education Level of Parents\***

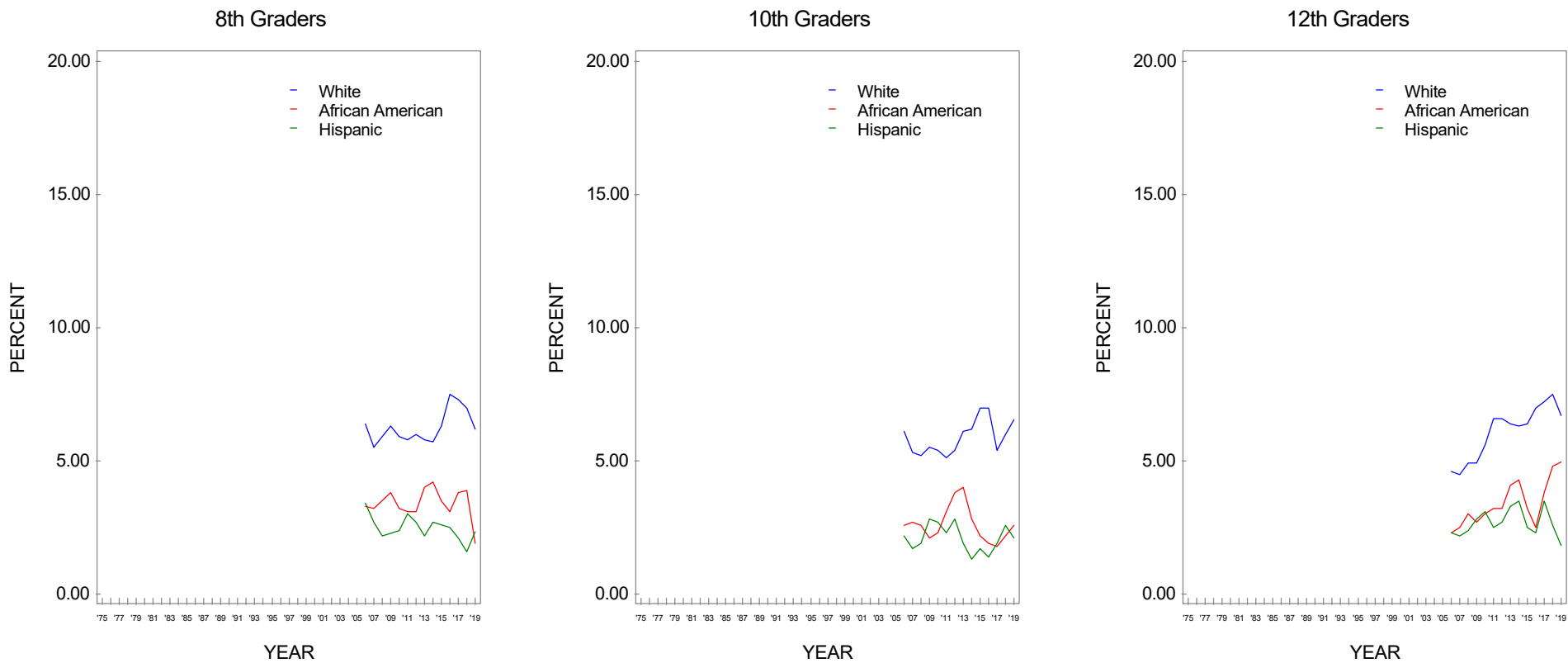


Source. The Monitoring the Future study, the University of Michigan.

\*Parental education is an average score of mother's education and father's education.

**FIGURE 456**

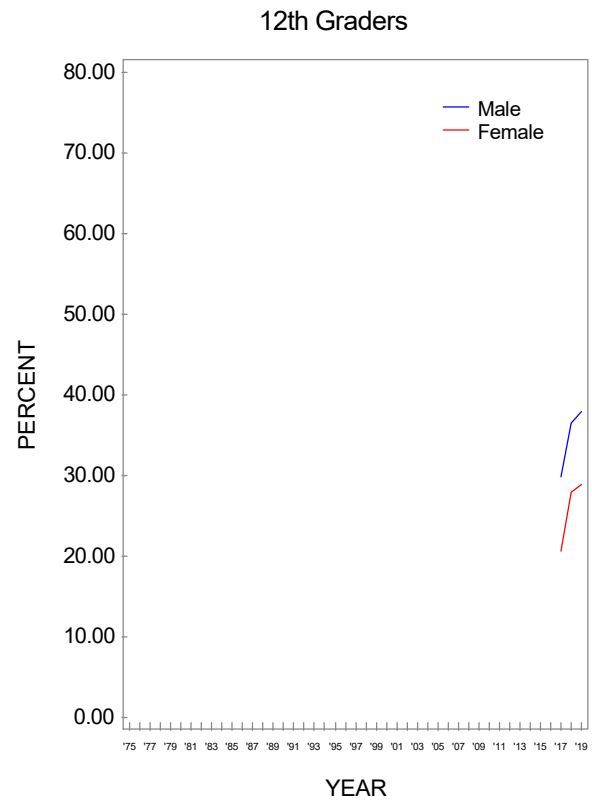
**Either Stimulant-Type or Non-Stimulant-Type ADHD Drugs: Trends in Current Prevalence of Legal Use by Race/Ethnicity\***



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

\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

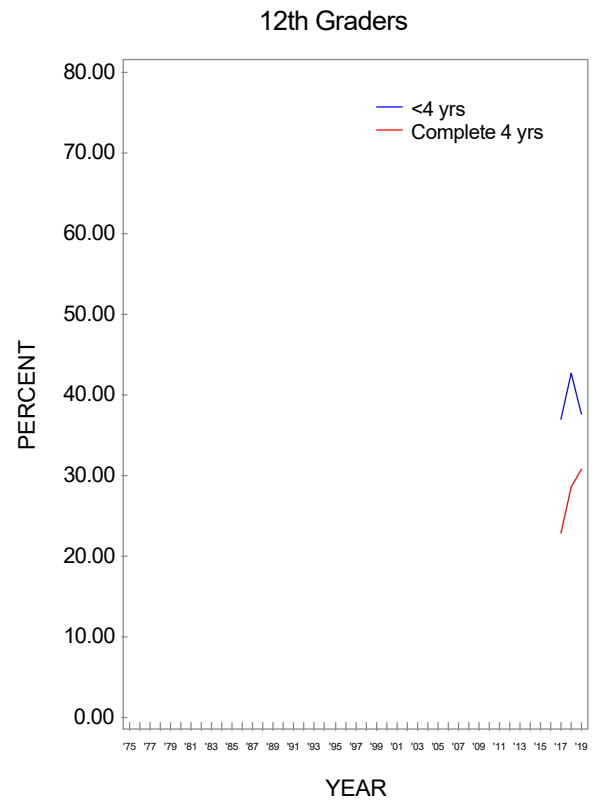
**FIGURE 457**  
**Any Nicotine Use\*: Trends in 30-Day Prevalence by Gender**



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

\*Includes use of any of the following: cigarettes, large cigars, flavored small cigars, regular small cigars, tobacco using a hookah, smokeless tobacco, or vaping nicotine.

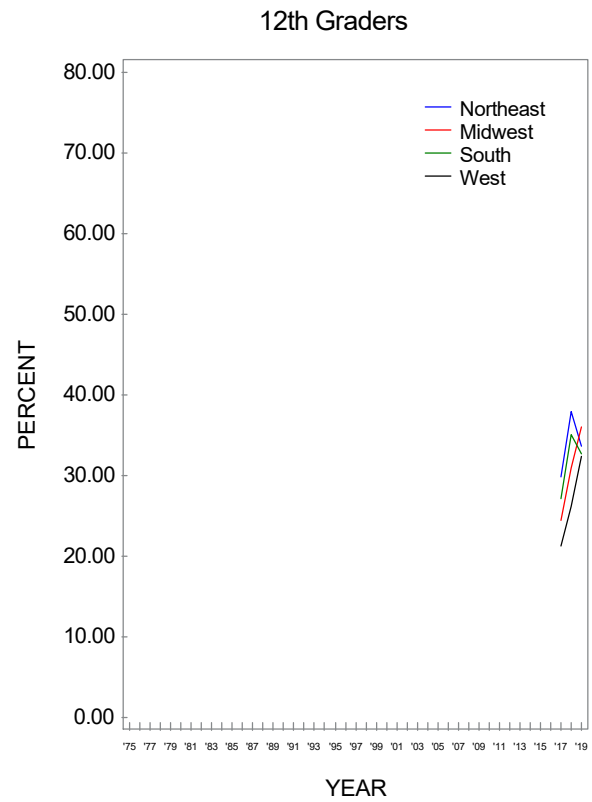
**FIGURE 458**  
**Any Nicotine Use\*: Trends in 30-Day Prevalence by College Plans**



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

\*Includes use of any of the following: cigarettes, large cigars, flavored small cigars, regular small cigars, tobacco using a hookah, smokeless tobacco, or vaping nicotine.

**FIGURE 459**  
**Any Nicotine Use\*: Trends in 30-Day Prevalence by Region**

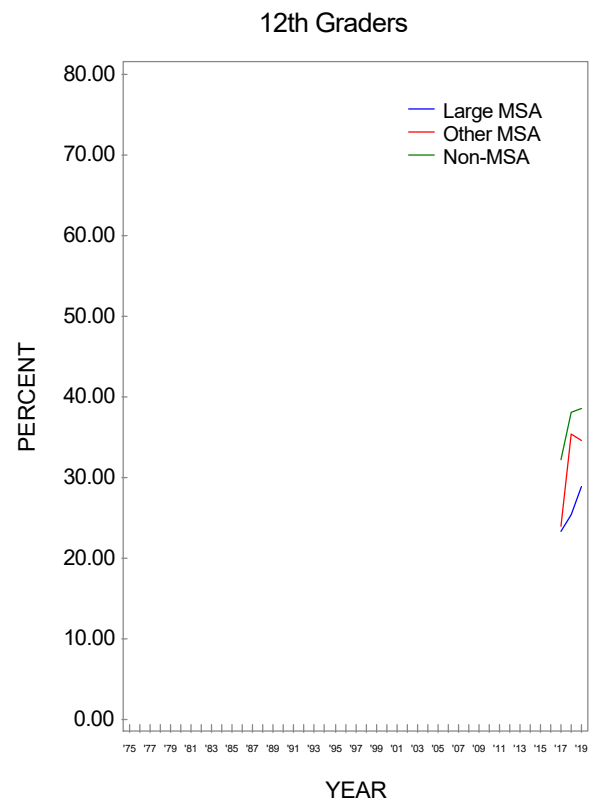


Source. The Monitoring the Future study, the University of Michigan.

\*Includes use of any of the following: cigarettes, large cigars, flavored small cigars, regular small cigars, tobacco using a hookah, smokeless tobacco, or vaping nicotine.



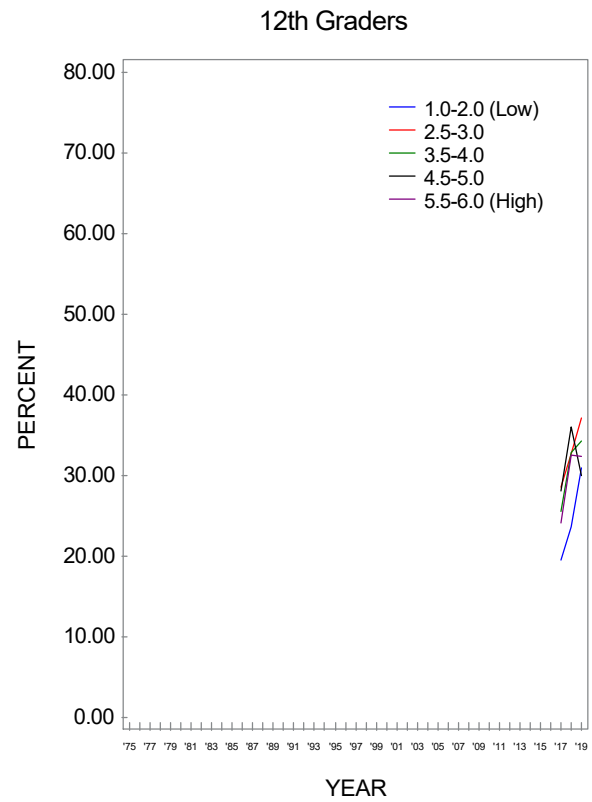
**FIGURE 460**  
**Any Nicotine Use\*: Trends in 30-Day Prevalence by Population Density**



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

\*Includes use of any of the following: cigarettes, large cigars, flavored small cigars, regular small cigars, tobacco using a hookah, smokeless tobacco, or vaping nicotine.

**FIGURE 461**  
**Any Nicotine Use\*: Trends in 30-Day Prevalence by Average Education Level of Parents\*\***

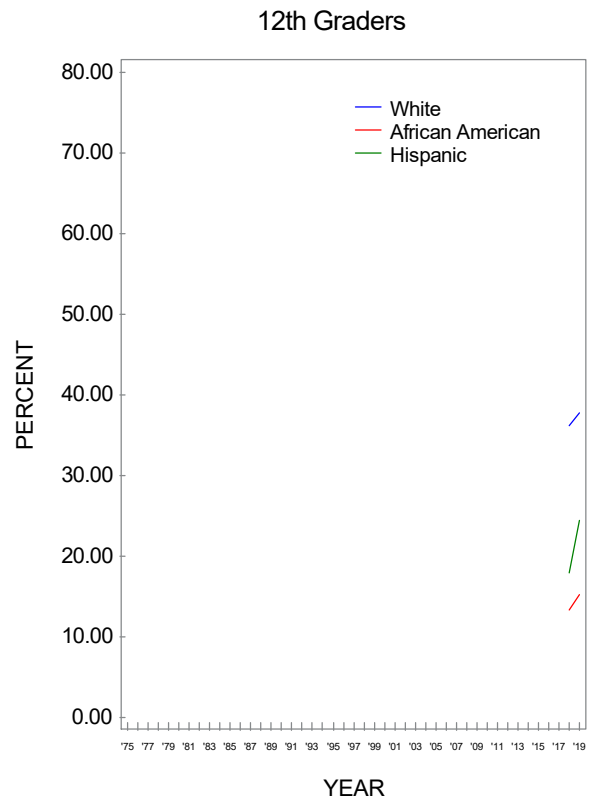


Source. The Monitoring the Future study, the University of Michigan.

\*Includes use of any of the following: cigarettes, large cigars, flavored small cigars, regular small cigars, tobacco using a hookah, smokeless tobacco, or vaping nicotine.

\*\*Parental education is an average score of mother's education and father's education.

**FIGURE 462**  
**Any Nicotine Use\*: Trends in 30-Day Prevalence by Race/Ethnicity\*\***

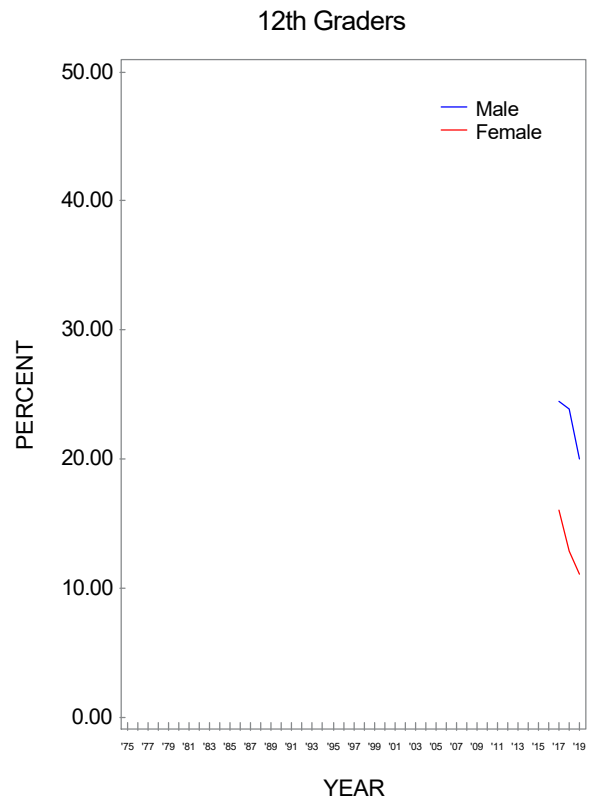


Source. The Monitoring the Future study, the University of Michigan.

\*Includes use of any of the following: cigarettes, large cigars, flavored small cigars, regular small cigars, tobacco using a hookah, smokeless tobacco, or vaping nicotine.

\*\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

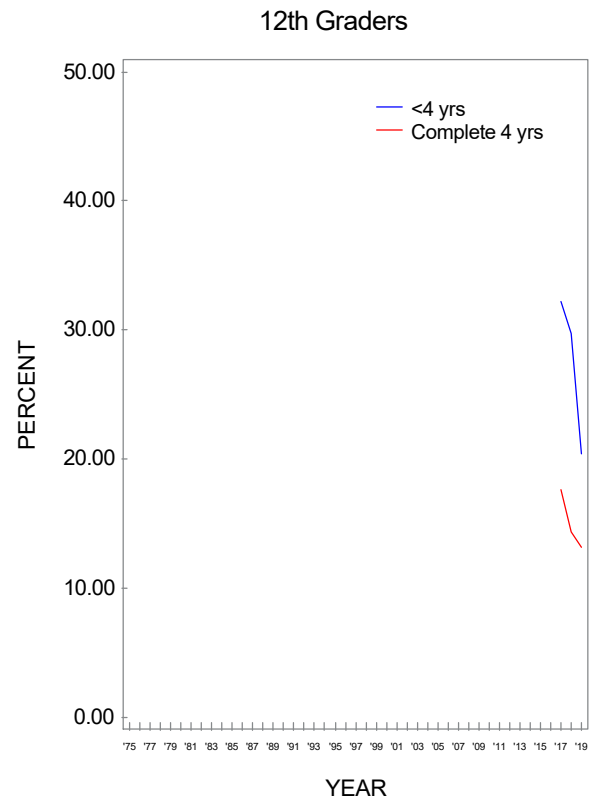
**FIGURE 463**  
**Any Nicotine Use other than Vaping\*: Trends in 30-Day Prevalence by Gender**



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

\*Includes use of any of the following: cigarettes, large cigars, flavored small cigars, regular small cigars, tobacco using a hookah, or smokeless tobacco.

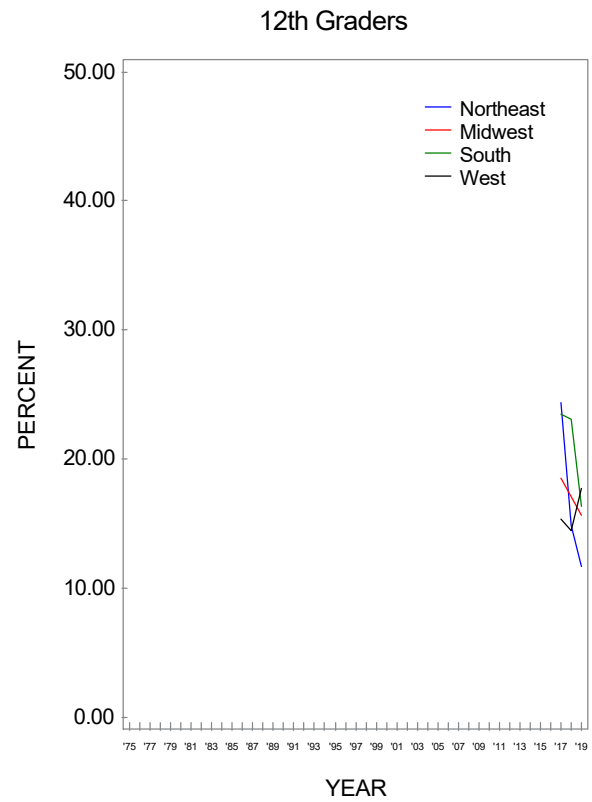
**FIGURE 464**  
**Any Nicotine Use other than Vaping\*: Trends in 30-Day Prevalence by College Plans**



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

\*Includes use of any of the following: cigarettes, large cigars, flavored small cigars, regular small cigars, tobacco using a hookah, or smokeless tobacco.

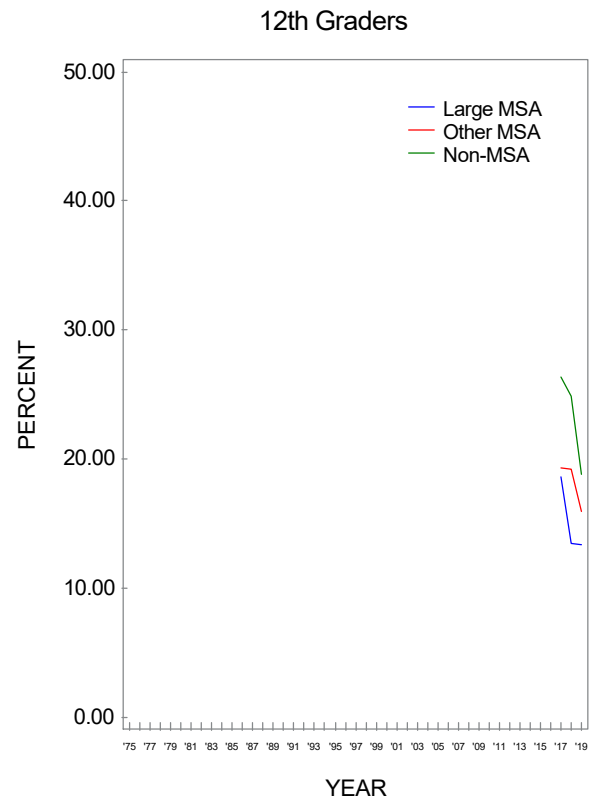
**FIGURE 465**  
**Any Nicotine Use other than Vaping\*: Trends in 30-Day Prevalence by Region**



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

\*Includes use of any of the following: cigarettes, large cigars, flavored small cigars, regular small cigars, tobacco using a hookah, or smokeless tobacco.

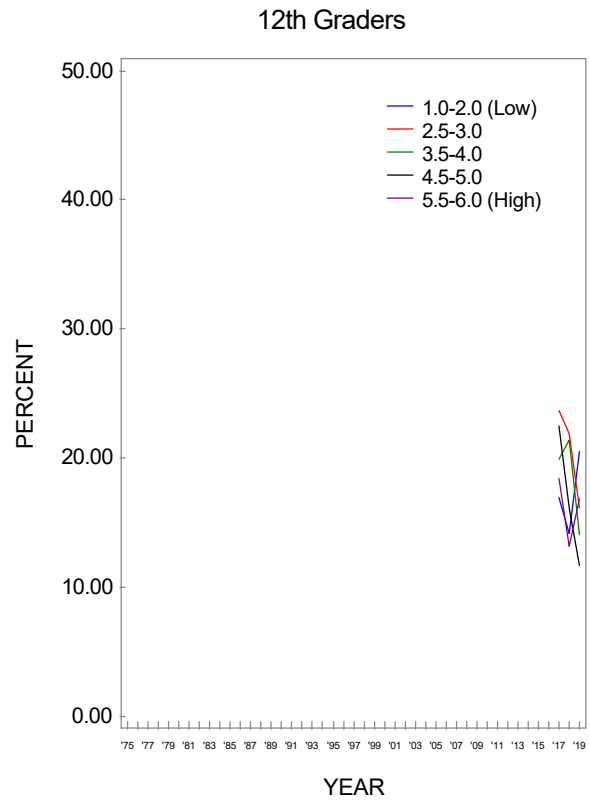
**FIGURE 466**  
**Any Nicotine Use other than Vaping\*: Trends in 30-Day Prevalence by Population Density**



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

\*Includes use of any of the following: cigarettes, large cigars, flavored small cigars, regular small cigars, tobacco using a hookah, or smokeless tobacco.

**FIGURE 467**  
**Any Nicotine Use other than Vaping\*: Trends in 30-Day Prevalence by Average Education Level of Parents\*\***



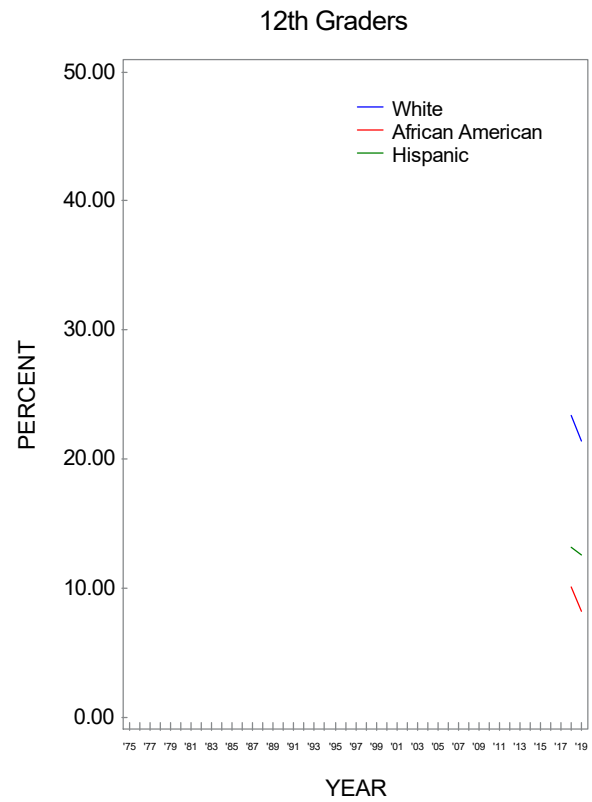
Source. The Monitoring the Future study, the University of Michigan.

\*Includes use of any of the following: cigarettes, large cigars, flavored small cigars, regular small cigars, tobacco using a hookah, or smokeless tobacco.

\*\*Parental education is an average score of mother's education and father's education.



**FIGURE 468**  
**Any Nicotine Use other than Vaping\*: Trends in 30-Day Prevalence by Race/Ethnicity\*\***



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

\*Includes use of any of the following: cigarettes, large cigars, flavored small cigars, regular small cigars, tobacco using a hookah, or smokeless tobacco.

\*\*To derive percentages for each racial/ethnic subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

## DEFINITION OF BACKGROUND AND DEMOGRAPHIC SUBGROUPS

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The following are brief definitions of the background and demographic subgroups explored in the Monitoring the Future (MTF) national survey of 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders' attitudes toward and use of drugs (including alcohol and tobacco). A more thorough discussion of the findings can be found in Appendix B of the MTF Volume I monograph, [\*Monitoring the Future National Survey Results on Drug Use, 1975-2019: Volume I, Secondary School Students\*](#).<sup>4</sup> (Note: All case counts provided in the tables are based on weighted Ns.)

**Total:** The total sample of respondents in a given year based on weighted cases (set to equal the total number of actual cases).

**Gender:** *Male and female.* Respondents are asked, "What is your sex?" Those with missing data on the question are omitted from the data presented by gender.

**College Plans:** Respondents are asked how likely it is that they will graduate from a four-year college program. College plans groupings are defined as follows:

*None or under four years.* Respondents who indicate they "definitely won't" or "probably won't" graduate from a four-year college program. (Note that, among those who do not expect to complete a four-year college program, a number still expect to get some postsecondary education.)

*Complete four years.* Respondents who indicate they "definitely will" or "probably will" graduate from a four-year college program.

Those not answering the college plans question are omitted from both groupings.

**Region:** Region of the country in which the respondent's school is located. There are four mutually exclusive regions in the US based on Census Bureau categories, defined as follows:

*Northeast.* Census classifications of New England and Middle Atlantic states consist of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania.

*Midwest.* Census classifications of East North Central and West North Central states consist of Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas.

*South.* Census classifications of South Atlantic, East South Central, and West South Central states consist of Delaware, Maryland, District of Columbia, Virginia, and West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas.

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<sup>4</sup>Miech, R. A., Johnston, L. D., O'Malley, P. M., Bachman, J. G., Schulenberg, J. E., & Patrick, M. E. (2020, forthcoming). *Monitoring the Future national survey results on drug use, 1975-2019: Volume I, Secondary school students*. Ann Arbor: Institute for Social Research, The University of Michigan.

**West.** Census classifications of Mountain and Pacific states consist of Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, and California (Alaska and Hawaii are also included in this Census region, but are not included in the MTF study).

**Population  
Density:**

Population density of the area in which the schools are located. There are three mutually exclusive groups into which schools have been placed in a given year based on population density (which has been variously defined over time by the U.S. Bureau of the Census, as described below). The 1975–1985 samples were based on the 1970 Census; in 1986, one-half of the sample was based on the 1970 Census and the other half was based on the 1980 Census. In 1987 through 1993, all samples were based on the 1980 Census; in 1994, half of the sample was based on the 1980 Census and half on the 1990 Census. Starting in 2006 until 2013, each first-year half-sample of schools comes from a sample design that utilizes 2000 Census counts as the measure of size for first-stage units. Counts from the 2010 Census will be used for the samples beginning in 2014.

The three levels of population density were defined in terms of Standard Metropolitan Statistical Area (SMSA) designations through 1985, and then changed to the new Census Bureau classifications of Metropolitan Statistical Areas (MSAs). Except in the New England states, an MSA is a county or group of contiguous counties that contain at least one city of 50,000 inhabitants or more or twin cities with a combined population of at least 50,000. In the New England states, MSAs consisted of towns and cities instead of counties until 1994, after which New England Consolidated Metropolitan Areas (NECMAs) were used to define MSAs. Each MSA must include at least one central city, and the complete title of an MSA identifies the central city or cities. For the complete description of the criteria used in defining MSAs, see the Office of Management and Budget publication, *Metropolitan Statistical Areas, 1990* (NTIS-PB90-214420), Washington, D.C. The population living in an MSA is designated as the metropolitan population. The levels of population density used in MTF include those described here:

**Large MSA.** These were the 12 largest SMSAs as of the 1970 Census and were used for the 1975–1985 samples: New York, Los Angeles, Chicago, Philadelphia, Detroit, San Francisco, Washington, Boston, Pittsburgh, St. Louis, Baltimore, and Cleveland. As of the 1980 Census, the Large MSA group consisted of the 16 largest MSAs in the nation. This new structure was used for the 1986–1994 samples. These 16 MSAs include all of those mentioned above except Cleveland, plus Dallas-Fort Worth, Houston, Nassau-Suffolk, Minneapolis-St. Paul, and Atlanta.

A new sample design was developed based on the 1990 Census, beginning with the first-year half-sample of schools chosen in 1994. In the 1990s sample, only the eight largest MSAs are represented with certainty at all three grade levels; 16 other large MSAs are divided into pairs, with half randomly assigned to both the 8<sup>th</sup>- and 12<sup>th</sup>- grade samples and the other half assigned to the 10<sup>th</sup>-grade sample. The eight largest MSAs are New York, Los Angeles, Chicago, Philadelphia PA-NJ, Detroit, Washington DC-MD-VA, Dallas-Ft. Worth, and Boston. The other 16 large MSAs are Houston, Atlanta, Seattle-Tacoma, Minneapolis MN-WI, St. Louis MO-IL, San Diego, Baltimore, Pittsburgh, Phoenix, Oakland, Cleveland, Miami, Newark, Denver, San Francisco, and Kansas City MO-KS.

**Other MSAs.** This category consists of all other, smaller MSAs, as defined by the Census, except those listed previously.

**Non-MSAs.** This category consists of all areas not designated as MSAs—in other words, they do not contain a town (or twin cities) of at least 50,000 inhabitants. The population living outside of MSAs constitutes the nonmetropolitan population.

**Parental  
Education:**

This is an average of mother’s education and father’s education based on the respondents’ answers about the highest level of education achieved by each parent, using the following scale: (1) completed grade school or less, (2) some high school, (3) completed high school, (4) some college, (5) completed college, and (6) graduate or professional school after college. Missing data were allowed for one of the two parents. The respondent was instructed, “If you were raised mostly by foster parents, stepparents, or others, answer for them. For example, if you have both a stepfather and a natural father, answer for the one that was most important in raising you.”

**Race/  
Ethnicity:**

From 1975 through 2004, respondents were asked, “How do you describe yourself?” and presented with a list of various racial/ethnic categories. A general instruction told them to select the *one* best response for each question. In 2005, the instructions in half of the questionnaire forms were revised in order to be more consistent with the guidelines of the Office of Management and Budget for assessing race/ethnicity. In the changed forms, respondents were presented with a list of racial/ethnic categories and instructed to “select one or more responses.” An examination of the data showed that relatively few respondents (about 6% in 2005 and about 6.6% of the sample in 2014) selected more than one racial/ethnic category. Because some survey questions appear in only one or a few forms, there was some variation in the version of the race/ethnicity question upon which the 2005 data were based. Based on the analyses we have examined, we do not believe these different permutations make any appreciable difference in the results. In 2006 and thereafter the revised instruction was used in all forms. Those checking multiple racial/ethnic groups or one of the other specified groups are omitted from the reporting on race/ethnicity in this volume because of the small numbers of cases.

**White/Caucasian.** Consists of those respondents who describe themselves as White or Caucasian in 1975–2004. In 2005, the unchanged questionnaire forms were treated in a similar manner. For the revised question in 2005 and for all forms in 2006 and beyond, those checking only White and no other racial/ethnic group were categorized as White.

**African American.** Consists of those respondents who in 1975–1990 describe themselves as Black or Afro-American or who, in 1991–2004, describe themselves as Black or African American. In 2005, the unchanged questionnaire forms were treated in a similar manner; for the revised question in 2005 and for all forms in 2006 and beyond, only those checking Black or African American and no other racial ethnic group were categorized as African American.

**Hispanic.** Consists of those respondents who in 1975–1990 describe themselves as Mexican American or Chicano, or Puerto Rican or other Latin American. After 1990, this group includes those respondents who describe themselves as Mexican American or Chicano, Cuban American, Puerto Rican American, or other Latin American. (The term “Puerto Rican American” was shortened to “Puerto Rican” after 1994.) In 2005, the unchanged questionnaire forms were treated in a similar manner; the changed forms

in 2005 and for all forms in 2006 and beyond, only those checking Mexican American or Chicano, Cuban American, Puerto Rican, or Other Hispanic or Latino and no other racial/ethnic group were categorized as Hispanic.

## TRENDS BY SUBGROUP: SUPPLEMENTAL TABLES FOR SECONDARY SCHOOL STUDENTS

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The tables in this section contain the numbers underlying the trend lines shown in the figures on subgroup trends. Trends in subgroup data for the 1975–2018 Monitoring the Future (MTF) results containing 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders' use of drugs and alcohol are presented in tables below. The trends observed span major classes of drugs for population subgroups defined by gender, college plans, region, population density, parental education, and race/ethnicity. Appendix D of Volume I contains a portion of the information presented here.<sup>5</sup>

Due to the sheer quantity of information such trend tables generate for each prevalence measure (e.g., lifetime, annual, 30-day, daily), we have selected only the prevalence periods that seem most useful for understanding subgroup differences below. Thus, for most drugs, we include only annual prevalence; rates for additional prevalence periods are provided for alcohol, cigarettes, and smokeless tobacco because of their more frequent use. The numbers of cases that go with the data in the figures may be found in the complete set of tables that are included below.

The subgroups distinguished in these tables are used throughout Volume I and defined in the previous section. The reader should note that two-year moving averages are given for the three major racial/ethnic groups included in order to reduce fluctuations in the trends due to random sampling differences. A footnote in each table describes the procedure used to obtain the presented data. A question about race/ethnicity identification was changed in 2005 in half of the questionnaire forms; allowing respondents to select multiple categories of race/ethnicity rather than just one (see the previous section for more details). In 2006, the remaining questionnaire forms were changed in a like manner. However, we believe that this change has had little effect on the results because so few respondents selected more than one of the categories offered.

For nearly all drugs, we provide one table showing the subgroup trends (since 1991) for 8<sup>th</sup> graders, a second table of trends (since 1991) for 10<sup>th</sup> graders and a third table showing the longer-term trends (since 1975) for 12<sup>th</sup> graders. However, for two of the drugs—sedatives (barbiturates) and narcotics other than heroin—the 8<sup>th</sup>- and 10<sup>th</sup>-grade data have been omitted, as they have been throughout MTF publications because we are less certain about the validity of the answers provided by those younger students. Specifically, we believe that they often fail to omit nonprescription substances. Usage questions for a few other drugs are simply not asked of 8<sup>th</sup> and 10<sup>th</sup> graders; thus, only 12<sup>th</sup>-grade tables are presented.

Sample sizes should be taken into account when interpreting the importance of any changes observed. The numbers provided in the tables assume that all respondents in a given grade were asked about their use of the drug. Some of the drugs were not contained in all questionnaire forms, meaning that the subgroup and total numbers must be adjusted accordingly. The “Notes” section at the bottom of each table will indicate if only a fraction of the total sample received the question.

This paper also includes graphic presentations of the trends presented in the tables for the various demographic subgroups. These figures use color to help distinguish the various subgroups and improve readability.

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<sup>5</sup>Miech, R. A., Johnston, L. D., O'Malley, P. M., Bachman, J. G., Schulenberg, J. E., & Patrick, M. E. (2020, forthcoming). *Monitoring the Future national survey results on drug use, 1975-2019: Volume I, Secondary school students*. Ann Arbor: Institute for Social Research, The University of Michigan.

## List of 2019 Tables

Substance	Table Number			Time Period				
	8th Grade	10th Grade	12th Grade	Lifetime	Annual	30-Day	Daily	2-Weeks
Any illicit drug	1	2	3		X			
Any illicit drug other than marijuana	4	5	6		X			
Marijuana, Lifetime	7	8	9	X				
Marijuana, Annual	10	11	12		X			
Marijuana, 30-Day	13	14	15			X		
Marijuana, Daily	16	17	18				X	
Synthetic Marijuana	19	20	21		X			
Inhalants	22	23	24		X			
Hallucinogens	25	26	27		X			
LSD	28	29	30		X			
Hallucinogens other than LSD	31	32	33		X			
Ecstasy (MDMA)	34	35	36		X			
Salvia	37	38	39		X			
Cocaine	40	41	42		X			
Crack	43	44	45		X			
Other cocaine	46	47	48		X			
Heroin	49	50	51		X			
Heroin with a needle	52	53	54		X			
Heroin without a needle	55	56	57		X			
Narcotics other than heroin	—	—	58		X			
OxyContin	59	60	61		X			
Vicodin	62	63	64		X			
Amphetamines	65	66	67		X			
Ritalin	68	69	70		X			
Adderall	71	72	73		X			
Provigil	—	—	74		X			
Methamphetamine	75	76	77		X			
Crystal methamphetamine (ice)	—	—	78		X			
Bath Salts (Synthetic Stimulants)	79	80	81		X			
Sedatives (barbiturates)	—	—	82		X			
Tranquilizers	83	84	85		X			
Any Prescription Drug	—	—	86					
OTC cough/cold medicines	87	88	89		X			
Rohypnol	90	91	92		X			
Alcohol, 30-Day	93	94	95			X		
Alcohol, Daily	96	97	98				X	
Been drunk	99	100	101			X		
5+ drinks in a row	102	103	104					X
10+ drinks in a row	105	105	105					X
15+ drinks in a row	—	—	106					X
Beer	107	108	109			X		
5+ drinks in a row	110	111	112					X
Liquor	—	—	113			X		
5+ drinks in a row	—	—	114					X
Wine	—	—	115			X		
5+ drinks in a row	—	—	116					X
Wine coolers	117	118	119			X		
5+ drinks in a row	—	—	120					X
Flavored alcoholic beverages	121	122	123			X		
Alcoholic Beverages containing Caffeine	124	125	126		X			
Cigarettes	127	128	129			X		
Daily	130	131	132				X	
1/2 pack+/day	133	134	135				X	
Tobacco using a Hookah	—	—	136		X			
Small cigars	—	—	137		X			
Flavored little cigars or cigarillos	138	138	138			X		
Regular little cigars or cigarillos	139	139	139			X		
Large cigars	140	140	140			X		

Substance	Table Number			Time Period				
	8th Grade	10th Grade	12th Grade	Lifetime	Annual	30-Day	Daily	2-Weeks
Any Vaping	141	141	141			X		
Vaping nicotine	142	142	142			X		
Vaping marijuana	143	143	143			X		
Vaping just flavoring	144	144	144			X		
Smokeless tobacco	145	146	147			X		
Daily	148	149	150				X	
Dissolvable Tobacco Products	151	152	153		X			
Snus	154	155	156		X			
Steroids	157	158	159		X			
Marijuana, Ever Daily for Month or More	—	—	160				X	
Nonprescription Diet Pills	—	—	161		X			
Nonprescription Stay-Awake Pills	—	—	162		X			
Stimulant-Type ADHD Drugs, Lifetime	163	164	165	X				
Stimulant-Type ADHD Drugs, Current	166	167	168					
Non-Stimulant-Type ADHD Drugs, Lifetime	169	170	171	X				
Non-Stimulant-Type ADHD Drugs, Current	172	173	174					
Either Type ADHD Drugs, Lifetime	175	176	177	X				
Either Type ADHD Drugs, Current	178	179	180					
Any Nicotine Use	—	—	181			X		
Any Nicotine Use other than Vaping	—	—	182			X		
Marijuana, Under a Doctor's Orders			183	X				
Powdered Alcohol	184	184	184		X			
Energy Drinks	185	186	187				X	
Energy Shots	188	189	190				X	
Either Energy Drinks or Shots	191	192	193				X	
Weighted <i>N</i> s by subgroups	S1	S2	S3					



**TABLE 1**  
**ANY ILLICIT DRUG:<sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months														
	<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>
Approximate weighted N =	17,500	18,600	18,300	17,300	17,500	17,800	18,600	18,100	16,700	16,700	16,200	15,100	16,500	17,000	16,800
Total	11.3	12.9	15.1	18.5	21.4	23.6	22.1	21.0	20.5	19.5	19.5	17.7	16.1	15.2	15.5
Gender:															
Male	11.7	11.9	15.2	19.4	22.3	23.6	22.6	21.3	21.3	19.7	21.3	19.2	16.4	15.0	15.2
Female	11.0	13.6	14.9	17.6	20.2	23.3	21.3	20.4	19.7	19.0	17.5	16.3	15.5	15.2	15.6
College Plans:															
None or under 4 years	22.8	25.6	30.7	34.6	38.4	40.3	39.6	41.3	39.9	38.9	38.5	36.8	34.7	33.6	35.2
Complete 4 years	9.5	10.9	12.8	16.3	19.1	21.0	19.9	18.4	18.0	17.1	17.2	15.7	14.0	13.2	13.3
Region:															
Northeast	9.3	10.6	11.5	16.6	17.9	20.3	20.2	16.0	18.2	16.6	18.1	13.8	13.1	13.0	12.3
Midwest	11.2	13.0	13.9	17.2	23.3	24.7	22.3	21.9	22.6	20.6	18.0	17.0	15.7	14.2	15.9
South	11.5	12.9	15.1	17.6	20.8	22.5	21.6	22.3	21.0	19.2	21.5	20.1	18.1	16.8	17.4
West	13.3	15.0	21.1	23.7	23.3	27.1	24.4	22.0	19.2	21.0	18.9	18.4	15.6	15.5	14.5
Population Density:															
Large MSA	10.5	12.0	13.1	16.2	15.2	23.4	20.5	19.8	19.1	18.1	16.4	15.9	14.3	14.0	14.9
Other MSA	12.1	14.4	17.3	21.5	23.7	24.9	22.6	21.4	19.5	18.8	21.5	18.3	16.2	15.9	16.2
Non-MSA	10.8	11.2	12.9	14.0	20.3	21.4	22.9	21.6	24.3	22.7	19.1	18.9	18.1	15.3	15.0
Parental Education: <sup>b</sup>															
1.0–2.0 (Low)	19.5	18.5	20.8	26.1	29.8	26.7	29.5	30.4	30.2	30.9	29.9	27.3	26.4	25.7	24.9
2.5–3.0	11.7	14.1	17.1	20.2	24.3	25.7	25.5	24.2	24.9	23.9	23.3	22.4	20.4	18.5	20.5
3.5–4.0	11.6	13.6	15.4	19.7	23.4	26.2	23.8	21.8	21.0	20.1	21.5	18.5	16.9	16.7	16.7
4.5–5.0	8.7	10.2	12.8	15.7	17.4	21.3	19.3	17.8	15.6	14.6	15.0	14.5	12.0	12.1	11.4
5.5–6.0 (High)	10.2	10.1	11.8	14.9	17.7	19.8	16.8	17.1	15.8	15.0	13.4	12.1	11.0	10.9	9.8
Race/Ethnicity (2-year average): <sup>c</sup>															
White	—	11.8	13.6	15.7	19.2	22.4	23.0	21.5	19.9	19.1	19.0	18.3	16.5	14.9	14.4
African American	—	7.9	9.3	13.0	15.8	17.5	18.1	18.1	18.6	18.3	16.7	15.1	14.6	14.6	15.6
Hispanic	—	18.1	20.6	24.6	26.7	26.9	26.5	26.7	27.4	25.1	24.3	24.8	22.8	20.9	18.8

Table continued on next page.

**TABLE 1 (cont.)**  
**ANY ILLICIT DRUG:<sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months														2018-2019 change
	<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>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	
Approximate weighted N =	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	
Total	14.8	13.2	14.1	14.5	16.0	14.7	13.4‡	15.2	14.6	14.8	12.0	12.9	13.4	14.8	+1.5
Gender:															
Male	15.1	13.2	14.3	15.7	16.7	15.7	13.8‡	14.9	14.1	14.0	11.3	11.6	13.2	12.6	-0.5
Female	14.2	12.9	13.7	13.1	15.4	13.3	12.7‡	14.9	14.5	15.3	12.5	13.6	13.3	16.7	+3.4 ss
College Plans:															
None or under 4 years	33.1	31.9	34.5	30.7	33.6	32.1	30.1‡	31.3	29.0	27.5	25.4	24.7	25.8	27.0	+1.1
Complete 4 years	13.0	11.4	12.3	13.0	14.6	13.2	12.1‡	14.0	13.3	13.6	10.7	11.5	11.6	13.0	+1.4
Region:															
Northeast	10.8	8.1	11.3	13.8	14.1	9.8	9.6‡	12.5	12.9	11.6	7.5	10.0	8.8	10.8	+2.0
Midwest	13.9	12.9	15.5	13.5	14.2	13.0	9.9‡	13.4	13.4	15.6	12.2	11.2	11.3	13.9	+2.6
South	17.7	15.2	15.6	15.9	18.4	15.7	15.8‡	17.3	14.7	14.9	13.1	13.2	13.2	15.4	+2.2
West	13.9	13.3	12.4	13.5	15.5	18.6	15.6‡	15.5	16.7	16.1	13.0	16.0	19.2	17.6	-1.6
Population Density:															
Large MSA	13.5	11.5	12.5	12.4	15.3	13.4	12.6‡	15.9	16.0	14.8	11.3	12.5	14.0	13.1	-0.8
Other MSA	15.6	13.8	15.1	15.7	17.2	16.1	14.3‡	14.8	14.1	15.7	11.8	13.5	13.5	15.5	+2.0
Non-MSA	15.2	14.5	14.2	14.5	14.4	13.7	12.7‡	14.9	13.7	12.9	13.3	12.0	12.0	15.8	+3.8 ss
Parental Education: <sup>b</sup>															
1.0–2.0 (Low)	23.7	23.2	23.3	21.5	24.6	23.4	22.0‡	25.8	22.9	24.0	17.9	19.8	19.0	22.1	+3.2
2.5–3.0	18.6	16.8	19.2	19.0	20.6	20.1	18.4‡	22.1	19.6	18.8	15.1	17.5	18.0	23.2	+5.2 ss
3.5–4.0	16.5	14.9	15.3	15.8	17.1	16.4	15.4‡	17.9	16.4	16.1	13.5	13.5	15.7	16.3	+0.6
4.5–5.0	11.0	9.2	10.5	11.1	12.8	10.7	9.6‡	11.0	10.4	10.3	9.7	9.4	9.9	11.4	+1.5
5.5–6.0 (High)	9.9	8.1	9.6	9.9	10.5	8.7	7.9‡	9.0	10.5	10.0	7.8	8.7	7.5	9.1	+1.6
Race/Ethnicity (2-year average): <sup>c</sup>															
White	14.1	13.1	13.0	13.5	14.1	13.8	12.1	11.1‡	11.5	11.5	10.4	9.8	10.3	10.9	+0.6
African American	14.9	12.7	12.3	14.2	15.7	15.0	13.5	14.9‡	14.9	14.7	14.3	13.9	13.1	13.8	+0.7
Hispanic	17.9	16.8	16.1	16.8	18.2	19.3	19.3	18.9‡	18.9	17.9	15.8	14.3	15.5	17.6	+2.1 ss

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

Notes. ‡ indicates some change in the question. See relevant footnote. See relevant figure to assess the impact of the wording changes. 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. The 2013 data are based on half the forms; N is one half of N indicated. Beginning in 2014 data are based on all forms. See the amphetamine notes for details of the changes.

<sup>a</sup>Use of any illicit drug includes any use of marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin; or any use of amphetamines or tranquilizers not under a doctor's orders. The use of narcotics other than heroin and sedatives (barbiturates) has been excluded because 8th and 10th graders appear to overreport their use (perhaps because they include the use of nonprescription drugs in their answers).

<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 2**  
**ANY ILLICIT DRUG:** <sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 10

	Percentage who used in last 12 months														
	<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>
Approximate weighted N =	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
Total	21.4	20.4	24.7	30.0	33.3	37.5	38.5	35.0	35.9	36.4	37.2	34.8	32.0	31.1	29.8
Gender:															
Male	21.6	20.4	25.1	31.8	33.7	38.8	40.1	35.3	37.0	39.4	39.6	35.9	33.2	32.0	30.5
Female	21.1	20.1	24.0	28.0	32.5	36.3	36.8	34.7	34.6	33.5	35.0	33.7	30.8	30.2	28.9
College Plans:															
None or under 4 years	32.7	32.0	37.7	43.2	47.3	52.4	55.2	50.5	51.8	53.5	52.7	51.5	48.6	46.9	45.8
Complete 4 years	18.9	17.8	21.9	27.0	30.8	35.0	35.7	32.2	33.2	33.9	34.6	32.1	29.2	28.9	27.6
Region:															
Northeast	21.8	19.0	26.9	29.6	32.4	37.7	37.8	39.0	38.2	34.0	37.4	35.2	32.6	32.8	31.3
Midwest	21.7	20.7	22.4	28.5	32.1	37.6	37.7	32.0	35.2	34.8	35.9	33.7	28.8	28.8	29.1
South	19.2	17.9	23.3	29.2	33.2	37.9	38.7	35.1	34.8	36.0	36.7	33.9	34.0	32.9	31.1
West	23.7	25.5	28.9	34.4	36.1	36.8	40.2	34.5	36.0	41.6	40.7	37.7	32.3	29.8	26.9
Population Density:															
Large MSA	21.4	19.9	24.0	29.4	28.7	35.5	37.2	32.6	35.0	36.5	34.0	33.0	30.5	28.9	28.0
Other MSA	22.0	20.8	25.1	32.7	35.5	40.0	40.0	36.9	37.3	36.6	39.0	36.9	32.4	32.0	31.1
Non-MSA	20.4	20.1	24.4	24.7	30.7	35.1	37.2	34.5	33.9	35.8	37.4	32.8	33.5	32.3	29.5
Parental Education: <sup>b</sup>															
1.0–2.0 (Low)	25.5	24.8	29.2	32.6	38.2	39.5	38.3	36.6	42.2	42.4	39.0	39.4	38.8	37.7	33.2
2.5–3.0	23.0	21.3	25.4	31.1	37.1	39.1	40.8	39.1	39.4	39.2	41.6	39.4	36.4	34.0	34.3
3.5–4.0	21.2	20.6	24.9	30.5	34.7	40.1	41.6	35.6	35.4	39.5	38.2	35.5	33.3	33.6	30.6
4.5–5.0	19.4	18.7	22.5	28.1	30.9	35.5	36.3	31.9	32.8	32.6	35.1	31.9	27.8	27.7	27.6
5.5–6.0 (High)	21.1	18.5	23.6	27.2	26.6	33.6	33.7	31.5	34.6	31.3	32.7	29.1	27.5	26.2	25.9
Race/Ethnicity (2-year average): <sup>c</sup>															
White	—	22.4	23.7	27.9	32.6	36.5	39.3	38.2	36.4	36.9	37.6	37.6	35.0	32.2	31.0
African American	—	10.8	11.9	18.5	23.6	27.3	30.2	28.9	28.4	29.7	30.5	28.5	27.3	29.3	29.0
Hispanic	—	23.6	26.3	30.3	34.3	40.0	41.3	38.1	38.4	39.3	38.8	36.2	33.8	34.5	32.8

Table continued on next page.

**TABLE 2 (cont.)**  
**ANY ILLICIT DRUG:<sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	28.7	28.1	26.9	29.4	30.2	31.1	30.1‡	32.1	29.9	27.9	26.8	27.8	29.9	31.0	+1.1
Gender:															
Male	29.3	29.5	27.9	31.6	33.0	33.8	32.9‡	34.9	30.3	27.8	25.9	26.1	29.5	29.5	0.0
Female	28.1	26.7	25.6	27.3	27.3	28.2	27.5‡	29.4	29.4	27.6	27.1	28.9	30.2	32.1	+1.9
College Plans:															
None or under 4 years	46.2	45.7	47.0	48.5	48.8	50.4	46.2‡	46.2	44.4	44.3	41.0	39.1	43.2	42.1	-1.0
Complete 4 years	26.4	25.7	24.2	27.3	28.0	28.9	28.5‡	30.6	28.4	26.1	25.2	26.1	28.0	28.8	+0.8
Region:															
Northeast	27.8	27.7	28.6	26.2	27.9	30.6	33.2‡	29.7	29.5	28.9	26.0	27.8	32.3	32.5	+0.1
Midwest	28.2	28.1	25.8	26.2	28.1	29.0	26.3‡	29.9	26.6	23.9	25.5	27.5	27.4	28.8	+1.4
South	29.7	26.7	27.1	31.6	31.0	31.4	30.3‡	33.6	31.1	28.4	27.3	26.1	28.9	30.1	+1.2
West	29.0	30.2	26.2	32.6	33.3	33.2	31.6‡	34.1	31.8	30.2	27.8	30.4	32.2	33.9	+1.7
Population Density:															
Large MSA	27.3	27.9	26.4	29.0	28.9	29.5	30.8‡	31.0	30.0	28.2	26.4	29.9	31.6	31.5	-0.1
Other MSA	28.6	28.3	28.1	30.7	31.9	32.6	30.2‡	33.8	30.5	28.2	26.6	27.4	30.7	32.1	+1.4
Non-MSA	31.4	27.8	24.8	27.4	28.6	30.2	29.2‡	29.5	28.5	26.3	28.0	25.2	25.3	27.1	+1.8
Parental Education: <sup>b</sup>															
1.0–2.0 (Low)	36.2	32.0	33.6	39.5	37.4	37.7	39.8‡	40.5	35.0	36.8	30.1	31.8	34.1	35.1	+0.9
2.5–3.0	33.7	33.0	31.7	32.8	36.1	36.3	34.5‡	40.6	34.8	34.0	31.9	31.9	34.1	38.8	+4.6 s
3.5–4.0	30.6	30.2	29.2	30.3	31.9	33.2	31.8‡	32.1	33.6	31.8	28.7	30.4	31.8	33.7	+1.9
4.5–5.0	24.6	24.7	22.3	26.5	24.6	27.2	27.5‡	29.2	25.5	24.5	24.1	24.7	26.9	26.8	-0.1
5.5–6.0 (High)	24.3	21.7	21.7	24.5	25.7	25.1	24.8‡	24.2	24.3	20.7	23.5	24.0	26.5	25.1	-1.4
Race/Ethnicity (2-year average): <sup>c</sup>															
White	30.2	29.4	28.0	27.9	29.2	30.0	29.7	29.2‡	29.0	27.2	26.6	27.1	27.7	28.2	+0.5
African American	26.2	24.2	22.4	23.5	26.6	29.6	30.6	32.5‡	33.2	30.8	28.5	26.2	26.4	29.5	+3.1 ss
Hispanic	28.5	27.3	30.1	33.1	34.0	33.5	34.3	36.3‡	35.8	32.8	29.8	28.8	31.0	32.7	+1.7

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

Notes. ' ‡ ' indicates some change in the question. See relevant footnote. See relevant figure to assess the impact of the wording changes. Level of 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. The 2013 data are based on half the forms; N is one half of N indicated. Beginning in 2014 data are based on all forms. See the amphetamine notes for details of the changes.

<sup>a</sup>Use of any illicit drug includes any use of marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin; or any use of amphetamines or tranquilizers not under a doctor's orders. The use of narcotics other than heroin and sedatives (barbiturates) has been excluded because 8th and 10th graders appear to overreport their use (perhaps because they include the use of nonprescription drugs in their answers).

<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 3**  
**ANY ILLICIT DRUG: <sup>a,b</sup>Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	<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>
<i>Approximate weighted N =</i>	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
Total	45.0	48.1	51.1	53.8	54.2	53.1	52.1	49.4	47.4	45.8	46.3	44.3	41.7	38.5	35.4	32.5
Gender:																
Male	49.0	52.6	55.4	58.6	58.1	56.0	53.6	51.8	49.7	48.0	48.3	45.7	43.2	40.6	37.7	34.3
Female	41.4	43.0	46.7	48.7	50.1	49.8	50.8	46.3	44.4	42.8	43.8	42.3	39.7	36.1	32.8	30.1
College Plans:																
None or under 4 years	—	50.6	54.3	55.5	56.8	56.5	55.8	53.4	50.8	50.3	50.1	48.6	46.7	42.0	40.9	37.8
Complete 4 years	—	44.3	46.8	50.5	50.5	49.7	48.6	45.5	43.7	41.4	43.1	41.2	39.0	36.5	32.6	29.6
Region:																
Northeast	51.5	55.3	56.8	61.6	62.9	58.9	58.8	55.1	53.8	54.7	53.2	49.7	45.8	41.2	36.0	36.4
Midwest	45.5	47.6	51.9	54.6	55.0	53.1	53.4	50.3	46.9	42.4	45.7	45.0	42.7	39.7	38.7	34.0
South	38.1	42.3	46.2	47.5	45.4	47.0	43.7	42.2	41.3	41.4	37.2	37.4	35.9	34.2	30.7	27.6
West	48.3	49.7	50.0	53.2	56.4	55.8	55.5	51.7	50.7	49.1	53.3	47.8	45.7	41.8	39.5	34.4
Population Density:																
Large MSA	54.5	54.6	56.3	60.3	61.3	59.9	57.8	54.8	52.0	49.7	49.9	48.0	43.9	39.1	32.9	32.6
Other MSA	45.0	47.8	52.4	54.5	55.2	53.8	52.1	49.8	49.6	46.7	46.5	45.1	42.7	40.5	36.3	33.5
Non-MSA	38.8	43.7	45.2	47.4	47.6	47.0	47.6	44.0	41.1	41.4	43.0	40.0	37.6	34.3	36.0	30.1
Parental Education: <sup>c</sup>																
1.0–2.0 (Low)	—	43.4	45.3	47.7	50.2	49.5	48.1	44.3	45.1	42.7	42.8	38.1	35.4	35.8	28.4	26.6
2.5–3.0	—	49.2	51.8	53.3	53.2	53.0	51.2	48.8	46.3	45.7	46.0	44.8	41.8	37.2	35.3	32.7
3.5–4.0	—	48.9	53.1	55.1	56.1	54.2	52.8	50.8	46.5	47.6	47.2	45.6	42.2	38.6	37.7	33.8
4.5–5.0	—	50.8	51.7	56.3	57.1	54.0	53.4	49.7	48.9	44.9	48.4	44.7	43.1	40.0	35.5	33.1
5.5–6.0 (High)	—	51.3	51.8	59.1	54.3	55.0	54.8	48.5	46.1	45.5	44.5	44.5	43.5	40.6	36.3	33.3
Race/Ethnicity (2-year average:) <sup>d</sup>																
White	—	—	50.4	53.5	55.2	54.9	54.4	50.7	49.3	47.4	47.6	47.2	45.2	43.0	40.3	37.5
African American	—	—	40.8	42.8	41.5	40.5	39.0	36.4	38.5	37.8	35.9	33.3	28.9	25.0	21.3	17.0
Hispanic	—	—	49.9	49.5	48.4	48.1	46.8	42.7	42.0	43.1	43.9	42.8	38.9	35.4	30.1	26.4

Table continued on next page.

**TABLE 3 (cont.)**  
**ANY ILLICIT DRUG: <sup>a,b</sup>Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Approximate weighted N =	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	29.4	27.1	31.0	35.8	39.0	40.2	42.4	41.4	42.1	40.9	41.4	41.0	39.3	38.8	38.4	36.5
Gender:																
Male	32.1	29.0	33.5	38.6	41.5	43.4	44.1	45.2	45.0	43.4	43.8	43.5	41.3	41.4	42.1	37.5
Female	26.2	24.7	27.9	32.7	35.8	36.2	40.0	37.2	38.9	38.0	38.4	37.8	36.7	35.9	34.5	35.0
College Plans:																
None or under 4 years	33.9	33.5	34.9	40.8	44.1	46.2	48.8	47.3	47.9	45.1	46.2	46.2	46.8	44.4	46.5	46.1
Complete 4 years	27.1	24.4	29.2	33.6	36.7	37.8	40.1	39.1	40.3	38.8	39.6	39.3	36.6	36.8	36.1	33.8
Region:																
Northeast	31.9	28.7	36.1	39.4	41.7	44.6	47.7	46.2	42.5	46.2	47.4	45.7	43.7	43.9	43.2	42.0
Midwest	31.3	27.8	30.8	36.5	40.9	40.9	40.6	38.1	42.1	38.9	42.0	41.6	40.0	38.2	38.8	36.3
South	24.5	23.7	28.2	34.1	36.4	37.6	38.8	40.5	40.8	35.3	37.3	38.1	34.8	35.7	36.6	34.9
West	32.6	31.1	31.8	34.7	38.2	39.1	45.9	43.1	44.2	47.4	41.9	40.5	41.4	39.6	36.3	34.6
Population Density:																
Large MSA	28.6	26.8	32.9	36.4	41.7	41.3	42.1	42.0	42.4	41.1	43.9	41.9	35.7	36.3	38.5	38.2
Other MSA	33.0	27.3	31.7	37.8	39.0	42.3	44.2	42.1	43.3	42.6	41.0	42.4	42.7	42.4	39.8	36.7
Non-MSA	23.8	27.0	28.4	31.6	35.9	35.4	39.2	39.3	39.9	37.5	39.4	37.1	37.6	34.9	35.5	33.5
Parental Education: <sup>c</sup>																
1.0–2.0 (Low)	28.7	27.7	29.5	32.9	37.7	36.6	40.3	38.9	40.9	41.3	38.8	35.3	35.8	34.7	32.0	37.6
2.5–3.0	28.7	26.4	29.2	35.4	38.3	39.9	40.8	40.5	43.7	40.5	41.9	39.3	39.0	37.7	38.9	38.2
3.5–4.0	29.6	28.1	31.6	36.4	38.8	40.4	42.0	42.9	42.9	41.6	42.7	43.2	41.3	42.1	41.3	37.1
4.5–5.0	28.7	26.2	31.5	36.5	39.0	40.5	43.6	40.9	40.0	39.6	41.3	42.0	38.9	38.2	38.8	33.2
5.5–6.0 (High)	31.9	26.8	33.4	35.7	40.7	40.6	44.0	41.8	42.3	41.1	40.1	40.6	36.5	37.4	36.0	37.3
Race/Ethnicity (2-year average:) <sup>d</sup>																
White	33.9	30.5	31.4	35.5	39.0	40.8	42.8	44.0	43.3	42.8	43.1	43.6	42.8	42.0	41.6	40.0
African American	14.7	14.5	16.6	23.5	29.6	32.4	33.0	32.3	32.8	32.7	31.7	30.4	28.3	27.7	29.0	30.0
Hispanic	29.4	30.3	28.8	31.2	35.5	38.0	41.2	41.9	42.5	44.8	41.8	39.0	35.8	34.4	34.5	34.2

Table continued on next page.

**TABLE 3 (cont.)**  
**ANY ILLICIT DRUG: <sup>a,b</sup>Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months												2018-2019 change	
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		2019
Approximate weighted N =	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	35.9	36.6	36.5	38.3	40.0	39.7‡	40.1	38.7	38.6	38.3	39.9	38.8	38.0	-0.8
Gender:														
Male	38.4	38.8	39.9	41.4	43.2	43.5‡	43.2	39.8	39.7	39.2	40.2	39.7	37.5	-2.3
Female	33.2	34.1	33.2	34.7	36.2	35.1‡	36.5	36.9	37.2	37.0	38.9	36.8	37.7	+0.9
College Plans:														
None or under 4 years	43.7	46.0	42.7	46.5	46.6	44.3‡	47.5	44.5	42.5	40.4	42.4	42.5	42.4	-0.1
Complete 4 years	34.0	34.2	34.9	36.1	38.2	38.2‡	38.1	36.7	37.3	37.1	39.0	37.2	36.3	-0.9
Region:														
Northeast	41.9	40.0	40.5	44.1	42.8	40.9‡	43.7	43.0	43.3	40.7	42.9	42.8	39.1	-3.7
Midwest	37.3	35.1	36.5	36.3	37.9	35.3‡	35.4	38.3	35.8	37.0	41.1	40.1	37.1	-3.0
South	33.6	36.0	34.7	36.2	37.0	37.5‡	38.8	37.7	35.3	35.7	36.2	34.6	36.4	+1.8
West	33.4	36.5	36.0	38.9	44.4	46.1‡	44.3	37.0	43.1	42.3	42.8	41.7	42.1	+0.4
Population Density:														
Large MSA	37.9	37.7	40.2	39.9	41.5	43.0‡	43.2	38.8	41.6	40.8	42.4	39.9	38.4	-1.5
Other MSA	35.1	35.7	35.8	39.4	41.3	40.3‡	40.9	41.2	38.3	38.1	39.2	38.1	38.4	+0.3
Non-MSA	34.7	37.2	33.4	33.2	34.6	32.9‡	33.6	32.3	34.2	34.7	37.2	38.7	36.4	-2.3
Parental Education: <sup>c</sup>														
1.0–2.0 (Low)	35.6	34.6	33.0	36.9	40.3	45.4‡	41.6	40.7	40.3	37.7	37.1	36.2	37.3	+1.1
2.5–3.0	37.8	37.5	37.4	39.2	40.5	40.9‡	42.8	41.4	41.1	38.9	42.2	42.2	39.6	-2.6
3.5–4.0	35.0	35.9	38.4	40.6	41.7	40.8‡	41.8	39.1	41.0	40.3	41.6	41.2	42.1	+0.9
4.5–5.0	34.9	36.5	35.4	37.9	38.5	38.5‡	38.1	36.5	35.4	37.4	38.9	37.4	33.0	-4.4 s
5.5–6.0 (High)	36.9	36.7	36.6	32.6	37.9	34.8‡	37.9	37.1	36.1	35.5	37.5	35.6	37.9	+2.3
Race/Ethnicity (2-year average): <sup>d</sup>														
White	38.5	38.7	38.7	38.8	40.2	40.3	39.3‡	38.9	38.5	38.5	39.2	39.5	38.1	-1.4
African American	28.7	28.6	30.4	33.1	34.8	35.0	37.7‡	39.6	36.3	35.6	38.0	38.8	38.3	-0.4
Hispanic	32.2	31.4	32.6	34.5	37.5	40.5	42.2‡	39.9	38.6	39.7	39.5	37.2	35.9	-1.2

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

Notes. ' ‡ ' indicates some change in the question. See relevant footnote. See relevant figure to assess the impact of the wording changes. 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 estimates 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. The 2013 data are based on half the forms; N is one half of N indicated. Beginning in 2014 data are based on all forms. See the amphetamine notes for details of the changes.

<sup>a</sup>Use of any illicit drug includes any use of marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin; or any use of narcotics other than heroin, amphetamines, sedatives (barbiturates), methaqualone (excluded since 1990), or tranquilizers not under a doctor's orders.

<sup>b</sup>Beginning in 1982 the question about amphetamine use was revised to get respondents to exclude the inappropriate reporting of nonprescription amphetamines. The prevalence-of-use rate dropped slightly as a result of this methodological change.

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

<sup>d</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 4**  
**ANY ILLICIT DRUG OTHER THAN MARIJUANA: <sup>a</sup> Trends in Annual Prevalence of Use**  
**by Subgroups in Grade 8**

	Percentage who used in last 12 months														
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 <sup>b</sup>	2002	2003	2004	2005
Approximate weighted N =	17,500	18,600	18,300	17,300	17,500	17,800	18,600	18,100	16,700	16,700	16,200	15,100	16,500	17,000	16,800
Total	8.4	9.3	10.4	11.3	12.6	13.1	11.8	11.0	10.5	10.2‡	10.8	8.8	8.8	7.9	8.1
Gender:															
Male	8.0	8.0	9.2	10.1	11.5	11.0	10.8	9.6	9.7	9.1‡	10.0	8.1	7.9	7.0	6.6
Female	8.8	10.4	11.5	12.3	13.5	14.7	12.6	12.1	11.2	10.9‡	11.2	9.3	9.4	8.8	9.3
College Plans:															
None or under 4 years	16.3	18.5	21.3	21.2	25.3	23.0	22.1	23.8	23.4	22.7‡	21.5	19.7	20.0	18.0	18.2
Complete 4 years	7.2	8.0	8.9	9.9	10.9	11.6	10.6	9.4	9.0	8.7‡	9.5	7.6	7.5	6.9	7.0
Region:															
Northeast	6.8	6.6	8.2	10.3	10.7	11.3	9.5	8.5	8.5	8.0‡	9.5	5.8	7.1	5.9	5.8
Midwest	8.6	10.4	9.4	10.2	14.0	14.3	12.5	10.5	11.9	11.2‡	9.9	8.7	8.7	7.7	8.1
South	8.6	9.7	11.0	11.7	12.5	12.6	11.8	12.5	11.2	10.3‡	12.4	10.6	10.0	9.0	9.5
West	9.3	9.8	13.4	12.7	12.7	14.0	13.0	11.1	9.3	10.5‡	10.1	8.4	7.9	8.2	7.7
Population Density:															
Large MSA	8.0	8.1	8.8	9.8	8.7	12.3	9.9	8.9	8.4	8.5‡	9.7	7.4	7.1	6.9	7.1
Other MSA	8.6	10.4	11.8	12.5	13.5	14.1	12.2	11.2	10.7	10.1‡	11.8	9.2	8.7	8.5	8.8
Non-MSA	8.6	8.9	9.8	9.8	13.2	12.1	13.0	12.8	12.8	12.3‡	10.3	9.8	11.0	8.0	8.1
Parental Education: <sup>c</sup>															
1.0–2.0 (Low)	12.9	12.9	14.4	15.6	18.0	15.5	14.8	17.3	16.0	15.8‡	14.3	13.0	14.1	15.2	14.3
2.5–3.0	8.5	10.1	11.8	12.4	14.2	13.9	12.9	12.2	12.1	12.2‡	13.2	10.9	10.9	8.8	10.3
3.5–4.0	8.7	10.1	10.6	11.8	14.2	14.5	12.5	11.2	11.3	10.6‡	11.7	9.0	9.0	8.4	9.0
4.5–5.0	7.1	7.5	9.1	9.5	9.7	12.0	10.6	9.4	8.5	7.7‡	8.9	7.6	6.7	6.8	5.7
5.5–6.0 (High)	7.8	8.0	8.2	9.4	10.1	11.7	10.3	9.5	8.3	8.4‡	8.0	6.5	6.8	5.9	5.3
Race/Ethnicity (2-year average): <sup>d</sup>															
White	—	9.0	10.0	10.8	12.6	13.9	13.5	12.5	11.5	11.1	10.6‡	10.3 <sup>e</sup>	9.3	8.7	8.1
African American	—	4.9	5.0	5.9	5.7	5.3	4.7	4.0	4.1	3.8	3.9‡	4.4 <sup>e</sup>	4.4	4.4	4.2
Hispanic	—	12.2	13.7	15.2	15.3	14.7	13.6	13.5	14.5	13.9	12.2‡	11.9 <sup>e</sup>	10.8	10.4	9.9

Table continued on next page.



**TABLE 4 (cont.)**  
**ANY ILLICIT DRUG OTHER THAN MARIJUANA:** <sup>a</sup> Trends in Annual Prevalence of Use  
 by Subgroups in Grade 8

	Percentage who used in last 12 months														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	
Total	7.7	7.0	7.4	7.0	7.1	6.4	5.5‡	6.3	6.4	6.3	5.4	5.8	6.1	6.5	+0.4
Gender:															
Male	6.5	5.9	6.0	6.6	6.4	6.1	4.8‡	5.5	5.3	5.1	4.7	4.4	5.8	5.2	-0.6
Female	8.7	8.0	8.7	7.3	7.7	6.5	6.0‡	6.9	7.1	7.4	6.1	6.8	6.1	7.6	+1.5 s
College Plans:															
None or under 4 years	17.7	18.1	20.3	18.2	16.4	17.2	13.0‡	14.6	14.7	11.0	11.5	10.5	11.6	12.5	+0.9
Complete 4 years	6.7	6.0	6.3	6.0	6.3	5.5	4.9‡	5.7	5.7	5.9	4.8	5.1	5.2	5.6	+0.3
Region:															
Northeast	4.4	4.4	5.2	5.0	4.6	4.4	4.1‡	4.0	4.3	5.3	3.0	3.9	3.6	4.7	+1.1
Midwest	7.1	7.4	7.6	6.7	7.0	6.0	3.7‡	5.4	5.6	5.9	4.9	4.9	4.6	6.2	+1.5 ss
South	9.8	7.8	8.8	8.4	8.3	6.7	7.3‡	8.2	7.1	6.7	6.4	6.1	6.8	6.8	0.0
West	7.4	6.9	6.7	6.3	7.0	7.8	5.4‡	5.9	7.5	6.6	5.9	7.3	8.2	7.7	-0.6
Population Density:															
Large MSA	6.6	6.1	6.8	5.5	5.7	5.7	5.1‡	5.7	5.7	5.8	4.9	6.0	7.1	5.9	-1.2
Other MSA	8.0	7.6	7.7	7.8	8.0	7.0	6.1‡	6.5	6.9	7.1	5.5	5.8	5.8	6.9	+1.1
Non-MSA	8.8	7.1	7.6	7.1	6.9	6.0	5.0‡	6.9	6.4	5.1	6.2	5.4	5.0	6.4	+1.4 s
Parental Education: <sup>c</sup>															
1.0–2.0 (Low)	12.3	11.9	13.6	12.4	11.5	10.7	8.3‡	10.6	9.4	9.8	8.5	9.7	8.3	9.0	+0.7
2.5–3.0	9.4	8.3	9.7	8.7	8.8	9.1	7.2‡	7.1	7.6	7.0	6.1	6.8	7.4	9.3	+1.9
3.5–4.0	8.4	7.8	8.0	7.4	7.3	7.0	6.5‡	8.2	7.0	6.8	5.4	5.8	6.8	6.5	-0.3
4.5–5.0	6.0	4.7	5.4	5.4	6.0	4.6	3.5‡	5.2	4.9	5.0	4.8	4.6	5.2	5.8	+0.6
5.5–6.0 (High)	6.2	5.5	5.7	5.1	4.7	4.3	4.4‡	4.0	5.4	5.1	4.8	4.2	4.0	4.8	+0.8
Race/Ethnicity (2-year average): <sup>d</sup>															
White	8.1	7.6	7.6	7.5	7.2	6.7	5.6	4.9‡	5.4	5.7	5.2	4.8	5.0	5.5	+0.5
African American	3.9	3.3	3.4	4.1	4.0	3.8	3.9	4.0‡	5.2	5.1	5.3	4.9	4.8	4.7	-0.1
Hispanic	9.2	8.6	8.4	8.6	8.7	8.7	8.1	7.4‡	7.4	7.1	6.8	6.5	7.0	7.8	+0.8

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

Notes. ' ‡ ' indicates some change in the question. See relevant footnote. See relevant figure to assess the impact of the wording changes. 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. The 2013 data are based on half the forms; N is one half of N indicated. Beginning in 2014 data are based on all forms. See the amphetamine notes for details of the changes.

<sup>a</sup>Use of any illicit drug other than marijuana includes any use of LSD, other hallucinogens, crack, other cocaine, or heroin; or any use of amphetamines or tranquilizers not under a doctor's orders. The use of narcotics other than heroin and sedatives (barbiturates) has been excluded because 8th and 10th graders appear to overreport their use (perhaps because they include the use of nonprescription drugs in their answers).

<sup>b</sup>In 2001 the question text was changed on half of the questionnaire forms. Other psychedelics was changed to other hallucinogens, and shrooms was added to the list of examples. For the tranquilizer list of examples, Miltown was replaced with Xanax. The 2001 data are based on the changed forms only; N is one half of N indicated. In 2002 the remaining forms were changed. Beginning in 2002, the data are based on all forms. Data for any illicit drug other than marijuana and hallucinogens are also affected by these changes and have been treated in a parallel manner.

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

<sup>d</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.

<sup>e</sup>Due to changes in the question wording in half of the questionnaire forms in 2001, the 2002 entry comprises half of the 2001 sample data double-weighted (the half with the new version of the question) and all of the 2002 sample data.

**TABLE 5**  
**ANY ILLICIT DRUG OTHER THAN MARIJUANA: <sup>a</sup> Trends in Annual Prevalence of Use**  
**by Subgroups in Grade 10**

	Percentage who used in last 12 months														
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 <sup>o</sup>	2002	2003	2004	2005
Approximate weighted N =	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
Total	12.2	12.3	13.9	15.2	17.5	18.4	18.2	16.6	16.7	16.7†	17.9	15.7	13.8	13.5	12.9
Gender:															
Male	11.2	11.1	13.4	14.1	15.8	17.2	17.2	15.6	15.9	16.7†	18.3	15.1	13.0	12.7	12.0
Female	13.1	13.2	14.3	16.0	18.9	19.6	19.1	17.5	17.3	16.6†	17.4	16.4	14.3	14.2	13.6
College Plans:															
None or under 4 years	19.6	20.2	23.1	24.0	27.5	29.5	29.6	27.8	27.3	27.7†	32.1	27.1	23.8	25.3	24.0
Complete 4 years	10.7	10.5	12.0	13.3	15.7	16.5	16.3	14.6	15.0	15.0†	15.5	14.0	12.1	11.9	11.4
Region:															
Northeast	10.6	9.6	12.8	13.7	14.1	17.2	16.0	17.2	18.2	14.7†	16.2	13.4	11.7	13.7	13.0
Midwest	13.2	12.9	12.8	14.8	19.0	20.0	16.2	14.4	16.1	15.8†	16.5	15.3	13.1	12.0	12.2
South	11.9	12.2	14.7	15.3	18.4	18.6	20.8	18.3	16.8	17.5†	19.5	16.8	15.7	14.8	13.9
West	12.7	14.1	15.6	17.2	17.2	17.4	18.7	15.8	15.7	18.5†	19.0	16.7	13.8	13.5	12.0
Population Density:															
Large MSA	11.8	11.4	12.2	13.1	13.5	16.8	16.3	14.6	15.0	17.2†	15.6	14.3	10.8	10.4	10.9
Other MSA	12.3	12.3	14.1	16.1	18.5	19.5	18.0	16.6	17.3	15.6†	17.4	16.5	14.2	15.1	13.2
Non-MSA	12.4	13.1	15.0	14.6	17.6	18.3	20.8	18.9	17.5	18.1†	21.5	16.1	17.2	14.5	14.7
Parental Education: <sup>c</sup>															
1.0–2.0 (Low)	14.4	16.6	18.1	17.1	20.8	22.7	19.1	21.5	19.2	20.4†	19.6	21.0	19.1	16.5	15.9
2.5–3.0	13.7	12.5	14.6	16.3	19.7	19.4	19.9	19.1	19.1	19.4†	20.3	18.3	16.7	15.6	14.4
3.5–4.0	12.1	12.7	14.8	15.9	18.3	19.9	19.8	16.4	16.5	17.4†	19.7	16.1	14.5	14.6	13.7
4.5–5.0	11.0	10.9	11.7	13.3	15.9	16.6	16.5	14.1	15.4	14.5†	15.6	13.7	11.2	11.6	11.5
5.5–6.0 (High)	11.6	10.7	12.2	12.8	13.4	15.4	15.4	14.4	15.6	14.5†	14.6	12.2	10.5	11.0	10.8
Race/Ethnicity (2-year average): <sup>d</sup>															
White	—	13.7	14.4	15.4	17.7	20.0	20.5	19.7	18.7	18.6	19.2†	18.9 <sup>e</sup>	17.2	15.7	14.9
African American	—	4.3	4.6	5.4	5.4	4.5	4.8	4.7	4.5	4.2	4.7†	5.7 <sup>e</sup>	4.7	4.6	4.8
Hispanic	—	11.8	13.7	16.1	16.9	18.8	19.1	17.5	17.9	17.8	15.8†	15.7 <sup>e</sup>	15.2	15.1	14.9

Table continued on next page.

**TABLE 5 (cont.)**  
**ANY ILLICIT DRUG OTHER THAN MARIJUANA:** <sup>a</sup> Trends in Annual Prevalence of Use  
by Subgroups in Grade 10

	Percentage who used in last 12 months														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	12.7	13.1	11.3	12.2	12.1	11.2	10.8‡	11.2	11.2	10.5	9.8	9.4	9.6	9.1	-0.4
Gender:															
Male	12.0	12.9	10.9	11.8	12.3	12.2	11.3‡	12.5	10.4	10.0	9.7	9.3	9.8	9.5	-0.2
Female	13.1	13.2	11.5	12.3	11.8	10.0	10.4‡	9.9	11.8	10.7	9.7	9.1	9.2	8.6	-0.6
College Plans:															
None or under 4 years	24.7	25.0	22.9	25.4	24.5	24.1	24.5‡	17.2	21.9	19.7	18.4	17.7	18.2	13.9	-4.3 ss
Complete 4 years	11.1	11.5	9.8	10.7	10.7	9.7	9.4‡	10.5	10.1	9.5	8.8	8.3	8.3	8.1	-0.3
Region:															
Northeast	10.4	11.3	8.2	9.0	9.8	9.4	9.3‡	8.5	9.8	9.9	6.8	6.7	7.4	6.1	-1.3
Midwest	12.7	13.4	11.8	11.5	12.0	10.8	10.4‡	11.0	11.8	9.0	9.2	10.3	9.6	8.5	-1.0
South	13.7	13.3	12.6	13.6	12.4	12.2	12.4‡	12.7	11.9	11.3	10.7	8.7	10.3	9.4	-0.9
West	13.3	13.8	11.5	13.7	14.1	11.7	10.3‡	11.6	10.9	11.3	11.5	11.6	10.0	11.4	+1.4
Population Density:															
Large MSA	11.5	12.0	9.9	10.7	11.2	10.4	10.0‡	10.4	10.2	10.3	9.5	9.9	9.6	8.2	-1.5
Other MSA	12.9	13.4	12.1	13.4	12.6	11.2	10.9‡	11.9	11.3	10.6	10.2	9.4	9.8	9.8	+0.1
Non-MSA	14.1	14.0	11.8	11.7	12.7	12.6	11.9‡	10.6	12.7	10.6	9.2	8.7	9.0	8.8	-0.3
Parental Education: <sup>c</sup>															
1.0–2.0 (Low)	16.0	15.6	15.2	18.3	15.8	13.3	16.8‡	15.2	14.1	15.1	11.3	10.5	12.5	11.5	-0.9
2.5–3.0	14.9	15.2	13.2	13.6	14.8	13.1	11.7‡	13.5	12.4	12.8	11.1	11.2	10.9	11.4	+0.5
3.5–4.0	13.4	14.2	12.7	13.0	12.9	12.0	10.9‡	11.6	13.2	12.3	11.0	9.5	9.8	9.7	-0.1
4.5–5.0	10.7	11.6	9.0	9.9	10.2	9.6	9.7‡	9.9	9.2	8.9	9.0	8.5	8.2	7.3	-0.9
5.5–6.0 (High)	11.1	9.9	8.6	10.6	9.4	9.2	9.1‡	9.1	9.0	7.4	8.3	8.5	9.1	7.4	-1.7
Race/Ethnicity (2-year average): <sup>d</sup>															
White	14.4	14.5	13.8	12.9	13.0	12.5	11.5	11.2‡	11.5	10.9	10.3	10.0	9.8	9.1	-0.7
African American	4.9	4.2	4.1	4.3	5.0	5.5	5.8	6.5‡	8.4	7.8	7.8	6.3	5.2	5.4	+0.3
Hispanic	13.0	11.8	12.4	13.2	13.5	12.9	12.6	12.4‡	11.7	11.1	11.1	10.6	11.0	11.0	0.0

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

Notes. ' ‡ ' indicates some change in the question. See relevant footnote. See relevant figure to assess the impact of the wording changes. 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. The 2013 data are based on half the forms; N is one half of N indicated. Beginning in 2014 data are based on all forms. See the amphetamine notes for details of the changes.

<sup>a</sup>Use of any illicit drug other than marijuana includes any use of LSD, other hallucinogens, crack, other cocaine, or heroin; or any use of amphetamines or tranquilizers not under a doctor's orders. The use of narcotics other than heroin and sedatives (barbiturates) has been excluded because 8th and 10th graders appear to overreport their use (perhaps because they include the use of nonprescription drugs in their answers).

<sup>b</sup>In 2001 the question text was changed on half of the questionnaire forms. Other psychedelics was changed to other hallucinogens, and shrooms was added to the list of examples. For the tranquilizer list of examples, Miltown was replaced with Xanax. The 2001 data are based on the changed forms only; N is one half of N indicated. In 2002 the remaining forms were changed. Beginning in 2002, the data are based on all forms. Data for any illicit drug other than marijuana and hallucinogens are also affected by these changes and have been treated in a parallel manner.

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

<sup>d</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.

<sup>e</sup>Due to changes in the question wording in half of the questionnaire forms in 2001, the 2002 entry comprises half of the 2001 sample data double-weighted (the half with the new version of the question) and all of the 2002 sample data.

**TABLE 6**  
**ANY ILLICIT DRUG OTHER THAN MARIJUANA: <sup>a,b</sup>**  
**Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Approximate weighted N =	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
Total	26.2	25.4	26.0	27.1	28.2	30.4	34.0	30.1	28.4	28.0	27.4	25.9	24.1	21.1	20.0	17.9
Gender:																
Male	25.9	25.7	26.3	27.9	29.4	30.2	32.8	31.0	28.9	28.2	27.9	26.2	24.3	22.2	21.0	19.2
Female	26.2	24.4	25.3	25.7	26.3	30.0	34.3	28.3	27.3	26.9	26.2	24.8	23.3	19.3	18.5	16.0
College Plans:																
None or under 4 years	—	28.7	30.1	30.0	31.8	35.5	38.3	34.0	32.3	32.9	31.6	31.3	28.8	24.5	25.5	23.1
Complete 4 years	—	20.9	20.8	22.7	23.5	25.5	30.1	26.0	24.7	23.3	24.1	22.2	21.3	19.0	17.2	15.2
Region:																
Northeast	26.0	26.1	27.8	30.7	32.0	32.1	38.0	33.5	31.2	33.8	32.9	29.5	25.5	20.2	19.2	17.1
Midwest	29.2	26.1	27.7	26.8	27.6	30.9	36.1	31.1	28.6	26.1	25.9	25.1	22.7	20.3	21.5	18.0
South	22.5	23.4	22.9	24.0	23.2	25.8	26.1	24.7	23.8	24.2	21.0	20.6	21.1	20.0	18.1	16.9
West	28.2	26.6	26.0	28.8	33.3	35.2	38.7	32.7	33.0	31.3	33.0	31.6	29.5	24.8	22.3	20.4
Population Density:																
Large MSA	30.3	27.5	27.1	30.2	32.1	34.6	38.3	33.8	31.5	30.5	30.4	28.3	24.5	20.7	16.9	16.0
Other MSA	26.3	25.8	26.8	27.3	28.7	30.1	33.3	30.0	29.7	27.8	26.9	26.4	24.5	22.7	20.9	18.5
Non-MSA	23.4	23.3	24.2	24.2	24.7	27.5	31.4	27.0	24.4	26.2	25.5	23.1	23.0	18.4	21.1	18.4
Parental Education: <sup>c</sup>																
1.0–2.0 (Low)	—	23.2	23.2	24.7	25.2	28.2	29.2	25.7	25.6	27.3	25.8	23.2	21.5	19.7	18.2	15.2
2.5–3.0	—	25.6	27.0	26.4	27.6	30.7	33.5	30.4	28.1	28.2	27.4	27.0	24.2	20.5	20.0	17.9
3.5–4.0	—	26.1	26.2	27.8	29.2	30.7	34.7	30.9	28.6	29.3	28.9	26.6	24.7	20.5	21.4	19.1
4.5–5.0	—	27.2	25.9	27.3	28.7	29.9	34.8	29.4	30.0	26.2	27.1	24.9	23.8	21.7	19.3	17.5
5.5–6.0 (High)	—	25.6	24.8	28.6	30.4	30.8	36.7	31.3	29.0	26.2	23.8	23.8	24.9	22.0	19.6	17.2
Race/Ethnicity (2-year average): <sup>d</sup>																
White	—	—	26.6	27.7	28.8	30.6	34.5	32.1	31.2	30.2	29.6	28.2	26.6	24.4	22.5	21.0
African American	—	—	14.2	13.4	13.0	13.8	13.2	14.5	15.2	12.9	12.0	12.1	11.1	10.3	8.6	6.5
Hispanic	—	—	23.8	23.5	23.3	24.7	27.6	25.5	25.2	26.2	27.2	26.2	23.0	20.5	17.7	15.6

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**TABLE 6 (cont.)**  
**ANY ILLICIT DRUG OTHER THAN MARIJUANA: <sup>a,b</sup>**  
**Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 <sup>g</sup>	2002	2003	2004	2005	2006
Approximate weighted N =	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	16.2	14.9	17.1	18.0	19.4	19.8	20.7	20.2	20.7	20.4 <sup>‡</sup>	21.6	20.9	19.8	20.5	19.7	19.2
Gender:																
Male	17.0	15.5	17.8	18.5	20.7	21.7	21.7	21.7	22.5	21.5 <sup>‡</sup>	23.3	22.0	21.1	21.5	21.4	19.7
Female	14.8	13.8	15.8	16.9	17.3	16.8	18.8	18.0	18.5	18.6 <sup>‡</sup>	19.0	19.0	17.9	18.7	17.5	18.3
College Plans:																
None or under 4 years	20.1	19.5	19.8	22.9	23.9	24.2	25.8	26.5	24.4	24.7 <sup>‡</sup>	24.5	27.2	26.5	26.0	25.3	25.4
Complete 4 years	14.3	13.0	15.9	16.0	17.5	17.9	18.4	17.8	19.4	18.5 <sup>‡</sup>	19.9	19.0	17.4	18.4	18.0	17.4
Region:																
Northeast	15.6	14.7	18.6	17.2	20.2	22.9	24.1	20.7	19.5	21.7 <sup>‡</sup>	22.4	21.5	19.3	20.4	18.0	20.3
Midwest	17.4	15.5	16.4	20.1	19.1	19.2	18.9	19.8	20.9	18.9 <sup>‡</sup>	24.0	19.9	18.7	19.1	21.4	17.9
South	14.4	14.0	16.0	17.3	19.0	18.6	19.8	20.3	21.2	19.0 <sup>‡</sup>	18.6	21.3	19.4	20.8	20.5	19.7
West	17.9	15.8	18.5	17.3	19.9	19.2	20.9	20.0	20.8	23.2 <sup>‡</sup>	22.6	21.1	22.4	21.9	18.0	19.1
Population Density:																
Large MSA	14.2	13.5	15.1	16.7	20.2	18.9	18.6	19.0	17.6	19.4 <sup>‡</sup>	23.6	20.6	15.9	18.0	18.6	20.1
Other MSA	17.9	14.9	18.2	19.2	19.2	20.2	21.5	20.4	21.6	20.9 <sup>‡</sup>	21.2	21.6	22.0	22.3	20.6	18.7
Non-MSA	14.9	16.1	16.8	17.2	18.7	19.8	21.2	21.3	22.4	20.7 <sup>‡</sup>	20.3	20.2	20.9	19.7	19.3	18.9
Parental Education: <sup>c</sup>																
1.0–2.0 (Low)	17.4	14.9	15.6	17.8	19.4	16.9	19.9	20.0	22.2	20.0 <sup>‡</sup>	17.3	17.8	19.4	18.7	14.8	19.7
2.5–3.0	16.8	15.0	16.1	18.5	19.4	19.7	19.4	20.1	21.0	19.9 <sup>‡</sup>	20.9	20.3	19.6	20.0	20.5	19.4
3.5–4.0	16.3	15.0	17.8	17.6	19.2	19.8	20.4	21.0	21.9	20.5 <sup>‡</sup>	24.5	22.0	21.7	23.0	21.5	20.2
4.5–5.0	14.6	14.3	17.5	18.4	19.4	19.3	21.0	19.1	19.3	20.1 <sup>‡</sup>	20.1	21.2	18.5	19.7	19.7	18.6
5.5–6.0 (High)	14.9	14.3	17.6	16.5	18.3	20.2	21.7	18.9	19.4	20.3 <sup>‡</sup>	18.7	19.8	17.0	17.6	17.5	18.0
Race/Ethnicity (2-year average): <sup>d</sup>																
White	18.7	17.1	17.9	19.4	20.3	21.2	22.3	23.1	22.9	22.7	23.0 <sup>‡</sup>	24.1 <sup>f</sup>	23.0	22.8	22.7	22.0
African American	5.7	5.3	4.8	6.1	6.9	6.0	6.4	7.1	6.8	6.4	6.3 <sup>‡</sup>	6.0 <sup>f</sup>	6.3	6.5	7.1	7.2
Hispanic	15.8	15.1	15.6	16.5	17.9	19.7	18.9	17.5	18.5	21.2	18.2 <sup>‡</sup>	16.1 <sup>f</sup>	16.0	16.2	16.7	17.3

Table continued on next page.

**TABLE 6 (cont.)**  
**ANY ILLICIT DRUG OTHER THAN MARIJUANA:** <sup>a,b</sup> Trends in Annual Prevalence of Use  
 by Subgroups in Grade 12

	Percentage who used in last 12 months													2018-2019 change
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	18.5	18.3	17.0	17.3	17.6	17.0‡	17.8	15.9	15.2	14.3	13.3	12.4	11.5	-1.0
Gender:														
Male	20.0	19.9	18.8	19.3	19.1	18.4‡	18.9	16.9	15.7	15.4	14.9	13.9	12.4	-1.4
Female	16.7	16.2	14.9	15.0	15.5	14.9‡	15.9	14.2	14.1	12.5	11.3	9.7	9.7	+0.1
College Plans:														
None or under 4 years	26.0	25.0	22.1	23.6	25.1	19.4‡	24.4	19.8	17.7	15.4	15.7	16.0	15.4	-0.6
Complete 4 years	16.7	16.5	15.7	15.7	15.8	16.1‡	16.2	14.5	14.3	13.6	12.3	10.8	10.0	-0.8
Region:														
Northeast	19.4	18.9	16.8	17.6	16.4	15.1‡	16.7	13.9	13.1	12.3	11.5	12.1	8.1	-4.0 ss
Midwest	18.4	16.8	19.1	16.9	17.5	17.2‡	18.9	16.2	15.0	15.7	12.1	12.2	11.9	-0.3
South	18.8	19.1	16.4	17.4	16.2	16.0‡	17.5	17.2	15.2	14.0	13.6	12.2	11.3	-0.9
West	17.3	18.1	15.6	17.4	20.6	19.5‡	17.9	15.1	16.9	15.0	15.1	13.3	14.7	+1.4
Population Density:														
Large MSA	18.4	16.9	15.9	17.3	16.6	18.3‡	18.1	14.6	14.8	14.3	12.5	11.0	10.7	-0.3
Other MSA	18.1	18.2	17.4	17.7	18.6	17.2‡	18.8	17.7	15.9	14.5	13.9	12.9	11.9	-1.0
Non-MSA	19.5	19.8	17.4	16.3	16.7	14.7‡	15.0	13.0	14.1	13.8	13.4	14.0	11.8	-2.2
Parental Education: <sup>c</sup>														
1.0–2.0 (Low)	16.7	16.4	14.7	14.9	16.0	16.5‡	15.9	14.7	16.5	13.0	10.7	11.4	10.5	-0.9
2.5–3.0	19.7	17.7	17.3	17.7	16.6	18.0‡	18.6	16.8	14.4	13.2	14.6	12.3	11.7	-0.6
3.5–4.0	18.4	18.7	17.6	18.4	18.8	17.6‡	18.3	15.7	15.8	15.4	13.4	12.4	12.9	+0.4
4.5–5.0	18.5	18.2	17.8	16.8	16.6	16.8‡	18.7	15.1	14.7	14.5	12.5	12.3	10.6	-1.8
5.5–6.0 (High)	17.4	17.9	15.4	15.7	18.3	15.2‡	16.3	16.8	16.0	14.0	14.4	12.1	10.0	-2.0
Race/Ethnicity (2-year average): <sup>d</sup>														
White	21.6	21.5	20.5	19.9	20.0	19.6	18.7‡	17.6	16.1	15.5	14.8	13.9	12.5	-1.4 s
African American	7.0	7.0	6.8	8.3	8.7	7.6	9.5‡	13.0	11.2	10.3	9.1	7.5	7.2	-0.3
Hispanic	15.8	13.7	13.6	12.8	12.8	13.6	14.7‡	15.1	14.0	13.7	12.7	10.8	10.1	-0.8

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

Notes. '‡' indicates some change in the question. See relevant footnote. See relevant figure to assess the impact of the wording changes. 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. The 2013 data are based on half the forms; N is one half of N indicated. Beginning in 2014 data are based on all forms. See the amphetamine notes for details of the changes.

<sup>a</sup>Use of any illicit drug other than marijuana includes any use of LSD, other hallucinogens, crack, other cocaine, or heroin; or any use of narcotics other than heroin, amphetamines, sedatives (barbiturates), methaqualone (excluded since 1990), or tranquilizers not under a doctor's orders.

<sup>b</sup>Beginning in 1982 the question about amphetamine use was revised to get respondents to exclude the inappropriate reporting of nonprescription amphetamines. The prevalence-of-use rate dropped slightly as a result of this methodological change.

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

<sup>d</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.

<sup>e</sup>In 2001 the question text was changed on half of the questionnaire forms. Other psychedelics was changed to other hallucinogens and shrooms was added to the list of examples. For the tranquilizer list of examples, Miltown was replaced with Xanax. The 2001 data are based on the changed forms only; N is one half of N indicated. In 2002 the remaining forms were changed. Beginning in 2002, the data are based on all forms. Data for any illicit drug other than marijuana and hallucinogens are also affected by these changes and have been treated in a parallel manner.

<sup>f</sup>Due to changes in the question wording in half of the questionnaire forms in 2001, the 2002 entry comprises half of the 2001 sample data double-weighted (the half with the new version of the question) and all of the 2002 sample data.

**TABLE 7**  
**MARIJUANA: Trends in Lifetime Prevalence of Use by Subgroups in Grade 8**

	Percentage who ever used														
	<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>
<i>Approximate weighted N =</i>	17,500	18,600	18,300	17,300	17,500	17,800	18,600	18,100	16,700	16,700	16,200	15,100	16,500	17,000	16,800
Total	10.2	11.2	12.6	16.7	19.9	23.1	22.6	22.2	22.0	20.3	20.4	19.2	17.5	16.3	16.5
Gender:															
Male	11.9	11.9	14.5	19.6	22.5	25.5	24.7	24.3	24.3	22.2	23.6	22.2	19.3	17.6	18.0
Female	8.3	10.3	10.8	13.7	17.2	20.5	20.2	19.6	19.8	18.1	17.2	16.2	15.6	14.9	14.8
College Plans:															
None or under 4 years	22.9	24.5	27.9	33.1	36.2	41.6	41.8	43.5	44.1	41.2	40.8	39.8	38.0	36.9	38.5
Complete 4 years	8.1	9.0	10.4	14.3	17.7	20.2	19.9	19.4	19.1	17.6	17.9	17.1	15.2	14.1	14.0
Region:															
Northeast	7.4	9.2	8.8	15.3	16.0	19.9	20.2	15.6	18.2	17.3	18.7	15.2	13.7	13.6	12.8
Midwest	9.9	9.4	11.5	15.6	21.7	23.1	21.3	23.7	24.6	21.0	18.3	17.9	16.8	15.4	17.6
South	10.8	11.8	12.5	14.9	19.4	22.1	22.7	23.9	23.0	20.5	22.4	22.1	20.0	18.0	18.5
West	12.4	15.1	18.7	22.7	22.4	27.4	25.9	23.1	20.6	21.5	20.7	19.5	17.5	16.8	15.0
Population Density:															
Large MSA	8.9	10.5	10.6	16.7	19.6	24.0	21.6	20.4	20.5	18.8	17.3	17.3	17.1	15.0	15.7
Other MSA	11.4	12.6	15.0	19.8	21.2	24.6	23.2	22.9	21.2	19.4	22.3	19.7	17.1	17.0	17.1
Non-MSA	9.3	9.4	10.1	11.0	18.1	19.1	22.4	22.7	25.6	23.8	20.3	20.7	18.9	16.7	16.3
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	20.6	19.9	18.6	24.9	28.7	26.6	31.6	30.6	35.1	32.7	31.8	31.2	31.1	25.7	25.3
2.5–3.0	11.9	13.6	14.6	18.1	23.0	25.9	25.7	26.0	28.3	25.0	25.3	25.5	22.2	21.7	23.0
3.5–4.0	10.1	10.4	13.3	16.8	21.4	25.2	25.0	23.9	21.7	20.7	22.0	19.8	18.3	17.0	17.5
4.5–5.0	6.6	7.9	10.0	13.8	16.3	20.1	19.8	17.9	16.2	14.8	15.3	14.9	12.7	12.7	11.7
5.5–6.0 (High)	6.7	7.3	8.7	14.1	14.9	18.8	15.5	16.8	15.2	14.6	12.8	11.8	11.3	10.5	9.8
Race (2-year average): <sup>b</sup>															
White	—	9.9	11.0	12.9	16.6	20.5	22.0	21.1	20.0	19.0	18.5	18.0	16.6	15.1	14.6
African American	—	7.4	9.3	13.2	17.1	19.7	21.7	23.0	23.9	23.8	22.2	20.2	19.7	19.9	20.5
Hispanic	—	19.0	20.3	23.3	26.3	27.2	28.6	29.6	29.7	27.1	26.2	27.4	26.1	23.7	20.5

Table continued on next page.

**TABLE 7 (cont.)**  
**MARIJUANA: Trends in Lifetime Prevalence of Use by Subgroups in Grade 8**

	Percentage who ever used														
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2018-2019 change
<i>Approximate weighted N =</i>	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	
Total	15.7	14.2	14.6	15.7	17.3	16.4	15.2	16.5	15.6	15.5	12.8	13.5	13.9	15.2	+1.3
Gender:															
Male	17.1	15.2	16.3	17.9	18.9	18.1	16.5	17.0	15.8	16.0	12.8	13.4	14.4	13.6	-0.8
Female	14.0	12.8	12.7	13.4	15.8	14.1	13.6	15.6	14.7	14.6	12.8	13.3	13.3	16.4	+3.2 s
College Plans:															
None or under 4 years	35.4	35.3	35.0	32.2	36.8	35.5	32.9	34.3	29.2	30.0	27.8	26.3	26.9	27.0	+0.1
Complete 4 years	13.6	12.2	12.7	14.3	15.7	14.8	13.8	15.2	14.4	14.1	11.5	12.0	12.1	13.5	+1.4
Region:															
Northeast	12.6	8.8	11.7	14.2	15.5	10.4	10.0	13.1	12.8	10.9	8.6	10.1	9.4	9.7	+0.3
Midwest	15.6	13.5	16.6	15.3	15.1	13.8	12.2	13.3	14.5	16.4	13.0	11.5	11.1	14.0	+2.8
South	18.4	16.6	15.8	17.2	19.9	17.8	17.6	19.4	15.8	15.9	14.0	13.7	13.5	16.7	+3.2
West	13.6	14.0	12.9	14.9	16.6	21.5	18.3	17.4	18.1	16.7	13.7	17.3	20.5	17.8	-2.7
Population Density:															
Large MSA	14.7	11.6	12.9	13.1	16.5	14.7	14.4	17.4	17.6	15.6	12.5	12.5	14.0	13.3	-0.7
Other MSA	16.2	15.3	15.9	17.1	18.3	17.8	15.8	15.0	14.7	15.9	12.4	14.6	14.0	15.9	+1.9
Non-MSA	16.2	15.4	14.2	16.3	16.3	16.1	15.3	18.2	14.3	14.1	14.4	12.0	13.5	16.6	+3.1
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	25.6	26.6	24.5	24.1	26.2	27.8	27.8	29.1	25.2	25.3	20.9	21.6	22.4	24.6	+2.2
2.5–3.0	20.8	19.8	19.7	21.2	23.1	23.0	22.2	23.4	21.8	20.5	18.0	18.9	20.0	25.0	+5.0 s
3.5–4.0	17.2	15.5	16.0	17.2	18.9	18.1	16.7	18.6	18.0	17.3	14.3	14.8	16.3	17.3	+1.0
4.5–5.0	11.1	9.2	11.0	11.4	13.3	11.7	10.6	11.6	10.4	9.6	10.0	9.2	9.0	10.2	+1.2
5.5–6.0 (High)	9.3	6.5	8.3	9.7	10.3	8.6	7.6	9.4	10.0	9.4	6.6	8.1	7.1	8.8	+1.7
Race (2-year average): <sup>b</sup>															
White	14.1	12.9	12.5	13.3	14.4	14.3	12.7	11.7	11.4	10.9	10.0	9.5	9.9	10.3	+0.4
African American	19.5	16.4	15.9	18.1	19.9	18.9	17.2	18.9	18.8	17.6	17.2	17.0	15.6	16.7	+1.1
Hispanic	19.3	19.1	18.1	18.5	20.4	21.8	22.8	22.1	21.2	20.0	17.5	15.5	16.4	18.5	+2.0 s

*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-of-use estimates for the two most recent classes 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 8**  
**MARIJUANA: Trends in Lifetime Prevalence of Use by Subgroups in Grade 10**

	Percentage who ever used														
	<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>
<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>
Total	23.4	21.4	24.4	30.4	34.1	39.8	42.3	39.6	40.9	40.3	40.1	38.7	36.4	35.1	34.1
Gender:															
Male	25.3	23.3	27.0	33.6	36.2	42.3	45.1	41.6	43.3	44.2	43.9	41.7	38.5	37.2	36.1
Female	21.4	19.3	21.7	26.8	31.6	37.3	39.3	37.6	38.4	36.3	36.4	35.8	34.1	32.9	31.8
College Plans:															
None or under 4 years	37.7	34.6	39.4	44.9	49.5	55.9	60.6	56.1	59.6	58.1	56.7	57.5	53.3	51.7	50.5
Complete 4 years	20.2	18.4	21.1	27.1	31.4	37.0	39.2	36.5	37.8	37.5	37.4	35.7	33.5	32.8	31.7
Region:															
Northeast	22.3	19.3	26.5	30.0	33.1	39.6	41.2	41.9	41.0	37.4	38.8	38.2	36.1	36.0	35.0
Midwest	23.2	20.8	21.7	27.4	30.8	38.0	41.3	35.7	40.3	38.0	38.8	36.6	32.3	32.1	33.4
South	21.3	19.4	23.1	29.8	34.9	41.3	41.9	39.8	39.6	39.8	39.6	38.0	38.9	37.4	35.6
West	27.4	27.4	29.4	36.7	38.4	39.4	45.7	41.4	43.6	46.9	45.2	43.2	37.8	34.8	31.5
Population Density:															
Large MSA	23.6	20.5	23.5	30.9	32.4	38.3	42.2	36.8	40.3	39.9	36.4	37.0	35.6	33.6	33.2
Other MSA	24.9	22.0	25.5	33.6	37.2	42.5	44.1	41.7	42.0	41.2	42.4	40.9	36.5	35.1	34.7
Non-MSA	20.6	21.1	23.2	24.0	30.0	36.2	39.1	38.8	39.2	38.9	39.8	36.4	37.2	37.0	33.9
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	30.3	28.7	32.0	35.8	39.3	40.8	46.2	43.2	49.0	46.1	44.0	45.9	43.1	45.6	40.1
2.5–3.0	26.2	22.9	26.0	32.8	38.0	42.3	45.7	45.2	45.2	44.3	45.7	44.8	41.9	40.3	40.0
3.5–4.0	23.4	21.4	24.6	30.8	35.5	42.4	44.8	40.1	40.9	44.0	40.6	38.1	37.9	37.6	34.9
4.5–5.0	20.3	18.8	20.4	27.0	31.7	37.4	38.9	35.0	36.8	35.7	37.3	35.2	31.2	30.0	30.4
5.5–6.0 (High)	20.0	17.7	21.9	25.9	26.8	34.7	35.4	33.8	36.2	32.7	33.8	31.4	29.7	27.5	28.2
Race (2-year average): <sup>b</sup>															
White	—	23.0	23.2	27.2	32.3	37.1	41.1	40.9	39.9	40.1	39.7	39.3	37.4	35.1	33.7
African American	—	16.2	16.2	22.1	28.6	34.3	38.1	37.1	37.3	39.5	40.1	38.1	36.9	38.0	38.3
Hispanic	—	26.9	28.8	33.5	37.5	42.2	46.5	46.6	46.5	46.0	44.9	41.9	39.4	39.9	38.8

Table continued on next page.

**TABLE 8 (cont.)**  
**MARIJUANA: Trends in Lifetime Prevalence of Use by Subgroups in Grade 10**

	Percentage who ever used														
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2018-2019 change
<i>Approximate weighted N =</i>	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	31.8	31.0	29.9	32.3	33.4	34.5	33.8	35.8	33.7	31.1	29.7	30.7	32.6	34.0	+1.5
Gender:															
Male	32.9	33.5	31.7	35.8	36.9	37.8	37.1	38.9	35.2	31.7	29.2	29.9	32.4	32.9	+0.5
Female	30.6	28.4	28.0	29.0	29.8	31.2	30.6	32.6	31.9	30.2	29.8	31.0	32.5	34.8	+2.3
College Plans:															
None or under 4 years	51.6	50.3	51.7	52.8	54.5	54.1	51.3	53.3	50.5	48.3	44.0	42.5	46.8	46.6	-0.3
Complete 4 years	29.2	28.3	27.0	30.0	30.9	32.2	31.9	33.9	31.8	29.3	28.1	28.9	30.4	31.6	+1.2
Region:															
Northeast	30.6	30.6	31.5	29.4	30.8	33.7	35.7	32.7	31.8	31.3	28.2	30.1	34.1	35.2	+1.1
Midwest	30.7	29.9	27.8	28.5	31.1	31.9	28.6	32.8	30.0	26.9	28.4	29.6	29.2	30.9	+1.7
South	33.0	30.7	31.1	35.0	35.2	35.7	34.5	38.6	34.6	31.9	30.3	29.6	32.0	34.2	+2.3
West	32.3	32.7	29.0	34.9	35.4	36.4	36.7	37.8	37.4	33.9	31.4	33.9	35.8	36.1	+0.3
Population Density:															
Large MSA	29.6	31.0	30.1	31.4	31.2	32.5	33.8	34.1	33.3	30.7	29.2	31.2	34.8	33.4	-1.4
Other MSA	31.7	30.9	30.2	33.4	35.3	36.5	34.1	37.5	34.4	31.3	29.1	30.9	33.4	35.7	+2.4
Non-MSA	35.3	31.0	28.6	31.2	32.7	33.7	32.9	34.4	32.5	31.1	32.4	29.5	27.2	30.3	+3.1
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	41.7	37.4	39.7	43.8	43.6	44.4	47.5	45.3	40.9	42.6	34.7	35.8	38.3	40.8	+2.5
2.5–3.0	39.1	37.8	35.8	37.2	40.4	41.6	39.8	43.7	41.2	38.8	37.0	36.4	39.2	43.1	+4.0
3.5–4.0	33.0	32.8	32.3	33.9	35.5	36.9	35.6	38.1	38.0	35.3	31.7	33.1	34.9	36.9	+1.9
4.5–5.0	26.7	26.3	24.0	28.0	26.6	28.7	30.4	31.5	27.9	26.2	26.1	27.4	28.3	28.8	+0.5
5.5–6.0 (High)	25.0	22.2	21.8	25.1	27.0	25.9	26.2	26.5	25.4	22.3	24.4	24.8	26.1	26.2	+0.1
Race (2-year average): <sup>b</sup>															
White	32.4	31.2	29.6	29.7	31.3	32.1	31.8	31.7	31.6	29.8	28.9	28.7	28.8	29.8	+1.1
African American	36.0	32.9	30.0	29.7	32.6	37.0	38.3	38.7	38.3	35.6	33.0	31.7	32.4	34.9	+2.4 s
Hispanic	34.7	32.1	34.8	37.8	38.9	38.9	40.4	42.9	42.1	39.3	35.2	33.5	35.3	36.8	+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-of-use estimates for the two most recent classes 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 9**  
**MARIJUANA: Trends in Lifetime Prevalence of Use by Subgroups in Grade 12**

Percentage who ever used

	<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>
<i>Approximate weighted N =</i>	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
Total	47.3	52.8	56.4	59.2	60.4	60.3	59.5	58.7	57.0	54.9	54.2	50.9	50.2	47.2	43.7	40.7
Gender:																
Male	52.7	58.9	61.9	64.4	65.0	64.4	62.5	61.5	59.9	57.9	56.6	53.3	52.0	49.8	46.6	43.6
Female	42.7	46.1	50.8	53.9	55.7	56.1	56.2	55.5	53.4	51.3	51.5	48.2	48.0	44.5	40.4	37.3
College Plans:																
None or under 4 years	—	55.3	59.6	61.4	62.9	64.3	63.5	63.8	61.2	60.7	59.1	56.0	57.0	53.6	51.5	48.0
Complete 4 years	—	48.7	52.0	55.5	56.8	56.8	55.9	54.0	52.2	49.7	50.2	47.5	46.4	44.0	39.7	37.2
Region:																
Northeast	56.3	60.7	62.5	66.7	69.8	67.4	67.8	64.6	63.7	64.0	62.2	56.8	55.7	49.6	45.4	44.5
Midwest	46.9	52.1	56.0	60.6	60.9	60.2	59.9	59.8	57.0	52.3	53.8	52.0	50.1	48.0	46.8	42.6
South	38.8	45.7	51.4	52.4	51.6	53.6	50.8	51.1	50.8	49.1	44.5	43.7	43.6	42.4	38.2	35.4
West	52.5	55.9	57.1	59.0	62.1	62.9	63.2	61.7	59.2	59.8	60.4	53.8	55.1	52.0	48.4	43.0
Population Density:																
Large MSA	58.1	60.1	62.5	66.2	68.5	67.9	65.9	64.0	62.3	59.3	59.2	55.8	53.2	47.8	41.4	40.8
Other MSA	48.1	52.3	57.7	60.2	62.0	61.0	59.6	59.6	58.8	56.0	54.6	51.5	52.0	49.7	45.0	42.5
Non-MSA	39.6	47.8	49.7	51.9	52.1	53.9	54.6	53.1	50.5	49.8	49.3	45.9	43.5	41.9	43.2	36.9
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	42.3	47.8	50.1	53.1	56.5	57.3	56.5	55.4	56.2	52.6	52.9	47.0	46.1	48.0	39.5	38.1
2.5–3.0	47.0	54.4	56.9	59.1	60.1	61.0	59.0	58.8	56.7	55.6	54.5	52.1	51.6	47.0	45.5	42.2
3.5–4.0	45.6	53.2	58.8	60.5	61.9	60.8	60.0	60.7	56.6	56.3	55.6	51.7	51.0	47.9	45.6	42.1
4.5–5.0	48.5	55.5	57.6	61.6	61.8	60.9	60.9	59.8	58.0	53.2	54.5	50.7	49.7	47.7	42.2	40.4
5.5–6.0 (High)	46.9	57.3	56.9	63.3	61.5	62.0	61.6	58.4	56.7	53.7	50.0	49.5	49.5	45.0	40.7	37.9
Race (2-year average): <sup>b</sup>																
White	—	—	55.1	58.7	60.6	61.3	61.3	60.7	58.8	56.5	55.5	53.8	52.2	51.1	48.3	45.4
African American	—	—	48.5	50.8	50.7	51.4	51.1	51.4	53.9	52.6	49.7	46.9	42.6	38.8	33.4	27.7
Hispanic	—	—	55.6	54.7	55.3	56.7	53.9	53.9	54.4	54.5	53.4	51.0	47.7	46.0	42.8	38.5

Table continued on next page.

**TABLE 9 (cont.)**  
**MARIJUANA: Trends in Lifetime Prevalence of Use by Subgroups in Grade 12**

Percentage who ever used

	<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>
<i>Approximate weighted N =</i>	<i>15,000</i>	<i>15,800</i>	<i>16,300</i>	<i>15,400</i>	<i>15,400</i>	<i>14,300</i>	<i>15,400</i>	<i>15,200</i>	<i>13,600</i>	<i>12,800</i>	<i>12,800</i>	<i>12,900</i>	<i>14,600</i>	<i>14,600</i>	<i>14,700</i>
Total	36.7	32.6	35.3	38.2	41.7	44.9	49.6	49.1	49.7	48.8	49.0	47.8	46.1	45.7	44.8
Gender:															
Male	40.3	36.3	38.9	42.8	45.2	48.6	52.0	53.2	52.1	51.5	51.9	50.7	50.1	48.5	49.1
Female	32.8	28.6	31.2	33.7	37.7	40.7	46.6	44.6	47.0	45.7	45.7	44.7	42.0	42.6	40.2
College Plans:															
None or under 4 years	43.6	41.8	41.7	44.6	48.8	53.1	56.5	55.6	57.2	55.2	55.9	55.5	55.6	52.6	54.7
Complete 4 years	33.8	28.8	32.7	35.6	38.8	41.8	47.2	46.4	47.0	45.9	46.6	45.6	42.9	43.5	42.1
Region:															
Northeast	40.4	34.5	41.1	44.3	44.5	48.9	54.3	54.1	50.8	52.5	54.9	52.4	50.0	51.2	50.4
Midwest	39.3	32.1	34.5	37.3	43.3	45.4	47.0	45.1	48.1	46.9	48.2	48.2	48.2	45.6	44.0
South	31.2	29.9	32.9	36.1	39.2	41.9	46.3	48.3	48.8	43.6	44.9	44.6	40.9	42.0	43.1
West	39.3	36.8	35.7	37.7	41.5	45.3	54.6	51.0	52.3	56.1	51.2	48.3	48.6	46.5	43.4
Population Density:															
Large MSA	36.1	32.5	36.5	38.6	44.1	46.4	48.9	50.7	50.3	49.1	50.1	48.1	43.4	42.8	45.5
Other MSA	41.4	32.6	36.3	40.7	42.1	47.8	52.6	50.3	50.6	50.2	49.1	50.5	49.5	49.3	45.9
Non-MSA	29.4	32.7	32.7	33.2	38.3	38.2	44.5	44.5	47.4	45.9	47.5	42.2	43.5	42.2	41.8
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	38.0	36.6	34.6	35.4	39.8	42.1	46.0	45.6	50.5	51.9	48.8	42.8	44.5	43.1	39.6
2.5–3.0	36.8	32.9	34.8	38.5	41.8	44.8	49.7	50.2	51.5	50.4	50.5	49.4	47.8	47.3	47.8
3.5–4.0	36.8	33.2	36.7	39.3	41.7	45.0	49.3	50.5	51.2	49.3	50.4	50.1	47.1	49.0	47.5
4.5–5.0	35.5	30.0	34.3	38.3	40.7	45.5	49.7	48.0	46.2	45.8	47.9	47.1	45.4	43.3	43.4
5.5–6.0 (High)	38.0	29.6	34.9	37.6	43.2	44.2	51.1	47.8	47.6	47.2	45.1	45.4	41.9	42.8	40.7
Race (2-year average): <sup>b</sup>															
White	41.3	36.3	35.6	38.3	41.1	43.9	48.3	50.9	50.3	49.4	49.8	49.9	48.8	48.2	47.5
African American	24.9	23.0	24.1	29.4	34.7	39.0	41.3	42.7	45.1	45.7	43.5	41.7	40.0	39.1	39.0
Hispanic	39.9	40.5	36.8	36.6	39.8	43.5	48.6	50.2	51.1	55.0	52.0	47.6	44.2	42.7	42.8

Table continued on next page.

**TABLE 9 (cont.)**  
**MARIJUANA: Trends in Lifetime Prevalence of Use by Subgroups in Grade 12**

	Percentage who ever used														
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2018-2019 change
<i>Approximate weighted N =</i>	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	42.3	41.8	42.6	42.0	43.8	45.5	45.2	45.5	44.4	44.7	44.5	45.0	43.6	43.7	+0.1
Gender:															
Male	43.7	44.8	44.8	45.4	47.1	48.7	49.2	49.1	46.2	46.2	45.5	45.7	43.5	43.7	+0.2
Female	40.6	38.6	40.1	38.1	40.0	41.8	40.5	41.3	42.3	43.3	43.3	43.9	42.8	42.9	+0.1
College Plans:															
None or under 4 years	53.3	49.8	54.2	50.4	54.7	52.6	53.6	54.1	52.0	51.0	48.2	49.0	48.9	49.3	+0.4
Complete 4 years	39.2	39.5	39.6	39.8	41.0	43.5	43.0	43.1	42.0	43.1	43.0	43.6	41.8	41.6	-0.2
Region:															
Northeast	48.5	48.9	46.7	45.4	50.3	48.8	47.3	49.5	46.7	49.2	46.6	48.0	48.3	44.5	-3.8
Midwest	42.5	42.5	41.3	42.1	40.8	43.0	39.4	38.8	43.5	41.0	41.8	46.1	45.0	41.6	-3.4
South	41.0	40.0	42.0	40.2	41.6	42.8	43.5	45.0	43.2	41.3	42.0	42.0	38.6	42.4	+3.8
West	38.9	37.9	42.0	41.7	45.1	50.1	52.1	50.0	45.1	50.5	50.0	46.8	47.3	49.1	+1.8
Population Density:															
Large MSA	44.4	43.6	44.4	45.6	45.4	47.9	48.1	48.5	44.1	47.2	46.5	47.4	44.4	44.5	+0.2
Other MSA	42.3	41.2	41.2	40.4	45.1	46.3	45.4	46.5	46.6	44.5	44.9	44.1	42.9	43.2	+0.4
Non-MSA	39.5	40.2	43.8	40.8	38.2	40.3	40.1	38.5	39.2	40.8	40.8	43.2	43.8	43.6	-0.3
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	46.8	44.6	42.6	42.7	44.5	48.3	52.6	50.8	48.4	48.8	47.7	43.2	42.9	45.6	+2.7
2.5–3.0	46.1	45.0	46.3	44.2	45.6	48.6	48.2	49.0	48.9	48.6	46.5	48.5	46.9	46.5	-0.4
3.5–4.0	43.3	41.5	42.9	44.0	45.6	47.3	46.3	47.9	45.5	46.8	47.4	47.1	46.3	47.8	+1.5
4.5–5.0	37.1	39.4	40.1	38.7	42.8	42.2	42.7	41.4	41.3	41.1	41.8	43.5	42.0	37.2	-4.8 s
5.5–6.0 (High)	40.5	39.0	40.2	38.4	36.9	40.9	38.6	39.0	39.0	39.5	37.9	40.5	38.6	41.7	+3.1
Race (2-year average): <sup>b</sup>															
White	45.3	43.3	43.4	43.3	43.3	44.8	45.2	44.0	43.7	43.8	43.6	44.3	44.2	42.7	-1.5
African American	38.9	37.7	38.0	40.0	41.0	41.8	42.1	43.8	43.7	41.1	41.8	43.7	43.7	43.0	-0.7
Hispanic	43.1	41.3	40.1	40.7	42.3	45.6	48.7	50.7	48.7	48.2	50.3	47.7	43.7	43.6	-0.1

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-of-use estimates for the two most recent classes 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 10**  
**MARIJUANA: Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months															
	<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>	
<i>Approximate weighted N =</i>	17,500	18,600	18,300	17,300	17,500	17,800	18,600	18,100	16,700	16,700	16,200	15,100	16,500	17,000	16,800	
Total	6.2	7.2	9.2	13.0	15.8	18.3	17.7	16.9	16.5	15.6	15.4	14.6	12.8	11.8	12.2	
Gender:																
Male	7.3	7.4	10.5	15.1	17.7	19.6	19.2	18.0	18.1	16.7	18.1	17.0	13.9	12.3	13.0	
Female	5.1	6.9	8.0	10.9	13.7	16.9	16.1	15.3	14.9	14.3	12.8	12.4	11.5	11.2	11.4	
College Plans:																
None or under 4 years	15.8	17.5	22.4	27.7	30.3	34.6	34.5	35.0	34.9	33.6	34.4	33.1	31.3	29.0	30.5	
Complete 4 years	4.6	5.5	7.3	11.0	13.8	15.8	15.5	14.5	14.0	13.4	13.2	12.7	10.7	10.0	10.2	
Region:																
Northeast	5.0	5.8	6.2	12.1	13.0	15.3	16.2	11.7	14.4	13.2	14.5	11.3	10.0	10.2	9.8	
Midwest	5.9	6.0	8.0	12.0	17.5	18.6	17.0	18.1	18.5	16.6	14.1	14.3	12.3	10.9	12.8	
South	6.1	7.3	9.0	11.4	14.7	17.1	17.2	17.9	16.7	15.2	16.8	16.3	14.4	12.9	13.5	
West	7.8	10.3	14.8	18.1	18.4	22.5	20.6	18.2	15.6	16.9	15.5	15.3	12.9	12.3	11.4	
Population Density:																
Large MSA	5.2	6.7	8.0	13.1	15.6	18.3	16.4	16.0	15.6	14.5	12.4	12.7	11.5	10.8	11.7	
Other MSA	7.2	8.3	10.9	15.7	17.2	19.5	18.2	17.4	15.4	14.8	17.4	15.2	12.9	12.4	12.9	
Non-MSA	5.3	5.7	7.2	8.0	13.7	15.8	18.0	16.9	19.7	18.5	15.3	16.1	14.1	11.9	11.6	
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	13.2	12.7	13.6	18.7	23.0	20.2	24.8	25.0	25.8	26.2	26.0	24.2	22.5	19.7	18.2	
2.5–3.0	7.0	7.7	10.7	14.5	17.9	20.6	20.3	20.0	20.8	19.4	19.5	18.7	16.5	15.4	17.4	
3.5–4.0	6.2	7.0	9.7	13.2	17.2	20.2	19.5	17.7	16.3	15.9	16.7	15.4	13.7	12.8	12.8	
4.5–5.0	3.7	5.4	7.4	10.9	12.7	16.2	15.7	13.7	11.7	10.8	11.1	11.4	8.9	9.0	8.9	
5.5–6.0 (High)	4.6	5.2	6.4	11.0	13.0	14.7	12.1	12.7	12.4	11.5	9.4	9.7	8.0	7.7	7.1	
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	6.4	7.8	10.0	13.5	16.7	17.8	16.7	15.4	14.9	14.7	14.5	13.0	11.5	11.1	
African American	—	4.1	5.7	8.9	11.9	14.0	15.3	16.0	16.3	16.1	14.6	12.7	12.6	12.8	13.6	
Hispanic	—	11.9	13.9	18.1	20.4	20.8	21.8	22.7	22.8	20.1	19.9	21.1	19.1	16.7	14.7	

Table continued on next page.

**TABLE 10 (cont.)**  
**MARIJUANA: Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months														2018-2019
	<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>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>change</u>
Approximate weighted N =	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	
Total	11.7	10.3	10.9	11.8	13.7	12.5	11.4	12.7	11.7	11.8	9.4	10.1	10.5	11.8	+1.3
Gender:															
Male	12.7	11.2	12.2	13.5	15.0	14.0	12.2	12.6	11.9	11.9	9.3	9.6	10.6	10.2	-0.4
Female	10.4	9.3	9.5	10.0	12.4	10.6	10.4	12.5	11.0	11.4	9.3	10.3	10.2	13.0	+2.8 s
College Plans:															
None or under 4 years	28.8	28.1	27.7	26.7	30.7	27.6	28.4	27.8	24.1	24.3	22.2	21.1	21.6	21.9	+0.4
Complete 4 years	10.0	8.6	9.4	10.5	12.3	11.2	10.1	11.6	10.6	10.6	8.2	8.8	8.9	10.3	+1.4
Region:															
Northeast	9.3	6.4	8.3	11.9	12.2	7.8	7.9	10.1	10.3	8.7	6.0	7.8	7.4	8.2	+0.8
Midwest	11.0	9.8	12.6	11.1	12.1	10.7	8.5	10.5	10.7	13.1	10.0	8.7	8.4	10.9	+2.5
South	13.8	11.9	11.5	12.5	15.2	13.3	13.2	14.5	11.5	11.6	9.9	9.8	9.7	12.0	+2.3
West	10.6	10.5	10.3	11.2	13.7	16.8	14.1	13.7	14.0	12.9	10.2	13.6	16.0	14.6	-1.4
Population Density:															
Large MSA	10.3	8.7	9.9	10.1	13.5	11.4	10.7	13.5	13.6	12.0	9.1	9.5	10.8	9.9	-0.9
Other MSA	12.5	10.8	11.8	12.8	14.3	14.0	12.3	11.7	10.8	12.2	8.9	10.9	10.7	12.6	+1.9
Non-MSA	12.0	11.4	10.4	11.8	12.3	11.2	10.8	13.6	10.9	10.4	10.9	9.2	9.5	12.8	+3.3 s
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	19.4	19.4	18.5	17.6	20.7	20.2	19.2	21.9	19.3	19.0	14.3	16.0	15.9	18.8	+2.9
2.5–3.0	15.1	13.8	14.6	15.8	18.4	17.5	16.3	18.3	16.7	15.8	13.0	14.7	15.1	19.5	+4.4 s
3.5–4.0	13.1	11.3	11.8	13.0	14.7	14.0	13.0	15.1	12.9	12.9	10.7	10.6	12.5	13.4	+0.9
4.5–5.0	8.0	7.2	8.2	8.7	10.6	9.1	8.2	8.6	8.0	7.6	7.4	6.7	7.0	8.0	+0.9
5.5–6.0 (High)	7.1	4.9	6.7	7.4	8.1	6.6	5.8	6.6	7.9	7.3	4.7	6.7	5.2	6.8	+1.6
Race/Ethnicity (2-year average): <sup>b</sup>															
White	10.9	9.9	9.6	10.3	11.5	11.4	10.0	9.1	8.9	8.7	7.8	7.3	7.5	8.0	+0.5
African American	12.9	11.1	10.6	12.3	14.1	13.6	12.4	13.6	13.2	11.9	11.7	11.5	10.7	11.6	+0.9
Hispanic	14.3	13.7	13.2	13.6	15.3	16.9	17.2	16.8	16.0	15.0	12.8	11.4	12.4	14.3	+1.9 ss

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 11**  
**MARIJUANA: Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months														
	<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>
Approximate weighted N =	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
Total	16.5	15.2	19.2	25.2	28.7	33.6	34.8	31.1	32.1	32.2	32.7	30.3	28.2	27.5	26.6
Gender:															
Male	17.7	16.3	21.2	28.2	30.6	36.0	37.3	32.2	34.3	36.1	36.0	32.3	30.0	29.0	28.1
Female	15.1	13.9	16.9	21.9	26.5	31.4	32.3	30.1	29.7	28.4	29.6	28.4	26.4	25.8	24.9
College Plans:															
None or under 4 years	26.9	25.1	31.5	37.3	41.8	48.9	51.5	46.8	48.3	48.8	47.4	46.6	44.6	41.9	41.4
Complete 4 years	14.2	13.0	16.5	22.4	26.4	31.0	32.0	28.2	29.3	29.7	30.3	27.7	25.5	25.4	24.6
Region:															
Northeast	17.1	14.9	22.4	25.6	28.8	34.8	34.6	35.4	34.4	30.3	34.1	31.7	29.5	29.2	28.7
Midwest	15.8	14.8	17.4	23.4	26.6	33.1	34.4	28.5	31.6	31.1	31.7	29.0	25.0	25.3	26.4
South	14.5	12.5	16.4	23.8	28.4	33.9	34.4	30.7	30.9	31.4	31.2	28.9	29.6	29.0	27.4
West	19.4	20.4	24.0	30.0	32.2	32.4	36.5	30.7	32.0	37.1	36.4	33.4	28.8	26.4	23.4
Population Density:															
Large MSA	16.5	15.1	19.0	26.3	27.8	31.5	34.1	28.7	31.2	32.4	30.0	29.0	27.1	25.9	25.3
Other MSA	17.3	15.9	19.8	28.2	31.2	36.2	36.6	33.1	33.6	32.8	35.2	32.4	28.7	27.8	28.0
Non-MSA	14.9	13.9	18.2	18.5	24.8	30.9	32.5	30.2	30.0	31.1	30.9	27.6	29.0	29.0	25.5
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	20.3	18.9	22.4	25.8	32.0	32.9	34.5	31.7	38.1	37.1	33.6	33.5	33.7	33.2	28.6
2.5–3.0	17.8	16.0	19.7	26.3	31.8	35.6	36.8	35.3	35.4	34.9	37.1	35.1	32.2	30.6	31.1
3.5–4.0	16.2	15.1	19.3	25.6	30.0	36.4	37.8	31.6	31.9	35.0	32.6	30.1	29.4	29.5	27.1
4.5–5.0	14.9	14.1	17.6	23.8	27.0	31.7	33.1	28.3	28.8	28.9	31.4	27.9	24.3	24.3	24.5
5.5–6.0 (High)	15.9	13.7	18.5	23.3	23.4	30.3	30.5	27.7	30.6	27.3	29.4	25.8	24.3	22.5	23.6
Race/Ethnicity (2-year average): <sup>b</sup>															
White	—	17.0	18.0	22.6	27.7	32.0	35.3	34.2	32.5	32.6	32.9	32.7	30.6	28.2	27.3
African American	—	7.6	8.7	15.3	20.9	25.7	28.4	26.9	26.3	27.6	28.7	26.5	25.1	27.0	27.2
Hispanic	—	18.9	21.3	25.1	29.2	34.6	36.8	34.4	34.0	34.8	34.9	31.6	28.8	29.8	28.6

Table continued on next page.



**TABLE 11 (cont.)**  
**MARIJUANA: Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months															
	<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>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	2018-2019 change	
Approximate weighted N =	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000		
Total	25.2	24.6	23.9	26.7	27.5	28.8	28.0	29.8	27.3	25.4	23.9	25.5	27.5	28.8	+1.4	
Gender:																
Male	26.3	26.8	25.5	29.6	30.7	31.8	31.0	32.7	28.3	25.9	23.3	24.2	27.2	27.6	+0.4	
Female	24.0	22.4	22.2	23.9	24.3	25.8	25.3	27.0	26.0	24.7	24.0	26.5	27.6	29.7	+2.1	
College Plans:																
None or under 4 years	42.0	42.1	43.5	44.5	45.8	47.9	43.6	46.5	41.4	40.8	37.2	35.5	40.3	40.2	-0.1	
Complete 4 years	23.0	22.2	21.4	24.7	25.3	26.7	26.5	28.0	25.7	23.8	22.4	24.0	25.6	26.6	+1.1	
Region:																
Northeast	24.9	25.0	26.3	24.1	26.2	29.3	31.4	28.7	27.4	26.7	24.1	25.9	29.8	30.7	+0.9	
Midwest	24.8	24.9	22.6	23.6	25.7	26.8	23.7	27.5	24.5	21.5	23.0	25.7	25.0	26.5	+1.6	
South	25.5	22.7	24.0	28.7	27.8	28.6	27.9	31.1	27.6	25.8	23.8	23.5	26.2	27.9	+1.7	
West	25.3	26.2	23.4	29.4	30.3	30.9	30.2	31.3	29.4	27.7	24.6	27.9	30.2	31.4	+1.1	
Population Density:																
Large MSA	24.0	24.5	24.2	26.6	26.6	27.4	28.6	28.7	27.5	25.6	24.0	27.0	29.1	29.1	0.0	
Other MSA	25.1	24.9	24.7	27.8	29.1	30.6	28.1	31.5	28.0	25.9	23.2	25.2	28.5	30.1	+1.6	
Non-MSA	27.4	23.9	21.7	24.5	25.7	27.2	27.0	27.3	25.1	23.8	25.4	23.7	22.4	24.8	+2.4	
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	31.9	28.4	30.2	36.0	34.8	35.8	37.1	36.9	31.5	34.2	26.6	28.8	31.2	32.3	+1.1	
2.5–3.0	29.6	29.4	28.3	29.9	33.0	34.0	33.0	35.7	32.0	31.1	29.1	29.1	32.0	36.3	+4.3 s	
3.5–4.0	26.6	26.3	26.0	27.3	29.3	31.0	29.7	31.8	30.6	29.0	26.1	28.7	29.2	31.6	+2.4	
4.5–5.0	21.8	21.2	19.8	24.2	22.2	24.6	25.5	26.3	23.3	21.9	20.9	23.0	24.7	24.9	+0.2	
5.5–6.0 (High)	21.2	18.9	18.9	21.8	23.1	23.1	22.9	23.2	21.6	18.6	20.7	21.3	23.6	22.9	-0.7	
Race/Ethnicity (2-year average): <sup>b</sup>																
White	26.6	25.7	24.6	25.1	26.5	27.4	27.5	27.3	26.7	24.8	24.2	24.6	25.3	26.0	+0.7	
African American	24.5	22.3	20.6	22.0	25.0	28.1	29.1	30.5	30.6	28.1	25.4	23.8	24.8	27.7	+2.9 ss	
Hispanic	24.9	23.7	26.6	29.9	31.1	31.0	31.8	33.4	32.6	30.6	27.2	26.0	28.2	29.9	+1.7	

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 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 12**  
**MARIJUANA: Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	<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>
<i>Approximate weighted N =</i>	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
Total	40.0	44.5	47.6	50.2	50.8	48.8	46.1	44.3	42.3	40.0	40.6	38.8	36.3	33.1	29.6	27.0
Gender:																
Male	45.8	50.6	53.2	55.9	55.8	53.4	49.2	47.2	45.7	43.2	43.1	41.2	38.6	35.8	32.8	29.4
Female	34.9	37.8	42.0	44.3	45.7	44.1	42.5	40.8	38.4	36.0	37.8	36.0	33.8	30.3	26.3	24.2
College Plans:																
None or under 4 years	—	46.8	50.7	51.6	53.1	51.7	49.7	48.2	46.0	44.2	44.0	42.7	40.6	36.2	34.4	31.1
Complete 4 years	—	40.7	43.4	47.1	47.3	45.9	42.6	40.6	38.3	35.9	37.5	36.1	34.0	31.3	27.3	24.7
Region:																
Northeast	47.4	52.7	53.5	59.2	60.6	55.5	53.2	50.9	49.3	49.6	48.2	44.6	41.2	36.7	31.3	32.2
Midwest	40.1	44.0	48.1	51.6	52.2	48.9	46.8	45.6	42.0	36.4	40.8	40.2	37.4	34.3	33.0	28.7
South	32.4	37.9	42.5	42.7	41.2	42.0	38.0	36.7	36.1	35.6	31.0	31.7	30.2	28.7	25.0	21.4
West	44.1	45.8	46.8	49.1	51.9	51.7	49.6	45.5	44.8	43.2	46.2	41.2	39.6	35.6	32.3	28.3
Population Density:																
Large MSA	50.4	51.3	53.2	57.2	58.7	56.3	51.4	50.4	47.0	44.2	44.4	42.6	39.3	34.3	27.8	27.7
Other MSA	40.3	44.2	48.9	50.8	51.9	49.8	46.4	44.8	44.0	41.0	40.7	39.4	36.9	34.7	30.3	28.3
Non-MSA	32.9	39.8	41.2	43.3	43.3	41.9	41.6	38.5	36.5	35.3	37.3	34.7	32.2	29.0	30.0	23.5
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	35.2	38.9	41.0	42.5	46.0	43.7	41.8	38.9	39.7	35.7	37.1	33.4	30.7	30.7	23.3	21.0
2.5–3.0	39.2	46.1	48.2	50.3	50.0	49.0	45.3	44.5	42.2	40.1	40.6	38.8	36.3	31.1	29.6	26.9
3.5–4.0	38.5	44.9	49.5	51.4	52.7	49.8	47.0	46.5	42.2	41.4	41.0	40.1	36.8	33.4	31.4	27.6
4.5–5.0	40.6	46.8	49.3	53.2	53.7	50.5	47.6	45.9	43.5	39.6	43.2	39.9	37.5	35.1	29.7	28.5
5.5–6.0 (High)	38.7	47.5	48.6	55.2	51.2	52.0	48.5	45.7	43.7	39.9	37.9	38.9	38.6	35.9	30.7	29.4
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	—	46.8	50.1	51.8	51.2	49.1	47.1	44.6	42.0	41.6	41.4	39.7	37.6	34.5	31.6
African American	—	—	37.9	39.6	38.4	37.5	36.1	35.5	37.4	36.4	33.4	30.6	25.7	21.2	17.8	13.7
Hispanic	—	—	45.8	43.4	42.1	44.1	41.2	38.8	38.3	38.8	37.8	36.7	33.3	29.6	25.0	21.6

Table continued on next page.

**TABLE 12 (cont.)**  
**MARIJUANA: Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	23.9	21.9	26.0	30.7	34.7	35.8	38.5	37.5	37.8	36.5	37.0	36.2	34.9	34.3	33.6	31.5
Gender:																
Male	27.2	24.4	29.0	35.1	38.1	39.4	40.9	41.7	41.4	39.2	40.1	39.9	37.8	37.4	37.6	32.7
Female	20.1	18.9	22.4	26.4	30.6	31.6	35.5	33.0	34.1	33.4	33.6	32.4	31.6	30.8	29.6	29.7
College Plans:																
None or under 4 years	27.6	27.5	29.1	34.4	39.0	41.7	44.6	43.0	43.2	40.3	41.5	40.9	42.1	39.0	41.3	39.9
Complete 4 years	22.0	19.4	24.4	29.1	32.6	33.4	36.4	35.2	35.9	34.6	35.3	34.7	32.3	32.6	31.5	29.1
Region:																
Northeast	28.2	23.9	31.2	36.0	37.7	40.0	43.5	43.0	39.0	42.3	43.8	41.9	40.5	40.1	39.6	38.1
Midwest	26.1	22.7	26.0	30.5	36.9	36.9	36.5	33.8	38.0	34.5	36.9	37.5	36.5	34.0	33.7	32.0
South	18.1	18.1	23.2	28.7	31.8	32.8	35.0	36.5	36.0	30.7	32.4	32.6	29.4	30.1	31.2	29.4
West	26.8	26.1	26.4	30.0	33.8	35.6	42.6	39.0	39.8	43.1	38.4	35.2	36.2	35.6	32.0	28.8
Population Density:																
Large MSA	24.3	22.6	29.1	32.0	37.5	37.2	38.3	38.4	38.7	37.1	39.2	37.7	32.3	32.3	34.5	33.4
Other MSA	27.5	22.1	26.2	32.7	34.9	38.6	40.5	38.8	39.1	38.1	36.7	38.0	38.1	37.9	35.0	31.9
Non-MSA	17.5	21.0	23.1	25.8	31.0	29.6	34.9	33.5	34.7	32.9	35.1	30.8	32.2	29.7	29.7	28.1
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	22.4	21.2	23.0	26.3	30.9	31.3	34.8	34.2	35.5	36.5	33.9	30.8	31.4	28.7	27.3	32.0
2.5–3.0	22.5	21.1	24.1	29.7	33.8	35.1	37.4	36.1	38.6	35.1	37.0	34.9	34.2	33.1	34.8	33.2
3.5–4.0	24.0	22.7	26.6	31.5	34.2	36.1	38.1	39.0	38.6	36.8	38.4	38.5	36.2	36.9	35.5	31.6
4.5–5.0	23.8	20.8	27.2	32.0	35.0	36.6	40.1	37.4	35.9	35.8	37.4	37.0	35.4	34.4	33.9	28.4
5.5–6.0 (High)	28.2	22.6	28.0	32.3	37.5	36.7	39.7	38.3	39.2	38.0	35.2	36.1	32.6	34.0	32.3	32.9
Race/Ethnicity (2-year average): <sup>b</sup>																
White	28.2	24.9	25.9	30.2	34.2	36.4	38.7	39.9	39.1	38.2	38.5	38.7	37.9	37.3	36.6	34.8
African American	11.4	11.5	14.2	20.7	26.8	30.2	30.4	30.0	30.4	30.0	29.0	27.3	26.3	25.5	26.3	27.7
Hispanic	23.6	24.7	23.5	25.7	29.7	32.3	36.4	37.2	37.8	40.5	37.6	34.6	31.1	29.5	29.6	28.7

Table continued on next page.

**TABLE 12 (cont.)**  
**MARIJUANA: Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months													
	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	2018-2019 <u>change</u>
<i>Approximate weighted N =</i>	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	31.7	32.4	32.8	34.8	36.4	36.4	36.4	35.1	34.9	35.6	37.1	35.9	35.7	-0.2
Gender:														
Male	35.0	35.1	36.7	38.3	40.0	40.8	39.8	37.0	36.3	36.9	37.4	36.8	35.2	-1.6
Female	28.3	29.5	28.7	30.7	32.1	31.3	32.4	33.0	33.5	34.0	36.2	34.1	35.5	+1.4
College Plans:														
None or under 4 years	38.6	41.0	38.0	42.7	41.5	41.5	42.1	40.8	38.7	37.8	39.6	39.5	39.8	+0.3
Complete 4 years	29.8	30.2	31.1	32.5	34.7	34.8	34.8	33.1	33.7	34.5	36.1	34.5	34.0	-0.5
Region:														
Northeast	39.2	36.6	37.8	41.3	40.7	38.1	40.9	39.6	41.0	39.0	41.5	41.1	37.6	-3.5
Midwest	32.6	31.1	32.5	32.5	34.7	32.0	31.6	34.6	32.7	33.4	38.8	38.2	34.4	-3.7
South	29.0	31.0	30.6	32.4	33.1	33.9	34.4	33.6	31.2	32.8	32.7	30.7	33.9	+3.2
West	29.1	32.8	32.1	35.8	40.0	43.0	40.9	34.3	38.9	40.1	39.6	38.9	39.8	+0.9
Population Density:														
Large MSA	33.9	34.8	37.2	36.8	38.7	40.4	38.9	35.8	38.5	38.1	40.2	37.0	36.4	-0.7
Other MSA	31.6	31.2	32.0	36.1	37.4	36.8	37.9	36.9	34.4	35.7	36.0	35.3	35.8	+0.5
Non-MSA	28.8	32.2	28.7	28.8	30.4	29.2	29.0	29.7	30.4	31.7	34.2	35.5	34.4	-1.1
Parental Education: <sup>a</sup>														
1.0–2.0 (Low)	31.1	30.5	28.9	32.8	35.7	42.0	38.4	37.3	35.3	35.0	34.6	33.1	34.5	+1.3
2.5–3.0	33.8	32.8	33.6	35.4	36.8	37.6	39.0	37.5	37.8	36.7	39.7	38.9	37.6	-1.3
3.5–4.0	30.6	32.0	34.5	36.8	38.1	37.5	38.3	35.9	36.8	37.1	39.0	38.6	39.4	+0.7
4.5–5.0	30.4	32.7	31.0	34.5	35.0	35.0	33.3	32.9	32.5	34.8	35.6	34.9	30.8	-4.0 s
5.5–6.0 (High)	32.8	32.8	33.6	29.9	34.5	32.2	33.8	32.9	32.1	32.6	34.1	32.8	35.8	+3.1
Race/Ethnicity (2-year average): <sup>b</sup>														
White	33.4	33.9	34.3	34.8	36.3	36.6	35.6	35.1	35.1	35.3	36.5	36.9	35.6	-1.3
African American	27.0	26.8	28.6	30.8	32.4	33.2	35.0	35.9	32.8	32.4	35.5	36.3	35.7	-0.6
Hispanic	27.2	27.3	28.8	31.6	34.4	37.3	39.2	37.1	35.6	36.9	36.8	34.2	33.4	-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 13**  
**MARIJUANA: Trends in 30-Day Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 30 days															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	
<i>Approximate weighted N =</i>	17,500	18,600	18,300	17,300	17,500	17,800	18,600	18,100	16,700	16,700	16,200	15,100	16,500	17,000	16,800	
Total	3.2	3.7	5.1	7.8	9.1	11.3	10.2	9.7	9.7	9.1	9.2	8.3	7.5	6.4	6.6	
Gender:																
Male	3.8	3.8	6.1	9.5	9.8	12.1	11.4	10.3	10.5	10.2	11.0	9.5	8.5	6.3	7.6	
Female	2.6	3.5	4.1	6.0	8.2	10.2	8.9	8.8	8.8	7.8	7.3	7.1	6.4	6.3	5.7	
College Plans:																
None or under 4 years	9.8	11.5	13.2	19.7	20.6	24.5	23.8	24.6	25.9	23.4	23.9	23.2	21.7	19.0	19.7	
Complete 4 years	2.1	2.5	3.9	6.1	7.5	9.1	8.4	7.8	7.7	7.4	7.5	6.8	6.0	4.9	5.2	
Region:																
Northeast	2.4	3.1	3.3	7.7	7.2	9.2	9.0	6.5	7.6	7.5	8.7	6.3	5.9	5.3	5.6	
Midwest	3.3	3.0	3.7	7.3	10.1	11.8	10.4	10.8	11.7	9.5	7.9	8.0	7.3	5.6	6.6	
South	3.3	3.7	5.0	6.6	8.5	10.3	9.7	10.2	10.1	8.9	10.0	9.4	8.7	7.0	7.6	
West	3.9	5.6	9.2	10.9	10.6	13.9	11.9	10.5	8.4	10.4	9.8	8.6	7.0	7.0	5.9	
Population Density:																
Large MSA	2.8	3.3	4.1	7.6	9.1	11.3	8.7	9.3	8.6	7.5	7.1	6.7	6.5	6.6	6.3	
Other MSA	3.7	4.4	6.5	9.8	9.9	12.0	10.7	9.8	9.4	9.1	10.5	8.8	7.5	6.4	7.4	
Non-MSA	2.8	3.1	3.2	4.3	7.7	9.7	10.8	10.2	11.6	11.0	9.1	9.4	9.0	6.1	5.7	
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	7.4	7.2	7.2	12.4	13.5	12.5	15.5	15.7	17.5	18.8	16.4	13.5	13.7	11.3	10.6	
2.5–3.0	3.9	3.9	5.5	9.0	10.4	13.4	11.6	11.4	12.1	11.9	11.9	11.3	10.0	8.3	9.6	
3.5–4.0	3.1	3.5	5.7	7.8	9.9	12.0	11.0	10.6	9.1	8.8	9.6	8.7	7.6	7.0	7.3	
4.5–5.0	1.7	2.9	3.6	6.0	7.1	9.3	9.0	7.1	6.7	5.3	6.5	6.2	5.0	4.4	4.2	
5.5–6.0 (High)	2.3	2.4	4.2	5.8	7.4	9.2	6.7	7.3	7.5	5.8	5.3	5.4	4.8	3.6	3.3	
Race (2-year average): <sup>b</sup>																
White	—	3.3	4.1	5.6	7.8	10.0	10.6	9.5	8.7	8.4	8.4	8.3	7.4	6.2	5.8	
African American	—	2.0	2.9	5.0	6.6	8.0	9.0	9.1	9.7	9.3	8.1	7.4	7.3	7.7	8.2	
Hispanic	—	6.4	8.3	12.1	12.9	12.5	13.1	13.5	14.3	12.7	12.6	12.6	10.3	9.3	8.3	

Table continued on next page.

**TABLE 13 (cont.)**  
**MARIJUANA: Trends in 30-Day Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 30 days														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	
Total	6.5	5.7	5.8	6.5	8.0	7.2	6.5	7.0	6.5	6.5	5.4	5.5	5.6	6.6	+1.0
Gender:															
Male	6.7	6.2	6.6	7.5	9.2	8.5	7.0	6.7	6.9	6.6	5.7	5.3	5.6	5.9	+0.2
Female	6.0	4.9	4.8	5.3	6.8	5.7	6.0	7.2	5.9	6.2	5.0	5.5	5.3	7.4	+2.1 ss
College Plans:															
None or under 4 years	20.1	18.3	19.1	18.9	21.4	19.4	20.0	19.7	17.6	16.4	15.4	13.1	14.2	13.5	-0.7
Complete 4 years	5.1	4.5	4.5	5.4	6.8	6.2	5.4	6.2	5.6	5.6	4.5	4.6	4.3	5.7	+1.3 s
Region:															
Northeast	5.2	3.4	4.2	6.6	7.0	4.3	4.7	5.4	6.2	5.3	3.2	3.8	4.0	4.3	+0.3
Midwest	5.6	5.3	6.8	6.2	6.8	5.7	4.4	5.8	6.0	6.6	5.8	4.3	4.5	6.4	+1.9
South	7.9	6.5	6.0	6.8	8.8	7.7	7.5	8.5	6.1	6.7	5.8	5.3	5.3	6.5	+1.2
West	5.9	5.9	5.6	6.0	8.5	10.2	8.2	7.0	7.7	6.8	6.0	7.9	8.4	8.7	+0.3
Population Density:															
Large MSA	5.3	4.3	4.9	5.5	7.7	6.8	5.8	7.2	7.5	7.1	4.9	4.4	5.8	5.5	-0.3
Other MSA	7.4	6.1	6.3	7.2	8.3	8.3	7.0	6.7	6.0	6.5	5.1	6.4	5.6	7.3	+1.7
Non-MSA	6.3	6.7	5.8	6.1	7.4	5.5	6.5	7.5	6.1	5.7	7.1	4.9	5.3	6.9	+1.6
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	12.0	10.4	11.1	10.3	12.3	12.2	11.4	13.6	12.4	11.9	8.9	9.5	8.6	11.3	+2.6
2.5–3.0	8.9	7.3	8.4	8.6	10.5	10.1	9.9	10.9	8.8	8.5	7.6	7.6	8.5	11.7	+3.2
3.5–4.0	7.0	6.7	5.6	7.1	8.8	7.7	7.2	8.1	7.1	6.7	5.9	6.1	6.3	6.9	+0.6
4.5–5.0	3.7	3.6	3.8	5.1	6.1	5.5	4.1	4.3	4.1	3.6	4.0	3.2	3.5	3.9	+0.4
5.5–6.0 (High)	3.4	2.3	3.6	4.0	4.3	3.4	3.1	3.4	4.1	4.1	2.6	3.5	2.4	3.6	+1.2
Race (2-year average): <sup>b</sup>															
White	5.8	5.4	5.0	5.4	6.5	6.5	5.3	4.7	4.7	4.6	4.1	3.9	4.0	4.2	+0.2
African American	7.5	6.4	6.1	6.7	7.7	8.1	7.6	8.2	7.7	7.1	7.2	6.5	5.5	6.1	+0.6
Hispanic	8.1	7.6	7.1	7.3	8.8	10.1	10.4	10.0	8.9	8.3	7.3	6.5	6.8	8.3	+1.5 s

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-of-use estimates for the two most recent classes 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 14**  
**MARIJUANA: Trends in 30-Day Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 30 days														
	<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>
<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>
Total	8.7	8.1	10.9	15.8	17.2	20.4	20.5	18.7	19.4	19.7	19.8	17.8	17.0	15.9	15.2
Gender:															
Male	10.1	9.0	13.1	18.6	19.1	22.3	23.0	20.3	21.8	23.3	22.7	19.3	19.0	17.4	16.7
Female	7.3	7.1	8.6	12.8	15.0	18.6	17.9	17.2	17.0	16.2	16.8	16.4	15.0	14.2	13.4
College Plans:															
None or under 4 years	15.0	14.3	20.4	25.8	27.9	35.2	34.7	32.6	33.8	33.7	35.2	31.5	31.3	27.5	27.0
Complete 4 years	7.4	6.7	8.8	13.6	15.2	17.9	18.1	16.1	17.0	17.6	17.3	15.6	14.7	14.2	13.4
Region:															
Northeast	10.1	7.7	13.4	16.9	17.1	21.9	21.6	22.7	22.0	19.4	21.3	19.4	18.3	16.5	17.6
Midwest	8.3	7.6	10.5	15.3	16.8	20.7	19.8	16.6	19.6	19.8	19.1	16.7	14.2	14.8	14.3
South	7.2	6.6	9.1	14.8	17.2	20.3	20.1	18.7	18.1	18.2	18.0	16.6	18.5	17.1	15.7
West	10.3	11.7	12.1	17.3	17.6	18.9	21.1	17.2	18.8	22.8	23.0	20.2	17.0	14.7	12.9
Population Density:															
Large MSA	9.3	8.0	11.2	17.2	16.9	18.4	19.8	17.4	19.0	20.6	18.5	16.8	15.4	13.8	14.6
Other MSA	9.1	8.6	11.2	17.5	18.5	22.2	21.7	19.7	20.3	19.7	21.0	19.1	17.3	16.7	15.6
Non-MSA	7.6	7.2	10.1	11.4	14.7	19.3	19.2	18.4	18.1	18.8	18.7	16.5	18.8	16.9	15.0
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	11.4	11.2	13.3	15.8	20.6	21.4	20.9	20.4	25.0	23.4	20.6	21.6	21.6	19.5	15.8
2.5–3.0	9.5	8.0	11.3	16.3	19.3	22.9	21.7	22.1	22.0	21.0	22.8	20.4	20.3	17.9	18.1
3.5–4.0	8.1	8.3	10.9	15.8	18.0	22.1	22.5	18.3	19.3	21.2	20.8	18.1	17.8	17.3	15.9
4.5–5.0	7.9	7.4	10.0	15.0	15.6	18.1	19.2	16.4	16.6	17.9	17.5	15.2	13.4	13.2	12.7
5.5–6.0 (High)	8.9	7.5	9.4	15.5	13.3	17.4	17.1	16.2	18.2	16.7	17.2	15.5	13.8	12.7	13.5
Race (2-year average): <sup>b</sup>															
White	—	9.0	9.8	13.4	16.8	19.3	21.2	20.3	19.8	20.2	20.2	19.8	18.2	16.5	15.7
African American	—	3.6	4.9	9.8	13.8	15.9	16.5	15.3	14.6	15.8	16.7	15.2	15.1	16.3	15.3
Hispanic	—	10.4	12.4	15.6	17.7	19.1	21.3	21.4	20.6	20.5	20.5	18.2	17.0	17.7	16.0

Table continued on next page.

**TABLE 14 (cont.)**  
**MARIJUANA: Trends in 30-Day Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 30 days														
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2018-2019 change
<i>Approximate weighted N =</i>															
	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	14.2	14.2	13.8	15.9	16.7	17.6	17.0	18.0	16.6	14.8	14.0	15.7	16.7	18.4	+1.7
Gender:															
Male	15.7	15.8	15.2	18.7	20.1	20.8	19.8	20.6	17.4	15.6	14.2	15.3	17.3	18.1	+0.9
Female	12.6	12.5	12.3	13.2	13.3	14.5	14.4	15.3	15.7	13.7	13.7	15.8	15.8	18.3	+2.5
College Plans:															
None or under 4 years	28.1	27.6	28.4	28.0	34.0	34.2	30.3	31.0	29.3	27.9	24.8	24.7	28.4	29.1	+0.8
Complete 4 years	12.4	12.3	11.9	14.5	14.6	15.7	15.7	16.5	15.1	13.4	12.8	14.4	14.8	16.2	+1.4
Region:															
Northeast	14.6	14.3	16.6	15.3	15.5	19.0	19.1	17.3	17.5	14.7	14.3	17.2	20.4	19.7	-0.7
Midwest	13.6	14.7	12.5	13.3	15.4	16.4	14.4	16.9	14.4	12.6	14.0	15.6	14.9	17.0	+2.1
South	14.6	12.8	14.0	17.3	16.7	16.7	17.2	19.0	17.0	15.3	14.3	13.8	15.4	17.8	+2.3
West	14.1	15.3	12.9	17.2	19.0	19.2	18.0	18.2	17.3	16.4	13.4	17.7	17.5	20.0	+2.5
Population Density:															
Large MSA	14.2	14.2	13.9	16.1	16.0	17.0	17.3	17.2	16.7	14.8	14.5	17.4	18.1	18.3	+0.2
Other MSA	13.6	13.5	14.4	16.4	18.0	18.9	17.2	19.1	17.1	15.4	13.7	15.4	17.6	19.8	+2.3
Non-MSA	15.7	15.5	12.4	14.8	15.1	15.8	16.3	16.3	14.9	13.4	14.2	13.9	12.4	14.6	+2.2
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	18.4	17.1	18.1	22.2	21.0	23.6	21.0	22.0	18.6	21.0	16.6	18.5	19.8	21.5	+1.6
2.5–3.0	17.1	17.4	15.7	18.1	20.4	21.2	21.3	21.4	19.9	18.4	15.8	18.1	19.6	24.1	+4.6 s
3.5–4.0	14.9	15.1	15.4	16.0	17.7	18.9	17.5	19.7	18.5	17.3	15.9	17.7	18.2	20.5	+2.3
4.5–5.0	12.0	11.2	11.2	14.4	13.7	14.8	15.4	15.5	13.4	12.1	12.0	13.5	14.4	14.5	+0.2
5.5–6.0 (High)	11.8	11.3	10.1	13.1	12.9	13.2	14.0	12.8	13.7	9.8	12.1	13.3	13.0	13.8	+0.8
Race (2-year average): <sup>b</sup>															
White	15.2	14.7	14.2	14.6	15.7	16.4	16.7	16.5	16.2	14.6	14.1	15.1	15.3	15.9	+0.6
African American	13.8	12.6	11.7	13.7	15.5	18.0	18.8	19.1	19.0	17.4	15.8	14.8	16.1	18.7	+2.5 ss
Hispanic	14.0	13.0	15.3	17.4	18.2	18.2	18.5	20.0	19.4	18.1	15.5	14.9	16.9	18.2	+1.3

*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-of-use estimates for the two most recent classes 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 15**  
**MARIJUANA: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<i>Approximate weighted N =</i>	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
Total	27.1	32.2	35.4	37.1	36.5	33.7	31.6	28.5	27.0	25.2	25.7	23.4	21.0	18.0	16.7	14.0
Gender:																
Male	32.3	37.7	40.7	42.6	41.4	37.8	35.3	31.4	31.0	28.2	28.7	26.8	23.1	20.7	19.5	16.1
Female	22.5	26.0	30.0	31.3	31.3	29.1	27.3	24.9	22.2	21.1	22.4	20.0	18.6	15.2	13.8	11.5
College Plans:																
None or under 4 years	—	34.5	38.7	39.2	39.6	37.7	36.1	32.9	30.7	29.2	29.0	28.3	25.1	20.4	21.0	17.6
Complete 4 years	—	28.4	31.0	33.2	32.2	29.4	27.4	23.9	22.9	20.9	22.7	20.0	18.5	16.4	14.6	11.9
Region:																
Northeast	32.2	38.6	40.4	46.7	44.7	39.3	38.2	33.3	32.0	33.3	32.0	28.5	25.3	20.2	18.6	17.6
Midwest	27.6	31.4	36.1	37.8	38.0	34.0	33.0	30.0	27.2	22.1	26.1	24.0	21.1	18.6	19.2	13.7
South	21.2	27.7	31.3	30.6	29.0	28.4	24.7	22.4	22.9	22.4	18.0	19.2	17.3	15.8	14.0	11.5
West	30.8	32.7	33.6	34.3	35.9	35.2	32.0	29.2	27.1	25.9	29.7	23.1	22.3	18.9	16.8	14.7
Population Density:																
Large MSA	36.2	37.9	40.4	44.0	42.2	39.6	36.3	34.3	31.7	28.5	28.5	26.7	23.1	19.4	15.2	14.1
Other MSA	26.4	32.5	36.2	37.1	37.5	34.5	31.4	28.3	28.1	25.1	25.9	22.9	21.3	19.3	17.5	14.6
Non-MSA	22.2	27.5	30.2	31.4	30.9	28.3	28.0	23.8	21.8	22.5	23.0	21.5	18.2	14.3	16.7	12.6
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	22.3	29.0	30.4	30.7	33.2	29.9	29.7	24.9	26.2	23.8	23.4	21.0	19.9	15.6	13.9	11.4
2.5–3.0	26.5	33.7	36.7	37.7	35.8	34.6	31.5	28.4	27.3	25.4	25.9	24.1	20.9	16.8	16.3	14.3
3.5–4.0	25.1	32.3	36.9	37.7	37.8	33.6	31.4	29.3	26.1	25.8	26.5	24.1	21.1	17.7	17.9	13.5
4.5–5.0	27.3	32.6	34.3	39.0	37.3	33.7	31.9	30.1	26.9	23.3	27.1	23.1	21.1	19.3	17.1	15.0
5.5–6.0 (High)	24.7	32.1	36.0	39.7	37.6	36.2	31.9	27.7	25.5	23.4	20.6	21.7	21.2	20.6	16.2	15.0
Race (2-year average): <sup>b</sup>																
White	—	—	34.0	36.9	37.6	35.8	33.3	30.8	27.9	26.0	25.9	25.5	23.4	21.1	19.2	17.1
African American	—	—	29.2	29.7	28.2	27.0	25.7	24.8	25.8	24.8	22.3	19.4	14.5	11.0	9.6	7.5
Hispanic	—	—	33.3	30.8	29.0	29.5	27.7	26.2	25.3	23.8	21.9	21.3	20.2	16.1	12.4	11.7

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**TABLE 15 (cont.)**  
**MARIJUANA: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days														
	<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>
<i>Approximate weighted N =</i>	<i>15,000</i>	<i>15,800</i>	<i>16,300</i>	<i>15,400</i>	<i>15,400</i>	<i>14,300</i>	<i>15,400</i>	<i>15,200</i>	<i>13,600</i>	<i>12,800</i>	<i>12,800</i>	<i>12,900</i>	<i>14,600</i>	<i>14,600</i>	<i>14,700</i>
Total	13.8	11.9	15.5	19.0	21.2	21.9	23.7	22.8	23.1	21.6	22.4	21.5	21.2	19.9	19.8
Gender:															
Male	16.1	13.4	18.2	23.0	24.6	25.1	26.4	26.5	26.3	24.7	25.6	25.3	24.7	23.0	23.6
Female	11.2	10.2	12.5	15.1	17.2	18.3	20.3	18.8	19.7	18.3	19.1	17.4	17.3	16.6	15.8
College Plans:															
None or under 4 years	15.8	15.0	17.9	21.6	23.7	26.4	29.3	28.3	26.6	26.0	27.5	27.0	26.9	24.1	24.9
Complete 4 years	12.5	10.4	14.2	17.7	19.6	20.0	21.5	20.5	21.8	19.6	20.4	19.6	18.9	18.3	18.1
Region:															
Northeast	17.6	14.4	19.5	22.7	23.8	25.9	27.0	27.2	24.2	26.0	28.4	25.6	26.5	25.1	25.0
Midwest	14.9	12.2	15.9	19.3	22.6	23.3	21.8	21.1	23.2	19.3	22.7	22.4	21.6	18.1	19.2
South	9.7	9.4	13.1	17.3	19.4	19.5	20.9	21.3	22.1	17.4	18.1	20.0	17.8	17.7	18.2
West	15.7	14.0	15.6	18.6	19.8	19.7	27.8	23.9	24.2	27.2	23.5	19.3	21.1	20.9	18.0
Population Density:															
Large MSA	14.3	12.9	18.0	20.7	23.6	22.9	21.7	23.4	23.2	22.6	23.4	22.9	19.6	19.1	20.4
Other MSA	16.3	11.5	15.3	19.8	21.5	23.7	25.6	23.9	24.4	22.6	22.5	22.7	23.7	22.3	20.8
Non-MSA	9.0	12.0	13.8	15.7	17.8	17.6	22.0	19.8	21.0	18.6	21.2	17.4	18.7	16.4	16.9
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	11.7	9.7	12.4	14.0	18.1	17.4	19.9	19.7	22.2	21.5	20.9	17.8	20.0	16.6	16.3
2.5–3.0	12.9	11.9	14.0	18.5	19.6	20.6	23.6	22.1	23.6	20.9	21.7	21.5	20.6	19.3	20.2
3.5–4.0	13.8	12.2	16.9	19.3	21.5	22.9	23.6	23.9	23.0	21.5	23.6	23.7	22.1	21.2	20.2
4.5–5.0	13.7	12.1	15.9	20.4	21.3	22.1	24.7	22.6	22.4	21.4	22.3	20.6	21.0	19.8	20.4
5.5–6.0 (High)	17.6	11.6	16.1	20.3	23.1	22.6	22.9	22.9	23.4	21.3	20.5	19.6	18.3	19.8	18.9
Race (2-year average): <sup>b</sup>															
White	15.3	14.1	14.9	18.4	20.8	22.0	23.6	24.4	23.8	22.7	22.9	23.3	22.8	22.1	21.6
African American	5.9	6.0	8.1	13.1	16.8	18.3	18.5	18.3	19.3	19.0	17.0	16.5	16.3	15.2	14.6
Hispanic	12.9	12.7	12.5	14.9	17.9	19.1	21.2	21.6	22.0	24.6	22.1	20.0	17.9	16.6	16.6

Table continued on next page.

**TABLE 15 (cont.)**  
**MARIJUANA: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	18.3	18.8	19.4	20.6	21.4	22.6	22.9	22.7	21.2	21.3	22.5	22.9	22.2	22.3	+0.1
Gender:															
Male	19.7	22.3	22.2	24.3	25.2	26.4	26.5	26.4	24.3	23.1	25.0	24.1	24.0	23.0	-1.1
Female	16.4	15.0	16.2	16.8	16.9	18.4	18.8	18.7	17.9	19.2	19.7	21.5	19.2	21.1	+1.9
College Plans:															
None or under 4 years	24.8	25.9	24.9	24.6	28.1	27.5	27.0	28.0	26.8	24.6	25.4	26.6	26.6	27.0	+0.4
Complete 4 years	16.4	16.8	17.7	19.2	19.3	21.1	21.4	21.3	19.5	20.0	21.2	21.6	20.2	20.3	0.0
Region:															
Northeast	24.8	23.7	23.1	24.6	26.1	26.4	24.0	25.8	25.6	26.2	25.8	26.7	27.4	22.7	-4.8 s
Midwest	17.4	18.6	17.5	20.2	20.0	21.7	19.5	20.0	21.0	19.6	20.4	22.7	23.2	20.7	-2.5
South	17.1	17.0	19.2	19.3	19.6	20.9	22.3	21.0	19.8	18.5	20.5	19.8	17.9	20.6	+2.7
West	16.0	17.7	19.2	19.7	21.7	23.4	26.6	25.8	20.0	23.8	25.6	25.6	24.7	28.1	+3.4
Population Density:															
Large MSA	19.6	20.9	21.8	24.0	22.8	23.3	25.9	25.7	22.0	24.5	24.4	25.2	24.0	22.3	-1.7
Other MSA	18.4	18.2	18.6	20.3	22.7	24.3	23.5	23.5	22.4	20.4	22.6	21.4	21.2	22.5	+1.4
Non-MSA	16.3	16.7	18.5	16.8	15.9	17.5	16.7	16.4	17.1	17.9	19.3	22.4	21.3	21.7	+0.3
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	17.9	18.2	18.5	16.9	18.6	20.5	26.7	22.6	23.0	21.9	21.4	22.2	19.8	22.6	+2.8
2.5–3.0	19.6	20.1	18.7	22.0	21.2	23.0	23.2	25.2	23.0	22.9	24.4	24.5	23.8	24.4	+0.7
3.5–4.0	18.6	18.5	18.8	21.7	22.8	23.5	23.2	23.5	21.4	21.4	22.8	24.8	23.5	23.8	+0.3
4.5–5.0	16.3	18.3	19.3	19.1	20.8	21.0	22.3	20.8	19.7	20.3	21.6	21.1	20.8	18.5	-2.3
5.5–6.0 (High)	18.2	17.9	21.0	20.3	18.4	23.1	20.3	21.3	19.8	18.6	18.6	19.1	20.8	20.5	-0.3
Race (2-year average): <sup>b</sup>															
White	20.5	19.5	20.1	20.8	21.4	22.2	22.6	21.8	21.3	21.0	21.1	22.1	22.3	21.3	-0.9
African American	15.9	16.0	16.3	18.6	20.1	21.0	22.3	24.0	23.0	20.8	22.2	23.9	24.0	23.8	-0.2
Hispanic	16.0	15.3	15.3	16.7	18.5	19.6	22.0	24.3	22.6	20.9	22.5	22.9	20.5	20.4	-0.1

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-of-use estimates for the two most recent classes 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 16**  
**MARIJUANA: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 8**

	Percentage who used daily in last 30 days															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	
<i>Approximate weighted N =</i>	17,500	18,600	18,300	17,300	17,500	17,800	18,600	18,100	16,700	16,700	16,200	15,100	16,500	17,000	16,800	
Total	0.2	0.2	0.4	0.7	0.8	1.5	1.1	1.1	1.4	1.3	1.3	1.2	1.0	0.8	1.0	
Gender																
Male	0.3	0.3	0.5	1.0	1.1	2.0	1.4	1.4	1.9	2.0	2.0	1.7	1.3	0.9	1.4	
Female	0.1	0.1	0.3	0.5	0.4	0.9	0.6	0.7	0.8	0.7	0.6	0.7	0.6	0.6	0.6	
College Plans:																
None or under 4 years	0.9	1.1	1.2	2.1	3.1	4.4	4.2	4.2	5.6	5.1	5.1	5.1	3.6	3.3	3.9	
Complete 4 years	0.1	0.1	0.3	0.5	0.5	1.0	0.6	0.7	0.8	0.9	0.8	0.8	0.7	0.4	0.7	
Region:																
Northeast	0.1	0.1	0.3	0.8	0.5	0.9	0.9	0.8	1.0	0.8	1.4	1.2	0.8	0.5	0.7	
Midwest	0.1	0.2	0.2	0.7	0.8	1.6	1.2	1.1	1.7	1.4	1.3	1.0	1.0	0.6	1.0	
South	0.3	0.2	0.4	0.6	0.8	1.4	0.9	1.4	1.5	1.4	1.5	1.6	1.1	0.9	1.2	
West	0.2	0.3	0.7	1.1	1.2	2.1	1.3	0.9	1.0	1.6	0.9	1.0	0.9	0.9	0.8	
Population Density:																
Large MSA	0.2	0.1	0.3	0.7	1.1	1.7	0.8	0.8	1.1	1.0	0.8	1.0	0.8	0.7	0.9	
Other MSA	0.2	0.2	0.5	0.9	0.9	1.6	1.2	1.1	1.5	1.3	1.6	1.3	1.0	0.8	1.2	
Non-MSA	0.2	0.3	0.2	0.5	0.5	1.0	1.1	1.4	1.3	1.8	1.4	1.4	1.2	0.8	0.7	
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	0.5	0.5	0.7	0.8	2.0	1.6	2.2	2.2	3.2	4.6	2.0	2.3	1.9	1.6	1.4	
2.5–3.0	0.3	0.3	0.4	0.8	0.9	2.0	0.9	1.5	1.3	1.6	1.9	1.7	1.4	0.8	1.2	
3.5–4.0	0.2	0.1	0.5	1.1	0.7	1.4	1.3	1.1	1.5	0.9	1.3	1.4	1.0	0.7	1.2	
4.5–5.0	0.1	0.1	0.1	0.5	0.6	0.8	0.8	0.5	0.8	0.5	0.8	0.7	0.7	0.5	0.5	
5.5–6.0 (High)	*	0.1	0.3	0.5	0.6	1.2	0.6	0.6	0.7	0.8	0.5	0.4	0.6	0.3	0.2	
Race (2-year average): <sup>b</sup>																
White	—	0.2	0.2	0.4	0.7	1.0	1.1	0.9	1.0	1.2	1.3	1.3	1.0	0.7	0.7	
African American	—	0.1	0.2	0.4	0.7	1.2	1.3	0.9	1.0	1.0	1.1	1.2	1.2	1.2	1.0	
Hispanic	—	0.3	0.6	1.1	1.2	1.6	1.8	1.6	2.0	1.9	1.6	1.5	1.2	1.1	1.3	

Table continued on next page.

**TABLE 16 (cont.)**  
**MARIJUANA: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 8**

	Percentage who used daily in last 30 days														2018-2019
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	change
<i>Approximate weighted N =</i>															
	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	
Total	1.0	0.8	0.9	1.0	1.2	1.3	1.1	1.1	1.0	1.1	0.7	0.8	0.7	1.3	+0.6 s
Gender															
Male	1.3	1.2	1.2	1.4	1.8	1.8	1.6	1.3	1.2	1.3	0.9	0.9	0.8	1.4	+0.5
Female	0.7	0.5	0.6	0.5	0.7	0.7	0.5	0.9	0.7	0.9	0.5	0.6	0.5	1.2	+0.7 ss
College Plans:															
None or under 4 years	5.3	3.2	4.7	4.7	5.2	5.2	5.6	4.9	2.9	3.4	3.0	2.7	2.2	3.7	+1.5
Complete 4 years	0.6	0.6	0.6	0.6	0.9	1.0	0.7	0.8	0.8	0.8	0.5	0.5	0.4	0.9	+0.5 ss
Region:															
Northeast	0.7	0.5	0.3	0.9	0.9	0.5	0.8	0.6	0.9	0.8	0.4	0.8	0.5	0.7	+0.2
Midwest	0.8	0.9	1.3	1.0	1.3	1.2	0.5	0.9	1.3	1.1	0.7	0.5	0.5	1.1	+0.6 s
South	1.4	0.9	1.0	1.0	1.4	1.4	1.2	1.3	0.8	1.2	0.8	0.7	0.6	0.6	+0.1
West	0.9	0.7	0.8	0.9	1.1	1.9	1.6	1.5	1.1	1.1	0.9	1.0	1.3	2.8	+1.5
Population Density:															
Large MSA	0.8	0.5	0.9	0.6	0.8	1.1	0.9	1.0	1.3	1.5	0.4	0.5	0.6	0.7	+0.1
Other MSA	1.3	0.8	0.8	1.2	1.3	1.5	1.2	1.2	0.8	0.9	0.8	0.9	0.6	1.3	+0.7
Non-MSA	0.9	1.4	1.0	1.0	1.7	1.0	1.2	1.3	0.9	0.9	1.1	0.7	1.0	2.2	+1.2
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	2.6	1.3	2.6	1.9	2.5	2.2	1.9	2.3	2.0	2.5	1.3	1.2	1.4	1.4	0.0
2.5–3.0	1.3	0.9	1.4	1.4	2.1	2.3	1.6	1.5	0.9	1.0	0.9	1.1	0.7	2.9	+2.2 s
3.5–4.0	0.9	1.0	0.7	0.8	1.0	1.3	1.0	1.0	1.1	0.8	0.9	0.8	0.6	1.1	+0.5 s
4.5–5.0	0.6	0.4	0.4	0.6	0.7	0.8	0.3	0.8	0.6	0.6	0.4	0.5	0.4	0.3	0.0
5.5–6.0 (High)	0.3	0.5	0.5	0.6	0.3	0.5	0.6	0.5	0.7	0.7	0.4	0.4	0.3	1.0	+0.8 s
Race (2-year average): <sup>b</sup>															
White	1.0	0.9	0.7	0.8	1.0	1.1	1.0	0.8	0.7	0.6	0.6	0.5	0.4	0.5	+0.1
African American	1.0	1.0	1.0	1.0	1.1	1.2	1.0	1.0	1.1	1.2	1.2	1.2	1.1	0.7	-0.4
Hispanic	1.1	0.7	1.0	1.3	1.4	1.9	2.1	1.7	1.4	1.3	0.9	0.8	0.9	1.4	+0.5

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. '\*\*\*' indicates less than .05 percent but greater than 0 percent. Any apparent inconsistency between the change estimate and the prevalence-of-use estimates for the two most recent classes 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 17**  
**MARIJUANA: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 10**

	Percentage who used daily in last 30 days														
	<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>
Approximate weighted N =	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
Total	0.8	0.8	1.0	2.2	2.8	3.5	3.7	3.6	3.8	3.8	4.5	3.9	3.6	3.2	3.1
Gender:															
Male	1.1	1.1	1.6	3.1	3.7	4.7	5.2	4.8	5.2	5.3	6.4	5.1	5.1	4.1	4.1
Female	0.5	0.4	0.4	1.2	1.7	2.3	2.1	2.4	2.4	2.3	2.6	2.6	2.2	2.2	2.0
College Plans:															
None or under 4 years	1.6	2.3	2.7	5.5	6.5	10.2	9.5	9.7	10.3	10.4	11.7	9.4	9.9	9.0	9.5
Complete 4 years	0.6	0.4	0.6	1.4	2.1	2.3	2.6	2.4	2.7	2.7	3.3	2.9	2.6	2.3	2.1
Region:															
Northeast	0.8	0.7	1.6	2.5	1.9	3.7	3.9	5.0	3.9	3.9	3.8	3.6	3.7	3.3	3.3
Midwest	0.9	0.6	1.0	2.0	2.9	3.8	3.8	3.4	4.2	4.2	4.1	4.2	2.8	3.0	3.3
South	0.6	0.6	0.7	2.2	3.2	3.0	3.9	3.4	3.6	3.4	4.5	3.2	4.2	3.4	2.9
West	1.1	1.3	1.1	2.1	2.7	3.8	2.7	2.9	3.7	3.7	6.2	5.2	3.8	3.0	2.9
Population Density:															
Large MSA	0.8	0.5	1.2	2.1	2.5	3.0	3.6	3.4	3.1	4.2	4.4	3.4	3.0	2.5	3.0
Other MSA	0.9	0.8	0.9	2.3	3.1	3.7	3.8	3.9	4.1	3.4	4.4	4.4	3.6	3.3	3.0
Non-MSA	0.7	0.9	1.1	2.0	2.4	3.7	3.6	3.3	3.9	4.0	4.8	3.7	4.8	3.8	3.4
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	1.1	1.1	1.4	2.0	4.1	3.6	3.2	3.8	4.6	4.9	6.0	4.6	5.5	5.3	3.7
2.5–3.0	0.9	0.8	1.0	2.6	3.6	4.6	4.3	4.9	5.5	4.3	5.3	4.9	4.8	3.8	4.8
3.5–4.0	0.8	0.9	1.1	2.4	2.8	4.1	4.2	3.4	3.5	4.2	4.7	3.9	3.4	3.4	3.3
4.5–5.0	0.8	0.6	0.6	1.8	1.9	2.4	3.0	3.1	2.6	3.4	3.8	2.7	2.9	2.0	2.0
5.5–6.0 (High)	0.4	0.8	1.0	1.0	2.0	2.1	2.2	2.3	2.5	2.1	3.3	3.2	2.4	1.7	1.8
Race (2-year average): <sup>b</sup>															
White	—	0.9	1.0	1.6	2.5	3.2	3.7	3.7	3.8	4.0	4.3	4.4	4.1	3.5	3.1
African American	—	0.3	0.3	0.8	1.7	2.2	2.8	3.4	3.0	3.2	3.6	3.0	2.9	2.8	2.8
Hispanic	—	0.8	1.1	1.9	2.5	2.8	3.5	3.6	3.2	3.2	4.2	3.9	3.0	2.9	3.1

Table continued on next page.

**TABLE 17 (cont.)**  
**MARIJUANA: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 10**

	Percentage who used daily in last 30 days														
	<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>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	2018-2019 change
Approximate weighted N =	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	2.8	2.8	2.7	2.8	3.3	3.6	3.5	4.0	3.4	3.0	2.5	2.9	3.4	4.8	+1.3 s
Gender:															
Male	3.5	3.9	3.8	4.1	5.1	5.4	4.6	6.2	4.3	3.6	3.1	3.3	4.2	5.2	+1.0
Female	2.0	1.8	1.7	1.7	1.6	1.7	2.4	2.0	2.4	2.4	1.9	2.4	2.5	4.2	+1.7 s
College Plans:															
None or under 4 years	8.9	8.3	9.2	7.9	9.5	9.5	10.5	10.0	8.8	8.8	7.4	8.1	8.9	10.3	+1.4
Complete 4 years	1.9	2.1	1.9	2.2	2.6	2.9	2.8	3.3	2.8	2.4	1.9	2.2	2.5	3.5	+1.0 s
Region:															
Northeast	2.8	3.2	2.8	1.9	2.9	4.3	3.2	2.8	3.4	3.0	2.4	3.2	4.1	4.3	+0.2
Midwest	2.6	2.9	2.6	2.5	2.9	2.9	3.2	3.9	3.2	2.0	2.6	3.2	2.5	4.2	+1.7 ss
South	3.0	2.7	3.2	3.5	3.3	3.6	4.1	5.0	3.7	3.7	2.6	2.7	3.6	5.0	+1.4
West	2.5	2.7	2.4	3.1	4.3	3.8	3.5	3.7	3.3	3.0	2.4	2.9	3.5	5.3	+1.8
Population Density:															
Large MSA	2.8	2.3	2.5	2.2	2.8	3.6	2.9	3.4	3.3	2.6	2.1	2.7	3.2	3.8	+0.6
Other MSA	2.6	2.9	3.0	3.0	3.7	3.5	3.6	4.4	3.6	3.2	2.5	2.7	3.8	5.7	+1.9 s
Non-MSA	3.2	3.5	2.6	3.4	3.3	3.6	4.3	3.9	3.2	3.5	3.4	4.0	2.9	3.7	+0.8
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	4.2	4.9	4.2	4.6	4.5	5.8	5.5	5.8	4.3	5.1	3.0	4.3	4.9	5.6	+0.7
2.5–3.0	3.9	3.4	3.7	3.4	4.6	4.3	5.3	5.7	4.4	4.8	3.3	3.9	5.0	7.5	+2.5
3.5–4.0	2.9	3.2	3.2	2.9	3.8	3.7	3.2	4.4	4.6	3.3	3.2	3.2	3.3	5.8	+2.5 s
4.5–5.0	1.8	2.0	1.8	2.1	2.4	2.5	3.0	2.8	2.0	1.7	1.8	2.1	2.3	2.7	+0.4
5.5–6.0 (High)	1.9	1.6	1.3	1.9	1.7	2.9	1.8	2.2	1.4	1.8	0.9	1.9	2.3	2.0	-0.3
Race (2-year average): <sup>b</sup>															
White	3.0	3.1	2.8	2.6	2.9	3.3	3.4	3.5	3.5	3.2	3.0	2.7	2.8	3.4	+0.6 s
African American	2.8	2.5	2.8	2.9	3.2	3.8	4.0	4.7	4.4	3.0	2.3	2.7	3.8	4.6	+0.9
Hispanic	2.6	1.9	2.5	2.9	3.2	3.3	3.2	3.7	3.7	3.3	2.7	2.6	2.9	4.5	+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-of-use estimates for the two most recent classes 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 18**  
**MARIJUANA: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 12**

	Percentage who used daily in last 30 days															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Approximate weighted N =	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
Total	6.0	8.2	9.1	10.7	10.3	9.1	7.0	6.3	5.5	5.0	4.9	4.0	3.3	2.7	2.9	2.2
Gender:																
Male	8.1	10.8	12.4	14.2	12.7	11.9	9.6	8.2	7.3	7.0	6.9	5.7	4.3	3.9	4.1	3.2
Female	4.0	5.0	5.6	7.1	7.3	6.0	4.2	4.0	3.2	2.5	2.8	2.3	2.1	1.3	1.5	1.0
College Plans:																
None or under 4 years	—	9.9	11.1	12.8	13.0	11.9	9.4	8.6	7.3	6.9	6.7	6.2	5.2	4.0	4.6	3.5
Complete 4 years	—	5.5	6.3	7.4	6.8	5.9	4.8	3.9	3.4	2.9	3.3	2.3	2.0	1.8	2.0	1.5
Region:																
Northeast	6.7	10.2	9.9	14.5	13.6	11.1	9.1	8.0	6.9	7.5	6.8	5.0	4.1	2.5	3.3	2.7
Midwest	6.2	8.1	8.8	11.4	11.5	9.5	8.2	6.8	5.5	4.4	5.5	4.0	3.1	2.5	3.2	2.3
South	5.0	6.7	9.1	8.5	7.0	7.5	4.5	4.8	4.5	4.1	3.0	2.8	2.9	2.6	2.6	1.7
West	6.5	8.0	8.1	8.2	9.3	8.6	6.4	5.4	5.1	4.7	4.5	4.6	3.4	3.1	2.5	2.4
Population Density:																
Large MSA	8.4	10.7	9.5	12.7	10.6	10.3	8.3	7.9	7.3	5.7	5.8	4.6	3.8	2.6	2.3	2.4
Other MSA	5.9	8.2	10.0	10.9	11.3	9.5	7.1	6.0	5.7	5.0	5.0	3.9	3.5	3.4	3.0	2.0
Non-MSA	4.5	6.3	7.6	9.0	8.6	7.7	6.0	5.3	3.8	4.4	3.8	3.6	2.6	1.4	3.3	2.4
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	4.4	6.8	6.9	8.6	8.4	8.2	6.2	6.2	5.7	5.1	4.2	4.1	4.0	2.5	2.4	2.0
2.5–3.0	5.7	8.2	9.9	11.3	10.9	10.0	7.5	6.5	5.4	5.4	5.5	4.4	2.9	2.7	2.6	2.3
3.5–4.0	5.0	8.0	9.0	10.3	10.1	8.7	6.4	6.4	5.2	4.6	4.7	3.7	3.5	2.4	2.6	1.9
4.5–5.0	5.5	8.8	8.6	10.4	9.0	7.8	6.4	5.7	5.0	4.0	4.2	3.5	2.9	2.6	3.3	2.1
5.5–6.0 (High)	4.3	8.1	9.0	10.2	10.4	8.0	7.1	4.8	3.7	4.0	3.6	2.3	2.7	2.3	2.7	2.5
Race (2-year average): <sup>b</sup>																
White	—	—	8.6	10.2	10.8	9.7	8.0	6.8	5.9	5.1	4.9	4.5	3.7	3.2	3.1	2.8
African American	—	—	6.4	6.0	5.1	5.8	5.4	4.3	4.1	3.6	3.3	3.1	2.3	1.3	0.9	0.7
Hispanic	—	—	6.9	6.3	6.5	8.3	6.9	5.7	5.3	4.7	3.9	3.3	3.0	2.1	1.9	2.0

Table continued on next page.



**TABLE 18 (cont.)**  
**MARIJUANA: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 12**

	Percentage who used daily in last 30 days														
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700
Total	2.0	1.9	2.4	3.6	4.6	4.9	5.8	5.6	6.0	6.0	5.8	6.0	6.0	5.6	5.0
Gender:															
Male	3.0	2.8	3.3	5.1	6.5	6.8	8.1	7.7	7.9	8.2	7.9	8.7	8.3	7.7	7.2
Female	0.9	1.0	1.5	2.0	2.4	2.7	3.1	3.2	3.9	3.5	3.6	3.1	3.4	3.1	2.8
College Plans:															
None or under 4 years	3.3	3.5	3.6	4.9	6.8	7.1	8.0	9.8	9.2	9.8	8.8	10.3	9.4	8.1	8.4
Complete 4 years	1.4	1.2	2.0	2.9	3.5	3.9	4.7	4.0	4.7	4.4	4.4	4.6	4.5	4.5	4.0
Region:															
Northeast	2.4	2.4	3.0	4.1	5.1	6.2	6.9	6.8	5.7	7.3	7.7	7.4	7.8	6.8	5.5
Midwest	1.9	1.8	2.3	4.1	4.1	5.2	5.2	5.3	6.2	5.9	6.8	6.2	5.7	5.1	5.4
South	1.8	1.3	1.7	3.0	4.3	3.8	5.3	4.9	5.2	4.6	3.9	5.6	5.4	5.0	5.4
West	2.1	2.6	3.3	3.3	5.3	4.8	6.3	6.5	7.6	7.4	5.9	5.1	5.6	6.1	3.6
Population Density:															
Large MSA	1.9	1.9	2.5	3.7	5.3	5.5	4.6	5.4	5.4	5.7	5.9	6.0	4.4	5.3	5.3
Other MSA	2.5	1.7	2.4	3.9	4.5	5.0	6.6	5.9	5.8	6.3	5.7	6.1	7.6	6.3	5.0
Non-MSA	1.2	2.1	2.3	2.8	3.9	4.1	5.4	5.4	7.1	5.9	6.0	5.6	5.2	4.7	4.7
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	2.3	1.6	2.3	2.3	4.0	3.9	4.9	6.2	8.8	7.7	5.5	4.5	5.0	5.5	4.3
2.5–3.0	2.4	1.9	2.1	3.8	4.9	5.1	5.8	5.7	6.2	6.3	5.8	7.0	6.0	5.5	5.7
3.5–4.0	1.8	1.8	2.8	3.6	4.0	5.0	5.7	5.8	5.5	5.9	5.7	6.7	6.4	6.0	5.0
4.5–5.0	1.7	1.6	2.3	3.6	4.3	4.8	6.1	5.0	5.5	5.3	5.4	4.8	5.5	5.5	5.1
5.5–6.0 (High)	1.6	2.0	2.1	3.1	3.9	4.1	4.8	4.1	4.6	4.1	4.4	4.6	3.9	3.7	3.8
Race (2-year average): <sup>b</sup>															
White	2.2	2.0	2.4	3.2	4.1	4.7	5.5	5.9	5.8	6.0	6.2	6.4	6.5	6.3	5.8
African American	0.7	0.5	0.8	2.0	3.2	3.7	3.9	4.4	4.7	4.6	4.1	3.7	3.7	3.2	3.5
Hispanic	2.2	2.1	1.9	2.0	3.0	4.2	4.5	4.7	6.0	6.9	5.0	4.0	4.0	4.0	3.7

Table continued on next page.

**TABLE 18 (cont.)**  
**MARIJUANA: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 12**

	Percentage who used daily in last 30 days														
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2018-2019 change
<i>Approximate weighted N =</i>	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	5.0	5.1	5.4	5.2	6.1	6.6	6.5	6.5	5.8	6.0	6.0	5.9	5.8	6.4	+0.7
Gender:															
Male	6.3	6.8	7.6	7.5	8.8	9.7	9.1	8.9	8.5	8.1	8.0	7.8	7.2	8.0	+0.8
Female	3.2	3.2	3.0	2.6	3.2	3.3	3.6	3.8	3.3	3.8	3.6	3.6	3.4	4.6	+1.2 s
College Plans:															
None or under 4 years	9.3	9.6	9.2	8.3	10.5	11.5	9.0	10.7	9.8	9.7	9.5	10.4	9.2	11.1	+1.8
Complete 4 years	3.7	3.8	4.2	4.1	4.7	5.4	5.5	5.1	4.6	5.0	4.9	4.6	4.1	4.7	+0.6
Region:															
Northeast	7.9	7.0	6.8	5.3	7.5	7.1	7.1	8.0	7.0	7.0	7.6	7.3	6.5	5.7	-0.7
Midwest	4.9	5.7	4.8	6.0	5.8	6.8	6.0	5.5	6.2	5.6	5.6	6.0	6.4	5.7	-0.8
South	4.2	4.3	5.5	5.0	6.1	6.3	6.1	6.4	5.3	5.5	5.0	4.7	4.2	6.2	+2.0 ss
West	3.7	4.0	4.9	4.4	5.4	6.5	7.0	6.5	5.4	6.6	6.9	6.9	7.2	8.8	+1.6
Population Density:															
Large MSA	4.9	4.7	5.6	5.4	6.3	6.2	7.4	6.6	5.2	6.4	6.7	6.1	6.4	5.6	-0.8
Other MSA	5.0	5.1	5.3	5.3	6.7	7.5	6.4	7.1	6.6	5.9	5.5	5.4	5.1	6.9	+1.7 ss
Non-MSA	5.1	5.5	5.6	4.6	4.3	5.0	5.2	4.7	4.8	5.8	6.1	7.0	6.1	6.9	+0.8
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	4.6	5.6	4.8	3.5	4.6	5.1	5.2	7.8	5.8	6.1	6.4	6.6	4.8	7.3	+2.4 ss
2.5–3.0	6.0	5.8	5.4	5.5	6.1	7.4	7.6	8.7	6.5	7.1	6.8	7.6	6.7	7.1	+0.4
3.5–4.0	4.9	5.0	4.9	5.5	6.6	6.9	7.2	6.9	6.4	5.9	6.2	6.4	6.0	6.7	+0.6
4.5–5.0	4.3	4.3	5.8	4.7	5.4	5.8	6.1	4.3	4.6	5.0	5.0	4.0	4.1	5.2	+1.1
5.5–6.0 (High)	3.6	3.8	4.9	4.1	4.7	6.0	4.4	4.8	4.5	4.9	3.7	3.5	4.4	4.4	0.0
Race (2-year average): <sup>b</sup>															
White	5.4	5.4	5.7	5.8	5.9	6.6	6.9	6.5	6.2	5.9	5.5	5.9	5.8	5.6	-0.2
African American	4.4	4.5	3.8	4.3	6.1	6.5	6.0	6.2	6.1	6.3	7.1	6.6	5.9	6.6	+0.6
Hispanic	3.2	3.2	3.4	3.6	4.1	4.6	4.8	6.1	5.7	4.8	5.1	5.0	4.3	4.8	+0.4

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-of-use estimates for the two most recent classes 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 19**  
**SYNTHETIC MARIJUANA: Trends in Annual Prevalence of Use**  
**by Subgroups in Grade 8**

	Percentage who used in last 12 months									2018– 2019 change
	1991– 2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	—	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	
Total	—	4.4	4.0	3.3	3.1	2.7	2.0	1.6	2.7	+1.1 ss
Gender:										
Male	—	4.1	3.8	2.9	2.6	2.6	2.3	1.8	2.3	+0.6
Female	—	4.6	4.1	3.6	3.5	2.8	1.6	1.4	3.1	+1.7 ss
College Plans:										
None or under 4 years	—	10.2	13.8	11.6	9.9	8.5	7.4	2.2	5.5	+3.3 s
Complete 4 years	—	3.9	3.3	2.6	2.6	2.2	1.4	1.4	2.3	+0.9 s
Region:										
Northeast	—	2.7	3.5	3.5	1.6	1.5	0.8	1.5	2.3	+0.9
Midwest	—	2.4	2.8	2.6	2.9	2.7	1.6	1.2	2.0	+0.9
South	—	5.6	4.2	2.6	3.1	2.8	2.5	1.6	2.8	+1.2
West	—	5.5	5.1	5.1	4.6	3.3	2.3	2.0	3.4	+1.5
Population Density:										
Large MSA	—	4.0	3.8	3.5	2.8	2.4	1.7	1.3	2.1	+0.9 s
Other MSA	—	4.9	3.9	2.6	3.4	2.5	2.4	1.8	3.1	+1.3 s
Non-MSA	—	3.8	4.2	4.3	3.0	3.6	1.4	1.5	2.5	+1.1
Parental Education: <sup>a</sup>										
1.0–2.0 (Low)	—	5.9	8.5	6.9	7.5	5.3	3.8	2.9	6.1	+3.2
2.5–3.0	—	6.4	4.0	4.3	3.5	3.3	2.0	1.5	5.1	+3.6 ss
3.5–4.0	—	5.5	4.8	2.9	3.1	4.3	2.2	1.5	2.6	+1.1
4.5–5.0	—	2.9	3.0	2.4	2.1	1.0	1.3	1.6	1.4	-0.2
5.5–6.0 (High)	—	1.8	2.7	2.7	1.3	1.4	1.2	1.0	1.7	+0.7
Race/Ethnicity (2-year data): <sup>b</sup>										
White	—	—	3.1	2.9	2.2	2.1	1.8	1.1	1.5	+0.4
African American	—	—	2.8	2.3	2.0	2.5	2.9	2.4	1.9	-0.5
Hispanic	—	—	7.6	5.3	4.3	3.7	2.7	2.5	3.5	+0.9

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

Notes. '—' 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 four forms; N is one third of N indicated in S1.

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

<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 20**  
**SYNTHETIC MARIJUANA: Trends in Annual Prevalence of Use**  
**by Subgroups in Grade 10**

	Percentage who used in last 12 months									2018– 2019 change
	1991– 2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	—	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	—	8.8	7.4	5.4	4.3	3.3	2.7	2.9	2.6	-0.3
Gender:										
Male	—	10.0	7.9	5.1	4.3	2.9	2.9	3.4	2.8	-0.6
Female	—	7.7	6.9	5.6	4.4	3.6	2.4	2.4	2.3	0.0
College Plans:										
None or under 4 years	—	18.7	16.5	12.9	11.4	7.8	5.5	4.7	4.3	-0.4
Complete 4 years	—	7.8	6.5	4.5	3.6	2.8	2.4	2.6	2.4	-0.2
Region:										
Northeast	—	7.7	6.9	3.8	4.6	4.2	1.3	3.3	2.6	-0.7
Midwest	—	9.2	6.3	5.8	3.4	2.7	2.7	2.6	2.3	-0.4
South	—	10.0	7.0	5.6	4.0	3.4	1.6	2.0	1.7	-0.3
West	—	7.4	9.4	6.1	5.7	3.0	5.0	4.6	4.7	+0.1
Population Density:										
Large MSA	—	7.7	6.4	5.6	4.6	2.8	1.9	3.7	1.8	-1.9 s
Other MSA	—	8.3	7.6	4.9	4.1	3.5	3.0	2.5	3.1	+0.7
Non-MSA	—	11.4	8.4	6.4	4.4	3.4	3.1	2.9	2.7	-0.1
Parental Education: <sup>a</sup>										
1.0–2.0 (Low)	—	10.5	8.6	6.6	8.5	4.4	5.0	5.5	3.0	-2.6
2.5–3.0	—	13.4	10.5	7.5	6.1	4.4	2.2	3.0	2.5	-0.6
3.5–4.0	—	9.0	8.4	6.9	5.0	3.8	3.2	2.8	2.4	-0.3
4.5–5.0	—	7.2	4.9	3.3	3.0	2.0	2.1	1.9	3.4	+1.4
5.5–6.0 (High)	—	6.4	4.8	3.4	2.0	2.4	1.4	3.2	1.6	-1.6
Race/Ethnicity (2-year data): <sup>b</sup>										
White	—	—	8.4	6.2	4.5	3.5	2.6	2.2	2.7	+0.5
African American	—	—	3.6	4.1	4.1	3.4	3.0	2.2	1.5	-0.7
Hispanic	—	—	8.8	7.4	5.7	5.1	4.0	4.3	3.4	-0.8

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

Notes. '—' 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 four forms; *N* is one third of *N* indicated in S2.

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

<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 21**  
**SYNTHETIC MARIJUANA: Trends in Annual Prevalence of Use**  
**by Subgroups in Grade 12**

	Percentage who used in last 12 months										2018– 2019 <u>change</u>
	2009– 2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	—	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	11.4	11.3	7.9	5.8	5.2	3.5	3.7	3.5	3.3	-0.2
Gender:											
Male	—	14.7	14.1	8.7	6.2	5.2	3.1	3.0	3.0	2.6	-0.3
Female	—	7.9	7.9	6.8	5.3	5.2	3.5	4.2	3.4	3.8	+0.4
College Plans:											
None or under 4 years	—	18.9	16.7	11.8	5.8	8.0	5.7	5.6	5.4	5.1	-0.3
Complete 4 years	—	10.0	9.9	7.0	5.8	4.4	2.8	3.3	2.9	2.8	-0.1
Region:											
Northeast	—	11.9	10.7	7.4	5.1	4.3	3.9	2.4	2.2	4.4	+2.2
Midwest	—	13.5	14.2	7.6	6.6	5.3	3.8	3.8	3.8	1.8	-2.0 s
South	—	11.0	9.3	7.9	6.2	4.3	3.4	3.4	4.0	3.1	-0.9
West	—	9.5	11.1	8.4	5.0	7.1	3.2	4.8	3.1	4.8	+1.7
Population Density:											
Large MSA	—	9.7	13.3	6.8	5.9	5.4	3.3	3.3	3.3	4.1	+0.8
Other MSA	—	12.3	10.3	8.2	6.3	5.0	3.9	3.2	3.7	2.9	-0.7
Non-MSA	—	11.7	10.8	8.6	4.6	5.2	2.8	5.5	3.4	2.9	-0.4
Parental Education: <sup>a</sup>											
1.0–2.0 (Low)	—	13.2	10.7	8.8	7.5	6.1	4.1	5.1	7.1	3.9	-3.2
2.5–3.0	—	12.9	12.3	7.0	7.0	5.9	4.8	4.8	3.6	5.0	+1.4
3.5–4.0	—	12.1	12.8	8.4	5.6	5.2	3.7	4.7	2.6	3.3	+0.7
4.5–5.0	—	9.2	11.0	8.5	5.2	4.2	2.5	1.8	3.0	2.8	-0.3
5.5–6.0 (High)	—	11.3	8.5	5.1	4.2	4.4	2.3	2.6	2.1	1.8	-0.3
Race/Ethnicity (2-year data:) <sup>b</sup>											
White	—	—	12.9	10.4	6.9	5.3	4.3	3.6	3.0	2.5	-0.5
African American	—	—	6.0	6.5	5.8	3.7	2.8	2.8	2.8	2.2	-0.6
Hispanic	—	—	9.9	9.6	7.6	6.9	6.1	4.4	5.0	5.0	+0.1

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

*Notes.* '—' 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 two of six forms; *N* is two sixths of *N* indicated in Table S3.

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

<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 22**  
**INHALANTS: Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months														
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<i>Approximate weighted N =</i>	17,500	18,600	18,300	17,300	17,500	17,800	18,600	18,100	16,700	16,700	16,200	15,100	16,500	17,000	16,800
Total	9.0	9.5	11.0	11.7	12.8	12.2	11.8	11.1	10.3	9.4	9.1	7.7	8.7	9.6	9.5
Gender:															
Male	9.0	9.2	10.4	11.2	11.5	10.3	10.5	10.6	9.5	8.9	8.4	7.6	7.7	8.8	7.8
Female	9.0	9.8	11.9	12.2	14.0	14.1	12.9	11.6	11.1	9.9	9.9	7.8	9.6	10.5	11.1
College Plans:															
None or under 4 years	15.0	15.6	17.7	18.3	19.6	18.2	18.1	20.9	17.9	17.2	15.1	14.5	16.5	17.9	15.3
Complete 4 years	8.1	8.8	10.2	10.9	11.9	11.4	11.2	10.2	9.5	8.6	8.6	7.1	8.0	8.7	9.0
Region:															
Northeast	8.0	8.6	11.3	12.0	13.1	11.7	12.1	9.1	9.8	8.7	9.4	6.9	9.0	8.9	9.1
Midwest	9.8	10.5	9.9	10.3	13.8	13.3	11.3	11.3	10.6	10.6	8.8	8.0	9.6	9.6	8.5
South	8.9	9.1	10.0	11.3	12.1	11.3	11.6	11.3	9.9	8.4	9.5	8.4	7.9	9.9	9.8
West	8.8	9.8	14.2	14.0	12.4	12.9	12.6	12.4	10.9	10.5	8.6	6.4	8.9	9.6	10.4
Population Density:															
Large MSA	9.9	9.1	10.8	11.6	11.7	11.4	10.4	8.6	8.8	8.3	8.3	7.1	8.0	8.8	8.8
Other MSA	8.5	10.3	12.3	13.1	13.7	13.4	11.5	11.1	10.1	9.4	8.9	8.0	8.5	10.3	10.7
Non-MSA	9.1	8.6	8.5	9.3	12.3	11.0	13.9	14.0	12.3	10.9	10.4	7.8	10.1	9.2	8.3
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	12.0	11.4	11.5	12.4	13.0	11.3	12.1	14.4	12.9	13.1	10.7	10.3	10.6	12.6	11.6
2.5–3.0	9.5	9.9	10.9	12.1	13.9	12.6	12.6	12.0	11.8	11.3	9.7	8.3	10.1	10.2	11.6
3.5–4.0	8.9	10.0	11.5	12.3	14.7	13.4	13.5	12.8	10.8	9.9	9.4	8.9	10.3	11.0	10.0
4.5–5.0	8.0	8.4	10.6	11.0	12.3	13.2	11.4	9.7	9.2	7.1	9.0	7.3	7.4	9.3	8.4
5.5–6.0 (High)	8.4	10.3	12.6	12.2	11.6	11.7	10.8	10.6	9.1	9.2	7.7	6.2	6.5	6.9	8.0
Race/Ethnicity (2-year average): <sup>b</sup>															
White	—	10.1	11.3	12.4	13.8	14.6	14.1	13.3	12.1	10.9	10.1	9.1	8.8	9.6	9.8
African American	—	4.4	4.6	5.3	5.0	4.2	3.8	4.2	4.2	4.3	4.8	5.0	4.9	5.4	5.8
Hispanic	—	10.4	11.5	12.5	13.3	12.7	11.4	11.5	12.7	12.2	11.0	9.9	9.6	10.6	11.0

Table continued on next page.

**TABLE 22 (cont.)**  
**INHALANTS: Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months														2018-2019 change	
	2006	2007	2008	2009	2010	2011	2012	2013	2014 <sup>c</sup>	2015 <sup>c</sup>	2016 <sup>c</sup>	2017 <sup>c</sup>	2018 <sup>c</sup>	2019 <sup>c</sup>		
<i>Approximate weighted N =</i>	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600		
Total	9.1	8.3	8.9	8.1	8.1	7.0	6.2	5.2	5.3	4.6	3.8	4.7	4.6	4.7	+0.1	
Gender:																
Male	7.7	7.3	7.0	7.0	6.4	5.5	4.5	4.0	4.0	3.8	2.9	4.0	3.6	3.1	-0.5	
Female	10.5	9.3	11.0	9.3	9.5	8.6	7.9	6.3	6.2	5.2	4.7	5.3	5.4	6.2	+0.8	
College Plans:																
None or under 4 years	17.3	18.1	19.1	16.7	13.1	12.8	11.2	10.9	10.7	7.6	8.6	8.3	8.0	5.8	-2.1	
Complete 4 years	8.3	7.5	8.0	7.5	7.7	6.7	5.9	4.8	4.8	4.3	3.3	4.3	4.2	4.5	+0.3	
Region:																
Northeast	7.2	5.9	7.9	7.4	7.4	6.7	5.6	5.3	4.1	4.6	2.6	4.3	3.7	4.0	+0.3	
Midwest	9.0	8.1	9.1	7.6	7.9	5.8	5.5	4.1	4.9	4.7	4.5	4.5	4.7	4.3	-0.5	
South	9.1	9.1	9.6	8.9	8.3	7.1	6.4	5.1	5.6	5.0	3.8	4.7	4.3	5.3	+1.0	
West	10.5	8.8	8.4	7.9	8.3	8.4	7.2	6.3	5.9	3.7	3.8	5.0	5.5	4.5	-1.0	
Population Density:																
Large MSA	8.8	8.6	8.7	7.1	7.2	6.7	6.6	5.1	5.1	4.2	3.4	4.3	4.6	4.1	-0.5	
Other MSA	9.0	8.3	8.9	8.8	8.6	7.3	6.5	5.3	4.9	4.7	3.7	4.6	4.4	5.0	+0.6	
Non-MSA	9.7	7.9	9.2	8.1	8.0	7.1	5.0	5.1	6.3	4.9	4.6	5.2	5.0	4.9	-0.1	
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	10.5	11.9	13.3	11.8	12.2	10.7	8.9	8.6	7.2	5.3	6.1	5.8	5.8	6.2	+0.4	
2.5–3.0	10.7	9.3	10.8	9.5	9.8	8.1	7.8	6.0	6.7	5.5	4.3	5.7	4.8	5.6	+0.8	
3.5–4.0	10.3	9.2	9.5	9.3	8.2	8.1	6.8	6.2	5.9	4.9	3.5	5.5	5.4	4.9	-0.5	
4.5–5.0	7.8	7.6	7.3	6.9	6.7	5.5	5.0	4.0	4.2	3.9	3.6	4.1	3.9	4.4	+0.5	
5.5–6.0 (High)	7.9	6.3	7.8	6.1	6.6	6.2	5.2	3.8	4.1	3.7	3.2	4.2	4.1	4.5	+0.4	
Race/Ethnicity (2-year average): <sup>b</sup>																
White	9.7	8.9	8.5	8.6	8.0	7.1	5.9	4.9	4.4	4.3	3.9	4.2	4.5	4.7	+0.3	
African American	5.4	5.5	5.6	5.9	5.5	5.1	5.6	5.1	4.7	4.4	3.6	3.3	3.6	4.0	+0.4	
Hispanic	9.5	9.2	10.2	10.3	10.7	10.5	9.0	7.6	6.5	4.8	4.1	4.4	4.7	4.6	-0.1	

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.

<sup>c</sup>Beginning in 2014 data are based on three of four forms; *N* is two thirds of *N* indicated.

**TABLE 23**  
**INHALANTS: Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months														
	<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>
<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>
Total	7.1	7.5	8.4	9.1	9.6	9.5	8.7	8.0	7.2	7.3	6.6	5.8	5.4	5.9	6.0
Gender:															
Male	7.4	7.6	9.1	9.7	10.3	10.1	9.1	8.4	7.6	7.7	6.7	5.4	5.2	5.8	5.0
Female	6.6	7.5	7.7	8.6	8.9	8.9	8.2	7.6	6.9	7.0	6.5	6.0	5.6	6.1	6.9
College Plans:															
None or under 4 years	12.0	12.4	14.0	15.1	14.6	14.3	14.4	13.5	11.6	11.2	11.0	9.8	9.6	11.2	9.9
Complete 4 years	5.9	6.4	7.3	7.8	8.7	8.7	7.7	7.0	6.5	6.7	5.9	5.2	4.8	5.2	5.5
Region:															
Northeast	7.2	7.8	10.6	9.8	10.4	11.5	8.9	9.3	8.3	7.2	6.5	6.0	5.9	6.1	6.2
Midwest	7.5	8.0	8.3	8.4	10.4	9.8	8.3	6.7	8.4	7.5	6.5	5.8	6.1	5.7	6.1
South	7.2	6.6	7.3	9.0	9.4	9.1	8.8	8.3	6.5	7.4	6.8	5.4	4.6	5.6	5.6
West	6.2	8.0	8.4	9.9	8.1	8.0	8.5	7.8	6.1	7.2	6.7	6.2	5.5	6.6	6.1
Population Density:															
Large MSA	7.7	7.8	8.5	7.9	8.7	8.1	8.1	6.7	6.9	7.1	6.0	5.1	4.8	5.0	6.2
Other MSA	7.1	7.4	8.4	9.8	9.7	9.6	8.4	7.7	7.0	6.8	6.9	5.4	5.2	6.3	5.6
Non-MSA	6.5	7.5	8.6	9.1	10.5	11.0	9.8	10.1	8.3	8.5	7.0	7.4	7.1	6.5	6.5
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	7.0	8.2	10.2	8.7	9.4	10.8	9.3	9.7	8.7	8.5	7.6	5.6	5.8	6.2	6.3
2.5–3.0	8.0	7.9	9.1	9.5	11.0	9.9	8.5	9.1	8.0	8.1	7.5	6.0	6.3	6.9	6.9
3.5–4.0	7.5	8.3	8.3	9.6	10.2	10.1	9.4	8.1	6.9	7.4	5.9	6.3	5.8	5.7	6.2
4.5–5.0	6.4	6.5	7.2	8.7	9.4	8.4	8.3	7.1	6.7	6.5	6.8	5.6	5.1	5.7	5.8
5.5–6.0 (High)	6.6	6.7	8.2	8.2	7.0	10.1	8.2	6.7	7.2	7.2	5.5	5.2	4.4	5.1	5.3
Race/Ethnicity (2-year average): <sup>b</sup>															
White	—	8.3	8.8	9.6	10.6	11.0	10.4	9.6	8.9	8.4	7.9	7.1	6.6	6.5	6.6
African American	—	3.6	3.7	3.3	2.8	2.3	2.3	2.4	2.0	2.0	2.1	2.4	2.0	2.1	2.8
Hispanic	—	6.4	8.3	9.0	8.5	8.2	7.9	7.6	7.3	6.3	5.9	4.8	4.8	5.7	6.2

Table continued on next page.



**TABLE 23 (cont.)**  
**INHALANTS: Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014 <sup>c</sup>	2015 <sup>c</sup>	2016 <sup>c</sup>	2017 <sup>c</sup>	2018 <sup>c</sup>	2019 <sup>c</sup>	
Approximate weighted N =	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	6.5	6.6	5.9	6.1	5.7	4.5	4.1	3.5	3.3	2.9	2.4	2.3	2.4	2.8	+0.4
Gender:															
Male	5.9	6.3	5.4	5.4	5.0	4.1	3.4	3.4	2.8	2.7	2.2	2.1	2.0	2.6	+0.6
Female	7.1	7.0	6.3	6.7	6.3	4.8	4.8	3.5	3.8	3.0	2.6	2.5	2.7	3.0	+0.3
College Plans:															
None or under 4 years	10.6	12.0	11.1	11.7	12.1	9.7	8.8	6.0	6.5	5.7	4.3	4.6	4.1	4.3	+0.3
Complete 4 years	5.9	5.9	5.3	5.4	5.0	3.9	3.6	3.2	3.0	2.6	2.2	2.0	2.2	2.5	+0.4
Region:															
Northeast	6.5	6.4	4.9	6.1	4.9	4.8	3.8	2.6	2.5	2.7	2.1	2.0	2.0	2.2	+0.2
Midwest	6.7	6.8	5.7	5.7	5.8	3.9	3.8	3.3	3.6	2.4	2.1	1.6	2.0	3.0	+1.0
South	5.7	6.1	5.6	5.2	5.8	4.3	4.2	3.2	3.8	2.9	2.7	3.0	2.9	2.9	0.0
West	7.2	7.3	7.2	7.6	6.3	5.1	4.4	4.5	3.2	3.5	2.6	2.1	2.2	2.8	+0.6
Population Density:															
Large MSA	6.0	6.0	5.3	6.1	5.6	4.5	3.9	3.3	3.2	3.2	2.2	2.2	1.9	2.5	+0.6
Other MSA	6.4	6.8	6.4	6.2	5.4	4.2	3.6	3.4	3.1	2.7	2.4	2.1	2.6	2.6	-0.1
Non-MSA	7.4	7.1	5.5	5.9	6.4	4.9	5.2	3.7	4.2	2.9	2.9	2.9	2.5	4.0	+1.5
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	6.9	9.3	8.7	7.1	9.0	6.0	5.4	4.1	4.6	5.7	2.9	2.0	1.0	3.4	+2.4 ss
2.5–3.0	6.2	7.5	6.7	7.4	6.9	5.4	4.7	4.5	4.7	3.5	2.3	2.4	2.4	4.2	+1.8 s
3.5–4.0	7.1	7.0	6.3	6.5	5.7	4.5	3.9	3.8	3.3	3.2	2.6	2.7	2.9	2.0	-0.9
4.5–5.0	5.5	5.8	5.0	4.9	4.8	3.7	3.9	2.9	2.7	2.3	2.2	2.3	3.1	2.4	-0.7
5.5–6.0 (High)	7.5	5.4	4.5	4.8	4.4	3.8	3.6	2.3	2.3	1.9	2.9	1.5	1.7	3.2	+1.6 s
Race/Ethnicity (2-year average): <sup>b</sup>															
White	6.8	7.1	6.5	5.9	5.7	4.8	4.1	3.6	3.2	2.9	2.5	2.3	2.3	2.7	+0.4
African American	2.9	2.9	2.9	3.2	3.1	2.9	2.4	2.6	3.1	2.7	1.9	2.0	2.8	3.0	+0.2
Hispanic	6.4	6.4	7.2	7.9	7.5	6.8	5.7	4.8	4.2	3.7	2.8	2.2	1.9	2.1	+0.2

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.

<sup>c</sup>Beginning in 2014 data are based on three of four forms; N is two thirds of N indicated.

**TABLE 24**  
**INHALANTS: <sup>a</sup>Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<i>Approximate weighted N =</i>	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
Total	—	3.0	3.7	4.1	5.4	4.6	4.1	4.5	4.3	5.1	5.7	6.1	6.9	6.5	5.9	6.9
Adjusted <sup>b</sup>	—	—	—	—	8.9	7.9	6.1	6.6	6.2	7.2	7.5	8.9	8.1	7.1	6.9	7.5
Gender:																
Male	—	3.8	5.1	5.6	6.7	5.9	5.1	5.8	5.8	6.5	6.9	7.8	8.3	8.2	7.8	8.8
Female	—	2.0	2.4	2.8	4.2	3.5	3.2	3.1	2.8	3.8	4.5	4.7	5.6	4.9	4.0	4.9
College Plans:																
None or under 4 years	—	3.6	4.7	5.0	6.3	5.0	4.3	4.9	4.7	5.8	5.8	7.7	8.0	8.1	7.1	7.8
Complete 4 years	—	2.2	2.9	3.4	4.5	4.3	4.0	4.1	3.9	4.7	5.7	5.2	6.4	6.0	5.4	6.4
Region:																
Northeast	—	3.2	4.1	4.4	6.4	6.0	5.2	6.2	5.0	6.1	8.0	5.6	6.7	6.0	6.3	7.4
Midwest	—	2.6	4.2	4.8	5.9	4.6	3.8	3.6	4.5	5.0	5.8	6.7	8.6	7.2	6.7	8.0
South	—	3.8	3.3	3.6	4.3	3.4	3.2	3.8	3.8	4.6	4.2	5.7	6.1	6.8	5.5	6.4
West	—	1.7	3.0	3.6	4.9	4.9	4.7	4.4	4.3	5.3	5.4	6.6	6.2	5.6	4.8	5.7
Population Density:																
Large MSA	—	2.9	3.4	3.4	5.1	5.7	4.7	5.5	4.8	5.3	5.9	5.2	6.0	6.5	5.1	6.7
Other MSA	—	2.6	3.6	3.7	4.8	4.2	4.0	3.9	4.4	5.0	5.9	6.3	6.9	6.0	5.8	6.8
Non-MSA	—	3.4	4.2	5.3	6.2	4.4	3.7	4.4	3.9	5.2	5.4	6.6	7.8	7.5	6.8	7.4
Parental Education: <sup>c</sup>																
1.0–2.0 (Low)	—	3.7	3.9	4.5	5.2	3.6	3.6	3.2	3.1	4.5	4.2	4.9	4.6	5.3	5.9	5.0
2.5–3.0	—	3.1	4.1	4.0	5.0	4.8	4.0	4.8	4.0	5.2	5.6	6.1	6.8	6.3	5.5	6.9
3.5–4.0	—	3.1	3.4	4.1	5.1	4.7	4.0	4.6	4.9	5.6	5.5	6.2	7.1	5.8	6.1	7.2
4.5–5.0	—	2.7	3.0	3.9	5.8	4.3	4.4	4.4	5.2	5.0	7.0	6.9	7.2	7.0	5.7	7.4
5.5–6.0 (High)	—	3.7	4.2	5.0	7.2	5.8	4.9	6.0	4.7	5.6	6.8	6.4	8.7	9.1	6.8	7.6
Race/Ethnicity (2-year average): <sup>d</sup>																
White	—	—	3.6	4.3	5.1	5.3	4.7	4.7	4.8	5.1	5.9	6.5	7.3	7.6	7.0	7.2
African American	—	—	1.5	1.3	2.1	2.2	2.1	1.9	1.8	2.2	2.0	2.1	3.0	3.1	2.2	2.1
Hispanic	—	—	2.7	3.0	2.9	2.9	3.5	4.1	3.4	4.6	6.5	5.5	4.6	4.1	4.7	4.8

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**TABLE 24 (cont.)**  
**INHALANTS: <sup>a</sup>Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	6.6	6.2	7.0	7.7	8.0	7.6	6.7	6.2	5.6	5.9	4.5	4.5	3.9	4.2	5.0	4.5
Adjusted <sup>b</sup>	6.9	6.4	7.4	8.2	8.4	8.5	7.3	7.1	6.0	6.2	4.9	4.9	4.5	4.6	5.4	4.7
Gender:																
Male	8.2	8.0	9.2	9.6	9.9	9.1	8.3	7.5	6.5	6.8	5.5	5.8	5.2	4.8	6.2	5.1
Female	5.0	4.5	4.8	6.0	6.2	6.1	5.2	5.1	4.9	5.1	3.5	3.3	2.9	3.4	4.1	3.9
College Plans:																
None or under 4 years	7.7	7.7	8.0	9.0	9.7	8.2	8.0	7.9	6.5	6.7	6.6	6.3	5.1	5.6	7.3	6.8
Complete 4 years	6.3	5.7	6.7	7.4	7.4	7.3	6.5	5.7	5.4	5.5	3.9	4.2	3.5	3.8	4.6	3.9
Region:																
Northeast	6.7	6.0	8.9	10.3	10.3	10.8	9.4	8.0	6.2	6.3	5.7	5.4	5.1	4.3	6.0	5.9
Midwest	8.6	7.4	6.3	9.5	8.6	7.6	6.9	7.6	6.3	5.5	5.0	5.6	3.7	3.8	5.6	4.8
South	5.0	4.8	6.5	6.2	7.0	6.5	5.6	5.1	5.2	5.5	3.4	4.1	3.5	4.1	4.6	3.6
West	6.8	7.5	7.0	5.7	6.7	6.0	5.4	4.7	4.9	6.7	4.8	3.2	3.6	4.6	4.3	4.7
Population Density:																
Large MSA	5.2	6.0	7.4	7.6	8.5	7.8	5.9	5.5	4.8	6.3	4.4	4.4	3.5	4.0	5.0	4.1
Other MSA	7.8	6.6	7.3	7.7	7.8	7.9	6.5	6.1	5.3	4.9	4.3	4.4	4.4	4.1	5.1	4.5
Non-MSA	5.8	5.6	6.0	7.6	7.8	7.0	8.1	7.4	6.9	7.2	5.2	4.8	3.7	4.3	4.9	5.2
Parental Education: <sup>c</sup>																
1.0–2.0 (Low)	6.1	4.2	4.3	5.3	7.5	5.8	5.4	6.3	4.8	4.0	3.2	5.7	3.4	4.6	5.2	5.0
2.5–3.0	6.6	6.7	6.0	7.8	8.0	7.9	6.3	6.0	5.4	5.2	5.7	4.3	3.8	4.9	5.7	4.8
3.5–4.0	6.1	6.3	7.7	7.1	6.7	7.8	7.1	7.3	6.1	6.1	4.2	4.5	3.9	5.0	4.8	4.7
4.5–5.0	7.4	6.3	7.6	8.9	8.9	7.4	7.9	5.3	5.6	5.9	3.8	4.7	4.4	3.4	5.8	4.3
5.5–6.0 (High)	7.1	6.7	9.4	9.7	9.7	8.5	6.0	6.2	6.1	7.5	5.8	4.6	4.0	3.2	3.0	3.9
Race/Ethnicity (2-year average): <sup>d</sup>																
White	7.6	7.2	7.6	8.6	9.1	9.0	8.6	7.9	7.0	6.4	5.9	5.2	4.9	4.7	5.1	5.3
African American	2.7	2.5	2.2	2.4	2.6	2.2	1.9	1.7	1.4	1.9	2.2	1.9	1.5	1.3	1.9	1.9
Hispanic	5.4	6.0	5.7	5.5	5.8	5.9	4.7	4.5	5.5	6.3	4.5	3.4	2.7	2.9	5.3	5.7

Table continued on next page.

**TABLE 24 (cont.)**  
**INHALANTS: <sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months													2018-2019 change
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	3.7	3.8	3.4	3.6	3.2	2.9	2.5	1.9	1.9	1.7	1.5	1.6	1.9	+0.3
Adjusted <sup>b</sup>	4.1	4.0	4.1	—	—	—	—	—	—	—	—	—	—	—
Gender:														
Male	3.9	4.4	3.6	4.7	3.3	3.1	2.9	2.1	2.1	1.5	1.4	1.8	2.2	+0.4
Female	3.4	3.2	3.2	2.5	3.0	2.6	2.2	1.8	1.6	1.7	1.6	1.2	1.5	+0.3
College Plans:														
None or under 4 years	4.4	6.1	4.7	4.5	6.2	3.7	3.9	3.1	4.1	2.2	2.7	2.1	3.7	+1.6 s
Complete 4 years	3.5	3.3	3.1	3.4	2.6	2.6	2.2	1.7	1.4	1.5	1.3	1.4	1.3	-0.1
Region:														
Northeast	3.9	3.5	3.7	3.4	3.1	3.8	2.6	1.9	1.4	2.0	1.4	2.0	1.9	-0.1
Midwest	3.9	3.0	3.7	3.9	3.2	2.5	2.3	2.4	1.5	1.7	1.3	1.1	2.3	+1.2 s
South	3.4	3.7	3.1	3.6	2.7	2.2	2.0	1.8	2.4	1.6	1.8	1.7	1.7	-0.1
West	3.7	5.0	3.5	3.8	4.0	3.4	3.3	1.7	1.8	1.5	1.4	1.6	2.0	+0.4
Population Density:														
Large MSA	2.8	3.1	2.4	4.0	3.3	3.2	2.6	1.7	1.4	1.5	1.3	1.5	2.3	+0.8
Other MSA	3.8	3.7	3.8	3.5	3.0	2.7	2.4	2.0	1.9	1.6	1.6	1.5	1.7	+0.1
Non-MSA	4.7	4.7	3.9	3.4	3.5	2.8	2.6	2.1	2.7	2.1	1.7	1.8	1.8	0.0
Parental Education: <sup>c</sup>														
1.0–2.0 (Low)	3.6	3.6	3.6	3.0	4.3	3.0	2.7	2.6	2.4	1.7	2.3	0.7	1.9	+1.1
2.5–3.0	3.8	3.6	4.1	3.5	3.4	3.4	3.0	1.5	2.2	0.7	1.1	2.0	2.2	+0.3
3.5–4.0	3.9	4.4	3.1	3.6	3.8	2.3	2.7	1.8	2.1	2.0	1.9	1.9	2.1	+0.2
4.5–5.0	3.7	3.6	3.9	3.9	2.3	3.1	1.9	2.1	1.4	2.0	0.8	1.6	1.3	-0.3
5.5–6.0 (High)	3.4	3.4	1.9	3.2	2.0	2.8	2.2	2.1	1.5	1.8	1.9	1.2	1.9	+0.7
Race/Ethnicity (2-year average): <sup>d</sup>														
White	4.7	4.3	4.1	3.8	3.5	3.0	2.6	2.3	1.9	1.6	1.4	1.5	1.8	+0.3
African American	1.6	1.5	1.6	2.0	2.2	1.9	2.0	2.1	1.9	1.8	1.9	1.6	1.9	+0.2
Hispanic	4.3	3.3	3.0	3.6	4.5	4.1	3.7	2.8	2.0	2.1	1.8	1.5	1.3	-0.2

*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 four of five forms in 1976–1988; N is four fifths of N indicated in Table S3. Data based on five of six forms in 1989–1998; N is five sixths of N indicated in Table S3. Data based on three of six forms beginning in 1999; N is three sixths of N indicated in Table S3.

<sup>a</sup>All data are unadjusted for underreporting of amyl and butyl nitrites, except where otherwise noted.

<sup>b</sup>Adjusted for underreporting of amyl and butyl nitrites. See text for details.

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

<sup>d</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 25**  
**HALLUCINOGENS: Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months														
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 <sup>a</sup>	2002	2003	2004	2005
<i>Approximate weighted N =</i>	17,500	18,600	18,300	17,300	17,500	17,800	18,600	18,100	16,700	16,700	16,200	15,100	16,500	17,000	16,800
Total	1.9	2.5	2.6	2.7	3.6	4.1	3.7	3.4	2.9	2.8†	3.4	2.6	2.6	2.2	2.4
Gender:															
Male	2.2	2.6	2.8	3.0	4.0	4.3	4.0	3.7	3.3	3.2†	3.8	2.9	2.9	2.3	2.5
Female	1.6	2.3	2.3	2.4	3.3	3.7	3.2	2.9	2.4	2.5†	2.9	2.2	2.3	2.1	2.2
College Plans:															
None or under 4 years	5.1	7.2	7.1	6.7	9.6	9.6	10.1	9.2	9.4	7.7†	9.5	7.8	8.7	7.8	7.6
Complete 4 years	1.4	1.8	1.9	2.2	2.9	3.2	2.9	2.7	2.1	2.3†	2.6	2.0	1.9	1.7	1.8
Region:															
Northeast	1.5	1.6	1.9	2.9	3.4	3.7	2.8	2.4	2.6	2.3†	2.9	1.5	2.5	2.0	1.9
Midwest	1.6	2.4	1.7	2.2	3.8	3.9	3.8	3.5	3.4	3.5†	2.7	2.7	2.6	1.9	2.2
South	1.9	2.7	2.8	2.4	3.3	3.9	3.4	3.7	2.9	2.7†	4.0	2.9	2.6	2.4	2.9
West	2.8	3.2	4.2	3.9	4.2	5.1	4.8	3.5	2.4	2.7†	3.3	2.9	2.7	2.6	2.3
Population Density:															
Large MSA	2.1	2.2	2.2	3.1	4.0	3.8	3.3	2.9	2.5	2.3†	2.7	2.0	2.2	1.9	2.2
Other MSA	2.0	3.0	3.1	3.1	3.8	4.8	4.0	3.4	3.1	3.0†	3.6	2.4	2.5	2.6	2.4
Non-MSA	1.5	2.0	1.8	1.6	3.0	3.2	3.5	3.8	2.8	3.2†	3.6	3.5	3.3	2.1	2.7
Parental Education: <sup>b</sup>															
1.0–2.0 (Low)	3.9	3.7	3.5	3.1	5.1	4.8	5.0	5.0	4.8	5.4†	5.9	4.4	4.3	4.8	3.4
2.5–3.0	2.2	2.3	2.7	2.8	3.8	4.7	3.9	3.4	3.5	3.2†	3.9	3.2	3.2	2.5	3.3
3.5–4.0	1.6	2.5	2.8	2.8	4.1	4.1	3.8	3.7	2.8	2.8†	3.7	2.6	2.6	2.1	3.0
4.5–5.0	1.6	2.0	2.3	2.8	3.2	4.0	3.4	3.0	2.1	2.1†	2.4	2.1	2.0	2.0	1.8
5.5–6.0 (High)	1.4	2.4	2.0	2.5	3.2	3.5	3.5	3.1	2.5	3.1†	2.3	1.7	1.9	1.7	1.1
Race/Ethnicity (2-year average): <sup>c</sup>															
White	—	2.2	2.6	2.8	3.6	4.5	4.5	3.9	3.2	3.1	2.9†	2.7 <sup>d</sup>	2.8	2.5	2.4
African American	—	0.7	0.7	0.6	0.6	0.7	0.7	0.7	0.6	0.7	0.7†	0.7 <sup>d</sup>	0.9	1.2	1.3
Hispanic	—	3.8	4.1	4.0	4.0	4.1	4.2	4.6	4.5	4.0	3.4†	3.6 <sup>d</sup>	2.9	2.9	2.7

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**TABLE 25 (cont.)**  
**HALLUCINOGENS: Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months														2018-2019 change	
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
Approximate weighted N =	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600		
Total	2.1	1.9	2.1	1.9	2.2	2.2	1.6	1.6	1.3	1.3	1.2	1.1	1.4	1.3	-0.1	
Gender:																
Male	2.1	2.1	2.2	2.0	2.5	2.6	1.7	1.7	1.5	1.3	1.3	1.1	1.5	1.2	-0.3	
Female	2.0	1.8	2.0	1.8	2.0	1.7	1.5	1.6	1.0	1.2	1.1	1.1	1.1	1.4	+0.3	
College Plans:																
None or under 4 years	6.7	6.9	8.4	7.4	6.9	7.7	5.2	5.3	4.1	3.8	3.5	2.9	3.9	3.3	-0.6	
Complete 4 years	1.6	1.5	1.6	1.4	1.8	1.8	1.3	1.4	1.0	1.1	0.9	0.9	1.0	1.0	+0.1	
Region:																
Northeast	1.4	1.0	1.4	1.4	1.8	1.1	1.5	1.0	0.6	0.6	0.8	0.8	0.7	0.5	-0.2	
Midwest	1.9	2.0	2.0	1.9	2.5	1.8	0.8	1.5	1.0	1.3	0.9	0.6	0.9	1.3	+0.4	
South	2.3	1.7	2.3	1.8	1.9	2.0	2.0	1.8	1.3	1.4	1.5	1.2	1.3	1.1	-0.1	
West	2.4	2.8	2.5	2.3	3.0	3.9	1.8	1.9	1.9	1.6	1.3	1.7	2.4	2.0	-0.4	
Population Density:																
Large MSA	1.4	1.5	2.1	1.5	1.9	2.0	1.7	1.5	1.1	1.1	1.3	1.0	1.8	0.9	-0.9 ss	
Other MSA	2.4	2.0	2.3	2.1	2.6	2.6	1.8	1.7	1.4	1.6	1.1	1.3	1.2	1.4	+0.2	
Non-MSA	2.5	2.4	1.7	2.0	2.1	1.7	1.1	1.5	1.4	0.9	1.5	1.1	1.0	1.5	+0.5	
Parental Education: <sup>b</sup>																
1.0–2.0 (Low)	2.9	3.0	4.2	3.9	3.1	3.7	2.5	2.3	2.1	2.0	2.4	1.9	2.0	2.2	+0.1	
2.5–3.0	2.6	2.0	2.4	1.8	2.8	3.2	1.9	1.8	1.4	1.1	1.6	1.4	1.8	2.2	+0.3	
3.5–4.0	2.3	2.3	2.1	2.0	2.4	2.3	2.0	1.5	1.5	1.3	1.2	1.6	1.4	1.4	-0.2	
4.5–5.0	1.9	1.6	1.7	1.6	2.0	1.6	1.0	1.4	0.7	1.0	0.6	0.8	1.0	0.9	-0.1	
5.5–6.0 (High)	1.5	1.1	1.9	1.5	1.4	1.4	1.2	1.6	1.3	0.8	0.8	0.8	0.8	0.9	+0.1	
Race/Ethnicity (2-year average): <sup>c</sup>																
White	2.5	2.2	2.1	2.1	2.1	2.1	1.6	1.3	1.2	1.0	1.0	1.0	1.1	1.1	0.0	
African American	1.1	0.7	0.8	0.8	0.7	0.9	1.1	1.2	0.9	0.7	1.0	0.9	0.7	0.8	+0.1	
Hispanic	1.8	2.1	2.5	2.4	2.7	3.1	2.8	2.1	1.8	1.5	1.7	1.5	1.5	1.8	+0.3	

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

Notes. ' ‡ ' indicates some change in the question. See relevant footnote. See relevant figure to assess the impact of the wording changes. 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>In 2001 the question text was changed on half of the questionnaire forms. Other psychedelics was changed to other hallucinogens, and shrooms was added to the list of examples. The 2001 data are based on the changed forms only; N is one half of N indicated. In 2002 the remaining forms were changed. Beginning in 2002, the data are based on all forms. Data for any illicit drug other than marijuana and hallucinogens are also affected by these changes and have been treated in a parallel manner.

<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.

<sup>d</sup>Due to changes in the question wording in half of the questionnaire forms in 2001, the 2002 entry comprises half of the 2001 sample data double-weighted (the half with the new version of the question) and all of the 2002 sample data.

**TABLE 26**  
**HALLUCINOGENS: Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 <sup>a</sup>	2002	2003	2004	2005	
<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	
Total	4.0	4.3	4.7	5.8	7.2	7.8	7.6	6.9	6.9	6.1‡	6.2	4.7	4.1	4.1	4.0	
Gender:																
Male	4.4	4.7	5.7	6.6	8.1	8.5	8.7	7.4	8.1	7.2‡	7.9	5.5	4.9	4.6	4.8	
Female	3.6	3.8	3.6	4.8	6.1	7.0	6.4	6.3	5.7	4.9‡	4.6	3.9	3.4	3.5	3.1	
College Plans:																
None or under 4 years	7.5	7.5	9.1	10.4	12.5	14.5	13.6	14.2	14.3	12.3‡	15.0	10.3	8.9	9.3	9.4	
Complete 4 years	3.3	3.6	3.7	4.8	6.2	6.6	6.5	5.6	5.7	5.1‡	4.8	3.9	3.3	3.3	3.2	
Region:																
Northeast	4.0	2.7	4.7	5.8	5.6	7.7	6.2	8.1	8.6	5.8‡	6.0	4.2	4.0	4.7	5.0	
Midwest	3.4	4.3	4.6	5.7	7.8	9.0	7.0	5.6	6.7	6.1‡	6.0	5.1	3.5	3.7	3.9	
South	3.6	3.9	3.6	5.1	7.3	7.5	8.3	7.6	6.5	5.7‡	5.3	4.0	3.9	3.6	3.5	
West	5.2	6.5	6.7	7.1	7.6	6.6	8.5	6.1	6.1	6.9‡	8.7	5.9	5.0	4.7	3.7	
Population Density:																
Large MSA	4.1	4.6	4.9	6.0	7.1	8.6	7.8	6.3	5.8	7.5‡	5.0	4.7	3.2	2.9	3.4	
Other MSA	4.8	4.4	4.9	6.4	8.0	8.2	7.9	7.6	7.8	5.8‡	6.6	4.9	4.4	5.0	4.3	
Non-MSA	2.5	3.7	4.1	4.4	5.5	6.0	6.7	6.3	6.5	5.1‡	6.8	4.4	4.6	3.9	4.2	
Parental Education: <sup>b</sup>																
1.0–2.0 (Low)	3.7	4.9	6.0	6.1	7.7	8.0	6.5	8.3	7.0	5.2‡	6.4	5.3	6.5	3.2	3.7	
2.5–3.0	4.3	4.2	4.5	5.5	7.6	8.5	7.3	8.2	8.1	5.8‡	6.7	5.2	4.7	4.8	4.5	
3.5–4.0	3.7	4.6	4.8	5.9	7.6	8.6	8.2	6.6	6.6	6.7‡	6.1	4.8	4.0	3.9	4.0	
4.5–5.0	4.1	3.8	4.5	5.5	6.6	6.9	8.2	6.1	6.6	6.3‡	6.0	4.0	3.5	3.7	4.0	
5.5–6.0 (High)	4.6	4.2	4.6	6.2	6.5	7.2	6.8	6.0	6.5	6.2‡	5.8	5.2	3.4	4.1	3.7	
Race/Ethnicity (2-year average): <sup>c</sup>																
White	—	4.9	5.1	5.6	7.1	8.6	8.9	8.4	8.2	7.6	6.6‡	5.6 <sup>d</sup>	5.3	4.9	4.7	
African American	—	0.2	0.6	1.1	1.2	0.9	1.0	1.1	1.0	1.0	1.3‡	1.4 <sup>d</sup>	1.0	0.8	1.2	
Hispanic	—	3.6	4.5	5.7	6.3	6.6	7.3	7.3	6.4	5.2	4.4‡	4.5 <sup>d</sup>	3.9	3.8	4.0	

Table continued on next page.

**TABLE 26 (cont.)**  
**HALLUCINOGENS: Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	4.1	4.4	3.9	4.1	4.2	4.1	3.5	3.4	3.3	3.1	2.9	2.8	2.7	3.1	+0.4
Gender:															
Male	4.5	5.4	4.7	5.0	5.2	4.9	4.6	4.4	3.3	3.4	3.5	3.4	3.2	4.0	+0.8
Female	3.5	3.4	3.1	3.1	3.0	3.2	2.5	2.4	3.4	2.5	2.3	2.2	2.1	2.2	+0.1
College Plans:															
None or under 4 years	10.0	10.0	10.4	10.5	11.0	10.3	10.5	6.5	8.3	7.0	6.8	7.5	6.0	5.5	-0.5
Complete 4 years	3.3	3.6	3.1	3.4	3.4	3.4	2.9	3.1	2.8	2.6	2.4	2.2	2.2	2.5	+0.3
Region:															
Northeast	4.0	4.4	3.5	3.4	4.0	4.0	3.0	2.7	3.4	3.2	2.1	1.6	2.1	1.9	-0.2
Midwest	4.1	4.7	3.8	4.4	3.5	3.5	3.2	2.9	3.2	2.2	2.6	3.0	2.6	3.0	+0.4
South	3.5	3.6	4.1	3.8	4.2	4.0	3.4	3.4	3.3	3.5	2.7	2.2	2.9	2.9	0.0
West	5.1	5.1	4.2	4.9	5.1	5.0	4.5	4.4	3.3	3.2	4.2	4.4	3.0	4.5	+1.5
Population Density:															
Large MSA	4.1	3.9	3.9	4.0	3.9	4.0	3.4	2.6	2.8	2.7	2.9	2.8	2.6	3.0	+0.4
Other MSA	4.1	4.7	4.2	4.3	4.3	4.4	3.7	3.9	3.7	3.4	3.0	2.8	2.8	3.2	+0.3
Non-MSA	3.8	4.2	3.4	3.8	4.1	3.7	3.4	3.2	3.4	2.8	2.7	2.8	2.6	3.3	+0.7
Parental Education: <sup>b</sup>															
1.0–2.0 (Low)	5.3	5.4	5.0	5.8	5.3	5.7	4.9	4.4	3.0	3.9	2.9	2.9	3.5	3.4	-0.1
2.5–3.0	4.5	4.6	4.1	3.9	5.6	4.6	4.5	4.0	3.5	4.1	3.8	3.8	3.0	3.7	+0.7
3.5–4.0	3.8	4.5	4.2	4.3	4.2	4.1	3.3	3.9	4.3	3.7	3.0	3.3	2.7	3.5	+0.8
4.5–5.0	3.9	4.2	3.3	3.6	3.5	3.5	3.2	2.9	2.7	2.5	2.5	2.4	2.3	2.5	+0.1
5.5–6.0 (High)	4.0	3.9	3.3	4.5	3.3	3.5	2.8	3.0	2.7	2.0	2.6	2.0	2.8	2.4	-0.4
Race/Ethnicity (2-year average): <sup>c</sup>															
White	4.7	4.9	4.8	4.5	4.5	4.4	4.1	3.6	3.5	3.3	3.2	3.2	3.0	3.1	+0.1
African American	1.4	1.0	1.1	1.4	1.6	1.4	1.4	1.5	1.5	2.0	1.6	1.0	0.8	1.0	+0.2
Hispanic	3.5	2.8	3.6	4.3	4.3	4.5	4.2	3.5	3.1	3.0	3.0	3.0	3.0	3.3	+0.3

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

Notes. '‡' indicates some change in the question. See relevant footnote. See relevant figure to assess the impact of the wording changes. 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>In 2001 the question text was changed on half of the questionnaire forms. Other psychedelics was changed to other hallucinogens, and shrooms was added to the list of examples.

The 2001 data are based on the changed forms only; N is one half of N indicated. In 2002 the remaining forms were changed. Beginning in 2002, the data are based on all forms.

Data for any illicit drug other than marijuana and hallucinogens are also affected by these changes and have been treated in a parallel manner.

<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.

<sup>d</sup>Due to changes in the question wording in half of the questionnaire forms in 2001, the 2002 entry comprises half of the 2001 sample data double-weighted (the half with the new version of the question) and all of the 2002 sample data.



**TABLE 27**  
**HALLUCINOGENS: <sup>a</sup>Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Approximate weighted N =	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
Total	11.2	9.4	8.8	9.6	9.9	9.3	9.0	8.1	7.3	6.5	6.3	6.0	6.4	5.5	5.6	5.9
Adjusted <sup>b</sup>	—	—	—	—	11.8	10.4	10.1	9.0	8.3	7.3	7.6	7.6	6.7	5.8	6.2	6.0
Gender:																
Male	13.7	11.6	10.8	11.6	11.8	11.7	10.9	9.6	8.6	7.9	8.1	7.2	7.5	7.2	7.4	7.7
Female	9.0	6.9	6.5	7.3	7.6	6.7	6.8	6.1	5.5	4.7	4.4	4.7	5.2	3.7	3.6	3.8
College Plans:																
None or under 4 years	—	11.2	10.6	11.0	11.3	11.2	10.7	9.5	8.9	8.3	7.7	7.4	7.9	6.4	7.1	6.6
Complete 4 years	—	6.9	6.4	7.3	7.5	7.1	7.4	6.2	5.4	4.7	5.0	4.7	5.4	4.7	4.8	5.3
Region:																
Northeast	13.2	10.9	10.6	13.0	12.9	12.2	12.9	11.4	8.7	11.3	9.9	7.9	7.5	5.8	5.6	6.6
Midwest	13.0	10.3	9.7	10.7	11.1	11.3	10.3	9.1	8.9	6.0	6.8	6.6	6.9	5.3	6.6	5.7
South	8.5	7.4	6.8	6.3	5.7	5.4	4.1	4.6	5.2	3.9	3.2	3.3	4.8	5.2	4.9	5.0
West	10.2	9.3	8.2	9.6	11.0	9.2	10.4	7.8	6.3	7.0	6.3	7.2	7.4	6.0	5.5	6.9
Population Density:																
Large MSA	13.9	11.1	9.9	11.9	12.3	11.6	12.0	10.9	9.2	8.8	8.3	7.6	7.9	6.5	5.4	5.7
Other MSA	12.1	9.8	9.1	9.3	10.5	9.8	9.0	7.6	7.6	6.3	6.1	5.9	6.3	6.0	5.9	6.6
Non-MSA	8.5	7.7	7.5	8.3	7.1	7.1	6.8	6.5	5.3	5.0	5.0	4.9	5.3	3.5	5.0	4.5
Parental Education: <sup>c</sup>																
1.0–2.0 (Low)	8.9	7.4	6.8	7.7	7.1	8.0	6.7	6.5	6.5	5.4	4.8	5.4	5.8	4.9	4.2	3.8
2.5–3.0	10.2	10.0	9.1	9.6	9.6	9.5	8.9	8.0	6.8	6.7	6.4	6.0	6.2	4.2	4.9	4.6
3.5–4.0	10.9	9.8	9.2	9.7	9.7	9.2	9.2	8.6	7.7	6.3	7.2	6.3	6.0	4.8	5.6	6.5
4.5–5.0	11.1	10.1	8.8	10.2	10.9	9.1	9.4	7.8	7.0	5.9	6.2	5.5	6.8	6.7	6.6	6.8
5.5–6.0 (High)	8.9	9.4	9.5	10.2	11.7	9.9	10.6	9.0	7.0	7.6	4.3	5.9	7.2	7.2	7.0	8.2
Race/Ethnicity (2-year average): <sup>d</sup>																
White	—	—	9.8	9.9	10.5	10.3	10.0	9.3	8.3	7.5	7.0	6.7	6.8	6.8	6.4	6.7
African American	—	—	2.4	2.3	2.0	1.9	1.9	1.8	2.2	1.7	1.2	1.6	1.5	1.0	0.9	0.8
Hispanic	—	—	7.9	7.2	7.0	7.1	7.0	7.7	6.6	5.2	5.7	5.7	5.0	4.0	3.2	3.3

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**TABLE 27 (cont.)**  
**HALLUCINOGENS: <sup>a</sup>Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 <sup>e</sup>	2002	2003	2004	2005	2006
Approximate weighted N =	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	5.8	5.9	7.4	7.6	9.3	10.1	9.8	9.0	9.4	8.1‡	9.1	6.6	5.9	6.2	5.5	4.9
Adjusted <sup>b</sup>	6.1	6.2	7.8	7.8	9.7	10.7	10.0	9.2	9.8	8.7‡	9.7	7.2	6.5	6.4	5.9	5.3
Gender:																
Male	7.5	7.1	8.9	9.2	11.9	12.4	12.0	11.0	11.4	9.6‡	11.1	8.4	7.8	8.4	7.4	6.2
Female	3.9	4.7	5.6	5.8	6.3	7.3	7.4	6.8	7.4	6.3‡	6.8	4.7	3.8	3.8	3.4	3.6
College Plans:																
None or under 4 years	7.0	7.8	8.1	8.4	11.9	12.1	11.3	12.0	10.5	10.3‡	10.4	9.8	8.2	7.7	7.8	7.0
Complete 4 years	5.3	5.1	6.9	7.0	8.2	9.0	9.0	7.8	8.7	7.0‡	8.0	5.5	5.0	5.4	4.7	4.4
Region:																
Northeast	7.0	7.1	9.0	9.0	10.1	13.3	13.9	10.7	9.8	9.3‡	9.8	9.1	7.8	7.0	5.5	7.1
Midwest	6.5	5.9	6.8	8.1	9.2	8.8	7.6	8.4	9.8	7.0‡	11.4	6.4	5.4	5.3	6.7	4.9
South	3.7	4.7	5.9	6.7	8.8	8.9	9.2	8.5	8.6	6.9‡	5.8	5.6	4.9	5.7	5.2	4.1
West	7.3	7.3	9.2	7.1	9.6	10.5	9.5	9.1	10.0	10.5‡	10.8	6.2	6.3	7.4	4.4	4.3
Population Density:																
Large MSA	5.1	6.2	7.3	8.1	11.0	10.5	8.8	8.7	8.4	8.9‡	11.5	6.8	4.4	5.6	5.5	6.0
Other MSA	7.7	6.0	8.1	8.6	9.5	11.4	11.2	9.9	10.4	8.3‡	8.7	7.2	7.2	7.2	5.9	4.5
Non-MSA	3.3	5.5	6.3	5.1	7.0	7.4	8.3	7.4	8.8	7.0‡	7.3	5.2	5.5	4.8	4.5	4.1
Parental Education: <sup>c</sup>																
1.0–2.0 (Low)	4.9	3.6	4.9	5.0	7.2	7.4	7.3	7.9	9.0	7.0‡	6.3	5.1	5.3	4.9	3.0	4.9
2.5–3.0	4.9	5.6	5.9	7.0	8.7	8.8	8.5	8.8	8.6	7.4‡	9.1	6.6	4.9	5.6	5.7	5.1
3.5–4.0	6.2	6.0	7.5	8.0	9.5	10.3	9.9	9.5	10.6	8.2‡	9.4	7.1	6.4	6.6	5.4	5.1
4.5–5.0	6.1	6.2	8.9	7.7	9.6	10.5	10.4	8.6	9.3	7.7‡	8.6	6.7	6.5	6.4	5.7	4.6
5.5–6.0 (High)	7.3	7.4	8.9	9.0	9.5	11.4	11.6	9.4	8.4	9.6‡	8.8	5.9	5.3	6.1	5.7	4.6
Race/Ethnicity (2-year average): <sup>d</sup>																
White	6.8	6.9	7.9	8.6	9.5	10.8	11.6	11.3	10.7	9.9	9.0‡	8.4 <sup>f</sup>	7.2	7.0	6.7	6.0
African American	0.6	0.7	0.8	1.2	1.2	1.7	1.9	1.4	1.2	1.6	1.4‡	1.2 <sup>f</sup>	1.3	1.2	1.3	1.5
Hispanic	4.4	4.6	5.3	5.8	7.1	8.3	7.3	6.8	7.9	9.6	7.8‡	6.0 <sup>f</sup>	4.6	4.1	3.9	3.8

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**TABLE 27 (cont.)**  
**HALLUCINOGENS: <sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months													2018-2019 change
	2007	2008	2009	2010	2011	2012	2013	2014 <sup>g</sup>	2015 <sup>g</sup>	2016 <sup>g</sup>	2017 <sup>g</sup>	2018 <sup>g</sup>	2019 <sup>g</sup>	
Approximate weighted N =	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	5.4	5.9	4.7	5.5	5.2	4.8	4.5	4.0	4.2	4.3	4.4	4.3	4.6	+0.3
Adjusted <sup>b</sup>	5.8	6.1	5.2	6.0	5.8	5.0	4.9	—	—	—	—	—	—	—
Gender:														
Male	7.5	7.8	6.2	7.9	7.0	6.0	5.9	5.5	5.2	5.7	5.9	5.8	6.1	+0.3
Female	3.3	3.9	3.1	2.9	3.3	3.1	2.8	2.6	2.9	2.8	3.0	2.3	2.7	+0.4
College Plans:														
None or under 4 years	8.3	8.4	5.6	8.4	7.7	5.8	6.0	5.8	6.1	4.7	6.1	6.7	6.6	-0.1
Complete 4 years	4.6	5.2	4.3	4.8	4.6	4.5	4.0	3.5	3.6	4.0	3.7	3.4	3.8	+0.5
Region:														
Northeast	6.7	8.0	4.7	6.2	5.7	5.2	4.5	4.4	3.6	5.0	4.2	4.8	4.0	-0.8
Midwest	5.3	4.5	5.9	5.4	5.2	4.5	4.9	4.0	3.8	4.9	3.6	4.5	4.1	-0.4
South	4.2	5.7	3.9	4.5	3.9	4.2	3.9	4.0	3.9	3.1	3.9	3.4	4.4	+0.9
West	6.5	6.2	4.6	6.6	6.7	5.5	4.8	3.6	5.3	5.5	6.2	5.1	6.3	+1.2
Population Density:														
Large MSA	6.2	6.9	5.1	5.6	4.9	5.4	4.5	4.2	4.4	4.3	5.2	3.8	4.2	+0.5
Other MSA	5.1	5.7	4.7	5.9	5.6	5.0	5.0	4.1	4.5	4.8	4.4	4.4	4.6	+0.2
Non-MSA	4.8	5.3	4.2	4.3	4.4	3.2	3.1	3.3	2.7	3.4	3.3	4.8	5.1	+0.3
Parental Education: <sup>c</sup>														
1.0–2.0 (Low)	3.9	4.4	3.6	3.7	4.9	3.3	4.4	3.0	4.8	4.0	4.1	4.0	4.1	+0.1
2.5–3.0	4.9	5.0	4.5	5.0	4.3	5.1	4.7	4.1	4.1	4.0	4.6	4.4	4.6	+0.2
3.5–4.0	5.5	5.5	4.6	6.2	5.4	4.8	4.6	4.4	4.3	4.5	4.7	4.3	5.1	+0.8
4.5–5.0	5.4	6.7	5.3	5.5	4.9	5.0	3.9	3.8	3.7	4.5	4.0	3.6	4.1	+0.6
5.5–6.0 (High)	6.7	7.2	4.6	5.4	5.7	4.5	4.7	4.1	4.1	4.0	4.5	4.4	4.0	-0.4
Race/Ethnicity (2-year average): <sup>d</sup>														
White	6.2	6.9	6.3	6.1	6.4	6.0	5.2	4.6	4.2	4.3	4.8	4.8	4.5	-0.3
African American	1.4	1.4	1.2	1.3	1.7	1.6	1.5	1.9	2.0	1.7	1.9	1.8	1.9	0.0
Hispanic	3.9	3.5	3.3	3.3	3.0	2.9	3.5	3.5	4.0	4.7	3.9	3.4	4.0	+0.5

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

*Notes.* '±' indicates some change in the question. See relevant footnote. See relevant figure to assess the impact of the wording changes. 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>All data are unadjusted for the underreporting of PCP, unless otherwise indicated.

<sup>b</sup>Adjusted for the underreporting of PCP. See text for details.

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

<sup>d</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.

<sup>e</sup>In 2001 the question text was changed on half of the questionnaire forms. Other psychedelics was changed to other hallucinogens, and shrooms was added to the list of examples. The 2001 data are based on the changed forms only; N is one half of N indicated. In 2002 the remaining forms were changed. Beginning in 2002, the data are based on all forms. Data for any illicit drug other than marijuana and hallucinogens are also affected by these changes and have been treated in a parallel manner.

<sup>f</sup>Due to changes in the question wording in half of the questionnaire forms in 2001, the 2002 entry comprises half of the 2001 sample data double-weighted (the half with the new version of the question) and all of the 2002 sample data.

<sup>g</sup>In 2014 questions on use of LSD and hallucinogens other than LSD, the two components of hallucinogen use, were each dropped from one of six forms. Beginning in 2014 data are based on five of six forms; N is five sixths of N indicated.

**TABLE 28**  
**LSD: Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months															
	<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>	
<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>	
Total	1.7	2.1	2.3	2.4	3.2	3.5	3.2	2.8	2.4	2.4	2.2	1.5	1.3	1.1	1.2	
Gender:																
Male	2.0	2.1	2.5	2.6	3.4	3.7	3.5	3.2	2.7	2.6	2.3	1.7	1.4	1.1	1.2	
Female	1.3	2.0	2.1	2.1	2.9	3.2	2.8	2.4	2.0	2.2	2.1	1.3	1.1	1.1	1.1	
College Plans:																
None or under 4 years	4.5	6.4	6.4	6.2	8.5	8.2	9.3	7.8	8.2	6.7	5.8	5.7	4.3	4.7	4.1	
Complete 4 years	1.2	1.5	1.6	1.8	2.5	2.7	2.5	2.2	1.7	2.0	1.8	1.1	0.9	0.7	0.8	
Region:																
Northeast	1.3	1.4	1.8	2.6	2.9	2.9	2.3	2.1	2.2	1.9	1.9	0.9	1.4	1.0	0.9	
Midwest	1.4	1.8	1.4	1.7	3.5	3.4	3.3	2.5	2.7	3.0	1.7	1.8	1.2	0.9	0.9	
South	1.8	2.4	2.4	2.1	2.8	3.4	3.0	3.2	2.5	2.4	2.7	1.8	1.3	1.2	1.5	
West	2.2	2.9	3.7	3.3	3.8	4.3	4.3	3.2	1.9	2.3	2.0	1.2	1.2	1.2	1.1	
Population Density:																
Large MSA	1.9	2.0	2.0	2.7	3.6	3.2	2.9	2.6	2.2	2.0	1.8	1.3	1.3	1.1	1.0	
Other MSA	1.7	2.5	2.8	2.8	3.3	4.1	3.6	2.9	2.7	2.6	2.3	1.5	1.2	1.3	1.1	
Non-MSA	1.3	1.6	1.4	1.3	2.4	2.6	2.8	2.9	1.9	2.8	2.4	1.9	1.4	0.7	1.4	
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	3.5	3.1	3.1	2.8	4.6	4.4	4.7	4.4	3.7	4.9	4.1	3.4	2.3	2.8	1.7	
2.5–3.0	1.8	2.1	2.3	2.6	3.1	4.0	3.2	2.8	2.7	2.9	2.6	2.0	1.4	1.2	1.7	
3.5–4.0	1.4	2.0	2.4	2.4	3.6	3.5	3.4	3.1	2.4	2.2	2.4	1.3	1.3	1.0	1.5	
4.5–5.0	1.4	1.5	2.1	2.1	2.6	3.4	2.9	2.5	1.9	1.8	1.5	1.2	1.1	1.0	0.6	
5.5–6.0 (High)	1.3	2.0	2.0	2.1	2.9	3.0	2.9	2.4	1.9	2.3	1.3	0.8	0.8	0.6	0.4	
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	1.9	2.3	2.5	3.1	3.9	3.9	3.2	2.6	2.6	2.6	2.0	1.5	1.1	1.0	
African American	—	0.5	0.4	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.6	0.8	0.9	
Hispanic	—	3.3	3.7	3.6	3.3	3.5	3.9	4.2	3.9	3.5	3.2	2.4	1.7	1.8	1.7	

Table continued on next page.

**TABLE 28 (cont.)**  
**LSD: Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months														2018-2019
Approximate weighted N =	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	change
Total	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	0.0
Gender:	0.9	1.1	1.3	1.1	1.2	1.1	0.8	1.0	0.7	0.9	0.8	0.9	0.9	0.9	0.0
Male	0.8	1.1	1.4	1.1	1.2	1.4	0.8	1.0	0.8	0.8	0.9	0.9	1.0	0.8	-0.1
Female	1.0	1.0	1.2	1.1	1.1	0.8	0.8	1.0	0.6	0.9	0.6	0.8	0.8	1.0	+0.2
College Plans:															
None or under 4 years	3.4	3.9	5.2	4.9	3.7	3.9	3.3	3.8	2.5	2.5	2.3	2.4	2.8	2.5	-0.3
Complete 4 years	0.7	0.8	1.0	0.8	0.9	0.9	0.6	0.8	0.6	0.7	0.6	0.7	0.6	0.7	+0.1
Region:															
Northeast	0.5	0.6	0.8	0.8	1.0	0.6	0.7	0.6	0.3	0.3	0.6	0.5	0.5	0.5	0.0
Midwest	0.7	1.2	1.3	1.1	1.4	0.9	0.3	0.9	0.6	1.0	0.6	0.6	0.4	1.1	+0.6 ss
South	1.1	1.0	1.4	1.0	1.0	1.0	1.1	1.2	0.8	0.9	1.1	0.9	0.8	0.9	0.0
West	1.0	1.4	1.4	1.6	1.4	2.1	0.9	1.1	1.0	1.0	0.6	1.4	1.8	1.3	-0.6
Population Density:															
Large MSA	0.6	0.7	1.4	1.0	1.0	1.0	0.9	1.0	0.7	0.8	1.1	0.8	1.3	0.7	-0.6 ss
Other MSA	1.1	1.2	1.3	1.2	1.4	1.3	0.8	1.1	0.7	1.1	0.6	1.0	0.9	1.1	+0.2
Non-MSA	1.0	1.3	1.0	1.1	1.0	0.9	0.6	0.8	0.7	0.5	0.9	0.7	0.5	0.9	+0.5
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	1.8	1.8	2.4	2.6	1.6	1.7	1.6	1.3	1.4	1.5	1.8	1.5	1.9	1.9	0.0
2.5–3.0	1.0	1.1	1.6	1.1	1.1	1.7	1.1	1.0	0.8	0.7	0.9	1.2	1.3	1.5	+0.2
3.5–4.0	1.0	1.0	1.1	1.0	1.4	1.2	0.7	0.8	1.0	1.1	0.8	0.9	1.0	0.9	-0.1
4.5–5.0	0.7	1.0	1.0	0.8	1.0	0.8	0.4	1.0	0.4	0.7	0.4	0.6	0.5	0.7	+0.2
5.5–6.0 (High)	0.7	0.6	1.3	0.9	0.8	0.8	0.7	1.1	0.6	0.6	0.5	0.5	0.5	0.5	0.0
Race/Ethnicity (2-year average): <sup>b</sup>															
White	1.0	1.0	1.1	1.1	1.1	1.0	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.0
African American	0.6	0.3	0.6	0.7	0.5	0.6	0.6	0.8	0.6	0.4	0.7	0.6	0.5	0.6	0.0
Hispanic	1.0	1.3	1.6	1.5	1.6	1.8	1.4	1.2	1.2	1.0	1.2	1.1	1.2	1.3	+0.1

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 29**  
**LSD: Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months														
	<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>
<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>
Total	3.7	4.0	4.2	5.2	6.5	6.9	6.7	5.9	6.0	5.1	4.1	2.6	1.7	1.6	1.5
Gender:															
Male	3.9	4.3	5.1	5.9	7.4	7.6	7.6	6.3	7.0	5.9	5.1	3.1	1.9	1.8	1.9
Female	3.4	3.6	3.2	4.3	5.5	6.2	5.8	5.4	5.1	4.3	3.1	2.0	1.6	1.4	1.0
College Plans:															
None or under 4 years	6.8	7.0	8.4	9.4	11.1	13.1	12.8	12.4	13.1	11.1	9.9	6.0	4.4	4.5	4.1
Complete 4 years	3.0	3.4	3.3	4.2	5.6	5.8	5.7	4.7	4.9	4.1	3.2	2.0	1.3	1.2	1.1
Region:															
Northeast	3.6	2.6	3.8	5.1	4.7	6.4	5.2	7.1	7.5	4.1	4.0	2.2	1.8	1.7	2.3
Midwest	3.2	4.1	4.4	5.2	7.3	8.3	6.0	4.5	6.0	5.4	4.3	2.8	1.7	1.5	1.2
South	3.3	3.7	3.2	4.6	6.8	6.8	7.9	6.5	5.8	5.0	3.5	2.3	1.7	1.4	1.4
West	4.8	5.9	6.1	6.3	6.5	5.7	7.4	5.2	5.1	5.9	5.3	3.2	1.7	1.9	1.0
Population Density:															
Large MSA	3.8	4.4	4.4	5.4	6.6	7.6	7.0	5.4	4.9	6.4	3.8	2.6	1.3	1.1	1.2
Other MSA	4.4	4.1	4.4	5.9	7.1	7.4	7.0	6.6	6.7	4.8	4.1	2.7	1.7	1.9	1.5
Non-MSA	2.3	3.5	3.7	3.7	5.0	5.2	6.0	5.0	5.9	4.4	4.6	2.3	2.3	1.5	1.8
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	3.1	4.4	5.5	5.5	6.9	7.6	5.9	7.9	6.3	4.9	3.9	2.7	3.7	1.3	1.8
2.5–3.0	4.0	4.2	4.2	5.1	6.9	7.6	6.6	7.0	7.3	5.1	4.8	2.9	2.0	1.7	1.7
3.5–4.0	3.4	4.1	4.2	5.3	6.9	7.9	7.4	5.6	5.8	5.6	4.3	2.8	1.7	1.4	1.6
4.5–5.0	3.8	3.6	3.9	4.8	6.0	6.0	7.0	5.0	5.7	5.0	3.8	2.0	1.2	1.4	1.2
5.5–6.0 (High)	4.2	3.9	3.9	5.4	5.9	5.8	6.0	4.6	5.3	5.0	3.5	2.4	1.2	1.6	1.4
Race/Ethnicity (2-year average): <sup>b</sup>															
White	—	4.6	4.6	5.0	6.4	7.7	7.9	7.3	7.0	6.5	5.2	3.8	2.4	1.9	1.7
African American	—	0.2	0.5	0.9	1.0	0.8	0.9	1.0	0.9	0.9	0.9	0.6	0.4	0.4	0.6
Hispanic	—	3.2	4.1	5.0	5.7	6.1	6.7	6.6	5.6	4.6	3.7	2.9	2.4	1.7	1.6

Table continued on next page.

**TABLE 29 (cont.)**  
**LSD: Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months														
	<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>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	2018-2019 change
<i>Approximate weighted N =</i>	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	1.7	1.9	1.8	1.9	1.9	1.8	1.7	1.7	1.9	2.0	2.1	2.1	2.0	2.3	+0.3
Gender:															
Male	2.1	2.3	2.2	2.3	2.4	2.2	2.3	2.3	2.1	2.2	2.6	2.5	2.4	2.7	+0.3
Female	1.3	1.5	1.3	1.3	1.3	1.3	1.1	1.0	1.8	1.5	1.6	1.6	1.5	1.8	+0.2
College Plans:															
None or under 4 years	5.1	4.3	5.1	5.9	5.1	4.2	6.3	3.5	5.2	4.2	4.7	5.3	4.4	4.3	-0.1
Complete 4 years	1.2	1.5	1.3	1.4	1.5	1.6	1.3	1.5	1.5	1.7	1.8	1.7	1.6	1.8	+0.2
Region:															
Northeast	1.7	1.8	1.5	1.6	2.0	1.8	1.4	1.7	1.7	2.1	1.6	1.1	1.7	1.4	-0.2
Midwest	1.6	2.2	2.0	2.3	1.4	1.7	1.6	1.5	2.0	1.4	2.0	2.6	1.9	2.2	+0.3
South	1.7	1.6	1.8	1.6	2.1	2.1	1.7	1.5	2.2	2.4	1.9	2.0	2.0	2.2	+0.2
West	1.8	1.9	1.7	2.0	2.0	1.8	2.1	1.9	1.5	1.6	3.0	2.5	2.1	3.0	+0.9
Population Density:															
Large MSA	1.6	1.6	1.5	1.7	1.7	1.8	1.8	1.3	1.7	1.7	2.3	2.1	1.8	2.2	+0.3
Other MSA	1.7	2.1	1.9	2.2	1.9	1.8	1.7	2.2	2.1	2.4	2.1	2.1	2.2	2.3	+0.1
Non-MSA	1.8	1.7	1.7	1.4	2.1	1.9	1.8	0.9	1.6	1.4	1.9	1.9	1.7	2.3	+0.6
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	2.5	2.9	2.2	2.5	2.4	3.0	2.0	2.2	1.7	2.5	2.4	2.0	2.4	2.8	+0.5
2.5–3.0	2.1	2.0	1.6	1.9	2.5	1.8	2.6	1.8	1.8	2.0	2.9	2.7	2.1	2.8	+0.7
3.5–4.0	1.6	1.8	1.9	2.0	1.8	1.8	1.4	1.7	2.3	2.4	2.1	2.6	2.0	2.5	+0.6
4.5–5.0	1.3	1.7	1.5	1.5	1.6	1.7	1.6	1.5	1.6	1.5	1.9	1.7	1.8	1.7	-0.1
5.5–6.0 (High)	1.3	1.7	1.9	2.2	1.9	1.6	1.3	1.7	1.6	1.6	1.8	1.6	2.0	1.5	-0.5
Race/Ethnicity (2-year average): <sup>b</sup>															
White	1.8	2.0	2.0	1.9	2.0	2.0	1.9	1.9	2.0	2.1	2.2	2.3	2.2	2.2	0.0
African American	0.7	0.6	0.7	0.9	1.1	1.0	0.8	0.8	1.1	1.2	0.8	0.9	0.7	0.7	0.0
Hispanic	1.6	1.4	1.8	2.0	1.7	1.9	1.9	1.5	1.4	1.6	2.2	2.2	2.3	2.5	+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 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 30**  
**LSD: Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	<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>
<i>Approximate weighted N =</i>	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
Total	7.2	6.4	5.5	6.3	6.6	6.5	6.5	6.1	5.4	4.7	4.4	4.5	5.2	4.8	4.9	5.4
Gender:																
Male	9.6	7.9	7.1	7.8	8.0	8.1	8.0	7.4	6.7	5.8	5.9	5.5	6.4	6.5	6.5	7.1
Female	5.6	4.6	3.9	4.5	4.8	4.8	4.7	4.3	3.8	3.1	2.8	3.4	3.9	3.0	3.2	3.6
College Plans:																
None or under 4 years	—	7.5	6.7	7.2	8.0	8.2	8.0	7.5	6.9	6.1	5.6	5.9	6.6	5.7	6.5	6.2
Complete 4 years	—	4.7	4.0	4.6	4.5	4.7	5.0	4.3	3.8	3.1	3.4	3.3	4.3	4.1	4.2	4.8
Region:																
Northeast	8.5	8.0	7.2	8.0	7.9	6.8	9.0	8.0	5.6	7.0	5.4	5.1	5.3	4.7	5.1	5.9
Midwest	8.7	7.0	6.5	7.9	7.9	8.5	7.8	7.3	7.0	4.4	5.3	5.3	5.7	4.7	6.0	5.3
South	5.4	4.7	3.7	3.7	3.4	4.3	3.4	3.9	4.4	3.5	2.8	2.6	4.2	4.7	4.2	4.7
West	7.6	5.9	5.0	5.8	8.3	6.5	6.3	4.8	4.2	4.5	4.6	5.9	6.2	5.2	4.4	6.4
Population Density:																
Large MSA	9.4	7.9	6.4	7.2	7.6	7.3	8.0	7.3	5.7	4.7	4.1	4.4	5.6	5.2	4.6	5.2
Other MSA	7.4	6.8	5.6	6.1	7.3	6.8	6.9	6.3	6.0	4.9	4.8	4.9	5.4	5.6	5.3	6.1
Non-MSA	5.7	4.8	4.8	5.8	4.9	5.6	4.9	4.8	4.4	4.2	4.1	4.0	4.4	3.1	4.3	4.2
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	6.1	4.8	4.5	5.0	4.5	5.2	4.8	5.0	4.9	4.1	3.0	3.9	4.4	4.1	3.6	3.4
2.5–3.0	6.5	6.8	5.8	6.1	6.3	6.8	6.5	6.1	5.1	4.8	4.5	4.6	4.9	3.8	4.3	4.4
3.5–4.0	6.4	6.7	5.6	6.1	6.7	6.7	6.7	6.4	5.7	4.3	4.7	4.6	4.9	4.2	5.1	6.0
4.5–5.0	7.0	6.4	5.3	6.7	7.5	5.7	6.4	5.7	5.2	4.3	4.8	4.1	5.8	6.2	5.9	6.2
5.5–6.0 (High)	6.5	6.4	6.1	7.0	7.4	7.2	7.7	6.0	4.8	5.0	3.8	4.7	6.1	6.2	5.5	7.4
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	—	6.3	6.3	6.8	7.0	7.2	6.9	6.2	5.5	5.0	4.9	5.4	5.8	5.7	6.1
African American	—	—	1.3	1.3	1.2	1.1	1.0	0.9	0.9	0.7	0.7	1.0	0.8	0.6	0.7	0.6
Hispanic	—	—	6.1	5.0	4.9	5.2	4.5	5.2	5.0	4.1	3.9	3.9	4.0	3.1	2.3	2.7

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**TABLE 30 (cont.)**  
**LSD: Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	<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>
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	5.2	5.6	6.8	6.9	8.4	8.8	8.4	7.6	8.1	6.6	6.6	3.5	1.9	2.2	1.8	1.7
Gender:																
Male	6.8	6.7	8.4	8.4	10.7	10.9	10.3	9.3	10.0	7.6	7.9	4.4	2.5	3.1	2.7	2.1
Female	3.4	4.4	5.1	5.3	5.8	6.5	6.2	5.7	6.1	5.3	5.0	2.3	1.2	1.2	0.9	1.1
College Plans:																
None or under 4 years	6.4	7.6	7.5	7.7	11.2	11.4	10.3	10.9	9.4	8.7	8.2	5.7	3.0	3.2	3.4	2.6
Complete 4 years	4.7	4.8	6.4	6.3	7.3	7.7	7.4	6.3	7.3	5.6	5.7	2.7	1.4	1.8	1.3	1.4
Region:																
Northeast	6.1	6.6	8.6	8.2	8.8	11.9	11.8	8.2	7.8	7.1	6.7	5.4	2.4	2.3	1.7	3.0
Midwest	5.9	5.5	6.3	7.3	8.3	7.7	7.0	7.6	9.1	5.9	8.6	3.7	1.8	1.8	2.1	1.6
South	3.4	4.4	5.5	6.3	8.1	7.9	8.1	7.4	7.7	6.0	4.7	3.1	1.9	2.6	1.8	1.4
West	6.5	7.0	8.5	6.2	8.5	8.8	6.9	7.1	7.7	7.9	6.6	2.1	1.4	2.3	1.6	1.1
Population Density:																
Large MSA	4.3	5.7	6.7	7.3	9.7	9.0	7.7	7.2	6.8	6.7	7.7	3.3	1.5	1.9	1.8	2.2
Other MSA	7.0	5.8	7.6	7.9	8.7	10.0	9.3	8.4	9.2	6.9	6.4	4.0	2.2	2.6	1.9	1.5
Non-MSA	3.0	5.1	5.6	4.6	6.5	6.5	7.3	6.1	7.4	5.9	5.6	2.7	1.7	1.9	1.7	1.2
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	4.3	3.3	4.6	4.4	6.6	6.7	6.8	6.8	8.6	5.6	5.4	2.4	1.5	3.2	1.7	1.5
2.5–3.0	4.4	5.2	5.6	6.5	8.1	8.2	7.3	7.8	7.6	6.4	6.7	3.4	1.9	2.4	1.9	2.0
3.5–4.0	5.5	5.7	7.0	7.4	8.6	9.3	8.5	8.2	9.0	6.7	6.3	4.0	1.7	1.8	1.5	1.9
4.5–5.0	5.3	5.8	8.3	6.9	8.6	8.7	8.6	6.5	8.0	6.0	6.7	3.1	1.7	2.0	1.7	1.3
5.5–6.0 (High)	7.1	7.0	8.2	7.9	8.3	9.2	9.5	7.3	6.4	7.0	5.6	2.8	1.7	2.2	1.7	1.1
Race/Ethnicity (2-year average): <sup>b</sup>																
White	6.3	6.4	7.4	8.0	8.6	9.7	10.1	9.5	9.1	8.3	7.5	5.8	3.0	2.2	2.2	1.8
African American	0.6	0.6	0.6	0.9	1.0	1.3	1.6	1.1	0.8	1.3	1.3	0.8	0.8	0.8	0.7	0.9
Hispanic	3.6	4.1	5.1	5.4	6.4	7.4	6.3	5.9	7.0	7.6	5.8	3.8	1.8	1.7	1.7	1.4

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**TABLE 30 (cont.)**  
**LSD: Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months													2018-2019 change
	2007	2008	2009	2010	2011	2012	2013	2014 <sup>c</sup>	2015 <sup>c</sup>	2016 <sup>c</sup>	2017 <sup>c</sup>	2018 <sup>c</sup>	2019 <sup>c</sup>	
<i>Approximate weighted N =</i>	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	2.1	2.7	1.9	2.6	2.7	2.4	2.2	2.5	2.9	3.0	3.3	3.2	3.6	+0.4
Gender:														
Male	3.0	3.7	2.4	3.6	3.6	2.9	2.9	3.4	3.5	4.1	4.4	4.4	4.9	+0.5
Female	1.2	1.6	1.3	1.4	1.7	1.6	1.3	1.5	2.1	1.9	2.1	1.6	2.1	+0.5
College Plans:														
None or under 4 years	4.1	4.8	2.5	4.2	3.7	3.1	3.4	3.7	4.4	3.6	4.9	5.0	4.7	-0.3
Complete 4 years	1.6	2.1	1.6	2.1	2.4	2.2	1.7	2.2	2.4	2.8	2.7	2.5	3.1	+0.6
Region:														
Northeast	2.1	3.0	2.6	3.7	3.0	2.9	2.7	2.6	2.3	3.2	2.9	3.7	3.3	-0.4
Midwest	2.7	2.5	2.4	2.8	3.0	1.9	2.3	2.3	2.4	3.5	2.8	3.5	3.1	-0.4
South	1.7	3.0	1.2	2.0	2.1	2.1	1.8	3.1	3.1	2.3	2.8	2.7	3.6	+0.8
West	2.0	2.2	1.5	2.3	2.9	2.8	2.2	1.6	3.5	3.6	4.8	3.1	4.5	+1.4
Population Density:														
Large MSA	2.4	2.7	2.4	2.4	2.4	2.5	2.2	2.6	3.3	3.1	3.9	2.8	3.4	+0.6
Other MSA	2.0	2.8	1.7	2.9	3.0	2.7	2.4	2.6	3.2	3.4	3.4	3.6	3.7	+0.1
Non-MSA	1.8	2.6	1.4	2.0	2.3	1.4	1.5	2.1	1.5	1.9	2.1	2.9	3.5	+0.7
Parental Education: <sup>a</sup>														
1.0–2.0 (Low)	2.3	2.3	1.8	1.9	2.4	1.7	2.0	2.0	3.8	2.4	2.9	3.0	3.3	+0.3
2.5–3.0	1.9	2.4	1.6	2.3	2.3	2.6	2.8	2.5	2.7	2.8	3.4	3.1	3.8	+0.7
3.5–4.0	2.1	2.4	1.6	2.7	2.8	2.4	1.9	2.7	2.9	3.1	3.5	3.1	3.8	+0.7
4.5–5.0	2.0	2.8	1.9	2.3	2.7	2.4	1.9	2.1	2.5	3.0	3.1	2.5	3.3	+0.8
5.5–6.0 (High)	2.3	3.2	2.1	3.2	2.4	2.2	2.1	2.8	2.9	3.3	3.2	3.4	2.9	-0.5
Race/Ethnicity (2-year average): <sup>b</sup>														
White	2.1	2.8	2.6	2.7	3.3	3.1	2.5	2.4	2.6	2.9	3.5	3.6	3.4	-0.2
African American	0.8	0.8	0.7	0.8	1.0	0.9	0.8	1.1	1.3	1.1	1.5	1.5	1.6	+0.1
Hispanic	1.8	1.8	1.3	0.9	1.0	1.3	1.7	2.0	3.1	3.7	2.9	2.6	3.2	+0.6

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.

<sup>c</sup>In 2014 questions on use of LSD were dropped from one of six forms. Beginning in 2014 data are based on five of six forms; N is five sixths of N indicated.

**TABLE 31**  
**HALLUCINOGENS OTHER THAN LSD: Trends in Annual Prevalence of Use**  
**by Subgroups in Grade 8**

	Percentage who used in last 12 months														
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 <sup>a</sup>	2002	2003	2004	2005
<i>Approximate weighted N =</i>	17,500	18,600	18,300	17,300	17,500	17,800	18,600	18,100	16,700	16,700	16,200	15,100	16,500	17,000	16,800
Total	0.7	1.1	1.0	1.3	1.7	2.0	1.8	1.6	1.5	1.4 <sup>‡</sup>	2.4	2.1	2.1	1.9	2.0
Gender:															
Male	0.8	1.1	1.2	1.6	1.9	2.1	2.1	1.8	1.8	1.5 <sup>‡</sup>	2.8	2.4	2.4	1.9	2.2
Female	0.6	1.0	0.9	0.9	1.4	1.7	1.4	1.4	1.1	1.3 <sup>‡</sup>	2.0	1.7	1.8	1.8	1.8
College Plans:															
None or under 4 years	1.7	3.6	2.9	3.6	4.8	5.2	4.7	5.1	5.3	3.9 <sup>‡</sup>	7.4	6.5	7.5	6.5	6.1
Complete 4 years	0.5	0.7	0.7	1.0	1.3	1.4	1.4	1.2	1.0	1.2 <sup>‡</sup>	1.8	1.6	1.5	1.4	1.6
Region:															
Northeast	0.4	0.6	0.7	1.4	1.8	2.1	1.7	1.2	1.4	1.3 <sup>‡</sup>	2.1	1.3	1.9	1.6	1.5
Midwest	0.6	1.3	0.6	1.1	1.6	1.8	1.8	1.9	1.7	1.8 <sup>‡</sup>	1.8	2.1	2.2	1.7	1.9
South	0.7	1.0	1.0	1.0	1.5	1.7	1.4	1.8	1.6	1.3 <sup>‡</sup>	2.9	2.2	2.2	1.9	2.4
West	1.4	1.3	1.9	1.9	1.9	2.6	2.7	1.3	1.1	1.4 <sup>‡</sup>	2.4	2.6	2.3	2.2	2.0
Population Density:															
Large MSA	0.7	0.8	0.7	1.6	1.6	1.8	1.4	1.3	1.1	1.2 <sup>‡</sup>	1.9	1.6	1.6	1.4	2.0
Other MSA	0.7	1.3	1.3	1.4	1.8	2.2	1.9	1.6	1.5	1.7 <sup>‡</sup>	2.6	1.9	2.1	2.1	2.0
Non-MSA	0.7	1.0	0.9	0.8	1.5	1.7	1.9	2.0	1.9	1.3 <sup>‡</sup>	2.6	3.0	3.0	2.0	2.2
Parental Education: <sup>b</sup>															
1.0–2.0 (Low)	1.5	1.8	1.4	1.6	2.4	2.2	2.6	2.7	2.6	2.5 <sup>‡</sup>	5.0	3.4	3.5	3.9	2.7
2.5–3.0	0.8	0.7	1.1	1.1	1.7	2.1	2.0	1.3	1.9	1.5 <sup>‡</sup>	2.3	2.6	2.8	2.0	2.9
3.5–4.0	0.4	1.2	1.2	1.2	1.8	2.0	1.6	1.8	1.3	1.3 <sup>‡</sup>	2.6	1.9	2.2	1.7	2.6
4.5–5.0	0.8	0.9	0.7	1.5	1.6	2.0	1.6	1.5	0.9	1.1 <sup>‡</sup>	1.6	1.7	1.5	1.6	1.6
5.5–6.0 (High)	0.8	1.3	0.9	1.5	1.7	1.4	1.9	1.9	1.5	2.0 <sup>‡</sup>	1.9	1.5	1.6	1.6	1.0
Race/Ethnicity (2-year average): <sup>c</sup>															
White	—	0.9	1.0	1.2	1.7	2.1	2.1	1.8	1.6	1.6	1.4 <sup>‡</sup>	1.5 <sup>d</sup>	2.3	2.2	2.1
African American	—	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3 <sup>‡</sup>	0.4 <sup>d</sup>	0.6	0.6	0.8	0.9
Hispanic	—	1.5	1.5	1.5	1.8	2.1	2.0	2.2	2.2	1.8 <sup>‡</sup>	1.8 <sup>d</sup>	2.2	2.2	2.2	2.1

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**TABLE 31 (cont.)**  
**HALLUCINOGENS OTHER THAN LSD: Trends in Annual Prevalence of Use**  
**by Subgroups in Grade 8**

	Percentage who used in last 12 months														2018-2019 change	
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
Approximate weighted N =	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600		
Total	1.8	1.6	1.6	1.5	1.8	1.8	1.3	1.2	1.0	0.8	0.8	0.7	0.9	0.9	0.0	
Gender:																
Male	1.8	1.7	1.6	1.7	2.1	2.1	1.3	1.2	1.2	1.0	0.8	0.6	1.1	0.8	-0.3	
Female	1.7	1.4	1.5	1.4	1.6	1.4	1.2	1.1	0.7	0.7	0.7	0.7	0.7	0.9	+0.3	
College Plans:																
None or under 4 years	5.5	6.0	6.9	5.9	6.0	5.8	3.8	3.7	3.2	3.1	2.5	2.0	2.3	2.1	-0.3	
Complete 4 years	1.4	1.2	1.1	1.2	1.5	1.5	1.1	1.0	0.8	0.6	0.6	0.5	0.7	0.7	0.0	
Region:																
Northeast	1.2	0.8	1.0	1.3	1.4	0.9	1.2	0.5	0.5	0.6	0.4	0.4	0.5	0.2	-0.3	
Midwest	1.7	1.7	1.4	1.4	2.0	1.4	0.7	1.1	0.8	0.8	0.6	0.3	0.8	0.9	+0.2	
South	1.8	1.4	1.7	1.4	1.4	1.5	1.6	1.3	0.9	0.9	0.9	0.8	0.9	0.8	-0.2	
West	2.2	2.3	1.8	2.1	2.6	3.4	1.4	1.5	1.5	0.9	1.1	1.1	1.3	1.5	+0.2	
Population Density:																
Large MSA	1.2	1.3	1.4	1.2	1.6	1.7	1.4	1.0	0.8	0.7	0.7	0.5	1.1	0.5	-0.6 ss	
Other MSA	2.0	1.6	1.7	1.6	2.0	2.2	1.4	1.2	1.0	1.0	0.8	0.8	0.8	1.0	+0.2	
Non-MSA	2.1	2.0	1.3	1.8	1.7	1.1	0.9	1.2	1.1	0.8	1.0	0.7	0.8	1.2	+0.4	
Parental Education: <sup>b</sup>																
1.0–2.0 (Low)	2.3	2.5	3.1	3.3	2.7	3.1	1.6	1.8	1.6	1.1	1.3	1.1	1.3	1.4	0.0	
2.5–3.0	2.2	1.5	1.7	1.3	2.4	2.3	1.5	1.4	1.1	0.8	1.0	0.8	0.9	1.6	+0.8	
3.5–4.0	1.8	1.9	1.7	1.6	2.0	1.9	1.7	1.2	1.0	0.8	1.1	0.8	1.2	0.8	-0.4	
4.5–5.0	1.7	1.2	1.2	1.3	1.7	1.4	0.8	0.9	0.6	0.6	0.4	0.4	0.8	0.6	-0.2	
5.5–6.0 (High)	1.2	0.9	1.3	1.3	1.0	1.2	1.1	1.0	1.0	0.7	0.6	0.6	0.5	0.8	+0.3	
Race/Ethnicity (2-year average): <sup>c</sup>																
White	2.2	1.8	1.7	1.6	1.8	1.8	1.3	1.1	1.0	0.8	0.7	0.7	0.7	0.8	+0.1	
African American	0.9	0.6	0.6	0.6	0.6	0.5	0.7	0.7	0.4	0.5	0.7	0.6	0.3	0.3	0.0	
Hispanic	1.4	1.6	1.9	1.8	2.1	2.6	2.3	1.6	1.3	1.0	0.9	0.8	0.8	1.1	+0.3	

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

Notes. ' † ' indicates some change in the question. See relevant footnote. See relevant figure to assess the impact of the wording changes. 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>In 2001 the question text was changed on half of the questionnaire forms. Other psychedelics was changed to other hallucinogens, and shrooms was added to the list of examples. The 2001 data are based on the changed forms only; N is one half of N indicated. In 2002 have been the remaining forms were changed. Beginning in 2002, the data are based on all forms. Data for any illicit drug other than marijuana and hallucinogens are also affected by these changes and treated in a parallel manner.

<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.

<sup>d</sup>Due to changes in the question wording in half of the questionnaire forms in 2001, the 2002 entry comprises half of the 2001 sample data double-weighted (the half with the new version of the question) and all of the 2002 sample data.

**TABLE 32**  
**HALLUCINOGENS OTHER THAN LSD: Trends in Annual Prevalence of Use**  
**by Subgroups in Grade 10**

	Percentage who used in last 12 months															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 <sup>a</sup>	2002	2003	2004	2005	
Approximate weighted N =	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	
Total	1.3	1.4	1.9	2.4	2.8	3.3	3.3	3.4	3.2	3.1‡	4.4	4.0	3.6	3.7	3.5	
Gender:																
Male	1.5	1.6	2.5	3.0	3.4	3.8	4.1	3.9	4.1	3.8‡	5.7	4.6	4.4	4.3	4.2	
Female	1.1	1.1	1.2	1.7	2.1	2.7	2.5	2.8	2.3	2.4‡	3.1	3.4	2.8	3.2	2.9	
College Plans:																
None or under 4 years	2.5	2.7	3.7	4.8	5.3	6.2	4.8	7.3	6.7	6.1‡	10.9	8.8	7.3	8.2	8.5	
Complete 4 years	1.1	1.1	1.5	1.9	2.3	2.7	3.0	2.6	2.6	2.6‡	3.3	3.3	2.9	3.1	2.8	
Region:																
Northeast	1.4	0.7	2.3	3.2	3.0	3.9	3.2	4.7	4.5	3.4‡	4.2	3.6	3.4	4.3	4.4	
Midwest	1.0	1.2	1.7	1.9	2.2	3.2	3.4	3.2	2.8	3.3‡	4.0	4.3	2.9	3.3	3.6	
South	1.3	1.2	1.5	2.1	2.7	3.1	3.1	3.2	2.7	2.9‡	3.6	3.4	3.5	3.3	3.0	
West	1.6	2.6	2.5	3.0	3.5	3.0	3.6	2.5	3.3	3.0‡	6.7	5.1	4.5	4.2	3.3	
Population Density:																
Large MSA	1.4	1.5	1.9	2.4	2.7	3.4	3.3	3.1	3.1	3.9‡	3.4	4.0	2.8	2.7	2.9	
Other MSA	1.4	1.4	1.9	2.5	3.0	3.5	3.2	3.4	3.5	2.9‡	4.8	4.0	3.9	4.4	3.9	
Non-MSA	1.0	1.2	2.0	2.3	2.5	2.7	3.5	3.5	2.7	2.8‡	4.5	3.9	3.8	3.6	3.6	
Parental Education: <sup>b</sup>																
1.0–2.0 (Low)	1.5	1.5	2.0	2.6	3.3	3.4	2.4	2.9	3.4	2.5‡	4.8	4.4	5.2	2.8	3.1	
2.5–3.0	1.2	1.0	1.4	1.8	2.7	3.4	2.7	4.2	3.0	2.6‡	4.4	4.3	4.2	4.5	4.1	
3.5–4.0	1.3	1.7	2.3	2.3	3.0	3.2	3.6	3.0	2.8	3.2‡	4.3	4.0	3.3	3.6	3.6	
4.5–5.0	1.2	1.5	1.9	2.6	2.5	3.3	3.7	3.0	3.7	3.7‡	4.4	3.5	3.2	3.5	3.5	
5.5–6.0 (High)	1.8	1.1	2.1	2.8	2.5	3.5	3.6	3.7	3.7	3.7‡	3.9	4.6	3.0	3.5	3.3	
Race/Ethnicity (2-year average): <sup>c</sup>																
White	—	1.5	1.8	2.3	2.8	3.4	3.9	4.0	4.0	3.8	3.4‡	4.0 <sup>d</sup>	4.7	4.4	4.2	
African American	—	0.1	0.4	0.7	0.7	0.4	0.3	0.4	0.5	0.6	1.1‡	1.3 <sup>d</sup>	0.9	0.7	1.1	
Hispanic	—	1.3	1.5	1.9	2.0	2.1	2.4	2.8	2.6	2.0	1.6‡	2.5 <sup>d</sup>	2.9	3.2	3.5	

Table continued on next page.

**TABLE 32 (cont.)**  
**HALLUCINOGENS OTHER THAN LSD: Trends in Annual Prevalence of Use**  
**by Subgroups in Grade 10**

	Percentage who used in last 12 months														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	3.7	3.8	3.3	3.5	3.5	3.5	3.0	2.7	2.6	1.9	2.0	1.8	1.7	2.1	+0.4
Gender:															
Male	4.1	4.7	4.0	4.4	4.4	4.1	4.0	3.5	2.5	2.2	2.3	2.1	1.9	2.9	+1.0 ss
Female	3.1	3.0	2.6	2.6	2.5	2.9	2.1	2.0	2.7	1.6	1.5	1.4	1.4	1.3	-0.1
College Plans:															
None or under 4 years	9.0	8.9	9.0	9.0	10.0	9.4	8.7	4.8	6.3	4.9	4.6	4.9	3.6	3.6	0.0
Complete 4 years	3.0	3.2	2.6	2.9	2.8	2.8	2.4	2.5	2.1	1.6	1.7	1.4	1.4	1.7	+0.3
Region:															
Northeast	3.7	4.1	2.9	2.7	3.3	3.3	2.8	1.8	2.9	2.1	1.4	1.0	1.1	1.2	+0.1
Midwest	3.7	4.0	3.3	3.8	2.9	2.9	2.4	2.3	2.4	1.3	1.7	1.6	1.5	1.8	+0.4
South	3.0	3.1	3.5	3.3	3.5	3.4	3.0	2.8	2.2	2.0	1.7	1.2	2.0	2.0	0.0
West	4.7	4.4	3.6	4.3	4.4	4.6	3.9	3.7	2.8	2.4	3.0	3.4	2.1	3.3	+1.2
Population Density:															
Large MSA	3.8	3.4	3.3	3.4	3.2	3.5	2.8	2.0	2.2	1.7	2.0	1.8	1.5	1.8	+0.3
Other MSA	3.7	4.1	3.6	3.6	3.7	3.8	3.2	3.1	2.8	2.0	2.1	1.6	1.9	2.2	+0.3
Non-MSA	3.3	3.8	2.9	3.4	3.6	3.0	2.9	2.7	2.5	2.1	1.8	2.1	1.6	2.4	+0.8
Parental Education: <sup>b</sup>															
1.0–2.0 (Low)	4.7	4.5	4.7	5.0	4.7	4.9	4.1	3.6	2.5	2.8	2.0	1.9	2.2	1.6	-0.5
2.5–3.0	3.8	3.9	3.3	3.2	5.0	4.1	3.5	3.5	2.6	2.7	2.6	2.6	1.9	2.8	+0.9
3.5–4.0	3.4	4.1	3.5	3.7	3.4	3.3	2.8	3.0	3.1	2.3	2.2	2.0	1.7	2.7	+1.0
4.5–5.0	3.7	3.8	2.9	3.2	2.8	3.1	2.9	2.4	2.2	1.6	1.5	1.4	1.4	1.5	+0.2
5.5–6.0 (High)	3.8	3.3	2.6	3.8	2.6	3.2	2.4	2.0	2.1	1.2	1.6	1.3	1.9	1.7	-0.2
Race/Ethnicity (2-year average): <sup>c</sup>															
White	4.2	4.4	4.2	3.9	3.8	3.8	3.5	3.0	2.7	2.4	2.2	2.2	1.9	2.1	+0.2
African American	1.2	0.8	0.7	1.1	1.2	1.0	1.1	1.1	0.9	1.4	1.2	0.6	0.4	0.6	+0.2
Hispanic	3.0	2.3	2.9	3.6	3.7	3.7	3.5	2.9	2.4	2.0	1.9	1.8	1.9	2.1	+0.2

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

Notes. ' ‡ ' indicates some change in the question. See relevant footnote. See relevant figure to assess the impact of the wording changes. 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>In 2001 the question text was changed on half of the questionnaire forms. Other psychedelics was changed to other hallucinogens, and shrooms was added to the list of examples. The 2001 data are based on the changed forms only; N is one half of N indicated. In 2002 the remaining forms were changed. Beginning in 2002, the data are based on all forms. Data for any illicit drug other than marijuana and hallucinogens are also affected by these changes and have been treated in a parallel manner.

<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.

<sup>d</sup>Due to changes in the question wording in half of the questionnaire forms in 2001, the 2002 entry comprises half of the 2001 sample data double-weighted (the half with the new version of the question) and all of the 2002 sample data.

**TABLE 33**  
**HALLUCINOGENS OTHER THAN LSD: Trends in Annual Prevalence of Use**  
**by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Approximate weighted N =	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
Total	9.4	7.0	6.9	7.3	6.8	6.2	5.6	4.7	4.1	3.8	3.6	3.0	3.2	2.1	2.2	2.1
Gender:																
Male	12.1	8.8	8.9	8.8	8.0	8.0	6.9	5.7	4.9	4.8	4.6	3.4	3.7	2.7	3.1	3.0
Female	7.5	5.0	4.9	5.5	5.3	4.2	4.0	3.6	3.1	2.7	2.5	2.5	2.6	1.4	1.1	1.1
College Plans:																
None or under 4 years	—	8.3	8.6	8.1	7.6	6.7	6.0	5.1	4.8	4.5	4.1	3.3	3.5	2.5	2.7	2.1
Complete 4 years	—	5.2	4.9	5.7	5.3	5.1	5.0	4.1	3.1	3.0	2.9	2.5	2.8	1.8	1.9	1.9
Region:																
Northeast	12.0	7.8	8.2	10.3	10.2	10.0	9.0	8.1	6.1	8.4	7.1	5.1	4.8	2.6	2.5	2.9
Midwest	11.3	7.9	7.9	7.6	6.8	6.7	5.7	4.8	4.4	2.9	3.1	2.7	3.5	1.6	2.3	1.7
South	7.1	5.7	5.4	4.8	4.1	3.1	2.0	1.8	2.4	1.5	1.5	1.4	1.7	2.0	1.9	1.7
West	7.7	6.7	6.3	7.2	6.6	5.9	6.9	4.9	4.1	4.5	3.6	3.3	3.3	2.5	2.3	2.6
Population Density:																
Large MSA	11.1	7.8	7.5	9.3	8.8	8.5	8.1	7.3	6.6	6.9	6.1	5.1	4.8	3.3	2.6	2.3
Other MSA	10.7	7.3	7.2	6.9	7.2	6.5	5.0	3.7	4.0	3.1	3.0	2.4	2.5	1.7	2.0	2.4
Non-MSA	6.8	6.1	6.1	6.1	4.7	4.1	4.4	4.0	2.4	2.4	2.4	2.1	2.9	1.6	2.1	1.5
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	7.5	5.1	5.4	5.7	4.7	5.8	3.9	3.7	3.6	2.8	2.7	2.3	3.4	2.7	2.0	1.5
2.5–3.0	8.7	7.6	6.9	7.2	6.5	5.9	5.1	4.7	3.6	3.8	3.5	3.1	2.9	1.5	1.8	1.2
3.5–4.0	9.1	7.5	7.4	7.3	6.6	5.8	5.8	4.8	4.5	3.6	4.1	3.2	3.0	1.8	1.8	2.2
4.5–5.0	9.7	8.4	7.0	7.8	7.5	6.4	6.0	4.7	3.9	3.8	3.6	2.7	3.3	2.2	2.6	2.8
5.5–6.0 (High)	7.4	7.2	7.8	7.9	9.2	7.2	7.0	6.7	4.6	5.3	2.6	2.8	3.5	3.1	3.3	3.6
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	—	7.6	7.6	7.5	7.0	6.3	5.6	4.7	4.3	4.0	3.5	3.4	3.0	2.4	2.4
African American	—	—	1.6	1.6	1.3	1.4	1.3	1.2	1.6	1.3	0.8	0.9	0.9	0.6	0.5	0.4
Hispanic	—	—	5.1	5.2	4.8	4.4	4.5	4.8	4.2	3.4	3.7	3.3	2.1	1.7	1.6	1.5

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**TABLE 33 (cont.)**  
**HALLUCINOGENS OTHER THAN LSD: Trends in Annual Prevalence of Use**  
**by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 <sup>c</sup>	2002	2003	2004	2005	2006
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	2.0	1.7	2.2	3.1	3.8	4.4	4.6	4.6	4.3	4.4†	5.9	5.4	5.4	5.6	5.0	4.6
Gender:																
Male	2.7	2.3	3.0	4.3	5.3	5.7	5.9	6.0	5.4	5.8†	7.2	7.2	7.2	7.7	6.7	5.7
Female	1.3	1.2	1.3	1.9	2.1	2.8	3.2	3.0	3.1	2.9†	4.2	3.5	3.4	3.4	3.2	3.3
College Plans:																
None or under 4 years	2.4	2.2	2.5	3.2	4.4	5.1	4.7	6.1	4.4	5.6†	7.3	7.9	7.3	6.9	6.8	6.5
Complete 4 years	1.9	1.5	2.0	2.9	3.4	4.0	4.4	3.9	4.0	3.8†	5.0	4.6	4.5	4.9	4.4	4.1
Region:																
Northeast	3.5	2.5	2.6	5.1	5.3	6.1	6.6	6.3	5.5	5.0†	6.9	7.5	7.3	6.7	4.9	6.4
Midwest	1.9	1.8	2.0	3.1	3.2	3.5	2.8	4.1	3.7	3.6†	6.9	5.0	4.7	4.6	6.3	4.7
South	1.0	1.3	1.8	1.9	3.1	3.6	4.0	3.5	3.3	3.3†	3.1	4.5	4.3	4.9	4.7	3.8
West	2.6	1.8	2.9	3.6	4.5	5.4	6.1	5.5	5.7	6.9†	8.0	5.6	6.0	6.9	4.0	4.2
Population Density:																
Large MSA	1.8	2.1	2.5	3.6	4.9	5.2	4.0	4.4	4.5	5.2†	7.6	5.9	3.9	5.2	5.1	5.5
Other MSA	2.6	1.7	2.2	3.6	3.7	4.7	5.4	5.1	4.2	4.3†	5.4	5.8	6.5	6.6	5.4	4.2
Non-MSA	1.2	1.4	2.0	1.8	2.7	3.1	3.6	3.7	4.2	3.8†	4.8	4.3	5.1	4.1	4.0	3.9
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	1.9	1.3	1.7	2.2	2.7	3.5	2.7	3.7	2.2	3.8†	3.8	4.3	4.7	3.3	2.9	4.9
2.5–3.0	1.6	1.6	1.5	2.4	3.4	3.0	3.5	3.9	3.3	3.6†	5.4	5.4	4.3	4.9	5.1	4.5
3.5–4.0	2.0	1.8	2.4	2.9	3.6	4.0	4.8	4.6	5.1	4.2†	6.1	5.6	5.9	6.0	4.9	4.9
4.5–5.0	2.4	1.7	2.7	3.7	4.2	5.2	5.3	5.0	4.4	4.6†	5.5	5.8	6.0	6.3	5.3	4.3
5.5–6.0 (High)	2.4	2.1	3.0	4.4	4.1	5.9	5.9	5.4	4.7	5.8†	6.6	5.1	4.8	5.6	5.3	4.5
Race/Ethnicity (2-year average): <sup>b</sup>																
White	2.4	2.2	2.2	3.0	3.8	4.4	5.2	5.6	5.2	4.8	4.7†	5.4 <sup>d</sup>	6.3	6.4	6.1	5.5
African American	0.3	0.3	0.5	0.7	0.8	0.8	0.7	0.6	0.6	1.0	0.9†	0.9 <sup>d</sup>	0.9	0.9	1.2	1.4
Hispanic	1.7	1.4	1.4	1.6	2.6	3.5	3.1	2.7	3.0	4.6	4.8†	4.1 <sup>d</sup>	4.1	3.7	3.6	3.5

Table continued on next page.



**TABLE 33 (cont.)**  
**HALLUCINOGENS OTHER THAN LSD: Trends in Annual Prevalence of Use**  
**by Subgroups in Grade 12**

	Percentage who used in last 12 months													2018-2019 change
	2007	2008	2009	2010	2011	2012	2013	2014 <sup>e</sup>	2015 <sup>e</sup>	2016 <sup>e</sup>	2017 <sup>e</sup>	2018 <sup>e</sup>	2019 <sup>e</sup>	
<i>Approximate weighted N =</i>	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	4.8	5.0	4.2	4.8	4.3	4.0	3.7	3.0	2.9	2.7	2.9	2.7	2.7	0.0
Gender:														
Male	6.8	6.7	5.7	6.9	5.9	5.3	5.0	4.1	3.6	3.5	4.1	3.6	3.7	+0.1
Female	2.9	3.4	2.6	2.5	2.7	2.6	2.2	2.1	1.9	1.8	1.8	1.4	1.5	+0.1
College Plans:														
None or under 4 years	7.2	6.3	5.0	7.1	6.7	4.7	4.9	4.1	4.9	3.2	4.1	4.3	4.4	+0.1
Complete 4 years	4.2	4.7	3.9	4.2	3.8	3.9	3.3	2.7	2.3	2.5	2.5	2.0	2.2	+0.2
Region:														
Northeast	6.0	7.2	3.8	5.0	4.7	4.0	3.3	3.4	2.8	3.1	2.9	3.0	2.2	-0.8
Midwest	4.6	3.9	5.3	4.5	4.2	4.1	4.1	3.2	2.7	2.9	2.1	2.9	2.7	-0.2
South	3.8	4.6	3.7	3.9	3.2	3.5	3.5	2.6	2.4	2.0	2.6	1.9	2.2	+0.3
West	5.7	5.4	4.0	6.2	5.8	4.7	3.7	3.4	4.1	3.6	4.3	3.6	4.4	+0.8
Population Density:														
Large MSA	5.5	6.0	4.5	5.0	4.1	4.8	3.7	3.1	2.8	2.5	3.4	2.3	2.4	+0.1
Other MSA	4.7	4.9	4.3	5.1	4.7	4.0	4.1	3.3	3.3	2.9	2.8	2.6	2.6	0.0
Non-MSA	4.1	4.4	3.6	3.6	3.6	2.8	2.6	2.3	2.2	2.7	2.6	3.6	3.5	-0.1
Parental Education: <sup>a</sup>														
1.0–2.0 (Low)	3.5	3.4	3.0	3.1	4.5	2.8	3.5	2.2	3.0	2.9	3.0	2.7	2.2	-0.5
2.5–3.0	4.3	3.9	4.1	4.1	3.7	4.3	3.5	3.2	2.9	2.4	2.8	2.8	2.7	-0.2
3.5–4.0	4.9	4.8	4.4	5.5	4.3	4.1	4.2	3.3	3.3	2.5	3.2	2.5	2.8	+0.3
4.5–5.0	4.9	6.0	4.7	4.7	4.0	4.3	3.0	3.1	2.4	3.0	2.5	2.1	2.5	+0.3
5.5–6.0 (High)	5.8	6.1	4.1	4.8	5.1	3.4	4.3	2.8	3.0	2.7	3.3	2.7	3.0	+0.2
Race/Ethnicity (2-year average): <sup>b</sup>														
White	5.6	6.0	5.6	5.4	5.5	4.9	4.4	3.8	3.2	3.0	3.1	3.0	2.9	-0.2
African American	1.2	1.0	0.9	1.0	1.3	1.4	1.3	1.4	1.3	1.1	1.3	1.2	1.1	-0.1
Hispanic	3.4	3.0	2.8	3.0	2.8	2.6	3.0	2.7	2.7	2.8	2.3	2.1	2.2	+0.2

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

Notes. ' ‡ ' indicates some change in the question. See relevant footnote. See relevant figure to assess the impact of the wording changes. 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.

<sup>c</sup>In 2001 the question text was changed on half of the questionnaire forms. Other psychedelics was changed to other hallucinogens, and shrooms was added to the list of examples. The 2001 data are based on the changed forms only; N is one half of N indicated. In 2002 the remaining forms were changed. Beginning in 2002, the data are based on all forms. Data for any illicit drug other than marijuana and hallucinogens are also affected by these changes and have been treated in a parallel manner.

<sup>d</sup>Due to changes in the question wording in half of the questionnaire forms in 2001, the 2002 entry comprises half of the 2001 sample data double-weighted (the half with the new version of the question) and all of the 2002 sample data.

<sup>e</sup>In 2014 questions on use of hallucinogens other than LSD were dropped from one of six forms. Beginning in 2014 data are based on five of six forms; N is five sixths of N indicated.

**TABLE 34**  
**MDMA (ECSTASY, MOLLY): Trends in Annual Prevalence of Use by Subgroups in Grade 8**

Percentage who used in last 12 months

	1991- 1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2018-2019 change	
Approximate weighted N =	—	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	14,600	14,400	16,900	15,300	14,000	13,600		
Total	—	2.3	2.3	1.8	1.7	3.1	3.5	2.9	2.1	1.7	1.7	1.4	1.5	1.7	1.3	2.4	1.7	1.1	1.1†	1.5	1.4	1.0	0.9	1.1	1.1	+0.1	
Gender:																											
Male	—	2.2	2.7	2.3	1.7	3.1	3.4	3.1	1.8	1.7	1.6	1.0	1.3	1.4	1.3	2.5	2.0	0.9	1.1†	1.6	1.2	1.0	0.9	1.2	1.2	0.0	
Female	—	2.3	2.0	1.3	1.7	3.0	3.7	2.6	2.2	1.8	1.7	1.7	1.7	2.0	1.2	2.4	1.4	1.2	1.1†	1.5	1.5	0.9	0.9	0.9	1.0	+0.1	
College Plans:																											
None or under 4 years	—	4.8	6.1	4.8	5.3	6.5	9.2	9.1	6.9	5.4	5.9	3.8	5.4	6.9	4.9	9.9	4.7	3.0	3.1†	4.1	3.3	2.9	3.1	3.3	3.4	+0.1	
Complete 4 years	—	1.9	2.0	1.5	1.2	2.7	2.9	2.3	1.5	1.3	1.3	1.2	1.1	1.3	1.0	1.9	1.5	0.9	1.0†	1.3	1.2	0.8	0.7	0.7	0.8	+0.1	
Region:																											
Northeast	—	2.1	1.5	1.6	1.8	2.4	3.8	2.0	1.8	1.8	1.1	0.8	0.5	1.2	1.0	1.2	0.9	1.2	0.6†	1.4	1.0	0.6	0.6	0.7	0.3	-0.4 s	
Midwest	—	1.7	1.7	1.7	1.4	3.5	2.9	2.3	2.1	1.4	1.7	1.6	1.2	1.4	1.0	2.4	0.9	0.3	1.2†	1.2	1.3	0.9	1.0	0.7	0.8	+0.1	
South	—	2.8	2.3	2.7	1.8	3.2	3.7	3.7	2.5	1.9	2.1	2.0	1.8	1.8	1.1	2.5	1.5	1.4	1.3†	1.7	1.7	1.1	0.9	1.2	1.3	+0.1	
West	—	2.3	3.8	0.8	1.7	2.9	3.6	3.0	1.6	1.7	1.5	0.7	1.9	2.2	2.2	3.2	3.7	1.3	1.2†	1.5	1.1	1.1	1.1	1.6	1.7	+0.2	
Population Density:																											
Large MSA	—	2.9	1.8	1.8	1.6	3.0	3.1	2.6	1.8	2.1	1.6	1.1	1.4	1.9	1.3	2.5	1.9	1.1	1.1†	1.2	1.7	0.7	0.9	1.2	0.6	-0.6 ss	
Other MSA	—	2.5	3.1	2.1	1.8	3.4	4.3	3.3	1.9	1.9	1.6	1.6	1.5	1.7	1.4	2.6	1.9	1.3	1.3†	1.8	1.4	1.1	0.9	1.1	1.4	+0.3	
Non-MSA	—	1.2	1.5	1.5	1.6	2.5	2.5	2.5	2.7	1.0	1.9	1.6	1.8	1.3	1.0	2.0	1.2	0.6	0.8†	1.2	0.9	1.2	0.8	0.9	1.3	+0.4	
Parental Education: <sup>a</sup>																											
1.0–2.0 (Low)	—	2.9	2.2	2.1	2.5	4.2	5.8	6.0	3.6	3.6	2.5	2.8	3.1	4.1	1.8	5.0	2.2	2.1	2.3†	2.4	2.5	1.7	2.1	2.0	2.1	+0.1	
2.5–3.0	—	2.2	2.4	1.4	2.0	3.9	4.3	3.6	3.1	2.2	3.0	1.5	1.9	1.7	1.6	3.8	2.2	1.7	1.2†	2.1	1.5	1.1	1.5	1.4	2.3	+0.9	
3.5–4.0	—	2.2	2.9	2.6	1.5	2.8	2.4	2.9	2.1	1.7	1.7	1.2	1.1	2.1	1.4	2.2	2.1	1.0	1.0†	1.3	1.2	1.1	0.8	1.1	0.8	-0.3	
4.5–5.0	—	2.6	2.0	1.4	1.2	3.1	3.3	2.4	1.4	1.2	1.1	1.3	1.4	1.0	1.1	1.9	1.5	0.6	1.1†	1.0	1.0	1.1	0.5	1.0	0.8	-0.2	
5.5–6.0 (High)	—	2.4	2.7	2.5	2.3	2.0	3.0	1.2	2.0	1.7	0.9	1.2	0.8	0.8	1.1	1.1	1.1	0.6	0.6†	1.3	0.8	0.3	0.5	0.5	0.8	+0.3	
Race/Ethnicity (2-year average): <sup>b</sup>																											
White	—	—	2.7	2.4	1.9	2.5	3.2	2.9	2.4	1.9	1.5	1.5	1.4	1.6	1.5	1.9	1.8	1.0	0.9	1.0†	1.3	0.9	0.7	0.7	0.9	+0.2	
African American	—	—	0.3	0.4	0.5	0.6	1.1	1.1	1.0	1.6	1.8	1.4	1.2	0.7	0.4	0.7	1.1	1.0	0.9	1.0†	1.3	1.3	1.2	0.5	0.2	-0.3 s	
Hispanic	—	—	2.5	1.7	1.9	3.3	5.3	5.9	4.0	2.3	2.3	1.8	1.8	2.1	2.1	2.6	3.1	2.4	1.8	1.5†	1.3	1.3	1.0	1.3	1.5	+0.2	

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 1996; N is one half of N indicated in Table S2. Data based on one of four forms in 1997–2001; N is one third of N indicated in Table S2. Data based on two of four forms beginning in 2002; N is one half of N indicated in Table S2. In 2014 a revised question on use of ecstasy (MDMA) including "Molly" was added to one form.

Beginning in 2014 data reported here are for the revised wording which includes "Molly"; N is two sixths of N indicated in 2014 and five sixths of N indicated beginning in 2015.

<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. Two year race data for the 2014 are based on the 2013 and 2014 unchanged forms only. Two year race data for the 2015 are based on the 2014 revised wording data two and one half times weighted and the 2015 revised wording data. Beginning in 2016 two year race data based only on revised wording data.

**TABLE 35**  
**MDMA (ECSTASY, MOLLY): Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months																							2018-2019 change			
	1991- 1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017		2018	2019	
Approximate weighted N =	—	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	13,000	15,600	14,700	13,500	14,300	14,000		
Total	—	4.6	3.9	3.3	4.4	5.4	6.2	4.9	3.0	2.4	2.6	2.8	3.5	2.9	3.7	4.7	4.5	3.0	3.6†	3.8	2.4	1.8	1.7	1.4	1.7	+0.3	
Gender:																											
Male	—	4.9	4.7	3.5	4.7	5.7	7.6	4.3	2.8	2.4	2.6	3.3	3.7	3.4	3.7	5.4	4.9	3.3	4.4†	3.9	2.6	2.2	2.1	1.5	2.1	+0.6 s	
Female	—	4.2	3.1	2.9	4.2	4.8	4.9	5.2	3.2	2.4	2.5	2.2	3.1	2.4	3.5	4.0	3.8	2.6	2.9†	3.6	2.1	1.4	1.3	1.3	1.2	-0.1	
College Plans:																											
None or under 4 years	—	7.7	7.5	5.4	8.5	10.7	13.6	10.1	5.7	5.4	5.6	6.9	7.4	7.5	8.6	9.2	10.6	8.3	7.0†	8.7	5.9	4.8	4.5	3.4	3.7	+0.3	
Complete 4 years	—	4.0	3.3	2.9	3.7	4.5	5.1	4.1	2.6	2.0	2.2	2.2	3.0	2.3	3.1	4.2	3.8	2.4	3.2†	3.2	2.0	1.5	1.4	1.1	1.2	+0.1	
Region:																											
Northeast	—	4.4	3.0	3.8	7.0	6.4	8.2	4.4	2.7	2.6	2.2	2.2	2.9	2.0	2.0	3.7	3.2	1.9	3.3†	3.4	1.9	1.2	1.6	0.8	0.9	+0.1	
Midwest	—	3.6	3.2	2.2	2.3	5.2	4.8	4.6	2.5	1.9	3.0	2.8	3.5	2.0	2.8	3.1	2.1	2.4	3.1†	3.1	1.9	1.6	2.1	1.6	1.1	-0.5	
South	—	5.6	5.0	4.1	4.1	5.2	5.9	5.1	3.8	2.6	2.6	3.0	3.6	2.8	3.2	4.5	3.9	2.8	3.9†	4.8	3.1	1.8	1.5	1.6	1.6	+0.1	
West	—	4.1	3.7	2.7	4.4	5.0	6.8	5.2	3.0	2.7	2.5	3.0	3.8	4.5	6.8	7.8	9.2	4.8	3.8†	3.3	2.3	2.4	1.8	1.4	2.8	+1.4 s	
Population Density:																											
Large MSA	—	5.6	4.0	2.5	5.2	7.0	7.3	5.1	2.4	1.8	3.0	2.9	3.0	3.8	3.3	4.8	4.8	3.8	3.1†	3.4	2.6	1.9	1.9	1.3	1.1	-0.3	
Other MSA	—	4.6	3.6	4.1	4.7	5.3	5.5	5.2	3.1	3.1	2.5	2.7	3.7	2.7	4.0	5.3	5.1	2.9	4.6†	4.4	2.1	1.7	1.6	1.5	2.0	+0.6	
Non-MSA	—	3.3	4.2	2.7	2.8	3.7	6.3	3.7	3.8	2.0	2.3	2.8	3.8	2.0	3.5	3.3	3.0	1.9	1.7†	3.1	2.7	1.9	1.7	1.4	1.7	+0.3	
Parental Education: <sup>a</sup>																											
1.0–2.0 (Low)	—	4.8	3.0	1.9	3.7	7.0	7.2	5.8	2.4	3.3	4.4	3.8	4.3	4.8	6.0	8.5	9.5	5.6	3.5†	2.5	3.7	2.3	2.0	1.7	1.3	-0.4	
2.5–3.0	—	4.7	3.9	3.1	4.4	4.9	6.5	5.5	3.8	3.3	2.8	2.9	4.7	3.5	4.8	5.6	5.0	3.0	5.0†	4.6	2.3	2.0	2.6	1.6	2.3	+0.7	
3.5–4.0	—	4.7	5.2	4.3	4.0	6.3	7.0	5.5	3.5	2.1	3.3	2.5	3.2	3.2	3.8	4.8	4.4	2.5	3.5†	5.1	3.2	1.8	2.0	1.3	2.0	+0.7	
4.5–5.0	—	4.2	2.5	2.9	4.3	5.0	5.3	3.9	2.7	2.3	2.2	2.7	3.2	2.0	2.5	3.6	2.5	2.9	3.1†	3.8	1.9	1.8	1.1	1.3	1.2	-0.1	
5.5–6.0 (High)	—	5.3	4.0	4.4	5.6	4.8	5.8	4.6	2.3	1.4	1.4	3.3	2.8	2.1	3.4	3.6	3.8	2.5	3.0†	2.5	1.7	1.5	1.3	1.6	1.3	-0.3	
Race/Ethnicity (2-year average): <sup>b</sup>																											
White	—	—	4.8	4.0	4.4	5.3	6.0	6.2	4.6	3.1	2.7	2.9	3.5	3.4	2.9	3.7	4.0	3.2	2.9	3.2†	3.5	2.2	1.7	1.4	1.4	+0.1	
African American	—	—	0.8	1.2	1.3	1.5	2.2	1.8	1.5	0.9	0.6	1.0	1.3	1.3	1.5	1.9	2.2	1.8	1.3	1.3†	1.9	1.5	1.3	1.0	0.8	-0.2	
Hispanic	—	—	3.6	2.3	2.4	4.6	5.4	4.3	3.4	3.0	4.3	3.9	2.7	3.8	5.6	7.3	8.7	7.3	5.1	3.9†	3.2	2.1	2.1	2.2	2.0	-0.2	

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 1996; N is one half of N indicated in Table S2. Data based on one of four forms in 1997–2001; N is one third of N indicated in Table S2. Data based on two of four forms beginning in 2002; N is one half of N indicated in Table S2. In 2014 a revised question on use of ecstasy (MDMA) including "Molly" was added to one form. Beginning in 2014 data reported here are for the revised wording which includes "Molly"; N is two sixths of N indicated in 2014 and five sixths of N indicated beginning in 2015.

<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. Two year race data for the 2014 are based on the 2013 and 2014 unchanged forms only. Two year race data for the 2015 are based on the 2014 revised wording data two and one half times weighted and the 2015 revised wording data. Beginning in 2016 two year race data based only on revised wording data.

**TABLE 36**  
**MDMA (ECSTASY, MOLLY): Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months																							2018–2019 change		
	1975–1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	—	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	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	4.6	4.0	3.6	5.6	8.2	9.2	7.4	4.5	4.0	3.0	4.1	4.5	4.3	4.3	4.5	5.3	3.8	4.0†	5.0	3.6	2.7	2.6	2.2	2.2	0.0
Gender:																										
Male	—	4.8	5.6	4.8	5.6	8.1	10.5	8.2	4.8	4.7	3.3	4.3	5.0	5.5	5.5	5.3	6.3	4.1	5.0†	6.6	4.0	3.3	3.5	2.9	2.9	-0.1
Female	—	4.2	2.5	2.7	5.6	8.2	8.0	6.4	4.0	3.2	2.7	4.0	4.1	3.3	3.2	3.6	4.6	3.4	2.9†	3.1	3.1	1.9	1.6	1.5	1.5	0.0
College Plans:																										
None or under 4 years	—	6.9	3.8	4.7	4.2	8.5	9.8	8.9	6.5	5.3	3.7	6.0	6.5	7.2	6.1	4.7	8.5	4.8	4.3†	5.6	6.1	3.0	3.8	3.4	4.1	+0.7
Complete 4 years	—	4.0	3.9	3.3	6.2	8.0	8.7	7.1	3.9	3.6	2.8	3.7	3.9	3.7	3.9	4.4	4.7	3.4	4.0†	4.6	3.1	2.4	2.1	1.8	1.7	-0.2
Region:																										
Northeast	—	6.3	6.9	3.7	9.4	8.8	10.1	10.3	5.1	3.5	3.0	2.9	4.3	2.9	3.8	4.5	5.9	3.7	4.6†	6.0	3.9	2.1	1.7	1.6	1.3	-0.4
Midwest	—	3.7	1.3	2.7	3.3	5.7	11.8	5.0	4.7	3.0	3.0	3.4	4.4	2.8	4.5	3.5	3.7	2.4	3.9†	2.8	2.3	2.9	1.9	2.2	1.5	-0.7
South	—	4.6	4.3	4.0	5.7	5.9	5.7	7.9	4.2	5.1	3.4	4.9	4.6	4.6	3.8	3.6	4.4	3.2	3.7†	5.4	2.7	2.4	2.6	1.8	2.6	+0.8 s
West	—	3.9	4.1	4.0	5.0	14.4	10.3	6.8	4.2	3.8	2.5	4.6	4.7	6.6	5.2	6.9	7.9	5.9	4.0†	5.6	5.9	3.3	3.8	3.1	3.0	-0.2
Population Density:																										
Large MSA	—	3.6	3.6	3.2	6.1	8.7	10.9	8.4	4.3	4.0	3.5	6.1	5.8	4.7	4.1	5.2	5.8	5.1	5.1†	4.2	3.5	2.3	2.6	2.1	1.7	-0.4
Other MSA	—	5.1	4.6	4.3	6.1	8.4	9.7	8.1	5.0	4.5	3.2	3.1	4.0	4.8	4.7	4.9	5.7	3.7	3.9†	6.8	3.6	2.9	2.9	2.2	2.4	+0.2
Non-MSA	—	4.5	3.4	2.7	4.2	7.4	6.4	4.6	4.0	2.8	2.1	3.1	3.7	2.8	3.5	2.2	3.7	1.8	2.6†	1.8	3.9	2.6	1.9	2.2	2.5	+0.3
Parental Education: <sup>a</sup>																										
1.0–2.0 (Low)	—	5.5	3.5	4.2	6.8	7.3	3.8	4.8	4.1	4.6	3.0	3.8	4.7	4.0	6.2	3.8	6.3	3.7	5.3†	6.4	3.4	2.9	3.3	1.7	1.8	+0.1
2.5–3.0	—	5.0	3.1	3.2	5.1	7.7	10.3	8.0	3.8	3.7	3.9	3.6	4.9	4.0	2.5	4.9	5.5	3.5	3.8†	4.1	3.9	2.7	3.1	2.7	2.9	+0.2
3.5–4.0	—	4.9	3.8	3.2	5.7	6.2	8.4	7.5	5.7	4.6	2.8	3.9	4.4	5.3	4.6	4.7	5.0	4.1	4.1†	4.2	4.3	2.4	2.5	2.0	1.8	-0.2
4.5–5.0	—	4.0	2.9	4.3	6.2	8.3	11.2	7.3	5.0	3.8	3.2	5.1	4.1	3.6	4.9	4.2	5.7	3.9	3.2†	4.9	3.1	2.5	2.1	2.0	1.9	0.0
5.5–6.0 (High)	—	4.1	8.7	3.5	4.7	10.6	8.1	7.6	3.3	3.1	2.0	3.6	4.6	4.1	4.0	4.3	4.4	3.6	5.9†	6.7	3.7	2.9	2.4	2.5	2.5	0.0
Race/Ethnicity (2-year average): <sup>b</sup>																										
White	—	—	5.2	4.7	5.1	7.6	9.6	8.5	6.4	4.7	3.9	4.0	4.9	4.8	4.6	4.5	5.1	4.9	4.0	3.9†	4.0	3.3	2.7	2.6	2.4	-0.2
African American	—	—	0.4	0.4	0.5	1.3	2.4	1.7	1.4	1.6	1.4	1.8	2.1	2.2	2.4	2.6	2.4	1.5	1.1	1.7†	3.3	2.2	1.6	0.9	1.1	+0.2
Hispanic	—	—	2.8	2.7	6.0	10.6	10.2	7.0	5.3	3.7	3.0	3.0	3.3	3.2	3.9	4.6	4.4	4.5	4.5	3.9†	3.8	2.8	2.2	2.1	1.8	-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 in 1996–2001; N is one sixth of N indicated in Table S3. Data based on two of six forms beginning in 2002; N is two sixths of N indicated in Table S3. Beginning in 2014 a revised question on use of ecstasy (MDMA) including "Molly" was added to one form. Beginning in 2014 data reported here are for the revised wording which includes "Molly". N is one sixth of N indicated in 2014 and three sixths of N indicated beginning in 2015.

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

<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. Two year race data for 2014 are based on the 2013 and 2014 unchanged forms only. Two year race data for the 2015 are based on the 2014 revised wording data triple weighted and the 2015 revised wording data. Beginning in 2016 two year race data based only on revised wording data.

**TABLE 37**  
**SALVIA: Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months												2018– 2019
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	change	
<i>Approximate weighted N =</i>	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600		
Total	—	1.7	1.6	1.4	1.2	0.6	0.7	0.9	0.4	0.6	0.8	+0.1	
Gender:													
Male	—	2.6	2.0	1.4	1.6	0.6	0.7	1.2	0.5	1.0	1.0	0.0	
Female	—	1.0	1.1	1.1	0.9	0.6	0.6	0.7	0.2	0.3	0.5	+0.2	
College Plans:													
None or under 4 years	—	4.4	5.4	5.2	4.2	2.7	1.7	5.5	1.4	2.0	2.1	+0.1	
Complete 4 years	—	1.4	1.3	1.1	1.0	0.4	0.6	0.5	0.2	0.4	0.6	+0.1	
Region:													
Northeast	—	1.9	1.8	0.5	0.8	0.8	0.5	0.7	0.1	0.5	0.2	-0.3	
Midwest	—	1.6	1.1	0.4	0.3	0.2	0.5	0.5	0.2	0.2	0.5	+0.3	
South	—	1.4	1.5	2.4	1.1	0.8	0.8	1.4	0.5	0.9	1.4	+0.5	
West	—	2.4	2.1	1.2	2.6	0.5	0.7	0.7	0.5	0.8	0.5	-0.3	
Population Density:													
Large MSA	—	2.0	1.3	1.9	1.4	0.5	0.7	0.9	0.3	1.0	1.0	0.0	
Other MSA	—	1.6	2.1	1.3	1.1	0.8	0.7	1.0	0.5	0.5	0.9	+0.4	
Non-MSA	—	1.9	0.9	0.6	1.2	0.3	0.4	0.7	0.2	0.3	0.1	-0.2	
Parental Education: <sup>a</sup>													
1.0–2.0 (Low)	—	2.3	4.7	1.4	2.3	1.0	1.3	2.2	1.3	0.9	1.2	+0.3	
2.5–3.0	—	1.7	2.5	1.3	1.1	0.4	0.5	1.1	0.2	0.1	1.5	+1.4 s	
3.5–4.0	—	0.9	1.7	1.0	1.4	0.3	0.4	1.9	0.0	0.4	0.4	0.0	
4.5–5.0	—	2.1	1.0	1.5	1.4	0.8	0.7	0.1	0.5	0.9	0.3	-0.6	
5.5–6.0 (High)	—	1.5	0.2	1.4	0.5	0.7	0.2	0.5	0.4	0.3	0.8	+0.5	
Race/Ethnicity (2-year average): <sup>b</sup>													
White	—	—	1.5	1.2	0.9	0.6	0.4	0.4	0.3	0.3	0.4	+0.1	
African American	—	—	1.4	1.5	1.4	0.8	0.6	1.1	1.2	1.3	1.6	+0.3	
Hispanic	—	—	2.1	2.4	2.2	1.6	0.9	1.3	1.1	0.6	0.8	+0.3	

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

Notes. '—' indicates data not available. See Table S1 for the number of subgroup cases. See appendix B for definition of variables in table. Data for 8th graders based on one of four forms; *N* is one third of *N* indicated in Table S1.

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

<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 38**  
**SALVIA: Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months												2018– 2019 change
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
<i>Approximate weighted N =</i>	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000		
Total	—	3.7	3.9	2.5	2.3	1.8	1.2	0.9	0.9	0.7	0.9	+0.2	
Gender:													
Male	—	5.4	5.0	3.7	3.4	2.2	1.8	1.3	1.0	0.8	1.4	+0.6	
Female	—	1.9	2.7	1.4	1.3	1.4	0.5	0.5	0.8	0.6	0.5	-0.1	
College Plans:													
None or under 4 years	—	8.1	12.1	8.2	5.4	5.7	3.8	1.9	1.4	1.4	1.7	+0.3	
Complete 4 years	—	3.2	2.9	1.9	2.0	1.3	0.9	0.8	0.8	0.6	0.8	+0.2	
Region:													
Northeast	—	2.8	5.0	3.6	2.6	1.4	1.5	0.9	0.3	1.0	0.2	-0.7	
Midwest	—	3.1	3.4	1.3	0.9	1.3	0.7	1.0	0.9	0.6	0.6	+0.1	
South	—	4.0	3.4	2.0	1.8	1.9	1.0	0.7	0.7	0.3	0.8	+0.4	
West	—	4.7	4.2	3.8	4.1	2.6	1.7	1.3	1.7	1.4	1.9	+0.5	
Population Density:													
Large MSA	—	4.3	3.8	2.3	2.5	2.1	1.1	1.0	1.1	1.0	0.6	-0.4	
Other MSA	—	3.3	3.8	2.6	2.1	1.4	1.2	0.7	0.7	0.7	1.2	+0.5	
Non-MSA	—	3.7	4.1	2.7	2.6	2.4	1.3	1.3	1.1	0.4	0.6	+0.2	
Parental Education: <sup>a</sup>													
1.0–2.0 (Low)	—	5.8	2.6	3.6	3.3	1.6	1.6	0.8	1.9	2.3	1.1	-1.2	
2.5–3.0	—	4.4	5.1	3.3	3.0	1.8	1.8	1.4	0.9	0.4	1.1	+0.7	
3.5–4.0	—	3.6	4.6	2.2	2.1	2.3	1.1	0.8	0.9	0.5	1.3	+0.8	
4.5–5.0	—	2.7	3.3	2.0	2.3	1.6	1.0	0.7	1.0	0.6	0.7	+0.2	
5.5–6.0 (High)	—	4.0	2.8	2.5	1.2	1.3	0.6	0.6	0.3	0.3	0.5	+0.2	
Race/Ethnicity (2-year average): <sup>b</sup>													
White	—	—	3.9	3.4	2.3	2.1	1.6	1.0	0.8	0.6	0.7	+0.1	
African American	—	—	1.6	0.7	1.3	1.3	1.7	1.2	0.7	0.7	0.9	+0.2	
Hispanic	—	—	4.7	4.0	2.8	1.6	0.8	1.1	1.2	1.2	1.1	-0.2	

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

Notes. \* — \* indicates data not available. See Table S2 for the number of subgroup cases. See appendix B for definition of variables in table. Data for 10th graders based on one of four forms; *N* is one third of *N* indicated in Table S2.

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

<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 39**  
**SALVIA: Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months											
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2018– 2019 change
<i>Approximate weighted N =</i>	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	5.7	5.5	5.9	4.4	3.4	1.8	1.9	1.8	1.5	0.9	0.7	-0.2
Gender:												
Male	9.3	8.5	8.6	5.6	5.0	2.3	2.4	2.2	1.0	1.0	0.7	-0.3
Female	2.3	2.5	3.3	3.0	1.8	1.0	1.0	0.9	1.6	0.4	0.7	+0.3
College Plans:												
None or under 4 years	7.4	9.2	11.4	5.9	6.7	3.4	3.0	3.6	2.9	1.4	0.8	-0.6
Complete 4 years	5.2	4.7	4.8	3.9	2.5	1.4	1.4	1.2	1.1	0.5	0.6	+0.2
Region:												
Northeast	7.1	6.2	6.0	5.3	3.9	2.9	1.3	1.8	2.8	2.3	0.0	-2.3
Midwest	5.0	5.0	3.1	2.6	1.3	1.5	1.3	1.0	1.6	0.4	0.3	-0.1
South	4.8	5.3	5.2	3.8	3.6	1.7	1.4	1.6	1.2	1.2	0.9	-0.2
West	6.9	6.1	9.9	6.5	5.2	1.5	3.5	2.8	1.3	0.2	1.2	+1.0
Population Density:												
Large MSA	7.8	6.7	7.0	5.0	2.8	2.3	2.0	1.4	1.7	1.3	1.0	-0.3
Other MSA	5.0	5.5	6.1	4.7	4.2	1.9	1.4	2.6	1.2	0.4	0.4	0.0
Non-MSA	4.6	4.1	4.1	2.9	2.5	1.0	2.7	0.6	1.9	1.3	0.8	-0.5
Parental Education: <sup>a</sup>												
1.0–2.0 (Low)	5.8	5.4	6.3	8.3	7.1	1.9	2.5	4.5	1.0	1.1	1.8	+0.7
2.5–3.0	4.6	4.4	5.3	3.7	4.1	1.9	1.6	1.2	1.8	0.9	0.4	-0.5
3.5–4.0	6.2	6.0	6.6	3.5	3.1	1.6	2.1	1.1	2.8	1.5	0.8	-0.7
4.5–5.0	5.5	5.6	5.4	4.6	2.6	1.7	1.0	1.6	0.5	0.6	0.0	-0.6
5.5–6.0 (High)	7.0	6.7	6.0	4.2	2.3	1.9	1.7	1.6	0.2	0.1	0.9	+0.8
Race/Ethnicity (2-year average): <sup>b</sup>												
White	—	6.3	6.2	5.3	3.8	2.5	1.7	1.5	1.6	1.4	0.5	-0.9 ss
African American	—	2.5	2.5	2.8	2.6	1.7	1.6	1.9	1.8	0.9	0.3	-0.6
Hispanic	—	4.4	4.6	5.6	4.8	2.0	1.0	1.8	1.6	1.4	1.8	+0.5

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

Notes. '—' indicates data not available. See Table S3 for the number of subgroup cases. See appendix B for definition of variables in table Data for 12th graders based on two of six forms; *N* is two sixths of *N* indicated in Table S3.

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

<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 40**  
**COCAINE: Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months														
	<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>
<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>
Total	1.1	1.5	1.7	2.1	2.6	3.0	2.8	3.1	2.7	2.6	2.5	2.3	2.2	2.0	2.2
Gender:															
Male	1.4	1.5	1.9	2.1	2.5	2.7	3.1	2.9	2.8	2.6	2.4	2.2	1.9	1.7	2.0
Female	0.9	1.5	1.5	2.1	2.6	3.1	2.5	3.1	2.7	2.6	2.6	2.3	2.3	2.3	2.3
College Plans:															
None or under 4 years	3.2	4.8	5.4	6.6	7.0	7.9	7.5	9.4	8.1	7.5	7.0	7.2	7.1	6.8	6.1
Complete 4 years	0.8	1.0	1.1	1.5	2.0	2.2	2.2	2.3	2.0	2.0	2.0	1.8	1.6	1.5	1.8
Region:															
Northeast	1.3	0.8	1.0	2.2	2.2	2.6	2.4	1.9	2.2	1.6	1.9	1.6	1.6	1.9	1.8
Midwest	0.9	1.4	1.0	1.2	2.6	2.9	2.6	2.7	2.6	2.9	2.3	2.3	2.0	1.6	2.0
South	1.1	1.7	2.1	2.5	2.4	2.7	2.6	3.8	3.1	2.2	3.2	2.6	2.5	2.1	2.4
West	1.5	2.0	2.7	2.3	3.3	3.7	3.7	3.3	2.7	3.7	2.4	2.4	2.3	2.4	2.4
Population Density:															
Large MSA	1.1	1.4	1.3	1.9	2.4	2.8	2.4	2.3	2.1	2.3	2.1	2.0	1.7	2.2	2.2
Other MSA	1.1	1.7	2.2	2.5	2.8	3.2	2.9	3.3	2.8	2.5	2.8	2.3	2.2	2.1	2.2
Non-MSA	1.2	1.3	1.2	1.4	2.4	2.7	3.0	3.4	3.2	3.1	2.5	2.6	2.7	1.7	2.2
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	2.4	3.2	2.9	3.5	4.9	3.9	4.7	6.3	5.6	5.3	4.4	3.7	4.1	3.3	4.2
2.5–3.0	1.4	1.6	2.0	2.3	2.4	3.3	3.0	3.3	3.1	2.9	2.8	2.8	2.4	2.5	2.9
3.5–4.0	0.7	1.2	1.8	2.1	2.8	3.3	2.8	3.1	2.8	2.5	2.4	2.2	2.2	2.0	2.5
4.5–5.0	0.7	1.0	1.0	1.6	1.9	2.7	2.6	2.2	1.7	1.8	2.1	2.0	1.5	1.8	1.5
5.5–6.0 (High)	1.2	1.5	1.1	1.9	2.5	2.5	2.3	2.5	2.5	2.2	1.6	1.5	2.0	1.2	1.2
Race/Ethnicity (2-year average): <sup>b</sup>															
White	—	1.2	1.3	1.6	2.3	2.8	3.0	2.8	2.6	2.5	2.5	2.4	2.2	1.9	1.8
African American	—	0.7	0.7	0.7	0.6	0.6	0.5	0.7	0.8	0.8	0.8	0.8	0.9	1.0	1.0
Hispanic	—	3.1	4.0	4.5	4.7	4.8	4.3	5.2	5.9	4.7	4.2	4.1	3.8	3.6	3.6

Table continued on next page.



**TABLE 40 (cont.)**  
**COCAINE: Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months														2018-2019 change
Approximate weighted N =	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Total	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	-0.1
Gender:															
Male	2.0	2.0	1.8	1.6	1.6	1.4	1.2	1.0	1.0	0.9	0.8	0.8	0.8	0.7	-0.1
Female	1.9	1.7	1.8	1.4	1.5	1.3	1.1	1.0	0.9	0.9	0.8	0.7	0.8	0.7	-0.1
College Plans:															
None or under 4 years	2.1	2.2	1.8	1.7	1.7	1.3	1.2	1.0	1.1	0.8	0.7	0.8	0.6	0.8	+0.1
Complete 4 years	7.1	6.5	6.9	6.4	5.6	5.5	4.6	3.4	3.0	2.5	2.3	2.6	2.4	1.3	-1.1 s
Region:															
Northeast	1.5	1.5	1.3	1.2	1.3	1.1	0.9	0.8	0.8	0.8	0.6	0.5	0.5	0.6	+0.1
Midwest	1.3	1.2	1.2	1.4	1.0	0.9	1.1	0.8	0.5	0.6	0.5	0.5	0.5	0.3	-0.2
South	1.3	1.6	1.9	1.8	2.0	1.3	0.6	0.8	0.8	0.8	0.6	0.6	0.5	0.4	-0.1
West	2.9	2.3	2.2	1.2	1.6	1.3	1.4	1.0	1.3	1.0	1.0	0.6	0.7	0.9	+0.2
Population Density:															
Large MSA	1.9	2.2	1.6	2.1	1.7	2.1	1.4	1.3	1.3	1.1	0.9	1.3	1.4	1.0	-0.4
Other MSA	1.9	1.9	2.0	1.1	1.4	1.5	1.3	1.0	1.2	1.0	0.8	0.7	0.8	0.8	0.0
Non-MSA	2.0	2.1	1.7	1.9	1.8	1.5	1.2	1.0	1.0	1.1	0.7	0.9	0.7	0.7	0.0
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	2.2	1.8	1.7	1.4	1.5	1.2	0.9	0.8	1.0	0.4	1.0	0.5	0.7	0.5	-0.2
2.5–3.0	4.4	3.8	3.6	3.9	3.3	2.6	2.6	2.1	1.8	1.2	1.8	1.3	1.7	1.5	-0.2
3.5–4.0	2.2	2.2	2.3	1.8	2.0	2.1	1.6	1.1	1.1	0.9	0.8	1.1	0.8	0.8	0.0
4.5–5.0	2.0	1.8	1.8	1.5	1.6	1.6	1.2	0.9	1.1	0.8	0.8	0.8	0.7	0.8	+0.1
5.5–6.0 (High)	1.4	1.4	1.2	0.8	1.2	0.9	0.5	0.7	0.9	0.6	0.6	0.5	0.7	0.6	-0.2
Race/Ethnicity (2-year average): <sup>b</sup>															
White	1.5	1.3	1.4	1.5	1.2	0.8	0.7	0.8	0.6	1.0	0.5	0.3	0.4	0.6	+0.2
African American	1.9	1.7	1.6	1.5	1.4	1.3	1.0	0.9	0.7	0.7	0.6	0.5	0.5	0.5	0.0
Hispanic	0.9	0.9	0.8	0.8	0.7	0.5	0.6	0.8	0.8	0.7	0.6	1.1	1.2	1.3	+0.1
Hispanic	3.5	3.8	3.5	2.8	2.8	2.9	2.6	1.8	1.4	1.3	1.2	1.7	1.8	1.5	-0.2

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 41**  
**COCAINE: Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months															
	<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>	
<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	
Total	2.2	1.9	2.1	2.8	3.5	4.2	4.7	4.7	4.9	4.4	3.6	4.0	3.3	3.7	3.5	
Gender:																
Male	2.2	2.0	2.5	3.1	3.5	4.5	4.7	4.9	5.2	4.7	3.8	4.2	3.3	3.9	3.6	
Female	2.2	1.7	1.6	2.5	3.3	4.0	4.6	4.4	4.6	4.1	3.2	3.9	3.2	3.4	3.3	
College Plans:																
None or under 4 years	4.7	4.0	5.1	6.6	7.2	10.0	10.4	10.7	11.6	9.7	9.1	10.1	8.3	9.4	8.8	
Complete 4 years	1.7	1.4	1.4	2.0	2.8	3.2	3.7	3.6	3.8	3.5	2.7	3.1	2.4	2.9	2.8	
Region:																
Northeast	1.5	1.0	2.0	2.4	2.5	3.0	3.0	4.9	4.6	3.1	2.3	2.4	3.1	3.4	3.6	
Midwest	1.7	1.7	1.4	2.2	2.9	4.1	4.0	3.7	4.4	4.6	3.4	3.6	2.7	3.2	3.4	
South	2.0	1.8	1.9	2.6	3.5	4.2	5.4	4.3	5.2	4.2	3.8	3.8	3.5	3.5	2.9	
West	3.6	3.2	3.7	4.7	5.3	5.9	6.4	6.4	5.3	5.7	4.9	6.5	3.7	4.8	4.4	
Population Density:																
Large MSA	1.9	1.6	1.6	2.3	3.4	3.8	4.5	4.3	4.1	4.3	3.2	3.6	2.5	3.3	3.3	
Other MSA	2.7	2.1	2.3	3.1	3.5	4.7	4.3	4.7	5.1	4.2	3.7	4.4	3.2	3.8	3.4	
Non-MSA	1.6	1.7	2.1	2.7	3.6	3.7	5.7	5.2	5.4	4.7	3.8	3.8	4.6	3.9	3.8	
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	3.3	3.5	3.2	3.8	5.3	7.4	6.3	8.1	8.2	7.7	5.6	7.9	7.0	6.5	5.3	
2.5–3.0	2.4	1.7	2.2	2.9	4.3	4.5	5.0	5.5	5.9	5.4	5.2	4.8	3.9	4.2	4.6	
3.5–4.0	2.4	2.1	2.5	3.2	3.7	4.3	5.4	4.4	4.7	4.4	2.9	3.8	3.4	4.0	3.4	
4.5–5.0	1.6	1.4	1.6	2.1	2.6	3.4	3.7	3.5	3.9	3.2	2.7	2.4	2.2	3.0	2.8	
5.5–6.0 (High)	1.9	1.5	1.1	1.9	1.9	3.4	3.3	3.2	3.9	2.9	2.0	3.2	1.6	1.8	2.4	
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	2.1	2.0	2.2	3.0	3.8	4.4	4.7	4.9	4.7	3.9	3.9	3.9	3.7	3.7	
African American	—	0.6	0.6	1.0	0.9	0.7	0.8	1.0	0.9	0.6	0.8	1.0	0.9	0.8	1.0	
Hispanic	—	3.7	3.7	4.9	5.5	7.0	8.5	8.3	8.2	8.0	6.6	6.0	6.1	5.8	6.4	

Table continued on next page.

**TABLE 41 (cont.)**  
**COCAINE: Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months														2018-2019
	<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>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>change</u>
<i>Approximate weighted N =</i>	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	3.2	3.4	3.0	2.7	2.2	1.9	2.0	1.9	1.5	1.8	1.3	1.4	1.5	1.5	-0.1
Gender:															
Male	3.2	3.6	3.0	2.8	2.7	2.3	2.3	2.5	1.8	1.9	1.5	1.7	1.8	1.5	-0.2
Female	3.1	3.3	2.8	2.4	1.6	1.4	1.6	1.3	1.0	1.7	1.0	1.0	1.3	1.3	+0.1
College Plans:															
None or under 4 years	9.0	8.6	8.7	8.5	7.2	5.5	6.8	4.1	4.8	4.3	4.0	3.8	3.8	2.3	-1.5
Complete 4 years	2.4	2.8	2.2	2.0	1.6	1.5	1.5	1.6	1.1	1.6	0.9	1.1	1.2	1.2	0.0
Region:															
Northeast	2.5	2.9	2.0	2.4	2.0	2.0	1.3	1.2	1.2	1.7	0.8	0.9	1.0	0.6	-0.4
Midwest	3.2	3.6	2.5	2.4	1.8	1.3	1.4	1.3	1.3	1.2	1.0	1.4	1.1	1.0	-0.1
South	3.2	3.5	3.5	2.4	1.9	1.9	2.2	2.0	1.5	1.8	1.4	1.3	2.1	1.8	-0.3
West	3.8	3.6	3.3	3.6	3.3	2.4	2.7	2.7	1.7	2.5	1.6	1.8	1.4	1.8	+0.4
Population Density:															
Large MSA	2.8	3.3	2.8	2.4	2.1	1.9	2.1	1.8	1.2	1.7	1.3	1.8	1.4	0.9	-0.6
Other MSA	3.2	3.4	3.3	3.1	2.3	2.0	1.7	2.1	1.3	1.7	1.2	1.3	1.9	1.9	0.0
Non-MSA	3.8	3.7	2.4	2.2	2.1	1.6	2.2	1.3	2.2	2.1	1.4	0.9	1.0	1.3	+0.4
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	6.5	6.4	6.8	6.0	4.4	3.4	5.3	3.1	2.7	3.9	1.4	2.0	2.5	2.2	-0.3
2.5–3.0	4.1	3.9	3.5	3.3	2.5	2.0	2.3	2.4	1.5	2.3	1.9	1.9	1.8	1.9	+0.1
3.5–4.0	2.9	3.5	2.7	2.7	1.9	1.9	1.6	1.6	1.8	1.9	1.0	1.1	1.7	1.7	0.0
4.5–5.0	2.0	2.5	2.2	1.6	1.8	1.4	1.5	1.4	0.8	1.1	1.1	1.0	1.0	0.9	-0.2
5.5–6.0 (High)	3.0	2.5	1.6	2.0	1.4	1.3	1.2	1.6	1.1	1.2	0.8	1.2	1.5	1.0	-0.5
Race/Ethnicity (2-year average): <sup>b</sup>															
White	3.5	3.5	3.2	2.6	2.1	1.7	1.6	1.6	1.5	1.5	1.5	1.3	1.3	1.2	-0.1
African American	1.0	0.8	0.8	0.9	0.9	0.7	1.3	1.6	0.9	1.0	0.8	0.7	0.6	0.3	-0.3
Hispanic	5.9	4.9	5.2	5.2	4.6	4.1	3.8	3.7	2.8	2.2	1.9	1.5	2.3	2.6	+0.4

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 42**  
**COCAINE: Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<i>Approximate weighted N =</i>	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
Total	5.6	6.0	7.2	9.0	12.0	12.3	12.4	11.5	11.4	11.6	13.1	12.7	10.3	7.9	6.5	5.3
Gender:																
Male	7.5	7.5	9.3	11.4	14.6	14.8	13.8	13.1	13.2	13.8	14.8	14.3	11.3	9.1	8.1	6.6
Female	3.9	4.4	4.9	6.5	9.3	9.8	10.4	9.6	9.3	9.1	11.2	10.9	9.2	6.5	4.9	3.8
College Plans:																
None or under 4 years	—	6.6	8.1	9.5	13.7	13.2	12.4	12.5	12.2	13.2	14.7	15.7	12.4	9.7	9.3	7.8
Complete 4 years	—	5.0	5.5	7.7	9.5	10.8	11.5	9.9	9.9	9.7	11.4	10.4	9.0	6.7	5.3	4.1
Region:																
Northeast	5.3	6.6	7.9	11.8	13.8	14.2	16.8	16.9	15.2	19.5	20.8	17.9	13.3	9.1	7.3	6.5
Midwest	5.1	5.5	6.3	8.5	10.5	10.9	9.4	9.0	8.0	5.8	8.2	10.1	7.5	6.1	5.3	4.1
South	5.4	5.1	6.0	6.8	8.5	7.8	6.8	6.3	7.7	7.7	7.5	7.1	7.0	6.2	6.0	4.8
West	7.8	7.9	10.2	10.7	18.6	20.6	22.1	17.9	19.2	19.3	19.7	20.0	16.4	12.1	8.5	6.6
Population Density:																
Large MSA	7.3	8.6	8.6	12.3	16.6	18.7	17.5	17.2	16.9	16.8	18.8	18.8	12.9	9.3	6.4	5.6
Other MSA	5.9	5.8	7.3	8.9	11.7	11.3	11.5	10.1	11.2	11.0	12.4	12.0	10.1	8.5	7.1	5.4
Non-MSA	4.3	4.3	5.8	6.4	8.9	8.9	9.4	8.5	7.3	8.3	9.2	9.0	8.1	5.3	5.4	4.8
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	4.5	5.3	5.5	6.3	8.4	9.0	8.3	7.6	9.0	9.4	12.0	10.5	8.7	7.6	6.7	4.7
2.5–3.0	4.6	6.1	6.8	8.7	11.1	11.2	10.5	11.0	9.8	10.9	12.7	12.9	9.9	7.4	6.4	5.6
3.5–4.0	4.5	5.9	7.2	9.0	13.2	13.3	13.3	12.5	11.7	12.2	14.0	13.6	11.2	7.2	6.4	5.6
4.5–5.0	6.3	7.6	8.1	10.4	14.0	13.6	14.9	13.6	13.1	12.2	13.7	12.2	10.0	8.7	7.1	4.4
5.5–6.0 (High)	5.2	7.1	9.5	11.6	15.2	16.3	16.2	13.8	15.1	13.4	11.9	12.5	10.8	8.1	5.8	5.5
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	—	6.5	8.3	10.9	12.8	13.0	12.6	11.8	11.9	13.0	13.5	12.0	9.6	7.6	6.3
African American	—	—	4.8	4.6	4.6	5.2	4.8	5.2	7.2	6.3	5.3	5.8	4.8	3.8	2.9	1.7
Hispanic	—	—	7.2	7.5	8.9	11.2	12.4	12.1	11.4	13.3	16.3	16.7	14.0	9.9	7.8	7.4

Table continued on next page.

**TABLE 42 (cont.)**  
**COCAINE: Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	3.5	3.1	3.3	3.6	4.0	4.9	5.5	5.7	6.2	5.0	4.8	5.0	4.8	5.3	5.1	5.7
Gender:																
Male	4.1	3.7	4.0	4.5	4.8	6.0	6.6	6.8	7.3	5.8	5.4	5.9	5.9	6.5	5.8	6.0
Female	2.6	2.4	2.3	2.8	3.1	3.5	4.2	4.5	5.0	3.9	4.1	4.0	3.7	4.1	4.2	5.2
College Plans:																
None or under 4 years	4.9	5.1	4.5	5.3	5.6	7.5	8.1	9.7	9.1	7.1	8.2	8.6	6.0	8.3	7.5	8.1
Complete 4 years	2.8	2.4	2.8	3.0	3.4	4.0	4.4	4.5	5.4	4.2	3.7	3.9	4.2	4.3	4.4	5.1
Region:																
Northeast	3.8	2.8	3.1	3.1	3.8	5.5	6.6	5.9	4.3	4.1	4.8	5.0	5.2	5.0	4.7	6.7
Midwest	3.2	2.5	2.4	3.7	3.4	3.8	4.7	5.8	6.2	4.8	5.7	5.2	3.9	4.2	5.0	4.2
South	3.0	3.2	3.1	3.4	3.6	4.6	4.8	5.8	6.9	4.7	3.9	5.0	4.7	5.4	5.3	6.4
West	4.4	4.3	4.9	4.5	5.8	6.1	6.8	5.4	6.9	6.3	5.0	4.6	5.8	7.0	5.0	5.5
Population Density:																
Large MSA	4.1	3.6	2.7	3.3	4.4	4.8	4.7	5.4	5.0	4.1	4.3	4.1	3.8	4.7	5.2	7.4
Other MSA	3.7	3.3	3.9	4.1	3.9	4.9	5.6	5.8	6.6	4.9	5.0	5.4	5.7	5.8	5.2	4.8
Non-MSA	2.5	2.4	2.7	3.2	3.9	4.9	6.0	6.0	6.9	6.1	5.2	5.3	4.6	5.0	4.7	4.9
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	3.5	3.9	3.5	4.1	4.8	5.3	6.5	6.9	9.0	6.2	5.7	6.6	4.8	7.3	4.3	6.1
2.5–3.0	3.8	3.3	3.0	4.0	3.9	5.0	5.5	6.3	6.0	4.6	6.0	5.3	4.1	5.2	6.6	6.3
3.5–4.0	3.7	3.0	3.8	3.8	4.2	5.0	5.6	6.0	6.8	5.0	4.8	5.3	5.2	5.3	5.2	5.7
4.5–5.0	3.1	2.9	3.0	3.1	3.7	4.8	5.2	5.0	5.4	5.3	4.4	4.2	4.7	5.2	4.3	5.1
5.5–6.0 (High)	2.4	2.6	2.4	3.3	3.4	4.3	4.4	4.4	5.2	3.9	2.6	4.3	4.4	4.3	4.1	5.7
Race/Ethnicity (2-year average): <sup>b</sup>																
White	4.6	3.3	3.1	3.5	4.0	4.5	5.5	6.3	6.7	6.2	5.5	5.7	5.6	5.6	5.6	5.8
African American	1.5	1.2	0.8	0.9	1.0	0.8	0.9	0.9	0.9	1.0	1.0	0.9	1.1	1.2	1.2	1.6
Hispanic	6.1	5.2	5.8	5.4	5.5	7.3	7.6	6.7	7.5	7.6	6.1	5.5	4.9	5.5	6.2	6.5

Table continued on next page.

**TABLE 42 (cont.)**  
**COCAINE: Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months													2018-2019 change
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	5.2	4.4	3.4	2.9	2.9	2.7	2.6	2.6	2.5	2.3	2.7	2.3	2.2	-0.1
Gender:														
Male	5.9	5.2	4.1	4.0	3.6	3.3	3.4	3.5	3.3	3.0	3.7	2.8	2.6	-0.2
Female	4.4	3.5	2.7	1.9	2.1	2.0	1.7	1.6	1.7	1.5	1.9	1.4	1.7	+0.3
College Plans:														
None or under 4 years	8.8	7.4	5.4	5.2	5.4	4.2	5.1	3.9	4.4	3.2	4.5	4.0	4.1	+0.1
Complete 4 years	4.4	3.6	2.8	2.4	2.3	2.3	1.9	2.2	2.1	1.9	2.2	1.8	1.6	-0.2
Region:														
Northeast	6.0	4.5	2.8	3.3	2.8	2.1	2.7	2.5	2.3	1.6	2.6	2.3	1.3	-1.0
Midwest	5.0	3.2	3.6	2.4	2.9	2.2	1.9	2.3	1.8	1.9	2.0	2.0	1.5	-0.5
South	5.2	4.8	3.2	2.5	2.6	2.5	2.2	2.7	2.0	1.7	2.5	1.7	2.1	+0.4
West	4.8	4.9	3.9	4.0	3.3	4.1	4.0	2.7	4.4	4.0	3.9	3.5	4.4	+0.8
Population Density:														
Large MSA	5.0	4.4	3.4	3.3	2.9	2.9	2.6	2.3	3.0	2.4	3.0	2.3	2.0	-0.4
Other MSA	5.4	4.3	3.3	3.1	2.9	2.9	3.0	3.1	2.3	2.4	2.9	2.2	2.2	0.0
Non-MSA	5.3	4.5	3.6	1.9	2.7	2.1	1.9	1.7	2.4	1.7	2.0	2.5	2.7	+0.2
Parental Education: <sup>a</sup>														
1.0–2.0 (Low)	6.2	4.7	4.1	3.2	4.2	3.0	4.2	3.0	4.0	2.7	3.2	3.3	2.3	-1.0
2.5–3.0	5.9	4.0	3.6	3.2	2.6	3.1	2.9	3.1	2.6	2.1	3.1	2.8	2.2	-0.6
3.5–4.0	5.5	4.9	3.4	3.0	3.0	2.6	3.0	2.4	2.3	2.0	2.8	1.7	2.1	+0.4
4.5–5.0	4.9	4.0	3.2	2.5	2.3	2.6	1.6	2.2	2.2	2.2	2.0	2.0	2.3	+0.3
5.5–6.0 (High)	4.0	4.1	2.5	2.4	3.0	2.4	2.1	2.6	2.2	2.4	2.7	1.9	1.6	-0.2
Race/Ethnicity (2-year average): <sup>b</sup>														
White	6.1	5.6	4.4	3.4	3.1	3.1	2.6	2.3	2.3	2.2	2.6	2.7	2.2	-0.5 s
African American	1.3	0.8	0.7	0.9	1.1	0.9	0.9	1.6	1.5	0.9	0.8	0.8	0.9	+0.1
Hispanic	6.0	4.7	4.0	3.5	3.3	3.4	3.8	3.6	3.4	3.6	3.2	2.9	2.7	-0.2

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 43**  
**CRACK: Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months														
	<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>
<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>
Total	0.7	0.9	1.0	1.3	1.6	1.8	1.7	2.1	1.8	1.8	1.7	1.6	1.6	1.3	1.4
Gender:															
Male	0.8	0.9	1.1	1.3	1.5	1.7	1.8	2.1	1.8	1.7	1.6	1.6	1.3	1.1	1.3
Female	0.5	0.9	0.9	1.2	1.6	1.9	1.5	2.1	1.8	1.8	1.8	1.6	1.7	1.5	1.5
College Plans:															
None or under 4 years	2.0	2.9	3.4	4.6	4.2	4.9	4.7	7.5	5.3	5.2	4.4	5.7	5.8	4.9	3.3
Complete 4 years	0.4	0.6	0.6	0.8	1.3	1.3	1.3	1.5	1.4	1.4	1.4	1.2	1.1	1.0	1.2
Region:															
Northeast	0.5	0.4	0.4	1.4	1.4	1.7	1.6	1.2	1.5	1.2	1.2	1.2	1.3	1.2	0.9
Midwest	0.6	1.0	0.8	0.9	1.4	1.9	1.6	1.9	1.9	1.9	1.7	1.5	1.3	1.2	1.4
South	0.7	1.0	1.2	1.6	1.4	1.7	1.4	2.5	1.9	1.4	2.0	1.7	1.8	1.3	1.5
West	0.8	1.3	1.4	1.3	2.3	2.1	2.3	2.6	1.8	2.9	1.7	2.0	1.8	1.8	1.6
Population Density:															
Large MSA	0.5	0.8	0.7	1.3	1.5	1.8	1.5	1.6	1.2	1.6	1.4	1.5	1.2	1.5	1.5
Other MSA	0.7	1.1	1.2	1.5	1.7	2.0	1.8	2.2	2.0	1.8	1.8	1.6	1.7	1.3	1.3
Non-MSA	0.8	0.8	0.9	1.0	1.4	1.7	1.7	2.6	2.1	2.0	1.8	1.8	1.7	1.2	1.4
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	1.7	2.2	1.8	2.8	3.0	2.7	3.0	5.0	3.6	3.7	3.2	3.1	3.3	2.2	3.1
2.5–3.0	0.7	0.8	1.0	1.4	1.2	2.1	2.0	2.2	2.0	2.1	1.8	2.1	1.7	1.7	1.8
3.5–4.0	0.4	0.7	1.2	0.9	1.7	2.0	1.4	2.1	2.0	1.8	1.3	1.4	1.6	1.3	1.6
4.5–5.0	0.4	0.6	0.5	1.1	1.3	1.5	1.5	1.6	1.0	1.0	1.5	1.2	1.0	1.1	0.9
5.5–6.0 (High)	0.8	1.0	0.6	1.4	1.6	1.5	1.5	1.6	1.9	1.8	1.3	1.3	1.3	1.0	0.6
Race/Ethnicity (2-year average): <sup>b</sup>															
White	—	0.7	0.8	1.0	1.4	1.7	1.7	1.7	1.8	1.7	1.7	1.5	1.5	1.3	1.2
African American	—	0.4	0.4	0.5	0.5	0.4	0.4	0.5	0.5	0.4	0.5	0.6	0.7	0.8	0.8
Hispanic	—	1.9	2.0	2.1	2.7	3.0	2.8	3.6	3.9	2.9	2.6	2.7	2.8	2.6	2.5

Table continued on next page.

**TABLE 43 (cont.)**  
**CRACK: Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>															
	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	
Total	1.3	1.3	1.1	1.1	1.0	0.9	0.6	0.6	0.7	0.5	0.5	0.5	0.4	0.4	0.0
Gender:															
Male	1.2	1.2	1.0	0.9	0.9	0.8	0.6	0.5	0.6	0.5	0.5	0.5	0.4	0.5	+0.1
Female	1.3	1.5	1.2	1.2	1.1	1.0	0.7	0.7	0.8	0.6	0.5	0.6	0.4	0.3	-0.1
College Plans:															
None or under 4 years	4.4	4.1	4.3	4.8	3.2	3.5	2.8	2.2	2.2	1.6	1.6	1.9	1.3	0.8	-0.6
Complete 4 years	1.0	1.1	0.8	0.8	0.8	0.7	0.5	0.5	0.6	0.4	0.4	0.4	0.3	0.4	+0.1
Region:															
Northeast	0.9	0.8	0.8	1.0	0.8	0.5	0.8	0.6	0.3	0.4	0.2	0.4	0.2	0.3	+0.1
Midwest	0.7	1.1	1.2	1.2	1.1	0.9	0.4	0.6	0.6	0.3	0.5	0.5	0.3	0.3	0.0
South	1.8	1.5	1.2	0.7	0.9	0.9	0.7	0.7	0.9	0.6	0.7	0.4	0.4	0.5	+0.1
West	1.3	1.8	1.2	1.7	1.2	1.3	0.6	0.6	0.6	0.7	0.5	0.9	0.8	0.5	-0.3
Population Density:															
Large MSA	1.3	1.1	1.4	0.8	1.0	1.0	0.8	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.0
Other MSA	1.1	1.6	1.0	1.3	1.1	0.9	0.6	0.6	0.7	0.6	0.5	0.6	0.4	0.4	0.0
Non-MSA	1.6	1.2	1.0	0.9	0.8	0.9	0.4	0.6	0.7	0.3	0.6	0.3	0.4	0.4	0.0
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	3.0	2.9	2.8	3.3	1.8	2.0	1.6	1.2	1.2	0.9	1.4	1.0	1.1	0.6	-0.5
2.5–3.0	1.5	1.4	1.6	0.9	1.1	1.4	0.8	0.7	0.9	0.7	0.6	0.7	0.4	0.3	-0.1
3.5–4.0	1.2	1.3	0.8	1.0	0.9	0.9	0.7	0.5	0.6	0.4	0.6	0.5	0.5	0.4	-0.1
4.5–5.0	0.9	0.9	0.7	0.6	0.8	0.6	0.2	0.5	0.5	0.4	0.3	0.4	0.2	0.4	+0.2
5.5–6.0 (High)	1.0	1.0	0.9	1.1	0.9	0.5	0.3	0.6	0.5	0.3	0.2	0.3	0.2	0.6	+0.3
Race/Ethnicity (2-year average): <sup>b</sup>															
White	1.1	1.0	1.0	0.8	0.8	0.7	0.6	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.0
African American	0.6	0.6	0.5	0.7	0.6	0.5	0.5	0.7	0.6	0.6	0.6	0.5	0.5	0.4	-0.1
Hispanic	2.6	2.7	2.5	2.2	2.1	2.1	1.7	1.1	0.9	0.8	0.8	0.8	0.8	0.8	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 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 44**  
**CRACK: Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months														
	<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>
<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>
Total	0.9	0.9	1.1	1.4	1.8	2.1	2.2	2.5	2.4	2.2	1.8	2.3	1.6	1.7	1.7
Gender:															
Male	0.9	0.9	1.3	1.6	1.9	2.1	2.3	2.7	2.5	2.3	1.9	2.5	1.6	1.8	1.6
Female	0.8	0.9	0.7	1.0	1.6	2.1	2.2	2.2	2.3	2.1	1.7	2.2	1.6	1.5	1.7
College Plans:															
None or under 4 years	2.4	2.1	2.7	3.4	3.7	5.0	4.9	6.0	5.5	5.2	4.7	5.6	4.5	4.6	4.8
Complete 4 years	0.6	0.6	0.7	0.9	1.5	1.5	1.8	1.9	1.8	1.7	1.4	1.8	1.1	1.2	1.3
Region:															
Northeast	0.5	0.4	1.1	1.4	1.1	1.4	1.5	2.6	2.5	1.7	1.0	1.4	1.3	1.4	1.8
Midwest	0.9	0.9	0.8	1.0	1.5	2.2	2.1	2.1	2.1	1.8	1.8	2.2	1.4	1.5	1.4
South	1.0	0.8	0.9	1.3	1.9	2.0	2.0	1.9	2.0	1.9	1.7	1.7	1.7	1.4	1.3
West	1.1	1.4	1.7	1.9	2.8	2.8	3.8	3.9	3.2	3.8	3.3	4.4	2.0	2.6	2.5
Population Density:															
Large MSA	0.9	0.8	0.7	0.9	1.9	1.7	2.3	2.2	2.2	2.4	1.9	2.2	1.2	1.5	1.8
Other MSA	0.9	0.9	1.1	1.5	1.6	2.4	1.7	2.4	2.3	2.0	1.8	2.5	1.7	1.8	1.5
Non-MSA	0.9	0.9	1.2	1.6	2.3	1.9	3.3	3.1	2.8	2.5	1.8	2.2	2.1	1.7	1.9
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	1.3	1.7	1.8	1.9	3.0	3.9	3.4	4.5	3.4	4.8	3.0	3.9	2.9	3.5	2.6
2.5–3.0	1.0	0.8	1.0	1.1	2.4	2.5	2.4	3.1	2.9	2.9	2.5	2.6	1.8	1.9	2.5
3.5–4.0	0.9	1.0	1.4	1.5	1.7	1.9	2.6	2.0	2.5	2.2	1.4	2.2	1.6	1.6	1.4
4.5–5.0	0.7	0.6	0.7	1.0	1.3	1.4	1.8	2.0	1.9	1.1	1.6	1.4	1.3	1.4	1.3
5.5–6.0 (High)	0.7	0.9	0.5	1.1	1.1	1.8	1.2	1.8	1.8	1.4	1.2	2.2	0.8	0.8	1.0
Race/Ethnicity (2-year average): <sup>b</sup>															
White	—	0.9	0.9	1.1	1.5	1.9	2.2	2.3	2.4	2.2	1.8	2.0	2.0	1.6	1.5
African American	—	0.3	0.4	0.8	0.6	0.4	0.4	0.5	0.5	0.5	0.7	0.8	0.6	0.4	0.6
Hispanic	—	1.5	1.7	1.9	2.5	3.7	3.7	4.1	4.4	4.0	3.7	3.6	3.5	3.1	3.6

Table continued on next page.

**TABLE 44 (cont.)**  
**CRACK: Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months														
	<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>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2018-2019</u> <u>change</u>
<i>Approximate weighted N =</i>	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	1.3	1.3	1.3	1.2	1.0	0.9	0.8	0.8	0.5	0.7	0.4	0.6	0.6	0.6	0.0
Gender:															
Male	1.3	1.5	1.3	1.1	1.0	1.0	0.9	0.9	0.6	0.7	0.6	0.6	0.5	0.6	+0.1
Female	1.2	1.1	1.2	1.2	0.9	0.8	0.6	0.7	0.5	0.6	0.3	0.5	0.6	0.5	-0.1
College Plans:															
None or under 4 years	3.7	3.8	3.9	4.1	3.4	2.5	3.5	1.3	1.8	2.2	1.7	2.4	1.3	0.9	-0.4
Complete 4 years	1.0	1.0	0.9	0.9	0.7	0.7	0.5	0.8	0.4	0.5	0.3	0.4	0.5	0.4	0.0
Region:															
Northeast	0.9	1.1	1.0	1.2	1.0	1.1	0.5	0.6	0.5	0.7	0.3	0.6	0.3	0.3	0.0
Midwest	1.3	1.1	1.1	1.4	0.9	0.6	0.7	0.7	0.6	0.5	0.3	0.4	0.4	0.5	+0.1
South	1.2	1.4	1.1	0.8	0.9	0.8	0.6	0.8	0.5	0.7	0.6	0.5	0.9	0.8	-0.1
West	1.7	1.6	1.8	1.5	1.4	1.3	1.3	1.2	0.5	1.1	0.6	0.8	0.4	0.5	0.0
Population Density:															
Large MSA	1.3	1.3	1.1	0.8	1.0	0.9	1.0	0.7	0.5	0.7	0.5	0.6	0.6	0.3	-0.3
Other MSA	1.1	1.3	1.4	1.5	1.0	1.0	0.5	1.0	0.4	0.7	0.4	0.6	0.6	0.7	+0.1
Non-MSA	1.6	1.3	1.2	1.0	1.2	0.8	0.9	0.6	0.8	1.0	0.6	0.5	0.4	0.7	+0.3
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	3.9	3.8	3.3	2.5	2.5	1.6	1.9	1.5	0.4	2.1	0.5	1.0	1.0	0.8	-0.2
2.5–3.0	1.6	1.6	1.3	1.6	0.9	0.9	1.0	1.0	0.6	0.8	0.7	0.9	0.5	0.9	+0.3
3.5–4.0	1.0	0.9	1.1	1.3	0.8	0.9	0.5	0.6	0.8	0.6	0.3	0.5	0.4	0.6	+0.2
4.5–5.0	0.8	0.9	1.0	0.7	0.8	0.6	0.6	0.7	0.3	0.4	0.3	0.3	0.4	0.2	-0.2
5.5–6.0 (High)	1.0	0.7	0.7	0.6	0.9	0.8	0.4	0.8	0.4	0.6	0.4	0.3	0.8	0.5	-0.3
Race/Ethnicity (2-year average): <sup>b</sup>															
White	1.4	1.2	1.1	1.0	0.9	0.7	0.6	0.5	0.6	0.5	0.4	0.4	0.5	0.5	0.0
African American	0.6	0.5	0.5	0.5	0.6	0.7	0.6	0.8	0.7	0.8	0.7	0.4	0.3	0.2	-0.1
Hispanic	3.1	2.3	2.4	2.5	2.0	1.9	2.0	1.8	1.0	0.8	0.9	0.6	1.0	1.0	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 45**  
**CRACK: Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<i>Approximate weighted N =</i>	—	—	—	—	—	—	—	—	—	—	—	15,200	16,300	16,300	16,700	15,200
Total	—	—	—	—	—	—	—	—	—	—	—	4.1	3.9	3.1	3.1	1.9
Gender:																
Male	—	—	—	—	—	—	—	—	—	—	—	4.2	4.6	4.0	4.3	2.3
Female	—	—	—	—	—	—	—	—	—	—	—	3.6	3.0	2.0	1.8	1.4
College Plans:																
None or under 4 years	—	—	—	—	—	—	—	—	—	—	—	5.2	5.1	4.1	3.8	3.5
Complete 4 years	—	—	—	—	—	—	—	—	—	—	—	2.8	2.7	2.3	2.7	1.2
Region:																
Northeast	—	—	—	—	—	—	—	—	—	—	—	6.0	4.0	2.3	3.3	2.0
Midwest	—	—	—	—	—	—	—	—	—	—	—	3.1	3.5	2.4	2.2	1.6
South	—	—	—	—	—	—	—	—	—	—	—	1.6	2.8	2.6	3.3	1.8
West	—	—	—	—	—	—	—	—	—	—	—	7.5	6.1	5.6	3.8	2.7
Population Density:																
Large MSA	—	—	—	—	—	—	—	—	—	—	—	5.9	4.7	3.9	3.4	1.6
Other MSA	—	—	—	—	—	—	—	—	—	—	—	3.5	3.5	3.2	3.3	2.0
Non-MSA	—	—	—	—	—	—	—	—	—	—	—	3.5	3.7	2.0	2.2	2.0
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	—	—	—	—	—	—	—	—	—	—	—	1.2	3.6	3.3	3.1	2.2
2.5–3.0	—	—	—	—	—	—	—	—	—	—	—	5.3	4.2	2.6	3.1	2.2
3.5–4.0	—	—	—	—	—	—	—	—	—	—	—	4.0	4.0	3.4	2.8	1.8
4.5–5.0	—	—	—	—	—	—	—	—	—	—	—	2.9	3.4	3.1	2.6	1.1
5.5–6.0 (High)	—	—	—	—	—	—	—	—	—	—	—	3.7	2.4	2.1	3.7	1.8
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	—	—	—	—	—	—	—	—	—	—	—	3.8	3.4	3.1	2.1
African American	—	—	—	—	—	—	—	—	—	—	—	—	1.9	2.5	2.0	1.3
Hispanic	—	—	—	—	—	—	—	—	—	—	—	—	5.5	3.7	3.2	4.2

Table continued on next page.

**TABLE 45 (cont.)**  
**CRACK: Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months														
	<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>
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700
Total	1.5	1.5	1.5	1.9	2.1	2.1	2.4	2.5	2.7	2.2	2.1	2.3	2.2	2.3	1.9
Gender:															
Male	1.8	1.7	1.9	2.4	2.5	2.6	3.0	3.1	2.9	2.5	2.4	2.6	2.3	2.5	2.2
Female	1.0	1.0	1.1	1.3	1.5	1.6	1.8	2.0	2.2	1.7	1.8	1.8	1.9	1.9	1.6
College Plans:															
None or under 4 years	2.3	2.6	2.7	3.3	3.0	4.0	4.3	4.6	5.0	3.5	4.4	4.5	2.7	3.9	3.4
Complete 4 years	1.1	1.0	1.2	1.4	1.7	1.6	1.7	1.9	1.9	1.7	1.5	1.7	1.8	1.7	1.6
Region:															
Northeast	1.3	1.3	1.2	1.5	1.6	2.1	2.6	3.0	2.4	1.8	2.0	2.0	2.0	1.7	1.5
Midwest	1.5	1.4	1.3	2.2	2.0	2.3	2.2	2.6	2.8	2.0	2.6	2.6	1.9	2.1	2.3
South	1.2	1.2	1.5	1.6	1.7	1.7	1.8	2.0	2.3	1.8	1.2	1.9	2.0	2.2	1.8
West	1.8	2.1	2.1	2.3	3.5	2.6	3.4	3.2	3.4	3.2	3.0	2.8	3.0	3.3	2.3
Population Density:															
Large MSA	1.2	1.3	1.3	1.5	2.0	2.1	2.2	2.5	2.0	1.8	1.5	1.6	1.8	2.0	1.7
Other MSA	1.7	1.6	1.8	2.1	2.1	1.9	2.3	2.4	2.5	2.1	2.2	2.4	2.3	2.2	1.8
Non-MSA	1.2	1.3	1.4	1.9	2.1	2.5	2.8	2.9	3.6	2.8	2.8	2.8	2.4	2.8	2.5
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	1.6	1.9	2.6	2.7	3.4	3.4	3.6	3.9	3.2	2.8	3.8	4.8	2.5	3.3	2.3
2.5–3.0	1.5	1.9	1.6	2.2	2.3	2.4	2.5	2.8	2.8	2.1	2.6	2.2	1.6	2.9	2.4
3.5–4.0	1.7	1.3	1.5	1.8	1.7	2.2	2.0	2.4	3.0	2.2	1.8	2.3	2.3	1.9	2.0
4.5–5.0	0.9	1.0	1.4	1.1	1.9	1.6	2.5	2.1	2.2	1.8	1.9	1.7	2.2	1.8	1.5
5.5–6.0 (High)	1.1	0.8	1.0	1.8	1.5	1.6	1.8	2.1	1.6	2.2	1.2	1.5	1.9	1.7	1.5
Race/Ethnicity (2-year average): <sup>b</sup>															
White	1.6	1.3	1.3	1.6	1.9	2.0	2.2	2.6	2.8	2.5	2.2	2.3	2.2	2.2	2.1
African American	1.0	0.6	0.6	0.9	1.0	0.7	0.5	0.3	0.4	0.5	0.5	0.7	1.2	1.3	0.9
Hispanic	3.4	2.7	2.5	2.4	3.1	4.1	4.2	3.9	3.5	3.4	3.1	3.1	2.9	3.0	3.1

Table continued on next page.

**TABLE 45 (cont.)**  
**CRACK: Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	2.1	1.9	1.6	1.3	1.4	1.0	1.2	1.1	1.1	1.1	0.8	1.0	0.9	1.0	+0.1
Gender:															
Male	2.1	2.1	1.7	1.6	1.9	1.2	1.4	1.1	1.4	1.3	1.0	1.2	1.4	1.4	0.0
Female	1.9	1.7	1.3	1.0	0.9	0.8	0.9	0.9	0.6	0.6	0.5	0.8	0.4	0.7	+0.3 s
College Plans:															
None or under 4 years	3.5	3.7	3.3	2.8	2.5	2.4	1.9	2.1	1.8	2.2	1.2	2.1	1.9	2.2	+0.3
Complete 4 years	1.7	1.5	1.1	0.9	1.2	0.7	1.0	0.7	0.9	0.7	0.7	0.7	0.6	0.7	+0.1
Region:															
Northeast	2.5	2.1	1.8	0.6	1.4	1.2	0.8	1.1	0.8	0.7	0.7	0.9	0.7	0.5	-0.2
Midwest	1.5	1.7	1.3	1.7	1.1	1.2	1.0	1.0	0.9	1.3	0.6	0.7	1.2	0.9	-0.3
South	2.1	2.2	1.6	1.2	1.4	0.8	1.1	0.8	1.0	0.9	0.5	1.1	0.9	1.1	+0.3
West	2.2	1.6	1.7	1.6	1.8	1.2	1.9	1.6	1.6	1.4	1.6	1.2	0.9	1.6	+0.7
Population Density:															
Large MSA	2.6	1.9	1.3	1.1	1.4	1.0	1.2	0.9	0.7	1.0	1.1	0.7	0.9	1.0	+0.1
Other MSA	1.7	1.9	1.6	1.3	1.6	1.1	1.3	1.2	1.5	1.0	0.7	1.2	1.1	1.0	0.0
Non-MSA	2.0	2.0	1.6	1.6	1.0	0.9	1.0	0.9	0.6	1.2	0.6	1.0	0.7	1.2	+0.5
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	3.6	3.6	2.1	2.2	2.5	2.3	1.9	1.5	1.8	1.8	1.7	1.6	1.7	1.6	-0.1
2.5–3.0	2.4	2.2	1.4	0.9	1.7	0.8	1.3	1.0	1.2	1.2	1.0	1.1	1.0	1.1	+0.1
3.5–4.0	2.0	1.9	1.6	1.4	1.4	1.2	1.0	1.2	0.7	1.0	0.3	1.0	0.8	1.0	+0.2
4.5–5.0	1.8	1.7	1.4	1.4	1.0	0.8	1.1	0.8	0.8	0.7	0.8	0.5	0.7	0.6	-0.1
5.5–6.0 (High)	1.2	1.0	1.3	0.6	0.8	0.8	1.1	0.8	1.4	0.8	0.6	0.6	0.5	1.0	+0.5
Race/Ethnicity (2-year average): <sup>b</sup>															
White	1.9	2.0	1.8	1.4	1.2	1.1	1.1	1.0	0.8	0.8	0.7	0.8	0.9	0.8	-0.1
African American	1.0	1.0	0.9	0.9	0.7	0.7	0.7	0.9	1.3	1.3	0.9	0.8	0.7	0.9	+0.1
Hispanic	3.1	2.7	2.0	1.6	1.8	1.9	1.7	1.7	1.7	1.5	1.3	1.1	1.2	1.3	+0.2

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 five forms in 1986; N is one fifth of N indicated in Table S3. Data based on two forms in 1987–1989; N is two fifths of N indicated in 1987–1988 and two sixths of N indicated in 1989 in Table S3. Data based on six forms beginning in 1990.

<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 46**  
**OTHER COCAINE: Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	
<i>Approximate weighted N =</i>	17,500	18,600	18,300	17,300	17,500	17,800	18,600	18,100	16,700	16,700	16,200	15,100	16,500	17,000	16,800	
Total	1.0	1.2	1.3	1.7	2.1	2.5	2.2	2.4	2.3	1.9	1.9	1.8	1.6	1.6	1.7	
Gender:																
Male	1.1	1.2	1.5	1.7	2.0	2.2	2.5	2.3	2.3	1.9	1.8	1.7	1.5	1.3	1.5	
Female	0.8	1.2	1.2	1.8	2.2	2.6	1.9	2.4	2.2	1.8	2.0	1.9	1.6	1.8	1.8	
College Plans:																
None or under 4 years	2.7	4.2	4.1	5.6	5.9	6.6	6.0	7.7	7.1	6.1	5.3	6.4	5.0	5.4	4.5	
Complete 4 years	0.6	0.7	0.9	1.2	1.6	1.8	1.7	1.8	1.7	1.4	1.5	1.3	1.2	1.1	1.4	
Region:																
Northeast	1.2	0.7	0.9	1.9	1.8	2.1	1.6	1.4	1.7	1.1	1.6	1.2	1.0	1.6	1.5	
Midwest	0.6	1.0	0.7	0.9	2.0	2.4	2.0	1.9	2.2	2.3	1.6	1.8	1.7	1.1	1.3	
South	1.0	1.5	1.6	2.0	2.0	2.3	2.1	3.1	2.6	1.7	2.4	2.1	1.9	1.7	1.9	
West	1.3	1.5	2.1	2.0	2.7	3.1	2.9	2.5	2.2	2.5	1.7	1.9	1.6	1.8	1.8	
Population Density:																
Large MSA	0.9	1.1	1.0	1.6	2.0	2.5	1.7	1.8	1.8	1.6	1.6	1.4	1.2	1.7	1.6	
Other MSA	0.9	1.4	1.8	2.1	2.1	2.6	2.2	2.5	2.3	1.8	2.2	1.8	1.6	1.6	1.7	
Non-MSA	1.1	0.9	0.7	1.2	2.2	2.2	2.5	2.8	2.8	2.5	1.6	2.3	2.2	1.3	1.7	
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	2.1	2.7	2.2	3.1	4.3	3.2	3.5	4.7	5.1	4.2	3.7	2.8	2.9	3.1	2.9	
2.5–3.0	1.2	1.1	1.5	2.0	2.0	2.6	2.4	2.5	2.8	2.1	1.9	2.3	1.8	1.9	2.2	
3.5–4.0	0.6	1.0	1.5	1.9	2.2	2.8	2.1	2.4	2.3	1.9	1.8	1.9	1.6	1.5	2.0	
4.5–5.0	0.6	0.8	0.8	1.1	1.6	2.4	1.9	1.8	1.3	1.4	1.6	1.6	1.1	1.3	1.2	
5.5–6.0 (High)	1.0	1.2	0.8	1.2	2.0	1.9	1.7	1.8	1.8	1.3	1.1	0.8	1.5	0.9	0.9	
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	0.9	1.0	1.2	1.8	2.4	2.5	2.2	2.1	1.9	1.8	1.8	1.8	1.5	1.4	
African American	—	0.6	0.5	0.6	0.5	0.4	0.3	0.5	0.7	0.6	0.5	0.5	0.6	0.8	0.9	
Hispanic	—	2.6	3.3	4.0	4.3	4.1	3.3	4.0	4.9	3.9	3.2	3.1	2.7	2.8	2.9	

Table continued on next page.

**TABLE 46 (cont.)**  
**OTHER COCAINE: Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months														2018-2019
Approximate weighted N =	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	change
Total	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	-0.1
Gender:															
Male	1.6	1.5	1.4	1.3	1.3	1.1	1.0	0.8	0.8	0.8	0.6	0.6	0.7	0.6	-0.3
Female	1.4	1.3	1.4	1.3	1.3	1.1	0.9	0.8	0.8	0.9	0.6	0.5	0.7	0.4	-0.3
College Plans:															
None or under 4 years	1.7	1.6	1.4	1.3	1.4	0.9	1.0	0.8	0.7	0.6	0.6	0.7	0.5	0.7	+0.3
Complete 4 years	5.7	5.7	5.5	5.6	4.7	4.6	3.8	3.0	2.6	2.0	2.0	2.1	2.1	1.0	-1.1 s
Region:															
Northeast	1.2	1.1	1.1	1.0	1.1	0.8	0.7	0.6	0.6	0.7	0.4	0.4	0.4	0.5	+0.1
Midwest	1.0	1.0	0.9	1.2	0.9	0.7	0.8	0.5	0.4	0.4	0.5	0.5	0.4	0.1	-0.3 s
South	1.1	1.3	1.5	1.5	1.6	1.0	0.5	0.6	0.6	0.6	0.3	0.5	0.4	0.3	-0.1
West	2.3	1.8	1.8	1.0	1.3	1.1	1.2	0.8	0.9	0.9	0.8	0.5	0.5	0.7	+0.2
Population Density:															
Large MSA	1.5	1.5	1.3	1.8	1.4	1.6	1.2	1.1	1.1	0.9	0.8	1.0	1.3	0.9	-0.4
Other MSA	1.5	1.5	1.5	0.9	1.1	1.2	1.1	0.8	1.1	0.8	0.5	0.6	0.7	0.5	-0.2
Non-MSA	1.6	1.5	1.4	1.6	1.5	1.2	1.0	0.9	0.7	0.9	0.6	0.7	0.7	0.7	0.0
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	1.7	1.5	1.4	1.4	1.3	0.8	0.8	0.7	0.7	0.3	0.8	0.4	0.6	0.4	-0.2
2.5–3.0	3.6	3.1	3.0	3.4	2.8	2.1	2.1	1.8	1.4	1.0	1.4	1.2	1.2	1.4	+0.2
3.5–4.0	1.7	1.6	1.8	1.4	1.9	1.6	1.2	1.0	0.7	0.8	0.5	0.9	0.7	0.8	+0.1
4.5–5.0	1.7	1.4	1.7	1.2	1.3	1.3	0.9	0.8	0.8	0.8	0.6	0.7	0.6	0.5	0.0
5.5–6.0 (High)	1.2	1.0	0.8	0.6	1.0	0.7	0.4	0.5	0.8	0.4	0.4	0.3	0.6	0.3	-0.3
Race/Ethnicity (2-year average): <sup>b</sup>															
White	0.9	0.9	1.1	1.3	0.9	0.6	0.6	0.7	0.4	0.8	0.5	0.4	0.4	0.4	+0.1
African American	1.5	1.3	1.2	1.2	1.2	1.0	0.8	0.7	0.5	0.5	0.5	0.5	0.4	0.4	0.0
Hispanic	2.7	0.6	0.6	0.8	0.7	0.4	0.4	0.6	0.6	0.5	0.4	0.3	0.4	0.4	0.0
	2.8	3.1	2.8	2.2	2.2	2.4	2.2	1.5	1.1	1.0	0.9	0.8	0.9	1.0	+0.1

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 47**  
**OTHER COCAINE: Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	
<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	
Total	2.1	1.7	1.8	2.4	3.0	3.5	4.1	4.0	4.4	3.8	3.0	3.4	2.8	3.3	3.0	
Gender:																
Male	2.0	1.9	2.2	2.7	3.1	3.7	4.1	4.1	4.6	4.2	3.3	3.6	2.9	3.6	3.3	
Female	2.1	1.5	1.4	2.1	2.9	3.3	4.0	3.8	4.1	3.4	2.6	3.3	2.7	3.0	2.7	
College Plans:																
None or under 4 years	4.4	3.3	4.5	5.9	6.3	8.4	9.0	9.3	10.5	8.3	8.2	8.7	7.3	8.3	8.1	
Complete 4 years	1.6	1.3	1.3	1.7	2.5	2.7	3.2	3.0	3.4	3.0	2.1	2.6	2.1	2.6	2.3	
Region:																
Northeast	1.3	1.0	1.8	2.0	2.2	2.2	2.5	4.3	4.1	2.5	2.0	1.8	2.7	3.2	3.0	
Midwest	1.6	1.3	1.3	1.8	2.5	3.4	3.4	3.1	3.9	4.0	3.0	3.2	2.3	3.0	3.0	
South	1.9	1.6	1.7	2.2	2.9	3.5	4.8	3.7	4.7	3.9	3.2	3.3	3.1	3.2	2.6	
West	3.4	3.1	3.2	4.3	4.8	5.2	5.3	5.2	4.6	4.6	3.9	5.5	3.2	4.1	3.6	
Population Density:																
Large MSA	1.6	1.5	1.4	1.9	2.8	3.3	3.9	3.8	3.7	3.7	2.5	3.1	2.2	2.9	2.7	
Other MSA	2.6	2.0	2.0	2.7	3.1	3.9	3.8	4.0	4.5	3.7	3.2	3.7	2.8	3.4	3.1	
Non-MSA	1.4	1.4	1.9	2.5	3.1	3.2	4.9	4.2	4.8	4.0	3.2	3.3	4.1	3.6	3.3	
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	3.1	2.7	2.7	3.1	5.0	6.1	5.5	6.7	7.6	6.3	4.8	7.1	6.4	5.7	4.5	
2.5–3.0	2.2	1.6	2.0	2.6	3.6	3.6	4.3	4.5	5.1	4.4	4.5	3.9	3.5	3.7	4.0	
3.5–4.0	2.2	2.0	2.2	2.7	3.3	3.8	4.6	4.0	4.2	4.0	2.5	3.2	2.9	3.7	3.0	
4.5–5.0	1.6	1.3	1.4	1.8	2.2	3.0	3.3	3.0	3.5	3.0	2.2	2.0	1.8	2.8	2.4	
5.5–6.0 (High)	1.8	1.3	0.9	1.6	1.7	2.8	2.9	2.5	3.5	2.7	1.4	2.7	1.2	1.6	2.1	
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	1.9	1.8	1.9	2.6	3.2	3.7	4.1	4.3	4.1	3.4	3.3	3.4	3.4	3.3	
African American	—	0.5	0.5	0.9	0.8	0.6	0.6	0.9	0.8	0.5	0.5	0.7	0.7	0.7	0.8	
Hispanic	—	3.4	3.4	4.6	5.2	6.1	7.5	7.0	6.8	7.1	5.6	5.0	5.2	5.1	5.4	

Table continued on next page.



**TABLE 47 (cont.)**  
**OTHER COCAINE: Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	2.9	3.1	2.6	2.3	1.9	1.7	1.8	1.6	1.3	1.5	1.1	1.2	1.4	1.4	0.0
Gender:															
Male	3.0	3.2	2.7	2.5	2.3	2.1	2.1	2.2	1.7	1.5	1.4	1.5	1.7	1.4	-0.2
Female	2.8	2.9	2.4	2.1	1.3	1.2	1.5	1.0	0.9	1.4	0.9	0.9	1.2	1.3	+0.1
College Plans:															
None or under 4 years	8.3	7.5	7.8	7.2	6.8	5.1	6.2	3.9	4.5	3.1	3.6	2.9	3.6	2.2	-1.4
Complete 4 years	2.2	2.5	1.8	1.8	1.3	1.3	1.4	1.3	0.9	1.3	0.9	1.0	1.1	1.2	0.0
Region:															
Northeast	2.5	2.5	1.7	2.1	1.7	1.7	1.1	1.1	1.0	1.4	0.7	0.6	0.9	0.5	-0.5
Midwest	2.8	3.3	2.2	2.1	1.5	1.2	1.2	0.8	1.1	1.2	1.0	1.4	1.0	1.0	0.0
South	2.9	3.3	3.2	2.1	1.5	1.8	2.2	1.8	1.5	1.5	1.2	1.1	2.0	1.8	-0.3
West	3.5	3.0	2.7	3.1	3.0	2.1	2.5	2.4	1.6	2.0	1.5	1.5	1.3	1.8	+0.5
Population Density:															
Large MSA	2.6	3.1	2.4	2.2	1.9	1.8	2.0	1.5	1.0	1.4	1.1	1.7	1.2	0.9	-0.4
Other MSA	3.0	2.9	2.9	2.6	2.0	1.7	1.6	1.9	1.3	1.5	1.1	1.0	1.8	1.8	0.0
Non-MSA	3.4	3.3	2.0	1.9	1.7	1.5	2.0	0.9	1.9	1.8	1.3	0.8	0.9	1.3	+0.3
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	5.6	5.1	5.9	5.1	3.6	3.1	5.3	2.5	2.6	2.5	1.2	1.7	2.3	2.2	-0.1
2.5–3.0	3.7	3.3	3.1	2.7	2.3	1.9	2.2	2.3	1.3	1.9	1.8	1.5	1.8	1.8	0.0
3.5–4.0	2.8	3.2	2.4	2.5	1.7	1.7	1.5	1.4	1.5	1.7	0.9	1.0	1.6	1.6	0.0
4.5–5.0	1.8	2.4	1.9	1.4	1.6	1.3	1.3	1.1	0.8	1.0	1.0	0.9	0.9	0.8	-0.1
5.5–6.0 (High)	2.8	2.4	1.3	2.0	1.0	1.0	1.0	1.2	0.9	1.1	0.7	1.1	1.4	0.9	-0.5
Race/Ethnicity (2-year average): <sup>b</sup>															
White	3.2	3.2	2.8	2.3	1.9	1.6	1.5	1.4	1.3	1.3	1.3	1.2	1.2	1.2	0.0
African American	0.9	0.6	0.7	0.7	0.6	0.6	1.2	1.4	0.7	0.6	0.5	0.6	0.6	0.3	-0.2
Hispanic	5.0	4.5	4.6	4.5	4.0	3.7	3.4	3.4	2.6	1.9	1.5	1.2	2.1	2.5	+0.4

*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 48**  
**OTHER COCAINE: Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	<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>
Approximate weighted N =	—	—	—	—	—	—	—	—	—	—	—	—	16,300	16,300	16,700	15,200
Total	—	—	—	—	—	—	—	—	—	—	—	—	9.8	7.4	5.2	4.6
Gender:																
Male	—	—	—	—	—	—	—	—	—	—	—	—	10.1	8.0	6.5	5.8
Female	—	—	—	—	—	—	—	—	—	—	—	—	9.1	6.2	4.0	3.2
College Plans:																
None or under 4 years	—	—	—	—	—	—	—	—	—	—	—	—	9.8	6.0	7.3	6.3
Complete 4 years	—	—	—	—	—	—	—	—	—	—	—	—	8.3	6.7	4.2	3.7
Region:																
Northeast	—	—	—	—	—	—	—	—	—	—	—	—	12.9	7.0	4.9	5.6
Midwest	—	—	—	—	—	—	—	—	—	—	—	—	8.2	5.6	4.8	3.7
South	—	—	—	—	—	—	—	—	—	—	—	—	5.8	5.8	4.6	4.1
West	—	—	—	—	—	—	—	—	—	—	—	—	15.3	13.4	7.5	6.1
Population Density:																
Large MSA	—	—	—	—	—	—	—	—	—	—	—	—	13.3	9.8	5.6	5.0
Other MSA	—	—	—	—	—	—	—	—	—	—	—	—	8.9	7.8	5.4	4.7
Non-MSA	—	—	—	—	—	—	—	—	—	—	—	—	8.0	4.5	4.4	4.1
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	—	—	—	—	—	—	—	—	—	—	—	—	5.3	4.9	3.3	3.4
2.5–3.0	—	—	—	—	—	—	—	—	—	—	—	—	10.5	6.5	4.6	5.0
3.5–4.0	—	—	—	—	—	—	—	—	—	—	—	—	10.5	7.2	5.1	4.7
4.5–5.0	—	—	—	—	—	—	—	—	—	—	—	—	9.0	7.7	6.1	4.1
5.5–6.0 (High)	—	—	—	—	—	—	—	—	—	—	—	—	9.7	9.0	6.5	5.4
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	—	—	—	—	—	—	—	—	—	—	—	—	9.3	7.0	5.3
African American	—	—	—	—	—	—	—	—	—	—	—	—	—	2.8	1.4	0.7
Hispanic	—	—	—	—	—	—	—	—	—	—	—	—	—	6.3	5.1	5.1

Table continued on next page.

**TABLE 48 (cont.)**  
**OTHER COCAINE: Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	<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>
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	3.2	2.6	2.9	3.0	3.4	4.2	5.0	4.9	5.8	4.5	4.4	4.4	4.2	4.7	4.5	5.2
Gender:																
Male	3.7	3.1	3.7	3.7	4.0	4.9	5.7	5.6	7.1	5.5	4.9	5.0	5.4	5.8	5.4	5.7
Female	2.4	2.0	2.0	2.3	2.5	3.2	4.0	3.9	4.2	3.4	3.7	3.7	2.9	3.5	3.6	4.4
College Plans:																
None or under 4 years	4.0	4.0	3.9	4.3	4.5	5.7	7.0	8.9	7.6	6.7	7.4	7.1	4.8	6.8	6.7	6.9
Complete 4 years	2.8	2.0	2.5	2.5	2.9	3.5	4.1	3.5	5.2	3.7	3.4	3.4	3.8	3.9	3.9	4.7
Region:																
Northeast	3.4	2.8	2.3	2.8	4.2	5.2	5.9	4.7	4.1	3.7	4.4	4.3	5.3	4.4	4.3	6.2
Midwest	2.9	2.2	2.3	3.5	2.7	3.2	4.1	5.3	5.7	4.5	5.6	4.8	3.2	3.9	4.2	3.6
South	2.8	2.5	2.6	2.6	3.1	4.2	4.6	4.9	6.6	4.0	3.9	4.4	4.1	4.9	4.7	5.8
West	3.9	3.1	4.6	3.5	4.0	4.5	6.2	4.4	6.1	5.9	3.5	3.9	4.7	5.8	4.7	5.1
Population Density:																
Large MSA	3.7	3.1	2.6	2.6	3.7	3.9	4.2	4.8	4.8	3.7	4.1	3.5	3.0	3.9	4.6	7.2
Other MSA	3.3	2.5	3.6	3.5	3.3	4.4	5.2	4.9	6.0	4.5	4.3	4.7	5.3	5.4	4.7	4.4
Non-MSA	2.5	2.3	2.0	2.6	3.1	4.2	5.6	4.9	6.7	5.4	5.0	4.9	3.9	4.2	4.0	3.8
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	3.5	3.7	3.9	2.7	2.9	5.2	6.4	5.5	7.4	5.4	3.7	5.1	4.1	6.3	4.1	4.6
2.5–3.0	3.5	2.3	2.3	3.2	3.4	3.8	4.9	5.3	5.0	3.8	5.6	4.7	3.4	3.6	5.5	5.5
3.5–4.0	3.2	2.6	3.3	3.4	3.6	4.6	4.9	5.3	6.9	4.7	4.7	4.9	4.6	5.1	4.7	5.2
4.5–5.0	2.7	2.3	2.9	2.6	3.2	3.9	4.4	4.2	5.5	4.5	3.9	3.4	4.3	5.1	4.2	4.6
5.5–6.0 (High)	2.4	2.0	1.7	3.1	2.7	3.8	4.8	3.5	3.6	4.2	2.2	3.9	3.8	3.7	3.7	5.9
Race/Ethnicity (2-year average): <sup>b</sup>																
White	4.2	2.9	2.6	2.9	3.3	3.9	5.0	5.6	6.0	5.7	5.0	5.1	4.9	4.8	4.9	5.2
African American	1.0	1.0	0.7	0.8	0.8	0.7	0.7	0.6	0.8	1.0	0.9	0.8	1.0	1.1	1.2	1.4
Hispanic	5.0	4.3	5.1	5.1	4.0	5.6	6.9	6.0	5.8	6.6	5.8	4.7	3.9	4.8	5.8	5.7

Table continued on next page.

**TABLE 48 (cont.)**  
**OTHER COCAINE: Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months													2018-2019 change
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	4.5	4.0	3.0	2.6	2.6	2.4	2.4	2.4	2.1	2.0	2.3	2.0	1.9	-0.1
Gender:														
Male	4.8	4.8	3.6	3.6	3.4	2.8	3.1	3.6	2.7	2.5	3.4	2.2	2.2	0.0
Female	3.9	3.1	2.3	1.7	1.9	1.8	1.6	1.3	1.6	1.4	1.4	1.2	1.3	+0.1
College Plans:														
None or under 4 years	7.7	6.8	4.7	5.3	4.3	3.2	4.4	3.3	3.8	3.3	4.3	3.3	3.5	+0.2
Complete 4 years	3.6	3.1	2.5	2.1	2.2	2.0	1.8	2.1	1.7	1.7	1.8	1.4	1.2	-0.2
Region:														
Northeast	5.3	4.4	2.7	3.3	2.9	1.8	2.4	2.2	1.9	1.0	2.2	2.1	1.2	-0.8
Midwest	4.4	3.4	3.5	2.2	2.6	1.7	1.7	2.0	1.9	1.6	1.7	1.8	1.5	-0.3
South	4.5	4.2	2.7	1.9	2.4	2.5	2.1	2.5	1.6	1.7	2.0	1.4	1.8	+0.4
West	3.8	4.1	2.9	3.6	2.9	3.3	3.5	2.7	3.5	3.7	3.5	2.9	3.4	+0.4
Population Density:														
Large MSA	4.3	4.1	2.8	2.8	2.6	2.6	2.1	2.0	2.4	2.2	2.6	2.0	1.6	-0.3
Other MSA	4.6	3.9	3.0	3.0	2.7	2.6	2.7	2.9	2.0	2.1	2.3	1.8	1.8	0.0
Non-MSA	4.6	4.2	3.2	1.5	2.5	1.5	1.9	1.9	1.9	1.8	1.9	2.3	2.4	+0.1
Parental Education: <sup>a</sup>														
1.0–2.0 (Low)	5.2	3.0	3.8	3.0	3.2	3.5	3.3	1.7	3.1	2.7	2.7	2.4	1.9	-0.5
2.5–3.0	5.0	3.8	3.2	2.6	2.6	2.4	3.1	3.1	2.3	1.9	2.7	2.5	2.1	-0.4
3.5–4.0	4.5	4.6	2.5	2.9	2.9	2.4	2.7	2.3	2.1	1.9	2.2	1.3	1.6	+0.3
4.5–5.0	4.3	3.5	2.9	2.1	2.2	1.9	1.4	2.2	1.8	2.0	1.7	1.6	1.8	+0.1
5.5–6.0 (High)	3.7	4.2	2.6	2.6	2.5	2.2	1.9	2.6	1.9	2.0	2.4	1.6	1.2	-0.4
Race/Ethnicity (2-year average): <sup>b</sup>														
White	5.5	5.2	4.3	3.2	3.0	2.8	2.3	2.0	2.0	2.1	2.3	2.3	1.9	-0.4
African American	1.2	0.7	0.6	0.7	0.7	0.8	1.0	1.5	1.4	0.8	0.6	0.4	0.7	+0.3
Hispanic	4.8	3.7	3.1	2.5	2.5	3.1	3.6	3.4	3.0	2.9	2.7	2.4	2.1	-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 form in 1987–1989;  $N$  is one fifth of  $N$  indicated in 1987–1988 and one sixth of  $N$  indicated in 1989 in Table S3. Data based on four of six forms beginning in 1990;  $N$  is four sixths of  $N$  indicated in Table S3.

<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 49**  
**HEROIN: Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months														
	1991	1992	1993	1994	1995 <sup>a</sup>	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<i>Approximate weighted N =</i>	17,500	18,600	18,300	17,300	17,500	17,800	18,600	18,100	16,700	16,700	16,200	15,100	16,500	17,000	16,800
Total	0.7	0.7	0.7	1.2	1.4	1.6	1.3	1.3	1.4	1.1	1.0	0.9	0.9	1.0	0.8
Gender:															
Male	0.9	0.8	0.8	1.3	1.6	1.5	1.4	1.5	1.4	1.0	1.0	0.8	0.8	0.9	0.8
Female	0.5	0.7	0.5	0.9	1.2	1.5	1.1	1.1	1.3	1.2	1.0	1.0	0.9	1.0	0.8
College Plans:															
None or under 4 years	2.1	2.7	2.0	3.9	4.4	4.1	3.4	5.0	3.7	3.5	3.1	2.9	3.1	4.2	2.3
Complete 4 years	0.4	0.4	0.5	0.7	1.0	1.1	1.1	0.9	1.1	0.8	0.8	0.7	0.6	0.6	0.6
Region:															
Northeast	0.5	0.6	0.7	1.3	1.4	1.8	1.1	1.1	1.3	1.1	1.1	0.8	0.7	1.1	0.7
Midwest	0.4	0.8	0.5	1.1	1.4	1.6	1.4	1.3	1.6	1.4	1.0	1.0	1.0	0.8	0.5
South	0.8	0.7	0.7	1.1	1.5	1.4	1.2	1.4	1.4	0.7	1.2	1.0	1.0	0.9	1.0
West	1.0	0.7	1.1	1.1	1.2	1.6	1.4	1.3	1.2	1.4	0.7	1.0	0.9	1.2	0.8
Population Density:															
Large MSA	0.5	0.7	0.7	1.2	1.2	1.4	1.0	1.0	1.3	1.0	0.9	0.7	0.8	1.2	0.6
Other MSA	0.7	0.8	0.9	1.2	1.5	1.7	1.3	1.3	1.4	1.1	1.0	1.0	0.9	1.0	0.8
Non-MSA	0.8	0.7	0.4	1.0	1.5	1.5	1.5	1.6	1.5	1.0	1.1	1.1	1.2	0.6	1.0
Parental Education: <sup>b</sup>															
1.0–2.0 (Low)	1.5	1.4	0.8	2.0	2.6	2.0	2.3	3.5	2.8	1.7	2.6	1.2	2.1	1.9	0.5
2.5–3.0	0.9	0.7	0.6	1.1	1.0	1.7	1.4	1.2	1.4	1.5	1.1	1.3	1.0	1.1	1.3
3.5–4.0	0.6	0.6	0.7	1.3	1.6	1.7	1.0	1.1	1.2	0.7	1.0	0.9	0.8	1.0	1.0
4.5–5.0	0.4	0.5	0.8	0.8	1.2	1.4	1.1	1.1	1.1	0.8	0.6	0.8	0.6	0.7	0.5
5.5–6.0 (High)	0.5	0.8	0.6	1.3	1.6	1.0	1.5	1.4	1.8	1.0	0.8	0.6	0.7	0.6	0.4
Race/Ethnicity (2-year average): <sup>c</sup>															
White	—	0.6	0.6	0.8	1.2	1.6	1.6	1.3	1.2	1.2	1.0	1.0	0.9	0.9	0.8
African American	—	0.4	0.3	0.6	0.7	0.5	0.4	0.5	0.7	0.5	0.6	0.6	0.5	0.7	0.5
Hispanic	—	1.4	1.4	1.5	1.8	2.1	1.7	1.7	2.2	2.0	1.4	1.2	1.4	1.7	1.5

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**TABLE 49**  
**HEROIN: Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015 <sup>a</sup>	2016 <sup>a</sup>	2017 <sup>a</sup>	2018 <sup>a</sup>	2019 <sup>a</sup>	
Approximate weighted N =	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	
Total	0.8	0.8	0.9	0.7	0.8	0.7	0.5	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.0
Gender:															
Male	0.6	0.8	0.9	0.8	0.9	0.7	0.5	0.4	0.6	0.2	0.2	0.2	0.4	0.3	-0.1
Female	0.9	0.9	0.7	0.7	0.7	0.7	0.5	0.5	0.4	0.3	0.2	0.4	0.2	0.4	+0.2
College Plans:															
None or under 4 years	3.0	3.7	3.5	3.5	2.3	3.1	1.8	2.1	2.2	0.6	0.9	1.7	0.9	0.7	-0.3
Complete 4 years	0.6	0.5	0.6	0.5	0.7	0.5	0.4	0.4	0.3	0.2	0.1	0.2	0.2	0.3	+0.1
Region:															
Northeast	0.4	0.5	0.7	0.4	0.6	0.6	0.4	0.3	0.3	0.1	0.2	0.2	0.2	0.2	0.0
Midwest	0.7	0.8	1.0	0.7	0.8	0.8	0.4	0.4	0.5	0.3	0.1	0.3	0.1	0.3	+0.1
South	0.9	0.8	0.8	0.6	0.8	0.6	0.6	0.6	0.4	0.4	0.4	0.3	0.4	0.4	0.0
West	0.9	1.0	0.9	1.2	0.9	0.8	0.5	0.6	0.8	0.1	0.2	0.7	0.5	0.4	-0.2
Population Density:															
Large MSA	0.7	0.5	1.2	0.6	0.7	0.6	0.6	0.5	0.6	0.2	0.2	0.4	0.6	0.3	-0.3
Other MSA	0.9	0.9	0.8	0.8	0.9	0.8	0.5	0.6	0.4	0.2	0.3	0.4	0.2	0.4	+0.2
Non-MSA	0.8	1.0	0.6	0.7	0.7	0.7	0.3	0.4	0.5	0.5	0.2	0.1	0.2	0.2	0.0
Parental Education: <sup>b</sup>															
1.0–2.0 (Low)	1.8	1.9	2.3	2.0	1.4	1.4	0.9	1.2	1.1	0.3	0.3	1.0	0.6	0.5	-0.1
2.5–3.0	0.8	0.8	1.0	0.8	1.0	1.3	0.8	0.6	0.4	0.2	0.3	0.3	0.6	0.3	-0.3
3.5–4.0	0.8	0.6	0.7	0.6	0.8	0.6	0.8	0.5	0.4	0.2	0.3	0.3	0.4	0.6	+0.2
4.5–5.0	0.6	0.9	0.4	0.5	0.5	0.3	0.2	0.3	0.3	0.3	0.2	0.0	0.2	0.1	0.0
5.5–6.0 (High)	0.4	0.4	1.2	0.6	0.8	0.5	0.3	0.5	0.5	0.1	0.1	0.3	0.1	0.4	+0.3
Race/Ethnicity (2-year average): <sup>c</sup>															
White	0.7	0.7	0.8	0.7	0.6	0.6	0.5	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.0
African American	0.4	0.4	0.4	0.6	0.7	0.4	0.5	0.5	0.4	0.2	0.1	0.2	0.2	0.4	+0.2
Hispanic	1.1	1.2	1.3	1.2	1.3	1.4	1.0	0.7	0.6	0.3	0.1	0.4	0.6	0.5	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 S1 for the number of subgroup cases. See appendix B for definition of variables in table.

<sup>a</sup>In 1995, the heroin question was changed in half of the forms. Separate questions were asked for use with and without injection. In 1996, the remaining forms were changed. Data presented here represent the combined data from all forms. Beginning in 2015 Heroin use with and without a needle were dropped in one form; data based on three of four forms; N is two thirds of N indicated.

<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 50**  
**HEROIN: Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months														
	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995<sup>a</sup></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>
<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>
Total	0.5	0.6	0.7	0.9	1.1	1.2	1.4	1.4	1.4	1.4	0.9	1.1	0.7	0.9	0.9
Gender:															
Male	0.7	0.8	0.9	1.0	1.3	1.5	1.6	1.7	1.7	1.5	1.0	1.3	0.8	1.0	1.1
Female	0.4	0.4	0.4	0.8	0.8	0.9	1.3	1.1	1.2	1.2	0.8	0.8	0.7	0.7	0.8
College Plans:															
None or under 4 years	1.4	1.4	1.9	2.0	2.2	2.4	2.9	2.7	3.4	3.8	2.5	2.7	2.0	2.8	3.2
Complete 4 years	0.3	0.4	0.4	0.7	0.9	1.0	1.2	1.2	1.1	1.0	0.7	0.8	0.5	0.6	0.6
Region:															
Northeast	0.4	0.6	0.6	0.6	0.9	0.9	1.3	1.8	1.9	1.5	1.0	0.9	0.6	1.1	1.3
Midwest	0.6	0.6	0.8	0.9	1.0	1.5	1.5	1.4	1.3	1.6	1.1	1.2	0.7	0.7	1.0
South	0.6	0.5	0.6	1.0	1.3	1.4	1.5	1.3	1.4	1.5	0.9	0.8	0.9	1.0	0.8
West	0.4	0.8	0.5	1.2	1.0	1.0	1.3	1.1	1.1	0.7	0.7	1.4	0.7	0.8	0.8
Population Density:															
Large MSA	0.6	0.6	0.7	0.8	1.0	1.1	1.6	1.2	1.2	1.8	0.9	0.9	0.6	0.9	0.8
Other MSA	0.5	0.6	0.6	0.9	1.0	1.3	1.3	1.5	1.4	1.2	1.0	1.0	0.8	0.9	1.0
Non-MSA	0.4	0.6	0.7	1.0	1.3	1.2	1.6	1.5	1.6	1.2	0.9	1.4	0.9	0.7	0.9
Parental Education: <sup>b</sup>															
1.0–2.0 (Low)	0.4	0.5	1.2	1.3	1.8	1.0	1.3	1.7	2.4	1.3	1.1	2.0	1.1	1.5	1.7
2.5–3.0	0.8	0.7	0.7	0.8	1.0	1.2	1.3	1.2	1.5	1.7	1.3	0.8	0.8	1.0	1.2
3.5–4.0	0.5	0.6	0.8	0.9	1.2	1.3	1.6	1.6	1.2	1.5	0.6	1.1	0.7	0.8	0.8
4.5–5.0	0.4	0.5	0.3	0.9	0.9	1.1	1.5	1.3	1.4	1.3	0.8	0.7	0.6	0.7	0.8
5.5–6.0 (High)	0.4	0.5	0.8	0.9	0.9	1.5	1.1	1.3	1.2	1.1	0.9	1.6	0.3	0.5	0.6
Race/Ethnicity (2-year average): <sup>c</sup>															
White	—	0.6	0.7	0.8	1.0	1.2	1.4	1.4	1.5	1.5	1.2	1.0	0.9	0.8	0.9
African American	—	0.3	0.4	0.6	0.6	0.2	0.2	0.4	0.5	0.5	0.5	0.3	0.3	0.4	0.6
Hispanic	—	0.7	0.7	0.7	1.0	1.0	1.3	1.6	1.7	1.4	1.4	1.1	1.1	1.2	1.2

Table continued on next page.

**TABLE 50**  
**HEROIN: Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015 <sup>a</sup>	2016 <sup>a</sup>	2017 <sup>a</sup>	2018 <sup>a</sup>	2019 <sup>a</sup>	
Approximate weighted N =	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	0.9	0.8	0.8	0.9	0.8	0.8	0.6	0.6	0.5	0.5	0.3	0.2	0.2	0.3	+0.1
Gender:															
Male	0.9	0.9	1.0	1.1	0.9	0.9	0.6	0.9	0.5	0.4	0.5	0.2	0.2	0.4	+0.2
Female	0.8	0.8	0.6	0.6	0.7	0.6	0.6	0.4	0.5	0.4	0.1	0.2	0.1	0.1	0.0
College Plans:															
None or under 4 years	2.7	2.0	2.5	2.9	2.8	2.6	2.5	2.0	1.9	1.3	1.0	0.7	0.5	0.5	-0.1
Complete 4 years	0.6	0.7	0.6	0.7	0.6	0.6	0.4	0.5	0.4	0.3	0.2	0.1	0.1	0.2	+0.1
Region:															
Northeast	0.9	1.1	0.7	0.9	0.8	0.9	0.6	0.5	0.2	0.6	0.2	0.2	0.2	0.2	0.0
Midwest	0.9	0.7	1.0	1.1	0.8	0.5	0.6	0.5	0.4	0.4	0.4	0.4	0.1	0.3	+0.1
South	0.9	0.8	0.9	0.8	0.8	0.9	0.6	0.5	0.8	0.5	0.3	0.1	0.2	0.3	+0.1
West	0.7	0.9	0.7	1.0	0.8	0.7	0.6	0.9	0.5	0.4	0.4	0.3	0.2	0.4	+0.3
Population Density:															
Large MSA	0.7	0.9	0.6	0.8	0.8	0.7	0.7	0.5	0.4	0.4	0.3	0.3	0.2	0.2	+0.1
Other MSA	0.9	0.8	0.8	1.2	0.8	0.8	0.4	0.8	0.4	0.3	0.3	0.2	0.2	0.4	+0.2
Non-MSA	1.0	0.7	1.1	0.5	0.9	0.8	0.9	0.5	1.1	0.8	0.4	0.3	0.2	0.2	0.0
Parental Education: <sup>b</sup>															
1.0–2.0 (Low)	1.4	1.8	1.9	1.5	1.3	0.9	1.7	0.8	0.5	1.1	0.6	0.6	0.2	0.3	+0.1
2.5–3.0	0.9	0.8	0.5	1.1	0.6	1.0	0.8	0.9	0.7	0.5	0.3	0.3	0.1	0.5	+0.4
3.5–4.0	0.6	0.8	1.1	1.2	0.7	0.8	0.5	0.4	0.6	0.4	0.2	0.2	0.2	0.2	0.0
4.5–5.0	0.7	0.7	0.6	0.6	0.9	0.5	0.5	0.5	0.4	0.3	0.3	0.1	0.1	0.1	0.0
5.5–6.0 (High)	1.2	0.5	0.6	0.6	0.8	0.5	0.3	0.9	0.5	0.4	0.4	0.1	0.3	0.5	+0.3
Race/Ethnicity (2-year average): <sup>c</sup>															
White	1.0	0.8	0.7	0.8	0.8	0.7	0.6	0.5	0.6	0.5	0.3	0.2	0.1	0.2	+0.1
African American	0.6	0.4	0.5	0.4	0.4	0.8	0.8	0.7	0.6	0.5	0.4	0.4	0.2	0.1	-0.2
Hispanic	1.2	1.0	1.0	1.1	1.0	0.9	1.0	1.0	0.7	0.5	0.4	0.4	0.3	0.2	-0.1

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>In 1995, the heroin question was changed in half of the forms. Separate questions were asked for use with and without injection. In 1996, the remaining forms were changed. Data presented here represent the combined data from all forms. Beginning in 2015 Heroin use with and without a needle were dropped in one form; data based on three of four forms;  $N$  is two thirds of  $N$  indicated.

<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 51**  
**HEROIN: Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<i>Approximate weighted N =</i>	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
Total	1.0	0.8	0.8	0.8	0.5	0.5	0.5	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.6	0.5
Gender:																
Male	1.2	1.0	1.2	1.1	0.6	0.6	0.6	0.8	0.7	0.7	0.8	0.7	0.7	0.7	0.9	0.6
Female	0.8	0.5	0.4	0.6	0.3	0.4	0.3	0.4	0.4	0.3	0.3	0.2	0.3	0.3	0.4	0.3
College Plans:																
None or under 4 years	—	0.9	1.1	1.0	0.7	0.6	0.5	0.7	0.9	0.6	0.7	0.8	0.5	0.8	0.9	0.6
Complete 4 years	—	0.6	0.5	0.6	0.3	0.3	0.5	0.4	0.3	0.4	0.5	0.4	0.4	0.3	0.5	0.4
Region:																
Northeast	1.1	0.7	0.7	0.6	0.6	0.5	0.5	0.9	0.6	0.6	0.8	0.7	0.6	0.5	0.9	0.8
Midwest	1.3	1.0	1.0	0.8	0.5	0.7	0.6	0.5	0.4	0.6	0.6	0.4	0.6	0.3	0.6	0.3
South	0.9	0.7	0.9	1.1	0.6	0.3	0.5	0.5	0.7	0.5	0.6	0.5	0.4	0.5	0.6	0.5
West	0.7	0.6	0.5	0.8	0.2	0.4	0.5	0.3	0.5	0.4	0.3	0.5	0.5	0.7	0.7	0.3
Population Density:																
Large MSA	1.3	1.0	0.5	0.7	0.4	0.3	0.3	0.7	0.6	0.6	0.7	0.7	0.3	0.4	0.5	0.4
Other MSA	0.9	1.0	0.8	0.8	0.6	0.5	0.5	0.4	0.4	0.4	0.7	0.4	0.6	0.5	0.7	0.5
Non-MSA	1.0	0.4	1.1	1.0	0.5	0.6	0.7	0.6	0.7	0.7	0.4	0.5	0.5	0.5	0.8	0.5
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	1.2	0.8	0.8	0.8	0.6	0.6	0.4	0.4	0.5	0.6	0.8	0.9	0.5	0.5	0.9	0.8
2.5–3.0	0.8	0.9	0.8	0.9	0.5	0.6	0.6	0.7	0.6	0.5	0.5	0.4	0.4	0.7	0.7	0.4
3.5–4.0	0.6	0.8	0.9	0.7	0.4	0.4	0.5	0.3	0.5	0.5	0.5	0.5	0.6	0.4	0.6	0.4
4.5–5.0	1.2	1.4	0.6	0.9	0.6	0.4	0.3	0.6	0.4	0.4	0.7	0.3	0.3	0.3	0.6	0.4
5.5–6.0 (High)	1.2	0.6	1.1	1.0	0.8	0.4	0.7	1.1	0.8	0.5	0.6	0.5	0.7	0.4	0.4	0.5
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	—	0.8	0.8	0.6	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.6
African American	—	—	0.6	0.6	0.5	0.5	0.6	0.7	0.6	0.4	0.5	0.5	0.5	0.7	0.6	0.3
Hispanic	—	—	1.2	2.0	1.7	0.4	0.3	0.4	0.6	1.1	1.0	0.9	0.9	0.5	0.5	0.6

Table continued on next page.

**TABLE 51 (cont.)**  
**HEROIN: Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	1991	1992	1993	1994	1995 <sup>c</sup>	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	0.4	0.6	0.5	0.6	1.1	1.0	1.2	1.0	1.1	1.5	0.9	1.0	0.8	0.9	0.8	0.8
Gender:																
Male	0.6	0.8	0.7	0.8	1.4	1.3	1.5	1.4	1.4	1.7	1.3	1.1	0.8	1.2	1.2	1.0
Female	0.3	0.3	0.3	0.4	0.8	0.7	0.9	0.7	0.8	1.2	0.6	0.8	0.5	0.4	0.5	0.4
College Plans:																
None or under 4 years	0.5	0.9	1.0	1.1	1.5	1.8	1.8	1.7	1.3	2.2	1.3	2.3	0.9	1.6	1.8	1.3
Complete 4 years	0.4	0.5	0.4	0.5	0.9	0.8	1.0	0.8	1.0	1.1	0.7	0.7	0.6	0.6	0.6	0.6
Region:																
Northeast	0.2	0.5	0.9	0.7	1.0	1.6	1.7	1.3	1.2	1.0	1.2	1.2	0.8	0.9	1.0	1.1
Midwest	0.8	0.6	0.5	0.9	0.7	0.7	0.9	1.0	0.9	1.4	1.3	1.0	0.6	0.6	0.8	0.4
South	0.4	0.6	0.4	0.6	1.4	1.0	1.1	1.1	1.3	1.6	0.6	1.2	1.0	1.0	0.9	0.8
West	0.3	0.8	0.5	0.4	1.0	0.9	1.2	0.6	0.9	1.8	0.8	0.5	0.5	0.9	0.7	0.7
Population Density:																
Large MSA	0.4	0.4	0.6	0.4	1.4	1.1	1.1	0.9	0.8	1.9	1.1	1.0	0.7	0.8	0.8	1.0
Other MSA	0.4	0.7	0.5	0.8	0.9	1.1	1.3	1.3	1.3	1.3	0.8	1.0	0.8	1.0	0.9	0.6
Non-MSA	0.6	0.7	0.5	0.5	1.0	0.9	1.0	0.6	1.0	1.3	0.9	1.1	0.9	0.6	0.8	0.6
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	0.5	0.7	0.3	0.9	1.8	1.1	2.1	1.2	2.3	2.3	1.3	2.1	1.1	1.4	1.0	1.2
2.5–3.0	0.4	0.6	0.4	0.8	1.1	0.9	1.0	1.0	0.9	1.6	0.5	1.0	0.7	0.9	1.2	0.9
3.5–4.0	0.4	0.6	0.6	0.4	0.9	1.1	1.2	1.2	1.0	1.3	1.0	0.9	0.8	0.7	0.8	0.7
4.5–5.0	0.6	0.7	0.7	0.3	1.1	1.0	1.1	1.0	1.1	1.5	1.0	0.7	0.6	0.9	0.5	0.5
5.5–6.0 (High)	0.5	0.3	0.4	0.9	1.0	0.8	1.1	0.7	1.1	1.1	0.8	1.0	0.6	0.6	0.8	0.7
Race/Ethnicity (2-year average): <sup>b</sup>																
White	0.5	0.5	0.5	0.5	0.8	1.0	1.2	1.2	1.1	1.3	1.3	1.0	0.8	0.7	0.7	0.7
African American	0.2	0.5	0.4	0.3	0.4	0.5	0.5	0.4	0.3	0.5	0.4	0.5	0.7	0.7	0.8	0.7
Hispanic	0.6	0.9	0.7	0.5	1.2	1.5	1.1	0.8	1.0	2.0	1.6	0.8	0.8	1.0	1.3	1.2

Table continued on next page.

**TABLE 51 (cont.)**  
**HEROIN: Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months													2018-2019 change
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	0.9	0.7	0.7	0.9	0.8	0.6	0.6	0.6	0.5	0.3	0.4	0.4	0.4	0.0
Gender:														
Male	1.2	1.0	1.0	1.1	1.0	0.8	0.8	0.9	0.7	0.4	0.4	0.3	0.5	+0.1
Female	0.6	0.4	0.5	0.5	0.4	0.4	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.0
College Plans:														
None or under 4 years	2.2	1.4	1.1	1.7	1.2	1.2	1.0	1.1	1.3	0.8	0.7	0.8	0.8	0.0
Complete 4 years	0.7	0.5	0.6	0.6	0.7	0.5	0.4	0.5	0.3	0.1	0.2	0.2	0.3	+0.1
Region:														
Northeast	1.1	0.7	0.8	1.3	0.7	0.8	0.6	0.8	0.3	0.2	0.1	0.2	0.4	+0.1
Midwest	0.8	0.6	0.8	0.9	0.7	0.7	0.6	0.6	0.6	0.4	0.2	0.6	0.1	-0.5 s
South	0.9	0.7	0.6	0.7	0.7	0.4	0.5	0.5	0.4	0.2	0.6	0.4	0.5	+0.1
West	0.9	1.0	0.9	0.7	1.0	0.8	0.7	0.5	0.6	0.4	0.4	0.1	0.4	+0.2
Population Density:														
Large MSA	0.9	0.9	0.9	0.8	0.9	0.7	0.5	0.4	0.4	0.4	0.3	0.3	0.5	+0.1
Other MSA	0.9	0.8	0.8	0.9	0.8	0.7	0.6	0.7	0.4	0.2	0.4	0.4	0.3	-0.1
Non-MSA	1.0	0.5	0.6	0.8	0.5	0.5	0.6	0.5	0.6	0.4	0.5	0.3	0.4	+0.1
Parental Education: <sup>a</sup>														
1.0–2.0 (Low)	1.7	1.3	1.5	1.1	1.0	1.3	1.0	1.3	0.8	0.5	0.7	1.1	0.9	-0.2
2.5–3.0	1.0	0.5	0.8	1.0	0.5	0.8	0.6	0.6	0.4	0.2	0.6	0.3	0.4	+0.1
3.5–4.0	0.8	0.9	0.6	0.9	0.8	0.4	0.4	0.3	0.6	0.3	0.3	0.3	0.4	+0.1
4.5–5.0	0.9	0.5	0.6	0.7	0.8	0.5	0.5	0.7	0.4	0.2	0.2	0.1	0.1	0.0
5.5–6.0 (High)	0.5	0.7	0.5	0.6	0.7	0.4	0.6	0.5	0.2	0.3	0.2	0.2	0.3	+0.1
Race/Ethnicity (2-year average): <sup>b</sup>														
White	0.9	0.9	0.7	0.8	0.9	0.7	0.5	0.4	0.4	0.3	0.2	0.2	0.2	0.0
African American	0.5	0.4	0.4	0.6	0.7	0.8	0.8	0.9	1.0	0.6	0.5	0.6	0.7	+0.1
Hispanic	1.1	0.9	0.7	0.6	0.5	0.4	0.5	0.6	0.5	0.4	0.4	0.4	0.5	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 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.

<sup>c</sup>In 1995, the heroin question was changed in half of the forms. Separate questions were asked for use with and without injection. In 1996, the remaining forms were changed. Data presented here represent the combined data from all forms.

**TABLE 52**  
**HEROIN WITH A NEEDLE: Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months											
	1991– 1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<i>Approximate weighted N =</i>	—	17,500	17,800	18,600	18,100	16,700	16,700	16,200	15,100	16,500	17,000	16,800
Total	—	0.9	1.0	0.8	0.8	0.9	0.6	0.7	0.6	0.6	0.7	0.6
Gender:												
Male	—	1.2	1.0	0.8	1.0	1.0	0.7	0.7	0.6	0.7	0.7	0.6
Female	—	0.5	1.0	0.7	0.7	0.8	0.6	0.7	0.6	0.5	0.7	0.6
College Plans:												
None or under 4 years	—	3.2	3.1	2.0	3.1	2.2	2.1	2.2	1.9	2.0	3.1	1.5
Complete 4 years	—	0.6	0.7	0.6	0.6	0.7	0.5	0.6	0.5	0.4	0.4	0.4
Region:												
Northeast	—	0.8	1.3	0.5	0.6	1.0	0.8	0.9	0.6	0.4	0.7	0.4
Midwest	—	0.9	1.1	0.7	0.9	1.2	0.9	0.7	0.8	0.6	0.6	0.3
South	—	0.8	0.9	0.8	1.0	0.9	0.3	0.9	0.6	0.7	0.6	0.8
West	—	1.0	1.0	1.0	0.8	0.7	0.8	0.3	0.6	0.7	0.9	0.6
Population Density:												
Large MSA	—	0.9	0.7	0.6	0.8	0.8	0.7	0.7	0.4	0.5	1.0	0.3
Other MSA	—	0.9	1.2	0.8	0.8	0.9	0.6	0.6	0.7	0.6	0.7	0.7
Non-MSA	—	0.9	1.1	0.9	1.1	1.1	0.7	1.0	0.8	0.9	0.5	0.7
Parental Education: <sup>a</sup>												
1.0–2.0 (Low)	—	1.3	0.9	1.5	2.3	2.0	1.2	2.0	1.1	1.6	1.6	0.3
2.5–3.0	—	0.5	1.2	0.8	0.8	0.9	0.5	0.7	0.9	0.6	0.8	1.0
3.5–4.0	—	0.8	1.2	0.6	0.6	0.9	0.4	0.6	0.6	0.4	0.7	0.7
4.5–5.0	—	1.0	0.8	0.7	0.7	0.5	0.4	0.5	0.5	0.5	0.6	0.3
5.5–6.0 (High)	—	1.0	0.6	0.9	0.9	1.2	0.9	0.7	0.4	0.5	0.5	0.3
Race/Ethnicity (2-year average): <sup>b</sup>												
White	—	—	1.1	1.0	0.7	0.8	0.7	0.6	0.7	0.6	0.6	0.5
African American	—	—	0.3	0.2	0.3	0.4	0.3	0.5	0.5	0.4	0.5	0.4
Hispanic	—	—	1.1	1.0	1.1	1.5	1.2	0.8	0.7	0.9	1.3	1.1

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**TABLE 52 (cont.)**  
**HEROIN WITH A NEEDLE: Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	
Total	0.5	0.6	0.5	0.5	0.6	0.5	0.4	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.0
Gender:															
Male	0.4	0.5	0.6	0.6	0.6	0.5	0.4	0.2	0.5	0.2	0.2	0.2	0.2	0.2	0.0
Female	0.6	0.5	0.4	0.5	0.5	0.4	0.3	0.4	0.3	0.2	0.1	0.3	0.1	0.2	+0.1
College Plans:															
None or under 4 years	2.1	2.7	2.1	2.6	1.3	2.1	1.3	1.8	2.2	0.6	0.7	1.1	0.5	0.3	-0.3
Complete 4 years	0.4	0.3	0.4	0.4	0.5	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.2	+0.1
Region:															
Northeast	0.3	0.4	0.5	0.3	0.5	0.5	0.3	0.2	0.2	0.1	0.2	0.1	0.2	0.2	+0.1
Midwest	0.4	0.6	0.5	0.5	0.6	0.3	0.3	0.3	0.4	0.2	0.1	0.3	0.1	0.0	-0.1
South	0.6	0.6	0.5	0.5	0.5	0.4	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.3	0.0
West	0.7	0.6	0.6	0.9	0.7	0.6	0.3	0.3	0.7	0.1	0.1	0.3	0.4	0.3	-0.1
Population Density:															
Large MSA	0.5	0.3	0.7	0.5	0.6	0.4	0.4	0.2	0.5	0.2	0.2	0.3	0.3	0.2	-0.1
Other MSA	0.6	0.6	0.5	0.6	0.7	0.5	0.4	0.4	0.4	0.2	0.2	0.2	0.2	0.3	+0.1
Non-MSA	0.4	0.7	0.3	0.5	0.3	0.4	0.2	0.2	0.4	0.3	0.2	0.1	0.1	0.0	-0.1
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	1.4	1.3	1.6	1.6	0.6	1.0	0.6	0.8	0.9	0.3	0.2	0.7	0.5	0.3	-0.2
2.5–3.0	0.5	0.6	0.5	0.5	0.7	0.9	0.5	0.4	0.3	0.1	0.2	0.2	0.4	0.3	-0.1
3.5–4.0	0.4	0.3	0.4	0.3	0.6	0.4	0.7	0.3	0.3	0.1	0.2	0.2	0.2	0.3	+0.1
4.5–5.0	0.4	0.6	0.3	0.4	0.4	0.2	0.1	0.2	0.3	0.2	0.2	0.0	0.1	0.1	0.0
5.5–6.0 (High)	0.2	0.3	0.7	0.5	0.6	0.4	0.2	0.3	0.4	0.1	0.1	0.1	0.1	0.1	0.0
Race/Ethnicity (2-year average): <sup>b</sup>															
White	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.0
African American	0.3	0.2	0.2	0.5	0.6	0.4	0.4	0.5	0.4	0.2	0.1	0.2	0.2	0.1	0.0
Hispanic	0.9	0.9	1.0	0.9	1.0	1.1	0.7	0.4	0.4	0.2	0.1	0.2	0.3	0.3	+0.1

*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 1995;  $N$  is one half of  $N$  indicated in Table S1. Data based on all forms beginning in 1996. Beginning in 2015 Heroin use with and without a needle were dropped in one form; data based on three of four forms;  $N$  is two thirds of  $N$  indicated.

<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 53**  
**HEROIN WITH A NEEDLE: Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months											
	1991– 1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<i>Approximate weighted N =</i>	—	17,000	15,600	15,500	15,000	13,600	14,300	14,000	14,300	15,800	16,400	16,200
Total	—	0.6	0.7	0.7	0.8	0.6	0.5	0.4	0.6	0.5	0.5	0.5
Gender:												
Male	—	0.8	0.8	0.9	1.0	0.8	0.6	0.5	0.6	0.5	0.6	0.6
Female	—	0.4	0.4	0.5	0.5	0.5	0.4	0.3	0.4	0.4	0.3	0.4
College Plans:												
None or under 4 years	—	1.6	1.4	1.5	1.6	1.7	1.7	1.4	1.5	1.4	1.6	1.6
Complete 4 years	—	0.4	0.5	0.6	0.6	0.5	0.3	0.3	0.4	0.3	0.3	0.3
Region:												
Northeast	—	0.5	0.3	0.6	0.8	0.7	0.5	0.5	0.4	0.4	0.5	0.6
Midwest	—	0.6	1.0	0.8	0.9	0.7	0.5	0.5	0.6	0.5	0.4	0.5
South	—	0.6	0.7	0.8	0.8	0.6	0.6	0.3	0.5	0.5	0.5	0.4
West	—	0.5	0.5	0.6	0.6	0.6	0.4	0.5	0.8	0.5	0.5	0.6
Population Density:												
Large MSA	—	0.5	0.5	0.6	0.7	0.6	0.6	0.4	0.5	0.4	0.5	0.4
Other MSA	—	0.5	0.7	0.6	0.7	0.5	0.4	0.5	0.4	0.4	0.5	0.6
Non-MSA	—	0.8	0.8	1.1	1.0	1.0	0.6	0.4	1.0	0.6	0.3	0.5
Parental Education: <sup>a</sup>												
1.0–2.0 (Low)	—	1.6	0.6	0.7	1.3	1.2	1.0	0.5	1.2	0.8	1.0	1.4
2.5–3.0	—	0.5	0.8	0.6	0.6	0.7	0.8	0.7	0.3	0.4	0.5	0.6
3.5–4.0	—	0.7	0.7	0.9	0.9	0.6	0.5	0.2	0.6	0.5	0.4	0.4
4.5–5.0	—	0.4	0.5	0.7	0.6	0.6	0.3	0.3	0.3	0.5	0.3	0.4
5.5–6.0 (High)	—	0.3	0.6	0.7	0.8	0.6	0.3	0.5	1.1	0.2	0.3	0.3
Race/Ethnicity (2-year average): <sup>b</sup>												
White	—	—	0.6	0.7	0.7	0.6	0.5	0.4	0.5	0.5	0.4	0.4
African American	—	—	0.1	0.1	0.3	0.3	0.3	0.3	0.2	0.1	0.2	0.5
Hispanic	—	—	0.6	0.6	0.8	1.0	0.9	0.9	0.7	0.7	0.8	0.8

Table continued on next page.

**TABLE 53 (cont.)**  
**HEROIN WITH A NEEDLE: Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	0.5	0.5	0.5	0.6	0.5	0.5	0.4	0.5	0.4	0.2	0.3	0.2	0.1	0.2	+0.1
Gender:															
Male	0.6	0.5	0.6	0.8	0.5	0.6	0.5	0.6	0.4	0.2	0.5	0.2	0.2	0.3	+0.2
Female	0.4	0.5	0.4	0.3	0.4	0.4	0.3	0.3	0.4	0.2	0.1	0.2	0.1	0.1	0.0
College Plans:															
None or under 4 years	1.3	1.3	1.7	2.1	1.7	1.6	1.6	1.1	1.7	0.5	1.0	0.6	0.3	0.4	+0.1
Complete 4 years	0.4	0.4	0.3	0.4	0.3	0.4	0.3	0.4	0.3	0.2	0.2	0.1	0.1	0.2	+0.1
Region:															
Northeast	0.6	0.6	0.4	0.8	0.5	0.4	0.3	0.4	0.2	0.3	0.1	0.1	0.1	0.2	0.0
Midwest	0.5	0.4	0.5	0.7	0.5	0.4	0.5	0.5	0.4	0.3	0.4	0.3	0.1	0.1	0.0
South	0.6	0.4	0.6	0.4	0.5	0.7	0.3	0.4	0.5	0.2	0.2	0.1	0.1	0.3	+0.1
West	0.3	0.6	0.5	0.5	0.4	0.4	0.4	0.6	0.5	0.1	0.4	0.2	0.1	0.4	+0.3
Population Density:															
Large MSA	0.4	0.5	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.1	0.1	0.0
Other MSA	0.5	0.5	0.5	0.8	0.4	0.5	0.3	0.6	0.3	0.1	0.3	0.2	0.1	0.3	+0.2
Non-MSA	0.7	0.4	0.7	0.4	0.6	0.6	0.5	0.4	1.0	0.4	0.3	0.1	0.1	0.2	+0.1
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	1.0	1.3	1.7	1.0	0.9	0.6	1.2	0.4	0.5	0.4	0.5	0.6	0.1	0.2	0.0
2.5–3.0	0.5	0.5	0.2	0.7	0.2	0.5	0.5	0.5	0.5	0.3	0.3	0.2	0.1	0.4	+0.3
3.5–4.0	0.4	0.4	0.5	0.8	0.4	0.5	0.3	0.3	0.5	0.2	0.2	0.1	0.1	0.1	0.0
4.5–5.0	0.3	0.5	0.3	0.3	0.4	0.4	0.3	0.4	0.3	0.3	0.2	0.1	0.1	0.0	0.0
5.5–6.0 (High)	1.0	0.2	0.3	0.4	0.7	0.2	0.3	0.7	0.3	0.1	0.3	0.1	0.2	0.5	+0.4
Race/Ethnicity (2-year average): <sup>b</sup>															
White	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.3	0.2	0.2	0.1	0.2	+0.1
African American	0.4	0.2	0.4	0.4	0.4	0.6	0.5	0.4	0.5	0.4	0.4	0.3	0.2	0.1	-0.1
Hispanic	0.8	0.6	0.7	0.8	0.6	0.4	0.6	0.6	0.5	0.3	0.3	0.4	0.2	0.1	-0.1

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

*Notes.* Level of significance of difference between the two most recent 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 1995; *N* is one half of *N* indicated in Table S2. Data based on all forms beginning in 1996. Beginning in 2015 Heroin use with and without a needle were dropped in one form; data based on three of four forms; *N* is two thirds of *N* indicated.

<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 54**  
**HEROIN WITH A NEEDLE: Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months											
	1975– 1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<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
Total	—	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.5
Gender:												
Male	—	0.7	0.9	0.9	0.6	0.6	0.6	0.5	0.5	0.6	0.6	0.6
Female	—	0.3	0.1	0.2	0.3	0.2	0.2	0.1	0.2	0.3	0.1	0.3
College Plans:												
None or under 4 years	—	0.9	1.2	0.9	0.8	0.5	1.0	0.7	0.9	0.4	1.0	0.9
Complete 4 years	—	0.4	0.4	0.4	0.3	0.4	0.2	0.2	0.3	0.4	0.2	0.4
Region:												
Northeast	—	0.4	0.6	0.6	0.7	0.3	0.2	0.7	0.6	0.6	0.6	0.6
Midwest	—	0.5	0.4	0.8	0.4	0.5	0.4	0.2	0.6	0.3	0.2	0.7
South	—	0.4	0.6	0.3	0.5	0.4	0.8	0.1	0.3	0.6	0.4	0.4
West	—	0.8	0.5	0.5	0.1	0.3	0.1	0.4	0.2	0.2	0.5	0.3
Population Density:												
Large MSA	—	0.6	0.7	0.3	0.3	0.4	0.8	0.4	0.5	0.5	0.6	0.4
Other MSA	—	0.4	0.5	0.6	0.5	0.3	0.3	0.3	0.3	0.4	0.4	0.6
Non-MSA	—	0.6	0.3	0.7	0.5	0.6	0.3	0.2	0.5	0.4	0.2	0.5
Parental Education: <sup>a</sup>												
1.0–2.0 (Low)	—	0.7	0.9	1.8	0.8	1.5	1.2	0.7	0.8	0.5	0.2	0.8
2.5–3.0	—	0.6	0.5	0.4	0.5	0.1	0.4	0.3	0.4	0.7	0.6	0.5
3.5–4.0	—	0.2	0.3	0.3	0.4	0.5	0.2	0.1	0.5	0.3	0.3	0.4
4.5–5.0	—	0.5	0.7	0.6	0.4	0.3	0.4	0.4	0.2	0.4	0.4	0.3
5.5–6.0 (High)	—	0.6	0.5	0.5	0.2	0.4	0.2	0.3	0.2	0.3	0.4	0.4
Race/Ethnicity (2-year average): <sup>b</sup>												
White	—	—	0.4	0.5	0.5	0.4	0.3	0.2	0.2	0.3	0.3	0.3
African American	—	—	0.2	0.5	0.4	0.2	0.5	0.4	0.2	0.4	0.5	0.6
Hispanic	—	—	1.0	0.7	0.5	0.6	1.0	0.6	0.4	0.6	0.7	0.8

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**TABLE 54 (cont.)**  
**HEROIN WITH A NEEDLE: Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	0.5	0.4	0.4	0.3	0.7	0.6	0.4	0.4	0.5	0.3	0.3	0.2	0.3	0.3	-0.0
Gender:															
Male	0.7	0.5	0.6	0.4	1.0	0.8	0.5	0.5	0.8	0.4	0.3	0.2	0.3	0.4	+0.1
Female	0.3	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.1	0.1	0.2	0.2	0.1	0.2	0.0
College Plans:															
None or under 4 years	1.0	1.0	1.0	0.6	1.6	1.3	1.1	0.7	0.9	0.8	1.0	0.4	1.0	0.7	-0.3
Complete 4 years	0.3	0.2	0.2	0.2	0.4	0.5	0.3	0.2	0.4	0.2	0.1	0.2	0.1	0.2	+0.1
Region:															
Northeast	0.8	0.7	0.3	0.3	0.6	0.8	0.6	0.3	0.7	0.0	0.1	0.1	0.2	0.6	+0.4
Midwest	0.1	0.1	0.3	0.3	0.8	0.4	0.6	0.3	0.7	0.6	0.3	0.1	0.6	0.1	-0.5
South	0.6	0.4	0.3	0.2	0.8	0.5	0.2	0.4	0.3	0.3	0.3	0.4	0.4	0.3	0.0
West	0.3	0.2	0.5	0.3	0.4	1.0	0.4	0.5	0.5	0.4	0.3	0.1	0.1	0.1	0.0
Population Density:															
Large MSA	0.7	0.6	0.2	0.5	0.7	0.8	0.5	0.3	0.4	0.5	0.2	0.2	0.4	0.4	0.0
Other MSA	0.4	0.2	0.5	0.2	0.6	0.7	0.4	0.4	0.6	0.2	0.3	0.3	0.3	0.2	-0.2
Non-MSA	0.4	0.4	0.2	0.1	0.7	0.3	0.2	0.3	0.4	0.4	0.5	0.2	0.2	0.4	+0.2
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	1.0	1.0	0.9	0.8	1.4	1.4	0.4	0.8	1.5	0.8	0.7	0.6	1.4	0.5	-0.9
2.5–3.0	0.5	0.4	0.3	0.5	0.9	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.0
3.5–4.0	0.5	0.2	0.4	0.2	0.5	0.8	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.4	+0.2
4.5–5.0	0.2	0.2	0.3	0.1	0.5	0.4	0.5	0.3	0.6	0.4	0.1	0.1	0.1	0.1	-0.1
5.5–6.0 (High)	0.6	0.3	0.2	0.1	0.3	0.6	0.3	0.0	0.1	0.1	0.2	0.3	0.1	0.3	+0.2
Race/Ethnicity (2-year average): <sup>b</sup>															
White	0.3	0.3	0.3	0.3	0.4	0.6	0.5	0.3	0.2	0.3	0.3	0.2	0.1	0.1	0.0
African American	0.7	0.4	0.3	0.3	0.7	0.9	0.5	0.5	0.8	0.6	0.2	0.4	0.6	0.9	+0.3
Hispanic	0.9	0.7	0.4	0.3	0.5	0.6	0.2	0.3	0.6	0.7	0.4	0.3	0.4	0.4	+0.1

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 three of six forms; N is three sixths of N indicated in Table S3.

<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 55**  
**HEROIN WITHOUT A NEEDLE: Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months											
	1991– <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>
<i>Approximate weighted N =</i>	—	17,500	17,800	18,600	18,100	16,700	16,700	16,200	15,100	16,500	17,000	16,800
Total	—	0.8	1.0	0.8	0.8	0.9	0.7	0.6	0.6	0.6	0.6	0.5
Gender:												
Male	—	1.0	0.9	0.9	0.9	0.8	0.5	0.6	0.6	0.6	0.4	0.4
Female	—	0.6	0.9	0.7	0.8	0.8	0.8	0.6	0.7	0.6	0.7	0.5
College Plans:												
None or under 4 years	—	3.2	2.1	2.2	3.4	2.7	2.4	1.9	1.7	2.3	2.5	1.6
Complete 4 years	—	0.5	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4
Region:												
Northeast	—	0.9	1.1	0.8	0.7	0.7	0.6	0.7	0.3	0.5	0.6	0.5
Midwest	—	1.0	1.0	0.9	0.9	1.0	0.8	0.6	0.7	0.8	0.4	0.3
South	—	0.8	0.8	0.7	0.9	0.9	0.5	0.6	0.7	0.7	0.6	0.6
West	—	0.7	1.1	1.1	0.9	0.9	0.8	0.5	0.7	0.5	0.7	0.4
Population Density:												
Large MSA	—	0.9	1.0	0.6	0.5	0.8	0.7	0.5	0.6	0.6	0.7	0.4
Other MSA	—	0.8	1.0	0.9	1.0	0.8	0.8	0.8	0.5	0.6	0.6	0.5
Non-MSA	—	0.9	0.9	1.0	1.0	1.1	0.5	0.4	0.8	0.7	0.3	0.6
Parental Education: <sup>a</sup>												
1.0–2.0 (Low)	—	1.9	1.5	1.3	2.4	1.7	1.1	1.3	0.5	1.4	1.5	0.2
2.5–3.0	—	0.7	0.9	1.1	0.7	1.0	1.3	0.6	0.8	0.6	0.6	0.9
3.5–4.0	—	0.5	1.2	0.5	0.8	0.6	0.5	0.6	0.6	0.7	0.6	0.5
4.5–5.0	—	0.8	0.8	0.8	0.6	0.8	0.5	0.5	0.6	0.4	0.4	0.3
5.5–6.0 (High)	—	0.7	0.8	1.0	1.1	1.1	0.3	0.4	0.4	0.5	0.3	0.1
Race/Ethnicity (2-year average): <sup>b</sup>												
White	—	—	1.0	1.0	0.8	0.8	0.8	0.7	0.6	0.6	0.5	0.4
African American	—	—	0.2	0.2	0.4	0.5	0.3	0.3	0.3	0.3	0.5	0.4
Hispanic	—	—	1.5	1.2	1.1	1.4	1.1	0.8	1.0	1.0	1.0	0.9

Table continued on next page.

**TABLE 55 (cont.)**  
**HEROIN WITHOUT A NEEDLE: Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	
Total	0.5	0.5	0.6	0.4	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.0
Gender:															
Male	0.5	0.4	0.6	0.4	0.5	0.4	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.2	-0.1
Female	0.6	0.5	0.6	0.4	0.5	0.5	0.3	0.3	0.2	0.2	0.1	0.3	0.1	0.3	+0.1
College Plans:															
None or under 4 years	2.3	1.9	2.6	1.9	1.8	1.8	1.1	1.3	0.5	0.4	0.9	1.3	0.8	0.4	-0.4
Complete 4 years	0.4	0.3	0.4	0.2	0.4	0.3	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.0
Region:															
Northeast	0.2	0.2	0.4	0.3	0.4	0.3	0.1	0.3	0.1	0.1	0.1	0.2	0.1	0.0	-0.1
Midwest	0.7	0.5	0.8	0.3	0.4	0.5	0.2	0.3	0.1	0.2	0.1	0.2	0.1	0.3	+0.2
South	0.6	0.4	0.7	0.3	0.5	0.4	0.3	0.4	0.2	0.3	0.3	0.2	0.3	0.3	0.0
West	0.5	0.7	0.5	0.7	0.6	0.5	0.4	0.3	0.4	0.0	0.1	0.5	0.4	0.2	-0.2
Population Density:															
Large MSA	0.4	0.3	0.8	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.4	0.1	-0.3 s
Other MSA	0.5	0.5	0.5	0.5	0.6	0.5	0.2	0.3	0.2	0.2	0.1	0.3	0.2	0.3	+0.1
Non-MSA	0.7	0.7	0.4	0.3	0.5	0.4	0.2	0.3	0.2	0.3	0.2	0.1	0.1	0.2	0.0
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	1.4	1.0	1.6	1.1	1.4	0.7	0.7	0.9	0.5	0.3	0.3	0.5	0.6	0.2	-0.4
2.5–3.0	0.6	0.4	0.8	0.4	0.6	1.0	0.4	0.4	0.2	0.2	0.3	0.3	0.4	0.2	-0.2
3.5–4.0	0.6	0.3	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.4	+0.2
4.5–5.0	0.4	0.7	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.0	0.0
5.5–6.0 (High)	0.3	0.3	0.8	0.2	0.5	0.2	0.1	0.4	0.2	0.0	0.0	0.2	0.1	0.4	+0.3
Race/Ethnicity (2-year average): <sup>b</sup>															
White	0.5	0.5	0.5	0.4	0.3	0.4	0.3	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.0
African American	0.3	0.3	0.3	0.3	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.3	+0.2
Hispanic	0.6	0.7	0.8	0.8	0.8	0.8	0.6	0.5	0.5	0.2	0.1	0.3	0.5	0.4	-0.1

*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 1995; N is one half of N indicated in Table S1. Data based on all forms beginning in 1996. Beginning in 2015 Heroin use with and without a needle were dropped in one form; data based on three of four forms; N is two thirds of N indicated.

<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 56**  
**HEROIN WITHOUT A NEEDLE: Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months											
	1991– 1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Approximate weighted N =	—	17,000	15,600	15,500	15,000	13,600	14,300	14,000	14,300	15,800	16,400	16,200
Total	—	0.8	0.9	1.1	1.0	1.1	1.1	0.7	0.8	0.5	0.7	0.7
Gender:												
Male	—	0.9	1.1	1.2	1.2	1.3	1.1	0.8	0.9	0.6	0.8	0.7
Female	—	0.7	0.7	1.0	0.8	1.0	1.0	0.6	0.6	0.4	0.5	0.6
College Plans:												
None or under 4 years	—	1.7	1.8	2.1	1.8	2.5	2.7	1.7	2.2	1.4	2.2	2.3
Complete 4 years	—	0.6	0.7	1.0	0.9	0.8	0.8	0.5	0.6	0.4	0.5	0.4
Region:												
Northeast	—	0.5	0.7	1.0	1.4	1.6	1.2	0.8	0.7	0.4	0.9	0.9
Midwest	—	0.5	0.8	1.2	0.7	1.0	1.2	0.8	0.9	0.5	0.5	0.8
South	—	1.1	1.1	1.2	1.0	1.0	1.3	0.7	0.5	0.7	0.7	0.6
West	—	0.9	0.9	1.0	0.8	0.8	0.5	0.5	1.2	0.4	0.5	0.5
Population Density:												
Large MSA	—	0.9	0.9	1.3	0.8	0.9	1.5	0.8	0.6	0.4	0.6	0.7
Other MSA	—	0.7	1.0	1.0	1.1	1.2	1.0	0.7	0.8	0.6	0.8	0.7
Non-MSA	—	0.9	0.7	1.1	1.0	1.2	0.9	0.7	1.0	0.6	0.5	0.6
Parental Education: <sup>a</sup>												
1.0–2.0 (Low)	—	1.7	0.8	0.9	1.2	1.8	1.1	0.9	1.5	0.9	1.0	1.1
2.5–3.0	—	0.6	0.7	1.0	1.0	1.1	1.1	0.9	0.7	0.7	0.7	0.9
3.5–4.0	—	0.9	1.0	1.3	1.2	0.9	1.3	0.5	0.8	0.4	0.7	0.6
4.5–5.0	—	0.5	0.8	1.1	1.0	1.0	1.0	0.6	0.5	0.5	0.5	0.6
5.5–6.0 (High)	—	0.9	1.1	1.0	0.7	1.1	1.1	0.6	1.1	0.1	0.4	0.5
Race/Ethnicity (2-year average): <sup>b</sup>												
White	—	—	0.9	1.0	1.1	1.1	1.2	1.0	0.8	0.7	0.6	0.7
African American	—	—	0.1	0.1	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3
Hispanic	—	—	0.8	1.1	1.4	1.3	0.9	0.8	0.8	0.8	0.9	1.0

Table continued on next page.

**TABLE 56 (cont.)**  
**HEROIN WITHOUT A NEEDLE: Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.1	0.1	0.2	+0.1
Gender:															
Male	0.6	0.6	0.8	0.8	0.6	0.5	0.4	0.5	0.3	0.3	0.2	0.2	0.1	0.3	+0.1
Female	0.6	0.5	0.4	0.4	0.5	0.4	0.4	0.3	0.4	0.3	0.1	0.1	0.1	0.1	0.0
College Plans:															
None or under 4 years	2.0	1.1	1.6	2.0	2.2	1.6	1.8	1.2	1.3	1.2	0.7	0.4	0.4	0.3	-0.2
Complete 4 years	0.4	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	+0.1
Region:															
Northeast	0.8	0.7	0.6	0.5	0.5	0.6	0.3	0.4	0.2	0.4	0.1	0.2	0.1	0.1	0.0
Midwest	0.6	0.5	0.8	0.7	0.6	0.2	0.4	0.2	0.2	0.3	0.3	0.2	0.0	0.2	+0.1
South	0.6	0.6	0.6	0.4	0.5	0.6	0.5	0.3	0.5	0.3	0.1	0.1	0.2	0.2	0.0
West	0.5	0.5	0.4	0.8	0.6	0.5	0.5	0.6	0.3	0.3	0.1	0.1	0.1	0.3	+0.2
Population Density:															
Large MSA	0.5	0.7	0.5	0.4	0.6	0.5	0.5	0.3	0.3	0.2	0.2	0.1	0.1	0.2	+0.1
Other MSA	0.6	0.5	0.6	0.8	0.5	0.4	0.3	0.5	0.2	0.2	0.1	0.1	0.1	0.3	+0.2
Non-MSA	0.8	0.6	0.8	0.3	0.6	0.5	0.6	0.3	0.6	0.6	0.2	0.2	0.2	0.1	-0.1
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	1.2	0.9	1.1	1.1	0.9	0.7	1.3	0.5	0.3	0.8	0.4	0.2	0.1	0.1	0.0
2.5–3.0	0.6	0.6	0.4	0.6	0.5	0.7	0.6	0.7	0.4	0.2	0.1	0.1	0.0	0.3	+0.3
3.5–4.0	0.5	0.6	0.8	0.7	0.5	0.4	0.4	0.1	0.3	0.4	0.1	0.2	0.2	0.1	-0.1
4.5–5.0	0.5	0.5	0.5	0.3	0.6	0.3	0.3	0.2	0.3	0.1	0.1	0.0	0.0	0.1	+0.1
5.5–6.0 (High)	0.4	0.3	0.4	0.5	0.5	0.4	0.1	0.7	0.4	0.4	0.2	0.1	0.2	0.5	+0.2
Race/Ethnicity (2-year average): <sup>b</sup>															
White	0.7	0.5	0.5	0.6	0.6	0.5	0.4	0.3	0.3	0.3	0.2	0.1	0.1	0.2	+0.1
African American	0.4	0.3	0.4	0.3	0.2	0.5	0.6	0.5	0.4	0.4	0.1	0.0	0.1	0.0	0.0
Hispanic	0.9	0.8	0.7	0.7	0.7	0.7	0.6	0.5	0.3	0.3	0.2	0.2	0.2	0.1	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. Data based on one of two forms in 1995; *N* is one half of *N* indicated in Table S2. Data based on all forms beginning in 1996. Beginning in 2015 Heroin use with and without a needle were dropped in one form; data based on three of four forms; *N* is two thirds of *N* indicated.

<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 57**  
**HEROIN WITHOUT A NEEDLE: Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months											
	1975– 1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<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
Total	—	1.0	1.0	1.2	0.8	1.0	1.6	0.8	0.8	0.8	0.7	0.8
Gender:												
Male	—	1.4	1.3	1.4	1.0	1.3	1.8	1.3	0.9	0.9	0.9	1.1
Female	—	0.7	0.7	0.9	0.7	0.8	1.5	0.4	0.7	0.7	0.4	0.5
College Plans:												
None or under 4 years	—	1.4	1.7	1.6	1.3	1.5	2.7	1.3	2.2	0.8	1.5	1.7
Complete 4 years	—	0.9	0.8	1.0	0.6	1.0	1.3	0.7	0.4	0.7	0.4	0.6
Region:												
Northeast	—	0.9	1.9	1.9	1.1	1.3	0.9	1.3	1.1	0.6	1.1	1.1
Midwest	—	0.7	0.5	1.0	0.6	0.7	1.6	1.1	0.9	0.7	0.4	0.7
South	—	1.4	0.9	1.1	1.1	1.2	1.8	0.3	0.9	1.2	0.5	0.7
West	—	0.8	0.7	0.6	0.3	1.0	2.0	0.9	0.4	0.3	1.0	0.7
Population Density:												
Large MSA	—	1.3	1.1	1.2	0.9	0.9	2.5	1.0	0.6	0.8	0.8	0.7
Other MSA	—	0.8	1.2	1.1	0.9	1.2	1.2	0.8	1.1	0.7	0.9	0.7
Non-MSA	—	1.0	0.4	1.2	0.4	0.8	1.4	0.7	0.6	1.0	0.2	1.0
Parental Education: <sup>a</sup>												
1.0–2.0 (Low)	—	1.0	0.8	1.7	0.5	2.0	2.7	1.5	1.8	1.0	1.1	1.1
2.5–3.0	—	1.1	0.6	0.8	1.1	1.1	1.8	0.5	0.9	0.9	0.8	1.0
3.5–4.0	—	0.9	1.1	1.3	0.9	0.8	1.7	0.8	1.0	0.7	0.6	0.9
4.5–5.0	—	1.2	1.2	1.2	0.8	1.1	1.6	1.1	0.2	0.8	0.7	0.5
5.5–6.0 (High)	—	0.6	1.0	1.0	0.5	1.0	0.6	0.8	0.8	0.7	0.3	0.5
Race/Ethnicity (2-year average): <sup>b</sup>												
White	—	—	1.1	1.3	1.2	1.1	1.4	1.3	1.0	0.8	0.7	0.6
African American	—	—	0.2	0.3	0.3	0.1	0.4	0.4	0.4	0.6	0.7	0.5
Hispanic	—	—	0.9	0.6	0.4	0.6	1.8	1.3	0.5	0.7	0.7	0.9

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**TABLE 57 (cont.)**  
**HEROIN WITHOUT A NEEDLE: Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	0.6	1.0	0.5	0.6	0.8	0.7	0.4	0.4	0.5	0.4	0.3	0.2	0.2	0.2	0.0
Gender:															
Male	0.8	1.2	0.7	0.8	1.1	0.9	0.5	0.5	0.8	0.5	0.2	0.1	0.2	0.2	0.0
Female	0.3	0.6	0.3	0.4	0.4	0.5	0.2	0.3	0.2	0.1	0.3	0.2	0.1	0.1	0.0
College Plans:															
None or under 4 years	1.2	2.6	1.0	0.7	1.8	1.1	0.8	0.8	0.7	0.8	0.5	0.4	0.6	0.6	0.0
Complete 4 years	0.4	0.7	0.3	0.5	0.4	0.6	0.3	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.0
Region:															
Northeast	1.0	1.1	0.7	0.7	1.3	0.8	0.2	0.4	0.9	0.3	0.1	0.0	0.2	0.4	+0.2
Midwest	0.2	0.9	0.3	0.7	0.7	0.9	0.3	0.3	0.5	0.6	0.2	0.0	0.4	0.1	-0.3
South	0.7	1.0	0.3	0.6	0.7	0.4	0.1	0.4	0.3	0.3	0.3	0.4	0.2	0.3	+0.1
West	0.6	0.9	0.8	0.7	0.6	0.9	0.8	0.8	0.4	0.3	0.3	0.2	0.1	0.1	0.0
Population Density:															
Large MSA	0.8	0.9	0.5	0.7	1.1	0.8	0.2	0.2	0.4	0.3	0.3	0.1	0.3	0.4	+0.1
Other MSA	0.4	0.9	0.6	0.6	0.8	0.7	0.4	0.5	0.6	0.4	0.2	0.3	0.1	0.2	0.0
Non-MSA	0.5	1.2	0.3	0.5	0.5	0.4	0.5	0.6	0.2	0.4	0.3	0.2	0.4	0.3	-0.1
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	1.2	2.2	0.7	1.1	0.8	1.0	0.1	1.0	0.9	1.0	0.6	0.4	0.3	0.7	+0.3
2.5–3.0	0.5	0.9	0.5	0.7	0.9	0.4	0.5	0.7	0.3	0.4	0.2	0.1	0.4	0.2	-0.3
3.5–4.0	0.5	0.8	0.3	0.9	1.1	1.0	0.2	0.3	0.2	0.2	0.2	0.3	0.1	0.4	+0.3
4.5–5.0	0.4	0.8	0.6	0.3	0.5	0.7	0.5	0.3	0.7	0.3	0.1	0.1	0.1	0.1	0.0
5.5–6.0 (High)	0.7	0.7	0.6	0.2	0.5	0.4	0.2	0.3	0.5	0.3	0.3	0.2	0.2	0.1	-0.1
Race/Ethnicity (2-year average): <sup>b</sup>															
White	0.6	0.8	0.8	0.6	0.7	0.8	0.6	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.0
African American	0.4	0.4	0.4	0.3	0.7	0.8	0.4	0.3	0.7	0.8	0.3	0.3	0.4	0.8	+0.4
Hispanic	1.0	1.1	0.7	0.4	0.6	0.7	0.3	0.3	0.6	0.6	0.4	0.2	0.2	0.2	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 S3 for the number of subgroup cases. See appendix B for definition of variables in table. Data based on three of six forms; N is three sixths of N indicated in Table S3.

<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 58**  
**NARCOTICS OTHER THAN HEROIN: <sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	<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>
<i>Approximate weighted N =</i>	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
Total	5.7	5.7	6.4	6.0	6.2	6.3	5.9	5.3	5.1	5.2	5.9	5.2	5.3	4.6	4.4	4.5
Gender:																
Male	6.6	6.8	7.3	6.9	7.3	7.1	6.5	6.0	6.0	6.2	6.8	5.9	5.6	5.1	4.9	5.0
Female	4.8	4.7	5.4	5.1	5.1	5.4	5.3	4.6	4.2	4.2	5.1	4.6	4.9	4.1	3.8	3.9
College Plans:																
None or under 4 years	—	6.8	8.0	6.8	7.3	7.4	7.2	6.1	6.1	6.1	6.6	6.7	6.1	4.8	5.3	5.7
Complete 4 years	—	4.6	4.7	4.9	5.0	5.1	4.8	4.6	4.3	4.3	5.4	4.3	4.8	4.6	3.9	4.0
Region:																
Northeast	6.1	6.5	6.6	6.8	7.0	5.7	7.2	5.6	5.6	6.7	7.3	5.7	6.0	3.7	4.7	4.1
Midwest	6.2	6.2	7.5	6.7	6.1	7.6	6.2	5.5	5.3	4.8	6.3	5.8	5.2	4.4	5.7	4.6
South	4.9	5.0	5.2	4.5	5.2	5.0	4.1	4.5	4.4	4.5	3.8	4.2	4.3	4.7	3.2	4.1
West	5.4	5.0	6.0	6.7	7.1	6.8	7.2	6.2	5.2	5.3	7.1	5.4	6.1	5.7	4.9	5.3
Population Density:																
Large MSA	7.3	6.7	6.7	6.9	7.3	6.9	6.9	5.2	6.0	5.2	6.0	4.8	5.2	4.0	4.1	3.8
Other MSA	5.5	6.1	6.3	5.9	6.3	7.0	6.3	5.7	5.3	5.1	6.4	5.6	5.3	5.2	4.9	4.6
Non-MSA	4.8	4.6	6.2	5.4	5.3	4.8	4.8	4.9	4.1	5.2	5.2	5.0	5.2	4.4	3.8	4.8
Parental Education: <sup>b</sup>																
1.0–2.0 (Low)	5.4	5.0	5.1	5.0	5.2	5.2	4.8	4.8	4.8	4.7	4.5	4.7	4.1	3.9	3.6	3.8
2.5–3.0	5.1	5.9	6.4	6.2	5.9	5.8	5.6	4.9	5.0	5.2	5.5	5.0	4.4	4.3	4.0	4.1
3.5–4.0	4.2	6.3	6.7	6.0	6.3	6.9	6.6	5.2	4.5	5.1	6.5	6.0	5.6	4.3	4.6	4.6
4.5–5.0	6.4	6.3	6.6	6.4	6.7	7.0	6.3	6.4	6.0	5.6	6.4	4.8	5.4	5.4	4.2	4.7
5.5–6.0 (High)	6.5	6.5	7.9	6.1	7.8	6.8	6.8	7.1	5.3	4.9	6.8	5.4	7.8	5.6	6.4	5.7
Race/Ethnicity (2-year average): <sup>c</sup>																
White	—	—	6.6	6.7	6.6	6.8	6.7	6.2	5.8	5.7	6.3	6.3	6.0	5.8	5.3	5.2
African American	—	—	2.2	2.0	1.8	1.7	1.9	1.8	1.7	1.6	1.6	1.7	1.6	1.5	1.5	1.4
Hispanic	—	—	3.8	3.5	3.5	3.7	4.3	4.1	4.0	4.2	3.6	3.0	2.4	2.2	2.5	2.4

Table continued on next page.



**TABLE 58 (cont.)**  
**NARCOTICS OTHER THAN HEROIN: <sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002 <sup>d</sup>	2003 <sup>d</sup>	2004	2005	2006
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	3.5	3.3	3.6	3.8	4.7	5.4	6.2	6.3	6.7	7.0	6.7†	9.4	9.3	9.5	9.0	9.0
Gender:																
Male	3.9	3.3	3.6	4.3	5.6	6.4	7.1	7.4	8.2	8.0	8.0†	11.6	10.7	10.9	10.7	10.3
Female	3.1	3.3	3.3	3.4	3.8	4.4	5.4	5.1	5.2	5.9	5.6†	7.4	7.8	8.1	7.4	7.8
College Plans:																
None or under 4 years	3.8	4.3	4.2	4.9	5.6	7.0	8.2	8.4	7.0	7.8	7.5†	12.4	12.3	12.4	12.2	12.4
Complete 4 years	3.5	3.0	3.3	3.5	4.4	4.9	5.7	5.5	6.6	6.6	6.4†	8.8	8.4	8.7	8.3	8.1
Region:																
Northeast	3.2	3.7	4.6	3.5	4.3	6.1	7.8	6.5	6.2	6.7	7.2†	10.6	9.3	9.9	8.3	10.1
Midwest	4.2	3.6	3.2	4.7	5.2	6.0	6.1	6.5	7.5	7.2	7.8†	8.8	9.1	8.7	10.7	9.9
South	2.7	2.7	3.2	3.8	4.5	5.1	6.1	6.5	7.5	6.6	5.7†	9.3	8.0	9.1	8.6	7.9
West	4.4	3.5	4.0	3.1	4.7	4.1	4.7	5.2	4.7	7.5	6.5†	9.5	11.4	11.1	8.3	8.9
Population Density:																
Large MSA	3.3	3.5	3.1	4.1	4.8	4.6	4.6	5.2	5.4	7.0	8.4†	8.9	7.4	8.1	8.4	8.1
Other MSA	3.9	3.1	3.7	3.7	4.7	5.4	7.2	6.8	7.4	7.2	5.6†	10.3	10.3	10.7	9.3	9.0
Non-MSA	3.1	3.6	3.7	3.6	4.7	6.0	6.0	6.5	6.8	6.6	6.9†	8.5	9.7	8.9	9.1	10.4
Parental Education: <sup>b</sup>																
1.0–2.0 (Low)	3.8	3.5	3.8	3.0	4.0	4.5	4.7	4.7	4.6	4.6	5.1†	6.2	7.9	6.8	5.2	6.1
2.5–3.0	3.2	3.5	2.9	3.8	4.2	5.6	5.3	5.9	5.9	6.4	6.4†	8.9	9.3	8.8	9.5	9.5
3.5–4.0	3.7	3.2	3.7	3.4	4.4	5.5	6.5	6.8	7.2	7.3	7.1†	10.4	9.8	10.8	10.5	10.3
4.5–5.0	3.6	3.4	3.7	4.3	5.5	5.4	6.8	6.2	7.4	7.9	7.0†	10.3	9.5	10.5	9.3	9.1
5.5–6.0 (High)	4.1	3.2	4.5	4.8	5.5	5.6	7.6	6.6	7.4	7.5	7.0†	8.7	8.8	8.8	7.6	8.0
Race/Ethnicity (2-year average): <sup>c</sup>																
White	4.7	4.1	4.1	4.3	5.0	5.9	7.1	7.6	7.7	8.3	8.5	10.3†	10.2 <sup>f</sup>	11.2	11.2	11.2
African American	1.1	0.9	1.0	1.5	1.4	1.2	1.8	2.4	2.0	1.7	1.8	1.9†	2.1 <sup>f</sup>	2.7	2.5	2.4
Hispanic	2.3	2.1	2.3	2.2	2.5	3.7	3.1	2.8	3.6	4.6	4.5	4.3†	5.2 <sup>f</sup>	5.5	5.3	5.0

Table continued on next page.

**TABLE 58 (cont.)**  
**NARCOTICS OTHER THAN HEROIN: <sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months													2018-2019 change
	2007 <sup>e</sup>	2008	2009	2010	2011	2012	2013 <sup>d</sup>	2014	2015	2016	2017	2018	2019	
	Approximate weighted N =													
	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	9.2	9.1	9.2	8.7	8.7	7.9	7.1	6.1	5.4	4.8	4.2	3.4	2.7	-0.7 ss
Gender:														
Male	10.9	10.6	10.7	9.9	9.6	9.3	8.4	7.2	6.1	5.6	5.3	4.4	3.4	-1.0 s
Female	7.6	7.9	7.9	7.4	7.8	6.5	5.6	5.0	4.6	3.8	3.2	2.2	1.8	-0.4
College Plans:														
None or under 4 years	12.9	13.1	11.0	12.3	13.2	9.7	10.1	7.3	6.8	4.9	6.0	4.6	3.7	-0.9
Complete 4 years	8.3	8.3	8.8	7.8	7.8	7.4	6.3	5.8	5.0	4.6	3.8	3.0	2.3	-0.7 s
Region:														
Northeast	9.3	9.7	9.3	9.2	8.3	6.3	7.1	4.0	3.9	3.1	3.0	2.8	1.6	-1.2 ss
Midwest	10.5	10.0	11.6	9.0	9.7	9.1	6.8	6.3	5.0	5.6	3.7	3.5	2.5	-1.0 s
South	8.3	8.3	8.0	8.4	7.3	6.1	7.1	6.4	5.5	4.8	4.9	3.2	2.8	-0.4
West	9.2	9.0	8.2	8.4	10.2	10.0	7.4	7.1	6.6	5.0	4.5	4.0	3.6	-0.4
Population Density:														
Large MSA	7.9	7.9	7.9	8.8	7.6	8.4	6.4	4.6	4.2	4.4	3.4	2.8	2.5	-0.3
Other MSA	9.3	9.0	9.4	9.0	9.0	7.4	7.9	7.4	5.9	5.0	4.6	3.6	2.8	-0.8
Non-MSA	10.7	10.7	10.6	7.7	9.6	8.3	6.1	4.8	6.1	4.7	4.9	4.0	2.6	-1.4 s
Parental Education: <sup>b</sup>														
1.0–2.0 (Low)	7.1	7.1	6.1	5.2	6.6	7.2	5.5	5.8	5.7	4.0	3.3	3.2	2.8	-0.4
2.5–3.0	8.8	9.2	9.9	9.4	8.5	9.0	7.6	6.8	4.7	4.0	5.1	3.9	2.9	-1.1
3.5–4.0	9.5	9.9	9.9	10.0	10.1	8.4	8.3	6.1	6.1	5.1	4.6	3.7	2.9	-0.8
4.5–5.0	9.9	9.0	9.9	8.1	8.1	8.0	6.6	5.8	5.3	5.2	3.7	3.1	2.2	-0.9
5.5–6.0 (High)	9.5	9.7	8.2	8.3	9.2	6.0	6.2	6.3	5.7	5.7	4.6	3.1	2.7	-0.4
Race/Ethnicity (2-year average): <sup>c</sup>														
White	11.5	11.7	11.7	11.1	10.6	10.0	8.5	7.0	6.0	5.6	5.0	4.2	3.3	-1.0 sss
African American	2.6	2.7	2.8	4.0	4.1	3.4	4.0	4.7	4.6	3.7	3.2	2.8	1.7	-1.1 ss
Hispanic	4.5	4.2	4.7	5.1	5.4	5.5	5.7	5.4	4.1	3.9	3.8	2.9	2.5	-0.5

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

Notes. ' † ' indicates some change in the question. See relevant footnote. See relevant figure to assess the impact of the wording changes. 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>Only drug use not under a doctor's orders is included here.

<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.

<sup>d</sup>In 2002 the question text was changed in half of the questionnaire forms. In the list of examples of narcotics other than heroin, Talwin, laudanum, and paregoric were replaced with Vicodin, OxyContin, and Percocet. The 2002 data presented here are based on the changed forms only; N is one half of N indicated. In 2003 the remaining forms were changed to the new wording. Beginning in 2003, the data are based on all forms.

<sup>e</sup>In 2007, in the list of narcotics other than heroin, Dilaudid was replaced with Ultram.

<sup>f</sup>The 2003 data comprise half of the 2002 sample data double-weighted and all of the 2003 sample data.

<sup>g</sup>In 2013 the list of examples was changed on one form: MS Contin, Roxycodone, Hydrocodone (Lortab, Lorcet, Norco), Suboxone, Tylox, and Tramadol were added to the list. An examination of the data did not show any effect from the wording change.

**TABLE 59**  
**OXYCONTIN:<sup>a</sup> Trends in Annual Prevalence of Use**  
**by Subgroups in Grade 8**

	Percentage who used in last 12 months																			2018– 2019 change
	1991– 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	—	15,100	16,500	17,000	16,800	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	
Total	—	1.3	1.7	1.7	1.8	2.6	1.8	2.1	2.0	2.1	1.8	1.6	2.0	1.0	0.8	0.9	0.8	0.8	1.2	+0.5
Gender:																				
Male	—	1.9	1.6	1.8	1.9	2.8	1.7	2.3	2.7	2.1	1.7	1.8	1.8	0.9	1.2	1.2	1.0	0.8	1.4	+0.6
Female	—	0.9	1.7	1.6	1.7	2.2	2.0	1.8	1.4	2.2	1.8	1.2	2.2	1.2	0.6	0.7	0.6	0.7	1.0	+0.3
College Plans:																				
None or under 4 years	—	4.3	7.5	6.9	6.8	8.8	5.1	6.1	8.4	6.4	7.7	8.2	7.6	3.8	3.4	3.3	3.2	2.5	3.8	+1.3
Complete 4 years	—	1.0	1.1	1.2	1.2	1.9	1.5	1.8	1.6	1.8	1.3	1.1	1.6	0.8	0.6	0.7	0.6	0.5	0.9	+0.3
Region:																				
Northeast	—	1.0	1.2	1.1	1.7	1.6	1.1	0.8	1.2	1.6	1.3	0.8	3.0	0.8	0.3	0.5	0.2	0.6	0.5	-0.1
Midwest	—	1.7	1.7	1.3	2.4	3.2	2.0	1.4	2.2	2.2	1.9	0.9	1.0	0.6	0.4	0.8	0.7	0.2	0.8	+0.5
South	—	1.5	2.1	2.2	2.0	2.4	2.0	2.9	2.1	2.5	1.8	2.6	1.9	1.1	1.4	1.2	0.9	0.9	1.8	+0.9
West	—	0.9	1.3	1.8	1.0	3.1	1.6	2.3	2.2	1.8	2.2	1.0	2.4	1.5	0.7	0.7	1.2	1.2	1.3	+0.1
Population Density:																				
Large MSA	—	1.2	1.1	0.9	1.1	1.3	0.9	1.7	0.7	1.3	0.8	1.8	1.4	0.8	0.6	0.9	0.5	0.8	1.4	+0.6
Other MSA	—	1.4	1.7	2.6	2.3	3.1	2.2	2.2	2.3	2.3	2.7	1.3	2.0	1.2	1.3	0.8	1.0	0.9	1.2	+0.4
Non-MSA	—	1.5	2.5	1.1	1.8	3.2	2.3	2.6	2.8	2.9	1.5	1.7	2.7	0.9	0.3	1.0	0.7	0.4	0.9	+0.5
Parental Education: <sup>b</sup>																				
1.0–2.0 (Low)	—	2.9	4.0	3.5	3.7	3.6	2.0	4.0	6.1	3.0	3.8	1.4	1.9	1.6	1.2	1.9	2.5	0.8	4.3	+3.5 s
2.5–3.0	—	2.0	2.3	2.1	2.9	3.4	2.2	2.3	2.1	2.7	2.6	2.7	1.7	1.3	1.1	1.2	0.3	0.7	2.1	+1.4
3.5–4.0	—	1.0	1.9	2.2	2.5	2.4	2.2	2.3	1.7	2.5	2.4	1.2	3.0	1.0	0.9	1.0	1.2	0.6	0.9	+0.4
4.5–5.0	—	0.9	0.7	1.3	0.7	2.0	1.6	1.7	1.7	1.3	1.1	1.2	1.9	1.0	0.7	0.5	0.4	1.1	0.5	-0.6
5.5–6.0 (High)	—	1.3	1.6	0.7	0.8	2.2	0.8	1.7	1.0	1.1	0.5	1.4	1.4	0.5	0.3	0.5	0.6	0.3	0.4	+0.1
Race/Ethnicity (2-year average): <sup>c</sup>																				
White	—	—	1.6	1.7	1.7	2.3	2.5	2.3	2.2	2.1	1.9	1.5	1.3	1.2	1.1	0.7	0.5	0.6	0.7	+0.1
African American	—	—	0.9	0.6	1.0	1.4	1.2	1.4	1.6	1.5	1.3	1.5	1.8	1.0	0.6	1.5	1.8	1.4	1.6	+0.2
Hispanic	—	—	1.3	2.8	2.6	2.4	2.3	1.5	1.8	2.2	2.6	2.1	1.9	1.9	1.0	1.0	0.9	0.7	1.3	+0.5

**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. Data based on one of four forms; N is one third of N indicated in Table S1.

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

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

<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 60**  
**OXYCONTIN: <sup>a</sup> Trends in Annual Prevalence of Use**  
**by Subgroups in Grade 10**

	Percentage who used in last 12 months																			2018– 2019 change
	1991– 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	—	14,300	15,800	16,400	16,200	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	—	3.0	3.6	3.5	3.2	3.8	3.9	3.6	5.1	4.6	3.9	3.0	3.4	3.0	2.6	2.1	2.2	2.2	2.0	-0.1
Gender:																				
Male	—	3.6	4.3	3.8	3.4	3.7	4.2	3.8	5.6	4.9	3.8	3.2	4.7	2.8	2.9	2.1	1.9	2.5	2.8	+0.3
Female	—	2.4	2.9	3.1	3.0	4.0	3.5	3.5	4.5	4.1	4.0	2.8	2.2	2.8	2.3	2.1	2.4	1.7	1.3	-0.4
College Plans:																				
None or under 4 years	—	6.5	10.8	7.2	8.0	11.0	8.8	10.2	12.6	13.9	11.8	9.1	6.1	6.9	7.5	6.5	4.6	3.7	3.2	-0.5
Complete 4 years	—	2.5	2.5	3.0	2.6	2.9	3.2	2.9	4.2	3.5	2.9	2.4	3.1	2.5	2.1	1.7	1.9	1.9	1.8	0.0
Region:																				
Northeast	—	3.6	3.7	4.6	3.8	3.1	2.8	3.2	3.6	4.4	4.5	3.0	3.1	1.0	2.4	1.3	1.2	1.6	1.1	-0.5
Midwest	—	2.1	2.9	2.5	3.5	4.1	4.3	3.9	5.8	4.9	4.2	2.0	4.2	2.3	2.7	1.9	1.8	1.9	1.3	-0.5
South	—	3.7	4.2	4.8	3.6	4.4	4.7	4.1	5.4	4.8	4.0	3.5	2.7	3.6	2.5	2.6	3.0	2.1	2.1	0.0
West	—	2.6	3.5	1.9	1.6	3.3	3.3	3.0	5.2	4.2	2.9	3.4	3.7	4.2	3.0	2.4	2.1	3.1	3.2	+0.1
Population Density:																				
Large MSA	—	2.0	2.3	2.1	2.8	3.4	3.5	2.5	4.5	4.2	2.9	2.3	3.2	2.6	2.0	1.5	1.9	2.3	0.8	-1.5 s
Other MSA	—	3.3	3.6	3.7	2.7	3.3	3.5	4.1	5.8	4.3	3.6	2.6	3.4	2.5	2.8	2.0	2.1	2.1	2.6	+0.5
Non-MSA	—	3.7	5.7	5.1	4.9	5.8	5.4	4.1	4.4	5.7	5.7	4.9	3.6	4.7	3.2	3.6	2.9	2.2	2.6	+0.4
Parental Education: <sup>b</sup>																				
1.0–2.0 (Low)	—	6.5	5.9	3.7	3.3	6.9	3.9	3.1	6.5	7.9	5.5	4.4	5.2	2.5	4.3	1.4	2.3	5.5	1.4	-4.0 ss
2.5–3.0	—	3.8	3.9	4.0	4.8	5.3	5.9	5.1	6.7	6.9	5.4	4.1	4.4	3.1	2.8	2.3	2.7	3.7	2.0	-1.7
3.5–4.0	—	2.0	4.1	4.1	3.0	4.3	3.5	3.6	5.5	4.0	4.3	3.9	3.2	3.8	4.0	2.8	2.3	1.4	2.9	+1.6
4.5–5.0	—	1.7	2.9	2.6	2.6	2.3	3.4	3.2	3.9	2.9	2.4	1.7	2.7	2.4	1.6	1.9	2.6	1.2	1.8	+0.6
5.5–6.0 (High)	—	4.4	2.8	2.8	2.6	2.4	2.8	3.5	4.6	3.6	3.2	2.2	2.8	2.1	1.7	1.9	0.9	0.8	2.1	+1.3
Race/Ethnicity (2-year average): <sup>c</sup>																				
White	—	—	3.6	4.1	4.1	4.1	4.6	4.7	5.0	5.3	4.4	3.5	3.5	3.6	3.0	2.7	2.3	1.7	1.7	0.0
African American	—	—	2.3	2.0	1.1	1.5	1.8	1.5	1.7	2.4	2.9	1.8	1.5	2.1	2.4	1.7	1.6	1.6	1.8	+0.2
Hispanic	—	—	2.5	2.9	2.3	1.8	1.9	1.8	2.9	4.0	4.4	3.6	1.9	1.9	2.0	1.7	2.2	4.0	3.1	-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 S2 for the number of subgroup cases. See appendix B for definition of variables in table. Data based on one of four forms; N is one third of N indicated in Table S2.

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

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

<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 61**  
**OXYCONTIN: <sup>a</sup> Trends in Annual Prevalence of Use**  
**by Subgroups in Grade 12**

	Percentage who used in last 12 months																			2018– 2019 change	
	1975– 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
Approximate weighted N =	—	12,900	14,600	14,600	14,700	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900		
Total	—	4.0	4.5	5.0	5.5	4.3	5.2	4.7	4.9	5.1	4.9	4.3	3.6	3.3	3.7	3.4	2.7	2.3	1.7	-0.6	
Gender:																					
Male	—	5.6	6.2	6.1	7.4	5.3	6.3	5.3	6.5	5.9	5.9	5.1	4.7	4.3	4.2	3.6	3.4	2.4	2.3	-0.1	
Female	—	2.6	2.8	3.4	3.5	2.9	4.0	4.0	3.4	3.8	3.8	3.1	2.5	2.2	3.0	2.6	1.8	1.7	1.0	-0.6	
College Plans:																					
None or under 4 years	—	7.0	8.8	8.2	9.9	7.4	7.8	7.6	6.7	10.2	9.7	5.2	6.0	4.5	4.3	5.3	4.5	3.8	3.5	-0.3	
Complete 4 years	—	3.2	3.1	3.8	4.3	3.3	4.5	4.1	4.5	3.9	3.9	4.0	2.8	2.9	3.4	2.9	2.1	1.7	1.2	-0.5	
Region:																					
Northeast	—	5.0	5.5	4.6	6.0	5.5	5.5	4.6	5.0	6.3	4.4	3.6	3.6	3.1	2.8	2.1	2.0	1.3	0.7	-0.6	
Midwest	—	5.0	4.5	4.2	6.0	4.3	5.1	4.4	5.4	5.0	4.3	4.5	3.0	3.4	3.8	3.6	2.1	2.0	1.4	-0.6	
South	—	3.6	4.0	5.9	6.3	4.0	5.2	4.9	4.3	4.8	5.0	4.3	4.1	4.4	3.6	3.6	3.1	2.8	2.1	-0.7	
West	—	2.6	4.4	4.7	3.0	3.6	5.1	4.9	5.0	4.7	5.9	4.5	3.3	1.6	4.2	3.7	3.1	2.5	2.2	-0.2	
Population Density:																					
Large MSA	—	3.7	2.8	4.6	4.8	4.4	4.2	3.9	4.2	5.4	3.9	4.6	2.8	3.6	2.6	3.7	2.0	2.5	1.3	-1.2 ss	
Other MSA	—	3.8	5.3	5.2	5.1	3.6	5.4	5.0	5.2	4.8	5.2	4.0	4.2	3.4	4.3	3.6	3.4	2.0	1.8	-0.2	
Non-MSA	—	4.7	5.2	4.9	7.1	5.4	6.2	5.1	5.2	5.3	6.0	4.6	3.1	2.7	3.9	2.7	2.5	2.6	2.3	-0.4	
Parental Education: <sup>b</sup>																					
1.0–2.0 (Low)	—	6.3	6.9	3.7	5.5	4.2	4.4	3.8	4.9	4.9	3.4	4.3	6.0	3.6	3.2	4.2	3.7	2.6	3.3	+0.7	
2.5–3.0	—	5.3	6.8	4.8	6.3	4.4	5.6	4.5	4.6	5.5	4.8	4.2	3.4	3.0	3.3	2.9	3.4	3.0	1.9	-1.1	
3.5–4.0	—	3.9	3.4	6.5	6.3	5.1	5.0	6.0	5.8	5.4	5.7	4.6	3.4	3.4	3.4	2.4	2.8	2.2	1.7	-0.5	
4.5–5.0	—	2.2	3.6	3.1	4.2	3.4	5.3	4.3	4.8	4.2	4.4	4.4	3.5	2.8	3.9	3.6	1.6	1.6	1.3	-0.2	
5.5–6.0 (High)	—	4.0	2.5	4.3	4.8	3.5	4.3	3.8	4.1	4.7	5.0	3.5	2.2	4.1	4.3	5.0	2.8	1.3	0.8	-0.6	
Race/Ethnicity (2-year average): <sup>c</sup>																					
White	—	—	4.7	5.1	5.8	5.4	5.5	6.0	5.8	5.7	5.8	5.2	4.0	3.3	3.7	3.7	3.0	2.5	1.9	-0.6 s	
African American	—	—	2.5	2.4	2.0	2.2	2.4	2.1	2.0	3.1	3.2	2.8	3.4	4.0	3.9	3.3	2.5	1.7	1.3	-0.4	
Hispanic	—	—	2.5	2.2	3.0	3.7	3.2	2.1	2.9	3.5	3.0	3.2	3.4	2.7	2.1	2.9	3.3	2.1	1.6	-0.5	

**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 S3 for the number of subgroup cases. See appendix B for definition of variables in table. Data based on two of six forms in 2002–2005; N is two sixths of N indicated in Table S3. Data based on three of six forms beginning in 2006; N is three sixths of N indicated in Table S3.

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

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

<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 62**  
**VICODIN:<sup>a</sup> Trends in Annual Prevalence of Use**  
**by Subgroups in Grade 8**

	Percentage who used in last 12 months																					
	1991–	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2018–	
	2001–																				2019	
	Approximate weighted N =	—	15,100	16,500	17,000	16,800	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600		change
Total	—	2.5	2.8	2.5	2.6	3.0	2.7	2.9	2.5	2.7	2.1	1.3	1.4	1.0	0.9	0.8	0.7	0.6	0.9	0.9	+0.3	
Gender:																						
Male	—	2.7	2.8	2.4	2.9	2.6	2.1	2.9	3.0	2.8	2.1	0.8	1.1	0.9	0.8	1.2	0.9	0.8	0.8	1.2	+0.4	
Female	—	2.4	2.8	2.6	2.2	3.4	3.2	2.7	2.2	2.6	1.9	1.7	1.6	1.1	1.0	0.5	0.4	0.3	0.7	0.7	+0.4	
College Plans:																						
None or under 4 years	—	5.9	6.3	7.1	7.3	9.5	8.1	7.0	6.5	7.2	6.4	3.0	4.0	1.9	2.2	2.9	2.7	1.9	2.3	2.3	+0.3	
Complete 4 years	—	2.1	2.4	2.0	1.9	2.4	2.1	2.5	2.3	2.2	1.8	1.2	1.2	0.9	0.7	0.6	0.4	0.4	0.7	0.7	+0.3	
Region:																						
Northeast	—	1.5	1.1	1.0	1.5	1.9	1.4	1.0	1.8	2.8	1.7	0.7	1.6	0.3	0.3	0.6	0.1	0.5	0.5	0.5	-0.1	
Midwest	—	3.3	3.9	3.2	3.3	3.9	3.6	3.1	3.5	3.4	2.8	1.8	1.0	1.4	1.0	0.8	1.0	0.0	0.9	0.9	+0.9	
South	—	2.5	2.1	2.1	2.3	2.2	2.1	2.9	1.7	1.8	1.5	1.5	1.1	0.6	1.0	0.9	0.5	0.8	1.2	1.2	+0.4	
West	—	2.6	4.2	3.6	3.1	4.4	3.5	3.7	3.3	3.2	3.0	1.1	2.0	1.8	1.0	1.0	0.9	0.8	0.8	0.8	-0.1	
Population Density:																						
Large MSA	—	2.6	2.4	1.8	2.5	2.4	1.6	2.7	1.9	1.8	1.2	1.8	1.3	0.8	0.7	0.9	0.4	0.6	1.4	1.4	+0.8	
Other MSA	—	3.0	3.1	3.0	2.6	3.3	3.4	3.0	2.6	3.2	2.7	1.0	1.4	1.2	1.2	0.8	1.0	0.6	0.8	0.8	+0.3	
Non-MSA	—	1.6	2.5	2.4	2.6	3.3	2.8	2.8	3.2	2.8	2.4	1.6	1.5	1.0	0.4	0.9	0.2	0.5	0.4	0.4	-0.1	
Parental Education: <sup>b</sup>																						
1.0–2.0 (Low)	—	3.3	3.3	4.9	3.9	4.8	3.1	3.4	5.4	3.9	4.0	1.7	1.7	1.5	2.8	1.7	1.4	0.6	2.2	2.2	+1.7 s	
2.5–3.0	—	3.9	3.4	4.1	3.8	4.0	3.0	3.3	3.8	3.3	3.0	1.2	1.1	0.9	1.1	0.7	0.5	0.1	1.3	1.3	+1.2 s	
3.5–4.0	—	3.4	2.9	3.2	2.9	2.7	3.1	2.8	2.5	1.6	2.8	1.3	2.3	1.5	0.6	1.1	0.6	0.6	0.6	0.6	0.0	
4.5–5.0	—	1.4	2.1	1.1	1.9	2.6	2.4	3.2	1.5	2.7	1.4	1.3	1.4	0.8	0.3	0.7	0.4	0.5	0.7	0.7	+0.2	
5.5–6.0 (High)	—	1.3	2.1	0.9	1.6	2.2	1.8	2.3	2.1	2.7	0.9	1.0	0.8	0.8	0.3	0.3	0.4	0.5	0.6	0.6	+0.1	
Race/Ethnicity (2-year average): <sup>c</sup>																						
White	—	—	3.0	2.7	2.4	2.9	3.2	3.2	2.8	2.6	2.5	1.8	1.2	0.9	0.7	0.7	0.6	0.4	0.3	0.3	-0.1	
African American	—	—	1.4	1.4	1.6	1.7	1.6	1.6	1.9	2.0	1.3	1.2	1.3	0.9	0.5	1.0	1.1	1.5	1.8	1.8	+0.3	
Hispanic	—	—	2.1	3.3	3.6	2.8	2.6	2.1	2.5	3.0	2.8	2.1	1.9	1.8	1.2	0.8	0.6	0.5	0.7	0.7	+0.2	

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 four forms; N is one third of N indicated in Table S1.

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

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

<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 63**  
**VICODIN:<sup>a</sup> Trends in Annual Prevalence of Use**  
**by Subgroups in Grade 10**

	Percentage who used in last 12 months																			2018– 2019 change
	1991– 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	—	14,300	15,800	16,400	16,200	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	—	6.9	7.2	6.2	5.9	7.0	7.2	6.7	8.1	7.7	5.9	4.4	4.6	3.4	2.5	1.7	1.5	1.1	1.1	-0.1
Gender:																				
Male	—	7.4	8.4	6.2	5.5	7.0	7.5	7.1	9.2	8.1	6.0	4.5	5.1	2.9	2.7	1.8	1.4	1.4	1.3	-0.1
Female	—	6.1	6.1	6.0	6.2	6.9	6.8	6.4	7.0	7.0	5.8	4.4	4.1	3.9	2.2	1.8	1.5	0.7	0.8	0.0
College Plans:																				
None or under 4 years	—	13.4	15.8	11.6	13.2	17.2	15.2	16.5	17.6	16.9	14.1	8.8	9.3	7.1	7.8	4.9	3.7	3.0	1.4	-1.6
Complete 4 years	—	5.7	5.8	5.4	4.8	5.6	6.1	5.6	7.1	6.5	4.9	4.0	4.1	3.0	2.0	1.4	1.2	0.8	1.0	+0.2
Region:																				
Northeast	—	6.2	5.6	6.4	5.7	4.9	6.5	5.3	5.1	5.6	4.6	3.3	3.5	2.4	1.9	1.8	1.0	0.8	0.5	-0.2
Midwest	—	7.2	9.4	6.4	7.1	8.7	8.8	8.4	10.5	9.3	8.1	4.6	5.8	4.4	2.9	2.6	1.3	1.6	0.8	-0.8
South	—	5.3	5.0	5.0	5.0	4.2	4.5	5.2	5.6	6.0	4.3	3.4	3.1	2.7	1.8	0.7	1.5	0.7	1.1	+0.4
West	—	10.0	9.1	7.1	5.8	11.1	9.4	7.9	12.1	10.1	6.6	6.6	6.0	4.4	3.9	2.4	1.9	1.6	1.5	-0.1
Population Density:																				
Large MSA	—	5.7	7.1	4.8	6.5	6.1	6.8	6.2	7.7	7.1	5.7	4.3	4.8	3.9	1.5	1.4	1.5	0.9	0.3	-0.6 s
Other MSA	—	7.9	6.4	6.9	5.3	7.6	7.2	6.7	8.9	7.5	5.8	4.5	4.7	3.0	2.8	1.5	1.3	1.1	1.5	+0.4
Non-MSA	—	6.2	9.2	6.4	6.3	6.9	7.8	7.6	7.1	8.9	6.3	4.5	4.0	3.9	3.5	3.0	1.8	1.5	1.1	-0.4
Parental Education: <sup>b</sup>																				
1.0–2.0 (Low)	—	6.1	6.4	6.4	4.9	7.6	6.5	6.3	10.4	12.1	5.8	6.6	8.2	3.0	4.8	1.1	2.4	3.0	0.2	-2.8 ss
2.5–3.0	—	8.0	8.3	8.2	7.7	8.0	8.6	7.5	9.1	9.6	7.5	5.8	4.4	3.5	3.0	2.1	1.1	1.6	0.5	-1.0
3.5–4.0	—	7.5	8.5	6.2	6.8	8.1	8.2	7.9	9.0	8.9	7.3	4.9	5.3	5.1	3.5	2.3	1.1	0.8	1.7	+0.8
4.5–5.0	—	5.7	6.3	5.1	5.0	5.6	7.0	6.0	7.3	4.5	4.3	3.6	3.7	2.4	1.7	1.7	1.6	0.4	0.9	+0.5
5.5–6.0 (High)	—	6.6	5.6	5.0	4.6	6.3	4.7	5.7	6.0	5.8	4.1	3.1	3.7	2.7	1.2	1.2	1.3	0.9	1.8	+0.9
Race/Ethnicity (2-year average): <sup>c</sup>																				
White	—	—	8.0	7.6	7.1	7.4	8.3	8.5	8.3	8.3	7.2	5.3	4.7	4.8	3.6	2.6	1.8	1.2	1.0	-0.2
African American	—	—	3.1	3.0	1.6	2.2	2.4	2.2	2.7	3.4	3.0	1.7	1.9	2.4	2.2	1.2	1.2	0.9	1.1	+0.2
Hispanic	—	—	6.5	6.0	4.8	4.4	4.2	4.1	6.2	8.2	7.3	5.6	4.6	3.3	2.2	1.5	1.5	1.8	1.0	-0.8 ss

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 four forms; N is one third of N indicated in Table S2.

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

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

<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 64**  
**VICODIN:<sup>a</sup> Trends in Annual Prevalence of Use**  
**by Subgroups in Grade 12**

	Percentage who used in last 12 months																			2018– 2019 change	
	1975– 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
Approximate weighted N =	—	12,900	14,600	14,600	14,700	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900		
Total	—	9.6	10.5	9.3	9.5	9.7	9.6	9.7	9.7	8.0	8.1	7.5	5.3	4.8	4.4	2.9	2.0	1.7	1.1	-0.7 s	
Gender:																					
Male	—	12.0	13.0	10.7	11.9	10.9	10.9	10.6	11.5	9.5	9.0	8.6	6.5	5.5	5.1	3.2	2.2	1.6	1.4	-0.3	
Female	—	7.5	8.1	7.6	7.2	8.7	8.1	8.9	7.9	6.4	7.1	5.9	4.1	3.8	3.8	2.3	1.5	1.3	0.7	-0.6	
College Plans:																					
None or under 4 years	—	13.0	14.7	11.6	14.3	11.8	13.2	15.0	13.1	12.0	13.2	9.2	8.3	5.7	5.8	4.1	2.7	3.2	2.4	-0.8	
Complete 4 years	—	8.4	9.1	8.3	8.4	9.1	8.5	8.5	8.9	7.1	7.1	6.8	4.5	4.4	4.0	2.6	1.7	1.2	0.7	-0.5 s	
Region:																					
Northeast	—	8.1	9.4	9.1	8.8	10.8	9.3	9.9	9.0	9.0	5.8	5.4	5.4	3.2	3.4	1.3	1.5	1.1	0.5	-0.7	
Midwest	—	11.6	13.2	8.4	12.4	12.0	14.1	11.7	14.3	9.6	9.6	9.7	6.7	7.4	5.6	4.4	2.5	2.2	1.3	-1.0	
South	—	8.1	6.1	7.0	7.8	6.9	6.3	7.3	6.2	5.0	5.6	4.9	3.1	3.6	3.7	2.3	1.9	1.8	0.9	-0.9	
West	—	10.9	16.3	15.4	9.3	11.2	10.9	11.1	10.4	10.6	11.9	9.7	7.1	5.7	5.2	3.9	1.8	1.6	1.9	+0.3	
Population Density:																					
Large MSA	—	9.7	7.3	8.3	8.9	10.4	9.1	8.4	8.6	8.4	8.7	8.7	5.5	4.2	3.4	3.0	2.0	2.1	0.9	-1.3 s	
Other MSA	—	10.6	12.2	10.9	9.3	9.4	9.3	10.0	9.7	8.5	8.2	6.8	5.5	5.3	5.4	3.3	2.0	1.3	1.3	0.0	
Non-MSA	—	7.8	11.4	7.2	10.6	9.5	10.7	10.5	11.3	6.2	7.2	7.3	4.6	4.3	3.6	1.9	1.7	2.0	0.8	-1.2 ss	
Parental Education: <sup>b</sup>																					
1.0–2.0 (Low)	—	12.1	9.4	7.8	7.8	7.9	6.3	7.8	9.6	6.0	8.6	6.8	6.0	4.9	4.5	2.6	2.0	2.0	0.9	-1.1	
2.5–3.0	—	9.6	10.8	8.8	10.5	9.3	10.2	10.5	9.2	8.5	7.6	9.0	5.0	5.0	3.7	3.0	2.5	2.1	1.1	-0.9	
3.5–4.0	—	9.5	12.0	10.1	10.0	11.6	9.9	11.2	10.9	8.3	9.0	7.8	6.5	4.1	4.9	2.6	2.0	1.8	1.5	-0.3	
4.5–5.0	—	9.9	9.7	8.4	9.0	8.6	10.5	8.8	10.3	7.9	7.3	7.1	5.3	5.1	4.8	2.4	1.2	0.8	0.8	0.0	
5.5–6.0 (High)	—	8.6	8.8	10.1	8.9	10.4	7.9	8.8	7.7	8.4	7.7	5.5	3.4	4.8	4.2	4.2	2.0	1.6	0.4	-1.2 s	
Race/Ethnicity (2-year average): <sup>c</sup>																					
White	—	—	11.7	11.2	10.5	11.3	11.5	11.6	11.8	10.4	9.4	8.7	6.6	5.0	4.7	3.8	2.5	1.9	1.2	-0.6 ss	
African American	—	—	3.3	3.1	3.3	3.7	3.3	3.6	4.3	4.3	4.1	3.8	3.2	2.7	2.9	2.9	1.8	1.1	1.2	+0.1	
Hispanic	—	—	7.1	7.2	7.7	6.5	5.7	4.9	5.7	6.2	6.0	7.1	7.1	4.7	3.5	3.4	2.3	1.7	1.4	-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 two of six forms in 2002–2005; N is two sixths of N indicated in Table S3. Data based on three of six forms beginning in 2006; N is three sixths of N indicated in Table S3.

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

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

<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 65**  
**AMPHETAMINES: <sup>a</sup> Trends in Annual Prevalence of Use**  
**by Subgroups in Grade 8**

	Percentage who used in last 12 months														
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<i>Approximate weighted N =</i>	17,500	18,600	18,300	17,300	17,500	17,800	18,600	18,100	16,700	16,700	16,200	15,100	16,500	17,000	16,800
Total	6.2	6.5	7.2	7.9	8.7	9.1	8.1	7.2	6.9	6.5	6.7	5.5	5.5	4.9	4.9
Gender:															
Male	5.5	5.2	5.6	6.5	7.0	6.7	6.6	5.6	5.6	5.1	5.7	4.8	4.4	3.7	3.5
Female	6.9	7.9	8.8	9.3	10.3	11.3	9.6	8.7	8.2	7.7	7.5	6.2	6.5	6.1	6.2
College Plans:															
None or under 4 years	11.6	12.9	14.6	14.5	17.1	15.5	14.1	15.4	14.0	14.2	12.0	12.2	12.4	8.9	11.2
Complete 4 years	5.4	5.7	6.3	7.0	7.6	8.3	7.5	6.3	6.2	5.7	6.1	4.8	4.8	4.5	4.3
Region:															
Northeast	5.1	4.3	5.9	6.9	7.3	7.6	6.5	5.5	5.6	5.0	5.5	3.4	4.1	2.8	3.5
Midwest	7.1	8.0	7.3	7.8	10.6	10.8	9.3	7.2	8.3	7.8	7.1	5.9	5.9	5.1	5.0
South	6.1	6.6	7.3	8.3	8.6	8.7	8.1	8.4	7.5	7.0	8.1	6.7	6.4	5.7	5.8
West	6.0	6.6	8.6	8.4	7.9	9.1	8.3	6.7	5.4	5.4	4.6	4.7	4.6	4.9	4.6
Population Density:															
Large MSA	5.8	4.8	5.6	6.6	7.2	7.9	6.4	5.4	5.2	5.2	5.0	4.2	3.9	4.0	3.6
Other MSA	6.2	7.5	8.2	8.8	8.9	10.0	8.1	7.4	6.8	6.4	7.6	5.9	5.5	5.4	5.8
Non-MSA	6.7	7.0	7.5	7.5	10.1	8.9	9.9	8.8	9.3	8.5	6.9	6.3	7.5	5.0	5.2
Parental Education: <sup>b</sup>															
1.0–2.0 (Low)	8.3	8.4	10.2	11.2	11.8	10.1	9.6	11.2	8.9	9.7	7.4	6.3	8.4	9.7	8.3
2.5–3.0	6.6	7.3	8.2	9.0	10.6	9.9	9.2	8.1	7.8	8.1	8.2	7.3	7.4	5.2	6.6
3.5–4.0	6.7	7.4	7.8	8.5	10.1	10.3	8.9	7.7	8.2	6.8	7.8	5.7	5.9	5.6	5.6
4.5–5.0	5.3	5.5	6.4	6.6	6.8	8.6	7.5	6.2	5.6	5.2	5.9	4.9	4.3	4.2	3.7
5.5–6.0 (High)	5.7	5.4	5.3	5.7	6.4	8.7	7.3	6.4	5.8	5.2	4.5	4.3	3.9	3.5	3.1
Race/Ethnicity (2-year average): <sup>c</sup>															
White	—	6.8	7.4	8.1	9.3	10.2	9.9	9.0	8.4	8.0	7.8	7.2	6.4	5.9	5.4
African American	—	3.3	3.4	3.9	3.9	3.4	3.0	2.8	2.7	2.4	2.3	2.7	2.5	2.1	2.2
Hispanic	—	7.2	7.7	8.6	8.7	8.6	8.1	7.2	7.0	6.8	6.6	5.9	5.0	5.4	5.3

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**TABLE 65 (cont.)**  
**AMPHETAMINES: <sup>a</sup> Trends in Annual Prevalence of Use**  
**by Subgroups in Grade 8**

	Percentage who used in last 12 months														
	<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>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	2018-2019 change
<i>Approximate weighted N =</i>	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	
Total	4.7	4.2	4.5	4.1	3.9	3.5	2.9†	4.2	4.3	4.1	3.5	3.5	3.7	4.1	+0.4
Gender:															
Male	3.5	3.3	3.5	3.7	3.4	3.1	2.4†	3.5	3.4	3.1	2.9	2.4	3.6	2.8	-0.7
Female	5.7	4.9	5.5	4.4	4.3	3.8	3.3†	4.8	4.8	5.1	4.1	4.4	3.9	5.3	+1.4 ss
College Plans:															
None or under 4 years	10.7	10.0	12.4	10.8	8.8	8.1	6.8†	8.7	10.4	6.5	7.4	6.0	7.0	7.5	+0.5
Complete 4 years	4.1	3.6	3.8	3.5	3.5	3.1	2.6†	3.9	3.7	3.9	3.1	3.2	3.3	3.5	+0.2
Region:															
Northeast	2.2	2.6	2.6	2.9	2.0	2.3	2.1†	2.6	3.3	3.4	1.6	2.3	2.1	3.5	+1.4 ss
Midwest	5.3	4.8	5.1	4.1	4.0	3.5	2.2†	4.0	3.8	3.8	3.5	3.0	3.2	4.0	+0.8
South	5.6	4.6	5.5	5.1	4.8	3.8	4.0†	5.3	4.4	4.6	4.2	3.9	4.3	4.2	-0.1
West	4.3	3.7	3.8	3.0	3.6	3.9	2.2†	3.8	5.2	4.0	3.7	4.4	4.5	4.4	-0.1
Population Density:															
Large MSA	3.9	3.4	4.1	2.7	2.6	2.6	2.6†	3.8	3.3	3.1	2.8	3.5	4.0	3.4	-0.6
Other MSA	4.8	4.6	4.8	4.8	4.6	4.1	3.1†	4.3	4.7	5.0	3.6	3.6	3.7	4.4	+0.8
Non-MSA	5.4	4.4	4.4	4.3	3.9	3.6	3.0†	4.8	4.8	3.5	4.3	3.6	3.3	4.4	+1.1 s
Parental Education: <sup>b</sup>															
1.0–2.0 (Low)	6.5	7.3	7.9	6.5	5.9	5.1	3.8†	6.0	5.3	6.0	5.0	5.8	4.8	5.4	+0.6
2.5–3.0	6.0	4.9	6.0	4.5	4.6	5.4	3.7†	5.0	5.3	5.3	4.0	4.1	4.2	5.8	+1.5
3.5–4.0	5.0	4.5	5.4	5.3	4.1	3.8	3.4†	6.1	4.8	4.4	3.5	3.7	4.5	4.1	-0.4
4.5–5.0	4.2	2.9	3.2	3.3	3.5	2.5	1.9†	3.5	3.2	3.3	3.2	2.7	3.2	3.8	+0.6
5.5–6.0 (High)	3.6	3.5	3.4	2.8	2.5	2.4	2.6†	2.3	3.6	3.3	3.3	2.7	3.0	3.1	+0.1
Race/Ethnicity (2-year average): <sup>c</sup>															
White	5.3	4.9	4.9	4.9	4.5	3.9	3.2	2.7†	3.9	4.1	3.6	3.2	3.3	3.8	+0.5 s
African American	2.0	1.7	1.8	2.4	2.3	1.9	1.9	1.6†	3.2	3.2	3.3	3.3	3.3	2.9	-0.4
Hispanic	4.5	3.9	4.0	3.9	3.5	3.9	3.6	2.6†	4.5	4.1	3.8	3.7	4.0	4.4	+0.4

Table continued on next page.

**TABLE 65 (cont.)**  
**AMPHETAMINES:<sup>a</sup> Trends in Annual Prevalence of Use  
by Subgroups in Grade 8**

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

*Notes.* ' ‡ ' indicates some change in the question. See relevant footnote. See relevant figure to assess the impact of the wording changes. 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. In 2009, the question text was changed slightly in half of the questionnaire forms. An examination of the data did not show any effect from the wording changes. In 2010 the remaining forms were changed in a like manner. In 2013 the question wording was changed two of the 8th and 10th grade questionnaires. The new wording in 2013 asked "On how many occasions (if any) have you taken amphetamines or other prescription stimulant drugs..." In contrast, the old wording did not include "or other prescription stimulant drugs." Results in 2013 indicated higher prevalence in questionnaires with the new as compared to the old wording; it was proportionally 61% higher in 8th grade and 34% higher in 10th grade. 2013 data are based on the changed forms only; *N* is one half of *N* indicated. Beginning in 2014 all questionnaires included the new, updated wording.

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

<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. 2013 race/ethnicity data are based on the 2012 data combined with the 2013 data from the unchanged forms which were double weighted. The 2014 race/ethnicity data are based on the 2013 changed data which were double weighted and the 2014 data.

**TABLE 66**  
**AMPHETAMINES: <sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months															
	<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>	
<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	
Total	8.2	8.2	9.6	10.2	11.9	12.4	12.1	10.7	10.4	11.1	11.7	10.7	9.0	8.5	7.8	
Gender:																
Male	7.0	7.0	8.2	8.6	9.6	10.5	10.3	9.0	9.2	10.3	10.6	9.6	7.8	7.3	6.6	
Female	9.3	9.3	10.9	11.7	14.1	14.2	13.9	12.3	11.5	11.8	12.7	11.8	10.1	9.6	9.0	
College Plans:																
None or under 4 years	13.4	14.4	15.5	16.6	19.9	20.3	19.3	17.9	16.3	18.2	20.4	17.5	15.7	14.8	13.7	
Complete 4 years	7.1	6.9	8.4	8.9	10.6	11.1	10.9	9.5	9.5	10.0	10.3	9.7	7.9	7.6	7.0	
Region:																
Northeast	6.1	5.4	7.8	8.7	9.8	11.5	10.7	11.0	12.1	9.8	10.5	9.3	7.4	8.5	7.4	
Midwest	10.3	9.4	9.5	10.5	13.3	14.0	11.0	9.8	10.3	11.1	10.7	10.4	9.7	8.2	8.5	
South	8.1	8.7	10.9	11.2	12.8	12.6	14.2	12.6	10.8	12.0	14.0	12.2	10.2	9.6	8.6	
West	7.7	8.4	9.5	9.4	10.6	10.6	11.1	8.5	8.2	10.9	9.9	9.6	8.1	7.3	5.8	
Population Density:																
Large MSA	7.5	6.7	7.6	8.0	9.2	10.5	9.9	8.9	9.3	10.7	9.8	9.8	6.2	6.2	6.5	
Other MSA	7.9	8.0	9.5	10.8	12.8	12.8	11.5	10.3	10.6	9.9	11.1	11.0	9.5	9.6	8.0	
Non-MSA	9.3	10.0	11.6	11.2	13.3	13.7	15.5	13.8	11.5	13.6	15.1	11.2	12.2	9.2	9.0	
Parental Education: <sup>b</sup>																
1.0–2.0 (Low)	10.0	11.9	12.3	10.8	14.3	15.1	12.2	12.6	10.7	13.3	12.3	13.1	10.9	9.2	8.9	
2.5–3.0	9.7	8.9	10.5	11.6	14.2	13.0	14.1	12.8	11.3	12.9	13.6	12.8	11.2	9.9	8.9	
3.5–4.0	7.9	8.4	10.5	11.1	12.4	14.1	13.5	11.1	11.2	12.2	12.6	11.1	9.9	10.1	8.1	
4.5–5.0	7.4	6.6	7.5	8.9	10.7	10.7	10.6	9.0	9.8	9.7	10.5	9.5	7.6	7.2	7.4	
5.5–6.0 (High)	6.9	6.9	8.3	7.3	8.8	10.1	9.2	9.4	9.8	8.8	9.2	8.1	6.4	6.3	6.6	
Race/Ethnicity (2-year average): <sup>c</sup>																
White	—	9.4	10.1	11.0	12.4	13.9	14.2	13.6	12.6	12.7	13.4	13.4	12.2	10.6	9.5	
African American	—	2.8	3.0	4.0	4.0	3.4	3.1	2.9	2.8	2.5	2.9	3.5	2.8	2.7	3.0	
Hispanic	—	6.2	7.0	7.7	8.9	10.3	9.8	8.9	8.8	9.1	8.3	7.9	7.7	7.3	7.3	

Table continued on next page.

**TABLE 66 (cont.)**  
**AMPHETAMINES: <sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	7.9	8.0	6.4	7.1	7.6	6.6	6.5†	7.9	7.6	6.8	6.1	5.6	5.7	5.2	-0.4
Gender:															
Male	6.7	7.4	5.8	6.8	7.4	7.2	6.9†	8.3	6.9	6.4	6.1	5.3	5.4	4.9	-0.5
Female	8.9	8.7	6.9	7.4	7.7	6.0	6.2†	7.5	8.3	7.3	6.2	5.7	5.9	5.5	-0.4
College Plans:															
None or under 4 years	14.8	15.4	12.5	15.3	15.7	14.6	13.8†	11.5	14.7	12.8	12.1	9.3	10.2	7.3	-2.8 s
Complete 4 years	7.0	7.1	5.6	6.3	6.7	5.7	5.8†	7.6	6.9	6.3	5.5	5.2	5.0	4.8	-0.2
Region:															
Northeast	6.7	7.3	4.2	5.2	5.9	5.7	6.2†	6.2	6.6	6.4	4.0	4.6	4.6	3.7	-0.9
Midwest	8.7	8.7	7.3	7.0	8.6	7.4	6.4†	8.5	8.7	6.0	6.9	6.9	6.6	4.6	-2.0 s
South	8.5	8.1	6.8	8.3	7.6	7.2	7.5†	9.0	7.9	7.5	6.8	5.4	5.6	5.5	-0.1
West	7.1	7.7	6.6	7.4	8.1	5.6	5.2†	7.3	7.0	7.1	6.2	5.5	5.8	6.5	+0.7
Population Density:															
Large MSA	6.8	7.5	5.4	6.3	6.9	6.0	5.9†	7.5	7.3	6.6	6.0	6.0	5.8	4.4	-1.4 s
Other MSA	8.3	8.0	6.6	7.7	8.0	6.4	6.5†	8.4	7.3	6.7	6.2	5.6	5.7	5.7	0.0
Non-MSA	8.7	9.0	7.2	7.3	8.1	8.0	7.3†	7.3	8.9	7.6	6.3	5.1	5.4	5.3	-0.2
Parental Education: <sup>b</sup>															
1.0–2.0 (Low)	9.3	7.9	7.8	9.8	9.6	6.6	9.8†	10.9	9.5	9.5	6.7	6.0	6.5	6.1	-0.4
2.5–3.0	9.0	10.2	7.6	8.0	8.5	7.9	6.8†	9.9	8.7	8.0	6.7	6.0	6.7	7.2	+0.5
3.5–4.0	9.1	8.9	7.7	7.8	8.3	7.3	6.7†	8.2	8.7	8.5	7.3	5.6	5.4	5.4	-0.1
4.5–5.0	6.6	6.9	5.4	6.0	6.9	5.8	6.1†	7.3	6.5	6.1	5.6	5.5	5.0	3.8	-1.1 s
5.5–6.0 (High)	6.8	6.0	4.3	6.5	6.3	5.3	5.7†	5.6	6.2	5.0	5.3	5.8	5.9	4.8	-1.0
Race/Ethnicity (2-year average): <sup>c</sup>															
White	9.2	9.4	8.7	7.8	8.5	8.3	7.4	7.1†	8.5	7.7	7.0	6.5	6.2	5.5	-0.7 ss
African American	2.8	2.3	2.3	2.3	2.8	3.0	2.9	2.6†	5.3	4.8	4.6	3.9	3.3	3.5	+0.1
Hispanic	6.3	5.8	6.0	6.1	6.3	6.1	6.1	4.7†	7.4	6.7	6.6	5.6	5.4	5.8	+0.4

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**TABLE 66 (cont.)**  
**AMPHETAMINES:<sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 10**

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

*Notes.* ' ‡ ' indicates some change in the question. See relevant footnote. See relevant figure to assess the impact of the wording changes. 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. In 2009, the question text was changed slightly in half of the questionnaire forms. An examination of the data did not show any effect from the wording changes. In 2010 the remaining forms were changed in a like manner. In 2013 the question wording was changed two of the 8th and 10th grade questionnaires. The new wording in 2013 asked "On how many occasions (if any) have you taken amphetamines or other prescription stimulant drugs..." In contrast, the old wording did not include "or other prescription stimulant drugs." Results in 2013 indicated higher prevalence in questionnaires with the new as compared to the old wording; it was proportionally 61% higher in 8th grade and 34% higher in 10th grade. 2013 data are based on the changed forms only; *N* is one half of *N* indicated. Beginning in 2014 all questionnaires included the new, updated wording.

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

<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. 2013 race/ethnicity data are based on the 2012 data combined with the 2013 data from the unchanged forms which were double weighted. The 2014 race/ethnicity data are based on the 2013 changed data which were double weighted and the 2014 data.

**TABLE 67**  
**AMPHETAMINES:** <sup>a,b</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 12

	Percentage who used in last 12 months															
	<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>
Approximate weighted N =	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
Total	16.2	15.8	16.3	17.1	18.3	20.8	26.0	20.3	17.9	17.7	15.8	13.4	12.2	10.9	10.8	9.1
Gender:																
Male	15.6	15.8	16.0	16.9	18.4	19.7	24.8	19.6	17.2	16.8	14.9	12.7	11.8	10.8	11.1	9.4
Female	16.5	15.4	16.4	17.1	17.8	21.8	26.9	20.3	17.9	18.2	16.4	13.8	12.4	10.9	10.5	8.6
College Plans:																
None or under 4 years	—	19.3	20.5	20.0	21.8	25.8	30.9	23.7	20.9	22.2	19.7	17.7	16.0	13.9	15.1	12.6
Complete 4 years	—	11.9	11.5	13.7	14.5	16.5	22.3	16.8	14.5	14.2	13.3	10.9	10.2	9.5	9.1	7.4
Region:																
Northeast	16.5	14.7	16.8	19.6	22.0	22.0	28.8	21.5	17.9	19.0	16.8	12.6	10.4	8.4	9.0	6.3
Midwest	18.7	17.8	19.0	18.2	18.3	22.2	30.1	24.1	20.4	20.3	17.3	15.2	13.5	12.2	13.3	10.7
South	12.6	13.7	13.2	14.0	14.0	17.7	19.6	16.4	15.4	15.1	12.8	11.5	11.5	10.8	9.9	8.9
West	18.5	17.2	16.0	17.8	20.7	22.1	26.6	18.7	18.2	16.9	17.3	15.0	13.4	11.8	11.1	10.2
Population Density:																
Large MSA	19.6	15.4	15.3	17.7	19.5	21.9	28.0	21.6	18.1	17.7	15.0	11.2	10.9	8.8	7.1	6.5
Other MSA	15.5	16.3	17.1	17.5	18.9	20.8	25.5	20.7	19.6	17.1	15.7	14.2	11.9	11.9	11.4	9.6
Non-MSA	14.8	15.4	15.9	16.0	16.6	19.9	25.1	18.8	15.6	18.5	16.6	14.1	14.0	11.3	13.3	10.6
Parental Education: <sup>c</sup>																
1.0–2.0 (Low)	15.7	13.4	14.5	14.9	16.0	19.1	22.3	18.7	15.7	17.1	14.5	11.9	11.9	9.8	10.4	7.6
2.5–3.0	16.7	16.9	17.4	17.3	18.4	22.2	26.7	21.9	19.6	19.2	17.0	15.2	13.3	11.1	11.7	9.7
3.5–4.0	14.9	16.6	16.1	18.2	19.6	21.5	26.9	21.7	19.4	18.5	17.2	14.3	12.6	11.8	12.3	10.6
4.5–5.0	14.5	16.8	15.9	16.9	17.1	20.0	26.2	19.1	18.9	15.9	15.1	12.0	11.7	10.3	9.4	8.1
5.5–6.0 (High)	12.0	14.6	16.0	17.2	20.4	17.9	26.8	20.5	16.1	14.0	10.9	10.1	10.4	10.0	9.1	7.3
Race/Ethnicity (2-year average): <sup>d</sup>																
White	—	—	17.3	18.2	19.2	21.3	26.4	23.6	22.3	20.5	18.9	16.4	14.3	13.0	12.4	11.4
African American	—	—	5.3	4.7	4.2	5.3	5.8	6.0	5.7	4.7	4.3	4.0	3.8	3.9	3.6	3.1
Hispanic	—	—	12.3	12.2	12.8	14.5	17.5	12.3	11.5	13.2	14.6	10.8	8.7	9.6	9.0	7.0

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**TABLE 67 (cont.)**  
**AMPHETAMINES:** <sup>a,b</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 12

	Percentage who used in last 12 months															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	8.2	7.1	8.4	9.4	9.3	9.5	10.2	10.1	10.2	10.5	10.9	11.1	9.9	10.0	8.6	8.1
Gender:																
Male	8.3	7.2	8.2	9.2	9.5	9.6	10.1	10.3	10.6	10.4	10.9	11.3	9.8	9.9	9.1	7.4
Female	7.9	6.9	8.5	9.4	8.9	8.8	10.2	9.8	9.6	10.5	10.6	10.7	9.5	9.9	7.9	8.5
College Plans:																
None or under 4 years	11.0	9.7	11.0	13.4	12.3	12.8	14.1	13.6	12.7	13.9	14.4	14.8	14.4	13.3	11.5	10.6
Complete 4 years	7.0	6.1	7.6	8.0	8.3	8.4	8.9	9.0	9.5	9.6	9.8	10.1	8.4	8.9	7.8	7.5
Region:																
Northeast	6.5	6.2	8.1	7.4	9.6	10.4	11.1	9.0	9.9	10.6	12.0	11.5	9.7	9.5	7.4	8.5
Midwest	10.1	8.4	8.9	12.0	9.5	10.0	10.8	11.0	10.5	10.4	12.7	11.3	10.3	10.2	10.3	7.6
South	7.9	6.7	8.3	9.0	9.2	9.1	9.8	10.4	10.8	10.2	9.5	11.7	9.7	10.3	9.4	8.8
West	7.8	6.9	8.3	8.4	8.9	8.3	9.1	9.6	8.8	10.9	9.7	9.6	9.7	9.5	6.1	7.0
Population Density:																
Large MSA	6.2	6.0	6.5	7.8	9.1	7.9	8.9	9.0	7.0	8.3	10.6	10.7	7.5	8.0	7.8	8.7
Other MSA	8.4	6.7	8.5	9.4	8.5	8.9	9.5	9.9	10.8	10.9	10.8	11.0	10.5	10.6	8.9	7.6
Non-MSA	9.5	9.0	9.8	10.9	10.8	11.9	13.0	12.2	12.4	12.4	11.4	12.1	11.7	11.1	8.9	8.2
Parental Education: <sup>c</sup>																
1.0–2.0 (Low)	9.5	7.0	9.0	10.4	9.9	8.1	9.8	9.7	9.9	11.0	8.9	8.1	10.6	7.5	6.1	8.2
2.5–3.0	9.1	7.7	8.6	10.3	9.9	10.5	10.3	10.6	11.3	11.0	12.2	11.4	9.9	11.0	9.2	8.2
3.5–4.0	8.9	7.7	9.1	9.4	9.1	9.3	10.8	11.4	10.8	10.6	11.6	12.3	10.7	12.3	9.5	8.9
4.5–5.0	6.5	6.3	8.0	9.5	9.2	8.9	9.4	9.4	9.7	10.3	10.7	11.1	9.4	8.2	8.5	7.8
5.5–6.0 (High)	5.7	5.8	7.6	7.1	8.1	9.1	10.2	8.7	8.4	10.2	8.7	10.2	7.7	8.4	7.4	7.0
Race/Ethnicity (2-year average): <sup>d</sup>																
White	9.8	8.8	9.0	10.4	10.7	10.5	11.4	12.1	11.9	11.9	12.6	13.2	12.4	11.6	11.0	9.9
African American	2.7	2.2	2.3	3.4	3.4	2.9	2.8	2.8	2.5	2.6	3.0	2.9	2.8	2.4	2.4	2.6
Hispanic	6.1	6.0	6.2	6.4	7.1	7.8	7.3	7.0	7.6	9.2	9.2	7.9	6.8	7.0	6.7	6.4

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**TABLE 67 (cont.)**  
**AMPHETAMINES:** <sup>a,b</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 12

	Percentage who used in last 12 months													2018-2019 change
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	7.5	6.8	6.6	7.4	8.2	7.9‡	9.2	8.1	7.7	6.7	5.9	5.5	4.5	-1.0 s
Gender:														
Male	7.4	6.5	7.5	8.3	8.8	8.2‡	10.0	8.8	8.1	7.5	6.9	6.3	4.9	-1.4 s
Female	7.3	6.8	5.7	6.4	7.4	7.5‡	7.9	7.3	7.1	5.8	5.0	4.2	3.8	-0.4
College Plans:														
None or under 4 years	10.3	10.7	8.4	10.5	11.6	8.9‡	13.1	9.5	9.3	6.7	6.8	6.7	6.1	-0.6
Complete 4 years	6.7	5.7	6.1	6.7	7.4	7.6‡	8.4	7.6	7.3	6.6	5.7	4.9	3.9	-1.0 s
Region:														
Northeast	7.5	6.5	6.7	8.6	7.1	7.0‡	8.1	7.1	6.6	5.8	5.0	5.4	3.1	-2.3 sss
Midwest	8.2	6.9	7.8	8.1	8.6	9.0‡	10.7	8.9	9.0	7.7	5.9	6.0	4.9	-1.1
South	7.9	7.1	6.5	6.9	8.1	7.0‡	9.3	8.9	7.5	6.6	6.3	5.5	4.6	-0.9
West	5.8	6.3	5.2	6.5	8.7	8.5‡	8.5	7.0	7.7	6.5	5.8	5.0	4.7	-0.3
Population Density:														
Large MSA	6.7	6.2	6.3	6.8	7.4	9.2‡	8.5	7.5	7.7	6.2	5.1	4.5	4.4	0.0
Other MSA	7.4	6.7	7.0	8.0	8.7	7.8‡	10.2	9.0	7.8	7.0	6.6	5.8	4.7	-1.1
Non-MSA	8.6	7.5	6.2	6.8	8.1	6.1‡	7.9	7.0	7.5	6.7	5.8	6.6	3.7	-2.9 sss
Parental Education: <sup>c</sup>														
1.0–2.0 (Low)	7.5	7.3	5.5	5.0	6.8	6.0‡	7.9	6.8	6.4	5.8	4.2	4.1	3.8	-0.3
2.5–3.0	7.6	7.3	7.3	7.2	8.1	7.8‡	10.1	8.9	7.3	6.0	6.0	5.1	3.8	-1.3
3.5–4.0	7.6	6.5	7.3	7.9	8.3	8.0‡	9.0	7.8	7.7	7.4	5.9	6.0	4.6	-1.5 s
4.5–5.0	7.4	6.2	6.3	8.1	7.6	8.7‡	10.0	8.5	8.5	6.9	6.1	5.5	5.0	-0.5
5.5–6.0 (High)	7.1	7.1	5.6	7.5	9.7	8.4‡	9.3	8.6	9.5	7.8	7.4	6.2	5.1	-1.1
Race/Ethnicity (2-year average): <sup>d</sup>														
White	9.3	8.7	8.1	8.6	9.6	10.0	10.1‡	9.8	9.1	8.6	7.6	6.8	5.7	-1.1 ss
African American	2.5	2.2	2.3	2.8	2.9	2.9	3.3‡	5.9	4.3	3.7	3.4	3.1	2.7	-0.4
Hispanic	5.8	4.7	4.4	4.4	4.8	4.7	6.3‡	6.9	6.5	5.8	4.7	3.9	3.6	-0.3

**TABLE 67 (cont.)**  
**AMPHETAMINES:** <sup>a,b</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 12

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

Notes. '±' indicates some change in the question. See relevant footnote. See relevant figure to assess the impact of the wording changes. 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. In 2013 the question wording was changed slightly in four of the six questionnaire forms. Vyvanse was added to the list of examples in one questionnaire form. 2013 data presented here are based on the unchanged forms only; *N* is two sixths of *N* indicated.

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

<sup>b</sup>Beginning in 1982, the question about amphetamine use was revised to get respondents to exclude the inappropriate reporting of nonprescription amphetamines. The prevalence rate dropped slightly as a result of this methodological change. (In 1982 and 1983, the data are based on three of the five questionnaire forms.) Only drug use not under a doctor's orders is included here. In 2009, the question text was changed slightly in half of the questionnaire forms. An examination of the data did not show any effect from the wording changes. In 2010 the remaining forms were changed in a like manner. In 2011 bennies, Benzedrine, and Methadrine were deleted from the list of examples in one questionnaire form. An examination of the data did not show any effect from the wording changes. In 2013 the question wording was changed in three of the 12th grade questionnaires. The new wording in 2013 asked "On how many occasions (if any) have you taken amphetamines or other prescription stimulant drugs..." In contrast, the old wording did not include "or other prescription stimulant drugs." Results in 2013 indicated higher prevalence in questionnaires with the new as compared to the old wording; it was proportionally 21% higher in 12th grade. 2013 data are based on the changed forms only; *N* is one half of *N* indicated. Beginning in 2014 all questionnaires included the new, updated wording.

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

<sup>d</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. 2013 race/ethnicity data are based on the 2012 data combined with the 2013 data from the unchanged forms which were triple weighted. The 2014 race/ethnicity data are based on the 2013 changed data which were double weighted and the 2014 data.

**TABLE 68**  
**RITALIN: <sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months																				2018– 2019 change
	1991– 2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	—	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	14,600	14,400	16,900	15,300	14,000	13,600	
Total	—	2.9	2.8	2.6	2.5	2.4	2.6	2.1	1.6	1.8	1.5	1.3	0.7	1.1	0.9	0.6	0.8	0.4	0.5	1.0	+0.4
Gender:																					
Male	—	3.2	3.2	2.9	2.6	2.4	2.7	1.9	1.5	2.4	1.5	1.1	0.5	1.3	0.8	0.8	1.2	0.5	0.7	1.2	+0.6
Female	—	2.6	2.5	2.3	2.4	2.4	2.5	2.3	1.5	1.4	1.5	1.3	0.8	0.8	1.0	0.5	0.4	0.3	0.3	0.7	+0.4
College Plans:																					
None or under 4 years	—	8.1	7.7	6.8	8.8	7.5	9.0	4.2	5.7	5.3	5.8	3.7	3.0	3.2	4.6	2.6	2.9	1.1	2.1	3.4	+1.3
Complete 4 years	—	2.4	2.2	2.1	1.8	1.8	1.9	1.8	1.2	1.6	1.1	1.1	0.5	0.9	0.6	0.4	0.6	0.3	0.4	0.6	+0.2
Region:																					
Northeast	—	1.5	2.8	1.7	1.6	2.0	2.0	0.9	0.4	1.2	1.8	1.5	0.1	1.3	1.3	0.2	0.5	0.1	0.5	0.6	+0.1
Midwest	—	3.0	3.0	2.9	2.4	1.9	3.2	2.4	2.0	2.3	1.8	1.2	0.1	0.7	0.2	0.5	0.4	0.2	0.4	1.0	+0.6
South	—	3.5	2.8	2.9	3.0	3.0	2.5	2.5	2.2	1.5	1.4	1.4	1.4	1.2	0.9	0.8	1.2	0.7	0.5	1.4	+0.9
West	—	2.9	2.5	2.2	2.5	2.1	2.7	1.6	1.2	2.2	1.2	1.0	0.5	1.3	1.4	0.7	0.7	0.5	0.7	0.7	-0.1
Population Density:																					
Large MSA	—	2.2	2.3	2.3	1.7	1.5	2.3	1.2	1.1	1.6	1.1	0.8	0.8	0.9	1.0	0.6	0.9	0.3	0.5	1.2	+0.7
Other MSA	—	2.9	3.1	2.8	3.0	3.4	3.0	2.7	1.8	1.9	1.9	1.8	0.8	1.2	1.0	0.7	1.0	0.6	0.7	0.9	+0.2
Non-MSA	—	3.5	2.8	2.4	2.4	1.7	2.3	2.0	1.9	2.0	1.3	0.9	0.2	1.0	0.8	0.3	0.3	0.3	0.2	0.9	+0.7
Parental Education: <sup>b</sup>																					
1.0–2.0 (Low)	—	4.8	5.3	2.5	4.2	5.2	6.5	1.9	4.4	4.6	2.3	2.7	0.7	2.3	2.0	0.8	1.8	0.9	0.6	2.0	+1.4
2.5–3.0	—	3.3	4.0	2.8	2.9	2.7	3.1	2.3	2.2	2.2	1.4	1.6	0.8	1.2	0.7	1.1	0.7	0.2	0.6	1.4	+0.8
3.5–4.0	—	3.5	3.3	3.3	2.7	2.7	2.6	2.4	1.7	2.1	0.5	1.5	1.1	1.2	1.0	0.4	1.0	0.4	0.5	1.2	+0.6
4.5–5.0	—	2.4	1.5	1.8	2.1	1.5	2.0	1.8	1.0	1.3	1.4	0.9	0.3	1.2	1.0	0.4	0.4	0.2	0.5	0.7	+0.2
5.5–6.0 (High)	—	2.1	1.7	2.1	1.9	1.6	1.2	1.8	0.7	1.4	1.6	0.8	0.6	0.4	0.4	0.3	0.6	0.6	0.3	0.5	+0.3
Race/Ethnicity (2-year average): <sup>c</sup>																					
White	—	—	3.0	2.8	2.7	2.5	2.6	2.4	1.9	1.7	1.7	1.4	1.0	0.7	0.8	0.6	0.4	0.4	0.3	0.4	+0.1
African American	—	—	1.0	1.3	1.5	1.6	1.8	1.8	1.8	1.3	1.0	1.1	1.0	1.4	1.2	0.7	1.5	1.6	0.9	1.2	+0.3
Hispanic	—	—	3.8	2.7	2.5	3.3	3.1	2.8	2.1	1.5	1.5	1.3	1.2	1.3	1.3	0.7	0.7	0.6	0.6	0.9	+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 S1 for the number of subgroup cases. See appendix B for definition of variables in table. Data based on one of four forms; N is one third of N indicated in Table S1.

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

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

<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 69**  
**RITALIN: <sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months																				2018– 2019 change
	1991– 2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	—	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	13,000	15,600	14,700	13,500	14,300	14,000	
Total	—	4.8	4.8	4.1	3.4	3.4	3.6	2.8	2.9	3.6	2.7	2.6	1.9	1.8	1.8	1.6	1.2	0.8	0.9	0.7	-0.2
Gender:																					
Male	—	5.2	4.9	4.2	3.6	3.2	3.7	2.6	3.0	3.8	3.1	2.9	2.8	2.5	2.2	2.1	1.5	0.7	1.5	1.1	-0.4
Female	—	4.3	4.6	3.8	3.0	3.5	3.7	2.9	2.9	3.4	2.1	2.5	1.0	1.2	1.5	1.2	0.9	0.7	0.4	0.2	-0.2
College Plans:																					
None or under 4 years	—	7.2	10.2	11.0	5.5	6.7	9.1	6.0	8.6	9.3	6.2	7.3	4.5	3.7	6.0	4.7	3.2	2.4	1.9	0.8	-1.1
Complete 4 years	—	4.3	3.8	2.9	3.0	2.9	2.8	2.3	2.3	3.0	2.2	2.1	1.6	1.6	1.4	1.3	0.9	0.6	0.7	0.7	-0.1
Region:																					
Northeast	—	5.5	3.6	3.8	4.5	4.1	3.0	2.8	3.3	4.0	2.2	3.5	2.1	1.8	1.6	1.9	1.2	0.4	0.8	0.5	-0.3
Midwest	—	4.6	4.8	4.2	2.7	4.8	4.0	3.6	3.1	4.6	3.2	2.9	2.1	1.9	2.2	1.0	1.6	1.0	1.3	0.5	-0.7
South	—	5.3	5.2	4.2	3.8	3.0	3.4	3.0	3.0	3.5	2.7	2.4	1.9	1.6	1.7	1.4	1.0	0.8	0.8	0.6	-0.2
West	—	3.1	5.1	3.9	2.4	1.4	4.2	1.6	2.4	2.3	2.4	2.1	1.2	1.9	1.9	2.4	1.1	0.8	0.7	1.0	+0.3
Population Density:																					
Large MSA	—	4.3	3.6	4.0	2.6	4.0	2.8	2.9	2.0	3.3	3.0	2.8	2.0	1.7	1.7	0.9	0.8	0.8	1.0	0.1	-0.9 sss
Other MSA	—	4.6	5.8	3.7	3.6	3.3	4.1	2.5	3.3	3.6	2.6	2.8	1.7	1.7	1.7	1.8	1.1	0.6	0.8	1.0	+0.2
Non-MSA	—	5.8	4.3	5.1	3.7	2.8	3.7	3.0	3.5	4.1	2.3	2.1	2.1	2.1	2.3	2.5	2.1	1.2	1.0	0.6	-0.3
Parental Education: <sup>b</sup>																					
1.0–2.0 (Low)	—	5.0	7.7	4.2	4.8	3.3	3.9	3.9	2.8	4.1	4.0	3.0	1.2	2.4	1.2	2.2	0.4	1.0	1.8	0.0	-1.8
2.5–3.0	—	5.4	5.9	5.0	3.4	4.4	3.8	3.2	2.9	3.9	2.7	3.3	3.2	3.3	1.3	1.6	2.1	0.9	1.4	0.6	-0.8
3.5–4.0	—	5.0	4.2	4.1	3.0	2.6	3.6	2.7	2.9	3.8	3.1	2.9	1.5	1.6	2.5	2.2	1.2	0.8	0.5	0.8	+0.3
4.5–5.0	—	4.2	3.6	3.7	2.9	4.0	3.4	2.6	3.4	3.3	1.4	1.9	1.7	1.5	1.5	1.1	0.4	0.4	0.7	1.0	+0.3
5.5–6.0 (High)	—	4.6	4.7	3.3	3.7	2.8	4.0	2.2	2.8	3.8	3.3	2.2	1.8	0.7	1.7	1.3	1.6	0.6	0.8	0.6	-0.2
Race/Ethnicity (2-year average): <sup>c</sup>																					
White	—	—	5.5	4.8	4.1	3.9	3.9	3.7	3.5	3.8	3.4	2.9	2.6	2.0	2.1	1.9	1.6	1.0	0.7	0.8	+0.1
African American	—	—	1.8	2.5	1.9	1.0	1.5	1.7	1.4	1.2	2.0	2.2	1.1	1.2	1.3	1.3	0.9	1.1	0.8	1.1	+0.3
Hispanic	—	—	3.1	4.4	3.6	2.2	2.1	1.9	1.6	2.3	2.8	2.6	2.2	1.7	1.5	1.8	1.7	1.2	1.0	0.5	-0.5 s

**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 four forms; N is one third of N indicated in Table S2.

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

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

<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 70**  
**RITALIN: <sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months																				2018– 2019 change
	1975– 2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	—	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	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	5.1	4.0	4.0	5.1	4.4	4.4	3.8	3.4	2.1	2.7	2.6	2.6	2.3	1.8	2.0	1.2	1.3	0.9	1.1	+0.2
Gender:																					
Male	—	6.0	5.1	5.5	6.0	5.4	4.5	3.6	3.7	3.2	3.5	2.7	2.7	2.9	1.9	2.4	1.3	1.6	1.4	1.5	+0.2
Female	—	4.1	2.8	2.6	4.0	3.3	3.8	3.5	2.9	1.1	1.7	2.3	1.9	1.6	1.5	1.4	0.6	0.9	0.4	0.7	+0.3
College Plans:																					
None or under 4 years	—	6.4	7.7	4.4	6.8	5.3	5.3	5.6	4.2	3.2	5.4	3.1	2.9	4.1	1.4	2.4	2.4	1.5	1.3	2.3	+1.0
Complete 4 years	—	4.7	3.0	3.7	4.4	4.1	4.0	3.3	3.2	1.8	2.1	2.5	2.3	1.9	1.6	1.8	0.8	1.1	0.7	0.8	+0.1
Region:																					
Northeast	—	4.7	4.5	4.6	4.1	4.7	6.1	4.1	4.2	1.3	3.5	2.1	2.5	2.0	1.6	1.6	0.9	1.5	1.8	0.7	-1.1
Midwest	—	7.4	5.4	3.8	6.0	5.3	3.8	5.2	3.4	3.0	2.9	3.0	2.4	2.0	2.1	2.0	1.3	1.1	0.9	1.4	+0.6
South	—	4.1	3.4	3.5	4.7	4.6	4.3	3.0	3.4	2.1	2.1	2.7	2.8	2.3	2.5	1.8	1.2	1.3	0.7	0.8	+0.1
West	—	3.8	2.6	4.4	5.5	2.7	3.8	3.5	2.8	1.7	2.8	2.2	2.5	2.8	0.4	2.5	1.4	1.2	0.7	1.9	+1.2
Population Density:																					
Large MSA	—	7.2	3.9	3.2	4.2	4.1	5.4	4.0	4.1	2.4	2.7	2.2	2.4	1.9	2.1	2.0	1.7	1.5	0.9	0.9	-0.1
Other MSA	—	3.7	4.0	5.1	5.6	5.1	3.9	3.4	3.5	2.2	2.8	2.6	2.4	2.5	1.8	1.6	1.0	1.5	0.7	1.2	+0.4
Non-MSA	—	5.4	4.0	2.9	4.9	3.4	3.8	4.2	2.4	1.5	2.2	3.1	3.1	2.4	1.2	2.7	1.0	0.4	1.3	1.5	+0.2
Parental Education: <sup>b</sup>																					
1.0–2.0 (Low)	—	5.6	5.3	3.1	5.2	5.5	5.2	2.1	2.0	2.6	2.9	1.9	4.1	2.3	1.9	2.0	1.5	0.8	0.4	2.6	+2.2
2.5–3.0	—	4.5	4.2	3.7	4.2	4.2	3.6	4.1	3.4	3.3	3.0	2.5	2.5	2.1	2.0	2.0	1.0	1.8	1.1	0.7	-0.4
3.5–4.0	—	5.0	3.9	4.8	6.3	4.1	4.6	3.5	3.6	1.3	2.6	2.7	2.7	2.6	1.1	1.6	0.9	1.3	0.8	1.4	+0.6
4.5–5.0	—	4.7	3.5	3.5	4.6	3.9	4.7	4.7	3.1	1.9	2.2	2.0	2.1	2.3	1.2	2.0	1.0	0.8	1.0	1.0	0.0
5.5–6.0 (High)	—	6.6	3.9	4.0	4.5	6.0	4.6	2.7	4.5	1.7	2.4	3.3	2.0	1.3	3.3	1.9	1.4	1.2	0.9	0.5	-0.4
Race/Ethnicity (2-year average): <sup>c</sup>																					
White	—	—	5.4	4.6	5.2	5.3	4.9	4.9	4.3	3.1	2.6	2.7	2.6	2.3	1.9	1.9	1.5	1.2	1.1	0.8	-0.4
African American	—	—	0.8	1.2	1.2	2.0	2.3	1.8	1.5	1.5	2.1	1.9	1.6	2.3	2.2	2.3	2.2	1.1	0.9	0.7	-0.2
Hispanic	—	—	3.1	3.3	3.6	3.6	3.9	2.7	1.5	1.9	2.1	2.3	2.7	2.3	1.6	1.4	1.2	1.1	1.0	1.3	+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 two of six forms; N is two sixths of N indicated in Table S3.

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

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

<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 71**  
**ADDERALL: <sup>a</sup> Trends in Annual Prevalence of Use**  
**by Subgroups in Grade 8**

	Percentage who used in last 12 months											2018– 2019 change
	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	
Approximate weighted N =	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	
Total	2.0	2.3	1.7	1.7	1.8	1.3	1.0	1.5	1.3	1.8	2.5	+0.7
Gender:												
Male	2.8	2.5	1.5	1.3	1.6	1.0	1.2	2.0	1.3	1.5	2.7	+1.2 s
Female	1.3	2.1	1.7	1.9	1.9	1.4	1.0	1.2	1.2	1.9	2.4	+0.5
College Plans:												
None or under 4 years	6.1	5.4	5.1	4.2	7.4	4.9	3.3	4.5	3.4	2.9	6.0	+3.1
Complete 4 years	1.7	2.0	1.4	1.5	1.4	1.0	0.9	1.2	1.0	1.6	2.0	+0.5
Region:												
Northeast	1.0	1.5	1.4	1.0	2.2	1.0	1.1	0.6	0.3	1.1	1.0	0.0
Midwest	2.3	3.1	2.3	1.0	0.8	0.9	0.6	1.8	1.7	1.5	2.1	+0.6
South	2.3	2.3	1.7	2.6	2.1	1.6	1.5	1.7	1.5	2.2	3.6	+1.4
West	1.8	1.9	1.2	1.3	2.0	1.3	0.6	1.6	1.1	2.0	2.3	+0.3
Population Density:												
Large MSA	1.9	1.7	0.7	2.1	1.5	1.3	0.9	1.2	0.9	1.8	3.2	+1.5 s
Other MSA	2.0	2.8	2.5	1.4	1.7	1.3	1.4	1.5	1.4	2.1	2.4	+0.3
Non-MSA	2.0	2.0	1.5	1.5	2.3	1.2	0.5	2.1	1.3	1.2	2.0	+0.8
Parental Education: <sup>b</sup>												
1.0–2.0 (Low)	5.3	3.5	3.7	1.1	2.2	1.9	1.9	1.8	0.9	1.3	4.6	+3.3 ss
2.5–3.0	1.8	2.5	2.6	1.9	2.1	1.3	1.0	1.7	1.5	1.9	5.6	+3.7 s
3.5–4.0	2.9	2.0	1.6	1.5	2.3	1.3	1.3	1.7	1.6	1.9	1.5	-0.3
4.5–5.0	1.4	2.4	1.3	1.4	1.8	1.0	1.1	1.0	1.4	1.9	2.3	+0.4
5.5–6.0 (High)	1.1	1.2	0.7	1.7	0.6	1.0	0.3	1.4	0.2	1.0	1.1	+0.1
Race/Ethnicity (2-year average): <sup>c</sup>												
White	—	2.4	2.1	1.7	1.4	1.3	1.2	1.3	1.5	1.3	1.9	+0.6
African American	—	1.2	1.5	1.4	1.6	1.3	1.1	2.0	2.0	1.5	2.4	+0.8
Hispanic	—	1.9	1.9	1.7	1.8	1.8	0.9	0.8	1.0	1.2	2.1	+0.9 s

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

Notes. '—' 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 D-S1 for the number of subgroup cases. See appendix B for definition of variables in table. Data based on one of four forms; N is one third of N indicated in Tables D-S1.

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

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

<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 72**  
**ADDERALL: <sup>a</sup> Trends in Annual Prevalence of Use**  
**by Subgroups in Grade 10**

	Percentage who used in last 12 months											2018– 2019 change
	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	
<i>Approximate weighted N =</i>	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	5.7	5.3	4.6	4.5	4.4	4.6	5.2	4.2	4.0	4.1	3.1	-1.0
Gender:												
Male	6.1	5.5	5.4	5.0	5.2	4.7	5.3	4.1	4.3	4.8	3.7	-1.1
Female	5.3	4.9	3.8	4.1	3.7	4.4	5.2	4.1	3.6	3.2	2.3	-0.9
College Plans:												
None or under 4 years	15.1	10.6	11.5	9.3	8.1	10.4	9.2	7.9	9.9	7.6	3.9	-3.7 s
Complete 4 years	4.8	4.6	3.7	4.0	4.0	4.0	4.8	3.7	3.3	3.5	2.9	-0.6
Region:												
Northeast	4.2	4.1	4.9	4.0	5.4	3.9	6.1	3.1	2.7	1.9	1.9	0.0
Midwest	8.4	7.6	6.3	5.3	5.8	6.1	5.2	4.2	5.5	5.7	2.1	-3.6 ss
South	6.5	5.2	4.6	5.5	4.1	4.9	5.3	4.8	3.7	4.2	3.2	-1.0
West	3.4	3.7	2.3	2.5	2.9	3.4	4.2	4.1	3.7	3.6	4.6	+1.0
Population Density:												
Large MSA	6.2	6.0	4.8	3.7	4.3	5.4	3.8	3.6	5.2	6.0	1.9	-4.2 sss
Other MSA	5.9	5.0	4.1	4.4	4.7	4.3	6.0	4.5	3.0	2.6	3.8	+1.2
Non-MSA	4.8	4.8	5.1	5.7	4.0	4.2	5.6	4.3	4.3	4.4	3.2	-1.3
Parental Education: <sup>b</sup>												
1.0–2.0 (Low)	7.9	6.7	4.7	5.4	4.2	4.4	5.8	3.1	7.3	5.9	2.6	-3.3
2.5–3.0	6.6	6.0	5.4	6.3	5.2	4.8	5.2	3.7	2.7	4.5	3.1	-1.4
3.5–4.0	5.4	6.2	4.9	4.8	4.5	5.8	6.8	5.5	4.0	4.2	3.6	-0.6
4.5–5.0	4.9	3.8	4.5	4.1	4.7	3.9	5.1	3.4	3.1	2.9	3.2	+0.3
5.5–6.0 (High)	6.7	4.6	3.2	2.9	3.2	4.2	4.0	4.9	4.5	4.8	3.2	-1.6
Race/Ethnicity (2-year average): <sup>c</sup>												
White	—	6.6	5.7	5.3	5.6	5.9	6.0	5.6	4.5	4.1	3.6	-0.5
African American	—	2.2	2.7	1.7	2.0	3.0	3.5	2.9	2.9	2.9	2.5	-0.4
Hispanic	—	4.2	3.9	3.8	2.5	2.0	3.3	4.0	4.6	4.5	3.4	-1.1

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

Notes. '—' 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 D-S2 for the number of subgroup cases. See appendix B for definition of variables in table. Data based on one of four forms; *N* is one third of *N* indicated in Table D-S2.

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

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

<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 73**  
**ADDERALL: <sup>a</sup> Trends in Annual Prevalence of Use**  
**by Subgroups in Grade 12**

	Percentage who used in last 12 months											2018– 2019 change
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	5.4	6.5	6.5	7.6	7.4	6.8	7.5	6.2	5.5	4.6	3.9	-0.7
Gender:												
Male	7.4	7.5	7.4	8.0	8.7	7.7	8.0	7.7	7.1	4.9	4.8	-0.1
Female	3.8	5.5	5.5	6.9	6.0	6.0	6.9	4.4	4.2	3.9	3.0	-0.9
College Plans:												
None or under 4 years	7.0	10.9	7.5	7.8	9.2	5.4	8.6	7.3	7.0	7.0	4.9	-2.0
Complete 4 years	5.0	5.7	6.4	7.4	6.8	7.0	7.0	5.8	5.1	4.0	3.5	-0.6
Region:												
Northeast	5.1	7.7	7.2	7.6	5.2	7.2	6.9	5.1	5.9	5.6	3.7	-1.9
Midwest	7.9	7.3	7.7	10.1	8.7	9.2	10.3	7.6	5.7	4.8	3.7	-1.1
South	5.1	6.2	6.3	6.4	8.3	7.0	6.8	6.0	5.7	4.6	3.6	-1.1
West	3.2	5.3	5.3	6.6	6.3	3.9	6.4	5.7	4.9	3.7	4.9	+1.2
Population Density:												
Large MSA	5.9	7.0	4.7	9.1	7.2	7.8	7.5	6.8	5.0	4.2	3.6	-0.5
Other MSA	5.5	6.5	7.9	7.4	8.1	7.2	7.3	6.1	5.9	4.8	4.4	-0.4
Non-MSA	4.5	6.0	6.1	6.2	5.7	4.3	8.0	5.2	5.6	4.8	2.9	-1.9
Parental Education: <sup>b</sup>												
1.0–2.0 (Low)	4.0	5.2	5.6	5.8	7.0	2.7	5.7	4.9	3.7	3.0	4.1	+1.1
2.5–3.0	5.7	6.0	7.2	6.3	5.7	7.3	7.0	4.5	6.9	4.6	3.1	-1.6
3.5–4.0	6.1	6.7	5.9	8.4	8.4	6.6	7.9	7.5	5.7	4.8	3.4	-1.4
4.5–5.0	5.5	7.0	7.1	9.4	7.7	7.7	7.8	6.9	3.6	4.4	3.9	-0.5
5.5–6.0 (High)	4.7	7.0	6.2	6.6	8.6	8.8	8.5	5.8	8.5	6.0	6.3	+0.3
Race/Ethnicity (2-year average): <sup>c</sup>												
White	—	7.5	8.1	8.8	9.1	8.1	8.4	8.6	7.7	6.6	5.1	-1.5 ss
African American	—	2.9	2.2	2.1	3.6	4.6	5.9	5.1	2.2	1.6	1.7	+0.1
Hispanic	—	3.1	2.9	3.7	4.8	4.9	4.4	4.7	4.3	3.6	3.1	-0.5

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

*Notes.* '—' 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 D-S3 for the number of subgroup cases. See appendix B for definition of variables in table. Data based on two of six forms; *N* is two sixths of *N* indicated in Table S3.

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

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

<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 74**  
**PROVIGIL:** <sup>a</sup> Trends in Annual Prevalence of Use  
 by Subgroups in Grade 12

	Percentage who used in last 12 months											2018– 2019 change
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	13,700	14,400	14,100	—	—	—	—	—	—	—	—	—
Total	1.8	1.3	1.5	—	—	—	—	—	—	—	—	—
Gender:												
Male	2.3	1.8	1.4	—	—	—	—	—	—	—	—	—
Female	1.3	0.6	1.3	—	—	—	—	—	—	—	—	—
College Plans:												
None or under 4 years	4.0	4.0	2.5	—	—	—	—	—	—	—	—	—
Complete 4 years	1.3	0.8	1.1	—	—	—	—	—	—	—	—	—
Region:												
Northeast	1.9	1.7	2.0	—	—	—	—	—	—	—	—	—
Midwest	2.0	1.7	1.0	—	—	—	—	—	—	—	—	—
South	1.9	1.2	1.7	—	—	—	—	—	—	—	—	—
West	1.4	0.9	1.2	—	—	—	—	—	—	—	—	—
Population Density:												
Large MSA	1.9	1.0	1.4	—	—	—	—	—	—	—	—	—
Other MSA	1.7	1.5	1.3	—	—	—	—	—	—	—	—	—
Non-MSA	2.0	1.6	1.8	—	—	—	—	—	—	—	—	—
Parental Education: <sup>b</sup>												
1.0–2.0 (Low)	3.8	1.7	2.4	—	—	—	—	—	—	—	—	—
2.5–3.0	2.0	1.6	2.0	—	—	—	—	—	—	—	—	—
3.5–4.0	1.7	1.2	1.6	—	—	—	—	—	—	—	—	—
4.5–5.0	1.2	0.8	0.5	—	—	—	—	—	—	—	—	—
5.5–6.0 (High)	1.1	1.8	0.9	—	—	—	—	—	—	—	—	—
Race/Ethnicity (2-year data): <sup>c</sup>												
White	—	1.5	1.3	—	—	—	—	—	—	—	—	—
African American	—	1.5	1.5	—	—	—	—	—	—	—	—	—
Hispanic	—	1.5	1.2	—	—	—	—	—	—	—	—	—

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

Notes. '—' 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 are based on two of six forms; *N* is two sixths of *N* indicated in Table S3.

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

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

<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 75**  
**METHAMPHETAMINE: Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months																					2018– 2019 change	
	1991– 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		2019
Approximate weighted N =	—	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	14,600	14,400	16,900	15,300	14,000	13,600	
Total	—	3.2	2.5	2.8	2.2	2.5	1.5	1.8	1.8	1.1	1.2	1.0	1.2	0.8	1.0	1.0	0.6	0.5	0.4	0.5	0.4	0.5	0.0
Gender:																							
Male	—	3.1	2.2	2.5	2.0	2.0	1.1	1.7	1.4	0.7	0.9	1.0	1.3	0.5	0.8	0.7	0.5	0.5	0.4	0.4	0.3	0.3	-0.1
Female	—	3.2	2.8	3.0	2.4	3.0	1.7	1.9	2.3	1.5	1.5	1.0	1.1	1.0	1.1	1.0	0.6	0.5	0.4	0.6	0.5	0.7	+0.2
College Plans:																							
None or under 4 years	—	7.4	6.8	6.6	6.6	7.9	6.6	6.8	6.3	3.2	3.8	3.1	2.7	3.6	5.0	4.4	3.0	1.2	1.9	1.8	1.8	2.1	+0.2
Complete 4 years	—	2.7	2.0	2.3	1.7	2.0	1.0	1.2	1.3	0.9	1.0	0.9	1.1	0.6	0.7	0.7	0.4	0.4	0.2	0.3	0.2	0.3	0.0
Region:																							
Northeast	—	1.6	2.0	1.2	0.8	1.7	1.0	0.6	0.7	0.5	0.8	0.3	0.6	0.6	0.8	0.4	0.5	0.2	0.2	0.0	0.4	0.4	+0.1
Midwest	—	4.4	3.0	3.2	2.5	3.5	2.1	2.0	1.7	1.5	1.6	0.9	1.6	0.5	0.3	0.7	0.8	0.8	0.4	0.4	0.1	0.1	0.0
South	—	3.4	2.4	3.4	2.8	2.4	1.4	2.0	1.6	1.1	1.4	1.1	1.0	0.9	1.2	1.0	0.4	0.4	0.5	0.6	0.6	0.5	-0.1
West	—	2.8	2.5	2.4	2.0	2.4	1.6	2.1	3.1	1.2	1.0	1.4	1.6	1.1	1.4	1.5	0.9	0.6	0.4	0.8	0.5	0.7	+0.3
Population Density:																							
Large MSA	—	2.2	2.1	1.6	1.3	2.0	1.5	1.3	1.5	0.4	0.7	1.1	0.9	0.6	0.9	1.5	0.7	0.3	0.3	0.4	0.5	0.3	-0.2
Other MSA	—	3.6	2.6	3.4	2.5	2.4	1.7	2.0	2.1	1.4	1.5	1.0	1.3	1.2	1.2	0.6	0.6	0.6	0.3	0.6	0.5	0.7	+0.2
Non-MSA	—	3.5	3.0	2.8	2.7	3.4	1.2	2.1	1.8	1.6	1.4	0.9	1.3	0.3	0.7	0.9	0.5	0.6	0.7	0.5	0.1	0.2	+0.1
Parental Education: <sup>a</sup>																							
1.0–2.0 (Low)	—	6.3	5.0	4.4	4.3	4.2	4.4	4.1	3.9	1.9	2.1	1.7	2.2	3.1	1.5	2.1	0.2	0.4	0.8	1.2	1.4	1.3	-0.1
2.5–3.0	—	4.3	3.1	4.0	3.0	3.4	1.3	1.5	1.8	1.4	1.7	0.9	1.0	1.5	1.3	0.7	0.8	0.2	0.2	0.5	0.7	0.9	+0.2
3.5–4.0	—	3.3	2.4	3.0	2.0	2.5	1.8	2.9	2.2	1.2	1.3	1.1	1.3	0.5	1.4	0.7	0.6	0.0	0.5	0.6	0.6	0.4	-0.1
4.5–5.0	—	1.9	1.3	1.6	1.9	1.6	1.0	0.9	1.2	0.9	0.9	0.6	1.1	0.4	0.6	0.7	0.6	0.5	0.2	0.3	0.1	0.2	0.0
5.5–6.0 (High)	—	3.2	2.2	1.2	1.1	2.3	0.9	0.7	1.7	0.8	1.1	1.6	1.1	0.4	0.7	0.8	0.2	0.6	0.2	0.2	0.0	0.5	+0.5
Race/Ethnicity (2-year average): <sup>b</sup>																							
White	—	—	3.2	3.1	2.8	2.7	2.2	1.6	1.6	1.4	1.1	1.0	1.0	0.8	0.7	0.7	0.6	0.6	0.5	0.3	0.2	0.2	0.0
African American	—	—	1.1	0.8	0.6	0.8	0.6	0.5	0.8	0.6	0.5	0.7	0.5	0.6	0.6	0.4	0.3	0.3	0.2	0.2	0.3	0.3	0.0
Hispanic	—	—	4.0	3.3	3.2	3.2	3.0	2.8	2.8	2.3	1.7	1.5	1.8	1.9	1.5	1.5	1.1	0.4	0.6	0.7	1.0	1.3	+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 S1 for the number of subgroup cases. See appendix B for definition of variables in table. Data based on one of four forms; N is one third of N indicated in Table S1.

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

<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 76**  
**METHAMPHETAMINE: Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months																					2018– 2019 change	
	1991– 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		2019
Approximate weighted N =	—	14,000	13,600	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	13,000	15,600	14,700	13,500	14,300	14,000	
Total	—	4.6	4.0	3.7	3.9	3.3	3.0	2.9	1.8	1.6	1.5	1.6	1.6	1.4	1.0	1.0	0.8	0.8	0.4	0.4	0.4	0.5	0.0
Gender:																							
Male	—	4.5	4.5	3.8	3.9	3.0	2.7	2.6	1.7	1.4	1.4	1.4	1.5	1.3	1.1	1.0	0.7	0.6	0.4	0.4	0.4	0.5	+0.1
Female	—	4.7	3.6	3.5	3.6	3.7	3.3	3.0	2.0	1.8	1.6	1.7	1.8	1.4	0.9	0.8	0.8	0.9	0.5	0.3	0.4	0.3	-0.1
College Plans:																							
None or under 4 years	—	9.1	8.8	7.0	9.1	9.4	6.0	7.3	5.8	3.9	3.6	4.6	4.8	4.6	4.1	2.4	3.6	3.4	2.2	1.2	1.5	0.2	-1.3
Complete 4 years	—	3.9	3.3	3.1	3.0	2.3	2.6	2.2	1.3	1.2	1.2	1.3	1.2	1.0	0.7	0.9	0.5	0.5	0.2	0.2	0.2	0.4	+0.2
Region:																							
Northeast	—	5.1	4.1	2.3	1.5	2.1	2.5	3.0	1.5	1.4	0.5	1.3	1.4	2.0	1.0	0.4	0.1	0.3	0.2	0.1	0.3	0.1	-0.2
Midwest	—	4.6	4.0	3.8	3.0	3.4	2.2	3.4	1.7	0.9	1.4	1.8	1.1	0.9	0.5	0.7	0.9	0.6	0.9	0.8	0.3	0.6	+0.4
South	—	4.0	3.8	4.0	4.6	3.8	2.9	2.2	2.3	1.9	1.9	1.4	1.5	1.4	1.0	0.9	1.2	1.2	0.3	0.2	0.6	0.1	-0.4
West	—	5.1	4.4	4.6	5.8	3.8	4.7	3.0	1.7	2.3	1.8	2.1	2.6	1.4	1.4	1.9	0.6	0.8	0.3	0.3	0.4	1.0	+0.6
Population Density:																							
Large MSA	—	3.8	4.4	4.0	3.1	2.3	2.7	2.9	2.2	1.7	1.2	1.5	1.5	1.0	1.1	1.0	0.7	0.7	0.1	0.3	0.4	0.2	-0.1
Other MSA	—	4.8	3.4	3.6	4.4	3.8	3.4	3.0	1.5	1.5	1.8	1.6	1.9	1.7	0.6	1.2	0.5	0.8	0.4	0.4	0.3	0.6	+0.2
Non-MSA	—	5.2	4.8	3.6	3.7	3.7	2.5	2.5	2.1	1.8	1.3	1.6	1.3	1.4	1.7	0.6	1.6	0.9	1.3	0.4	0.7	0.5	-0.2
Parental Education: <sup>a</sup>																							
1.0–2.0 (Low)	—	7.2	7.0	5.6	6.2	7.3	4.5	4.2	3.8	3.8	2.6	3.7	3.4	2.9	2.5	1.9	1.2	1.0	0.7	0.3	0.7	0.4	-0.3
2.5–3.0	—	4.2	4.3	4.6	4.9	4.1	3.7	3.8	2.7	1.6	2.3	2.7	2.3	1.2	1.7	1.4	0.4	1.0	0.3	0.9	0.3	0.1	-0.2
3.5–4.0	—	4.8	4.3	3.2	3.7	3.2	3.3	2.0	1.4	1.7	1.0	1.4	1.9	1.3	0.7	1.0	1.2	1.1	0.5	0.1	0.7	0.3	-0.4
4.5–5.0	—	4.8	3.5	3.6	2.4	2.2	2.3	3.2	1.4	1.0	1.6	0.7	0.8	1.3	0.8	0.3	0.4	0.6	0.2	0.2	0.1	0.3	+0.2
5.5–6.0 (High)	—	3.3	3.5	2.5	4.0	2.1	1.7	1.3	1.3	1.0	0.6	0.7	0.8	1.0	0.3	1.2	0.6	0.3	0.6	0.1	0.7	1.2	+0.6
Race/Ethnicity (2-year average): <sup>b</sup>																							
White	—	—	4.7	4.1	4.1	4.2	3.4	2.9	2.4	1.8	1.6	1.4	1.5	1.5	1.2	0.9	0.9	0.8	0.6	0.4	0.3	0.4	+0.1
African American	—	—	0.4	1.0	1.1	0.6	0.8	1.1	1.0	0.8	0.5	0.4	0.6	0.7	0.3	0.3	0.6	0.9	0.4	0.5	0.4	0.0	-0.4
Hispanic	—	—	3.9	3.0	4.4	4.6	4.6	5.0	3.3	1.9	2.3	2.7	2.5	1.9	1.8	2.1	1.2	1.0	0.8	0.3	0.4	0.3	-0.2

**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 four forms;  $N$  is one third of  $N$  indicated in Table S2.

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

<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 77**  
**METHAMPHETAMINE: Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months																				2018– 2019 change		
	1975– 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017		2018	2019
<i>Approximate weighted N =</i>	—	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	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	4.7	4.3	3.9	3.6	3.2	3.4	2.5	2.5	1.7	1.2	1.2	1.0	1.4	1.1	0.9	1.0	0.6	0.6	0.6	0.5	0.5	-0.1
Gender:																							
Male	—	5.0	4.4	4.3	4.3	3.6	3.7	2.7	2.0	1.8	1.8	1.3	1.5	1.6	1.2	1.3	1.3	0.7	0.9	0.6	0.7	0.7	-0.1
Female	—	4.5	4.2	3.4	3.0	2.9	3.1	2.3	3.0	1.6	0.7	1.0	0.5	1.1	0.9	0.4	0.7	0.4	0.4	0.5	0.2	0.2	0.0
College Plans:																							
None or under 4 years	—	6.8	6.2	6.9	6.5	5.8	6.7	4.9	3.7	3.9	1.9	3.1	1.8	1.9	2.3	1.6	1.3	2.0	1.3	1.6	1.0	0.8	-0.1
Complete 4 years	—	4.0	3.8	3.2	2.7	2.4	2.4	2.0	2.1	1.2	1.0	0.8	0.8	1.3	0.8	0.6	0.9	0.3	0.5	0.4	0.4	0.3	-0.1
Region:																							
Northeast	—	3.1	4.5	3.4	1.6	1.8	1.3	0.6	1.4	1.4	1.1	1.0	1.2	2.1	0.5	1.3	0.9	0.0	0.6	0.6	0.1	0.1	0.0
Midwest	—	5.1	4.1	4.7	4.5	4.2	3.3	4.4	1.2	1.2	0.8	1.2	1.1	1.2	0.9	0.8	0.7	1.2	0.4	0.6	1.3	0.5	-0.8
South	—	3.9	3.7	3.4	3.0	2.8	4.0	2.2	3.1	2.1	1.2	1.4	0.9	1.1	0.9	0.5	1.2	0.4	0.4	0.6	0.5	0.7	+0.2
West	—	7.1	5.4	4.4	5.4	4.0	4.9	2.7	3.8	1.5	1.9	1.0	1.2	1.5	1.8	1.4	0.7	0.7	1.4	0.7	0.2	0.2	0.0
Population Density:																							
Large MSA	—	4.2	3.6	2.7	2.1	1.8	2.8	1.5	3.4	1.3	1.3	1.1	1.0	0.9	1.2	0.8	0.9	0.5	0.7	0.6	0.4	0.6	+0.1
Other MSA	—	4.0	4.9	4.0	4.4	3.0	2.6	2.4	2.0	1.7	1.2	1.1	1.1	2.0	1.2	0.9	1.0	0.5	0.8	0.7	0.6	0.3	-0.3
Non-MSA	—	6.4	4.3	5.3	4.1	5.3	5.5	4.1	2.0	2.2	1.3	1.4	1.0	0.6	0.5	1.2	0.8	1.0	0.2	0.4	0.6	0.7	+0.1
Parental Education: <sup>a</sup>																							
1.0–2.0 (Low)	—	6.0	7.7	5.0	3.5	4.3	5.5	4.0	2.7	3.1	1.6	3.5	2.0	3.1	1.4	1.4	1.6	1.1	2.2	1.0	0.9	1.0	+0.1
2.5–3.0	—	4.8	3.5	4.8	4.9	3.6	4.1	3.0	2.4	2.2	0.6	1.4	1.1	1.0	0.6	1.2	1.1	0.8	0.3	0.2	0.4	0.3	-0.1
3.5–4.0	—	5.2	3.9	3.8	3.8	3.6	3.1	3.0	2.9	1.4	1.3	0.8	0.9	1.2	1.3	0.6	0.7	0.5	0.3	0.8	0.4	0.4	0.0
4.5–5.0	—	3.7	4.2	3.1	2.9	2.9	2.8	2.1	2.2	1.7	0.8	1.0	1.0	1.2	1.2	0.7	0.9	0.6	0.4	0.6	0.6	0.1	-0.5
5.5–6.0 (High)	—	4.2	5.5	3.2	3.1	1.0	3.0	1.2	1.2	0.8	1.6	0.4	0.4	1.3	0.7	0.9	0.9	0.2	0.7	0.1	0.3	0.3	0.0
Race/Ethnicity (2-year average): <sup>b</sup>																							
White	—	—	4.9	4.6	4.2	3.5	3.5	3.3	2.6	2.1	1.5	1.1	1.1	1.3	1.2	0.9	0.7	0.6	0.4	0.5	0.7	0.4	-0.3 s
African American	—	—	1.1	1.0	0.5	1.4	1.8	0.7	0.4	0.7	1.1	1.1	0.5	0.4	0.5	0.4	1.1	1.0	0.3	0.2	0.2	0.6	+0.4
Hispanic	—	—	4.9	4.6	3.9	3.4	3.4	3.4	3.7	2.7	1.1	1.2	1.1	1.2	1.2	1.2	1.5	1.0	0.8	0.8	0.5	0.5	+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 S3 for the number of subgroup cases. See appendix B for definition of variables in table. Data based on two of six forms; N is two sixths of N indicated in Table S3.

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

<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 78**  
**CRYSTAL METHAMPHETAMINE (ICE): Trends in Annual Prevalence of Use by Subgroups in Grade 12**

		Percentage who used in last 12 months																
		1975–																
		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Approximate weighted N =	—	15,200	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	
Total	—	1.3	1.4	1.3	1.7	1.8	2.4	2.8	2.3	3.0	1.9	2.2	2.5	3.1	2.0	2.1	2.3	
Gender:																		
Male	—	1.5	1.9	1.5	1.9	2.2	2.6	3.9	2.6	3.9	2.2	2.5	2.7	3.5	2.5	2.6	2.5	
Female	—	1.0	0.9	1.0	1.2	1.3	2.1	1.7	2.1	2.1	1.6	1.9	2.1	2.5	1.5	1.6	2.0	
College Plans:																		
None or under 4 years	—	1.4	1.9	2.2	2.6	2.4	4.3	5.1	3.8	5.0	2.3	3.8	4.2	4.8	2.6	4.4	4.2	
Complete 4 years	—	1.2	1.2	1.0	1.4	1.5	1.8	2.1	1.9	2.4	1.8	1.7	2.0	2.6	1.9	1.5	1.8	
Region:																		
Northeast	—	1.6	1.1	0.9	1.1	0.9	1.4	3.2	2.8	2.6	1.0	1.0	1.9	2.6	1.3	0.9	1.2	
Midwest	—	1.1	1.4	1.1	1.5	2.3	2.2	2.1	1.9	2.7	1.7	2.8	2.1	2.0	1.0	1.8	2.2	
South	—	0.5	1.0	1.0	1.2	1.2	1.8	2.0	1.6	3.1	2.3	2.0	1.7	3.5	2.3	2.3	2.7	
West	—	2.5	2.2	2.6	3.2	2.8	4.7	4.9	3.7	3.4	2.5	2.9	4.7	4.0	3.4	3.5	3.1	
Population Density:																		
Large MSA	—	1.2	1.3	1.5	2.2	2.0	3.0	4.6	2.9	2.5	1.6	2.3	2.7	2.2	1.9	2.3	2.1	
Other MSA	—	1.3	1.7	1.3	1.7	1.8	2.0	2.0	2.0	3.3	2.1	1.7	2.3	3.6	2.0	1.4	2.3	
Non-MSA	—	1.2	0.8	1.2	1.2	1.6	2.3	2.6	2.1	2.8	2.0	3.0	2.5	3.2	2.1	3.2	2.7	
Parental Education: <sup>a</sup>																		
1.0–2.0 (Low)	—	1.1	1.0	0.9	1.6	1.0	3.2	3.4	2.2	2.8	3.6	3.2	5.9	3.7	3.7	4.0	2.6	
2.5–3.0	—	1.4	1.1	1.1	1.2	3.0	2.6	3.0	2.5	3.2	1.3	1.7	2.4	3.6	1.7	2.7	2.6	
3.5–4.0	—	1.4	1.2	1.5	2.3	1.6	1.9	2.6	2.2	3.6	2.5	1.9	2.8	2.4	2.2	2.4	3.1	
4.5–5.0	—	1.2	1.8	1.4	1.8	1.3	2.5	2.9	2.9	2.6	1.3	2.8	1.5	2.8	1.5	1.0	1.4	
5.5–6.0 (High)	—	1.1	1.0	1.4	1.3	1.0	2.2	2.5	1.4	1.9	2.1	1.3	2.0	2.8	1.8	0.9	1.1	
Race/Ethnicity (2-year average): <sup>b</sup>																		
White	—	—	1.3	1.3	1.5	1.7	2.0	2.5	2.6	2.9	2.8	2.3	2.4	2.6	2.3	2.0	2.0	
African American	—	—	0.8	1.0	0.8	0.5	0.5	0.3	0.5	1.0	0.7	0.7	1.1	1.6	1.4	0.7	1.0	
Hispanic	—	—	1.3	1.8	2.3	2.1	2.7	4.0	2.8	1.7	1.7	2.4	3.4	3.6	2.5	2.6	3.4	

Table continued on next page.

**TABLE 78 (cont.)**  
**CRYSTAL METHAMPHETAMINE (ICE): Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months													2018-2019 change	
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		2019
<i>Approximate weighted N =</i>	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	1.9	1.6	1.1	0.9	0.9	1.2	0.8	1.1	0.8	0.5	0.8	0.8	0.6	0.6	+0.1
Gender:															
Male	1.5	1.8	1.4	1.1	1.1	1.0	1.0	1.3	0.8	0.5	1.0	0.4	0.6	0.7	+0.1
Female	2.2	1.4	0.7	0.8	0.6	1.1	0.7	0.8	0.7	0.5	0.6	1.2	0.2	0.4	+0.2
College Plans:															
None or under 4 years	3.5	3.7	1.7	1.8	2.1	2.9	1.9	2.4	1.7	1.0	1.6	1.3	1.4	1.6	+0.2
Complete 4 years	1.3	1.2	0.8	0.7	0.6	0.9	0.5	0.8	0.5	0.4	0.6	0.7	0.2	0.4	+0.2
Region:															
Northeast	1.0	1.1	1.4	0.5	0.6	0.4	0.9	1.0	0.3	0.4	0.4	0.5	0.5	0.4	0.0
Midwest	1.0	1.5	0.5	1.0	0.9	0.8	1.0	0.6	0.9	1.2	0.8	0.6	0.6	0.6	0.0
South	2.9	1.7	0.9	0.8	0.9	1.4	0.6	1.1	0.8	0.4	1.0	1.1	0.7	0.7	0.0
West	1.9	2.1	1.7	1.5	1.2	1.8	0.9	1.6	1.1	0.4	1.0	0.6	0.4	0.7	+0.4
Population Density:															
Large MSA	2.2	1.3	0.6	0.9	0.9	1.1	1.2	1.3	1.2	0.8	0.8	0.7	0.6	0.9	+0.3
Other MSA	1.5	1.7	1.2	0.8	0.9	1.3	0.7	1.2	0.7	0.3	0.7	0.7	0.2	0.4	+0.1
Non-MSA	2.1	1.9	1.3	1.3	1.1	1.0	0.7	0.7	0.6	0.7	1.3	1.1	1.2	0.8	-0.4
Parental Education: <sup>a</sup>															
1.0-2.0 (Low)	4.2	3.2	1.4	2.8	1.9	3.6	1.1	3.8	3.0	1.4	1.2	1.6	0.9	0.7	-0.3
2.5-3.0	2.6	2.1	0.6	0.8	1.6	0.3	1.6	1.3	0.8	1.0	0.7	0.7	0.4	1.2	+0.8
3.5-4.0	1.4	1.4	1.0	1.2	0.4	1.5	0.6	0.9	0.6	0.4	1.0	1.2	0.7	0.6	-0.1
4.5-5.0	1.0	1.5	0.7	0.3	0.5	0.5	0.4	0.4	0.3	0.3	0.6	0.2	0.4	0.3	-0.1
5.5-6.0 (High)	1.4	0.8	1.2	0.6	0.7	1.3	0.2	0.4	0.2	0.0	1.0	0.5	0.3	0.3	0.0
Race/Ethnicity (2-year average): <sup>b</sup>															
White	1.9	1.7	1.3	0.7	0.5	0.6	0.7	0.6	0.6	0.3	0.3	0.5	0.4	0.3	-0.2
African American	1.0	0.6	0.6	0.7	0.9	1.1	0.8	1.0	1.3	0.6	0.6	0.8	0.8	1.5	+0.7
Hispanic	3.3	2.9	1.8	1.4	1.7	2.4	2.1	1.4	2.0	2.0	1.6	1.2	0.9	0.6	-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 two of six forms;  $N$  is two sixths of  $N$  indicated in Table S3.

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

<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 79**  
**BATH SALTS (SYNTHETIC STIMULANTS): Trends in**  
**Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months									2018– 2019 change
	1991– 2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	—	15,100	14,600	14,600	14,400	16,900	15,300	14,000	—	
Total	—	0.8	1.0	0.5	0.4	0.9	0.5	0.9	—	—
Gender:										
Male	—	0.6	1.1	0.5	0.5	1.2	0.9	1.4	—	—
Female	—	0.9	0.9	0.5	0.3	0.7	0.3	0.4	—	—
College Plans:										
None or under 4 years	—	3.6	3.1	2.3	1.0	3.2	2.5	3.3	—	—
Complete 4 years	—	0.6	0.8	0.4	0.3	0.6	0.3	0.6	—	—
Region:										
Northeast	—	0.3	0.7	0.9	0.1	0.5	0.4	0.6	—	—
Midwest	—	0.5	0.6	0.3	0.2	0.7	0.3	0.2	—	—
South	—	1.3	1.0	0.5	0.6	1.0	0.5	1.6	—	—
West	—	0.7	1.5	0.4	0.3	1.1	0.9	0.7	—	—
Population Density:										
Large MSA	—	1.0	1.4	0.8	0.5	1.2	0.5	1.1	—	—
Other MSA	—	0.7	0.8	0.4	0.3	0.7	0.6	0.8	—	—
Non-MSA	—	0.8	0.8	0.3	0.3	1.0	0.4	0.8	—	—
Parental Education: <sup>a</sup>										
1.0–2.0 (Low)	—	0.9	2.7	1.0	0.5	2.5	1.6	1.1	—	—
2.5–3.0	—	0.6	0.6	0.4	0.4	0.6	0.4	0.3	—	—
3.5–4.0	—	0.8	0.8	0.2	0.5	1.3	0.4	1.1	—	—
4.5–5.0	—	0.6	1.0	0.7	0.3	0.3	0.4	0.8	—	—
5.5–6.0 (High)	—	0.8	0.4	0.6	0.2	0.5	0.5	0.9	—	—
Race/Ethnicity (2-year data): <sup>b</sup>										
White	—	—	0.5	0.4	0.3	0.4	0.4	0.4	—	—
African American	—	—	1.3	1.0	0.7	1.4	1.6	1.9	—	—
Hispanic	—	—	1.7	1.3	0.5	0.8	0.8	0.9	—	—

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

*Notes.* '—' 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 four forms; *N* is one third of *N* indicated in S1.

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

<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 80**  
**BATH SALTS (SYNTHETIC STIMULANTS): Trends in**  
**Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months									2018– 2019 change
	1991– <u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	
<i>Approximate weighted N =</i>	—	15,000	12,900	13,000	15,600	14,700	13,500	14,300	—	—
Total	—	0.6	0.9	0.9	0.7	0.8	0.4	0.5	—	—
Gender:										
Male	—	0.9	1.3	1.0	0.8	1.1	0.4	0.7	—	—
Female	—	0.4	0.6	0.7	0.5	0.4	0.4	0.3	—	—
College Plans:										
None or under 4 years	—	1.9	3.7	3.6	3.6	2.4	0.8	1.6	—	—
Complete 4 years	—	0.5	0.6	0.5	0.4	0.6	0.4	0.4	—	—
Region:										
Northeast	—	0.7	1.4	0.6	0.4	1.3	0.2	0.7	—	—
Midwest	—	0.8	0.8	0.7	0.4	0.7	0.4	0.4	—	—
South	—	0.5	0.8	1.0	0.9	0.6	0.3	0.6	—	—
West	—	0.6	0.9	1.1	0.9	0.7	0.9	0.6	—	—
Population Density:										
Large MSA	—	1.0	0.7	1.0	0.5	0.4	0.4	0.6	—	—
Other MSA	—	0.3	0.8	0.6	0.7	0.8	0.3	0.5	—	—
Non-MSA	—	0.8	1.7	1.4	0.9	1.5	0.7	0.5	—	—
Parental Education: <sup>a</sup>										
1.0–2.0 (Low)	—	0.7	0.4	0.9	1.8	1.0	1.0	1.2	—	—
2.5–3.0	—	0.9	2.0	0.6	1.2	0.7	0.4	0.5	—	—
3.5–4.0	—	0.4	0.6	1.5	0.4	1.0	0.6	0.5	—	—
4.5–5.0	—	0.7	0.4	0.4	0.3	0.3	0.2	0.4	—	—
5.5–6.0 (High)	—	0.2	1.1	0.9	0.5	1.0	0.1	0.2	—	—
Race/Ethnicity (2-year data): <sup>b</sup>										
White	—	—	0.7	0.8	0.6	0.6	0.6	0.3	—	—
African American	—	—	0.8	1.4	1.7	1.3	0.9	0.5	—	—
Hispanic	—	—	0.7	0.6	0.5	0.8	0.9	0.9	—	—

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

*Notes.* \* — \* 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 four forms; *N* is one third of *N* indicated in S2.

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

<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 81**  
**BATH SALTS (SYNTHETIC STIMULANTS): Trends in**  
**Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months									
	1991–									2018–
	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>change</u>
<i>Approximate weighted N =</i>	—	13,700	12,600	12,400	12,900	11,800	12,600	13,300	—	
Total	—	1.3	0.9	0.9	1.0	0.8	0.6	0.6	—	—
Gender:										
Male	—	1.2	1.0	1.1	1.2	0.8	0.6	0.4	—	—
Female	—	1.1	0.6	0.5	0.6	0.3	0.7	0.5	—	—
College Plans:										
None or under 4 years	—	1.8	1.8	1.5	1.6	2.1	1.8	1.4	—	—
Complete 4 years	—	1.1	0.6	0.6	0.8	0.3	0.3	0.3	—	—
Region:										
Northeast	—	1.2	0.7	1.4	0.1	0.6	0.6	0.3	—	—
Midwest	—	1.3	1.0	0.7	1.5	1.0	0.4	0.5	—	—
South	—	1.7	1.0	1.2	1.3	0.9	0.7	0.8	—	—
West	—	1.0	0.8	0.2	0.7	0.4	0.6	0.5	—	—
Population Density:										
Large MSA	—	1.3	0.9	1.0	1.1	0.5	0.6	0.7	—	—
Other MSA	—	1.4	0.7	1.0	0.8	0.9	0.5	0.2	—	—
Non-MSA	—	1.2	1.3	0.5	1.4	0.7	0.9	1.2	—	—
Parental Education: <sup>a</sup>										
1.0–2.0 (Low)	—	2.1	1.7	2.0	1.6	1.9	1.5	1.2	—	—
2.5–3.0	—	1.7	0.9	1.5	0.9	1.0	0.9	1.0	—	—
3.5–4.0	—	0.8	1.0	0.3	0.6	0.6	0.4	0.1	—	—
4.5–5.0	—	1.2	0.6	0.5	1.0	0.3	0.4	0.4	—	—
5.5–6.0 (High)	—	1.3	0.2	0.2	0.4	0.1	0.2	0.3	—	—
Race/Ethnicity (2-year data): <sup>b</sup>										
White	—	—	1.0	0.5	0.6	0.7	0.5	0.4	—	—
African American	—	—	1.6	2.2	2.3	1.7	1.2	1.0	—	—
Hispanic	—	—	1.2	0.8	0.6	0.8	0.8	0.7	—	—

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

*Notes.* '—' 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 two of six forms; *N* is two sixths of *N* indicated in Table S3.

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

<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 82**  
**SEDATIVES (BARBITURATES):** <sup>a,b</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 12

	Percentage who used in last 12 months															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<i>Approximate weighted N =</i>	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
Total	10.7	9.6	9.3	8.1	7.5	6.8	6.6	5.5	5.2	4.9	4.6	4.2	3.6	3.2	3.3	3.4
Gender:																
Male	12.3	9.9	10.2	8.4	7.6	7.3	7.2	5.9	5.9	5.5	5.2	4.7	4.0	3.4	3.5	3.8
Female	9.9	9.2	8.4	7.7	7.0	6.0	5.8	5.0	4.2	4.0	3.9	3.8	3.2	3.0	3.0	3.0
College Plans:																
None or under 4 years	—	11.6	11.4	9.1	9.3	9.0	8.1	7.4	6.7	6.2	6.2	6.1	4.7	4.1	4.8	4.7
Complete 4 years	—	7.3	6.8	6.8	5.2	4.8	5.1	3.8	3.8	3.7	3.6	3.0	3.0	2.7	2.5	2.8
Region:																
Northeast	11.5	10.4	9.2	9.6	9.6	6.9	6.8	5.6	4.7	5.1	5.3	5.2	4.2	2.5	3.2	2.9
Midwest	12.8	10.4	10.7	7.9	6.9	7.3	7.5	5.4	6.1	4.9	4.9	4.2	3.3	2.5	3.2	3.5
South	9.9	9.7	9.3	7.8	7.3	7.0	5.5	6.3	5.2	5.2	4.2	4.1	3.7	4.1	3.7	4.0
West	10.0	6.7	6.6	6.6	5.7	5.2	6.5	3.9	4.0	4.2	4.1	3.3	3.2	3.2	2.7	2.9
Population Density:																
Large MSA	11.1	10.2	8.1	8.1	8.3	6.6	6.9	5.3	5.2	4.4	4.4	3.7	3.3	2.8	2.6	2.6
Other MSA	11.3	9.8	9.9	8.2	7.3	6.5	6.4	5.7	5.3	4.9	4.2	4.4	3.6	3.4	3.1	3.6
Non-MSA	9.8	9.0	9.5	8.1	7.0	7.2	6.6	5.5	5.0	5.5	5.4	4.5	3.9	3.2	4.4	3.9
Parental Education: <sup>c</sup>																
1.0–2.0 (Low)	10.3	9.1	8.0	7.5	7.8	8.0	6.5	5.8	6.1	4.7	5.0	4.8	3.8	4.3	4.1	3.1
2.5–3.0	10.3	10.2	10.3	8.2	7.3	7.2	6.5	5.7	5.7	5.2	5.3	4.6	3.6	3.1	3.4	3.7
3.5–4.0	9.5	9.6	9.0	8.3	7.4	6.3	6.5	5.1	4.6	5.0	4.4	4.4	3.2	2.9	3.2	3.9
4.5–5.0	10.7	10.1	9.1	7.8	6.6	5.9	6.4	5.0	4.4	4.3	4.1	3.3	3.9	3.3	2.8	3.1
5.5–6.0 (High)	9.0	10.3	8.3	8.0	7.2	5.4	6.8	5.8	3.7	4.0	3.1	3.4	3.6	3.1	3.4	2.9
Race/Ethnicity (2-year average): <sup>d</sup>																
White	—	—	10.2	9.3	8.2	7.5	7.2	6.5	5.8	5.5	5.1	4.7	4.2	3.7	3.5	3.7
African American	—	—	3.3	3.2	2.6	2.5	2.4	2.0	1.7	1.6	1.6	1.6	1.7	1.5	1.1	1.1
Hispanic	—	—	7.4	5.8	5.8	5.8	5.7	5.1	4.1	4.4	4.6	3.6	2.8	2.8	3.2	2.8

Table continued on next page.

**TABLE 82 (cont.)**  
**SEDATIVES (BARBITURATES):** <sup>a,b</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 12

	Percentage who used in last 12 months															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	3.4	2.8	3.4	4.1	4.7	4.9	5.1	5.5	5.8	6.2	5.7	6.7	6.0	6.5	7.2	6.6
Gender:																
Male	3.4	2.9	3.4	4.3	5.1	5.2	5.3	6.3	6.3	6.9	6.3	7.4	6.7	7.0	7.7	6.4
Female	3.2	2.6	3.3	3.8	4.2	4.4	4.8	4.8	5.3	5.4	5.1	5.9	5.4	6.0	6.6	6.7
College Plans:																
None or under 4 years	4.3	3.9	3.8	5.4	5.9	6.7	6.6	6.9	7.0	7.0	7.1	9.8	9.6	9.3	10.7	10.0
Complete 4 years	2.9	2.3	3.2	3.7	4.4	4.3	4.6	5.1	5.5	6.0	5.4	6.0	5.1	5.6	6.3	5.7
Region:																
Northeast	2.8	2.7	3.5	4.0	4.1	5.6	5.7	5.5	4.7	5.6	5.3	5.9	4.8	5.4	5.7	5.7
Midwest	3.5	2.7	3.5	4.1	4.5	4.9	4.4	4.8	6.0	5.2	5.6	6.4	5.1	5.9	7.5	6.2
South	3.6	3.0	3.6	4.8	5.3	5.4	5.8	6.8	6.8	7.5	6.1	8.4	7.1	7.8	8.5	7.5
West	3.3	2.5	2.7	2.8	4.3	3.3	4.2	4.2	4.9	5.7	5.6	5.1	6.5	6.3	5.9	6.2
Population Density:																
Large MSA	2.4	2.4	2.6	3.6	4.1	3.6	4.2	4.6	3.7	5.1	5.9	6.5	4.2	5.5	6.1	6.6
Other MSA	3.9	2.6	3.1	4.3	4.9	5.4	5.0	5.6	6.2	6.6	6.1	6.7	6.6	7.1	7.5	6.6
Non-MSA	3.3	3.4	4.3	4.1	5.0	5.4	6.4	6.8	7.4	6.8	4.9	7.0	7.4	6.6	7.8	6.6
Parental Education: <sup>c</sup>																
1.0–2.0 (Low)	3.6	3.9	3.8	4.5	4.9	4.8	4.3	6.4	7.5	5.2	6.3	5.1	6.7	6.6	6.2	7.3
2.5–3.0	3.7	2.4	3.6	4.5	5.2	4.9	4.9	6.3	6.2	7.1	5.3	7.1	6.5	7.0	8.1	6.5
3.5–4.0	3.0	2.8	2.8	4.0	4.6	4.9	6.0	5.6	6.4	5.8	6.1	7.7	7.2	8.0	7.7	7.3
4.5–5.0	3.3	2.9	3.4	4.0	4.4	5.0	5.1	5.0	5.0	6.7	5.9	6.3	4.7	5.1	7.0	6.2
5.5–6.0 (High)	3.6	2.4	3.8	3.6	4.1	4.6	4.6	5.0	5.1	5.5	5.8	6.6	4.3	5.5	6.3	6.0
Race/Ethnicity (2-year average): <sup>d</sup>																
White	3.8	3.5	3.6	4.3	4.9	5.4	5.9	6.5	6.7	6.9	7.0	7.5	7.6	7.4	7.9	7.9
African American	1.2	1.1	1.0	1.5	1.6	1.1	1.0	1.4	1.4	1.3	1.5	1.4	1.7	2.4	2.6	2.5
Hispanic	2.4	2.2	1.9	2.6	3.5	4.0	3.7	3.3	4.0	5.1	4.7	4.5	4.1	4.7	5.8	5.8

Table continued on next page.

**TABLE 82 (cont.)**  
**SEDATIVES (BARBITURATES):<sup>a,b</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months														2018-2019
Approximate weighted N =	2007	2008	2009	2010	2011	2012	2013 <sup>c</sup>	2014	2015	2016	2017	2018	2019	change	
Total	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	-0.2	
Gender:															
Male	6.2	5.8	5.2	4.8	4.3	4.5	4.8	4.3	3.6	3.0	2.9	2.7	2.5	-0.2	
Female	6.3	5.9	5.6	4.8	4.2	4.2	4.7	4.4	3.1	2.7	2.9	2.4	2.5	+0.2	
College Plans:															
None or under 4 years	6.2	5.7	4.9	4.6	4.4	4.7	4.9	4.2	4.1	3.2	2.9	2.5	2.3	-0.3	
Complete 4 years	8.2	8.9	7.6	6.7	7.5	5.1	6.1	5.9	4.1	3.6	3.9	3.5	3.3	-0.3	
Region:															
Northeast	5.7	5.2	4.7	4.3	3.7	4.3	4.4	3.9	3.5	2.9	2.8	2.4	2.2	-0.2	
Midwest	5.5	5.1	4.3	4.2	3.4	4.1	3.9	3.0	3.3	2.2	1.6	2.5	1.7	-0.8	
South	5.9	5.7	6.5	5.3	4.7	4.4	4.7	4.1	2.9	3.7	2.7	2.9	2.1	-0.8	
West	7.2	6.8	5.6	5.3	4.2	4.4	5.5	5.1	3.8	2.9	3.2	2.5	2.8	+0.2	
Population Density:															
Large MSA	5.4	5.0	4.0	4.2	4.7	5.0	4.5	4.1	4.3	3.2	3.7	2.7	3.1	+0.4	
Other MSA	5.7	4.3	4.5	4.1	3.4	4.3	4.7	3.6	3.3	2.5	2.3	2.3	2.3	-0.1	
Non-MSA	6.3	6.2	5.4	5.0	4.6	4.8	5.2	5.0	4.0	3.4	3.4	2.6	2.5	-0.1	
Parental Education: <sup>c</sup>															
1.0–2.0 (Low)	6.9	6.7	5.9	5.5	4.9	4.0	3.9	3.5	3.3	3.0	3.1	3.2	2.7	-0.5	
2.5–3.0	6.3	6.0	4.8	4.3	4.8	5.1	4.9	4.3	3.3	3.4	3.4	2.8	2.5	-0.3	
3.5–4.0	5.7	6.3	5.7	5.5	4.6	5.0	5.0	4.8	3.2	3.0	3.2	2.5	2.7	+0.1	
4.5–5.0	6.5	6.2	5.5	5.2	4.6	4.8	5.1	4.0	4.6	3.4	3.3	2.9	2.5	-0.4	
5.5–6.0 (High)	7.0	5.0	5.6	4.5	4.2	4.3	4.6	4.6	3.1	2.7	2.2	2.8	2.2	-0.6	
Race/Ethnicity (2-year average): <sup>d</sup>															
White	5.3	5.4	3.5	3.6	3.0	3.7	4.6	3.7	4.1	3.3	2.8	2.1	2.3	+0.2	
African American	7.5	7.3	6.6	5.8	5.2	4.9	5.1	5.0	4.5	3.8	3.2	2.8	2.6	-0.3	
Hispanic	2.5	2.2	2.0	2.7	2.5	2.1	2.5	3.1	2.6	2.0	1.7	1.5	2.0	+0.5	

*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 S3 for the number of subgroup cases. See appendix B for definition of variables in table.

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

<sup>b</sup>In 2004 the barbiturate question text was changed on half of the questionnaire forms. Barbiturates was changed to Sedatives, including barbiturates, and "have you taken barbiturates . . ." was changed to "have you taken sedatives . . ." In the list of examples downers, downers, goofballs, yellow, reds, blues, rainbows were changed to downers, or downers, and include Phenobarbital, Tuinal, Nembutal, and Seconal. An examination of the data did not show any effect from the wording change. In 2005 the remaining forms were changed in a like manner.

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

<sup>d</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.

<sup>e</sup>In 2013 the question text was changed in all forms: Tuinal, Nembutal, and Seconal were replaced with Ambien, Lunesta, and Sonata. In one form the list of examples was also changed: Tuinal was dropped from the list and Dalmane, Restoril, Halcion, Intermezzo, and Zolpimist were added. An examination of the data did not show any effect from the wording changes.

**TABLE 83**  
**TRANQUILIZERS: <sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months															
	<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<sup>b</sup></u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</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>	
Total	1.8	2.0	2.1	2.4	2.7	3.3	2.9	2.6	2.5	2.6†	2.8	2.6	2.7	2.5	2.8	
Gender:																
Male	1.5	1.6	1.8	1.9	2.0	2.3	2.6	2.3	2.1	2.1†	2.5	2.2	2.2	1.9	2.1	
Female	2.1	2.3	2.4	2.8	3.3	4.0	3.2	3.0	2.9	3.1†	2.9	2.8	3.0	3.2	3.4	
College Plans:																
None or under 4 years	3.9	4.9	3.6	5.1	5.9	6.4	5.8	6.4	5.8	6.8†	5.8	6.5	6.3	6.2	6.9	
Complete 4 years	1.5	1.5	1.9	2.0	2.3	2.8	2.6	2.2	2.0	2.2†	2.5	2.1	2.3	2.1	2.4	
Region:																
Northeast	1.0	1.6	1.7	2.5	2.3	2.7	2.5	2.0	2.3	2.2†	2.0	1.8	1.9	1.7	1.6	
Midwest	1.4	1.9	1.3	1.7	2.6	3.5	2.4	2.6	2.6	2.2†	2.2	2.4	2.2	2.1	2.8	
South	2.6	2.5	2.4	2.6	3.0	3.7	3.3	3.2	2.8	3.2†	3.4	3.4	3.5	3.4	3.7	
West	1.8	1.6	3.0	2.7	2.4	2.9	3.0	2.3	1.9	2.5†	3.2	1.9	2.6	2.2	2.2	
Population Density:																
Large MSA	1.8	2.1	1.7	2.5	1.8	3.2	2.1	1.9	1.8	2.5†	2.8	2.0	1.8	1.8	2.0	
Other MSA	1.7	1.8	2.5	2.6	3.2	3.4	3.2	2.6	2.4	2.7†	3.1	2.7	2.9	3.1	3.1	
Non-MSA	2.2	2.2	1.6	1.9	2.6	3.1	3.2	3.6	3.4	2.7†	2.3	2.9	3.4	2.4	3.4	
Parental Education: <sup>c</sup>																
1.0–2.0 (Low)	3.6	3.8	2.5	3.2	3.9	4.9	4.3	5.5	5.0	5.6†	3.7	5.0	3.9	4.7	5.0	
2.5–3.0	1.6	2.1	2.5	2.6	2.7	3.5	3.1	2.8	3.3	3.6†	3.7	3.6	3.5	2.8	4.3	
3.5–4.0	2.0	2.2	2.1	2.6	3.2	3.9	3.2	2.7	2.1	2.6†	2.7	2.2	2.8	3.0	3.3	
4.5–5.0	1.4	0.9	1.8	2.0	2.2	2.8	2.4	2.4	1.7	1.4†	2.7	2.0	2.1	2.0	1.3	
5.5–6.0 (High)	1.8	1.9	1.7	2.1	1.6	2.7	2.7	2.1	1.9	2.2†	2.1	1.6	1.6	1.7	2.0	
Race/Ethnicity (2-year average): <sup>d</sup>																
White	—	2.0	2.0	2.2	2.7	3.2	3.4	3.1	2.9	3.0	3.0†	3.0 <sup>e</sup>	2.8	2.8	2.9	
African American	—	0.9	1.1	1.2	1.2	1.3	1.2	0.9	0.7	0.5	0.5†	0.6 <sup>e</sup>	1.0	1.2	1.0	
Hispanic	—	2.7	3.1	3.4	3.3	3.5	3.5	3.4	3.5	3.5	3.6†	3.8 <sup>e</sup>	3.4	3.4	3.5	

Table continued on next page.

**TABLE 83 (cont.)**  
**TRANQUILIZERS: <sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months														2018-2019 change	
	<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>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>		
<i>Approximate weighted N =</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>	<i>14,600</i>	<i>14,400</i>	<i>16,900</i>	<i>15,300</i>	<i>14,000</i>	<i>13,600</i>		
Total	2.6	2.4	2.4	2.6	2.8	2.0	1.8	1.8	1.7	1.7	1.7	2.0	2.0	2.4	+0.4	
Gender:																
Male	2.2	1.6	1.7	2.3	2.2	1.6	1.3	1.3	1.3	1.2	1.4	1.5	2.0	2.1	+0.2	
Female	2.9	3.1	3.2	3.0	3.3	2.4	2.3	2.4	2.1	2.2	1.9	2.4	2.1	2.7	+0.6	
College Plans:																
None or under 4 years	6.0	6.8	5.9	7.0	5.5	4.8	4.1	5.3	4.8	3.1	3.3	4.2	4.0	5.1	+1.2	
Complete 4 years	2.3	2.0	2.2	2.3	2.6	1.8	1.6	1.6	1.5	1.6	1.5	1.8	1.8	2.0	+0.2	
Region:																
Northeast	1.3	1.4	1.6	1.2	1.6	1.1	1.3	1.2	1.5	1.6	1.1	0.9	0.9	1.1	+0.1	
Midwest	2.4	2.8	2.5	2.4	2.6	1.8	1.0	1.5	1.5	1.8	1.2	1.6	1.3	2.1	+0.8 s	
South	3.6	2.9	3.3	3.6	3.6	2.5	2.7	2.3	2.0	1.9	2.0	2.3	2.5	2.8	+0.3	
West	2.1	1.9	1.8	2.2	2.4	2.2	1.3	1.9	1.8	1.4	2.1	2.7	2.9	3.2	+0.3	
Population Density:																
Large MSA	1.9	1.9	1.8	2.0	2.2	1.7	1.5	1.6	1.8	2.2	1.5	2.0	2.2	2.5	+0.3	
Other MSA	2.6	2.8	2.8	3.0	3.1	2.4	2.2	1.9	1.8	1.7	1.7	2.1	2.2	2.6	+0.4	
Non-MSA	3.5	2.4	2.6	2.5	2.8	1.6	1.5	1.9	1.6	1.0	1.8	1.7	1.5	1.9	+0.4	
Parental Education: <sup>c</sup>																
1.0–2.0 (Low)	5.1	5.2	4.7	5.9	4.8	3.4	3.2	3.6	3.0	3.1	2.5	4.4	3.2	3.4	+0.2	
2.5–3.0	3.2	3.3	3.0	3.4	3.4	2.8	2.4	2.4	2.3	1.7	1.7	2.4	2.6	4.1	+1.5 s	
3.5–4.0	3.1	2.9	2.5	2.8	3.2	2.5	1.9	2.2	1.9	1.8	2.0	1.7	2.4	2.3	-0.1	
4.5–5.0	1.7	1.3	2.1	1.7	2.0	1.3	1.1	1.5	1.5	1.5	1.7	1.5	1.9	2.0	+0.1	
5.5–6.0 (High)	1.8	1.0	1.7	1.4	1.7	1.3	1.5	0.9	1.1	1.3	1.2	1.5	1.1	1.7	+0.6	
Race/Ethnicity (2-year average): <sup>d</sup>																
White	3.0	2.7	2.6	2.8	2.9	2.6	2.0	1.7	1.7	1.7	1.4	1.5	1.6	1.8	+0.2	
African American	0.8	0.9	0.9	1.0	1.2	1.3	1.2	1.1	1.1	1.2	1.5	1.4	1.0	1.0	0.0	
Hispanic	3.0	2.9	2.9	2.9	3.3	2.9	2.4	2.4	2.2	2.0	2.1	2.3	2.6	3.0	+0.4	

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

Notes. ' ‡ ' indicates some change in the question. See relevant footnote. See relevant figure to assess the impact of the wording changes. 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>Only drug use not under a doctor's orders is included here.

<sup>b</sup>In 2001, for the tranquilizer list of examples, Miltown was replaced with Xanax. The 2001 data are based on the changed forms only; *N* is one half of *N* indicated.

In 2002 the remaining forms were changed. Beginning in 2002, the data are based on all forms. Data for any illicit drug other than marijuana and hallucinogens are also affected by these changes and have been treated in a parallel manner.

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

<sup>d</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.

<sup>e</sup>Due to changes in the question wording in half of the questionnaire forms in 2001, the 2002 entry comprises half of the 2001 sample data double-weighted (the half with the new version of the question) and all of the 2002 sample data.

**TABLE 84**  
**TRANQUILIZERS: <sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 <sup>b</sup>	2002	2003	2004	2005	
<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	
Total	3.2	3.5	3.3	3.3	4.0	4.6	4.9	5.1	5.4	5.6‡	7.3	6.3	5.3	5.1	4.8	
Gender:																
Male	2.5	2.7	3.2	3.0	4.0	4.3	4.7	4.7	5.2	5.8‡	7.9	5.7	4.7	4.7	4.3	
Female	3.8	4.3	3.2	3.6	4.0	4.9	5.2	5.4	5.4	5.5‡	6.8	6.9	5.8	5.5	5.3	
College Plans:																
None or under 4 years	5.0	6.0	5.8	6.0	7.4	9.4	8.6	8.3	8.6	10.0‡	13.5	11.6	9.2	9.6	9.6	
Complete 4 years	2.8	3.1	2.7	2.8	3.4	3.8	4.3	4.5	4.8	4.9‡	6.4	5.5	4.7	4.5	4.2	
Region:																
Northeast	2.7	2.8	3.4	2.8	2.6	3.9	3.6	5.7	5.5	3.9‡	6.2	4.6	4.3	5.0	5.0	
Midwest	2.4	3.0	2.5	2.6	3.2	4.4	3.7	3.4	4.6	5.4‡	5.6	5.5	4.5	3.5	3.3	
South	4.2	4.5	3.9	4.2	5.1	5.7	7.3	6.6	6.0	6.9‡	9.6	8.1	7.5	7.3	6.6	
West	2.9	3.2	3.2	3.6	4.3	3.6	3.7	4.1	4.9	5.4‡	6.7	5.8	4.1	4.1	3.8	
Population Density:																
Large MSA	3.2	3.3	2.7	2.6	3.2	4.2	3.9	4.1	5.0	5.5‡	5.8	5.1	3.9	3.2	3.5	
Other MSA	3.0	3.8	3.3	3.9	4.1	4.6	4.4	5.2	5.5	5.4‡	7.0	6.8	5.8	5.7	5.4	
Non-MSA	3.5	3.3	3.6	3.0	4.7	5.2	7.0	6.0	5.6	6.1‡	9.9	6.7	6.4	6.4	5.3	
Parental Education: <sup>c</sup>																
1.0–2.0 (Low)	3.3	5.3	4.8	4.2	5.0	5.9	4.7	6.5	5.0	8.2‡	7.6	7.1	7.5	5.8	5.2	
2.5–3.0	3.6	3.5	3.1	3.3	4.5	5.2	5.3	6.3	5.9	6.2‡	7.9	7.5	7.3	5.6	5.7	
3.5–4.0	3.2	3.4	3.5	3.4	4.3	5.0	5.5	4.9	5.2	5.6‡	8.1	6.7	5.7	5.7	5.4	
4.5–5.0	2.5	3.9	2.9	2.9	3.5	4.1	4.2	4.5	5.7	5.2‡	6.7	5.8	4.1	4.6	4.0	
5.5–6.0 (High)	3.5	2.3	3.1	3.4	3.2	3.6	4.4	4.0	5.3	4.7‡	6.9	4.6	3.4	4.1	4.0	
Race/Ethnicity (2-year average): <sup>d</sup>																
White	—	4.0	3.8	3.6	4.1	4.9	5.6	6.0	6.1	6.4	7.0‡	7.6 <sup>e</sup>	7.4	6.5	6.0	
African American	—	0.9	0.9	0.9	0.8	0.7	0.9	1.0	1.2	1.1	1.5‡	1.5 <sup>e</sup>	1.3	1.3	1.3	
Hispanic	—	2.9	3.3	3.1	3.1	3.4	3.5	3.5	3.7	4.0	4.0‡	4.3 <sup>e</sup>	4.4	4.5	4.3	

Table continued on next page.

**TABLE 84 (cont.)**  
**TRANQUILIZERS: <sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months														2018-2019 change	
	<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>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>		
Approximate weighted N =	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000		
Total	5.2	5.3	4.6	5.0	5.1	4.5	4.3	3.7	3.9	3.9	4.1	4.1	3.9	3.4	-0.4	
Gender:																
Male	5.0	4.6	4.1	4.4	4.5	4.7	4.0	3.8	3.2	3.2	3.5	3.8	3.9	3.7	-0.2	
Female	5.3	6.0	5.0	5.7	5.5	4.3	4.5	3.6	4.6	4.5	4.5	4.2	3.7	3.1	-0.6	
College Plans:																
None or under 4 years	10.2	9.9	9.6	11.4	10.6	9.9	10.7	6.4	7.9	8.5	8.7	7.2	7.4	6.0	-1.3	
Complete 4 years	4.5	4.7	3.9	4.4	4.4	3.9	3.6	3.4	3.5	3.4	3.6	3.7	3.4	2.9	-0.4	
Region:																
Northeast	3.8	4.1	2.8	3.0	4.0	3.5	3.0	2.9	3.0	3.4	2.3	2.4	2.1	1.9	-0.2	
Midwest	4.2	5.3	4.7	5.1	5.1	4.4	4.3	3.9	4.7	2.9	3.9	4.3	3.9	3.3	-0.6	
South	6.9	6.5	6.2	6.2	6.1	5.4	5.3	4.3	4.3	4.8	4.6	3.8	4.6	4.0	-0.6	
West	5.3	4.7	3.7	5.2	4.3	4.2	3.9	3.3	3.2	3.8	4.8	5.5	4.0	3.7	-0.3	
Population Density:																
Large MSA	4.4	4.1	3.3	3.9	4.6	4.0	3.7	3.0	3.6	3.8	4.5	4.5	3.8	2.8	-1.0	
Other MSA	5.3	5.8	5.2	5.8	5.2	4.7	4.2	4.1	3.9	3.9	3.7	4.1	3.9	3.8	-0.1	
Non-MSA	6.3	6.0	5.1	5.1	5.5	5.1	5.2	3.7	4.5	3.8	4.5	3.4	3.8	3.6	-0.3	
Parental Education: <sup>c</sup>																
1.0–2.0 (Low)	6.6	5.5	5.4	7.4	6.5	4.8	5.5	5.4	5.4	4.8	4.9	4.6	5.3	4.0	-1.4	
2.5–3.0	6.2	6.4	5.9	5.9	6.7	5.0	5.4	4.6	4.0	4.8	5.4	4.8	3.7	4.0	+0.3	
3.5–4.0	5.6	5.7	5.2	5.9	5.8	4.8	5.0	4.4	4.9	5.0	4.2	4.5	4.7	4.4	-0.3	
4.5–5.0	4.3	4.9	3.5	4.1	4.0	4.4	3.6	2.4	3.3	3.4	3.7	3.7	3.2	2.5	-0.6	
5.5–6.0 (High)	4.3	3.9	3.6	3.6	3.3	4.1	3.2	3.2	2.8	2.5	3.1	3.8	3.4	2.8	-0.6	
Race/Ethnicity (2-year average): <sup>d</sup>																
White	6.0	6.2	6.1	5.7	5.8	5.6	5.1	4.4	4.0	4.1	4.0	4.1	4.0	3.6	-0.4	
African American	1.6	1.3	1.0	1.3	1.8	2.1	1.8	1.7	2.1	2.5	2.7	2.2	1.5	1.8	+0.3	
Hispanic	3.8	3.3	3.5	4.5	4.9	4.1	4.0	4.2	3.8	3.8	4.4	5.2	5.3	4.2	-1.1 s	

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

Notes. ' † ' indicates some change in the question. See relevant footnote. See relevant figure to assess the impact of the wording changes. 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>Only drug use not under a doctor's orders is included here.

<sup>b</sup>In 2001, for the tranquilizer list of examples, Miltown was replaced with Xanax. The 2001 data are based on the changed forms only; N is one half of N indicated.

In 2002 the remaining forms were changed. Beginning in 2002, the data are based on all forms. Data for any illicit drug other than marijuana and hallucinogens are also affected by these changes and have been treated in a parallel manner.

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

<sup>d</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.

<sup>e</sup>Due to changes in the question wording in half of the questionnaire forms in 2001, the 2002 entry comprises half of the 2001 sample data double-weighted (the half with the new version of the question) and all of the 2002 sample data.



**TABLE 85**  
**TRANQUILIZERS: <sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months															
<i>Approximate weighted N =</i>	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Total	10.6	10.3	10.8	9.9	9.6	8.7	8.0	7.0	6.9	6.1	6.1	5.8	5.5	4.8	3.8	3.5
Gender:																
Male	10.0	9.4	10.2	9.7	9.9	9.0	8.0	6.9	7.0	6.3	6.4	5.9	5.2	4.7	4.0	3.5
Female	11.1	11.0	11.4	10.1	9.3	8.5	7.7	7.1	6.7	5.8	5.7	5.8	5.8	4.8	3.5	3.5
College Plans:																
None or under 4 years	—	11.5	12.3	11.1	11.0	10.7	9.4	8.0	8.0	7.4	6.8	7.2	6.7	5.1	4.8	4.3
Complete 4 years	—	8.9	9.0	8.6	8.1	7.2	6.9	6.3	5.8	5.2	5.5	5.1	4.9	4.6	3.3	3.2
Region:																
Northeast	9.2	9.7	10.4	10.9	11.5	8.6	8.3	7.8	6.8	6.8	7.1	6.4	6.9	4.5	3.7	2.9
Midwest	10.6	10.1	11.0	8.8	7.5	8.2	7.8	6.2	6.8	5.6	6.0	5.5	4.5	3.7	3.1	2.9
South	11.3	11.7	11.4	10.5	10.4	9.5	7.8	7.4	7.4	6.9	5.9	6.3	5.7	6.0	4.4	4.3
West	11.7	8.5	9.6	8.9	9.4	8.6	8.0	6.4	6.2	4.9	5.3	4.8	5.2	4.4	3.4	3.9
Population Density:																
Large MSA	11.2	9.6	9.6	10.3	9.9	8.7	8.3	7.0	7.0	5.4	5.8	5.3	5.8	4.7	3.1	3.6
Other MSA	11.0	11.3	11.4	10.1	10.2	9.3	8.1	7.2	7.2	6.1	6.0	5.7	5.6	5.0	3.5	3.7
Non-MSA	9.9	9.5	11.0	9.2	8.7	8.0	7.5	6.8	6.5	6.8	6.5	6.4	5.2	4.5	4.9	3.3
Parental Education: <sup>b</sup>																
1.0–2.0 (Low)	—	11.2	10.1	9.4	9.4	9.1	7.8	7.1	6.1	6.0	6.5	5.3	6.7	5.7	3.9	3.6
2.5–3.0	—	9.8	10.3	11.5	10.1	8.8	9.1	8.0	7.3	7.2	6.5	6.2	5.8	5.4	4.6	3.9
3.5–4.0	—	9.8	11.2	11.1	9.5	10.4	8.9	8.3	6.7	6.9	5.8	6.4	6.5	5.3	4.5	3.4
4.5–5.0	—	11.3	11.7	11.4	10.5	10.0	8.1	7.4	7.6	6.6	5.8	6.3	4.7	5.9	5.5	3.8
5.5–6.0 (High)	—	9.3	12.0	10.1	11.0	11.4	10.3	9.1	7.6	7.1	6.3	5.5	5.4	5.4	5.6	4.9
Race/Ethnicity (2-year average): <sup>c</sup>																
White	—	—	11.4	11.1	10.5	9.9	9.1	8.3	7.8	7.3	6.8	6.6	6.3	5.9	5.0	4.2
African American	—	—	4.3	4.2	3.6	3.1	3.0	2.5	2.3	2.1	1.7	1.7	2.0	2.0	1.2	0.7
Hispanic	—	—	8.4	8.2	7.4	6.4	5.7	5.8	5.1	5.3	5.0	4.4	3.7	2.5	1.6	1.9

Table continued on next page.

**TABLE 85 (cont.)**  
**TRANQUILIZERS: <sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months																
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 <sup>d</sup>	2002	2003	2004	2005	2006	
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200	
Total	3.6	2.8	3.5	3.7	4.4	4.6	4.7	5.5	5.8	5.7‡	6.9	7.7	6.7	7.3	6.8	6.6	
Gender:																	
Male	3.5	2.7	3.5	4.0	4.7	5.0	5.4	6.3	6.9	6.4‡	7.9	8.4	6.9	8.0	7.2	7.1	
Female	3.6	3.0	3.3	3.5	4.1	4.0	3.9	4.7	4.8	4.9‡	5.8	6.9	6.3	6.5	6.2	6.1	
College Plans:																	
None or under 4 years	4.2	3.9	3.9	4.5	5.6	5.6	6.2	6.8	6.4	6.7‡	7.6	9.9	9.6	9.1	10.3	8.5	
Complete 4 years	3.4	2.5	3.3	3.5	4.1	4.2	4.0	5.1	5.6	5.2‡	6.7	7.1	6.0	6.8	5.9	6.0	
Region:																	
Northeast	3.0	3.0	3.7	3.5	3.9	4.8	5.3	4.9	5.6	5.2‡	5.7	6.8	5.4	6.5	5.7	7.2	
Midwest	3.0	2.3	2.8	3.1	4.0	4.4	3.5	3.7	5.1	4.7‡	8.1	6.5	5.5	6.2	7.0	5.8	
South	4.0	3.5	4.2	4.8	5.0	5.3	5.4	7.5	7.6	6.7‡	7.4	10.4	8.5	9.0	8.3	7.6	
West	4.4	2.3	3.0	2.8	4.3	3.0	4.3	4.4	3.9	5.6‡	5.5	5.8	6.6	7.0	4.9	5.3	
Population Density:																	
Large MSA	2.5	2.9	2.9	3.9	4.0	3.7	4.2	4.8	4.0	4.7‡	7.9	7.8	4.7	5.5	5.5	6.5	
Other MSA	4.1	2.7	3.6	3.7	4.5	4.9	4.8	5.7	6.6	6.2‡	6.4	8.2	7.8	8.5	7.4	6.6	
Non-MSA	3.7	3.1	3.7	3.5	4.8	4.7	5.1	5.9	6.5	6.0‡	6.7	6.8	7.4	7.3	7.1	6.9	
Parental Education: <sup>b</sup>																	
1.0–2.0 (Low)	4.0	3.9	3.3	4.2	3.9	4.2	3.9	6.4	5.2	6.4‡	5.4	5.2	7.1	5.0	4.3	5.7	
2.5–3.0	3.6	2.8	3.3	3.5	4.7	4.0	4.3	5.2	6.2	5.3‡	6.7	7.9	6.5	7.9	7.7	6.9	
3.5–4.0	3.1	2.7	3.5	3.6	4.3	4.7	4.6	6.0	6.4	5.6‡	7.7	8.4	7.6	9.0	7.3	6.9	
4.5–5.0	3.9	3.0	3.4	3.7	4.5	4.6	5.4	4.9	5.4	5.9‡	7.4	7.9	5.9	7.1	6.8	6.6	
5.5–6.0 (High)	4.0	2.2	4.2	4.2	4.1	5.3	5.1	5.5	5.6	5.8‡	6.0	7.9	6.2	5.4	5.9	6.4	
Race/Ethnicity (2-year average): <sup>c</sup>																	
White	4.1	3.7	3.7	4.2	4.6	5.1	5.5	6.2	6.8	6.9	7.7‡	9.2 <sup>f</sup>	8.7	8.4	8.6	8.2	
African American	0.9	1.3	1.0	1.1	1.2	0.9	0.8	1.0	1.0	0.7	0.6‡	1.1 <sup>f</sup>	1.3	1.7	1.9	1.6	
Hispanic	2.7	2.4	2.0	2.4	3.5	4.3	3.8	3.3	3.5	4.3	3.9‡	4.1 <sup>f</sup>	4.5	4.5	4.3	4.3	

Table continued on next page.

**TABLE 85 (cont.)**  
**TRANQUILIZERS: <sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months													2018-2019 change
	2007 <sup>e</sup>	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
	Approximate weighted N =													
Total	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	-0.5
Gender:														
Male	6.2	6.2	6.3	5.6	5.6	5.3	4.6	4.7	4.7	4.9	4.7	3.9	3.4	-1.0 s
Female	6.9	6.8	6.8	5.9	5.4	5.1	4.6	4.9	4.6	4.8	5.2	4.2	3.2	+0.3
College Plans:														
None or under 4 years	5.4	5.7	5.7	5.2	5.6	5.5	4.4	4.4	4.6	4.9	4.0	3.1	3.4	-0.8
Complete 4 years	9.1	9.3	8.7	8.6	9.1	6.7	6.0	5.5	5.5	5.2	6.2	5.4	4.7	-0.3
Region:														
Northeast	6.4	5.2	7.0	5.7	6.1	5.3	4.7	4.4	4.5	4.9	4.4	4.3	3.8	-1.2
Midwest	7.0	7.8	6.9	6.4	5.5	5.3	5.0	5.0	4.6	5.1	5.4	4.0	3.5	-0.6
South	4.7	5.5	4.1	4.3	5.7	6.0	4.4	5.8	5.6	5.3	4.6	3.5	3.6	-0.5
West	5.9	5.3	6.7	5.2	4.8	4.6	4.2	3.3	4.1	3.7	3.6	3.4	2.2	+0.1
Population Density:														
Large MSA	6.4	6.6	6.7	5.8	5.8	5.6	5.2	5.6	5.3	5.1	5.5	4.2	3.7	-0.2
Other MSA	6.2	6.5	6.3	6.0	6.5	4.9	3.6	4.0	3.6	4.6	4.2	4.5	3.2	-0.5
Non-MSA	6.0	5.9	5.1	5.0	5.4	5.3	4.3	4.4	4.6	4.9	4.3	3.2	3.1	-1.3
Parental Education: <sup>b</sup>														
1.0–2.0 (Low)	6.5	5.5	7.0	6.4	5.5	5.9	4.5	5.1	4.9	4.2	4.9	4.4	4.1	-0.1
2.5–3.0	6.4	7.4	6.2	6.1	6.7	5.7	5.8	4.7	5.5	5.3	5.5	4.2	3.8	-0.3
3.5–4.0	6.3	5.7	6.5	5.1	5.2	4.9	4.0	4.8	4.5	5.0	4.0	3.3	2.9	-0.5
4.5–5.0	5.5	6.0	5.9	4.2	4.6	4.6	4.0	4.4	4.3	5.0	4.9	3.6	2.5	-0.4
5.5–6.0 (High)	7.9	7.9	8.0	7.3	6.8	6.7	5.9	5.1	5.0	5.1	5.1	4.7	4.0	-1.1
Race/Ethnicity (2-year average): <sup>c</sup>														
White	1.3	1.0	1.2	2.2	2.3	1.6	1.7	2.5	2.8	2.9	2.9	2.7	2.3	-0.7 s
African American	4.5	4.2	4.0	3.9	3.9	3.9	3.8	4.2	4.6	4.7	4.7	3.7	3.0	-0.4
Hispanic														-0.7

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

Notes. ' + ' indicates some change in the question. See relevant footnote. See relevant figure to assess the impact of the wording changes. 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>Only drug use not under a doctor's orders is included here.

<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.

<sup>d</sup>In 2001, for the tranquilizer list of examples, Miltown was replaced with Xanax. The 2001 data are based on the changed forms only; N is one half of N indicated. In 2002 the remaining forms were changed. Beginning in 2002, the data are based on all forms. Data for any illicit drug other than marijuana and hallucinogens are also affected by these changes and have been treated in a parallel manner.

<sup>e</sup>In 2007, for the list of tranquilizers, Equanil and meprobamate were replaced with Soma while Atarax, Tranxene, and Vistaril were replaced with Ativan and Klonopin.

<sup>f</sup>Due to changes in the question wording in half of the questionnaire forms in 2001, the 2002 entry comprises half of the 2001 sample data double-weighted (the half with the new version of the question) and all of the 2002 sample data.

**TABLE 86**  
**ANY PRESCRIPTION DRUG<sup>a</sup> WITHOUT MEDICAL SUPERVISION:**  
**Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2018–2019 change
	<i>Approx. weighted N =</i>															
	14,700	14,200	14,500	14,000	13,700	13,700	13,700	13,600	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	17.1	16.8	15.8	15.4	14.4	15.0	15.2	14.8‡	15.9	13.9	12.9	12.0	10.9	9.9	8.6	-1.3 s
Gender																
Male	18.2	17.0	16.4	16.3	16.1	16.1	15.9	15.5‡	16.5	14.2	12.9	12.3	12.0	10.7	9.0	-1.7 s
Female	15.7	16.3	14.8	14.4	13.5	13.7	14.0	13.7‡	14.6	13.0	12.6	11.0	9.6	8.1	7.8	-0.2
College Plans																
None or under 4 years	22.2	22.3	21.7	20.9	18.6	20.0	22.3	16.7‡	21.1	16.4	14.8	12.3	12.9	12.0	10.7	-1.3
Complete 4 years	15.8	15.2	14.3	14.1	13.9	13.8	13.7	14.0‡	14.7	13.0	12.3	11.5	10.3	8.8	7.7	-1.1
Region																
Northeast	15.5	17.4	15.8	15.2	14.7	15.1	13.3	12.4‡	14.6	11.7	11.2	9.7	9.2	9.1	5.7	-3.5 ss
Midwest	18.9	16.1	16.5	15.0	17.3	15.0	15.9	15.6‡	17.0	14.3	13.1	13.5	10.1	9.9	9.6	-0.4
South	17.9	17.4	16.3	16.1	14.3	15.6	14.3	13.5‡	16.1	15.1	13.0	12.0	11.7	10.0	8.6	-1.4
West	15.2	16.2	14.1	15.0	12.8	14.0	17.2	17.0‡	15.5	13.3	13.9	11.9	11.7	10.2	10.3	+0.2
Population Density																
Large MSA	15.5	16.9	15.0	13.3	13.6	14.9	14.1	15.8‡	15.9	12.3	12.2	12.0	9.6	8.5	8.0	-0.4
Other MSA	18.0	16.5	15.7	15.7	15.3	15.5	15.9	14.7‡	16.8	15.9	13.5	11.9	11.8	10.5	9.3	-1.2
Non-MSA	17.4	17.5	17.1	17.3	15.4	14.1	15.0	13.2‡	13.5	11.2	12.7	12.0	11.3	10.9	8.0	-2.9 s
Parental Education <sup>b</sup>																
1.0–2.0 (Low)	11.8	15.7	13.7	13.2	11.5	11.9	13.2	13.3‡	13.6	12.1	12.5	10.3	8.6	8.6	7.5	-1.1
2.5–3.0	18.1	17.2	16.4	15.3	15.6	15.6	15.1	16.1‡	16.9	14.7	12.3	10.6	11.7	9.8	8.5	-1.2
3.5–4.0	18.9	18.2	16.2	16.3	15.5	16.3	16.1	15.5‡	16.3	13.7	14.0	13.1	11.3	10.0	9.7	-0.3
4.5–5.0	17.4	16.6	15.9	15.2	15.7	14.6	14.6	14.6‡	16.6	13.9	12.7	12.4	10.7	10.1	8.2	-1.8
5.5–6.0 (High)	15.0	15.5	14.8	15.1	13.5	14.1	15.5	13.0‡	15.2	14.8	14.0	12.7	12.0	10.1	8.1	-2.0
Race/Ethnicity (2-year average) <sup>c</sup>																
White	—	19.8	19.3	18.9	18.2	17.8	17.8	17.5	17.2‡	15.5	14.4	13.5	12.5	11.4	10.1	-1.4 ss
African American	—	6.1	5.8	5.7	5.7	7.3	7.5	6.5	10.1‡	10.2	9.3	8.7	7.8	6.4	5.6	-0.8
Hispanic	—	12.8	11.9	10.3	10.1	9.9	10.3	10.9	11.9‡	12.4	11.1	10.5	10.1	8.5	7.3	-1.2 s

*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 D-S3 for the number of subgroup cases. See appendix B for definition of variables in table. '‡' indicates that the question changed the following year.

<sup>a</sup>The use of any prescription drug includes use of any of the following: amphetamines, sedatives (barbiturates), narcotics other than heroin, or tranquilizers ... without a doctor telling you to use them. In 2013 the question wording for amphetamines was changed in three of the 12th grade questionnaires. 2013 data are based on the three changed forms only. N is three sixths of N indicated. Data for any prescription drug use are affected by these changes and have been handled in a parallel manner.

<sup>b</sup>Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data were allowed on one of the two variables.

<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 87**  
**OVER-THE-COUNTER COUGH/COLD MEDICINES: <sup>c</sup>**  
**Trends in Annual Prevalence of Use by Subgroups in Grade 8**

		Percentage who used in last 12 months															2018–
	1991–	<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>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	2019
	Approximate weighted N =	—	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	change
Total		—	4.2	4.0	3.6	3.8	3.2	2.7	3.0	2.9	2.0	1.6	2.6	2.1	2.8	3.2	+0.4
Gender:																	
Male		—	3.4	3.1	2.7	3.7	2.7	2.2	1.7	2.7	1.4	1.1	2.4	2.1	2.6	3.4	+0.8
Female		—	4.7	5.0	4.3	3.8	3.7	3.1	3.9	3.0	2.5	2.1	2.9	2.1	2.9	3.1	+0.2
College Plans:																	
None or under 4 years		—	11.9	8.0	7.1	12.9	5.9	5.9	6.4	8.2	5.2	4.5	7.0	6.0	4.2	5.2	+1.1
Complete 4 years		—	3.4	3.6	3.3	3.1	2.9	2.5	2.8	2.6	1.8	1.4	2.3	1.7	2.6	3.0	+0.3
Region:																	
Northeast		—	3.4	2.4	2.5	2.7	2.2	2.3	1.6	2.6	1.8	1.2	1.8	0.9	1.4	2.1	+0.8
Midwest		—	4.5	4.0	3.8	3.8	3.0	2.4	2.6	1.9	1.6	1.6	3.2	2.4	2.4	2.6	+0.2
South		—	4.2	4.8	4.1	4.5	3.2	2.7	3.9	3.1	2.2	2.0	2.5	2.1	3.2	3.6	+0.4
West		—	4.4	3.6	3.3	3.3	4.1	3.5	3.0	3.8	2.3	1.2	2.9	2.6	3.7	4.1	+0.4
Population Density:																	
Large MSA		—	3.5	2.7	3.1	3.4	2.6	1.7	3.1	3.6	1.6	1.3	2.3	1.3	2.3	3.3	+1.0
Other MSA		—	4.4	4.8	3.5	3.8	3.7	3.5	3.0	2.7	2.2	1.7	2.8	2.7	2.9	3.3	+0.5
Non-MSA		—	4.6	4.2	4.3	4.3	3.0	2.7	2.8	2.3	2.2	1.8	2.8	1.8	3.5	2.9	-0.5
Parental Education: <sup>a</sup>																	
1.0–2.0 (Low)		—	6.2	5.7	4.8	9.2	4.1	5.0	4.6	3.1	2.8	1.5	4.1	3.4	4.3	5.8	+1.5
2.5–3.0		—	5.1	4.5	4.4	4.6	4.0	3.7	3.3	3.9	1.0	2.7	2.9	1.9	2.8	5.0	+2.2
3.5–4.0		—	4.4	5.4	3.8	4.2	3.1	3.7	4.0	3.2	2.7	1.3	3.5	2.6	3.0	3.4	+0.3
4.5–5.0		—	3.8	3.4	3.4	3.3	2.1	1.9	1.9	3.2	1.7	1.6	1.8	1.9	3.5	2.4	-1.1
5.5–6.0 (High)		—	3.0	2.0	2.5	1.7	3.3	1.0	2.0	1.5	2.5	1.1	2.4	1.6	1.4	2.7	+1.3
Race/Ethnicity (2-year average): <sup>b</sup>																	
White		—	—	4.5	4.1	3.7	3.3	2.9	2.6	2.6	2.6	1.9	2.1	2.4	2.4	2.9	+0.5
African American		—	—	2.2	2.3	2.7	2.8	2.3	3.0	3.2	2.1	1.9	2.4	2.3	2.4	3.3	+0.8
Hispanic		—	—	4.4	3.8	3.6	3.9	3.2	3.8	3.9	2.8	1.5	1.9	2.3	2.4	2.8	+0.4

**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 four forms;  $N$  is one third of  $N$  indicated in Table S1.

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

<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.

<sup>c</sup>Taken to get high.

**TABLE 88**  
**OVER-THE-COUNTER COUGH/COLD MEDICINES: <sup>c</sup>**  
**Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	1991– 2005	Percentage who used in last 12 months														2018– 2019 change
		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	—	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	—	5.3	5.4	5.3	6.0	5.1	5.5	4.7	4.3	3.7	3.3	3.0	3.6	3.3	2.6	-0.7
Gender:																
Male	—	5.1	4.6	4.9	5.9	5.5	5.4	5.5	4.6	3.8	3.0	2.7	3.5	3.7	3.1	-0.6
Female	—	5.5	6.3	5.7	6.0	4.9	5.8	4.1	3.5	3.3	3.5	3.3	3.5	3.0	2.1	-0.9
College Plans:																
None or under 4 years	—	9.9	9.7	11.3	13.5	10.8	13.6	10.2	8.0	9.2	9.3	4.8	7.6	4.8	4.6	-0.1
Complete 4 years	—	4.6	4.8	4.6	5.2	4.5	4.6	4.2	3.9	3.0	2.6	2.8	3.2	3.1	2.3	-0.8
Region:																
Northeast	—	4.1	5.8	3.5	4.1	4.4	5.3	4.5	4.4	3.1	2.2	3.4	2.1	2.6	3.2	+0.7
Midwest	—	4.3	5.4	5.4	6.2	4.9	6.0	4.3	3.5	3.3	3.2	2.0	3.7	3.3	2.1	-1.2
South	—	6.3	5.9	6.6	6.9	5.0	6.2	5.7	4.2	4.4	3.4	3.7	3.5	3.4	2.1	-1.3 s
West	—	6.0	4.7	4.8	6.3	6.3	4.2	4.0	5.1	3.5	4.2	2.6	4.8	3.9	3.7	-0.2
Population Density:																
Large MSA	—	4.3	4.7	4.3	5.3	5.1	4.1	4.2	4.3	3.8	2.6	2.9	3.6	3.7	1.6	-2.1 sss
Other MSA	—	5.5	5.6	6.2	6.8	4.7	6.4	4.7	4.0	3.3	3.6	3.1	3.2	3.2	2.7	-0.4
Non-MSA	—	6.3	6.3	4.7	5.3	6.1	5.9	5.5	5.0	4.3	3.7	2.7	4.7	3.1	4.0	+0.9
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	—	5.1	6.4	6.8	9.7	9.3	8.0	6.2	5.4	3.5	5.1	4.4	5.4	6.7	2.8	-3.9 s
2.5–3.0	—	6.2	7.4	5.9	7.3	6.0	6.2	5.9	5.3	2.9	3.9	3.6	4.2	4.2	3.3	-0.9
3.5–4.0	—	6.2	6.0	5.0	6.5	5.3	5.5	5.8	5.2	4.7	3.4	2.4	4.8	2.4	3.3	+0.9
4.5–5.0	—	4.1	4.5	5.6	4.5	3.4	5.1	3.5	3.0	2.9	2.9	2.6	3.1	2.4	2.2	-0.3
5.5–6.0 (High)	—	5.1	3.0	3.9	5.2	5.1	4.6	3.6	2.9	3.6	2.6	3.3	2.0	3.0	2.0	-1.1
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	—	6.0	6.2	6.4	5.8	5.4	5.1	4.7	4.2	3.7	3.5	3.5	3.4	3.2	-0.2
African American	—	—	3.9	3.1	2.1	2.6	3.8	2.7	2.3	3.6	3.4	2.4	2.8	2.6	2.5	-0.1
Hispanic	—	—	3.2	4.0	5.5	5.6	5.7	6.5	5.0	3.5	2.4	2.1	3.4	4.2	3.0	-1.2

*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 four forms; *N* is one third of *N* indicated in Table S2.

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

<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.

<sup>c</sup>Taken to get high.

**TABLE 89**  
**OVER-THE-COUNTER COUGH/COLD MEDICINES: <sup>c</sup>**  
**Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	1991– 2005	Percentage who used in last 12 months														2018– 2019 change
		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	—	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	6.9	5.8	5.5	5.9	6.6	5.3	5.6	5.0	4.1	4.6	4.0	3.2	3.4	2.5	-0.9
Gender:																
Male	—	7.6	5.9	6.3	8.1	7.7	5.6	6.1	5.9	4.8	5.8	4.7	4.0	4.0	3.4	-0.6
Female	—	5.9	5.1	4.7	4.1	5.4	4.7	4.5	4.2	3.3	3.2	3.3	2.5	2.6	1.5	-1.1 s
College Plans:																
None or under 4 years	—	8.9	8.3	7.6	7.1	8.6	7.3	8.4	7.3	4.3	5.6	5.7	4.7	5.9	4.3	-1.6
Complete 4 years	—	6.2	5.2	4.9	5.5	6.1	4.9	4.8	4.4	3.9	4.2	3.6	2.9	2.8	2.0	-0.8
Region:																
Northeast	—	5.9	7.8	4.4	5.1	7.4	5.6	4.9	5.1	3.8	3.8	3.9	2.7	3.4	1.4	-1.9
Midwest	—	6.6	6.8	4.4	6.7	5.9	6.1	5.8	4.6	4.3	4.2	3.7	2.9	3.7	2.1	-1.6
South	—	7.6	5.2	6.7	6.2	6.6	5.5	5.6	5.7	4.6	4.6	4.7	3.3	3.1	2.3	-0.8
West	—	6.7	4.2	5.8	4.8	6.6	4.1	5.8	4.5	3.5	5.4	3.2	3.7	3.6	4.3	+0.7
Population Density:																
Large MSA	—	7.6	5.4	4.9	5.7	6.3	5.2	5.9	5.0	2.8	4.7	3.4	2.7	2.6	1.6	-1.0
Other MSA	—	6.0	5.9	5.5	6.6	6.8	5.4	5.2	4.9	4.8	4.4	4.6	3.9	3.4	2.7	-0.7
Non-MSA	—	7.5	6.1	6.4	4.4	6.2	5.4	6.0	5.4	4.3	4.7	3.6	2.8	4.7	3.4	-1.3
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	—	7.7	7.2	6.8	7.8	7.4	7.3	5.7	5.9	3.6	3.3	4.6	3.0	3.6	5.6	+2.0
2.5–3.0	—	6.2	6.7	5.0	6.1	6.2	5.7	5.5	4.3	5.6	4.8	4.1	5.1	4.0	2.8	-1.2
3.5–4.0	—	7.7	4.6	6.3	5.7	7.9	4.9	5.6	6.3	2.8	5.9	3.9	3.7	3.3	2.0	-1.2
4.5–5.0	—	6.7	6.8	4.8	5.6	5.3	4.9	6.0	4.1	4.5	4.0	3.4	2.0	2.5	2.2	-0.3
5.5–6.0 (High)	—	4.9	4.0	4.4	5.1	5.9	5.6	5.3	3.9	4.1	3.2	4.5	0.9	3.8	1.6	-2.2
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	—	6.3	5.8	5.9	6.4	6.2	5.6	5.3	4.5	4.2	4.2	3.4	3.2	2.8	-0.4
African American	—	—	5.0	4.2	4.5	4.6	4.6	3.8	3.7	4.5	4.8	4.9	3.3	2.2	2.1	-0.2
Hispanic	—	—	7.9	6.0	6.0	7.1	5.4	5.4	5.8	3.8	4.2	5.0	4.2	3.3	3.1	-0.2

**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 are based on two of six forms; N is two sixths of N indicated in Table S3.

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

<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.

<sup>c</sup>Taken to get high.

**TABLE 90**  
**ROHYPNOL: Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months											
	1991– 1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<i>Approximate weighted N =</i>	—	17,800	18,600	18,100	16,700	16,700	16,200	15,100	16,500	17,000	16,800	16,500
Total	—	1.0	0.8	0.8	0.5	0.5	0.7	0.3	0.5	0.6	0.7	0.5
Gender:												
Male	—	1.1	0.7	0.8	0.6	0.5	0.6	0.2	0.4	0.5	0.7	0.7
Female	—	1.0	0.9	0.9	0.2	0.6	0.7	0.2	0.4	0.7	0.7	0.4
College Plans:												
None or under 4 years	—	2.5	1.5	3.0	0.9	2.2	2.0	1.0	1.3	2.4	1.8	1.1
Complete 4 years	—	0.8	0.7	0.6	0.4	0.4	0.5	0.2	0.4	0.4	0.6	0.5
Region:												
Northeast	—	0.9	0.3	0.9	0.3	0.6	0.9	0.2	0.2	0.3	0.6	1.4
Midwest	—	0.9	0.8	0.8	0.3	0.4	1.0	0.4	0.2	0.8	0.6	0.0
South	—	1.3	1.1	0.9	0.7	0.9	0.6	0.4	0.6	0.5	0.5	0.6
West	—	1.0	0.7	0.8	0.5	*	0.4	0.1	0.7	0.7	1.1	0.2
Population Density:												
Large MSA	—	1.2	0.8	0.7	0.4	0.9	1.2	0.1	0.1	0.5	0.4	0.6
Other MSA	—	1.1	0.9	1.0	0.6	0.5	0.5	0.3	0.4	0.8	0.7	0.5
Non-MSA	—	0.8	0.7	0.8	0.3	0.2	0.4	0.5	1.0	0.3	1.0	0.5
Parental Education: <sup>a</sup>												
1.0–2.0 (Low)	—	2.0	2.1	2.2	0.2	0.9	1.3	0.9	1.8	2.4	0.6	0.7
2.5–3.0	—	1.1	1.1	0.8	0.3	0.8	0.3	0.0	0.9	0.1	1.3	0.1
3.5–4.0	—	1.2	0.7	0.9	0.6	0.2	1.2	0.2	0.1	0.2	0.4	0.7
4.5–5.0	—	0.8	0.6	0.6	0.5	0.4	0.7	0.6	0.4	0.6	0.9	0.1
5.5–6.0 (High)	—	0.8	0.5	0.9	0.7	0.9	0.2	0.2	0.0	0.1	0.5	1.5
Race/Ethnicity (2-year average): <sup>b</sup>												
White	—	—	0.9	0.8	0.7	0.5	0.6	0.5	0.4	0.4	0.5	0.5
African American	—	—	0.4	0.4	0.4	0.3	0.4	0.4	0.3	0.9	0.7	0.2
Hispanic	—	—	1.4	1.5	1.5	0.6	0.9	0.8	0.4	1.0	0.8	0.6

Table continued on next page.



**TABLE 90 (cont.)**  
**ROHYPNOL: Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months													2018-2019 change
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	
Total	0.7	0.5	0.4	0.5	0.8	0.4	0.4	0.3	0.3	0.5	0.4	0.3	0.4	+0.1
Gender:														
Male	0.6	0.6	0.4	0.3	0.7	0.4	0.5	0.3	0.5	0.4	0.2	0.4	0.2	-0.2
Female	0.7	0.3	0.4	0.7	0.8	0.3	0.3	0.4	0.2	0.3	0.6	0.3	0.7	+0.4
College Plans:														
None or under 4 years	3.3	2.6	2.4	0.5	1.8	3.1	2.2	0.9	1.5	3.3	1.1	1.3	0.2	-1.1
Complete 4 years	0.4	0.3	0.2	0.5	0.7	0.2	0.3	0.3	0.2	0.2	0.3	0.1	0.4	+0.3
Region:														
Northeast	0.1	0.0	0.0	0.5	0.9	0.4	0.5	0.2	0.0	1.2	0.3	0.0	0.0	0.0
Midwest	0.8	0.7	0.6	0.4	0.6	0.1	0.0	0.5	0.0	0.2	0.5	0.4	0.5	0.0
South	0.7	0.6	0.4	0.7	0.4	0.6	0.5	0.2	0.4	0.5	0.3	0.4	0.7	+0.3
West	0.8	0.5	0.5	0.5	1.7	0.4	0.6	0.4	0.6	0.1	0.4	0.3	0.2	-0.1
Population Density:														
Large MSA	0.4	0.6	0.1	0.4	1.1	0.4	0.3	0.2	0.3	1.0	0.6	0.2	0.2	0.0
Other MSA	0.8	0.5	0.6	0.7	0.7	0.3	0.6	0.3	0.5	0.1	0.4	0.3	0.3	+0.1
Non-MSA	0.8	0.4	0.4	0.3	0.5	0.6	0.2	0.4	0.0	0.3	0.1	0.6	0.9	+0.3
Parental Education: <sup>a</sup>														
1.0–2.0 (Low)	0.5	0.7	1.4	1.4	0.3	1.6	0.3	0.7	0.0	1.9	0.9	0.3	0.0	-0.3
2.5–3.0	0.5	0.5	0.0	0.0	1.0	0.5	0.7	0.4	0.2	0.5	0.7	0.2	1.9	+1.7
3.5–4.0	0.7	0.7	0.3	0.6	1.0	0.4	0.4	0.2	0.8	0.4	0.2	0.6	0.3	-0.3
4.5–5.0	0.9	0.2	0.6	0.6	0.6	0.3	0.7	0.1	0.3	0.3	0.2	0.4	0.2	-0.2
5.5–6.0 (High)	0.4	0.3	0.1	0.4	1.0	0.2	0.0	0.4	0.0	0.2	0.1	0.2	0.0	-0.2
Race/Ethnicity (2-year average): <sup>b</sup>														
White	0.4	0.5	0.6	0.4	0.3	0.4	0.4	0.3	0.2	0.2	0.2	0.3	0.4	0.0
African American	0.2	0.2	0.2	0.1	0.3	0.7	0.6	0.6	0.6	0.3	0.2	0.4	0.3	-0.1
Hispanic	1.1	1.0	0.5	0.8	1.6	1.2	0.3	0.4	0.3	0.6	0.7	0.4	0.5	+0.1

*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. '\*' indicates less than 0.05% but greater than 0%. 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 1996; N is one half of N indicated in Table S1. Data based on three of four forms in 1997–1998; N is two thirds of N indicated in Table S1. Data based on two of four forms in 1999–2001; N is one third of N indicated in Table S1. Data are based on one of four forms beginning in 2002; N is one sixth of N indicated in Table S1.

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

<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 91**  
**ROHYPNOL: Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months											
	1991– 1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Approximate weighted N =	—	15,600	15,500	15,000	13,600	14,300	14,000	14,300	15,800	16,400	16,200	16,200
Total	—	1.1	1.3	1.2	1.0	0.8	1.0	0.7	0.6	0.7	0.5	0.5
Gender:												
Male	—	1.1	1.4	1.4	1.2	1.0	1.1	0.4	0.7	0.8	0.3	0.4
Female	—	1.1	1.1	1.1	0.9	0.6	0.9	0.9	0.6	0.6	0.6	0.7
College Plans:												
None or under 4 years	—	2.9	2.7	2.9	2.8	1.4	2.8	0.5	0.3	1.4	1.6	1.5
Complete 4 years	—	0.8	1.1	0.9	0.8	0.6	0.7	0.7	0.6	0.6	0.3	0.4
Region:												
Northeast	—	0.6	0.7	0.9	0.4	0.6	0.9	0.4	1.0	0.8	0.7	0.3
Midwest	—	0.5	0.8	1.0	0.9	0.4	0.9	0.3	0.2	0.3	0.2	1.0
South	—	1.9	2.4	2.0	1.8	1.2	1.0	0.4	0.8	0.9	0.7	0.7
West	—	1.1	0.6	0.5	0.6	0.7	1.3	2.0	0.4	0.9	0.2	0.0
Population Density:												
Large MSA	—	1.1	1.3	1.3	0.9	0.9	1.2	0.7	0.3	0.6	0.3	0.2
Other MSA	—	1.4	1.3	1.3	1.3	0.9	0.8	0.9	0.4	0.7	0.5	0.7
Non-MSA	—	0.6	1.3	1.0	0.7	0.5	1.2	0.3	1.5	0.8	0.5	0.8
Parental Education: <sup>a</sup>												
1.0–2.0 (Low)	—	1.7	1.3	1.7	1.2	1.3	2.3	0.4	1.3	0.4	1.1	1.4
2.5–3.0	—	1.0	1.1	1.6	1.6	0.5	1.1	0.9	0.7	0.4	0.5	0.3
3.5–4.0	—	1.5	1.6	1.0	0.8	0.8	0.7	1.0	0.9	1.0	0.4	0.7
4.5–5.0	—	0.7	1.5	0.9	0.6	0.7	1.1	0.7	0.2	0.6	0.6	0.3
5.5–6.0 (High)	—	1.1	0.8	1.3	1.1	0.8	0.3	0.2	0.4	1.0	0.0	0.0
Race/Ethnicity (2-year average): <sup>b</sup>												
White	—	—	1.4	1.5	1.5	1.0	1.0	1.0	0.6	0.9	0.8	0.5
African American	—	—	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.2	0.4	0.3
Hispanic	—	—	1.0	1.2	1.1	0.7	0.9	1.0	0.7	0.3	0.2	0.6

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**TABLE 91 (cont.)**  
**ROHYPNOL: Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months													2018-2019 change
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	0.7	0.4	0.4	0.6	0.6	0.5	0.6	0.5	0.2	0.5	0.3	0.3	0.6	+0.3
Gender:														
Male	0.7	0.3	0.3	0.6	0.8	0.4	0.7	0.7	0.1	0.6	0.0	0.1	0.3	+0.1
Female	0.7	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.3	0.2	0.5	0.5	0.9	+0.4
College Plans:														
None or under 4 years	1.4	0.5	0.9	1.2	0.9	2.3	0.6	1.8	0.7	2.4	0.4	0.9	0.0	-0.9
Complete 4 years	0.6	0.4	0.4	0.5	0.6	0.3	0.6	0.4	0.2	0.3	0.2	0.2	0.7	+0.4
Region:														
Northeast	0.5	0.7	0.2	0.9	0.6	0.8	0.3	0.1	0.1	0.3	0.5	0.1	0.1	0.0
Midwest	1.4	0.2	0.9	0.3	0.5	0.3	1.1	0.5	0.1	0.9	0.3	0.3	0.1	-0.2
South	0.5	0.4	0.3	0.8	0.8	0.5	0.4	0.8	0.4	0.1	0.3	0.3	1.1	+0.7
West	0.4	0.4	0.3	0.2	0.6	0.5	0.4	0.7	0.1	1.0	0.1	0.5	0.6	+0.1
Population Density:														
Large MSA	0.7	0.1	0.3	0.5	0.7	0.5	0.8	0.3	0.4	0.5	0.4	0.2	1.2	+1.0
Other MSA	0.6	0.7	0.5	0.7	0.5	0.4	0.4	0.4	0.1	0.4	0.3	0.3	0.3	+0.1
Non-MSA	0.9	0.3	0.4	0.4	0.9	0.5	0.7	1.3	0.0	0.8	0.0	0.6	0.1	-0.5
Parental Education: <sup>a</sup>														
1.0–2.0 (Low)	0.4	1.2	0.2	0.7	0.0	0.8	0.6	0.6	0.9	1.8	0.9	0.4	0.7	+0.3
2.5–3.0	0.6	0.3	0.4	0.3	0.6	0.8	0.5	1.3	0.0	0.7	0.1	0.0	0.8	+0.8
3.5–4.0	0.5	0.5	0.9	0.4	0.5	0.0	0.8	0.8	0.0	0.3	0.2	0.4	0.3	-0.1
4.5–5.0	0.6	0.2	0.1	0.6	1.2	0.2	0.6	0.1	0.2	0.2	0.3	0.4	0.0	-0.4
5.5–6.0 (High)	1.1	0.6	0.6	1.0	0.0	1.1	0.4	0.0	0.5	0.5	0.1	0.2	1.8	+1.6
Race/Ethnicity (2-year average): <sup>b</sup>														
White	0.6	0.5	0.5	0.6	0.8	0.6	0.5	0.7	0.5	0.4	0.3	0.4	0.6	+0.3
African American	0.0	0.0	0.1	0.3	0.5	0.3	0.1	0.5	0.3	0.3	0.3	0.1	0.1	0.0
Hispanic	0.8	0.6	0.3	0.4	0.3	0.3	0.5	0.7	0.3	0.4	0.6	0.4	0.3	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. Data based on one of two forms in 1996;  $N$  is one half of  $N$  indicated in Table S2. Data based on three of four forms in 1997–1998;  $N$  is two thirds of  $N$  indicated in Table S2. Data based on two of four forms in 1999–2001;  $N$  is one third of  $N$  indicated in Table S2. Data based on one of four forms beginning in 2002;  $N$  is one sixth of  $N$  indicated in Table S2.

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

<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 92**  
**ROHYPNOL: Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months												
	1975–	1995	1996	1997	1998	1999	2000	2001 <sup>a</sup>	2002 <sup>a</sup>	2003	2004	2005	2006
<i>Approximate weighted N =</i>	—	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200	
Total	—	1.1	1.2	1.4	1.0	0.8	0.9‡	1.6	1.3	1.6	1.2	1.1	
Gender:													
Male	—	1.8	1.2	1.7	1.0	0.8	1.1‡	2.3	2.0	2.3	1.5	1.3	
Female	—	0.3	1.1	1.1	1.0	0.7	0.6‡	1.0	0.5	0.7	0.8	0.5	
College Plans:													
None or under 4 years	—	1.4	0.5	1.8	1.0	0.1	1.2‡	2.5	2.1	3.0	2.4	1.6	
Complete 4 years	—	0.8	1.3	1.3	1.0	0.9	0.8‡	1.4	0.9	1.0	0.9	0.8	
Region:													
Northeast	—	0.9	0.6	1.2	0.8	0.3	1.7‡	1.2	1.4	0.8	1.1	1.3	
Midwest	—	1.0	0.5	1.0	0.8	0.9	0.5‡	1.8	1.2	1.3	1.7	0.8	
South	—	1.8	2.2	2.6	1.6	1.3	1.0‡	1.5	1.4	2.1	1.3	1.3	
West	—	0.1	0.8	0.0	0.2	0.1	0.8‡	2.0	1.1	1.8	0.6	1.3	
Population Density:													
Large MSA	—	1.3	0.9	0.8	0.3	0.3	1.0‡	1.6	1.1	1.8	1.4	1.2	
Other MSA	—	1.3	1.5	2.2	1.4	1.1	1.2‡	2.0	1.7	1.6	1.2	1.0	
Non-MSA	—	0.7	0.7	0.6	0.9	0.7	0.3‡	1.1	0.9	1.2	1.1	1.4	
Parental Education: <sup>b</sup>													
1.0–2.0 (Low)	—	1.6	0.4	0.6	4.7	0.0	4.2‡	3.7	2.8	3.4	3.9	1.2	
2.5–3.0	—	0.5	0.6	1.0	0.3	0.4	0.4‡	2.9	1.8	1.8	1.2	1.2	
3.5–4.0	—	0.8	1.4	1.1	1.1	1.5	0.8‡	0.8	1.2	1.5	1.4	1.0	
4.5–5.0	—	0.9	1.7	2.7	0.3	0.6	0.8‡	1.6	0.9	0.6	0.3	1.2	
5.5–6.0 (High)	—	1.8	1.7	1.4	0.7	0.0	0.2‡	0.8	0.2	1.5	0.9	0.7	
Race/Ethnicity (2-year average): <sup>c</sup>													
White	—	—	1.2	1.6	1.5	0.9	0.8‡	—	1.5	1.3	1.1	0.9	
African American	—	—	0.1	0.0	0.2	0.4	0.2‡	—	0.8	1.2	1.7	1.3	
Hispanic	—	—	2.0	1.3	1.0	0.6	1.3‡	—	1.6	1.7	1.9	2.1	

Table continued on next page.

**TABLE 92 (cont.)**  
**ROHYPNOL: Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months													2018-2019 change
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	1.0	1.3	1.0	1.5	1.3	1.5	0.9	0.7	1.0	1.1	0.8	0.7	0.5	-0.2
Gender:														
Male	0.9	1.5	1.1	2.2	2.0	1.2	0.9	0.9	0.9	1.0	0.7	0.5	0.7	+0.3
Female	0.7	0.8	0.8	0.7	0.5	0.7	0.7	0.4	0.7	1.0	0.8	0.4	0.3	-0.1
College Plans:														
None or under 4 years	1.8	2.3	1.8	3.8	1.7	2.7	1.7	0.6	1.0	3.9	2.5	1.5	1.5	0.0
Complete 4 years	0.7	1.0	0.8	0.9	1.2	0.8	0.6	0.7	0.8	0.4	0.3	0.3	0.2	-0.1
Region:														
Northeast	1.7	0.8	0.7	2.2	1.9	0.9	0.9	1.3	0.2	0.7	2.0	0.3	0.0	-0.3
Midwest	0.9	1.0	1.3	1.5	0.6	1.1	1.0	0.5	1.6	1.6	0.6	0.6	0.8	+0.2
South	1.0	2.0	1.1	1.0	1.7	2.3	1.0	0.7	1.0	1.3	0.6	1.3	0.3	-1.0
West	0.5	0.9	0.5	1.8	1.0	1.1	0.7	0.3	0.8	0.6	0.4	0.1	1.0	+0.9
Population Density:														
Large MSA	1.0	0.6	1.0	1.5	0.7	1.4	0.5	0.7	1.4	0.6	0.6	0.7	0.6	-0.1
Other MSA	1.1	1.8	1.2	1.5	1.4	1.1	0.9	0.8	0.9	1.7	1.0	0.6	0.4	-0.2
Non-MSA	0.8	1.0	0.4	1.3	1.8	2.6	1.5	0.4	0.6	0.5	0.6	1.0	0.6	-0.4
Parental Education: <sup>b</sup>														
1.0–2.0 (Low)	1.3	1.6	2.1	1.0	3.6	1.4	2.1	3.2	0.7	3.8	1.0	1.0	1.8	+0.7
2.5–3.0	0.8	1.7	1.2	1.2	1.0	1.1	1.2	0.5	0.3	1.6	1.6	1.2	0.6	-0.6
3.5–4.0	0.5	1.3	0.8	1.3	1.1	1.4	0.3	0.3	0.8	0.2	0.4	0.6	0.7	+0.1
4.5–5.0	1.4	0.7	0.4	1.4	1.0	1.4	0.4	0.5	0.6	0.8	0.3	0.3	0.0	-0.3
5.5–6.0 (High)	0.9	0.6	0.9	2.0	1.0	1.1	0.0	0.0	0.3	0.0	0.2	0.3	0.0	-0.3
Race/Ethnicity (2-year average): <sup>c</sup>														
White	0.7	0.9	1.0	1.1	1.3	0.9	0.7	0.4	0.4	0.6	0.8	0.7	0.4	-0.2
African American	1.6	2.1	1.7	1.2	1.3	1.8	2.0	1.9	2.1	2.2	1.4	0.3	0.4	0.0
Hispanic	1.5	0.8	1.3	1.5	1.0	1.5	1.4	0.8	0.5	0.8	0.7	0.8	1.1	+0.3

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

**Notes.** ' ‡ ' indicates some change in the question. See relevant footnote. See relevant figure to assess the impact of the wording changes. 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 in 1996–2001; N is one sixth of N indicated in Table S3. Data based on two of six forms beginning in 2002; N is two sixths of N indicated in Table S3. Data based on one of six forms beginning in 2010; N is one sixth of N indicated in Table S3.

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

<sup>a</sup>The 2001 and 2002 data are not comparable due to changes in the questionnaire forms.

<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 93**  
**ALCOHOL: Trends in 30-Day Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 30 days															
	1991	1992	1993 <sup>a</sup>	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004 <sup>a</sup>	2005	
<i>Approximate weighted N =</i>	17,500	18,600	18,300	17,300	17,500	17,800	18,600	18,100	16,700	16,700	16,200	15,100	16,500	17,000	16,800	
Total	25.1	26.1†	24.3	25.5	24.6	26.2	24.5	23.0	24.0	22.4	21.5	19.6	19.7	18.6	17.1	
Gender:																
Male	26.3	26.3†	25.3	26.5	25.0	26.6	25.2	24.0	24.8	22.5	22.3	19.1	19.4	17.9	16.2	
Female	23.8	25.9†	23.7	24.7	24.0	25.8	23.9	21.9	23.3	22.0	20.6	20.0	19.8	19.0	17.9	
College Plans:																
None or under 4 years	37.2	39.6†	41.1	41.4	40.0	41.7	40.2	41.2	41.6	38.3	37.0	35.3	35.3	32.6	32.6	
Complete 4 years	23.1	24.2†	22.2	23.6	22.6	24.0	22.8	21.0	22.0	20.4	19.7	18.2	18.1	17.2	15.5	
Region:																
Northeast	24.3	23.8†	21.0	25.4	24.1	26.9	24.8	21.2	25.7	25.6	23.3	19.3	18.4	18.0	14.5	
Midwest	26.6	28.3†	24.7	24.2	24.7	26.9	22.8	23.9	25.7	24.1	21.2	19.1	21.9	19.3	16.9	
South	25.1	26.8†	25.4	25.6	25.5	26.3	26.4	23.8	24.4	20.9	22.8	21.6	20.8	18.8	19.0	
West	23.1	23.5†	25.6	27.2	23.1	24.8	22.7	22.2	19.8	20.2	18.1	17.0	16.0	17.9	16.4	
Population Density:																
Large MSA	25.4	27.4†	21.2	23.8	22.3	24.9	23.1	21.4	21.7	21.2	19.4	17.4	18.2	18.1	17.2	
Other MSA	24.3	26.1†	26.0	27.4	25.3	27.4	24.9	22.4	23.4	21.3	21.5	20.1	19.4	19.1	17.9	
Non-MSA	26.2	24.2†	24.9	23.8	26.0	25.7	25.4	26.0	28.1	26.1	24.1	21.4	22.3	18.1	15.6	
Parental Education: <sup>b</sup>																
1.0–2.0 (Low)	30.7	32.8†	28.0	33.5	30.8	28.1	29.7	28.9	30.7	30.2	28.5	27.6	25.5	24.2	23.8	
2.5–3.0	27.0	27.2†	28.0	27.4	27.8	30.1	26.2	26.5	27.9	26.3	27.0	23.2	24.0	22.1	20.4	
3.5–4.0	25.1	26.3†	25.9	26.7	26.8	27.6	27.8	24.5	25.2	23.0	23.3	21.2	22.0	20.0	18.8	
4.5–5.0	22.8	24.6†	20.6	22.6	21.0	25.0	22.6	20.2	20.4	18.4	17.2	17.0	16.0	16.3	14.6	
5.5–6.0 (High)	24.0	25.2†	22.3	23.6	20.5	21.5	20.5	21.3	22.1	19.0	16.4	15.1	15.7	15.8	13.1	
Race/Ethnicity (2-year average): <sup>c</sup>																
White	—	26.6	27.1†	25.3	25.4	26.6	26.7	24.8	24.7	24.7	23.2	21.5	20.1	19.2	17.9	
African American	—	18.6	19.7†	19.4	18.7	18.1	17.9	16.1	16.1	16.0	15.0	14.8	15.5	16.2	14.9	
Hispanic	—	31.0	32.3†	33.5	32.4	29.7	29.8	29.5	29.0	26.7	25.7	26.5	25.3	23.5	20.6	

Table continued on next page.

**TABLE 93 (cont.)**  
**ALCOHOL: Trends in 30-Day Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 30 days															2018-2019 change
	<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>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>		
<i>Approximate weighted N =</i>	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600		
Total	17.2	15.9	15.9	14.9	13.8	12.7	11.0	10.2	9.0	9.7	7.3	8.0	8.2	7.9	-0.2	
Gender:																
Male	16.3	15.6	15.4	14.7	13.2	12.1	10.3	9.3	8.2	9.1	6.7	6.8	7.4	7.3	0.0	
Female	17.6	16.0	16.4	14.9	14.3	12.8	11.6	11.2	9.5	9.9	7.8	9.1	9.1	8.3	-0.8	
College Plans:																
None or under 4 years	30.8	33.5	30.4	31.7	25.7	24.6	23.3	23.6	17.0	15.5	14.6	14.5	15.7	13.5	-2.2	
Complete 4 years	15.8	14.3	14.7	13.5	12.8	11.7	10.0	9.4	8.3	9.1	6.7	7.3	7.3	7.1	-0.2	
Region:																
Northeast	16.9	12.9	15.9	15.3	13.3	8.8	9.3	9.1	7.6	8.2	5.9	5.8	6.8	5.3	-1.5	
Midwest	17.0	15.5	16.1	13.0	12.2	11.7	7.8	8.5	8.9	7.9	6.3	6.9	7.6	8.9	+1.3	
South	18.5	17.1	18.2	17.4	15.7	14.2	13.3	12.5	9.8	10.8	8.4	8.1	8.0	9.1	+1.1	
West	15.3	15.9	12.6	12.5	12.5	14.2	11.5	9.1	8.6	10.2	7.3	10.3	9.9	7.3	-2.7	
Population Density:																
Large MSA	16.6	14.8	15.2	12.9	13.5	11.5	10.3	9.5	8.8	9.2	6.4	7.5	8.7	6.7	-2.0 ss	
Other MSA	17.4	16.1	16.3	15.9	14.0	13.1	11.8	10.4	9.0	9.6	7.0	8.0	7.9	7.8	-0.2	
Non-MSA	17.5	16.8	16.2	15.5	13.5	13.6	10.6	11.1	9.2	10.4	9.3	8.7	7.9	10.5	+2.6	
Parental Education: <sup>b</sup>																
1.0–2.0 (Low)	24.1	26.1	25.5	22.8	19.2	19.7	17.1	16.2	11.3	13.4	10.3	11.8	10.8	9.6	-1.2	
2.5–3.0	20.0	20.3	19.3	18.3	17.4	16.6	15.3	13.2	11.5	11.6	9.5	10.5	10.9	10.9	0.0	
3.5–4.0	19.0	16.9	16.8	16.8	15.3	14.1	11.7	12.7	10.7	10.4	6.9	8.5	9.5	9.4	-0.1	
4.5–5.0	13.9	11.6	13.4	11.5	11.4	9.5	8.9	7.5	7.6	7.7	6.3	6.9	6.3	6.9	+0.6	
5.5–6.0 (High)	13.8	11.2	11.5	10.4	9.2	9.3	7.3	7.4	6.5	8.0	6.2	5.5	6.4	5.6	-0.8	
Race/Ethnicity (2-year average): <sup>c</sup>																
White	16.9	15.6	15.2	15.4	13.9	12.3	10.7	9.5	9.0	8.9	8.2	7.2	7.3	8.0	+0.8	
African American	13.1	12.3	12.9	12.3	11.8	11.6	10.0	9.7	8.8	8.2	6.9	6.0	6.0	4.9	-1.1	
Hispanic	21.2	23.0	21.5	19.2	18.1	18.0	17.5	14.3	11.2	10.4	9.5	9.0	9.8	9.6	-0.3	

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

Notes. ' ‡ ' indicates some change in the question. See relevant footnote. See relevant figure to assess the impact of the wording changes. 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>In 1993, the question text was changed slightly in one form to indicate that a drink meant more than a few sips. The 1993 data are based on the changed form only;

N is one half of N indicated. In 1994 the question text was changed in the remaining form. Beginning in 1994, the data are based on all forms. In 2004, the question text was changed slightly in half of the forms. An examination of the data did not show any effect from the wording change. The remaining forms were changed in 2005.

<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 94**  
**ALCOHOL: Trends in 30-Day Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 30 days														
	<u>1991</u>	<u>1992</u>	<u>1993<sup>a</sup></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<sup>a</sup></u>	<u>2005</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
Total	42.8	39.9†	38.2	39.2	38.8	40.4	40.1	38.8	40.0	41.0	39.0	35.4	35.4	35.2	33.2
Gender:															
Male	45.5	41.6†	40.6	43.5	39.7	42.6	42.5	40.0	42.3	43.3	41.1	35.3	35.3	36.3	32.8
Female	40.2	38.3†	35.6	34.8	37.8	38.3	37.9	37.7	38.1	38.6	36.8	35.7	35.3	34.0	33.6
College Plans:															
None or under 4 years	53.6	49.5†	48.6	52.0	52.2	53.3	51.6	52.4	53.7	53.9	52.2	47.1	46.6	47.5	44.9
Complete 4 years	40.6	37.9†	36.1	36.4	36.4	38.3	38.1	36.5	37.9	39.1	36.8	33.5	33.6	33.6	31.6
Region:															
Northeast	48.0	42.3†	42.4	37.4	38.3	41.4	41.1	41.6	44.8	42.0	37.8	36.3	38.7	40.4	37.0
Midwest	43.5	40.3†	37.4	39.6	38.9	39.1	38.6	37.6	40.9	42.5	41.0	35.7	34.4	30.9	31.9
South	41.7	38.2†	38.0	40.5	39.4	41.7	40.8	39.9	38.8	39.1	38.3	33.7	34.8	36.4	33.4
West	39.6	39.8†	35.6	38.2	38.0	38.9	39.9	35.5	36.1	41.1	38.2	37.2	34.1	33.7	30.7
Population Density:															
Large MSA	43.6	40.4†	39.0	36.3	34.6	37.9	37.8	34.2	39.7	42.4	37.6	32.0	33.1	32.0	31.1
Other MSA	41.4	38.6†	36.2	40.1	39.9	41.0	40.2	39.0	39.7	39.3	38.3	35.2	35.6	37.0	34.4
Non-MSA	44.8	41.9†	41.3	40.6	41.3	42.1	42.6	43.7	41.0	42.4	41.8	40.4	38.3	35.8	33.5
Parental Education: <sup>b</sup>															
1.0–2.0 (Low)	42.1	40.4†	37.5	38.6	43.5	43.2	39.2	39.9	40.6	41.1	38.6	38.2	38.4	38.6	36.5
2.5–3.0	43.9	40.9†	40.6	41.5	42.3	42.6	41.1	41.2	42.3	42.8	41.4	38.0	37.4	38.5	36.0
3.5–4.0	44.2	40.0†	38.0	40.6	38.8	42.2	41.6	40.1	40.2	42.8	41.0	36.4	36.6	37.5	33.5
4.5–5.0	40.7	39.4†	36.2	37.7	37.9	37.8	39.3	36.9	38.7	40.2	37.0	33.7	32.7	32.6	31.8
5.5–6.0 (High)	44.9	41.7†	39.3	35.4	34.3	39.6	38.9	37.0	40.9	39.0	37.1	32.0	34.1	32.4	31.8
Race/Ethnicity (2-year average): <sup>c</sup>															
White	—	44.1	43.1†	40.4	41.0	42.2	43.0	42.7	43.0	43.9	42.7	40.0	38.7	37.8	37.0
African American	—	30.2	29.3†	29.7	28.0	23.9	24.6	25.1	24.4	24.7	25.3	24.3	23.7	24.6	23.0
Hispanic	—	41.0	39.9†	37.7	40.5	44.0	42.8	39.4	39.6	40.5	40.2	37.9	37.1	39.5	38.2

Table continued on next page.



**TABLE 94 (cont.)**  
**ALCOHOL: Trends in 30-Day Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 30 days														2018-2019
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	change
<i>Approximate weighted N =</i>															
Total	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	-0.2
Gender:															
Male	33.8	33.4	28.6	31.0	30.1	28.2	28.0	26.0	23.0	20.6	18.6	17.1	18.2	18.1	-0.1
Female	33.8	33.3	29.0	29.8	27.7	26.0	27.1	25.3	23.9	22.5	20.9	22.1	19.1	18.6	-0.5
College Plans:															
None or under 4 years	44.8	47.4	44.6	45.5	45.6	41.4	40.9	37.1	37.0	32.0	28.9	26.6	25.3	24.1	-1.2
Complete 4 years	32.5	31.7	26.9	28.8	26.9	25.6	26.3	24.4	22.1	20.5	19.0	18.8	17.7	17.3	-0.4
Region:															
Northeast	35.7	36.2	31.4	30.5	29.5	31.5	33.3	28.4	27.0	24.0	19.8	21.1	20.4	19.5	-0.9
Midwest	33.7	34.4	29.5	28.9	27.4	23.2	24.5	22.4	20.4	19.1	18.1	17.2	16.6	17.7	+1.1
South	32.8	31.2	29.0	32.2	29.9	27.7	28.3	27.4	24.3	22.9	21.7	19.2	19.5	18.6	-1.0
West	33.9	32.9	25.9	29.0	28.7	27.5	24.9	24.6	22.6	19.4	19.2	21.8	17.8	18.0	+0.3
Population Density:															
Large MSA	32.5	31.8	27.4	30.3	29.3	26.5	27.4	24.8	23.3	21.2	21.0	22.4	19.6	16.7	-2.9
Other MSA	34.5	33.3	28.7	29.7	28.4	27.7	26.9	26.5	24.0	21.4	18.1	17.9	18.8	19.1	+0.3
Non-MSA	34.4	36.2	31.1	31.9	29.4	27.1	29.1	24.9	22.6	22.4	23.0	19.8	16.8	19.5	+2.7
Parental Education: <sup>b</sup>															
1.0–2.0 (Low)	33.1	36.5	35.5	37.4	34.2	30.3	32.2	29.4	26.3	23.2	20.0	21.2	20.3	19.4	-0.9
2.5–3.0	38.0	37.0	30.9	32.9	33.1	30.2	28.6	30.3	25.0	22.8	22.0	18.4	19.0	21.4	+2.5
3.5–4.0	35.6	35.6	30.4	31.3	30.3	29.4	28.6	26.8	26.2	23.6	21.2	22.0	18.8	19.6	+0.8
4.5–5.0	32.0	31.5	25.9	28.2	26.3	24.3	27.6	22.6	21.3	19.9	19.2	18.6	17.3	16.7	-0.6
5.5–6.0 (High)	31.7	28.8	26.2	27.4	24.5	24.0	26.2	23.4	22.1	21.6	20.3	21.0	22.0	18.2	-3.9
Race/Ethnicity (2-year average): <sup>c</sup>															
White	36.3	35.9	33.3	31.5	30.8	29.1	29.1	28.2	26.4	24.6	23.0	22.4	21.9	20.8	-1.1
African American	21.5	21.7	20.6	20.2	20.7	20.8	20.2	19.0	16.6	15.1	13.9	11.4	10.2	11.4	+1.2
Hispanic	36.1	34.8	33.7	34.1	34.9	31.8	28.4	28.8	27.1	24.0	21.4	20.8	20.0	19.2	-0.8

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

*Notes.* ' ‡ ' indicates some change in the question. See relevant footnote. See relevant figure to assess the impact of the wording changes. 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>In 1993, the question text was changed slightly in one form to indicate that a drink meant more than a few sips. The 1993 data are based on the changed form only;

N is one half of N indicated. In 1994 the question text was changed in the remaining form. Beginning in 1994, the data are based on all forms. In 2004, the question text was changed slightly in half of the forms. An examination of the data did not show any effect from the wording change. The remaining forms were changed in 2005.

<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 95**  
**ALCOHOL: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<i>Approximate weighted N =</i>	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
Total	68.2	68.3	71.2	72.1	71.8	72.0	70.7	69.7	69.4	67.2	65.9	65.3	66.4	63.9	60.0	57.1
Gender:																
Male	75.0	74.5	77.8	77.5	76.7	77.4	75.7	74.1	74.4	71.4	69.8	69.0	69.9	68.0	65.1	61.3
Female	62.2	61.8	65.0	67.1	67.0	66.8	65.7	65.4	64.3	62.8	62.1	61.9	63.1	59.9	54.9	52.3
College Plans:																
None or under 4 years	—	69.9	72.8	72.7	72.2	73.5	72.1	71.6	70.5	69.0	67.9	66.6	68.6	65.0	61.6	58.7
Complete 4 years	—	66.5	69.4	71.6	71.4	70.8	70.0	68.6	68.1	65.7	64.6	64.8	65.7	63.6	59.1	56.4
Region:																
Northeast	76.9	75.7	76.6	78.0	81.1	79.4	80.4	76.7	74.4	73.6	72.3	67.6	69.1	66.7	61.7	65.3
Midwest	71.1	73.2	76.4	77.2	73.9	75.1	73.6	75.0	74.4	70.6	66.8	71.3	70.7	67.9	65.9	61.5
South	62.8	60.2	64.7	67.0	65.7	65.5	62.9	61.3	64.3	62.1	60.0	58.2	60.7	58.6	55.1	51.0
West	60.0	62.2	64.4	63.1	65.5	67.6	65.3	63.8	62.9	63.6	66.2	64.5	66.7	65.0	59.3	51.6
Population Density:																
Large MSA	75.3	72.6	74.0	75.5	77.3	78.0	75.5	72.9	69.2	66.6	67.4	66.2	66.3	63.8	56.9	59.2
Other MSA	68.5	67.0	72.0	72.7	72.0	70.8	69.1	69.3	69.8	66.2	65.1	64.8	66.9	64.1	60.7	57.4
Non-MSA	63.2	66.5	67.8	68.4	67.3	69.0	68.9	67.6	69.0	69.0	65.9	65.2	65.5	63.8	61.7	54.4
Parental Education: <sup>b</sup>																
1.0–2.0 (Low)	58.7	62.5	62.0	62.7	64.6	65.9	62.1	61.3	61.2	58.1	58.7	56.1	56.3	54.5	47.8	47.2
2.5–3.0	70.0	71.4	72.5	71.9	71.1	72.0	70.7	69.4	69.2	67.4	65.9	65.3	67.0	64.6	59.7	57.2
3.5–4.0	69.2	67.9	73.5	75.0	74.6	73.3	71.5	72.7	70.4	69.6	66.9	66.7	67.2	64.3	62.9	57.7
4.5–5.0	69.6	71.3	74.5	77.0	76.0	74.4	73.1	74.5	73.1	69.3	68.9	68.0	68.8	66.0	62.1	60.8
5.5–6.0 (High)	67.3	72.5	77.1	79.2	75.9	77.2	77.4	74.1	75.0	70.3	67.9	69.9	70.5	67.3	62.2	60.8
Race/Ethnicity (2-year average): <sup>c</sup>																
White	—	—	72.8	75.0	75.3	75.4	75.4	74.6	73.9	72.8	71.2	70.2	71.0	70.6	67.3	63.8
African American	—	—	49.5	48.7	47.2	47.6	46.7	46.0	47.7	45.5	42.8	42.1	39.4	39.8	39.5	35.8
Hispanic	—	—	63.0	64.5	63.8	63.6	62.0	60.3	59.1	59.7	58.1	56.3	57.2	57.8	52.9	49.1

Table continued on next page.

**TABLE 95 (cont.)**  
**ALCOHOL: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days															
	1991	1992	1993 <sup>a</sup>	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004 <sup>c</sup>	2005	2006
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	54.0	51.3‡	48.6	50.1	51.3	50.8	52.7	52.0	51.0	50.0	49.8	48.6	47.5	48.0	47.0	45.3
Gender:																
Male	58.4	55.8‡	54.2	55.5	55.7	54.8	56.2	57.3	55.3	54.0	54.7	52.3	51.7	51.1	50.7	47.3
Female	49.0	46.8‡	43.4	45.2	47.0	46.9	48.9	46.9	46.8	46.1	45.1	45.1	43.8	45.1	43.3	43.0
College Plans:																
None or under 4 years	57.1	54.9‡	52.4	53.6	55.9	54.8	56.1	56.0	55.2	54.3	55.5	53.0	55.4	52.1	52.8	54.0
Complete 4 years	52.7	50.0‡	47.4	48.9	49.6	49.3	51.4	50.9	49.8	48.3	47.9	47.4	45.2	47.0	45.5	43.2
Region:																
Northeast	59.6	51.5‡	56.1	53.1	55.0	56.5	56.7	56.2	57.2	58.0	54.3	50.9	51.6	53.9	54.5	52.4
Midwest	59.7	58.0‡	51.6	53.8	55.3	51.5	51.5	51.9	51.1	52.3	54.5	52.1	50.8	49.5	48.0	46.3
South	49.1	48.1‡	47.7	49.2	50.6	51.1	51.1	51.4	49.5	44.9	45.9	46.8	43.0	43.5	43.9	43.2
West	49.7	46.7‡	39.8	44.2	43.2	42.1	52.7	49.2	47.8	48.3	44.9	45.0	47.0	47.3	43.6	41.3
Population Density:																
Large MSA	52.9	49.0‡	50.6	49.5	50.6	51.6	51.1	49.1	48.9	51.2	49.7	50.3	43.0	44.1	46.6	47.6
Other MSA	55.7	50.8‡	47.1	49.2	50.6	50.1	53.4	53.9	52.8	48.8	49.6	48.8	49.6	51.7	47.6	43.9
Non-MSA	52.0	54.1‡	49.8	52.5	53.4	51.4	52.9	51.6	50.1	50.8	50.0	45.9	49.6	45.5	46.1	44.7
Parental Education: <sup>b</sup>																
1.0–2.0 (Low)	49.9	45.6‡	36.6	43.5	45.9	41.2	43.8	43.8	46.8	43.4	42.9	42.2	43.6	42.1	38.2	44.4
2.5–3.0	53.3	52.3‡	49.0	49.9	52.0	48.2	51.0	50.1	50.5	50.0	49.0	47.9	47.8	46.8	47.8	46.7
3.5–4.0	54.3	51.2‡	51.2	50.1	50.6	51.4	52.1	55.6	51.1	51.3	51.4	50.9	47.9	52.4	47.8	46.3
4.5–5.0	54.8	51.0‡	49.8	52.6	51.8	53.6	55.3	52.4	50.2	48.1	51.5	48.9	47.5	47.7	50.2	42.9
5.5–6.0 (High)	58.0	55.7‡	53.2	52.2	55.1	54.2	57.4	54.7	56.0	54.0	49.5	51.1	49.3	47.4	46.0	48.2
Race/Ethnicity (2-year average): <sup>c</sup>																
White	60.0	56.8	55.6‡	54.0	54.5	54.8	56.4	57.7	56.3	55.1	55.3	54.0	52.3	52.2	52.3	50.7
African American	33.7	31.7	32.4‡	33.8	35.2	36.5	34.3	33.3	32.2	30.0	29.4	30.1	29.9	29.2	29.0	29.2
Hispanic	51.5	53.8	50.5‡	45.9	48.7	47.5	48.2	49.8	50.2	51.2	48.9	47.5	46.4	45.4	43.3	43.4

Table continued on next page.

**TABLE 95 (cont.)**  
**ALCOHOL: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days												2018-2019 change	
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		2019
<i>Approximate weighted N =</i>	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	44.4	43.1	43.5	41.2	40.0	41.5	39.2	37.4	35.3	33.2	33.2	30.2	29.3	-0.9
Gender:														
Male	47.1	45.8	47.8	44.2	42.1	43.8	41.8	37.4	36.0	34.5	34.1	30.4	29.8	-0.7
Female	41.4	40.9	38.9	37.9	37.5	38.8	36.3	37.1	35.0	32.0	32.3	30.1	28.5	-1.5
College Plans:														
None or under 4 years	48.6	49.7	51.0	47.9	45.2	44.2	45.3	40.2	37.9	35.6	35.7	30.9	31.1	+0.2
Complete 4 years	43.3	41.7	41.6	39.3	38.8	40.7	37.9	36.6	35.0	32.5	32.8	30.0	28.7	-1.3
Region:														
Northeast	51.8	49.1	48.4	49.2	46.3	48.1	45.7	41.6	42.7	36.9	37.3	32.6	30.5	-2.1
Midwest	47.9	42.8	45.0	40.8	41.2	41.8	39.0	40.2	33.6	33.7	34.0	30.4	29.4	-1.1
South	43.1	42.9	42.0	39.6	37.5	36.6	35.4	34.6	33.1	31.3	31.7	30.0	28.3	-1.7
West	36.6	39.2	39.2	37.4	38.0	43.1	39.8	36.1	35.4	33.8	32.1	28.5	30.4	+1.9
Population Density:														
Large MSA	47.1	46.1	46.7	42.4	41.1	44.1	39.2	37.7	38.5	33.0	34.3	30.0	27.9	-2.1
Other MSA	42.1	40.4	41.5	41.6	41.1	41.8	40.8	38.7	33.4	33.6	30.5	28.3	29.1	+0.8
Non-MSA	45.2	45.8	43.7	38.5	35.8	36.9	35.3	33.7	35.0	32.7	37.5	34.9	32.1	-2.7
Parental Education: <sup>b</sup>														
1.0–2.0 (Low)	38.3	41.4	39.8	36.4	36.7	41.4	36.1	32.5	32.5	31.7	28.9	23.7	23.4	-0.3
2.5–3.0	46.0	42.4	43.4	42.4	38.8	41.4	40.3	38.2	35.3	31.4	31.1	27.1	28.5	+1.4
3.5–4.0	43.6	43.2	46.9	41.6	41.2	42.7	41.1	37.9	36.5	32.8	33.2	32.4	29.3	-3.1
4.5–5.0	45.0	43.9	42.0	42.1	40.1	41.7	39.5	38.7	36.1	35.7	35.8	32.0	30.0	-2.0
5.5–6.0 (High)	47.6	45.9	43.3	38.4	41.9	41.1	38.7	40.6	36.3	34.4	38.3	35.5	35.6	+0.2
Race/Ethnicity (2-year average): <sup>c</sup>														
White	49.3	48.6	47.2	45.4	43.8	43.8	43.6	42.5	40.9	39.0	39.0	38.0	34.9	-3.2 ss
African American	28.7	28.6	30.5	31.4	30.1	29.6	28.4	25.9	24.0	21.8	20.3	21.2	19.4	-1.9
Hispanic	41.4	38.9	40.1	40.1	39.7	39.8	39.0	37.0	36.3	34.9	30.9	26.4	24.4	-2.0

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

*Notes.* ' ‡ ' indicates some change in the question. See relevant footnote. See relevant figure to assess the impact of the wording changes. 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>In 1993, the question text was changed slightly in three of six forms to indicate that a drink meant more than a few sips. The 1993 data are based on the changed forms only; N is three sixths of N indicated. In 1994 the question text was changed in the remaining forms. Beginning in 1994, the data are based on all six forms. In 2004 the question text was changed slightly in half of the forms. An examination of the data did not show any effect from the wording change. The remaining forms were changed in 2005.

<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 96**  
**ALCOHOL: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 8**

	Percentage who used daily in last 30 days														
	<u>1991</u>	<u>1992</u>	<u>1993<sup>a</sup></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<sup>a</sup></u>	<u>2005</u>
<i>Approximate weighted N =</i>	17,500	18,600	18,300	17,300	17,500	17,800	18,600	18,100	16,700	16,700	16,200	15,100	16,500	17,000	16,800
Total	0.6	0.6‡	1.0	1.0	0.7	1.0	0.8	0.9	1.0	0.8	0.9	0.7	0.8	0.6	0.5
Gender:															
Male	0.7	0.8‡	1.5	1.2	1.0	1.4	0.9	1.2	1.3	1.0	1.2	0.8	0.8	0.6	0.6
Female	0.4	0.4‡	0.5	0.7	0.5	0.6	0.6	0.5	0.6	0.5	0.6	0.4	0.7	0.6	0.3
College Plans:															
None or under 4 years	1.6	2.2‡	2.7	2.8	1.9	3.0	2.0	3.1	3.4	1.8	2.8	2.8	2.3	2.2	1.9
Complete 4 years	0.4	0.4‡	0.7	0.7	0.6	0.7	0.6	0.6	0.7	0.6	0.6	0.5	0.6	0.5	0.3
Region:															
Northeast	0.4	0.5‡	0.7	1.0	0.6	1.0	0.8	1.0	1.0	0.6	0.8	0.7	0.6	0.3	0.3
Midwest	0.6	0.6‡	0.9	0.7	0.7	1.1	0.8	1.0	1.3	1.2	0.7	0.7	0.9	0.6	0.6
South	0.6	0.8‡	1.3	1.4	0.7	1.1	0.8	1.0	1.0	0.7	1.2	0.8	0.8	0.8	0.5
West	0.5	0.5‡	0.9	0.7	0.8	0.8	0.7	0.5	0.9	0.6	0.6	0.4	0.6	0.6	0.4
Population Density:															
Large MSA	0.4	0.6‡	1.1	0.6	0.6	0.9	0.4	0.7	1.0	0.4	0.5	0.4	0.7	0.5	0.5
Other MSA	0.5	0.6‡	0.6	1.0	0.6	1.0	0.9	0.8	0.8	0.7	0.9	0.8	0.7	0.5	0.4
Non-MSA	0.8	0.7‡	1.6	1.4	1.1	1.3	0.9	1.1	1.5	1.4	1.3	0.8	1.0	0.9	0.6
Parental Education: <sup>b</sup>															
1.0–2.0 (Low)	1.6	1.4‡	1.5	1.5	1.4	1.3	1.6	1.8	1.9	0.8	1.7	1.1	2.5	1.5	0.9
2.5–3.0	0.8	0.6‡	0.6	0.9	0.8	1.3	0.5	0.8	0.9	1.1	1.2	0.8	1.1	0.6	0.5
3.5–4.0	0.3	0.5‡	0.8	1.0	1.0	1.2	0.8	0.6	1.2	0.6	0.5	0.7	0.6	0.6	0.5
4.5–5.0	0.3	0.5‡	0.5	0.9	0.4	0.5	0.7	0.7	0.4	0.6	0.6	0.5	0.3	0.2	0.3
5.5–6.0 (High)	0.4	0.6‡	1.8	0.9	0.6	1.0	0.5	1.0	1.1	0.6	0.7	0.4	0.5	0.4	0.1
Race/Ethnicity (2-year average): <sup>c</sup>															
White	—	0.5	0.6‡	0.7	0.8	0.8	0.9	0.7	0.8	0.8	0.8	0.7	0.6	0.6	0.4
African American	—	0.5	1.0‡	1.2	0.9	0.8	0.6	0.6	0.9	0.5	0.4	0.5	0.5	0.6	0.6
Hispanic	—	1.1	1.2‡	1.6	1.5	1.4	1.4	1.3	1.3	1.1	1.2	1.3	1.4	1.4	0.8

Table continued on next page.

**TABLE 96 (cont.)**  
**ALCOHOL: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 8**

	Percentage who used daily in last 30 days														2018-2019
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	change
<i>Approximate weighted N =</i>															
Total	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	+0.1
Gender:															
Male	0.5	0.6	0.7	0.5	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.3	+0.2
Female	0.4	0.3	0.4	0.4	0.5	0.3	0.2	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.0
College Plans:															
None or under 4 years	1.5	2.4	2.7	1.8	2.2	1.6	1.9	1.5	1.3	1.0	0.5	0.6	0.3	0.7	+0.4
Complete 4 years	0.3	0.4	0.6	0.4	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0
Region:															
Northeast	0.3	0.4	0.6	0.1	0.4	0.1	0.3	0.0	0.2	0.1	0.1	0.2	0.1	0.1	0.0
Midwest	0.5	0.6	0.8	0.3	0.4	0.3	0.2	0.1	0.2	0.2	0.0	0.1	0.0	0.2	+0.1
South	0.6	0.7	0.9	0.7	0.7	0.4	0.4	0.5	0.4	0.3	0.3	0.1	0.2	0.3	+0.1
West	0.4	0.5	0.4	0.6	0.5	0.7	0.4	0.2	0.4	0.1	0.1	0.2	0.2	0.3	+0.1
Population Density:															
Large MSA	0.4	0.4	0.7	0.3	0.5	0.3	0.4	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.0
Other MSA	0.5	0.6	0.8	0.4	0.5	0.4	0.4	0.2	0.3	0.2	0.1	0.1	0.2	0.3	+0.1
Non-MSA	0.6	0.8	0.7	0.8	0.6	0.5	0.2	0.5	0.5	0.2	0.5	0.2	0.1	0.4	+0.3
Parental Education: <sup>b</sup>															
1.0–2.0 (Low)	0.7	1.3	1.8	2.1	1.3	0.5	0.3	0.2	0.8	0.2	0.2	0.3	0.1	0.3	+0.2
2.5–3.0	0.6	0.5	0.9	0.5	0.5	0.7	0.5	0.2	0.2	0.3	0.3	0.3	0.2	0.2	+0.1
3.5–4.0	0.6	0.7	0.7	0.4	0.6	0.4	0.4	0.6	0.3	0.2	0.3	0.2	0.0	0.3	+0.3 s
4.5–5.0	0.3	0.2	0.2	0.1	0.3	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.0	-0.1
5.5–6.0 (High)	0.3	0.4	0.6	0.4	0.3	0.4	0.2	0.2	0.2	0.1	0.2	0.0	0.2	0.2	+0.1
Race/Ethnicity (2-year average): <sup>c</sup>															
White	0.4	0.4	0.6	0.5	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	+0.1
African American	0.5	0.5	0.6	0.4	0.3	0.4	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.1	-0.2
Hispanic	0.6	0.8	1.0	1.0	0.9	0.8	0.7	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.0

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

*Notes.* ' ‡ ' indicates some change in the question. See relevant footnote. See relevant figure to assess the impact of the wording changes. 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>In 1993, the question text was changed slightly in one form to indicate that a drink meant more than a few sips. The 1993 data are based on the changed form only; N is one half of N indicated. In 1994 the question text was changed in the remaining form. Beginning in 1994, the data are based on all forms. In 2004, the question text was changed slightly in half of the forms. An examination of the data did not show any effect from the wording change. The remaining forms were changed in 2005.

<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 97**  
**ALCOHOL: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 10**

	Percentage who used daily in last 30 days														
	1991	1992	1993 <sup>a</sup>	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004 <sup>a</sup>	2005
Approximate weighted N =	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
Total	1.4	1.3‡	1.8	1.7	1.7	1.6	1.7	1.9	1.9	1.8	1.9	1.8	1.5	1.3	1.3
Gender:															
Male	2.3	1.6‡	2.6	2.5	2.6	2.4	2.5	2.8	2.9	2.7	2.9	2.6	2.0	1.9	1.9
Female	0.4	0.8‡	1.0	0.8	0.8	0.8	0.8	1.2	0.9	0.8	0.9	1.0	1.0	0.7	0.7
College Plans:															
None or under 4 years	2.0	3.2‡	3.6	3.6	4.0	3.2	4.0	4.3	4.5	4.0	4.6	3.7	3.0	3.7	3.9
Complete 4 years	1.2	0.8‡	1.5	1.2	1.3	1.3	1.3	1.5	1.5	1.4	1.4	1.4	1.2	1.0	1.0
Region:															
Northeast	1.3	0.9‡	1.8	0.9	1.5	1.0	1.5	2.3	1.9	1.3	1.6	1.4	1.5	0.9	1.4
Midwest	1.4	1.5‡	1.8	1.7	1.8	1.6	1.6	2.1	2.3	1.9	1.6	1.7	1.2	1.0	1.1
South	1.6	1.2‡	1.8	2.3	1.8	1.8	1.9	1.9	1.6	2.0	1.9	1.8	1.5	1.6	1.4
West	1.0	1.4‡	1.7	1.6	1.8	1.9	1.8	1.5	1.9	1.7	2.4	2.0	1.8	1.6	1.4
Population Density:															
Large MSA	1.3	1.2‡	1.1	1.3	1.3	1.5	1.2	1.5	2.0	1.6	1.8	1.4	1.4	0.7	0.9
Other MSA	1.2	1.0‡	1.4	1.7	1.8	1.5	1.6	1.7	1.7	1.6	1.6	1.8	1.4	1.5	1.4
Non-MSA	1.6	1.9‡	3.2	2.1	2.2	1.9	2.5	2.9	2.2	2.3	2.5	2.1	2.0	1.5	1.7
Parental Education: <sup>b</sup>															
1.0–2.0 (Low)	2.6	2.0‡	3.1	1.9	2.9	1.6	2.1	2.7	2.4	2.2	2.9	2.0	2.3	1.6	1.7
2.5–3.0	1.5	1.1‡	2.1	1.9	2.1	1.6	2.1	2.4	2.1	2.3	1.9	2.1	1.6	1.6	2.0
3.5–4.0	1.1	1.3‡	1.7	1.7	1.7	1.6	1.9	2.0	1.9	1.9	1.5	1.5	1.4	1.1	1.2
4.5–5.0	1.1	0.8‡	1.0	1.3	1.3	1.5	1.2	1.2	1.5	1.4	1.7	1.6	1.6	1.1	0.7
5.5–6.0 (High)	1.2	1.5‡	2.0	1.2	0.9	1.4	0.8	1.9	2.0	1.2	1.7	1.8	0.9	1.2	0.9
Race/Ethnicity (2-year average): <sup>c</sup>															
White	—	1.3	1.4‡	1.6	1.7	1.7	1.6	1.8	1.9	1.8	1.7	1.8	1.7	1.5	1.4
African American	—	0.9	1.2‡	1.2	1.1	0.6	0.7	1.0	1.0	1.1	1.4	1.2	0.9	0.5	0.5
Hispanic	—	1.6	1.9‡	1.8	2.3	2.3	2.0	2.4	2.4	2.0	2.6	2.4	1.8	1.7	1.6

Table continued on next page.

**TABLE 97 (cont.)**  
**ALCOHOL: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 10**

	Percentage who used daily in last 30 days														2018-2019
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	change
<i>Approximate weighted N =</i>	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	1.4	1.4	1.0	1.1	1.1	0.8	1.0	0.9	0.8	0.5	0.5	0.6	0.5	0.6	+0.2
Gender:															
Male	1.8	1.9	1.4	1.5	1.7	1.1	1.4	1.3	1.1	0.7	0.8	0.7	0.6	0.9	+0.3
Female	1.0	0.9	0.6	0.7	0.6	0.4	0.5	0.5	0.6	0.3	0.3	0.4	0.3	0.4	+0.1
College Plans:															
None or under 4 years	3.2	3.3	2.1	3.5	3.3	2.2	3.0	1.9	2.7	1.3	1.1	1.5	0.9	0.9	-0.1
Complete 4 years	1.2	1.2	0.9	0.9	0.9	0.6	0.7	0.8	0.6	0.4	0.5	0.4	0.4	0.6	+0.2
Region:															
Northeast	1.6	1.5	1.1	0.8	0.7	0.8	1.2	0.9	0.5	0.3	0.6	0.5	0.8	0.2	-0.6 s
Midwest	1.3	1.6	0.9	1.1	1.2	0.5	0.8	0.6	0.6	0.3	0.5	0.6	0.3	0.6	+0.4
South	1.6	1.2	1.1	1.3	1.1	0.9	1.2	1.3	1.2	0.7	0.6	0.5	0.6	0.9	+0.4
West	1.2	1.6	0.9	1.2	1.5	0.8	0.8	0.8	0.7	0.5	0.5	0.6	0.4	0.5	+0.1
Population Density:															
Large MSA	1.3	1.3	0.9	1.0	1.2	0.8	0.8	1.0	0.6	0.4	0.5	0.6	0.4	0.2	-0.1
Other MSA	1.4	1.5	1.0	1.1	1.0	0.7	0.8	0.8	0.7	0.5	0.4	0.3	0.5	0.8	+0.3
Non-MSA	1.8	1.6	1.2	1.3	1.3	0.9	1.5	0.9	1.4	0.6	0.9	1.1	0.7	0.9	+0.2
Parental Education: <sup>b</sup>															
1.0–2.0 (Low)	2.9	3.6	2.1	1.6	2.3	0.8	1.5	1.1	1.8	0.7	0.7	0.5	0.3	1.3	+1.0
2.5–3.0	1.9	1.6	1.0	1.4	1.6	0.9	1.2	1.5	0.9	0.9	0.5	0.8	0.6	1.2	+0.6 s
3.5–4.0	1.5	1.2	1.0	1.3	0.6	0.8	0.7	0.9	0.9	0.4	0.7	0.5	0.2	0.6	+0.4 s
4.5–5.0	0.9	1.1	0.4	0.6	1.0	0.8	0.8	0.7	0.4	0.4	0.4	0.2	0.6	0.3	-0.3
5.5–6.0 (High)	0.7	1.0	0.9	0.6	0.7	0.5	1.1	0.4	0.7	0.3	0.3	0.9	0.9	0.4	-0.4
Race/Ethnicity (2-year average): <sup>c</sup>															
White	1.4	1.4	1.2	1.0	1.0	0.9	0.9	1.0	0.9	0.6	0.5	0.6	0.6	0.6	0.0
African American	0.8	0.8	0.7	0.9	0.8	0.5	0.5	0.4	0.3	0.4	0.2	0.2	0.2	0.2	0.0
Hispanic	2.0	2.1	2.0	1.9	1.9	1.6	1.1	1.0	1.0	0.9	0.6	0.5	0.4	0.6	+0.3

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

*Notes.* ' ‡ ' indicates some change in the question. See relevant footnote. See relevant figure to assess the impact of the wording changes. 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>In 1993, the question text was changed slightly in one form to indicate that a drink meant more than a few sips. The 1993 data are based on the changed form only;

N is one half of N indicated. In 1994 the question text was changed in the remaining form. Beginning in 1994, the data are based on all forms. In 2004, the question text was changed slightly in half of the forms. An examination of the data did not show any effect from the wording change. The remaining forms were changed in 2005.

<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 98**  
**ALCOHOL: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 12**

	Percentage who used daily in last 30 days															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<i>Approximate weighted N =</i>	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
Total		5.6	6.1	5.7	6.9	6.0	6.0	5.8	5.5	4.8	5.0	4.7	4.8	4.2	4.2	3.7
Gender:																
Male	—	8.1	8.6	8.3	9.7	8.6	8.4	7.7	7.7	6.6	7.0	6.7	7.2	6.2	6.0	5.2
Female	—	2.7	3.6	3.2	4.0	3.6	3.4	3.4	2.9	2.7	3.0	2.8	2.5	2.3	2.2	1.9
College Plans:																
None or under 4 years	—	7.3	8.0	7.3	9.1	8.1	7.7	7.5	6.7	6.0	6.5	6.8	7.0	6.0	6.1	4.9
Complete 4 years	—	3.6	4.0	4.1	5.0	4.4	4.6	4.1	4.0	3.6	4.0	3.5	3.6	3.4	3.2	3.0
Region:																
Northeast	—	6.3	6.5	6.2	8.7	7.4	7.5	6.3	5.9	6.5	6.6	4.9	4.2	4.2	4.3	4.6
Midwest	—	6.9	6.7	7.0	6.8	6.7	6.6	7.6	6.2	4.3	4.4	4.9	5.3	4.8	5.1	3.9
South	—	4.6	5.9	5.0	7.2	5.2	5.2	5.0	5.4	5.3	5.0	4.9	5.1	4.0	4.0	3.4
West	—	3.8	4.3	3.8	3.8	4.5	4.3	2.8	3.6	2.8	4.0	4.2	4.5	3.9	3.5	2.9
Population Density:																
Large MSA	—	5.4	5.9	6.2	7.0	7.1	6.5	6.4	5.6	5.1	5.3	4.1	3.7	3.5	4.0	4.7
Other MSA	—	5.4	5.8	5.5	6.1	5.4	5.3	5.1	5.7	4.5	5.1	4.5	5.4	4.5	3.9	3.2
Non-MSA	—	6.1	6.5	5.7	7.9	6.1	6.6	6.1	5.9	5.1	4.8	5.8	4.9	4.5	5.2	3.8
Parental Education: <sup>b</sup>																
1.0–2.0 (Low)	—	5.7	5.0	4.7	6.2	6.3	5.8	5.2	6.1	5.2	5.5	5.5	5.8	5.0	3.9	3.1
2.5–3.0	—	6.2	7.1	6.4	7.2	6.5	6.3	6.1	5.2	5.1	5.2	4.7	4.5	4.3	5.0	3.9
3.5–4.0	—	5.0	5.3	5.3	6.4	5.5	6.1	5.5	5.3	4.6	4.7	4.6	4.9	3.8	4.0	3.5
4.5–5.0	—	5.6	5.7	5.6	6.7	5.8	4.8	5.6	5.1	4.1	4.5	4.4	4.8	3.9	3.8	3.4
5.5–6.0 (High)	—	5.0	6.3	5.6	8.8	5.5	6.3	5.2	5.6	4.1	4.8	4.0	4.5	4.8	3.0	4.2
Race/Ethnicity (2-year average): <sup>c</sup>																
White	—	—	6.0	6.2	6.6	6.8	6.5	6.3	5.9	5.3	5.1	5.2	5.1	4.8	4.5	4.2
African American	—	—	2.2	2.0	2.1	2.5	2.3	2.2	2.3	2.2	2.2	2.1	2.1	2.2	2.4	2.1
Hispanic	—	—	5.3	4.6	4.0	4.3	4.5	3.7	3.2	4.0	5.0	4.7	4.6	4.6	4.3	3.8

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**TABLE 98 (cont.)**  
**ALCOHOL: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 12**

	Percentage who used daily in last 30 days															
	1991	1992	1993 <sup>a</sup>	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004 <sup>c</sup>	2005	2006
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	3.6	3.4‡	3.4	2.9	3.6	3.7	3.9	4.0	3.4	2.9	3.6	3.5	3.2	2.8	3.1	3.0
Gender:																
Male	5.3	5.2‡	5.3	4.8	5.5	5.2	5.7	6.4	5.2	4.7	5.5	5.3	4.7	4.1	4.4	4.3
Female	1.6	1.6‡	1.6	1.2	1.6	2.0	1.9	1.4	1.4	1.1	1.7	1.7	1.6	1.4	1.6	1.5
College Plans:																
None or under 4 years	5.4	5.3‡	4.3	4.4	5.4	5.0	6.0	6.8	5.9	4.8	5.3	4.8	5.0	4.3	5.6	4.9
Complete 4 years	2.9	2.7‡	2.9	2.4	2.9	3.1	3.2	3.0	2.6	2.2	2.9	3.1	2.4	2.2	2.3	2.4
Region:																
Northeast	3.3	2.9‡	5.3	3.0	2.8	4.1	3.7	4.1	2.8	3.0	3.1	2.8	3.7	3.3	3.1	3.3
Midwest	3.9	3.7‡	3.3	3.1	4.3	3.8	4.5	4.1	3.2	3.1	4.5	4.6	3.4	2.6	3.6	3.3
South	4.1	3.7‡	3.5	3.0	3.8	3.6	4.1	4.2	3.9	2.8	3.5	3.3	3.0	2.8	3.2	3.1
West	2.7	2.9‡	1.8	2.5	2.8	3.1	3.2	3.2	3.2	2.9	3.0	3.0	2.6	2.5	2.1	2.4
Population Density:																
Large MSA	3.3	3.4‡	2.7	2.5	3.5	4.4	3.9	3.4	2.3	3.0	3.6	3.4	2.1	2.5	2.8	3.4
Other MSA	3.5	3.1‡	3.6	2.8	3.5	3.3	4.0	4.1	3.4	2.7	3.6	3.2	3.5	3.3	3.1	2.8
Non-MSA	4.1	4.1‡	3.6	3.6	3.6	3.7	3.9	4.3	4.4	3.4	3.7	4.2	3.9	2.3	3.4	3.0
Parental Education: <sup>b</sup>																
1.0–2.0 (Low)	4.2	3.0‡	3.6	2.3	3.9	2.6	3.8	5.3	4.0	3.5	3.5	2.5	2.7	3.4	2.6	3.1
2.5–3.0	4.1	4.0‡	2.6	3.4	3.9	3.5	3.7	4.1	3.6	2.9	3.4	3.4	3.6	3.0	3.7	3.4
3.5–4.0	3.0	2.9‡	3.7	2.5	2.7	3.4	3.2	4.0	3.3	3.0	3.4	3.7	2.9	2.9	2.5	2.8
4.5–5.0	3.1	2.8‡	3.6	2.8	3.9	4.0	3.9	3.6	2.9	2.4	3.3	3.1	3.0	2.0	3.1	2.7
5.5–6.0 (High)	4.1	4.7‡	2.9	3.1	3.5	3.6	4.7	3.1	3.2	2.9	3.9	4.0	2.3	2.6	2.7	2.8
Race/Ethnicity (2-year average): <sup>c</sup>																
White	3.8	3.6	3.1‡	3.1	3.3	3.7	4.1	4.3	3.9	3.3	3.5	3.8	3.6	3.2	3.3	3.4
African American	1.6	1.9	2.3‡	2.6	2.5	2.2	1.8	1.8	1.6	1.4	1.6	1.6	1.5	1.2	1.1	1.5
Hispanic	3.6	3.6	2.8‡	3.1	3.5	4.0	4.0	4.3	4.8	5.0	4.1	3.3	2.8	2.7	2.9	2.9

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**TABLE 98 (cont.)**  
**ALCOHOL: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 12**

	Percentage who used daily in last 30 days													2018-2019 change
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	3.1	2.8	2.5	2.7	2.1	2.5	2.2	1.9	1.9	1.3	1.6	1.2	1.7	+0.5 s
Gender:														
Male	4.3	4.0	3.6	3.6	2.9	3.6	3.0	2.8	2.3	1.7	2.2	1.6	2.4	+0.7
Female	1.9	1.7	1.3	1.6	1.2	1.2	1.2	1.0	1.4	0.8	0.7	0.5	0.9	+0.4
College Plans:														
None or under 4 years	4.8	5.1	5.0	4.4	4.1	3.8	4.8	3.7	3.9	2.6	2.9	2.4	3.1	+0.7
Complete 4 years	2.6	2.2	1.8	2.2	1.6	2.1	1.5	1.4	1.4	1.0	1.2	0.7	1.1	+0.4 s
Region:														
Northeast	3.5	2.2	2.2	2.9	2.8	3.3	2.2	1.3	2.0	1.6	1.2	1.2	0.9	-0.3
Midwest	3.3	2.9	3.2	3.2	2.6	2.6	2.3	2.1	2.1	1.4	1.2	0.8	1.6	+0.8
South	3.4	3.8	2.3	2.9	1.7	2.1	2.2	1.9	1.8	1.3	2.1	1.5	2.2	+0.7
West	2.0	1.7	2.1	1.8	1.8	2.5	1.9	1.9	1.8	1.3	1.4	0.9	1.4	+0.4
Population Density:														
Large MSA	3.1	2.1	2.5	2.7	2.3	2.2	1.8	1.6	2.1	1.3	1.5	1.0	1.1	+0.1
Other MSA	3.3	2.6	2.6	2.7	2.1	2.8	2.2	2.0	1.5	1.2	1.6	1.2	1.5	+0.3
Non-MSA	2.6	4.2	2.3	2.8	2.0	2.4	2.7	1.9	2.7	1.7	1.7	1.6	3.1	+1.5 ss
Parental Education: <sup>b</sup>														
1.0–2.0 (Low)	3.6	2.6	3.3	2.9	2.4	2.8	2.3	2.6	3.1	1.6	1.3	1.0	2.0	+1.0
2.5–3.0	3.6	2.6	2.4	2.9	2.9	2.2	3.0	1.5	1.8	1.4	1.6	1.0	1.8	+0.8
3.5–4.0	2.9	2.7	2.5	2.3	2.1	2.5	1.7	1.5	1.8	0.9	1.4	1.2	1.3	+0.1
4.5–5.0	3.0	2.9	2.1	2.5	1.3	2.5	2.1	2.2	1.6	1.5	1.5	1.1	1.5	+0.4
5.5–6.0 (High)	2.4	2.6	1.5	2.0	2.0	2.5	1.7	1.8	1.5	0.9	1.1	1.4	1.6	+0.2
Race/Ethnicity (2-year average): <sup>c</sup>														
White	3.4	3.4	2.9	2.6	2.5	2.5	2.4	2.0	1.9	1.7	1.7	1.7	1.6	-0.1
African American	1.5	1.3	1.4	2.1	2.0	1.5	1.5	1.4	1.1	0.8	0.9	0.9	0.8	-0.1
Hispanic	3.1	2.8	2.5	2.5	2.4	2.3	2.7	2.3	2.0	1.9	1.2	0.8	1.0	+0.2

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

Notes. ' ‡ ' indicates some change in the question. See relevant footnote. See relevant figure to assess the impact of the wording changes. 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>In 1993, the question text was changed slightly in three of six forms to indicate that a drink meant more than a few sips. The 1993 data are based on the changed forms only; N is three sixths of N indicated. In 1994 the question text was changed in the remaining forms. Beginning in 1994, the data are based on all six forms. In 2004 the question text was changed slightly in half of the forms. An examination of the data did not show any effect from the wording change. The remaining forms were changed in 2005.

<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 99**  
**BEEN DRUNK: Trends in 30-Day Prevalence by Subgroups in Grade 8**

	Percentage who had been drunk in last 30 days														
	<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>
<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>
Total	7.6	7.5	7.8	8.7	8.3	9.6	8.2	8.4	9.4	8.3	7.7	6.7	6.7	6.2	6.0
Gender:															
Male	8.4	7.4	7.8	9.0	8.2	9.7	8.4	8.5	10.2	8.2	7.8	7.1	6.6	5.8	5.9
Female	7.0	7.6	7.8	8.3	8.2	9.5	7.9	8.2	8.6	8.1	7.4	6.3	6.8	6.6	6.2
College Plans:															
None or under 4 years	15.8	17.2	18.4	20.0	17.2	19.3	18.7	21.4	22.4	18.9	18.9	15.5	17.0	16.1	15.7
Complete 4 years	6.4	6.1	6.4	7.3	7.3	8.2	7.1	6.9	8.0	7.0	6.5	5.9	5.7	5.2	5.1
Region:															
Northeast	5.7	6.4	6.2	8.2	8.2	9.7	7.9	6.9	9.4	8.3	8.0	5.3	4.9	4.8	4.2
Midwest	7.7	7.6	7.3	8.3	8.3	10.2	8.2	10.4	11.6	9.7	8.2	7.0	8.1	6.8	6.2
South	8.8	8.2	8.3	8.8	8.4	9.1	8.3	7.8	9.5	7.4	8.1	7.6	7.2	6.4	7.1
West	7.3	6.9	9.4	9.6	8.2	9.8	8.3	8.3	6.6	8.1	6.0	5.9	6.0	6.4	5.8
Population Density:															
Large MSA	7.4	7.0	6.0	7.6	7.2	8.9	6.7	6.9	7.8	7.1	6.3	5.2	5.6	5.4	5.4
Other MSA	7.3	7.4	8.4	9.7	8.9	9.9	8.6	7.5	8.4	7.2	7.9	7.3	6.8	6.5	6.1
Non-MSA	8.4	8.2	8.8	7.9	8.6	10.0	9.2	11.7	13.3	12.0	8.9	7.3	8.1	6.5	6.9
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	13.4	11.0	10.4	12.5	13.1	11.1	11.5	13.1	14.5	14.0	12.1	10.5	13.4	10.0	9.3
2.5–3.0	9.2	8.8	9.2	9.3	9.6	11.9	9.3	9.5	11.7	10.5	9.7	8.5	9.4	7.4	8.4
3.5–4.0	6.9	7.6	8.5	9.3	9.4	10.4	10.2	9.1	9.9	8.0	8.7	6.7	7.1	6.8	6.7
4.5–5.0	6.1	6.5	5.9	7.5	6.4	8.7	6.7	7.0	6.9	5.6	5.7	5.5	4.5	5.0	4.6
5.5–6.0 (High)	6.8	4.9	6.7	7.6	6.0	7.1	5.8	6.9	8.7	7.1	4.6	4.8	4.2	4.4	3.5
Race/Ethnicity (2-year average): <sup>b</sup>															
White	—	7.7	7.8	8.4	8.9	9.7	9.7	9.1	9.8	10.0	9.0	8.0	7.2	6.8	6.6
African American	—	5.4	5.1	5.6	5.6	5.5	4.6	3.9	4.9	4.7	4.0	4.0	4.2	4.1	3.8
Hispanic	—	9.9	9.9	10.8	10.8	10.8	10.4	9.8	9.9	8.5	7.8	8.4	8.5	8.1	7.0

Table continued on next page.

**TABLE 99 (cont.)**  
**BEEN DRUNK: Trends in 30-Day Prevalence by Subgroups in Grade 8**

	Percentage who had been drunk in last 30 days														
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2018-2019 change
Approximate weighted N =	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	
Total	6.2	5.5	5.4	5.4	5.0	4.4	3.6	3.5	2.7	3.1	1.8	2.2	2.1	2.6	+0.5
Gender:															
Male	6.1	5.3	5.3	5.3	4.8	4.4	3.3	3.0	2.7	2.9	1.8	1.6	1.8	2.3	+0.5
Female	6.2	5.6	5.4	5.3	5.2	4.2	3.8	4.0	2.7	3.0	1.7	2.8	2.3	2.9	+0.6
College Plans:															
None or under 4 years	15.4	16.3	14.9	14.9	12.9	10.9	9.5	10.9	6.7	6.7	5.3	5.2	4.5	4.9	+0.3
Complete 4 years	5.4	4.6	4.6	4.6	4.4	3.9	3.1	3.0	2.4	2.7	1.5	1.9	1.8	2.3	+0.5
Region:															
Northeast	5.8	3.5	4.5	4.7	4.2	2.9	3.5	2.7	2.0	2.6	0.9	1.5	1.5	1.8	+0.3
Midwest	6.3	5.7	5.3	5.0	4.7	4.1	2.2	2.6	2.3	2.4	1.4	2.0	2.0	2.2	+0.2
South	6.9	6.1	6.8	6.5	5.7	4.4	4.4	4.5	2.8	3.3	2.2	2.4	2.0	2.9	+0.9
West	5.2	5.7	4.2	4.4	4.8	5.7	3.5	3.3	3.4	3.6	1.9	2.7	2.8	3.1	+0.3
Population Density:															
Large MSA	5.1	4.8	5.4	4.0	4.7	3.5	3.1	3.1	2.5	2.6	1.2	2.1	2.0	2.1	0.0
Other MSA	6.4	5.6	5.2	5.8	5.2	4.8	4.1	3.3	2.8	3.3	1.8	2.1	2.1	2.7	+0.7
Non-MSA	7.5	6.4	5.9	6.3	5.0	4.7	3.2	4.6	3.0	3.2	2.6	2.9	2.3	3.3	+1.0
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	9.4	10.6	10.1	10.1	7.8	7.9	6.0	6.4	3.8	4.9	3.5	2.8	2.2	2.9	+0.7
2.5–3.0	7.9	7.9	7.4	6.3	7.1	6.6	5.6	4.6	3.4	4.1	2.2	3.0	2.5	3.5	+1.0
3.5–4.0	7.1	6.0	5.8	5.4	5.3	4.8	4.1	4.3	2.9	2.6	1.5	2.6	2.3	3.7	+1.5 s
4.5–5.0	4.4	3.1	3.7	4.4	4.2	3.2	2.6	2.4	2.4	2.3	1.4	1.9	1.7	2.3	+0.6
5.5–6.0 (High)	4.6	3.1	3.3	3.4	2.6	2.7	1.6	2.2	2.2	2.5	1.4	1.8	1.9	1.6	-0.3
Race/Ethnicity (2-year average): <sup>b</sup>															
White	6.4	5.9	5.5	5.5	5.3	4.7	3.9	3.3	2.9	2.6	2.3	2.0	2.1	2.5	+0.4
African American	3.6	3.7	3.8	3.6	3.4	2.9	2.7	3.0	2.4	2.0	1.7	1.4	1.6	1.2	-0.4
Hispanic	7.2	7.4	6.7	6.2	5.8	5.6	5.5	4.5	3.6	3.5	2.8	2.2	2.2	2.4	+0.2

*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 100**  
**BEEN DRUNK: Trends in 30-Day Prevalence by Subgroups in Grade 10**

	Percentage who had been drunk in last 30 days														
	<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>
Approximate weighted N =	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
Total	20.5	18.1	19.8	20.3	20.8	21.3	22.4	21.1	22.5	23.5	21.9	18.3	18.2	18.5	17.6
Gender:															
Male	22.3	18.6	21.4	23.2	21.9	23.0	24.6	22.3	25.4	26.2	24.2	19.3	18.8	20.2	18.2
Female	18.7	17.5	18.1	17.2	19.6	19.8	20.2	19.9	19.8	20.9	19.7	17.4	17.7	17.0	16.8
College Plans:															
None or under 4 years	29.5	26.3	29.0	31.1	31.4	32.0	35.5	33.5	34.6	35.1	34.8	27.4	27.4	27.5	27.8
Complete 4 years	18.6	16.4	17.9	18.0	19.0	19.7	20.3	19.1	20.7	21.8	19.8	16.8	16.9	17.4	16.3
Region:															
Northeast	23.9	18.8	20.0	19.0	19.5	22.4	21.9	23.1	25.8	22.8	19.9	18.1	20.3	22.4	20.5
Midwest	21.8	18.9	20.1	21.0	22.6	22.0	23.3	21.8	26.0	27.6	24.0	18.7	18.8	16.6	17.4
South	19.2	16.8	19.8	20.9	20.9	21.4	22.0	21.9	20.3	21.4	21.5	17.5	17.6	18.7	17.2
West	18.2	18.3	19.0	19.5	19.5	19.3	22.6	17.0	19.0	22.4	21.2	19.5	16.5	16.7	15.2
Population Density:															
Large MSA	20.6	17.6	17.6	16.1	18.2	19.6	20.7	17.2	21.6	23.4	19.5	16.5	15.7	15.1	16.2
Other MSA	20.1	17.3	18.2	21.7	21.8	21.9	21.8	21.2	22.7	22.5	21.6	18.0	18.6	20.5	18.3
Non-MSA	21.1	19.9	24.7	21.8	21.8	22.4	25.5	25.4	23.4	25.4	25.3	21.4	21.4	19.0	17.8
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	20.9	18.2	22.2	20.0	23.4	22.1	19.7	20.1	21.8	21.3	22.0	17.3	19.0	17.7	15.8
2.5–3.0	22.5	18.5	21.4	21.2	22.9	23.4	22.5	23.3	23.4	24.5	22.6	19.9	18.9	21.0	19.4
3.5–4.0	20.4	19.4	19.4	22.1	21.4	22.1	24.1	21.3	23.3	24.5	22.8	19.5	19.3	18.9	17.5
4.5–5.0	19.7	17.1	18.2	18.7	19.7	19.5	22.3	20.2	21.7	24.1	21.4	17.4	17.5	17.3	17.5
5.5–6.0 (High)	20.6	18.5	18.6	17.9	17.9	22.3	22.4	20.4	24.0	23.1	21.5	16.8	17.7	19.3	17.0
Race/Ethnicity (2-year average): <sup>b</sup>															
White	—	21.6	20.8	22.0	22.7	23.7	25.0	25.5	25.7	26.7	25.8	23.2	21.9	21.7	21.0
African American	—	9.4	10.3	10.1	9.8	8.5	8.6	8.8	7.6	8.6	9.5	8.6	8.0	8.3	8.0
Hispanic	—	16.2	15.9	17.0	18.6	20.1	19.5	18.0	17.8	18.0	18.7	17.4	15.7	17.0	17.3

Table continued on next page.

**TABLE 100 (cont.)**  
**BEEN DRUNK: Trends in 30-Day Prevalence by Subgroups in Grade 10**

	Percentage who had been drunk in last 30 days														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	18.8	18.1	14.4	15.5	14.7	13.7	14.5	12.8	11.2	10.3	9.0	8.9	8.4	8.8	+0.3
Gender:															
Male	19.1	18.9	14.6	16.4	15.5	14.9	15.4	13.2	11.1	10.3	8.4	7.6	8.2	8.6	+0.5
Female	18.4	17.4	14.3	14.8	13.7	12.4	13.5	12.4	11.5	10.3	9.6	10.1	8.6	8.9	+0.3
College Plans:															
None or under 4 years	29.0	28.9	25.2	26.8	27.0	23.8	23.1	18.5	20.9	16.3	13.9	13.4	11.8	11.2	-0.6
Complete 4 years	17.5	16.8	13.2	14.4	13.3	12.6	13.7	12.3	10.3	9.7	8.5	8.3	7.9	8.3	+0.4
Region:															
Northeast	20.4	20.5	15.3	14.6	14.7	16.6	18.6	13.6	13.3	11.6	10.0	9.9	9.1	9.2	+0.1
Midwest	19.8	19.6	16.0	15.0	15.3	11.9	12.8	11.4	9.7	9.5	8.4	8.1	8.2	8.1	-0.1
South	17.6	16.3	14.9	16.6	14.5	14.0	15.0	13.9	11.6	11.4	9.2	8.5	8.7	8.8	+0.1
West	17.9	16.9	11.8	15.5	14.3	13.0	12.1	12.4	10.7	7.9	8.4	9.6	7.6	9.0	+1.4
Population Density:															
Large MSA	17.7	16.3	12.7	15.3	14.2	12.9	14.9	12.8	11.3	10.0	9.3	11.1	9.4	7.8	-1.6
Other MSA	19.0	18.5	14.8	15.3	14.8	14.1	13.7	13.0	10.8	9.9	7.9	7.4	8.1	9.4	+1.4
Non-MSA	20.0	20.0	16.4	16.4	15.1	14.0	15.7	12.6	12.3	11.6	11.5	9.2	7.7	8.6	+0.9
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	18.4	17.7	16.9	19.7	18.2	13.6	15.7	15.1	12.0	8.5	8.5	8.4	8.5	8.1	-0.4
2.5–3.0	21.6	19.9	15.0	17.6	16.4	15.8	14.9	13.6	11.5	11.4	8.9	8.0	8.1	9.5	+1.5
3.5–4.0	19.9	19.1	15.7	16.4	14.3	14.8	14.7	13.4	12.9	11.3	9.4	9.3	8.4	10.1	+1.8
4.5–5.0	17.4	16.8	13.3	13.8	13.9	12.1	15.0	12.1	10.4	10.0	8.7	8.9	7.8	7.8	-0.1
5.5–6.0 (High)	17.6	17.7	14.2	14.6	13.2	13.1	14.6	12.3	11.3	9.8	10.8	10.7	10.9	9.6	-1.3
Race/Ethnicity (2-year average): <sup>b</sup>															
White	20.9	21.3	19.2	17.0	16.4	15.6	16.0	15.4	14.1	12.8	11.7	11.3	11.0	10.5	-0.5
African American	7.8	8.3	8.0	8.4	9.3	8.3	7.6	7.2	5.5	5.3	4.8	3.7	3.1	3.7	+0.6
Hispanic	16.6	15.0	14.0	14.9	15.7	13.8	12.5	13.1	11.6	10.0	8.5	7.8	7.7	8.0	+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 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 101**  
**BEEN DRUNK: Trends in 30-Day Prevalence by Subgroups in Grade 12**

Percentage who had been drunk in last 30 days																
	1975–															
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<i>Approximate weighted N =</i>	—	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700
Total	—	31.6	29.9	28.9	30.8	33.2	31.3	34.2	32.9	32.9	32.3	32.7	30.3	30.9	32.5	30.2
Gender:																
Male	—	37.1	35.2	34.5	34.5	37.8	35.4	39.2	39.0	37.9	38.4	37.0	34.3	34.9	36.0	33.6
Female	—	25.4	24.5	23.5	26.8	28.8	27.3	29.1	26.6	27.7	26.7	28.4	26.9	26.9	29.0	26.4
College Plans:																
None or under 4 years	—	32.2	31.4	32.6	32.2	37.6	31.4	38.1	33.7	36.1	35.0	36.3	31.7	37.6	34.7	34.3
Complete 4 years	—	30.9	29.2	27.4	29.4	31.4	31.0	32.3	32.0	31.7	30.6	31.3	29.3	28.7	31.2	28.5
Region:																
Northeast	—	36.4	30.0	35.0	35.2	35.5	37.2	35.9	35.6	37.5	39.3	33.9	33.6	35.4	38.1	38.7
Midwest	—	37.2	38.2	32.5	34.1	38.2	31.5	33.7	34.8	33.4	34.8	39.2	35.0	34.9	34.2	31.3
South	—	26.5	25.2	26.4	29.1	31.2	31.0	34.5	30.1	30.8	26.5	28.8	28.4	25.9	29.3	26.9
West	—	28.5	26.6	23.2	25.4	27.1	24.7	32.7	33.5	32.2	32.8	28.8	25.0	30.1	29.5	26.5
Population Density:																
Large MSA	—	30.4	26.1	29.4	28.7	32.0	31.5	31.5	32.2	29.2	30.5	30.6	32.9	25.4	27.4	28.2
Other MSA	—	33.5	29.8	26.9	29.9	31.7	33.0	33.7	34.0	35.4	34.5	31.7	29.1	33.5	37.3	31.5
Non-MSA	—	29.4	33.7	32.0	34.4	36.9	28.2	38.2	31.4	32.5	30.5	36.7	29.2	33.2	29.1	29.9
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	—	20.4	20.5	23.6	25.7	25.4	18.8	23.7	24.6	20.8	28.4	22.2	20.0	25.6	25.5	22.0
2.5–3.0	—	30.2	30.0	26.4	30.3	30.0	27.4	31.5	28.0	30.5	33.1	32.2	27.0	28.7	32.3	29.9
3.5–4.0	—	31.0	31.3	29.2	29.9	34.4	31.1	32.7	34.1	34.0	31.2	32.0	32.4	30.6	35.1	31.3
4.5–5.0	—	34.4	29.4	32.8	33.5	36.5	35.8	37.7	36.0	32.8	31.9	36.1	31.0	33.3	33.7	31.3
5.5–6.0 (High)	—	40.5	34.3	30.4	30.7	34.9	34.6	39.8	39.9	40.6	35.5	33.6	34.5	33.4	32.6	32.2
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	—	34.7	33.6	34.0	36.4	36.6	37.7	39.3	37.8	37.0	37.7	36.6	35.6	36.4	36.5
African American	—	—	11.0	12.5	14.1	13.2	13.0	13.8	13.8	14.9	14.9	12.0	12.1	11.7	14.3	15.4
Hispanic	—	—	27.2	24.8	23.0	24.2	26.2	26.9	25.9	27.5	29.8	25.5	23.5	23.9	24.1	22.2

Table continued on next page.



**TABLE 101 (cont.)**  
**BEEN DRUNK: Trends in 30-Day Prevalence by Subgroups in Grade 12**

	Percentage who had been drunk in last 30 days														
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2018-2019 change
	<i>Approximate weighted N =</i>														
	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	30.0	28.7	27.6	27.4	26.8	25.0	28.1	26.0	23.5	20.6	20.4	19.1	17.5	17.5	0.0
Gender:															
Male	32.9	31.7	29.2	32.7	31.2	27.5	30.6	29.1	24.9	21.1	22.1	20.4	19.0	17.2	-1.7
Female	26.3	25.7	26.2	22.5	21.8	22.0	24.8	22.7	22.4	19.6	19.1	18.1	16.2	17.4	+1.2
College Plans:															
None or under 4 years	37.2	30.6	32.0	31.0	32.9	27.9	29.6	28.9	25.3	21.2	23.8	21.7	17.1	19.6	+2.5
Complete 4 years	27.6	28.2	26.4	25.9	24.8	24.1	27.3	25.0	22.6	20.3	19.4	18.6	17.6	16.4	-1.2
Region:															
Northeast	37.9	32.6	31.1	36.3	32.4	31.5	34.7	30.1	28.6	25.1	21.8	25.3	20.7	17.9	-2.8
Midwest	32.2	32.0	31.2	29.4	28.9	27.5	29.6	26.8	25.9	20.3	22.8	17.7	18.0	18.9	+0.9
South	27.4	26.5	25.5	23.6	24.9	21.5	22.2	21.7	21.0	18.4	17.6	17.8	15.4	16.2	+0.7
West	25.2	26.0	24.1	23.5	23.4	23.3	29.3	28.3	21.4	21.3	22.1	18.4	18.3	18.4	0.0
Population Density:															
Large MSA	30.4	29.8	31.4	29.8	26.6	23.8	30.7	25.6	22.5	22.9	21.1	19.7	18.4	16.7	-1.7
Other MSA	29.0	27.6	25.0	25.9	26.8	26.9	28.0	28.1	25.2	18.1	20.4	17.3	16.4	17.3	+0.9
Non-MSA	31.4	29.4	28.8	27.8	27.2	22.3	24.1	21.1	20.7	22.6	19.4	21.9	18.6	19.1	+0.5
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	27.7	19.7	26.7	19.8	22.4	19.1	19.7	25.7	18.7	14.0	13.9	15.8	9.5	12.7	+3.2
2.5–3.0	29.5	31.6	25.3	29.0	25.4	22.9	26.6	24.8	25.2	21.4	19.3	15.7	16.0	15.6	-0.4
3.5–4.0	31.0	26.8	28.2	28.2	28.6	26.3	29.5	25.6	21.7	22.4	21.8	20.0	16.8	17.1	+0.3
4.5–5.0	29.7	28.4	30.0	27.0	26.5	25.6	29.7	27.9	25.9	21.8	21.5	19.7	19.1	19.7	+0.6
5.5–6.0 (High)	30.1	33.0	27.8	29.0	26.5	27.5	30.5	27.1	25.8	21.1	23.4	24.1	27.5	21.2	-6.3
Race/Ethnicity (2-year average): <sup>b</sup>															
White	35.2	33.7	32.7	31.8	31.6	29.9	29.7	30.6	29.0	26.4	25.0	24.2	23.1	21.9	-1.2
African American	13.5	14.6	14.8	15.1	14.7	14.2	14.3	13.4	15.1	13.8	9.9	10.1	10.9	10.5	-0.4
Hispanic	23.1	24.0	22.2	21.7	20.5	20.0	21.2	22.7	19.5	16.0	17.2	16.8	13.1	11.6	-1.4

*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 two of six forms;  $N$  is two sixths of  $N$  indicated in Table S3.

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

<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 102**  
**BINGE DRINKING: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Subgroups in Grade 8**

	Percentage reporting 5+ drinks in a row on one or more occasions														
	<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>
<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>
Total	10.9	11.3	11.3	12.1	12.3	13.3	12.3	11.5	13.1	11.7	11.0	10.3	9.8	9.4	8.4
Gender:															
Male	12.1	11.6	12.4	13.2	12.5	14.1	13.0	12.1	14.0	11.7	11.5	10.4	10.2	8.8	8.2
Female	9.6	10.8	10.3	11.1	12.1	12.4	11.5	10.8	12.0	11.3	10.2	10.0	9.4	9.9	8.6
College Plans:															
None or under 4 years	21.1	23.0	25.7	25.3	25.0	26.1	26.5	26.7	30.2	25.0	24.7	24.7	23.2	21.2	21.0
Complete 4 years	9.3	9.7	9.4	10.5	10.8	11.3	10.7	9.8	11.2	10.1	9.4	9.0	8.4	8.2	7.2
Region:															
Northeast	8.6	8.8	8.1	10.9	11.1	12.8	10.9	9.7	12.4	11.5	10.5	8.4	7.8	8.1	6.0
Midwest	11.5	12.5	10.9	11.5	12.2	13.5	12.0	12.4	15.5	13.2	10.8	10.5	10.8	10.1	8.7
South	11.9	12.3	12.9	12.4	13.0	13.7	13.2	11.9	13.3	11.0	12.5	11.4	10.6	9.6	9.8
West	10.2	10.4	12.8	13.8	12.3	12.9	12.3	11.6	10.3	10.9	9.0	9.9	9.0	9.5	8.0
Population Density:															
Large MSA	10.6	10.4	8.6	10.4	10.3	12.2	11.3	10.1	11.0	10.6	9.2	8.3	8.8	8.7	8.0
Other MSA	10.5	11.7	12.3	13.1	12.2	13.7	12.1	10.9	12.1	10.5	11.0	10.8	8.9	9.3	8.3
Non-MSA	12.0	11.7	12.9	12.1	15.0	14.2	13.9	14.3	17.4	15.3	13.1	11.8	12.9	10.5	9.2
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	18.3	17.8	16.3	16.8	20.1	16.9	17.6	16.5	20.8	18.9	16.5	16.6	16.3	14.9	14.4
2.5–3.0	12.6	13.4	13.3	14.2	14.8	15.4	13.5	13.8	17.0	15.3	14.3	12.8	13.5	12.1	10.7
3.5–4.0	10.7	11.3	11.5	12.5	13.3	14.3	14.2	12.4	14.0	11.0	11.7	11.1	10.5	10.0	9.4
4.5–5.0	8.8	8.7	8.5	10.3	9.3	11.1	10.3	9.3	9.5	8.2	8.1	7.9	6.7	8.0	6.4
5.5–6.0 (High)	8.8	8.4	8.9	9.1	8.7	10.7	9.0	9.4	9.2	9.5	6.6	7.3	6.8	6.2	5.0
Race/Ethnicity (2-year average): <sup>b</sup>															
White	—	11.2	10.9	11.1	12.1	13.2	13.3	12.3	12.6	13.0	11.9	10.9	10.0	9.6	9.0
African American	—	6.5	7.6	8.6	8.3	8.0	7.5	6.9	7.7	7.3	6.4	7.1	7.5	6.9	6.1
Hispanic	—	16.5	17.7	18.9	18.4	17.5	17.4	16.9	17.4	16.0	14.4	14.4	13.8	13.2	12.1

Table continued on next page.

**TABLE 102 (cont.)**  
**BINGE DRINKING: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Subgroups in Grade 8**

	Percentage reporting 5+ drinks in a row on one or more occasions														2018-2019
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	change
Approximate weighted N =	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	
Total	8.7	8.3	8.1	7.8	7.2	6.4	5.1	5.1	4.1	4.6	3.4	3.7	3.7	3.8	+0.2
Gender:															
Male	8.6	8.2	8.1	7.8	6.5	6.1	4.6	4.5	3.5	4.6	3.2	3.1	3.3	3.5	+0.2
Female	8.5	8.2	8.0	7.7	7.8	6.5	5.5	5.7	4.6	4.6	3.6	4.2	3.9	4.0	+0.1
College Plans:															
None or under 4 years	19.3	21.5	21.3	19.1	17.6	15.6	15.3	14.2	9.9	10.5	7.7	8.3	8.9	8.2	-0.7
Complete 4 years	7.6	7.1	7.0	6.8	6.3	5.7	4.4	4.5	3.7	4.1	3.0	3.2	2.9	3.1	+0.2
Region:															
Northeast	7.8	5.6	7.1	8.2	6.2	3.7	4.3	4.2	3.3	3.6	2.5	2.8	2.9	2.0	-0.9
Midwest	8.8	7.5	8.2	7.0	6.5	6.1	2.6	4.1	3.4	3.8	2.7	3.1	2.9	3.6	+0.6
South	9.7	9.4	9.7	8.8	8.4	7.1	6.3	6.4	4.7	5.4	4.3	3.9	3.6	4.8	+1.3
West	7.6	8.9	6.3	6.6	6.6	8.0	6.1	4.8	4.5	4.8	3.2	4.7	5.1	3.9	-1.1
Population Density:															
Large MSA	8.1	7.4	8.1	6.4	6.5	5.8	4.5	4.9	4.0	4.3	2.7	3.5	3.7	3.1	-0.6
Other MSA	8.3	8.5	7.9	8.2	7.6	6.6	5.6	5.0	4.0	4.6	3.4	3.5	3.7	3.9	+0.2
Non-MSA	10.2	9.2	8.4	8.9	7.0	7.0	5.1	5.8	4.5	5.3	4.6	4.4	3.4	5.1	+1.6
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	13.3	15.5	17.0	15.2	12.0	11.0	9.5	9.5	5.7	7.5	6.2	6.2	5.9	5.6	-0.3
2.5–3.0	10.6	10.5	10.5	9.5	9.3	8.8	7.6	6.7	5.4	5.8	4.6	5.1	4.7	6.5	+1.8
3.5–4.0	9.9	9.2	7.9	8.7	8.0	7.2	5.3	6.4	4.9	4.9	2.8	3.7	3.7	4.2	+0.5
4.5–5.0	6.7	5.5	5.7	5.3	5.7	4.6	3.8	3.0	3.4	3.1	3.1	2.9	2.6	3.0	+0.4
5.5–6.0 (High)	5.9	5.0	4.7	4.7	4.3	4.1	2.0	3.9	3.0	3.6	2.3	2.5	2.5	2.1	-0.5
Race/Ethnicity (2-year average): <sup>b</sup>															
White	8.4	8.0	7.8	7.7	7.1	6.2	4.9	4.2	4.2	4.0	3.6	3.0	2.9	3.4	+0.5
African American	5.7	5.6	5.7	5.2	5.3	5.1	4.3	4.5	4.4	4.1	3.4	2.9	2.6	1.9	-0.8
Hispanic	11.6	12.5	12.3	11.5	10.8	10.4	9.9	7.8	5.7	5.4	5.3	4.9	5.2	5.3	+0.1

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 103**  
**BINGE DRINKING: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Subgroups in Grade 10**

	Percentage reporting 5+ drinks in a row on one or more occasions															
	<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>	
<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>	
Total	21.0	19.1	21.0	21.9	22.0	22.8	23.1	22.4	23.5	24.1	22.8	20.3	20.0	19.9	19.0	
Gender:																
Male	24.1	21.5	24.1	26.4	24.1	25.1	26.3	24.7	27.4	27.6	26.1	21.6	21.1	21.6	19.9	
Female	18.1	17.0	17.7	17.3	19.7	20.4	20.1	20.4	20.0	20.6	19.7	19.0	19.0	18.1	17.9	
College Plans:																
None or under 4 years	30.5	28.6	31.8	34.1	34.5	35.7	36.9	35.7	36.5	36.7	37.2	31.0	31.5	29.6	31.3	
Complete 4 years	19.1	17.2	18.8	19.3	19.8	20.7	20.8	20.2	21.5	22.2	20.5	18.5	18.2	18.6	17.3	
Region:																
Northeast	23.7	18.0	21.1	19.9	20.3	22.3	21.8	24.1	26.0	23.8	20.7	19.5	21.5	23.8	21.0	
Midwest	21.7	19.8	22.0	23.0	23.3	23.4	22.4	22.2	25.0	26.2	24.8	20.3	19.9	16.7	18.8	
South	20.8	18.9	20.4	22.9	22.4	23.5	23.4	23.1	22.1	22.5	22.1	19.7	19.1	20.1	18.6	
West	18.6	19.8	20.0	20.4	21.1	21.4	25.3	19.9	21.7	24.6	23.1	22.2	20.1	19.6	17.6	
Population Density:																
Large MSA	20.2	17.5	19.1	17.6	18.4	20.5	20.4	18.3	22.4	24.0	20.8	17.6	18.0	16.9	17.4	
Other MSA	20.4	18.1	19.2	22.7	22.1	23.0	22.9	22.0	22.7	23.4	21.7	20.4	19.9	21.6	19.4	
Non-MSA	22.9	22.8	25.8	24.6	25.9	25.3	26.6	28.0	26.7	25.7	27.2	23.8	23.4	20.1	20.3	
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	23.2	23.0	24.3	22.6	26.7	24.7	22.7	24.1	25.2	24.7	23.0	23.9	24.4	23.0	21.0	
2.5–3.0	23.8	20.0	23.4	23.4	24.7	25.5	23.5	25.5	26.3	27.0	24.6	22.5	21.8	21.9	21.3	
3.5–4.0	19.9	19.2	20.6	23.3	22.8	23.7	24.6	22.8	23.6	23.8	24.2	20.7	20.5	20.4	18.9	
4.5–5.0	19.3	18.1	18.6	20.2	20.2	20.3	21.6	20.1	21.3	23.3	21.5	17.7	17.8	18.2	17.9	
5.5–6.0 (High)	20.9	18.4	18.9	18.5	17.3	22.4	22.4	20.1	23.6	23.1	21.2	18.7	18.4	19.0	17.9	
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	21.6	21.4	22.9	23.8	24.5	25.2	25.3	25.4	26.2	25.6	23.6	22.5	22.2	21.8	
African American	—	12.3	11.9	11.8	11.1	9.4	10.0	10.6	10.7	10.8	10.3	10.0	9.8	9.7	9.1	
Hispanic	—	20.3	20.5	20.9	23.3	25.7	24.4	23.6	24.4	25.1	24.8	23.3	22.9	23.3	22.4	

Table continued on next page.

**TABLE 103 (cont.)**  
**BINGE DRINKING: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Subgroups in Grade 10**

	Percentage reporting 5+ drinks in a row on one or more occasions														2018-2019
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	change
<i>Approximate weighted N =</i>	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	19.9	19.6	16.0	17.5	16.3	14.7	15.6	13.7	12.6	10.9	9.7	9.8	8.7	8.5	-0.2
Gender:															
Male	21.0	20.9	16.6	18.8	17.9	16.5	16.4	14.7	13.1	11.3	9.6	9.0	9.1	9.0	0.0
Female	18.9	18.3	15.4	16.1	14.6	12.7	14.8	12.5	12.2	10.6	9.8	10.5	8.3	7.9	-0.4
College Plans:															
None or under 4 years	30.8	30.7	29.1	29.9	30.5	27.1	25.9	21.7	24.3	18.3	16.4	15.0	14.0	12.1	-2.0
Complete 4 years	18.6	18.2	14.4	16.1	14.6	13.4	14.6	12.8	11.4	10.1	9.0	9.1	7.9	7.7	-0.1
Region:															
Northeast	21.2	20.4	16.8	16.4	15.2	16.8	19.5	14.5	13.8	11.9	9.4	9.8	9.0	9.0	0.0
Midwest	20.0	20.7	16.5	17.2	16.2	13.0	13.8	12.3	11.4	9.7	9.2	8.5	7.6	8.2	+0.7
South	19.1	18.4	16.3	18.4	16.7	15.4	16.2	15.0	13.3	11.9	10.4	9.7	9.6	8.7	-0.8
West	20.1	19.5	14.4	17.4	16.9	14.1	13.2	12.8	11.9	9.6	9.6	11.3	8.1	8.1	-0.1
Population Density:															
Large MSA	19.2	17.9	14.5	16.7	16.0	14.3	15.9	13.7	12.3	11.0	10.2	12.2	9.4	7.2	-2.2
Other MSA	19.7	19.6	16.0	17.0	16.5	14.7	14.8	13.7	12.4	10.3	8.7	8.2	8.1	8.9	+0.8
Non-MSA	21.9	22.5	18.1	19.8	16.7	15.4	16.6	13.7	13.8	12.4	11.8	10.0	8.7	9.6	+0.8
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	19.8	22.0	20.6	25.7	22.8	17.6	20.5	17.8	15.4	13.9	10.5	11.7	11.2	8.9	-2.3
2.5–3.0	22.8	22.6	17.8	19.6	19.5	17.1	17.3	15.1	14.0	11.9	10.8	9.4	9.5	9.4	-0.1
3.5–4.0	21.2	20.7	16.6	18.4	16.3	15.8	15.0	13.6	13.7	12.1	10.0	10.9	8.5	9.5	+1.0
4.5–5.0	18.1	17.7	14.7	14.7	14.1	12.7	15.4	12.5	10.7	10.1	9.2	9.2	7.2	7.0	-0.2
5.5–6.0 (High)	19.0	17.2	12.8	14.8	13.1	12.3	14.7	12.1	11.6	9.6	10.0	9.9	9.4	8.4	-1.0
Race/Ethnicity (2-year average): <sup>b</sup>															
White	21.7	21.8	19.7	17.9	17.2	16.1	16.3	15.7	14.4	13.0	11.6	11.0	10.5	9.7	-0.8
African American	9.1	10.0	9.8	9.8	10.7	9.4	8.2	8.6	7.5	6.9	5.8	4.7	3.9	4.2	+0.3
Hispanic	21.2	20.1	19.6	20.6	22.2	19.7	17.1	16.9	15.0	13.2	11.4	11.3	10.8	9.3	-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 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 104**  
**BINGE DRINKING: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Subgroups in Grade 12**

	Percentage reporting 5+ drinks in a row on one or more occasions															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Approximate weighted N =	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
Total	36.8	37.1	39.4	40.3	41.2	41.2	41.4	40.5	40.8	38.7	36.7	36.8	37.5	34.7	33.0	32.2
Gender:																
Male	49.0	47.9	50.0	51.4	51.9	52.1	51.6	49.8	50.4	47.5	45.3	46.1	46.1	43.0	41.2	39.1
Female	26.4	25.9	29.3	29.6	30.9	30.5	30.8	31.1	31.0	29.6	28.2	28.1	29.2	26.5	24.9	24.4
College Plans:																
None or under 4 years	—	41.8	44.7	44.3	44.5	46.3	46.7	45.7	44.9	43.5	41.6	41.3	42.7	38.5	38.2	35.8
Complete 4 years	—	31.5	33.9	35.9	37.7	36.9	37.4	36.5	37.2	34.6	33.0	34.1	35.0	32.8	30.5	30.3
Region:																
Northeast	43.0	40.8	40.0	43.5	47.4	48.0	49.3	43.3	42.2	42.9	42.4	37.1	37.2	34.3	33.3	37.2
Midwest	40.6	42.8	44.5	45.3	44.8	45.4	44.9	47.9	47.2	44.3	39.7	42.6	43.5	39.9	40.4	37.9
South	32.1	30.8	36.3	36.4	36.7	34.4	34.7	34.6	37.6	33.5	29.7	31.7	33.4	30.4	28.5	27.2
West	29.0	32.8	34.2	33.3	34.0	36.0	35.6	32.5	33.3	34.5	36.1	35.9	36.6	35.4	30.8	26.3
Population Density:																
Large MSA	37.9	37.0	38.1	39.5	42.2	44.8	43.4	40.9	38.8	37.9	37.6	36.4	34.8	32.5	28.8	34.5
Other MSA	36.1	36.8	39.5	40.1	40.8	38.9	39.5	39.7	41.0	37.3	35.4	35.5	38.6	35.3	33.7	31.8
Non-MSA	36.9	38.0	40.5	41.3	40.9	41.4	42.2	41.3	42.0	41.2	37.6	39.1	38.3	35.9	35.8	30.6
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	31.6	34.1	35.6	36.3	36.0	37.0	37.0	35.3	37.2	34.8	31.8	31.7	33.9	30.7	25.4	25.3
2.5–3.0	37.5	41.1	41.8	40.9	42.3	43.3	43.2	41.4	41.2	39.8	38.2	37.9	38.9	35.7	34.0	32.7
3.5–4.0	35.1	36.4	39.5	41.3	41.4	42.1	42.4	42.4	40.9	39.3	36.9	37.9	38.3	34.7	34.3	32.0
4.5–5.0	34.4	36.9	37.2	42.4	43.8	40.8	40.8	41.9	41.9	38.6	37.1	37.1	37.2	35.1	34.2	34.5
5.5–6.0 (High)	29.9	34.5	41.1	37.2	41.9	38.5	39.3	40.9	42.1	38.2	34.9	36.7	37.2	34.7	31.8	34.1
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	—	40.5	42.4	43.5	44.3	44.9	44.9	44.5	43.6	41.5	40.3	40.9	40.0	37.9	36.6
African American	—	—	19.0	19.3	18.9	17.7	17.1	17.1	18.3	17.2	15.7	16.4	15.8	15.2	15.7	14.4
Hispanic	—	—	36.4	37.2	33.6	33.1	34.8	32.9	32.5	33.0	31.7	30.8	33.0	33.7	28.8	25.6

Table continued on next page.

**TABLE 104 (cont.)**  
**BINGE DRINKING: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Subgroups in Grade 12**

	Percentage reporting 5+ drinks in a row on one or more occasions															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	29.8	27.9	27.5	28.2	29.8	30.2	31.3	31.5	30.8	30.0	29.7	28.6	27.9	29.2	27.1	25.4
Gender:																
Male	37.8	35.6	34.6	37.0	36.9	37.0	37.9	39.2	38.1	36.7	36.0	34.2	34.2	34.3	32.6	28.9
Female	21.2	20.3	20.7	20.2	23.0	23.5	24.4	24.0	23.6	23.5	23.7	23.0	22.1	24.2	21.6	21.5
College Plans:																
None or under 4 years	34.4	32.8	32.7	34.0	35.2	33.9	36.2	36.3	35.4	35.7	35.9	34.0	34.5	34.6	34.3	32.3
Complete 4 years	27.9	26.0	25.8	26.3	27.8	28.8	29.5	30.0	29.5	27.6	27.8	27.2	25.9	27.6	25.1	23.7
Region:																
Northeast	33.4	25.8	30.3	29.2	31.2	33.7	33.5	33.5	33.7	35.1	31.8	30.7	30.9	33.2	32.2	30.9
Midwest	34.6	34.6	30.1	31.9	34.3	31.5	31.6	32.6	31.6	33.9	34.5	33.4	32.5	30.2	29.1	26.5
South	26.3	24.7	27.1	26.9	28.6	30.2	30.6	30.7	30.0	24.9	26.6	26.8	23.7	26.1	24.2	23.9
West	26.3	26.0	22.0	24.5	24.2	24.0	29.6	29.5	28.6	29.3	26.0	23.9	26.5	28.6	24.5	22.0
Population Density:																
Large MSA	28.6	25.5	27.6	26.8	28.3	29.8	29.9	27.9	27.1	29.7	29.0	29.9	23.3	25.5	26.5	26.6
Other MSA	30.1	27.0	26.5	27.1	28.4	30.3	31.1	33.1	32.2	29.3	29.0	28.0	29.8	31.9	27.4	25.0
Non-MSA	30.4	31.9	29.2	31.5	34.0	30.5	33.2	32.4	32.4	31.7	31.9	28.2	30.5	28.2	27.0	24.5
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	26.8	23.4	21.9	24.0	26.6	24.8	22.6	26.3	27.4	25.1	24.8	22.2	23.5	22.9	19.4	25.4
2.5–3.0	29.9	28.1	27.6	28.5	31.2	28.6	30.4	30.3	30.8	29.2	30.2	28.5	27.6	28.8	28.3	25.8
3.5–4.0	30.4	27.9	28.4	28.4	29.5	29.8	31.0	33.2	30.5	30.5	30.3	28.6	28.4	30.9	27.6	26.5
4.5–5.0	29.9	28.1	28.4	29.3	29.9	32.4	32.4	32.3	30.6	29.9	30.9	30.9	28.6	30.5	29.4	24.0
5.5–6.0 (High)	30.6	30.4	29.0	29.0	30.7	33.1	34.9	32.4	34.2	32.7	28.6	30.6	28.7	27.8	25.2	26.3
Race/Ethnicity (2-year average): <sup>b</sup>																
White	34.6	32.1	31.3	31.5	32.3	33.4	35.1	36.4	35.7	34.6	34.5	33.7	32.4	32.5	32.5	30.4
African American	11.7	11.3	12.6	14.4	14.9	15.3	13.4	12.3	12.3	11.5	11.8	11.5	10.8	11.4	11.3	11.4
Hispanic	27.9	31.1	27.2	24.3	26.6	27.1	27.6	28.1	29.3	31.0	28.4	26.4	25.9	26.0	23.9	23.3

Table continued on next page.

**TABLE 104 (cont.)**  
**BINGE DRINKING: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Subgroups in Grade 12**

	Percentage reporting 5+ drinks in a row on one or more occasions													2018-2019 change
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	25.9	24.6	25.2	23.2	21.6	23.7	22.1	19.4	17.2	15.5	16.6	13.8	14.4	+0.6
Gender:														
Male	30.7	28.4	30.5	28.0	25.5	27.2	26.1	22.3	19.3	17.2	18.5	15.9	16.1	+0.2
Female	21.5	21.3	20.2	18.4	17.6	19.7	18.1	16.6	14.9	13.5	14.6	11.9	12.4	+0.5
College Plans:														
None or under 4 years	30.8	31.5	31.3	32.1	27.4	27.5	29.2	24.0	21.5	18.2	20.7	16.5	16.7	+0.2
Complete 4 years	24.7	23.2	23.8	21.2	20.4	22.6	20.6	18.3	16.4	14.7	15.8	12.9	13.5	+0.7
Region:														
Northeast	29.7	27.3	28.9	28.7	26.1	29.0	26.6	22.3	21.3	18.0	18.7	15.2	13.6	-1.6
Midwest	28.9	25.2	28.8	24.6	24.3	24.8	22.7	20.4	16.7	16.0	15.7	13.5	13.5	0.0
South	25.4	24.7	23.1	21.0	18.8	19.6	18.6	17.9	16.4	14.6	16.9	14.0	15.0	+1.0
West	20.5	21.9	20.9	20.7	19.9	24.1	23.1	18.8	16.2	14.9	15.6	12.7	15.0	+2.3
Population Density:														
Large MSA	28.0	25.8	25.7	23.0	21.7	25.1	21.3	19.4	18.9	15.6	16.5	13.7	12.8	-0.9
Other MSA	24.2	22.5	24.1	23.6	22.5	23.3	23.3	20.1	15.3	15.2	14.7	12.4	14.2	+1.8
Non-MSA	26.4	28.1	27.2	22.4	19.6	22.4	20.5	17.9	19.3	16.2	21.2	17.1	17.6	+0.5
Parental Education: <sup>a</sup>														
1.0–2.0 (Low)	20.4	21.3	23.2	20.1	17.9	23.6	21.5	19.0	17.2	14.6	13.0	10.8	11.7	+0.9
2.5–3.0	27.3	23.0	24.6	24.6	21.1	23.9	23.1	20.1	17.1	13.9	15.5	12.7	14.8	+2.2
3.5–4.0	24.8	25.1	27.6	23.3	23.2	24.3	23.9	19.2	17.4	15.9	16.4	13.8	13.8	0.0
4.5–5.0	27.5	26.2	24.4	24.2	21.4	23.6	21.4	20.7	17.9	16.5	18.2	15.0	14.5	-0.5
5.5–6.0 (High)	27.1	26.4	25.6	21.2	22.1	22.8	20.3	19.0	17.6	15.9	20.1	17.2	17.5	+0.3
Race/Ethnicity (2-year average): <sup>b</sup>														
White	29.7	29.9	29.0	27.6	25.9	25.7	25.6	23.8	21.2	19.1	19.6	19.4	17.6	-1.8 s
African American	11.5	10.9	12.0	13.1	11.3	11.3	12.5	11.3	9.8	8.3	7.7	7.4	6.7	-0.7
Hispanic	22.5	21.5	22.6	22.1	20.8	21.8	22.4	20.4	18.5	16.7	14.4	11.7	10.8	-0.9

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 105**  
**EXTREME BINGE DRINKING:**  
**Trends in 2-Week Prevalence of Having 10 or More Drinks in a Row**  
**by Subgroups in Grades 8 and 10**

	8th Graders					10th Graders						
	1991– 2015	2016	2017	2018	2019	2018– 2019 change	1991– 2015	2016	2017	2018	2019	2018– 2019 change
<i>Approximate weighted N =</i>	—	16,900	15,300	14,000	13,600		—	14,700	13,500	14,300	14,000	
Total	—	1.2	1.1	1.1	1.7	+0.5	—	3.0	3.6	3.3	3.3	0.0
Gender:												
Male	—	1.2	1.0	1.1	1.0	-0.2	—	3.5	4.1	3.5	3.8	+0.3
Female	—	0.9	1.0	1.0	2.4	+1.4 s	—	2.5	2.8	2.9	2.8	-0.1
College Plans:												
None or under 4 years	—	3.4	2.7	3.8	3.2	-0.5	—	6.6	7.2	8.2	6.9	-1.3
Complete 4 years	—	0.9	0.8	0.7	1.5	+0.8 s	—	2.6	2.8	2.7	2.7	0.0
Region:												
Northeast	—	0.7	1.2	0.5	0.7	+0.2	—	3.2	2.7	3.0	2.3	-0.7
Midwest	—	1.0	0.7	1.0	1.2	+0.2	—	3.5	3.5	2.9	3.3	+0.4
South	—	1.4	0.9	0.6	2.2	+1.6 s	—	2.8	3.5	4.0	3.6	-0.5
West	—	1.2	1.7	2.7	2.0	-0.7	—	2.7	4.6	2.7	3.5	+0.8
Population Density:												
Large MSA	—	0.7	1.2	0.7	0.8	+0.2	—	3.3	4.8	2.9	2.5	-0.5
Other MSA	—	1.1	1.1	1.2	1.8	+0.6	—	2.3	2.2	3.4	3.3	-0.1
Non-MSA	—	2.0	1.0	1.8	2.8	+1.1	—	4.5	5.2	3.5	4.6	+1.1
Parental Education: a												
1.0–2.0 (Low)	—	2.8	2.1	1.8	2.6	+0.8	—	4.9	6.1	4.4	4.9	+0.5
2.5–3.0	—	1.2	1.5	1.8	3.3	+1.6	—	2.7	3.2	2.9	4.7	+1.8
3.5–4.0	—	1.0	0.7	0.6	2.2	+1.6 s	—	2.5	3.1	3.6	4.8	+1.2
4.5–5.0	—	0.8	0.9	0.5	0.7	+0.3	—	2.9	2.9	2.7	1.3	-1.4 s
5.5–6.0 (High)	—	1.0	0.6	0.8	0.9	+0.1	—	3.3	4.2	3.8	2.3	-1.4
Race/Ethnicity (2-year data): b												
White	—	—	0.8	0.6	1.1	+0.5	—	—	3.7	3.9	3.8	-0.1
African American	—	—	1.0	0.8	0.6	-0.2	—	—	0.9	1.0	0.8	-0.2
Hispanic	—	—	1.6	1.6	1.8	+0.2	—	—	3.5	3.4	4.1	0.7

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

*Notes.* '—' 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 Tables S1, S2, and S3 for the number of subgroup cases. See appendix B for definition of variables in table. Data based on one of four forms; N is one third of N indicated in S1 and S2.

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

<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 105 (cont.)**  
**EXTREME BINGE DRINKING:**  
**Trends in 2-Week Prevalence of Having 10 or More Drinks in a Row**  
**by Subgroups in Grade 12**

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2018– 2019 change
Approx. weighted N =	14,700	14,200	14,500	14,000	13,700	13,700	13,700	13,600	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	10.6	12.9	11.1	10.4	10.6	9.9	9.8	10.4	8.1	7.1	6.1	4.4	6.0	4.6	5.3	+0.7
Gender																
Male	16.0	17.8	15.6	14.3	15.2	14.5	13.6	14.1	11.7	10.9	8.0	5.4	7.6	6.4	6.2	-0.2
Female	4.1	6.8	6.2	5.8	5.5	4.9	4.6	5.3	4.1	3.0	3.3	2.8	2.6	2.4	3.6	+1.2
College Plans																
None or under 4 years	14.0	19.4	14.3	16.4	13.4	15.4	14.9	10.9	11.0	10.3	10.4	7.1	7.8	8.5	6.8	-1.7
Complete 4 years	8.2	10.0	9.7	8.2	9.4	8.0	8.3	9.5	6.2	5.7	4.6	3.0	4.7	3.4	3.4	+0.0
Region																
Northeast	11.0	13.3	13.9	11.0	14.3	9.3	11.2	12.7	8.7	7.5	7.3	4.9	7.4	3.9	2.1	-1.9
Midwest	12.6	15.3	12.1	11.9	13.1	13.8	11.9	10.5	9.4	7.6	8.6	4.3	5.7	3.5	5.6	+2.0
South	10.3	14.2	11.1	10.3	9.6	9.5	9.3	9.0	6.3	7.6	5.1	4.1	6.0	5.5	6.8	+1.3
West	8.3	7.1	7.5	8.1	5.7	7.1	7.5	10.8	9.1	5.4	4.8	4.6	5.4	4.5	4.4	-0.0
Population Density																
Large MSA	9.2	12.6	9.5	10.4	9.5	10.0	10.7	12.5	8.2	5.9	6.9	4.8	7.1	3.8	4.1	+0.3
Other MSA	9.1	12.7	12.2	8.6	10.2	9.0	9.4	8.8	8.8	7.0	4.7	2.5	4.4	4.3	4.8	+0.5
Non-MSA	15.1	13.8	10.9	14.3	13.0	11.9	9.7	11.2	6.4	9.0	8.5	8.4	7.8	6.6	8.6	+2.0
Parental Education <sup>a</sup>																
1.0–2.0 (Low)	6.8	15.8	6.0	10.6	8.8	7.8	9.4	14.9	9.1	6.9	3.0	3.3	6.3	5.6	5.0	-0.6
2.5–3.0	11.8	13.5	10.6	10.8	11.8	9.2	7.6	9.3	7.8	11.4	5.2	4.7	6.0	4.3	3.8	-0.5
3.5–4.0	10.7	11.4	11.1	8.0	10.8	10.4	10.0	9.9	8.5	4.9	7.2	4.4	3.7	4.5	6.7	+2.2
4.5–5.0	10.2	11.3	11.8	11.8	8.4	8.8	9.2	9.9	8.0	6.2	6.1	3.7	6.3	3.7	3.8	+0.1
5.5–6.0 (High)	6.4	10.7	11.2	8.0	9.0	7.1	10.2	9.6	2.7	6.6	5.2	2.4	4.9	4.9	3.8	-1.1
Race/Ethnicity (2-year average) <sup>b</sup>																
White	—	13.2	13.8	13.3	12.2	11.9	11.9	11.4	9.8	7.9	7.3	6.1	5.9	6.2	5.8	-0.4
African American	—	4.4	4.1	1.4	2.8	4.4	3.5	5.0	5.1	5.0	4.5	1.9	3.2	3.8	2.5	-1.3
Hispanic	—	9.6	8.8	6.7	9.0	8.0	6.8	7.1	8.1	8.0	5.4	3.5	3.0	3.6	3.9	+0.2

*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 D-S3 for the number of subgroup cases. See appendix B for definition of variables in table. Data based on 1 of 6 forms;  $N$  is one sixth of  $N$  indicated in Table S3.

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

<sup>a</sup>Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data were allowed on one of the two variables.

<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 106**  
**EXTREME BINGE DRINKING:**  
**Trends in 2-Week Prevalence of Having 15 or More Drinks in a Row**  
**by Subgroups in Grade 12**

	<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>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	2018– 2019 change
Approx. weighted N =	14,700	14,200	14,500	14,000	13,700	13,700	13,700	13,600	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	5.7	7.2	5.6	5.6	6.0	6.3	4.6	5.5	4.4	4.1	3.5	2.3	3.1	2.5	3.2	+0.8
Gender																
Male	8.5	10.7	8.3	8.7	8.8	9.4	6.4	7.1	6.4	6.4	4.9	3.6	4.4	3.0	3.7	+0.8
Female	1.8	2.9	2.7	2.1	3.0	2.3	1.9	2.1	1.7	1.2	1.5	1.0	0.7	0.9	1.8	+0.9
College Plans																
None or under 4 years	7.0	12.2	8.3	10.5	7.9	11.0	9.1	6.0	5.9	5.3	8.4	4.2	6.3	4.8	5.2	+0.4
Complete 4 years	4.1	5.1	4.5	4.1	5.3	4.6	3.3	4.6	2.9	3.1	2.0	1.7	2.0	1.6	1.7	+0.1
Region																
Northeast	5.6	5.5	6.0	4.7	6.6	5.7	4.3	5.1	5.5	4.0	3.8	1.7	2.2	1.7	1.7	+0.0
Midwest	7.1	8.9	6.7	6.5	8.2	9.6	6.8	5.9	4.9	4.2	4.2	2.8	2.3	1.0	2.7	+1.7 s
South	5.9	8.4	6.1	6.2	6.1	6.1	4.6	5.6	3.4	4.9	3.0	2.2	3.7	3.9	4.3	+0.5
West	4.1	4.3	3.5	4.1	2.4	3.9	2.7	5.2	4.4	2.6	3.6	2.5	3.6	2.0	2.7	+0.7
Population Density																
Large MSA	4.9	7.2	4.3	4.0	5.5	6.5	4.0	7.1	4.9	3.3	3.9	2.6	3.3	1.3	2.4	+1.1
Other MSA	5.5	6.6	6.4	4.2	5.4	5.8	4.3	4.2	4.5	4.5	3.0	1.6	2.6	2.2	3.2	+1.0
Non-MSA	7.4	8.1	6.0	10.5	7.8	7.2	6.3	6.3	3.3	4.2	4.3	3.5	4.2	5.2	4.7	-0.5
Parental Education <sup>a</sup>																
1.0–2.0 (Low)	5.5	8.0	5.7	7.9	5.6	6.6	6.3	9.7	4.3	4.9	1.9	1.6	2.6	4.1	3.8	-0.3
2.5–3.0	6.3	7.6	6.4	5.3	7.4	5.2	4.7	4.1	3.2	4.7	2.9	2.8	3.6	1.8	2.5	+0.7
3.5–4.0	4.0	6.1	5.6	4.6	6.1	6.6	5.5	4.2	5.2	3.4	4.0	2.3	2.7	2.1	3.7	+1.6
4.5–5.0	4.9	6.9	5.7	6.1	4.0	4.0	2.6	5.0	3.7	3.4	3.3	2.1	2.7	1.1	2.4	+1.3
5.5–6.0 (High)	4.1	4.7	2.7	2.6	4.2	4.9	3.8	5.2	0.6	3.6	2.4	0.7	0.9	3.2	1.0	-2.2
Race/Ethnicity (2-year average) <sup>b</sup>																
White	—	6.9	7.0	6.5	6.7	6.9	6.1	5.2	4.9	4.4	4.1	3.1	2.7	2.9	2.7	-0.2
African American	—	1.1	2.2	1.5	1.8	3.1	2.5	2.8	2.8	2.7	1.6	0.4	2.3	3.2	2.5	-0.7
Hispanic	—	5.6	5.8	5.1	5.0	4.3	4.4	4.5	4.6	3.8	2.9	2.8	1.8	1.3	1.9	+0.6

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 D-S3 for the number of subgroup cases. See appendix B for definition of variables in table. Data based on 1 of 6 forms; N is one sixth of N indicated in Table S3.

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

<sup>a</sup>Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data were allowed on one of the two variables.

<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 107**  
**BEER: Trends in 30-Day Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 30 days															
Approximate weighted N =	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	
Total	17,500	18,600	18,300	17,300	17,500	17,800	18,600	18,100	16,700	16,700	16,200	15,100	16,500	17,000	16,800	
	16.2	16.9	17.4	18.3	18.8	18.4	16.7	16.2	16.6	15.2	15.0	12.3	12.0	14.4	12.8	
Gender:																
Male	19.1	18.6	19.1	21.2	20.4	19.9	18.6	17.7	19.4	16.8	16.5	12.2	12.4	14.0	12.9	
Female	13.5	15.3	16.1	16.0	17.0	17.1	14.6	14.7	14.1	13.5	13.6	12.2	11.4	14.6	12.9	
College Plans:																
None or under 4 years	26.4	27.7	32.2	32.8	36.0	33.0	33.9	32.6	35.5	29.6	32.9	27.4	28.7	26.4	26.3	
Complete 4 years	14.6	15.4	15.6	16.6	16.8	16.3	14.6	14.4	14.3	13.8	12.9	11.1	10.2	13.1	11.5	
Region:																
Northeast	14.0	14.0	14.9	18.6	19.3	21.7	18.4	14.7	18.5	14.2	18.7	10.8	12.3	15.1	11.4	
Midwest	16.4	18.0	16.7	18.0	17.4	19.3	16.8	18.4	17.5	17.0	13.2	10.2	14.0	15.9	11.4	
South	17.8	18.5	19.1	18.2	20.1	16.6	15.5	16.1	17.2	14.2	14.3	14.0	11.4	14.4	15.0	
West	14.9	15.1	18.0	18.8	17.6	17.8	17.2	15.1	12.6	15.7	15.3	13.9	10.3	12.2	11.4	
Population Density:																
Large MSA	15.0	18.7	15.1	15.2	12.0	16.2	15.0	13.8	14.3	14.0	12.0	11.5	11.0	14.2	11.4	
Other MSA	16.1	16.8	17.6	19.4	19.1	19.6	15.9	14.3	16.5	14.1	15.5	12.4	11.9	13.9	13.6	
Non-MSA	17.8	15.4	19.8	18.3	21.8	18.8	19.6	22.7	19.4	18.8	17.2	13.2	13.5	15.6	13.1	
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	22.0	22.5	21.5	24.4	23.9	19.7	21.6	21.9	25.4	23.2	21.3	24.1	17.1	23.7	22.6	
2.5–3.0	18.2	18.4	19.5	19.7	22.8	21.3	21.2	17.4	19.7	20.7	18.4	14.8	15.1	17.8	15.8	
3.5–4.0	15.7	18.0	19.4	19.7	19.6	20.2	18.5	17.9	16.9	13.5	18.1	13.5	14.3	15.0	13.9	
4.5–5.0	14.4	13.4	14.9	15.3	15.6	17.8	12.7	12.6	12.3	12.0	10.0	8.4	7.4	11.9	11.2	
5.5–6.0 (High)	13.5	14.6	14.4	17.2	14.2	13.2	14.1	17.0	16.0	11.4	9.7	10.3	10.2	13.3	6.7	
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	16.7	17.6	17.9	19.0	19.7	18.8	17.4	17.4	16.8	15.5	13.5	12.0	13.5	14.0	
African American	—	12.6	13.0	15.8	14.5	11.1	9.7	8.1	9.7	9.7	7.9	7.2	7.5	8.1	7.6	
Hispanic	—	23.9	24.2	22.2	23.3	23.7	21.8	19.9	19.5	19.8	20.7	21.8	19.6	18.4	18.3	

Table continued on next page.

**TABLE 107 (cont.)**  
**BEER: Trends in 30-Day Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 30 days														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	
Total	12.5	12.2	11.8	10.0	10.6	9.8	7.9	6.8	6.3	7.3	4.7	5.7	6.8	5.8	-1.0
Gender:															
Male	13.0	11.3	12.3	10.6	11.3	10.2	8.5	6.9	6.9	8.1	4.9	5.3	6.3	5.2	-1.1
Female	11.9	12.2	11.2	9.2	10.1	9.2	7.2	6.6	5.8	6.5	4.7	6.3	7.5	6.3	-1.2
College Plans:															
None or under 4 years	24.7	27.3	30.5	20.9	26.1	16.6	19.5	14.5	16.0	14.5	11.8	11.3	13.0	12.2	-0.9
Complete 4 years	11.4	10.8	10.3	9.0	9.4	9.4	7.0	6.3	5.6	6.8	4.3	5.1	6.1	5.0	-1.0
Region:															
Northeast	11.4	9.5	10.4	9.2	10.4	6.8	6.8	5.0	4.6	5.8	4.0	3.1	4.8	3.4	-1.4
Midwest	13.2	10.6	12.5	8.4	10.2	9.1	5.0	7.0	6.1	7.6	3.1	4.7	7.0	5.0	-2.0
South	13.3	14.0	14.1	12.2	12.2	10.5	8.8	8.2	6.4	7.8	6.3	6.4	7.1	6.4	-0.7
West	11.4	12.0	8.9	8.8	8.6	11.7	10.1	5.6	7.6	7.1	4.2	7.7	7.5	6.9	-0.6
Population Density:															
Large MSA	11.9	10.3	13.0	8.9	9.0	8.2	7.4	6.6	4.7	6.8	4.6	4.3	5.6	5.0	-0.6
Other MSA	12.1	12.3	11.3	9.5	10.9	9.9	8.6	7.5	6.5	7.5	4.3	5.8	8.0	5.3	-2.6 s
Non-MSA	14.3	14.6	11.3	12.5	12.3	12.0	6.9	5.9	8.1	7.5	6.2	7.7	5.7	8.3	+2.6
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	17.3	21.0	21.3	15.0	13.6	15.4	12.1	11.8	8.6	13.7	12.4	10.1	9.5	9.0	-0.4
2.5–3.0	16.8	19.5	16.7	13.2	14.6	12.5	9.6	8.3	8.8	8.5	6.2	6.3	9.8	8.4	-1.4
3.5–4.0	13.6	10.6	13.1	10.6	11.5	11.4	8.4	8.1	9.0	8.7	3.2	7.1	7.9	6.7	-1.1
4.5–5.0	9.4	9.3	8.8	8.6	8.8	7.5	6.3	6.1	4.1	4.6	4.4	5.2	5.9	4.8	-1.1
5.5–6.0 (High)	9.3	6.7	7.0	6.5	6.5	7.4	4.7	4.9	4.5	6.1	3.0	3.3	4.8	3.8	-1.0
Race/Ethnicity (2-year average): <sup>b</sup>															
White	12.7	11.5	11.5	11.2	10.7	10.2	8.2	6.8	6.4	6.5	5.4	4.6	5.8	6.5	+0.7
African American	8.5	9.0	7.4	6.3	5.6	5.9	5.8	4.2	3.3	3.7	4.1	3.9	3.1	2.1	-1.0
Hispanic	17.1	17.8	17.8	14.9	13.3	14.0	13.8	11.3	9.0	8.8	8.9	7.8	8.4	8.4	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 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; N is one half of N indicated in Table S1. Data based on one of four forms beginning in 1997; N is one third of N indicated in Table S1.

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

<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 108**  
**BEER: Trends in 30-Day Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 30 days															
<i>Approximate weighted N =</i>	<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>	
Total	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	
	31.1	28.9	28.7	30.2	29.9	30.5	30.4	28.3	29.5	30.6	28.0	24.6	23.2	26.5	24.8	
Gender:																
Male		37.6	33.1	33.3	37.3	33.5	34.7	34.1	32.5	35.4	33.7	28.7	27.9	30.7	26.5	
Female		25.2	25.1	24.2	23.3	26.2	26.7	27.1	24.3	23.8	22.9	20.9	19.3	22.3	23.1	
College Plans:																
None or under 4 years		39.4	37.5	37.4	41.4	41.9	44.8	43.8	40.5	43.7	42.3	37.2	30.3	36.4	36.4	
Complete 4 years		29.4	27.2	26.9	28.0	27.8	28.1	28.2	26.1	27.0	28.6	25.9	22.7	22.2	25.1	23.2
Region:																
Northeast		37.1	29.4	32.0	31.9	31.7	33.1	33.2	31.0	34.7	31.7	27.0	23.8	25.6	30.4	25.2
Midwest		31.7	29.4	29.1	31.6	31.1	30.4	30.1	27.8	29.8	33.1	29.0	25.6	23.3	22.1	26.2
South		29.4	28.4	26.6	29.5	29.4	30.6	28.5	27.2	27.8	27.1	26.6	22.6	21.9	27.2	23.6
West		28.4	28.8	28.7	27.5	27.3	28.1	31.1	28.1	26.6	32.6	30.6	27.6	22.6	27.0	24.4
Population Density:																
Large MSA		31.0	30.1	28.8	28.9	23.9	28.9	28.8	24.3	29.3	30.1	25.5	22.5	21.6	23.4	21.8
Other MSA		28.9	27.4	26.4	30.8	30.3	30.1	31.2	28.9	29.4	29.8	26.2	24.7	22.9	27.0	25.2
Non-MSA		35.2	30.8	32.8	30.0	32.2	33.0	30.5	31.4	30.0	32.7	34.4	27.1	26.1	29.3	27.9
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)		33.5	27.7	33.3	30.0	34.0	28.9	28.6	29.3	26.5	26.7	26.7	22.4	26.3	28.7	28.9
2.5–3.0		32.0	30.3	28.4	31.1	33.0	31.1	30.3	30.9	32.3	30.8	27.2	28.6	24.1	30.3	29.1
3.5–4.0		31.4	29.9	29.0	31.3	30.1	30.9	31.3	30.0	29.5	32.3	29.0	25.1	24.3	26.2	23.8
4.5–5.0		29.9	27.7	28.0	30.3	28.5	29.0	31.4	25.0	27.4	32.4	27.7	22.7	21.9	26.4	24.4
5.5–6.0 (High)		30.7	27.4	28.1	27.1	26.5	33.7	30.7	26.5	31.1	28.7	30.4	21.9	21.0	24.2	21.7
Race/Ethnicity (2-year average): <sup>b</sup>																
White		—	31.7	30.2	31.1	32.1	32.5	32.4	31.9	32.2	33.1	31.7	28.7	27.0	27.5	28.2
African American		—	20.9	20.3	19.0	18.8	15.9	15.6	13.1	10.0	13.5	14.8	11.6	10.2	11.3	12.5
Hispanic		—	32.2	29.6	29.3	31.2	31.9	31.3	29.8	28.3	28.9	30.7	28.6	25.1	27.8	31.3

Table continued on next page.

**TABLE 108 (cont.)**  
**BEER: Trends in 30-Day Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 30 days														2018-2019
Approximate weighted N =	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	change
Total	26.8	24.4	22.4	22.6	22.4	19.6	19.6	18.4	17.3	15.7	13.0	14.0	14.1	12.2	-1.9
Gender:															
Male	29.2	26.8	24.5	25.2	26.3	23.0	22.1	21.0	19.2	16.3	13.4	13.6	16.1	13.6	-2.5
Female	24.0	21.8	20.6	19.8	18.4	16.1	17.3	15.7	15.8	15.2	12.3	14.4	12.3	11.1	-1.2
College Plans:															
None or under 4 years	39.2	39.2	38.1	38.0	36.9	31.0	27.6	26.9	28.6	24.9	23.6	20.4	16.5	16.2	-0.3
Complete 4 years	25.2	22.6	20.4	20.9	20.6	18.4	18.7	17.4	16.1	14.8	11.8	13.1	13.9	11.5	-2.3
Region:															
Northeast	31.4	27.3	24.9	23.3	22.3	22.9	23.6	19.7	20.2	17.2	15.2	15.6	15.2	15.1	-0.1
Midwest	25.5	24.7	23.0	21.3	21.3	16.6	16.6	14.1	13.8	13.7	10.7	11.3	11.6	13.6	+1.9
South	25.0	21.2	22.7	23.5	22.2	20.8	20.9	21.5	17.6	17.1	13.4	14.7	16.2	10.9	-5.3 s
West	27.2	25.8	19.7	21.8	23.8	19.0	17.6	17.7	18.0	14.2	12.9	14.5	12.5	11.1	-1.4
Population Density:															
Large MSA	25.5	24.6	21.7	22.1	22.0	18.3	21.6	16.3	16.7	15.3	14.9	15.8	14.9	11.6	-3.3
Other MSA	27.5	22.4	21.8	22.6	22.1	20.7	18.9	19.0	18.0	15.4	10.6	13.0	14.1	11.2	-2.9
Non-MSA	27.3	28.7	24.8	23.1	23.5	19.6	18.2	19.8	16.5	17.3	16.3	13.7	13.1	15.7	+2.7
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	27.8	28.9	29.2	26.8	30.4	25.9	23.1	20.6	23.7	19.1	12.5	15.4	17.9	13.9	-4.0
2.5–3.0	30.7	29.7	25.7	25.7	26.8	22.7	21.1	23.3	18.3	20.5	16.6	15.9	14.2	14.5	+0.3
3.5–4.0	28.4	25.4	23.5	22.8	23.3	20.6	18.8	18.0	18.4	16.7	13.0	14.9	13.0	13.6	+0.6
4.5–5.0	23.4	21.5	20.6	20.3	18.5	16.3	19.7	16.8	14.2	13.5	13.4	11.7	13.0	8.9	-4.1 s
5.5–6.0 (High)	26.0	20.5	17.3	20.0	18.8	17.0	19.9	16.8	18.7	14.6	10.4	13.8	16.3	13.5	-2.8
Race/Ethnicity (2-year average): <sup>b</sup>															
White	28.4	27.8	25.3	23.9	23.3	21.6	21.0	20.3	19.6	18.7	16.3	15.0	15.8	15.3	-0.6
African American	11.9	9.7	10.0	11.7	12.5	12.2	8.2	6.9	6.9	7.2	6.1	4.2	4.1	4.4	+0.3
Hispanic	30.7	29.3	28.2	28.0	29.9	28.3	24.4	23.3	20.5	18.2	16.0	16.0	17.5	16.2	-1.3

*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 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; *N* is one half of *N* indicated in Table S2. Data based on one of four forms beginning in 1997; *N* is one third of *N* indicated in Table S2.

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

<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 109**  
**BEER: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<i>Approximate weighted N =</i>	—	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
Total	—	59.8	62.1	62.3	63.7	62.9	62.7	60.3	61.7	59.5	56.7	55.5	56.2	53.3	51.4	47.2
Gender:																
Male	—	68.6	73.1	73.0	74.0	74.3	71.4	68.3	69.7	67.4	64.5	64.3	64.9	61.8	59.7	55.7
Female	—	51.3	52.8	52.7	54.5	52.4	53.9	52.7	54.0	51.8	49.4	47.9	48.1	46.3	43.4	38.0
College Plans:																
None or under 4 years	—	62.1	64.6	65.2	65.7	68.3	65.0	64.6	62.4	62.7	59.8	54.2	58.2	57.3	55.5	46.5
Complete 4 years	—	57.6	60.3	59.5	61.6	58.4	61.0	57.4	61.1	57.4	55.1	55.7	55.1	51.8	49.4	47.5
Region:																
Northeast	—	64.9	65.9	64.7	71.9	67.6	67.1	65.7	68.3	62.6	64.4	51.5	56.8	54.8	54.2	52.7
Midwest	—	65.4	66.9	68.3	66.1	64.9	67.5	66.1	66.6	66.8	57.4	66.3	61.4	59.8	58.5	50.3
South	—	53.2	55.3	58.4	59.2	60.3	57.5	53.0	56.5	53.7	51.0	48.6	52.1	47.6	46.1	42.0
West	—	52.8	59.4	54.2	56.1	57.7	56.9	52.8	53.8	55.3	56.4	54.4	54.8	52.7	48.5	45.4
Population Density:																
Large MSA	—	62.5	64.2	62.8	65.3	67.7	63.8	63.3	63.1	58.8	56.0	55.1	56.9	52.6	50.1	52.3
Other MSA	—	58.6	62.0	62.4	62.3	62.1	61.9	58.6	59.4	56.6	56.8	55.1	56.4	53.0	51.6	47.3
Non-MSA	—	59.3	60.7	61.7	64.4	60.5	63.0	60.0	63.6	63.7	57.3	56.3	55.4	54.3	52.1	42.4
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	—	58.5	48.3	54.6	52.9	55.9	54.7	56.8	58.8	51.1	52.2	46.8	55.8	47.1	45.3	42.2
2.5–3.0	—	62.7	64.8	63.6	64.5	66.1	65.4	58.5	59.8	62.4	56.8	54.6	53.6	51.9	52.4	47.5
3.5–4.0	—	58.4	66.0	62.7	67.1	64.4	64.0	63.9	62.3	61.2	57.9	56.0	56.0	51.5	52.2	45.8
4.5–5.0	—	62.6	64.4	64.7	68.4	58.4	60.1	60.0	66.2	61.9	60.5	57.6	59.9	58.2	51.4	49.3
5.5–6.0 (High)	—	64.1	69.3	68.3	63.6	69.3	68.9	68.3	65.9	54.2	55.4	62.5	57.7	57.4	53.2	53.4
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	—	63.8	65.2	65.9	66.3	66.3	65.4	64.6	64.6	62.2	59.9	59.6	59.1	57.0	54.1
African American	—	—	38.7	36.4	37.4	38.7	38.8	37.2	39.2	36.9	33.1	32.7	28.6	30.3	32.6	28.4
Hispanic	—	—	52.7	54.3	52.3	52.5	47.7	47.5	43.4	40.7	46.5	50.9	55.4	49.2	40.4	36.6

Table continued on next page.



**TABLE 109 (cont.)**  
**BEER: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	47.2	42.0	43.4	42.6	44.9	46.9	44.4	45.6	42.7	42.7	41.5	39.7	37.8	38.3	38.0	35.5
Gender:																
Male	55.3	50.1	50.0	51.2	53.0	53.5	49.7	55.0	48.2	51.7	50.9	44.3	44.5	44.1	47.3	39.7
Female	39.3	34.6	37.2	35.6	37.4	40.2	39.9	37.0	36.9	33.9	32.1	34.4	31.7	32.1	30.4	31.1
College Plans:																
None or under 4 years	52.4	48.8	48.2	47.1	50.1	46.2	44.6	49.6	47.5	42.4	54.1	45.7	39.4	44.0	45.1	46.2
Complete 4 years	45.2	39.9	41.5	41.6	42.8	47.0	44.4	44.4	41.7	42.4	38.4	37.9	37.2	36.6	36.6	33.4
Region:																
Northeast	49.5	40.8	47.0	43.3	47.0	56.9	47.5	52.6	54.3	48.9	47.2	43.4	41.9	42.6	41.3	42.9
Midwest	53.5	49.1	46.3	48.0	49.7	48.1	43.3	44.6	45.4	47.6	48.1	42.9	43.1	41.4	40.5	35.8
South	41.1	39.5	43.0	40.4	43.8	44.4	43.3	43.2	36.6	35.1	33.6	35.1	32.0	34.2	33.8	34.2
West	46.0	36.7	37.0	38.2	37.8	38.8	44.5	45.5	40.2	43.5	39.9	39.8	36.9	36.1	38.8	31.3
Population Density:																
Large MSA	44.4	42.3	44.0	42.8	45.9	49.1	45.5	42.1	39.9	45.2	38.0	40.5	36.3	34.2	37.9	35.1
Other MSA	47.6	40.3	42.0	39.4	43.7	46.9	45.0	47.6	42.8	40.7	42.6	38.8	38.9	38.9	38.4	37.2
Non-MSA	48.8	45.1	45.3	47.6	46.0	45.3	41.9	45.6	45.4	43.2	43.3	40.5	37.5	41.4	37.1	33.0
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	48.1	36.6	41.1	37.0	43.1	31.2	30.4	37.0	35.4	37.2	39.1	41.6	30.9	34.1	32.9	27.5
2.5–3.0	46.7	41.4	43.7	44.4	44.0	42.4	41.5	42.8	43.0	37.4	48.0	36.6	36.2	38.0	35.8	38.1
3.5–4.0	48.4	40.7	44.4	42.2	42.8	48.2	46.3	48.9	42.5	45.1	35.8	40.9	39.9	43.0	38.4	35.7
4.5–5.0	46.4	43.8	41.9	41.1	47.1	47.1	47.7	48.9	40.0	43.9	43.6	39.9	38.4	36.1	42.4	35.3
5.5–6.0 (High)	46.1	47.0	47.7	46.6	49.6	58.0	49.9	44.5	51.8	52.0	42.3	45.2	41.4	38.7	37.6	38.4
Race/Ethnicity (2-year average): <sup>b</sup>																
White	51.6	48.3	46.0	46.5	47.8	50.1	50.7	49.9	47.7	45.8	46.7	45.4	43.1	42.1	42.3	41.8
African American	25.3	24.2	28.0	29.9	25.6	28.4	25.5	22.8	22.3	21.7	20.6	16.9	14.0	15.7	18.0	14.8
Hispanic	40.3	44.7	39.8	40.5	41.7	41.3	39.8	39.0	43.6	45.3	42.6	40.8	37.2	36.7	39.2	35.4

Table continued on next page.

**TABLE 109 (cont.)**  
**BEER: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days													2018-2019 change
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	36.6	33.7	34.9	31.7	29.0	32.2	30.8	28.6	25.4	23.6	25.5	21.8	21.9	+0.1
Gender:														
Male	43.7	40.7	42.2	39.7	35.2	39.1	36.9	33.1	28.9	28.2	32.6	25.0	27.3	+2.3
Female	29.3	27.7	28.7	23.0	22.4	25.6	24.6	24.4	22.4	19.0	19.7	18.5	16.7	-1.8
College Plans:														
None or under 4 years	39.0	43.7	38.5	40.6	35.8	33.9	41.5	31.4	27.1	23.5	30.8	23.5	27.8	+4.3
Complete 4 years	35.7	31.7	34.1	30.2	27.5	31.9	28.4	27.6	25.2	23.4	24.7	21.5	20.9	-0.6
Region:														
Northeast	44.1	39.7	42.6	41.2	30.5	40.7	35.7	32.4	38.1	26.5	30.6	23.7	22.1	-1.6
Midwest	39.2	32.7	37.8	31.8	31.2	31.1	33.6	28.8	22.2	26.3	29.6	22.5	19.8	-2.7
South	34.2	33.4	31.0	29.0	25.5	26.4	28.2	26.5	20.8	20.2	23.5	20.4	22.3	+1.8
West	31.7	31.8	30.5	28.9	31.0	35.1	27.9	28.7	26.7	25.6	21.6	22.0	24.0	+2.0
Population Density:														
Large MSA	40.7	36.9	39.5	31.6	30.9	36.2	30.7	30.0	29.4	20.7	25.0	22.7	21.6	-1.1
Other MSA	32.8	31.5	31.7	33.1	27.9	32.4	32.5	29.0	23.4	24.7	22.5	18.4	20.1	+1.6
Non-MSA	38.2	35.0	36.6	28.3	29.0	26.0	26.9	25.8	23.7	25.4	32.4	27.9	27.3	-0.6
Parental Education: <sup>a</sup>														
1.0–2.0 (Low)	32.8	28.5	32.2	24.1	28.7	32.1	24.5	26.3	28.2	23.5	11.0	18.0	21.7	+3.7
2.5–3.0	35.2	34.7	30.4	34.8	28.9	30.9	33.7	26.6	26.2	20.6	24.5	21.8	23.3	+1.5
3.5–4.0	36.8	30.9	36.9	31.5	26.2	31.4	33.2	30.5	22.7	23.8	26.9	19.5	19.7	+0.3
4.5–5.0	39.4	33.8	38.9	34.3	32.3	33.6	32.7	25.9	28.3	24.5	28.7	23.6	20.3	-3.3
5.5–6.0 (High)	38.8	43.1	33.7	28.2	29.5	34.7	26.1	39.5	23.2	26.4	33.8	29.1	26.6	-2.5
Race/Ethnicity (2-year average): <sup>b</sup>														
White	41.0	39.7	37.8	36.4	34.0	33.8	34.5	34.0	31.5	29.1	31.0	30.8	25.8	-5.0 sss
African American	13.6	14.6	19.3	18.9	12.0	12.2	15.2	13.4	11.1	9.7	7.3	6.6	6.2	-0.4
Hispanic	32.7	31.2	31.6	32.1	32.7	35.5	32.9	30.7	29.6	23.8	21.6	20.0	21.5	+1.6

*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 five forms in 1976–1988; N is one fifth of N indicated in Table S3. Data based on one of six forms beginning in 1989; N is one sixth of N indicated in Table S3.

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

<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 110**  
**BEER: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Subgroups in Grade 8**

	Percentage reporting 5+ drinks in a row on one or more occasions														
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<i>Approximate weighted N =</i>	17,500	18,600	18,300	17,300	17,500	17,800	18,600	18,100	16,700	16,700	16,200	15,100	16,500	17,000	16,800
Total	7.2	7.3	8.2	8.5	8.5	9.2	7.6	8.0	8.3	7.5	8.1	6.1	5.5	6.8	5.8
Gender:															
Male	9.2	8.9	9.4	10.6	9.8	10.1	9.2	10.0	10.5	8.8	9.4	6.5	5.8	6.4	5.5
Female	5.2	5.9	7.1	6.7	7.4	8.2	6.0	6.3	6.2	6.3	7.0	5.5	5.1	6.9	6.2
College Plans:															
None or under 4 years	15.4	18.2	18.4	20.7	17.5	19.7	22.0	21.6	24.8	21.9	25.4	19.0	17.5	19.0	16.7
Complete 4 years	5.9	5.8	6.9	7.1	7.5	7.6	6.0	6.6	6.2	6.1	6.3	5.0	4.2	5.5	4.9
Region:															
Northeast	4.8	5.5	5.8	8.1	9.3	10.7	7.6	6.6	9.1	5.7	9.4	3.5	5.6	6.5	3.7
Midwest	6.9	7.0	7.6	8.8	8.0	9.2	8.4	10.0	9.3	8.9	7.8	5.6	7.0	8.3	4.7
South	8.9	9.0	9.4	8.1	8.8	8.4	6.9	8.0	8.9	7.1	7.9	6.7	5.1	6.4	7.4
West	7.0	6.7	9.2	9.1	8.1	9.2	7.9	7.1	5.3	8.0	7.9	8.4	4.2	6.0	6.0
Population Density:															
Large MSA	6.6	7.4	6.1	6.9	5.3	8.5	5.6	6.7	6.2	6.0	5.4	5.0	4.2	5.6	4.9
Other MSA	7.0	7.6	8.2	9.1	8.8	9.3	7.4	6.6	8.6	6.4	8.4	6.0	5.3	6.4	6.0
Non-MSA	8.4	6.8	10.7	8.4	9.8	9.8	9.6	12.3	10.2	11.5	10.5	7.7	7.3	8.9	6.6
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	12.6	12.5	11.0	11.6	12.5	12.8	9.8	12.6	17.9	14.8	11.5	11.2	9.4	11.9	14.0
2.5–3.0	7.7	8.9	9.9	9.3	10.2	10.7	10.1	8.0	9.8	10.9	10.0	8.1	7.2	8.8	8.1
3.5–4.0	7.8	7.0	7.9	9.0	9.8	10.1	8.3	9.0	10.4	6.6	9.1	6.8	6.0	7.9	5.3
4.5–5.0	5.0	4.5	7.3	6.8	6.1	7.5	5.3	5.9	3.9	5.0	5.1	3.7	3.5	5.3	4.3
5.5–6.0 (High)	6.2	6.0	6.2	8.4	5.9	6.7	5.7	8.7	6.1	4.3	5.3	4.8	4.1	4.7	2.4
Race/Ethnicity (2-year average): <sup>b</sup>															
White	—	7.0	7.6	8.0	8.7	9.2	8.6	7.9	8.3	8.3	7.7	6.7	5.7	6.1	5.9
African American	—	5.2	5.1	7.2	6.4	4.9	4.4	3.6	4.7	4.9	4.0	3.2	3.0	3.6	3.1
Hispanic	—	12.7	13.2	12.1	11.6	12.7	12.3	10.5	10.2	9.8	12.3	13.2	10.3	9.1	10.0

Table continued on next page.

**TABLE 110 (cont.)**  
**BEER: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Subgroups in Grade 8**

	Percentage reporting 5+ drinks in a row on one or more occasions														2018-2019
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	change
<i>Approximate weighted N =</i>															
Total	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	-0.3
Gender:															
Male	5.9	5.5	6.0	5.3	5.2	4.4	3.5	2.8	2.6	2.3	1.9	2.6	3.1	2.2	-1.0
Female	4.9	4.8	4.3	4.1	4.7	4.0	3.6	3.1	2.4	2.6	2.1	2.5	2.7	2.9	+0.2
College Plans:															
None or under 4 years	13.9	15.3	19.2	15.4	16.8	8.4	12.2	7.8	6.7	8.6	4.9	6.4	7.7	7.0	-0.7
Complete 4 years	4.7	4.4	4.1	4.1	3.9	4.0	2.9	2.7	2.2	2.0	1.8	2.1	2.2	1.9	-0.3
Region:															
Northeast	4.1	4.8	5.3	4.6	4.8	2.1	2.1	2.0	1.8	1.9	1.3	0.8	1.9	0.8	-1.1
Midwest	5.9	3.6	4.6	4.4	4.3	4.9	1.5	2.8	2.9	1.9	1.6	2.2	2.9	2.1	-0.7
South	6.3	6.6	6.2	5.8	5.8	4.3	4.1	3.7	2.6	3.1	2.7	3.1	2.8	3.0	+0.2
West	4.9	5.4	3.9	4.2	3.9	5.4	5.8	2.6	2.6	2.3	1.5	3.5	3.8	3.3	-0.5
Population Density:															
Large MSA	4.1	4.5	5.6	4.4	4.4	3.0	3.6	2.3	1.7	2.1	2.2	1.9	2.8	1.5	-1.3 s
Other MSA	5.4	5.2	4.7	4.4	5.0	4.6	3.7	3.4	2.7	2.5	1.6	2.6	3.2	2.6	-0.5
Non-MSA	7.8	6.9	5.2	6.8	5.2	5.5	2.9	2.8	3.3	2.9	2.4	3.6	2.2	3.7	+1.5
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	8.9	11.6	11.3	9.5	9.2	7.6	7.7	6.1	4.7	6.2	7.3	3.9	4.8	4.0	-0.7
2.5–3.0	7.1	8.8	8.8	6.8	7.6	5.5	5.1	3.1	3.7	4.3	2.5	2.8	4.7	4.1	-0.6
3.5–4.0	5.4	4.8	5.7	5.1	4.8	5.7	2.7	4.1	2.9	1.8	1.7	2.6	2.8	2.8	0.0
4.5–5.0	4.3	3.4	2.5	4.3	3.4	3.0	2.4	2.2	1.4	1.4	1.4	2.6	1.8	1.8	0.0
5.5–6.0 (High)	4.7	2.1	2.3	2.0	2.5	2.7	1.4	2.1	1.6	0.9	0.9	1.6	1.9	1.8	-0.1
Race/Ethnicity (2-year average): <sup>b</sup>															
White	5.2	4.9	4.8	5.0	4.8	4.3	3.3	2.9	2.5	1.9	1.8	2.0	2.3	2.5	+0.3
African American	2.7	2.6	2.4	2.0	1.5	2.9	3.0	1.3	1.7	1.6	0.9	1.4	1.9	1.1	-0.8
Hispanic	9.0	9.0	9.0	7.3	7.1	7.0	7.3	5.9	3.6	3.9	4.3	3.4	3.7	4.3	+0.6

**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; *N* is one half of *N* indicated in Table S1. Data based on one of four forms beginning in 1997; *N* is one third of *N* indicated in Table S1.

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

<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 111**  
**BEER: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Subgroups in Grade 10**

Percentage reporting 5+ drinks in a row on one or more occasions

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	
<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	
Total	16.4	15.1	16.1	17.0	17.1	17.9	17.6	16.0	18.1	17.5	16.3	14.1	13.8	13.6	13.1	
Gender:																
Male	21.7	18.9	20.4	23.0	21.1	22.5	21.2	20.7	24.0	22.5	22.2	16.7	18.3	17.1	15.2	
Female	11.7	11.7	11.8	11.1	13.1	13.7	14.4	11.8	12.5	12.7	11.2	11.7	9.9	10.4	10.8	
College Plans:																
None or under 4 years	25.4	22.8	25.4	26.6	28.2	30.7	31.6	26.1	29.9	26.8	31.2	26.2	22.7	20.5	23.0	
Complete 4 years	14.5	13.5	14.2	15.0	15.3	15.8	15.4	14.2	16.2	15.9	14.1	12.2	12.6	12.7	11.8	
Region:																
Northeast	19.0	14.6	17.1	18.4	17.4	19.9	17.5	18.8	21.5	16.4	15.2	12.6	16.4	16.9	15.2	
Midwest	16.5	16.7	17.3	18.2	18.3	18.8	18.4	16.3	18.3	20.9	16.4	14.9	13.5	10.9	14.6	
South	15.4	13.9	14.9	16.9	16.9	17.7	16.6	15.4	17.5	15.7	15.9	13.2	12.4	12.8	10.8	
West	15.9	15.5	15.2	13.5	15.5	15.1	18.3	14.0	15.5	16.9	18.3	16.0	14.0	15.0	12.4	
Population Density:																
Large MSA	16.0	14.8	15.2	14.5	12.7	16.4	15.9	12.8	18.0	16.9	13.0	12.0	13.0	11.5	10.6	
Other MSA	15.8	13.9	13.9	17.0	17.2	17.6	17.6	15.9	17.3	16.3	15.7	13.5	13.1	14.4	13.8	
Non-MSA	17.9	17.7	20.9	18.7	19.6	20.1	19.1	19.6	20.1	20.1	21.2	18.1	17.0	14.7	14.6	
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	21.3	15.6	18.9	19.2	20.3	20.5	18.1	12.8	14.2	16.7	17.9	13.8	19.0	14.1	15.1	
2.5–3.0	18.5	16.6	15.3	18.5	19.7	18.8	18.0	19.0	20.5	16.5	15.9	15.8	14.8	17.1	16.3	
3.5–4.0	15.0	15.6	16.5	16.7	17.4	18.5	18.9	15.8	17.6	17.9	17.8	14.4	13.7	13.9	13.6	
4.5–5.0	15.1	14.0	16.3	16.8	16.0	15.9	16.5	14.9	17.3	19.0	14.3	12.5	13.1	12.0	11.6	
5.5–6.0 (High)	15.4	13.1	15.3	14.5	13.8	18.3	16.1	16.2	19.3	16.8	17.5	13.1	11.8	13.7	11.3	
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	16.7	16.4	17.4	18.1	19.0	19.3	18.6	19.7	19.9	18.1	16.5	16.1	15.5	15.1	
African American	—	9.8	10.1	9.3	8.7	6.5	6.6	5.5	4.0	6.2	6.8	6.1	4.7	4.1	4.2	
Hispanic	—	17.2	16.1	16.8	18.6	19.7	19.5	16.9	14.8	17.5	20.3	17.5	16.2	17.5	16.5	

Table continued on next page.

**TABLE 111 (cont.)**

**BEER: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Subgroups in Grade 10**

	Percentage reporting 5+ drinks in a row on one or more occasions														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	14.5	13.7	10.8	11.3	10.9	10.3	10.4	9.1	8.2	7.4	5.6	6.4	6.8	5.4	-1.4
Gender:															
Male	16.3	16.5	12.8	13.6	14.0	12.7	12.9	10.8	9.9	8.6	6.2	7.1	9.4	6.8	-2.6 s
Female	12.3	10.7	9.2	9.1	8.0	7.7	8.1	7.1	6.6	6.2	4.9	5.9	4.4	4.2	-0.2
College Plans:															
None or under 4 years	26.1	26.4	21.2	24.3	23.9	20.0	18.3	15.2	18.3	16.4	11.3	13.7	11.2	6.5	-4.7 s
Complete 4 years	12.8	12.3	9.6	10.0	9.4	9.3	9.7	8.4	7.0	6.5	5.0	5.6	6.2	5.3	-0.9
Region:															
Northeast	17.7	14.7	12.0	12.1	10.3	12.2	12.7	8.8	9.0	8.7	6.1	7.0	8.2	5.5	-2.7
Midwest	14.8	14.2	11.2	11.0	10.9	8.0	9.9	6.4	6.2	6.4	5.2	4.5	5.3	5.9	+0.5
South	12.7	12.5	11.3	11.6	10.7	11.2	11.1	12.0	9.0	8.0	4.8	7.2	8.2	5.4	-2.8
West	13.7	13.9	9.0	10.4	11.8	10.1	8.0	8.4	8.3	6.5	6.7	6.9	5.1	4.9	-0.2
Population Density:															
Large MSA	13.3	12.7	10.2	10.4	10.6	9.5	11.4	7.5	7.2	6.8	6.6	6.4	7.0	4.9	-2.1
Other MSA	15.3	12.5	10.9	11.5	10.5	10.6	9.4	9.3	8.1	7.1	4.5	6.6	6.1	5.3	-0.8
Non-MSA	14.1	17.8	11.7	12.2	12.3	10.6	11.1	10.8	10.1	9.6	6.8	6.1	8.2	6.5	-1.7
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	16.4	19.2	15.1	17.0	19.0	16.0	17.5	13.5	10.9	10.3	5.1	10.2	10.2	6.8	-3.4
2.5–3.0	17.8	18.1	13.2	13.7	11.7	12.1	11.2	10.8	11.1	8.4	7.1	8.1	5.5	6.7	+1.3
3.5–4.0	14.5	13.9	10.9	12.6	11.4	10.5	9.3	9.3	8.8	8.7	5.6	6.4	6.1	5.9	-0.3
4.5–5.0	12.3	11.0	9.5	8.4	8.9	9.2	10.2	7.7	6.0	6.6	5.7	4.8	6.4	2.6	-3.8 ss
5.5–6.0 (High)	14.3	10.6	7.6	9.6	7.9	7.6	10.2	7.6	7.2	6.0	4.6	5.5	7.1	7.4	+0.3
Race/Ethnicity (2-year average): <sup>b</sup>															
White	15.8	15.7	13.7	12.2	11.4	10.7	11.0	10.1	9.4	8.8	7.2	6.6	7.6	7.0	-0.6
African American	3.8	3.7	3.7	4.0	4.4	4.2	3.1	3.1	3.0	3.2	2.8	1.9	1.1	0.9	-0.2
Hispanic	16.0	16.6	15.7	14.7	17.2	17.1	14.3	12.6	8.9	7.3	7.2	8.0	8.8	7.9	-0.9

**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; N is one half of N indicated in Table S2. Data based on one of four forms beginning in 1997; N is one third of N indicated in Table S2.

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

<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 112**  
**BEER: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Subgroups in Grade 12**

	Percentage reporting 5+ drinks in a row on one or more occasions															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Approximate weighted N =	—	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
Total	—	33.0	35.1	35.4	36.4	36.6	38.0	37.6	38.1	36.2	32.0	33.1	33.8	31.0	31.3	27.0
Gender:																
Male	—	45.6	49.0	49.8	50.6	51.1	49.4	48.5	49.8	47.7	42.6	45.4	45.4	41.5	39.5	37.1
Female	—	21.4	23.5	22.6	24.2	23.9	26.5	27.3	27.4	25.0	22.4	22.4	23.1	22.2	23.8	16.5
College Plans:																
None or under 4 years	—	37.7	39.2	41.6	39.5	43.5	42.8	42.1	43.1	41.2	35.5	36.1	37.8	36.9	37.7	29.0
Complete 4 years	—	27.8	31.0	29.4	33.3	30.9	34.2	34.2	34.3	33.6	29.8	30.8	31.7	28.4	28.5	26.0
Region:																
Northeast	—	39.0	35.3	36.5	41.9	41.4	42.1	40.0	37.9	39.8	35.5	32.6	32.1	32.7	32.1	27.4
Midwest	—	35.8	37.6	39.9	39.0	42.3	43.6	45.3	45.1	43.7	34.2	40.8	41.3	38.5	38.2	31.4
South	—	26.6	33.9	31.8	34.0	30.5	33.9	31.7	35.1	31.5	26.6	29.4	30.7	25.7	27.5	23.8
West	—	31.0	31.6	32.0	28.3	31.1	28.5	28.1	31.3	29.4	33.8	27.5	29.8	28.5	27.4	25.1
Population Density:																
Large MSA	—	32.8	34.4	34.4	35.0	40.9	38.9	36.2	37.4	34.5	31.2	33.9	32.3	29.6	27.3	32.0
Other MSA	—	33.9	35.4	35.7	36.3	33.9	37.7	36.6	36.6	33.2	30.2	31.5	34.5	30.9	32.3	26.9
Non-MSA	—	32.1	35.2	35.7	37.6	37.0	37.6	39.8	40.6	41.4	35.1	35.0	33.9	32.6	32.9	22.6
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	—	30.7	31.9	33.6	32.8	31.1	32.3	35.0	38.4	26.8	27.4	28.5	32.9	31.3	26.9	28.1
2.5–3.0	—	37.5	36.4	37.8	38.0	38.8	42.9	37.5	37.4	39.2	33.6	34.2	34.3	31.0	32.2	26.7
3.5–4.0	—	32.9	34.8	34.4	36.5	37.6	39.2	41.6	39.1	37.1	32.1	32.9	34.9	29.4	32.8	24.9
4.5–5.0	—	33.9	34.1	36.2	38.2	36.0	31.7	35.3	39.1	39.9	35.9	34.4	34.7	32.8	31.2	27.7
5.5–6.0 (High)	—	27.2	38.0	28.7	35.5	37.6	38.5	38.9	36.5	30.2	27.4	33.8	29.7	31.4	26.5	32.3
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	—	35.5	36.8	37.6	38.5	40.1	40.9	40.8	40.0	37.1	35.3	35.8	35.2	34.4	32.5
African American	—	—	18.8	19.5	19.4	17.7	16.4	16.9	18.1	18.9	15.5	13.2	13.6	16.1	18.5	13.5
Hispanic	—	—	34.4	33.5	31.5	32.7	30.8	27.6	27.9	27.4	24.6	29.4	32.8	27.5	22.0	20.6

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**TABLE 112 (cont.)**  
**BEER: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Subgroups in Grade 12**

	Percentage reporting 5+ drinks in a row on one or more occasions															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	28.5	25.4	25.5	24.6	27.6	29.2	26.7	28.5	25.6	27.5	26.7	26.1	21.4	23.7	22.4	21.4
Gender:																
Male	37.0	34.0	34.2	35.7	36.5	38.7	32.9	39.3	34.7	38.2	35.9	33.7	31.1	32.1	30.9	26.9
Female	20.1	17.6	18.1	15.5	19.5	19.2	21.2	19.5	17.0	17.6	18.0	18.2	12.9	15.6	15.3	16.2
College Plans:																
None or under 4 years	35.1	32.8	30.2	29.6	32.7	29.4	29.0	39.7	29.5	31.0	40.5	37.0	24.9	32.0	28.9	31.5
Complete 4 years	26.0	23.3	23.8	23.4	25.4	28.8	26.2	25.1	24.7	26.0	23.3	22.9	20.3	21.5	21.1	19.0
Region:																
Northeast	27.8	25.7	28.5	23.4	30.5	35.4	32.0	34.2	33.0	32.7	26.5	28.6	27.1	26.1	25.8	25.9
Midwest	34.7	32.5	27.6	28.3	30.2	29.9	25.7	31.4	28.9	32.4	33.9	28.9	24.8	26.2	26.2	22.1
South	24.2	22.9	25.2	24.8	27.2	27.5	24.1	25.5	21.3	20.0	19.7	22.4	16.8	21.8	20.2	20.6
West	27.3	18.4	20.8	19.7	21.8	24.6	27.6	25.6	22.8	29.4	27.9	26.3	19.2	20.9	18.0	18.1
Population Density:																
Large MSA	24.7	26.0	23.8	23.6	26.9	32.4	26.2	24.4	21.3	29.8	23.4	25.7	18.9	20.9	21.4	21.2
Other MSA	28.8	24.2	24.8	22.6	26.7	29.3	27.9	30.3	26.8	26.1	26.7	25.2	22.9	22.9	23.7	21.2
Non-MSA	31.0	27.2	28.1	28.7	30.0	26.6	25.0	29.5	28.1	27.4	30.2	28.1	21.7	28.2	21.0	22.1
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	34.9	23.4	27.3	23.7	28.9	23.8	18.7	23.5	22.1	16.8	28.2	32.0	20.1	18.5	17.0	19.3
2.5–3.0	29.2	26.6	26.1	25.3	27.6	25.0	26.0	26.5	27.7	24.3	31.9	24.5	22.9	27.0	21.3	23.2
3.5–4.0	29.4	25.2	26.6	24.2	25.6	29.3	28.3	31.9	26.5	29.1	21.4	27.4	20.5	26.3	23.0	23.9
4.5–5.0	26.2	23.9	24.1	24.1	27.6	28.1	29.1	29.3	24.2	28.7	28.7	24.4	23.3	20.9	25.5	19.6
5.5–6.0 (High)	25.7	26.9	26.1	26.0	32.2	41.0	28.3	27.6	24.3	35.1	28.0	27.3	19.0	20.2	21.8	19.3
Race/Ethnicity (2-year average): <sup>b</sup>																
White	30.6	29.6	27.6	27.3	29.0	31.3	31.4	31.3	30.0	28.8	31.0	30.2	26.4	25.3	26.1	25.8
African American	10.2	13.1	15.5	15.4	12.6	14.6	13.3	11.7	10.6	9.9	9.1	7.6	6.1	9.3	11.2	7.1
Hispanic	23.8	27.2	24.8	24.9	23.8	26.1	26.0	24.4	27.5	29.0	27.1	24.7	21.6	20.0	19.7	19.8

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**TABLE 112 (cont.)**  
**BEER: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Subgroups in Grade 12**

	Percentage reporting 5+ drinks in a row on one or more occasions												2018-2019	
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	change
<i>Approximate weighted N =</i>	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	22.0	20.9	20.8	19.5	16.8	18.8	17.3	16.8	13.6	11.5	14.7	11.2	11.5	+0.4
Gender:														
Male	27.7	27.7	28.0	26.3	24.2	25.1	23.3	22.3	17.5	14.7	20.5	14.4	15.8	+1.4
Female	16.1	15.1	14.3	12.4	10.2	12.3	11.8	11.7	10.0	7.6	9.8	8.1	7.6	-0.5
College Plans:														
None or under 4 years	24.2	30.9	26.7	25.9	21.1	21.3	25.6	18.7	16.6	13.3	21.7	16.5	19.9	+3.4
Complete 4 years	21.2	18.7	19.5	18.3	16.0	18.0	15.3	16.0	12.9	10.7	13.1	9.6	9.9	+0.3
Region:														
Northeast	29.5	23.7	26.0	25.2	17.7	24.9	20.9	18.9	20.0	15.0	19.8	12.1	12.2	+0.1
Midwest	24.3	21.0	23.6	23.3	21.5	18.6	19.8	14.4	13.7	12.7	19.0	10.8	9.9	-0.9
South	18.8	21.1	16.7	16.6	14.2	16.1	15.6	17.1	10.4	9.0	13.3	11.1	12.4	+1.3
West	18.6	18.7	18.8	16.0	15.1	18.5	14.2	16.7	14.0	12.7	9.9	11.0	11.4	+0.3
Population Density:														
Large MSA	25.1	22.7	21.0	17.8	17.7	22.4	17.3	17.4	14.8	11.5	14.0	12.4	11.5	-0.9
Other MSA	19.0	18.8	19.4	21.4	15.6	18.3	16.9	15.8	13.2	10.6	12.9	9.0	8.9	-0.2
Non-MSA	23.3	23.4	23.6	17.3	18.3	14.6	18.0	18.2	12.6	13.7	19.6	13.9	18.7	+4.8
Parental Education: <sup>a</sup>														
1.0–2.0 (Low)	21.5	14.0	21.8	12.3	15.8	22.5	15.4	19.6	12.5	15.1	7.7	11.7	11.3	-0.4
2.5–3.0	23.1	20.4	17.6	22.3	16.9	19.7	18.4	14.2	15.3	9.6	13.7	10.6	10.9	+0.3
3.5–4.0	21.1	19.8	21.2	19.9	16.1	18.9	19.2	19.3	10.6	10.2	15.9	9.3	11.6	+2.3
4.5–5.0	24.2	21.1	23.6	20.9	18.7	18.1	18.5	15.1	16.2	11.7	16.7	13.3	11.1	-2.2
5.5–6.0 (High)	21.0	27.6	19.6	15.8	15.6	15.9	12.1	17.0	12.6	13.6	17.2	11.3	12.2	+0.8
Race/Ethnicity (2-year average): <sup>b</sup>														
White	25.8	25.3	23.6	23.0	21.4	19.7	19.6	20.2	18.1	14.8	16.7	17.2	13.6	-3.6 ss
African American	5.0	5.7	8.2	6.1	4.8	5.3	5.9	7.7	6.8	4.3	3.1	3.7	3.4	-0.3
Hispanic	19.8	17.5	19.4	20.6	18.6	22.9	22.1	16.6	17.7	15.0	11.8	11.2	11.7	+0.5

*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 S3 for the number of subgroup cases. See appendix B for definition of variables in table. Data based on one of five forms in 1976–1988; *N* is one fifth of *N* indicated in Table S3. Data based on one of six forms beginning in 1989; *N* is one sixth of *N* indicated in Table S3.

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

<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 113**  
**LIQUOR: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Approximate weighted N =	—	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
Total	—	44.1	45.0	48.2	47.3	47.9	44.6	45.2	46.4	42.3	40.0	41.0	39.0	35.6	35.7	30.8
Gender:																
Male	—	44.4	44.7	48.9	48.5	48.8	45.3	45.2	48.8	43.3	40.3	43.7	42.8	38.5	39.6	36.9
Female	—	43.8	45.3	47.6	46.6	47.4	44.3	45.1	43.7	40.8	39.5	38.6	35.4	33.6	32.1	24.6
College Plans:																
None or under 4 years	—	44.6	47.8	49.3	46.1	51.4	46.9	47.5	47.4	44.6	41.0	38.9	39.4	36.8	38.1	30.6
Complete 4 years	—	43.8	42.5	47.7	48.5	45.1	43.0	43.6	45.3	40.6	39.6	41.8	39.0	35.0	35.0	30.4
Region:																
Northeast	—	52.5	47.4	47.8	56.7	53.2	49.5	50.8	50.8	46.4	42.1	37.2	43.3	36.1	40.3	34.5
Midwest	—	47.0	49.7	53.7	45.4	46.5	47.2	49.1	50.5	45.6	40.1	49.8	42.2	42.2	40.5	31.0
South	—	37.6	39.8	46.0	43.6	48.5	38.8	38.7	43.3	38.5	37.1	35.9	34.6	30.4	33.0	29.6
West	—	38.3	41.3	42.0	45.0	42.9	43.2	40.0	38.4	39.6	42.1	39.6	37.4	35.0	30.0	28.5
Population Density:																
Large MSA	—	47.3	45.4	49.3	52.0	51.7	44.4	48.5	48.1	40.8	37.7	41.2	39.9	36.0	36.4	33.8
Other MSA	—	44.7	46.0	48.3	47.1	48.4	45.9	45.6	45.5	40.9	39.3	39.9	40.5	36.3	33.5	31.1
Non-MSA	—	41.4	43.3	47.2	44.1	44.8	43.2	42.1	46.1	45.1	42.6	42.4	35.5	34.0	40.3	27.7
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	—	40.8	38.2	37.3	38.2	44.2	43.1	40.3	41.6	33.1	36.2	36.1	32.2	33.5	32.1	25.7
2.5–3.0	—	46.7	45.9	49.8	46.6	47.8	43.5	44.8	44.7	46.3	37.9	38.1	36.0	34.6	32.1	29.5
3.5–4.0	—	44.7	47.3	51.9	51.7	47.5	46.6	48.0	46.5	42.0	39.2	42.3	38.2	33.1	38.3	31.6
4.5–5.0	—	47.9	45.6	49.1	51.7	48.7	40.7	43.6	50.0	44.9	48.0	43.9	43.4	38.7	36.9	34.2
5.5–6.0 (High)	—	46.6	53.4	54.2	49.3	53.4	53.8	54.2	55.2	40.4	40.9	47.4	45.7	39.4	37.7	33.8
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	—	47.5	49.5	50.3	50.1	48.9	48.2	49.0	47.3	44.1	43.5	43.4	41.1	39.8	37.7
African American	—	—	21.2	19.9	23.3	27.5	25.1	21.5	25.3	23.7	18.5	17.4	15.0	16.0	16.8	14.4
Hispanic	—	—	47.7	48.8	43.3	47.2	45.6	41.2	35.6	35.4	42.1	40.4	36.9	31.6	24.6	21.0

Table continued on next page.

**TABLE 113 (cont.)**  
**LIQUOR: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	31.3	28.6	31.4	28.0	34.3	34.7	34.6	37.3	34.3	36.0	35.1	36.0	34.3	35.6	36.4	34.2
Gender:																
Male	34.9	32.0	36.4	32.8	38.2	36.4	36.3	41.2	38.0	41.7	35.6	37.9	36.1	39.3	38.4	33.7
Female	28.0	25.9	27.3	23.2	30.9	32.6	33.4	33.3	30.0	30.7	33.7	33.8	32.9	32.2	34.9	33.9
College Plans:																
None or under 4 years	37.0	31.9	37.3	28.3	36.8	35.8	34.2	38.3	35.0	38.1	40.4	42.5	36.9	40.3	42.6	39.7
Complete 4 years	29.0	27.4	29.9	28.1	33.4	34.1	34.9	36.6	33.9	35.0	33.6	34.2	33.6	34.3	35.5	33.0
Region:																
Northeast	36.6	25.8	32.4	25.9	37.7	40.9	36.6	46.3	39.8	40.9	40.8	41.4	35.8	41.1	41.9	40.0
Midwest	33.5	33.5	32.1	29.0	35.4	36.2	35.2	36.6	33.7	40.5	37.4	39.6	37.4	35.4	39.3	35.2
South	28.1	27.1	34.7	28.1	34.9	33.6	32.9	33.9	32.1	28.3	31.7	32.9	30.7	33.3	33.7	32.5
West	29.0	26.3	24.0	28.2	28.7	27.8	35.1	37.2	34.5	38.5	33.3	31.8	35.4	33.8	32.3	30.9
Population Density:																
Large MSA	30.4	29.8	32.2	30.3	33.3	30.6	36.0	37.2	34.5	41.1	36.0	37.5	32.4	30.1	36.2	34.4
Other MSA	33.1	27.4	30.4	26.5	34.9	38.0	34.6	38.9	34.9	33.8	35.4	37.0	35.6	37.7	37.8	36.3
Non-MSA	29.1	30.0	32.7	28.1	34.3	32.4	33.4	33.9	33.3	34.0	33.9	32.3	34.3	37.4	34.2	30.2
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	29.7	25.4	29.1	23.6	26.8	24.7	27.7	33.5	35.3	30.8	28.2	29.4	27.6	29.5	30.9	30.2
2.5–3.0	32.6	29.9	29.4	28.2	34.8	37.5	31.8	33.5	33.7	28.7	36.3	33.5	35.2	34.0	33.0	36.7
3.5–4.0	33.6	29.0	34.1	25.8	32.4	34.7	36.4	40.6	32.7	40.0	35.4	37.3	35.7	38.2	33.8	34.7
4.5–5.0	27.4	25.9	32.2	29.3	35.7	30.1	35.8	38.2	33.4	35.2	38.3	38.2	36.5	36.4	43.3	33.8
5.5–6.0 (High)	33.5	33.1	29.9	32.0	41.1	42.1	40.4	38.3	40.8	47.8	34.5	38.8	33.0	36.6	38.4	35.9
Race/Ethnicity (2-year average): <sup>b</sup>																
White	35.0	32.9	32.5	32.6	34.1	37.2	38.5	39.5	37.6	37.2	38.8	38.9	37.8	37.8	39.8	39.5
African American	14.1	15.1	17.5	17.1	17.9	24.9	20.4	17.6	21.5	22.2	22.1	22.0	23.0	23.7	25.3	23.0
Hispanic	23.2	29.2	28.9	26.3	27.4	29.4	28.1	31.7	36.6	36.3	36.0	36.3	33.3	29.6	30.2	28.4

Table continued on next page.

**TABLE 113 (cont.)**  
**LIQUOR: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days												2018-2019 change	
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		2019
<i>Approximate weighted N =</i>	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	34.1	32.4	33.2	29.8	29.8	31.2	31.0	28.1	26.1	25.1	26.8	21.8	22.4	+0.6
Gender:														
Male	36.2	33.8	35.2	31.9	31.1	32.3	31.8	29.2	26.0	25.6	26.7	20.0	22.2	+2.2
Female	31.4	30.7	30.9	27.3	28.6	30.4	29.8	27.6	26.3	24.1	27.2	23.3	22.3	-1.0
College Plans:														
None or under 4 years	37.5	38.0	40.6	34.9	29.5	30.0	33.6	25.3	27.8	20.5	29.3	21.4	27.1	+5.7
Complete 4 years	33.5	31.4	31.7	28.8	29.7	31.3	30.4	28.5	26.0	26.1	26.8	22.0	21.7	-0.3
Region:														
Northeast	41.2	37.1	37.7	38.5	38.0	41.8	33.4	29.7	35.9	29.6	28.7	24.4	21.4	-3.0
Midwest	38.1	33.4	34.7	31.1	30.4	27.9	32.5	30.9	23.6	26.3	30.1	22.3	23.5	+1.2
South	30.6	32.2	32.1	26.4	26.8	28.2	27.7	25.4	22.6	21.8	25.1	20.6	22.0	+1.3
West	29.8	28.7	29.3	27.6	28.2	31.7	32.1	28.8	26.9	27.0	25.2	21.6	23.0	+1.4
Population Density:														
Large MSA	37.4	37.1	38.7	30.1	34.3	36.5	35.7	29.9	26.8	25.7	28.3	21.1	24.0	+2.9
Other MSA	31.7	29.2	30.9	31.9	29.2	32.4	30.8	29.0	25.9	24.8	23.7	22.0	20.3	-1.6
Non-MSA	34.1	34.1	31.7	24.2	24.7	20.7	24.9	23.7	25.8	24.9	30.7	22.8	25.4	+2.6
Parental Education: <sup>a</sup>														
1.0–2.0 (Low)	27.1	33.3	32.5	22.5	28.7	28.8	24.7	21.7	27.3	24.3	10.8	16.8	16.6	-0.2
2.5–3.0	33.7	30.8	28.1	33.3	28.9	31.7	29.9	28.9	24.4	22.2	27.9	19.1	22.7	+3.7
3.5–4.0	33.2	33.1	33.9	29.3	29.8	32.4	34.6	29.1	23.4	24.4	28.1	22.9	23.3	+0.5
4.5–5.0	37.3	30.3	36.8	30.5	29.5	31.9	34.2	28.1	28.9	29.9	30.0	25.0	22.0	-3.0
5.5–6.0 (High)	39.4	37.5	35.9	28.7	35.3	30.3	26.6	32.5	28.6	24.5	34.5	27.5	27.2	-0.3
Race/Ethnicity (2-year average): <sup>b</sup>														
White	37.5	35.2	33.8	33.0	31.9	32.5	32.5	32.2	30.4	28.2	30.3	29.6	25.8	-3.8 s
African American	21.6	23.7	29.4	27.4	22.8	26.7	27.1	21.6	19.2	17.6	16.3	15.3	15.0	-0.4
Hispanic	27.5	29.3	30.5	30.5	30.9	30.9	30.6	29.1	26.4	25.4	22.6	18.7	17.9	-0.9

*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 five forms in 1976–1988; N is one fifth of N indicated in Table S3. Data based on one of six forms beginning in 1989; N is one sixth of N indicated in Table S3.

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

<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 114**  
**LIQUOR: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Subgroups in Grade 12**

	Percentage reporting 5+ drinks in a row on one or more occasions															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<i>Approximate weighted N =</i>	—	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
Total	—	19.8	19.9	22.0	22.8	23.0	21.3	23.8	22.0	21.3	19.6	21.4	20.5	18.2	20.0	16.8
Gender:																
Male	—	23.3	21.1	24.4	26.3	26.1	23.0	25.8	26.4	24.6	20.9	24.7	25.0	20.3	24.5	20.7
Female	—	16.1	18.5	19.6	19.8	20.2	19.7	21.9	17.8	18.2	18.2	18.6	16.2	16.6	15.7	12.8
College Plans:																
None or under 4 years	—	23.8	23.4	26.7	24.2	26.5	26.4	26.9	25.7	24.7	22.0	24.0	24.5	20.7	23.7	17.3
Complete 4 years	—	15.8	16.8	17.9	21.5	19.7	18.0	21.8	19.2	19.2	18.4	19.9	18.6	17.2	18.6	16.4
Region:																
Northeast	—	24.9	20.2	21.8	28.8	27.2	25.0	26.1	24.7	24.9	23.8	20.1	22.3	17.4	23.7	18.0
Midwest	—	22.1	23.3	24.0	23.0	23.7	22.9	27.5	24.0	24.1	19.3	25.9	21.9	23.1	21.4	17.7
South	—	16.0	16.4	22.5	20.6	22.1	18.0	19.6	20.7	20.2	17.0	19.1	18.7	15.2	18.6	15.4
West	—	14.8	19.2	16.2	18.5	18.2	19.2	20.1	17.0	15.3	19.8	19.6	19.6	17.2	17.5	16.5
Population Density:																
Large MSA	—	20.3	18.3	20.5	22.6	22.8	22.6	26.1	24.3	21.1	18.7	21.7	20.3	16.8	18.4	17.9
Other MSA	—	19.9	21.8	21.4	23.4	23.9	20.7	22.2	21.8	20.1	19.6	19.7	20.8	19.8	19.1	16.4
Non-MSA	—	19.4	18.8	23.8	22.3	22.1	21.2	24.1	20.5	23.0	20.2	23.9	20.2	16.6	23.7	16.8
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	—	22.0	18.1	20.9	19.1	22.0	24.3	21.0	21.5	21.0	19.6	19.0	20.6	19.9	17.6	18.0
2.5–3.0	—	22.8	20.4	23.7	23.6	23.9	21.3	24.7	23.6	25.5	20.4	24.2	21.2	21.6	18.1	16.4
3.5–4.0	—	17.4	21.5	22.0	22.9	20.5	24.9	25.2	19.9	19.7	18.1	20.1	18.1	15.7	23.2	15.0
4.5–5.0	—	18.0	16.7	18.6	24.7	24.8	14.7	21.3	22.6	20.0	20.2	20.4	21.8	16.7	20.9	18.5
5.5–6.0 (High)	—	14.0	24.9	22.5	23.2	23.6	19.5	28.1	20.4	17.5	20.6	22.0	22.2	16.4	16.3	19.4
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	—	20.5	22.1	23.6	24.1	23.3	24.2	24.5	23.0	22.0	22.0	22.6	21.3	21.0	20.7
African American	—	—	10.5	7.7	8.4	11.1	10.6	8.6	10.9	11.2	8.0	7.5	6.2	7.2	10.4	9.6
Hispanic	—	—	25.5	26.8	25.9	22.9	25.3	26.7	24.5	21.4	20.9	20.8	21.9	19.0	14.6	11.9

Table continued on next page.

**TABLE 114 (cont.)**  
**LIQUOR: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Subgroups in Grade 12**

	Percentage reporting 5+ drinks in a row on one or more occasions															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	17.4	16.0	18.2	17.1	20.2	21.6	21.1	23.6	22.3	23.8	22.7	25.6	21.1	23.8	25.0	23.3
Gender:																
Male	20.5	20.0	24.6	22.4	24.7	24.6	23.9	27.3	27.6	30.8	26.4	27.2	24.1	29.2	28.5	24.7
Female	14.4	12.6	13.2	12.6	16.2	17.7	18.7	20.0	16.1	17.4	18.8	23.6	18.9	18.2	22.0	22.0
College Plans:																
None or under 4 years	21.7	21.4	24.6	19.1	22.5	21.1	23.4	31.2	23.2	26.4	29.2	31.9	23.0	29.2	32.6	27.1
Complete 4 years	15.8	14.1	16.5	16.6	19.2	21.4	20.6	21.7	21.9	22.9	20.7	23.7	20.5	22.1	23.7	22.6
Region:																
Northeast	21.3	14.8	15.1	14.2	19.2	25.4	24.6	29.8	25.5	24.7	27.9	27.8	23.5	28.2	28.7	29.0
Midwest	19.0	19.0	18.9	17.7	21.5	22.0	20.6	23.6	19.9	29.7	21.5	28.1	24.8	23.4	28.3	26.2
South	15.3	15.5	21.7	17.6	21.8	21.9	20.0	21.7	21.7	17.4	20.4	24.3	17.4	21.6	22.8	20.5
West	15.2	13.7	13.6	18.0	16.4	16.3	20.5	22.3	23.6	26.1	24.3	22.7	20.7	23.4	21.2	19.8
Population Density:																
Large MSA	16.4	15.6	16.8	16.1	19.3	19.5	23.0	23.9	21.4	26.6	23.6	25.8	20.0	20.7	25.3	22.6
Other MSA	17.5	15.2	17.3	16.3	20.3	24.9	21.3	25.1	22.8	21.7	22.2	26.3	21.9	24.6	26.2	25.0
Non-MSA	18.1	17.9	20.7	19.5	21.1	17.7	18.7	20.3	22.2	24.1	22.6	24.0	21.2	25.5	22.5	21.0
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	19.9	15.9	20.7	14.4	15.2	14.7	16.7	23.9	25.5	24.4	15.2	18.4	17.9	17.8	18.5	19.1
2.5–3.0	18.1	17.9	18.3	18.5	19.7	22.1	18.3	21.3	20.7	17.8	25.4	24.2	24.2	25.9	22.1	22.7
3.5–4.0	18.6	15.9	19.7	16.2	20.7	20.4	23.3	25.4	23.6	25.8	21.8	24.4	21.1	26.2	23.5	26.1
4.5–5.0	16.4	13.5	17.4	17.7	21.6	18.0	22.2	24.3	20.6	24.5	24.9	29.0	21.0	22.2	29.8	24.5
5.5–6.0 (High)	13.3	16.5	16.0	18.8	22.0	31.3	23.5	23.0	22.8	30.4	22.4	31.0	21.0	20.3	28.7	20.3
Race/Ethnicity (2-year average): <sup>b</sup>																
White	19.0	18.0	18.7	19.4	20.4	22.3	23.4	24.7	24.4	24.3	25.3	26.3	25.4	24.6	26.9	27.5
African American	6.8	7.1	8.9	9.5	11.3	15.4	12.5	9.9	10.4	10.2	12.8	14.6	14.9	15.8	17.2	14.9
Hispanic	13.4	19.4	18.1	16.8	18.1	18.9	20.0	22.2	24.3	25.2	24.0	24.0	21.1	18.9	20.6	18.4

Table continued on next page.

**TABLE 114 (cont.)**  
**LIQUOR: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Subgroups in Grade 12**

	Percentage reporting 5+ drinks in a row on one or more occasions													
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2018-2019 change
Approximate weighted N =	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	22.9	22.1	21.5	20.3	18.3	22.1	21.0	18.2	16.7	14.6	18.8	12.9	14.6	+1.7
Gender:														
Male	24.4	24.0	23.3	23.6	20.4	24.3	22.5	21.0	17.7	14.9	19.2	12.0	14.7	+2.7
Female	21.5	20.3	19.3	15.9	16.0	19.8	19.2	15.6	15.7	13.8	18.2	13.9	14.4	+0.5
College Plans:														
None or under 4 years	26.5	29.3	28.5	28.9	21.5	23.0	26.5	19.0	21.1	12.4	22.1	15.6	18.5	+2.9
Complete 4 years	22.1	20.5	19.9	18.6	17.7	21.4	19.8	17.9	15.9	14.9	18.3	12.4	14.1	+1.7
Region:														
Northeast	31.2	23.2	27.6	23.9	24.3	29.3	22.0	19.5	24.7	17.7	20.4	12.9	12.6	-0.2
Midwest	26.7	23.4	23.7	21.4	19.7	21.8	23.5	19.8	16.4	15.7	23.8	14.1	15.2	+1.1
South	19.0	21.2	18.7	19.2	15.4	19.7	18.8	15.9	13.9	12.6	16.5	12.1	15.0	+3.0
West	19.0	21.3	17.3	18.2	17.6	20.9	20.9	19.4	16.0	15.3	16.6	13.1	14.7	+1.6
Population Density:														
Large MSA	26.0	24.0	21.9	22.3	22.4	26.7	24.4	18.5	18.0	15.4	19.0	11.7	13.2	+1.6
Other MSA	21.4	20.3	21.8	20.8	17.7	21.4	19.9	18.8	16.4	14.2	16.6	13.5	13.7	+0.2
Non-MSA	21.6	23.8	20.1	16.2	14.0	16.8	19.2	16.5	15.6	14.6	22.8	13.7	19.6	+6.0
Parental Education: <sup>a</sup>														
1.0–2.0 (Low)	18.8	16.9	23.8	15.7	17.3	17.3	20.6	11.5	15.2	17.4	6.4	12.1	9.2	-2.9
2.5–3.0	22.0	20.1	17.8	25.5	16.5	24.2	18.0	17.3	16.3	12.9	22.2	11.8	15.9	+4.1
3.5–4.0	24.3	22.8	22.1	19.0	18.9	21.4	25.5	19.7	14.6	13.2	20.2	11.4	16.0	+4.6
4.5–5.0	24.1	22.0	24.5	20.5	20.5	24.1	23.0	18.3	19.4	17.1	18.7	16.3	13.5	-2.7
5.5–6.0 (High)	24.1	25.5	20.0	18.3	18.1	19.8	15.8	24.0	16.6	13.7	22.7	14.5	17.0	+2.5
Race/Ethnicity (2-year average): <sup>b</sup>														
White	25.8	23.9	22.3	21.7	20.9	21.5	22.7	22.2	19.5	16.7	19.1	19.4	16.6	-2.8 s
African American	13.7	17.1	21.7	18.8	12.3	13.8	16.8	13.6	11.7	10.5	9.1	8.6	9.2	+0.6
Hispanic	17.6	19.1	20.5	21.0	21.6	22.5	21.6	17.5	17.4	16.2	14.2	13.2	10.6	-2.6

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 five forms in 1976–1988; N is one fifth of N indicated in Table S3. Data based on one of six forms beginning in 1989; N is one sixth of N indicated in Table S3.

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

<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 115**  
**WINE: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988 <sup>a</sup>	1989	1990
Approximate weighted N =	—	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
Total	—	34.5	37.4	37.7	36.6	39.5	36.6	37.8	36.0	34.1	36.0	34.5	33.5	22.7	19.7	14.7
Gender:																
Male	—	34.1	35.5	34.8	33.9	38.1	35.3	35.6	33.8	30.3	34.2	30.8	29.3	20.7	18.9	16.1
Female	—	34.5	39.1	40.2	39.0	41.1	38.2	39.9	37.7	38.1	37.4	38.1	37.1	24.3	20.4	13.5
College Plans:																
None or under 4 years	—	31.5	33.1	33.8	33.8	37.1	32.8	36.3	34.5	33.7	34.6	31.5	28.2	19.7	18.6	11.9
Complete 4 years	—	38.0	41.4	41.5	38.5	41.0	39.1	39.5	37.2	34.0	37.3	36.2	35.7	24.0	20.5	16.0
Region:																
Northeast	—	45.2	42.6	47.5	45.3	48.0	51.6	51.4	46.0	41.5	43.9	32.0	35.6	27.7	22.1	15.0
Midwest	—	33.8	36.3	40.8	33.8	36.6	38.5	38.9	36.0	34.3	34.1	41.0	34.0	23.0	23.7	13.4
South	—	27.5	34.2	30.2	30.8	34.8	26.3	27.7	30.9	29.5	30.7	28.1	31.7	18.9	17.4	14.5
West	—	34.0	38.1	32.7	40.8	42.4	31.6	32.5	32.4	34.7	38.4	38.1	33.8	24.5	16.0	16.9
Population Density:																
Large MSA	—	46.6	47.0	45.6	44.2	46.9	46.0	46.3	45.0	36.7	40.7	36.6	35.3	27.6	20.6	15.3
Other MSA	—	33.0	36.5	36.8	36.0	42.1	34.6	36.6	32.4	34.0	36.4	36.0	34.9	22.0	20.5	16.8
Non-MSA	—	28.0	31.4	32.8	31.9	31.0	32.4	32.8	33.8	32.3	31.7	30.7	29.2	19.3	16.7	9.9
Parental Education: <sup>b</sup>																
1.0–2.0 (Low)	—	33.4	30.1	32.3	31.4	28.0	28.0	30.2	26.6	28.3	28.6	28.0	23.9	16.4	19.0	9.5
2.5–3.0	—	33.8	32.8	35.3	33.0	38.0	33.2	33.8	35.3	34.0	32.4	31.3	30.7	17.8	15.6	12.4
3.5–4.0	—	36.9	42.0	40.2	38.2	39.6	37.2	42.0	32.9	35.9	36.9	37.1	31.5	23.4	18.8	14.2
4.5–5.0	—	39.6	42.5	40.8	43.6	45.2	41.5	43.4	46.1	37.1	43.1	36.3	39.7	26.5	24.1	18.9
5.5–6.0 (High)	—	48.4	57.3	49.8	46.7	51.7	52.9	47.5	43.2	33.9	42.6	40.1	40.9	31.4	23.5	19.3
Race/Ethnicity (2-year average): <sup>c</sup>																
White	—	—	35.9	38.1	38.1	39.2	40.2	39.6	38.4	36.5	36.7	37.1	35.7	29.9	23.0	18.6
African American	—	—	36.2	30.8	27.4	27.9	24.9	26.0	28.9	24.4	21.3	21.0	21.8	18.4	15.0	11.2
Hispanic	—	—	42.9	38.5	30.0	31.0	27.3	26.8	28.3	30.9	37.0	37.4	33.0	22.2	15.0	14.2

Table continued on next page.



**TABLE 115 (cont.)**  
**WINE: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days															
	<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>
<i>Approximate weighted N =</i>	<i>15,000</i>	<i>15,800</i>	<i>16,300</i>	<i>15,400</i>	<i>15,400</i>	<i>14,300</i>	<i>15,400</i>	<i>15,200</i>	<i>13,600</i>	<i>12,800</i>	<i>12,800</i>	<i>12,900</i>	<i>14,600</i>	<i>14,600</i>	<i>14,700</i>	<i>14,200</i>
Total	16.1	16.9	14.9	14.2	14.3	18.3	17.0	16.0	15.8	16.2	14.1	13.4	13.4	13.9	14.4	12.6
Gender:																
Male	16.9	17.2	15.9	13.8	13.2	18.1	16.7	17.4	17.6	17.7	12.8	13.2	13.9	13.8	13.8	11.6
Female	15.5	16.6	13.9	14.3	15.3	18.2	17.3	15.0	14.4	15.0	15.5	13.2	13.5	14.1	15.1	13.6
College Plans:																
None or under 4 years	16.1	12.6	16.5	11.7	10.6	14.5	14.2	19.0	11.9	12.0	15.9	11.7	13.8	12.7	14.4	13.9
Complete 4 years	16.4	18.4	14.4	14.8	15.3	19.3	18.0	15.3	16.8	17.1	13.3	13.7	13.5	14.5	14.3	11.9
Region:																
Northeast	22.1	18.5	15.2	15.9	14.2	23.4	19.4	18.7	23.5	20.8	19.2	17.3	12.5	18.2	15.2	13.9
Midwest	17.3	21.9	14.0	14.3	14.3	13.1	14.2	17.7	16.2	11.9	13.5	14.9	13.5	13.0	15.3	13.9
South	11.8	11.0	16.7	13.0	15.9	20.0	17.7	13.8	14.6	17.2	13.9	12.7	14.0	12.6	13.4	12.1
West	16.2	18.3	13.0	15.0	11.6	16.8	17.1	15.9	11.2	15.9	11.3	9.8	13.5	12.8	14.1	10.7
Population Density:																
Large MSA	13.9	17.0	20.0	16.8	14.8	19.5	18.2	19.5	17.4	20.4	16.7	17.2	11.1	12.5	16.9	15.0
Other MSA	17.8	19.0	15.0	14.4	15.1	18.6	18.2	15.9	16.5	14.6	11.5	11.8	15.0	15.4	14.0	12.8
Non-MSA	15.1	12.6	11.3	11.3	12.4	16.6	13.6	12.3	13.3	14.2	15.6	11.9	13.5	12.8	12.2	8.9
Parental Education: <sup>b</sup>																
1.0–2.0 (Low)	10.8	11.7	14.3	9.8	13.5	9.7	13.1	14.6	16.7	19.7	12.3	14.8	9.4	12.8	10.9	4.0
2.5–3.0	16.0	13.9	12.1	13.6	10.2	15.2	13.8	10.2	10.5	10.4	13.6	8.6	13.1	10.9	13.4	10.6
3.5–4.0	16.4	15.4	14.3	11.7	10.5	17.9	15.7	15.1	11.5	14.6	10.2	13.1	13.1	15.6	12.2	11.4
4.5–5.0	17.5	19.2	17.7	14.6	18.1	18.0	18.0	20.8	19.6	16.2	19.1	15.4	15.5	14.1	16.8	15.5
5.5–6.0 (High)	19.4	27.1	16.5	23.8	24.9	27.2	29.1	20.0	29.8	29.1	16.7	19.0	15.8	18.3	18.2	18.4
Race/Ethnicity (2-year average): <sup>c</sup>																
White	16.6	17.4	16.2	14.4	14.4	16.8	19.3	18.1	16.6	16.4	15.9	15.2	14.5	14.7	15.5	15.6
African American	10.2	11.7	14.5	17.6	13.6	12.8	11.1	9.9	9.3	9.5	10.9	8.5	8.0	7.9	7.8	6.1
Hispanic	10.9	14.9	14.3	14.2	15.0	13.8	13.5	13.4	16.4	17.9	12.9	9.4	12.2	13.5	13.1	10.5

Table continued on next page.

**TABLE 115 (cont.)**  
**WINE: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days													2018-2019 change
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	14.1	14.0	11.5	9.3	10.2	10.6	11.5	11.5	8.4	9.5	10.8	9.7	10.3	+0.6
Gender:														
Male	12.1	13.4	12.0	8.7	9.2	8.8	10.2	10.7	5.5	6.8	8.7	5.9	8.0	+2.1
Female	15.3	14.4	10.9	10.2	11.0	12.5	12.7	12.6	10.2	11.6	12.7	13.6	12.0	-1.5
College Plans:														
None or under 4 years	13.1	17.3	10.3	10.6	8.3	5.6	8.9	12.9	8.0	7.5	9.7	4.9	7.8	+2.9
Complete 4 years	14.4	13.4	11.6	9.0	10.6	11.9	12.1	11.1	8.7	9.6	11.2	11.2	11.0	-0.2
Region:														
Northeast	17.6	17.0	17.6	13.4	12.2	13.2	11.2	13.5	13.9	11.8	15.5	15.6	11.4	-4.1
Midwest	14.1	13.9	14.6	12.3	8.8	10.4	12.4	12.4	10.4	8.6	12.0	9.3	8.7	-0.6
South	13.9	13.3	7.6	6.8	10.0	9.3	10.5	10.9	6.3	8.6	9.2	10.2	11.7	+1.5
West	11.5	13.3	8.2	7.3	10.8	10.7	12.0	10.0	5.9	10.2	9.3	5.5	8.1	+2.6
Population Density:														
Large MSA	16.7	18.8	12.6	9.6	11.1	16.0	12.9	13.6	9.7	9.5	11.3	9.8	9.6	-0.2
Other MSA	13.5	13.0	12.3	10.3	11.0	9.4	10.3	11.5	7.6	8.2	11.2	8.7	10.2	+1.6
Non-MSA	11.3	11.0	8.3	6.6	7.4	5.6	12.2	8.7	7.9	12.4	9.4	11.7	11.5	-0.2
Parental Education: <sup>b</sup>														
1.0–2.0 (Low)	9.9	11.3	9.1	5.7	9.0	8.9	5.6	6.6	6.3	4.9	3.1	5.9	3.2	-2.7
2.5–3.0	9.0	11.9	8.8	9.5	5.8	9.0	10.5	7.9	7.2	7.0	9.3	6.7	5.4	-1.3
3.5–4.0	15.3	13.3	10.2	7.5	11.2	11.1	12.0	11.5	7.8	10.4	10.4	9.0	11.1	+2.1
4.5–5.0	16.4	13.7	13.6	12.3	8.8	11.6	14.9	10.8	9.4	10.6	11.7	12.1	12.0	-0.1
5.5–6.0 (High)	19.9	17.2	17.9	10.0	17.3	12.4	11.4	25.5	12.4	10.9	19.8	16.7	16.8	+0.1
Race/Ethnicity (2-year average): <sup>c</sup>														
White	15.4	14.3	12.8	11.5	10.8	11.5	12.2	13.0	12.1	10.6	11.8	13.3	12.7	-0.7
African American	6.5	11.2	11.6	7.6	8.8	10.4	10.5	7.7	5.4	6.7	6.6	4.5	7.3	+2.8
Hispanic	11.0	15.7	14.2	9.4	8.2	9.4	7.8	6.6	6.5	6.6	7.4	6.9	6.4	-0.6

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 five forms in 1976–1988; N is one fifth of N indicated in Table S3. Data based on one of six forms beginning in 1989; N is one sixth of N indicated in Table S3.

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

<sup>a</sup>In the 1988 questionnaires, a question on the use of wine coolers was added. This change may account for the discontinuity between the 1987 and 1988 use rates for wine.

<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 116**  
**WINE: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Subgroups in Grade 12**

	Percentage reporting 5+ drinks in a row on one or more occasions															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988 <sup>a</sup>	1989	1990
Approximate weighted N =	—	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
Total	—	12.5	13.1	13.5	12.9	13.2	13.0	14.9	14.3	13.0	12.8	13.8	12.7	7.8	6.8	4.9
Gender:																
Male	—	14.5	13.9	14.3	13.9	13.3	12.2	12.6	14.4	12.6	12.9	12.4	12.3	7.8	6.1	5.5
Female	—	10.4	12.1	12.8	12.0	12.8	13.5	16.8	13.9	13.1	12.5	14.6	12.8	7.7	7.3	4.3
College Plans:																
None or under 4 years	—	14.1	14.6	14.6	14.8	15.3	13.2	16.1	15.7	14.4	13.9	14.6	13.7	9.5	9.0	5.1
Complete 4 years	—	10.4	11.6	12.7	11.4	11.3	12.6	13.9	13.2	11.9	11.9	13.3	12.0	7.1	6.0	4.9
Region:																
Northeast	—	14.8	14.8	15.0	16.4	18.2	17.9	18.3	19.1	16.9	15.7	11.5	10.7	8.1	7.4	3.6
Midwest	—	13.8	12.9	15.4	12.6	12.2	13.9	16.0	13.6	14.1	12.3	17.2	13.5	7.8	6.9	3.9
South	—	10.1	11.8	11.7	11.8	11.6	10.0	12.4	12.5	11.0	10.9	12.9	13.1	6.8	6.7	5.4
West	—	10.8	13.4	10.9	10.4	11.6	9.8	12.0	13.1	10.9	13.3	12.2	13.2	9.5	6.3	7.0
Population Density:																
Large MSA	—	17.0	14.9	14.7	14.3	14.9	16.8	17.9	17.1	14.1	14.0	13.5	11.0	9.7	6.1	4.4
Other MSA	—	11.4	13.0	12.5	11.8	13.2	11.6	13.3	12.6	12.4	13.7	13.8	13.6	7.8	8.0	4.9
Non-MSA	—	10.7	11.8	14.0	13.1	12.0	11.8	14.7	14.4	13.0	10.6	13.9	12.9	6.0	4.8	5.2
Parental Education: <sup>b</sup>																
1.0–2.0 (Low)	—	14.0	16.4	14.9	12.7	10.2	13.7	15.7	12.1	12.8	11.9	14.7	12.2	8.2	8.3	4.6
2.5–3.0	—	13.4	12.0	13.7	12.4	15.4	13.1	12.1	16.8	14.6	12.1	13.6	13.0	7.2	6.2	5.4
3.5–4.0	—	11.7	14.0	12.2	10.3	13.0	13.4	16.7	12.4	15.0	13.1	14.9	12.1	7.5	6.3	5.4
4.5–5.0	—	12.4	9.4	12.9	16.5	12.7	11.2	14.9	14.4	10.2	13.4	12.2	13.3	7.7	8.0	4.3
5.5–6.0 (High)	—	14.4	15.4	15.0	16.5	12.0	14.2	21.2	12.5	7.7	14.5	12.9	12.3	9.5	5.0	4.4
Race/Ethnicity (2-year average): <sup>c</sup>																
White	—	—	12.0	13.1	13.4	13.1	13.4	14.4	14.8	13.8	13.3	13.6	13.4	10.4	7.5	6.0
African American	—	—	16.7	12.6	10.8	10.4	9.0	10.0	11.4	10.1	8.3	8.3	7.6	8.3	7.8	4.7
Hispanic	—	—	19.3	14.7	9.7	9.5	15.3	15.1	15.8	14.3	13.4	16.1	14.7	8.4	5.1	6.4

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**TABLE 116 (cont.)**  
**WINE: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Subgroups in Grade 12**

	Percentage reporting 5+ drinks in a row on one or more occasions															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	5.8	5.7	5.8	4.9	5.8	7.0	6.4	6.4	5.0	5.4	5.9	4.7	5.0	4.9	5.4	4.4
Gender:																
Male	7.1	6.5	7.2	4.9	6.1	8.3	6.9	6.9	6.5	7.3	5.8	4.6	5.7	6.2	5.1	4.9
Female	4.6	4.5	4.4	4.9	5.6	5.7	6.1	5.8	3.8	3.6	5.3	4.1	4.3	3.5	5.6	4.1
College Plans:																
None or under 4 years	8.0	6.7	8.3	4.0	6.1	5.7	8.7	9.6	5.0	4.2	7.8	6.4	7.0	5.2	7.1	6.0
Complete 4 years	5.3	5.4	5.1	5.3	5.4	7.2	5.7	5.5	5.1	5.6	5.2	4.1	4.5	4.8	4.8	4.0
Region:																
Northeast	7.1	4.5	3.4	4.2	5.9	10.2	6.6	8.0	5.4	5.9	8.3	5.3	4.1	4.6	5.2	5.6
Midwest	5.6	7.2	4.6	4.6	6.3	5.7	5.5	6.4	6.4	5.3	4.5	4.6	5.5	5.1	6.1	5.0
South	5.1	4.1	8.2	4.7	6.9	6.7	7.2	5.7	5.0	5.2	5.8	3.9	5.4	4.9	5.1	3.6
West	6.0	7.1	5.3	6.5	3.0	6.1	6.3	6.5	3.2	5.5	6.1	5.8	4.5	4.9	5.3	4.1
Population Density:																
Large MSA	5.3	6.1	5.4	4.7	5.6	9.6	7.3	6.6	5.3	6.7	5.5	5.4	4.1	5.3	5.8	5.3
Other MSA	6.5	5.8	6.8	6.2	5.4	7.0	6.4	6.6	4.2	5.4	5.4	3.2	5.0	4.6	5.3	3.9
Non-MSA	4.9	5.1	4.5	3.2	6.6	4.9	5.6	5.8	6.2	3.9	7.0	6.7	5.9	5.0	5.2	4.1
Parental Education: <sup>b</sup>																
1.0–2.0 (Low)	5.7	8.0	12.4	4.9	6.1	4.2	5.2	10.7	8.2	11.3	8.0	8.2	6.8	6.4	5.6	4.3
2.5–3.0	6.8	4.8	5.3	3.8	5.6	6.5	6.8	6.0	3.5	3.7	5.6	4.6	6.6	4.4	5.3	2.8
3.5–4.0	6.5	4.1	4.3	5.5	4.2	7.1	4.8	5.7	4.1	5.3	4.7	4.5	4.6	6.5	4.6	3.6
4.5–5.0	4.9	6.1	6.0	3.7	5.6	4.4	8.1	7.6	4.7	4.8	7.2	4.4	4.1	4.1	4.7	5.2
5.5–6.0 (High)	3.5	8.3	4.4	8.4	11.1	13.0	8.2	4.5	8.8	6.5	5.5	4.4	4.2	4.2	8.1	7.3
Race/Ethnicity (2-year average): <sup>c</sup>																
White	5.3	5.5	5.0	4.8	5.2	6.2	6.9	6.5	5.4	4.7	4.8	4.9	5.0	4.9	5.1	5.2
African American	5.1	5.1	7.6	7.5	4.0	4.9	5.1	5.3	4.5	5.2	6.5	5.0	4.3	3.5	2.3	1.7
Hispanic	4.3	7.5	7.8	7.2	7.3	7.6	7.6	7.1	7.8	7.8	7.8	4.7	3.5	5.2	5.0	3.9

Table continued on next page.

**TABLE 116 (cont.)**  
**WINE: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Subgroups in Grade 12**

	Percentage reporting 5+ drinks in a row on one or more occasions													2018-2019 change	
<i>Approximate weighted N =</i>	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
Total	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	0.0	
Gender:															
Male		4.7	4.8	3.6	3.5	4.0	3.3	4.4	4.5	2.9	2.8	3.5	2.1	2.6	+0.5
Female		5.6	5.1	4.3	3.7	2.9	4.1	4.2	5.4	5.7	3.8	4.9	5.0	4.5	-0.6
College Plans:															
None or under 4 years		5.4	7.7	3.4	4.6	3.8	1.6	3.7	7.5	4.1	3.1	4.2	2.3	2.9	+0.6
Complete 4 years		5.1	4.3	3.9	3.3	3.5	4.4	3.7	4.1	4.7	3.3	4.4	4.0	3.7	-0.2
Region:															
Northeast		8.3	4.2	5.8	5.7	4.8	5.7	4.7	5.8	5.6	5.4	8.2	4.6	4.2	-0.4
Midwest		4.9	6.2	5.1	4.3	2.2	4.0	3.9	6.2	5.5	4.2	4.5	3.5	3.0	-0.4
South		4.4	4.7	2.7	2.7	4.1	3.4	3.9	4.5	4.6	2.8	3.5	4.6	4.0	-0.6
West		4.1	4.8	3.0	3.0	3.3	3.3	3.8	3.7	2.6	3.2	3.3	1.6	2.8	+1.3
Population Density:															
Large MSA		6.4	4.2	3.9	3.6	3.8	5.2	4.4	5.2	6.3	3.8	4.3	4.6	2.7	-1.9
Other MSA		5.3	5.4	4.2	4.2	4.0	3.5	3.2	4.8	3.4	2.6	5.1	2.4	4.0	+1.6
Non-MSA		2.9	5.2	3.8	2.4	2.1	3.0	5.4	4.8	4.1	5.7	3.2	4.4	3.9	-0.5
Parental Education: <sup>b</sup>															
1.0–2.0 (Low)		2.3	5.1	4.3	2.4	2.5	2.1	2.2	3.6	4.2	4.3	1.5	4.0	0.7	-3.3
2.5–3.0		3.1	5.2	3.5	3.4	3.0	4.1	5.7	3.1	5.4	2.8	5.2	2.0	1.4	-0.7
3.5–4.0		6.5	5.2	3.6	3.2	3.3	3.3	5.4	6.6	4.2	4.6	4.1	2.3	4.7	+2.4
4.5–5.0		5.3	3.9	5.3	4.5	3.6	5.2	3.6	3.7	3.4	2.9	4.4	4.8	3.6	-1.1
5.5–6.0 (High)		7.5	4.5	3.8	3.7	5.4	3.6	1.8	7.8	7.1	3.5	6.8	5.6	5.2	-0.4
Race/Ethnicity (2-year average): <sup>c</sup>															
White		5.2	4.9	4.1	4.1	4.0	3.6	3.7	5.1	5.8	4.4	4.6	4.8	4.0	-0.8
African American		2.6	3.8	4.5	4.3	3.6	4.0	4.4	4.1	2.9	3.7	3.1	1.5	3.2	+1.7
Hispanic		4.4	5.6	5.2	3.3	2.6	4.3	3.7	2.6	4.2	3.8	2.8	3.4	2.9	-0.5

*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 S3 for the number of subgroup cases. See appendix B for definition of variables in table. Data based on one of five forms in 1976–1988;  $N$  is one fifth of  $N$  indicated in Table S3. Data based on one of six forms beginning in 1989;  $N$  is one sixth of  $N$  indicated in Table S3.

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

<sup>a</sup>In the 1988 questionnaires, a question on the use of wine coolers was added. This change may account for the discontinuity between the 1987 and 1988 use rates for wine.

<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 117**  
**WINE COOLERS: Trends in 30-Day Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 30 days													
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004– 2019
<i>Approximate weighted N =</i>	17,500	18,600	18,300	17,300	17,500	17,800	18,600	18,100	16,700	16,700	16,200	15,100	16,500	—
Total	14.8	15.1	16.1	15.9	15.3	17.5	15.9	15.6	16.5	14.8	15.3	12.9	12.4	—
Gender:														
Male	14.7	13.8	16.2	15.8	14.6	16.1	14.5	15.4	16.7	13.4	14.2	11.9	10.2	—
Female	14.6	16.2	16.0	16.2	15.6	18.7	16.9	15.8	16.3	15.9	15.9	13.3	14.3	—
College Plans:														
None or under 4 years	21.2	23.9	30.6	28.1	25.3	28.7	32.1	27.3	31.9	28.5	31.6	21.1	24.2	—
Complete 4 years	13.7	14.0	14.3	14.5	14.1	15.7	14.0	14.3	14.7	13.3	13.4	12.2	11.1	—
Region:														
Northeast	9.8	11.5	12.7	15.8	15.0	17.7	14.5	15.7	15.4	13.5	17.7	11.8	10.9	—
Midwest	14.5	14.6	15.7	15.0	13.9	18.5	16.1	16.2	17.6	17.0	14.8	12.1	15.5	—
South	17.4	18.1	17.8	16.7	17.0	17.5	16.6	16.2	18.6	14.6	16.8	15.0	12.7	—
West	14.8	14.2	17.3	15.9	13.9	16.0	15.3	14.0	12.7	13.3	11.4	11.3	8.9	—
Population Density:														
Large MSA	14.1	16.4	12.7	14.4	11.1	16.5	14.1	14.0	14.0	12.9	12.3	12.1	10.4	—
Other MSA	14.6	15.4	17.4	17.8	16.1	18.2	15.7	15.4	16.8	14.5	15.4	12.7	12.3	—
Non-MSA	15.8	13.4	17.3	13.2	15.8	17.3	17.9	17.6	18.9	17.5	18.3	14.4	14.7	—
Parental Education: <sup>a</sup>														
1.0–2.0 (Low)	19.3	18.7	18.5	21.1	20.4	21.7	22.2	20.7	30.2	22.1	25.1	22.8	18.2	—
2.5–3.0	16.9	16.6	19.9	17.7	17.6	20.2	19.2	17.8	19.7	18.1	19.7	14.3	15.4	—
3.5–4.0	12.9	16.8	17.2	18.4	15.7	18.4	16.8	16.6	17.5	14.3	19.6	15.7	15.8	—
4.5–5.0	13.9	11.8	13.5	12.0	12.5	15.4	11.9	13.6	13.1	11.8	9.0	9.8	8.1	—
5.5–6.0 (High)	13.5	12.5	11.9	14.7	13.2	13.8	13.5	14.2	11.4	12.1	8.2	9.0	8.7	—
Race/Ethnicity (2-year average): <sup>b</sup>														
White	—	14.4	15.1	15.1	14.9	16.4	16.5	15.4	16.0	15.9	15.0	14.0	12.6	—
African American	—	13.7	13.3	14.4	12.7	12.2	14.7	12.8	12.8	13.1	12.0	9.8	9.6	—
Hispanic	—	21.9	23.2	23.4	24.4	22.9	21.3	21.2	22.4	21.1	18.5	18.9	18.8	—

**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 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;  $N$  is one half of  $N$  indicated in Table S1. Data based on one of four forms beginning in 1997;  $N$  is one third of  $N$  indicated in Table S1. The category of wine coolers was dropped from the 8th- and 10th-grade questionnaires in 2004 to make space for a more general class of flavored alcoholic beverages.

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

<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 118**  
**WINE COOLERS: Trends in 30-Day Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 30 days													
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004– 2019
<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	—
Total	24.0	21.5	22.5	21.8	20.8	22.8	22.1	20.9	22.1	21.2	20.8	18.9	17.2	—
Gender:														
Male	23.9	19.8	20.5	21.9	19.4	21.8	20.6	19.0	20.5	19.6	19.8	16.0	14.8	—
Female	24.1	22.9	24.3	21.6	21.9	23.6	23.4	22.0	23.4	22.6	21.7	21.6	19.5	—
College Plans:														
None or under 4 years	31.1	26.7	27.6	28.4	28.9	33.0	28.4	29.3	33.4	32.6	31.6	30.2	23.8	—
Complete 4 years	22.5	20.5	21.4	20.4	19.4	21.0	21.1	19.3	20.3	19.5	19.1	17.2	16.2	—
Region:														
Northeast	23.2	19.0	24.1	21.6	18.5	20.3	21.0	19.1	21.7	18.8	21.5	18.1	18.7	—
Midwest	23.0	20.2	20.4	21.6	20.6	21.9	20.9	19.1	21.1	20.6	20.2	19.2	15.3	—
South	26.0	23.3	23.6	23.0	22.9	25.0	23.4	22.5	24.0	23.3	21.4	17.7	16.9	—
West	23.0	22.7	23.0	20.2	19.2	22.3	22.4	22.0	20.3	20.7	19.6	21.5	18.2	—
Population Density:														
Large MSA	23.1	21.6	21.5	21.2	16.4	19.3	20.2	16.9	23.1	19.8	19.9	17.4	17.0	—
Other MSA	23.8	22.3	22.4	22.6	20.7	23.7	22.2	21.9	21.3	19.7	19.7	18.7	16.4	—
Non-MSA	25.1	20.0	23.6	20.4	23.7	24.6	23.8	23.2	22.6	25.6	23.7	21.2	19.5	—
Parental Education: <sup>a</sup>														
1.0–2.0 (Low)	25.9	24.4	27.4	24.4	27.7	25.4	21.1	22.6	26.3	23.8	22.2	20.3	23.4	—
2.5–3.0	26.8	21.3	22.3	22.4	23.8	25.5	24.3	25.4	25.1	24.2	22.7	22.5	19.8	—
3.5–4.0	24.8	22.5	22.5	22.3	22.1	23.7	23.6	22.0	22.3	23.6	22.2	19.1	17.5	—
4.5–5.0	21.8	20.6	21.9	21.4	19.1	19.9	21.2	15.6	17.5	19.4	17.7	18.2	15.4	—
5.5–6.0 (High)	20.7	20.5	20.2	17.8	14.5	21.3	18.5	18.5	21.2	14.2	20.3	13.7	13.3	—
Race/Ethnicity (2-year average): <sup>b</sup>														
White	—	23.0	21.9	22.1	21.2	21.7	22.6	21.7	21.6	21.9	21.2	20.3	18.1	—
African American	—	19.9	19.3	20.6	20.0	16.6	16.1	17.6	17.0	18.1	18.3	15.3	15.2	—
Hispanic	—	26.3	26.2	24.7	24.9	28.1	28.0	24.1	24.5	25.2	24.5	22.3	21.7	—

*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 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;  $N$  is one half of  $N$  indicated in Table S2. Data based on one of four forms beginning in 1997;  $N$  is one third of  $N$  indicated in Table S2. The category of wine coolers was dropped from the 8th- and 10th-grade questionnaires in 2004 to make space for a more general class of flavored alcoholic beverages.

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

<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 119**  
**WINE COOLERS: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<i>Approximate weighted N =</i>	—	—	—	—	—	—	—	—	—	—	—	—	—	16,300	16,700	15,200
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	36.6	29.4	26.2
Gender:																
Male	—	—	—	—	—	—	—	—	—	—	—	—	—	30.8	25.5	22.7
Female	—	—	—	—	—	—	—	—	—	—	—	—	—	41.5	33.6	29.8
College Plans:																
None or under 4 years	—	—	—	—	—	—	—	—	—	—	—	—	—	38.2	30.9	29.2
Complete 4 years	—	—	—	—	—	—	—	—	—	—	—	—	—	35.9	28.6	24.9
Region:																
Northeast	—	—	—	—	—	—	—	—	—	—	—	—	—	33.8	29.6	29.2
Midwest	—	—	—	—	—	—	—	—	—	—	—	—	—	37.9	33.0	28.6
South	—	—	—	—	—	—	—	—	—	—	—	—	—	33.6	25.7	22.9
West	—	—	—	—	—	—	—	—	—	—	—	—	—	42.7	31.3	24.7
Population Density:																
Large MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	37.7	28.6	25.9
Other MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	37.1	31.1	28.7
Non-MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	34.6	26.4	21.1
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	—	—	—	—	—	—	—	—	—	—	—	—	—	28.8	27.7	22.9
2.5–3.0	—	—	—	—	—	—	—	—	—	—	—	—	—	37.8	31.9	28.1
3.5–4.0	—	—	—	—	—	—	—	—	—	—	—	—	—	38.5	31.2	27.1
4.5–5.0	—	—	—	—	—	—	—	—	—	—	—	—	—	35.6	27.6	27.6
5.5–6.0 (High)	—	—	—	—	—	—	—	—	—	—	—	—	—	36.9	23.5	21.5
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	—	—	—	—	—	—	—	—	—	—	—	—	—	35.4	29.6
African American	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25.3	21.7
Hispanic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30.2	23.3

Table continued on next page.



**TABLE 119 (cont.)**  
**WINE COOLERS: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	24.3	21.9	19.4	22.2	20.6	20.7	20.7	20.1	18.4	17.6	19.0	19.3	14.6	14.4	14.1	13.3
Gender:																
Male	22.1	19.1	15.1	16.9	15.5	17.7	15.9	15.0	15.6	15.6	14.1	12.0	9.4	11.2	8.7	9.2
Female	26.3	24.3	22.8	26.4	25.1	23.6	24.4	23.5	20.6	19.5	22.2	24.2	18.9	17.2	18.7	17.1
College Plans:																
None or under 4 years	29.3	21.9	20.5	22.8	22.7	20.0	17.8	21.8	22.8	21.2	23.1	21.8	17.2	16.7	18.6	17.5
Complete 4 years	22.8	22.0	19.2	22.3	19.8	20.9	21.6	19.6	17.3	16.1	17.7	18.8	14.0	13.7	13.2	12.3
Region:																
Northeast	21.0	19.6	18.9	15.4	14.6	21.1	17.2	20.8	22.1	19.1	18.4	17.8	15.9	14.7	17.3	13.3
Midwest	26.1	23.7	19.4	26.0	19.8	20.9	21.5	18.6	19.2	18.3	19.5	20.9	15.5	11.0	13.7	13.2
South	23.1	21.3	20.6	23.4	24.1	23.2	22.9	20.6	18.7	16.8	19.7	20.6	13.9	16.7	13.5	14.6
West	26.3	22.2	17.8	19.8	20.4	14.9	18.9	20.4	13.7	16.7	17.5	16.6	13.1	14.6	12.7	10.9
Population Density:																
Large MSA	20.9	21.2	20.4	21.2	20.7	22.7	23.9	22.5	14.7	19.8	18.1	20.5	12.8	14.2	13.5	10.7
Other MSA	28.1	21.0	19.0	23.3	19.8	19.3	19.1	19.4	17.5	15.0	18.5	18.4	13.7	13.8	13.2	14.4
Non-MSA	20.6	24.1	19.4	21.3	21.8	21.6	20.1	18.7	23.4	19.4	20.6	19.4	18.0	15.6	16.7	14.7
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	24.0	25.7	20.8	23.5	21.1	18.2	13.2	19.8	19.0	24.8	19.3	18.4	13.7	21.3	15.6	12.8
2.5–3.0	25.4	21.2	17.1	26.4	20.4	26.8	20.0	21.4	23.2	16.3	22.8	19.6	18.1	17.2	19.8	15.6
3.5–4.0	27.2	22.9	24.4	20.9	22.0	19.5	23.0	23.3	17.3	21.8	18.5	17.8	14.7	16.4	12.6	15.3
4.5–5.0	22.1	18.0	17.2	22.8	21.0	17.0	21.4	17.9	14.3	13.6	19.0	19.4	12.4	9.1	13.6	12.7
5.5–6.0 (High)	18.0	24.5	16.4	14.6	16.7	20.8	21.0	16.6	19.9	16.8	14.6	23.5	10.1	13.3	9.8	9.8
Race/Ethnicity (2-year average): <sup>b</sup>																
White	26.7	23.7	21.3	21.5	21.9	20.8	21.2	21.0	19.6	18.0	18.2	19.7	16.8	13.1	13.6	14.6
African American	20.9	18.2	17.6	18.3	17.6	22.1	21.1	18.4	15.5	12.4	17.0	17.0	15.8	19.4	18.4	10.9
Hispanic	22.3	26.7	22.9	22.9	26.0	22.0	19.8	18.2	17.4	20.7	20.0	16.7	16.0	19.7	19.4	13.8

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**TABLE 119 (cont.)**  
**WINE COOLERS: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days													2018-2019 change
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	12.7	12.8	12.2	12.4	10.0	10.7	11.3	11.3	9.8	10.5	11.4	9.7	10.5	+0.7
Gender:														
Male	9.2	8.3	7.6	9.1	6.1	6.7	6.6	7.0	6.0	6.4	7.5	6.0	8.0	+2.0
Female	16.1	16.6	16.0	16.2	13.4	14.6	15.6	15.0	12.9	13.9	15.2	13.0	12.5	-0.5
College Plans:														
None or under 4 years	18.0	16.8	15.1	18.6	12.7	10.8	13.7	12.4	9.3	9.5	15.3	6.9	13.3	+6.3 s
Complete 4 years	11.5	12.0	11.4	11.3	9.5	10.8	10.8	10.8	10.2	10.5	10.6	10.7	9.8	-0.9
Region:														
Northeast	15.2	11.7	11.7	15.9	14.8	13.5	14.0	12.6	12.4	11.9	11.9	11.6	10.7	-0.9
Midwest	11.9	12.3	14.4	12.3	9.5	10.9	12.7	11.6	8.1	12.3	13.6	13.8	12.2	-1.6
South	13.0	15.1	10.1	12.8	9.8	9.4	9.3	12.6	10.0	9.7	10.8	10.3	11.0	+0.8
West	10.9	10.8	13.1	9.4	7.7	10.6	10.9	7.8	9.4	9.4	9.6	3.9	6.4	+2.4
Population Density:														
Large MSA	11.9	11.4	11.9	12.2	11.6	11.8	12.2	10.7	9.5	8.6	10.3	9.1	9.1	0.0
Other MSA	12.6	12.8	12.8	12.8	8.5	9.5	10.4	10.1	9.5	9.7	10.1	8.4	9.8	+1.4
Non-MSA	13.9	14.3	11.3	11.8	11.4	12.2	12.3	14.7	11.2	15.1	15.4	13.8	14.6	+0.8
Parental Education: <sup>a</sup>														
1.0–2.0 (Low)	18.4	17.3	17.4	13.5	12.8	10.6	11.0	10.0	13.0	9.9	8.4	5.9	6.3	+0.3
2.5–3.0	13.1	12.8	11.1	16.7	15.5	10.2	13.1	15.0	10.5	8.6	11.1	10.8	9.4	-1.3
3.5–4.0	13.5	12.3	14.5	11.6	7.7	11.9	12.7	11.3	9.8	12.0	14.7	9.2	9.1	0.0
4.5–5.0	10.8	11.1	11.0	10.9	8.5	12.3	11.0	9.0	8.8	11.2	11.9	11.6	13.3	+1.6
5.5–6.0 (High)	11.7	12.5	7.1	10.7	8.2	6.5	9.6	11.9	9.0	7.5	7.8	11.8	12.1	+0.2
Race/Ethnicity (2-year average): <sup>b</sup>														
White	13.1	11.4	11.1	12.5	12.0	10.8	11.2	11.6	11.1	10.8	12.5	13.7	13.3	-0.4
African American	11.8	16.8	18.5	13.0	8.3	8.9	10.9	10.4	8.9	10.0	8.9	6.8	7.5	+0.6
Hispanic	13.0	12.9	13.2	12.7	10.5	9.7	11.2	11.0	10.0	8.7	8.8	7.0	5.1	-1.9

*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 five forms in 1988; *N* is one fifth of *N* indicated in Table S3. Data based on one of six forms beginning in 1989; *N* is one sixth of *N* indicated in Table S3.

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

<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 120**  
**WINE COOLERS: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Subgroups in Grade 12**

	Percentage reporting 5+ drinks in a row on one or more occasions															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<i>Approximate weighted N =</i>	—	—	—	—	—	—	—	—	—	—	—	—	—	16,300	16,700	15,200
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	13.9	12.4	10.5
Gender:																
Male	—	—	—	—	—	—	—	—	—	—	—	—	—	12.1	11.3	9.9
Female	—	—	—	—	—	—	—	—	—	—	—	—	—	15.1	13.5	11.3
College Plans:																
None or under 4 years	—	—	—	—	—	—	—	—	—	—	—	—	—	17.7	16.2	14.2
Complete 4 years	—	—	—	—	—	—	—	—	—	—	—	—	—	12.5	10.7	9.0
Region:																
Northeast	—	—	—	—	—	—	—	—	—	—	—	—	—	14.7	14.3	10.0
Midwest	—	—	—	—	—	—	—	—	—	—	—	—	—	14.2	13.1	12.0
South	—	—	—	—	—	—	—	—	—	—	—	—	—	11.2	11.2	9.3
West	—	—	—	—	—	—	—	—	—	—	—	—	—	17.4	12.0	11.0
Population Density:																
Large MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	14.2	11.7	10.0
Other MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	15.6	12.4	11.0
Non-MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	10.7	13.3	9.9
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	—	—	—	—	—	—	—	—	—	—	—	—	—	13.9	9.2	10.7
2.5–3.0	—	—	—	—	—	—	—	—	—	—	—	—	—	16.6	13.8	13.3
3.5–4.0	—	—	—	—	—	—	—	—	—	—	—	—	—	13.6	14.9	9.3
4.5–5.0	—	—	—	—	—	—	—	—	—	—	—	—	—	11.7	10.5	11.3
5.5–6.0 (High)	—	—	—	—	—	—	—	—	—	—	—	—	—	11.4	7.4	6.3
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.6	12.3
African American	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.0	9.9
Hispanic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.5	6.0

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**TABLE 120 (cont.)**  
**WINE COOLERS: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Subgroups in Grade 12**

	Percentage reporting 5+ drinks in a row on one or more occasions															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	10.2	10.4	8.5	8.9	9.0	8.4	9.4	9.5	7.7	8.8	9.7	10.0	7.1	7.5	7.2	7.1
Gender:																
Male	10.0	10.2	7.3	7.4	6.7	6.9	6.7	7.0	7.0	9.4	6.2	7.2	5.4	7.5	4.2	6.1
Female	10.2	10.3	9.5	10.0	10.8	9.7	11.3	11.0	7.8	8.4	11.4	11.4	8.2	8.0	9.7	8.0
College Plans:																
None or under 4 years	13.5	11.1	10.8	10.9	12.1	8.8	10.1	9.9	10.2	12.1	14.8	13.7	8.9	10.8	11.4	11.9
Complete 4 years	9.2	10.1	8.0	8.6	8.0	8.3	9.2	9.5	7.0	7.4	8.2	9.2	6.7	6.8	6.2	6.0
Region:																
Northeast	7.6	8.8	6.5	5.5	5.5	9.8	8.2	9.6	8.9	10.1	10.2	9.8	8.0	7.5	10.7	6.9
Midwest	10.9	12.0	8.0	9.9	7.0	9.2	9.7	7.3	7.0	10.8	8.9	12.0	8.8	6.4	6.6	7.3
South	8.8	10.3	11.1	9.3	11.5	8.7	9.7	10.5	8.8	5.9	10.9	9.6	6.7	8.6	6.6	8.3
West	13.2	9.7	6.2	10.0	10.4	4.8	9.7	10.2	5.6	10.1	8.4	8.4	5.0	7.1	5.7	5.1
Population Density:																
Large MSA	7.9	11.8	7.9	8.5	11.1	8.8	10.8	12.1	7.5	11.1	10.6	9.6	6.8	7.2	7.0	6.4
Other MSA	12.4	9.2	8.7	8.8	7.5	8.3	9.5	8.7	6.5	8.1	8.2	9.9	6.3	7.0	7.4	6.6
Non-MSA	8.2	11.7	8.6	9.6	9.1	8.2	7.8	7.9	9.7	7.4	11.3	10.7	8.9	8.9	7.1	9.1
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	12.5	13.1	12.2	11.4	11.7	9.6	6.8	13.2	8.3	16.8	14.1	14.6	9.3	11.9	8.3	12.0
2.5–3.0	10.9	9.5	6.9	10.4	9.5	11.4	9.8	11.0	9.2	8.8	12.6	9.9	9.4	9.5	9.9	8.2
3.5–4.0	12.0	11.1	11.1	8.8	8.5	6.8	10.6	9.9	7.7	8.8	7.3	9.9	6.1	9.1	6.2	7.4
4.5–5.0	9.2	8.8	7.4	9.2	9.2	7.2	8.6	7.7	7.2	8.6	10.7	10.7	5.9	4.2	6.8	7.4
5.5–6.0 (High)	3.7	10.6	5.6	4.8	7.5	7.7	9.5	7.9	5.8	7.0	6.1	8.0	5.9	5.5	5.2	3.4
Race/Ethnicity (2-year average): <sup>b</sup>																
White	10.7	10.3	9.5	8.6	8.6	8.1	8.7	8.8	7.6	7.6	8.9	10.2	8.4	6.4	6.9	7.5
African American	9.2	8.7	8.6	8.6	7.5	10.4	10.0	9.2	6.9	4.2	9.6	10.0	7.8	11.7	10.5	4.6
Hispanic	9.8	14.5	13.5	13.1	13.9	11.1	9.8	12.0	12.6	13.2	11.5	9.1	9.3	10.6	9.4	8.0

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**TABLE 120 (cont.)**  
**WINE COOLERS: Trends in 2-Week Prevalence of 5 or More Drinks in a Row by Subgroups in Grade 12**

	Percentage reporting 5+ drinks in a row on one or more occasions													
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2018-2019 change
<i>Approximate weighted N =</i>	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	5.8	7.3	6.2	6.4	4.9	5.4	5.3	5.8	5.0	4.3	6.3	5.0	4.9	-0.1
Gender:														
Male	4.8	4.5	3.5	5.7	3.6	3.0	4.1	4.1	2.5	2.2	4.4	2.8	4.1	+1.3
Female	7.0	9.6	8.7	7.0	6.1	7.2	6.4	7.2	6.8	5.6	8.1	6.5	5.6	-1.0
College Plans:														
None or under 4 years	11.1	8.2	9.4	9.9	6.2	6.7	7.9	6.2	5.4	5.2	8.8	6.9	5.8	-1.1
Complete 4 years	4.7	7.0	5.6	5.6	4.5	5.1	4.6	5.4	5.0	3.9	5.7	4.6	4.7	+0.1
Region:														
Northeast	6.1	7.4	5.9	7.5	9.4	6.1	6.0	5.0	4.5	5.5	8.6	5.2	5.8	+0.6
Midwest	6.0	8.1	7.8	6.1	5.0	4.6	6.9	5.4	4.6	7.7	8.1	6.5	4.8	-1.7
South	5.7	8.4	4.9	7.3	4.6	6.1	3.9	6.5	5.5	2.8	5.2	5.3	5.7	+0.4
West	5.5	4.6	6.7	4.3	2.5	4.9	5.0	5.6	5.1	3.1	4.9	3.2	2.5	-0.7
Population Density:														
Large MSA	5.3	6.3	4.8	7.1	4.9	6.8	6.3	5.3	4.8	3.6	6.7	5.8	4.4	-1.4
Other MSA	6.4	6.7	6.6	6.5	4.0	3.8	4.0	5.1	5.3	3.9	6.0	4.0	4.2	+0.3
Non-MSA	5.3	9.4	7.2	4.9	7.2	6.8	7.0	7.7	4.8	6.3	6.6	6.1	7.7	+1.5
Parental Education: <sup>a</sup>														
1.0–2.0 (Low)	8.8	9.1	9.7	7.5	8.4	4.9	8.3	5.5	7.6	1.0	4.1	7.5	1.6	-5.9
2.5–3.0	8.1	8.0	5.4	8.5	7.9	6.7	4.9	6.4	5.3	3.7	8.0	5.4	5.7	+0.2
3.5–4.0	5.6	6.8	8.6	5.6	4.0	5.0	6.6	6.9	4.6	5.8	8.2	2.7	4.3	+1.6
4.5–5.0	4.7	5.5	4.2	5.3	3.4	5.7	4.3	4.5	4.5	5.6	6.3	4.6	5.7	+1.1
5.5–6.0 (High)	4.1	8.3	3.8	5.2	3.5	3.0	4.6	6.0	5.3	2.5	3.6	7.0	5.0	-2.0
Race/Ethnicity (2-year average): <sup>b</sup>														
White	6.4	5.4	5.5	6.1	6.1	5.3	5.4	6.4	5.9	4.7	6.3	6.9	5.6	-1.2
African American	4.9	6.6	8.2	7.2	4.3	3.9	4.7	3.8	4.4	6.1	3.4	1.8	3.4	+1.6
Hispanic	7.9	8.1	8.8	7.4	5.6	5.4	5.8	5.2	5.7	4.1	4.5	5.7	4.0	-1.7

*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 S3 for the number of subgroup cases. See appendix B for definition of variables in table. Data based on one of five forms in 1988;  $N$  is one fifth of  $N$  indicated in Table S3. Data based on one of six forms beginning in 1989;  $N$  is one sixth of  $N$  indicated in Table S3.

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

<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 121**  
**FLAVORED ALCOHOLIC BEVERAGES:**  
**Trends in 30-Day Prevalence of Use by Subgroups in Grade 8**

	1991– 2003	Percentage who used in last 30 days																2018– 2019 change
		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	—	17,000	16,800	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	
Total	—	14.6	12.9	13.1	12.2	10.2	9.5	9.4	8.6	7.6	6.3	5.7	5.5	4.0	4.4	4.9	4.5	-0.4
Gender:																		
Male	—	12.7	11.4	10.8	10.4	9.2	9.1	8.3	8.3	6.1	5.8	5.1	5.2	3.5	3.7	3.9	3.7	-0.1
Female	—	16.3	14.4	15.3	13.4	10.9	9.7	10.3	8.6	9.1	6.7	5.9	5.8	4.5	5.2	6.1	5.3	-0.8
College Plans:																		
None or under 4 years	—	28.1	24.9	25.9	23.8	24.0	18.3	19.6	14.4	19.9	14.3	13.8	10.4	7.5	9.8	6.0	7.5	+1.5
Complete 4 years	—	13.3	11.8	11.8	11.1	9.0	8.7	8.6	8.3	6.7	5.8	5.1	5.2	3.7	3.8	4.9	4.2	-0.7
Region:																		
Northeast	—	14.9	11.0	12.2	9.7	9.2	8.8	9.2	5.4	7.2	4.7	4.9	4.2	2.3	2.0	4.8	2.7	-2.0
Midwest	—	16.2	12.6	12.9	12.0	10.5	9.1	8.2	7.8	5.2	6.3	5.6	5.5	4.0	4.4	4.7	5.1	+0.4
South	—	15.1	14.6	14.3	14.0	12.6	11.8	11.3	9.6	9.2	7.4	4.7	6.6	4.8	4.5	5.1	4.6	-0.5
West	—	11.7	11.9	12.0	10.9	7.2	6.7	7.6	10.4	7.6	5.9	7.8	4.5	3.7	5.9	5.0	5.1	+0.1
Population Density:																		
Large MSA	—	14.4	11.5	12.6	10.6	11.1	7.2	8.5	6.4	6.8	5.7	4.9	4.5	3.2	3.8	4.0	3.2	-0.7
Other MSA	—	14.2	14.0	13.0	12.4	9.7	9.7	10.0	9.7	8.0	7.2	5.3	6.0	4.0	4.5	5.6	4.1	-1.5
Non-MSA	—	15.6	12.8	13.9	14.2	10.2	12.0	9.0	9.6	8.2	5.5	7.4	5.8	5.1	4.9	4.9	7.7	+2.7
Parental Education: <sup>a</sup>																		
1.0–2.0 (Low)	—	19.5	19.5	18.7	21.1	19.3	14.7	11.2	12.7	11.7	12.3	9.5	11.5	10.0	7.7	6.0	4.4	-1.6
2.5–3.0	—	17.5	18.0	18.7	17.5	14.4	13.1	13.4	12.1	11.7	8.7	8.4	5.2	4.4	5.1	6.4	9.1	+2.7
3.5–4.0	—	17.8	16.2	13.4	12.3	11.7	11.4	10.5	10.3	7.8	7.9	7.0	6.4	3.4	4.9	5.6	6.1	+0.5
4.5–5.0	—	11.8	10.3	8.5	9.8	7.2	7.4	8.0	6.2	5.4	5.6	3.3	3.8	3.6	3.4	4.5	3.1	-1.4
5.5–6.0 (High)	—	11.5	7.3	9.9	7.1	6.5	4.7	4.9	6.2	4.7	2.8	4.1	4.0	2.1	3.1	4.5	3.3	-1.2
Race/Ethnicity (2-year average): <sup>b</sup>																		
White	—	—	13.8	12.6	12.1	11.1	9.8	9.0	8.5	7.4	6.4	5.5	5.1	4.4	3.7	4.2	4.9	+0.7
African American	—	—	12.0	11.0	10.1	9.2	8.5	8.0	7.7	8.8	7.3	4.2	4.3	3.9	3.8	3.2	2.3	-0.9
Hispanic	—	—	17.0	17.6	16.7	13.9	11.8	11.7	11.4	10.8	9.1	7.5	7.1	6.6	5.5	5.6	5.4	-0.2

*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 four forms; *N* is one third of *N* indicated in Table S1. In 2011 Sky Blue and Zima were deleted from the list of examples.

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

<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 122**  
**FLAVORED ALCOHOLIC BEVERAGES:**  
**Trends in 30-Day Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 30 days																		2018– 2019 change
	1991– 2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
<i>Approximate weighted N =</i>	—	16,400	16,200	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000		
Total	—	25.1	23.1	24.7	21.8	20.2	19.0	19.4	15.8	16.3	15.5	14.0	12.8	11.0	12.9	11.8	11.1	-0.7	
Gender																			
Male	—	24.5	20.3	22.4	18.8	17.0	17.0	18.8	13.8	13.5	13.7	12.4	10.5	8.4	9.9	11.2	10.2	-1.1	
Female	—	25.6	25.8	26.9	24.7	22.9	20.9	19.8	17.7	18.5	16.7	15.7	14.9	13.4	15.7	12.5	11.9	-0.6	
College Plans:																			
None or under 4 years	—	32.5	33.8	37.2	32.0	29.1	30.0	28.6	25.7	21.0	19.1	20.5	18.9	17.2	17.4	14.5	13.8	-0.7	
Complete 4 years	—	24.2	21.7	23.1	20.6	19.1	17.8	18.4	14.7	15.8	15.0	13.3	12.3	10.3	12.2	11.6	10.7	-0.9	
Region:																			
Northeast	—	26.6	22.4	26.3	23.2	22.2	18.6	18.3	17.5	19.4	15.6	14.4	12.4	11.0	13.9	13.4	12.7	-0.6	
Midwest	—	22.5	23.4	23.5	21.2	20.0	17.6	19.1	14.3	14.5	13.9	12.3	12.6	9.0	11.0	10.6	13.0	+2.4	
South	—	25.6	23.7	24.5	20.0	20.3	21.1	19.6	16.6	17.4	17.2	14.5	15.0	12.6	14.1	13.5	10.3	-3.1	
West	—	26.5	22.5	25.4	23.6	19.0	17.9	20.3	15.1	14.0	15.0	14.8	9.7	10.6	12.5	9.1	9.6	+0.5	
Population Density:																			
Large MSA	—	22.4	22.0	23.1	21.5	19.0	17.6	20.2	15.3	17.4	13.8	13.7	12.3	10.5	13.7	11.2	11.0	-0.2	
Other MSA	—	26.1	23.1	25.5	21.4	20.9	19.6	19.0	15.8	16.2	16.4	14.5	12.4	9.7	12.5	12.5	10.7	-1.7	
Non-MSA	—	26.5	24.4	25.5	23.0	20.5	19.7	18.9	16.5	14.7	15.7	13.2	14.5	15.6	13.0	11.2	12.3	+1.0	
Parental Education: <sup>a</sup>																			
1.0–2.0 (Low)	—	27.3	24.9	25.8	25.5	21.8	23.5	26.4	17.6	17.0	16.4	14.6	13.6	9.3	15.5	14.8	13.5	-1.3	
2.5–3.0	—	30.5	28.1	27.9	25.8	23.4	23.3	24.5	19.2	17.3	19.9	16.6	17.7	14.3	13.7	11.2	14.8	+3.6	
3.5–4.0	—	25.0	23.6	28.5	23.1	21.2	18.8	20.2	17.5	15.6	16.3	16.2	13.6	11.4	13.0	12.6	11.1	-1.5	
4.5–5.0	—	24.9	22.6	19.9	19.7	19.0	18.2	15.7	13.6	16.7	14.6	11.5	11.2	12.1	12.5	11.4	9.4	-2.0	
5.5–6.0 (High)	—	20.8	17.3	23.7	16.9	16.2	14.3	15.4	12.3	17.5	10.5	13.3	10.9	7.8	12.3	10.3	10.4	+0.1	
Race/Ethnicity (2-year average): <sup>b</sup>																			
White	—	—	25.7	25.1	24.0	21.8	20.0	19.0	17.4	16.5	16.5	15.8	14.8	13.2	13.2	14.1	13.6	-0.6	
African American	—	—	16.1	15.5	15.9	15.2	14.2	14.8	14.0	10.7	9.6	8.1	8.1	8.4	7.0	6.5	6.2	-0.3	
Hispanic	—	—	29.0	28.6	26.1	23.1	23.0	24.2	22.6	17.7	16.7	16.1	14.3	12.5	12.2	12.5	11.7	-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 S2 for the number of subgroup cases. See appendix B for definition of variables in table. Data based on one of four forms;  $N$  is one third of  $N$  indicated in Table S2. In 2011 Sky Blue and Zima were deleted from the list of examples.

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

<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 123**  
**FLAVORED ALCOHOLIC BEVERAGES:**  
**Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days																		
	1991–																		2018–
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	change	
<i>Approximate weighted N =</i>	—	14,600	14,700	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900		
Total	—	31.1	30.5	29.3	29.1	27.4	27.4	24.1	23.1	21.8	21.0	19.9	20.8	18.3	20.2	18.1	18.5	+0.4	
Gender:																			
Male	—	28.9	28.3	26.0	25.4	25.8	27.3	22.6	21.8	19.9	20.1	16.8	19.1	17.4	17.7	18.2	17.8	-0.4	
Female	—	33.2	33.2	32.3	32.8	29.0	27.1	25.0	24.6	23.3	22.0	21.9	22.6	18.6	21.7	18.1	18.5	+0.4	
College Plans:																			
None or under 4 years	—	34.7	34.2	32.9	37.0	29.0	35.6	26.8	26.2	22.6	25.8	22.8	24.8	18.1	20.3	20.3	16.6	-3.7	
Complete 4 years	—	30.3	29.6	28.7	27.5	26.9	25.9	23.9	22.4	21.5	19.9	19.3	20.0	18.1	20.3	17.9	19.2	+1.3	
Region:																			
Northeast	—	33.5	38.1	29.4	36.0	33.5	34.0	31.3	25.7	20.6	23.6	22.6	24.9	21.8	22.9	20.1	17.3	-2.8	
Midwest	—	35.3	33.4	32.2	28.5	25.8	26.7	23.7	23.1	22.4	18.3	24.3	19.9	18.3	25.1	17.7	21.5	+3.9	
South	—	25.9	25.9	27.0	28.8	26.9	27.2	23.3	22.1	19.3	19.9	17.6	21.3	16.9	20.0	18.3	16.6	-1.7	
West	—	32.1	27.9	29.9	24.9	25.8	23.2	20.9	22.9	24.8	23.9	17.6	18.0	18.5	14.5	16.8	19.9	+3.0	
Population Density:																			
Large MSA	—	27.0	29.9	32.3	30.8	28.7	27.0	26.4	25.3	22.5	23.4	18.7	21.9	18.2	17.9	16.7	14.5	-2.1	
Other MSA	—	33.4	29.9	27.7	27.8	25.8	28.8	23.8	23.8	22.2	20.0	19.9	19.3	17.0	19.1	17.7	17.9	+0.2	
Non-MSA	—	30.9	32.2	28.5	29.5	29.1	24.7	21.8	18.6	19.5	20.1	21.2	22.2	21.2	26.5	21.3	26.4	+5.1	
Parental Education: <sup>a</sup>																			
1.0–2.0 (Low)	—	28.5	22.2	30.3	34.0	24.9	26.8	13.8	24.8	19.7	21.8	21.0	20.9	11.9	19.0	13.0	13.7	+0.7	
2.5–3.0	—	31.0	33.3	30.6	32.4	28.3	28.2	27.8	26.1	24.0	24.8	21.5	19.0	20.5	19.5	18.9	17.1	-1.8	
3.5–4.0	—	33.6	31.7	30.9	29.9	28.4	28.7	24.0	25.3	22.9	20.7	22.0	22.6	17.3	21.4	18.0	20.6	+2.5	
4.5–5.0	—	29.4	30.2	28.8	27.6	27.6	24.4	26.1	20.0	21.7	20.0	16.1	23.9	21.1	19.1	22.6	19.6	-3.0	
5.5–6.0 (High)	—	29.8	30.2	26.4	25.3	26.6	28.4	23.4	20.5	19.7	19.1	19.9	17.8	15.9	24.0	18.3	24.3	+5.9	
Race/Ethnicity (2-year average): <sup>b</sup>																			
White	—	—	33.3	31.4	30.6	31.1	29.9	27.0	24.6	22.9	22.2	22.1	22.4	22.7	23.5	23.4	21.9	-1.5	
African American	—	—	17.1	20.9	21.6	19.8	19.3	20.0	20.0	17.2	14.2	16.1	14.1	10.9	10.5	13.5	12.8	-0.6	
Hispanic	—	—	28.6	32.2	34.5	26.2	25.2	24.7	25.5	26.8	21.9	16.3	18.6	21.4	16.5	13.9	14.6	+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 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 Skyy Blue and Zima were deleted from the list of examples.

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

<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 124**  
**ALCOHOLIC BEVERAGES CONTAINING CAFFEINE:**  
**Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months										
	1991– 2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2018– 2019 change
<i>Approximate weighted N =</i>	—	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	
Total	—	11.8‡	10.9	10.2	9.5	8.4	6.5	5.6	6.0	7.3	+1.3
Gender:											
Male	—	9.4‡	9.6	8.4	9.2	7.6	6.1	4.6	5.4	7.3	+1.9
Female	—	13.8‡	11.9	11.7	9.6	8.9	6.9	6.4	6.7	7.5	+0.8
College Plans:											
None or under 4 years	—	22.3‡	19.1	21.6	22.9	19.3	15.8	10.4	11.9	13.3	+1.4
Complete 4 years	—	11.0‡	10.2	9.4	8.4	7.6	5.7	5.2	5.3	6.6	+1.4
Region:											
Northeast	—	10.4‡	8.7	11.5	6.7	7.4	4.2	2.6	5.5	5.6	+0.1
Midwest	—	10.3‡	8.6	8.7	10.3	8.6	6.7	4.4	5.1	7.0	+1.9
South	—	12.9‡	12.4	11.4	9.0	7.7	6.6	6.1	5.6	7.6	+2.0
West	—	12.5‡	12.3	9.1	11.3	10.3	7.9	7.9	8.2	8.4	+0.2
Population Density:											
Large MSA	—	9.8‡	10.6	9.6	7.8	7.3	5.3	5.7	7.0	5.9	-1.2
Other MSA	—	13.4‡	10.9	10.5	9.6	7.8	6.6	5.3	5.9	7.6	+1.7
Non-MSA	—	11.4‡	11.3	10.5	11.4	11.1	8.4	6.1	4.7	8.6	+3.9 ss
Parental Education: <sup>a</sup>											
1.0–2.0 (Low)	—	19.0‡	13.8	13.4	13.8	12.5	9.9	8.7	8.7	12.7	+4.1
2.5–3.0	—	17.3‡	14.4	11.1	12.6	8.4	7.4	6.6	8.2	12.0	+3.7
3.5–4.0	—	13.8‡	13.3	13.1	10.9	11.5	8.7	7.2	6.6	7.9	+1.3
4.5–5.0	—	8.3‡	8.9	8.2	7.1	6.5	5.4	3.4	4.8	4.7	-0.1
5.5–6.0 (High)	—	7.0‡	6.9	8.8	6.5	4.8	4.8	4.4	4.2	5.3	+1.1
Race/Ethnicity (2-year average): <sup>b</sup>											
White	—	—	—	9.0	9.6	9.2	7.2	5.3	4.8	6.3	+1.5 ss
African American	—	—	—	7.3	5.9	5.6	4.8	3.7	4.2	5.7	+1.5
Hispanic	—	—	—	14.5	11.5	9.4	8.5	7.5	7.1	8.2	+1.0

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

*Notes.* '—' 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. '‡' indicates some change in the question. See relevant footnote for that drug. See relevant figure to assess the impact of the wording changes. See Table S1 for the number of subgroup cases. See appendix B for definition of variables in table. In 2012 the question text was changed from "...had an alcoholic beverage containing caffeine (like Four Loko or Joose)" to "...had an alcoholic beverage mixed with an energy drink (like Red Bull)." The data in 2011 and 2012 are not comparable due to this question change. Data based on one of four forms; N is one third of N indicated in Table S1.

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

<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 125**  
**ALCOHOLIC BEVERAGES CONTAINING CAFFEINE:**  
**Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months										2018– 2019 change
	1991– 2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	—	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	—	22.5‡	19.7	16.9	14.3	12.8	10.6	9.9	9.8	8.4	-1.4
Gender:											
Male	—	20.4‡	19.7	17.0	13.8	12.8	10.6	9.5	11.0	8.9	-2.1
Female	—	24.7‡	19.8	16.7	14.7	12.7	10.8	10.2	8.3	7.8	-0.4
College Plans:											
None or under 4 years	—	34.1‡	29.9	26.7	23.9	21.4	19.5	18.2	17.9	12.9	-5.0 s
Complete 4 years	—	21.2‡	18.7	15.9	13.2	11.9	9.7	9.0	8.5	7.6	-0.8
Region:											
Northeast	—	26.4‡	19.9	18.4	12.2	14.2	11.0	9.4	8.8	9.8	+1.0
Midwest	—	17.4‡	18.5	15.5	13.4	12.2	9.1	8.4	9.6	6.0	-3.6 s
South	—	22.9‡	19.5	16.6	14.9	12.4	10.7	8.7	9.0	7.1	-2.0
West	—	24.7‡	21.1	17.7	16.0	12.9	11.6	13.1	12.2	12.2	0.0
Population Density:											
Large MSA	—	21.7‡	17.4	14.0	13.8	11.6	10.0	9.1	10.9	6.6	-4.4 ss
Other MSA	—	23.2‡	20.1	18.2	13.4	13.5	10.4	10.0	9.6	8.8	-0.8
Non-MSA	—	22.1‡	21.8	17.9	17.3	13.1	12.5	10.6	8.7	10.5	+1.8
Parental Education: <sup>a</sup>											
1.0–2.0 (Low)	—	33.8‡	23.7	21.7	16.8	18.4	12.4	12.7	13.5	10.5	-3.0
2.5–3.0	—	25.6‡	23.2	20.9	18.2	14.6	14.7	10.7	12.2	8.5	-3.7 s
3.5–4.0	—	25.5‡	22.8	19.7	16.2	14.1	11.6	10.3	10.7	8.8	-1.8
4.5–5.0	—	17.1‡	18.8	13.4	12.8	11.5	8.8	8.9	7.1	8.6	+1.5
5.5–6.0 (High)	—	17.0‡	12.4	12.7	9.8	10.7	8.6	8.7	8.5	7.3	-1.1
Race/Ethnicity (2-year average): <sup>b</sup>											
White	—	—	—	19.3	17.3	15.2	13.5	12.1	11.0	10.2	-0.8
African American	—	—	—	10.4	7.6	7.2	6.2	5.2	5.2	4.8	-0.5
Hispanic	—	—	—	20.3	16.6	13.9	11.4	10.7	10.8	9.0	-1.8

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

*Notes.* '—' 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. '‡' indicates some change in the question. See relevant footnote for that drug. See relevant figure to assess the impact of the wording changes. See Table S2 for the number of subgroup cases. See appendix B for definition of variables in table. 'In 2012 the question text was changed from "...had an alcoholic beverage containing caffeine (like Four Loko or Joose)" to "...had an alcoholic beverage mixed with an energy drink (like Red Bull)." The data in 2011 and 2012 are not comparable due to this question change. Data based on one of four forms; N is one third of N indicated in Table S2.

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

<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 126**  
**ALCOHOLIC BEVERAGES CONTAINING CAFFEINE:**  
**Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months											2018– 2019 change
	1975– 2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
<i>Approximate weighted N =</i>	—	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900		
Total	—	26.4‡	26.4	23.5	20.0	18.3	17.0	16.9	14.7	12.3	-2.4	s
Gender:												
Male	—	26.6‡	28.8	26.9	21.7	19.6	19.0	18.7	15.9	12.4	-3.5	s
Female	—	25.9‡	23.7	20.1	18.5	17.4	14.4	15.3	12.9	11.5	-1.4	
College Plans:												
None or under 4 years	—	29.4‡	28.7	29.7	23.7	22.5	18.3	19.9	17.7	16.5	-1.3	
Complete 4 years	—	25.6‡	25.3	22.0	19.1	17.4	16.3	16.0	13.8	11.2	-2.6	s
Region:												
Northeast	—	29.7‡	28.7	23.6	22.5	21.1	17.4	21.5	14.5	10.9	-3.6	
Midwest	—	26.6‡	30.2	23.1	23.0	18.5	18.5	18.6	15.2	12.8	-2.4	
South	—	23.8‡	21.9	22.3	17.9	15.5	14.5	15.1	14.4	11.3	-3.1	
West	—	27.8‡	26.4	25.6	18.7	20.6	19.9	15.4	14.9	15.4	+0.5	
Population Density:												
Large MSA	—	27.9‡	27.7	25.2	20.3	18.5	17.5	16.8	13.3	11.1	-2.2	
Other MSA	—	27.4‡	27.0	24.2	20.8	17.7	17.2	16.4	14.9	12.2	-2.7	
Non-MSA	—	21.9‡	22.6	19.3	17.6	19.3	15.7	18.0	16.8	14.7	-2.2	
Parental Education: <sup>a</sup>												
1.0–2.0 (Low)	—	26.5‡	20.3	22.4	21.5	17.0	18.4	14.3	12.0	12.0	0.0	
2.5–3.0	—	28.1‡	25.9	23.1	19.5	19.2	14.8	17.1	15.9	12.5	-3.4	
3.5–4.0	—	27.0‡	30.3	25.3	20.2	18.3	17.9	17.8	15.3	12.3	-2.9	
4.5–5.0	—	24.7‡	26.8	22.8	20.5	19.3	17.6	16.1	15.4	13.1	-2.4	
5.5–6.0 (High)	—	26.3‡	24.2	22.3	20.1	19.0	16.7	17.9	13.0	12.7	-0.3	
Race/Ethnicity (2-year average): <sup>b</sup>												
White	—	—	—	28.1	24.6	22.2	21.0	20.3	19.1	15.8	-3.2	sss
African American	—	—	—	11.5	11.6	11.2	10.1	8.5	8.0	7.2	-0.8	
Hispanic	—	—	—	23.0	18.9	16.3	15.9	15.4	12.5	10.8	-1.6	

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

*Notes.* '—' 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. '‡' indicates some change in the question. See relevant footnote for that drug. See relevant figure to assess the impact of the wording changes. See Table S3 for the number of subgroup cases. See appendix B for definition of variables in table. In 2012 the question text was changed from "...had an alcoholic beverage containing caffeine (like Four Loko or Joose)" to "...had an alcoholic beverage mixed with an energy drink (like Red Bull)." The data in 2011 and 2012 are not comparable due to this question change. Data based on two of six forms; *N* is two sixths of *N* indicated in Table S3.

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

<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 127**  
**CIGARETTES: Trends in 30-Day Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 30 days															
	<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>	
<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>	
Total	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	
Gender:																
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	
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	
College Plans:																
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	
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	
Region:																
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	
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	
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	
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	
Population Density:																
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	
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	
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	
Parental Education: <sup>a</sup>																
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	
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	
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	
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	
5.5–6.0 (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	
Race/Ethnicity (2-year average): <sup>b</sup>																
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	
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	
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	

Table continued on next page.

**TABLE 127 (cont.)**  
**CIGARETTES: Trends in 30-Day Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 30 days														2018-2019 change	
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
<i>Approximate weighted N =</i>	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600		
Total	8.7	7.1	6.8	6.5	7.1	6.1	4.9	4.5	4.0	3.6	2.6	1.9	2.2	2.3	+0.1	
Gender:																
Male	8.1	7.5	6.7	6.7	7.4	6.2	4.6	4.0	3.5	3.3	2.5	1.8	2.1	1.7	-0.4	
Female	8.9	6.4	6.7	6.0	6.8	5.7	4.9	4.7	4.2	3.7	2.6	1.9	2.0	2.8	+0.9 s	
College Plans:																
None or under 4 years	23.2	23.9	21.1	19.5	22.8	18.2	17.3	15.0	13.1	11.7	9.9	5.5	6.1	6.3	+0.2	
Complete 4 years	7.1	5.4	5.5	5.3	5.7	5.1	3.9	3.8	3.1	2.8	2.0	1.4	1.5	1.8	+0.3	
Region:																
Northeast	6.7	3.7	5.9	5.6	6.0	4.4	4.2	3.5	3.4	2.2	2.0	1.2	1.6	1.2	-0.4	
Midwest	9.3	7.8	8.1	7.0	8.6	6.4	3.9	4.4	3.5	4.5	3.2	2.6	2.4	1.8	-0.6	
South	10.9	8.6	7.7	7.7	8.5	6.8	6.9	5.8	4.6	4.0	3.0	1.8	2.0	2.8	+0.8	
West	5.7	5.8	5.2	4.6	4.0	6.1	3.0	3.0	3.9	2.9	2.0	2.0	2.5	2.7	+0.2	
Population Density:																
Large MSA	6.4	4.7	5.2	4.2	4.8	4.0	3.6	2.5	2.8	2.2	1.4	1.5	1.3	1.3	0.0	
Other MSA	8.8	7.6	7.5	6.9	7.6	7.0	5.1	4.3	3.7	3.5	2.3	1.9	2.0	2.2	+0.2	
Non-MSA	11.6	9.5	7.9	8.5	9.2	7.7	6.9	8.0	6.6	5.9	5.6	2.6	3.8	4.2	+0.4	
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	14.7	13.8	12.1	10.5	11.4	9.2	7.6	6.3	5.8	5.9	4.7	3.2	3.0	3.5	+0.5	
2.5–3.0	12.5	10.2	8.7	8.8	10.2	9.8	7.4	6.5	6.2	4.6	3.6	2.7	2.1	3.8	+1.7 s	
3.5–4.0	8.8	7.8	7.3	7.1	8.0	6.3	5.7	5.6	4.8	3.5	2.6	2.1	2.8	2.5	-0.3	
4.5–5.0	5.5	3.9	4.7	4.4	4.9	3.9	3.0	2.4	2.6	2.5	2.0	1.3	1.5	1.3	-0.2	
5.5–6.0 (High)	4.8	2.4	4.1	3.5	2.9	3.1	2.6	2.9	1.7	2.1	1.4	1.2	1.1	1.4	+0.3	
Race/Ethnicity (2-year average): <sup>b</sup>																
White	9.3	8.1	7.2	7.3	7.6	7.2	5.8	4.7	4.4	4.2	3.4	2.6	1.9	2.1	+0.2	
African American	6.0	5.1	4.6	4.4	4.3	4.1	4.0	3.5	2.6	2.2	2.1	1.7	1.4	1.2	-0.2	
Hispanic	8.8	8.0	7.0	6.5	6.7	6.9	5.5	4.0	3.5	3.0	2.5	2.0	1.8	2.0	+0.2	

*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 128**  
**CIGARETTES: Trends in 30-Day Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 30 days														
	<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>
<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>
Total	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
Gender:															
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
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
College Plans:															
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
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
Region:															
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
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
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
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
Population Density:															
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
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
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
Parental Education: <sup>a</sup>															
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
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
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
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
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
Race/Ethnicity (2-year average): <sup>b</sup>															
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
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
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

Table continued on next page.

**TABLE 128**  
**CIGARETTES: Trends in 30-Day Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 30 days														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	14.5	14.0	12.3	13.1	13.6	11.8	10.8	9.1	7.2	6.3	4.9	5.0	4.2	3.4	-0.9
Gender:															
Male	13.4	14.6	12.7	13.7	15.0	13.4	12.0	10.5	7.7	6.1	5.0	5.0	4.4	3.9	-0.5
Female	15.5	13.3	11.9	12.5	12.1	10.0	9.6	7.5	6.6	6.3	4.4	4.9	3.7	2.9	-0.8
College Plans:															
None or under 4 years	32.7	30.1	30.1	29.0	32.5	28.5	27.6	23.3	19.4	17.6	14.5	15.0	10.2	8.9	-1.3
Complete 4 years	12.1	11.8	10.0	11.3	11.3	9.9	9.0	7.4	5.8	5.1	3.8	3.7	3.2	2.3	-0.9 s
Region:															
Northeast	11.8	13.1	10.1	11.1	12.1	12.2	10.9	7.2	6.7	6.1	4.4	3.9	2.9	2.1	-0.8
Midwest	18.1	17.1	14.5	12.9	14.5	11.8	9.7	9.3	8.0	7.0	4.7	5.6	4.2	3.3	-0.9
South	15.6	14.4	14.0	16.7	15.4	13.8	13.6	11.8	7.7	7.0	5.5	4.9	5.5	3.7	-1.7 s
West	10.9	11.1	9.6	10.1	11.1	8.5	7.6	6.9	5.8	4.7	4.5	5.5	3.4	3.9	+0.5
Population Density:															
Large MSA	11.5	12.1	10.3	11.4	11.1	9.5	8.4	5.8	5.9	4.9	4.4	4.9	3.0	1.5	-1.5 ss
Other MSA	13.3	13.9	12.3	13.0	13.5	11.5	10.2	9.5	6.0	5.7	4.3	3.8	3.7	3.8	+0.1
Non-MSA	22.4	17.2	15.4	16.1	17.5	15.7	15.4	13.0	12.3	10.4	7.2	8.4	7.6	5.6	-2.0
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	20.4	17.5	15.7	18.2	18.8	14.6	15.4	12.8	9.7	9.3	5.5	7.1	5.5	3.9	-1.6
2.5–3.0	19.7	18.4	15.8	16.5	18.6	16.2	14.4	13.6	9.1	8.7	7.1	7.3	5.5	6.2	+0.7
3.5–4.0	15.5	14.7	13.9	13.8	15.1	12.7	11.2	10.2	8.4	7.8	5.3	5.0	4.7	3.6	-1.1
4.5–5.0	10.8	11.3	9.6	10.9	10.0	8.6	9.6	6.0	5.2	5.0	3.5	3.3	3.0	1.7	-1.3 s
5.5–6.0 (High)	10.0	9.7	7.8	8.9	7.7	8.0	7.1	4.9	4.9	3.3	3.4	3.6	3.0	2.1	-0.9
Race/Ethnicity (2-year average): <sup>b</sup>															
White	16.6	16.2	15.1	14.4	14.7	14.3	12.9	11.4	9.5	7.8	6.8	6.3	5.8	4.6	-1.2 ss
African American	8.0	7.1	6.5	6.8	6.7	7.1	6.7	5.3	4.2	3.8	2.6	2.1	1.8	1.5	-0.4
Hispanic	12.1	10.5	11.1	12.1	12.2	10.5	8.3	8.3	6.8	5.3	4.0	3.4	3.7	3.1	-0.6

*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 129**  
**CIGARETTES: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Approximate weighted N =	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
Total	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
Gender:																
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
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
College Plans:																
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
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
Region:																
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
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
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
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
Population Density:																
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
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
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
Parental Education: <sup>a</sup>																
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
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
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
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
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
Race/Ethnicity (2-year average): <sup>b</sup>																
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
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
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

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**TABLE 129 (cont.)**  
**CIGARETTES: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	28.3	27.8	29.9	31.2	33.5	34.0	36.5	35.1	34.6	31.4	29.5	26.7	24.4	25.0	23.2	21.6
Gender:																
Male	29.0	29.2	30.7	32.9	34.5	34.9	37.3	36.3	35.4	32.8	29.7	27.4	26.2	25.3	24.8	22.4
Female	27.5	26.1	28.7	29.2	32.0	32.4	35.2	33.3	33.5	29.7	28.7	25.5	22.1	24.1	20.7	20.1
College Plans:																
None or under 4 years	38.1	38.6	37.3	40.9	43.5	45.0	45.7	46.7	44.9	43.6	40.8	37.5	36.2	36.8	34.8	32.9
Complete 4 years	24.2	23.8	27.3	28.0	29.9	30.8	33.1	31.3	31.4	27.3	25.9	23.6	20.8	21.6	20.0	18.6
Region:																
Northeast	30.5	29.6	34.2	33.2	34.4	38.5	40.6	35.9	34.2	33.1	30.3	27.3	25.0	25.9	22.0	23.1
Midwest	34.6	31.7	33.2	36.2	37.8	37.7	39.3	40.0	37.8	35.6	35.9	31.7	27.3	28.3	26.8	23.6
South	25.4	26.4	29.0	30.7	33.5	33.2	35.0	34.3	36.2	29.6	25.9	27.2	24.3	24.6	24.6	23.2
West	23.2	22.8	22.9	24.0	26.5	24.4	30.5	29.1	27.6	28.1	25.2	19.4	20.7	20.1	17.5	15.0
Population Density:																
Large MSA	26.2	25.6	29.5	29.0	33.9	32.1	34.9	32.9	30.0	27.4	27.3	24.8	18.9	20.8	20.8	20.7
Other MSA	29.3	26.9	29.8	31.1	31.7	32.6	35.7	34.2	35.0	31.5	28.2	26.2	25.1	26.3	22.6	20.3
Non-MSA	28.6	31.5	30.3	33.8	36.2	38.2	40.0	39.7	38.7	36.3	34.3	30.1	30.4	27.6	27.4	25.3
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	31.3	27.1	26.5	26.2	31.2	31.5	31.2	32.3	33.0	31.3	24.8	20.9	23.5	21.0	19.1	21.1
2.5–3.0	28.7	30.3	30.4	32.8	35.0	35.5	36.5	36.0	37.3	32.2	31.5	28.9	27.0	28.7	27.3	24.7
3.5–4.0	28.4	27.8	29.9	31.4	33.2	33.2	35.6	36.7	35.0	32.8	30.3	28.6	24.3	26.3	24.8	22.9
4.5–5.0	26.9	25.8	30.1	32.0	32.6	34.5	37.5	34.2	32.4	30.2	29.3	25.0	22.6	23.8	21.8	19.2
5.5–6.0 (High)	27.1	25.5	30.5	30.4	34.0	32.9	38.5	33.1	34.4	27.4	25.0	25.3	21.0	19.9	18.0	17.4
Race/Ethnicity (2-year average): <sup>b</sup>																
White	32.2	31.8	33.2	35.2	36.6	38.1	40.7	41.7	40.1	37.9	35.3	32.5	29.4	28.2	27.6	25.9
African American	10.6	8.7	9.5	10.9	12.9	14.2	14.3	14.9	14.9	14.3	13.3	12.1	10.0	10.1	10.7	10.5
Hispanic	24.0	25.0	24.2	23.6	25.1	25.4	25.9	26.6	27.3	27.7	23.8	21.3	19.0	18.5	17.1	16.0

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**TABLE 129 (cont.)**  
**CIGARETTES: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days													2018-2019 change
	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	
Approximate weighted N =	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	21.6	20.4	20.1	19.2	18.7	17.1	16.3	13.6	11.4	10.5	9.7	7.6	5.7	-1.9 sss
Gender:														
Male	23.1	21.5	22.1	21.9	21.5	19.3	18.4	15.2	13.0	12.7	10.6	8.4	6.9	-1.4
Female	19.6	19.1	17.6	15.7	15.1	14.5	13.2	11.6	9.1	8.1	8.3	5.9	4.0	-1.9 sss
College Plans:														
None or under 4 years	32.4	32.4	31.2	31.2	32.2	27.9	28.9	25.3	21.9	19.2	16.5	14.6	10.7	-3.9 ss
Complete 4 years	19.0	17.6	17.3	16.3	15.6	14.7	13.0	10.8	8.9	8.4	8.0	5.2	4.0	-1.1 s
Region:														
Northeast	23.8	19.7	18.9	18.2	17.8	18.8	17.0	11.7	10.8	10.9	9.6	6.4	3.7	-2.7 ss
Midwest	24.7	22.1	25.7	21.5	21.8	21.0	16.5	13.8	12.7	12.0	9.6	7.3	5.7	-1.7
South	21.9	22.4	20.0	20.5	18.4	15.6	18.6	15.4	12.5	10.8	11.2	9.2	6.6	-2.7 ss
West	15.8	15.8	14.7	15.3	16.4	13.9	12.1	11.9	8.6	8.3	7.1	6.1	5.8	-0.3
Population Density:														
Large MSA	19.9	18.8	17.7	18.7	17.2	15.8	14.5	11.7	9.3	8.4	7.4	5.3	3.4	-1.9 ss
Other MSA	20.8	19.5	19.1	17.9	18.1	15.6	15.5	12.9	10.5	9.9	9.5	6.8	6.0	-0.8
Non-MSA	25.9	24.3	25.5	23.1	22.3	23.1	20.9	17.8	17.0	15.1	13.8	13.9	9.0	-4.9 sss
Parental Education: <sup>a</sup>														
1.0–2.0 (Low)	20.5	18.5	19.9	17.0	18.2	17.0	18.2	14.8	12.9	9.9	7.9	6.9	7.2	+0.3
2.5–3.0	24.7	22.4	23.2	21.6	22.4	19.0	18.2	16.1	13.9	12.0	11.3	8.0	6.6	-1.5
3.5–4.0	21.6	21.3	21.0	20.9	19.6	20.1	18.5	14.2	12.2	11.9	10.4	8.1	5.3	-2.8 sss
4.5–5.0	20.5	18.6	18.0	17.5	15.9	15.7	14.1	12.0	9.7	9.1	8.7	6.6	4.7	-1.9 s
5.5–6.0 (High)	18.4	19.2	15.3	12.8	14.3	11.2	9.5	9.4	7.5	7.6	8.1	5.9	4.2	-1.6
Race/Ethnicity (2-year average): <sup>b</sup>														
White	24.9	24.7	23.9	22.9	22.2	21.2	19.4	17.5	15.0	13.2	12.7	11.0	7.9	-3.0 sss
African American	10.8	10.3	9.8	10.1	9.7	8.6	9.6	9.0	6.9	6.0	5.0	4.1	3.2	-0.9
Hispanic	15.3	15.0	15.7	15.0	14.3	13.2	12.4	11.4	9.6	8.2	6.9	5.2	4.5	-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 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 130**  
**CIGARETTES: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 8**

	Percentage who used daily in last 30 days														
	<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>
Approximate weighted N =	17,500	18,600	18,300	17,300	17,500	17,800	18,600	18,100	16,700	16,700	16,200	15,100	16,500	17,000	16,800
Total	7.2	7.0	8.3	8.8	9.3	10.4	9.0	8.8	8.1	7.4	5.5	5.1	4.5	4.4	4.0
Gender:															
Male	8.1	6.9	8.8	9.5	9.2	10.5	9.0	8.1	7.4	7.0	5.9	5.4	4.4	4.3	3.9
Female	6.2	7.2	7.8	8.0	9.2	10.1	8.7	9.0	8.4	7.5	4.9	4.9	4.5	4.3	4.0
College Plans:															
None or under 4 years	18.5	20.1	21.5	22.6	22.5	26.0	25.4	25.2	25.2	21.7	17.7	17.1	16.1	15.4	14.4
Complete 4 years	5.3	5.1	6.4	6.8	7.5	8.0	6.9	6.6	5.9	5.6	3.9	3.9	3.2	3.1	2.9
Region:															
Northeast	7.2	7.1	7.1	8.6	9.2	11.0	8.8	6.1	7.2	6.9	6.1	3.7	2.9	3.3	3.2
Midwest	7.8	7.6	8.5	9.4	11.0	12.4	10.3	11.2	11.5	9.0	6.4	5.7	5.5	5.7	4.8
South	7.9	7.8	9.3	9.4	9.4	10.4	9.5	10.2	8.5	7.8	6.1	6.6	5.7	4.7	5.0
West	4.6	4.8	7.4	7.4	7.0	7.5	6.8	5.8	3.8	4.9	2.6	2.9	2.4	3.3	2.4
Population Density:															
Large MSA	6.3	6.3	5.7	6.6	7.6	9.5	7.0	6.7	5.4	5.6	4.1	3.2	3.0	3.5	2.3
Other MSA	7.7	7.2	9.1	9.5	9.3	10.2	8.7	7.9	7.4	6.3	5.4	5.1	4.3	4.1	4.1
Non-MSA	7.3	7.8	10.1	9.6	11.1	11.8	11.7	12.7	12.7	11.8	7.2	7.6	7.0	5.9	6.2
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	15.9	11.9	12.7	13.0	15.8	13.6	14.3	13.0	14.7	13.1	11.1	10.6	9.1	10.1	7.8
2.5–3.0	8.6	8.4	9.7	11.3	11.3	14.0	11.7	12.0	11.4	11.3	7.5	7.1	6.6	5.6	6.3
3.5–4.0	6.5	6.9	8.5	8.9	9.4	10.1	9.2	9.7	8.1	6.7	5.1	5.4	4.4	4.2	4.3
4.5–5.0	4.0	5.2	5.9	6.1	7.2	7.6	6.8	5.7	4.6	3.9	3.0	3.3	2.6	2.8	2.2
5.5–6.0 (High)	4.9	4.2	6.3	5.8	5.7	7.4	5.5	5.2	5.1	4.1	3.1	2.1	2.1	1.9	1.4
Race/Ethnicity (2-year average) <sup>b</sup>															
White	—	7.7	8.8	9.7	10.5	11.7	11.4	10.4	9.7	9.0	7.5	6.0	5.3	4.7	4.6
African American	—	1.4	1.8	2.6	2.8	3.2	3.7	3.8	3.8	3.2	2.8	2.8	2.9	2.7	2.1
Hispanic	—	7.3	7.2	9.0	9.2	8.0	8.1	8.4	8.5	7.1	5.0	4.4	3.7	3.5	3.1

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**TABLE 130 (cont.)**  
**CIGARETTES: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 8**

	Percentage who used daily in last 30 days														2018-2019 change	
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
<i>Approximate weighted N =</i>	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600		
Total	4.0	3.0	3.1	2.7	2.9	2.4	1.9	1.8	1.4	1.3	0.9	0.6	0.8	0.8	-0.1	
Gender:																
Male	4.0	3.4	3.2	2.9	3.5	2.5	2.0	1.7	1.2	1.1	1.0	0.6	0.9	0.6	-0.3	
Female	3.8	2.6	2.9	2.3	2.3	2.2	1.6	1.8	1.3	1.4	0.8	0.5	0.6	0.9	+0.3	
College Plans:																
None or under 4 years	13.2	12.3	10.8	10.9	12.8	8.1	8.0	8.3	4.7	5.9	4.4	1.8	3.3	2.8	-0.5	
Complete 4 years	2.9	2.2	2.3	1.9	2.0	1.9	1.4	1.4	1.0	0.9	0.5	0.4	0.4	0.5	+0.1	
Region:																
Northeast	3.0	1.7	2.4	2.1	2.4	1.4	1.8	1.3	1.2	0.7	0.6	0.2	0.5	0.4	-0.1	
Midwest	4.7	3.8	3.9	3.0	3.3	2.3	1.3	1.5	0.9	1.6	1.0	0.8	1.0	0.6	-0.4	
South	5.3	3.8	3.7	3.2	3.8	2.9	2.9	2.6	1.9	1.5	1.0	0.6	0.8	0.8	0.0	
West	1.8	1.9	2.0	2.0	1.4	2.3	0.8	1.2	1.1	1.1	0.9	0.6	1.0	1.2	+0.2	
Population Density:																
Large MSA	2.3	1.6	2.2	1.6	1.7	1.2	1.4	0.8	1.1	0.6	0.4	0.4	0.5	0.4	-0.1	
Other MSA	4.1	3.1	3.3	3.0	3.1	3.2	2.0	1.8	1.3	1.2	0.7	0.6	0.9	0.7	-0.1	
Non-MSA	6.3	5.0	4.2	3.7	4.3	2.7	2.8	3.4	2.1	2.7	2.5	0.9	1.4	1.5	+0.1	
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	7.3	5.5	5.4	6.2	4.2	3.9	2.6	2.7	2.6	1.7	2.2	1.1	1.0	1.1	+0.1	
2.5–3.0	6.6	4.9	4.4	3.4	4.8	3.9	3.3	3.0	1.9	1.9	1.2	0.7	0.8	1.3	+0.5	
3.5–4.0	3.8	3.6	3.0	2.5	2.8	2.9	2.2	2.0	1.6	1.6	0.6	0.6	1.1	0.6	-0.4	
4.5–5.0	2.1	1.5	1.9	1.8	1.9	1.4	0.9	1.0	0.8	0.8	0.6	0.3	0.5	0.4	-0.1	
5.5–6.0 (High)	1.8	0.7	1.9	1.4	1.0	0.9	1.0	1.0	0.5	0.4	0.5	0.3	0.5	0.7	+0.2	
Race/Ethnicity (2-year average) <sup>b</sup>																
White	4.6	3.9	3.3	3.2	3.2	3.0	2.4	2.0	1.7	1.4	1.2	0.9	0.6	0.7	+0.1	
African American	1.9	2.1	1.9	2.0	1.9	1.5	1.6	1.5	1.2	0.9	0.5	0.4	0.5	0.5	-0.1	
Hispanic	2.8	2.8	2.5	2.2	2.3	2.4	1.8	1.4	1.3	1.0	0.8	0.6	0.4	0.6	+0.1	

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 131**  
**CIGARETTES: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 10**

	Percentage who used daily in last 30 days														
	<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>
Approximate weighted N =	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
Total	12.6	12.3	14.2	14.6	16.3	18.3	18.0	15.8	15.9	14.0	12.2	10.1	8.9	8.3	7.5
Gender:															
Male	12.4	12.1	13.8	15.2	16.3	18.1	17.2	14.7	15.6	13.7	12.4	9.4	8.6	8.2	7.2
Female	12.5	12.4	14.3	13.7	16.1	18.6	18.5	16.8	15.9	14.1	11.9	10.8	9.0	8.2	7.7
College Plans:															
None or under 4 years	25.7	25.5	28.9	28.9	32.7	34.3	35.4	31.7	32.1	28.8	27.3	22.9	22.1	21.4	19.2
Complete 4 years	9.6	9.5	11.0	11.5	13.3	15.5	15.0	12.9	13.2	11.6	9.6	7.9	6.7	6.4	5.9
Region:															
Northeast	14.3	13.1	16.3	14.1	15.8	18.8	18.0	18.7	17.7	14.1	11.0	8.3	8.6	8.5	7.6
Midwest	14.3	14.3	15.1	16.9	17.6	20.6	19.5	17.3	19.6	16.3	13.2	11.5	10.2	7.4	8.6
South	12.8	11.4	13.9	15.5	19.3	20.5	20.5	17.1	16.3	15.7	14.3	11.3	10.1	11.0	8.8
West	9.1	10.7	10.9	9.7	9.4	10.7	11.1	8.8	9.1	7.8	7.0	7.8	6.0	5.2	4.0
Population Density:															
Large MSA	12.3	11.7	12.3	12.0	12.6	15.3	15.7	12.2	13.2	13.8	9.6	7.4	6.1	5.6	5.5
Other MSA	11.7	11.6	13.6	15.5	17.5	18.8	16.9	15.1	15.5	12.1	11.6	10.4	8.7	8.1	7.0
Non-MSA	14.3	14.5	16.9	15.5	18.4	20.8	22.5	21.1	19.7	17.5	16.3	13.1	13.7	12.3	11.4
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	16.0	17.8	19.3	15.5	20.0	19.3	17.7	17.4	20.1	18.9	12.9	14.1	15.3	11.4	9.9
2.5–3.0	15.5	13.9	16.9	17.6	21.6	23.1	22.1	21.3	19.1	17.6	16.2	14.7	12.7	11.5	11.1
3.5–4.0	12.0	11.8	13.6	15.9	17.0	19.4	18.9	14.9	16.6	14.2	12.2	10.0	8.8	9.3	7.9
4.5–5.0	10.6	10.5	10.7	11.5	12.6	14.8	15.6	12.9	13.0	11.5	9.7	6.8	5.8	5.4	5.2
5.5–6.0 (High)	9.6	9.0	10.5	9.6	10.3	13.6	12.0	11.1	11.2	9.8	8.3	6.4	4.5	4.2	4.4
Race/Ethnicity (2-year average): <sup>b</sup>															
White	—	14.5	15.3	16.5	17.6	20.0	21.4	20.3	19.1	17.7	15.5	13.3	11.4	10.0	9.1
African American	—	2.8	3.1	3.8	4.7	5.1	5.6	5.8	5.3	5.2	5.0	4.3	4.4	3.9	
Hispanic	—	8.4	8.9	8.1	9.9	11.6	10.8	9.4	9.1	8.8	7.4	6.4	6.0	6.0	5.9

Table continued on next page.

**TABLE 131 (cont.)**  
**CIGARETTES: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 10**

	Percentage who used daily in last 30 days														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	7.6	7.2	5.9	6.3	6.6	5.5	5.0	4.4	3.2	3.0	1.9	2.2	1.8	1.3	-0.5
Gender:															
Male	6.9	7.7	6.2	6.9	7.2	6.4	5.6	5.4	3.5	2.8	2.2	2.3	1.9	1.5	-0.4
Female	8.1	6.6	5.5	5.6	5.9	4.5	4.4	3.4	2.8	2.8	1.5	1.9	1.5	1.2	-0.3
College Plans:															
None or under 4 years	21.7	18.9	17.9	17.3	19.1	17.1	17.0	13.4	10.5	10.8	7.2	8.9	5.1	3.6	-1.4
Complete 4 years	5.6	5.6	4.3	5.0	5.0	4.2	3.7	3.4	2.3	2.0	1.2	1.4	1.2	0.9	-0.4
Region:															
Northeast	6.2	6.8	5.3	5.3	5.7	6.3	5.1	3.6	2.8	2.7	1.6	2.2	1.0	0.4	-0.6 s
Midwest	10.3	10.0	7.6	5.8	7.3	5.7	4.4	4.9	3.9	2.8	2.3	2.8	1.8	1.6	-0.2
South	8.4	7.2	6.9	8.5	7.9	6.6	6.9	5.7	3.4	3.6	2.2	2.1	2.6	1.5	-1.1
West	4.2	4.7	3.4	4.3	4.4	3.0	2.6	3.1	2.4	2.3	1.4	2.1	1.1	1.3	+0.2
Population Density:															
Large MSA	5.4	5.7	4.3	5.2	4.8	4.3	3.6	2.3	2.5	2.1	1.6	1.7	1.1	0.4	-0.7 s
Other MSA	6.7	7.2	6.2	6.0	6.3	5.3	4.7	4.8	2.6	2.5	1.6	1.5	1.4	1.6	+0.1
Non-MSA	13.2	9.6	7.5	8.5	9.7	7.6	7.4	6.8	5.7	5.5	3.2	4.9	3.8	2.2	-1.6 s
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	12.5	9.8	7.6	9.4	10.0	8.2	8.0	6.8	4.6	5.2	2.4	3.8	3.2	1.5	-1.7 s
2.5–3.0	11.9	10.8	8.7	8.7	10.1	8.9	7.5	7.2	4.7	4.6	3.0	3.5	2.8	2.5	-0.3
3.5–4.0	7.8	7.2	6.7	6.7	7.1	5.6	4.5	4.7	3.9	3.4	1.9	2.5	1.9	1.5	-0.5
4.5–5.0	4.4	5.5	3.8	4.6	3.9	3.3	4.3	2.8	1.8	2.1	1.2	1.1	1.0	0.4	-0.6 s
5.5–6.0 (High)	4.3	3.5	3.0	3.5	3.1	2.5	2.8	1.9	1.6	1.0	1.0	1.0	0.8	0.8	+0.0
Race/Ethnicity (2-year average): <sup>b</sup>															
White	8.7	8.8	8.0	7.1	7.4	7.1	6.2	5.7	4.8	3.5	2.8	2.5	2.4	1.9	-0.5 s
African American	3.3	3.2	3.0	3.2	3.5	3.5	2.9	2.6	2.3	2.1	1.3	0.9	1.0	0.8	-0.1
Hispanic	5.3	3.8	3.8	4.5	4.4	3.8	3.0	2.6	2.3	2.1	1.9	1.6	1.6	1.1	-0.4 s

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 132**  
**CIGARETTES: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 12**

	Percentage who used daily in last 30 days															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<i>Approximate weighted N =</i>	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
Total	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
Gender:																
Male	26.9	28.0	27.1	26.0	22.3	18.5	18.1	18.2	19.2	16.0	17.8	16.9	16.4	17.4	17.9	18.6
Female	26.4	28.8	30.0	28.3	27.8	23.5	21.7	23.2	22.2	20.5	20.6	19.8	20.6	18.1	19.4	19.3
College Plans:																
None or under 4 years	—	36.5	37.2	35.2	33.8	29.7	29.3	29.5	29.3	27.2	29.6	28.2	29.0	27.4	27.9	28.3
Complete 4 years	—	19.8	19.3	18.3	17.0	13.8	12.9	13.2	13.8	11.9	12.4	12.8	13.3	13.4	14.6	14.7
Region:																
Northeast	31.4	32.3	33.8	32.5	28.6	24.1	23.3	23.4	26.1	23.6	24.9	24.9	24.8	21.4	21.3	22.8
Midwest	28.6	30.2	29.4	28.6	27.0	22.0	23.0	24.0	23.4	20.4	22.4	19.9	20.3	19.0	23.0	22.2
South	26.2	29.1	28.7	26.4	25.8	22.6	19.1	20.2	19.4	17.7	16.0	15.8	15.7	17.7	17.1	16.5
West	17.3	19.4	19.2	19.1	17.0	14.0	13.1	12.7	13.0	12.4	14.2	13.4	14.9	14.0	13.8	14.8
Population Density:																
Large MSA	30.8	30.4	30.9	29.2	24.5	21.6	21.9	23.5	22.1	21.5	21.9	20.6	20.3	18.0	16.7	19.0
Other MSA	25.6	27.1	27.2	25.7	25.0	21.3	19.0	19.3	20.2	17.4	17.7	17.0	17.6	17.7	19.0	19.0
Non-MSA	25.8	29.5	29.1	28.7	26.5	21.2	20.7	21.3	21.7	18.2	19.9	19.8	19.3	18.8	20.9	19.5
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	27.2	32.7	29.6	28.6	29.1	23.7	24.1	24.6	24.0	23.2	22.7	20.4	19.7	19.2	17.1	16.7
2.5–3.0	27.2	31.3	31.5	30.3	26.5	24.7	22.5	23.1	23.2	21.5	21.8	21.4	21.1	19.6	21.5	21.0
3.5–4.0	22.1	25.8	28.1	24.8	24.5	19.4	19.0	19.7	18.8	16.4	19.3	19.4	17.8	17.5	19.0	19.3
4.5–5.0	22.9	24.5	23.7	23.2	21.2	16.6	16.1	16.8	17.5	14.1	16.0	13.9	16.5	16.5	17.2	18.3
5.5–6.0 (High)	17.4	22.8	21.7	22.8	20.6	15.0	13.9	14.5	17.2	14.1	11.2	13.6	16.6	15.1	15.8	16.5
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	—	28.9	28.3	26.9	23.9	21.4	21.6	22.1	21.0	20.4	20.6	20.5	20.6	21.1	21.8
African American	—	—	24.9	22.7	20.9	17.4	14.6	13.1	12.5	10.7	9.9	9.4	7.9	7.3	6.4	5.8
Hispanic	—	—	22.6	20.4	15.8	12.8	13.6	14.3	14.9	13.9	11.8	11.3	11.0	10.9	10.8	10.9

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**TABLE 132 (cont.)**  
**CIGARETTES: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 12**

	Percentage who used daily in last 30 days															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	18.5	17.2	19.0	19.4	21.6	22.2	24.6	22.4	23.1	20.6	19.0	16.9	15.8	15.6	13.6	12.2
Gender:																
Male	18.8	17.2	19.4	20.4	21.7	22.2	24.8	22.7	23.6	20.9	18.4	17.2	17.0	15.4	14.6	12.0
Female	17.9	16.7	18.2	18.1	20.8	21.8	23.6	21.5	22.2	19.7	18.9	16.1	14.0	15.0	11.9	11.8
College Plans:																
None or under 4 years	28.4	28.1	27.8	29.8	33.7	33.2	35.6	34.6	34.2	31.7	30.1	27.6	27.9	26.9	24.9	22.8
Complete 4 years	14.1	12.9	15.9	15.7	17.4	18.9	20.6	18.4	19.5	16.6	15.5	13.8	12.1	12.2	10.5	9.4
Region:																
Northeast	20.9	19.4	23.5	21.3	22.5	27.0	29.4	23.4	23.2	22.8	21.9	18.4	16.4	16.2	13.3	14.3
Midwest	23.0	19.0	21.3	23.8	25.7	26.1	28.0	27.8	25.9	23.6	25.2	22.5	18.2	18.5	16.3	13.2
South	16.4	16.7	18.5	19.3	21.7	20.5	22.6	21.8	24.2	19.4	15.5	16.6	16.3	15.8	15.4	13.3
West	13.9	13.3	13.0	12.4	14.5	13.8	17.5	15.5	17.3	16.9	13.4	9.5	11.8	10.1	7.6	7.0
Population Density:																
Large MSA	16.7	16.6	17.3	17.7	21.3	20.7	23.7	20.6	18.6	16.7	17.4	15.0	11.5	12.6	11.4	10.3
Other MSA	19.0	15.9	19.7	19.2	19.9	21.9	23.9	21.2	22.8	21.1	17.5	16.7	15.9	16.1	12.7	11.5
Non-MSA	19.0	20.3	19.2	21.6	24.8	24.1	26.8	27.2	28.5	24.5	23.9	19.8	21.4	18.0	18.2	16.2
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	21.2	16.5	17.6	16.9	21.3	21.1	21.9	21.7	23.8	22.8	16.4	12.4	15.1	14.2	11.7	11.4
2.5–3.0	19.8	20.4	20.2	22.4	24.6	24.4	26.0	24.7	26.9	22.9	21.9	19.8	18.3	19.4	18.3	16.1
3.5–4.0	18.5	16.9	18.9	18.9	21.6	21.2	23.8	23.8	23.6	21.2	19.9	19.1	16.5	16.3	14.4	12.3
4.5–5.0	16.2	15.0	18.9	18.7	19.7	22.4	24.9	20.6	20.6	18.6	17.9	14.1	13.0	13.7	11.7	10.4
5.5–6.0 (High)	16.1	12.8	16.6	17.3	18.5	20.0	22.9	17.4	19.0	15.2	13.4	14.3	11.3	10.3	8.1	8.3
Race/Ethnicity (2-year average): <sup>b</sup>																
White	21.5	20.5	21.4	22.9	23.9	25.4	27.8	28.3	26.9	25.7	23.8	21.8	19.5	18.3	17.1	15.3
African American	5.1	4.2	4.1	4.9	6.1	7.0	7.2	7.4	7.7	8.0	7.5	6.4	5.4	5.2	5.6	5.7
Hispanic	11.5	12.5	11.8	10.6	11.6	12.9	14.0	13.6	14.0	15.7	12.0	9.2	8.0	8.2	7.7	7.0

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**TABLE 132 (cont.)**  
**CIGARETTES: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 12**

	Percentage who used daily in last 30 days													2018-2019 change
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	12.3	11.4	11.2	10.7	10.3	9.3	8.5	6.7	5.5	4.8	4.2	3.6	2.4	-1.3 sss
Gender:														
Male	13.0	12.0	11.8	12.3	11.6	10.9	9.7	7.9	6.6	5.6	4.3	3.8	2.8	-1.1 s
Female	11.2	10.6	9.9	8.7	8.6	7.3	6.5	5.4	3.9	3.7	3.8	2.6	1.6	-1.0 ss
College Plans:														
None or under 4 years	22.5	21.1	20.9	21.6	21.0	18.4	18.8	14.0	14.1	10.3	8.7	8.6	5.6	-3.0 ss
Complete 4 years	9.9	9.0	8.6	8.2	7.9	7.0	5.8	5.0	3.5	3.4	3.1	1.9	1.3	-0.6 s
Region:														
Northeast	14.3	11.3	10.8	10.3	10.2	11.3	9.8	6.8	5.4	5.9	4.1	2.3	1.8	-0.5
Midwest	14.5	12.9	15.4	12.5	11.7	11.6	8.4	6.6	6.6	5.5	4.3	3.5	2.2	-1.3 s
South	12.9	13.1	11.4	12.3	10.8	9.0	10.5	8.2	6.1	5.0	5.2	4.9	2.7	-2.2 sss
West	7.4	7.0	5.9	6.7	7.9	5.8	4.6	4.5	3.5	3.0	2.7	2.5	2.4	-0.1
Population Density:														
Large MSA	10.3	8.9	8.6	9.9	9.2	8.3	7.2	5.4	4.0	3.4	2.8	2.1	1.2	-0.9 sss
Other MSA	11.7	11.2	11.0	9.9	9.5	8.2	7.9	6.3	5.0	4.7	4.0	3.3	2.3	-1.0
Non-MSA	16.6	14.8	15.1	14.0	13.7	13.5	11.8	9.6	9.4	7.2	7.3	7.1	4.5	-2.6 ss
Parental Education: <sup>a</sup>														
1.0–2.0 (Low)	14.6	11.9	11.2	8.9	9.9	9.6	10.2	6.9	7.2	5.0	3.8	3.7	2.9	-0.8
2.5–3.0	15.1	13.4	14.7	13.9	13.5	11.6	10.4	8.9	7.8	6.2	5.3	4.6	3.4	-1.1
3.5–4.0	12.3	12.5	11.5	11.6	10.7	11.2	10.0	6.7	5.8	5.2	4.6	3.9	2.4	-1.5 ss
4.5–5.0	11.2	9.0	9.0	8.7	8.2	7.1	6.4	5.8	3.7	3.6	3.6	2.3	1.2	-1.1 s
5.5–6.0 (High)	7.4	9.1	5.8	6.1	6.7	4.7	3.6	4.7	3.1	2.6	2.6	1.4	1.1	-0.2
Race/Ethnicity (2-year average): <sup>b</sup>														
White	14.5	14.3	13.9	13.5	13.0	12.1	10.9	9.3	7.3	6.1	5.8	5.0	3.5	-1.6 sss
African American	5.8	5.8	5.4	5.3	4.9	4.7	5.3	5.1	4.1	3.5	2.5	2.0	1.8	-0.2
Hispanic	6.6	6.7	6.4	5.7	5.3	4.9	4.7	4.1	3.7	2.9	1.9	1.8	1.9	+0.1

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 133**  
**CIGARETTES: Trends in 30-Day Prevalence of Use of Half Pack a Day or More by Subgroups in Grade 8**

	Percentage who used half pack a day or more in last 30 days														
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Approximate weighted N =	17,500	18,600	18,300	17,300	17,500	17,800	18,600	18,100	16,700	16,700	16,200	15,100	16,500	17,000	16,800
Total	3.1	2.9	3.5	3.6	3.4	4.3	3.5	3.6	3.3	2.8	2.3	2.1	1.8	1.7	1.7
Gender:															
Male	3.7	3.1	4.3	4.2	3.7	4.7	3.7	3.5	3.1	2.8	2.6	2.4	1.8	1.7	2.0
Female	2.4	2.7	2.7	2.9	3.2	3.7	3.1	3.3	3.3	2.6	2.0	1.9	1.7	1.7	1.3
College Plans:															
None or under 4 years	10.1	10.8	11.9	11.7	11.4	13.5	11.6	13.8	13.4	10.3	9.8	8.4	7.5	7.4	7.7
Complete 4 years	1.9	1.7	2.2	2.4	2.3	2.8	2.4	2.2	2.0	1.8	1.4	1.5	1.2	1.1	1.0
Region:															
Northeast	3.3	2.8	2.7	3.7	3.7	4.1	3.7	2.1	3.1	3.3	2.6	1.7	1.0	1.4	1.4
Midwest	3.3	3.2	3.5	3.9	4.4	5.3	4.1	4.6	5.7	3.4	3.1	2.7	2.1	2.3	2.2
South	3.4	3.3	4.6	3.9	3.6	4.5	3.7	4.8	2.9	2.8	2.7	2.5	2.6	1.8	1.9
West	1.9	2.0	2.2	2.6	1.8	2.7	2.2	1.6	1.2	1.3	0.7	0.9	0.8	1.2	0.9
Population Density:															
Large MSA	2.4	2.3	2.1	3.0	2.5	3.7	2.7	2.3	1.8	2.1	1.5	1.3	1.0	1.3	1.0
Other MSA	3.3	3.2	3.7	3.9	3.6	3.8	3.2	3.2	2.8	2.2	2.1	2.2	1.7	1.6	1.5
Non-MSA	3.4	3.3	5.0	3.7	4.3	5.8	4.8	5.6	5.9	4.6	3.9	3.1	3.1	2.4	2.9
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	7.9	6.5	6.4	5.1	8.2	6.5	6.4	6.2	6.2	7.1	5.2	4.6	3.7	5.6	2.9
2.5–3.0	3.7	3.4	3.9	4.9	4.1	6.4	4.8	5.2	4.8	3.8	3.6	2.8	2.9	2.1	2.8
3.5–4.0	2.5	2.6	3.6	3.4	3.6	3.2	3.5	3.7	3.4	2.3	2.0	2.2	1.8	1.5	1.9
4.5–5.0	1.6	1.8	2.3	2.6	2.0	2.8	2.2	2.0	1.5	1.4	0.9	1.2	0.7	0.8	0.6
5.5–6.0 (High)	1.8	1.5	2.2	2.2	1.5	2.7	1.8	2.1	1.8	1.5	1.4	1.1	0.9	0.6	0.5
Race/Ethnicity (2-year average): <sup>b</sup>															
White	—	3.3	3.8	4.2	4.2	4.6	4.6	4.2	4.0	3.6	3.2	2.8	2.3	1.9	1.9
African American	—	0.4	0.7	1.0	0.9	1.3	1.4	1.2	1.3	1.0	1.1	1.1	1.2	1.1	0.9
Hispanic	—	2.7	2.5	3.1	3.3	2.7	2.4	2.8	3.0	2.3	1.4	1.3	1.5	1.4	1.1

Table continued on next page.

**TABLE 133 (cont.)**  
**CIGARETTES: Trends in 30-Day Prevalence of Use of Half Pack a Day or More by Subgroups in Grade 8**

	Percentage who used half pack a day or more in last 30 days														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	
Total	1.5	1.1	1.2	1.0	0.9	0.7	0.6	0.7	0.5	0.4	0.3	0.2	0.3	0.2	-0.1
Gender:															
Male	1.7	1.3	1.4	1.2	1.1	0.7	0.8	0.9	0.5	0.5	0.4	0.2	0.3	0.2	-0.2
Female	1.3	0.8	0.9	0.7	0.7	0.6	0.3	0.5	0.4	0.3	0.2	0.1	0.2	0.2	0.0
College Plans:															
None or under 4 years	5.8	4.7	4.7	4.7	4.6	3.0	3.0	4.0	1.8	2.4	1.8	0.6	1.1	1.0	0.0
Complete 4 years	1.1	0.7	0.8	0.6	0.5	0.5	0.4	0.5	0.3	0.2	0.1	0.1	0.1	0.1	-0.1
Region:															
Northeast	1.2	0.8	0.9	0.8	0.6	0.2	0.7	0.4	0.4	0.3	0.2	0.1	0.3	0.2	-0.1
Midwest	1.9	1.2	1.6	1.1	1.0	0.8	0.5	0.5	0.3	0.4	0.2	0.3	0.6	0.2	-0.4
South	2.1	1.3	1.3	1.1	1.2	0.8	0.8	1.1	0.8	0.6	0.5	0.2	0.2	0.3	+0.1
West	0.6	0.9	0.6	0.7	0.5	1.0	0.3	0.6	0.3	0.3	0.3	0.2	0.4	0.1	-0.3
Population Density:															
Large MSA	0.9	0.7	0.7	0.5	0.4	0.3	0.4	0.5	0.3	0.2	0.2	0.1	0.2	0.2	0.0
Other MSA	1.6	1.1	1.3	1.1	0.9	1.0	0.6	0.7	0.5	0.4	0.3	0.2	0.3	0.2	-0.2
Non-MSA	2.3	1.7	1.6	1.3	1.4	0.8	0.8	1.3	0.9	0.9	0.7	0.4	0.5	0.3	-0.3
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	3.6	1.9	2.5	2.6	0.9	1.2	0.7	1.0	1.2	0.7	1.0	0.3	0.3	0.3	0.0
2.5–3.0	2.4	2.0	1.5	1.2	1.7	1.0	1.0	0.9	0.6	0.3	0.3	0.1	0.2	0.1	-0.1
3.5–4.0	1.3	1.3	1.0	0.8	0.9	0.8	0.7	0.7	0.6	0.4	0.1	0.3	0.4	0.1	-0.2
4.5–5.0	1.0	0.5	0.7	0.4	0.7	0.4	0.1	0.3	0.2	0.2	0.0	0.2	0.2	0.1	-0.1
5.5–6.0 (High)	0.6	0.2	0.9	0.7	0.2	0.2	0.4	0.7	0.1	0.2	0.2	0.0	0.1	0.1	0.0
Race/Ethnicity (2-year average): <sup>b</sup>															
White	1.9	1.5	1.2	1.2	1.1	0.9	0.7	0.7	0.6	0.4	0.3	0.3	0.3	0.2	-0.1
African American	0.8	0.9	0.8	0.8	0.6	0.4	0.4	0.6	0.6	0.4	0.3	0.3	0.3	0.3	-0.1
Hispanic	0.7	0.9	0.9	0.7	0.7	0.7	0.5	0.5	0.5	0.4	0.3	0.1	0.1	0.1	+0.1

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

*Notes.* Level of significance of difference between the two most recent 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 134**  
**CIGARETTES: Trends in 30-Day Prevalence of Use of Half Pack a Day or More**  
**by Subgroups in Grade 10**

	Percentage who used half pack a day or more in last 30 days															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	
<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	
Total	6.5	6.0	7.0	7.6	8.3	9.4	8.6	7.9	7.6	6.2	5.5	4.4	4.1	3.3	3.1	
Gender:																
Male	6.9	6.5	7.8	8.2	8.7	9.9	8.9	8.1	7.8	6.7	6.0	4.1	4.3	3.5	2.9	
Female	6.0	5.1	6.2	6.7	7.7	9.0	8.2	7.8	7.3	5.6	5.1	4.6	3.8	2.9	3.2	
College Plans:																
None or under 4 years	15.9	15.3	18.5	18.5	20.9	22.4	22.0	20.6	18.9	16.0	16.0	11.5	12.3	10.8	9.4	
Complete 4 years	4.4	4.0	4.6	5.2	6.1	7.1	6.3	5.6	5.7	4.5	3.8	3.1	2.8	2.2	2.2	
Region:																
Northeast	7.8	5.9	8.5	7.8	7.7	9.1	8.8	10.0	9.1	6.0	5.0	3.7	4.6	3.6	3.4	
Midwest	7.1	7.3	7.7	8.3	9.5	10.9	9.3	9.1	9.9	8.1	6.0	4.8	5.0	3.0	3.3	
South	7.2	5.5	7.1	8.7	10.3	11.0	10.2	8.9	7.8	7.1	6.5	5.5	4.5	4.3	3.7	
West	4.0	5.0	4.3	4.2	3.4	5.0	4.4	3.0	3.0	2.2	3.3	2.5	2.3	1.8	1.7	
Population Density:																
Large MSA	6.9	5.2	5.9	5.8	6.0	7.6	6.6	5.8	6.0	5.7	4.8	3.0	2.3	1.9	2.3	
Other MSA	5.8	5.8	6.7	8.5	9.2	9.5	8.0	7.7	7.6	5.6	5.0	4.7	4.0	3.3	2.6	
Non-MSA	7.6	6.9	8.7	7.8	9.2	11.5	12.0	11.0	9.4	7.8	7.5	5.7	7.3	5.2	5.4	
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	9.9	10.7	10.8	8.1	12.0	12.1	10.8	9.0	11.3	10.7	7.6	7.4	8.6	6.6	4.6	
2.5–3.0	8.9	6.9	8.5	10.1	12.2	13.1	11.4	11.6	10.4	8.5	8.3	7.0	6.3	5.3	4.9	
3.5–4.0	5.8	5.4	7.3	8.0	8.6	10.2	8.8	7.4	7.4	5.9	5.3	4.0	4.2	3.8	3.2	
4.5–5.0	4.7	4.7	4.3	5.4	5.0	6.2	6.5	5.9	5.5	4.3	3.9	2.4	2.2	1.4	1.8	
5.5–6.0 (High)	4.5	3.7	3.9	4.0	4.0	5.7	4.8	5.4	4.5	3.6	2.6	2.0	1.4	1.0	1.6	
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	7.4	7.7	8.6	9.3	10.5	11.0	10.4	9.9	8.5	7.1	6.2	5.5	4.7	3.9	
African American	—	0.8	0.6	1.2	1.8	1.6	1.7	1.8	1.5	1.9	1.7	1.2	1.0	1.0	1.2	
Hispanic	—	3.0	3.0	2.6	3.4	4.3	3.3	3.0	3.1	2.9	2.7	2.2	1.8	1.5	1.9	

Table continued on next page.

**TABLE 134 (cont.)**  
**CIGARETTES: Trends in 30-Day Prevalence of Use of Half Pack a Day or More**  
**by Subgroups in Grade 10**

	Percentage who used half pack a day or more in last 30 days														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	3.3	2.7	2.0	2.4	2.4	1.9	1.5	1.5	1.2	1.0	0.6	0.7	0.7	0.5	-0.2
Gender:															
Male	3.1	2.9	2.4	2.7	3.0	2.5	1.7	1.9	1.5	1.1	0.8	0.7	0.8	0.7	-0.1
Female	3.3	2.5	1.7	2.0	1.8	1.2	1.3	1.1	0.9	0.8	0.4	0.4	0.4	0.4	0.0
College Plans:															
None or under 4 years	12.0	8.1	7.8	8.6	8.6	7.0	6.8	5.3	4.9	5.0	3.2	3.2	2.1	1.4	-0.8
Complete 4 years	2.1	2.0	1.3	1.7	1.7	1.3	1.0	1.0	0.8	0.5	0.3	0.3	0.4	0.3	0.0
Region:															
Northeast	3.2	2.5	1.2	2.2	2.6	2.3	1.1	1.4	0.9	0.9	0.5	0.9	0.3	0.1	-0.1
Midwest	4.5	4.2	3.3	2.7	2.7	2.2	1.5	1.8	1.7	1.0	0.9	0.7	0.8	0.7	-0.1
South	3.6	2.8	2.6	3.2	3.1	2.3	2.3	2.0	1.3	1.3	0.7	0.5	0.9	0.5	-0.5
West	1.3	1.3	0.7	1.0	1.1	0.5	0.8	0.7	0.8	0.7	0.4	0.7	0.5	0.7	+0.1
Population Density:															
Large MSA	1.8	2.0	1.1	1.6	1.6	1.3	0.9	0.8	0.7	0.6	0.5	0.6	0.5	0.2	-0.3
Other MSA	3.0	2.7	2.2	2.3	2.4	1.7	1.4	1.4	0.8	0.7	0.4	0.4	0.6	0.6	0.0
Non-MSA	6.3	4.0	3.1	3.7	3.8	3.0	2.6	2.7	3.0	2.4	1.5	1.4	1.3	1.0	-0.3
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	7.1	4.9	3.4	4.8	4.2	3.0	3.9	2.6	1.9	2.0	0.9	0.9	1.3	0.6	-0.7
2.5–3.0	5.6	4.5	3.2	3.7	4.5	3.6	2.5	2.6	1.9	1.3	0.9	1.2	1.1	0.8	-0.3
3.5–4.0	3.1	2.6	2.4	2.4	2.3	1.8	1.3	1.5	1.5	1.2	0.4	0.5	0.7	0.6	-0.1
4.5–5.0	1.5	1.6	1.1	1.4	1.1	0.9	1.0	0.9	0.5	0.7	0.4	0.3	0.3	0.1	-0.2 s
5.5–6.0 (High)	1.6	1.2	0.7	1.1	1.0	0.5	0.5	0.5	0.4	0.1	0.3	0.3	0.3	0.4	0.0
Race/Ethnicity (2-year average): <sup>b</sup>															
White	3.8	3.8	3.2	2.8	2.9	2.6	2.1	1.9	1.8	1.2	0.9	0.7	0.8	0.8	0.0
African American	1.3	1.2	0.9	1.1	1.4	1.3	0.9	0.8	1.0	0.9	0.6	0.4	0.4	0.3	-0.1
Hispanic	2.0	1.0	0.9	1.1	1.0	0.9	0.8	0.6	0.5	0.7	0.7	0.5	0.5	0.4	-0.1

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 135**  
**CIGARETTES: Trends in 30-Day Prevalence of Use of Half Pack a Day or More**  
**by Subgroups in Grade 12**

	Percentage who used half pack a day or more in last 30 days															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<i>Approximate weighted N =</i>	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
Total	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
Gender:																
Male	19.6	19.9	19.7	18.9	15.4	13.5	12.8	13.1	13.1	11.0	12.3	10.7	10.1	11.1	11.2	11.6
Female	16.1	18.0	18.9	18.0	17.1	14.7	13.8	14.7	13.6	12.8	12.0	11.6	12.5	9.7	10.7	10.8
College Plans:																
None or under 4 years	—	25.5	26.9	25.5	23.3	21.2	20.8	21.0	20.9	19.6	20.7	19.2	19.5	18.4	18.6	19.2
Complete 4 years	—	11.9	11.2	11.1	9.8	8.2	7.5	7.8	7.6	6.5	6.5	6.4	7.2	6.8	7.5	7.5
Region:																
Northeast	22.0	22.5	24.2	23.6	19.8	17.0	16.6	15.6	16.6	17.4	17.0	15.6	16.5	13.1	13.6	13.8
Midwest	18.8	20.3	20.3	19.8	17.4	15.4	16.0	17.3	17.1	13.0	14.9	12.3	12.3	11.5	14.2	13.7
South	16.8	19.0	18.5	17.0	16.1	14.5	12.0	13.3	12.4	11.3	9.7	10.0	9.4	10.1	9.7	9.4
West	11.3	12.4	11.5	12.2	10.8	8.3	7.3	7.1	6.4	7.4	7.6	6.5	8.1	7.7	6.9	8.3
Population Density:																
Large MSA	21.7	20.1	20.4	19.7	16.2	14.8	15.4	15.9	14.1	14.8	14.4	12.2	13.1	10.8	10.1	11.2
Other MSA	17.4	18.9	18.8	17.9	16.5	13.8	12.4	12.9	13.5	11.4	11.0	9.6	10.0	10.4	11.2	11.0
Non-MSA	15.9	19.0	19.5	19.3	16.7	14.7	13.6	14.2	14.0	11.5	12.9	13.3	12.5	10.7	12.1	12.1
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	18.6	21.3	20.0	19.2	19.5	16.3	16.0	17.1	17.1	16.4	16.1	15.6	13.8	11.2	11.5	10.2
2.5–3.0	17.7	21.4	22.2	21.0	17.6	16.8	15.6	15.9	15.2	14.8	14.2	13.3	13.9	12.4	13.5	13.4
3.5–4.0	13.9	17.4	18.3	16.9	15.2	12.8	12.5	13.3	11.9	10.5	12.0	11.0	10.5	10.3	10.7	11.6
4.5–5.0	15.9	15.9	14.8	15.4	12.6	10.3	10.1	10.1	10.5	8.0	9.5	6.8	8.9	8.6	9.2	10.2
5.5–6.0 (High)	9.1	15.9	14.6	14.5	13.6	9.8	8.8	9.3	9.3	7.9	5.4	7.4	8.4	8.3	8.4	7.9
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	—	20.3	20.2	18.6	16.4	15.0	15.1	15.2	14.2	13.6	13.1	12.9	12.9	12.9	13.3
African American	—	—	10.7	9.7	9.1	7.1	5.8	5.4	4.9	4.1	3.9	3.6	2.9	2.3	1.9	1.8
Hispanic	—	—	11.3	9.0	6.4	5.6	6.1	5.6	5.9	6.1	5.3	5.0	4.1	3.5	4.2	4.2

Table continued on next page.

**TABLE 135 (cont.)**  
**CIGARETTES: Trends in 30-Day Prevalence of Use of Half Pack a Day or More**  
**by Subgroups in Grade 12**

	Percentage who used half pack a day or more in last 30 days															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	10.7	10.0	10.9	11.2	12.4	13.0	14.3	12.6	13.2	11.3	10.3	9.1	8.4	8.0	6.9	5.9
Gender:																
Male	11.6	10.4	11.6	12.7	13.2	13.6	15.5	13.5	14.5	11.4	10.2	10.0	9.5	8.0	8.0	6.2
Female	9.5	9.2	9.9	9.5	11.1	12.0	12.6	11.1	11.5	10.8	10.2	7.9	6.6	7.5	5.3	5.2
College Plans:																
None or under 4 years	18.7	19.1	18.7	19.6	22.6	23.1	23.5	23.7	23.2	20.3	19.3	17.5	17.2	16.0	15.2	13.0
Complete 4 years	7.1	6.5	8.1	8.2	8.9	10.0	11.0	8.9	10.1	8.1	7.6	6.7	5.5	5.6	4.6	3.9
Region:																
Northeast	12.9	11.1	14.7	12.2	13.4	17.0	19.4	13.6	13.4	13.6	12.3	10.9	8.7	9.0	7.5	7.9
Midwest	14.1	11.0	12.5	15.3	14.2	15.1	16.9	16.8	15.0	13.7	14.8	13.6	10.1	8.8	8.7	6.7
South	8.9	10.2	10.4	10.8	12.6	12.0	12.3	11.8	13.9	10.6	7.6	8.6	8.9	8.9	7.6	6.0
West	7.2	6.8	6.0	5.9	8.4	6.5	8.2	7.5	9.0	7.5	6.6	3.1	5.0	4.1	3.1	2.9
Population Density:																
Large MSA	10.2	9.9	9.1	10.2	12.3	11.6	12.8	11.0	9.6	8.2	9.4	7.6	5.4	6.0	5.2	4.8
Other MSA	10.7	8.4	11.2	10.5	11.1	12.8	14.3	11.7	12.6	11.6	9.4	8.7	8.4	8.2	6.3	5.0
Non-MSA	11.1	13.1	11.7	13.7	14.7	14.4	16.0	16.5	18.0	14.5	13.3	11.9	12.2	10.0	10.4	9.2
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	12.5	11.0	10.7	9.5	13.5	13.6	11.9	12.5	15.0	16.1	10.8	7.4	8.7	8.6	6.8	5.4
2.5–3.0	12.4	12.7	12.5	13.7	15.1	14.8	16.4	14.9	16.6	13.8	12.5	12.0	10.5	10.9	10.0	8.4
3.5–4.0	10.7	9.6	10.4	11.0	12.7	12.3	13.9	13.8	13.1	10.7	10.6	10.3	8.7	8.2	7.2	5.8
4.5–5.0	7.9	8.1	10.0	10.4	9.8	12.6	14.5	10.3	10.7	9.3	9.2	6.8	5.7	6.1	5.1	4.6
5.5–6.0 (High)	9.0	5.7	8.3	8.8	9.1	10.8	11.2	7.4	9.5	7.1	6.2	5.4	4.9	4.7	3.2	3.3
Race/Ethnicity (2-year average): <sup>b</sup>																
White	13.1	12.3	12.8	13.7	14.2	15.2	16.9	16.9	15.9	15.1	13.6	12.4	10.9	10.0	9.1	7.9
African American	1.8	1.8	1.5	1.7	2.2	2.5	2.8	2.5	2.4	2.6	2.4	2.1	1.7	1.6	1.8	2.1
Hispanic	4.0	4.6	4.5	4.0	4.1	5.3	5.8	5.2	5.8	7.0	5.3	3.8	3.0	2.9	2.9	2.6

Table continued on next page.

**TABLE 135 (cont.)**  
**CIGARETTES: Trends in 30-Day Prevalence of Use of Half Pack a Day or More**  
**by Subgroups in Grade 12**

	Percentage who used half pack a day or more in last 30 days													2018-2019 change
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	5.7	5.4	5.0	4.7	4.3	4.0	3.4	2.6	2.1	1.8	1.7	1.5	0.9	-0.6 s
Gender:														
Male	6.4	6.1	5.4	5.6	5.3	4.9	4.0	3.4	2.5	1.9	1.8	1.6	1.1	-0.5
Female	4.7	4.6	4.2	3.6	3.0	2.8	2.4	1.8	1.2	1.5	1.3	0.9	0.6	-0.3
College Plans:														
None or under 4 years	12.5	11.9	11.2	12.0	11.1	9.5	8.6	6.2	5.8	4.7	4.7	3.1	2.3	-0.8
Complete 4 years	4.0	3.8	3.6	3.1	2.8	2.6	2.1	1.7	1.1	1.0	0.9	0.8	0.5	-0.3
Region:														
Northeast	6.1	5.5	5.0	4.4	4.0	5.4	4.3	2.5	2.2	2.2	2.1	0.8	0.6	-0.2
Midwest	7.2	6.6	7.2	5.9	4.5	5.2	3.4	2.5	2.4	2.3	1.9	1.6	0.7	-0.9
South	6.4	6.5	5.3	5.5	5.2	4.0	4.3	3.3	2.4	1.9	2.0	2.1	1.2	-1.0 s
West	2.5	2.6	1.8	2.2	3.0	1.8	1.4	1.6	1.1	0.9	0.6	0.7	0.9	+0.2
Population Density:														
Large MSA	4.2	3.4	3.8	4.0	3.8	3.2	2.6	1.9	1.5	1.0	0.9	1.0	0.5	-0.5 s
Other MSA	5.3	5.3	4.6	4.2	3.9	3.4	2.8	2.4	1.9	1.8	1.8	1.2	0.8	-0.4
Non-MSA	8.8	8.2	7.5	6.9	6.2	6.8	6.0	4.1	3.6	2.9	2.6	3.1	2.1	-1.0
Parental Education: <sup>a</sup>														
1.0–2.0 (Low)	7.5	6.8	5.2	4.3	5.0	4.9	3.9	2.7	3.0	2.9	1.3	1.5	1.1	-0.4
2.5–3.0	7.6	6.9	7.2	6.4	6.2	5.3	5.0	3.1	3.2	2.4	2.3	1.4	1.3	-0.1
3.5–4.0	5.6	6.0	5.1	5.1	4.3	4.7	3.7	2.8	1.7	1.6	1.6	1.7	1.0	-0.8
4.5–5.0	4.7	3.7	3.6	3.2	2.7	2.3	2.4	2.1	1.3	1.3	1.5	0.8	0.4	-0.4
5.5–6.0 (High)	2.7	3.5	2.0	2.3	2.7	2.0	1.1	1.6	1.1	0.7	0.7	0.6	0.7	+0.1
Race/Ethnicity (2-year average): <sup>b</sup>														
White	7.1	7.1	7.0	6.6	6.0	5.4	4.8	3.9	2.9	2.3	2.2	2.1	1.4	-0.6 ss
African American	2.4	2.2	1.6	1.6	2.0	1.5	1.5	2.0	1.5	1.1	1.0	0.9	0.9	0.0
Hispanic	2.5	2.1	1.6	1.5	1.4	1.3	1.4	1.2	1.1	0.9	0.6	0.6	0.6	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 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 136**  
**TOBACCO USING A HOOKAH: Trends in Annual**  
**Prevalence of Use by Subgroups in Grade 12**

	Percent who used in last 12 months											2018– 2019 change
	1975– 2011	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
	<i>Approximate weighted N =</i>											
Total	—	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	-2.2 s
Gender:												
Male	—	19.0	20.0	19.9	21.6	24.9	22.2	15.2	9.4	7.0	6.6	-0.5
Female	—	15.2	16.7	17.0	21.0	21.4	17.9	10.7	10.5	7.7	4.4	-3.3 s
College Plans:												
None or under 4 years	—	19.4	19.8	17.9	21.3	23.7	20.6	18.5	10.8	11.5	8.1	-3.4
Complete 4 years	—	16.2	18.6	18.4	21.5	22.8	19.5	11.6	10.2	7.1	5.0	-2.1
Region:												
Northeast	—	15.4	15.1	17.5	23.9	21.6	20.5	18.9	7.3	11.9	4.8	-7.1 ss
Midwest	—	17.9	21.3	18.6	18.9	26.2	24.2	13.5	10.5	8.7	4.7	-4.0
South	—	15.3	14.5	12.1	16.5	20.1	16.6	8.2	8.7	5.8	5.8	0.0
West	—	20.9	23.9	26.2	29.7	25.9	21.1	17.2	13.7	7.5	7.1	-0.3
Population Density:												
Large MSA	—	19.6	18.6	22.7	25.2	24.6	20.1	18.6	9.7	8.3	4.4	-3.9 ss
Other MSA	—	18.3	21.2	19.3	23.6	23.5	20.2	11.0	9.7	8.5	5.6	-3.0
Non-MSA	—	10.5	12.3	9.1	10.7	19.3	18.6	9.2	11.5	5.4	7.7	+2.3
Parental Education: <sup>a</sup>												
1.0–2.0 (Low)	—	16.8	19.8	18.1	19.2	17.9	16.4	10.7	8.1	8.3	6.7	-1.5
2.5–3.0	—	16.3	17.6	16.8	20.6	20.2	19.8	14.6	9.3	7.8	9.6	+1.8
3.5–4.0	—	18.7	18.1	19.4	23.7	22.9	21.3	15.2	12.7	10.5	6.3	-4.2 s
4.5–5.0	—	15.0	18.6	19.6	20.8	29.0	19.5	11.2	8.4	6.3	3.6	-2.6
5.5–6.0 (High)	—	21.3	20.6	17.6	20.4	22.0	23.8	10.6	12.7	5.9	3.4	-2.5
Race/Ethnicity (2-year data): <sup>b</sup>												
White	—	—	20.6	20.5	20.2	24.4	25.2	19.7	13.0	9.4	6.7	-2.7 sss
African American	—	—	6.0	5.9	8.6	10.3	9.5	8.7	8.3	7.3	4.8	-2.5
Hispanic	—	—	17.6	18.5	22.8	23.7	19.9	16.3	11.6	8.8	8.4	-0.4

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

*Notes.* ' — ' 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. Beginning in 2016 data based on three of six forms; *N* is three sixths of *N* indicated in Table S3.

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

<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 137**  
**SMALL CIGARS: Trends in Annual Prevalence**  
**of Use by Subgroups in Grade 12**

	Percent who used in last 12 months											2018– 2019 change
	1975– 2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>		14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	23.1	19.5	19.9	20.4	18.9	15.9	15.6	13.3	9.2	7.8	-1.4
Gender:												
Male	—	29.7	26.7	27.1	26.5	26.4	23.6	22.5	19.3	12.3	11.7	-0.6
Female	—	16.3	12.3	12.9	14.8	11.8	9.3	8.5	7.8	6.5	3.5	-3.0 s
College Plans:												
None or under 4 years	—	30.7	27.7	24.5	21.8	22.9	20.3	18.8	18.7	14.4	13.2	-1.2
Complete 4 years	—	21.4	17.8	19.0	20.1	18.0	14.9	14.6	12.4	7.8	6.1	-1.7
Region:												
Northeast	—	26.1	21.5	19.2	21.4	21.2	17.4	18.2	13.9	12.6	6.5	-6.0 s
Midwest	—	28.1	23.7	28.4	23.7	23.6	17.6	15.5	14.6	8.1	7.5	-0.5
South	—	19.8	14.2	12.8	19.8	18.2	14.4	14.2	13.0	9.2	8.9	-0.3
West	—	20.8	21.8	20.5	17.1	14.2	15.9	16.7	11.9	7.9	6.3	-1.6
Population Density:												
Large MSA	—	22.7	16.2	21.6	18.5	16.0	10.7	13.6	11.5	4.6	5.3	+0.7
Other MSA	—	23.5	21.9	19.5	22.4	20.3	17.9	16.7	13.8	11.1	8.5	-2.6
Non-MSA	—	22.5	18.4	18.3	18.3	19.4	19.7	16.1	14.9	12.5	9.8	-2.8
Parental Education: <sup>a</sup>												
1.0–2.0 (Low)	—	16.6	14.8	12.8	18.3	9.5	11.8	8.5	10.3	6.5	7.9	+1.3
2.5–3.0	—	23.6	16.2	18.6	17.5	17.6	15.9	15.8	11.1	9.8	6.0	-3.8
3.5–4.0	—	22.9	19.9	20.5	22.8	20.6	18.7	16.0	14.3	10.3	8.9	-1.4
4.5–5.0	—	25.9	19.4	23.2	22.1	20.8	14.8	16.3	14.9	9.3	8.1	-1.2
5.5–6.0 (High)	—	23.5	26.5	19.7	18.1	21.5	19.9	19.1	15.5	9.1	9.4	+0.3
Race/Ethnicity (2-year data): <sup>b</sup>												
White	—	—	25.8	24.3	23.9	24.2	22.0	20.6	19.6	15.1	11.3	-3.8 sss
African American	—	—	6.3	5.9	9.1	10.5	9.4	7.8	5.3	4.3	4.1	-0.2
Hispanic	—	—	17.9	13.6	16.0	13.7	10.0	10.4	8.5	5.9	5.2	-0.7

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

*Notes.* '—' 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.

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

<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 138**  
**Flavored Little Cigars or Cigarillos: Trends in 30-Day**  
**Prevalence of Use by Subgroups in Grades 8, 10, and 12**

	Percentage who used in last 30 days																							
	<u>8th Graders</u>							<u>10th Graders</u>							<u>12th Graders</u>									
	1991– 2013	2014	2015	2016	2017	2018	2019	change	1991– 2013	2014	2015	2016	2017	2018	2019	change	1976– 2013	2014	2015	2016	2017	2018	2019	change
<i>Approximate weighted N =</i>	—	14600	14,400	16,900	15,300	14,000	13,600		—	13000	15,600	14,700	13,500	14,300	14,000		—	12400	12,900	11,800	12,600	13,300	12,900	
Total	—	4.1	4.1	2.8	2.6	2.6	2.2	-0.4	—	6.9	6.1	4.9	4.0	5.3	3.7	-1.6 s	—	11.9	11.4	9.5	10.1	8.9	7.7	-1.1
Gender:																								
Male	—	4.8	4.4	2.6	2.8	2.6	1.9	-0.7	—	8.2	7.5	5.8	4.9	6.1	4.3	-1.8	—	16.1	15.4	13.4	12.6	12.0	11.3	-0.7
Female	—	3.4	3.7	2.8	2.4	2.3	2.5	+0.3	—	5.8	4.8	3.7	3.0	4.4	3.2	-1.2	—	8.2	7.6	5.8	7.5	5.2	4.6	-0.7
College Plans:																								
None or under 4 years	—	10.0	9.8	10.0	8.5	7.1	6.2	-0.9	—	12.9	15.1	10.4	10.9	13.1	8.0	-5.2 s	—	19.6	18.4	12.6	17.4	14.4	11.0	-3.4
Complete 4 years	—	3.5	3.6	2.2	2.1	1.9	1.6	-0.3	—	6.5	5.2	4.2	3.0	4.4	2.9	-1.5 s	—	9.9	9.8	8.8	8.4	7.3	6.6	-0.8
Region:																								
Northeast	—	2.3	3.0	3.5	2.5	1.8	0.6	-1.3 s	—	7.3	5.2	2.9	4.0	3.3	2.0	-1.3	—	15.5	11.7	10.8	12.3	6.0	5.7	-0.3
Midwest	—	3.3	3.1	2.2	2.6	2.7	2.4	-0.3	—	7.2	6.2	4.2	3.3	4.9	3.8	-1.1	—	14.5	11.5	11.1	11.1	9.3	9.0	-0.2
South	—	4.8	4.8	3.3	2.5	2.6	2.9	+0.4	—	7.7	7.0	6.2	3.5	7.5	5.0	-2.4	—	10.7	11.7	8.4	10.1	10.0	7.6	-2.4
West	—	4.7	4.5	1.9	2.8	3.2	2.1	-1.1	—	5.3	5.5	5.4	5.3	3.8	2.6	-1.2	—	9.0	10.6	8.9	7.6	8.4	7.9	-0.5
Population Density:																								
Large MSA	—	4.2	3.4	2.2	2.2	2.2	1.9	-0.4	—	7.0	4.9	4.6	4.5	3.3	2.2	-1.1	—	7.9	9.0	7.4	9.1	6.8	5.5	-1.3
Other MSA	—	4.4	4.6	2.7	2.7	2.3	2.2	-0.1	—	6.3	5.2	4.8	2.8	6.3	4.1	-2.3	—	12.6	12.5	9.5	9.5	8.7	8.0	-0.7
Non-MSA	—	3.2	3.9	4.0	3.0	4.0	2.9	-1.1	—	8.5	10.6	6.0	6.0	6.0	5.2	-0.8	—	15.4	12.7	12.2	12.6	12.8	10.5	-2.3
Parental Education: a																								
1.0–2.0 (Low)	—	9.1	8.0	4.3	3.1	5.0	3.3	-1.7	—	10.5	7.9	5.8	5.2	2.9	6.7	+3.9 s	—	10.7	13.1	8.5	7.4	8.5	9.1	+0.5
2.5–3.0	—	6.0	4.5	3.1	4.9	2.8	3.2	+0.4	—	7.2	8.5	4.3	6.2	7.6	6.0	-1.5	—	14.8	14.3	9.7	10.0	9.0	8.5	-0.5
3.5–4.0	—	3.9	3.1	2.2	2.6	3.7	2.3	-1.4	—	10.8	6.2	5.1	4.1	6.7	4.1	-2.6	—	12.4	10.6	9.9	10.5	9.1	8.3	-0.8
4.5–5.0	—	2.2	3.4	2.7	1.9	1.5	1.7	+0.3	—	5.1	4.6	4.3	2.6	4.0	1.6	-2.4 s	—	10.4	11.8	10.4	10.7	9.2	5.2	-4.0 ss
5.5–6.0 (High)	—	2.1	2.6	1.8	1.3	1.0	1.3	+0.3	—	3.7	4.8	5.5	1.9	4.7	2.8	-1.9	—	9.6	6.9	6.9	10.9	7.5	9.0	+1.5
Race/Ethnicity (2-year data): b																								
White	—	—	2.6	2.7	2.2	2.0	2.0	-0.1	—	—	6.8	5.7	4.1	4.6	4.6	0.0	—	—	13.4	12.2	12.0	11.6	9.6	-1.9 sss
African American	—	—	4.2	3.1	2.8	3.5	3.2	-0.3	—	—	6.4	3.9	3.3	3.6	4.2	+0.6	—	—	8.8	8.0	6.5	5.6	4.7	-0.9
Hispanic	—	—	6.7	4.4	2.9	3.1	2.8	-0.3	—	—	5.9	4.7	4.6	5.1	5.3	+0.3	—	—	9.5	8.1	5.9	5.8	7.3	+1.5

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

Notes. '—' 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 Tables S1, S2, and S3 for the number of subgroup cases. See appendix B for definition of variables in table. For 8th and 10th graders only: Data based on two of four forms; N is one third of N indicated in S1 and S2. For 12th graders only: Data based on two of six forms; N is two sixths of N indicated in Table S3.

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

<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 139**  
**Regular Little Cigars or Cigarillos: Trends in 30-Day**  
**Prevalence of Use by Subgroups in Grades 8, 10, and 12**

	Percentage who used in last 30 days																							
	8th Graders							10th Graders							12th Graders									
	1991– 2013	2014	2015	2016	2017	2018	2019	1991– 2013	2014	2015	2016	2017	2018	2019	1976– 2013	2014	2015	2016	2017	2018	2019			
Approximate weighted N =	—	14,600	14,400	16,900	15,300	14,000	13,600	—	13,000	15,600	14,700	13,500	14,300	14,000	—	12,400	12,900	11,800	12,600	13,300	12,900			
Total	—	2.5	3.3	1.9	1.6	1.6	1.6	0.0	—	4.4	3.8	3.0	3.0	3.1	2.6	-0.4	—	7.0	7.8	6.1	6.6	5.8	4.9	-0.9
Gender:																								
Male	—	2.9	4.1	1.8	1.7	1.9	1.5	-0.4	—	5.9	4.9	3.8	3.9	3.5	3.3	-0.2	—	9.6	10.9	8.7	8.4	7.9	6.6	-1.3
Female	—	2.0	2.5	1.6	1.5	1.2	1.7	+0.5	—	2.9	2.9	2.0	2.0	2.5	2.0	-0.5	—	4.6	4.6	3.3	4.3	3.1	3.3	+0.2
College Plans:																								
None or under 4 years	—	8.5	9.5	6.9	5.4	5.5	4.6	-0.8	—	9.9	9.1	8.1	9.2	8.3	5.6	-2.7	—	13.6	14.6	8.8	12.0	11.1	8.3	-2.8
Complete 4 years	—	2.0	2.8	1.4	1.3	1.1	1.2	+0.1	—	4.0	3.3	2.4	2.1	2.4	2.1	-0.3	—	5.3	6.1	5.3	5.4	4.3	4.0	-0.3
Region:																								
Northeast	—	1.7	3.2	2.6	1.4	1.3	0.3	-1.0	—	4.7	4.4	2.3	2.9	2.4	1.2	-1.2	—	9.0	7.8	7.3	7.3	4.0	2.5	-1.5
Midwest	—	1.5	2.9	1.4	1.5	1.8	1.7	-0.1	—	3.9	4.1	2.7	2.7	3.1	2.0	-1.1	—	8.7	7.5	6.4	6.5	5.9	5.1	-0.8
South	—	3.8	4.0	2.3	1.7	1.5	2.4	+0.9	—	6.0	4.5	3.5	3.0	4.4	3.9	-0.5	—	6.8	8.7	6.4	7.8	7.1	5.2	-1.9
West	—	2.0	2.6	1.0	1.8	1.7	1.2	-0.5	—	2.5	1.9	3.1	3.3	1.4	2.1	+0.7	—	4.1	6.6	4.5	4.1	4.9	6.1	+1.2
Population Density:																								
Large MSA	—	2.2	3.3	1.2	1.5	1.3	1.1	-0.3	—	4.1	2.8	2.7	2.9	2.1	1.4	-0.7	—	4.8	6.0	5.4	4.9	5.4	3.7	-1.8
Other MSA	—	2.7	3.5	1.9	1.7	1.5	2.1	+0.5	—	3.6	3.5	2.8	2.1	3.4	3.2	-0.3	—	7.0	8.1	6.0	5.9	5.5	4.7	-0.8
Non-MSA	—	2.5	3.1	2.8	1.6	2.1	1.3	-0.7	—	7.1	6.4	4.1	5.2	3.7	3.3	-0.4	—	9.5	9.9	7.3	10.6	7.1	7.4	+0.2
Parental Education: a																								
1.0–2.0 (Low)	—	5.4	8.3	2.3	2.7	3.4	2.1	-1.4	—	7.4	5.5	4.3	3.2	3.3	4.6	+1.3	—	8.4	7.9	3.0	5.2	6.3	8.1	+1.8
2.5–3.0	—	3.3	3.1	2.1	3.1	1.8	1.6	-0.2	—	3.8	4.7	2.1	3.7	3.8	4.8	+1.0	—	7.9	10.9	6.5	7.8	5.6	5.4	-0.2
3.5–4.0	—	1.9	2.6	1.4	1.3	2.0	1.5	-0.5	—	6.6	3.3	4.0	3.9	4.3	2.6	-1.7	—	7.4	6.4	6.8	7.2	6.3	4.6	-1.7
4.5–5.0	—	1.9	2.7	1.7	1.0	0.8	1.1	+0.4	—	3.6	2.6	2.2	2.0	1.4	0.9	-0.5	—	5.3	7.9	6.3	5.8	5.6	2.0	-3.6 sss
5.5–6.0 (High)	—	1.8	2.6	1.2	0.4	0.8	0.9	+0.1	—	2.8	4.2	3.3	1.2	3.2	2.2	-1.0	—	5.7	4.7	4.6	5.5	4.1	6.7	+2.6
Race/Ethnicity (2-year data): b																								
White	—	—	2.1	2.0	1.3	1.1	1.1	0.0	—	—	4.2	3.6	2.8	2.9	2.6	-0.2	—	—	8.3	7.8	7.3	6.8	5.5	-1.3 s
African American	—	—	3.4	2.4	2.1	2.7	2.0	-0.6	—	—	4.8	3.4	2.9	3.2	3.8	+0.7	—	—	6.5	6.8	5.6	4.9	3.7	-1.2
Hispanic	—	—	4.0	2.9	1.8	2.0	1.8	-0.2	—	—	3.7	2.9	3.1	3.0	3.2	+0.2	—	—	6.1	4.9	3.6	4.1	5.3	+1.2

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

Notes. '—' 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 Tables S1, S2, and S3 for the number of subgroup cases. See appendix B for definition of variables in table. For 8th and 10th graders only: Data based on two of four forms; N is one third of N indicated in S1 and S2. For 12th graders only: Data based on two of six forms; N is two sixths of N indicated in Table S3.

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

<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 140**  
**Large Cigars: Trends in 30-Day**  
**Prevalence of Use by Subgroups in Grades 8, 10, and 12**

	Percentage who used in last 30 days																								
	8th Graders							10th Graders							12th Graders										
	1991– 2013	2014	2015	2016	2017	2018	2019	2018– 2019 change	1991– 2013	2014	2015	2016	2017	2018	2019	2018– 2019 change	1976– 2013	2014	2015	2016	2017	2018	2019	2018– 2019 change	
Approximate weighted N =	—	14,600	14,400	16,900	15,300	14,000	13,600	—	13,000	15,600	14,700	13,500	14,300	14,000	—	12,400	12,900	11,800	12,600	13,300	12,900				
Total	—	1.9	2.4	1.5	1.5	1.7	1.3	-0.3	—	3.9	3.4	2.3	2.6	2.8	2.1	-0.7	—	6.4	7.0	6.5	5.6	5.2	5.3	+0.1	
Gender:																									
Male	—	2.8	3.6	1.8	1.6	2.0	1.5	-0.6	—	5.8	4.8	3.2	3.9	4.1	3.1	-0.9	—	10.7	11.9	10.7	8.5	8.3	8.6	+0.3	
Female	—	1.1	1.2	1.1	1.3	1.2	1.2	0.0	—	2.2	2.1	1.2	1.3	1.3	1.2	-0.1	—	2.4	2.4	2.4	2.6	1.9	2.0	+0.2	
College Plans:																									
None or under 4 years	—	6.2	7.5	6.3	5.3	5.2	3.3	-2.0	—	7.2	10.4	7.1	8.7	6.1	4.2	-2.0	—	11.9	12.2	8.3	9.1	8.3	7.4	-0.9	
Complete 4 years	—	1.6	1.9	1.1	1.1	1.3	1.1	-0.2	—	3.7	2.7	1.7	1.8	2.3	1.8	-0.6	—	5.0	5.8	6.0	4.7	4.3	4.6	+0.3	
Region:																									
Northeast	—	1.8	1.6	2.5	1.5	1.6	0.7	-0.9	—	6.1	3.7	2.2	1.2	1.9	1.2	-0.8	—	8.7	8.3	6.1	6.9	4.9	3.7	-1.2	
Midwest	—	0.8	1.8	0.8	1.8	1.7	1.1	-0.5	—	3.8	3.2	3.0	2.9	3.2	1.7	-1.5	—	7.4	6.7	7.3	6.1	5.3	5.6	+0.3	
South	—	2.7	2.9	1.9	1.2	1.4	1.6	+0.3	—	4.1	3.7	1.7	2.5	3.7	3.0	-0.7	—	5.9	6.2	5.5	5.2	6.5	5.4	-1.1	
West	—	1.6	2.5	0.8	1.7	2.3	1.4	-0.9	—	2.1	2.8	2.5	3.5	1.5	1.7	+0.2	—	4.4	7.8	7.6	4.9	3.3	6.2	+2.9	
Population Density:																									
Large MSA	—	2.2	1.8	0.8	1.5	0.8	0.9	+0.1	—	4.4	2.8	1.9	2.8	2.0	1.5	-0.4	—	4.4	5.9	6.1	4.7	3.8	4.4	+0.6	
Other MSA	—	1.9	2.7	1.5	1.5	1.9	1.5	-0.4	—	2.9	2.6	2.1	1.7	2.9	2.2	-0.7	—	6.4	7.1	6.4	5.4	5.7	5.2	-0.5	
Non-MSA	—	1.3	2.5	2.6	1.3	2.5	1.6	-0.9	—	5.5	6.4	3.4	4.8	3.8	2.9	-0.9	—	8.7	8.6	7.2	7.3	6.7	7.0	+0.4	
Parental Education: a																									
1.0–2.0 (Low)	—	4.1	4.5	2.4	2.4	3.8	1.5	-2.3	—	4.2	5.7	2.5	1.6	3.0	1.5	-1.5	—	4.8	7.9	4.9	2.4	3.6	5.0	+1.5	
2.5–3.0	—	2.8	2.7	1.5	2.3	1.7	2.2	+0.6	—	4.6	2.9	1.8	3.3	3.1	2.9	-0.2	—	6.1	5.8	5.8	5.7	4.6	5.4	+0.9	
3.5–4.0	—	1.5	1.6	1.4	1.7	2.0	1.0	-0.9	—	4.9	2.3	1.9	3.7	3.9	3.4	-0.5	—	6.4	7.1	5.7	5.8	5.7	4.4	-1.3	
4.5–5.0	—	1.2	1.8	1.0	1.0	1.0	0.8	-0.2	—	3.3	3.1	2.2	1.6	1.4	1.1	-0.3	—	7.0	8.2	7.5	6.3	5.0	3.4	-1.5	
5.5–6.0 (High)	—	1.2	1.5	1.1	0.9	0.6	1.0	+0.4	—	3.8	3.3	3.4	1.9	2.9	1.7	-1.3	—	6.1	5.6	5.6	6.7	5.9	9.0	+3.1	
Race/Ethnicity (2-year data): b																									
White	—	—	1.6	1.5	1.0	0.9	1.1	+0.1	—	—	4.1	3.3	2.8	3.1	2.8	-0.3	—	—	8.3	8.5	7.5	6.7	6.2	-0.4	
African American	—	—	2.0	1.5	0.9	1.5	1.7	+0.3	—	—	3.5	2.2	1.7	1.8	1.3	-0.6	—	—	3.2	3.1	2.7	2.5	1.9	-0.6	
Hispanic	—	—	3.4	2.3	1.7	2.1	1.6	-0.4	—	—	3.2	2.3	2.0	2.2	2.6	+0.4	—	—	5.0	4.7	3.5	3.2	4.1	+0.9	

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

Notes: '—' 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 Tables S1, S2, and S3 for the number of subgroup cases. See appendix B for definition of variables in table. For 8th and 10th graders only: Data based on two of four forms; N is one third of N indicated in S1 and S2. For 12th graders only: Data based on two of six forms; N is two sixths of N indicated in Table S3.

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

<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 141**  
**Any Vaping:<sup>c</sup> Trends in 30-Day**  
**Prevalence of Use by Subgroups in Grades 8, 10, and 12**

	Percentage who used in last 30 days																					2018– 2019 change		
	<u>8th Graders</u>							<u>10th Graders</u>							<u>12th Graders</u>									
	1991– 2013	2014	2015	2016	2017	2018	2019	1991– 2013	2014	2015	2016	2017	2018	2019	1976– 2013	2014	2015	2016	2017	2018	2019			
<i>Approximate weighted N =</i>	—	—	14,400	16,900	16,900	14,000	13,600	—	—	15,600	14,700	13,500	14,300	14,000	—	—	12,900	11,800	12,600	13,300	12,900			
Total	—	—	8.0	6.2‡	6.6	10.4	12.2	+1.8	—	—	14.2	11.0‡	13.1	21.7	25.0	+3.3 s	—	—	16.3	12.5‡	16.6	26.7	30.9	+4.2 s
Gender:																								
Male	—	—	8.6	7.0‡	7.2	10.5	10.9	+0.4	—	—	17.2	12.1‡	13.3	21.2	24.9	+3.8 s	—	—	20.9	16.1‡	21.0	30.0	33.0	+2.9
Female	—	—	7.4	5.4‡	6.2	10.1	13.4	+3.3 ss	—	—	11.1	9.7‡	12.7	21.8	24.9	+3.1	—	—	11.2	9.1‡	12.8	23.8	28.8	+5.0 s
College Plans:																								
None or under 4 years	—	—	15.7	18.2‡	14.6	19.2	20.5	+1.3	—	—	26.0	19.3‡	22.0	25.8	33.8	+8.1 ss	—	—	25.8	17.7‡	21.8	29.2	36.6	+7.4 s
Complete 4 years	—	—	7.3	5.3‡	5.8	9.3	11.1	+1.9	—	—	13.0	9.9‡	12.0	21.0	23.3	+2.4	—	—	14.2	11.6‡	15.1	26.4	29.1	+2.7
Region:																								
Northeast	—	—	6.1	6.5‡	6.9	7.3	10.3	+3.0	—	—	14.0	8.4‡	12.8	24.0	25.0	+1.0	—	—	16.0	12.8‡	18.3	32.9	29.4	-3.5
Midwest	—	—	7.9	7.2‡	7.6	12.5	13.2	+0.6	—	—	14.7	11.3‡	15.9	23.4	25.3	+1.9	—	—	17.2	14.8‡	17.1	25.6	31.2	+5.6
South	—	—	8.8	5.7‡	5.5	9.9	13.1	+3.2	—	—	16.0	12.1‡	11.9	20.8	24.6	+3.8	—	—	15.4	10.7‡	15.0	24.7	30.7	+6.0 s
West	—	—	8.0	6.1‡	7.5	11.6	11.4	-0.2	—	—	10.9	11.1‡	12.6	19.4	25.2	+5.8	—	—	17.3	13.6‡	18.3	26.9	32.5	+5.6
Population Density:																								
Large MSA	—	—	6.7	5.6‡	5.3	9.5	9.8	+0.3	—	—	13.9	13.2‡	14.7	22.3	21.6	-0.6	—	—	13.5	12.8‡	16.6	22.2	25.3	+3.1
Other MSA	—	—	7.9	5.9‡	7.3	11.0	11.3	+0.3	—	—	13.8	9.0‡	12.3	21.7	25.5	+3.7	—	—	17.6	11.8‡	16.1	29.5	32.4	+2.9
Non-MSA	—	—	10.0	8.0‡	7.1	10.2	18.4	+8.2 sss	—	—	15.9	12.2‡	12.8	20.7	29.2	+8.5 sss	—	—	17.8	14.0‡	18.5	28.1	36.7	+8.6 ss
Parental Education: <sup>a</sup>																								
1.0–2.0 (Low)	—	—	9.7	10.3‡	10.1	12.7	16.3	+3.6	—	—	14.2	9.2‡	12.9	20.3	25.5	+5.3	—	—	11.5	13.2‡	12.2	17.9	23.7	+5.8
2.5–3.0	—	—	9.8	7.8‡	8.7	11.3	16.3	+5.0 ss	—	—	16.1	15.1‡	14.4	22.2	28.7	+6.5 s	—	—	18.6	12.2‡	17.4	25.7	32.3	+6.6 s
3.5–4.0	—	—	10.6	6.7‡	6.9	12.2	13.7	+1.5	—	—	18.3	11.4‡	13.5	22.9	27.7	+4.8 s	—	—	17.2	11.9‡	14.8	29.1	33.7	+4.6
4.5–5.0	—	—	5.6	5.8‡	5.6	9.7	11.1	+1.4	—	—	13.8	10.6‡	13.6	23.1	24.0	+0.9	—	—	18.0	13.1‡	20.7	32.3	30.9	-1.5
5.5–6.0 (High)	—	—	6.5	4.0‡	5.8	7.5	8.8	+1.3	—	—	9.8	9.4‡	12.0	21.4	21.4	0.0	—	—	11.4	12.2‡	17.5	31.0	31.7	+0.8
Race/Ethnicity (2-year data): <sup>b</sup>																								
White	—	—	—	6.4‡	—	8.7	14.2	+5.5 sss	—	—	—	14.8‡	—	21.5	29.3	+7.8 sss	—	—	—	17.4‡	—	28.0	36.5	+8.5 sss
African American	—	—	—	6.2‡	—	3.3	6.0	+2.7 s	—	—	—	6.4‡	—	7.0	16.6	+9.7 sss	—	—	—	6.5‡	—	8.3	14.3	+6.0 sss
Hispanic	—	—	—	8.4‡	—	9.3	10.5	+1.3	—	—	—	10.3‡	—	14.1	22.3	+8.2 ss	—	—	—	11.5‡	—	15.2	23.3	+8.1 sss

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

Notes. ' — ' 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.

‡ indicates some change in the question. See relevant footnote for that drug. See relevant figures to assess the impact of the change.

See Tables S1, S2, and S3 for the number of subgroup cases. See appendix B for definition of variables in table. For 8th and 10th graders only: Data based on one of four forms; *N* is one third of *N* indicated in S1 and S2. For 12th graders only: Data based on two of six forms; *N* is two sixths of *N* indicated in Table S3.

In 2017, the surveys switched from asking about vaping in general to asking separately about vaping nicotine, marijuana, and just flavoring. Beginning in 2017, data presented for any vaping are based on these new questions. The 2017 results by race/ethnicity are based on data from the old version of the question in 2016 combined with the new version in 2017.

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

<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.

<sup>c</sup>In 2017, the surveys switched from asking about vaping in general to asking separately about vaping nicotine, marijuana, and just flavoring. Beginning in 2017, data presented for any vaping are based on these new questions.

**TABLE 142**  
**Vaping Nicotine: Trends in 30-Day**  
**Prevalence of Use by Subgroups in Grades 8, 10, and 12**

	Percentage who used in last 30 days																											
	<u>8th Graders</u>							<u>10th Graders</u>							<u>12th Graders</u>													
	1991–	2013	2014	2015	2016	2017	2018	2019	change	1991–	2013	2014	2015	2016	2017	2018	2019	change	1976–	2013	2014	2015	2016	2017	2018	2019	change	
<i>Approximate weighted N =</i>	—	—	—	—	15,300	14,000	13,600			—	—	—	—	13,500	14,300	14,000			—	—	—	—	—	12,600	13,300	12,900		
Total	—	—	—	—	3.5	6.1	9.6	+3.4 sss		—	—	—	—	8.2	16.1	19.9	+3.8 s		—	—	—	—	—	11.0	20.9	25.5	+4.5 s	
Gender:																												
Male	—	—	—	—	3.7	6.8	8.8	+1.9		—	—	—	—	8.2	16.2	20.3	+4.2 ss		—	—	—	—	—	14.3	24.1	28.1	+4.0	
Female	—	—	—	—	3.3	5.3	10.3	+5.0 sss		—	—	—	—	8.1	15.9	19.5	+3.6 s		—	—	—	—	—	8.0	18.4	22.9	+4.5 s	
College Plans:																												
None or under 4 years	—	—	—	—	9.2	12.8	16.4	+3.6		—	—	—	—	13.5	20.4	26.8	+6.5 s		—	—	—	—	—	14.5	22.9	29.9	+7.0 s	
Complete 4 years	—	—	—	—	2.9	5.3	8.7	+3.4 sss		—	—	—	—	7.6	15.6	18.7	+3.1 s		—	—	—	—	—	10.2	20.7	23.9	+3.2	
Region:																												
Northeast	—	—	—	—	3.2	4.4	8.4	+4.0 ss		—	—	—	—	7.9	18.1	20.0	+1.8		—	—	—	—	—	11.3	25.3	24.9	-0.4	
Midwest	—	—	—	—	4.1	9.2	11.2	+2.1		—	—	—	—	10.3	18.3	20.9	+2.5		—	—	—	—	—	11.5	20.9	27.4	+6.5	
South	—	—	—	—	3.2	5.2	9.6	+4.4 ss		—	—	—	—	7.5	15.7	19.3	+3.7		—	—	—	—	—	10.1	19.2	25.2	+6.0 s	
West	—	—	—	—	3.8	6.1	9.0	+2.9		—	—	—	—	7.5	12.9	20.0	+7.1 s		—	—	—	—	—	11.7	20.8	23.9	+3.1	
Population Density:																												
Large MSA	—	—	—	—	2.5	6.0	7.4	+1.3		—	—	—	—	9.7	17.9	15.9	-2.0		—	—	—	—	—	10.0	17.2	19.4	+2.2	
Other MSA	—	—	—	—	3.7	6.7	9.1	+2.4 s		—	—	—	—	7.1	14.8	20.2	+5.4 s		—	—	—	—	—	10.7	23.1	26.7	+3.6	
Non-MSA	—	—	—	—	4.5	5.0	14.6	+9.6 sss		—	—	—	—	8.5	16.4	26.0	+9.6 sss		—	—	—	—	—	13.0	22.3	32.6	+10.3 sss	
Parental Education: a																												
1.0–2.0 (Low)	—	—	—	—	5.9	5.7	11.6	+5.9 ss		—	—	—	—	5.7	16.4	19.3	+2.9		—	—	—	—	—	7.8	11.4	15.2	+3.8	
2.5–3.0	—	—	—	—	3.8	5.8	13.3	+7.5 sss		—	—	—	—	10.1	16.4	22.6	+6.2 s		—	—	—	—	—	11.7	17.9	25.8	+7.9 ss	
3.5–4.0	—	—	—	—	3.8	8.1	10.7	+2.5		—	—	—	—	8.2	14.7	21.8	+7.1 ss		—	—	—	—	—	9.6	21.5	28.0	+6.5 ss	
4.5–5.0	—	—	—	—	3.5	5.8	9.4	+3.6 sss		—	—	—	—	8.5	17.9	20.0	+2.1		—	—	—	—	—	14.7	28.2	27.0	-1.2	
5.5–6.0 (High)	—	—	—	—	2.8	4.8	6.9	+2.1		—	—	—	—	7.9	18.1	17.9	-0.2		—	—	—	—	—	10.5	27.1	28.1	+1.1	
Race/Ethnicity (2-year data): b																												
White	—	—	—	—	—	5.5	12.1	+6.6 sss		—	—	—	—	—	16.4	25.8	+9.4 sss		—	—	—	—	—	—	22.9	32.4	+9.5 sss	
African American	—	—	—	—	—	1.6	3.5	+1.9 s		—	—	—	—	—	2.7	9.5	+6.8 sss		—	—	—	—	—	—	4.6	10.1	+5.6 sss	
Hispanic	—	—	—	—	—	4.7	6.9	+2.2 s		—	—	—	—	—	8.5	15.6	+7.1 sss		—	—	—	—	—	—	7.7	13.9	+6.1 sss	

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

**Notes.** '—' 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 Tables S1, S2, and S3 for the number of subgroup cases. See appendix B for definition of variables in table. For 8th and 10th graders only: Data based on one of four forms; *N* is one third of *N* indicated in S1 and S2. For 12th graders only: Data based on two of six forms; *N* is two sixths of *N* indicated in Table S3.

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

<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 143**  
**Vaping Marijuana: Trends in 30-Day**  
**Prevalence of Use by Subgroups in Grades 8, 10, and 12**

	Percentage who used in last 30 days																											
	<u>8th Graders</u>							<u>10th Graders</u>							<u>12th Graders</u>													
	1991–	2013	2014	2015	2016	2017	2018	2019	change	1991–	2013	2014	2015	2016	2017	2018	2019	change	1976–	2013	2014	2015	2016	2017	2018	2019	change	
<i>Approximate weighted N =</i>	—	—	—	—	15,300	14,000	13,600			—	—	—	—	13,500	14,300	14,000			—	—	—	—	12,600	13,300	12,900			
Total	—	—	—	—	1.6	2.6	3.9	+1.3	ss	—	—	—	—	4.3	7.0	12.6	+5.6	sss	—	—	—	—	4.9	7.5	14.0	+6.5	sss	
Gender:																												
Male	—	—	—	—	1.8	2.9	3.3	+0.4		—	—	—	—	4.7	6.9	13.6	+6.7	sss	—	—	—	—	7.2	9.5	14.7	+5.1	sss	
Female	—	—	—	—	1.6	2.3	4.5	+2.1	sss	—	—	—	—	3.8	6.9	11.6	+4.8	sss	—	—	—	—	2.9	5.5	13.0	+7.5	sss	
College Plans:																												
None or under 4 years	—	—	—	—	4.9	8.7	8.2	-0.5		—	—	—	—	8.7	9.3	19.5	###	sss	—	—	—	—	5.8	8.3	17.1	+8.7	sss	
Complete 4 years	—	—	—	—	1.2	1.8	3.3	+1.5	sss	—	—	—	—	3.7	6.6	11.2	+4.6	sss	—	—	—	—	4.5	7.1	12.7	+5.6	sss	
Region:																												
Northeast	—	—	—	—	1.3	1.2	3.5	+2.3	ss	—	—	—	—	6.1	9.5	13.9	+4.4	s	—	—	—	—	6.7	13.9	16.4	+2.5		
Midwest	—	—	—	—	1.3	1.1	3.5	+2.4	sss	—	—	—	—	4.4	6.1	11.7	+5.7	ss	—	—	—	—	4.1	3.8	12.9	+9.1	sss	
South	—	—	—	—	1.6	2.7	3.1	+0.5		—	—	—	—	2.6	4.8	11.2	+6.4	sss	—	—	—	—	3.5	5.0	11.6	+6.6	sss	
West	—	—	—	—	2.5	5.2	5.9	+0.7		—	—	—	—	5.4	9.7	15.0	+5.3	s	—	—	—	—	6.9	10.7	18.9	+8.3	ss	
Population Density:																												
Large MSA	—	—	—	—	0.8	2.7	3.2	+0.4		—	—	—	—	5.7	8.8	14.2	+5.4	ss	—	—	—	—	7.1	9.2	14.1	+4.9	sss	
Other MSA	—	—	—	—	1.9	3.1	4.6	+1.4		—	—	—	—	3.8	6.8	13.0	+6.2	sss	—	—	—	—	4.3	7.4	15.0	+7.5	sss	
Non-MSA	—	—	—	—	2.2	1.3	3.7	+2.4	sss	—	—	—	—	3.4	4.6	8.8	+4.2	sss	—	—	—	—	2.8	4.5	11.3	+6.8	sss	
Parental Education: a																												
1.0–2.0 (Low)	—	—	—	—	3.0	5.3	6.1	+0.8		—	—	—	—	5.1	8.8	15.7	+6.9	s	—	—	—	—	4.8	7.7	13.6	+5.9	s	
2.5–3.0	—	—	—	—	2.9	3.9	6.6	+2.7	s	—	—	—	—	5.5	7.8	14.1	+6.2	sss	—	—	—	—	5.4	7.9	14.8	+6.9	sss	
3.5–4.0	—	—	—	—	1.2	3.2	3.9	+0.7		—	—	—	—	4.1	7.7	15.1	+7.4	sss	—	—	—	—	3.8	7.4	14.2	+6.8	sss	
4.5–5.0	—	—	—	—	1.0	1.4	2.9	+1.4	s	—	—	—	—	3.7	6.3	10.6	+4.3	ss	—	—	—	—	4.9	7.5	12.3	+4.8	ss	
5.5–6.0 (High)	—	—	—	—	1.2	0.6	2.4	+1.8	ss	—	—	—	—	4.5	6.5	10.0	+3.5	s	—	—	—	—	5.7	8.5	14.5	+6.1	sss	
Race/Ethnicity (2-year data): b																												
White	—	—	—	—	—	1.5	3.2	+1.8	sss	—	—	—	—	—	6.1	12.5	+6.4	sss	—	—	—	—	—	—	6.7	13.9	+7.3	sss
African American	—	—	—	—	—	1.2	2.4	+1.2		—	—	—	—	—	2.6	10.1	+7.5	sss	—	—	—	—	—	—	2.5	8.0	+5.5	sss
Hispanic	—	—	—	—	—	3.1	5.4	+2.3	ss	—	—	—	—	—	5.7	14.4	+8.7	sss	—	—	—	—	—	—	6.8	14.1	+7.3	sss

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

Notes: '—' 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 Tables S1, S2, and S3 for the number of subgroup cases. See appendix B for definition of variables in table. For 8th and 10th graders only: Data based on one of four forms; N is one third of N indicated in S1 and S2. For 12th graders only: Data based on two of six forms; N is two sixths of N indicated in Table S3.

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

<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 144**  
**Vaping Just Flavoring: Trends in 30-Day**  
**Prevalence of Use by Subgroups in Grades 8, 10, and 12**

	Percentage who used in last 30 days																									
	8th Graders							10th Graders							12th Graders											
	1991–	2013	2014	2015	2016	2017	2018	2019	change	1991–	2013	2014	2015	2016	2017	2018	2019	change	1976–	2013	2014	2015	2016	2017	2018	2019
<i>Approximate weighted N =</i>	—	—	—	—	15,300	14,000	13,600		—	—	—	—	13,500	14,300	14,000		—	—	—	—	12,600	13,300	12,900			
Total	—	—	—	—	5.3	8.1	7.7	-0.4	—	—	—	—	9.2	13.1	10.5	-2.6 s	—	—	—	—	9.7	13.5	10.7	-2.8 ss		
Gender:																										
Male	—	—	—	—	6.0	8.1	6.9	-1.2	—	—	—	—	9.4	12.9	10.1	-2.9 s	—	—	—	—	11.6	15.0	11.0	-4.0 ss		
Female	—	—	—	—	4.8	8.0	8.6	+0.6	—	—	—	—	8.9	13.1	11.0	-2.1	—	—	—	—	7.9	11.8	10.2	-1.6		
College Plans:																										
None or under 4 years	—	—	—	—	11.5	13.2	13.0	-0.2	—	—	—	—	15.4	16.2	15.7	-0.5	—	—	—	—	13.0	15.3	13.5	-1.8		
Complete 4 years	—	—	—	—	4.8	7.4	7.1	-0.4	—	—	—	—	8.4	12.6	9.6	-3.1 ss	—	—	—	—	8.6	13.0	9.8	-3.2 ss		
Region:																										
Northeast	—	—	—	—	5.2	5.6	6.4	+0.7	—	—	—	—	8.8	13.4	9.1	-4.3	—	—	—	—	10.4	15.2	7.8	-7.4 sss		
Midwest	—	—	—	—	7.0	10.3	8.2	-2.1	—	—	—	—	10.8	15.2	9.5	-5.7 sss	—	—	—	—	9.8	13.7	10.7	-3.0		
South	—	—	—	—	4.1	7.5	8.8	+1.3	—	—	—	—	8.5	12.8	11.4	-1.4	—	—	—	—	9.1	13.6	11.3	-2.3		
West	—	—	—	—	5.8	8.7	6.4	-2.3	—	—	—	—	8.8	11.3	11.2	-0.2	—	—	—	—	9.9	11.9	12.0	+0.1		
Population Density:																										
Large MSA	—	—	—	—	4.5	7.2	5.4	-1.8	—	—	—	—	8.6	11.9	6.3	-5.6 sss	—	—	—	—	8.8	9.7	7.0	-2.7 s		
Other MSA	—	—	—	—	5.8	8.6	6.8	-1.8	—	—	—	—	9.6	13.7	11.1	-2.6	—	—	—	—	9.7	15.6	11.4	-4.2 s		
Non-MSA	—	—	—	—	5.4	8.3	13.6	+5.3 sss	—	—	—	—	8.8	13.7	16.2	+2.5	—	—	—	—	11.0	15.2	15.3	+0.2		
Parental Education: a																										
1.0–2.0 (Low)	—	—	—	—	7.5	8.5	10.9	+2.4	—	—	—	—	8.7	14.9	15.0	+0.1	—	—	—	—	7.5	11.4	11.4	0.0		
2.5–3.0	—	—	—	—	7.4	8.1	10.8	+2.7	—	—	—	—	10.3	14.5	13.8	-0.6	—	—	—	—	9.4	13.9	13.0	-1.0		
3.5–4.0	—	—	—	—	5.5	9.9	8.2	-1.7	—	—	—	—	10.6	14.5	11.5	-3.0	—	—	—	—	8.1	16.9	12.0	-4.9 s		
4.5–5.0	—	—	—	—	4.6	7.8	7.2	-0.6	—	—	—	—	8.7	12.4	8.7	-3.7 s	—	—	—	—	12.1	14.5	8.4	-6.1 sss		
5.5–6.0 (High)	—	—	—	—	4.5	6.9	5.3	-1.7	—	—	—	—	8.6	11.7	7.2	-4.5 s	—	—	—	—	11.1	11.3	7.8	-3.5		
Race/Ethnicity (2-year data): b																										
White	—	—	—	—	—	7.2	9.3	+2.1 s	—	—	—	—	—	13.1	12.4	-0.7	—	—	—	—	—	13.5	11.2	-2.3 s		
African American	—	—	—	—	—	2.4	4.4	+2.0	—	—	—	—	—	4.8	6.6	+1.9	—	—	—	—	—	5.6	6.2	+0.6		
Hispanic	—	—	—	—	—	7.2	6.3	-0.8	—	—	—	—	—	9.4	9.7	+0.3	—	—	—	—	—	9.6	9.4	-0.2		

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

Notes. '—' 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 Tables S1, S2, and S3 for the number of subgroup cases. See appendix B for definition of variables in table. For 8th and 10th graders only; Data based on one of four forms; *N* is one third of *N* indicated in S1 and S2. For 12th graders only; Data based on two of six forms; *N* is two sixths of *N* indicated in Table S3.

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

<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 145**  
**SMOKELESS TOBACCO: Trends in 30-Day Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 30 days														
	<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>
<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>
Total	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
Gender:															
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
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
College Plans:															
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
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
Region:															
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
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
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
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
Population Density:															
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
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
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
Parental Education: <sup>a</sup>															
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
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
3.5–4.0	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
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
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
Race/Ethnicity (2-year average): <sup>b</sup>															
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
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
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

Table continued on next page.

**TABLE 145 (cont.)**  
**SMOKELESS TOBACCO: Trends in 30-Day Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 30 days														
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2018-2019 change
<i>Approximate weighted N =</i>	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	
Total	3.7	3.2	3.5	3.7	4.1	3.5	2.8	2.8	3.0	3.2	2.5	1.7	2.1	2.5	+0.4
Gender:															
Male	5.3	4.7	5.5	6.3	6.3	4.9	4.0	3.8	3.8	4.0	3.6	2.2	3.0	3.3	+0.3
Female	2.1	1.7	1.5	1.4	1.9	1.9	1.5	1.9	2.2	2.3	1.4	1.3	1.1	1.6	+0.5
College Plans:															
None or under 4 years	11.3	8.9	12.7	11.1	14.0	11.1	11.5	9.2	9.6	11.3	9.1	7.2	6.7	7.5	+0.8
Complete 4 years	2.9	2.7	2.7	3.1	3.2	2.8	2.1	2.4	2.4	2.4	2.0	1.2	1.4	1.8	+0.5
Region:															
Northeast	2.9	1.5	2.5	3.2	3.9	2.9	2.6	1.8	1.3	1.7	1.9	1.9	2.0	1.0	-1.0
Midwest	4.0	2.9	3.4	3.0	4.8	3.3	2.1	1.4	2.7	2.8	2.4	1.4	2.0	2.5	+0.5
South	4.6	4.1	5.2	5.6	5.0	4.3	3.6	4.7	3.7	4.0	3.3	1.9	1.5	3.8	+2.3 ss
West	2.2	2.8	1.8	1.8	1.9	2.6	2.0	2.0	3.2	3.0	1.6	1.6	3.1	1.5	-1.6
Population Density:															
Large MSA	1.9	1.9	2.8	2.5	2.3	1.8	1.4	1.7	1.8	1.8	1.0	1.3	1.2	1.4	+0.2
Other MSA	3.1	3.1	3.1	3.6	4.7	3.7	3.1	2.6	2.7	2.8	2.6	1.6	2.0	2.4	+0.4
Non-MSA	7.1	5.3	5.4	5.8	5.0	5.4	4.2	4.9	5.2	5.8	4.7	2.7	3.5	4.5	+0.9
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	5.9	4.9	5.4	5.3	5.2	6.6	4.2	4.1	5.6	4.4	3.4	2.9	1.8	4.0	+2.2
2.5–3.0	3.9	3.7	5.1	5.5	6.0	4.2	3.8	3.5	4.4	4.0	2.8	2.3	3.1	3.5	+0.4
3.5–4.0	3.7	3.1	3.8	4.9	4.1	3.3	3.2	3.7	3.0	3.6	3.2	2.2	2.9	3.0	+0.1
4.5–5.0	3.1	2.5	2.4	2.9	3.3	2.7	2.0	1.6	1.9	2.5	2.0	1.0	1.5	2.0	+0.5
5.5–6.0 (High)	3.4	2.3	2.3	1.4	2.5	1.5	1.4	1.8	1.9	1.9	1.2	0.5	0.9	1.4	+0.5
Race/Ethnicity (2-year average): <sup>b</sup>															
White	3.7	3.8	3.9	4.4	4.9	4.6	3.6	3.1	3.4	3.5	3.4	2.6	1.9	2.1	+0.2
African American	2.1	2.3	2.4	2.6	2.2	1.8	1.8	2.2	2.0	2.2	2.4	1.9	1.8	2.3	+0.5
Hispanic	3.1	2.9	2.4	2.5	2.6	3.2	3.1	2.4	2.6	2.7	2.2	1.9	2.0	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 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 146**  
**SMOKELESS TOBACCO: Trends in 30-Day Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 30 days															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	
<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	
Total	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	
Gender:																
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	
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	
College Plans:																
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	
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	
Region:																
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	
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	
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	
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	
Population Density:																
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	
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	
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	
Parental Education: <sup>a</sup>																
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	
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	
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	
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	
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	
Race/Ethnicity (2-year average): <sup>b</sup>																
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	
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	
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	

Table continued on next page.

**TABLE 146 (cont.)**  
**SMOKELESS TOBACCO: Trends in 30-Day Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 30 days														2018-2019 change	
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
<i>Approximate weighted N =</i>	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000		
Total	5.7	6.1	5.0	6.5	7.5	6.6	6.4	6.4	5.3	4.9	3.5	3.8	3.9	3.2	-0.7	
Gender:																
Male	10.2	10.2	8.2	11.1	13.0	11.5	11.2	11.1	8.9	7.9	5.8	6.1	6.2	5.3	-1.0	
Female	1.2	2.0	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.8	1.3	1.5	1.4	1.4	0.0	
College Plans:																
None or under 4 years	14.9	14.0	14.6	17.5	21.8	17.9	16.8	18.6	17.9	12.3	10.1	10.2	10.2	6.2	-4.1 s	
Complete 4 years	4.5	5.0	3.8	5.3	5.8	5.2	5.3	5.1	4.1	4.0	2.8	2.9	2.9	2.7	-0.2	
Region:																
Northeast	4.5	5.9	3.3	6.6	6.7	5.6	4.3	6.4	4.1	4.8	2.7	3.0	3.4	1.9	-1.5	
Midwest	7.5	6.3	7.2	7.7	9.2	6.4	7.9	6.9	5.7	5.1	3.3	4.4	4.2	3.1	-1.1	
South	6.0	8.3	6.5	7.7	9.1	7.9	8.1	6.9	6.8	5.5	4.6	3.8	5.1	3.5	-1.6	
West	4.1	3.3	2.2	3.3	4.0	5.4	4.0	5.4	3.6	3.6	2.9	3.8	2.0	3.7	+1.8	
Population Density:																
Large MSA	3.9	4.1	3.4	4.8	5.1	4.6	3.6	5.1	4.1	3.5	2.7	3.4	3.3	1.8	-1.5	
Other MSA	5.3	5.8	4.4	6.3	7.0	6.1	6.3	5.3	4.4	4.3	2.9	2.6	3.4	3.3	-0.1	
Non-MSA	9.6	9.9	8.7	9.3	12.1	10.2	10.5	11.2	9.5	8.6	6.8	7.2	5.9	5.4	-0.5	
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	7.4	6.1	5.0	7.9	6.5	6.4	7.2	5.6	4.7	4.7	2.4	3.4	3.0	4.6	+1.6	
2.5–3.0	7.1	6.9	6.5	7.4	9.1	8.8	7.7	8.4	6.7	7.1	4.9	3.6	4.6	3.6	-1.0	
3.5–4.0	5.7	6.4	5.4	7.4	8.7	7.2	7.5	6.9	5.8	4.2	4.0	4.6	3.8	2.5	-1.3	
4.5–5.0	4.9	6.1	4.6	5.4	7.0	5.2	6.1	5.9	4.3	5.0	3.0	3.6	4.2	3.5	-0.7	
5.5–6.0 (High)	5.3	4.8	2.9	5.6	6.0	5.3	3.8	5.3	4.6	3.8	2.8	3.6	4.0	2.6	-1.4	
Race/Ethnicity (2-year average): <sup>b</sup>																
White	6.9	7.3	7.3	7.5	9.1	9.1	8.0	8.1	7.7	6.5	5.7	5.3	5.5	5.0	-0.5	
African American	3.2	3.3	2.8	2.6	2.3	2.2	2.3	2.2	2.5	2.8	2.4	1.9	1.4	1.8	+0.4	
Hispanic	3.4	2.7	2.6	2.9	2.8	3.4	4.4	3.4	3.0	3.1	1.9	1.7	2.4	2.7	+0.2	

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 147**  
**SMOKELESS TOBACCO: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990 <sup>a</sup>
<i>Approximate weighted N =</i>	—	—	—	—	—	—	—	—	—	—	—	15,200	16,300	16,300	16,700	—
Total	—	—	—	—	—	—	—	—	—	—	—	11.5	11.3	10.3	8.4	—
Gender:																
Male	—	—	—	—	—	—	—	—	—	—	—	22.3	22.8	19.9	15.9	—
Female	—	—	—	—	—	—	—	—	—	—	—	1.6	0.7	1.7	1.2	—
College Plans:																
None or under 4 years	—	—	—	—	—	—	—	—	—	—	—	14.5	15.5	13.1	9.6	—
Complete 4 years	—	—	—	—	—	—	—	—	—	—	—	9.8	9.0	8.8	7.7	—
Region:																
Northeast	—	—	—	—	—	—	—	—	—	—	—	9.5	7.3	5.9	5.0	—
Midwest	—	—	—	—	—	—	—	—	—	—	—	13.5	11.3	10.8	8.3	—
South	—	—	—	—	—	—	—	—	—	—	—	12.2	13.7	12.1	9.8	—
West	—	—	—	—	—	—	—	—	—	—	—	9.3	11.7	10.9	9.1	—
Population Density:																
Large MSA	—	—	—	—	—	—	—	—	—	—	—	9.0	6.4	7.7	6.8	—
Other MSA	—	—	—	—	—	—	—	—	—	—	—	8.9	10.5	8.5	7.6	—
Non-MSA	—	—	—	—	—	—	—	—	—	—	—	17.1	17.5	16.1	11.7	—
Parental Education: <sup>b</sup>																
1.0–2.0 (Low)	—	—	—	—	—	—	—	—	—	—	—	8.6	11.7	10.7	5.3	—
2.5–3.0	—	—	—	—	—	—	—	—	—	—	—	14.4	11.5	10.7	7.0	—
3.5–4.0	—	—	—	—	—	—	—	—	—	—	—	11.5	12.1	10.6	9.0	—
4.5–5.0	—	—	—	—	—	—	—	—	—	—	—	10.4	11.7	11.8	10.2	—
5.5–6.0 (High)	—	—	—	—	—	—	—	—	—	—	—	7.7	8.1	7.2	8.4	—
Race/Ethnicity (2-year average): <sup>c</sup>																
White	—	—	—	—	—	—	—	—	—	—	—	—	12.9	12.0	10.6	—
African American	—	—	—	—	—	—	—	—	—	—	—	—	2.1	4.5	4.5	—
Hispanic	—	—	—	—	—	—	—	—	—	—	—	—	4.4	5.2	5.1	—

Table continued on next page.

**TABLE 147 (cont.)**  
**SMOKELESS TOBACCO: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days															
	1991 <sup>a</sup>	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<i>Approximate weighted N =</i>	—	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	—	11.4	10.7	11.1	12.2	9.8	9.7	8.8	8.4	7.6	7.8	6.5	6.7	6.7	7.6	6.1
Gender:																
Male	—	20.8	19.7	20.3	23.6	19.5	18.7	15.6	15.5	14.4	14.2	12.2	12.5	12.2	12.7	11.0
Female	—	2.0	2.3	2.6	1.8	1.1	1.2	1.5	1.3	1.3	1.6	1.2	1.0	1.6	1.9	1.5
College Plans:																
None or under 4 years	—	18.0	14.9	15.8	18.7	17.6	16.9	14.3	10.5	15.8	13.0	10.8	12.8	11.9	15.2	13.4
Complete 4 years	—	9.4	9.4	9.3	9.9	7.6	7.4	7.1	7.6	5.4	6.1	4.8	4.8	4.9	5.4	4.1
Region:																
Northeast	—	8.2	9.6	12.0	9.6	8.4	6.9	2.6	4.3	5.3	5.4	5.3	6.3	5.1	8.0	5.3
Midwest	—	12.3	13.6	14.7	16.7	12.6	13.4	11.8	8.9	11.1	9.9	7.8	5.7	7.4	10.5	7.0
South	—	12.5	11.1	9.7	11.9	9.2	9.0	10.5	10.7	7.3	8.5	7.9	7.9	8.4	7.5	7.5
West	—	11.1	7.0	8.5	8.6	8.5	9.1	7.3	7.0	6.3	6.2	3.9	6.0	4.3	4.0	3.4
Population Density:																
Large MSA	—	5.9	7.1	7.5	12.5	8.6	6.5	4.7	4.9	4.2	4.4	3.4	3.4	3.8	4.3	4.8
Other MSA	—	11.1	9.9	11.3	9.5	7.4	7.4	7.7	8.5	7.9	8.0	5.7	6.9	5.6	7.8	4.6
Non-MSA	—	16.9	15.0	14.7	16.7	15.3	17.9	16.1	11.7	11.4	11.5	11.9	10.4	12.1	11.3	10.9
Parental Education: <sup>b</sup>																
1.0–2.0 (Low)	—	14.9	7.0	12.3	9.8	6.3	5.8	6.1	5.4	4.3	6.3	4.1	9.3	6.1	5.3	4.9
2.5–3.0	—	12.4	11.6	12.9	11.5	10.4	10.7	9.0	9.1	9.9	7.5	5.6	5.9	8.8	9.7	8.0
3.5–4.0	—	12.4	10.8	9.8	12.8	9.1	10.4	9.8	8.8	8.9	8.6	7.4	6.5	4.6	7.8	6.4
4.5–5.0	—	8.0	13.3	11.1	12.8	11.4	9.1	9.6	8.5	6.2	6.2	7.3	7.6	7.9	8.0	6.1
5.5–6.0 (High)	—	10.6	7.8	10.2	11.6	8.1	9.9	7.4	7.9	5.7	10.3	4.6	6.2	5.4	3.7	3.5
Race/Ethnicity (2-year average): <sup>c</sup>																
White	—	—	13.8	13.8	13.8	13.0	12.2	11.8	11.0	10.5	10.3	9.7	8.5	8.2	8.7	8.8
African American	—	—	2.0	1.9	2.1	2.7	2.2	1.4	1.5	1.5	1.2	1.0	1.0	0.6	0.3	0.5
Hispanic	—	—	6.0	5.4	7.6	8.1	5.3	4.3	3.9	3.8	3.2	2.6	3.1	3.9	4.9	3.8

Table continued on next page.

**TABLE 147 (cont.)**  
**SMOKELESS TOBACCO: Trends in 30-Day Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 30 days													2018-2019 change
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	6.6	6.5	8.4	8.5	8.3	7.89	8.1	8.4	6.1	6.6	4.9	4.2	3.5	-0.7
Gender:														
Male	11.9	11.8	15.8	15.7	14.2	13.49	14.6	14.3	10.7	11.9	9.9	7.6	5.7	-2.0
Female	1.2	1.0	1.7	1.7	1.8	1.58	1.4	2.1	1.6	1.5	0.7	1.0	1.1	+0.1
College Plans:														
None or under 4 years	11.7	12.4	14.2	14.4	17.5	14.96	16.1	15.0	14.3	11.7	11.4	8.3	7.1	-1.3
Complete 4 years	5.3	5.0	7.3	7.3	6.4	6.01	6.2	6.5	4.4	5.1	3.4	3.0	2.5	-0.5
Region:														
Northeast	5.3	7.5	7.1	7.6	8.2	7.14	5.6	9.6	5.8	6.7	7.6	3.0	2.5	-0.5
Midwest	9.1	7.2	14.1	12.2	7.8	10.49	11.2	11.8	6.9	7.4	3.5	6.3	3.0	-3.4
South	7.9	6.1	7.1	7.8	8.9	7.73	9.3	5.9	6.1	7.5	5.6	4.9	4.5	-0.4
West	2.8	5.6	4.6	6.7	7.7	5.92	5.2	8.4	5.7	4.3	3.4	1.5	2.7	+1.2
Population Density:														
Large MSA	3.9	2.6	4.4	5.9	5.3	6.35	7.1	3.8	3.1	3.4	2.6	1.7	1.6	-0.1
Other MSA	6.8	6.2	7.7	7.9	8.4	6.39	7.4	9.8	5.1	7.3	5.4	4.3	2.5	-1.7
Non-MSA	10.1	11.8	15.0	13.8	12.4	14.11	11.4	11.1	13.5	10.2	7.8	8.4	9.2	+0.8
Parental Education: <sup>b</sup>														
1.0–2.0 (Low)	5.3	3.4	2.8	6.1	2.2	5.26	7.9	6.3	6.6	5.5	1.9	0.6	2.9	+2.3
2.5–3.0	9.8	7.2	10.4	8.2	9.3	10.04	7.9	9.3	7.1	7.1	5.4	5.0	4.0	-0.9
3.5–4.0	5.3	6.8	9.4	8.7	8.2	8.46	6.7	8.1	6.5	6.7	6.3	5.2	3.9	-1.3
4.5–5.0	6.6	6.5	7.7	9.8	9.9	8.43	10.5	9.5	6.0	7.8	6.0	4.9	3.2	-1.8
5.5–6.0 (High)	5.8	6.3	8.7	7.5	6.3	4.72	7.7	7.9	4.9	6.2	3.6	4.5	3.4	-1.1
Race/Ethnicity (2-year average): <sup>c</sup>														
White	8.3	8.6	10.5	12.1	11.8	11.31	11.0	11.4	10.2	9.6	9.4	7.7	5.6	-2.0 ss
African American	1.8	2.0	1.5	2.2	1.8	1.0	2.4	2.6	1.3	2.0	2.4	1.7	1.3	-0.4
Hispanic	2.7	2.3	2.5	3.7	3.9	2.53	2.3	3.4	3.6	1.8	1.1	1.2	1.5	+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 148**  
**SMOKELESS TOBACCO: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 8**

	Percentage who used daily in last 30 days														
	<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>
<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>
Total	1.6	1.8	1.5	1.9	1.2	1.5	1.0	1.0	0.9	0.9	1.2	0.8	0.8	1.0	0.7
Gender:															
Male	3.1	3.4	2.9	3.2	2.2	2.9	1.7	1.8	1.6	1.5	2.5	1.5	1.4	1.7	1.2
Female	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.3	0.1	0.2	0.2	0.3	0.2
College Plans:															
None or under 4 years	4.1	5.6	4.4	5.4	3.5	5.1	3.6	6.1	3.8	2.7	4.5	4.5	4.0	3.8	2.4
Complete 4 years	1.2	1.2	1.1	1.4	0.9	1.0	0.6	0.5	0.5	0.7	0.9	0.5	0.5	0.7	0.5
Region:															
Northeast	1.2	0.9	0.6	0.8	0.6	0.8	0.6	0.4	0.1	0.4	0.7	0.6	0.8	1.0	0.1
Midwest	1.5	1.6	1.6	1.4	1.1	2.0	1.2	1.3	0.9	1.3	1.1	1.1	0.6	0.6	0.3
South	2.4	3.0	2.2	3.3	1.8	2.0	1.5	1.3	1.6	1.3	2.1	1.0	1.3	1.7	1.4
West	0.6	0.8	1.0	0.9	0.8	0.8	0.2	0.7	0.3	0.2	0.1	0.2	0.2	0.3	0.2
Population Density:															
Large MSA	0.5	0.6	0.7	0.7	0.4	0.4	0.5	0.4	0.3	0.2	0.3	0.4	0.7	0.4	*
Other MSA	1.2	1.9	1.5	1.0	0.9	1.2	0.8	0.6	0.8	0.8	0.8	0.6	0.6	0.6	0.5
Non-MSA	3.3	2.8	2.5	4.6	2.6	3.4	1.6	2.6	1.8	2.0	2.9	1.8	1.5	2.6	1.9
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	2.8	3.5	2.0	3.0	2.2	1.5	3.2	2.6	0.9	1.4	1.8	2.2	1.8	2.8	1.4
2.5–3.0	2.2	2.6	1.9	2.7	1.7	3.1	1.1	1.5	1.6	1.4	2.1	1.0	1.0	1.1	0.5
3.5–4.0	1.4	1.2	1.8	1.9	1.2	1.7	0.9	1.3	0.8	1.3	0.3	1.0	0.8	0.8	0.8
4.5–5.0	0.8	1.3	1.1	1.1	0.9	0.3	0.8	0.5	0.5	0.4	0.5	0.3	0.2	0.7	0.8
5.5–6.0 (High)	1.0	0.9	0.6	0.7	0.8	0.8	0.4	0.5	0.4	0.4	1.7	0.9	1.1	0.8	0.4
Race/Ethnicity (2-year average): <sup>b</sup>															
White	—	2.0	2.0	2.0	1.9	1.7	1.5	1.2	1.1	1.1	1.2	1.0	0.7	0.9	0.9
African American	—	0.3	0.4	0.7	0.6	0.4	0.5	0.4	0.4	0.4	0.5	0.5	0.6	0.5	0.2
Hispanic	—	0.8	0.9	0.9	0.7	1.1	0.9	0.8	1.0	0.8	0.8	0.8	0.9	0.9	0.4

Table continued on next page.

**TABLE 148 (cont.)**  
**SMOKELESS TOBACCO: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 8**

	Percentage who used daily in last 30 days														2018-2019 change	
	<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>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>		
<i>Approximate weighted N =</i>	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600		
Total	0.7	0.8	0.8	0.8	0.9	0.8	0.5	0.5	0.5	0.8	0.6	0.4	0.3	0.5	+0.2	
Gender:																
Male	1.1	1.6	1.2	1.4	1.5	1.5	0.8	0.9	0.9	1.2	1.2	0.5	0.5	0.8	+0.3	
Female	0.3	0.1	0.4	0.3	0.3	0.2	0.1	0.1	0.3	0.3	0.1	0.2	0.1	0.2	+0.1	
College Plans:																
None or under 4 years	4.0	3.2	5.0	2.5	4.0	3.6	2.3	1.9	3.1	3.3	2.8	2.3	1.4	1.3	-0.1	
Complete 4 years	0.4	0.6	0.4	0.7	0.6	0.6	0.4	0.4	0.3	0.5	0.4	0.2	0.1	0.4	+0.3 s	
Region:																
Northeast	0.6	0.2	0.9	1.1	0.7	0.7	0.5	0.1	0.1	0.2	0.6	0.8	0.2	0.2	0.0	
Midwest	0.5	0.5	0.4	0.6	0.9	0.6	0.2	0.4	0.3	0.4	0.4	0.2	0.2	0.5	+0.2	
South	1.1	1.5	1.3	1.3	1.5	1.1	0.7	0.9	0.8	1.1	1.0	0.5	0.4	0.9	+0.5	
West	0.4	0.4	0.3	0.1	0.2	0.4	0.5	0.3	0.8	0.8	0.2	0.1	0.5	0.2	-0.3	
Population Density:																
Large MSA	0.3	0.4	0.4	0.5	0.4	0.2	0.2	0.1	0.2	0.4	0.1	0.3	0.1	0.3	+0.2	
Other MSA	0.6	0.7	0.7	0.6	1.1	0.8	0.5	0.5	0.2	0.5	0.7	0.3	0.3	0.4	0.0	
Non-MSA	1.6	1.7	1.5	1.7	1.1	1.7	1.0	1.2	1.8	1.8	1.3	0.7	0.7	1.2	+0.5	
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	1.3	1.9	1.5	1.6	1.0	1.6	0.3	0.9	1.5	0.7	0.9	0.3	0.0	0.6	+0.6	
2.5–3.0	0.9	1.0	1.3	0.9	1.9	0.9	0.6	0.8	1.3	1.3	0.6	0.8	0.3	0.7	+0.4	
3.5–4.0	0.7	0.8	0.8	1.3	0.8	0.9	1.0	0.6	0.2	0.3	0.6	0.5	0.6	0.5	0.0	
4.5–5.0	0.6	0.6	0.3	0.4	0.4	0.7	0.3	0.3	0.0	0.7	0.2	0.1	0.0	0.4	+0.4	
5.5–6.0 (High)	0.5	0.5	0.6	0.2	0.2	0.1	0.2	0.2	0.6	0.4	0.8	0.3	0.2	0.3	+0.2	
Race/Ethnicity (2-year average): <sup>b</sup>																
White	0.7	0.9	0.9	0.9	1.0	1.0	0.9	0.7	0.8	0.9	0.9	0.7	0.5	0.4	0.0	
African American	0.5	0.5	0.7	1.0	0.7	0.5	0.3	0.3	0.2	0.2	0.3	0.4	0.4	0.6	+0.2	
Hispanic	0.5	0.5	0.4	0.3	0.4	0.4	0.3	0.1	0.1	0.3	0.3	0.2	0.3	0.4	+0.2	

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. '\*' indicates less than 0.05% but greater than 0%. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years thus provide more stable estimates. See appendix B for details on how race/ethnicity is defined.  
 1991–1996 and on two of four forms beginning in 1997; N is one half of N indicated in Table S1.

<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 149**  
**SMOKELESS TOBACCO: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 10**

	Percentage who used daily in last 30 days															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	
<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	
Total	3.3	3.0	3.3	3.0	2.7	2.2	2.2	2.2	1.5	1.9	2.2	1.7	1.8	1.6	1.9	
Gender:																
Male	6.3	6.3	6.4	5.9	5.2	4.2	4.0	4.3	3.2	3.9	4.5	3.0	3.7	3.0	3.4	
Female	0.2	0.1	0.3	0.2	0.2	0.2	0.3	0.3	0.1	0.2	0.3	0.2	0.1	0.2	0.3	
College Plans:																
None or under 4 years	7.6	8.5	8.8	6.5	7.8	5.4	6.3	6.4	3.6	5.9	6.6	4.6	4.8	5.0	5.4	
Complete 4 years	2.3	1.9	2.2	2.2	1.9	1.6	1.5	1.5	1.2	1.2	1.5	1.0	1.3	1.1	1.3	
Region:																
Northeast	1.8	1.0	1.7	3.0	2.0	1.3	1.5	1.2	1.2	0.9	1.1	0.8	1.6	2.1	1.3	
Midwest	3.1	2.9	2.5	2.4	2.5	2.1	1.4	2.1	2.0	2.1	2.1	1.3	1.3	0.8	1.7	
South	4.7	4.5	5.2	3.3	4.1	3.3	3.5	3.8	2.0	2.8	3.6	2.6	3.0	2.6	2.8	
West	2.7	2.9	3.1	3.6	1.1	1.0	1.7	0.8	0.7	1.0	0.9	1.1	0.8	0.6	1.2	
Population Density:																
Large MSA	1.5	1.6	1.1	1.0	1.5	0.6	0.8	1.0	0.8	1.6	0.8	1.3	1.2	0.8	0.8	
Other MSA	3.1	2.8	3.2	3.5	2.3	2.3	1.7	1.5	1.0	1.0	1.7	1.4	1.5	1.3	1.4	
Non-MSA	5.0	4.9	5.3	4.2	4.9	3.6	4.6	5.0	3.5	3.8	5.0	2.6	3.5	3.4	4.2	
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	2.5	3.9	4.1	3.2	3.6	1.7	3.8	2.6	1.7	2.4	3.8	1.7	1.7	1.5	2.0	
2.5–3.0	4.8	5.0	4.3	3.8	3.4	3.4	2.0	2.8	1.7	2.3	3.2	1.2	2.1	1.8	2.6	
3.5–4.0	3.3	2.8	3.1	3.0	2.8	1.4	2.4	2.7	1.6	1.6	1.5	2.0	1.9	2.4	2.0	
4.5–5.0	2.5	1.7	2.5	2.7	2.9	2.3	1.7	1.8	1.6	1.9	1.9	1.5	1.7	0.7	1.7	
5.5–6.0 (High)	2.5	1.6	2.7	1.7	1.0	1.4	1.9	0.7	0.8	0.8	1.9	1.3	1.4	0.9	1.2	
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	3.8	3.9	3.8	3.3	2.9	2.5	2.7	2.4	2.1	2.4	2.3	2.1	2.1	2.1	
African American	—	0.5	0.4	0.6	0.5	0.4	0.4	0.4	0.3	0.4	0.9	0.8	0.4	0.6	0.8	
Hispanic	—	1.1	1.0	0.8	1.2	1.2	1.3	1.3	0.8	0.8	1.0	0.5	0.4	0.9	1.0	

Table continued on next page.

**TABLE 149 (cont.)**  
**SMOKELESS TOBACCO: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 10**

	Percentage who used daily in last 30 days														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	1.7	1.6	1.4	1.9	2.5	1.7	2.0	1.9	1.8	1.6	1.0	0.6	1.0	0.9	-0.1
Gender:															
Male	3.3	2.9	2.6	3.7	4.7	3.3	3.9	3.5	3.4	3.1	1.7	1.2	1.8	1.6	-0.2
Female	*	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.4	0.2	0.2	0.1	0.2	0.4	+0.2
College Plans:															
None or under 4 years	6.8	4.4	6.2	7.7	8.2	5.2	6.2	7.6	7.7	5.8	4.3	2.4	3.6	2.4	-1.2
Complete 4 years	1.0	1.2	0.8	1.3	1.8	1.3	1.6	1.2	1.2	1.2	0.7	0.4	0.7	0.7	0.0
Region:															
Northeast	0.8	1.4	0.5	1.5	2.3	1.2	1.2	1.7	0.9	1.4	0.5	0.8	1.1	0.8	-0.3
Midwest	2.2	1.6	2.4	2.8	2.3	1.7	2.5	1.7	1.9	1.8	0.7	0.4	0.9	0.8	-0.1
South	2.3	2.6	2.1	2.3	3.7	2.4	2.9	2.7	3.1	2.3	1.7	0.8	1.5	1.3	-0.2
West	0.9	0.4	0.2	0.6	0.8	0.9	0.9	1.0	0.5	0.7	0.8	0.4	0.4	0.6	+0.2
Population Density:															
Large MSA	1.1	1.0	0.7	1.0	1.4	1.2	0.7	1.1	0.9	1.0	0.9	0.6	0.8	0.5	-0.3
Other MSA	1.4	1.5	1.1	1.9	2.6	1.0	1.7	1.5	1.3	1.1	0.7	0.3	0.9	1.0	+0.1
Non-MSA	3.2	2.6	3.2	3.1	3.8	3.5	4.5	3.7	4.7	4.1	2.0	1.5	1.7	1.5	-0.2
Parental Education: <sup>a</sup>															
1.0–2.0 (Low)	3.6	2.0	1.0	2.9	2.5	2.0	1.5	1.1	2.2	1.5	0.5	0.1	0.5	1.3	+0.8
2.5–3.0	2.9	2.1	1.7	2.3	3.4	2.8	3.4	3.0	2.9	3.2	1.7	0.5	1.3	1.2	-0.1
3.5–4.0	1.3	1.6	1.9	2.2	3.0	1.4	2.2	2.0	2.3	0.7	1.3	0.8	1.0	1.3	+0.2
4.5–5.0	1.1	1.4	1.3	1.3	1.7	1.4	1.7	1.2	1.2	2.1	0.6	0.6	1.0	0.8	-0.2
5.5–6.0 (High)	1.3	1.1	0.1	1.7	2.0	1.4	1.3	1.1	0.9	1.1	0.7	0.7	1.1	0.5	-0.7
Race/Ethnicity (2-year average): <sup>b</sup>															
White	2.2	2.1	2.1	2.4	3.1	2.8	2.4	2.7	2.6	2.4	1.8	1.2	1.3	1.2	-0.1
African American	0.8	0.6	0.4	0.4	0.6	0.9	0.8	0.7	0.8	1.0	0.9	0.4	0.3	1.0	+0.7 s
Hispanic	0.7	0.3	0.2	0.4	0.5	0.7	0.9	0.5	0.4	0.3	0.3	0.3	0.2	0.4	+0.2

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. ' \* ' indicates less than 0.05% but greater than 0%. 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.

<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 150**  
**SMOKELESS TOBACCO: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 12**

	Percentage who used daily in last 30 days															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990 <sup>a</sup>
Approximate weighted N =	—	—	—	—	—	—	—	—	—	—	—	15,200	16,300	16,300	16,700	—
Total	—	—	—	—	—	—	—	—	—	—	—	4.7	5.1	4.3	3.3	—
Gender:																
Male	—	—	—	—	—	—	—	—	—	—	—	10.0	10.7	8.6	6.8	—
Female	—	—	—	—	—	—	—	—	—	—	—	0.1	0.1	0.5	0.0	—
College Plans:																
None or under 4 years	—	—	—	—	—	—	—	—	—	—	—	7.1	7.8	5.8	4.2	—
Complete 4 years	—	—	—	—	—	—	—	—	—	—	—	3.3	3.7	3.5	2.7	—
Region:																
Northeast	—	—	—	—	—	—	—	—	—	—	—	4.6	2.1	2.3	1.3	—
Midwest	—	—	—	—	—	—	—	—	—	—	—	4.5	4.5	3.5	2.2	—
South	—	—	—	—	—	—	—	—	—	—	—	6.1	7.4	6.3	4.2	—
West	—	—	—	—	—	—	—	—	—	—	—	2.9	5.5	4.0	4.9	—
Population Density:																
Large MSA	—	—	—	—	—	—	—	—	—	—	—	3.4	3.3	3.0	3.0	—
Other MSA	—	—	—	—	—	—	—	—	—	—	—	3.3	4.3	2.5	2.8	—
Non-MSA	—	—	—	—	—	—	—	—	—	—	—	7.8	8.5	8.9	4.6	—
Parental Education: <sup>b</sup>																
1.0–2.0 (Low)	—	—	—	—	—	—	—	—	—	—	—	1.9	5.6	5.3	1.8	—
2.5–3.0	—	—	—	—	—	—	—	—	—	—	—	7.6	6.9	3.2	3.9	—
3.5–4.0	—	—	—	—	—	—	—	—	—	—	—	3.5	4.7	5.4	3.1	—
4.5–5.0	—	—	—	—	—	—	—	—	—	—	—	3.9	5.0	4.7	4.6	—
5.5–6.0 (High)	—	—	—	—	—	—	—	—	—	—	—	3.3	2.1	3.5	1.2	—
Race/Ethnicity (2-year average): <sup>c</sup>																
White	—	—	—	—	—	—	—	—	—	—	—	—	5.8	5.4	4.5	—
African American	—	—	—	—	—	—	—	—	—	—	—	—	0.6	1.0	0.5	—
Hispanic	—	—	—	—	—	—	—	—	—	—	—	—	0.8	2.1	2.1	—

Table continued on next page.

**TABLE 150 (cont.)**  
**SMOKELESS TOBACCO: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 12**

	Percentage who used daily in last 30 days															
	1991 <sup>a</sup>	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Approximate weighted N =	—	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	—	4.3	3.3	3.9	3.6	3.3	4.4	3.2	2.9	3.2	2.8	2.0	2.2	2.8	2.5	2.2
Gender:																
Male	—	7.8	6.4	7.2	7.2	7.1	8.6	6.0	5.7	6.5	5.6	4.3	4.6	5.6	4.7	4.3
Female	—	0.5	0.4	0.3	0.1	0.1	0.2	0.0	0.0	0.4	0.3	0.0	0.0	0.2	0.2	0.1
College Plans:																
None or under 4 years	—	7.4	4.3	6.6	6.5	6.8	9.1	6.5	3.4	7.9	4.7	2.4	5.3	5.0	7.1	6.1
Complete 4 years	—	3.3	3.1	2.8	2.7	2.6	2.7	2.3	2.6	2.0	2.1	1.4	1.4	2.0	1.5	1.2
Region:																
Northeast	—	1.8	1.9	4.5	2.2	3.2	3.5	0.5	1.0	1.3	1.5	1.6	2.7	1.9	2.1	1.9
Midwest	—	4.0	4.4	4.7	4.9	4.1	7.0	4.0	3.4	5.0	2.8	2.2	1.1	3.0	3.8	2.1
South	—	5.4	4.0	3.5	4.2	3.1	3.6	4.6	4.0	4.0	3.8	2.4	2.6	3.7	2.7	3.0
West	—	5.1	1.7	3.2	1.6	2.9	3.0	1.8	1.9	1.6	2.6	1.3	2.2	1.7	1.0	1.0
Population Density:																
Large MSA	—	2.0	1.7	2.0	2.1	2.6	3.3	0.9	0.5	0.9	1.4	0.4	0.5	0.8	1.0	1.4
Other MSA	—	4.2	3.0	3.6	3.2	1.9	3.3	2.4	3.1	3.7	2.6	2.0	2.2	2.2	2.4	1.6
Non-MSA	—	6.5	5.2	6.7	5.8	6.7	7.7	7.6	4.9	5.3	5.0	3.8	4.2	6.2	4.8	4.4
Parental Education: <sup>b</sup>																
1.0–2.0 (Low)	—	6.7	3.9	6.6	2.7	2.2	1.3	2.2	2.1	2.9	4.0	2.2	4.9	3.0	2.2	1.3
2.5–3.0	—	4.8	3.5	3.8	4.7	3.6	5.8	5.2	3.7	4.2	3.2	1.7	1.4	4.2	3.5	3.3
3.5–4.0	—	5.2	3.3	3.3	2.9	3.6	3.7	2.6	3.5	3.9	2.8	2.1	2.0	2.0	3.7	1.7
4.5–5.0	—	2.4	3.7	3.9	3.5	4.6	3.9	3.0	1.9	2.1	2.7	2.4	2.8	2.6	1.8	2.6
5.5–6.0 (High)	—	2.6	1.8	2.7	2.7	1.1	5.0	2.5	2.1	2.5	2.5	0.2	1.8	1.9	0.4	1.3
Race/Ethnicity (2-year average): <sup>c</sup>																
White	—	—	4.8	4.7	4.6	4.1	5.0	5.2	4.3	4.3	4.4	3.5	2.9	3.2	3.5	3.4
African American	—	—	0.3	0.7	0.6	0.3	0.2	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.2
Hispanic	—	—	1.6	0.7	1.2	2.2	1.9	0.8	0.4	0.9	0.6	0.3	0.7	1.1	0.7	0.4

Table continued on next page.

**TABLE 150 (cont.)**  
**SMOKELESS TOBACCO: Trends in 30-Day Prevalence of Daily Use by Subgroups in Grade 12**

	Percentage who used daily in last 30 days													2018-2019 change
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	2.8	2.7	2.9	3.1	3.1	3.2	3.0	3.4	2.9	2.7	2.0	1.6	1.1	-0.5
Gender:														
Male	5.6	5.6	5.8	5.9	6.0	5.7	5.7	6.5	5.8	5.1	4.0	3.2	1.9	-1.3
Female	0.2	0.0	0.4	0.2	0.0	0.3	0.0	0.1	0.0	0.3	0.2	0.3	0.2	-0.1
College Plans:														
None or under 4 years	5.3	6.6	6.4	7.5	7.8	8.4	7.8	8.8	8.6	5.1	6.7	3.6	3.0	-0.7
Complete 4 years	2.1	1.9	2.3	2.1	2.2	2.0	1.8	1.9	1.7	1.9	1.0	1.1	0.5	-0.6
Region:														
Northeast	1.9	1.8	2.1	2.4	3.8	3.2	1.6	3.9	2.1	2.1	1.4	1.1	0.4	-0.8
Midwest	3.9	3.1	4.4	5.3	4.1	3.7	4.9	5.6	3.8	1.9	2.0	2.8	1.3	-1.6
South	4.2	2.7	3.7	3.7	2.9	4.3	2.9	2.5	3.3	3.6	3.0	1.6	1.5	-0.1
West	0.1	3.0	0.7	0.6	1.9	1.3	2.2	2.3	2.0	2.2	0.7	0.6	0.6	-0.1
Population Density:														
Large MSA	1.6	0.5	0.9	0.9	1.6	2.1	1.4	0.9	0.4	1.2	0.3	0.5	0.0	-0.5 ss
Other MSA	2.4	2.1	2.4	2.0	2.9	1.9	2.3	3.5	2.9	3.1	2.3	1.6	1.0	-0.6
Non-MSA	5.8	6.8	6.7	9.2	5.9	8.1	7.0	6.4	7.1	4.0	4.1	3.6	3.2	-0.4
Parental Education: <sup>b</sup>														
1.0–2.0 (Low)	2.5	0.7	1.2	2.2	0.8	3.1	2.0	0.6	1.2	1.8	0.0	.	1.0	+1.0
2.5–3.0	3.8	3.4	3.5	3.9	4.7	5.9	3.0	3.8	4.1	3.5	3.1	2.3	1.3	-1.0
3.5–4.0	2.7	2.9	2.5	2.9	2.9	3.1	3.0	3.8	3.5	2.1	2.6	2.8	0.7	-2.1 s
4.5–5.0	3.1	2.7	3.5	3.2	3.5	2.3	3.7	4.4	2.7	3.2	2.3	1.6	0.9	-0.7
5.5–6.0 (High)	1.8	2.2	3.1	2.8	0.8	1.9	1.5	2.4	1.8	3.3	0.4	0.9	1.3	+0.4
Race/Ethnicity (2-year average): <sup>c</sup>														
White	3.4	3.8	4.5	4.7	4.6	4.6	4.3	4.6	4.7	4.4	4.1	3.4	2.0	-1.4 ss
African American	0.8	0.9	0.6	1.5	1.4	0.3	0.6	1.3	0.6	0.7	1.1	0.8	0.3	-0.4
Hispanic	0.7	0.6	0.2	0.4	0.5	0.5	0.4	0.5	0.8	0.5	0.0	0.2	0.2	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 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.

**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 151**  
**DISSOLVABLE TOBACCO PRODUCTS: Trends in Annual**  
**Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months									2018– 2019 change
	1991– 2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	—	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	
Total	—	1.0	1.1	1.1	0.9	0.7	0.6	0.6	1.1	+0.5 s
Gender:										
Male	—	0.8	1.5	1.3	1.1	0.7	0.8	0.9	1.4	+0.5
Female	—	1.0	0.8	1.0	0.8	0.6	0.5	0.3	0.8	+0.5
College Plans:										
None or under 4 years	—	4.4	4.5	6.1	3.3	4.5	3.5	2.1	2.6	+0.5
Complete 4 years	—	0.8	0.9	0.7	0.7	0.3	0.3	0.4	0.8	+0.5 s
Region:										
Northeast	—	0.3	0.5	1.4	0.5	0.2	0.3	0.6	1.1	+0.5
Midwest	—	0.8	0.4	0.5	1.0	0.4	0.2	0.1	0.8	+0.8
South	—	1.4	1.7	1.2	1.2	1.1	1.0	1.0	1.4	+0.4
West	—	1.1	1.3	1.4	0.7	0.5	0.8	0.3	0.7	+0.4
Population Density:										
Large MSA	—	1.2	1.0	1.2	0.8	0.8	0.5	0.8	1.3	+0.4
Other MSA	—	0.7	1.1	0.8	1.0	0.5	0.8	0.4	1.0	+0.6
Non-MSA	—	1.3	1.3	1.7	0.9	1.0	0.4	0.4	0.8	+0.4
Parental Education: <sup>a</sup>										
1.0–2.0 (Low)	—	1.2	2.6	2.4	1.3	2.1	1.1	0.6	1.1	+0.6
2.5–3.0	—	1.3	0.7	1.9	1.1	0.7	0.3	0.3	1.7	+1.4 s
3.5–4.0	—	1.4	1.7	0.8	1.4	0.8	0.7	0.2	1.0	+0.8
4.5–5.0	—	0.7	0.7	0.8	0.6	0.2	0.4	0.5	0.8	+0.3
5.5–6.0 (High)	—	0.6	0.8	0.8	0.2	0.2	0.8	0.8	0.9	+0.1
Race/Ethnicity (2-year data): <sup>b</sup>										
White	—	—	0.8	1.0	0.9	0.4	0.3	0.3	0.5	+0.1
African American	—	—	1.2	1.0	1.0	1.1	0.9	1.4	2.0	+0.6
Hispanic	—	—	1.7	1.6	1.2	0.9	0.9	0.8	0.9	+0.1

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

*Notes.* '—' 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 four forms; *N* is one third of *N* indicated in S1.

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

<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 152**  
**DISSOLVABLE TOBACCO PRODUCTS: Trends in Annual**  
**Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months									2018– 2019 change
	1991– 2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	—	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	—	1.6	1.2	1.3	1.1	0.9	0.6	1.1	0.8	-0.3
Gender:										
Male	—	2.3	2.0	1.9	1.4	1.3	0.9	1.6	1.5	0.0
Female	—	0.9	0.6	0.7	0.6	0.5	0.3	0.5	0.0	-0.4 ss
College Plans:										
None or under 4 years	—	5.6	2.8	5.9	4.1	3.0	1.3	1.9	1.4	-0.5
Complete 4 years	—	1.2	1.0	0.8	0.7	0.7	0.5	0.9	0.7	-0.3
Region:										
Northeast	—	0.5	1.0	1.1	0.6	1.1	0.1	1.2	0.3	-1.0 s
Midwest	—	1.7	1.2	0.9	1.0	1.0	0.9	1.2	0.5	-0.7
South	—	1.7	1.6	1.3	0.9	0.9	0.5	0.8	0.4	-0.4
West	—	2.1	0.9	1.9	1.6	0.7	1.0	1.1	1.9	+0.7
Population Density:										
Large MSA	—	1.4	0.8	1.1	0.7	0.7	0.6	1.2	0.2	-1.0 s
Other MSA	—	1.5	1.0	1.0	1.0	0.9	0.6	0.9	1.0	+0.1
Non-MSA	—	1.9	2.2	2.6	1.7	1.2	0.7	1.2	1.1	-0.1
Parental Education: <sup>a</sup>										
1.0–2.0 (Low)	—	2.2	1.4	0.5	2.8	0.9	0.9	1.5	0.2	-1.4 s
2.5–3.0	—	2.2	2.0	1.2	1.6	1.2	0.1	1.9	0.3	-1.6 s
3.5–4.0	—	2.3	1.0	2.2	0.7	0.9	0.7	0.7	0.2	-0.5
4.5–5.0	—	0.6	1.1	0.9	0.6	0.6	0.7	0.8	1.9	+1.0
5.5–6.0 (High)	—	1.1	0.9	0.7	0.8	0.7	0.3	0.8	0.7	-0.2
Race/Ethnicity (2-year data): <sup>b</sup>										
White	—	—	1.4	1.3	1.1	0.7	0.6	0.9	1.0	+0.2
African American	—	—	0.8	1.2	1.3	1.1	0.7	0.5	0.4	-0.1
Hispanic	—	—	1.4	1.0	1.0	1.4	1.4	1.2	0.9	-0.3

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

Notes: '—' 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 four forms; N is one third of N indicated in S2.

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

<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 153**  
**DISSOLVABLE TOBACCO PRODUCTS: Trends in Annual**  
**Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months										2018– 2019 change
	2009– 2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	—	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	1.5	1.6	1.9	1.1	1.4	1.1	1.4	1.3	1.1	-0.2
Gender:											
Male	—	1.8	2.4	3.3	1.1	1.8	1.2	2.3	1.0	1.8	+0.8
Female	—	1.0	0.4	0.5	0.7	0.7	0.6	0.2	0.7	0.4	-0.3
College Plans:											
None or under 4 years	—	3.0	1.7	3.9	4.6	2.3	4.1	1.0	3.4	2.6	-0.8
Complete 4 years	—	1.1	1.6	1.3	0.3	1.0	0.5	1.2	0.4	0.6	+0.3
Region:											
Northeast	—	1.3	1.4	1.3	0.3	1.1	0.7	0.5	0.6	0.4	-0.2
Midwest	—	0.5	0.8	2.0	0.8	0.5	0.2	1.3	2.3	0.4	-1.9 ss
South	—	2.4	2.2	1.5	1.5	2.5	2.0	1.8	1.5	1.4	-0.1
West	—	1.5	2.0	2.7	1.3	0.6	0.6	1.5	0.5	2.3	+1.8
Population Density:											
Large MSA	—	1.7	1.7	1.8	1.9	0.7	0.9	1.0	2.1	1.0	-1.1 s
Other MSA	—	1.4	1.4	1.6	0.8	1.8	1.3	1.5	0.9	1.1	+0.1
Non-MSA	—	1.5	2.1	2.7	0.7	1.4	1.0	1.9	0.8	1.7	+0.9
Parental Education: <sup>a</sup>											
1.0–2.0 (Low)	—	0.6	1.1	3.8	2.5	1.9	1.6	4.0	1.9	0.8	-1.1
2.5–3.0	—	2.7	2.5	1.0	1.9	0.6	1.4	1.5	0.8	1.0	+0.3
3.5–4.0	—	1.1	1.6	2.3	1.0	1.0	2.2	0.7	0.8	1.5	+0.7
4.5–5.0	—	0.5	1.3	1.5	0.1	2.1	0.3	0.4	0.3	0.5	+0.2
5.5–6.0 (High)	—	1.9	0.7	1.7	0.1	0.4	0.0	1.3	1.4	0.3	-1.1
Race/Ethnicity (2-year data): <sup>b</sup>											
White	—	—	1.6	1.8	1.5	1.2	0.9	0.5	0.8	0.8	0.0
African American	—	—	1.5	1.8	1.9	2.4	2.7	2.5	1.7	2.1	+0.4
Hispanic	—	—	1.0	1.4	1.1	0.5	1.0	1.4	1.1	1.0	-0.1

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

*Notes.* '—' 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.

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

<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 154**  
**SNUS: Trends in Annual Prevalence of Use**  
**by Subgroups in Grade 8**

	Percentage who used in last 12 months									
	1991–									2018–
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2019
										change
Approximate weighted N =	—	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	
Total	—	2.4	2.0	2.2	1.9	2.2	1.1	1.3	1.5	+0.2
Gender:										
Male	—	3.3	3.3	3.1	3.0	3.3	1.7	2.1	1.9	-0.2
Female	—	1.5	0.8	1.5	1.0	1.0	0.5	0.7	1.0	+0.4
College Plans:										
None or under 4 years	—	9.0	7.4	8.9	6.0	9.5	4.7	3.7	4.5	+0.8
Complete 4 years	—	2.0	1.6	1.6	1.5	1.5	0.8	1.0	1.1	+0.1
Region:										
Northeast	—	1.8	1.1	1.4	1.2	1.1	0.5	0.7	0.6	-0.1
Midwest	—	2.0	1.2	2.2	2.4	1.3	0.8	0.7	1.5	+0.8
South	—	3.4	3.3	2.4	2.3	3.5	1.6	2.1	2.0	-0.1
West	—	1.6	1.4	2.2	1.0	1.4	1.0	1.1	1.3	+0.2
Population Density:										
Large MSA	—	1.2	1.6	1.1	0.8	1.0	0.5	0.9	1.3	+0.4
Other MSA	—	2.4	1.8	1.7	1.7	2.1	1.0	0.9	1.1	+0.2
Non-MSA	—	4.5	3.0	4.6	3.9	4.0	2.3	2.9	2.8	-0.1
Parental Education: <sup>a</sup>										
1.0–2.0 (Low)	—	2.2	3.0	3.1	1.1	3.2	1.2	0.7	1.8	+1.1
2.5–3.0	—	3.9	2.0	3.5	2.7	2.6	1.5	0.8	2.7	+1.9 s
3.5–4.0	—	3.9	3.0	2.2	1.7	2.4	1.5	1.5	2.1	+0.6
4.5–5.0	—	1.5	1.4	1.4	2.1	1.3	0.7	2.2	1.4	-0.7
5.5–6.0 (High)	—	1.1	1.3	1.2	0.9	0.9	1.0	1.1	0.3	-0.7
Race/Ethnicity (2-year data): <sup>b</sup>										
White	—	—	2.7	2.6	2.7	2.5	1.9	1.4	1.6	+0.3
African American	—	—	0.9	0.7	0.9	1.4	1.4	1.4	1.7	+0.3
Hispanic	—	—	1.8	1.5	1.0	1.3	1.3	0.9	0.9	0.0

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

Notes. '—' 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 four forms; N is one third of N indicated in S1.

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

<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 155**  
**SNUS: Trends in Annual Prevalence of Use**  
**by Subgroups in Grade 10**

	Percentage who used in last 12 months									
	1991– 2011	2012	2013	2014	2015	2016	2017	2018	2019	2018– 2019 change
Approximate weighted N =	—	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	—	6.9	5.2	4.5	4.0	3.0	2.6	3.1	2.3	-0.8
Gender:										
Male	—	12.1	9.3	7.5	6.5	5.1	4.5	5.6	4.4	-1.2
Female	—	2.1	1.3	1.7	1.7	1.1	0.8	0.7	0.5	-0.2
College Plans:										
None or under 4 years	—	17.5	16.0	15.1	8.2	9.1	7.1	7.8	4.0	-3.9 s
Complete 4 years	—	5.8	4.0	3.4	3.6	2.3	2.1	2.4	2.1	-0.3
Region:										
Northeast	—	6.2	5.5	3.3	4.0	2.6	1.8	2.4	1.1	-1.3
Midwest	—	7.8	6.7	5.7	4.8	2.9	3.1	3.4	2.2	-1.2
South	—	8.4	5.0	5.2	4.7	3.6	3.6	4.1	2.5	-1.6
West	—	4.2	3.8	3.5	2.1	2.6	1.4	1.7	2.9	+1.2
Population Density:										
Large MSA	—	4.1	3.1	3.4	2.9	2.0	2.8	2.2	0.7	-1.5 ss
Other MSA	—	7.4	4.8	3.9	3.7	2.5	1.5	2.8	2.4	-0.4
Non-MSA	—	9.6	8.9	8.1	6.7	6.2	5.2	5.1	4.7	-0.4
Parental Education: <sup>a</sup>										
1.0–2.0 (Low)	—	4.9	4.8	3.4	3.8	2.1	2.1	2.8	2.0	-0.8
2.5–3.0	—	8.5	6.9	4.3	5.3	4.0	2.6	3.3	1.6	-1.7
3.5–4.0	—	8.3	6.2	5.2	3.8	3.7	3.4	4.3	2.0	-2.3 s
4.5–5.0	—	6.3	3.4	4.7	3.9	2.9	2.1	3.0	4.4	+1.4
5.5–6.0 (High)	—	5.4	4.7	4.4	3.7	1.8	2.8	2.2	0.9	-1.3
Race/Ethnicity (2-year data): <sup>b</sup>										
White	—	—	8.1	7.1	6.0	4.9	4.1	4.4	4.3	-0.1
African American	—	—	1.6	1.4	2.2	2.1	1.1	0.6	1.0	+0.3
Hispanic	—	—	2.6	1.2	1.1	1.6	1.5	1.3	1.0	-0.2

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

Notes. '—' 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 four forms; N is one third of N indicated in S2.

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

<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 156**  
**SNUS: Trends in Annual Prevalence of Use**  
**by Subgroups in Grade 12**

	Percentage who used in last 12 months										2018– 2019 change
	1975– 2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	—	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	7.9	7.9	7.7	5.8	5.8	5.8	4.2	4.7	2.7	-2.1 ss
Gender:											
Male	—	13.9	14.1	14.6	9.9	10.5	9.9	7.2	7.6	4.5	-3.1 s
Female	—	1.9	1.2	1.4	1.5	1.3	1.4	1.2	1.1	0.7	-0.4
College Plans:											
None or under 4 years	—	15.1	12.2	13.6	16.0	12.8	14.0	7.0	8.0	6.2	-1.9
Complete 4 years	—	6.2	6.6	6.1	3.5	4.4	4.0	3.4	3.5	1.7	-1.9 ss
Region:											
Northeast	—	7.8	8.0	7.3	6.0	7.8	5.1	4.3	2.3	2.1	-0.1
Midwest	—	10.6	8.3	8.3	7.1	5.6	7.3	3.4	8.1	3.0	-5.1 s
South	—	6.4	8.8	8.9	5.0	6.8	6.2	5.7	5.0	2.4	-2.6 s
West	—	7.1	6.2	5.5	5.9	2.9	4.1	2.6	2.6	3.4	+0.7
Population Density:											
Large MSA	—	6.9	6.1	6.7	3.7	3.6	3.1	3.1	3.6	1.5	-2.1 s
Other MSA	—	6.5	7.8	7.9	5.2	6.8	6.4	3.9	4.5	2.6	-1.9
Non-MSA	—	12.2	10.8	8.6	9.6	6.9	8.3	6.4	7.5	4.8	-2.7
Parental Education: <sup>a</sup>											
1.0–2.0 (Low)	—	2.9	4.8	9.2	4.5	4.4	4.0	3.7	2.9	2.8	-0.1
2.5–3.0	—	8.8	8.9	5.7	7.5	4.3	3.4	4.5	4.2	2.6	-1.6
3.5–4.0	—	9.4	6.8	9.7	5.5	6.0	6.4	4.1	4.8	2.8	-2.0
4.5–5.0	—	8.1	10.0	7.5	6.3	7.8	7.7	3.4	4.9	1.7	-3.2 s
5.5–6.0 (High)	—	5.4	6.2	6.7	2.5	5.3	5.3	5.3	4.4	3.0	-1.4
Race/Ethnicity (2-year data): <sup>b</sup>											
White	—	—	10.2	9.9	9.1	8.1	7.6	6.8	6.2	4.3	-1.8 ss
African American	—	—	3.4	3.3	2.1	2.2	3.0	2.2	1.1	2.1	+0.9
Hispanic	—	—	4.4	4.6	2.9	2.8	3.2	1.9	1.8	1.9	+0.1

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

Notes. '—' 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 two of six forms; N is two sixths of N indicated in Table S3.

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

<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 157**  
**STEROIDS: <sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months														
	<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>
<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>
Total	1.0	1.1	0.9	1.2	1.0	0.9	1.0	1.2	1.7	1.7	1.6	1.5	1.4	1.1	1.1
Gender:															
Male	1.8	1.7	1.4	1.8	1.3	1.1	1.3	1.6	2.5	2.2	2.3	1.8	1.8	1.3	1.2
Female	0.3	0.5	0.3	0.6	0.8	0.7	0.7	0.7	0.9	1.0	1.0	1.2	1.1	1.0	0.9
College Plans:															
None or under 4 years	2.2	2.4	2.2	2.5	2.2	1.5	2.4	2.8	4.0	3.6	3.1	3.6	2.7	3.2	2.4
Complete 4 years	0.8	0.9	0.7	1.0	0.9	0.8	0.8	1.0	1.4	1.5	1.5	1.3	1.3	0.9	0.9
Region:															
Northeast	0.7	1.1	0.6	1.0	1.0	1.1	1.0	1.1	1.6	1.7	1.8	1.2	1.1	0.8	0.6
Midwest	1.1	1.2	1.0	1.0	1.1	0.8	1.0	1.2	1.6	1.8	1.7	1.6	1.7	1.2	1.1
South	1.2	1.1	1.0	1.6	1.1	0.9	0.9	1.4	1.9	1.8	1.9	1.9	1.6	1.3	1.3
West	0.7	0.9	0.7	1.0	1.0	0.8	1.1	0.9	1.4	1.3	0.9	1.2	1.2	1.0	1.0
Population Density:															
Large MSA	0.8	1.0	0.8	0.9	0.9	0.8	0.9	1.0	1.3	1.6	1.6	1.1	1.0	1.0	0.8
Other MSA	1.2	1.2	0.9	1.2	1.2	0.9	0.9	1.2	1.9	1.5	1.7	1.6	1.5	1.1	1.1
Non-MSA	1.0	0.9	0.9	1.5	0.9	0.9	1.2	1.4	1.7	2.0	1.6	2.1	1.8	1.3	1.3
Parental Education: <sup>b</sup>															
1.0–2.0 (Low)	1.8	1.2	1.2	1.6	1.3	0.9	1.4	1.7	2.2	2.5	2.0	1.8	1.3	1.5	2.1
2.5–3.0	1.1	1.2	0.8	1.6	1.3	0.7	0.9	1.1	1.9	2.1	1.6	1.7	1.9	1.4	1.0
3.5–4.0	1.0	1.0	1.1	1.3	0.8	0.9	1.2	1.4	1.6	1.3	1.9	1.9	1.6	1.0	1.1
4.5–5.0	0.7	0.9	0.8	0.8	0.8	1.2	0.9	1.1	1.4	1.6	1.5	1.0	1.3	1.2	1.1
5.5–6.0 (High)	1.0	1.3	0.6	0.9	1.5	0.9	1.2	1.1	2.0	1.6	1.7	1.6	1.0	0.7	0.7
Race/Ethnicity (2-year average): <sup>c</sup>															
White	—	1.1	1.0	1.0	1.1	0.9	0.9	1.1	1.5	1.9	1.8	1.7	1.6	1.3	1.0
African American	—	0.7	0.6	0.8	0.9	0.7	0.6	0.7	0.8	0.7	0.8	1.2	1.2	0.9	0.9
Hispanic	—	1.2	1.1	1.1	1.3	1.5	1.4	1.4	1.8	1.8	1.5	1.5	1.7	1.7	1.2

Table continued on next page.

**TABLE 157 (cont.)**  
**STERIODS: <sup>a</sup>Trends in Annual Prevalence of Use by Subgroups in Grade 8**

	Percentage who used in last 12 months														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600	
Total	0.9	0.8	0.9	0.8	0.5	0.7	0.6	0.6	0.6	0.5	0.5	0.6	0.6	0.8	+0.1
Gender:															
Male	1.2	1.1	1.2	1.0	0.7	1.0	0.8	0.7	0.6	0.5	0.5	0.6	0.6	0.7	+0.1
Female	0.6	0.4	0.5	0.5	0.3	0.4	0.3	0.4	0.5	0.5	0.5	0.6	0.7	0.9	+0.2
College Plans:															
None or under 4 years	2.4	2.7	2.3	2.2	1.4	1.4	1.4	1.6	1.4	1.1	1.1	1.3	1.0	1.5	+0.4
Complete 4 years	0.7	0.6	0.8	0.7	0.5	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.7	+0.1
Region:															
Northeast	0.6	0.5	0.8	0.8	0.5	0.5	0.5	0.6	0.6	0.5	0.2	0.8	0.5	0.6	+0.1
Midwest	0.8	0.7	0.9	0.7	0.7	0.9	0.5	0.3	0.6	0.6	0.6	0.6	0.6	0.8	+0.2
South	1.1	1.0	1.1	0.7	0.5	0.8	0.8	0.8	0.6	0.6	0.6	0.4	0.7	0.7	0.0
West	0.7	0.8	0.6	0.9	0.4	0.6	0.5	0.5	0.4	0.4	0.6	0.8	0.7	1.0	+0.3
Population Density:															
Large MSA	0.8	0.7	0.8	0.4	0.4	0.3	0.6	0.6	0.3	0.5	0.5	0.4	0.6	0.6	0.0
Other MSA	0.8	0.8	0.9	0.9	0.7	0.8	0.6	0.6	0.6	0.4	0.4	0.7	0.7	0.8	+0.1
Non-MSA	1.2	1.0	1.0	0.9	0.4	1.2	0.6	0.7	0.7	0.7	0.9	0.9	0.7	1.1	+0.4
Parental Education: <sup>b</sup>															
1.0–2.0 (Low)	1.0	1.7	1.7	2.1	0.7	1.0	0.6	0.6	0.8	0.8	0.8	0.8	0.6	0.6	0.0
2.5–3.0	0.9	0.9	1.0	0.7	0.5	0.9	0.6	0.7	0.5	0.7	0.5	0.7	1.0	1.2	+0.2
3.5–4.0	1.0	0.8	1.0	0.9	0.5	0.9	0.4	0.6	0.7	0.3	0.5	0.5	0.7	0.6	-0.2
4.5–5.0	0.7	0.4	0.7	0.5	0.6	0.5	0.5	0.3	0.5	0.6	0.5	0.7	0.5	0.9	+0.4
5.5–6.0 (High)	1.1	0.8	0.8	0.6	0.5	0.8	0.9	0.8	0.6	0.5	0.6	0.6	0.4	0.7	+0.2
Race/Ethnicity (2-year average): <sup>c</sup>															
White	0.9	0.8	0.8	0.7	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.0
African American	0.8	0.8	0.7	0.7	0.7	0.5	0.7	0.8	0.7	0.6	0.5	0.6	0.6	0.6	+0.1
Hispanic	0.9	0.7	0.7	0.9	0.8	0.7	0.4	0.5	0.6	0.5	0.6	0.6	0.7	0.8	+0.1

*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. In 2006 the question text was changed slightly in half of the questionnaire forms. An examination of the data did not show any effect from the wording change. In 2007 the remaining forms were changed in a like manner. In 2008 the question text was changed slightly in half of the questionnaire forms. An examination of the data did not show any effect from the wording change. In 2009 the remaining forms were changed in a like manner.

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

<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 158**  
**STEROIDS: <sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months														
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<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
Total	1.1	1.1	1.0	1.1	1.2	1.2	1.2	1.2	1.7	2.2	2.1	2.2	1.7	1.5	1.3
Gender															
Male	1.9	1.9	1.7	1.9	2.0	1.7	1.8	1.9	2.8	3.6	3.3	3.2	2.3	2.3	1.8
Female	0.3	0.3	0.3	0.4	0.5	0.6	0.6	0.6	0.7	0.8	1.0	1.2	1.1	0.9	0.7
College Plans															
None or under 4 years	1.7	1.3	1.9	2.1	2.1	2.1	2.4	1.9	2.6	3.6	3.2	3.0	2.7	2.9	1.9
Complete 4 years	0.9	1.0	0.8	0.9	1.1	1.0	1.0	1.1	1.6	1.9	1.9	2.1	1.5	1.4	1.2
Region															
Northeast	1.2	0.9	1.0	1.0	1.1	1.0	0.9	1.4	2.0	1.8	1.9	2.0	1.9	1.4	1.5
Midwest	1.0	1.1	1.2	1.1	1.2	1.4	1.2	1.1	1.8	2.1	1.5	1.8	1.9	1.4	1.2
South	1.0	1.2	1.0	1.3	1.3	1.4	1.4	1.4	1.7	2.5	2.5	2.5	1.5	1.9	1.5
West	1.0	1.2	0.8	1.1	1.3	0.6	1.3	0.9	1.4	2.1	2.3	2.4	1.4	1.4	0.9
Population Density															
Large MSA	1.5	0.9	0.8	0.8	0.8	0.8	1.0	0.8	1.2	2.3	1.9	2.1	1.4	1.2	0.9
Other MSA	1.0	1.0	0.9	1.1	1.4	1.2	1.2	1.3	1.9	2.0	2.0	2.3	1.5	1.5	1.4
Non-MSA	0.8	1.4	1.4	1.5	1.4	1.5	1.5	1.5	2.0	2.5	2.4	2.1	2.6	2.1	1.5
Parental Education <sup>b</sup>															
1.0–2.0 (Low)	0.7	0.9	1.5	1.8	1.2	1.7	1.7	1.3	1.2	2.3	1.6	1.6	1.9	1.5	1.8
2.5–3.0	1.3	1.1	1.0	0.9	1.1	0.7	1.1	1.1	1.7	2.2	2.1	2.0	1.9	1.8	1.2
3.5–4.0	1.0	1.2	1.1	0.8	1.6	1.2	1.4	1.7	2.0	2.0	2.3	2.8	1.9	1.7	1.0
4.5–5.0	0.9	1.0	0.8	1.4	1.1	1.2	1.0	0.9	1.5	2.4	2.0	2.0	1.6	1.5	1.5
5.5–6.0 (High)	1.2	1.4	1.1	1.1	1.0	1.1	1.1	1.1	2.4	2.2	2.1	3.0	1.3	1.2	1.3
Race/Ethnicity (2-year average) <sup>c</sup>															
White	—	1.0	1.0	1.0	1.2	1.3	1.3	1.3	1.5	2.1	2.3	2.4	2.3	1.8	1.6
African American	—	0.7	0.8	0.8	0.7	0.7	0.5	0.5	0.7	1.2	1.6	1.2	0.8	0.7	0.9
Hispanic	—	1.2	1.4	1.3	0.9	1.1	1.2	1.2	1.5	1.8	2.1	2.1	1.8	1.6	1.3

Table continued on next page.



**TABLE 158 (cont.)**  
**STEROIDS: <sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 10**

	Percentage who used in last 12 months														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000	
Total	1.2	1.1	0.9	0.8	1.0	0.9	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.8	+0.2
Gender															
Male	1.9	1.7	1.4	1.2	1.3	1.4	1.3	1.3	1.1	1.0	0.9	0.8	0.6	1.1	+0.5 ss
Female	0.5	0.4	0.5	0.4	0.5	0.4	0.4	0.5	0.5	0.4	0.5	0.5	0.6	0.6	0.0
College Plans															
None or under 4 years	2.3	1.9	2.6	1.6	2.6	2.1	2.3	1.2	2.5	1.5	1.2	1.7	0.9	1.0	+0.1
Complete 4 years	1.1	0.9	0.7	0.7	0.8	0.8	0.7	0.8	0.6	0.7	0.7	0.6	0.6	0.8	+0.2
Region															
Northeast	0.9	1.1	0.8	1.2	1.1	0.8	0.8	1.0	0.5	1.1	0.5	0.7	0.7	0.8	+0.1
Midwest	1.2	1.2	1.0	0.7	0.7	0.8	0.7	0.8	0.7	0.7	0.9	0.8	0.7	0.6	-0.1
South	1.6	1.3	1.0	0.7	1.2	1.2	1.0	0.8	1.2	0.7	0.9	0.7	0.7	1.0	+0.3
West	0.9	0.7	0.8	0.6	0.8	0.7	0.7	0.8	0.6	0.6	0.5	0.6	0.4	0.8	+0.4
Population Density															
Large MSA	1.0	0.8	0.7	0.9	0.9	0.6	0.9	0.9	0.8	0.7	0.4	0.6	0.7	0.5	-0.2
Other MSA	1.3	1.1	1.0	0.7	0.9	1.0	0.8	0.9	0.6	0.7	0.8	0.7	0.6	0.9	+0.3
Non-MSA	1.4	1.3	1.1	0.7	1.1	1.1	0.7	0.8	1.2	1.0	1.1	0.8	0.7	1.2	+0.5
Parental Education <sup>b</sup>															
1.0–2.0 (Low)	1.4	1.0	1.5	1.0	1.5	0.5	1.1	1.0	0.6	0.4	0.7	1.2	0.4	1.0	+0.6
2.5–3.0	1.5	1.4	1.0	0.9	1.0	0.9	0.9	0.9	0.6	0.6	0.7	0.6	0.5	0.6	+0.1
3.5–4.0	1.3	1.0	0.9	0.7	0.9	0.8	0.7	1.2	1.0	0.9	0.9	0.9	0.9	1.0	+0.1
4.5–5.0	0.9	1.1	0.8	0.7	0.7	1.1	0.9	0.5	0.7	0.9	0.5	0.6	0.5	0.5	0.0
5.5–6.0 (High)	1.4	0.9	1.0	0.9	1.2	1.0	0.7	0.7	0.8	0.5	1.0	0.4	0.6	1.2	+0.6
Race/Ethnicity (2-year average) <sup>c</sup>															
White	1.3	1.2	1.0	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.8	+0.2
African American	1.1	0.9	0.8	0.7	1.0	1.3	1.0	0.9	1.0	1.0	0.7	0.7	0.6	0.4	-0.2
Hispanic	1.0	0.7	1.1	1.3	0.8	0.6	0.8	0.9	0.5	0.6	0.4	0.4	0.6	0.7	+0.1

<sup>a</sup>Source. The Monitoring the Future study, the University of Michigan.

<sup>b</sup>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. In 2006 the question text was changed slightly in half of the questionnaire forms. An examination of the data did not show any effect from the wording change. In 2007 the remaining forms were changed in a like manner. In 2008 the question text was changed slightly in half of the questionnaire forms. An examination of the data did not show any effect from the wording change. In 2009 the remaining forms were changed in a like manner.

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

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

<sup>e</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 159**  
**STEROIDS: <sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months																	
	1975– 1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<i>Approximate weighted N =</i>	—	16,700	15,200	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700
Total	—	1.9	1.7	1.4	1.1	1.2	1.3	1.5	1.4	1.4	1.7	1.8	1.7	2.4	2.5	2.1	2.5	1.5
Gender																		
Male	—	2.8	2.6	2.4	2.1	2.5	2.1	2.4	2.2	2.5	2.8	3.1	2.5	3.8	3.8	3.2	3.3	2.6
Female	—	0.9	0.3	0.2	0.1	0.1	0.5	0.6	0.4	0.5	0.3	0.6	0.9	1.1	1.3	1.1	1.7	0.4
College Plans																		
None or under 4 years	—	2.3	2.2	2.1	2.1	2.0	1.9	2.0	2.3	2.3	2.1	3.6	2.0	4.6	4.1	2.6	2.8	2.1
Complete 4 years	—	1.6	1.3	1.2	0.8	0.9	1.1	1.2	1.1	1.2	1.4	1.3	1.6	1.8	2.0	2.0	2.4	1.2
Region																		
Northeast	—	2.0	1.3	1.2	0.6	1.5	1.5	1.6	1.3	2.1	0.9	1.3	1.9	4.5	2.1	3.0	3.8	1.6
Midwest	—	1.5	1.3	1.4	1.4	0.8	2.2	1.5	2.1	2.1	2.3	1.6	2.3	1.7	2.8	1.8	2.4	1.6
South	—	2.1	2.2	1.7	0.6	1.6	1.0	1.7	1.3	0.5	1.6	2.6	1.5	2.1	2.5	1.8	2.2	1.6
West	—	1.9	1.7	1.0	2.3	1.1	0.8	1.0	0.3	1.6	1.7	1.2	1.1	2.1	2.4	2.2	2.0	1.0
Population Density																		
Large MSA	—	1.6	1.3	1.1	1.0	0.7	1.1	1.4	1.3	0.8	2.1	1.3	1.7	1.9	2.0	2.1	2.6	1.4
Other MSA	—	2.3	1.5	1.4	1.4	0.9	1.5	1.3	1.3	1.7	1.5	2.0	2.0	2.9	3.0	2.1	2.9	1.4
Non-MSA	—	1.1	2.4	1.6	0.8	2.2	1.3	2.1	1.5	1.6	1.6	1.9	1.2	2.0	2.1	2.3	1.8	1.7
Parental Education <sup>b</sup>																		
1.0–2.0 (Low)	—	0.6	1.1	2.0	2.1	1.1	2.8	1.1	1.5	3.4	3.0	1.5	1.3	2.1	3.6	2.9	4.9	2.1
2.5–3.0	—	2.1	2.0	0.6	0.9	1.3	1.7	1.3	1.9	1.4	1.4	0.8	1.6	3.2	3.0	1.3	2.9	1.3
3.5–4.0	—	2.6	2.3	1.6	1.3	1.5	1.1	1.1	1.3	1.1	1.1	2.5	1.9	1.9	2.8	2.7	2.5	1.7
4.5–5.0	—	1.3	1.1	1.6	0.9	1.3	0.6	2.0	1.1	1.2	1.9	2.2	1.4	1.9	2.3	2.3	1.8	1.3
5.5–6.0 (High)	—	2.1	1.0	0.5	0.8	0.8	1.2	1.4	1.1	1.3	1.5	1.1	2.4	2.2	1.0	1.4	2.4	1.2
Race/Ethnicity (2-year average) <sup>c</sup>																		
White	—	—	1.6	1.3	1.3	1.2	1.1	1.4	1.3	1.2	1.5	1.7	1.8	2.1	2.5	2.4	2.4	2.1
African American	—	—	1.8	1.2	0.5	1.1	1.8	1.2	1.4	1.5	0.9	0.7	1.0	1.2	1.0	1.1	1.3	1.6
Hispanic	—	—	2.3	3.3	1.8	0.9	1.7	1.3	0.6	1.6	2.4	2.9	2.4	2.1	2.2	1.8	2.4	2.0

Table continued on next page.

**TABLE 159 (cont.)**  
**STEROIDS:<sup>a</sup> Trends in Annual Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in last 12 months														2018-2019 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	1.8	1.4	1.5	1.5	1.5	1.2	1.3	1.5	1.5	1.7	1.0	1.1	1.1	1.0	-0.1
Gender															
Male	2.7	2.3	2.5	2.5	2.5	1.8	1.7	2.2	2.0	2.5	1.3	1.4	1.5	1.4	-0.1
Female	0.7	0.6	0.4	0.4	0.3	0.5	0.7	0.7	0.7	0.7	0.6	0.5	0.4	0.6	+0.2
College Plans															
None or under 4 years	2.7	2.1	3.1	2.9	3.3	1.6	1.4	2.7	1.8	1.8	2.1	2.3	2.2	3.0	+0.8
Complete 4 years	1.5	1.3	1.1	1.2	1.1	1.1	1.1	1.1	1.3	1.5	0.8	0.7	0.7	0.5	-0.2
Region															
Northeast	2.0	1.6	2.2	1.3	1.7	1.2	1.6	1.0	2.1	1.1	0.9	0.8	0.6	1.5	+1.0
Midwest	1.5	1.3	1.7	1.4	1.6	0.6	0.9	1.6	0.9	1.6	1.1	0.9	1.4	0.8	-0.6
South	2.0	2.0	1.4	1.7	1.5	1.5	1.6	1.9	1.4	1.9	1.1	1.4	1.4	1.1	-0.3
West	1.5	0.5	0.9	1.4	1.1	1.5	1.0	0.9	1.5	2.0	1.0	0.8	0.7	0.7	0.0
Population Density															
Large MSA	1.6	1.0	0.9	1.3	1.2	1.0	1.4	1.1	0.8	1.8	0.7	0.6	1.4	1.1	-0.3
Other MSA	1.6	1.5	1.4	1.7	1.5	1.4	1.2	1.1	1.9	1.9	1.3	1.0	1.0	0.9	-0.1
Non-MSA	2.2	1.9	2.4	1.1	1.6	1.2	1.0	2.8	1.1	1.2	0.9	1.8	0.9	1.3	+0.3
Parental Education <sup>b</sup>															
1.0–2.0 (Low)	2.8	3.0	2.1	1.7	1.6	2.2	1.5	3.3	1.9	1.1	1.5	1.4	1.6	1.1	-0.5
2.5–3.0	1.8	1.6	1.6	1.8	2.2	1.3	1.0	1.5	1.4	1.1	0.9	1.4	1.3	0.5	-0.7
3.5–4.0	1.7	1.1	1.3	1.6	1.6	1.5	1.1	0.8	1.1	2.1	1.1	0.7	0.7	1.8	+1.1
4.5–5.0	1.3	1.1	1.4	1.3	0.7	0.6	1.0	1.7	1.2	1.9	0.7	1.0	1.3	0.6	-0.7
5.5–6.0 (High)	1.5	1.5	1.5	0.9	1.4	0.8	1.8	0.5	1.4	1.9	1.2	0.6	0.7	0.8	0.0
Race/Ethnicity (2-year average) <sup>c</sup>															
White	1.6	1.5	1.5	1.5	1.5	1.3	1.2	1.3	1.1	1.3	1.4	0.9	0.8	0.8	0.0
African American	1.7	1.6	1.4	1.5	1.7	1.8	1.6	1.4	2.7	2.2	1.3	2.2	2.4	1.8	-0.6
Hispanic	2.3	2.3	1.3	1.0	1.3	1.4	1.0	1.1	1.4	1.3	1.0	0.7	1.1	1.4	+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 in 1989–1990; *N* is one sixth of *N* indicated in Table S3. Data based on two of six forms in 1991–2005; *N* is two sixths of *N* indicated in Table S3. Data based on three of six forms beginning in 2006; *N* is three sixths of *N* indicated in Table S3. In 2006 there were no changes in the two forms containing the original version of the question text. A slightly altered version of the question was added to a third form. An examination of the data did not show any effect from the wording change. In 2007 the forms containing the original version were changed in a like manner. In 2008 the question wording was changed slightly in two of the questionnaire forms. An examination of the data did not show any effect from the wording changes. In 2009 the remaining form was changed in a like manner.

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

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

<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 160**  
**MARIJUANA<sup>c</sup>: Trends in Lifetime Prevalence of Daily Use for a Month or More by Subgroups in Grade 12**

	Percentage who used daily for month or more in lifetime															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Approximate weighted N =	—	—	—	—	—	—	—	17,700	16,300	15,900	16,000	15,200	16,300	16,300	16,700	15,200
Total <sup>d</sup>	—	—	—	—	—	—	—	20.5	16.8	16.3	15.6	14.9	14.7	12.8	11.5	10.0
Gender:																
Male	—	—	—	—	—	—	—	20.1	18.1	17.2	17.7	16.6	16.2	14.8	12.7	10.6
Female	—	—	—	—	—	—	—	18.0	13.5	12.9	12.0	11.6	12.2	9.6	9.7	7.9
College Plans:																
None or under 4 years	—	—	—	—	—	—	—	22.5	20.3	18.9	19.6	17.2	18.0	14.5	15.3	12.8
Complete 4 years	—	—	—	—	—	—	—	13.8	10.5	10.7	10.6	11.0	11.1	9.8	9.1	7.4
Region:																
Northeast	—	—	—	—	—	—	—	25.1	20.4	24.1	20.9	21.5	17.0	13.1	14.6	10.4
Midwest	—	—	—	—	—	—	—	21.1	15.9	12.8	16.3	11.3	12.7	10.3	13.4	10.8
South	—	—	—	—	—	—	—	15.7	12.7	14.0	8.9	11.3	11.9	10.9	8.1	8.7
West	—	—	—	—	—	—	—	20.8	21.4	17.6	18.5	18.3	19.7	19.0	12.3	11.0
Population Density:																
Large MSA	—	—	—	—	—	—	—	23.8	20.0	19.4	18.1	17.0	16.7	14.0	10.6	8.3
Other MSA	—	—	—	—	—	—	—	20.3	18.2	16.6	16.0	14.9	15.0	14.9	12.4	11.7
Non-MSA	—	—	—	—	—	—	—	17.9	12.6	13.2	12.8	13.2	12.2	7.6	10.4	8.2
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	—	—	—	—	—	—	—	20.9	15.5	15.4	15.0	17.2	11.2	11.9	8.4	9.3
2.5–3.0	—	—	—	—	—	—	—	20.1	15.5	16.8	15.3	13.3	15.6	10.0	10.4	10.4
3.5–4.0	—	—	—	—	—	—	—	20.1	14.7	15.9	15.2	14.5	14.2	12.8	14.0	8.0
4.5–5.0	—	—	—	—	—	—	—	16.8	17.0	10.8	12.8	12.4	14.2	14.5	8.5	10.3
5.5–6.0 (High)	—	—	—	—	—	—	—	12.8	15.3	14.8	11.8	14.6	11.4	10.0	13.5	7.5
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	—	—	—	—	—	—	—	18.2	16.2	15.8	15.0	15.1	14.6	13.0	11.4
African American	—	—	—	—	—	—	—	—	11.3	9.9	9.8	9.2	8.6	6.9	6.2	4.2
Hispanic	—	—	—	—	—	—	—	—	19.5	14.8	11.0	11.8	11.3	11.4	9.4	8.3

Table continued on next page.

**TABLE 160 (cont.)**  
**MARIJUANA<sup>c</sup>: Trends in Lifetime Prevalence of Daily Use for a Month or More by Subgroups in Grade 12**

	Percentage who used daily for month or more in lifetime															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Approximate weighted N =	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total <sup>d</sup>	9.0	8.4	9.6	11.3	12.1	15.7	18.8	18.0	17.9	17.0	18.0	15.5	16.4	17.8	14.5	16.6
Gender:																
Male	10.5	8.3	10.7	13.3	12.9	18.7	19.7	19.5	18.5	18.8	20.3	17.2	17.1	19.9	15.8	17.0
Female	6.4	7.5	7.2	8.5	7.9	10.7	15.2	13.9	14.4	13.7	13.8	11.7	12.5	12.3	11.1	13.3
College Plans:																
None or under 4 years	11.5	11.2	11.6	16.1	14.2	21.5	22.6	22.1	22.1	19.1	22.8	20.5	22.2	24.5	20.0	24.8
Complete 4 years	6.5	5.9	7.7	8.6	9.2	11.9	14.9	13.4	14.2	13.7	13.8	11.7	11.9	13.4	11.4	12.2
Region:																
Northeast	10.3	8.7	12.0	12.2	12.8	21.3	24.6	22.7	17.9	19.8	23.4	20.7	20.8	19.5	15.5	17.7
Midwest	8.4	8.0	9.3	11.0	13.6	14.6	16.5	16.1	14.3	13.8	18.4	16.3	15.0	17.9	16.6	16.3
South	7.4	5.9	8.3	11.8	11.2	12.7	14.9	15.6	19.1	14.7	12.7	14.6	15.5	18.6	15.8	17.1
West	11.3	13.4	10.4	10.2	10.6	17.0	23.0	20.6	20.4	21.9	21.2	11.7	15.4	14.3	8.9	15.2
Population Density:																
Large MSA	7.2	8.4	8.6	10.3	13.9	15.3	18.8	18.0	16.3	18.4	19.7	15.2	14.0	17.0	13.7	18.7
Other MSA	11.1	8.9	10.2	13.6	11.3	18.2	20.1	19.7	19.2	18.3	17.5	15.1	19.0	19.5	14.6	14.2
Non-MSA	7.1	7.6	9.6	8.4	11.2	11.6	16.2	14.4	17.1	13.0	17.1	16.8	14.8	15.5	15.3	18.2
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	9.6	12.4	7.2	10.3	10.0	14.1	16.1	18.0	13.9	20.9	16.7	13.7	16.4	17.2	11.1	26.5
2.5–3.0	7.1	8.3	10.8	8.8	11.2	16.3	20.2	16.5	15.6	16.6	16.7	17.7	15.0	17.5	18.0	15.4
3.5–4.0	9.3	8.6	9.8	12.6	11.5	15.1	14.9	17.6	18.0	16.0	19.4	13.3	14.1	18.4	12.9	16.5
4.5–5.0	8.2	4.9	8.0	10.2	9.4	13.2	18.1	14.7	18.7	12.7	15.2	16.0	14.6	16.1	11.1	12.6
5.5–6.0 (High)	7.9	6.5	6.4	9.6	10.1	14.3	14.1	16.0	9.1	17.5	9.8	6.9	10.6	11.4	11.6	9.9
Race/Ethnicity (2-year average): <sup>b</sup>																
White	9.6	8.7	9.4	10.8	11.0	13.0	16.8	17.7	16.7	16.2	17.1	16.7	16.2	17.1	16.9	16.3
African American	2.6	2.9	4.2	7.3	9.7	10.3	11.2	13.3	14.5	13.6	12.4	10.2	8.7	11.0	11.9	12.7
Hispanic	10.7	11.7	7.9	7.5	9.1	13.0	18.3	18.2	21.1	24.3	16.8	13.2	10.8	10.9	11.0	11.6

Table continued on next page.

**TABLE 160 (cont.)**  
**MARIJUANA<sup>c</sup>: Trends in Lifetime Prevalence of Daily Use for a Month or More by Subgroups in Grade 12**

	Percentage who used daily for month or more in lifetime													2018-2019 change
	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	
Approximate weighted N =	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total <sup>d</sup>	15.7	15.1	14.9	15.5	17.4	18.2	15.8	13.7	12.4	14.3	13.9	12.3	14.9	+2.6
Gender:														
Male	17.5	15.3	16.8	17.4	20.4	21.6	18.4	15.5	13.1	17.2	15.7	12.3	16.2	+3.9
Female	12.6	12.8	10.7	11.5	12.0	11.9	11.7	10.9	9.8	10.3	10.5	9.3	11.7	+2.3
College Plans:														
None or under 4 years	21.8	23.4	18.6	21.9	26.4	28.0	24.3	22.9	19.0	19.2	22.5	18.5	16.4	-2.2
Complete 4 years	13.3	11.0	11.8	12.5	13.9	14.1	12.5	10.3	9.7	11.5	10.4	8.1	12.3	+4.3 ss
Region:														
Northeast	19.0	19.7	14.2	16.0	18.6	17.6	17.5	15.9	13.6	12.3	13.6	9.7	15.4	+5.7
Midwest	17.1	13.8	17.0	15.4	15.9	15.7	14.5	11.3	10.8	11.1	13.5	14.6	14.3	-0.4
South	14.2	13.3	15.9	14.8	17.5	16.7	14.2	12.8	13.8	15.5	13.6	11.0	14.2	+3.2
West	13.9	15.6	11.2	16.4	17.8	23.2	18.2	15.6	10.4	16.6	14.9	14.0	17.2	+3.2
Population Density:														
Large MSA	14.2	18.3	13.8	16.6	18.6	20.2	16.8	13.8	12.5	17.3	14.1	12.2	15.6	+3.4
Other MSA	16.2	13.5	15.4	16.5	17.1	18.2	16.3	14.0	11.6	10.9	14.0	11.5	15.2	+3.7
Non-MSA	16.8	14.8	15.1	11.5	16.1	14.9	13.3	13.0	14.2	17.8	13.2	14.3	12.6	-1.7
Parental Education: <sup>a</sup>														
1.0–2.0 (Low)	15.8	17.7	13.8	13.6	16.4	20.6	21.4	12.5	12.9	13.7	17.4	10.9	15.8	+4.9
2.5–3.0	18.0	18.5	16.2	14.5	15.2	18.3	18.0	17.2	15.2	13.3	15.0	10.3	15.7	+5.4
3.5–4.0	15.7	12.3	13.2	17.2	16.5	16.5	16.9	13.6	11.9	16.2	13.3	11.7	15.1	+3.4
4.5–5.0	13.3	12.1	11.5	10.8	16.5	16.4	12.7	11.5	10.2	12.3	9.1	9.8	11.8	+2.0
5.5–6.0 (High)	12.2	9.2	11.0	10.7	15.6	13.9	8.1	5.4	6.6	9.3	7.5	8.4	7.7	-0.7
Race/Ethnicity (2-year average): <sup>b</sup>														
White	15.9	15.0	14.3	14.3	15.3	16.8	16.2	13.7	11.2	11.5	12.5	11.6	11.2	-0.4
African American	13.9	10.4	10.8	14.7	14.6	14.5	13.7	14.0	14.1	14.3	14.9	12.8	13.3	+0.5
Hispanic	13.8	13.9	13.0	12.8	15.4	19.0	18.5	15.8	13.6	12.8	14.7	12.2	12.6	+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. Data based on one of six forms; N is one sixth of N indicated in Table S3. See appendix B for definition of variables in table.

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

<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

<sup>c</sup>These estimates are based on data that have been cleaned to account for inconsistency with related questions.

<sup>d</sup>Total prevalence includes respondents who are missing data on some subgroups, and thus may appear inconsistent with subgroup prevalence values.

**TABLE 161**  
**NONPRESCRIPTION DIET PILLS: Trends in Annual Prevalence of Legal Use by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<i>Approximate weighted N =</i>	—	—	—	—	—	—	—	17,700	16,300	15,900	16,000	15,200	16,300	16,300	16,700	15,200
Total	—	—	—	—	—	—	—	20.5	20.5	18.8	16.9	15.3	13.9	12.2	10.9	10.4
Gender:																
Male	—	—	—	—	—	—	—	10.7	10.6	9.2	9.0	6.9	6.4	4.9	4.3	4.3
Female	—	—	—	—	—	—	—	29.6	30.0	27.5	24.4	23.2	21.1	18.8	17.2	16.7
College Plans:																
None or under 4 years	—	—	—	—	—	—	—	23.3	21.4	18.2	20.7	16.1	14.9	13.1	11.9	13.2
Complete 4 years	—	—	—	—	—	—	—	17.5	19.0	18.8	14.7	15.0	13.3	11.7	10.9	9.7
Region:																
Northeast	—	—	—	—	—	—	—	19.1	18.5	18.4	16.5	14.9	14.3	10.5	10.4	11.5
Midwest	—	—	—	—	—	—	—	24.6	23.3	20.2	19.2	16.6	15.0	13.7	15.0	11.1
South	—	—	—	—	—	—	—	18.2	19.2	19.6	14.9	13.9	13.1	12.0	9.3	10.0
West	—	—	—	—	—	—	—	18.9	21.1	15.8	17.3	16.4	13.5	12.1	8.7	8.9
Population Density:																
Large MSA	—	—	—	—	—	—	—	19.7	18.7	17.3	17.1	15.0	13.0	12.1	10.3	7.4
Other MSA	—	—	—	—	—	—	—	20.0	22.8	18.6	17.1	15.6	13.7	12.4	10.9	11.2
Non-MSA	—	—	—	—	—	—	—	21.7	19.2	20.5	16.5	15.2	15.2	11.9	11.7	11.7
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	—	—	—	—	—	—	—	19.5	15.9	19.2	14.6	12.0	13.5	13.4	9.5	5.1
2.5–3.0	—	—	—	—	—	—	—	21.6	21.3	18.2	17.8	15.6	13.1	12.0	9.9	12.3
3.5–4.0	—	—	—	—	—	—	—	20.6	20.2	20.6	18.0	16.6	14.5	11.5	11.8	9.2
4.5–5.0	—	—	—	—	—	—	—	19.3	22.4	17.4	16.8	15.0	15.9	12.0	10.4	12.0
5.5–6.0 (High)	—	—	—	—	—	—	—	21.0	22.3	19.1	17.1	15.7	11.6	13.6	13.4	12.2
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	—	—	—	—	—	—	—	23.2	22.2	20.4	18.4	16.3	14.7	13.4	12.5
African American	—	—	—	—	—	—	—	—	6.6	8.1	6.4	5.5	7.5	6.9	4.3	2.9
Hispanic	—	—	—	—	—	—	—	—	11.6	12.6	14.8	10.8	7.8	7.9	9.6	9.8

Table continued on next page.

**TABLE 161 (cont.)**  
**NONPRESCRIPTION DIET PILLS: Trends in Annual Prevalence of Legal Use by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	8.8	8.4	8.0	9.3	9.8	9.3	9.8	9.6	10.2	11.1	11.8	15.1	13.0	10.7	10.0	9.4
Gender:																
Male	3.0	4.3	3.2	2.5	3.5	3.7	4.9	4.3	4.0	4.9	6.2	8.1	6.9	6.5	6.0	5.7
Female	14.2	12.2	12.3	15.0	15.1	14.1	14.6	15.4	15.7	17.2	15.6	20.0	17.5	14.1	13.2	12.5
College Plans:																
None or under 4 years	8.9	10.5	9.7	10.8	11.5	10.8	12.0	10.7	9.1	10.0	9.4	17.8	13.9	10.4	11.5	12.1
Complete 4 years	8.6	8.0	7.3	9.3	9.3	8.6	9.2	10.1	10.4	11.5	11.6	13.8	12.6	10.5	9.3	8.6
Region:																
Northeast	5.7	6.3	7.6	8.6	8.2	10.1	8.1	8.6	8.6	8.0	12.8	16.7	11.6	11.9	9.1	12.0
Midwest	10.7	9.3	8.4	11.8	11.8	9.5	10.2	10.4	10.4	12.6	15.5	14.4	14.4	9.1	10.0	9.9
South	9.0	7.7	9.2	8.9	10.8	9.4	11.5	10.1	11.2	12.9	9.9	16.7	13.6	10.5	10.4	9.2
West	8.8	10.3	5.4	7.4	6.3	7.9	7.8	8.6	9.3	9.3	8.6	12.4	11.7	12.2	10.1	6.5
Population Density:																
Large MSA	7.7	7.4	7.3	8.5	10.7	8.5	9.4	9.5	9.0	8.3	12.3	13.9	12.5	9.8	7.9	8.0
Other MSA	9.2	8.4	6.8	9.9	8.9	9.3	8.7	9.1	9.5	11.5	11.5	13.6	10.8	11.5	10.7	9.9
Non-MSA	9.1	9.2	10.5	9.1	10.1	10.0	12.3	11.0	12.6	13.6	11.7	19.8	17.7	10.3	11.1	10.3
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	9.4	10.6	6.9	11.0	8.9	8.3	14.4	11.8	9.9	9.8	5.6	12.7	15.8	7.0	10.5	6.9
2.5–3.0	8.6	8.9	8.9	11.0	10.9	8.5	10.5	8.9	11.1	13.1	15.0	17.7	13.8	14.1	11.1	13.3
3.5–4.0	8.2	7.9	7.8	10.6	11.5	9.7	8.8	9.9	10.5	11.6	14.1	15.6	11.1	10.7	10.2	9.0
4.5–5.0	9.3	6.6	8.0	8.5	7.5	8.8	10.7	11.6	11.2	12.7	9.0	14.8	11.5	9.0	8.9	8.6
5.5–6.0 (High)	8.5	8.2	6.2	5.3	9.2	8.4	9.4	9.6	7.4	7.4	7.9	8.5	13.4	10.1	7.5	6.4
Race/Ethnicity (2-year average): <sup>b</sup>																
White	11.0	9.8	9.2	9.7	10.9	10.9	10.8	11.2	11.2	11.8	12.9	14.8	15.4	13.1	11.3	10.7
African American	3.5	3.0	4.5	6.1	5.3	4.3	5.3	4.9	4.2	5.5	6.5	5.5	4.6	4.8	4.5	4.2
Hispanic	5.6	4.6	7.1	7.1	7.5	7.0	8.2	9.3	9.8	10.0	9.1	13.2	12.7	7.9	7.5	7.7

Table continued on next page.



**TABLE 161 (cont.)**  
**NONPRESCRIPTION DIET PILLS: Trends in Annual Prevalence of Legal Use by Subgroups in Grade 12**

	Percentage who used in last 12 months													2018-2019 change
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	6.7	7.2	6.1	4.3	4.9	5.5	5.3	6.4	5.1	4.5	4.0	3.5	3.1	-0.4
Gender:														
Male	3.4	4.2	3.0	2.4	3.0	3.7	2.6	3.7	1.6	1.6	2.7	2.0	1.6	-0.5
Female	9.2	9.9	9.3	6.0	6.1	7.0	7.3	8.6	8.3	7.1	4.5	4.5	3.9	-0.6
College Plans:														
None or under 4 years	4.4	10.2	9.4	4.3	6.1	5.2	5.2	12.0	4.8	4.7	3.4	3.8	3.5	-0.3
Complete 4 years	7.1	6.8	5.6	4.5	4.4	5.5	4.8	5.0	5.1	4.6	3.5	3.6	2.9	-0.7
Region:														
Northeast	7.2	6.3	4.6	3.5	3.2	4.8	5.7	8.1	5.0	4.6	3.6	3.8	2.5	-1.3
Midwest	7.4	8.0	6.0	5.4	5.8	4.3	5.8	6.4	6.3	4.4	3.6	3.9	2.1	-1.7
South	6.9	6.5	6.8	3.8	4.7	7.4	6.0	6.5	4.5	4.9	5.0	3.7	3.1	-0.6
West	5.3	8.0	6.6	4.7	5.4	4.8	3.3	4.6	5.3	3.9	2.8	2.8	5.5	+2.7
Population Density:														
Large MSA	4.8	6.8	5.2	3.9	4.2	6.1	5.7	4.4	4.6	3.2	3.3	2.8	3.1	+0.3
Other MSA	7.4	7.0	5.8	5.0	4.3	5.6	4.7	7.2	5.0	5.2	3.9	3.5	3.3	-0.2
Non-MSA	8.3	7.9	8.0	3.1	7.3	4.6	6.1	7.1	6.3	4.9	5.2	4.9	2.8	-2.1
Parental Education: <sup>a</sup>														
1.0–2.0 (Low)	5.8	7.4	5.9	4.4	5.5	8.9	5.9	6.1	4.4	4.2	2.4	2.1	5.0	+2.9
2.5–3.0	8.8	7.8	8.2	4.6	4.7	4.5	6.9	6.1	4.9	5.0	5.6	3.6	2.2	-1.4
3.5–4.0	6.0	7.5	5.9	5.0	6.0	4.9	5.4	7.9	8.0	5.1	3.1	4.8	2.0	-2.7 s
4.5–5.0	5.0	8.7	4.9	3.7	4.7	5.7	3.1	6.3	4.4	4.7	4.1	3.7	3.2	-0.5
5.5–6.0 (High)	7.4	3.0	6.5	4.9	2.7	3.7	3.4	4.2	3.0	3.0	3.3	4.0	2.1	-1.9
Race/Ethnicity (2-year average): <sup>b</sup>														
White	9.3	8.1	7.2	4.8	4.3	4.9	4.8	5.6	6.0	5.7	5.0	4.4	3.4	-1.0 s
African American	3.2	2.5	3.4	4.4	3.0	3.3	3.6	4.3	3.6	1.8	2.4	3.0	2.4	-0.6
Hispanic	4.9	5.2	7.2	6.4	5.5	5.6	5.6	5.1	5.0	4.4	2.6	1.9	2.9	+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 S3 for the number of subgroup cases. Data based on one of six forms; N is one sixth of N indicated in Table S3. See appendix B for definition of variables in table.

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

<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 162**  
**NONPRESCRIPTION STAY-AWAKE PILLS: Trends in Annual Prevalence of Legal Use by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<i>Approximate weighted N =</i>	—	—	—	—	—	—	—	17,700	16,300	15,900	16,000	15,200	16,300	16,300	16,700	15,200
Total	—	—	—	—	—	—	—	11.8	12.3	13.9	18.2	22.3	25.2	26.4	23.0	23.4
Gender:																
Male	—	—	—	—	—	—	—	12.8	13.8	15.4	19.7	22.3	25.5	27.6	24.8	22.3
Female	—	—	—	—	—	—	—	10.0	10.5	12.5	17.0	22.2	25.0	25.2	21.7	24.5
College Plans:																
None or under 4 years	—	—	—	—	—	—	—	11.4	10.8	12.5	15.5	18.1	23.1	23.3	21.8	22.9
Complete 4 years	—	—	—	—	—	—	—	10.5	12.6	14.0	20.4	24.9	26.5	27.5	24.1	24.1
Region:																
Northeast	—	—	—	—	—	—	—	9.6	9.5	11.9	18.2	20.4	26.4	23.8	18.4	22.0
Midwest	—	—	—	—	—	—	—	15.1	16.8	16.3	18.4	24.5	26.8	27.5	29.1	28.4
South	—	—	—	—	—	—	—	9.6	10.7	12.0	13.3	19.8	20.9	25.6	20.4	20.6
West	—	—	—	—	—	—	—	13.5	11.5	16.0	25.6	25.5	28.9	28.9	24.0	22.9
Population Density:																
Large MSA	—	—	—	—	—	—	—	11.5	11.1	12.2	17.7	19.0	25.6	23.2	20.9	19.0
Other MSA	—	—	—	—	—	—	—	12.4	14.5	14.0	19.1	24.1	24.1	27.7	22.9	25.1
Non-MSA	—	—	—	—	—	—	—	11.3	10.5	15.4	17.4	22.1	27.0	27.4	25.2	24.5
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	—	—	—	—	—	—	—	8.8	8.2	8.3	10.9	12.0	15.0	17.1	18.1	15.3
2.5–3.0	—	—	—	—	—	—	—	10.6	10.1	13.9	15.5	19.5	22.8	22.5	21.6	23.2
3.5–4.0	—	—	—	—	—	—	—	12.6	13.5	13.5	21.3	26.5	30.0	28.4	26.0	25.6
4.5–5.0	—	—	—	—	—	—	—	13.2	15.3	16.1	24.0	23.7	29.9	30.3	24.0	28.0
5.5–6.0 (High)	—	—	—	—	—	—	—	13.0	16.7	18.0	20.2	28.7	24.9	32.3	25.1	22.3
Race/Ethnicity (2-year average): <sup>b</sup>																
White	—	—	—	—	—	—	—	—	13.6	15.0	18.7	23.7	27.7	30.4	29.8	27.7
African American	—	—	—	—	—	—	—	—	2.0	3.0	3.6	4.4	5.5	6.2	6.0	6.4
Hispanic	—	—	—	—	—	—	—	—	5.7	8.3	8.4	9.7	13.8	15.6	16.5	14.1

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**TABLE 162 (cont.)**  
**NONPRESCRIPTION STAY-AWAKE PILLS: Trends in Annual Prevalence of Legal Use by Subgroups in Grade 12**

	Percentage who used in last 12 months															
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<i>Approximate weighted N =</i>	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Total	22.2	20.4	19.2	20.7	20.3	19.0	19.7	19.0	15.7	15.0	17.3	14.9	12.5	11.8	10.4	10.0
Gender:																
Male	22.3	20.9	19.7	20.3	19.7	18.2	17.4	19.5	14.5	14.0	17.8	13.9	9.3	11.1	9.4	10.2
Female	22.0	20.2	17.6	20.4	20.1	18.7	21.0	18.0	15.9	15.9	16.5	14.6	14.3	12.3	10.3	9.4
College Plans:																
None or under 4 years	21.0	20.5	18.6	20.1	21.1	18.2	21.8	18.5	14.3	15.5	18.9	16.1	14.3	13.0	11.2	9.1
Complete 4 years	22.3	21.0	18.7	20.6	19.7	18.3	19.1	18.4	15.1	14.7	16.5	14.0	11.9	11.4	9.3	9.8
Region:																
Northeast	18.3	18.2	20.2	21.2	18.4	22.5	19.1	17.6	16.0	10.2	14.7	13.9	10.9	14.0	8.0	8.3
Midwest	31.8	25.7	22.0	26.2	24.2	19.8	23.8	22.0	17.3	19.3	24.4	18.9	12.9	12.3	13.4	14.1
South	16.1	17.6	18.7	20.2	18.8	17.5	20.1	18.8	15.6	13.8	15.4	13.5	11.6	9.7	11.0	9.7
West	23.4	20.0	14.9	13.7	19.1	16.5	13.3	16.8	13.3	16.3	12.4	13.2	14.9	12.5	8.0	7.0
Population Density:																
Large MSA	16.7	15.2	16.7	18.4	18.9	14.4	15.5	15.3	9.6	11.0	15.7	11.9	9.2	8.3	7.4	7.7
Other MSA	25.3	21.2	19.8	21.1	19.3	20.2	18.4	21.1	18.4	15.2	14.3	14.7	12.6	13.6	11.7	10.2
Non-MSA	21.7	23.4	19.9	22.3	23.6	20.7	26.8	18.9	17.3	19.3	24.3	19.3	16.5	12.2	11.4	12.7
Parental Education: <sup>a</sup>																
1.0–2.0 (Low)	14.9	16.2	11.0	16.6	13.2	11.5	18.2	11.7	7.9	7.3	15.3	8.9	10.3	5.9	4.2	6.1
2.5–3.0	20.2	22.8	19.0	18.1	18.1	19.0	21.0	16.5	13.4	15.1	17.1	13.4	12.0	13.9	9.7	9.0
3.5–4.0	23.9	22.4	18.6	21.6	24.3	17.4	17.6	19.9	18.3	17.0	20.3	16.5	11.4	13.5	12.8	11.4
4.5–5.0	25.1	20.0	21.1	24.4	20.4	23.2	20.2	20.3	15.6	16.7	16.2	14.9	12.7	11.3	9.7	10.0
5.5–6.0 (High)	25.8	17.8	20.2	18.4	17.3	17.4	19.3	22.6	14.9	13.4	13.6	15.7	14.5	11.4	8.3	8.9
Race/Ethnicity (2-year average): <sup>b</sup>																
White	27.4	25.8	24.0	23.7	23.9	23.3	23.1	23.2	20.7	18.2	19.9	19.5	16.0	14.2	12.8	11.6
African American	5.1	3.5	3.5	3.6	4.8	4.4	5.3	6.2	3.6	3.0	4.2	3.2	2.2	1.9	2.3	2.6
Hispanic	11.6	11.9	13.3	14.2	12.3	9.5	9.6	10.1	12.3	11.8	10.6	12.3	9.4	5.6	5.7	6.9

Table continued on next page.

**TABLE 162 (cont.)**  
**NONPRESCRIPTION STAY-AWAKE PILLS: Trends in Annual Prevalence of Legal Use by Subgroups in Grade 12**

	Percentage who used in last 12 months													2018-2019 change
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	7.6	6.3	4.8	3.2	3.9	3.8	3.2	3.5	2.7	2.5	2.5	2.4	1.8	-0.6
Gender:														
Male	7.8	5.2	5.9	3.2	2.8	3.9	2.9	2.8	2.1	2.3	2.6	1.9	1.8	0.0
Female	7.1	7.0	3.5	3.1	4.6	3.8	3.4	3.6	2.7	2.5	1.7	2.7	1.3	-1.5 s
College Plans:														
None or under 4 years	9.5	9.5	3.9	3.0	5.1	4.4	3.0	4.4	3.1	1.1	2.1	5.0	2.6	-2.4
Complete 4 years	7.1	5.3	4.7	3.3	3.6	3.5	2.9	3.3	2.4	2.8	2.0	1.4	1.4	0.0
Region:														
Northeast	5.7	6.7	5.6	3.0	2.7	3.0	4.0	2.6	2.9	1.9	1.5	1.8	1.4	-0.4
Midwest	10.9	6.6	6.1	3.1	4.2	3.1	3.1	4.2	4.6	2.8	1.7	2.9	1.6	-1.3
South	7.4	5.9	4.6	3.3	2.8	4.2	2.7	3.9	2.3	2.0	3.7	1.9	2.1	+0.2
West	6.3	6.2	3.0	3.2	6.2	4.5	3.4	2.8	1.5	3.3	1.8	3.2	1.9	-1.3
Population Density:														
Large MSA	5.3	7.2	4.9	2.8	3.9	2.5	2.6	2.0	2.0	1.2	1.8	1.5	1.6	+0.1
Other MSA	8.9	5.0	4.4	3.8	3.8	4.1	3.3	3.9	2.8	3.0	2.7	2.3	2.0	-0.3
Non-MSA	8.3	8.1	5.9	2.3	4.1	5.1	3.7	4.6	3.5	3.1	3.1	4.2	1.7	-2.4
Parental Education: <sup>a</sup>														
1.0–2.0 (Low)	3.7	6.0	3.3	1.8	3.5	6.5	2.8	3.8	3.6	1.4	0.7	1.9	2.3	+0.3
2.5–3.0	9.5	6.7	4.7	1.6	4.3	4.7	3.1	2.0	2.2	2.0	3.9	3.0	2.2	-0.7
3.5–4.0	7.6	7.4	3.7	3.9	5.1	3.3	4.8	3.2	2.4	3.0	1.8	3.5	1.5	-2.0
4.5–5.0	6.2	4.9	4.5	3.3	3.1	3.3	2.0	3.5	2.8	3.0	2.6	0.9	1.2	+0.3
5.5–6.0 (High)	9.7	5.4	5.7	5.5	2.9	2.4	2.3	6.2	1.7	1.4	1.5	1.9	1.6	-0.3
Race/Ethnicity (2-year average): <sup>b</sup>														
White	10.6	8.4	6.3	4.4	3.8	4.0	3.6	3.3	3.3	3.3	2.5	2.2	2.0	-0.2
African American	1.2	1.2	3.0	3.3	2.0	2.2	2.3	2.1	1.8	1.2	1.1	1.1	2.5	+1.4
Hispanic	5.2	4.4	4.4	2.7	2.7	4.5	4.0	3.3	2.5	1.4	1.3	1.8	1.5	-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. Data based on one of six forms; N is one sixth of N indicated in Table S3. See appendix B for definition of variables in table.

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

<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 163**  
**STIMULANT-TYPE ADHD DRUGS:**  
**Trends in Lifetime Prevalence of Legal Use by Subgroups in Grade 8**

	Percentage who used in lifetime																2018– 2019 change
	1991- 2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	—	14,500	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	8.3	9.3	8.3	8.1	7.8	8.2	7.6	7.7	7.1	7.2	7.1	7.5	6.6	7.1	6.5	-0.6
Gender:																	
Male	—	9.3	11.2	9.4	9.9	9.2	9.3	8.6	9.1	8.8	7.9	8.3	8.9	7.6	8.6	7.9	-0.7
Female	—	7.2	7.4	7.3	6.5	6.8	7.1	6.4	6.4	5.4	6.7	6.0	6.0	5.2	6.1	4.9	-1.1
College Plans:																	
None or under 4 years	—	14.4	16.6	10.8	10.8	7.7	11.1	11.3	10.3	12.4	12.2	9.6	13.5	8.6	11.1	10.2	-0.9
Complete 4 years	—	7.6	8.6	8.0	7.8	7.9	7.9	7.2	7.5	6.7	6.9	6.8	7.0	6.4	6.6	6.1	-0.5
Region:																	
Northeast	—	7.8	7.9	7.2	9.0	8.5	6.3	6.0	5.6	7.1	7.2	5.7	5.6	5.8	8.1	6.7	-1.4
Midwest	—	8.5	8.6	8.8	6.7	7.0	8.9	8.2	7.6	6.7	7.1	7.5	8.7	7.7	7.0	5.7	-1.3
South	—	9.3	10.2	9.3	9.9	9.5	8.9	7.5	9.4	8.8	7.7	8.6	9.4	7.7	9.3	7.1	-2.1
West	—	6.7	9.7	6.8	6.6	5.6	7.4	8.4	6.0	4.6	6.7	4.9	4.2	4.5	3.2	6.2	+3.1 s
Population Density:																	
Large MSA	—	7.2	7.6	7.1	7.2	6.5	7.2	7.5	6.4	6.1	6.4	6.3	6.2	6.9	6.3	5.9	-0.4
Other MSA	—	10.0	10.3	9.0	9.32	8.2	8.9	7.7	8.1	7.1	8.2	7.4	8.3	6.5	8.8	6.3	-2.5
Non-MSA	—	6.9	10.0	8.5	7.0	8.6	7.9	7.6	8.7	8.4	6.4	7.4	7.5	6.7	4.7	7.9	+3.2 s
Parental Education: <sup>a</sup>																	
1.0–2.0 (Low)	—	12.1	12.0	9.0	11.2	11.0	7.2	8.6	7.7	4.2	4.9	7.4	7.2	4.3	7.8	4.7	-3.1
2.5–3.0	—	7.9	10.6	9.1	7.8	7.5	8.9	8.0	8.8	6.0	7.2	7.6	8.5	6.4	5.9	8.4	+2.6
3.5–4.0	—	9.7	7.9	8.7	6.8	8.0	7.3	8.4	7.4	8.3	7.4	7.4	7.0	6.2	6.9	7.3	+0.4
4.5–5.0	—	6.9	9.0	7.5	8.6	7.5	8.3	7.1	7.8	7.8	7.6	7.0	7.4	6.9	8.4	6.6	-1.8
5.5–6.0 (High)	—	8.2	8.5	8.8	9.7	8.1	9.2	6.9	6.2	6.7	6.6	6.7	6.4	8.2	7.9	4.9	-2.9
Race/Ethnicity (2-year average): <sup>b</sup>																	
White	—	—	9.3	9.5	9.1	9.0	9.0	8.3	8.1	8.3	8.3	8.2	8.5	8.4	8.4	8.5	0.0
African American	—	—	6.4	5.8	6.7	7.2	7.0	6.4	6.1	6.6	6.0	5.7	6.1	6.9	7.2	4.7	-2.5 sss
Hispanic	—	—	7.5	7.4	6.6	6.1	5.8	7.1	6.4	4.1	4.9	5.5	5.2	4.2	3.9	4.4	+0.5

*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 S3 for the number of subgroup cases. See appendix B for definition of variables in table. Data are based on one of four forms; N is one third of N indicated in Table S3.

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

<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 164**  
**STIMULANT-TYPE ADHD DRUGS:**  
**Trends in Lifetime Prevalence of Legal Use by Subgroups in Grade 10**

	Percentage who used in lifetime																2018– 2019 change
	1991- 2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	—	14,500	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	8.7	8.5	8.4	7.8	8.2	8.6	7.2	8.0	8.3	6.8	8.8	7.1	6.5	8.2	6.6	-1.6
Gender:																	
Male	—	10.4	9.2	9.6	9.3	9.1	10.0	8.1	8.8	10.9	8.3	9.9	7.4	7.4	9.4	7.7	-1.7
Female	—	6.9	7.7	7.4	6.4	7.3	7.2	6.4	7.2	5.7	5.3	7.7	6.8	5.6	6.9	5.5	-1.4
College Plans:																	
None or under 4 years	—	12.6	14.7	10.6	13.3	14.4	12.8	10.2	11.7	11.7	12.5	15.0	12.4	9.6	11.7	11.6	-0.1
Complete 4 years	—	8.2	7.6	8.1	7.2	7.6	8.2	6.9	7.6	8.0	6.1	8.2	6.6	6.2	7.5	5.6	-1.9 s
Region:																	
Northeast	—	9.1	6.4	7.0	6.8	7.5	7.4	6.1	8.0	9.2	6.2	8.9	6.5	5.6	5.7	5.7	0.0
Midwest	—	8.0	7.9	8.6	8.9	9.9	10.3	9.0	6.7	9.1	7.8	8.5	6.3	5.4	11.2	6.8	-4.5 ss
South	—	10.2	10.8	9.3	8.7	9.7	9.9	8.8	10.5	9.2	8.6	10.3	9.0	8.0	8.2	5.9	-2.3 s
West	—	6.8	7.6	8.0	6.4	5.2	5.8	3.6	6.0	6.0	3.5	6.6	5.6	6.2	6.6	8.0	+1.5
Population Density:																	
Large MSA	—	7.5	7.5	6.8	6.7	8.5	8.1	6.4	6.9	8.2	5.8	8.6	6.1	6.1	7.1	3.6	-3.5 s
Other MSA	—	9.4	9.2	9.2	7.3	8.3	8.7	7.3	8.7	8.2	6.9	9.0	7.0	6.9	8.4	8.6	+0.2
Non-MSA	—	8.6	8.5	9.0	10.5	7.7	9.3	8.1	8.1	8.8	8.1	8.8	9.2	6.4	9.0	6.2	-2.8 s
Parental Education: <sup>a</sup>																	
1.0–2.0 (Low)	—	6.6	8.7	8.0	5.8	7.3	9.0	5.4	7.2	7.8	4.0	7.4	5.5	6.0	7.4	4.1	-3.3
2.5–3.0	—	8.6	9.0	8.8	8.2	7.9	10.6	8.3	9.6	8.5	5.2	8.0	7.1	6.8	7.5	5.9	-1.6
3.5–4.0	—	8.2	9.8	7.7	8.3	7.6	8.4	7.5	6.9	9.3	7.0	10.0	6.4	6.3	7.8	8.1	+0.2
4.5–5.0	—	8.7	7.4	8.8	7.6	8.5	7.9	7.0	8.4	8.5	6.8	7.6	6.8	7.2	9.7	7.2	-2.4
5.5–6.0 (High)	—	10.0	8.0	8.8	7.9	10.3	8.8	6.0	8.4	8.9	8.6	10.4	8.9	6.4	8.6	6.7	-1.9
Race/Ethnicity (2-year average): <sup>b</sup>																	
White	—	—	9.8	9.4	9.2	8.9	9.4	9.1	8.7	9.4	9.0	9.4	9.7	8.5	9.3	9.6	+0.3
African American	—	—	5.2	6.7	6.0	4.8	6.1	6.8	5.7	5.9	5.6	6.3	6.7	5.1	4.1	3.9	-0.2
Hispanic	—	—	5.6	5.4	4.8	5.3	5.9	5.1	5.9	5.0	3.7	4.5	4.5	4.6	5.5	4.4	-1.1

*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 are based on one of four forms; *N* is one third of *N* indicated in Table S3.

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

<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 165**  
**STIMULANT-TYPE ADHD DRUGS:**  
**Trends in Lifetime Prevalence of Legal Use by Subgroups in Grade 12**

	Percentage who used in lifetime																2018– 2019 change
	1991- 2004	2005 <sup>c</sup>	2006 <sup>c</sup>	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	—	14,500	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	8.5	7.8	7.6	8.6	8.2	8.3	8.4	9.0	9.6	9.1	9.9	8.4	8.6	8.6	7.9	-0.7
Gender:																	
Male	—	12.0	10.2	10.1	10.3	8.7	9.8	10.3	10.5	10.9	9.7	9.6	9.8	10.1	10.3	9.6	-0.7
Female	—	5.3	5.4	4.9	7.0	6.5	6.3	6.4	7.4	7.9	8.0	8.7	6.2	6.7	6.2	6.2	-0.1
College Plans:																	
None or under 4 years	—	12.3	11.1	10.8	13.6	13.4	11.2	13.2	11.4	12.7	12.4	14.8	10.8	10.0	10.4	10.6	+0.2
Complete 4 years	—	7.8	7.0	6.9	7.5	7.2	7.6	7.4	8.4	8.8	8.1	9.1	7.6	7.9	7.7	7.1	-0.6
Region:																	
Northeast	—	8.8	9.8	7.8	9.5	7.4	7.7	8.3	8.0	6.7	7.4	7.5	7.5	9.7	8.3	4.5	-3.8 sss
Midwest	—	9.3	6.0	7.8	8.5	8.9	9.6	8.9	9.0	9.1	9.6	11.2	9.1	9.5	9.0	8.1	-0.9
South	—	9.2	9.5	8.5	8.4	10.3	9.1	9.2	10.3	10.8	11.3	12.9	9.4	9.1	9.0	9.3	+0.3
West	—	6.2	5.2	5.5	8.3	4.5	5.8	6.7	8.2	10.2	6.1	5.4	6.5	6.3	7.6	7.5	-0.1
Population Density:																	
Large MSA	—	7.1	8.7	8.5	10.2	7.1	7.2	7.5	9.8	10.6	8.1	9.2	8.8	7.6	8.4	6.2	-2.2 s
Other MSA	—	9.9	7.1	7.6	8.6	8.1	9.4	9.8	9.1	9.9	9.3	10.4	8.2	9.0	8.6	8.6	0.0
Non-MSA	—	7.5	7.8	6.3	6.9	9.7	7.0	6.4	7.7	7.6	9.7	9.8	8.3	9.4	8.9	9.1	+0.2
Parental Education: <sup>a</sup>																	
1.0–2.0 (Low)	—	7.7	7.0	5.8	5.4	7.5	8.5	6.9	5.9	10.4	8.6	8.3	6.6	5.9	3.2	6.6	+3.4 s
2.5–3.0	—	7.1	8.4	6.3	6.5	6.5	7.2	7.1	9.6	8.8	8.1	7.1	7.1	7.9	7.5	6.1	-1.4
3.5–4.0	—	9.0	6.2	7.6	10.3	8.1	8.8	7.8	8.7	9.2	8.5	10.3	7.5	7.7	9.1	7.3	-1.8
4.5–5.0	—	8.1	8.5	7.2	8.3	8.4	8.6	8.7	9.1	9.3	8.6	11.0	9.4	11.7	9.2	8.5	-0.6
5.5–6.0 (High)	—	11.3	8.7	11.2	10.2	11.1	8.2	10.7	11.1	12.4	12.2	11.0	11.2	7.8	11.9	8.7	-3.1
Race/Ethnicity (2-year average): <sup>b</sup>																	
White	—	—	9.1	8.5	9.2	9.9	9.5	9.6	10.4	10.7	10.5	11.0	11.1	10.3	10.8	9.8	-0.9
African American	—	—	5.4	4.6	4.6	5.5	6.5	6.2	6.5	6.8	7.1	7.9	7.5	7.6	7.9	8.1	+0.3
Hispanic	—	—	6.0	5.8	5.6	5.1	5.7	6.1	5.4	5.8	5.7	5.1	4.9	5.0	4.5	3.8	-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 S3 for the number of subgroup cases. See appendix B for definition of variables in table. Data are based on two of six forms; N is two sixths of N indicated in Table S3.

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

<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.

<sup>c</sup>Data from one of the questionnaire forms was omitted in 2005 due to an error in the skip pattern in the questionnaire. For the 2006 results by race/ethnicity, data from the remaining form in 2005 were double-weighted to account for the omission of the other form.

**TABLE 166**  
**STIMULANT-TYPE ADHD DRUGS:**  
**Trends in Current Prevalence of Legal Use by Subgroups in Grade 8**

	Percentage who said "Yes, I take them now."																2018– 2019 change
	1991- 2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	—	14,500	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	3.9	3.5	3.1	3.5	3.7	3.4	3.3	3.5	3.4	3.2	3.6	3.7	3.4	3.7	2.8	-0.9
Gender:																	
Male	—	4.7	4.8	4.0	4.5	4.6	3.7	4.3	4.6	4.0	4.0	4.6	4.6	4.0	4.7	3.9	-0.8
Female	—	3.0	2.1	2.2	2.4	3.0	3.1	2.4	2.5	2.8	2.6	2.8	2.7	2.5	2.9	1.6	-1.3 s
College Plans:																	
None or under 4 years	—	4.9	6.0	3.9	3.6	3.0	5.0	2.3	4.1	5.5	2.6	5.9	6.3	3.0	5.9	3.5	-2.4
Complete 4 years	—	3.7	3.2	3.0	3.4	3.7	3.3	3.4	3.4	3.3	3.3	3.3	3.5	3.4	3.4	2.7	-0.7
Region:																	
Northeast	—	4.2	3.0	3.1	3.1	5.0	2.1	2.6	2.9	3.8	2.9	3.6	2.5	3.6	4.1	4.2	0.0
Midwest	—	4.4	3.1	3.3	2.7	2.7	3.8	4.0	4.1	3.6	3.8	4.1	4.6	4.0	3.9	2.6	-1.3
South	—	3.7	4.1	3.3	4.8	4.3	3.9	3.1	4.4	3.9	3.5	3.8	4.8	4.1	4.8	2.5	-2.3 ss
West	—	3.3	3.0	2.5	2.4	2.7	3.0	3.7	1.7	2.1	2.3	2.6	1.6	1.4	1.2	2.4	+1.2
Population Density:																	
Large MSA	—	3.7	2.5	2.7	3.8	4.0	3.0	3.2	3.0	3.4	2.5	3.2	2.5	3.5	3.3	2.2	-1.1
Other MSA	—	4.5	4.1	3.0	3.3	3.8	3.8	3.4	4.0	3.4	3.9	4.1	4.3	3.2	4.6	2.7	-1.9 s
Non-MSA	—	3.0	3.6	3.9	3.3	3.0	3.0	3.4	3.0	3.7	2.7	2.9	3.9	3.6	2.1	3.7	+1.6
Parental Education: <sup>a</sup>																	
1.0–2.0 (Low)	—	4.3	3.9	2.8	3.1	3.5	2.2	2.0	2.5	1.9	2.0	2.0	1.7	2.2	4.1	0.9	-3.2 s
2.5–3.0	—	3.2	3.7	3.1	2.2	3.2	2.8	3.0	3.6	2.6	2.8	3.1	2.8	3.1	1.5	3.0	+1.5
3.5–4.0	—	3.7	2.7	2.5	2.5	3.3	3.3	2.9	3.1	3.3	3.6	3.3	4.2	2.9	2.6	2.8	+0.2
4.5–5.0	—	3.9	2.9	3.2	4.2	3.6	3.3	3.9	3.6	4.0	3.8	4.0	3.9	4.1	5.5	3.5	-2.0
5.5–6.0 (High)	—	4.7	4.0	3.9	5.8	5.3	4.1	3.5	3.5	3.8	3.1	4.4	3.9	4.5	4.3	2.9	-1.3
Race/Ethnicity (2-year average): <sup>b</sup>																	
White	—	—	4.2	3.7	4.0	4.6	4.5	4.1	4.3	4.3	4.2	4.5	5.2	5.2	5.2	4.6	-0.6
African American	—	—	2.1	2.2	2.5	2.7	1.8	1.9	2.4	2.6	2.7	2.7	2.0	1.9	2.0	0.9	-1.1 s
Hispanic	—	—	2.5	1.9	1.3	1.5	1.7	2.0	1.7	1.3	1.4	1.6	1.6	1.0	0.9	1.6	+0.7 s

*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 are based on one of four forms; *N* is one third of *N* indicated in Table S3.

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

<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 167**  
**STIMULANT-TYPE ADHD DRUGS:**  
**Trends in Current Prevalence of Legal Use by Subgroups in Grade 10**

	Percentage who said "Yes, I take them now."																2018– 2019 change
	1991- 2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	—	14,500	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	3.4	2.8	2.8	2.9	3.3	3.1	2.8	3.8	3.7	3.4	4.2	3.0	3.0	3.9	2.9	-1.0
Gender:																	
Male	—	4.1	3.5	3.2	3.4	3.6	4.1	3.0	4.4	4.8	4.2	5.0	3.1	3.5	4.7	3.1	-1.6
Female	—	2.7	2.1	2.5	2.4	3.1	2.1	2.7	3.4	2.5	2.7	3.3	2.8	2.5	3.1	2.7	-0.5
College Plans:																	
None or under 4 years	—	4.8	4.1	3.5	3.2	6.9	4.7	3.3	2.4	5.0	6.1	6.6	4.4	4.1	4.8	4.3	-0.5
Complete 4 years	—	3.2	2.6	2.7	2.9	3.0	2.9	2.8	4.0	3.6	3.1	3.9	2.9	3.0	3.7	2.7	-1.0
Region:																	
Northeast	—	3.3	1.9	2.4	2.9	2.1	2.7	2.9	3.3	5.8	3.3	4.0	2.9	2.5	2.6	2.0	-0.6
Midwest	—	3.5	2.9	3.1	3.9	5.2	3.3	3.1	4.1	4.5	3.7	4.6	3.4	2.3	5.2	3.3	-1.9
South	—	4.2	3.4	3.5	2.9	4.1	3.6	3.5	5.3	3.3	4.3	5.0	3.7	4.1	4.5	2.4	-2.1 s
West	—	2.0	2.5	2.0	2.1	1.4	2.5	1.4	1.8	2.0	2.0	2.4	1.8	2.7	2.4	3.9	+1.5
Population Density:																	
Large MSA	—	2.9	2.5	2.2	3.2	3.4	3.3	3.2	3.4	4.6	3.7	4.0	2.6	2.8	3.8	1.6	-2.2 s
Other MSA	—	3.9	3.0	3.1	2.7	3.2	2.9	2.5	4.1	3.4	3.1	4.7	2.5	3.5	4.1	3.9	-0.2
Non-MSA	—	3.1	2.6	3.1	3.2	3.4	3.2	3.0	3.9	3.3	3.5	3.1	5.3	2.2	3.5	2.5	-1.0
Parental Education: <sup>a</sup>																	
1.0–2.0 (Low)	—	2.6	3.6	1.8	1.7	1.5	1.4	1.8	1.9	1.4	1.1	0.9	1.0	1.7	2.3	1.5	-0.8
2.5–3.0	—	2.7	1.7	2.1	3.1	2.7	3.2	3.1	4.0	3.1	2.1	2.8	1.3	2.8	2.7	2.4	-0.3
3.5–4.0	—	3.7	3.4	3.1	2.3	2.9	3.5	1.8	4.3	3.2	3.1	4.4	2.5	3.3	3.1	2.9	-0.2
4.5–5.0	—	2.9	2.6	2.9	2.8	3.6	2.9	3.6	3.6	4.5	3.4	4.2	4.3	3.1	5.3	3.4	-1.9
5.5–6.0 (High)	—	5.1	3.1	3.3	4.2	5.5	4.6	3.4	4.1	6.1	6.2	6.0	3.9	3.7	5.5	4.3	-1.2
Race/Ethnicity (2-year average): <sup>b</sup>																	
White	—	—	3.8	3.3	3.5	3.7	3.8	3.6	4.0	4.7	4.7	5.1	5.1	4.1	4.7	4.8	+0.1
African American	—	—	1.2	1.9	1.8	1.3	1.2	1.9	2.8	2.2	1.0	1.4	1.2	1.5	1.9	+0.4	
Hispanic	—	—	1.3	1.3	1.1	1.6	1.6	1.3	1.7	1.4	0.9	1.0	0.9	1.5	2.1	1.1	-1.0 ss

*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 are based on one of four forms; *N* is one third of *N* indicated in Table S3.

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

<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 168**  
**STIMULANT-TYPE ADHD DRUGS:**  
**Trends in Current Prevalence of Legal Use by Subgroups in Grade 12**

	1991- 2004	Percentage who said "Yes, I take them now."															2018- 2019 change
		2005 <sup>c</sup>	2006 <sup>c</sup>	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
	—	14,500	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
<i>Approximate weighted N =</i>																	
Total	—	2.9	2.3	2.6	2.9	2.9	3.0	3.3	3.8	4.4	3.8	4.0	3.9	3.4	3.5	3.2	-0.2
Gender:																	
Male	—	4.1	2.6	3.7	3.0	2.6	3.6	3.5	3.9	4.5	3.4	4.4	4.7	3.6	3.9	4.2	+0.3
Female	—	1.8	2.0	2.0	2.6	3.2	2.5	3.2	3.8	4.2	4.0	2.9	3.0	3.3	3.1	2.4	-0.7
College Plans:																	
None or under 4 years	—	5.3	2.4	3.6	3.3	1.8	3.9	3.9	3.4	5.1	3.4	4.0	2.9	2.9	3.3	3.2	0.0
Complete 4 years	—	2.5	2.3	2.4	2.9	3.0	2.9	3.2	3.8	4.2	3.8	4.0	3.8	3.7	3.3	3.3	0.0
Region:																	
Northeast	—	3.5	3.0	2.7	3.2	2.0	3.2	3.3	3.1	3.1	3.6	2.5	3.3	4.8	3.2	1.7	-1.5 s
Midwest	—	2.7	2.0	3.3	2.9	2.7	4.0	4.6	5.0	3.7	4.5	5.0	3.8	4.0	3.8	4.2	+0.4
South	—	2.7	2.6	2.8	2.8	4.3	3.3	3.2	3.7	5.4	4.8	5.2	4.1	3.1	3.8	3.3	-0.6
West	—	3.0	1.6	1.2	2.9	1.6	1.4	2.3	3.1	4.5	1.6	2.1	4.0	2.6	2.7	3.2	+0.4
Population Density:																	
Large MSA	—	2.3	2.2	2.9	3.7	2.9	2.7	3.0	3.9	5.0	3.5	3.9	4.7	3.6	3.3	2.5	-0.8
Other MSA	—	3.5	2.4	2.4	2.9	2.7	3.5	4.5	4.5	4.9	3.9	4.2	4.1	3.5	3.4	3.6	+0.2
Non-MSA	—	2.3	2.3	2.4	2.1	3.1	2.3	1.2	2.0	2.3	3.9	3.3	2.1	3.1	3.9	3.7	-0.2
Parental Education: <sup>a</sup>																	
1.0–2.0 (Low)	—	2.2	1.0	1.4	1.9	1.3	2.6	2.8	2.5	3.7	1.9	2.0	2.7	1.0	1.0	0.8	-0.1
2.5–3.0	—	2.0	1.4	2.4	1.9	1.6	2.3	2.2	3.2	4.1	2.9	1.9	2.0	3.0	2.6	2.0	-0.5
3.5–4.0	—	2.9	2.1	2.4	2.8	2.8	3.2	3.6	3.2	3.9	2.8	3.1	3.4	2.5	3.4	3.2	-0.1
4.5–5.0	—	3.3	3.2	2.1	3.6	3.0	2.9	3.6	4.2	4.3	4.2	5.2	5.1	5.8	3.9	3.7	-0.2
5.5–6.0 (High)	—	3.8	3.0	4.3	3.8	5.9	4.7	4.8	6.5	6.9	8.0	6.9	5.2	4.4	6.9	4.9	-2.1
Race/Ethnicity (2-year average): <sup>b</sup>																	
White	—	—	3.1	2.9	3.3	3.5	3.7	4.3	4.8	4.8	4.7	4.9	5.2	4.8	4.6	4.4	-0.2
African American	—	—	0.6	1.1	1.2	1.3	1.5	1.3	1.8	2.8	2.3	1.5	1.4	2.4	2.8	2.4	-0.4
Hispanic	—	—	1.1	0.9	1.2	1.6	1.8	1.7	1.5	1.7	2.0	1.4	1.4	2.1	1.6	1.1	-0.5

*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 S3 for the number of subgroup cases. See appendix B for definition of variables in table. Data are based on two of six forms; *N* is two sixths of *N* indicated in Table S3.

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

<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.

<sup>c</sup>Data from one of the questionnaire forms was omitted in 2005 due to an error in the skip pattern in the questionnaire. For the 2006 results by race/ethnicity, data from the remaining form in 2005 were double-weighted to account for the omission of the other form.

**TABLE 169**  
**NON-STIMULANT-TYPE ADHD DRUGS:**  
**Trends in Lifetime Prevalence of Legal Use by Subgroups in Grade 8**

	Percentage who used in lifetime																2018– 2019 <u>change</u>
	1991- 2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	—	14,500	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	7.3	7.9	6.3	6.3	5.8	5.8	6.1	5.1	5.1	4.8	5.1	5.7	4.9	4.4	4.5	+0.1
Gender:																	
Male	—	7.6	8.7	6.7	6.8	6.5	6.6	6.7	5.2	5.7	6.1	5.7	6.7	5.3	5.1	5.6	+0.5
Female	—	7.0	6.8	5.9	5.7	5.1	4.9	5.4	4.9	4.4	3.6	4.6	4.8	4.2	3.6	3.5	-0.1
College Plans:																	
None or under 4 years	—	11.1	12.9	8.1	7.3	8.9	8.8	11.7	8.8	11.5	7.7	7.8	10.0	7.6	6.3	10.2	+3.9
Complete 4 years	—	6.9	7.4	6.0	6.2	5.5	5.4	5.7	4.9	4.6	4.6	4.8	5.3	4.6	4.2	3.8	-0.4
Region:																	
Northeast	—	7.4	6.0	4.3	5.1	6.1	4.6	5.0	4.2	4.7	5.6	5.2	7.1	4.7	5.5	4.8	-0.7
Midwest	—	6.9	8.8	7.6	6.7	5.3	6.2	5.5	5.5	3.8	4.7	4.8	5.4	5.3	4.4	4.1	-0.3
South	—	7.9	7.5	6.6	7.2	5.8	6.4	7.0	5.7	5.6	5.1	4.8	5.2	5.3	4.4	5.6	+1.2
West	—	6.5	9.3	5.3	5.3	6.0	5.0	6.2	4.1	6.0	4.0	5.9	5.8	3.9	3.5	3.0	-0.5
Population Density:																	
Large MSA	—	5.3	7.8	4.5	6.0	4.0	5.3	5.6	4.4	4.3	4.3	4.6	6.0	4.2	3.9	4.5	+0.6
Other MSA	—	8.0	7.8	7.7	6.7	6.8	6.6	6.7	4.7	5.3	5.4	4.9	5.3	5.7	4.7	5.0	+0.3
Non-MSA	—	8.6	8.4	5.9	5.9	5.8	4.4	5.7	6.9	5.9	4.3	6.2	6.0	4.0	4.4	3.3	-1.1
Parental Education: <sup>a</sup>																	
1.0–2.0 (Low)	—	8.7	8.1	4.5	7.0	7.7	7.1	9.1	8.0	5.4	3.4	6.2	4.6	3.6	4.2	4.1	-0.2
2.5–3.0	—	9.6	6.7	7.4	5.5	6.0	5.8	6.2	4.4	4.4	4.1	4.9	6.0	6.0	4.1	4.8	+0.7
3.5–4.0	—	8.1	10.1	6.5	6.4	5.5	5.4	7.1	5.9	6.4	5.9	4.7	5.3	4.6	5.8	4.7	-1.1
4.5–5.0	—	5.5	8.0	5.6	6.9	5.0	5.2	5.3	5.0	4.1	4.8	5.2	6.4	6.2	4.6	4.9	+0.4
5.5–6.0 (High)	—	6.6	5.4	6.6	6.3	7.1	5.9	5.4	4.6	5.5	5.1	4.7	6.2	3.4	3.7	4.1	+0.4
Race/Ethnicity (2-year average): <sup>b</sup>																	
White	—	—	7.7	7.6	7.3	6.7	5.8	5.6	5.5	5.0	5.2	5.6	6.6	6.4	5.0	4.7	-0.3
African American	—	—	6.0	5.0	4.3	4.8	4.9	5.6	4.8	4.0	4.1	3.6	3.7	4.9	5.2	4.6	-0.6
Hispanic	—	—	6.5	5.3	3.7	4.7	6.0	6.6	6.0	5.1	4.7	4.1	4.2	3.8	3.1	3.2	+0.1

*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 are based on one of four forms;  $N$  is one third of  $N$  indicated in Table S3.

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

<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 170**  
**NON-STIMULANT-TYPE ADHD DRUGS:**  
**Trends in Lifetime Prevalence of Legal Use by Subgroups in Grade 10**

	1991- 2004	Percentage who used in lifetime															2018- 2019 change
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	—	14,500	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	8.3	8.3	6.7	6.8	6.8	6.1	6.4	5.2	4.9	5.8	5.8	5.2	4.6	5.1	5.2	0.0
Gender:																	
Male	—	9.5	9.2	8.0	7.4	8.9	6.6	6.7	6.4	5.7	7.1	6.4	5.8	5.6	6.1	6.4	+0.4
Female	—	7.0	7.5	5.2	6.2	4.8	5.5	6.2	4.1	4.0	4.5	5.1	4.7	3.7	4.0	3.8	-0.1
College Plans:																	
None or under 4 years	—	12.6	10.1	9.5	10.5	14.0	10.1	10.6	11.2	7.1	8.7	12.1	6.4	6.2	7.9	7.9	0.0
Complete 4 years	—	7.7	8.0	6.3	6.3	6.1	5.6	5.9	4.5	4.7	5.4	5.1	5.0	4.5	4.5	4.5	+0.1
Region:																	
Northeast	—	8.6	8.8	6.5	6.1	7.0	5.7	7.2	5.3	4.7	5.2	4.9	6.1	5.3	4.1	5.6	+1.6
Midwest	—	6.9	7.4	6.8	7.7	7.7	5.9	6.7	3.8	4.8	6.8	5.4	4.6	3.8	5.7	5.3	-0.4
South	—	10.6	9.6	7.2	8.2	7.2	7.0	6.6	6.1	5.0	6.1	6.9	5.5	4.4	5.6	3.9	-1.7
West	—	6.6	7.0	6.1	4.6	5.4	5.3	5.1	5.2	5.1	4.7	5.1	4.8	5.4	4.6	6.9	+2.3
Population Density:																	
Large MSA	—	6.0	7.2	6.1	4.3	6.2	6.1	5.1	5.3	5.5	5.0	5.4	5.0	4.5	4.2	4.1	-0.1
Other MSA	—	9.2	8.4	6.5	7.1	7.5	5.7	6.8	4.9	4.8	5.6	5.4	5.6	5.0	4.9	5.6	+0.7
Non-MSA	—	9.3	9.7	8.2	9.6	6.4	6.8	7.4	5.6	4.4	7.6	7.3	4.6	3.9	6.9	5.8	-1.1
Parental Education: <sup>a</sup>																	
1.0–2.0 (Low)	—	8.2	10.5	6.6	5.1	7.0	6.2	6.3	7.5	5.6	4.7	7.5	2.8	5.9	4.9	2.0	-2.8
2.5–3.0	—	8.7	7.6	6.0	8.3	6.9	6.5	7.7	4.3	4.3	5.7	5.3	4.9	2.2	4.2	5.4	+1.1
3.5–4.0	—	7.4	9.7	7.4	7.1	5.3	6.4	5.6	5.3	5.8	7.1	5.1	5.6	4.7	5.8	4.3	-1.5
4.5–5.0	—	9.1	7.4	6.3	7.4	7.2	5.5	5.9	5.9	4.4	4.5	6.1	5.5	5.2	4.3	5.9	+1.6
5.5–6.0 (High)	—	8.6	8.3	6.3	5.1	7.8	6.4	6.8	4.0	5.7	6.3	6.1	5.5	5.4	6.3	7.5	+1.2
Race/Ethnicity (2-year average): <sup>b</sup>																	
White	—	—	9.4	8.3	7.4	7.4	6.9	6.8	6.2	5.4	5.9	6.3	5.9	5.1	5.7	6.6	+0.9
African American	—	—	4.7	5.0	4.2	4.6	6.1	4.9	3.2	4.0	5.3	5.1	4.3	5.0	3.6	2.0	-1.6 s
Hispanic	—	—	4.9	4.5	5.0	5.7	4.8	5.6	6.4	4.3	3.5	4.7	5.4	4.9	4.4	3.8	-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 S3 for the number of subgroup cases. See appendix B for definition of variables in table. Data are based on one of four forms; *N* is one third of *N* indicated in Table S3.

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

<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 171**  
**NON-STIMULANT-TYPE ADHD DRUGS:**  
**Trends in Lifetime Prevalence of Legal Use by Subgroups in Grade 12**

	Percentage who used in lifetime																2018– 2019 change
	1991- 2004	2005 <sup>c</sup>	2006 <sup>c</sup>	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
	<i>Approximate weighted N =</i>																
	—	14,500	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	6.2	6.1	7.0	6.4	5.4	6.7	5.8	5.9	5.4	5.6	5.6	5.8	6.4	6.1	5.7	-0.4
Gender:																	
Male	—	7.0	6.1	8.3	7.0	6.5	7.7	6.4	5.8	7.1	6.0	6.1	6.8	7.6	6.4	6.2	-0.2
Female	—	5.0	5.7	5.6	6.5	4.0	5.6	5.2	5.6	3.8	4.8	5.1	4.8	5.3	4.7	4.8	+0.1
College Plans:																	
None or under 4 years	—	9.2	7.6	9.4	9.9	6.7	9.0	8.0	8.1	6.3	7.4	7.3	7.3	9.0	6.4	7.9	+1.5
Complete 4 years	—	5.3	5.8	6.4	5.5	5.0	6.1	5.2	5.4	4.9	5.0	5.4	5.4	5.7	5.9	5.0	-0.9
Region:																	
Northeast	—	6.0	5.9	7.6	8.0	5.1	4.9	5.4	6.5	5.5	6.5	5.8	6.8	7.7	6.6	4.0	-2.6 s
Midwest	—	5.8	5.5	7.1	6.8	6.1	8.4	5.0	6.3	5.6	6.9	6.4	6.7	7.2	6.5	6.6	+0.1
South	—	7.6	7.4	7.6	5.2	5.7	7.0	6.8	5.8	5.9	6.2	6.9	5.7	7.0	6.3	5.6	-0.7
West	—	4.5	4.4	5.1	6.7	4.4	5.7	5.6	5.3	4.3	3.0	2.8	4.6	4.2	5.0	6.1	+1.1
Population Density:																	
Large MSA	—	5.1	6.1	6.9	6.6	5.6	7.3	5.4	6.1	5.3	6.7	4.5	6.3	6.3	5.8	5.6	-0.2
Other MSA	—	7.9	6.2	7.3	6.3	5.0	6.2	6.3	6.2	4.7	5.5	6.2	5.4	6.8	6.5	5.4	-1.0
Non-MSA	—	3.8	5.8	6.3	6.4	6.2	7.2	5.5	4.9	7.0	4.6	6.2	6.2	5.8	5.8	6.3	+0.6
Parental Education: <sup>a</sup>																	
1.0–2.0 (Low)	—	5.2	4.3	5.5	6.6	6.0	5.1	4.9	5.8	4.7	6.2	5.0	5.7	6.0	3.8	8.3	+4.5 ss
2.5–3.0	—	4.1	6.2	5.7	6.4	3.4	6.1	4.5	4.8	5.2	4.5	5.4	3.8	7.7	4.1	4.7	+0.6
3.5–4.0	—	7.6	5.9	6.9	7.0	5.2	6.6	5.9	5.6	4.8	5.0	4.1	6.0	5.8	5.3	4.9	-0.4
4.5–5.0	—	6.8	6.4	8.1	4.7	6.5	7.9	6.5	6.1	6.2	5.7	6.5	6.4	6.3	8.1	5.2	-2.9 s
5.5–6.0 (High)	—	6.4	6.8	7.8	7.5	6.4	6.6	6.8	7.0	6.3	8.5	7.4	6.3	6.7	9.8	6.8	-3.0
Race/Ethnicity (2-year average): <sup>b</sup>																	
White	—	—	6.6	7.3	7.3	6.3	6.7	6.9	6.1	5.9	6.1	6.5	6.9	7.1	7.3	6.5	-0.9
African American	—	—	4.9	4.9	5.0	4.7	5.8	5.5	5.9	5.5	5.6	5.5	4.5	6.3	7.7	9.1	+1.5
Hispanic	—	—	4.2	4.0	4.7	4.5	4.5	5.2	5.1	4.3	3.7	3.8	3.9	4.4	3.3	2.6	-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. Data are based on two of six forms; *N* is two sixths of *N* indicated in Table S3.

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

<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.

<sup>c</sup>Data from one of the questionnaire forms was omitted in 2005 due to an error in the skip pattern in the questionnaire. For the 2006 results by race/ethnicity, data from the remaining form in 2005 were double-weighted to account for the omission of the other form.

**TABLE 172**  
**NON-STIMULANT-TYPE ADHD DRUGS:**  
**Trends in Current Prevalence of Legal Use by Subgroups in Grade 8**

	Percentage who said "Yes, I take them now."																2018– 2019 change
	1991- 2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	—	14,500	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	2.2	1.9	1.4	1.6	1.2	1.4	1.5	1.2	1.4	1.2	1.2	2.0	1.1	1.2	1.4	+0.2
Gender:																	
Male	—	2.4	2.3	1.6	1.7	1.2	1.5	1.9	1.1	1.6	2.0	1.2	2.0	1.1	1.6	2.0	+0.5
Female	—	1.9	1.5	1.3	1.5	1.1	1.3	0.9	1.1	1.0	0.6	1.0	1.8	1.0	0.9	0.9	0.0
College Plans:																	
None or under 4 years	—	2.5	3.8	1.3	3.1	1.6	2.1	3.9	1.6	4.2	1.1	3.4	4.0	2.8	3.5	2.8	-0.8
Complete 4 years	—	2.1	1.7	1.4	1.5	1.1	1.3	1.2	1.2	1.2	1.3	0.9	1.6	1.0	0.9	1.3	+0.3
Region:																	
Northeast	—	2.4	2.5	1.1	1.8	1.0	1.1	1.1	1.5	1.3	0.6	0.8	1.8	1.3	1.4	1.0	-0.4
Midwest	—	2.0	2.7	1.9	1.7	0.7	1.8	1.7	1.3	0.7	1.5	1.6	1.4	1.2	1.0	1.2	+0.2
South	—	2.2	1.6	1.5	1.8	1.3	1.4	1.4	1.2	1.8	1.3	1.1	2.4	1.3	1.6	1.6	0.0
West	—	2.0	1.3	0.8	1.2	1.5	1.0	1.4	1.0	1.7	1.2	1.2	1.9	0.6	0.6	1.5	+0.9
Population Density:																	
Large MSA	—	1.4	1.7	0.9	1.9	1.0	1.2	1.3	1.3	1.4	1.1	0.6	2.2	1.2	1.0	0.9	-0.1
Other MSA	—	2.3	2.1	1.9	1.5	1.4	1.6	1.7	1.2	1.5	1.4	1.2	1.8	1.0	1.3	1.5	+0.2
Non-MSA	—	2.9	1.9	1.1	1.6	0.9	1.1	1.2	0.9	1.2	1.0	1.9	2.0	1.1	1.3	2.0	+0.7
Parental Education: <sup>a</sup>																	
1.0–2.0 (Low)	—	2.8	1.2	1.2	1.3	2.1	1.1	1.7	0.4	0.7	0.9	2.4	0.7	0.7	0.4	1.6	+1.2
2.5–3.0	—	2.4	1.4	1.1	0.9	0.5	0.7	1.4	0.8	1.0	0.5	1.1	1.9	1.1	0.7	0.8	+0.1
3.5–4.0	—	2.3	2.8	0.9	1.9	0.4	1.2	1.7	1.0	1.9	2.4	0.8	1.4	1.2	1.6	2.0	+0.4
4.5–5.0	—	1.8	1.8	1.8	1.6	1.9	1.6	1.3	2.0	1.3	1.2	1.3	1.7	1.7	2.1	1.3	-0.8
5.5–6.0 (High)	—	2.3	1.5	2.2	2.3	1.2	1.6	1.4	1.4	2.0	0.9	0.3	3.3	0.7	0.5	1.8	+1.3 s
Race/Ethnicity (2-year average): <sup>b</sup>																	
White	—	—	2.3	2.0	1.9	1.6	1.4	1.6	1.5	1.2	1.2	1.4	1.9	1.9	1.5	1.6	+0.2
African American	—	—	1.3	0.9	0.9	1.1	1.5	1.5	1.0	1.4	1.3	0.7	1.0	1.7	1.7	0.9	-0.7
Hispanic	—	—	1.0	0.8	0.7	0.6	0.5	1.0	1.0	0.9	1.2	0.8	1.1	1.2	0.5	0.5	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 S3 for the number of subgroup cases. See appendix B for definition of variables in table. Data are based on one of four forms; N is one third of N indicated in Table S3.

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

<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 173**  
**NON-STIMULANT-TYPE ADHD DRUGS:**  
**Trends in Current Prevalence of Legal Use by Subgroups in Grade 10**

	Percentage who said "Yes, I take them now."																2018– 2019 change
	1991- 2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	—	14,500	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	2.3	2.3	1.6	1.7	1.9	1.6	1.3	1.3	1.3	1.4	1.7	1.2	1.0	1.4	1.8	+0.3
Gender:																	
Male	—	2.6	2.7	1.8	1.9	2.2	2.1	1.3	1.6	1.2	1.9	1.8	1.4	0.9	1.3	1.9	+0.6
Female	—	1.9	2.0	1.4	1.4	1.5	1.2	1.3	0.9	1.2	1.0	1.6	1.0	1.0	1.4	1.6	+0.2
College Plans:																	
None or under 4 years	—	4.4	2.6	2.5	1.8	4.4	3.5	2.8	2.3	2.5	1.0	3.2	1.8	1.5	1.7	2.1	+0.5
Complete 4 years	—	2.0	2.2	1.4	1.6	1.7	1.4	1.0	1.2	1.2	1.4	1.6	1.1	0.9	1.2	1.7	+0.5
Region:																	
Northeast	—	3.1	2.6	1.6	1.6	2.9	1.4	1.0	1.4	2.0	1.2	1.6	1.2	1.2	1.2	2.0	+0.8
Midwest	—	2.2	2.2	2.3	2.6	2.5	1.2	1.3	0.7	1.1	1.7	2.4	1.3	1.4	1.5	1.6	+0.1
South	—	2.2	2.5	1.4	1.9	1.4	2.4	1.3	1.7	1.1	1.9	1.5	1.2	0.7	1.6	1.1	-0.5
West	—	1.8	2.0	1.0	0.7	1.2	1.1	1.4	1.1	1.3	0.5	1.4	1.1	1.0	1.3	2.9	+1.6
Population Density:																	
Large MSA	—	1.5	1.9	1.5	0.9	2.3	2.1	1.2	1.3	1.5	1.2	1.6	1.1	0.9	1.3	1.4	0.0
Other MSA	—	2.7	2.7	1.6	1.9	2.0	1.2	1.0	1.3	1.5	1.5	1.7	1.3	1.1	1.4	2.1	+0.8
Non-MSA	—	2.3	2.2	1.7	2.2	1.2	1.8	1.9	1.2	0.8	1.6	2.0	1.3	1.1	1.8	1.5	-0.3
Parental Education: <sup>a</sup>																	
1.0–2.0 (Low)	—	1.4	3.2	2.5	1.2	1.3	1.5	1.5	0.5	1.4	0.7	0.3	1.0	1.8	1.2	0.7	-0.5
2.5–3.0	—	1.6	1.5	0.6	1.8	1.9	1.6	1.4	1.0	0.8	0.6	1.1	0.8	0.3	1.1	1.9	+0.9
3.5–4.0	—	2.5	2.5	1.5	1.4	1.0	2.0	1.2	0.9	2.2	2.0	1.6	0.8	1.3	1.2	1.0	-0.1
4.5–5.0	—	2.9	2.6	1.7	2.2	2.7	1.4	1.3	1.8	0.9	1.5	2.2	1.3	0.7	1.4	1.8	+0.4
5.5–6.0 (High)	—	2.2	2.5	2.0	1.6	2.8	1.6	1.0	1.9	1.4	1.4	2.3	1.9	1.3	2.1	3.2	+1.1
Race/Ethnicity (2-year average): <sup>b</sup>																	
White	—	—	2.6	2.3	1.9	2.0	2.0	1.6	1.3	1.3	1.5	2.1	2.0	1.3	1.4	2.0	+0.6 s
African American	—	—	1.7	1.2	0.7	0.7	1.0	1.0	0.8	1.6	1.7	0.9	0.5	0.6	0.7	0.5	-0.2
Hispanic	—	—	1.3	0.8	1.1	1.6	1.1	1.0	1.3	0.7	0.2	0.5	0.4	0.5	0.7	1.1	+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 are based on one of four forms; N is one third of N indicated in Table S3.

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

<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 174**  
**NON-STIMULANT-TYPE ADHD DRUGS:**  
**Trends in Current Prevalence of Legal Use by Subgroups in Grade 12**

	Percentage who said "Yes, I take them now."																2018– 2019 change
	1991– 2004	2005 <sup>c</sup>	2006 <sup>c</sup>	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	—	14,500	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	1.6	1.6	1.7	1.9	1.5	2.3	1.9	1.8	1.8	2.2	1.5	2.1	2.5	2.6	2.3	-0.3
Gender:																	
Male	—	1.3	1.4	1.3	1.1	1.5	2.3	1.7	1.6	2.4	2.2	1.8	2.5	2.5	2.3	2.7	+0.4
Female	—	1.6	1.8	1.6	2.2	1.6	2.3	1.9	2.0	1.3	2.2	1.0	1.6	2.3	2.1	2.0	-0.1
College Plans:																	
None or under 4 years	—	2.9	0.8	2.5	2.2	1.5	3.2	3.3	2.7	1.7	3.6	2.0	1.7	3.3	3.3	3.0	-0.3
Complete 4 years	—	1.2	1.7	1.6	1.9	1.5	2.1	1.5	1.6	1.6	1.9	1.4	2.0	2.3	2.4	2.2	-0.1
Region:																	
Northeast	—	2.5	1.5	2.4	3.9	1.1	1.9	2.8	1.5	2.2	2.2	1.5	3.2	2.1	2.6	1.4	-1.2
Midwest	—	1.6	1.5	1.7	2.0	1.9	2.8	1.5	2.5	1.6	2.7	1.8	2.4	3.1	2.8	2.9	+0.1
South	—	1.5	1.9	1.9	1.1	1.9	2.4	2.3	1.4	2.1	2.3	1.7	1.9	2.7	2.5	1.9	-0.6
West	—	0.8	1.1	0.8	1.8	0.7	1.9	1.1	1.8	1.3	1.8	0.8	1.3	1.8	2.6	3.5	+0.9
Population Density:																	
Large MSA	—	1.4	1.9	1.7	2.4	1.8	1.7	1.9	1.8	2.6	2.4	1.2	1.9	2.5	3.0	2.1	-0.9
Other MSA	—	1.9	1.3	2.1	1.7	1.2	2.5	2.0	2.1	1.3	2.5	1.6	2.4	3.0	2.2	2.4	+0.1
Non-MSA	—	1.0	1.5	1.1	1.9	1.7	2.7	1.6	1.1	1.9	1.5	1.6	1.7	1.4	2.7	2.5	-0.2
Parental Education: <sup>a</sup>																	
1.0–2.0 (Low)	—	0.3	2.2	1.0	2.2	1.3	3.3	1.8	2.3	2.2	3.8	1.6	2.2	2.1	1.6	3.4	+1.8
2.5–3.0	—	1.5	0.9	1.5	1.9	0.9	2.2	1.6	1.6	1.8	1.7	0.9	1.8	3.4	1.3	1.8	+0.5
3.5–4.0	—	2.4	1.3	1.9	1.8	1.4	2.4	1.6	1.8	1.3	1.7	0.9	2.0	2.3	2.5	2.1	-0.4
4.5–5.0	—	1.7	1.6	1.6	1.5	2.1	2.3	2.2	1.6	1.7	2.4	1.5	1.7	2.5	3.3	2.1	-1.2
5.5–6.0 (High)	—	0.9	2.8	2.3	2.7	1.2	1.8	1.6	2.1	2.8	2.8	2.6	2.5	2.5	3.9	2.8	-1.0
Race/Ethnicity (2-year average): <sup>b</sup>																	
White	—	—	1.7	1.7	1.9	1.7	2.1	2.4	1.9	1.7	2.0	2.1	2.2	2.7	3.0	2.8	-0.2
African American	—	—	2.0	1.8	2.0	1.5	1.5	1.9	1.9	1.8	2.4	2.0	1.1	1.7	2.5	3.0	+0.5
Hispanic	—	—	1.2	1.3	1.2	1.4	1.7	1.1	1.4	2.0	1.8	1.1	0.9	1.8	1.2	0.7	-0.5

*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 S3 for the number of subgroup cases. See appendix B for definition of variables in table. Data are based on two of six forms;  $N$  is two sixths of  $N$  indicated in Table S3.

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

<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.

<sup>c</sup>Data from one of the questionnaire forms was omitted in 2005 due to an error in the skip pattern in the questionnaire. For the 2006 results by race/ethnicity, data from the remaining form in 2005 were double-weighted to account for the omission of the other form.



**TABLE 175**  
**EITHER STIMULANT-TYPE OR NON-STIMULANT-TYPE ADHD DRUGS:**  
**Trends in Lifetime Prevalence of Legal Use by Subgroups in Grade 8**

	1991- 2004	Percentage who used in lifetime															2018- 2019 change
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	—	14,500	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	13.7	15.8	13.4	13.1	12.8	12.8	12.4	11.6	11.5	11.2	11.4	12.1	10.9	11.0	9.8	-1.2
Gender:																	
Male	—	14.9	18.0	14.8	14.7	14.5	14.5	13.7	13.3	13.6	12.7	12.8	14.2	12.5	13.1	11.9	-1.2
Female	—	12.4	13.2	12.1	11.5	11.4	11.3	10.9	10.0	9.4	9.9	10.2	10.0	8.6	9.2	7.5	-1.7
College Plans:																	
None or under 4 years	—	20.6	24.2	17.9	17.1	15.8	17.2	18.8	16.7	21.5	17.2	14.2	20.6	15.7	16.5	17.0	+0.5
Complete 4 years	—	12.9	14.9	12.9	12.7	12.6	12.4	11.9	11.3	10.8	10.8	11.1	11.4	10.3	10.2	8.9	-1.3
Region:																	
Northeast	—	12.9	12.0	10.6	13.7	14.3	9.9	11.0	9.7	11.0	11.5	10.1	11.6	10.2	12.5	10.2	-2.3
Midwest	—	14.2	15.3	14.7	12.5	11.6	13.8	12.0	11.4	10.0	11.0	11.8	12.3	12.4	10.6	8.8	-1.8
South	—	15.1	16.5	14.7	15.0	14.2	14.1	13.2	13.9	13.6	11.8	13.0	13.4	12.2	13.1	10.9	-2.1
West	—	11.3	17.8	11.3	10.8	11.0	11.6	12.7	8.9	10.0	10.1	9.0	9.6	7.7	6.6	8.5	+1.9
Population Density:																	
Large MSA	—	11.4	14.1	11.1	12.3	10.1	11.3	11.9	10.6	10.1	9.8	10.3	11.0	10.8	9.9	9.7	-0.2
Other MSA	—	15.7	16.2	14.7	14.3	14.2	14.3	13.2	11.7	11.4	12.5	11.5	12.6	11.1	12.8	9.8	-3.0
Non-MSA	—	13.1	17.6	13.9	11.6	13.2	11.4	11.7	13.1	13.7	10.3	12.6	12.3	10.4	8.7	9.9	+1.2
Parental Education: <sup>a</sup>																	
1.0–2.0 (Low)	—	18.8	17.8	12.6	17.5	17.0	13.9	15.3	12.5	8.6	7.8	12.7	10.9	7.4	11.5	8.7	-2.8
2.5–3.0	—	14.3	16.3	15.6	11.9	12.9	13.9	13.0	12.4	9.4	10.6	11.1	14.2	12.3	9.3	11.6	+2.3
3.5–4.0	—	15.7	16.2	14.2	12.6	12.6	11.7	14.0	12.1	13.4	11.5	11.4	10.9	9.8	11.4	10.0	-1.4
4.5–5.0	—	11.3	15.5	11.7	13.3	12.0	12.5	11.3	12.0	11.5	11.9	12.2	12.6	12.0	12.9	10.2	-2.7
5.5–6.0 (High)	—	13.0	13.4	13.5	14.8	13.7	13.7	11.5	9.6	11.8	11.1	10.8	11.7	11.5	10.7	7.9	-2.7
Race/Ethnicity (2-year average): <sup>b</sup>																	
White	—	—	15.2	15.7	15.0	14.4	13.8	13.1	12.7	12.3	12.7	13.4	14.4	13.9	12.8	12.3	-0.6
African American	—	—	11.0	9.5	9.8	11.3	11.5	10.3	9.4	10.1	9.6	8.8	9.2	10.9	11.2	8.0	-3.2 ss
Hispanic	—	—	12.4	11.7	9.7	10.4	11.2	12.2	10.7	8.2	8.5	8.2	8.2	7.4	6.7	7.1	+0.4

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 are based on one of four forms; N is one third of N indicated in Table S3.

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

<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 176**  
**EITHER STIMULANT-TYPE OR NON-STIMULANT-TYPE ADHD DRUGS:**  
**Trends in Lifetime Prevalence of Legal Use by Subgroups in Grade 10**

	1991- 2004	Percentage who used in lifetime															2018- 2019 change
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	—	14,500	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	14.3	14.2	12.9	12.8	13.0	12.7	12.0	12.0	11.7	11.3	13.1	11.5	10.1	12.1	9.8	-2.3 s
Gender:																	
Male	—	16.5	15.2	15.1	14.8	15.5	14.1	13.2	13.8	14.6	13.8	14.9	12.4	11.8	14.5	12.0	-2.5
Female	—	12.0	12.9	10.8	10.9	10.5	11.3	11.0	10.3	8.7	8.8	11.3	10.5	8.4	9.6	7.7	-1.9
College Plans:																	
None or under 4 years	—	19.2	20.9	16.6	20.1	20.9	19.3	16.7	17.7	15.9	19.6	21.9	16.4	14.1	17.2	15.6	-1.6
Complete 4 years	—	13.6	13.2	12.4	11.8	12.2	11.9	11.5	11.4	11.2	10.3	12.2	10.9	9.6	11.1	8.6	-2.5 s
Region:																	
Northeast	—	14.3	11.8	12.2	11.4	11.5	11.8	12.0	12.2	12.5	10.2	13.0	11.4	9.1	8.9	9.0	+0.1
Midwest	—	12.8	12.9	13.7	14.5	14.2	13.3	13.6	9.6	12.4	13.4	12.5	10.0	7.9	15.7	10.8	-4.9 s
South	—	17.6	17.8	13.2	14.2	15.2	14.7	13.5	15.3	12.4	13.2	15.0	13.6	11.5	12.8	8.3	-4.5 sss
West	—	11.3	12.0	12.3	10.2	10.0	9.5	7.9	9.8	9.6	7.0	10.7	9.7	10.8	9.4	12.0	+2.6
Population Density:																	
Large MSA	—	12.0	12.3	11.2	10.3	12.8	11.7	10.8	11.4	11.8	9.6	12.6	10.4	9.0	10.4	6.6	-3.8 s
Other MSA	—	15.5	15.1	13.7	12.3	13.6	12.9	12.0	12.1	11.5	11.2	12.7	11.7	10.8	12.3	11.6	-0.7
Non-MSA	—	14.7	14.7	13.9	17.4	12.0	13.6	13.6	12.6	12.0	14.4	14.8	12.6	9.7	14.1	10.5	-3.6 s
Parental Education: <sup>a</sup>																	
1.0–2.0 (Low)	—	11.9	16.0	11.5	9.6	12.7	12.6	11.0	12.3	11.4	7.2	12.7	7.8	10.7	10.9	5.5	-5.4 s
2.5–3.0	—	15.0	14.6	12.6	14.0	12.3	14.5	14.4	12.5	11.6	9.8	12.1	11.1	8.3	10.8	8.6	-2.2
3.5–4.0	—	12.9	16.1	12.8	14.0	11.1	12.6	11.5	11.2	12.8	12.5	13.7	10.8	10.2	12.0	11.4	-0.6
4.5–5.0	—	14.8	12.2	13.5	13.2	13.5	11.8	11.2	13.0	11.8	10.5	12.0	11.8	10.9	13.3	10.2	-3.1
5.5–6.0 (High)	—	15.9	13.5	12.6	10.7	15.6	13.5	11.1	11.6	12.3	13.3	15.1	13.0	10.4	13.6	11.9	-1.8
Race/Ethnicity (2-year average): <sup>b</sup>																	
White	—	—	16.0	15.0	14.3	14.1	13.9	13.7	13.2	13.3	13.4	14.1	14.1	12.4	13.7	14.1	+0.5
African American	—	—	8.8	10.4	9.1	8.4	10.5	9.9	8.3	9.2	9.3	9.7	10.0	9.3	7.4	5.9	-1.5
Hispanic	—	—	8.7	8.5	8.6	9.8	9.6	9.3	10.5	7.4	5.9	8.0	8.8	8.7	8.4	7.1	-1.3

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 are based on one of four forms; N is one third of N indicated in Table S3.

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

<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 177**  
**EITHER STIMULANT-TYPE OR NON-STIMULANT-TYPE ADHD DRUGS:**  
**Trends in Lifetime Prevalence of Legal Use by Subgroups in Grade 12**

	Percentage who used in lifetime																2018– 2019 change
	1991- 2004	2005 <sup>c</sup>	2006 <sup>c</sup>	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	—	14,500	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	12.4	11.7	12.1	13.1	11.0	12.7	12.2	12.7	13.2	12.6	13.7	12.7	13.0	12.7	11.1	-1.6
Gender:																	
Male	—	15.8	13.2	15.7	14.6	13.0	14.7	14.3	14.4	15.5	13.5	13.4	14.5	15.3	14.6	13.0	-1.7
Female	—	8.8	9.6	8.6	11.5	9.1	10.1	9.9	10.8	10.6	11.0	12.6	10.2	10.2	9.7	8.8	-0.9
College Plans:																	
None or under 4 years	—	16.7	16.3	15.7	18.8	17.3	16.1	17.4	16.6	16.3	16.9	18.9	15.5	15.1	14.8	14.4	-0.4
Complete 4 years	—	11.3	10.6	11.2	11.2	10.6	11.8	11.0	11.8	12.2	11.4	13.0	11.6	12.1	11.8	10.1	-1.7
Region:																	
Northeast	—	13.1	13.8	12.2	14.2	11.2	11.1	12.0	13.1	10.5	12.0	11.5	13.1	15.4	12.5	7.9	-4.6 ss
Midwest	—	12.7	9.7	12.5	12.0	12.9	14.7	12.3	12.9	12.5	13.7	15.5	13.4	14.1	13.3	12.4	-0.9
South	—	13.9	14.0	13.3	12.3	14.0	13.6	13.0	13.0	14.8	14.7	17.3	13.7	13.7	12.9	12.1	-0.9
West	—	8.6	8.1	9.2	12.5	7.2	10.3	10.9	12.0	13.2	8.5	7.9	9.7	9.4	11.8	10.0	-1.8
Population Density:																	
Large MSA	—	10.4	12.6	12.4	14.5	10.9	12.4	10.6	13.4	13.9	12.3	12.4	13.6	12.0	12.2	10.0	-2.2
Other MSA	—	14.6	11.1	12.6	12.5	11.2	13.3	14.1	13.2	13.3	12.6	14.5	12.0	13.4	13.0	11.3	-1.6
Non-MSA	—	9.9	11.6	10.5	10.6	14.2	11.8	9.8	10.5	11.8	12.9	14.0	12.9	13.5	12.9	12.4	-0.5
Parental Education: <sup>a</sup>																	
1.0–2.0 (Low)	—	10.1	10.3	9.5	10.7	11.1	11.5	10.4	9.7	13.1	12.1	11.1	11.9	10.2	6.3	11.0	+4.7 s
2.5–3.0	—	10.0	12.5	10.8	10.1	8.9	10.5	10.0	12.5	12.2	11.6	11.5	9.6	13.4	10.5	8.9	-1.6
3.5–4.0	—	13.6	10.4	12.2	14.4	11.8	13.1	11.7	12.5	12.4	11.4	13.2	11.9	11.4	12.4	10.4	-1.9
4.5–5.0	—	12.1	12.3	12.2	11.2	12.8	14.4	13.0	12.8	13.4	12.5	15.4	13.8	15.7	14.7	11.3	-3.4
5.5–6.0 (High)	—	15.3	12.2	15.2	15.2	14.9	13.4	14.9	14.8	17.0	17.5	16.0	15.8	13.7	19.0	12.9	-6.1 s
Race/Ethnicity (2-year average): <sup>b</sup>																	
White	—	—	13.0	13.1	13.6	13.8	14.0	14.4	14.5	14.5	14.3	15.3	15.8	15.3	15.8	14.0	-1.8 s
African American	—	—	8.3	8.0	8.0	8.8	10.4	9.7	9.7	10.1	10.6	11.1	11.0	11.7	11.7	13.0	+1.3
Hispanic	—	—	9.0	8.7	8.9	8.0	8.1	8.9	8.2	8.4	8.4	8.1	8.0	8.4	7.2	5.8	-1.4

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 are based on two of six forms; N is two sixths of N indicated in Table S3.

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

<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.

<sup>c</sup>Data from one of the questionnaire forms was omitted in 2005 due to an error in the skip pattern in the questionnaire. For the 2006 results by race/ethnicity, data from the remaining form in 2005 were double-weighted to account for the omission of the other form.

**TABLE 178**  
**EITHER STIMULANT-TYPE OR NON-STIMULANT-TYPE ADHD DRUGS:**  
**Trends in Current Prevalence of Legal Use by Subgroups in Grade 8**

	Percentage who said "Yes, I take them now."																2018– 2019 change
	1991- 2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Approximate weighted N =	—	14,500	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	6.1	5.2	4.5	5.1	4.9	4.7	4.9	4.7	5.0	4.6	4.9	5.6	4.7	5.2	3.8	-1.4 s
Gender:																	
Male	—	7.1	6.9	5.6	6.3	5.9	5.0	6.3	5.8	5.7	6.1	5.9	6.6	5.6	6.8	5.0	-1.8
Female	—	5.0	3.3	3.3	3.9	4.1	4.4	3.5	3.6	4.0	3.4	4.0	4.5	3.6	4.0	2.6	-1.4
College Plans:																	
None or under 4 years	—	7.1	8.6	5.3	6.9	4.6	6.5	6.3	5.5	9.0	3.7	9.0	9.6	6.3	9.8	5.3	-4.5
Complete 4 years	—	5.9	4.8	4.4	4.9	4.9	4.5	4.8	4.7	4.7	4.8	4.5	5.2	4.5	4.6	3.6	-1.0
Region:																	
Northeast	—	6.2	5.0	4.1	4.8	6.1	3.5	4.1	4.4	5.0	3.7	4.5	4.4	4.8	5.9	5.1	-0.9
Midwest	—	6.9	5.2	5.5	4.8	3.6	5.3	5.8	5.3	4.7	5.3	5.9	6.2	5.6	5.1	3.6	-1.5
South	—	5.9	5.7	4.6	6.5	5.7	5.3	4.7	5.6	5.9	5.1	5.1	6.7	5.6	6.9	3.5	-3.4 ss
West	—	5.6	4.4	3.5	3.6	4.2	3.8	5.0	2.8	3.8	3.7	3.6	3.7	2.3	2.0	3.5	+1.4
Population Density:																	
Large MSA	—	5.5	4.1	3.9	5.4	4.9	4.1	4.9	4.7	5.0	3.9	4.1	4.9	5.0	4.6	2.9	-1.7
Other MSA	—	6.7	5.8	4.7	5.1	5.3	5.4	5.2	5.2	5.0	5.4	5.6	6.0	4.4	6.5	3.9	-2.6 s
Non-MSA	—	5.7	5.6	5.0	4.6	4.1	3.9	4.4	3.8	5.0	3.9	4.5	5.6	5.1	3.4	4.8	+1.4
Parental Education: <sup>a</sup>																	
1.0–2.0 (Low)	—	7.0	4.5	3.7	4.9	4.7	3.3	3.7	2.9	2.9	2.9	4.4	2.7	3.0	4.9	2.1	-2.8
2.5–3.0	—	5.3	5.0	4.5	3.0	3.9	3.6	4.5	4.3	3.8	3.4	4.0	5.0	4.7	2.3	4.0	+1.6
3.5–4.0	—	6.1	5.3	3.4	4.4	4.1	4.3	4.7	4.2	5.1	5.8	4.4	5.4	4.1	4.5	4.1	-0.4
4.5–5.0	—	5.9	4.5	4.7	5.8	5.6	4.7	5.2	5.8	5.3	5.5	5.7	5.9	5.7	8.2	4.3	-3.9 ss
5.5–6.0 (High)	—	7.1	5.3	6.2	8.4	6.2	6.1	5.3	4.5	6.1	4.3	5.3	6.5	5.7	5.4	4.0	-1.4
Race/Ethnicity (2-year average): <sup>b</sup>																	
White	—	—	6.4	5.5	5.9	6.3	5.9	5.8	6.0	5.8	5.7	6.3	7.5	7.3	7.0	6.2	-0.8
African American	—	—	3.3	3.2	3.5	3.8	3.2	3.1	3.1	4.0	4.2	3.5	3.1	3.8	3.9	1.9	-2.0 ss
Hispanic	—	—	3.4	2.7	2.2	2.3	2.4	3.0	2.7	2.2	2.7	2.6	2.5	2.1	1.6	2.3	+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 S3 for the number of subgroup cases. See appendix B for definition of variables in table. Data are based on one of four forms; N is one third of N indicated in Table S3.

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

<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 179**  
**EITHER STIMULANT-TYPE OR NON-STIMULANT-TYPE ADHD DRUGS:**  
**Trends in Current Prevalence of Legal Use by Subgroups in Grade 10**

	Percentage who said "Yes, I take them now."																2018– 2019 change	
	1991- 2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
	Approximate weighted N =	—	14,500	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total		—	5.6	4.8	4.2	4.5	5.0	4.6	4.2	5.1	5.0	4.8	5.8	4.3	4.0	5.1	4.4	-0.7
Gender:																		
Male		—	6.4	5.6	4.8	5.2	5.7	5.8	4.5	5.8	6.3	5.9	6.8	4.7	4.5	6.2	5.0	-1.2
Female		—	4.5	3.9	3.7	3.8	4.3	3.2	4.0	4.5	3.6	3.7	4.9	3.8	3.5	4.2	3.8	-0.4
College Plans:																		
None or under 4 years		—	8.7	6.2	5.4	4.8	9.9	7.7	6.2	3.9	7.5	7.7	9.3	6.5	5.4	5.6	6.3	+0.7
Complete 4 years		—	5.2	4.5	4.0	4.4	4.5	4.2	4.0	5.2	4.7	4.4	5.5	4.1	3.9	4.9	4.0	-0.9
Region:																		
Northeast		—	6.0	3.8	4.0	4.3	4.4	4.0	4.1	4.8	7.4	4.6	5.8	4.1	3.2	3.5	3.4	-0.1
Midwest		—	5.7	4.7	5.1	6.2	7.3	4.1	4.5	4.6	5.6	5.3	6.5	4.7	3.4	6.5	4.9	-1.5
South		—	6.2	5.7	4.6	4.8	5.5	6.0	4.9	7.2	4.5	5.9	6.7	5.1	5.1	5.8	3.4	-2.5 s
West		—	3.9	4.2	2.9	2.6	2.4	3.4	2.9	2.9	3.3	2.7	3.5	3.1	3.6	3.6	6.2	+2.6
Population Density:																		
Large MSA		—	4.6	4.0	3.2	4.1	5.5	4.9	4.5	4.8	5.8	4.9	5.6	3.7	3.6	4.9	2.7	-2.2 s
Other MSA		—	6.4	5.4	4.8	4.3	5.0	4.2	3.8	5.2	5.0	4.5	6.3	3.9	4.6	5.2	5.6	+0.4
Non-MSA		—	4.9	4.4	4.2	5.5	4.3	5.0	4.8	5.3	4.0	5.3	4.7	6.5	3.3	5.1	4.0	-1.1
Parental Education: <sup>a</sup>																		
1.0–2.0 (Low)		—	3.5	5.7	3.6	2.6	2.3	3.0	3.5	2.3	2.7	1.7	1.3	2.2	3.1	3.3	2.4	-0.9
2.5–3.0		—	4.2	3.2	2.8	4.6	4.4	4.7	4.7	5.1	3.7	2.8	3.9	2.3	3.3	3.4	4.2	+0.9
3.5–4.0		—	5.9	5.1	4.5	3.7	3.8	5.3	3.1	5.2	5.3	5.1	6.0	3.5	4.4	4.2	3.7	-0.5
4.5–5.0		—	5.6	4.9	4.5	5.0	5.8	4.2	4.9	5.2	5.6	4.8	5.9	5.7	3.9	6.8	4.6	-2.2
5.5–6.0 (High)		—	7.6	5.3	5.1	5.2	8.1	5.7	4.7	6.1	7.5	7.7	8.4	5.4	4.9	7.2	7.1	-0.1
Race/Ethnicity (2-year average): <sup>b</sup>																		
White		—	—	6.1	5.3	5.2	5.5	5.4	5.1	5.4	6.1	6.2	7.0	7.0	5.4	6.0	6.5	+0.5
African American		—	—	2.6	2.7	2.6	2.1	2.3	3.1	3.8	4.0	2.8	2.2	1.9	1.8	2.2	2.6	+0.4
Hispanic		—	—	2.2	1.7	1.9	2.8	2.7	2.3	2.8	1.9	1.3	1.7	1.4	1.9	2.6	2.1	-0.5

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 S3 for the number of subgroup cases. See appendix B for definition of variables in table. Data are based on one of four forms; N is one third of N indicated in Table S3.

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

<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 180**  
**EITHER STIMULANT-TYPE OR NON-STIMULANT-TYPE ADHD DRUGS:**  
**Trends in Current Prevalence of Legal Use by Subgroups in Grade 12**

	Percentage who said "Yes, I take them now."																2018– 2019 change
	1991- 2004	2005 <sup>c</sup>	2006 <sup>c</sup>	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	—	14,500	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	4.5	3.7	4.1	4.4	4.3	5.2	5.1	5.5	6.0	5.5	5.3	5.6	5.7	5.9	5.0	-0.9
Gender:																	
Male	—	5.5	3.9	5.2	3.9	3.9	5.8	5.2	5.5	6.5	5.1	5.7	6.7	5.9	6.1	6.0	-0.1
Female	—	3.4	3.5	3.4	4.6	4.5	4.6	4.9	5.4	5.6	5.7	4.0	4.4	5.3	5.1	4.0	-1.0
College Plans:																	
None or under 4 years	—	8.2	3.2	5.9	5.2	3.1	6.5	6.9	5.8	6.9	6.3	5.6	4.0	5.5	6.5	5.3	-1.2
Complete 4 years	—	3.7	3.7	3.8	4.4	4.3	4.9	4.6	5.3	5.7	5.2	5.4	5.6	5.9	5.4	4.9	-0.5
Region:																	
Northeast	—	6.3	4.1	4.7	5.9	3.0	5.0	6.3	4.8	5.1	5.5	3.8	6.0	7.1	5.4	3.0	-2.4
Midwest	—	4.0	3.5	5.0	4.5	4.5	6.7	6.3	7.2	5.0	6.1	6.8	5.7	7.1	6.3	6.4	+0.1
South	—	4.2	4.2	4.5	3.9	5.8	5.4	4.9	4.8	7.4	6.6	6.6	5.9	5.6	6.2	4.9	-1.3
West	—	4.0	2.7	2.1	4.5	2.3	3.3	3.3	4.8	5.7	3.2	3.0	4.7	4.0	5.3	4.8	-0.5
Population Density:																	
Large MSA	—	3.5	3.7	4.5	5.7	4.5	4.3	4.6	5.6	6.9	5.4	5.1	6.4	6.1	6.2	4.3	-1.9
Other MSA	—	5.6	3.6	4.2	4.3	3.7	6.0	6.4	6.3	6.2	5.7	5.7	6.0	6.2	5.4	5.2	-0.3
Non-MSA	—	3.5	3.8	3.4	3.5	4.9	4.4	2.6	3.0	4.3	5.3	4.8	3.6	4.2	6.4	5.5	-0.9
Parental Education: <sup>a</sup>																	
1.0–2.0 (Low)	—	2.7	3.3	2.3	4.2	2.3	5.1	4.8	3.7	5.7	4.8	3.3	4.8	3.0	2.6	4.1	+1.4
2.5–3.0	—	3.7	2.0	3.8	3.2	2.5	4.4	3.6	4.8	5.7	4.4	2.8	3.4	5.9	4.1	3.4	-0.6
3.5–4.0	—	5.0	3.3	4.1	4.1	3.9	5.2	5.3	5.0	5.1	4.2	4.1	5.2	4.3	5.6	4.6	-1.0
4.5–5.0	—	5.0	4.6	3.7	4.8	4.8	5.4	5.6	5.7	5.8	5.7	6.5	6.8	8.3	6.8	5.0	-1.8
5.5–6.0 (High)	—	4.8	5.3	6.2	6.5	7.4	6.5	6.3	8.3	9.9	11.0	9.0	6.9	7.0	10.4	7.1	-3.2
Race/Ethnicity (2-year average): <sup>b</sup>																	
White	—	—	4.6	4.5	4.9	4.9	5.6	6.6	6.6	6.4	6.3	6.4	7.0	7.2	7.5	6.7	-0.8
African American	—	—	2.3	2.5	3.0	2.7	3.0	3.2	3.2	4.1	4.3	3.2	2.5	3.8	4.8	4.9	+0.1
Hispanic	—	—	2.3	2.2	2.4	2.8	3.1	2.5	2.7	3.3	3.5	2.5	2.3	3.5	2.6	1.8	-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. Data are based on two of six forms;  $N$  is two sixths of  $N$  indicated in Table S3.

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

<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.

<sup>c</sup>Data from one of the questionnaire forms was omitted in 2005 due to an error in the skip pattern in the questionnaire. For the 2006 results by race/ethnicity, data from the remaining form in 2005 were double-weighted to account for the omission of the other form.

**TABLE 181**  
**Any Nicotine Use<sup>c</sup>: Trends in 30-Day**  
**Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in past 30 days							2018– 2019 change
	12th Graders							
	1976– 2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	—	—	—	—	12,600	13,300	12,900	
Total	—	—	—	—	25.6	32.5	33.6	+1.1
Gender:								
Male	—	—	—	—	29.9	36.5	37.9	+1.3
Female	—	—	—	—	20.7	28.0	28.9	+0.8
College Plans:								
None or under 4 years	—	—	—	—	37.0	42.7	37.6	-5.1
Complete 4 years	—	—	—	—	22.8	28.5	30.8	+2.4
Region:								
Northeast	—	—	—	—	29.8	37.9	33.6	-4.3
Midwest	—	—	—	—	24.5	30.9	36.1	+5.2
South	—	—	—	—	27.2	35.1	32.6	-2.5
West	—	—	—	—	21.2	26.1	32.4	+6.3
Population Density:								
Large MSA	—	—	—	—	23.4	25.4	28.8	+3.4
Other MSA	—	—	—	—	24.0	35.3	34.6	-0.7
Non-MSA	—	—	—	—	32.2	38.0	38.6	+0.6
Parental Education: <sup>a</sup>								
1.0–2.0 (Low)	—	—	—	—	19.5	23.6	30.9	+7.4
2.5–3.0	—	—	—	—	28.5	32.6	37.1	+4.5
3.5–4.0	—	—	—	—	25.5	32.9	34.2	+1.3
4.5–5.0	—	—	—	—	28.1	36.0	30.0	-6.0
5.5–6.0 (High)	—	—	—	—	24.1	32.5	32.3	-0.2
Race/Ethnicity (2-year data): <sup>b</sup>								
White	—	—	—	—	—	36.1	46.8	+10.8 sss
African American	—	—	—	—	—	13.4	23.3	+9.9 ss
Hispanic	—	—	—	—	—	17.9	38.5	+20.6 sss

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

Notes. '—' 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.

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

<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.

<sup>c</sup>Includes use of any of the following: cigarettes, large cigars, flavored small cigars, regular small cigars, tobacco using a hookah, smokeless tobacco, or vaping nicotine.

**TABLE 182**  
**Any Nicotine Use other than Vaping<sup>c</sup>: Trends in 30-Day**  
**Prevalence of Use by Subgroups in Grade 12**

	Percentage who used in past 30 days							2018– 2019 change
	12th Graders							
	1976– 2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>	—	—	—	—	12,600	13,300	12,900	
Total	—	—	—	—	20.6	18.5	15.7	-2.7
Gender:								
Male	—	—	—	—	24.5	23.9	20.0	-3.9
Female	—	—	—	—	16.1	12.9	11.1	-1.8
College Plans:								
None or under 4 years	—	—	—	—	32.2	29.7	20.4	-9.3 s
Complete 4 years	—	—	—	—	17.6	14.4	13.2	-1.2
Region:								
Northeast	—	—	—	—	24.4	14.9	11.7	-3.2
Midwest	—	—	—	—	18.5	17.1	15.7	-1.4
South	—	—	—	—	23.5	23.1	16.3	-6.8 ss
West	—	—	—	—	15.4	14.5	17.8	+3.3
Population Density:								
Large MSA	—	—	—	—	18.6	13.5	13.4	-0.2
Other MSA	—	—	—	—	19.3	19.2	15.9	-3.3
Non-MSA	—	—	—	—	26.4	24.9	18.8	-6.0
Parental Education: <sup>a</sup>								
1.0–2.0 (Low)	—	—	—	—	17.0	14.2	20.5	+6.3
2.5–3.0	—	—	—	—	23.7	21.9	16.2	-5.8
3.5–4.0	—	—	—	—	19.9	21.4	14.1	-7.3 ss
4.5–5.0	—	—	—	—	22.5	16.2	11.7	-4.5
5.5–6.0 (High)	—	—	—	—	18.4	13.2	16.9	+3.6
Race/Ethnicity (2-year data): <sup>b</sup>								
White	—	—	—	—	—	23.4	18.2	-5.2 sss
African American	—	—	—	—	—	10.1	8.1	-2.0
Hispanic	—	—	—	—	—	13.2	15.6	+2.4

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

Notes. '—' 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.

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

<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.

<sup>c</sup>Includes use of any of the following: cigarettes, large cigars, flavored small cigars, regular small cigars, tobacco using a hookah, or smokeless tobacco.



**TABLE 183**  
**Use of Marijuana Under a Doctor's Orders: Trends in Lifetime**  
**Prevalence of Use by Subgroups in Grades 8, 10, and 12**

	Percentage who used in lifetime														
	8th Graders					10th Graders					12th Graders				
	1991– 2016	2017	2018	2019	2018– 2019 change	1991– 2016	2017	2018	2019	2018– 2019 change	1976– 2016	2017	2018	2019	2018– 2019 change
<i>Approximate weighted N =</i>	—	15,300	14,000	13,600		—	13,500	14,300	14,000		—	12,600	13,300	12,900	
Total	—	1.1	1.1	1.3	+0.2	—	1.1	1.3	2.0	+0.7	—	1.5	1.2	2.0	+0.8 s
Gender:															
Male	—	1.1	1.1	1.3	+0.3	—	1.0	1.6	2.2	+0.6	—	1.9	1.3	1.8	+0.5
Female	—	0.9	1.0	1.2	+0.2	—	1.2	0.9	1.7	+0.8	—	1.2	0.8	1.2	+0.4
College Plans:															
None or under 4 years	—	2.2	1.1	3.0	+1.8	—	2.8	1.2	3.2	+2.0	—	4.1	1.7	3.2	+1.5
Complete 4 years	—	0.8	1.0	1.0	0.0	—	0.8	1.3	1.6	+0.4	—	0.8	0.8	1.4	+0.6 s
Region:															
Northeast	—	0.4	0.8	0.9	+0.1	—	0.7	1.0	1.8	+0.8	—	0.7	1.2	1.4	+0.2
Midwest	—	0.4	0.7	1.0	+0.3	—	1.1	1.0	1.5	+0.5	—	0.2	0.7	0.8	+0.1
South	—	1.6	1.2	1.4	+0.2	—	0.8	1.6	2.3	+0.7	—	1.4	1.4	1.7	+0.3
West	—	1.2	1.5	1.5	-0.1	—	1.8	1.2	2.2	+1.0	—	3.2	1.5	4.8	+3.2 s
Population Density:															
Large MSA	—	1.0	0.8	1.5	+0.7	—	0.8	0.9	1.8	+0.8	—	1.6	1.4	1.7	+0.3
Other MSA	—	1.4	1.1	1.1	0.0	—	1.4	1.5	2.3	+0.8	—	1.0	1.1	2.4	+1.3 s
Non-MSA	—	0.3	1.7	1.4	-0.4	—	0.7	1.4	1.8	+0.4	—	2.3	1.1	1.5	+0.4
Parental Education: a															
1.0–2.0 (Low)	—	1.0	2.5	1.5	-1.1	—	1.8	1.5	2.1	+0.6	—	2.5	1.2	2.4	+1.2
2.5–3.0	—	0.9	1.3	2.1	+0.8	—	2.4	2.2	2.8	+0.6	—	2.4	1.0	2.8	+1.8 s
3.5–4.0	—	1.0	1.1	0.7	-0.4	—	0.8	0.6	2.1	+1.5 ss	—	1.2	1.5	1.7	+0.2
4.5–5.0	—	0.5	0.4	1.1	+0.7	—	0.3	1.3	1.3	+0.1	—	0.6	1.0	1.3	+0.3
5.5–6.0 (High)	—	1.0	0.7	1.2	+0.5	—	0.7	0.7	1.8	+1.1	—	1.0	1.0	1.1	0.0
Race/Ethnicity (2-year data): b															
White	—	—	0.7	0.9	+0.1	—	—	0.6	1.2	+0.6 ss	—	—	0.8	0.9	+0.2
African American	—	—	1.3	1.1	-0.2	—	—	2.1	2.2	+0.1	—	—	1.8	1.6	-0.2
Hispanic	—	—	1.1	1.6	+0.4	—	—	1.8	1.7	-0.1	—	—	1.8	2.4	+0.6

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

*Notes.* '—' 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 Tables S1, S2, and S3 for the number of subgroup cases. See appendix B for definition of variables in table. For 8th and 10th graders only: Data based on one of four forms; *N* is one third of *N* indicated in S1 and S2. For 12th graders only: Data based on two of six forms; *N* is two sixths of *N* indicated in Table S3.

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

<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 184**  
**Powdered Alcohol: Trends in Annual**  
**Prevalence of Use by Subgroups in Grades 8, 10, and 12**

	Percentage who used in last 12 months																	
	8th Graders						10th Graders						12th Graders					
	1991– 2015	2016	2017	2018	2019	2018– 2019 change	1991– 2015	2016	2017	2018	2019	2018– 2019 change	1976– 2015	2016	2017	2018	2019	2018– 2019 change
<i>Approximate weighted N =</i>	—	16,900	15,300	14,000	13,600		—	14,700	13,500	14,300	14,000		—	11,800	12,600	13,300	12,900	
Total	—	1.0	0.8	0.8	1.2	+0.5	—	1.3	0.8	1.2	1.0	-0.2	—	1.7	1.0	1.3	1.4	+0.1
Gender:																		
Male	—	1.3	0.9	0.8	1.2	+0.4	—	1.8	1.0	1.5	1.4	-0.1	—	1.9	1.3	1.4	2.2	+0.8
Female	—	0.8	0.6	0.7	1.3	+0.5	—	0.8	0.7	0.9	0.5	-0.4	—	1.3	0.5	0.7	0.5	-0.2
College Plans:																		
None or under 4 years	—	4.5	2.4	2.1	2.7	+0.6	—	3.2	2.3	1.6	1.8	+0.2	—	4.1	1.2	2.8	2.9	0.0
Complete 4 years	—	0.7	0.6	0.6	1.0	+0.4	—	1.0	0.6	1.1	0.8	-0.4	—	1.1	0.7	0.7	0.9	+0.2
Region:																		
Northeast	—	0.4	0.6	1.1	1.2	+0.1	—	1.4	0.7	2.2	0.4	-1.8 s	—	1.2	0.7	0.8	1.3	+0.5
Midwest	—	0.8	0.6	0.1	0.7	+0.7	—	1.2	0.4	1.4	0.7	-0.7	—	1.8	1.0	1.5	0.5	-0.9 s
South	—	1.2	0.8	0.7	1.4	+0.7	—	1.3	0.9	0.7	0.6	-0.2	—	2.1	1.3	1.5	1.6	+0.1
West	—	1.2	1.1	1.2	1.5	+0.3	—	1.3	1.1	1.2	2.4	+1.2	—	1.3	0.6	1.3	2.1	+0.8
Population Density:																		
Large MSA	—	1.1	0.9	0.9	1.3	+0.4	—	0.9	0.7	1.7	0.6	-1.1 s	—	1.7	1.1	1.6	2.2	+0.6
Other MSA	—	0.9	0.9	0.8	1.4	+0.6	—	1.3	0.7	1.2	1.1	-0.1	—	1.8	1.1	1.1	1.0	-0.1
Non-MSA	—	0.9	0.5	0.4	0.9	+0.5	—	2.0	1.4	0.8	1.5	+0.7	—	1.6	0.6	1.5	1.1	-0.4
Parental Education: a																		
1.0–2.0 (Low)	—	2.0	1.5	1.8	0.2	-1.5	—	1.3	2.2	2.1	0.6	-1.5	—	3.8	1.7	2.4	2.7	+0.3
2.5–3.0	—	1.1	0.1	1.1	1.9	+0.9	—	2.3	0.3	1.7	0.3	-1.4	—	1.6	1.7	1.7	1.1	-0.6
3.5–4.0	—	1.4	0.8	0.5	1.2	+0.7	—	1.0	1.1	1.1	1.8	+0.7	—	2.1	0.5	0.9	1.2	+0.3
4.5–5.0	—	0.7	0.9	0.5	1.0	+0.5	—	0.6	0.3	0.7	1.2	+0.5	—	0.8	0.4	0.5	0.7	+0.1
5.5–6.0 (High)	—	0.4	0.7	0.3	1.1	+0.8	—	1.4	0.2	1.1	0.2	-0.9	—	1.2	0.7	1.0	0.8	-0.2
Race/Ethnicity (2-year data): b																		
White	—	—	0.6	0.6	0.8	+0.2	—	—	0.8	0.7	1.0	+0.3	—	—	1.0	0.7	0.7	-0.1
African American	—	—	1.3	1.2	1.5	+0.2	—	—	1.3	0.9	1.1	+0.2	—	—	1.5	0.9	2.6	+1.7 s
Hispanic	—	—	1.3	1.1	1.3	+0.2	—	—	1.6	2.1	1.6	-0.5	—	—	1.3	1.2	1.8	+0.5

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

Notes. '—' 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 Tables S1, S2, and S3 for the number of subgroup cases. See appendix B for definition of variables in table. For 8th and 10th graders only: Data based on one of four forms; *N* is one third of *N* indicated in S1 and S2. For 12th graders only: Data based on two of six forms; *N* is two sixths of *N* indicated in Table S3.

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

<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 185**  
**ENERGY DRINKS: Trends in Daily Prevalence**  
**of Use by Subgroups in Grade 8**

	Percent who used daily											2018– 2019 change
	1975– 2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>		14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	18.6	17.7	16.3	14.2	12.8	12.1	11.3	10.1	10.3	10.5	+0.3
Gender:												
Male	—	22.5	20.3	17.6	16.4	14.9	14.0	12.8	12.5	13.8	12.2	-1.6
Female	—	15.2	15.0	14.9	11.9	10.5	10.2	9.8	6.9	6.4	8.8	+2.4 s
College Plans:												
None or under 4 years	—	32.2	37.5	36.9	32.2	25.9	27.7	25.0	20.2	20.4	21.0	+0.6
Complete 4 years	—	17.1	16.1	14.9	12.8	11.5	10.5	9.9	8.9	8.8	9.0	+0.2
Region:												
Northeast	—	19.7	14.9	12.3	12.5	11.5	8.2	8.8	6.6	11.2	9.5	-1.7
Midwest	—	18.0	17.3	13.8	15.4	12.5	11.5	11.6	8.6	8.4	10.6	+2.3
South	—	20.4	19.6	18.2	16.7	14.1	14.7	12.4	11.2	10.1	10.9	+0.9
West	—	15.5	17.0	18.7	9.9	11.7	10.5	11.0	11.8	11.8	10.6	-1.2
Population Density:												
Large MSA	—	14.1	15.8	13.6	12.4	12.4	9.4	10.4	8.7	8.8	9.3	+0.5
Other MSA	—	21.3	18.1	16.3	13.0	12.6	11.7	11.3	11.2	11.0	10.0	-1.0
Non-MSA	—	18.5	19.8	20.9	19.5	13.9	16.7	13.0	9.4	10.9	13.9	+3.0
Parental Education: <sup>a</sup>												
1.0–2.0 (Low)	—	23.5	26.5	22.9	20.8	17.7	15.4	15.8	11.6	12.2	15.3	+3.1
2.5–3.0	—	23.2	23.4	21.7	17.4	15.1	15.8	13.0	13.1	10.9	13.9	+3.0
3.5–4.0	—	18.8	18.6	18.9	13.7	12.3	11.2	10.9	11.1	11.4	11.6	+0.2
4.5–5.0	—	15.5	12.4	11.8	11.4	9.7	8.9	9.1	7.9	8.3	9.0	+0.6
5.5–6.0 (High)	—	11.5	10.8	9.0	9.9	9.4	6.9	8.3	5.3	9.6	6.9	-2.7
Race/Ethnicity (2-year data): <sup>b</sup>												
White	—	—	16.5	14.7	12.8	10.3	10.7	10.4	9.0	8.3	9.5	+1.2
African American	—	—	19.1	18.2	15.8	14.3	13.3	13.1	14.0	13.1	9.8	-3.3 ss
Hispanic	—	—	22.6	22.6	18.5	15.2	14.5	13.4	11.9	10.7	10.8	+0.2

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

*Notes.* '—' 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 four forms; *N* is one third of *N* indicated in Table S3.

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

<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 186**  
**ENERGY DRINKS: Trends in Daily Prevalence**  
**of Use by Subgroups in Grade 10**

	Percent who used daily											2018– 2019 change
	1975– 2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>		14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	13.6	11.4	10.8	10.3	9.6	7.8	9.2	8.8	9.1	10.5	+1.4
Gender:												
Male	—	17.0	14.1	13.8	12.5	11.4	9.0	10.8	9.9	10.9	12.8	+1.9
Female	—	10.0	8.9	7.8	8.1	7.8	6.3	6.8	7.3	7.3	8.2	+0.9
College Plans:												
None or under 4 years	—	28.1	23.9	27.2	18.7	20.4	15.3	17.4	21.6	17.5	18.9	+1.4
Complete 4 years	—	11.8	9.9	9.1	9.3	8.2	7.0	8.0	7.1	7.7	8.9	+1.2
Region:												
Northeast	—	11.0	9.3	7.1	8.1	6.7	7.0	7.2	8.1	9.8	8.1	-1.7
Midwest	—	12.0	11.1	12.1	8.6	7.8	6.7	8.7	9.8	10.0	10.0	0.0
South	—	15.8	14.3	11.6	11.2	10.5	7.8	10.0	6.8	8.7	10.0	+1.3
West	—	14.3	9.1	11.5	12.5	12.3	9.6	10.0	11.2	8.3	13.3	+5.0 s
Population Density:												
Large MSA	—	11.0	10.4	10.4	9.3	8.5	7.5	7.6	8.3	8.6	7.3	-1.3
Other MSA	—	13.6	10.0	9.6	9.9	7.8	7.8	9.3	8.3	8.8	11.2	+2.4
Non-MSA	—	17.4	15.5	14.1	12.7	15.7	8.5	11.9	11.0	10.6	13.9	+3.3
Parental Education: <sup>a</sup>												
1.0–2.0 (Low)	—	18.8	16.5	15.7	19.4	13.4	10.7	12.2	14.3	14.9	9.5	-5.4 s
2.5–3.0	—	18.1	16.5	15.2	15.3	14.0	10.6	12.6	9.2	9.3	12.3	+3.0
3.5–4.0	—	14.0	10.7	10.6	10.2	9.0	7.4	8.7	8.7	9.8	10.6	+0.9
4.5–5.0	—	8.3	7.6	8.0	5.5	7.5	5.7	7.3	6.7	6.7	8.5	+1.8
5.5–6.0 (High)	—	8.9	8.3	6.9	6.3	5.4	5.4	5.4	4.9	6.9	8.6	+1.6
Race/Ethnicity (2-year data): <sup>b</sup>												
White	—	—	11.7	10.0	9.1	9.0	8.0	7.8	8.6	8.8	9.9	+1.1
African American	—	—	13.6	11.5	10.2	10.2	10.3	8.7	7.6	8.0	8.7	+0.7
Hispanic	—	—	14.2	14.1	14.7	11.8	9.2	9.3	9.8	10.1	9.7	-0.4

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

*Notes.* '—' 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 four forms; *N* is one third of *N* indicated in Table S3.

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

<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 187**  
**ENERGY DRINKS: Trends in Daily Prevalence**  
**of Use by Subgroups in Grade 12**

	Percent who used daily											2018– 2019 change
	1975– 2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>		14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	12.3	9.5	9.2	8.2	8.3	7.8	9.8	9.4	10.1	11.6	+1.5
Gender:												
Male	—	14.8	11.6	10.7	10.7	10.1	9.0	11.2	12.7	12.2	15.0	+2.9
Female	—	8.9	7.5	7.5	5.8	6.4	6.7	7.8	6.3	7.6	7.9	+0.3
College Plans:												
None or under 4 years	—	18.5	14.1	16.5	15.3	18.8	13.3	19.7	15.1	18.4	22.7	+4.3
Complete 4 years	—	11.1	8.4	7.6	6.3	5.8	6.4	7.8	8.0	7.8	8.2	+0.4
Region:												
Northeast	—	15.7	7.2	8.6	9.7	9.5	4.5	11.2	7.3	7.7	8.4	+0.7
Midwest	—	10.7	8.9	7.2	7.5	9.1	10.6	8.3	10.9	12.4	12.7	+0.4
South	—	11.9	10.3	12.4	8.2	7.4	6.5	12.4	10.8	9.8	11.7	+1.9
West	—	12.4	10.4	7.8	7.8	8.3	9.5	5.5	7.2	10.0	13.0	+3.0
Population Density:												
Large MSA	—	10.6	8.2	9.6	8.7	6.9	8.4	9.1	10.5	9.4	9.1	-0.2
Other MSA	—	11.7	8.8	9.0	7.0	8.3	7.5	10.1	8.4	8.7	11.2	+2.4
Non-MSA	—	16.3	12.9	9.4	10.2	10.2	7.4	10.3	9.8	14.8	16.9	+2.1
Parental Education: <sup>a</sup>												
1.0–2.0 (Low)	—	19.0	10.8	14.1	17.4	12.3	10.6	12.8	16.0	11.1	9.4	-1.7
2.5–3.0	—	16.9	12.9	10.9	7.6	14.1	9.0	11.5	10.3	12.4	11.7	-0.7
3.5–4.0	—	11.2	10.5	11.8	8.2	7.0	6.9	11.8	9.3	9.7	14.7	+4.9 s
4.5–5.0	—	10.1	5.9	5.3	5.7	4.9	6.8	4.7	6.2	7.7	10.0	+2.3
5.5–6.0 (High)	—	3.5	8.4	5.6	5.3	4.8	6.2	9.2	6.4	9.8	6.4	-3.4
Race/Ethnicity (2-year data): <sup>b</sup>												
White	—	—	10.4	8.1	7.6	8.5	9.1	9.3	9.5	10.1	11.5	+1.4
African American	—	—	8.9	10.7	10.4	7.9	7.6	8.9	10.2	8.1	9.2	+1.1
Hispanic	—	—	11.8	12.8	10.9	7.9	6.2	5.8	9.1	8.7	7.9	-0.8

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

*Notes.* '—' 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.

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

<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 188**  
**ENERGY SHOTS: Trends in Daily Prevalence**  
**of Use by Subgroups in Grade 8**

	Percent who used daily											2018– 2019 change
	1975– 2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>		14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	6.4	6.8	5.7	5.6	4.2	5.3	4.4	4.0	3.7	4.6	+0.9
Gender:												
Male	—	7.6	8.5	6.6	6.8	4.6	6.6	5.1	5.4	5.2	5.5	+0.3
Female	—	5.3	5.2	4.7	4.3	3.7	4.2	3.7	2.4	1.9	3.6	+1.8 ss
College Plans:												
None or under 4 years	—	12.9	17.5	17.7	18.7	12.3	14.2	13.4	6.9	8.2	9.5	+1.3
Complete 4 years	—	5.7	6.0	4.8	4.7	3.4	4.4	3.4	3.5	3.0	3.9	+0.9
Region:												
Northeast	—	7.8	5.8	4.0	3.4	2.8	2.5	3.1	2.9	4.0	3.9	-0.1
Midwest	—	5.1	6.0	5.6	6.2	3.6	5.1	3.9	2.9	2.7	3.2	+0.4
South	—	7.4	7.9	6.5	7.6	5.4	7.0	5.0	5.1	4.3	6.3	+2.1 s
West	—	5.4	6.7	5.7	3.4	4.0	4.4	4.8	3.7	3.7	3.9	+0.2
Population Density:												
Large MSA	—	5.3	6.7	5.5	5.0	4.6	4.6	4.6	3.8	4.1	4.4	+0.3
Other MSA	—	7.4	7.6	5.2	4.7	4.1	4.8	4.1	4.7	3.2	4.4	+1.2
Non-MSA	—	5.8	5.3	7.1	8.7	4.0	7.5	4.7	2.5	4.3	5.5	+1.2
Parental Education: <sup>a</sup>												
1.0–2.0 (Low)	—	9.6	14.0	9.0	8.6	8.0	6.8	8.7	5.6	6.6	7.9	+1.3
2.5–3.0	—	8.1	8.7	7.2	6.3	5.4	6.2	4.0	5.1	3.3	5.5	+2.3 s
3.5–4.0	—	5.1	6.8	6.8	6.0	3.5	4.8	3.6	4.0	3.4	4.0	+0.6
4.5–5.0	—	5.5	4.7	3.4	4.4	2.8	3.8	3.7	3.2	2.7	3.5	+0.8
5.5–6.0 (High)	—	4.6	4.1	3.2	3.7	2.8	4.0	2.2	2.2	3.7	3.3	-0.3
Race/Ethnicity (2-year data): <sup>b</sup>												
White	—	—	5.2	4.4	3.4	3.2	2.9	3.2	2.7	2.5	3.0	+0.6
African American	—	—	7.0	7.7	8.1	7.1	6.6	6.5	6.4	5.8	5.9	+0.1
Hispanic	—	—	10.4	10.1	7.1	5.2	6.3	6.4	5.6	4.6	4.9	+0.2

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

*Notes.* '—' 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 four forms; *N* is one third of *N* indicated in Table S3.

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

<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 189**  
**ENERGY SHOTS: Trends in Daily Prevalence**  
**of Use by Subgroups in Grade 10**

	Percent who used daily											2018– 2019 change
	1975– 2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>		14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	4.3	4.6	4.0	4.0	3.4	2.6	3.3	3.3	3.8	4.1	+0.3
Gender:												
Male	—	5.7	5.8	4.8	5.0	4.3	3.0	3.7	4.3	4.8	5.9	+1.1
Female	—	2.8	3.4	2.9	2.8	2.5	2.1	2.8	2.1	2.7	2.2	-0.6
College Plans:												
None or under 4 years	—	10.0	8.6	9.9	6.0	9.9	7.0	5.9	9.8	6.5	7.4	+0.9
Complete 4 years	—	3.6	4.1	3.4	3.6	2.7	2.1	2.9	2.5	3.3	3.5	+0.2
Region:												
Northeast	—	3.8	5.0	3.2	2.9	2.8	2.1	3.0	3.3	3.1	2.4	-0.7
Midwest	—	3.8	3.5	4.6	3.1	2.5	2.5	3.1	3.0	4.0	2.9	-1.0
South	—	5.5	5.9	3.5	4.6	4.0	2.2	3.8	2.8	4.4	4.8	+0.4
West	—	3.4	3.6	4.4	4.9	3.9	3.9	3.1	4.2	3.1	5.1	+2.0
Population Density:												
Large MSA	—	4.0	4.4	4.3	4.1	3.1	2.8	3.2	3.5	2.8	2.4	-0.4
Other MSA	—	3.9	4.2	3.5	3.8	2.4	2.2	3.2	3.0	4.1	4.7	+0.7
Non-MSA	—	5.4	5.7	4.4	4.2	6.3	3.4	4.0	3.6	4.7	5.2	+0.5
Parental Education: <sup>a</sup>												
1.0–2.0 (Low)	—	6.5	7.5	8.9	7.4	4.2	3.6	5.4	5.4	6.8	5.0	-1.9
2.5–3.0	—	5.8	5.8	5.0	5.8	5.0	3.6	3.3	2.9	3.3	5.1	+1.9
3.5–4.0	—	4.5	3.9	3.7	3.8	2.9	2.0	3.5	3.1	4.6	4.1	-0.5
4.5–5.0	—	2.4	3.1	2.4	2.2	2.6	2.4	2.3	2.6	2.0	2.2	+0.3
5.5–6.0 (High)	—	3.1	4.1	2.3	2.7	2.0	0.9	2.3	1.6	3.0	3.3	+0.4
Race/Ethnicity (2-year data): <sup>b</sup>												
White	—	—	3.6	3.3	2.6	2.4	2.4	2.4	2.2	2.7	3.4	+0.8 s
African American	—	—	7.4	6.9	6.7	6.4	4.6	4.7	5.1	4.9	5.7	+0.8
Hispanic	—	—	5.2	5.7	5.4	4.5	3.4	3.9	4.7	4.8	4.2	-0.5

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

*Notes.* '—' 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 four forms; *N* is one third of *N* indicated in Table S3.

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

<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 190**  
**ENERGY SHOTS: Trends in Daily Prevalence**  
**of Use by Subgroups in Grade 12**

	Percent who used daily											2018– 2019 change
	1975– 2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>		14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	4.3	4.0	2.7	2.5	2.1	3.1	4.1	3.8	4.2	4.1	-0.1
Gender:												
Male	—	5.9	4.5	2.9	3.4	1.6	2.9	4.7	5.1	5.2	5.0	-0.2
Female	—	2.2	3.4	2.7	1.7	2.1	3.0	3.2	2.4	2.3	2.9	+0.6
College Plans:												
None or under 4 years	—	8.9	5.9	4.3	4.1	5.7	4.5	8.4	6.8	7.8	11.3	+3.5
Complete 4 years	—	3.4	3.4	2.4	1.9	1.2	2.6	2.9	2.9	3.0	2.0	-1.0
Region:												
Northeast	—	4.7	5.4	2.9	4.3	2.4	1.5	4.7	3.4	5.1	4.1	-1.0
Midwest	—	3.3	4.3	2.4	1.2	2.2	2.9	2.5	3.8	4.0	3.1	-0.9
South	—	4.8	4.5	3.1	2.3	2.4	4.0	4.7	5.2	4.4	5.1	+0.7
West	—	4.2	2.0	2.6	3.1	1.5	3.0	4.2	2.0	3.4	3.0	-0.4
Population Density:												
Large MSA	—	2.8	2.4	3.1	3.2	2.6	3.3	4.5	4.2	4.8	4.3	-0.5
Other MSA	—	4.7	4.6	2.2	2.0	1.5	3.5	3.6	3.4	3.7	4.0	+0.3
Non-MSA	—	5.2	4.8	3.6	2.8	3.0	1.8	4.7	4.1	4.0	3.9	-0.2
Parental Education: <sup>a</sup>												
1.0–2.0 (Low)	—	9.0	5.0	5.2	6.7	4.0	5.6	8.1	8.5	8.4	7.7	-0.7
2.5–3.0	—	6.5	4.8	3.3	1.9	2.5	3.6	5.0	4.5	5.2	3.0	-2.2
3.5–4.0	—	3.6	5.2	3.4	2.2	2.3	3.2	3.2	2.9	2.9	5.3	+2.4
4.5–5.0	—	2.3	2.9	1.3	2.1	0.6	2.7	2.5	2.6	2.9	2.1	-0.8
5.5–6.0 (High)	—	2.1	2.2	1.9	1.7	1.0	1.9	3.1	1.9	2.1	1.1	-0.9
Race/Ethnicity (2-year data): <sup>b</sup>												
White	—	—	3.1	2.8	1.9	1.8	2.2	2.6	2.7	3.3	3.3	+0.1
African American	—	—	6.6	6.9	4.6	3.7	4.5	6.6	8.1	6.0	6.1	+0.1
Hispanic	—	—	5.7	4.0	3.5	2.6	3.0	4.2	4.1	3.9	3.9	+0.1

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

*Notes.* '—' 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.

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

<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 191**  
**EITHER ENERGY DRINKS OR ENERGY SHOTS: Trends in Daily Prevalence**  
**of Use by Subgroups in Grade 8**

	Percent who used daily											2018– 2019 change
	1975– 2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>		14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	19.5	18.9	17.2	15.4	13.5	13.0	12.3	11.1	11.4	11.7	+0.4
Gender:												
Male	—	23.2	22.0	18.8	18.2	15.7	15.2	14.1	14.0	15.2	13.4	-1.7
Female	—	16.0	15.7	15.4	12.4	11.2	10.9	10.5	7.5	7.0	9.8	+2.8 s
College Plans:												
None or under 4 years	—	34.0	40.9	39.9	36.4	27.5	29.1	28.6	21.8	22.1	23.0	+0.9
Complete 4 years	—	17.9	17.1	15.5	13.8	12.0	11.4	10.7	9.9	9.8	9.9	+0.2
Region:												
Northeast	—	20.9	16.2	12.4	12.9	11.7	8.9	9.7	7.7	12.6	10.2	-2.4
Midwest	—	18.7	18.3	14.6	16.3	13.3	12.1	12.1	9.9	8.9	11.2	+2.3
South	—	21.5	21.0	19.4	19.0	15.2	16.2	13.3	12.2	11.5	12.9	+1.3
West	—	16.0	18.1	19.5	10.4	12.2	11.1	12.8	12.8	12.7	11.5	-1.2
Population Density:												
Large MSA	—	15.6	17.0	14.4	13.7	13.3	10.1	11.4	9.7	10.2	10.6	+0.4
Other MSA	—	21.9	19.4	17.3	14.0	13.3	12.6	12.2	12.6	11.7	11.3	-0.4
Non-MSA	—	19.2	20.8	21.5	21.3	14.3	18.0	14.3	9.7	12.5	14.6	+2.1
Parental Education: <sup>a</sup>												
1.0–2.0 (Low)	—	24.9	28.7	24.6	22.5	18.7	16.2	18.2	13.2	14.2	17.6	+3.4
2.5–3.0	—	24.0	24.6	22.4	18.5	15.9	17.0	14.2	14.4	12.3	15.2	+2.9
3.5–4.0	—	19.4	20.3	19.9	15.0	12.8	12.3	11.4	11.8	12.0	12.3	+0.3
4.5–5.0	—	16.3	13.4	12.0	12.8	10.3	9.5	9.9	9.2	9.0	9.6	+0.6
5.5–6.0 (High)	—	12.4	11.7	9.5	10.9	10.2	7.8	8.8	5.7	11.0	7.7	-3.4
Race/Ethnicity (2-year data): <sup>b</sup>												
White	—	—	17.3	15.6	13.4	11.8	11.3	11.1	9.7	9.1	10.4	+1.3
African American	—	—	20.4	19.3	17.5	16.9	14.7	14.6	15.1	14.0	11.3	-2.7
Hispanic	—	—	24.0	24.2	20.1	16.0	15.7	14.9	13.4	12.0	12.3	+0.3

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

*Notes.* '—' 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 four forms; *N* is one third of *N* indicated in Table S3.

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

<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 192**  
**EITHER ENERGY DRINKS OR ENERGY SHOTS: Trends in Daily Prevalence**  
**of Use by Subgroups in Grade 10**

	Percent who used daily											2018– 2019 change
	1975– 2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>		14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	14.4	12.4	11.8	11.3	10.1	8.4	10.0	9.5	9.9	11.6	+1.7
Gender:												
Male	—	17.8	15.4	14.8	13.7	12.3	9.8	11.6	10.8	12.0	14.4	+2.4
Female	—	10.7	9.6	8.6	8.8	8.0	6.7	7.7	7.8	7.7	8.7	+1.0
College Plans:												
None or under 4 years	—	29.0	25.8	28.8	20.7	22.4	17.2	19.0	22.8	18.0	20.5	+2.5
Complete 4 years	—	12.5	10.9	10.0	10.0	8.6	7.6	8.7	7.7	8.5	9.9	+1.4
Region:												
Northeast	—	11.8	10.9	7.9	8.2	7.5	7.3	8.0	8.8	10.2	9.6	-0.6
Midwest	—	12.6	11.7	12.9	9.6	8.2	7.2	9.6	10.4	10.7	10.9	+0.3
South	—	16.8	15.3	12.8	12.7	11.0	8.4	10.9	7.4	9.8	11.5	+1.7
West	—	14.8	10.1	12.3	13.3	12.9	10.8	10.7	12.0	9.0	13.8	+4.9 s
Population Density:												
Large MSA	—	11.8	11.4	11.5	10.2	9.4	8.4	8.3	9.1	9.2	8.1	-1.1
Other MSA	—	14.5	11.1	10.5	10.9	8.1	8.1	10.0	8.8	9.8	12.6	+2.8
Non-MSA	—	17.9	16.3	15.0	13.8	16.2	9.2	13.1	11.8	11.1	15.0	+3.9
Parental Education: <sup>a</sup>												
1.0–2.0 (Low)	—	20.4	17.3	18.1	21.4	13.9	11.5	14.1	15.1	15.9	11.8	-4.1
2.5–3.0	—	19.3	17.3	16.5	16.1	14.9	11.2	13.9	10.1	9.9	14.0	+4.1 s
3.5–4.0	—	14.6	11.8	11.3	11.5	9.4	8.1	9.6	9.5	11.0	11.4	+0.4
4.5–5.0	—	8.7	8.4	8.3	5.8	8.1	6.4	7.7	7.1	6.9	8.7	+1.9
5.5–6.0 (High)	—	9.9	9.8	7.6	7.1	5.7	5.6	5.9	5.4	7.8	9.7	+1.9
Race/Ethnicity (2-year data): <sup>b</sup>												
White	—	—	12.4	10.7	9.7	9.3	8.4	8.4	9.0	9.3	10.6	+1.4 s
African American	—	—	15.8	13.4	11.8	11.9	11.7	9.9	9.4	9.7	10.3	+0.7
Hispanic	—	—	15.2	15.6	16.3	10.6	9.9	10.4	10.9	10.8	10.6	-0.2

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

*Notes.* '—' 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 four forms; *N* is one third of *N* indicated in Table S3.

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

<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 193**  
**EITHER ENERGY DRINKS OR ENERGY SHOTS: Trends in Daily Prevalence**  
**of Use by Subgroups in Grade 12**

	Percent who used daily											2018– 2019 change
	1975– 2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<i>Approximate weighted N =</i>		14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900	
Total	—	13.5	11.0	9.9	9.1	9.3	9.0	10.9	10.9	11.2	12.8	+1.5
Gender:												
Male	—	16.0	13.7	11.1	11.9	10.7	10.2	12.6	14.8	14.1	16.7	+2.6
Female	—	9.9	8.5	8.4	6.6	7.5	7.8	8.5	7.1	7.9	8.6	+0.7
College Plans:												
None or under 4 years	—	21.5	16.9	17.7	16.1	20.9	15.7	22.3	16.4	20.1	25.5	+5.3
Complete 4 years	—	11.8	9.7	8.2	7.2	6.3	7.3	8.4	9.2	8.7	8.7	0.0
Region:												
Northeast	—	16.2	9.8	9.0	11.2	10.9	5.5	13.2	8.2	10.7	10.0	-0.6
Midwest	—	11.7	10.7	7.7	8.1	9.3	12.3	8.8	13.0	12.8	13.8	+0.9
South	—	13.4	11.9	13.6	9.2	8.6	8.3	13.6	12.7	10.8	13.1	+2.3
West	—	13.5	10.8	8.3	8.7	9.1	9.6	6.2	7.9	10.8	13.3	+2.4
Population Density:												
Large MSA	—	11.7	9.2	9.9	10.1	8.7	10.1	10.1	11.8	11.2	10.8	-0.4
Other MSA	—	12.6	10.9	9.5	7.8	8.8	8.6	11.0	9.3	9.7	12.1	+2.3
Non-MSA	—	18.1	13.6	10.8	10.8	11.1	8.2	11.6	12.7	14.8	17.7	+2.9
Parental Education: <sup>a</sup>												
1.0–2.0 (Low)	—	21.4	13.0	16.6	20.0	14.5	13.5	13.4	18.0	13.0	13.3	+0.3
2.5–3.0	—	19.0	13.9	11.3	8.1	14.8	10.3	12.5	12.7	14.1	12.3	-1.8
3.5–4.0	—	12.2	12.8	12.6	9.2	7.7	7.9	12.6	10.3	9.9	16.5	+6.6 ss
4.5–5.0	—	10.7	7.4	5.7	6.3	5.2	8.0	6.3	7.7	9.1	10.3	+1.2
5.5–6.0 (High)	—	3.9	8.7	5.7	6.3	5.1	6.9	9.2	6.4	10.7	6.4	-4.3
Race/Ethnicity (2-year data): <sup>b</sup>												
White	—	—	11.6	9.1	8.1	10.0	9.7	10.0	10.4	11.1	12.4	+1.2
African American	—	—	11.1	13.3	12.2	11.8	10.3	11.2	12.8	10.4	10.6	+0.1
Hispanic	—	—	13.8	13.7	12.4	7.3	7.8	7.3	9.9	9.3	9.2	0.0

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

*Notes.* '—' 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.

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

<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 S1**  
**Approximate Weighted Ns by Subgroups in Grade 8**

	<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>
Total	17,500	18,600	18,300	17,300	17,500	17,800	18,600	18,100	16,700	16,700	16,200	15,100	16,500	17,000	16,800	16,500
Gender																
Male	8,600	8,800	8,600	8,300	8,100	8,400	8,600	8,600	7,800	7,900	7,500	7,000	7,600	8,100	8,000	7,800
Female	8,600	9,300	9,200	8,600	8,700	8,800	9,300	8,900	8,400	8,300	8,300	7,600	8,400	8,500	8,400	8,200
College Plans																
None or under 4 years	2,300	2,400	2,100	2,000	1,900	2,200	1,900	1,800	1,700	1,600	1,600	1,300	1,600	1,600	1,600	1,500
Complete 4 years	14,600	15,400	15,400	14,700	14,800	14,800	15,800	15,600	14,500	14,500	14,100	13,400	14,500	15,000	14,800	14,600
Region																
Northeast	3,000	3,700	3,900	3,400	3,100	3,200	3,400	3,300	3,000	2,800	2,900	2,800	3,200	3,200	3,200	2,900
Midwest	5,300	5,300	4,700	4,200	4,300	4,600	4,100	4,300	4,200	4,300	4,000	4,000	4,100	4,000	3,700	3,500
South	6,300	6,200	6,400	6,300	6,600	6,300	7,200	6,600	6,100	6,300	5,900	5,400	6,300	6,300	6,300	6,300
West	2,900	3,400	3,300	3,400	3,500	3,700	3,900	3,900	3,400	3,300	3,400	2,900	2,900	3,500	3,600	3,800
Population Density																
Large MSA	4,500	5,700	5,500	4,400	5,200	5,200	5,000	4,800	4,800	4,900	4,700	4,500	4,900	5,000	5,400	5,400
Other MSA	8,400	8,300	8,800	8,300	7,800	8,400	9,000	8,800	7,900	7,900	7,500	6,900	7,700	7,900	7,400	7,300
Non-MSA	4,600	4,600	4,000	4,600	4,500	4,200	4,600	4,500	4,000	3,900	4,000	3,700	3,900	4,100	4,000	3,800
Parental Education																
1.0–2.0 (Low)	1,400	1,700	1,700	1,600	1,500	1,500	1,500	1,300	1,300	1,300	1,300	1,100	1,100	1,200	1,400	1,400
2.5–3.0	4,400	4,600	4,500	4,100	3,900	4,300	4,000	3,900	3,800	3,700	3,400	3,200	3,400	3,400	3,400	3,300
3.5–4.0	4,100	4,300	4,300	4,200	4,000	4,100	4,300	4,100	3,800	3,900	4,000	3,500	3,700	4,000	3,700	3,800
4.5–5.0	4,100	4,100	4,100	3,900	3,900	3,900	4,500	4,500	4,000	3,900	3,900	3,800	4,200	4,300	4,200	4,000
5.5–6.0 (High)	2,200	2,300	2,300	2,200	2,300	2,200	2,600	2,700	2,200	2,200	2,100	2,100	2,400	2,500	2,600	2,300
Race/Ethnicity (2-year average) <sup>a</sup>																
White	—	21,900	22,000	20,900	19,800	20,200	21,400	21,300	19,800	18,900	18,600	17,600	18,400	20,400	20,500	19,500
African American	—	4,200	4,800	5,500	5,600	5,300	4,700	4,900	5,000	4,800	4,500	4,500	4,400	3,900	3,800	4,000
Hispanic	—	3,400	3,600	4,000	4,000	4,000	4,200	4,100	4,100	4,000	4,100	3,900	3,400	3,200	3,600	4,700

Table continued on next page.

**TABLE S1 (cont.)**  
**Approximate Weighted Ns by Subgroups in Grade 8**

	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
Total	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	14,000	13,600
Gender													
Male	7,800	7,600	7,100	7,100	7,600	7,200	7,000	6,800	6,700	8,000	7,200	6,500	6,500
Female	7,900	7,600	7,400	7,800	7,900	7,400	7,100	7,200	7,200	8,200	7,500	6,800	6,600
College Plans													
None or under 4 years	1,300	1,200	1,100	1,200	1,100	980	900	1,000	1,000	1,200	1,300	1,400	1,500
Complete 4 years	14,400	14,000	13,500	13,800	14,500	13,700	13,300	13,000	12,900	15,100	13,300	11,800	11,400
Region													
Northeast	2,400	2,600	2,500	2,500	2,900	2,800	2,500	2,400	2,200	2,800	2,600	2,500	2,400
Midwest	3,600	3,400	3,400	3,700	3,400	3,200	3,400	3,200	3,000	3,700	3,200	3,100	2,800
South	6,400	5,600	5,700	5,600	6,200	5,800	5,400	5,600	5,900	6,500	6,000	5,100	5,100
West	3,700	4,100	3,400	3,500	3,500	3,300	3,300	3,400	3,300	3,900	3,500	3,300	3,300
Population Density													
Large MSA	5,000	5,100	4,500	4,600	5,400	5,200	4,800	4,700	4,300	5,500	4,600	4,500	4,300
Other MSA	7,800	7,500	7,300	7,500	7,300	6,900	6,800	6,800	7,100	8,200	7,600	6,700	6,800
Non-MSA	3,300	3,100	3,200	3,200	3,300	3,000	3,000	3,100	3,000	3,200	3,100	2,700	2,500
Parental Education													
1.0–2.0 (Low)	1,400	1,300	1,200	1,400	1,300	1,300	1,400	1,300	1,400	1,600	1,600	1,400	1,200
2.5–3.0	3,100	2,800	2,700	2,800	2,700	2,500	2,400	2,400	2,500	2,800	2,600	2,400	2,100
3.5–4.0	3,700	3,500	3,300	3,400	3,500	3,000	2,900	3,100	2,900	3,300	3,100	2,700	2,500
4.5–5.0	3,900	4,100	3,900	3,800	4,100	3,900	3,900	3,600	3,500	4,300	3,600	3,400	3,500
5.5–6.0 (High)	2,300	2,300	2,100	2,200	2,700	2,600	2,400	2,300	2,200	2,700	2,400	2,100	2,600
Race/Ethnicity (2-year average) <sup>a</sup>													
White	18,300	17,300	16,400	16,000	16,700	16,300	14,800	13,100	12,700	13,800	13,700	12,200	11,900
African American	3,900	4,000	4,100	4,000	3,700	3,500	3,500	4,100	4,300	4,100	3,600	2,900	3,000
Hispanic	5,400	5,100	4,700	5,000	5,200	5,200	5,500	5,700	6,200	7,200	8,000	7,300	5,600

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

Notes. '—' indicates data not available. See appendix B for definition of variables in table.

**Caution:** The Ns in this table are based on the entire sample at each grade level. Some drug use questions are asked only in some of the questionnaire forms rather than in all, in which case these Ns need to be adjusted appropriately. Look under Notes in each table to see if only a fraction of the sample was asked about that drug. If there is no such indication, the entire sample received the question.

<sup>a</sup>Ns for each racial subgroup represent the combination of the specified year and the previous year. Data 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 S2**  
**Approximate Weighted Ns by Subgroups in Grade 10**

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Total	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
Gender																
Male	7,200	7,000	7,300	7,700	8,300	7,500	7,400	7,100	6,300	6,800	6,600	6,900	7,500	7,900	7,900	7,900
Female	7,400	7,400	7,800	7,900	8,400	7,800	7,800	7,700	7,000	7,200	7,100	7,100	8,000	8,300	8,000	8,000
College Plans																
None or under 4 years	2,600	2,400	2,500	2,700	2,500	2,300	2,200	2,200	1,900	1,900	1,900	2,000	2,100	1,900	1,800	1,800
Complete 4 years	11,900	12,000	12,400	12,800	14,200	13,000	13,000	12,500	11,500	12,100	11,900	12,100	13,400	14,300	14,100	14,100
Region																
Northeast	2,700	3,000	2,900	3,100	3,300	3,100	3,300	3,100	3,000	2,800	2,700	2,600	3,400	3,600	3,500	3,200
Midwest	3,700	3,800	4,800	4,700	4,400	3,900	3,900	3,600	3,100	3,700	4,100	3,700	4,000	4,600	4,500	4,300
South	4,900	5,000	4,900	5,200	6,100	5,600	5,500	5,200	4,700	5,000	5,000	5,100	4,900	4,900	5,000	5,300
West	3,500	3,000	2,700	2,800	3,200	3,000	2,800	3,100	2,800	2,800	2,200	2,900	3,500	3,300	3,200	3,400
Population Density																
Large MSA	3,400	3,700	3,500	4,100	4,700	4,300	4,300	4,300	3,700	4,000	3,900	4,300	4,900	5,000	4,900	5,100
Other MSA	7,400	7,300	7,600	7,500	8,200	7,500	7,300	7,000	6,700	6,700	6,700	6,800	7,800	7,800	7,600	7,900
Non-MSA	4,000	3,800	4,200	4,200	4,100	3,800	3,900	3,700	3,200	3,600	3,400	3,200	3,100	3,600	3,700	3,200
Parental Education																
1.0–2.0 (Low)	1,300	1,300	1,300	1,300	1,200	1,100	1,300	1,300	1,100	1,200	1,200	1,300	1,200	1,300	1,100	1,100
2.5–3.0	3,900	3,900	4,100	4,100	4,100	3,600	3,700	3,700	3,200	3,200	3,200	3,300	3,500	3,400	3,200	3,200
3.5–4.0	3,900	3,900	4,100	4,300	4,600	4,300	4,100	4,000	3,600	3,700	3,700	3,700	4,200	4,200	4,100	4,300
4.5–5.0	3,500	3,400	3,500	3,700	4,000	3,900	3,700	3,500	3,300	3,500	3,400	3,500	3,900	4,300	4,400	4,500
5.5–6.0 (High)	1,800	1,700	1,700	1,800	2,300	1,900	1,900	1,800	1,700	1,900	1,800	1,700	2,100	2,400	2,400	2,300
Race/Ethnicity (2-year average) <sup>a</sup>																
White	—	19,600	20,700	22,000	22,900	22,400	20,900	19,800	18,400	18,200	18,600	18,000	18,500	19,900	20,400	21,100
African American	—	3,900	3,600	3,300	3,300	3,100	3,200	3,600	3,600	3,100	2,800	3,400	4,600	4,600	4,300	3,900
Hispanic	—	2,600	2,700	2,800	2,900	3,000	3,200	3,500	3,200	3,100	3,400	3,600	3,600	3,500	3,500	3,300

Table continued on next page.

**TABLE S2 (cont.)**  
**Approximate Weighted Ns by Subgroups in Grade 10**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Total	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	14,300	14,000
Gender													
Male	7,800	7,000	7,600	7,200	7,200	7,200	6,100	6,200	7,600	7,100	6,500	6,800	6,600
Female	7,900	7,700	8,000	7,700	7,400	7,500	6,500	6,400	7,600	7,200	6,600	7,000	7,100
College Plans													
None or under 4 years	1,800	1,600	1,500	1,600	1,500	1,300	1,300	1,200	1,400	1,400	1,400	1,800	2,000
Complete 4 years	14,000	13,200	14,100	13,400	13,200	13,400	11,400	11,500	13,900	12,900	11,700	12,000	11,600
Region													
Northeast	3,200	2,800	3,400	3,000	2,600	2,900	2,400	2,500	3,100	2,800	2,300	2,600	2,300
Midwest	3,900	3,600	3,700	3,700	3,800	3,800	3,200	3,000	3,600	3,200	3,100	3,300	3,200
South	5,100	4,800	5,200	5,200	5,100	4,900	4,100	4,400	5,500	5,100	4,800	5,200	5,300
West	3,900	3,900	3,600	3,300	3,400	3,400	3,200	3,100	3,400	3,600	3,300	3,100	3,200
Population Density													
Large MSA	5,200	4,700	5,200	5,200	4,900	4,700	3,800	4,500	5,100	4,800	4,200	4,600	4,400
Other MSA	7,600	7,300	7,300	6,600	6,600	7,100	6,400	6,000	7,600	7,300	6,600	6,800	7,100
Non-MSA	3,300	3,100	3,400	3,400	3,400	3,200	2,700	2,500	2,900	2,600	2,700	2,900	2,500
Parental Education													
1.0–2.0 (Low)	1,200	1,300	1,300	1,400	1,200	1,100	1,100	1,100	1,300	1,400	1,300	1,500	1,400
2.5–3.0	3,300	3,000	3,000	3,000	3,000	2,600	2,400	2,300	2,400	2,400	2,300	2,500	2,500
3.5–4.0	4,400	3,800	4,000	3,800	3,900	3,800	3,100	3,100	3,600	3,400	3,000	3,200	3,200
4.5–5.0	4,300	4,000	4,300	3,900	3,800	4,100	3,500	3,600	4,300	3,800	3,400	3,500	3,600
5.5–6.0 (High)	2,100	2,000	2,400	2,200	2,000	2,500	2,000	2,100	2,800	2,500	3,000	2,200	2,200
Race/Ethnicity (2-year average) <sup>a</sup>													
White	20,800	18,300	17,900	18,400	17,600	17,600	16,000	13,900	15,700	16,000	13,500	13,100	13,200
African American	3,400	3,600	3,600	3,400	3,200	3,100	2,900	2,900	3,000	3,300	3,700	3,800	3,700
Hispanic	3,800	4,500	4,500	4,600	4,500	4,100	4,100	4,300	4,400	5,100	5,300	5,400	5,700

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

*Notes.* '—' indicates data not available. See appendix B for definition of variables in table.

**Caution:** The Ns in this table are based on the entire sample at each grade level. Some drug use questions are asked only in some of the questionnaire forms rather than in all, in which case these N s need to be adjusted appropriately. Look under Notes in each table to see if only a fraction of the sample was asked about that drug. If there is no such indication, the entire sample received the question.

<sup>a</sup>Ns for each racial subgroup represent the combination of the specified year and the previous year. Data 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 S3**  
**Approximate Weighted Ns by Subgroups in Grade 12**

	<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>
Total	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
Gender																
Male	4,300	6,900	7,100	8,500	7,500	7,500	8,400	8,500	7,800	7,600	7,600	7,100	7,700	7,700	8,000	7,700
Female	5,200	7,000	7,600	9,000	8,000	7,800	8,600	8,600	8,000	7,800	8,000	7,700	8,200	8,200	8,300	7,100
College Plans																
None or under 4 years	—	6,500	6,700	8,100	6,800	6,300	6,700	7,200	6,300	5,900	5,600	5,100	5,000	4,700	4,800	4,200
Complete 4 years	—	6,800	7,200	8,600	8,000	8,500	9,700	9,200	8,800	8,900	9,300	9,100	10,300	10,600	11,000	10,100
Region																
Northeast	2,200	3,400	3,700	4,400	3,800	3,600	4,100	4,600	3,900	3,200	3,700	3,600	3,500	3,200	3,200	3,300
Midwest	2,900	4,500	4,600	5,200	4,800	4,700	5,300	5,200	4,600	4,500	4,400	4,300	4,400	4,300	4,500	4,200
South	3,000	4,300	4,600	6,000	4,800	4,800	5,300	5,300	5,200	5,300	4,900	4,700	5,200	5,600	6,100	5,000
West	1,400	2,200	2,200	2,500	2,600	2,700	2,800	2,600	2,600	2,900	3,000	2,600	3,200	3,200	2,900	2,700
Population Density																
Large MSA	2,100	3,700	4,000	4,600	4,000	3,900	4,500	4,800	4,200	4,100	4,200	3,700	4,200	4,400	4,000	3,800
Other MSA	4,000	5,700	6,200	8,000	6,800	6,700	7,100	7,300	6,800	6,900	6,900	7,000	8,000	7,700	8,800	7,700
Non-MSA	3,400	5,000	4,900	5,500	5,200	5,200	5,900	5,600	5,300	4,900	4,900	4,500	4,100	4,200	3,900	3,700
Parental Education																
1.0–2.0 (Low)	1,700	2,200	2,600	3,100	2,500	2,300	2,400	2,700	2,200	1,900	1,800	1,800	1,700	1,600	1,700	1,600
2.5–3.0	3,000	4,300	5,400	6,200	5,600	5,300	5,800	5,900	5,500	5,100	5,100	4,600	4,500	4,500	4,600	4,300
3.5–4.0	1,600	2,500	3,200	4,000	3,600	3,600	4,200	4,200	3,900	4,000	4,000	3,800	4,300	4,400	4,500	4,100
4.5–5.0	1,100	1,600	2,200	2,800	2,600	2,700	3,100	2,900	2,800	2,900	3,000	2,900	3,400	3,500	3,500	3,100
5.5–6.0 (High)	440	710	1,100	1,200	1,200	1,300	1,500	1,300	1,200	1,400	1,500	1,500	1,800	1,900	1,700	1,600
Race/Ethnicity (2-year average) <sup>a</sup>																
White	—	—	23,400	26,500	27,500	25,600	26,300	27,300	26,200	24,700	24,200	23,600	23,800	24,200	24,000	23,400
African American	—	—	3,300	3,700	3,500	3,500	4,000	4,000	3,900	4,000	4,000	3,500	3,200	3,600	3,900	3,500
Hispanic	—	—	890	1,000	940	740	930	1,300	1,300	1,200	1,200	1,500	1,900	2,100	2,400	2,500

Table continued on next page.



**TABLE S3 (cont.)**  
**Approximate Weighted Ns by Subgroups in Grade 12**

	<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>
Total	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600	14,600	14,700	14,200
Gender																
Male	7,400	7,400	7,500	6,900	7,200	6,700	7,100	7,100	6,300	5,800	5,800	5,800	6,600	6,800	6,800	6,600
Female	7,200	7,900	8,200	8,000	7,800	7,100	7,700	7,500	6,700	6,400	6,500	6,600	7,400	7,200	7,300	7,100
College Plans																
None or under 4 years	4,000	3,700	3,700	3,400	3,300	2,600	3,200	3,100	2,800	2,600	2,500	2,400	2,800	2,800	2,600	2,500
Complete 4 years	10,300	11,200	11,600	11,100	11,200	10,800	11,000	11,100	10,200	9,300	9,600	9,700	11,100	11,000	11,300	11,000
Region																
Northeast	2,800	2,800	2,700	2,700	2,800	3,000	3,300	2,800	2,500	2,500	2,400	2,500	3,100	3,100	2,900	2,600
Midwest	4,000	4,400	4,600	4,000	4,300	3,800	4,100	3,800	3,600	3,100	3,700	3,300	3,600	3,800	3,600	3,500
South	5,100	5,600	5,800	5,700	5,400	5,100	5,300	5,700	4,900	4,500	4,100	4,300	4,900	5,000	5,200	5,200
West	3,100	3,000	3,200	3,000	2,900	2,400	2,700	2,900	2,600	2,700	2,600	2,800	3,000	2,700	3,000	2,900
Population Density																
Large MSA	3,600	3,600	3,700	4,300	4,400	3,400	4,100	4,300	3,800	3,800	3,800	4,000	4,600	4,200	4,300	4,700
Other MSA	7,200	8,200	7,800	7,100	7,000	7,000	7,500	7,500	6,200	5,800	5,800	5,900	6,500	6,800	7,000	6,200
Non-MSA	4,200	4,000	4,800	4,000	4,000	3,900	3,800	3,400	3,600	3,200	3,200	3,000	3,500	3,600	3,400	3,300
Parental Education																
1.0–2.0 (Low)	1,500	1,400	1,600	1,400	1,200	1,100	1,300	1,200	960	860	1,000	980	1,200	1,000	1,100	1,100
2.5–3.0	4,100	4,100	4,300	3,700	3,700	3,300	3,600	3,700	3,200	3,000	2,900	2,800	3,400	3,400	3,200	3,100
3.5–4.0	4,200	4,600	4,500	4,300	4,400	3,800	4,100	4,300	3,900	3,600	3,600	3,800	4,200	4,000	3,900	4,000
4.5–5.0	3,100	3,400	3,600	3,500	3,700	3,500	3,500	3,300	3,200	3,100	3,200	3,100	3,400	3,600	3,600	3,600
5.5–6.0 (High)	1,500	1,700	1,700	1,800	1,800	2,100	2,100	2,000	1,800	1,600	1,600	1,500	1,800	2,000	2,100	1,900
Race/Ethnicity (2-year average) <sup>a</sup>																
White	21,900	21,500	22,000	21,800	21,600	20,700	19,800	20,200	19,500	17,700	16,200	16,300	17,800	19,600	19,600	18,600
African American	3,200	3,900	4,200	3,600	3,300	3,200	3,600	3,700	3,400	3,300	3,100	2,900	3,000	3,200	3,000	3,000
Hispanic	2,400	2,600	2,900	3,100	2,700	2,600	2,800	3,000	2,500	2,200	2,600	3,100	3,100	2,800	2,900	3,500

Table continued on next page.

**TABLE S3 (cont.)**  
**Approximate Weighted *N*s by Subgroups in Grade 12**

	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
Total	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	13,300	12,900
Gender:													
Male	6,500	6,400	6,300	6,700	6,800	6,600	5,900	5,700	5,700	5,400	5,600	5,800	5,900
Female	7,400	6,900	6,700	7,100	6,700	6,600	6,100	6,100	6,300	5,600	6,100	6,400	6,300
College Plans													
None or under 4 years	2,400	2,300	2,100	2,100	2,100	2,100	2,200	2,000	1,900	1,900	2,000	2,300	2,500
Complete 4 years	11,300	10,800	10,800	11,300	11,200	10,900	9,700	9,600	10,200	9,100	9,700	9,700	9,400
Region													
Northeast	2,700	2,400	2,600	2,700	2,400	2,300	2,200	2,400	2,200	1,900	2,000	2,100	2,300
Midwest	3,200	3,500	3,500	3,200	3,400	3,600	3,100	2,500	2,700	2,500	2,800	3,000	3,000
South	5,500	5,000	4,800	5,400	5,100	4,400	4,300	4,700	5,100	4,700	4,800	5,100	5,400
West	3,100	3,100	2,800	3,100	3,200	3,400	3,000	2,800	2,900	2,700	3,000	3,100	2,200
Population Density													
Large MSA	4,700	3,700	3,900	4,200	4,300	4,300	3,800	3,500	4,100	3,700	4,300	4,600	4,200
Other MSA	6,600	7,100	6,900	7,300	6,900	6,700	6,200	6,300	6,300	5,700	5,700	6,000	6,200
Non-MSA	3,200	3,200	2,900	2,900	2,900	2,700	2,600	2,600	2,500	2,400	2,600	2,600	2,500
Parental Education													
1.0–2.0 (Low)	1,100	1,200	1,400	1,400	1,200	1,200	1,200	1,200	1,300	1,200	1,400	1,600	1,500
2.5–3.0	3,200	3,000	2,900	3,000	2,800	2,800	2,500	2,400	2,500	2,300	2,500	2,600	2,500
3.5–4.0	4,200	3,900	3,700	4,000	3,900	3,700	3,500	3,400	3,200	3,000	3,200	3,200	3,200
4.5–5.0	3,600	3,500	3,300	3,500	3,600	3,600	3,300	3,200	3,400	3,000	2,900	3,100	3,100
5.5–6.0 (High)	1,800	1,700	1,600	1,600	1,900	1,800	1,500	1,300	1,600	1,400	1,600	1,600	1,700
Race/Ethnicity (2-year average) <sup>a</sup>													
White	18,200	17,300	16,300	16,400	16,500	16,300	15,600	14,100	13,400	12,800	12,200	12,500	13,000
African American	3,200	3,500	3,100	3,000	3,400	3,200	2,700	2,800	3,300	3,400	3,200	2,800	2,500
Hispanic	3,700	4,000	4,400	4,500	4,000	3,700	3,900	4,000	4,200	4,000	4,500	5,700	5,700

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

*Notes.* ' — ' indicates data not available. See appendix B for definition of variables in table.

**Caution:** The *N*s in this table are based on the entire sample at each grade level. Some drug use questions are asked only in some of the questionnaire forms rather than in all, in which case these *N*s need to be adjusted appropriately. Look under Notes in each table to see if only a fraction of the sample was asked about that drug. If there is no such indication, the entire sample received the question.

<sup>a</sup>*N*s for each racial subgroup represent the combination of the specified year and the previous year. Data 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.