

2022

# MONITORING THE FUTURE PANEL STUDY ANNUAL REPORT

National data on substance use among adults ages 19 to 60, 1976-2022

Sponsored by the National Institute on Drug Abuse at the National Institutes of Health



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# Chapter 1

## Monitoring the Future Panel Study Design

### Overview

Monitoring the Future (MTF) is an ongoing research program conducted at the University of Michigan's Institute for Social Research under a series of investigator-initiated, competing research grants from the National Institute on Drug Abuse beginning in 1975. The integrated MTF study includes annual surveys of nationally representative samples of 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> grade students, as well as a subset of 12<sup>th</sup> grade students followed into adulthood from each graduating class. Repeating these annual cross-sectional surveys over time provides data to examine behavior change across history in consistent age segments of the adult population, as well as among key subgroups.

The panel study now has over 110,000 individuals, with approximately 28,500 surveyed each year including young adults ages 19 to 30 and midlife adults ages 35 to 60. These data, gathered on national samples over such a large portion of the lifespan, are extremely rare and can provide needed insight into the epidemiology, etiology, and life course history of substance use and relevant behaviors, attitudes, and other factors. The current report is the latest in a series of publications dating back to 1986 and updated annually since then, all available at [monitoringthefuture.org](http://monitoringthefuture.org).



## Participants

### Young Adults (Ages 19 to 30)

In 2022, young adults (N=4,628) were from the 12<sup>th</sup> grade classes of 2010 to 2021 and provided data at modal ages 19 to 30 (see [Table/Figure 1](#)). Each individual participates in a young adult follow up survey every two years. However, because each cohort's follow up sample is split into two random subsamples that are surveyed in alternate years (at modal ages 19/20, 21/22, 23/24, 25/26, 27/28, 29/30), a representative sample of people from each 12<sup>th</sup> grade class is obtained every year. In this report in [Chapter 2](#), combined prevalence estimates for young adults ages 19 to 30 are reported in the figures, along with age-specific breakdowns in the tables.

### Midlife Adults (Ages 35 to 60)

In 2022, midlife adults (N=5,450) were from the 12<sup>th</sup> grade classes of 2005, 2000, 1995, 1990, 1985, and 1980 and provided data at modal ages 35, 40, 45, 50, 55, and 60, respectively (see [Table/Figure 1](#)). In this report in [Chapter 3](#), combined prevalence estimates for midlife adults ages 35 to 50 are reported in the figures, along with age-specific breakdowns in the tables.

## Research Design & Procedures: Base Year

The MTF panel first samples participants in 12<sup>th</sup> grade, which corresponds to modal age 18. The methods and findings regarding this base year survey are available [elsewhere](#). Briefly, 12<sup>th</sup> graders have been surveyed in the spring of each year since 1975. Typically, each year's data collection of 12<sup>th</sup> graders takes place in 120–140 public and private high schools selected to provide an accurate representative cross-section of 12<sup>th</sup> graders throughout the contiguous United States. In 2020, due to the school shutdowns that came with the COVID-19 pandemic in March 2020, only 36 schools participated in data collection for 12<sup>th</sup> graders. Analyses of the 2020 12<sup>th</sup> grade data indicated that the curtailed sample did not differ from the

nationally representative results from previous years in terms of sociodemographic characteristics.<sup>1</sup>

The final year of high school, 12<sup>th</sup> grade, is a strategic starting point at which to begin longitudinal panel surveys to monitor drug use and related attitudes of youth through adulthood. Completion of high school represents the end of an important developmental period in the United States, demarcating both the end of universal education and, for many, the end of living full time in the parental home. Therefore, it provides an important base year from which to follow individuals as they transition to adulthood. There is also a practical advantage: it is the final point at which a reasonably good national sample of an age-specific cohort can be drawn from schools. However, a limitation of the MTF study design is the exclusion of individuals who dropped out of high school before graduation—approximately 5–15% of each age cohort nationally. The dropout rate has been declining in recent years; it was 5% in 2020, according to US Census statistics.<sup>2</sup> Because the proportion of students who drop out is small and remains relatively constant from year to year, drop out omission should introduce little or no bias in analyses of trends.

A multistage random sampling procedure is used to secure the nationwide sample of 12<sup>th</sup> graders each year. Stage 1 is the selection of particular geographic primary areas from within each of 105 strata in the US. Stage 2 is the selection of one or more high schools in each area (with probability proportional to the student enrollment size for 12<sup>th</sup> grade). Stage 3 is the selection of 12<sup>th</sup> graders within each high school. Weights are assigned to compensate for differential probabilities of selection at each stage of sampling. Final weights are normalized to average 1.0, so that the weighted number of cases approximately equals the unweighted number of cases overall. In order for us to be able to check observed trends in any given one-

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<sup>1</sup> Miech, R., Leventhal, A., Johnston, L., O'Malley, P. M., Patrick, M. E., & Barrington-Trimis, J. (2021). [Trends in use and perceptions of nicotine vaping among US youth from 2017 to 2020](#). *JAMA Pediatrics*, 175(2), 185.

<sup>2</sup> United States Census Bureau. [CPS Historical Time Series Tables on School Enrollment](#). Released August 2021. Accessed April 11, 2022.

year interval, schools are asked to participate in the study for two consecutive years on a staggered schedule, with one half being replaced with a new randomly-selected half sample of schools each year. Therefore, in any given year about half of the schools in the sample are participating for the first time and the other half are participating for their second and final year.

Because many survey questions are needed to cover all of the topic areas in the MTF study, much of the survey content is divided into six different questionnaire forms that are randomly distributed to participants in equal proportions. (Five questionnaire forms were used between 1975 and 1988.) About one third of each form consists of key, or “core,” variables common to all forms. All demographic and key drug variables are contained in this core set of measures. Many other specific drugs that have been added over time are in one or more forms but not in the core set. All tables in this report list the sample sizes upon which the statistics are based, stated in terms of the weighted number of cases which, as explained above, is roughly equivalent to the actual number of cases.

## **Research Design & Procedures: Panel Study**

Each year from the 9,000–19,000 12<sup>th</sup> graders originally surveyed, a panel subsample (N~2450<sup>3</sup>) is selected. At that point they are randomly assigned to begin longitudinal follow up one year later (age 19) or two years later (age 20). Each participant is surveyed every other year through age 29/30 (i.e., at ages 19/20, 21/22, 23/24, 25/26, 27/28, 29/30). Young adults are given the same questionnaire form (of 6 forms) that they were originally given in 12<sup>th</sup> grade. Starting at age 35, participants are surveyed every 5 years. At ages 35 to 60, there is only a single questionnaire form at each age that is given to all participants. The panel design is illustrated in [Table/Figure 1](#). Typically, panel data are collected in April through October.

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<sup>3</sup> Only students providing (a) contact information necessary for longitudinal follow up and (b) valid data on sex are eligible for panel subsample selection. As noted previously, 12<sup>th</sup> grade data collection in 2020 was curtailed due to the COVID-19 pandemic, and all 12<sup>th</sup> grade students providing contact information and valid data on sex were selected with certainty (N=1,225). Additional information on panel sampling is available in [Monitoring the Future Occasional Paper 98 \(2022\)](#).

## Consent

From the beginning of the study through 2021, the elements of consent were included in the introductory letter (e.g., on the cover page of the survey). Beginning in 2022, informed consent has been provided at the beginning of each survey. The consent form is sent along with the web survey invitation letter, included as the first page of the web survey, and sent on paper with paper surveys.

## Oversampling of Substance Users

In order to ensure that drug using populations are adequately represented in the panel surveys, 12<sup>th</sup> graders reporting 20 or more occasions of marijuana use in the previous 30 days (i.e., daily or near daily users), or any use of the other illicit drugs in the previous 30 days, are selected with higher probability (by a factor of 3.0) than the remaining 12<sup>th</sup> graders. These differential sampling probabilities are accounted for in the calculation of the Panel Analysis Weights (described below).

## Data Collection Procedures

**Survey mode.** Up through 2017, all panel surveys were conducted by mailing paper surveys. In 2018 and in 2019, one random half of those aged 19 to 30 received the standard MTF panel procedures with mailed paper surveys; the other random half received new web push procedures and were encouraged to complete web-based surveys. Analyses of the web push experiment among young adults documented that, once sociodemographic characteristics were controlled, there were very few differences in substance use prevalence estimates by condition or survey mode.<sup>4</sup> We combined the

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<sup>4</sup> Patrick, M. E., Couper, M. P., Jang, B. J., Laetz, V., Schulenberg, J. E., O'Malley, P. M., Bachman, J., & Johnston, L. D. (2022). [Building on a sequential mixed-mode research design in the Monitoring the Future Study](#). *Journal of Survey Statistics and Methodology*, 10(1), 149-160.

Patrick, M. E., Couper, M. P., Parks, M. J., Laetz, V., & Schulenberg, J. E. (2021). [Comparison of a web-push survey research protocol with a mailed paper and pencil protocol in the Monitoring the Future panel survey](#). *Addiction*, 116(1), 191-199.

Patrick, M. E., Couper, M. P., Jang, B. J., Laetz, V., Schulenberg, J. E., O'Malley, P. M., Bachman, J., & Johnston, L. D. (2022). [Building on a sequential mixed-mode research design in the Monitoring the Future Study](#). *Journal of Survey Statistics and Methodology*, 10(1), 149-160.

responses from the two modes in both 2019 and 2020, and the results from combining the two modes are shown in this volume (as was done in the two previous editions). In 2020, the web push condition became the standard at age 19 to 30. Also in 2020, we began the transition to web push survey administration for ages 35 to 60, with one random half receiving the standard MTF mailed surveys and the other half receiving the web push procedures. Results of the web push experiment among adults again documented very few differences in substance use prevalence estimates.<sup>5</sup> Therefore, we have combined responses from the two survey modes that year in the estimates shown here.

**Mail-based procedures.** Using information provided by 12<sup>th</sup> grade respondents, contact is maintained with the subset of individuals selected for inclusion in the follow up panels. Newsletters are sent to them each year, providing a short summary of study results on a variety of survey topics. Name and address corrections are requested of both the US Postal Service and the individual. Panel questionnaires are sent in the spring to each individual based on their scheduled panel participation, with an incentive check (currently \$25); reminder letters and postcards are sent at fixed intervals thereafter; telephone callers attempt to gather updated location information and prompt response. If requested by the respondent, a second copy of the questionnaire is sent. No questionnaire content is administered by phone. If a respondent asks not to be contacted further, the request is honored.

**Web push procedures.** The web push condition follows many of the standard mail-based procedures, including initial contact, mailing of newsletters, survey invitation with incentive check, and follow up contact with nonrespondents. In the web push procedures, respondents are given

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Patrick, M. E., Couper, M. P., Jang, B., Laetz, V. B., Schulenberg, J., Johnston, L. D., Bachman, J., O'Malley, P. M. (2019). [Two-year follow-up of the sequential mixed-mode experiment in the U.S. National monitoring the future study](#). *Survey Practice*, 12(1).

<sup>5</sup> Patrick, M. E., Pang, Y. C., Terry-McElrath, Y. M., Laetz, V., & Couper, M. P. (2022). [Comparison of a web-push vs. mailed survey protocol in the Monitoring the Future panel study among adults ages 35 to 60](#). *Drug and alcohol dependence reports*, 4, 100089.

access to respond online (i.e., a link and PIN), and they are later offered a paper survey if they do not respond to the web survey. They are also contacted by email and text message (with their permission). We ensure confidentiality of web-based responses by immediately encrypting data. By design, respondents can pause their web surveys and then easily get back into them; we email reminders to both nonrespondents as well as respondents with a partially completed survey. The web-based surveys are optimized for a variety of operating systems and devices, including computers, tablets, and smartphones. Those who do not respond to the web survey within a month are sent paper versions of the surveys. In the process of telephoning nonrespondents, web surveys and paper surveys are offered.

## Panel Attrition & Weighting Adjustments

Longitudinal studies—including MTF—experience attrition. Survey response rates in general have been declining,<sup>6</sup> and response is typically differentially associated with health risks including substance use.<sup>7</sup> A vital feature of the MTF panel study is the very low cost per respondent, which allows us to survey such large numbers of respondents.

### Response Rates

Response rates by cohort and data collection wave are shown in [Table/Figure 2](#). The largest drop in response rates occurs after the first follow up. The most recent response rates across the first six follow-ups at ages 19 to 30 were 34–43%. Due to cohort differences in the propensity to respond, response rates tend to be higher among earlier than later cohorts: 35–39% at ages 35 to 45 and 36–51% at ages 50 to 60 in 2022. Response rates within cohort tend to decline with the length of the follow up interval.

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<sup>6</sup> United States Bureau of Labor Statistics. [Household and establishment survey response rates](#). Updated June 1, 2022. Accessed June 21, 2022.

<sup>7</sup> Keyes, K. M., Jager, J., Platt, J., Rutherford, C., Patrick, M. E., Kloska, D. D., & Schulenberg, J. (2020). [When does attrition lead to biased estimates of alcohol consumption? Bias analysis for loss to follow-up in 30 longitudinal cohorts](#). *International Journal of Methods in Psychiatric Research*, 29(4), e1842. McCabe, S.E., & West, B.T. (2016). [Selective nonresponse bias in population-based survey estimates of drug use behaviors in the United States](#). *Social Psychiatry & Psychiatric Epidemiology*, 51(1), 141-153.

The impact of the change from paper to web push methodology on response rates has been examined. We found a significant difference in response rates by survey condition combining across ages 19 to 30 in 2019; the web push response rate was 39.1% (95% confidence interval [CI] = 37.89, 40.2). This was significantly higher than the standard MTF response rate of 35.1% (95% CI = 33.96, 36.29).<sup>8</sup> In 2020, when the web push condition was the standard procedure for ages 19 to 30, the overall response rate was 41%. No significant differences in response rates by survey modes were observed among respondents ages 35–60 in 2020.<sup>9</sup>

The response rates are respectable, especially given the relatively low data collection costs and the extended period over which respondents are followed. Weights can be used to adjust for attrition. More information on using weights to adjust back to the 12<sup>th</sup> grade probability sample is available in a study report.<sup>10</sup>

### Panel Analysis Weights

An important purpose of the MTF panel study is to estimate drug prevalence levels among the nationally representative samples of US high school graduates as they move across adulthood. Thus, we have always been concerned about making appropriate adjustments to account for panel attrition.

In the past, our standard adjustment for this publication series used a drug specific post-stratification procedure in which we reweighted each cohort's panel sample so that the 12<sup>th</sup> grade use distribution for a specific drug was the same for the panel respondents as it was for all of the 12<sup>th</sup> grade students

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<sup>8</sup> Patrick, M. E., Couper, M. P., Parks, M. J., Laetz, V., & Schulenberg, J. E. (2020). [Comparison of a web-push survey research protocol with a mailed paper and pencil protocol in the Monitoring the Future panel survey](#). *Addiction* 116(1), 191-199.

<sup>9</sup> Patrick, M. E., Pang, Y. C., Terry-McElrath, Y. M., Laetz, V., & Couper, M. P. (2022). [Comparison of a web-push vs. mailed survey protocol in the Monitoring the Future panel study among adults ages 35 to 60](#). *Drug and alcohol dependence reports*, 4, 100089.

<sup>10</sup> Patrick, M. E., Terry-McElrath, Y. M., Berglund, P., Pang, Y. C., Heeringa, S. G., & Si, Y. (2022). [An Updated Weighting Strategy for the Monitoring the Future Panel Study](#). Monitoring the Future Occasional Paper No. 98. University of Michigan Institute for Social Research: Ann Arbor, MI.

from which they were selected. This procedure was carried out separately for cigarettes, alcohol, and marijuana, as well as other illicit drugs (combined). As expected, it produced prevalence estimates in the panel data that were somewhat higher than those uncorrected for attrition. However, the adjustments were relatively modest.

Starting with the current publication, we have instituted the use of MTF Panel Analysis Weights for all estimates reported. Detailed information on the construction of these weights is available in a separate study report.<sup>11</sup> Briefly, the Panel Analysis Weights are calculated such that they weight back to the initial nationally representative 12<sup>th</sup> grade samples, accounting for 1) the fraction of 12<sup>th</sup> grade students not eligible for panel selection, 2) the panel sample selection process including oversampling of those reporting drug use, and 3) panel attrition. This weighting procedure results in an overall improvement in the degree to which the sociodemographic distributions of the initial 12<sup>th</sup> grade samples are retained, as well as likely producing slightly improved substance use estimates due to accounting for historical variation in panel sample selection and attrition over time. To facilitate the ability of users to evaluate the impact the use of the new weights may have had on prevalence and trend estimates, we have prepared a [separate report](#) that replicates all data included in the previous volume in this publication series<sup>12</sup> using the new weighting procedures, and evaluates the degree of differences in results that were observed (differences observed were minimal).

We are not able to adjust for the absence of students who dropped out of school prior to 12<sup>th</sup> grade. Because nearly all college students have completed high school, the omission of high school dropouts should have

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<sup>11</sup> Terry-McElrath, Y. M. & Patrick, M. E. (2023). [Comparison of estimates before and after the updated weighting strategy change for the Monitoring the Future Panel study annual report](#). Monitoring the Future Occasional Paper No. 100. Ann Arbor, MI: Institute for Social Research, University of Michigan.

<sup>12</sup> Patrick, M. E., Schulenberg, J. E., Miech, R. A., Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (2022). [Monitoring the Future Panel Study annual report: National data on substance use among adults ages 19 to 60, 1976-2021](#). Monitoring the Future Monograph Series. Ann Arbor: Institute for Social Research, The University of Michigan.



almost no effect on college student prevalence estimates, but this omission does affect the estimates for noncollege young adults and the combined young adult estimates. The omission of about 5–15% of each cohort<sup>13</sup> who dropped out prior to 12<sup>th</sup> grade might mean that drug use estimates reported here for young adults are likely somewhat lower than would be observed for the age group as a whole. Nevertheless, the year to year trends should be minimally affected by the limitations in sample coverage.

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<sup>13</sup> United States Census Bureau. [CPS Historical Time Series Tables on School Enrollment](#). Released August 2021. Accessed April 11, 2022.

# Chapter 2

## Young Adult Substance Use Prevalence and Trends

### Executive Summary

The most prevalent substances used by young adults ages 19 to 30 in 2022 were:

	Past 12 months	Past 30 days
<b>Alcohol</b>	83.5%	67.5%
<b>Marijuana</b> (any mode)	43.6%	28.8%
<b>Vaping Nicotine</b>	23.7%	17.2%
<b>Vaping Marijuana</b>	21.3%	13.9%
<b>Cigarettes</b>	17.8%	8.5%
<b>Other Drugs<sup>1</sup></b>	17.4%	6.7%

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<sup>1</sup> An index of non-medical use of any drugs other than marijuana includes hallucinogens (including LSD), cocaine, amphetamines, sedatives (barbiturates), tranquilizers, and narcotics/opioids (including heroin).

In addition, binge drinking (having 5+ drinks in a row in the past 2 weeks) was reported by 30.5%, and daily marijuana use (20+ occasions in the past 30 days) was reported by 11.3% of young adults in 2022.

There were notable significant changes from 2021 to 2022 among young adults ages 19 to 30:

- An increase in vaping marijuana in the past 12 months from 2021 to 2022, which is now at the highest level recorded since it was added to the survey in 2017.
- Decreases in cigarette smoking (all time periods), LSD use (past 12 months), and tranquilizer use (past 12 months) from 2021 to 2022.

In addition, in 2022, young adults had historically high prevalence levels of:

- Marijuana use: In 2022, marijuana use in the past 12 months and daily use among young adults reached the highest levels ever recorded (since first calculated in 1988). Marijuana use in the past 30 days virtually tied the highest level from 2021. In addition, vaping marijuana in the past 12 months and past 30 days continues to reach new highest levels (since first tracked in 2017).
- Nicotine vaping: Since it was first measured in 2017, nicotine vaping in the past 30 days has nearly tripled among young adults to 17.2% in 2022. Nicotine vaping in the past 12 months was reported by 23.7%, an all-time study high.
- Hallucinogens other than LSD: In 2022, 7.0% of young adults reported use of hallucinogens other than LSD in the past 12 months, which follows increases over the past 5 and 10 years and was the highest level recorded (since first calculated in 1988). On the contrary, LSD use significantly decreased in 2022.

In 2022, young adults had historically low prevalence levels of:

- Cigarette smoking: Smoking among young adults has been declining steadily, with large and significant decreases in past 12-month use, past 30 day use, daily use, and smoking a half pack or more per day

over the past 1, 5, and 10 years. For example, smoking in the past 30 days decreased by more than two-thirds, from 28.8% in 2004 to 8.5% in 2022.

- Alcohol use: Measures of drinking in the past 30 days, daily drinking, and binge drinking have decreased over the past 10 years.
- Narcotics (opioids): Narcotics other than heroin and OxyContin were at record low levels among young adults in 2022. Heroin and Vicodin were close to all-time low levels in 2022.
- Sedatives and tranquilizers: Use of sedatives and tranquilizers in the past 12 months were at record low levels of 1.4% and 2.2%, respectively, in 2022.

## Introduction

The multiple cohort sequential design of MTF provides a useful snapshot of each age group in a given year. In this chapter, we present the most recent prevalence of substance use among young adults (ages 19 to 30) and describe recent historical trends comparing these estimates to young adults in previous years. The data are presented in a series of figures and tables ordered by substance and timeframe of use (e.g., past 12 months, past 30 days). In the figures, estimates for ages 19 to 30 are combined, and the statistical significance levels of 1-year change and linear trend estimates across 5 and 10 years are provided. In the tables, estimates for young adults are provided in 2-year age groupings (e.g., modal ages 19 and 20) and, for comparison, with estimates from adolescents at age 18 (described in detail in the report on secondary school students<sup>2</sup>) and adults ages 35 to 60 (discussed in the next chapter). Longitudinal panel studies that track the same individuals across several years are also extremely valuable for examining developmental changes with age and long term connections across the life course, as we illustrate in other publications.

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<sup>2</sup> Miech, R. A., Johnston, L. D., Patrick, M. E., O'Malley, P. M., Bachman, J. G., & Schulenberg J. E. (2023). [Monitoring the Future national survey results on drug use, 1975-2022: Secondary school students](#). Monitoring the Future Monograph Series. Ann Arbor: Institute for Social Research, The University of Michigan.

## Most Common Substances: Prevalence & Trends

The prevalence estimates and trends are first presented for the most commonly used substances including marijuana, alcohol, cigarettes, vaping, and any drug other than marijuana.

We focus on recent trends in substance use among young adults ages 19 to 30 combined (shown in [Tables/Figures 1 through 34](#)). Data are given for each year in which they are available for that full age band. We present significance tests on trends for one year (the percentage point change between 2021 and 2022), 5 years (based on a linear slope from 2017 to 2022), and 10 years (based on a linear slope from 2012 to 2022).

### Marijuana

The legal status of marijuana at the state level, as well as how it is talked about in the literature and society at large, is changing. The term “marijuana” is increasingly being replaced with the term “cannabis.” However, in our surveys and this publication we predominantly continue to use the term marijuana.<sup>3</sup> We continue to update our surveys about modes of use; the estimates here include use of marijuana in any form, unless noted otherwise.

**12 month.** Marijuana use in the past 12 months was reported by 43.6% of young adults in 2022 ([Table/Figure 3](#)), with the highest prevalence at ages 27–28 (46.6%; [Table/Figure 4](#)).

**30 day.** Marijuana use in the past 30 days was reported by 28.8% of young adults in 2022 ([Table/Figure 5](#)), with the highest levels for ages 23–24 at 32.9% ([Table/Figure 6](#)).

**Daily.** Daily marijuana use (defined as using on 20 or more occasions in the past 30 days) was reported by 11.3% of young adults in 2022 ([Table/Figure 7](#)), with the highest levels at ages 23–24 at 13.8% ([Table/Figure 8](#)).

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<sup>3</sup> National Institute on Drug Abuse. [Cannabis \(Marijuana\)](#).  
National Institute on Drug Abuse. [Cannabis \(Marijuana\) Drug Facts](#).

**Vaping marijuana.** In particular, vaping marijuana in the past 12 months was reported by 21.3% of young adults in 2022 ([Table/Figure 9](#)). Vaping marijuana in the past 30 days was reported by 13.9% of young adults in 2022 ([Table/Figure 11](#)), with the highest prevalence at ages 23–24 at 16.5% ([Table/Figure 12](#)).

**Trends.** In 2022, marijuana use among young adults reached the highest levels ever recorded since the indices were first available in 1988 ([Tables/Figures 3–8](#)). Marijuana use in the past 12 months among young adults has increased over the past 10 years (from 28.1% in 2012) and past 5 years (from 35.3% in 2017) to 43.6% in 2022 ([Table/Figure 3](#)). Similarly, marijuana use in the past 30 days increased over the past 5 years (from 22.1% in 2017) and the past 10 years (from 16.6% in 2012) to 28.8% in 2022 ([Table/Figure 5](#)). Current daily marijuana use among young adults also reached a new peak of 11.3% in 2022 ([Table/Figure 7](#)), reflecting significant change over the past 5 years (from 7.8% in 2017) and 10 years (from 5.6% in 2012). However, the 1-year change from 2021 to 2022 was not significant for use in the past 12 months ([Table/Figure 3](#)), past 30 days ([Table/Figure 5](#)), or daily marijuana use ([Table/Figure 7](#)).

Vaping marijuana, in particular, has increased among young adults and reached the highest levels recorded since it was added to the survey in 2017. The prevalence of vaping marijuana in the past 12 months increased over the past year and 5 years, from 11.5% in 2017 to 21.3% in 2022 ([Table/Figure 9](#)). Vaping marijuana in the past 30 days also increased over the past 5 years, from 5.9% in 2017 to 13.9% in 2022 ([Table/Figure 11](#)). Questions about vaping marijuana were added to the young adult surveys in 2017, with 30 day prevalence more than doubling from 2017 to 2019 and then remaining fairly steady from 2019 through 2022.

## Alcohol

**12 month.** Alcohol use in the past 12 months was reported by 83.5% of young adults in 2022 ([Table/Figure 13](#)); it rose sharply with age, reaching 87.4% at age 29–30 ([Table/Figure 14](#)).

**30 day.** More than two-thirds (67.5%) of young adults reported drinking in the past 30 days in 2022 ([Table/Figure 15](#)); peaking at 75.0% at ages 29–30 ([Table/Figure 16](#)).

**Daily.** Daily drinking (defined as 20 or more occasions in the past 30 days) was reported by 4.6% of young adults in 2022 ([Table/Figure 17](#)). It increased across the age strata until ages 23–24 at 5.9% and was relatively stable through ages 29–30 ([Table/Figure 18](#)).

Binge drinking (i.e., having 5+ drinks in a row) in the past 2 weeks was reported by 30.5% of young adults in 2022 ([Table/Figure 19](#)). Prevalence was 19.0% at ages 19–20 and 28.6–34.0% at ages 21–30 ([Table/Figure 20](#)), reflecting a recent shift upward in the peak age.<sup>4</sup>

High-intensity drinking<sup>5</sup> (i.e., having 10+ drinks in a row) was reported by 9.5% of young adults in the past 2 weeks ([Table/Figure 21](#)).

**Trends.** Alcohol use in the past 12 months among young adults in 2022 was 83.5%, which is not a significant change from 2021 ([Table/Figure 13](#)). There was a significant upward trend in past 12 month use among young adults in the past 5 years (from 81.5% in 2017). Alcohol use in the past 30 days similarly had no significant change over 1 year, at 67.5% in 2022 ([Table/Figure 15](#)). However, there was a slight significant downward linear trend in the past 30 day use over 10 years (from 68.1% in 2012; [Table/Figure 15](#)). Among young adults, current daily drinking has also decreased over the past 10 years (from 6.0% in 2012) to 4.6% in 2022 ([Table/Figure 17](#)).

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<sup>4</sup> Jager, J., Keyes, K., Son, D., Patrick, M., Platt, J., & Schulenberg, J. (2022). [Age 18–30 trajectories of binge drinking frequency and prevalence across the past 30 years for men and women: Delineating when and why historical trends reversed across age](#). *Development and Psychopathology*, 1-15.

Patrick, M. E., Terry-McElrath, Y. M., Lanza, S. T., Jager, J., Schulenberg, J. E., & O'Malley, P. M. (2019). [Shifting age of peak binge drinking prevalence: Historical changes in normative trajectories among young adults aged 18 to 30](#). *Alcoholism: Clinical and Experimental Research*, 43, 287-298.

<sup>5</sup> Patrick, M. E., Terry-McElrath, Y. M., Miech, R. A., Schulenberg, J. E., O'Malley, P. M., & Johnston, L. D. (2017). [Age-specific prevalence of binge and high-intensity drinking among U.S. young adults: Changes from 2005 to 2015](#). *Alcoholism: Clinical and Experimental Research*, 41(7), 1319-1328.

Patrick, M. E., Terry-McElrath, Y. M., Kloska, D. D., & Schulenberg, J. E. (2016). [High-intensity drinking among young adults in the United States: Prevalence, frequency, and developmental change](#). *Alcoholism: Clinical and Experimental Research*, 40, 1905-1912.

Binge drinking (5+ drinks in a row in the past two weeks) among young adults rebounded from a historic low during the COVID-19 pandemic in 2020 (when it reached 28.1%), back to 32.2% in 2021 and 30.5% in 2022 which was even with pre-pandemic levels ([Table/Figure 19](#)). However, this was still a decrease over the past 10 years (down from 35.2% in 2012). High-intensity drinking (10+ drinks in a row in the past two weeks) has not changed significantly over time ([Table/Figure 21](#)), at 9.5% among young adults in 2022.

### Cigarettes

**12 month.** Cigarette use in the past 12 months was reported by 17.8% of young adults in 2022 ([Table/Figure 23](#)), with a peak at ages 23–24 of 20.9% ([Table/Figure 24](#)).

**30 day.** Cigarette use in the past 30 days was reported by 8.5% of young adults in 2022 ([Table/Figure 25](#)), with the highest level of 11.2% at ages 23–24 ([Table/Figure 26](#)).

**Daily.** Daily smoking was reported by 4.2% of young adults in 2022 ([Table/Figure 27](#)), increasing from 1.3% at ages 19–20 to 5.4% at ages 29–30 ([Table/Figure 28](#)). Smoking a half pack or more per day was reported by 2.1% of young adults ([Table/Figure 29](#)).

**Trends.** Cigarette smoking among young adults has been declining steadily since 2004 and reached new historic lows in 2022. The 1-year decreases were significant, in addition to large and significant decreases in past 12 month use, past 30 day use, daily use, and smoking a half pack or more per day over the past 5 years and 10 years ([Tables/Figures 23–30](#)). For example, cigarette use in the past 30 days decreased by more than two-thirds since 2004, when it was 28.8% ([Table/Figure 25](#)).

### Vaping Nicotine

**12 month.** Vaping nicotine in the past 12 months was reported by 23.7% of young adults in 2022 ([Table/Figure 31](#)).



**30 day.** Vaping nicotine in the past 30 days was reported by 17.2% of young adults in 2022 ([Table/Figure 33](#)), and highest at ages 21–24 (22.1–22.8%; [Table/Figure 34](#)).

**Trends.** Questions about vaping nicotine were added to the young adult surveys in 2017. The prevalence of vaping nicotine in the past 12 months has increased significantly since then, nearly doubling prevalence in the past 12 months (from 13.7% in 2017 to 23.7% in 2022; [Table/Figure 31](#)), and more than doubling prevalence in the past 30 days (from 6.1% in 2017 to 17.2% in 2022, [Table/Figure 33](#)). However, there were no significant 1-year increases in 2022.

### Any Drug Other Than Marijuana

An index of non-medical use of any drugs other than marijuana includes hallucinogens (including LSD), cocaine, amphetamines, sedatives (barbiturates), tranquilizers, and narcotics (opioids, including heroin).

**12 month.** Use of any drug other than marijuana was reported by 17.4% of young adults ([Table/Figure 35](#)), peaking at ages 25–26 at 21.3% ([Table/Figure 36](#)).

**Trends.** Past 12 month use of non-medical use of any drug other than marijuana remained steady among young adults (at 17.4% in 2022). There has been a significant decrease over the past 5 years from 19.5% in 2017 ([Table/Figure 35](#)).

### Other Substances: Prevalence & Trends

MTF includes specific questions about many individual substances. Below are prevalence levels and trends for use in the past 12 months among young adults for non-medical use of hallucinogens, narcotics (opioids), sedatives/tranquilizers, stimulants, and tobacco in other forms. Additional data are also available.<sup>6</sup>

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<sup>6</sup> [Monitoring the Future: Restricted-Use Panel Data, United States, 1976-2019 \(ICPSR 37072\)](#)

## Hallucinogens

Hallucinogen use was reported by 8.0% of young adults in 2022 ([Table/Figure 38](#)), ranging from 3.6–9.7% across ages 19 to 30 ([Figure/Table 39](#)). The 1-year change was not significant, although there were significant longer-term increases across the past 5 years (from 4.5% in 2017) and 10 years (from 3.4% in 2012; [Table/Figure 38](#)). This increase was driven by hallucinogens other than LSD, the prevalence of which significantly increased from over the past 5 years (from 3.1% in 2017) and 10 years (from 2.9% in 2012) to 7.0% in 2022 ([Table/Figure 42](#)).

On the other hand, LSD use was reported by 2.6% of young adults in 2022, which was a decrease from 2021 to 2022. This follows a longer-term increase in LSD use over the past 10 years (from 1.4% in 2012; [Table/Figure 40](#)).

MDMA (ecstasy, Molly) was the exception among hallucinogens, with prevalence at 3.2% of young adults in 2022 ([Table/Figure 44](#)) and no significant changes in the past 1 or 5 years.

## Narcotics (Opioids)

Heroin use was uncommon, with 0.2% of young adults reporting past 12 month use ([Table/Figure 46](#)), and has significantly decreased over the past 10 years from 0.5% in 2012.

Use of narcotics other than heroin was reported by 1.8% of young adults in the past 12 months ([Table/Figure 48](#)), which follows significant decreases over the past 5 years (from 4.6% in 2017) and 10 years (from 7.6% in 2012). Its peak was 9.2% in 2010 ([Table/Figure 48](#)).

Correspondingly, OxyContin appeared to have leveled at very low prevalence (1.4% in 2022), which was a decrease over the past 10 years (from 2.2% in 2012; [Table/Figure 50](#)). Past 12 month use of Vicodin was 1.7% in 2022 ([Table/Figure 51](#)) after significant declines over the past 5 years (from 2.8% in 2017) and 10 years (from 6.8% in 2012; [Table/Figure 51](#)).

### Sedatives & Tranquilizers

Sedative (barbiturate) use was reported by 1.4% of young adults in 2022 ([Table/Figure 52](#)), with significant decreases over the past 5 years (from 2.5% in 2017) and 10 years (from 2.8% in 2012). In 2022 prevalence was at an all-time low for young adults.

Tranquilizer use was reported by 2.2% of young adults in 2022 ([Table/Figure 54](#)), which is an all-time low for young adults. Significant decreases have been observed across 1 year (from 3.2% in 2021), 5 years (from 4.9% in 2017), and 10 years (from 5.5% in 2012).

### Stimulants

Amphetamine use was reported by 5.4% of young adults in 2022 ([Table/Figure 56](#)), ranging from 2.3% at ages 19–20 to 6.9% at ages 27–28 ([Table/Figure 57](#)). Use declined significantly among young adults over the past 5 years (from 7.5% in 2017) and 10 years (from 7.2% in 2012; [Table/Figure 56](#)).

Non-medical use of Adderall, an amphetamine stimulant also used in the treatment of ADHD, was reported by 6.9% of young adults in 2022 ([Table/Figure 58](#)), after a decline across the past 5 years (from 8.2% in 2017).

Non-medical use of Ritalin, a stimulant widely prescribed for the treatment of attention deficit hyperactivity disorder or ADHD, was reported by 1.5% of young adults in 2022 ([Table/Figure 59](#)), with no significant change over time.

Cocaine use was reported by 5.5% of young adults in 2022 ([Table/Figure 60](#)), peaking at 7.3% at ages 23–24 and then declining through age 30 ([Table/Figure 61](#)). The prevalence declined significantly over the past 5 years (6.5% in 2017), reversing the longer-term increase over the past 10 years, during which the all-time low was 4.0% in 2013 ([Table/Figure 60](#)).

Methamphetamine use has remained at 0.5–1.0% for young adults since 2008, at 0.8% in 2022 ([Table/Figure 62](#)).

### Any Prescription Drug

Non-medical use of any prescription drug was reported by 8.0% of young adults in the past 12 months, following significant declines over 5 years (from 13.0% in 2017) and 10 years (from 14.5% in 2012; [Table/Figure 63](#)).

### Tobacco, Other Forms

Use of small cigars has been trending downward over the past 5 and 10 years, reaching a new low of 10.5% of young adults in 2022 ([Table/Figure 65](#)).

Smoking tobacco with a hookah has decreased significantly over the past 5 and 10 years, with prevalence of use in the past 12 months at 8.0% of young adults in 2022 ([Table/Figure 66](#)).

Use of snus in the past 12 months was reported by 2.8% of young adults in 2022, which is a substantial decrease over the past 10 years (from 5.8% in 2012; [Table/Figure 67](#)).

# Chapter 3

## Midlife Adult Substance Use Prevalence and Trends

### Executive Summary

The most prevalent substances used by midlife adults ages 35 to 50 in 2022 were:

	Past 12 months	Past 30 days
<b>Alcohol</b>	84.8%	71.3%
<b>Marijuana</b>	27.9%	17.3%
<b>Cigarettes</b>	16.6%	12.2%
<b>Other Drugs<sup>1</sup></b>	11.9%	5.5 %

In addition, binge drinking (having 5+ drinks in a row in the past 2 weeks) was reported by 29.2%, and daily marijuana use (20+ occasions in the past 30 days) was reported by 6.5% of midlife adults ages 35 to 50 in 2022.

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<sup>1</sup> An index of non-medical use of any drugs other than marijuana includes hallucinogens (including LSD), cocaine, amphetamines, sedatives (barbiturates), tranquilizers, and narcotics (including heroin).

There were notable significant changes from 2021 to 2022 among midlife adults ages 35 to 50:

- Marijuana use in the past 12 months increased significantly.
- Binge drinking increased over the past year, 5 years, and 10 years. In 2022, it was 29.2% which is the highest level recorded (since it was first calculated in 2008).
- Hallucinogen use in the past 12 months has increased over the past 1, 5, and 10 years. In 2022 it was 4.1%, which is the highest level recorded (since it was first calculated in 2008).

Additional longer-term trends among midlife adults ages 35 to 50 in the past 10 years include:

- Marijuana use in the past 12 months and past 30 days have increased significantly over the past 5 and 10 years, reaching 27.9% and 17.3% in 2022 which were the highest levels recorded (since first calculated in 2008). However, the increase from 2021 to 2022 was only statistically significant for past 12 month use.
- Alcohol use in the past 12 months and past 30 days have slightly increased over the past 10 years (from 83.4% in 2012 to 84.8% in 2022, and from 68.1% to 71.3%, respectively).
- Cigarette smoking has decreased over the past decade, including smoking in the past 12 months (from 20.1% in 2012 to 16.6% in 2022), past 30 days (from 16.0% to 12.2%), daily (13.4% to 9.0%), and a half pack or more daily (from 10.5% to 6.2%). However, this decline stopped in 2022 when there were non-significant increases in all indicators.
- Over the past 5 and 10 years, we have seen significant increases in the past 12 month prevalence of amphetamine use (from 1.1% in 2012 to 3.2% in 2022)
- Over the past 10 years, there have been significant decreases in the past 12 month prevalence of nonmedical use of any prescription drug

(from 10.0% in 2012 to 8.3% in 2022), sedatives (from 2.7% to 2.2%), and narcotics other than heroin (from 4.9% to 3.1%).

## Introduction

MTF has been following individuals from modal age 18 throughout adulthood since 1976. In 2022, these surveys included follow-ups through age 60. In this chapter, we present the most recent prevalence estimates of substance use among midlife adults ages 35 to 50 combined and for separate age groups from 35 to 60 (ages 55 and 60 are not included in the combined midlife adult estimates because of differences in developmental stage, measurement, and dates when data first became available). We describe recent historical trends comparing these estimates to previous years. The data are presented in a series of figures and tables ordered by substance and timeframe of use (e.g., past 12 months, past 30 days). In the figures, estimates for ages 35 to 50 are combined, and the statistical significance levels of 1-year change and linear trend estimates across 5 and 10 years are provided. In the tables, estimates from adolescents at age 18 (presented [elsewhere](#)) and young adults at modal ages 19 to 30 (discussed in [Chapter 2](#)) are provided for comparison.

## Adjusted Lifetime Prevalence Estimates

Having longitudinal data allows us to compare participants' most recent responses about ever having used a substance in their lifetime to an adjusted lifetime prevalence estimate which aggregates data across multiple data collections. These estimates are shown in [Tables/Figures 68 through 76](#).

To be categorized as a lifetime user for the adjusted lifetime prevalence estimate, a participant must have reported either lifetime use in the most recent data collection and/or reported some use in their lifetime on at least two earlier data collections. Respondents ages 18 through 20 cannot have their responses adjusted on the basis of 2 earlier data collections; therefore,

adjusted lifetime prevalence estimates are calculated only for ages 21 and older.

We believe that the truth lies somewhere between the two estimates: the lower estimate may be depressed by tendencies to forget, forgive, repress, or conceal earlier use, whereas the upper estimate may include earlier response errors, intentional exaggerations, or incorrect definitions of drugs that respondents appropriately revised in later surveys.<sup>2</sup>

### **Most Common Substances: Prevalence & Trends**

The prevalence estimates and trends are first presented for the most commonly used substances including marijuana, alcohol, cigarettes, and vaping, as well as for the index of any drug other than marijuana. Estimates for other specific substances are presented in the final section of the chapter.

We focus on recent trends over the past 1 year, past 5 years, and past 10 years in substance use among middle adults ages 35 to 50 combined (shown in [Tables/Figures 3 through 67](#)). Data are given for each year in which they are available for that full age band. We present trends for one year (the percentage point change between 2021 and 2022), 5 years (based on a linear slope from 2017 to 2022), and 10 years (based on a linear slope from 2012 to 2022). Data on ages 55 and 60 have been available for only 10 and 5 years, respectively, so they are not yet included in the adult trend analysis (although their estimates are presented in the tables).

#### **Marijuana**

The legal status of marijuana at the state level, as well as how it is talked about in the literature and society at large, is changing. The term “marijuana” is increasingly being replaced with the term “cannabis.”

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<sup>2</sup> For a more detailed discussion see Johnston, L. D., & O'Malley, P. M. (1997). [The recanting of earlier-reported drug use by young adults](#). In L. Harrison & A. Hughes (Eds.), *The validity of self-reported drug use: Improving the accuracy of survey estimates* (NIDA Research Monograph No-167). Washington, DC: National Institute on Drug Abuse.



However, in our surveys and this publication, we predominantly continue to use the term marijuana.<sup>3</sup> We continue to update our surveys about modes of use; the estimates here include use of marijuana in any form, unless otherwise noted.

**Lifetime.** Among midlife adults, adjusted lifetime prevalence was lowest for those age 50 (at 68%; [Table/Figure 68](#)). These respondents graduated from high school in 1990, when marijuana and other drugs were at or near historic lows across the past four decades, suggesting a cohort effect. The highest adjusted lifetime prevalence levels were for those ages 55 (78%) and 60 (80%), who were in high school during years of peak marijuana use.<sup>4</sup>

**12 month.** Prevalence of marijuana use in the past 12 months for midlife adults ages 35 to 50 combined was 27.9% in 2022 ([Table/Figure 3](#)) and declined with age from 37.1% at ages 35 to 18.1% at age 55, with a slight rebound to 19.3% at age 60 ([Table/Figure 4](#)).

**30 day.** Marijuana use in the past 30 days was reported by 17.3% of midlife adults ages 35 to 50 in 2022 ([Table/Figure 5](#)) and ranged from 23.4% at age 35 to 12.7% at age 60 ([Table/Figure 6](#)).

**Daily.** Current daily marijuana use (defined as using on 20 or more occasions in the past 30 days) for ages 35 to 50 was 6.5% in 2022 ([Table/Figure 7](#)), ranging from 8.4% at age 35 to 3.9% at age 55 ([Table/Figure 8](#)).

Vaping marijuana in the past 12 months was reported by 9.0% of midlife adults ([Table/Figure 9](#)); 6.3% vaped marijuana in the past 30 days ([Table/Figure 11](#)). However, there were marked age differences, with a

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<sup>3</sup> National Institute on Drug Abuse. [Cannabis \(Marijuana\)](#). National Institute on Drug Abuse. [Cannabis \(Marijuana\) Drug Facts](#).

<sup>4</sup> Miech, R. A., Johnston, L. D., Patrick, M. E., O'Malley, P. M., Bachman, J. G., & Schulenberg J. E. (2023). [Monitoring the Future national survey results on drug use, 1975-2022: Secondary school students](#). Monitoring the Future Monograph Series. Ann Arbor: Institute for Social Research, The University of Michigan.

decrease in prevalence in past 12 month use observed from age 35 (13.6%) to age 60 (3.5%; [Table/Figure 10](#)).

**Trends.** Among those ages 35 to 50 combined, the prevalence of marijuana use in the past 12 months has more than doubled in the past 10 years to 27.9% in 2022. This follows significant increases over the past 1 year (from 24.8% in 2021), past 5 years (from 17.3% in 2017), and past 10 years (from 13.1% in 2012; [Table/Figure 3](#)). A similar pattern was seen for marijuana use in the past 30 days, which was 7.6% in 2012, 10.5% in 2017, and 17.3% in 2022 ([Table/Figure 5](#)). Again following the same pattern, daily marijuana use significantly increased over the past 5 years and 10 years (3.0% in 2012, 3.9% in 2017, 6.5% in 2022; [Table/Figure 7](#)). There were no significant increases in marijuana use in the past 30 days or daily among midlife adults from 2021 to 2022 ([Tables/Figures 5 and 7](#)). Vaping marijuana did not increase significantly from 2021 to 2022 but has reached all-time high prevalence levels (at 9.0% in the past 12 months, [Table/Figure 9](#); and at 6.3% in the past 30 days, [Table/Figure 11](#)).

## Alcohol

**Lifetime.** The vast majority of adults reported lifetime alcohol use, with 97–99% of those ages 35 to 60 ever drinking ([Table/Figure 69](#)).

**12 month.** Alcohol use in the past 12 months was also very high, with 84.8% of midlife adults ages 35 to 50 reporting it in 2022 ([Table/Figure 13](#)). Across age, past 12-month alcohol use ranging from 87.1% of those at age 40 to 80.3% at age 60 ([Table/Figure 14](#)).

**30 day.** 71.3% of midlife adults ages 35 to 50 used alcohol in the past 30 days in 2022 ([Table/Figure 15](#)), ranging from 73.3% at age 40 to 65.5% of those at age 60 ([Table/Figure 16](#)).

**Daily.** Current daily drinking (defined as 20 or more occasions in the past 30 days) was 8.5% for midlife adults ages 35 to 50 in 2022 ([Table/Figure 17](#)). Unlike other measures of alcohol use, daily drinking increased across age stratum, from 7.5% at age 35 to 13.0% at age 60 ([Table/Figure 18](#)).

Binge drinking (i.e., having 5+ drinks in a row in the past 2 weeks) was reported by 29.2% of midlife adults ages 35 to 50 in 2022 ([Table/Figure 19](#)). Its prevalence ranged from 31.7% at age 35 to 18.3% at age 60 ([Table/Figure 20](#)).

**Trends.** Alcohol use among midlife adults ages 35 to 50 has shown a gradual increase over the past 10 years. Past 12 month drinking prevalence has increased from 83.4% in 2012 to 84.8% in 2022 ([Table/Figure 13](#)), and past 30 day drinking prevalence has increased from 68.1% in 2012 to 71.3% in 2022 ([Table/Figure 15](#)). There have been no significant trends in daily use, other than an elevated level during the pandemic in 2020 ([Table/Figure 17](#)).

Binge drinking among midlife adults has increased over the past 1, 5, and 10 years (from 22.8% in 2012 to 29.2% in 2022; [Table/Figure 19](#)).

### Cigarettes

**12 month.** Among midlife adults ages 35 to 50, 16.6% smoked cigarettes in the past 12 months ([Table/Figure 23](#)), with prevalence across age ranging from 12.2% at age 50 to 19.6% at age 35 ([Table/Figure 24](#)).

**30 day.** 12.2% of midlife adults ages 35 to 50 smoked cigarettes in the past 30 days in 2022 ([Table/Figure 25](#)), with prevalence across age ranging 8.3% at age 50 to 13.7% at age 35 ([Table/Figure 26](#)).

**Daily.** Daily smoking in the past 30 days was reported by 9.0% of those ages 35 to 50 ([Table/Figure 27](#)), with relatively similar prevalence levels across age ranging from 7.3% at age 50 to 10.5% at age 60 ([Table/Figure 28](#)). Smoking a half pack or more per day was reported by 6.2% of those ages 35 to 50 ([Table/Figure 29](#)), but highest among those ages 55–60 (7.7–8.1%). Of all daily smokers at age 60, about 77% were smoking half pack a day or more.

**Trends.** Cigarette use has been steadily declining among midlife adults ages 35 to 50. Smoking in the past 12 months and past 30 days decreased over the past 5 and 10 years; however, the additional drop from 2021 to 2022 did not reach statistical significance for any of the indicators. Cigarette smoking

in the past 12 months has decreased from 20.1% in 2012 to 16.6% in 2022; [Table/Figure 23](#)) and in the past 30 days has decreased from 16.0% in 2012 to 12.2% in 2022 ([Table/Figure 25](#)). Daily smoking has decreased from 13.4% of midlife adults in 2012 to 9.0% in 2022 ([Table/Figure 27](#)). Prevalence of midlife adults ages 35 to 50 smoking half a pack or more per day has trended downward in the past 5 and 10 years, to 6.2% in 2022 ([Table/Figure 29](#)). In 2020 during the early months of the COVID-19 pandemic, half pack a day smoking had increased to 7.4% but has now returned to pre-pandemic levels.

### Vaping Nicotine

**12 month & 30 day.** In 2022, vaping nicotine in the past 12 months was reported by 6.7% of midlife adults ([Table/Figure 31](#)), with the highest level at age 35 (11.8%) and a decrease through age 60 (1.4%; [Table/Figure 32](#)). In the past 30 days, 5.2% of midlife adults ages 35 to 50 vaped nicotine ([Table/Figure 33](#)).

**Trends.** Reports of vaping nicotine among midlife adults ages 35 to 50 did not significantly increase from 2021 to 2022. In 2022, prevalence was 6.7% in the past 12 months ([Table/Figure 31](#)) and 5.2% in the past 30 days ([Table/Figure 33](#)).

### Any Drug Other Than Marijuana

An index of non-medical use of any drugs other than marijuana includes hallucinogens (including LSD), cocaine, amphetamines, sedatives (barbiturates), tranquilizers, and narcotics (including heroin). This is reported for ages 35 to 50 only, because some drugs are no longer measured after age 50.

**Lifetime.** Adjusted lifetime prevalence of using any drug other than marijuana ranged from 52% at age 35 to 63% at age 50 ([Table/Figure 70](#)).

**12 month.** 11.9% of midlife adults ages 35 to 50 reported using any drug in the index other than marijuana in the past 12 months ([Table/Figure 35](#)), ranging from 14.6% at age 35 to 9.0% at age 50 ([Table/Figure 36](#)).

**Trends.** Among those ages 35 to 50 it has remained stable over the past 10 years. In 2022, 11.9% reported using drugs other than marijuana in the past 12 months ([Table/Figure 35](#)) and 5.5% in the past 30 days ([Table/Figure 37](#)).

## Other Substances: Prevalence & Trends

MTF includes specific questions about many individual substances. Below are prevalence levels and trends for use in the past 12 months among midlife adults ages 35 to 50 for hallucinogens, narcotics (opioids), sedatives/tranquilizers, stimulants, and tobacco in other forms. Additional data are also available.<sup>5</sup>

### Hallucinogens

Hallucinogen use in the past 12 months was reported by 4.1% of adults ages 35 to 50 in 2022, which is the highest level recorded since it was first computed in 2008 ([Table/Figure 38](#)). There have been significant increases over the past 1 year, 5 years, and 10 years (from 0.5% in 2012, 1.0% in 2017, and 2.3% in 2021; [Table/Figure 38](#)). Use ranged from 2.0% at age 50 to 5.9% at age 35 ([Table/Figure 39](#)).

### Narcotics (Opioids)

Heroin use among adults ages 35 to 50 was 0.3% in 2022, with no significant change over the past 10 years ([Table/Figure 46](#)).

Use of narcotics other than heroin was reported by 3.1% in 2022, with a decrease over the past 5 years (from 4.3% in 2017) and 10 years (from 4.9% in 2012; [Table/Figure 48](#)). Use of heroin ([Table/Figure 47](#)) and narcotics other than heroin ([Table/Figure 49](#)) were generally lower for those in older strata in midlife.

### Sedatives & Tranquilizers

Sedative use in the past 12 months was reported by 2.2% of midlife adults ages 35 to 50 in 2022 ([Table/Figure 52](#)), which was a decrease over the past

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<sup>5</sup> [Monitoring the Future: Restricted-Use Panel Data, United States, 1976-2019 \(ICPSR 37072\)](#)

10 years from 2.7% in 2012. Use was between 1.7 and 3.0% at each age ([Table/Figure 53](#)).

Tranquilizer use in the past 12 months was reported by 3.6% of midlife adults ages 35 to 50, with no significant changes in the past 10 years ([Table/Figure 54](#)). Use ranged from 2.7 to 4.7% age all ages from 35 to 60 ([Table/Figure 55](#)).

### Stimulants

Amphetamine use was reported by 3.2% of adults ages 35 to 50 in 2022 ([Table/Figure 56](#)), ranging from 5.0% at age 35 to 0.7–0.8% at ages 55 and 60 ([Table/Figure 57](#)). There were increases over the past 5 and 10 years (from 1.1% in 2012 and 2.0% in 2017) but no additional significant increases from 2021 to 2022.

Cocaine use was reported by 2.9% of adults ages 35 to 50 in 2022 ([Table/Figure 60](#)). There has been a gradual increase in cocaine use among midlife adults over the past 10 years, from 1.8% in 2012 ([Table/Figure 60](#)). By age stratum, there was a range of 4.1% at age 35 descending to 0.9% at age 60 ([Table/Figure 61](#)).

# Chapter 4

## College and Noncollege Young Adult Substance Use

### Executive Summary

In 2022, differences in substance use for college vs. noncollege young adults ages 19 to 22 showed that:

- Noncollege young adults had higher prevalence of vaping marijuana in the past 12 months and past 30 days, using marijuana daily, daily and heavy cigarette smoking, and past 12 month use of sedatives and small cigars.
- College students had a higher prevalence of drinking in the past 12 months and past 30 days.

Trends over time revealed that:

- College young adults showed a marked decrease in use of drugs other than marijuana over the past 1, 5, and 10 years, to an all-time low (since it was first measured in 1980) of 2.9% in 2022. The decrease was especially clear for college women. Noncollege young adults were also at an all-time low following 5 and 10 year declines, although the decrease from 2021 to 2022 was not statistically significant.
- The gap between college and noncollege young adults in cigarette use closed as prevalence among both groups declined over the past two decades; the groups had similar levels of smoking cigarettes in the past 12 months and past 30 days in 2022.

- There has been convergence between college and noncollege young adults, and between men and women, in binge drinking. In 2022 there were no significant differences in binge drinking by college status or sex.

## Introduction

The Monitoring the Future (MTF) study tracks multiple forms of substance use among US college students and has done so for over four decades. This chapter focuses on the current prevalence and trends of drug use among college students and noncollege young adults, focusing on the typical college-attending ages of 19 to 22 (i.e., one to four years after high school).

MTF has been able to generate an unparalleled national sample of college students and same-aged young adults not in college every year since 1980 by following national samples of sequential high school classes after they graduate. The graduating class of 1976 was the first such class followed after high school graduation, and by 1980 the survey included college students 1 to 4 years past high school. The MTF follow up samples have provided excellent coverage of the U.S. college student population for over 4 decades (1980–2022); previous results are available [elsewhere](#).

MTF draws the sample prospectively in the senior year of high school, so it has considerable advantages for generating a broadly representative college sample, compared to relying on institution-based samples. In addition, the “before, during, and after college” design permits examination of the many changes associated with the college experience. The design also generates comparable panel data for young adults who are not attending college in the four years after high school, an important segment of the young adult population in its own right, but also as a comparison group for college students.

## Definition of College Students

**Ages 19 to 22.** We compare college students and nonstudents during the most typical ages for college attendance. According to statistics available



from the United States Census Bureau<sup>1</sup> and the National Center on Education Statistics,<sup>2</sup> this age band encompasses about 73% of all undergraduate college students enrolled full time in 2019.

**Full time students.** College students are defined here as young adults one to four years past high school who report that they were taking courses as full-time students in a 2-year or 4-year college or university at the beginning of March of the year in question. In other words, we consider full-time students at 2-year colleges, such as community colleges, and 4-year colleges and universities as college students. Nonstudents include those who are attending part time and those who previously attended college but are not currently attending. Full-time college students as defined here now constitute about three fifths (58%) of the entire follow up sample 1 to 4 years past high school, with roughly 800–1,500 respondents in the college sample each year.

The changing sex composition of college students is relevant to interpreting differences over time. The proportion of college students who are women has risen substantially since 1980. In 1980, women were about 50% of the college respondents, but in 2022 they were 66%. Below, we include prevalence and trends separately for college men and women to permit an assessment of what effect these changing proportions may have on the overall prevalence estimates.<sup>3</sup>

**Noncollege young adults.** The MTF panels also include high school graduates 1 to 4 years past high school who were not attending college full time. Having data for both groups is a rare and valuable feature of the MTF panel. As more young adults attend college, noncollege young adults comprise relatively smaller sample sizes (and thus lead to less precision in our estimates for noncollege young adults). Each year, roughly 500–1,700 respondents constitute the noncollege group 1 to 4 years beyond high

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<sup>1</sup> [U.S. Census Bureau](#).

<sup>2</sup> [National Center on Education Statistics](#). Fall 2019 Enrollment.

<sup>3</sup> In 2018, 2019, and 2020 only, the total sample included a small proportion who were missing on sex.

school. If data from the missing high school dropout segment—which has declined from around 15% to roughly 5% of a class cohort—were available for inclusion as part of the noncollege segment, any difference between the two groups in terms of their substance use would likely be greater.

## Most Common Substances: Prevalence & Trends for College & Noncollege

The prevalence estimates and trends are first presented for the most commonly used substances including marijuana, alcohol, cigarettes, vaping, and any drug other than marijuana. Prevalence estimates for other specific substances are then presented, followed by prevalence and trends by sex among college young adults for use of the most common substances.

### Marijuana

**12 month & 30 day.** Prevalence of marijuana use (in any form) in the past 12 months was similar for college (40.9%) and noncollege (41.6%) young adults in 2022 ([Table/Figure 77](#)). Likewise, prevalence of marijuana use in the past 30 days was similar for college (22.1%) and noncollege (28.2%) young adults in 2022 ([Table/Figure 78](#)).

**Daily.** The prevalence of current daily marijuana use was higher for noncollege (14.5%) compared to college (4.7%) young adults in 2022 ([Table/Figure 79](#)).

**Vaping marijuana.** Prevalence of vaping marijuana was higher for noncollege than for college young adults in the past 12 months (19.9% vs. 26.6%) and in the past 30 days (11.2% vs. 18.9%; [Tables/Figures 77–78](#)).

**Trends.** Marijuana use trends showed that, for both college and noncollege young adults, there were no significant trends over the past 1 or 5 years. However, there has been an increase over the past 10 years in marijuana use in the past 30 days (from 20.6% to 22.1% from 2012 to 2022 for college; from 19.5% to 28.2% for noncollege; [Table/Figure 80](#)). There has been a dramatic increase in vaping marijuana among both college (from 4.9% in

2017 to 11.2% in 2022) and noncollege (from 6.7% in 2017 to 18.9% in 2022) young adults since it was first measured in 2017 ([Table/Figure 82](#)).

## Alcohol

**12 month & 30 day.** College young adults had significantly higher prevalence than noncollege young adults of alcohol use in the past 12 months (80.5% vs. 72.7%) and past 30 days (62.5% vs. 54.1%; [Tables/Figures 77–78](#)).

**Daily.** The prevalence of daily drinking was similar for college (1.7%) and noncollege (1.6%) young adults ([Table/Figure 79](#)).

**Binge drinking.** In 2022, college (27.7%) and noncollege (23.9%) young adults had similar prevalence of binge drinking in the past 2 weeks in 2022 ([Table/Figure 79](#)). Binge drinking had typically been more prevalent among college than noncollege young adults over the years, but there is no significant difference in 2022 ([Table/Figure 86](#)).

**High-intensity drinking.** The prevalence of high-intensity drinking (i.e., 10+ drinks in a row) in the past 2 weeks was similar for college (5.2%) and noncollege (7.8%) young adults in 2022 ([Table/Figure 79](#)).

**Trends.** Trends showed that the prevalence of alcohol use in the past 30 days has been fairly flat among noncollege students over the past 10 years (at 54.1% in 2022), but decreased slightly among college young adults over the past 10 years (from 65.7% in 2012) to 62.5% in 2022 ([Table/Figure 84](#)). In the longer term, since the early 1980s, the predominant trend has been one of decline for both groups ([Table/Figure 84](#)). Among college and noncollege young adults there have been 10-year trends indicating a long-term decrease in binge drinking ([Table/Figure 86](#)). The pandemic-related decrease in 2020 and rebound in 2021 was concentrated in college young adults; noncollege young adults did not have a pandemic-related dip and rebound ([Table/Figure 86](#)).

## Cigarettes

**12 month & 30 day.** The prevalence of cigarette smoking had historically been higher among noncollege young adults, although the gap closed considerably in 2021. In 2022, college and noncollege young adults had similar prevalence levels of smoking in the past 12 months (15.6% vs. 16.7%) and past 30 days (6.4% vs. 7.0%; [Tables/Figures 77–78](#)) in 2022.

**Daily smoking.** Noncollege young adults continued to have higher prevalence of daily smoking (3.8% vs. 1.1%) and a half a pack a day or more smoking (1.6% vs. 0.1%) than college students in 2022 ([Table/Figure 79](#)).

**Trends.** Trends in cigarette use showed major decreases for both college and noncollege young adults over the past 5 and 10 years ([Table/Figure 88](#)). However, in 2022, there was a non-significant increase (from 6.0% to 6.4%) in smoking in the past 30 days among college students, and a non-significant decrease (from 9.8% to 7.0%) among noncollege young adults. There is no longer a significant difference in cigarette smoking in the past 30 days among college and noncollege young adults, which is a marked shift from differences observed historically since 1980 ([Table/Figure 88](#)).

## Vaping Nicotine

**12 month & 30 day.** The prevalence of nicotine vaping was similar among college and noncollege young adults in 2022 over the past 12 months (26.4% vs. 30.9%) and past 30 days (18.9% vs. 23.2%; [Tables/Figures 77–78](#)).

**Trends.** There have been dramatic increases in vaping nicotine since it was first reported in 2017, with significant increases over the past 5 years among college and noncollege young adults. Specifically, since 2017, past 30 day prevalence has more than tripled among college young adults (from 5.4% in 2017 to 18.9% in 2022) and among noncollege young adults (from 7.0% in 2017 to 23.2% in 2022; [Table/Figure 90](#)).

### Any Drug Other Than Marijuana

An index of non-medical use of any drugs other than marijuana includes hallucinogens (including LSD), cocaine, amphetamines, sedatives (barbiturates), tranquilizers, and narcotics (including heroin).

**12 month & 30 day.** Use of any drugs other than marijuana was similar among college and noncollege young adults in 2022, with no significant differences in prevalence of use over the past 12 months (10.7% vs. 14.0%) and the past 30 days (2.9% vs. 4.2%; [Tables/Figures 77–78](#)).

**Trends.** Among college young adults, use of any drug other than marijuana has decreased considerably over the past 1, 5, and 10 years (from 7.8% in 2012, 6.7% in 2017, and 5.5% in 2021, to 2.9% in 2022; [Table/Figure 92](#)). Among noncollege young adults, there was no significant change in 2022, although there has been a longer-term decline over the past 5 and 10 years (from 7.7% in 2012 and 9.0% in 2017, to 4.2% in 2022; [Table/Figure 92](#)). In 2022, college and noncollege young adults had all-time low prevalence levels of drug use other than marijuana (since the index was first available in 1980).

### Other Substances: Prevalence for College & Noncollege

MTF includes specific questions about many individual substances. Below are prevalence levels for college and noncollege young adults for use of hallucinogens, narcotics (opioids), sedatives/tranquilizers, stimulants, and tobacco in forms other than cigarettes in the past 12 months. Additional data are also available.<sup>4</sup>

#### Hallucinogens

The use of hallucinogens was similar for college and noncollege young adults in 2022, for use in the past 12 months (5.0 vs. 8.5%), LSD (1.4% vs.

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<sup>4</sup> [Monitoring the Future: Restricted-Use Panel Data, United States, 1976-2019 \(ICPSR 37072\)](#)

2.9%), hallucinogens other than LSD (4.6% vs. 7.2%), MDMA (ecstasy, Molly) (1.7% vs. 2.0%), and ketamine (0.4% vs. 0.9%; [Table/Figure 77](#)).

### Narcotics (Opioids)

Use of heroin and narcotics other than heroin without medical supervision in the past 12 months was similar for college and noncollege young adults in 2022 (less than 0.05% vs. 0.3% for heroin; 0.8% vs. 1.1% for other narcotics; [Table/Figure 77](#)). For specific drugs, Vicodin use among college and noncollege young adults (0.1% vs. 0.1%) and OxyContin use (0.1% vs. 1.6%<sup>5</sup>) was similar for college and noncollege young adults ([Table/Figure 77](#)).

### Sedatives & Tranquilizers

Noncollege young adults had somewhat higher prevalence levels than college young adults for use of sedatives (barbiturates) (2.7% vs. 0.6%). However, there were similar levels of use between college and noncollege young adults for tranquilizers (1.6% vs. 1.3%) in the past 12 months in 2022 ([Table/Figure 77](#)).

### Stimulants

Amphetamine use without a doctor's prescription in the past 12 months was similar for college and noncollege young adults (4.8% vs. 2.6%; [Table/Figure 77](#)). Amphetamine use prior to 2020 was typically higher among college than noncollege young adults, likely due to amphetamine use (and particularly use of Adderall) for study purposes.

Use of Adderall, a subclass of amphetamines, without medical supervision was similar for college and noncollege young adults in 2022 (3.6% vs. 4.5% in the past 12 months; [Table/Figure 77](#)).

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<sup>5</sup> The prevalence of OxyContin, a subclass of narcotics other than heroin, is asked on three questionnaire forms; the prevalence of narcotics other than heroin is asked on all six forms. When the prevalence of OxyContin slightly exceeds the prevalence of narcotics other than heroin, this is likely due to random variation in relatively small sample sizes with very low prevalence estimates.

The nonmedical use of Ritalin, another but now less common stimulant drug prescribed for ADHD, was low among college and noncollege young adults in 2022 (0.2% and 0.8%, respectively, in the past 12 months; [Table/Figure 77](#)).

Cocaine use in the past 12 months was the same (3.3%) among college and noncollege young adults in 2022 ([Table/Figure 77](#)).

Methamphetamine use in the past 12 months was similar for college and noncollege young adults (less than 0.05% vs. 0.5%) in 2022 ([Table/Figure 77](#)).

### Tobacco, Other Forms

Various forms of nicotine and tobacco use (in addition to cigarettes and vaping nicotine, reported above) are assessed. Other tobacco use in the past 12 months is higher for noncollege than college young adults for small cigars (9.3% vs. 2.9% in 2022). Noncollege young adults had a similar prevalence to college young adults of using snus (0.7% vs. less than 0.05% in the past 12 months) and tobacco with a hookah (5.7% vs. 5.6% in the past 12 months in 2022; [Table/Figure 77](#)).

## Sex Differences Among College Students: Most Common Substances

### Marijuana

In 2022, marijuana use in the past 30 days was higher, although not significantly so, among women in college (23.3%) compared to men in college (19.8%; [Table/Figure 78](#)). This crossover is due to somewhat stable levels of use among men and an increasing trend among women in college over the past 10 years (from 17.6% in 2012 to 23.3% in 2022; [Table/Figure 81](#)).

### Alcohol

In 2022, alcohol use in the past 30 days was more prevalent, although not significantly so, for college women (65.8%) than college men (56.8%) ([Table/Figure 85](#)). Trends have been flat for college women over the past 10

years, but college men have seen a significant 10 year decline (from 65.5% in 2012 to 56.8% in 2022; [Table/Figure 85](#)). Prior to 2000, college men consistently had a higher 30 day prevalence. For binge drinking, there have been significant decreases over the past 10 years for both college men and college women, with levels nearly the same at 26.8% and 27.5% in 2022 ([Tables/Figures 79](#) and [87](#)). This is an all-time low among college men since the value was first available in 1980 ([Table/Figure 87](#)).

### Cigarettes

Noncollege men had the highest prevalence of cigarette use in the past 12 months (at 20.2%; [Table/Figure 77](#)), but there were no sex differences for past 30 day use (at 8.2%; [Table/Figure 78](#)) or daily smoking (at 4.8%; [Table/Figure 79](#)). Trends in prevalence of cigarette use in the past 30 days were similar for college men and women, with a significant decrease over the past 10 years ([Table/Figure 89](#)).

### Vaping Nicotine

There were no significant differences in vaping nicotine for men compared to women in college or noncollege young adults ([Tables/Figures 77–78](#)). The prevalence of vaping nicotine changed very little from 2021 to 2022 ([Table/Figure 91](#)). College women had a significant 5 year increase from 2.7% in 2017 to 19.0% in 2022, now at 19.0% matching the prevalence among college men at 18.2% ([Table/Figure 91](#)).

### Any Drug Other Than Marijuana

Trends in 30 day use of any drugs other than marijuana have been showing declines. For men, these declines are over the past 10 years (from 9.0% in 2012 to 4.4% in 2022; [Table/Figure 93](#)). For women, there have been significant decreases over the past 1, 5, and 10 years (from 6.6% in 2012, 6.4% in 2017, and 4.9% in 2021, to 2.1% in 2022; [Table/Figure 93](#)).



# Chapter 5

## Demographic Subgroup Differences

### Executive Summary

Men had significantly higher prevalence levels of substance use than women in 2022 for many measures of the most commonly used substances. In particular:

- Men had higher prevalence than women among young adults ages 19 to 30 and midlife adults ages 35 to 50 for cigarette use in the past 30 days, alcohol use in the past 30 days, binge drinking in the past 2 weeks, vaping nicotine in the past 30 days, and use of any drug other than marijuana in the past 12 months and past 30 days.
- Men had higher prevalence among midlife adults ages 35 to 50, but not for young adults ages 19 to 30, for marijuana use in the past 12 months and past 30 days.
- Trends over time showed that sex differences have been narrowing for marijuana use (since about 2010), alcohol use (since about 1994), and binge drinking (since about 1989) among young adults.
- Sex differences have generally persisted for cigarette use among young adults, with men having a greater prevalence than women. Among midlife adults, men had a significant increase in their past 30 day cigarette use from 2021 (11.1%) to 2022 (14.3%), while women stayed stable at 10.3% in 2022.

Significant differences by racial/ethnic subgroups for young adults in 2022 showed that:

- White young adults reported the highest prevalence levels of alcohol use, binge drinking, cigarette smoking, nicotine vaping, and use of any drug other than marijuana. However, there were no significant differences between White and Hispanic young adults or midlife adults.
- There have been significant increases in binge drinking over the past 1, 5, and 10 years during midlife among women and White adults.
- Black and Hispanic young adults had lower rates of 12-month marijuana use for some years but in the past ten years have caught up to and passed White young adults. A similar trend is seen among midlife adults.

## Introduction

Trends in the prevalence of use are charted separately for young adults ages 19 to 30 and midlife adults ages 35 to 50 for different timeframes (e.g., 12 months, 30 days) by sex, and race/ethnicity. Trends are also shown in tables following each figure. Subgroup difference in trends by sex, and race/ethnicity for respondents ages 19 to 30 and 35 to 50 are presented in [Tables/Figures 94 through 127](#). Subgroup data for young adults ages 19 to 30 are available since 1988 and for midlife adults ages 35 to 50 since 2008. Sample sizes for subgroups shown range in size from 150 to 8,800 each year, depending on the variable and the year, with the smallest sample sizes being for Black and Hispanic young adults and midlife adults.

## Sex

Since the beginning of the study sex has been coded as male or female based on the question “What is your sex” asked in high school at age 18. However, in more recent surveys additional questions are asked and additional response options (e.g., nonbinary) are included. As data become available on

larger portions of the population, we will be able to examine differences among sexual and gender minority groups.

### Race/Ethnicity

Since 2005, the survey question has been, "How do you describe yourself? (Select one or more responses.)" Responses include: Black or African American; the following four which are combined for the Hispanic category: Mexican American or Chicano, Cuban American, Puerto Rican, Other Hispanic or Latino; Asian American; White (Caucasian); American Indian or Alaska Native; Native Hawaiian or Other Pacific Islander.

Trends by race/ethnicity are shown for the three largest subgroups: Black, Hispanic, and White. Trends for additional subgroups—such as Asian, American Indian, and Multiracial—are not shown here due to smaller subgroup sample sizes (and due to variation in substance use across these smaller categories, making them into an “other” category would not be informative).

### Most Common Substances

Results are reported for the most prevalent substances, including marijuana, alcohol, cigarettes, vaping nicotine, and any drug other than marijuana. Tests for significant differences by sex and race/ethnicity are shown in [Table/Figure 126](#) for young adults ages 19 to 30 and in [Table/Figure 127](#) for midlife adults ages 35 to 50. Differences for other subgroups and other substances have been reported [elsewhere](#) and can be examined in the data available for use by researchers.<sup>1</sup>

## Subgroup Differences & Trends by Substance

### Marijuana

**Sex.** Marijuana use among young adults and midlife adults in the past 12 months ([Tables/Figures 94](#) and [96](#)) and past 30 days ([Tables/Figures 98](#) and

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<sup>1</sup> [Monitoring the Future: Restricted-Use Panel Data, United States, 1976-2019 \(ICPSR 37072\)](#)

[100](#)) was slightly higher for men than women. The gap has narrowed as women's use has increased to catch up with men's, and the gap is now significant only for midlife adults ([Tables/Figures 98](#) and [100](#)).

**Race/Ethnicity.** In 2022 Black, White, and Hispanic young adults reported similarly high prevalence of marijuana use in the past 12 months and past 30 days ([Tables/Figures 95](#) and [99](#)). This ranking has shifted over time; the first time that the prevalence was higher among Black than White young adults was in 2014 for past 12 month use in 2012 for past 30 days use. From the late 1980s through 2007, White young adults consistently had significantly higher prevalence of marijuana use than Black and Hispanic young adults. For midlife adults ages 35 to 50, there were no significant differences by race/ethnicity in 2022 ([Tables/Figures 97](#) and [101](#)).

### Alcohol

**Sex.** Alcohol use in the past 30 days among young adults has shown narrowing differences by sex, and the difference between prevalence among men (68.6%) and women (66.7%) was not significant in 2022 ([Tables/Figures 102](#) and [126](#)). Among midlife adults ages 35 to 50, the sex differences have been more consistent, with prevalence of alcohol use in the past 30 days higher for men (74.1%) than women (68.7%) in 2022 ([Tables/Figures 104](#) and [127](#)). Binge drinking (5+ drinks) in the past 2 weeks showed a similar pattern, with a narrowing gap among young adults (35.7% of men and 26.0% of women in 2022; [Table/Figure 106](#)) and a more persistent difference among midlife adults (36.3% of men and 22.7% of women in 2022; [Table/Figure 108](#)).

**Race/Ethnicity.** Differences in alcohol use have persisted over time, with White young adults having the highest prevalence of alcohol use in the past 30 days in 2022 at 70.3%, followed by Hispanic (66.2%) and Black (60.7%) young adults ([Tables/Figures 103](#) and [126](#)). However, there has been a significant increase in alcohol use in the past 30 days over the last 5 years among Black young adults (from 51.7% in 2017; [Table/Figure 103](#)), and a slight decrease over the past 10 years among White young adults (from

72.8% in 2012; [Table/Figure 103](#)), narrowing the previous gaps. Among midlife adults, Black adults had lower levels of binge drinking (17.1%) than White (31.4%) and Hispanic (30.6%) adults in 2022 ([Tables/Figures 109](#) and [127](#)). There have been slight increases in alcohol use in the past 30 days among both Black and White midlife adults over the past 10 years ([Table/Figure 105](#)).

For binge drinking, the time-limited decrease associated with the COVID-19 pandemic in 2020 was seen for White young adults only ([Table/Figure 107](#)). In 2022, White (32.5%) and Hispanic (35.2%) young adults had higher prevalence of binge drinking than Black (20.2%) young adults ([Tables/Figures 107](#) and [126](#)). Similarly, for midlife adults, White (31.4%) and Hispanic (30.6%) midlife adults had a higher prevalence of binge drinking than Black (17.1%) midlife adults in 2022 ([Tables/Figures 109](#) and [127](#)). Among midlife adults ages 35 to 50, there have been significant increases in binge drinking over the past 1 year, 5 years, and 10 years among White midlife adults only ([Table/Figure 109](#)).

## Cigarettes

**Sex.** The sex difference in cigarette use among young adults has grown across the life of the study. There was a significant decline for men from 2021 to 2022. In 2022, cigarette use in the past 30 days was significantly different by sex and reported by 10.4% of young adult men compared to 6.7% of young adult women ([Table/Figure 110](#)). For midlife adults ages 35 to 50 in 2022, there was a sex difference (14.3% of men and 10.3% of women) in cigarette smoking in the past 30 days ([Tables/Figures 112](#) and [127](#)). Although there have been declines for both men and women over the past 10 years, there was a significant increase in cigarette use in the past 30 days among men from 11.1% in 2021 to 14.3% in 2022 ([Table/Figure 112](#)).

**Race/Ethnicity.** White young adults have consistently had the highest prevalence of smoking cigarettes in the past 30 days, and this persisted in 2022 (9.7% of White vs. 7.8% of Hispanic and 4.2% of Black young adults; [Table/Figure 111](#)). This pattern was also observed for midlife adults, with

Black midlife adults having significantly lower prevalence than White midlife adults, as was also true for Hispanic midlife adults ([Table/Figure 113](#)).

### Vaping Nicotine

**Sex.** The prevalence of nicotine vaping in the past 30 days was significantly higher for young adult men than women (19.6% vs. 14.6%) in 2022 ([Table/Figure 114](#)), although there was no significant sex difference among midlife adults (6.0% vs. 4.5% in 2022; [Table/Figure 116](#)).

**Race/Ethnicity.** White young adults have consistently had the highest prevalence of nicotine vaping (18.9% in 2022), although Hispanic young adults had a significant increase from 2021 to 2022 (at 17.2% in 2022; [Table/Figure 115](#)). Nicotine vaping prevalence also increased among Hispanic midlife adults, doubling from 3.0% in 2021 to 6.3% in 2022 ([Table/Figure 117](#)).

### Any Drug Other Than Marijuana

An index of non-medical use of any drugs other than marijuana includes hallucinogens (including LSD), cocaine, amphetamines, sedatives (barbiturates), tranquilizers, and narcotics (including heroin).

**Sex.** In 2022, young adult men continued to have higher prevalence levels of use of any illicit drug other than marijuana in the past 12 months (19.6% among men vs. 15.4% among women; [Table/Figure 118](#)) and past 30 days (7.9% vs. 5.6%; [Table/Figure 122](#)). Among midlife adults, men had higher prevalence of use of any illicit drug other than marijuana in the past 12 months (13.3% vs. 10.6%), but not in the past 30 days (6.0% vs. 5.0%; [Tables/Figures 120](#) and [124](#)).

**Race/Ethnicity.** White and Hispanic young adults have the highest prevalence of using any drug other than marijuana in the past 12 months in 2022 (20.7% among Hispanic and 17.8% among White young adults; [Table/Figure 119](#)). Black young adults had the lowest prevalence (8.3%) in 2022, and this has been true since this age group was first surveyed in 1988

([Table/Figure 119](#)). Among young adults there were no significant racial/ethnic differences for use of any illicit drug in the past 30 days in 2022 ([Table/Figure 123](#)). However, Black young adults have had the lowest prevalence of using any illicit drug other than marijuana for as long as data on this full age band were first available in 1988. These patterns held for use among midlife adults ages 35 to 50, as well, with White midlife adults having the highest prevalence in 2022 in the past 12 months and past 30 days (13.1% and 6.3%), followed by Hispanic (12.0% and 2.4%) and Black (5.2% and 2.5%) midlife adults; however, differences were smaller and there was not a significant difference between Hispanic and Black midlife adults for use in the past 30 days ([Tables/Figures 121](#) and [125](#)). The rankings of all three groups across years were less consistent than among the young adults, with Black and Hispanic young adults having more variability due to smaller sample sizes.

# Acknowledgments

First, we would like to acknowledge the thousands who have participated for many years in the Monitoring the Future (MTF) panel study. Their participation has provided critical data that have shaped the understanding of substance use and implementation of drug policy across the US. Their ongoing assistance and cooperation with the study is invaluable.

We are grateful for funding from the National Institute on Drug Abuse, which has consistently supported the Monitoring the Future Study for nearly fifty years.

We particularly want to acknowledge the tremendous contributions of two former co-authors of this annual report. Jerald G. Bachman retired in 2022 after decades of work with MTF. He was an original investigator on the MTF project from its inception in 1975. His leadership and dedication to MTF helped guide the course of the study and ensure its continuation for years to come. John E. Schulenberg, who passed away suddenly in February 2023, had been an investigator on the MTF project since 1991 and was the Principal Investigator of the MTF Panel from 2017–2022. His direction, insight, and mentorship have been critical to the continued success of the MTF project and will always be remembered.

We appreciate our colleagues in the Survey Research Center, Institute for Social Research, for their insights and assistance in the design and implementation of the study. A special thanks to the MTF data processing and administrative teams for their work on these annual reports. The



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Allison Esper	Ana Murphy	Yvonne Terry-McElrath
Scott Franz	Jeffrey Nicholls	Jing Wang
Andria Goedert	Patrick O'Neill	Nathan Williams



**TABLE/FIGURE 2**  
**Monitoring the Future Panel Study Weighted Response Rates (Proportion Responding)**  
**by Cohort, 1976-2022**

Cohort	N per Cohort	Ages 19/20	Ages 21/22	Ages 23/24	Ages 25/26	Ages 27/28	Ages 29/30	Age 35	Age 40	Age 45	Age 50	Age 55	Age 60
1976	2224	0.717	0.794	0.788	0.762	0.737	0.731	0.661	0.627	0.590	0.566	0.535	0.520
1977	2358	0.843	0.821	0.807	0.759	0.750	0.716	0.679	0.635	0.630	0.592	0.559	0.548
1978	2411	0.846	0.821	0.796	0.759	0.738	0.699	0.651	0.614	0.605	0.585	0.543	0.531
1979	2437	0.851	0.811	0.763	0.766	0.724	0.700	0.650	0.594	0.580	0.560	0.538	0.525
1980	2458	0.859	0.807	0.783	0.767	0.721	0.695	0.654	0.597	0.574	0.563	0.542	0.514
1981	2458	0.842	0.785	0.778	0.723	0.694	0.672	0.604	0.565	0.540	0.505	0.478	
1982	2437	0.838	0.780	0.749	0.699	0.664	0.617	0.569	0.568	0.528	0.505	0.463	
1983	2426	0.811	0.782	0.724	0.688	0.648	0.599	0.548	0.544	0.497	0.466	0.459	
1984	2438	0.800	0.760	0.715	0.686	0.628	0.587	0.508	0.505	0.472	0.453	0.440	
1985	2467	0.802	0.726	0.694	0.646	0.590	0.562	0.493	0.479	0.467	0.426	0.413	
1986	2461	0.758	0.720	0.675	0.614	0.573	0.534	0.512	0.478	0.437	0.394		
1987	2466	0.733	0.695	0.661	0.590	0.552	0.537	0.499	0.456	0.417	0.382		
1988	2456	0.762	0.729	0.663	0.615	0.596	0.548	0.517	0.471	0.442	0.441		
1989	2478	0.741	0.696	0.626	0.569	0.534	0.511	0.466	0.427	0.396	0.393		
1990	2470	0.724	0.649	0.589	0.546	0.521	0.485	0.426	0.406	0.370	0.360		
1991	2473	0.741	0.664	0.607	0.549	0.516	0.489	0.436	0.398	0.368			
1992	2479	0.747	0.674	0.630	0.566	0.532	0.522	0.459	0.425	0.373			
1993	2449	0.703	0.658	0.601	0.547	0.508	0.513	0.445	0.389	0.368			
1994	2467	0.693	0.653	0.582	0.537	0.519	0.479	0.425	0.379	0.375			
1995	2469	0.700	0.635	0.583	0.544	0.550	0.501	0.449	0.411	0.385			
1996	2440	0.691	0.614	0.562	0.545	0.515	0.491	0.433	0.387				
1997	2457	0.652	0.579	0.542	0.542	0.488	0.478	0.408	0.361				
1998	2454	0.642	0.561	0.551	0.508	0.464	0.454	0.383	0.352				
1999	2459	0.614	0.537	0.559	0.479	0.468	0.453	0.383	0.372				
2000	2456	0.593	0.580	0.535	0.475	0.459	0.436	0.375	0.345				
2001	2448	0.559	0.576	0.503	0.472	0.464	0.433	0.359					
2002	2453	0.613	0.574	0.521	0.491	0.472	0.438	0.375					
2003	2449	0.605	0.526	0.488	0.463	0.422	0.401	0.364					
2004	2450	0.580	0.520	0.491	0.454	0.415	0.381	0.347					
2005	2450	0.534	0.519	0.488	0.422	0.397	0.376	0.347					
2006	2452	0.506	0.501	0.474	0.439	0.386	0.393						
2007	2452	0.552	0.493	0.482	0.428	0.402	0.402						
2008	2454	0.551	0.490	0.449	0.398	0.404	0.398						
2009	2453	0.507	0.461	0.404	0.346	0.351	0.351						
2010	2450	0.485	0.433	0.400	0.363	0.371	0.349						
2011	2450	0.470	0.408	0.367	0.351	0.364	— <sup>a</sup>						
2012	2452	0.442	0.384	0.378	0.391	0.352							
2013	2450	0.423	0.361	0.360	0.392	— <sup>a</sup>							
2014	2450	0.382	0.363	0.378	0.352								
2015	2451	0.335	0.340	0.375	— <sup>a</sup>								
2016	2450	0.347	0.378	0.339									
2017	2452	0.362	0.344	— <sup>a</sup>									
2018	2450	0.374	0.350										
2019	2450	0.312	— <sup>a</sup>										
2020	1745	0.428											
2021	2450	— <sup>a</sup>											

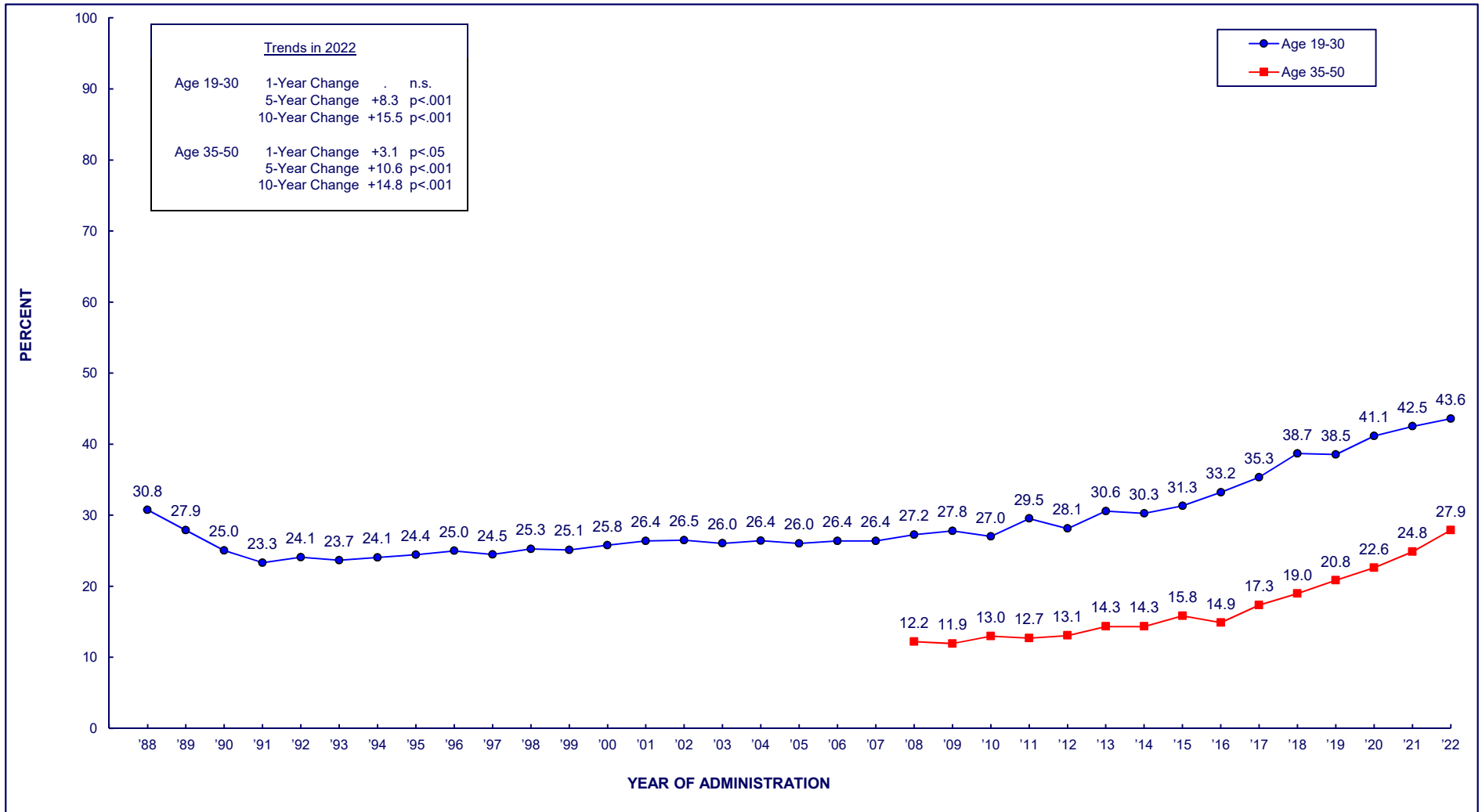
Notes: All response rates presented are weighted by drug user strata. Denominators include all respondents other than those coded as deceased or ineligible/foreign exchange.

<sup>a</sup> Response rates not reported as only the first half sample of the noted cohort has been able to complete participation at the specified follow up age as of 2022 data collection.

TABLE/FIGURE 3

**MARIJUANA**

**Trends in 12-Month Prevalence  
among Respondents of Modal Ages 19 through 50, by Age Group**



(Age-specific data provided in the following table.)

**TABLE/FIGURE 4**  
**MARIJUANA**  
**Trends in 12-Month Prevalence**  
**among Respondents of Modal Ages 18 through 60, by Age Group**

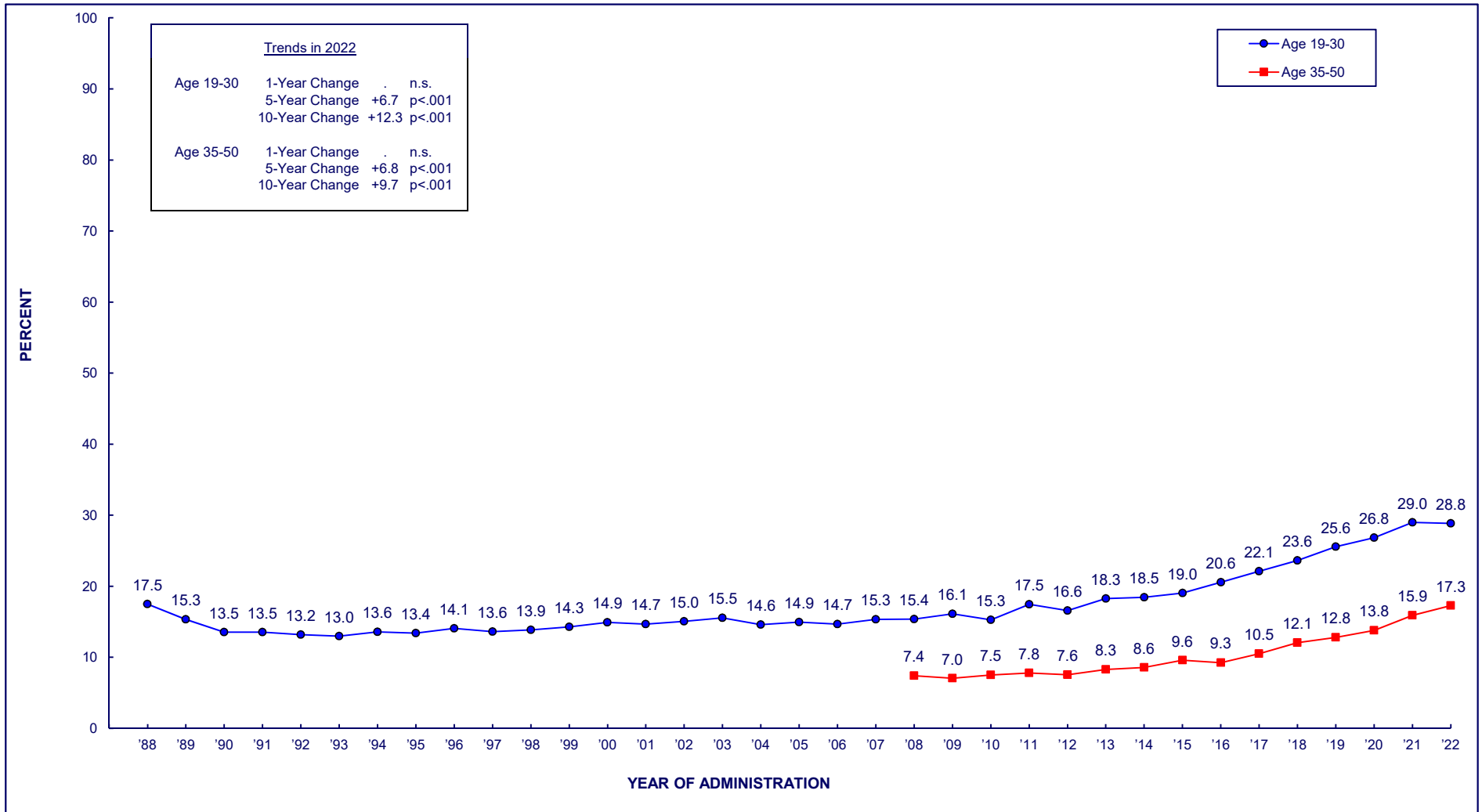
<u>Year</u>	<u>Age 18</u>	<u>Ages 19–20</u>	<u>Ages 21–22</u>	<u>Ages 23–24</u>	<u>Ages 25–26</u>	<u>Ages 27–28</u>	<u>Ages 29–30</u>	<u>Age 35</u>	<u>Age 40</u>	<u>Age 45</u>	<u>Age 50</u>	<u>Age 55</u>	<u>Age 60</u>
1976	44.5												
1977	47.6												
1978	50.2	52.5											
1979	50.8	50.8											
1980	48.8	50.5	50.4										
1981	46.1	49.4	50.7										
1982	44.3	46.2	46.3	46.7									
1983	42.3	42.9	45.5	43.6									
1984	40.0	42.4	43.4	38.7	38.6								
1985	40.6	41.9	40.7	41.5	39.7								
1986	38.8	39.6	40.0	38.1	34.2	33.1							
1987	36.3	36.6	37.8	34.3	34.8	32.3							
1988	33.1	34.6	33.5	32.9	30.7	27.1	25.5						
1989	29.6	30.5	31.6	28.2	26.1	26.4	25.0						
1990	27.0	27.8	27.6	27.0	24.5	23.3	20.4						
1991	23.9	25.3	25.9	23.7	22.8	21.4	21.0						
1992	21.9	27.5	25.8	25.7	23.7	22.1	20.2						
1993	26.0	26.7	25.4	25.7	22.7	22.4	19.4						
1994	30.7	29.6	29.8	24.4	21.6	19.5	20.0	15.4					
1995	34.7	30.9	27.1	25.1	23.4	20.7	19.6	17.3					
1996	35.8	33.3	30.0	27.3	21.3	20.8	17.7	16.1					
1997	38.5	34.5	29.6	24.0	23.5	17.7	18.3	17.5					
1998	37.5	36.7	30.7	25.5	21.7	20.9	16.9	14.7	16.3				
1999	37.8	37.6	30.6	26.7	21.9	18.4	16.5	15.0	14.2				
2000	36.5	35.0	33.1	26.1	23.0	19.3	19.0	15.3	13.7				
2001	37.0	34.1	35.9	28.1	24.3	19.8	17.3	14.7	12.2				
2002	36.2	34.1	31.9	31.6	24.0	19.2	19.8	14.5	14.1				
2003	34.9	34.4	33.3	29.4	23.9	20.7	16.9	13.7	13.3	15.0			
2004	34.3	34.3	31.9	28.0	27.7	22.0	16.4	12.9	15.0	12.3			
2005	33.6	34.0	32.2	26.5	25.9	19.8	18.7	13.5	15.8	11.9			
2006	31.5	33.7	31.3	28.4	22.9	21.9	20.6	11.0	11.6	12.0			
2007	31.7	33.0	31.2	28.0	24.9	23.8	17.6	11.7	12.5	12.7			
2008	32.4	30.7	33.6	27.9	25.1	22.9	23.2	14.3	11.6	11.0	12.1		
2009	32.8	32.1	32.3	30.2	25.9	23.8	22.3	12.3	12.4	12.7	10.2		
2010	34.8	29.1	33.4	31.0	24.8	21.1	22.2	14.5	13.3	13.2	11.1		
2011	36.4	34.5	34.7	30.8	28.5	26.8	21.3	17.9	9.9	12.2	11.0		
2012	36.4	33.3	32.4	29.7	26.4	27.0	19.4	14.2	13.0	12.7	12.4		
2013	36.4	34.6	36.9	33.7	28.6	26.4	23.0	18.2	15.4	12.5	11.9	12.8	
2014	35.1	37.6	34.3	30.6	29.0	27.1	23.7	19.7	13.2	11.1	13.7	11.7	
2015	34.9	39.2	37.1	33.2	31.9	25.8	22.1	20.8	14.2	14.8	13.9	12.8	
2016	35.6	38.9	43.1	34.2	28.4	29.1	27.0	19.3	16.9	11.7	12.4	12.9	
2017	37.1	38.4	41.4	36.0	34.8	33.8	28.8	23.8	17.4	15.0	14.0	15.3	
2018	35.9	41.3	42.5	46.0	37.2	32.3	34.0	23.6	21.6	18.2	13.1	16.6	16.8
2019	35.7	38.1	43.5	40.5	37.8	34.0	38.1	26.7	23.9	16.4	17.5	17.6	13.7
2020	35.2	38.4	44.7	41.8	45.1	41.7	35.1	27.0	26.6	20.3	17.2	16.9	17.9
2021	30.5	39.3	43.3	45.1	43.9	42.1	40.5	32.1	28.5	25.2	16.2	15.6	15.7
2022	30.7	37.8	42.7	44.7	45.3	46.6	41.5	37.1	28.9	25.0	20.6	18.1	19.3

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

TABLE/FIGURE 5

**MARIJUANA**

**Trends in 30-Day Prevalence  
among Respondents of Modal Ages 19 through 50, by Age Group**



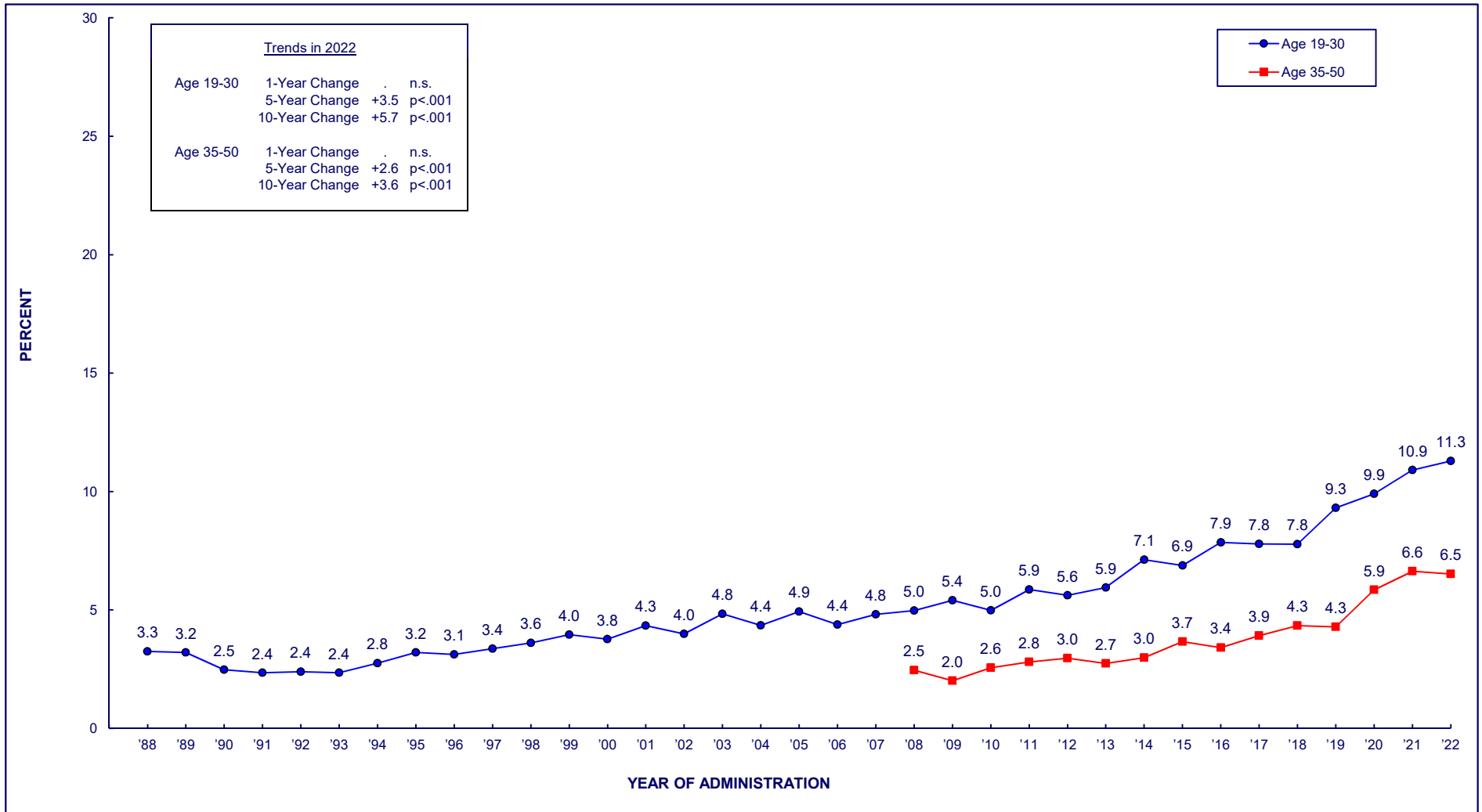
(Age-specific data provided in the following table.)

**TABLE/FIGURE 6**  
**MARIJUANA**  
**Trends in 30-Day Prevalence**  
**among Respondents of Modal Ages 18 through 60, by Age Group**

<b>Year</b>	<b>Age 18</b>	<b>Ages 19–20</b>	<b>Ages 21–22</b>	<b>Ages 23–24</b>	<b>Ages 25–26</b>	<b>Ages 27–28</b>	<b>Ages 29–30</b>	<b>Age 35</b>	<b>Age 40</b>	<b>Age 45</b>	<b>Age 50</b>	<b>Age 55</b>	<b>Age 60</b>
1976	32.2												
1977	35.4												
1978	37.1	37.9											
1979	36.5	37.1											
1980	33.7	34.6	36.3										
1981	31.6	33.8	35.0										
1982	28.5	29.5	29.5	31.0									
1983	27.0	25.9	28.8	29.7									
1984	25.2	25.5	26.7	25.8	25.4								
1985	25.7	23.9	25.5	26.5	25.1								
1986	23.4	23.3	23.6	23.6	20.2	21.3							
1987	21.0	20.8	22.4	19.9	21.0	20.7							
1988	18.0	19.1	18.8	18.0	17.4	16.5	15.1						
1989	16.7	15.1	16.4	16.0	14.9	14.3	15.4						
1990	14.0	14.9	13.9	13.7	13.5	13.3	11.9						
1991	13.8	13.1	14.2	13.4	13.7	14.0	12.8						
1992	11.9	14.7	14.0	12.0	13.1	13.0	12.5						
1993	15.5	13.9	13.5	13.1	13.2	12.7	11.7						
1994	19.0	16.0	17.0	13.1	12.3	11.3	12.1	9.1					
1995	21.2	18.6	14.9	12.4	11.9	10.9	11.8	11.2					
1996	21.9	19.5	16.1	15.3	12.8	11.0	10.1	8.6					
1997	23.7	20.0	18.5	13.2	10.5	10.3	9.7	10.6					
1998	22.8	19.0	17.1	14.3	13.1	11.0	9.2	8.9	9.7				
1999	23.1	22.2	17.3	15.2	12.0	9.2	10.2	9.0	8.6				
2000	21.6	21.0	20.1	14.2	12.8	11.2	10.8	8.9	8.6				
2001	22.4	20.4	21.8	14.4	14.3	9.8	8.4	8.9	8.3				
2002	21.5	20.5	18.4	17.3	15.2	9.6	10.3	9.6	7.8				
2003	21.2	22.2	18.6	18.7	14.3	12.1	8.9	7.9	8.2	9.1			
2004	19.9	19.5	18.0	15.8	15.4	11.8	8.4	8.0	9.1	6.6			
2005	19.8	18.4	17.6	14.0	16.0	11.8	12.1	7.5	9.2	7.2			
2006	18.3	17.9	17.1	16.5	13.2	13.4	10.3	6.0	7.2	6.6			
2007	18.8	17.4	19.3	16.6	15.0	13.6	10.3	6.0	7.6	7.2			
2008	19.4	16.8	17.8	16.4	13.3	14.2	13.4	8.2	7.5	6.5	7.8		
2009	20.6	18.7	19.0	17.6	16.0	13.5	11.9	6.3	7.2	8.3	6.1		
2010	21.4	17.7	17.4	17.5	13.0	13.7	12.2	8.5	7.6	7.4	6.6		
2011	22.6	20.5	21.3	17.6	17.2	16.3	11.4	10.9	6.2	8.2	6.0		
2012	22.9	21.1	19.0	17.8	14.7	14.8	11.7	9.1	6.9	6.7	7.5		
2013	22.7	22.4	23.7	20.1	15.4	15.0	12.9	10.8	9.6	5.8	7.4	8.2	
2014	21.2	25.1	19.8	18.6	18.1	16.5	13.3	11.1	7.1	6.9	9.2	8.4	
2015	21.3	23.8	23.6	19.9	19.8	14.3	13.6	13.1	8.8	8.4	8.3	8.8	
2016	22.5	22.0	29.0	20.8	18.3	18.2	15.9	11.1	11.0	7.3	8.0	6.5	
2017	22.9	22.1	26.5	23.8	22.8	20.6	17.5	14.1	10.3	8.7	9.3	10.3	
2018	22.2	25.1	23.6	26.5	24.0	21.4	21.5	15.0	13.6	11.0	9.0	10.0	11.3
2019	22.3	24.7	29.6	25.5	24.6	25.1	24.3	16.4	14.9	10.2	10.3	12.5	9.1
2020	21.1	22.1	28.7	27.6	31.2	27.0	23.7	16.7	16.0	11.9	11.0	10.7	11.6
2021	19.5	28.8	29.4	28.4	31.9	28.5	27.0	19.0	19.1	17.0	10.5	9.7	11.1
2022	20.2	23.9	26.0	32.9	31.5	28.6	27.9	23.4	18.4	15.5	12.0	12.2	12.7

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

Trends in 30-Day Prevalence of Daily Use  
among Respondents of Modal Ages 19 through 50, by Age Group



Trends in 2022			
Age 19-30	1-Year Change	.	n.s.
	5-Year Change	+3.5	p<.001
	10-Year Change	+5.7	p<.001
Age 35-50	1-Year Change	.	n.s.
	5-Year Change	+2.6	p<.001
	10-Year Change	+3.6	p<.001

(Age-specific data provided in the following table.)



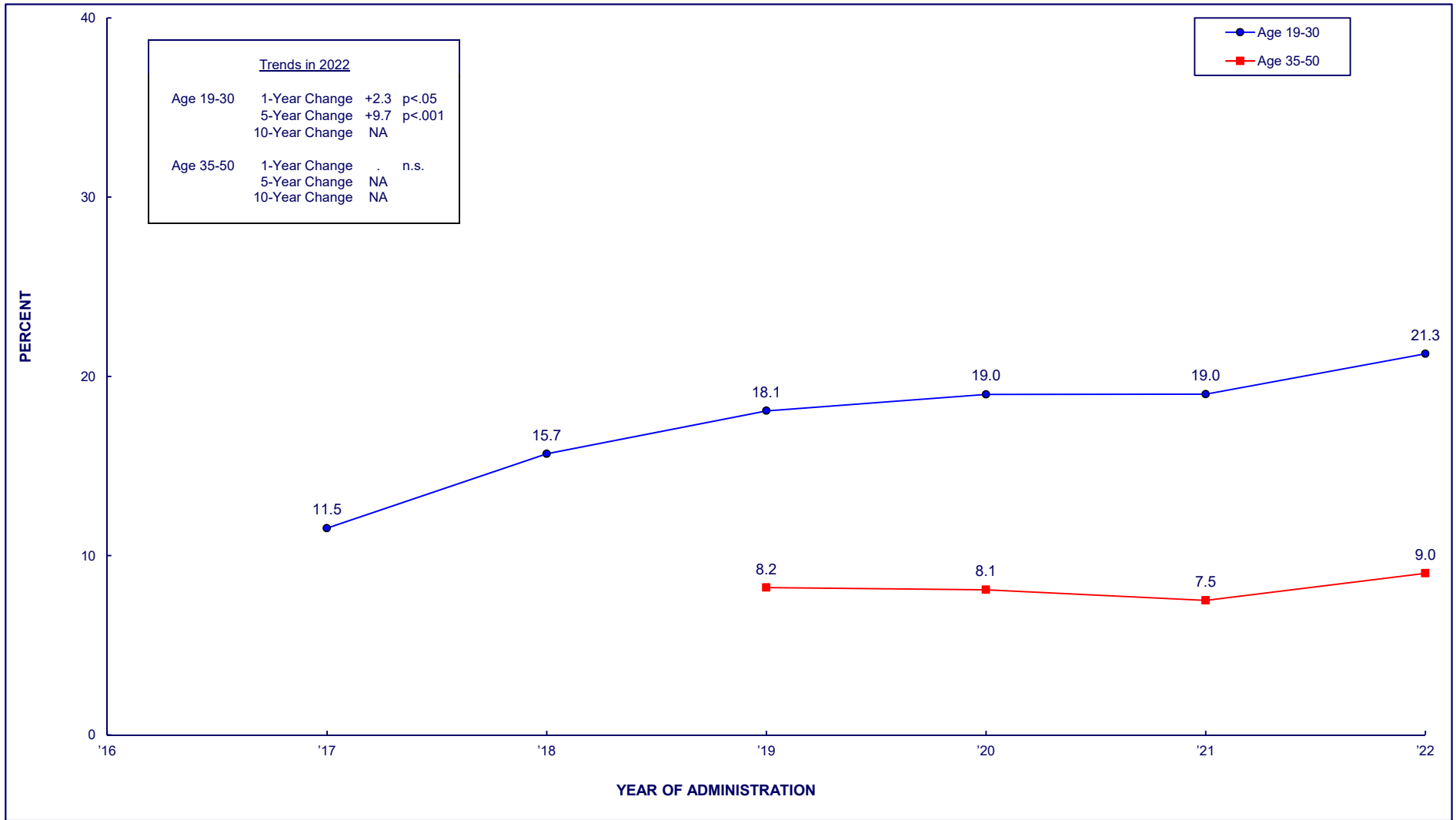
**TABLE/FIGURE 8**  
**MARIJUANA**  
**Trends in 30-Day Prevalence of Daily Use**  
**among Respondents of Modal Ages 18 through 60, by Age Group**

<u>Year</u>	<u>Age 18</u>	<u>Ages 19-20</u>	<u>Ages 21-22</u>	<u>Ages 23-24</u>	<u>Ages 25-26</u>	<u>Ages 27-28</u>	<u>Ages 29-30</u>	<u>Age 35</u>	<u>Age 40</u>	<u>Age 45</u>	<u>Age 50</u>	<u>Age 55</u>	<u>Age 60</u>
1976	8.2												
1977	9.1												
1978	10.7	10.5											
1979	10.3	10.8											
1980	9.1	8.3	11.4										
1981	7.0	7.7	9.4										
1982	6.3	6.3	6.4	8.3									
1983	5.5	5.2	5.8	6.7									
1984	5.0	4.8	5.3	5.8	6.3								
1985	4.9	4.6	4.5	5.4	6.0								
1986	4.0	3.5	4.2	4.7	3.6	4.6							
1987	3.3	3.3	3.9	4.4	4.6	4.8							
1988	2.7	3.1	3.6	3.0	3.6	3.1	3.0						
1989	2.9	2.7	3.1	2.9	3.2	4.0	3.3						
1990	2.2	2.5	2.4	2.6	2.6	2.4	2.2						
1991	2.0	2.1	2.2	2.0	2.7	2.6	2.5						
1992	1.9	1.5	2.4	2.2	2.8	2.5	2.9						
1993	2.4	2.0	2.1	2.5	2.4	2.3	2.7						
1994	3.5	3.4	3.0	3.0	2.4	2.4	2.3	2.3					
1995	4.6	5.0	3.3	3.4	2.4	2.8	2.4	2.4					
1996	4.9	4.7	3.1	2.6	3.5	2.3	2.5	2.1					
1997	5.8	5.1	5.3	2.7	2.3	2.6	2.3	3.5					
1998	5.6	5.1	5.2	3.4	2.9	2.7	2.5	2.4	3.2				
1999	6.0	6.1	4.5	5.1	3.0	3.0	2.2	1.9	2.1				
2000	6.0	5.7	5.0	3.7	3.5	2.5	2.4	2.7	2.7				
2001	5.8	6.2	6.6	4.5	4.5	2.0	2.6	2.5	1.7				
2002	6.0	5.7	5.3	5.6	2.5	2.3	2.9	3.1	2.9				
2003	6.0	6.4	6.7	6.7	3.4	4.2	2.1	2.4	2.4	3.1			
2004	5.6	5.7	4.8	5.6	5.6	2.9	1.9	2.1	1.9	2.1			
2005	5.0	6.3	4.9	4.8	6.2	3.2	4.2	2.2	1.9	2.1			
2006	5.0	5.2	4.5	5.2	4.6	4.6	2.3	2.6	3.0	1.3			
2007	5.1	4.4	5.5	5.0	4.7	5.7	3.5	2.5	2.6	2.9			
2008	5.4	4.2	5.8	4.6	5.6	4.2	5.4	2.3	2.6	2.7	2.2		
2009	5.2	5.4	6.0	6.1	5.9	3.8	5.2	1.9	1.9	2.3	2.0		
2010	6.1	5.6	5.4	6.1	3.5	5.2	4.1	3.4	2.7	2.1	2.0		
2011	6.6	5.9	6.3	6.8	7.4	4.2	4.2	3.0	2.7	3.1	2.4		
2012	6.5	6.2	5.8	6.5	5.5	4.9	4.8	3.9	3.0	2.3	2.7		
2013	6.5	6.4	7.9	6.9	5.7	5.5	3.0	3.7	2.8	2.7	2.0	2.9	
2014	5.8	8.9	7.2	6.9	6.9	7.2	5.8	4.8	2.0	2.5	2.8	2.3	
2015	6.0	9.2	6.4	7.8	7.3	5.8	5.2	4.9	4.0	2.8	3.1	2.8	
2016	6.0	6.4	10.0	9.3	6.8	6.7	7.7	3.9	4.3	3.0	2.5	3.0	
2017	5.9	5.9	9.8	9.2	8.2	6.3	7.4	5.2	4.7	3.3	2.7	3.2	
2018	5.8	6.4	7.2	9.4	9.7	6.9	6.9	4.6	5.4	3.6	3.9	3.6	4.7
2019	6.4	6.9	10.4	10.1	9.7	10.6	8.3	5.2	6.0	2.7	3.5	3.7	2.7
2020	6.9	5.6	12.3	10.2	11.0	11.2	8.3	8.0	6.4	4.8	4.4	3.6	4.7
2021	5.8	11.1	9.5	10.5	12.7	9.8	11.9	9.5	8.2	6.3	3.5	4.5	4.3
2022	6.3	7.0	11.3	13.8	10.9	11.3	11.3	8.4	7.6	4.7	5.4	3.9	4.9

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

**TABLE/FIGURE 9**  
**VAPING MARIJUANA**

**Trends in 12-Month Prevalence**  
**among Respondents of Modal Ages 19 through 50, by Age Group**



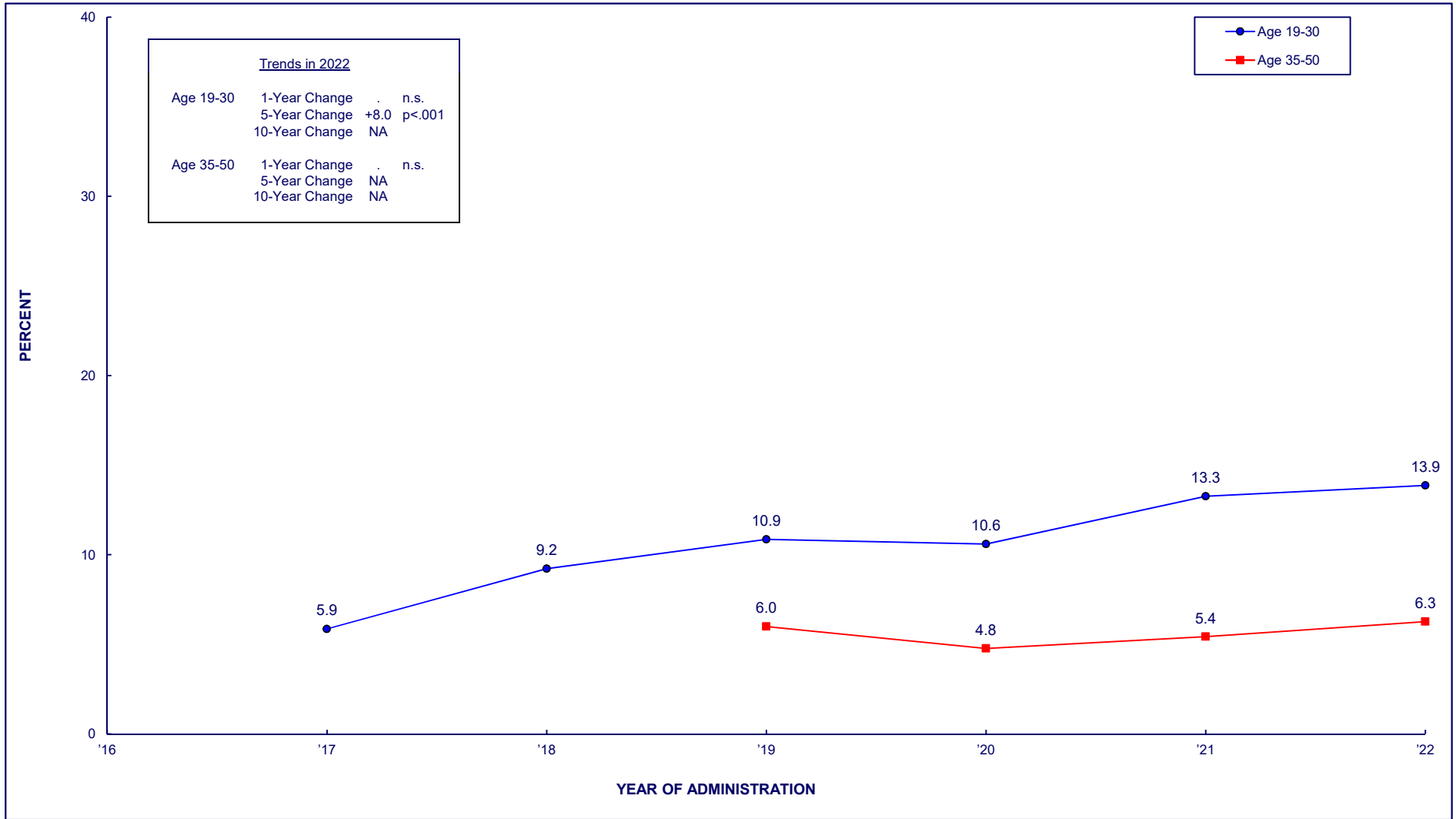
**TABLE/FIGURE 10**  
**VAPING MARIJUANA**  
**Trends in 12-Month Prevalence**  
**among Respondents of Modal Ages 18 through 60, by Age Group**

	<u>Age 18</u>	<u>Ages 19–20</u>	<u>Ages 21–22</u>	<u>Ages 23–24</u>	<u>Ages 25–26</u>	<u>Ages 27–28</u>	<u>Ages 29–30</u>	<u>Age 35</u>	<u>Age 40</u>	<u>Age 45</u>	<u>Age 50</u>	<u>Age 55</u>	<u>Age 60</u>
<b>2017</b>	9.5	11.0	11.3	17.2	11.2	11.7	6.6						
<b>2018</b>	13.1	13.8	15.7	18.4	20.5	11.8	14.3						
<b>2019</b>	20.8	18.1	20.6	20.0	17.6	15.8	17.1	16.0	8.6	4.2	5.8	5.4	3.7
<b>2020</b>	22.1	22.4	23.3	18.2	17.4	19.8	13.8	11.1	10.5	5.4	6.0	3.0	3.5
<b>2021</b>	18.3	19.8	20.1	21.0	20.4	16.4	17.3	10.6	7.5	6.9	5.3	3.2	2.5
<b>2022</b>	20.6	23.4	23.3	25.0	18.1	21.4	18.0	13.6	9.0	8.3	5.2	3.9	3.5

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

*Notes.* ' \* ' indicates a percentage of less than 0.05%.

**TABLE/FIGURE 11**  
**VAPING MARIJUANA**  
**Trends in 30-Day Prevalence**  
**among Respondents of Modal Ages 19 through 50, by Age Group**



(Age-specific data provided in the following table.)

**TABLE/FIGURE 12**  
**VAPING MARIJUANA**  
**Trends in 30-Day Prevalence**  
**among Respondents of Modal Ages 18 through 60, by Age Group**

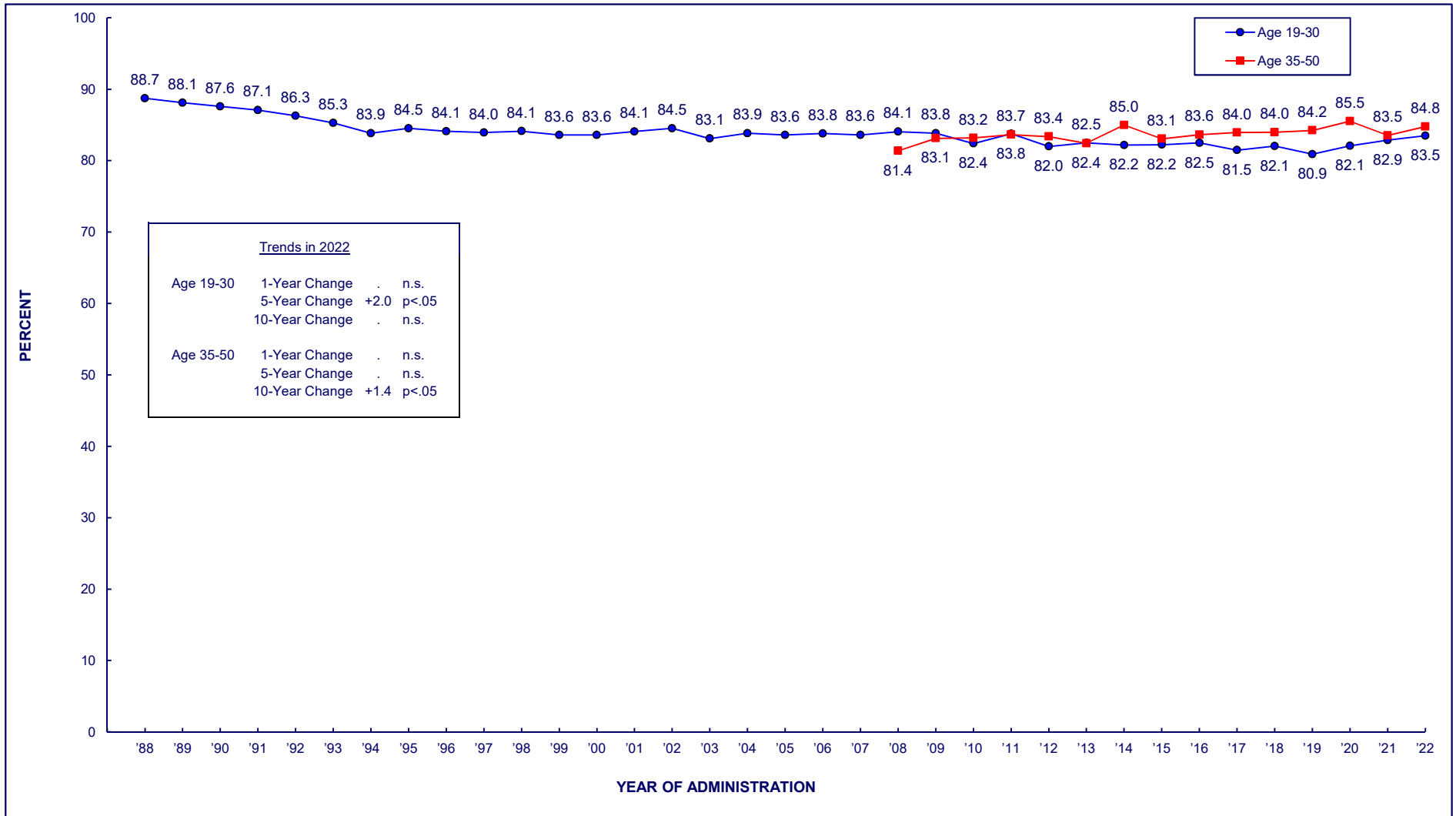
	<u>Age 18</u>	<u>Ages 19–20</u>	<u>Ages 21–22</u>	<u>Ages 23–24</u>	<u>Ages 25–26</u>	<u>Ages 27–28</u>	<u>Ages 29–30</u>	<u>Age 35</u>	<u>Age 40</u>	<u>Age 45</u>	<u>Age 50</u>	<u>Age 55</u>	<u>Age 60</u>
<b>2017</b>	4.9	5.1	6.2	7.0	5.2	7.6	4.0						
<b>2018</b>	7.5	7.2	10.6	12.1	12.5	7.2	6.2						
<b>2019</b>	14.0	10.5	11.4	10.4	10.1	10.9	11.9	12.1	6.5	2.8	3.9	3.9	2.6
<b>2020</b>	12.2	13.3	11.5	11.2	10.7	10.1	7.8	7.3	5.7	2.8	3.6	1.7	1.8
<b>2021</b>	12.4	13.8	13.3	13.1	15.7	11.4	12.7	8.2	4.9	5.4	3.5	2.0	1.3
<b>2022</b>	14.8	13.3	16.0	16.5	10.9	13.5	12.9	9.0	6.2	6.2	3.6	2.9	2.8

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

*Notes.* ' \* ' indicates a percentage of less than 0.05%.

ALCOHOL

Trends in 12-Month Prevalence  
among Respondents of Modal Ages 19 through 50, by Age Group



(Age-specific data provided in the following table.)

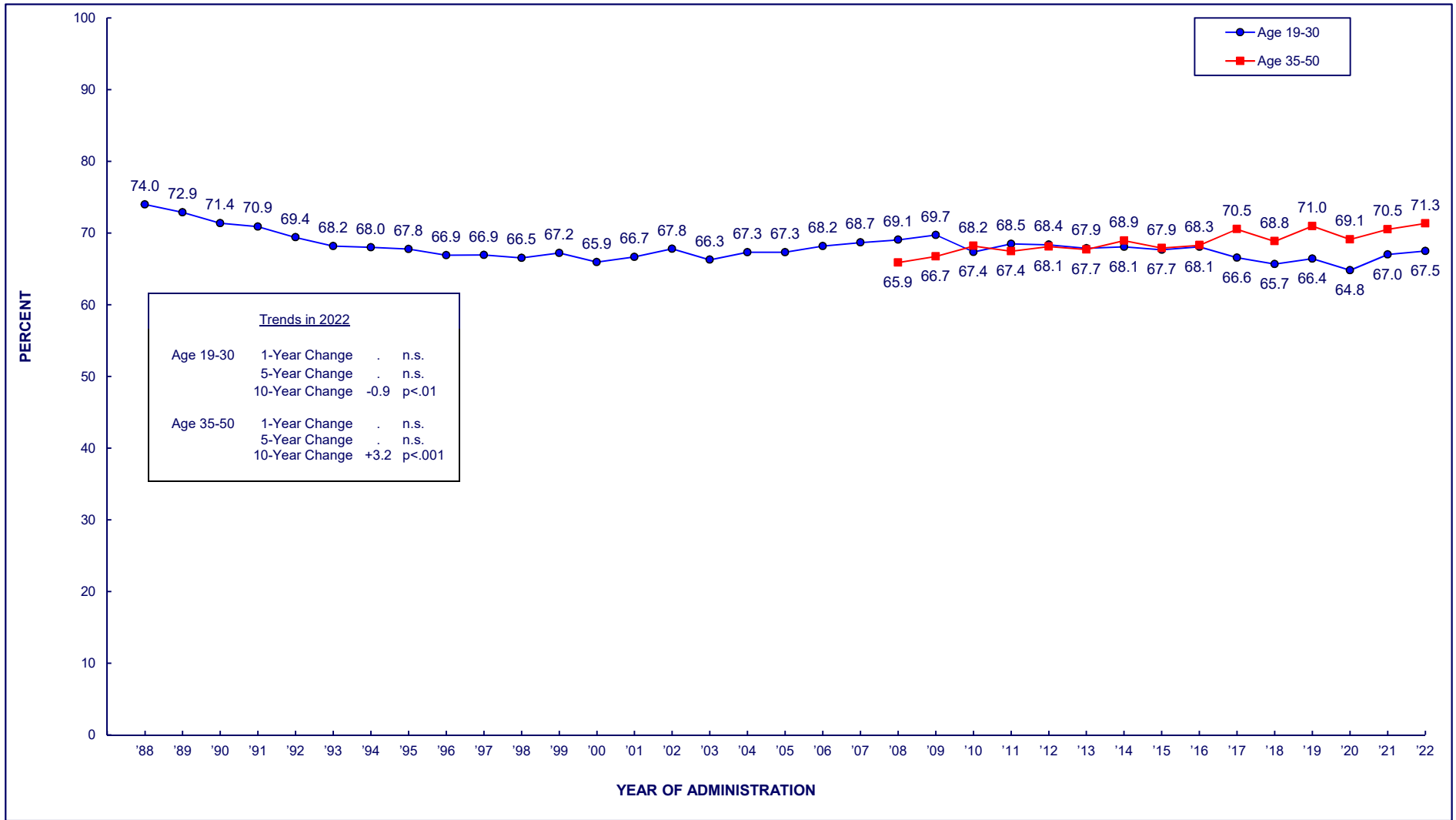
**TABLE/FIGURE 14**  
**ALCOHOL**  
**Trends in 12-Month Prevalence**  
**among Respondents of Modal Ages 18 through 60, by Age Group**

<u>Year</u>	<u>Age 18</u>	<u>Ages 19-20</u>	<u>Ages 21-22</u>	<u>Ages 23-24</u>	<u>Ages 25-26</u>	<u>Ages 27-28</u>	<u>Ages 29-30</u>	<u>Age 35</u>	<u>Age 40</u>	<u>Age 45</u>	<u>Age 50</u>	<u>Age 55</u>	<u>Age 60</u>
1976	85.7												
1977	87.0												
1978	87.7	90.4											
1979	88.1	90.5											
1980	87.9	89.2	90.7										
1981	87.0	91.1	91.8										
1982	86.8	89.5	91.5	90.8									
1983	87.3	89.1	92.4	91.4									
1984	86.0	89.5	90.1	90.4	89.2								
1985	85.6	89.3	90.4	92.0	90.3								
1986	84.5	88.2	90.5	89.0	88.6	88.8							
1987	85.7	88.5	91.4	90.5	90.4	87.7							
1988	85.3	87.3	89.2	89.6	90.3	87.5	88.4						
1989	82.7	87.3	89.7	89.3	88.4	88.0	86.1						
1990	80.6	86.0	89.8	87.8	87.9	87.0	87.1						
1991	77.7	85.2	88.8	88.4	88.4	86.3	85.5						
1992	76.8	82.9	88.0	89.1	86.4	85.7	85.4						
1993	76.0	80.4	85.5	87.0	88.4	86.3	83.9						
1994	73.0	79.1	85.2	86.4	86.0	83.5	83.0	83.4					
1995	73.7	78.5	85.1	87.2	85.9	86.3	84.0	82.3					
1996	72.5	80.0	83.8	86.2	85.5	85.5	83.6	84.3					
1997	74.8	79.4	84.1	85.0	86.0	85.2	83.8	83.4					
1998	74.3	80.2	85.5	84.9	84.6	85.8	83.6	82.7	77.4				
1999	73.8	80.4	84.7	84.5	84.4	83.8	83.7	82.2	80.5				
2000	73.2	78.2	85.5	86.4	83.9	83.0	84.2	81.5	79.7				
2001	73.3	78.2	86.9	85.7	85.7	83.4	83.8	82.5	81.5				
2002	71.5	78.2	84.8	87.5	87.5	83.9	84.4	85.2	80.9				
2003	70.1	75.8	84.1	87.3	85.3	82.3	82.7	82.8	81.3	79.1			
2004	70.6	76.9	85.7	85.8	86.4	85.3	82.9	85.4	80.8	79.7			
2005	68.6	77.3	84.7	86.5	84.9	84.7	83.9	85.6	82.2	79.5			
2006	66.5	77.8	83.6	87.6	84.7	85.8	83.8	83.2	79.8	82.8			
2007	66.4	73.4	87.2	87.9	84.8	84.3	84.3	84.6	85.2	80.7			
2008	65.5	73.8	87.5	85.9	84.6	84.5	87.7	84.3	82.1	80.1	79.1		
2009	66.2	71.9	84.7	87.6	88.6	86.9	83.5	83.5	85.7	82.7	80.4		
2010	65.2	67.6	82.3	88.6	85.3	84.5	85.7	84.8	86.2	82.2	79.9		
2011	63.5	72.1	81.0	87.7	89.9	87.1	84.7	89.0	84.1	80.1	81.5		
2012	63.5	70.0	80.4	84.2	88.6	86.0	82.5	85.7	83.4	84.2	80.2		
2013	62.0	67.3	82.8	83.8	87.2	87.4	86.1	86.2	84.3	81.2	79.2	76.9	
2014	60.2	65.9	82.4	83.7	84.5	89.4	85.9	88.2	83.6	83.9	84.3	78.1	
2015	58.2	69.3	83.2	84.6	83.6	84.8	86.2	85.7	81.0	84.3	81.5	78.2	
2016	55.6	66.6	86.3	84.9	83.0	82.7	89.5	85.7	85.6	82.0	81.6	79.6	
2017	55.7	65.2	83.5	86.9	82.4	84.6	84.5	86.9	82.2	84.6	82.6	81.9	
2018	53.3	63.3	83.2	88.6	86.4	84.5	84.5	87.3	84.2	85.2	79.5	80.1	77.2
2019	52.1	63.5	81.9	85.3	85.5	85.1	83.6	88.0	85.8	80.1	83.9	81.6	78.2
2020	55.3	63.1	81.9	84.3	88.0	85.9	84.9	88.4	84.2	86.0	83.5	80.2	78.1
2021	46.5	66.6	80.6	84.8	86.6	87.9	84.1	86.9	84.9	83.6	79.2	79.2	79.0
2022	51.9	62.4	82.5	84.5	86.5	85.9	87.4	85.4	87.1	84.3	82.6	83.9	80.3

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

**ALCOHOL**

**Trends in 30-Day Prevalence  
among Respondents of Modal Ages 19 through 50, by Age Group**



(Age-specific data provided in the following table.)



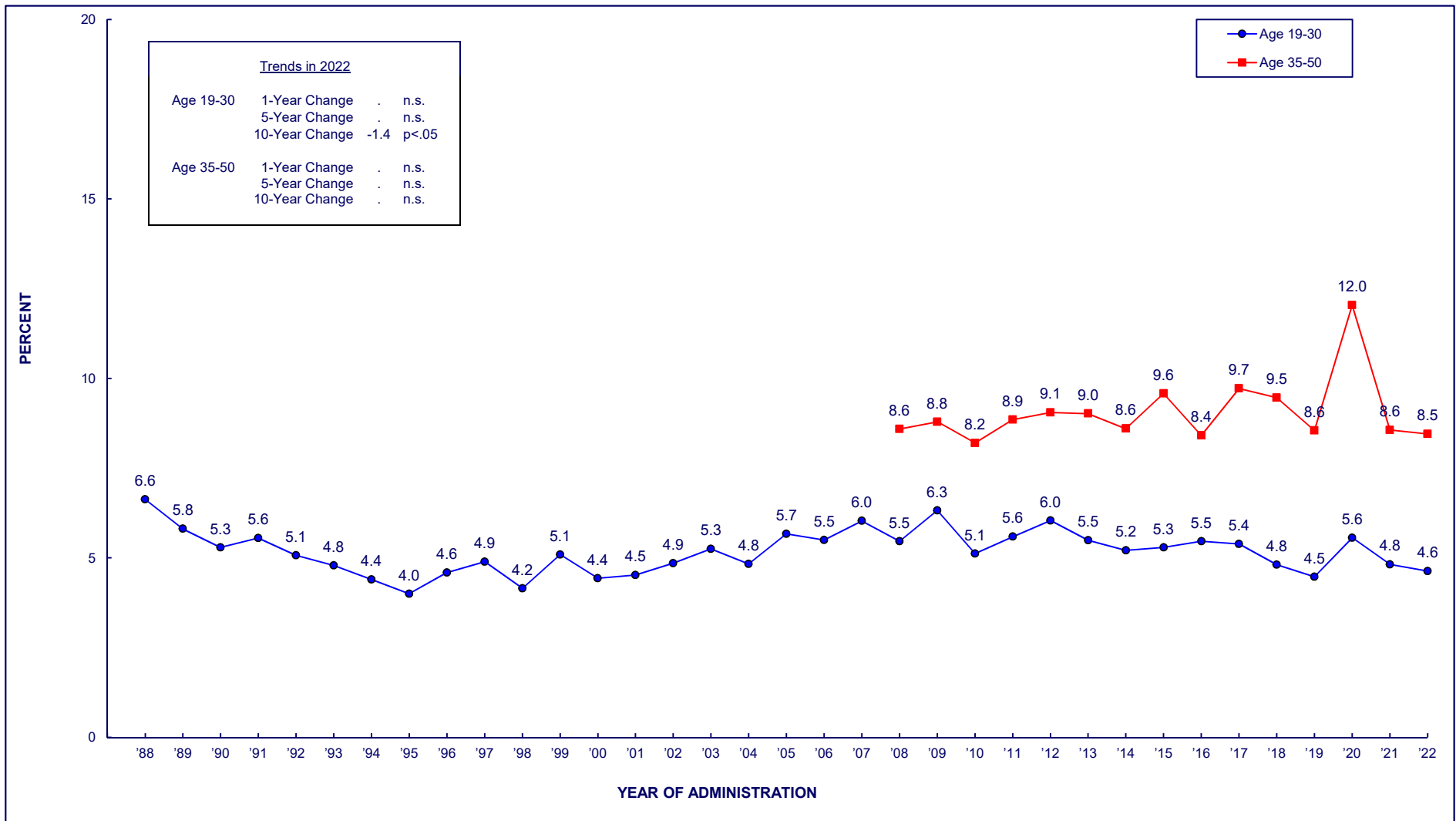
**TABLE/FIGURE 16**  
**ALCOHOL**  
**Trends in 30-Day Prevalence**  
**among Respondents of Modal Ages 18 through 60, by Age Group**

<u>Year</u>	<u>Age 18</u>	<u>Ages 19–20</u>	<u>Ages 21–22</u>	<u>Ages 23–24</u>	<u>Ages 25–26</u>	<u>Ages 27–28</u>	<u>Ages 29–30</u>	<u>Age 35</u>	<u>Age 40</u>	<u>Age 45</u>	<u>Age 50</u>	<u>Age 55</u>	<u>Age 60</u>
1976	68.3												
1977	71.2												
1978	72.1	76.8											
1979	71.8	76.5											
1980	72.0	76.5	79.3										
1981	70.7	77.6	80.8										
1982	69.7	76.0	79.7	79.1									
1983	69.4	74.6	79.7	78.6									
1984	67.2	74.3	79.2	77.7	76.2								
1985	65.9	74.5	76.6	80.3	77.1								
1986	65.3	72.8	77.4	76.7	76.1	74.4							
1987	66.4	72.8	78.3	75.5	77.9	75.2							
1988	63.9	69.1	75.6	75.4	75.3	74.7	73.2						
1989	60.0	69.1	74.6	73.3	73.6	74.2	72.5						
1990	57.1	66.7	74.3	73.3	72.1	71.4	70.6						
1991	54.0	64.8	73.9	73.0	72.7	70.8	69.9						
1992	51.3	62.0	72.0	72.6	69.4	69.6	70.2						
1993	51.0	59.7	70.1	72.1	70.2	69.3	67.3						
1994	50.1	60.6	71.3	69.5	69.7	69.0	67.9	65.7					
1995	51.3	58.9	68.7	71.4	70.3	69.5	67.7	67.1					
1996	50.8	58.1	68.3	69.7	67.7	70.0	67.5	65.2					
1997	52.7	59.6	67.4	67.8	70.4	69.4	66.5	66.0					
1998	52.0	60.4	68.0	69.9	66.5	68.7	65.4	63.0	60.9				
1999	51.0	62.5	68.6	69.2	67.8	69.4	65.7	65.2	64.5				
2000	50.0	56.9	69.4	70.0	67.9	65.3	65.5	64.4	62.4				
2001	49.8	58.8	70.9	70.0	68.2	65.7	65.6	64.5	65.4				
2002	48.6	59.0	70.0	70.8	70.5	68.2	67.4	67.7	65.5				
2003	47.5	57.3	67.9	71.2	68.0	66.4	65.4	64.7	66.1	63.4			
2004	48.0	57.8	70.9	71.8	70.8	67.7	65.0	69.4	64.6	66.0			
2005	47.0	58.2	70.0	69.3	72.3	69.2	65.6	68.2	65.6	64.6			
2006	45.3	57.3	69.7	72.7	68.4	72.4	69.0	62.4	62.3	66.7			
2007	44.4	54.2	73.0	73.3	73.2	69.7	69.0	67.7	66.9	64.1			
2008	43.1	53.4	72.5	73.3	71.4	70.2	73.3	64.5	67.4	67.1	64.4		
2009	43.5	52.2	71.8	77.5	75.6	69.8	71.0	64.3	70.2	67.5	64.7		
2010	41.2	49.7	69.8	72.8	72.8	70.2	68.2	66.4	72.3	67.7	66.4		
2011	40.0	52.4	67.8	73.6	74.5	73.4	69.2	71.0	66.1	65.0	67.7		
2012	41.5	52.4	68.0	71.2	76.2	73.5	68.4	68.0	68.0	71.1	65.3		
2013	39.2	48.9	69.8	71.3	73.6	72.1	70.9	68.9	69.4	67.3	65.7	62.7	
2014	37.4	48.2	68.1	68.7	71.5	76.9	73.2	72.1	65.8	70.6	67.3	64.3	
2015	35.3	48.3	67.9	71.7	69.5	72.8	73.4	71.0	64.7	67.5	68.6	65.5	
2016	33.2	49.0	71.0	73.0	68.7	69.4	75.0	68.7	69.1	68.0	67.4	68.0	
2017	33.2	45.9	71.2	72.1	69.3	68.3	70.6	72.1	69.8	70.1	70.2	67.1	
2018	30.2	43.0	65.6	72.8	71.8	67.7	70.6	72.8	69.1	70.2	63.7	66.5	61.5
2019	29.3	43.1	68.3	71.9	72.4	70.8	71.5	73.3	71.1	67.6	72.3	65.3	64.7
2020	33.6	41.7	63.4	66.1	72.3	70.7	69.3	72.5	70.8	66.2	67.2	63.0	61.3
2021	25.8	46.9	63.2	70.4	73.8	72.3	67.6	72.7	73.1	71.4	65.3	66.7	65.1
2022	28.4	41.2	65.2	70.2	70.3	68.1	75.0	72.5	73.3	69.2	70.6	70.2	65.5

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

**ALCOHOL**

**Trends in 30-Day Prevalence of Daily Use  
among Respondents of Modal Ages 19 through 50, by Age Group**



Trends in 2022			
Age 19-30	1-Year Change	.	n.s.
	5-Year Change	.	n.s.
	10-Year Change	-1.4	p<.05
Age 35-50	1-Year Change	.	n.s.
	5-Year Change	.	n.s.
	10-Year Change	.	n.s.

(Age-specific data provided in the following table.)

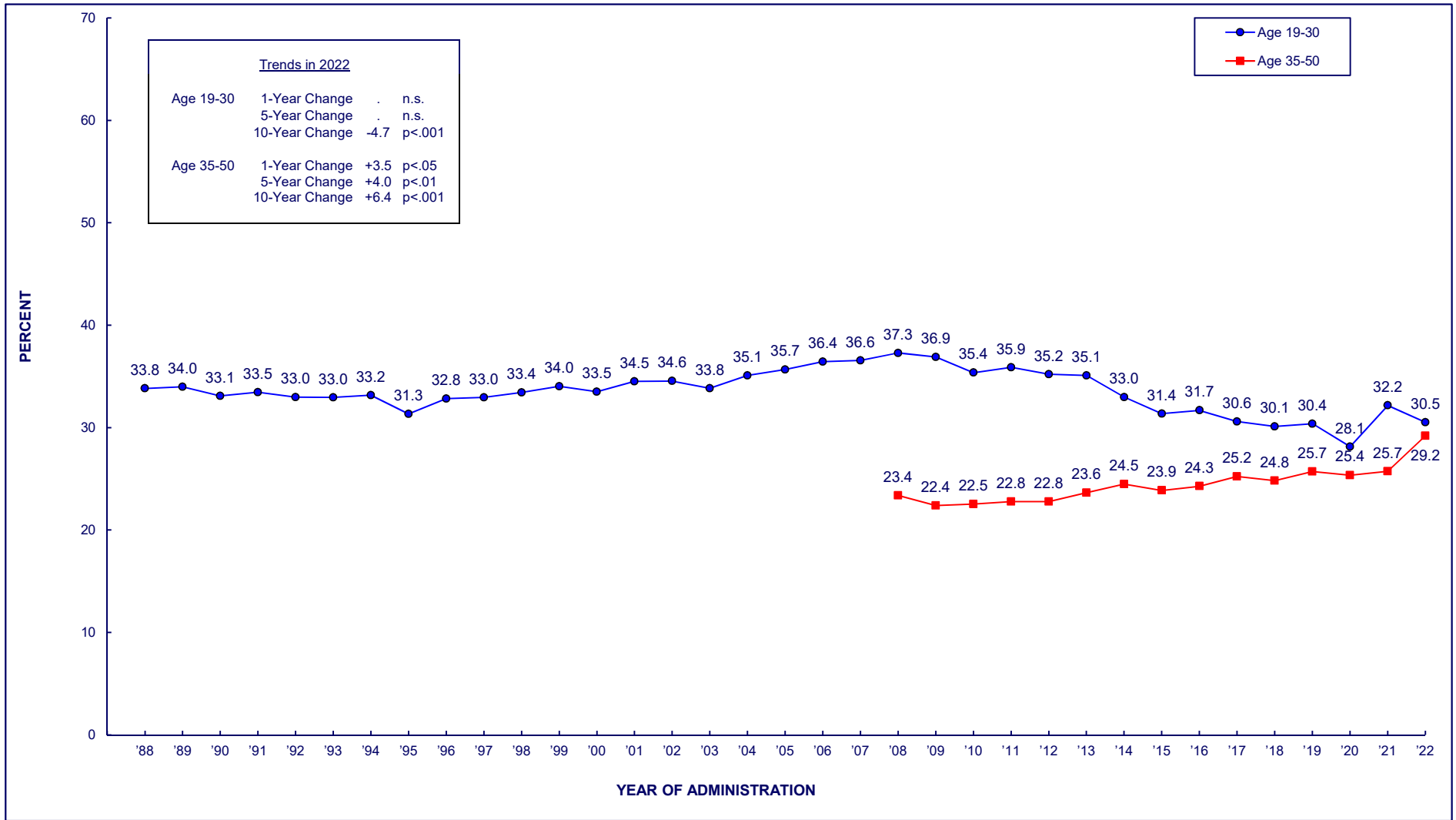
**TABLE/FIGURE 18**  
**ALCOHOL**  
**Trends in 30-Day Prevalence of Daily Use**  
**among Respondents of Modal Ages 18 through 60, by Age Group**

<u>Year</u>	<u>Age 18</u>	<u>Ages 19–20</u>	<u>Ages 21–22</u>	<u>Ages 23–24</u>	<u>Ages 25–26</u>	<u>Ages 27–28</u>	<u>Ages 29–30</u>	<u>Age 35</u>	<u>Age 40</u>	<u>Age 45</u>	<u>Age 50</u>	<u>Age 55</u>	<u>Age 60</u>
1976	5.6												
1977	6.1												
1978	5.7	7.8											
1979	6.9	7.5											
1980	6.0	7.3	8.6										
1981	6.0	7.4	7.9										
1982	5.7	7.9	8.1	8.5									
1983	5.5	5.7	8.3	8.8									
1984	4.8	5.9	8.3	7.4	7.9								
1985	5.0	5.9	6.9	7.4	7.9								
1986	4.8	5.2	6.6	6.7	5.7	7.7							
1987	4.8	6.0	7.2	6.4	7.1	7.4							
1988	4.2	4.9	7.5	6.6	6.8	6.0	8.2						
1989	4.2	4.7	5.2	5.8	6.3	7.0	5.8						
1990	3.7	4.4	4.9	5.9	5.3	4.9	6.2						
1991	3.6	4.1	5.0	5.7	5.1	6.6	6.6						
1992	3.4	3.7	4.5	4.6	6.7	4.7	6.1						
1993	2.5	3.1	4.8	4.8	5.6	5.3	5.0						
1994	2.9	3.6	4.2	4.2	3.4	5.6	5.2	7.9					
1995	3.5	3.1	3.5	4.3	4.1	4.5	4.4	5.9					
1996	3.7	3.0	5.0	6.1	4.3	3.9	5.3	7.8					
1997	3.9	4.9	4.4	4.3	5.4	4.4	6.0	4.9					
1998	3.9	3.5	5.7	4.0	3.9	4.0	3.9	6.5	7.3				
1999	3.4	4.3	6.2	4.9	5.7	4.3	5.1	5.3	7.9				
2000	2.9	3.8	5.9	4.2	3.8	4.5	4.5	5.5	6.9				
2001	3.6	3.8	6.0	4.6	5.6	3.2	3.9	6.2	7.7				
2002	3.5	3.7	5.4	5.3	5.8	4.6	4.1	5.1	7.1				
2003	3.2	4.3	6.0	6.7	4.9	5.5	3.9	4.2	7.9	8.2			
2004	2.8	4.9	6.4	5.7	4.8	3.4	4.3	6.6	6.5	9.0			
2005	3.1	3.6	6.9	5.8	6.4	5.2	6.3	6.4	7.8	8.7			
2006	3.0	4.5	6.2	6.0	5.3	6.2	4.9	4.9	7.8	9.5			
2007	3.1	3.4	7.0	6.8	7.3	6.2	5.6	8.7	6.9	8.9			
2008	2.8	2.3	5.5	6.5	7.1	6.6	4.9	5.5	7.5	10.4	10.6		
2009	2.5	2.4	5.9	7.2	8.6	6.9	7.0	7.0	9.2	9.7	9.3		
2010	2.7	1.7	5.4	4.8	5.2	6.6	7.0	6.5	8.1	7.5	10.4		
2011	2.1	2.4	6.0	5.0	6.7	7.7	5.7	8.7	7.5	8.1	11.2		
2012	2.5	2.3	4.8	7.0	5.5	8.6	8.1	7.0	8.3	9.7	11.1		
2013	2.2	3.0	4.6	5.0	6.3	6.8	7.3	7.0	9.4	8.1	11.3	10.7	
2014	1.9	2.6	4.4	4.7	6.2	5.4	7.8	7.6	7.1	9.1	10.4	10.5	
2015	1.9	2.0	3.7	5.1	5.3	7.1	8.1	9.8	9.0	9.9	9.6	11.2	
2016	1.3	1.7	6.2	3.9	6.0	7.3	7.2	7.8	8.0	7.7	10.0	14.4	
2017	1.6	1.4	6.0	7.0	5.0	7.0	5.4	9.9	9.5	9.6	9.9	11.2	
2018	1.2	1.2	4.1	5.4	5.5	5.5	6.7	9.2	8.8	9.7	10.1	11.0	12.8
2019	1.7	0.5	4.7	3.8	6.6	4.7	6.2	9.2	7.1	8.2	9.8	11.5	11.9
2020	2.7	2.2	2.8	5.3	8.2	5.8	8.0	13.3	11.6	12.7	10.6	12.9	12.2
2021	0.9	1.2	4.2	4.6	5.1	6.0	6.1	8.5	7.7	9.9	8.1	10.2	14.7
2022	1.5	0.8	2.0	5.9	5.5	5.6	5.9	7.5	9.4	6.6	10.5	10.8	13.0

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

ALCOHOL

Trends in 2-Week Prevalence of Binge Drinking (5+ Drinks in a Row) among Respondents of Modal Ages 19 through 50, by Age Group



(Age-specific data provided in the following table.)

**ALCOHOL**

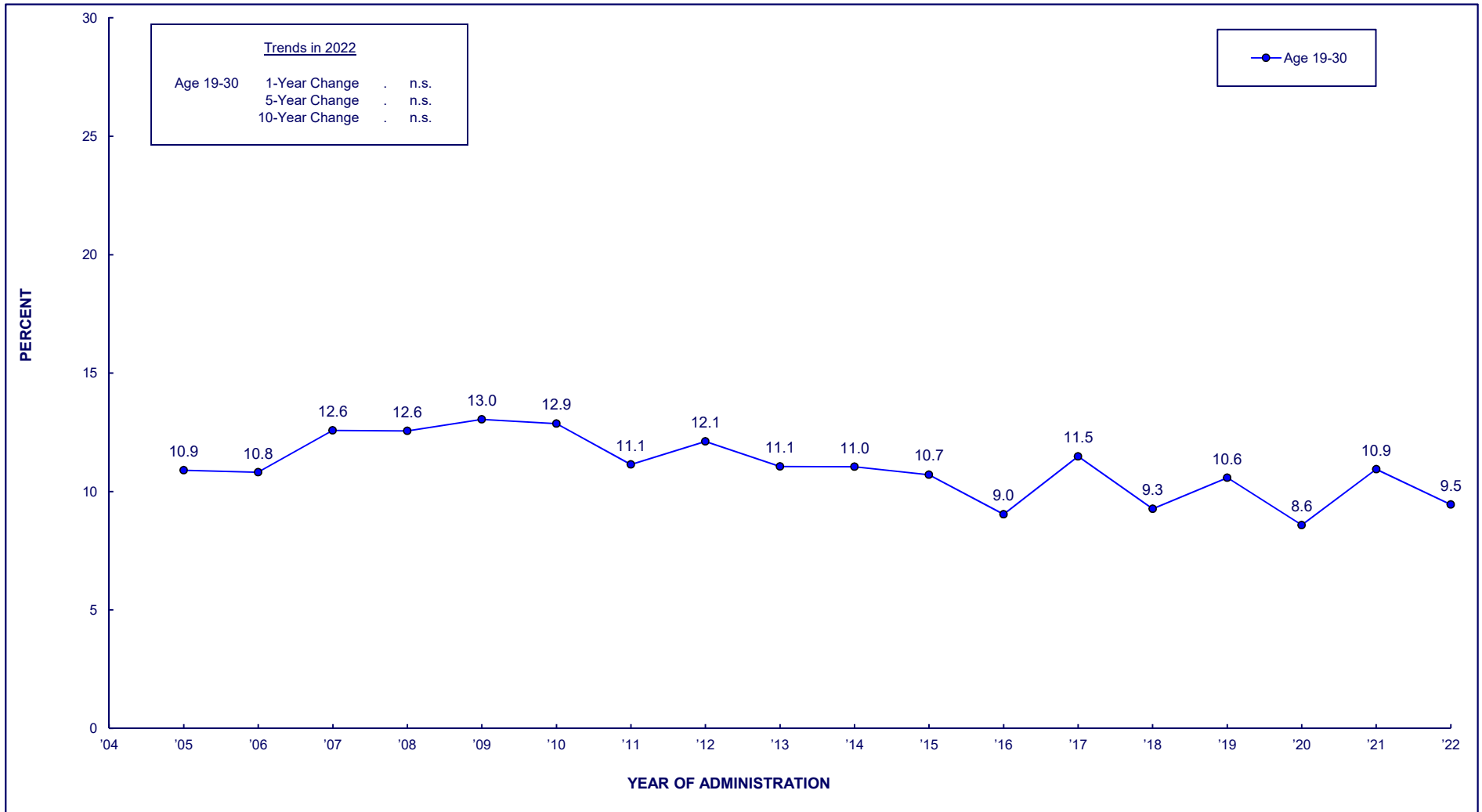
**Trends in 2-Week Prevalence of Binge Drinking (5+ Drinks in a Row) among Respondents of Modal Ages 18 through 60, by Age Group**

<u>Year</u>	<u>Age 18</u>	<u>Ages 19-20</u>	<u>Ages 21-22</u>	<u>Ages 23-24</u>	<u>Ages 25-26</u>	<u>Ages 27-28</u>	<u>Ages 29-30</u>	<u>Age 35</u>	<u>Age 40</u>	<u>Age 45</u>	<u>Age 50</u>	<u>Age 55</u>	<u>Age 60</u>
1976	37.1												
1977	39.4												
1978	40.3	41.6											
1979	41.2	42.1											
1980	41.2	43.1	41.6										
1981	41.4	43.6	43.9										
1982	40.5	42.3	41.8	38.2									
1983	40.8	41.6	43.1	40.0									
1984	38.7	41.5	41.9	36.0	34.0								
1985	36.7	42.9	41.1	38.4	34.5								
1986	36.8	40.8	40.7	36.3	32.2	30.9							
1987	37.5	37.8	42.4	37.6	33.9	32.4							
1988	34.7	36.6	41.7	36.8	31.6	28.9	27.3						
1989	33.0	36.1	40.9	36.6	33.4	30.4	27.0						
1990	32.2	35.7	37.7	36.3	32.8	30.1	26.7						
1991	29.8	37.1	39.4	35.8	32.8	30.4	25.5						
1992	27.9	35.0	39.2	34.8	32.4	30.2	26.6						
1993	27.5	33.6	39.9	34.7	33.7	30.2	26.4						
1994	28.2	35.1	41.9	33.0	31.8	29.2	28.8	22.5					
1995	29.8	31.4	37.8	34.6	28.3	28.8	27.5	21.1					
1996	30.2	32.8	38.0	37.8	31.4	31.3	26.0	23.0					
1997	31.3	36.9	38.5	32.9	31.9	29.6	28.3	22.6					
1998	31.5	35.0	39.4	35.7	33.3	30.1	27.6	21.7	20.7				
1999	30.8	35.9	40.2	37.5	32.0	32.1	27.0	22.5	21.3				
2000	30.0	34.7	40.9	37.0	33.3	31.1	24.9	24.1	19.1				
2001	29.7	36.4	41.3	39.5	34.0	29.6	27.1	22.5	22.1				
2002	28.6	35.9	39.3	39.0	35.1	29.9	28.7	25.1	21.0				
2003	27.9	34.3	38.7	38.6	35.7	30.5	26.2	25.3	22.2	21.8			
2004	29.2	37.1	39.9	40.0	35.7	31.6	27.9	22.3	21.9	20.5			
2005	27.1	35.5	39.2	39.0	38.9	32.3	30.2	23.5	23.6	20.7			
2006	25.4	34.5	42.5	43.2	36.6	33.5	29.8	22.9	21.5	20.9			
2007	25.9	30.5	45.8	40.8	39.3	33.3	30.1	24.8	22.1	19.6			
2008	24.6	30.8	42.0	44.1	38.8	36.0	32.4	26.2	24.3	22.5	20.5		
2009	25.2	27.6	40.4	42.9	41.4	35.7	33.4	22.6	25.1	22.9	18.6		
2010	23.2	26.7	38.0	39.8	37.8	35.9	33.6	24.9	23.7	23.6	18.4		
2011	21.6	30.7	38.4	39.1	39.3	36.2	31.2	27.0	22.5	21.5	20.2		
2012	23.7	27.5	37.5	38.6	36.0	36.8	35.0	26.2	23.5	21.4	20.1		
2013	22.1	27.4	39.1	36.9	37.7	35.4	33.8	25.2	26.5	21.4	21.9	17.5	
2014	19.4	27.5	34.9	33.8	33.5	35.7	31.8	25.5	23.5	25.4	23.6	18.4	
2015	17.2	23.5	34.0	36.0	33.7	31.4	28.9	30.6	20.3	21.2	23.9	20.0	
2016	15.5	22.3	37.9	33.4	34.7	30.8	30.4	26.1	23.7	24.3	23.2	20.5	
2017	16.6	21.6	39.0	29.8	32.5	32.1	28.6	28.8	26.7	24.9	21.2	18.1	
2018	13.8	18.9	32.7	35.0	32.5	29.0	31.6	30.3	23.2	24.9	21.3	20.0	17.3
2019	14.4	18.4	34.3	33.8	34.2	31.0	30.9	31.8	22.5	23.5	26.1	23.9	18.1
2020	16.8	17.7	30.3	30.6	31.4	29.5	27.3	29.1	26.3	24.0	22.3	20.7	17.0
2021	11.8	25.1	31.3	34.8	35.0	33.1	31.3	27.6	28.9	23.8	23.1	23.0	18.5
2022	12.6	19.0	28.6	29.4	32.6	34.0	32.9	31.7	31.2	26.9	27.3	21.5	18.3

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

**ALCOHOL**

**Trends in Two-Week Prevalence of High-Intensity Drinking (10+ Drinks in a Row)  
among Respondents of Modal Ages 19 through 30**



**ALCOHOL**

**Trends in 2-Week Prevalence of High Intensity Drinking  
(10+ Drinks in a Row) among Respondents of Modal Ages  
18 through 60, by Age Group**

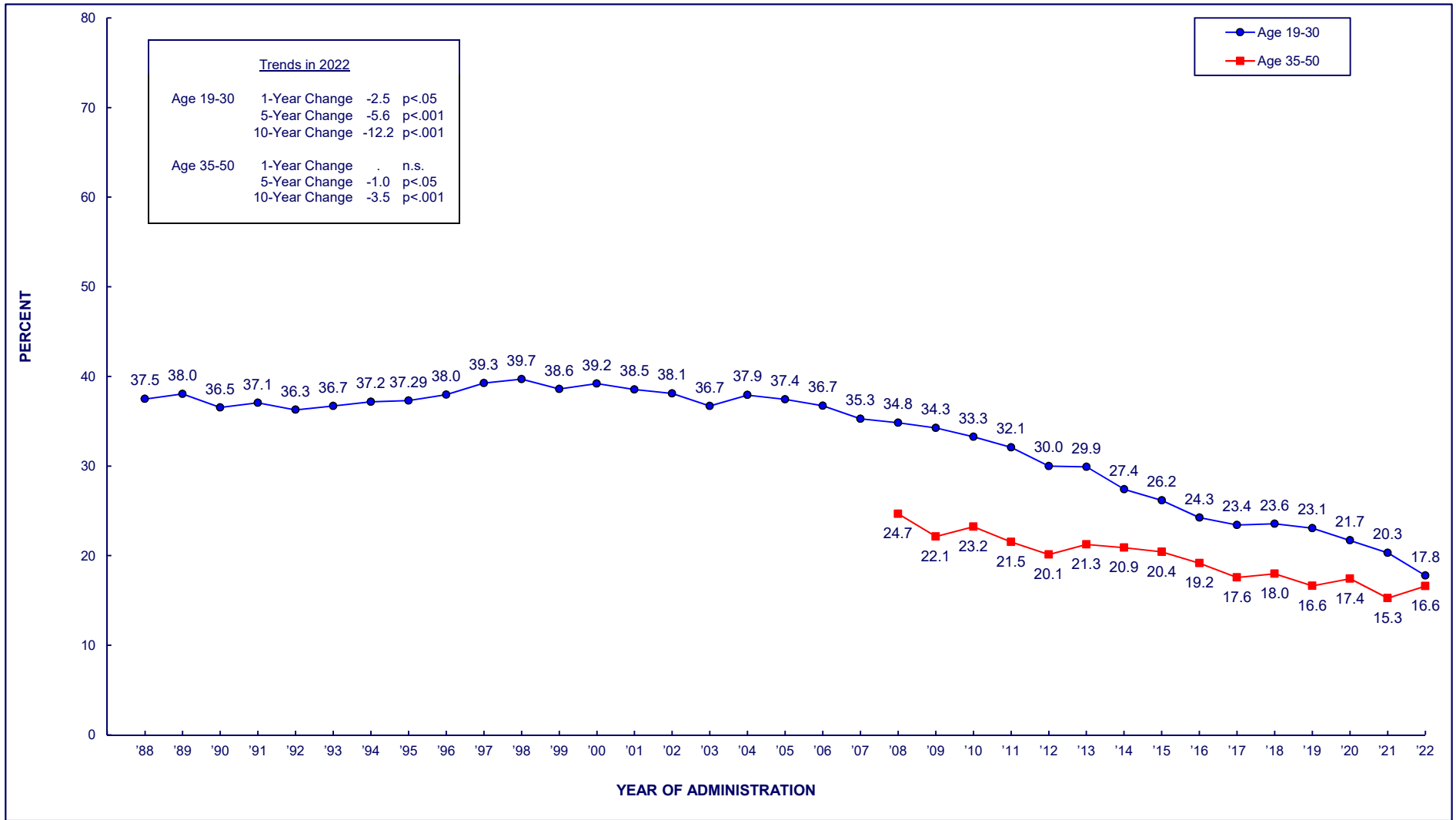
<u>Year</u>	<u>Age 18</u>	<u>Ages 19–20</u>	<u>Ages 21–22</u>	<u>Ages 23–24</u>	<u>Ages 25–26</u>	<u>Ages 27–28</u>	<u>Ages 29–30</u>
2005	10.6	13.1	12.6	11.2	14.7	9.1	5.0
2006	12.9	13.4	15.5	11.4	10.3	8.3	6.3
2007	11.1	12.2	19.8	15.2	9.3	11.6	7.4
2008	10.4	12.5	12.5	16.3	13.1	11.7	9.3
2009	10.6	10.8	16.5	15.2	14.5	9.2	11.8
2010	9.9	8.7	13.9	14.1	15.2	11.2	13.9
2011	9.8	10.3	12.5	11.9	13.7	12.0	6.3
2012	10.4	10.5	15.8	13.8	8.0	9.8	15.0
2013	8.1	6.9	11.9	8.7	14.1	10.8	13.6
2014	7.1	13.7	10.3	9.6	10.4	10.8	11.5
2015	6.1	7.3	15.3	10.2	10.8	11.3	8.9
2016	4.4	7.5	11.5	8.5	9.4	6.8	10.6
2017	6.0	8.9	15.2	11.4	11.1	14.5	7.9
2018	4.6	7.1	8.5	10.9	11.7	8.9	8.4
2019	5.3	8.0	11.7	11.9	10.4	9.0	12.6
2020	—	8.2	9.8	8.3	10.9	7.7	6.7
2021	3.2	10.0	10.2	11.7	12.3	10.0	11.2
2022	4.3	5.9	7.0	11.9	8.7	11.1	10.4

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

Notes. — ' indicates data not available.

**CIGARETTES**

**Trends in 12-Month Prevalence  
among Respondents of Modal Ages 19 through 50, by Age Group**



(Age-specific data provided in the following table.)



**TABLE/FIGURE 24**  
**CIGARETTES**  
**Trends in 12-Month Prevalence**  
**among Respondents of Modal Ages 18 through 60, by Age Group**

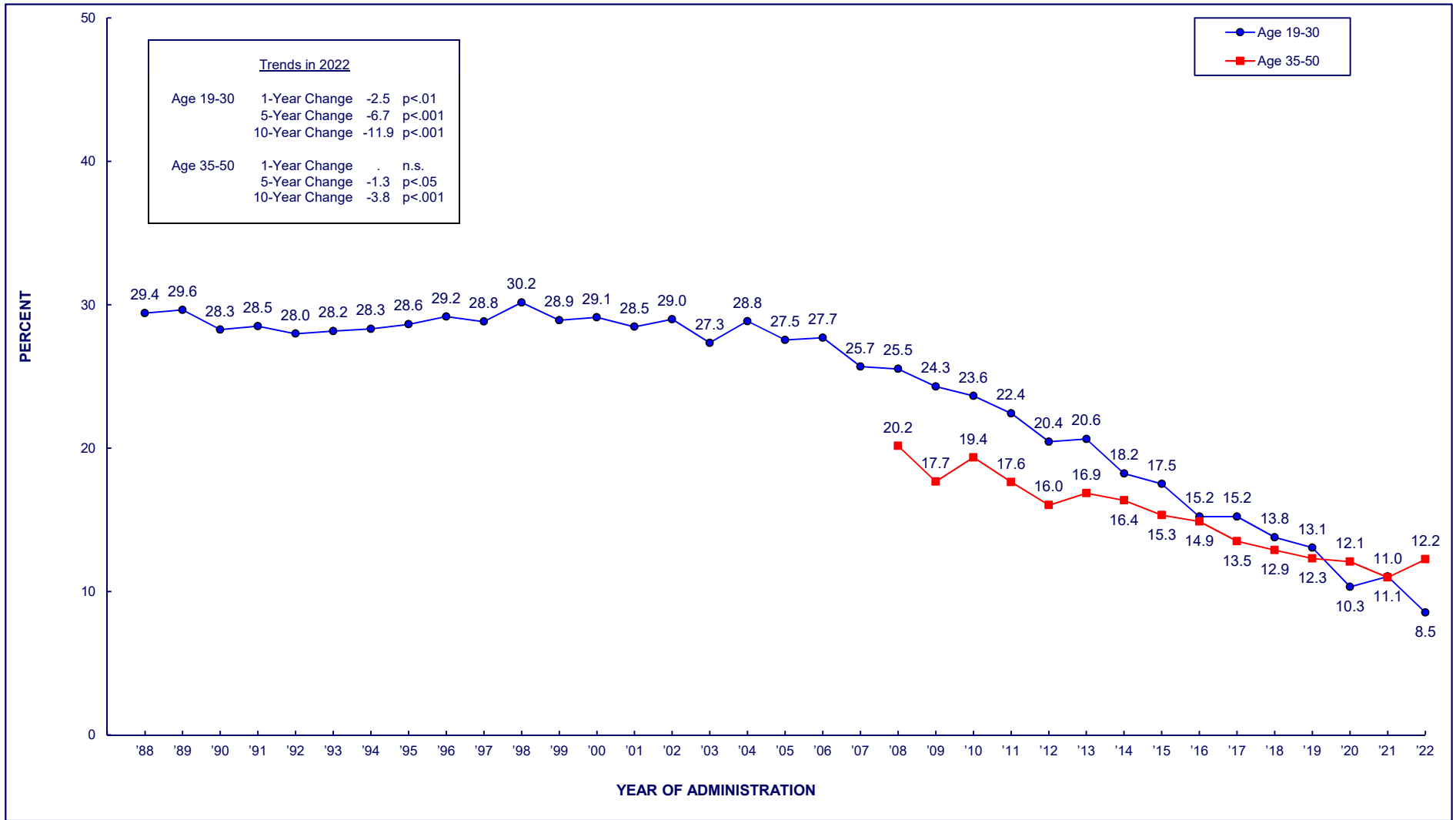
<u>Year</u>	<u>Ages 19-20</u>	<u>Ages 21-22</u>	<u>Ages 23-24</u>	<u>Ages 25-26</u>	<u>Ages 27-28</u>	<u>Ages 29-30</u>	<u>Age 35</u>	<u>Age 40</u>	<u>Age 45</u>	<u>Age 50</u>	<u>Age 55</u>	<u>Age 60</u>
1978	49.7											
1979	51.3											
1980	47.9	47.3										
1981	45.1	47.6										
1982	45.1	46.0	44.5									
1983	45.1	43.7	45.2									
1984	43.9	42.2	41.8	41.4								
1985	43.6	43.8	39.7	42.1								
1986	43.3	41.2	39.6	39.5	39.7							
1987	43.4	43.4	41.3	36.0	38.2							
1988	41.6	40.6	36.9	35.5	35.3	35.1						
1989	42.0	39.4	39.5	37.9	33.7	35.8						
1990	40.4	39.4	37.7	36.1	32.7	33.3						
1991	42.0	39.4	37.4	36.5	35.6	31.7						
1992	41.5	40.4	37.4	34.0	34.6	30.3						
1993	42.4	41.5	36.0	35.2	32.7	33.0						
1994	45.2	41.2	37.8	34.8	33.3	31.4	29.7					
1995	44.3	41.9	37.3	35.7	33.0	31.7	29.5					
1996	45.9	44.6	39.8	35.5	32.6	29.9	32.0					
1997	48.1	44.0	38.6	39.0	34.3	32.1	28.3					
1998	47.0	45.5	42.8	38.6	33.9	31.0	29.7	27.4				
1999	47.7	43.9	42.8	34.5	32.0	31.4	29.6	27.8				
2000	45.0	45.1	41.6	38.1	35.6	30.6	29.1	27.5				
2001	43.2	45.8	41.5	39.7	32.7	29.2	27.3	27.3				
2002	42.0	42.7	41.3	37.3	34.2	32.0	30.1	23.5				
2003	40.1	39.7	40.0	35.5	35.2	30.7	27.2	27.4	26.2			
2004	41.7	43.3	42.1	39.0	33.1	29.9	27.0	25.8	24.2			
2005	39.4	39.8	39.2	40.9	35.3	30.9	27.0	25.3	25.8			
2006	36.2	39.7	38.7	38.4	35.6	32.2	25.4	23.2	22.9			
2007	34.4	38.1	38.0	36.5	34.6	30.4	25.0	23.8	21.6			
2008	32.3	36.9	38.6	33.6	35.6	31.9	29.4	24.2	22.5	22.9		
2009	32.1	36.7	36.3	34.5	32.4	33.2	23.9	20.3	23.3	20.8		
2010	30.5	35.2	34.8	34.9	32.1	31.8	26.1	20.9	23.3	22.7		
2011	31.1	35.3	34.7	33.4	29.5	28.0	28.8	17.6	19.0	21.0		
2012	26.7	30.0	32.3	32.9	30.8	26.9	24.6	16.7	20.0	19.1		
2013	28.2	32.4	31.7	30.8	29.2	26.9	23.0	23.2	19.2	19.9	17.8	
2014	25.9	27.6	28.9	25.7	28.8	27.4	27.2	18.8	18.9	19.2	18.5	
2015	26.9	27.9	27.7	28.6	25.9	20.3	26.9	19.7	15.5	20.2	18.4	
2016	17.4	27.5	25.9	25.7	23.1	25.4	24.1	20.1	15.5	17.6	16.9	
2017	17.9	27.1	25.6	26.6	24.0	19.0	20.3	20.4	12.9	16.8	16.6	
2018	19.0	23.4	29.0	23.1	24.2	22.6	21.6	18.9	17.5	14.3	18.4	16.0
2019	17.1	25.9	22.8	26.1	23.8	22.6	19.6	18.0	13.9	15.6	16.4	14.6
2020	18.9	21.7	23.4	24.9	21.8	19.1	20.7	17.9	18.7	12.6	15.9	16.1
2021	17.0	18.3	20.2	21.5	22.8	20.6	16.7	15.8	14.0	14.6	15.1	13.8
2022	12.3	18.4	20.9	17.2	17.5	17.5	19.6	18.1	16.6	12.2	13.9	14.8

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

TABLE/FIGURE 25

**CIGARETTES**

**Trends in 30-Day Prevalence  
among Respondents of Modal Ages 19 through 50, by Age Group**



Trends in 2022			
Age 19-30	1-Year Change	-2.5	p<.01
	5-Year Change	-6.7	p<.001
	10-Year Change	-11.9	p<.001
Age 35-50	1-Year Change	.	n.s.
	5-Year Change	-1.3	p<.05
	10-Year Change	-3.8	p<.001

(Age-specific data provided in the following table.)

**CIGARETTES**

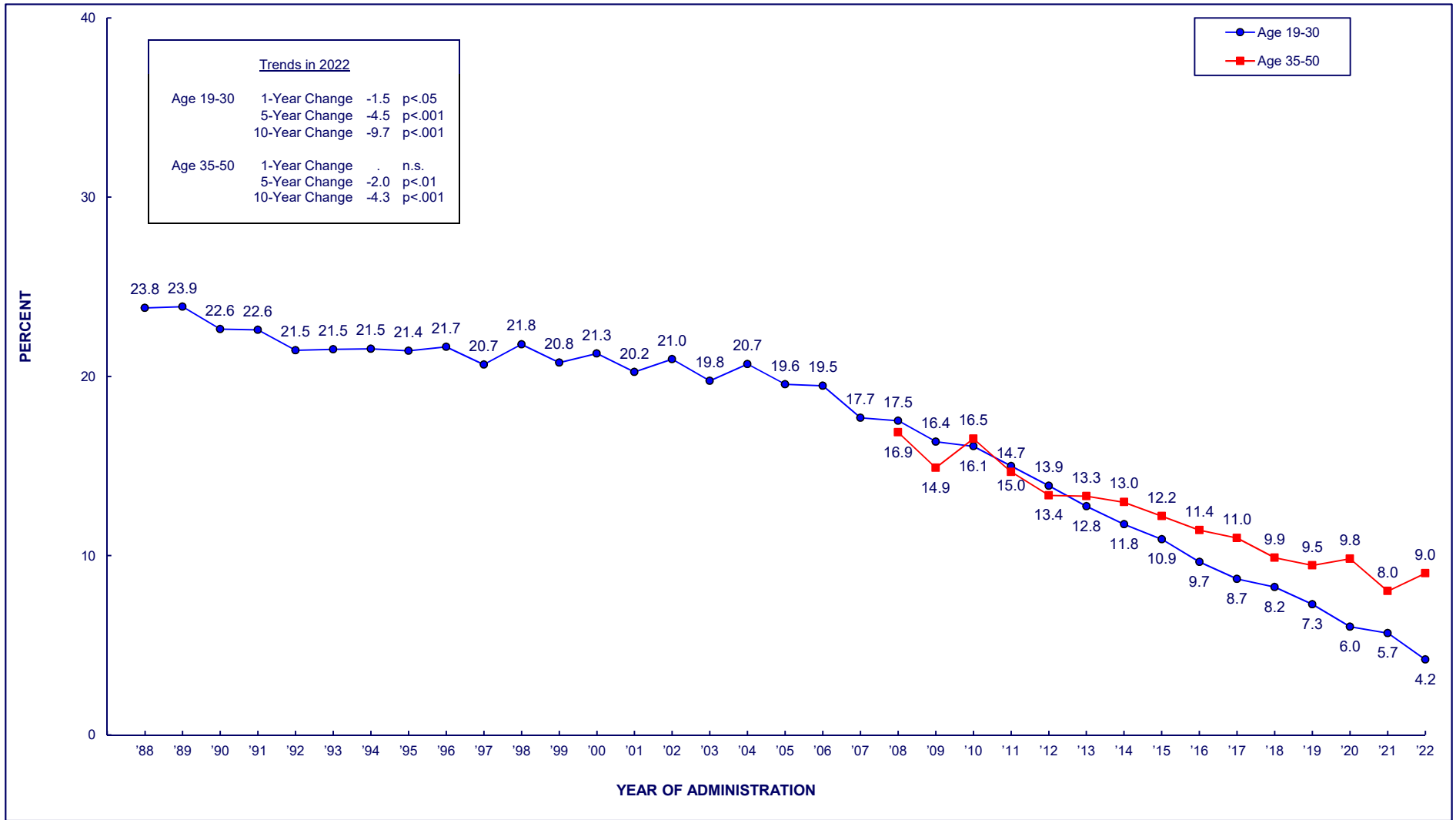
**Trends in 30-Day Prevalence  
among Respondents of Modal Ages 18 through 60, by Age Group**

<u>Year</u>	<u>Age 18</u>	<u>Ages 19-20</u>	<u>Ages 21-22</u>	<u>Ages 23-24</u>	<u>Ages 25-26</u>	<u>Ages 27-28</u>	<u>Ages 29-30</u>	<u>Age 35</u>	<u>Age 40</u>	<u>Age 45</u>	<u>Age 50</u>	<u>Age 55</u>	<u>Age 60</u>
1976	38.8												
1977	38.4												
1978	36.7	39.3											
1979	34.4	39.1											
1980	30.5	37.0	38.0										
1981	29.4	34.6	37.0										
1982	30.0	33.7	36.7	37.5									
1983	30.3	33.4	33.8	35.9									
1984	29.3	32.4	33.6	34.6	33.8								
1985	30.1	31.4	33.3	32.5	34.9								
1986	29.6	30.6	32.1	31.2	31.7	33.7							
1987	29.4	30.1	32.7	32.7	28.8	32.0							
1988	28.7	28.3	30.3	30.2	28.6	29.5	29.7						
1989	28.6	28.2	29.9	30.3	30.8	28.2	30.2						
1990	29.4	27.1	28.7	28.8	29.1	27.5	28.4						
1991	28.3	28.2	28.5	28.7	30.1	29.8	25.5						
1992	27.8	30.1	28.8	28.6	27.6	28.5	24.5						
1993	29.9	29.0	29.8	27.8	28.4	26.5	27.6						
1994	31.2	32.5	30.2	27.4	27.2	26.6	26.2	25.9					
1995	33.5	32.7	31.2	28.6	26.3	27.6	25.6	26.2					
1996	34.0	34.3	32.9	30.4	27.2	26.3	24.1	27.0					
1997	36.5	33.9	31.4	28.3	28.5	25.4	25.7	22.8					
1998	35.1	34.0	33.3	32.3	30.8	26.1	24.9	25.1	24.1				
1999	34.6	36.0	32.8	32.6	25.9	23.3	23.6	23.8	24.5				
2000	31.4	32.0	34.5	30.6	29.2	26.6	22.4	24.9	23.5				
2001	29.5	31.9	33.6	31.4	28.8	24.8	21.0	21.3	24.1				
2002	26.7	30.4	32.4	32.9	27.8	25.6	25.3	24.1	19.7				
2003	24.4	28.3	29.4	29.9	27.4	26.5	23.0	20.4	24.1	22.0			
2004	25.0	29.0	31.8	33.3	31.1	26.0	22.7	20.4	21.1	21.0			
2005	23.2	26.5	29.4	28.4	31.2	27.0	23.2	21.1	21.6	22.5			
2006	21.6	26.1	29.0	28.4	30.3	27.4	25.2	18.3	18.6	19.8			
2007	21.6	21.6	28.2	28.4	26.9	26.2	23.1	18.6	19.4	18.4			
2008	20.4	21.2	26.5	28.2	24.5	27.8	24.9	22.2	19.1	19.7	19.8		
2009	20.1	20.9	25.3	24.8	25.4	24.4	24.9	17.9	16.1	19.0	17.5		
2010	19.2	20.6	23.1	24.3	24.4	23.2	26.0	20.0	17.7	19.6	20.0		
2011	18.7	19.5	24.2	22.9	24.6	21.9	21.1	21.8	15.3	16.2	17.3		
2012	17.1	16.9	20.3	20.5	22.3	22.9	19.7	18.9	12.9	16.4	15.8		
2013	16.3	18.7	22.3	21.5	20.4	21.4	19.2	18.1	19.0	13.9	16.8	14.7	
2014	13.6	15.9	18.2	18.8	16.5	20.2	19.7	19.4	14.5	16.2	15.5	15.1	
2015	11.4	17.0	18.8	19.3	19.4	15.6	14.9	19.0	14.7	11.5	16.4	15.6	
2016	10.5	9.7	16.1	16.0	16.4	15.6	16.9	17.3	14.8	12.8	15.0	14.5	
2017	9.7	9.7	17.8	17.5	18.2	15.8	12.0	15.5	14.5	9.9	14.1	13.2	
2018	7.6	11.2	12.4	16.8	14.2	13.9	13.9	12.3	13.2	14.4	11.5	15.3	13.9
2019	5.7	8.4	13.3	10.8	15.2	15.4	14.9	13.0	13.8	11.6	11.0	13.2	12.2
2020	7.5	8.1	7.8	11.4	11.6	10.9	11.5	12.0	13.0	13.4	9.9	12.1	13.1
2021	4.1	7.2	8.3	9.4	11.2	15.0	13.2	12.4	11.1	9.0	11.4	11.4	10.1
2022	4.0	5.1	7.8	11.2	8.8	8.1	8.4	13.7	13.8	13.2	8.3	10.5	12.0

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

**CIGARETTES**

**Trends in 30-Day Prevalence of Daily Use  
among Respondents of Modal Ages 19 through 50, by Age Group**



(Age-specific data provided in the following table.)

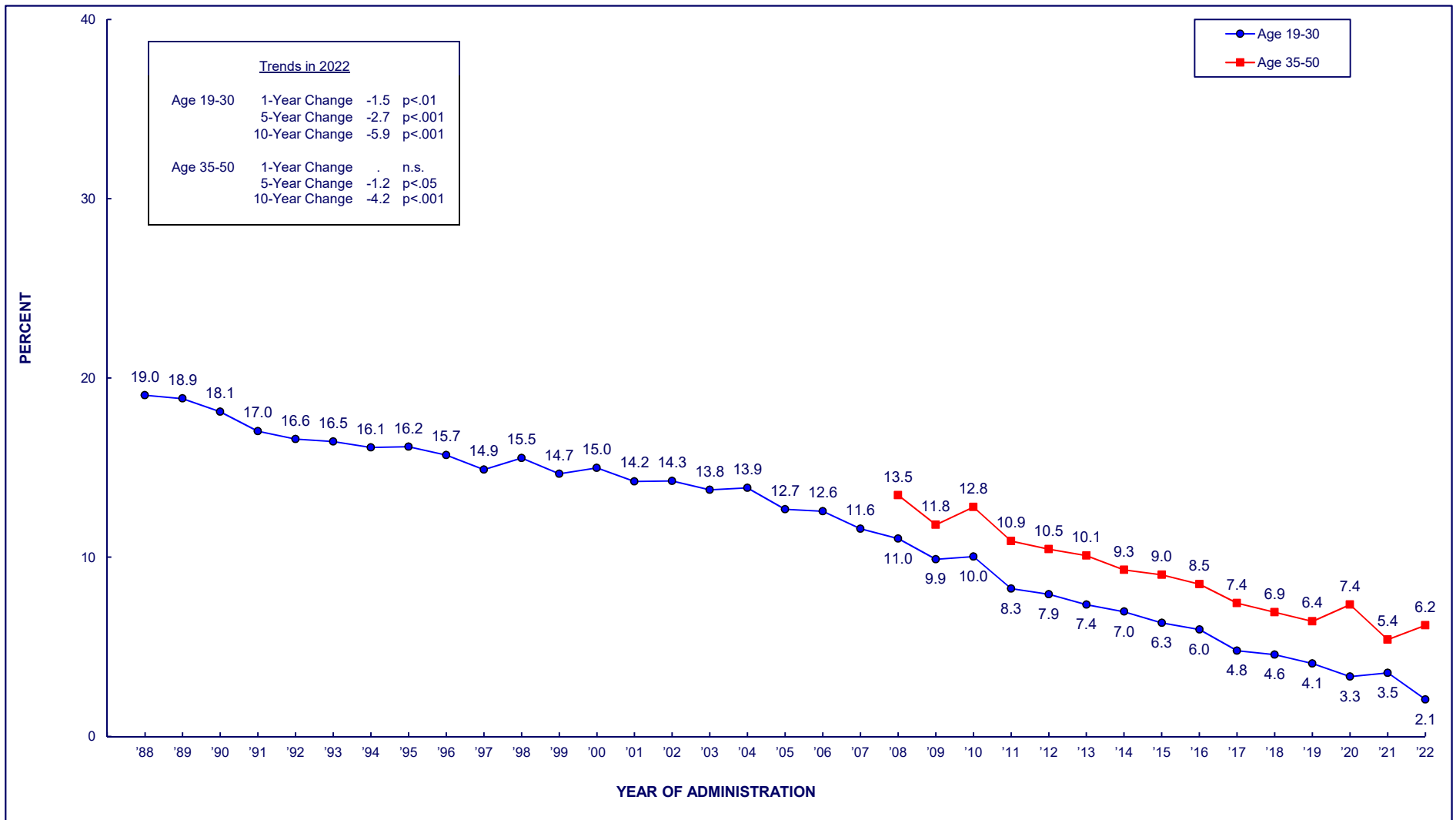
**CIGARETTES**

**Trends in 30-Day Prevalence of Daily Use  
among Respondents of Modal Ages 18 through 60, by Age Group**

<u>Year</u>	<u>Age 18</u>	<u>Ages 19-20</u>	<u>Ages 21-22</u>	<u>Ages 23-24</u>	<u>Ages 25-26</u>	<u>Ages 27-28</u>	<u>Ages 29-30</u>	<u>Age 35</u>	<u>Age 40</u>	<u>Age 45</u>	<u>Age 50</u>	<u>Age 55</u>	<u>Age 60</u>
1976	28.8												
1977	28.8												
1978	27.5	31.0											
1979	25.4	30.7											
1980	21.3	30.0	31.3										
1981	20.3	25.7	30.7										
1982	21.1	25.1	29.1	30.7									
1983	21.2	25.2	26.4	29.8									
1984	18.7	25.1	26.6	29.0	28.9								
1985	19.5	23.7	26.1	25.7	29.9								
1986	18.7	22.3	25.2	26.3	27.8	28.9							
1987	18.7	22.7	24.8	27.0	24.3	27.7							
1988	18.1	19.6	22.8	24.6	24.0	25.6	26.3						
1989	18.9	19.5	22.9	24.2	26.3	23.9	26.3						
1990	19.1	19.3	20.5	23.2	24.4	23.2	25.0						
1991	18.5	20.2	20.7	22.6	24.4	25.4	21.9						
1992	17.2	21.0	21.3	21.3	21.5	22.8	20.8						
1993	19.0	21.1	20.7	20.3	22.2	21.1	23.4						
1994	19.4	23.0	22.4	20.0	20.6	22.0	21.4	23.5					
1995	21.6	21.8	24.0	20.7	20.0	21.7	20.5	23.2					
1996	22.2	22.8	23.6	23.0	21.3	19.9	19.4	23.4					
1997	24.6	22.9	21.4	21.0	20.2	18.2	20.5	19.0					
1998	22.4	24.1	22.9	22.1	22.6	20.2	19.1	21.9	21.6				
1999	23.1	25.3	23.3	21.6	20.0	16.4	18.5	21.0	21.8				
2000	20.6	22.5	26.0	21.7	20.9	20.1	16.9	20.9	20.9				
2001	19.0	21.4	23.1	22.9	21.3	17.7	15.4	17.4	21.2				
2002	16.9	21.0	24.0	24.6	20.2	18.2	18.0	20.1	17.5				
2003	15.8	19.5	20.9	20.6	21.1	19.5	17.1	16.8	21.1	20.2			
2004	15.6	18.9	21.3	24.9	23.8	18.5	17.3	15.3	17.4	18.5			
2005	13.6	16.8	20.1	19.5	23.3	19.1	18.6	16.4	18.2	20.1			
2006	12.2	15.2	18.7	20.0	23.0	21.2	18.9	13.9	15.8	17.4			
2007	12.3	12.1	18.9	19.4	19.4	19.7	16.8	14.2	16.7	16.4			
2008	11.4	13.8	16.9	18.7	17.1	20.3	18.2	17.4	15.8	16.8	17.6		
2009	11.2	12.3	15.2	17.1	18.3	17.6	17.7	14.2	12.4	17.0	15.9		
2010	10.7	11.8	15.9	16.4	16.1	17.8	18.5	15.7	14.9	17.3	18.1		
2011	10.3	11.6	15.9	13.3	18.8	14.8	15.5	16.9	12.3	14.2	15.3		
2012	9.3	9.6	12.5	12.9	15.7	16.9	15.8	14.3	10.6	14.2	14.1		
2013	8.5	12.1	12.5	13.1	11.0	14.6	13.2	12.7	14.7	11.3	14.5	13.9	
2014	6.7	8.4	10.9	11.4	11.8	13.9	13.8	15.0	10.8	12.3	13.9	13.4	
2015	5.5	8.2	11.6	12.2	11.9	10.0	11.1	13.1	12.2	9.7	13.9	13.6	
2016	4.8	4.2	9.0	10.1	10.3	10.3	13.1	12.5	10.5	10.7	12.2	12.7	
2017	4.2	5.0	8.7	9.9	10.2	10.9	7.0	11.7	11.6	7.9	12.6	11.7	
2018	3.6	6.8	5.4	8.8	8.3	9.9	9.8	8.5	10.2	11.0	9.7	13.3	12.8
2019	2.4	3.2	5.9	6.1	10.4	8.5	9.0	9.5	9.4	9.7	9.3	11.9	9.9
2020	3.1	4.1	3.9	6.4	6.7	6.9	7.6	10.0	10.6	11.0	7.7	11.1	12.2
2021	2.0	3.4	3.1	3.9	5.8	8.1	8.4	7.7	8.1	6.8	9.4	10.7	9.4
2022	1.6	1.3	3.4	4.6	4.8	4.0	5.4	9.8	9.8	9.2	7.3	9.7	10.5

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

**Trends in 30-Day Prevalence of Smoking a Half Pack or More per Day  
among Respondents of Modal Ages 19 through 50, by Age Group**



(Age-specific data provided in the following table.)

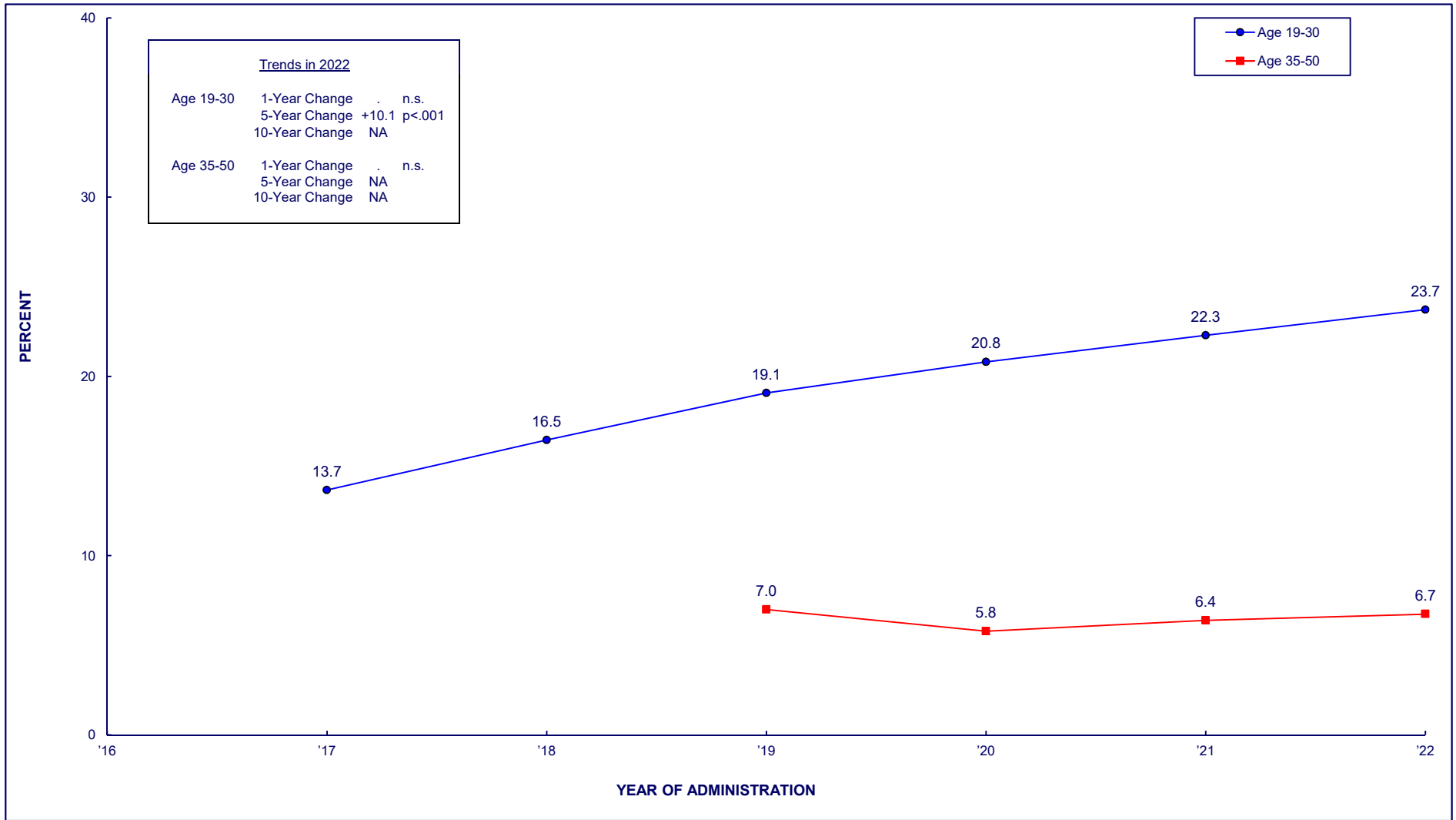
**CIGARETTES**

**Trends in 30-Day Prevalence of Smoking a Half Pack or More per Day among Respondents of Modal Ages 18 through 60, by Age Group**

<u>Year</u>	<u>Age 18</u>	<u>Ages 19–20</u>	<u>Ages 21–22</u>	<u>Ages 23–24</u>	<u>Ages 25–26</u>	<u>Ages 27–28</u>	<u>Ages 29–30</u>	<u>Age 35</u>	<u>Age 40</u>	<u>Age 45</u>	<u>Age 50</u>	<u>Age 55</u>	<u>Age 60</u>
1976	19.2												
1977	19.4												
1978	18.8	23.5											
1979	16.5	24.3											
1980	14.3	22.4	25.2										
1981	13.5	19.6	24.7										
1982	14.2	18.8	23.2	25.0									
1983	13.8	17.8	20.2	24.6									
1984	12.3	18.2	22.0	23.6	24.2								
1985	12.5	17.2	20.9	21.3	24.4								
1986	11.4	16.5	20.1	21.8	22.2	24.1							
1987	11.4	15.9	19.6	22.4	20.3	22.9							
1988	10.6	13.7	17.8	19.1	19.4	21.0	23.3						
1989	11.2	13.3	16.7	19.4	21.7	19.9	21.7						
1990	11.3	14.7	15.0	18.4	20.5	18.8	21.0						
1991	10.7	13.1	14.4	17.4	19.3	20.0	17.7						
1992	10.0	14.8	15.6	16.0	16.6	18.7	17.5						
1993	10.9	14.7	14.7	15.2	17.4	17.2	19.2						
1994	11.2	15.1	16.4	14.9	15.7	16.8	17.8	19.7					
1995	12.4	14.9	18.2	15.6	15.0	16.4	17.0	19.2					
1996	13.0	14.6	16.7	16.8	15.3	15.2	15.6	19.3					
1997	14.3	15.5	14.7	16.0	13.6	13.4	16.2	16.0					
1998	12.6	17.3	16.1	15.3	15.9	15.3	13.4	17.6	18.1				
1999	13.2	15.7	15.9	14.4	15.1	12.9	14.1	18.2	17.6				
2000	11.3	14.3	17.9	14.4	15.2	15.1	13.1	15.6	17.3				
2001	10.3	13.9	14.9	16.2	15.6	12.9	11.9	14.1	16.9				
2002	9.1	12.4	13.5	16.6	14.2	14.3	14.3	14.4	14.5				
2003	8.4	11.8	14.2	14.7	14.0	14.6	13.0	13.3	16.7	17.8			
2004	8.0	11.7	12.6	16.2	16.6	12.7	13.2	11.1	14.8	15.9			
2005	6.9	9.5	12.0	13.4	14.5	13.1	13.4	12.9	16.0	16.5			
2006	5.9	8.7	11.2	13.0	14.7	14.3	13.4	10.9	12.9	14.8			
2007	5.7	6.8	11.0	11.3	14.8	13.4	12.3	10.5	12.6	13.1			
2008	5.4	7.3	9.8	12.4	10.9	12.3	13.4	12.8	12.4	14.1	14.5		
2009	5.0	7.3	8.7	9.3	11.3	12.3	10.6	11.7	8.5	14.2	12.7		
2010	4.7	6.2	9.5	10.2	10.8	11.6	11.8	11.9	11.0	13.9	14.3		
2011	4.3	4.6	8.6	8.0	10.9	7.6	9.7	11.8	8.6	11.3	12.0		
2012	4.0	4.2	7.4	7.9	8.0	11.0	9.1	11.1	7.7	11.1	11.8		
2013	3.4	6.4	6.4	8.3	5.9	9.5	7.6	9.3	10.6	9.0	11.3	11.4	
2014	2.6	4.5	6.1	7.4	7.2	8.6	7.7	9.9	7.4	9.1	10.7	10.6	
2015	2.1	4.0	5.6	7.5	6.9	5.8	8.0	8.0	9.5	7.3	11.2	11.2	
2016	1.8	2.7	4.3	6.7	6.6	6.7	8.1	9.5	6.6	8.2	9.8	9.6	
2017	1.7	2.9	4.6	6.8	4.9	5.3	4.0	6.4	7.6	5.6	9.8	9.3	
2018	1.5	3.1	3.2	4.8	4.3	6.3	5.5	5.8	6.9	8.2	6.7	10.7	10.1
2019	0.9	2.1	2.1	3.7	6.5	4.0	5.6	5.1	5.6	7.6	7.1	9.5	7.7
2020	1.4	1.4	1.3	4.1	4.2	4.9	3.6	7.7	7.2	9.0	5.5	9.1	9.4
2021	0.8	2.6	2.6	2.4	2.7	5.5	4.8	4.5	5.2	4.8	7.0	8.1	7.1
2022	0.9	1.1	0.9	2.1	2.9	1.9	2.9	6.5	7.2	6.5	4.7	7.7	8.1

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

**TABLE/FIGURE 31**  
**VAPING NICOTINE**  
**Trends in 12-Month Prevalence**  
**among Respondents of Modal Ages 19 through 50, by Age Group**



Trends in 2022			
Age 19-30	1-Year Change	.	n.s.
	5-Year Change	+10.1	p<.001
	10-Year Change	NA	
Age 35-50	1-Year Change	.	n.s.
	5-Year Change	NA	
	10-Year Change	NA	

(Age-specific data provided in the following table.)

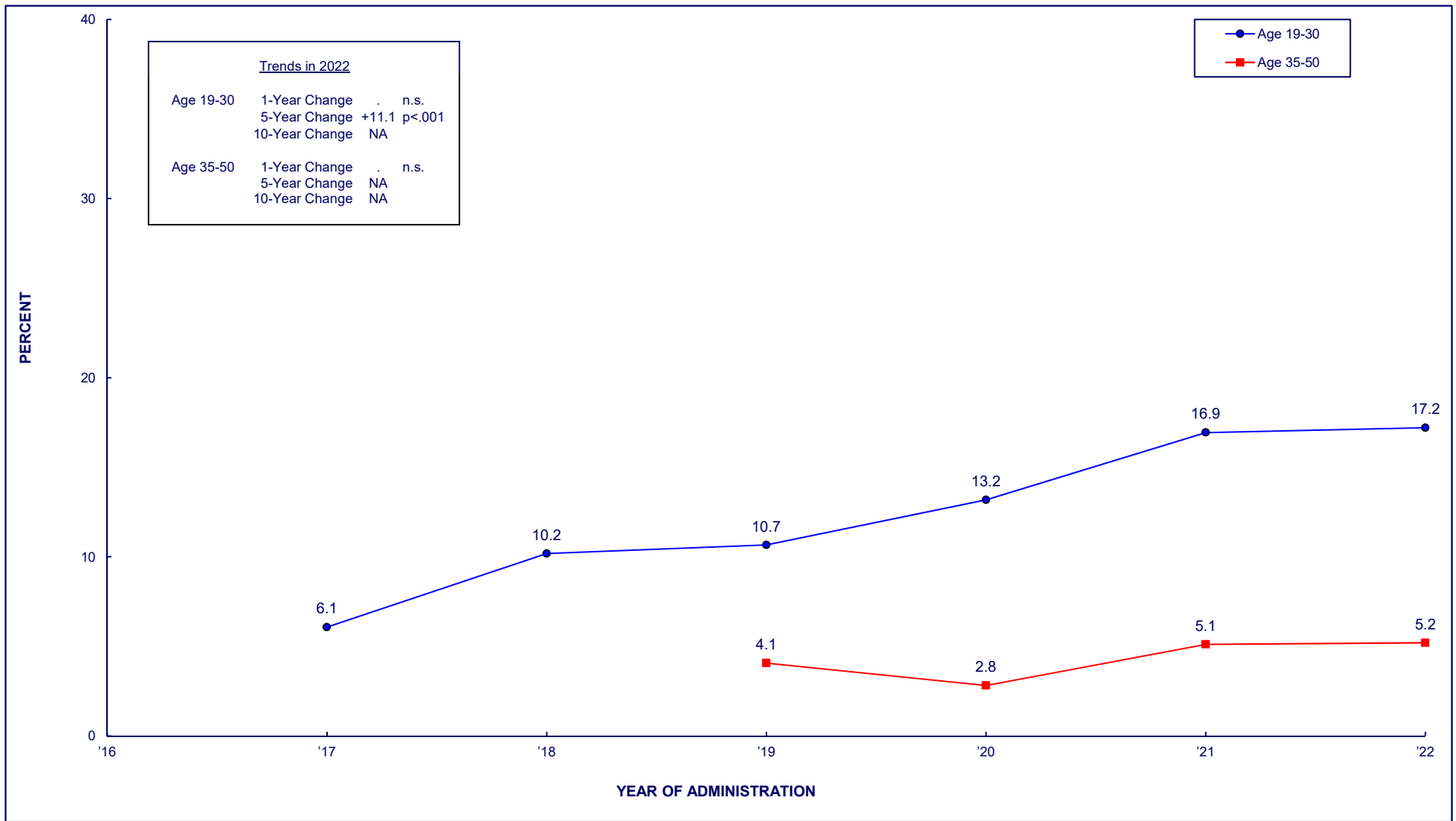


**TABLE/FIGURE 32**  
**VAPING NICOTINE**  
**Trends in 12-Month Prevalence**  
**among Respondents of Modal Ages 18 through 60, by Age Group**

<u>Year</u>	<u>Age 18</u>	<u>Ages 19–20</u>	<u>Ages 21–22</u>	<u>Ages 23–24</u>	<u>Ages 25–26</u>	<u>Ages 27–28</u>	<u>Ages 29–30</u>	<u>Age 35</u>	<u>Age 40</u>	<u>Age 45</u>	<u>Age 50</u>	<u>Age 55</u>	<u>Age 60</u>
<b>2017</b>	18.8	13.3	18.4	16.7	12.7	14.5	7.1						
<b>2018</b>	29.7	24.0	20.0	17.8	17.8	10.8	9.8						
<b>2019</b>	35.3	24.6	26.5	21.1	16.5	12.6	14.7	11.9	6.6	5.2	5.3	4.4	2.8
<b>2020</b>	34.5	29.4	30.4	19.6	20.5	17.2	10.8	7.7	7.3	4.2	4.3	2.7	2.6
<b>2021</b>	26.6	26.6	30.8	26.2	22.0	16.1	14.8	9.4	6.9	4.8	4.8	3.3	1.7
<b>2022</b>	27.3	26.2	29.6	31.4	21.4	18.9	17.1	11.8	6.4	5.8	2.9	2.9	1.4

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

Trends in 30-Day Prevalence  
among Respondents of Modal Ages 19 through 50, by Age Group



Trends in 2022

Age 19-30	1-Year Change	.	n.s.
	5-Year Change	+11.1	p<.001
	10-Year Change	NA	
Age 35-50	1-Year Change	.	n.s.
	5-Year Change	NA	
	10-Year Change	NA	

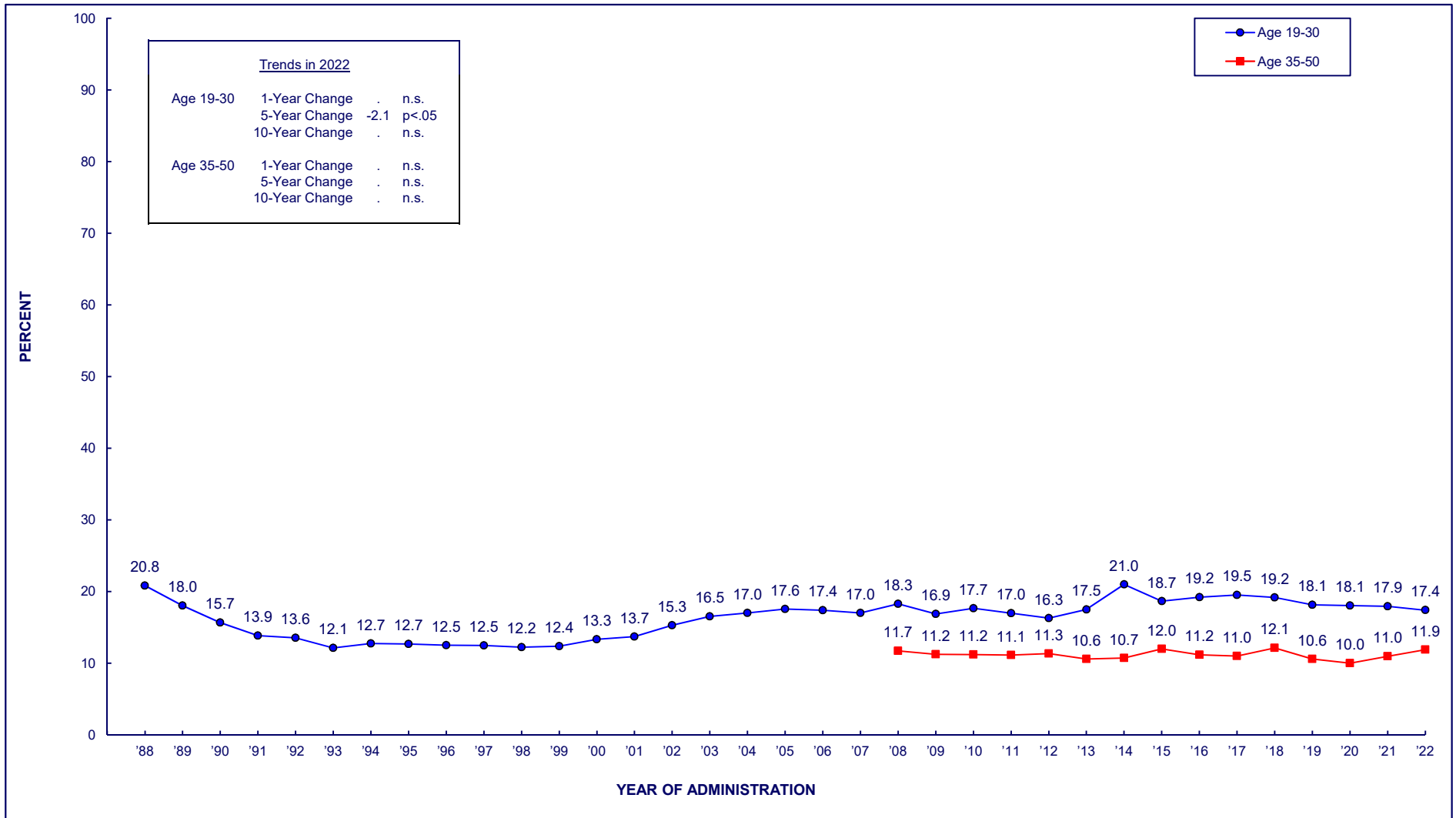
(Age-specific data provided in the following table.)

**TABLE/FIGURE 34**  
**VAPING NICOTINE**  
**Trends in 30-Day Prevalence**  
**among Respondents of Modal Ages 18 through 60, by Age Group**

<u>Year</u>	<u>Age 18</u>	<u>Ages 19–20</u>	<u>Ages 21–22</u>	<u>Ages 23–24</u>	<u>Ages 25–26</u>	<u>Ages 27–28</u>	<u>Ages 29–30</u>	<u>Age 35</u>	<u>Age 40</u>	<u>Age 45</u>	<u>Age 50</u>	<u>Age 55</u>	<u>Age 60</u>
<b>2017</b>	11.0	5.9	6.2	7.7	5.4	7.3	4.0						
<b>2018</b>	20.9	13.6	14.6	11.3	9.7	5.8	7.0						
<b>2019</b>	25.5	16.4	13.5	12.5	8.4	6.8	7.3	6.5	4.2	3.1	3.0	3.7	1.7
<b>2020</b>	24.7	18.9	19.9	12.9	13.7	9.1	6.9	3.3	3.0	2.3	2.8	1.6	1.7
<b>2021</b>	19.6	21.0	24.2	19.4	17.4	11.5	10.6	7.5	5.7	4.0	3.5	2.3	0.8
<b>2022</b>	20.7	18.7	22.1	22.8	14.5	14.0	12.7	8.7	5.1	4.5	2.5	2.0	1.0

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

**TABLE/FIGURE 35**  
**ANY DRUG OTHER THAN MARIJUANA<sup>1</sup>**  
**Trends in 12-Month Prevalence**  
**among Respondents of Modal Ages 19 through 50, by Age Group**



<sup>1</sup>An index of non-medical use of any drugs other than marijuana includes hallucinogens (including LSD), cocaine, amphetamines, sedatives (barbiturates), tranquilizers, and narcotics (opioids, including heroin).

(Age-specific data provided in the following table.)

**TABLE/FIGURE 36**  
**ANY DRUG OTHER THAN MARIJUANA<sup>1</sup>**  
**Trends in 12-Month Prevalence**  
**among Respondents of Modal Ages 18 through 50<sup>2</sup>, by Age Group**

<u>Year</u>	<u>Age 18</u>	<u>Ages 19–20</u>	<u>Ages 21–22</u>	<u>Ages 23–24</u>	<u>Ages 25–26</u>	<u>Ages 27–28</u>	<u>Ages 29–30</u>	<u>Age 35</u>	<u>Age 40</u>	<u>Age 45</u>	<u>Age 50</u>
1976	25.4										
1977	26.0										
1978	27.1	27.7									
1979	28.2	29.3									
1980	30.4	33.2	35.4								
1981	34.0	34.1	36.0								
1982	30.1	32.2	33.8	34.9							
1983	28.4	29.4	33.3	32.8							
1984	28.0	27.5	31.6	29.3	30.1						
1985	27.4	28.3	29.4	33.0	30.0						
1986	25.9	24.9	28.9	29.8	25.6	26.6					
1987	24.1	22.8	25.9	23.1	25.4	23.1					
1988	21.1	20.4	22.6	21.1	21.1	20.7	18.9				
1989	20.0	17.0	19.9	19.4	17.4	18.5	16.2				
1990	17.9	15.9	16.8	17.5	17.0	15.6	11.5				
1991	16.2	14.0	14.3	14.7	15.0	13.8	11.3				
1992	14.9	13.9	14.7	14.6	13.6	13.9	10.6				
1993	17.1	13.4	13.4	12.4	13.3	11.9	8.7				
1994	18.0	15.4	14.7	12.7	12.4	11.1	10.3	11.6			
1995	19.4	18.0	14.5	11.6	11.2	11.6	9.2	10.3			
1996	19.8	17.4	14.2	13.7	10.1	11.0	9.0	11.3			
1997	20.7	17.4	17.0	11.7	10.5	8.6	9.9	10.1			
1998	20.2	16.1	15.2	14.3	11.2	9.7	7.2	7.8	9.3		
1999	20.7	18.5	14.3	14.7	11.7	8.5	7.0	9.5	8.4		
2000	20.4	19.4	16.4	14.1	13.5	10.3	6.9	9.3	7.8		
2001	21.6	17.3	19.4	14.2	13.3	11.6	7.1	8.9	7.2		
2002	20.9	18.9	18.5	17.4	14.6	13.2	9.6	10.3	9.3		
2003	19.8	19.8	20.8	20.1	14.2	15.1	10.1	10.6	6.8	9.6	
2004	20.5	19.5	20.4	21.0	16.0	14.9	11.2	10.6	9.2	10.1	
2005	19.7	19.5	20.5	17.5	19.6	14.2	14.6	11.0	10.1	8.5	
2006	19.2	18.0	21.8	18.6	17.3	15.5	13.6	10.7	10.1	10.0	
2007	18.5	16.9	19.9	19.3	17.2	16.9	12.2	11.2	12.0	10.9	
2008	18.3	17.2	19.4	20.8	18.9	19.0	14.6	13.8	11.8	10.6	10.7
2009	17.0	14.0	22.0	17.3	18.1	14.4	15.4	13.2	10.4	10.4	11.0
2010	17.3	16.7	20.1	20.2	19.3	16.6	13.0	12.6	9.6	11.9	10.8
2011	17.6	17.7	17.5	18.6	17.8	16.3	13.5	14.7	9.2	10.3	10.4
2012	17.0	15.9	17.6	18.9	15.4	16.9	12.6	12.8	10.6	11.4	10.5
2013	17.8	17.7	21.3	17.6	17.9	16.6	13.5	13.2	11.3	10.4	8.1
2014	15.9	22.0	23.0	21.7	22.3	19.3	17.8	16.1	9.1	8.6	9.4
2015	15.2	17.9	21.8	22.1	18.7	17.8	13.6	16.0	10.6	10.4	11.3
2016	14.3	17.2	24.4	19.6	18.8	19.3	16.0	14.8	12.3	8.7	9.6
2017	13.3	16.7	20.9	23.2	21.5	18.1	16.6	13.6	11.2	9.7	9.9
2018	12.4	13.3	22.0	22.2	20.5	19.2	17.4	15.0	10.7	11.2	11.9
2019	11.5	11.5	20.5	19.5	19.3	19.4	18.6	14.3	11.2	9.4	8.1
2020	11.4	14.5	19.4	19.2	21.3	18.2	15.2	13.7	10.8	8.8	7.1
2021	7.2	15.2	15.0	20.1	21.7	18.3	16.6	13.2	10.2	12.0	8.6
2022	8.0	9.4	13.8	20.6	21.3	18.9	16.3	14.6	13.4	10.7	9.0

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

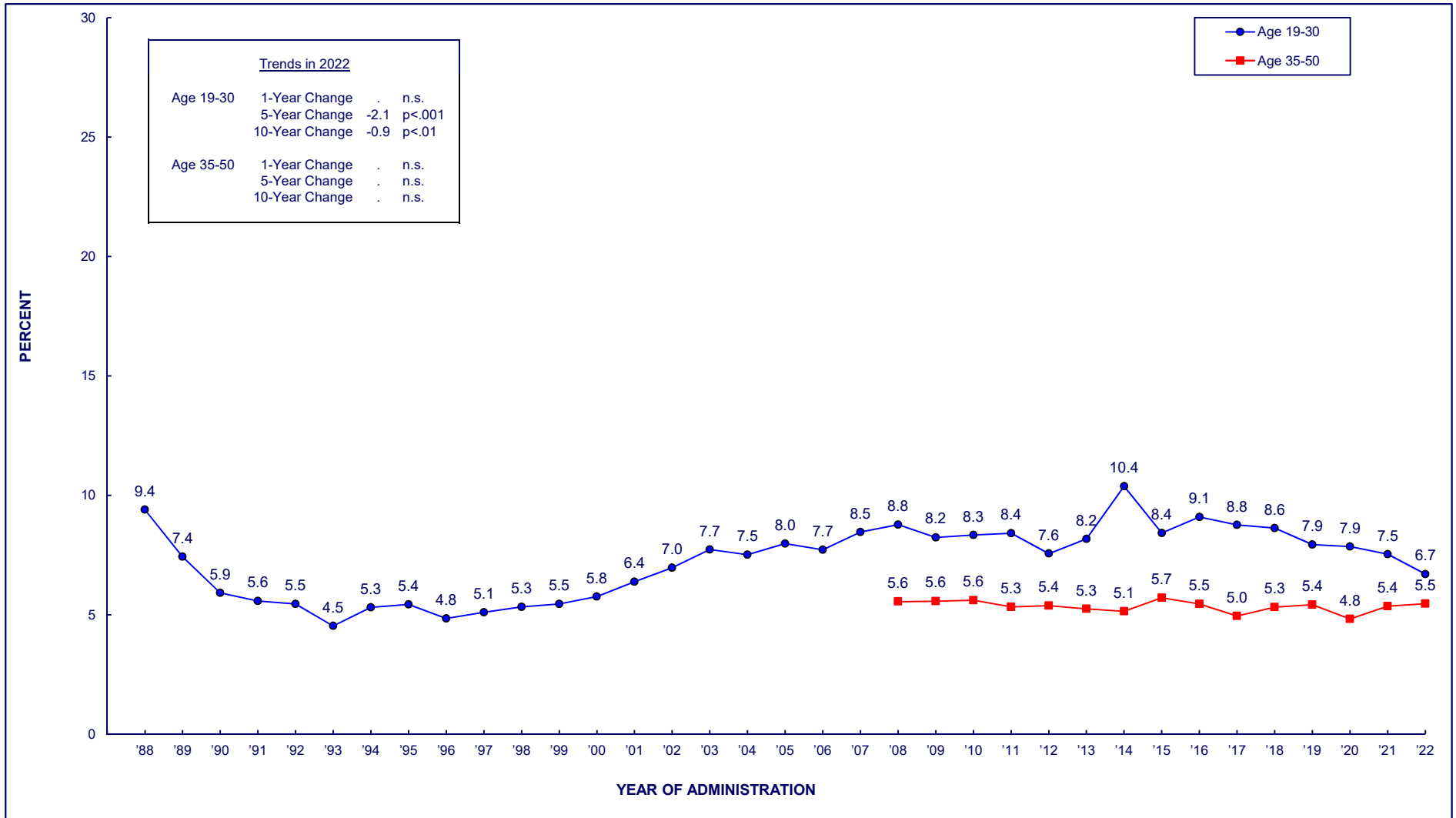
<sup>1</sup>An index of non-medical use of any drugs other than marijuana includes hallucinogens (including LSD), cocaine, amphetamines, sedatives (barbiturates), tranquilizers, and narcotics (opioids, including heroin).

<sup>2</sup>Questions about the use of hallucinogens were not included in the questionnaires for 55- and 60-year-olds. Therefore, we only present estimates through age 50 here.

TABLE/FIGURE 37

**ANY DRUG OTHER THAN MARIJUANA<sup>1</sup>**

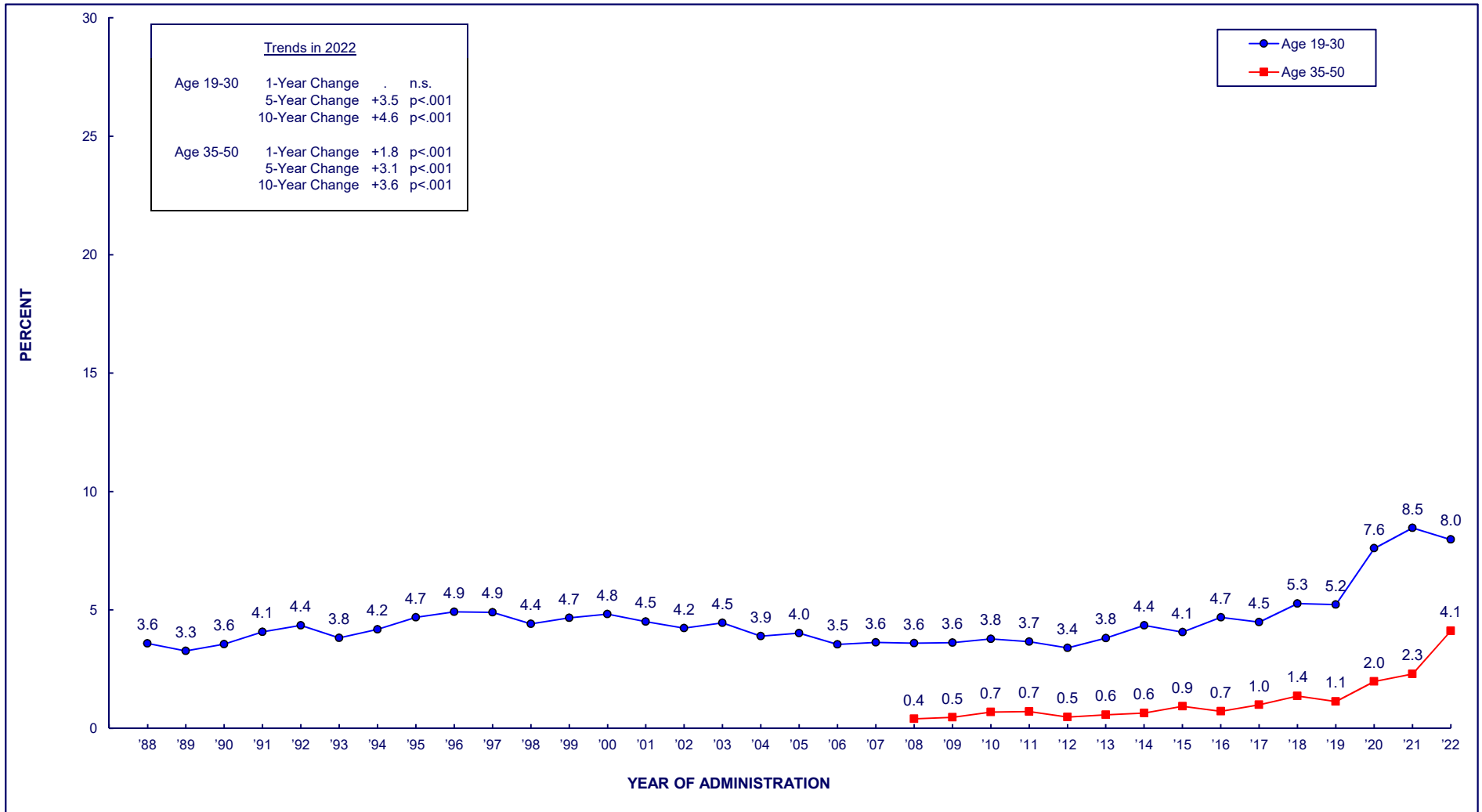
Trends in 30-Day Prevalence  
among Respondents of Modal Ages 19 through 50, by Age Group



<sup>1</sup>An index of non-medical use of any drugs other than marijuana includes hallucinogens (including LSD), cocaine, amphetamines, sedatives (barbiturates), tranquilizers, and narcotics (opioids, including heroin).

(Age-specific data provided in the following table.)

**Trends in 12-Month Prevalence  
among Respondents of Modal Ages 19 through 50, by Age Group**



Trends in 2022			
Age 19-30	1-Year Change	.	n.s.
	5-Year Change	+3.5	p<.001
	10-Year Change	+4.6	p<.001
Age 35-50	1-Year Change	+1.8	p<.001
	5-Year Change	+3.1	p<.001
	10-Year Change	+3.6	p<.001

(Age-specific data provided in the following table.)

**TABLE/FIGURE 39**  
**HALLUCINOGENS <sup>1</sup>**

**Trends in 12-Month Prevalence**  
**among Respondents of Modal Ages 18 through 50, <sup>2</sup> by Age Group**

<u>Year</u>	<u>Age 18</u>	<u>Ages 19–20</u>	<u>Ages 21–22</u>	<u>Ages 23–24</u>	<u>Ages 25–26</u>	<u>Ages 27–28</u>	<u>Ages 29–30</u>	<u>Age 35</u>	<u>Age 40</u>	<u>Age 45</u>	<u>Age 50</u>
1976	9.4										
1977	8.8										
1978	9.6	9.1									
1979	9.9	10.8									
1980	9.3	9.8	9.8								
1981	9.0	9.2	11.0								
1982	8.1	10.1	9.2	7.9							
1983	7.3	7.6	7.6	7.5							
1984	6.5	6.1	7.5	5.5	4.7						
1985	6.3	5.9	6.0	4.8	5.0						
1986	6.0	7.1	5.5	4.7	3.1	2.5					
1987	6.4	6.3	5.4	4.1	2.5	2.8					
1988	5.5	5.8	6.0	3.8	2.6	1.4	2.1				
1989	5.6	5.9	4.6	3.9	2.1	1.7	1.6				
1990	5.9	6.3	5.3	4.5	2.3	1.9	1.3				
1991	5.8	6.5	5.9	4.7	3.3	2.6	1.5				
1992	5.9	7.1	6.9	4.2	3.9	2.3	2.0				
1993	7.4	7.1	4.9	4.6	3.2	2.1	1.4				
1994	7.6	7.5	7.0	4.3	2.7	2.5	1.5	0.7			
1995	9.3	9.5	5.9	4.8	3.6	2.4	1.9	0.6			
1996	10.1	10.6	6.8	5.6	3.3	2.1	1.3	0.6			
1997	9.8	10.1	7.6	5.0	3.8	1.7	1.6	1.1			
1998	9.0	7.6	6.6	5.7	3.5	2.2	1.2	0.4	0.8		
1999	9.4	9.4	7.1	6.0	2.7	1.5	1.5	0.8	0.4		
2000	8.1	8.5	7.4	4.6	4.2	2.8	1.9	0.5	1.1		
2001	9.1	8.7	8.0	4.6	3.2	1.8	1.5	0.7	0.1		
2002	6.6	7.0	5.9	5.3	3.0	2.3	2.4	0.2	0.6		
2003	5.9	7.8	7.1	5.7	3.0	2.4	1.5	0.6	0.5	0.6	
2004	6.2	6.1	6.5	4.2	3.2	2.3	1.6	0.9	0.5	0.3	
2005	5.5	6.2	5.6	3.8	4.1	2.2	2.4	0.3	0.4	0.1	
2006	4.9	5.8	5.5	4.4	2.3	2.1	1.4	0.3	0.1	0.1	
2007	5.4	5.4	4.7	4.0	3.3	2.9	1.5	0.4	0.5	0.3	
2008	5.9	5.3	5.0	3.5	3.2	1.9	2.7	1.2	0.1	0.1	0.2
2009	4.7	4.7	5.3	4.0	3.5	2.2	2.0	0.9	0.4	0.3	0.3
2010	5.5	5.3	5.0	4.8	3.5	2.0	1.9	1.9	0.5	0.3	0.2
2011	5.2	5.0	5.4	3.4	3.1	2.8	2.2	1.5	0.6	0.6	0.1
2012	4.8	5.4	4.1	3.5	2.7	2.2	2.4	1.0	0.2	0.5	0.2
2013	4.5	5.4	4.6	4.2	3.0	2.9	2.7	1.4	0.7	0.2	0.0
2014	4.0	7.0	5.9	4.8	3.3	2.7	2.7	1.3	0.3	0.6	0.4
2015	4.2	5.7	6.2	3.5	4.6	2.1	2.6	2.8	0.6	0.1	0.4
2016	4.3	4.7	6.5	4.9	5.6	2.5	4.1	1.4	1.0	0.2	0.4
2017	4.4	4.7	5.4	5.8	5.4	3.5	2.2	1.7	1.3	0.7	0.3
2018	4.3	5.6	6.2	5.0	5.1	6.5	3.4	1.7	2.1	1.1	0.6
2019	4.6	5.1	6.9	5.3	5.3	3.7	5.2	2.9	1.1	0.6	0.2
2020	5.3	7.5	10.1	8.8	8.6	5.5	5.5	2.9	2.5	1.7	1.0
2021	4.1	10.9	7.0	9.3	9.6	7.7	7.5	3.5	3.1	2.3	0.5
2022	4.4	3.6	8.4	9.7	9.5	9.1	5.5	5.9	4.8	3.8	2.0

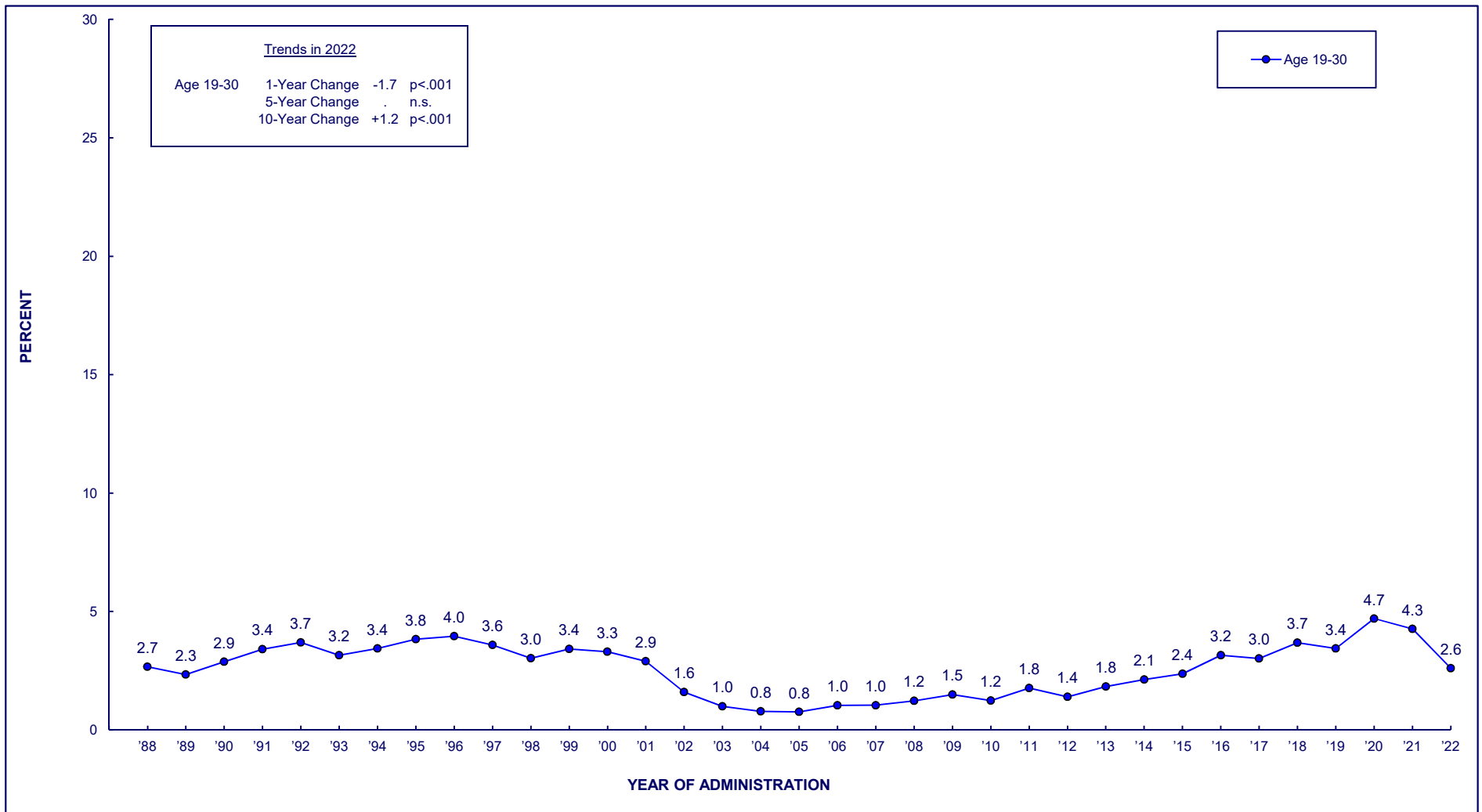
Source. The Monitoring the Future study, the University of Michigan.

<sup>1</sup>Unadjusted for the possible underreporting of PCP.

<sup>2</sup>Questions about the use of hallucinogens were not included in the questionnaires for 55- and 60-year-olds.



Trends in 12-Month Prevalence  
among Respondents of Modal Ages 19 through 30



(Age-specific data provided in the following table.)

**LSD**

**Trends in 12-Month Prevalence  
among Respondents of Modal Ages 18 through 35, by Age Group**

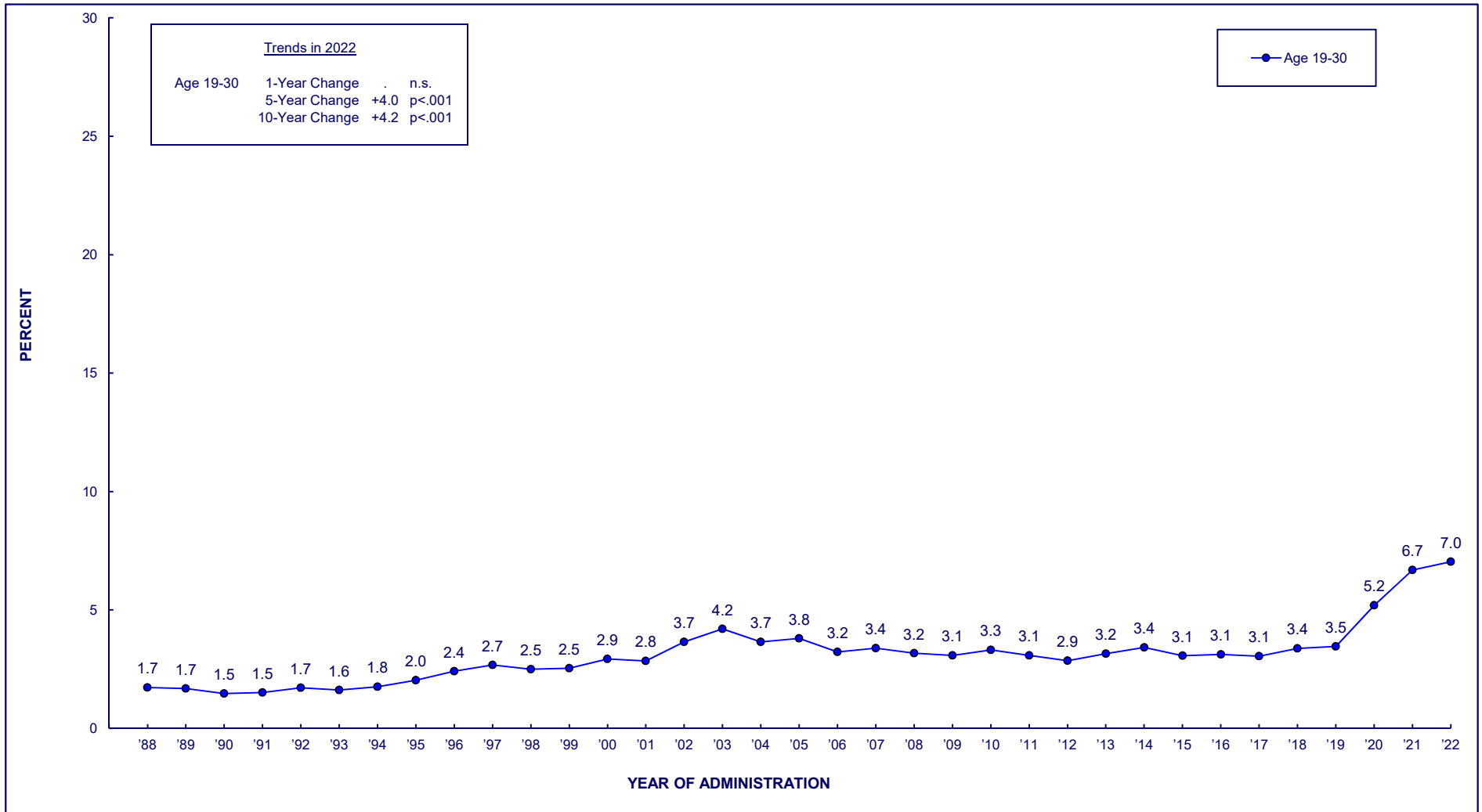
<u>Year</u>	<u>Age 18</u>	<u>Ages 19–20</u>	<u>Ages 21–22</u>	<u>Ages 23–24</u>	<u>Ages 25–26</u>	<u>Ages 27–28</u>	<u>Ages 29–30</u>	<u>Age 35<sup>1</sup></u>
1976	6.4							
1977	5.5							
1978	6.3	5.9						
1979	6.6	8.0						
1980	6.5	7.4	7.4					
1981	6.5	6.8	8.2					
1982	6.1	7.8	6.8	5.9				
1983	5.4	5.6	5.2	4.7				
1984	4.7	4.3	5.2	3.2	2.7			
1985	4.4	3.9	3.4	2.8	3.1			
1986	4.5	5.0	4.2	2.8	1.5	1.7		
1987	5.2	5.2	3.9	2.4	1.6	2.0		
1988	4.8	4.8	4.3	2.9	1.8	0.9	1.4	
1989	4.9	4.5	3.5	2.7	1.4	1.2	0.8	
1990	5.4	5.4	4.4	3.6	1.8	1.6	0.9	
1991	5.2	5.7	5.1	4.1	2.7	2.0	1.1	
1992	5.6	6.7	5.7	3.5	3.3	1.7	1.5	
1993	6.8	6.2	4.2	3.4	2.6	1.8	1.0	
1994	6.9	6.9	6.0	3.3	2.2	1.6	1.0	0.4
1995	8.4	8.1	5.0	4.1	2.5	1.8	1.5	0.4
1996	8.8	9.2	5.4	4.9	2.1	1.6	0.9	0.5
1997	8.4	8.0	5.2	3.9	2.7	1.3	0.8	0.5
1998	7.6	5.7	4.4	4.0	2.2	1.1	0.9	0.2
1999	8.1	7.9	4.7	4.4	2.0	1.1	0.7	0.6
2000	6.6	6.7	4.8	2.6	3.0	1.8	1.2	0.3
2001	6.6	6.5	4.7	2.7	1.8	1.4	0.9	0.5
2002	3.5	3.3	1.9	2.2	0.9	0.6	1.0	*
2003	1.9	1.7	1.5	1.3	0.7	0.6	0.4	*
2004	2.2	1.4	1.5	0.9	0.6	0.3	0.2	0.3
2005	1.8	1.4	1.0	0.8	0.8	0.2	0.4	0.2
2006	1.7	2.2	1.5	0.9	0.9	0.7	0.2	*
2007	2.1	1.4	1.2	1.4	1.3	0.7	0.4	—
2008	2.7	1.9	2.3	0.9	1.0	0.6	0.6	—
2009	1.9	2.5	2.3	1.7	1.4	1.0	0.3	—
2010	2.6	2.4	1.6	1.5	1.1	0.6	0.3	—
2011	2.7	3.1	3.0	1.6	1.2	0.4	1.2	—
2012	2.4	2.6	1.7	1.6	1.3	0.5	0.5	—
2013	2.2	2.8	2.8	2.2	1.6	0.7	0.9	—
2014	2.5	3.7	3.2	2.4	1.6	1.1	0.7	—
2015	2.9	3.5	4.2	2.0	2.8	0.7	1.1	—
2016	3.0	4.1	4.0	3.7	3.9	1.1	2.3	—
2017	3.3	3.1	4.0	4.1	3.9	2.4	0.8	—
2018	3.2	4.8	5.0	2.6	3.2	4.5	2.2	—
2019	3.6	3.5	4.1	3.7	4.5	1.9	3.1	—
2020	3.9	5.7	7.4	4.9	5.6	2.8	2.4	—
2021	2.5	7.0	4.3	3.9	5.8	3.3	2.6	—
2022	2.5	1.5	2.7	3.8	3.3	2.9	1.1	—

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

Notes. \* \* \* indicates a percentage of less than 0.05%. ' — ' indicates data not available.

<sup>1</sup>Questions about LSD use were not included in the questionnaires administered to the 40-, 45-, 50-, 55-, and 60-year-olds, or the 35-year-olds after 2006.

**TABLE/FIGURE 42**  
**HALLUCINOGENS OTHER THAN LSD**  
**Trends in 12-Month Prevalence**  
**among Respondents of Modal Ages 19 through 30**



(Age-specific data provided in the following table.)

**TABLE/FIGURE 43**  
**HALLUCINOGENS OTHER THAN LSD <sup>1</sup>**  
**Trends in 12-Month Prevalence**  
**among Respondents of Modal Ages 18 through 30, by Age Group**

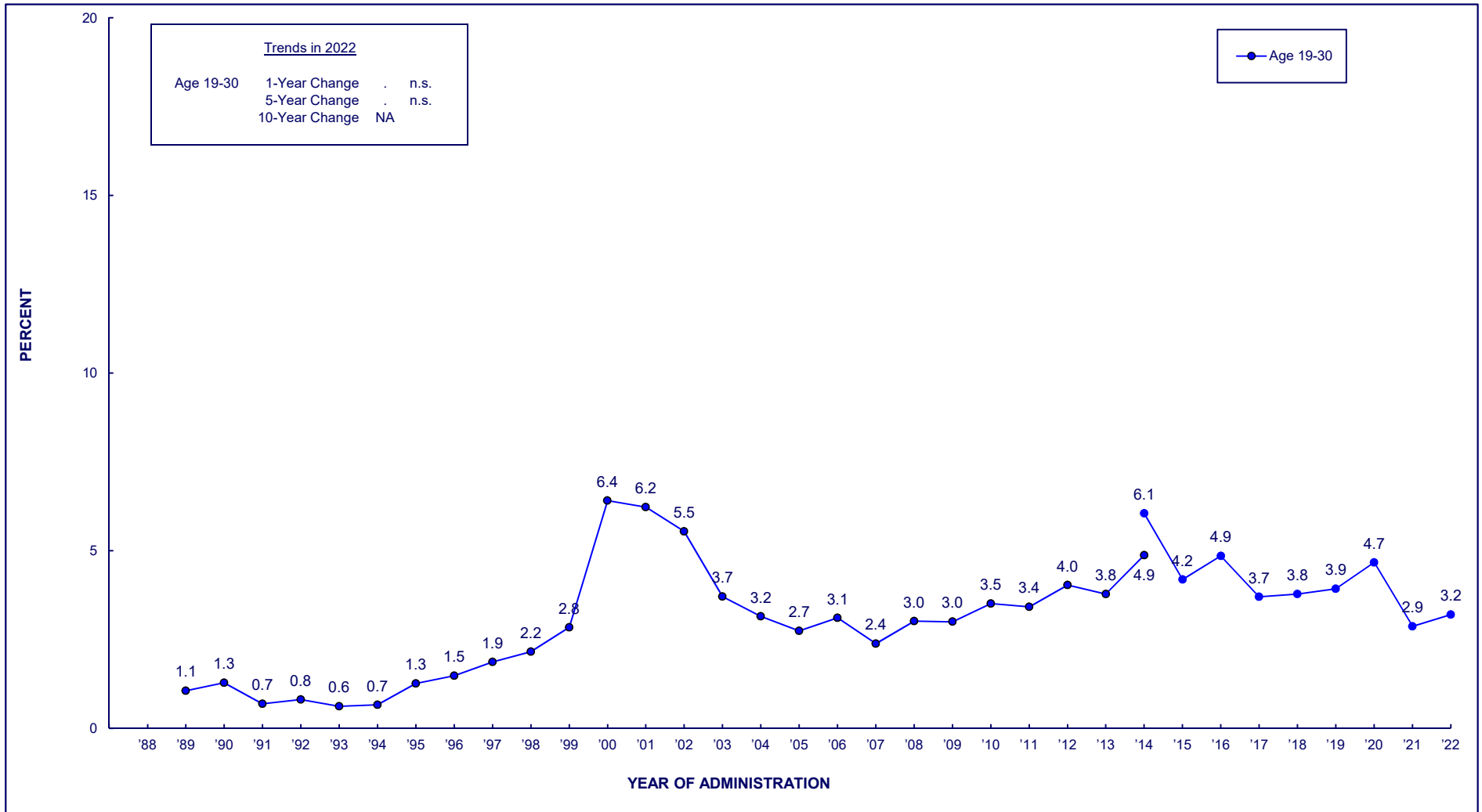
<u>Year</u>	<u>Age 18</u>	<u>Ages 19–20</u>	<u>Ages 21–22</u>	<u>Ages 23–24</u>	<u>Ages 25–26</u>	<u>Ages 27–28</u>	<u>Ages 29–30</u>
1976	7.0						
1977	6.9						
1978	7.3	6.9					
1979	6.8	7.2					
1980	6.2	5.5	5.7				
1981	5.6	4.8	6.5				
1982	4.7	6.2	5.2	3.9			
1983	4.1	4.0	4.3	4.2			
1984	3.8	3.3	4.1	3.5	3.1		
1985	3.6	3.7	3.8	2.9	2.8		
1986	3.0	3.9	2.4	2.7	2.0	1.4	
1987	3.2	2.6	2.7	2.6	1.3	1.5	
1988	2.1	2.4	3.2	1.8	1.2	0.7	1.0
1989	2.2	3.0	2.2	2.0	1.3	0.7	1.0
1990	2.1	2.4	2.7	1.6	0.9	0.8	0.6
1991	2.0	2.5	2.2	1.5	1.2	1.1	0.5
1992	1.7	2.2	3.0	1.8	1.6	0.8	0.9
1993	2.2	2.8	1.8	2.2	1.4	0.8	0.8
1994	3.1	2.4	3.0	2.0	1.1	1.3	0.8
1995	3.8	3.9	3.0	1.8	1.7	1.2	0.6
1996	4.4	4.4	3.9	3.0	1.6	1.0	0.7
1997	4.6	5.3	4.9	2.3	1.6	0.9	1.2
1998	4.6	4.4	3.5	3.1	1.9	1.5	0.6
1999	4.3	4.0	4.4	3.7	1.5	0.7	1.0
2000	4.4	4.8	4.7	3.4	2.1	1.7	1.1
2001	5.9	5.2	5.6	3.0	1.9	0.9	0.9
2002	5.4	6.2	5.4	4.3	2.6	1.9	2.0
2003	5.4	7.4	6.9	5.4	2.7	2.2	1.4
2004	5.6	5.8	6.1	3.8	3.1	2.2	1.5
2005	5.0	6.0	5.2	3.6	3.8	2.2	2.2
2006	4.6	5.3	5.1	4.2	2.0	1.7	1.3
2007	4.8	5.1	4.6	3.5	2.7	2.8	1.5
2008	5.0	4.8	4.3	3.2	2.8	1.7	2.3
2009	4.2	4.0	4.3	3.3	3.1	1.9	1.9
2010	4.8	4.7	4.4	4.1	3.0	1.8	1.8
2011	4.3	3.9	4.2	2.9	3.0	2.7	1.7
2012	4.0	4.5	3.5	2.7	2.1	2.1	2.2
2013	3.7	4.4	3.7	3.5	2.3	2.6	2.4
2014	3.0	5.7	4.7	3.4	2.5	2.2	2.2
2015	2.9	4.3	4.3	2.7	3.3	1.9	2.2
2016	2.7	3.0	4.8	3.4	2.8	1.8	3.0
2017	2.9	3.1	3.3	3.7	4.1	2.4	1.8
2018	2.7	2.8	3.8	3.6	3.4	3.7	2.9
2019	2.7	3.1	4.5	3.4	3.9	2.7	3.3
2020	2.8	5.4	6.8	6.5	5.4	3.8	3.6
2021	2.9	8.3	4.8	6.9	7.8	6.7	6.2
2022	3.4	3.1	7.4	8.1	8.4	8.1	5.2

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

Notes. '—' indicates data not available.

<sup>1</sup>Unadjusted for the possible underreporting of PCP.

**TABLE/FIGURE 44**  
**MDMA (ECSTASY, MOLLY)**  
**Trends in 12-Month Prevalence**  
**among Respondents of Modal Ages 19 through 30**



(Age-specific data provided in the following table.)

**TABLE/FIGURE 45**  
**MDMA (Ecstasy, Molly)**  
**Trends in 12-Month Prevalence**  
**among Respondents of Modal Ages 18 through 30,<sup>1,2</sup>**  
**by Age Group**

Year	Age 18		Ages 19–20		Ages 21–22		Ages 23–24		Ages 25–26		Ages 27–28		Ages 29–30	
	Original	Revised	Original	Revised	Original	Revised	Original	Revised	Original	Revised	Original	Revised	Original	Revised
1989			1.9		2.1		1.2		0.3		0.9		0.2	
1990			2.1		2.2		1.4		1.1		0.9		0.2	
1991			0.5		1.0		0.9		0.6		0.7		0.6	
1992			2.0		1.7		0.4		0.7		0.4		*	
1993			1.0		0.4		1.2		0.6		0.7		*	
1994			0.7		1.6		1.1		0.3		0.3		0.3	
1995			2.2		1.7		1.2		1.0		1.4		0.3	
1996	4.6		3.9		1.6		1.2		1.3		0.7		0.6	
1997	4.0		3.0		3.5		1.3		1.8		0.5		1.5	
1998	3.6		3.4		3.3		2.5		1.7		2.5		*	
1999	5.6		4.6		4.5		3.2		3.2		1.6		0.6	
2000	8.2		9.8		9.3		6.4		8.1		2.5		3.0	
2001	9.2		10.1		10.4		6.7		4.7		3.8		2.2	
2002	7.4		5.9		9.7		7.8		3.9		3.4		2.9	
2003	4.5		4.7		5.3		4.9		3.9		2.8		1.2	
2004	4.0		4.2		2.8		3.3		3.9		3.7		1.1	
2005	3.0		3.4		3.5		2.6		2.3		2.8		1.9	
2006	4.1		4.4		4.2		4.2		2.0		1.9		2.3	
2007	4.5		3.1		2.5		2.8		2.1		1.8		2.1	
2008	4.3		5.0		4.2		2.6		2.3		2.0		2.1	
2009	4.3		3.2		4.1		3.5		2.7		2.3		2.1	
2010	4.5		5.2		5.5		4.3		1.5		2.1		2.3	
2011	5.3		4.7		5.2		3.4		2.2		3.1		2.0	
2012	3.8		5.9		5.6		4.2		3.1		2.2		3.1	
2013	4.0		5.3		5.7		5.1		3.0		1.9		1.7	
2014	3.6	5.0	6.2	6.0	6.9	6.7	4.7	2.3	4.5	10.6	4.9	6.4	2.0	4.0
2015	—	3.6	—	5.8	—	4.2	—	5.2	—	4.2	—	3.3	—	2.7
2016	—	2.7	—	4.9	—	7.9	—	4.1	—	3.8	—	5.0	—	3.7
2017	—	2.6	—	1.7	—	6.2	—	5.4	—	3.8	—	2.3	—	2.9
2018	—	2.2	—	2.5	—	3.5	—	3.9	—	4.3	—	3.5	—	4.7
2019	—	2.2	—	1.6	—	5.7	—	4.4	—	5.1	—	3.0	—	3.9
2020	—	1.8	—	3.6	—	5.2	—	5.5	—	5.2	—	3.9	—	4.5
2021	—	1.1	—	1.3	—	2.7	—	3.0	—	4.7	—	2.4	—	2.5
2022	—	1.4	—	0.6	—	2.4	—	3.8	—	2.7	—	5.5	—	2.9

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

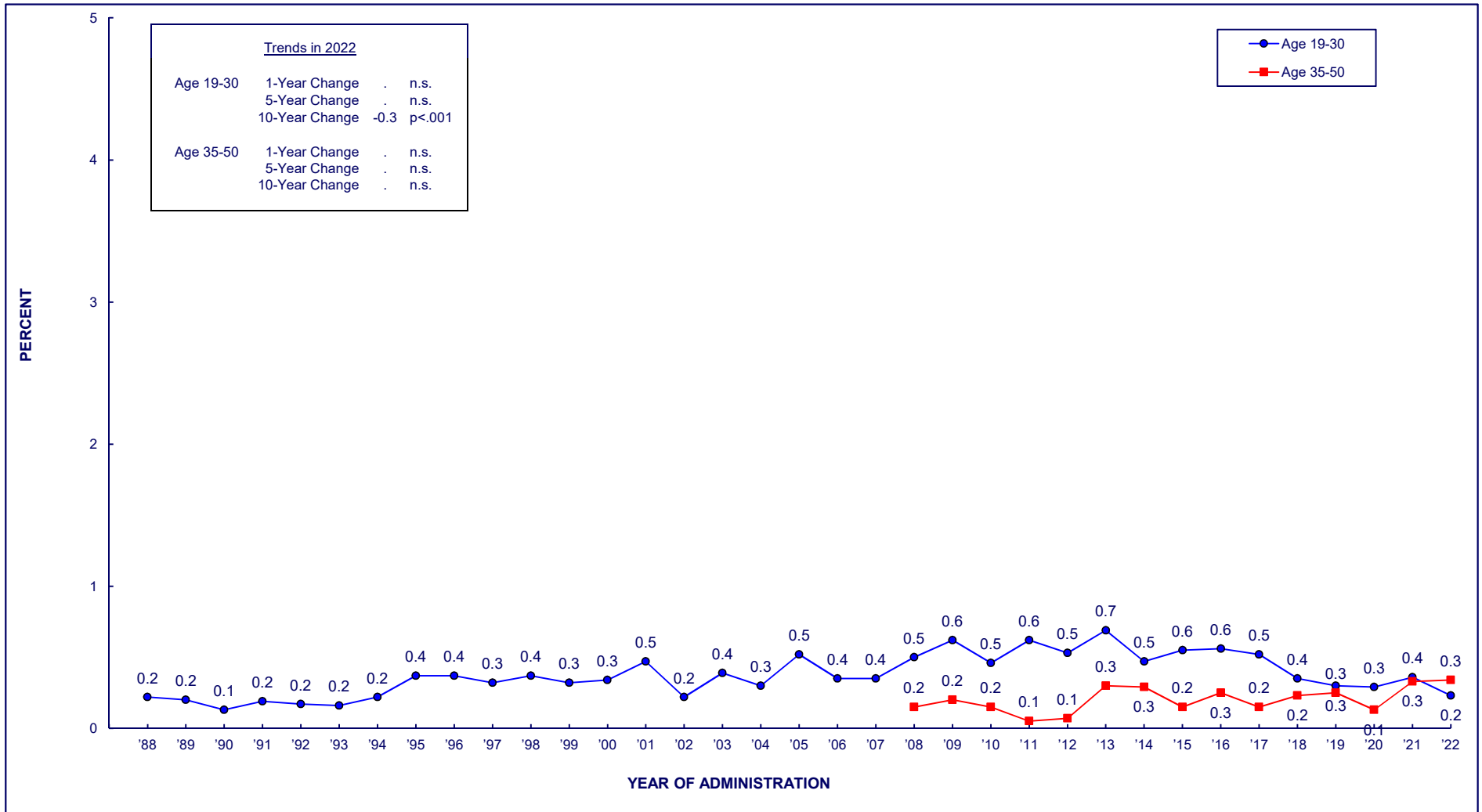
Notes. \*\* indicates a percentage of less than 0.05%. '—' indicates data not available.

<sup>1</sup>Questions about use of ecstasy (MDMA, Molly) were not included in the questionnaires administered to those ages 35+.

<sup>2</sup>In 2014, a version of the question was added to an additional form that included "molly" in the description. In 2015 the remaining forms changed to this updated wording. Data for both versions of the question are included here.

**HEROIN**

Trends in 12-Month Prevalence  
among Respondents of Modal Ages 19 through 50, by Age Group



(Age-specific data provided in the following table.)

**HEROIN**

**Trends in 12-Month Prevalence  
among Respondents of Modal Ages 18 through 60, by Age Group**

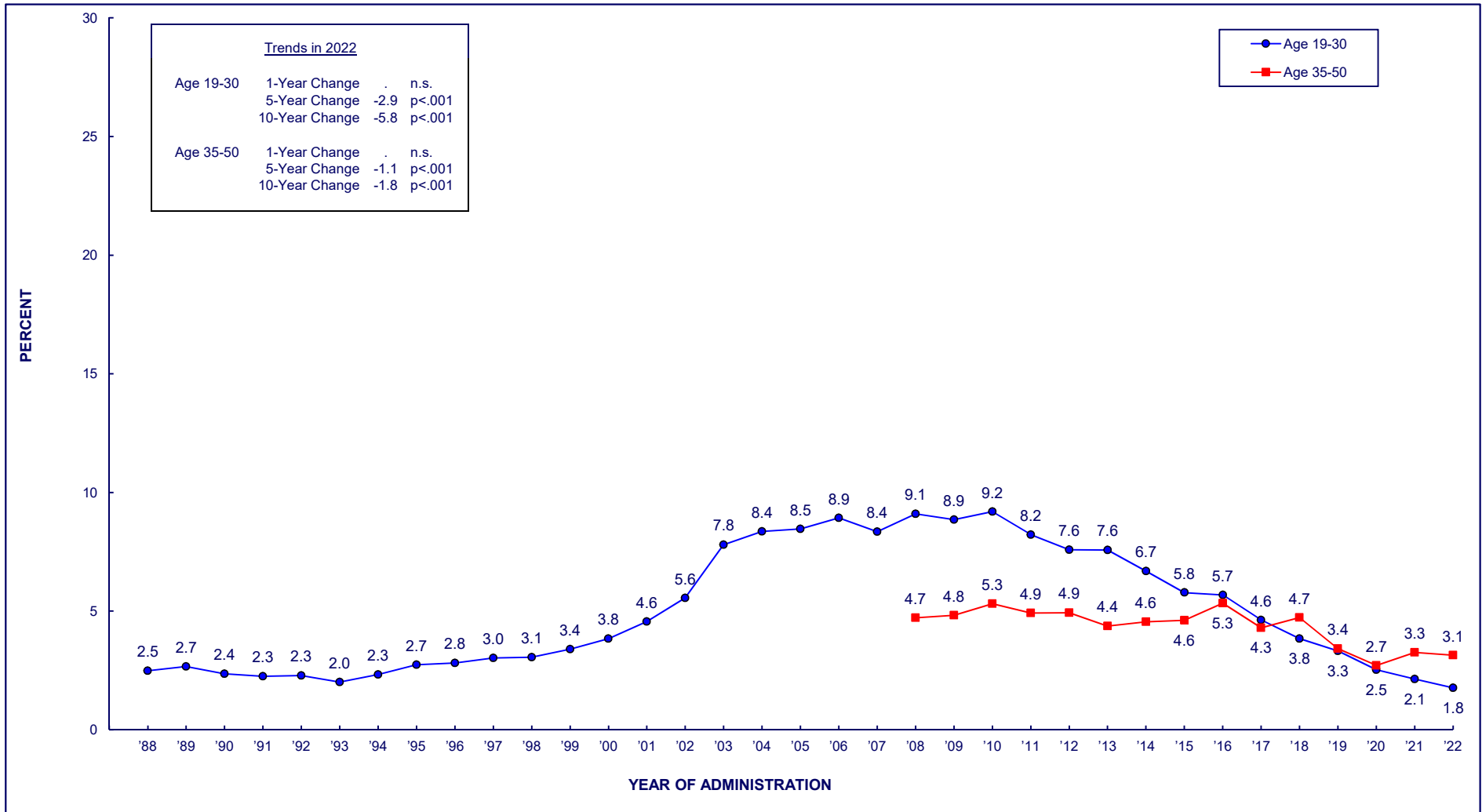
<u>Year</u>	<u>Age 18</u>	<u>Ages 19–20</u>	<u>Ages 21–22</u>	<u>Ages 23–24</u>	<u>Ages 25–26</u>	<u>Ages 27–28</u>	<u>Ages 29–30</u>	<u>Age 35</u>	<u>Age 40</u>	<u>Age 45</u>	<u>Age 50</u>	<u>Age 55</u>	<u>Age 60</u>
1976	0.8												
1977	0.8												
1978	0.8	0.4											
1979	0.5	0.3											
1980	0.5	0.2	0.7										
1981	0.5	0.5	0.4										
1982	0.6	0.2	0.4	0.2									
1983	0.6	0.2	0.3	0.5									
1984	0.5	0.2	0.3	0.2	0.3								
1985	0.6	0.1	0.3	0.3	0.3								
1986	0.5	0.1	0.2	0.1	0.2	0.3							
1987	0.5	0.2	0.3	0.1	0.3	0.3							
1988	0.5	0.1	0.2	0.2	0.1	0.3	0.4						
1989	0.6	0.2	0.2	0.1	0.1	0.3	0.3						
1990	0.5	0.2	0.2	0.2	0.1	*	0.2						
1991	0.4	0.1	0.2	0.2	0.2	0.1	0.3						
1992	0.6	0.1	0.3	0.2	0.1	0.2	0.1						
1993	0.5	0.2	0.2	0.1	0.2	0.2	0.1						
1994	0.6	0.1	0.3	0.1	0.2	0.2	0.4	0.3					
1995	1.1	0.6	0.2	0.8	0.1	0.1	0.4	0.2					
1996	1.0	0.8	0.5	0.4	0.2	0.2	0.1	0.2					
1997	1.2	0.3	0.6	0.2	0.3	0.2	0.4	0.1					
1998	1.0	1.0	0.4	0.3	0.4	0.1	0.2	0.1	0.7				
1999	1.1	0.5	0.4	0.5	0.2	0.2	0.1	0.5	*				
2000	1.5	0.6	0.5	0.4	0.3	0.1	0.1	*	0.1				
2001	0.9	1.1	0.4	0.5	0.3	0.4	0.2	0.0	0.1				
2002	1.0	0.5	0.1	0.3	0.2	0.1	0.2	0.2	0.3				
2003	0.8	0.3	0.4	0.6	0.1	0.7	0.2	0.3	0.4	0.5			
2004	0.9	0.3	0.5	0.3	0.2	0.1	0.4	0.1	0.1	0.3			
2005	0.8	0.5	0.7	0.3	0.2	0.5	0.8	*	*	0.1			
2006	0.8	0.5	0.6	0.2	0.6	*	0.1	0.4	0.2	0.2			
2007	0.9	0.3	0.5	0.4	0.3	0.3	0.4	0.1	0.1	0.1			
2008	0.7	0.6	1.1	0.6	0.3	0.2	0.2	0.1	*	*	0.5		
2009	0.7	0.7	0.8	0.8	0.7	0.3	0.3	0.3	*	0.1	0.4		
2010	0.9	0.5	0.3	0.9	0.7	0.3	0.1	0.3	0.1	*	0.2		
2011	0.8	0.7	0.4	0.7	0.8	0.7	0.4	0.1	*	0.1	*		
2012	0.6	0.4	0.5	0.4	1.0	0.3	0.6	0.1	*	0.0	0.1		
2013	0.6	0.4	1.0	0.6	1.0	0.7	0.4	0.6	0.2	0.3	0.1	0.1	
2014	0.6	0.4	0.3	0.4	0.8	0.7	0.2	0.8	*	0.1	0.3	0.2	
2015	0.5	0.3	0.3	0.8	0.8	0.5	0.6	0.3	0.1	*	0.3	0.1	
2016	0.3	0.1	0.9	0.4	0.6	0.5	0.9	0.7	*	0.0	0.3	0.1	
2017	0.4	*	0.2	0.5	0.8	0.9	0.6	0.1	0.2	0.3	*	0.2	
2018	0.4	0.2	0.3	0.4	0.4	0.5	0.3	0.4	0.3	0.2	0.1	0.2	0.2
2019	0.4	*	0.1	0.4	0.1	0.4	0.8	0.4	0.4	0.2	*	0.2	0.2
2020	0.3	*	*	0.1	0.9	0.4	0.2	0.5	*	*	*	*	*
2021	0.1	1.1	0.4	0.1	0.2	*	0.6	0.9	0.3	*	0.1	0.1	0.2
2022	0.3	*	0.2	0.1	0.5	0.2	0.2	0.5	0.3	0.3	0.3	*	0.1

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

Notes. '\*' indicates a percentage of less than 0.05%.



**TABLE/FIGURE 48**  
**NARCOTICS OTHER THAN HEROIN**  
**Trends in 12-Month Prevalence**  
**among Respondents of Modal Ages 19 through 50, by Age Group**



(Age-specific data provided in the following table.)

**TABLE/FIGURE 49**  
**NARCOTICS OTHER THAN HEROIN <sup>1</sup>**

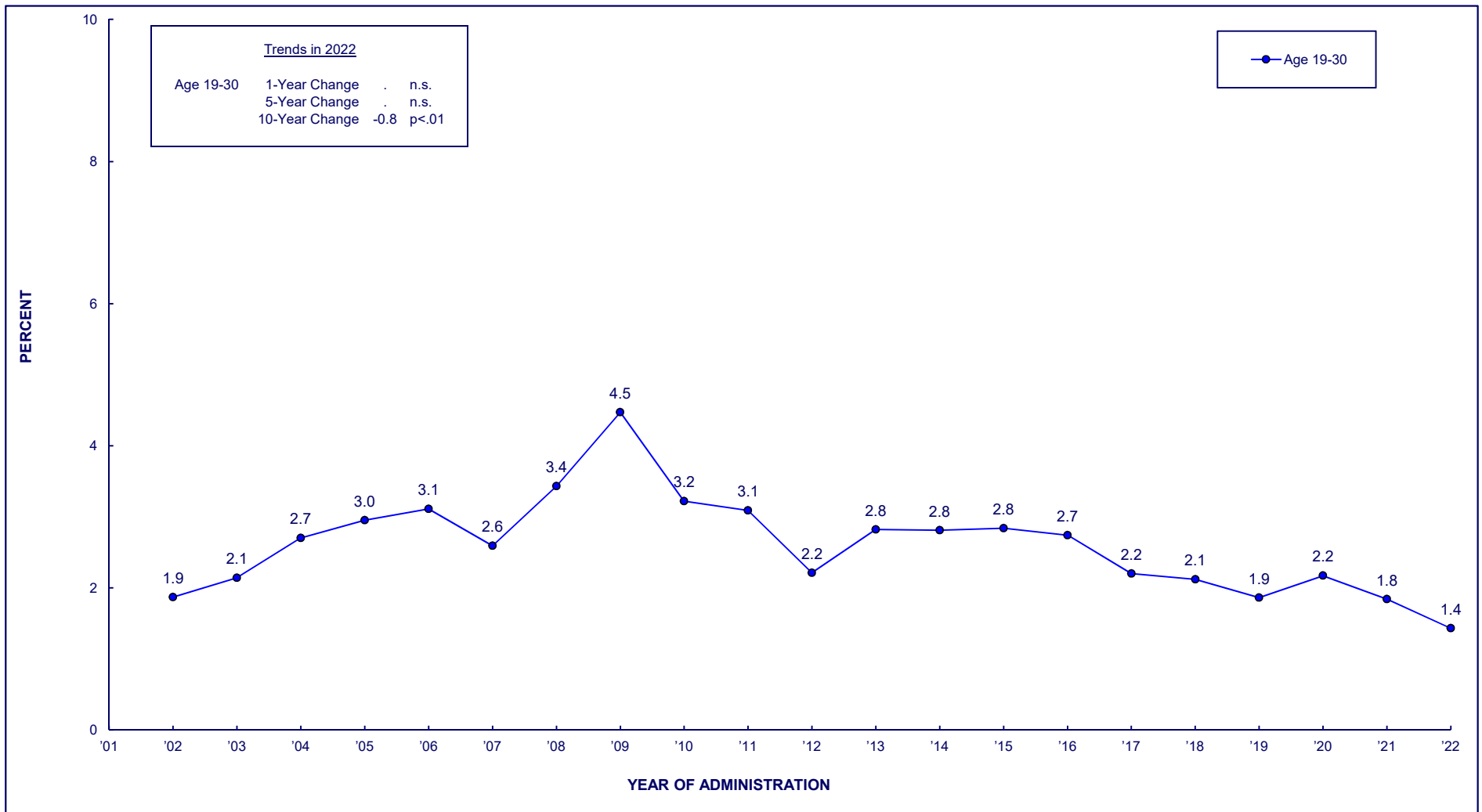
**Trends in 12-Month Prevalence**  
**among Respondents of Modal Ages 18 through 60, by Age Group**

<u>Year</u>	<u>Age 18</u>	<u>Ages 19–20</u>	<u>Ages 21–22</u>	<u>Ages 23–24</u>	<u>Ages 25–26</u>	<u>Ages 27–28</u>	<u>Ages 29–30</u>	<u>Age 35</u>	<u>Age 40</u>	<u>Age 45</u>	<u>Age 50</u>	<u>Age 55</u>	<u>Age 60</u>
1976	5.7												
1977	6.4												
1978	6.0	4.5											
1979	6.2	4.7											
1980	6.3	5.8	4.8										
1981	5.9	5.0	5.0										
1982	5.3	4.4	3.4	4.6									
1983	5.1	4.4	4.1	3.1									
1984	5.2	4.1	3.3	3.6	2.5								
1985	5.9	3.7	3.9	3.8	3.4								
1986	5.2	4.4	3.6	2.7	2.0	2.5							
1987	5.3	3.9	3.7	2.6	2.7	3.0							
1988	4.6	3.1	3.5	2.3	2.4	1.7	1.9						
1989	4.4	3.0	3.4	2.5	2.3	2.9	2.0						
1990	4.5	3.6	2.8	2.7	2.1	1.5	1.7						
1991	3.5	3.2	2.2	2.3	2.3	1.9	1.7						
1992	3.3	2.3	3.3	2.2	2.6	1.7	1.6						
1993	3.6	2.6	2.7	2.0	2.1	1.3	1.4						
1994	3.8	2.7	3.5	2.7	1.5	2.1	1.6	1.6					
1995	4.7	4.5	2.8	2.7	1.9	2.7	1.9	1.4					
1996	5.4	4.8	2.8	3.3	2.1	1.9	2.1	1.8					
1997	6.2	4.5	4.6	2.7	2.1	1.9	2.5	1.9					
1998	6.3	4.1	4.0	3.9	3.1	1.9	1.6	1.1	1.6				
1999	6.7	5.8	4.3	4.0	2.8	1.9	1.7	2.4	1.6				
2000	7.0	6.8	4.9	4.0	2.9	2.1	2.5	1.9	1.8				
2001	6.7	7.1	7.1	4.4	3.4	3.1	2.6	2.3	1.4				
2002	9.4	7.4	7.2	6.7	4.5	4.3	3.5	4.5	3.3				
2003	9.3	10.4	9.5	10.3	6.1	6.4	4.9	3.5	2.2	2.7			
2004	9.5	10.4	9.0	9.5	7.7	7.9	6.0	4.3	3.1	3.4			
2005	9.0	9.1	10.0	7.7	9.1	6.9	8.0	4.4	3.8	3.1			
2006	9.0	8.5	12.4	9.9	9.2	6.9	7.0	4.9	4.3	3.2			
2007	9.2	8.0	9.3	9.5	8.6	8.0	6.8	3.9	6.2	4.5			
2008	9.1	9.0	8.1	10.9	10.1	9.5	7.3	7.2	5.1	3.2	3.5		
2009	9.2	7.0	11.0	8.1	10.5	6.9	9.6	6.1	4.6	4.5	4.1		
2010	8.7	8.2	9.6	10.4	10.6	8.9	7.3	6.9	4.2	5.5	4.7		
2011	8.7	8.2	7.8	7.3	10.2	8.0	7.7	6.1	4.9	4.2	4.6		
2012	7.9	6.7	7.1	8.4	8.4	8.2	6.8	6.3	4.5	4.7	4.3		
2013	7.1	8.6	7.5	7.3	7.7	7.7	6.6	6.7	4.9	3.5	2.9	2.3	
2014	6.1	5.9	6.6	6.4	7.8	6.7	6.6	7.0	3.6	3.9	3.9	2.8	
2015	5.4	4.6	5.0	6.4	5.7	6.5	6.2	5.7	4.5	3.7	4.7	3.5	
2016	4.8	4.3	6.1	5.4	6.9	5.7	5.7	7.4	5.6	4.8	3.9	3.6	
2017	4.2	3.5	3.9	4.1	4.9	4.7	6.5	4.6	4.9	4.1	3.6	3.2	
2018	3.4	2.0	3.8	3.8	3.6	5.0	4.6	5.6	4.6	4.2	4.7	3.3	2.8
2019	2.7	1.4	3.3	3.6	2.8	3.8	5.0	3.3	3.8	2.7	4.0	2.0	1.9
2020	2.1	1.3	2.4	2.1	2.8	3.0	3.2	3.8	2.5	2.9	1.7	2.6	3.1
2021	1.0	1.4	1.6	1.2	2.5	2.3	3.3	2.9	3.4	4.1	2.7	2.6	2.7
2022	1.7	1.2	0.8	2.7	1.8	1.5	2.3	3.8	2.9	3.1	2.7	2.9	2.7

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

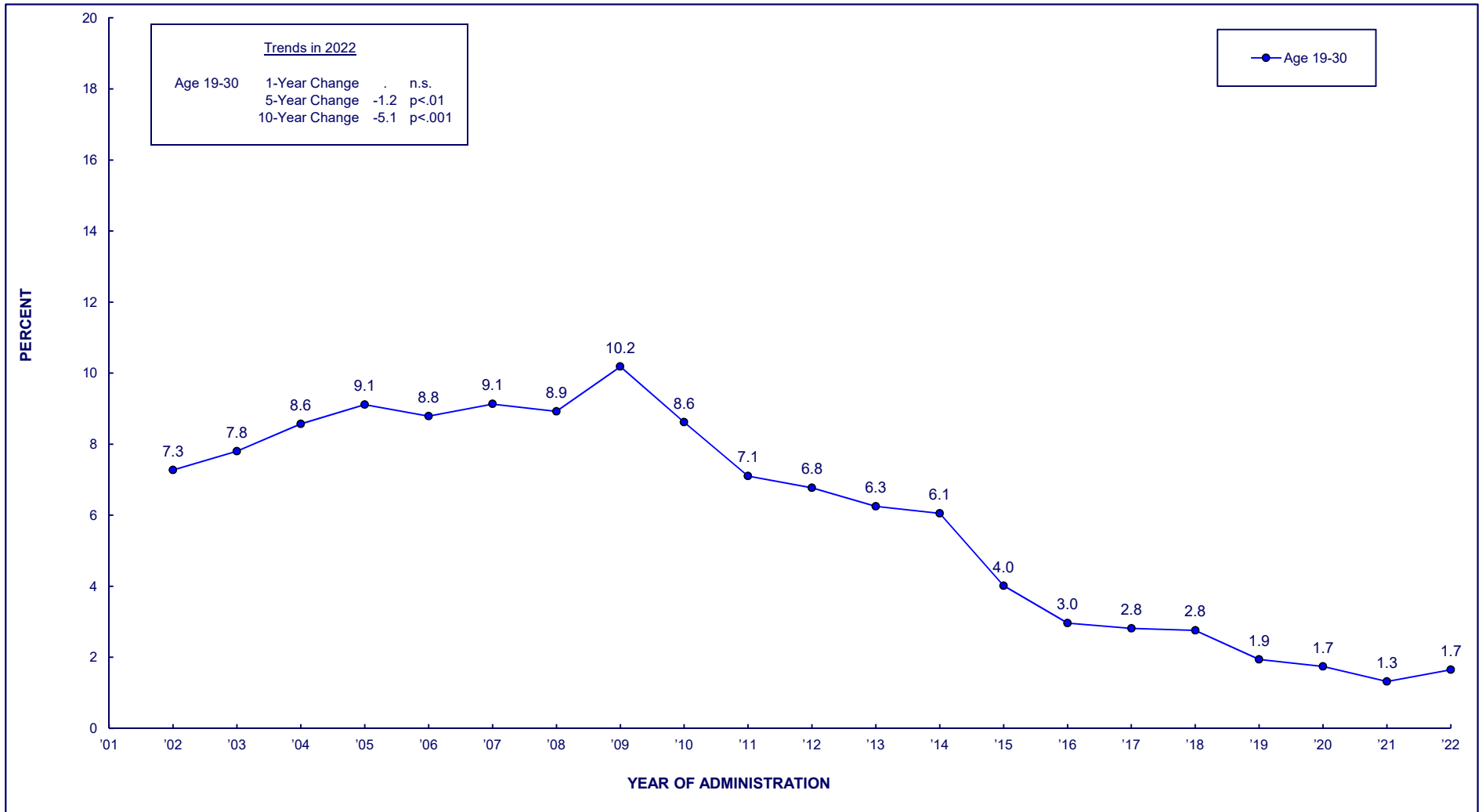
<sup>1</sup>In 2002 the question text was changed on half of the questionnaire forms for 18- to 30-year-olds. The list of examples of narcotics other than heroin was updated. Talwin, laudanum, and paregoric—all of which had negligible rates of use by 2001—were replaced by Vicodin, OxyContin, and Percocet. The 2001 data presented here are based on all forms. The 2002 data are based on the changed forms only. In 2003 the remaining forms were changed to the new wording. The data are based on all forms in 2003. Beginning in 2002 data were based on the changed question text for 35- and 40-year-olds.

Trends in 12-Month Prevalence  
among Respondents of Modal Ages 19 through 30



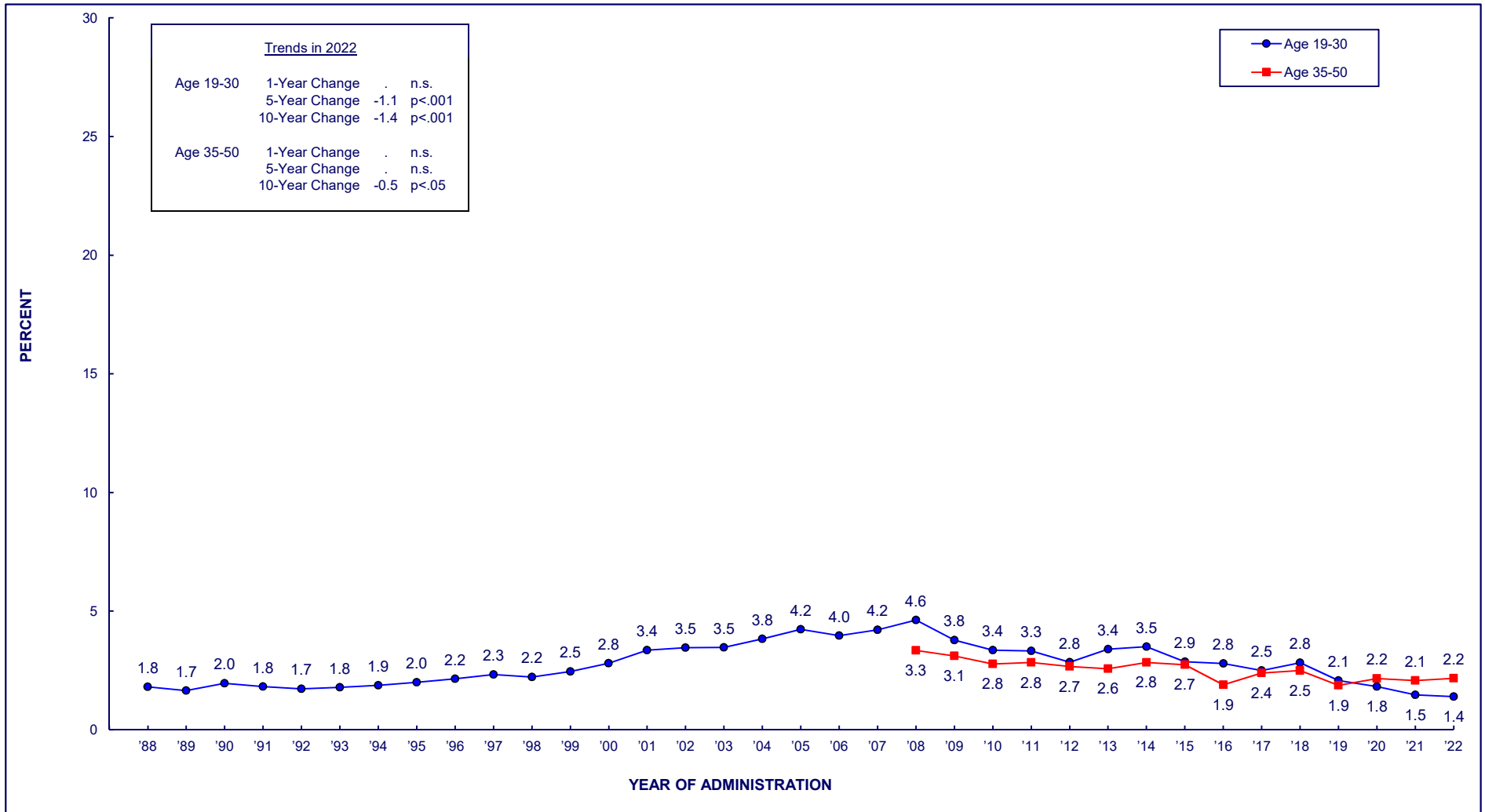
VICODIN

Trends in 12-Month Prevalence among Respondents of Modal Ages 19 through 30



**TABLE/FIGURE 52**  
**SEDATIVES (BARBITURATES)**

**Trends in 12-Month Prevalence**  
**among Respondents of Modal Ages 19 through 50, by Age Group**



(Age-specific data provided in the following table.)

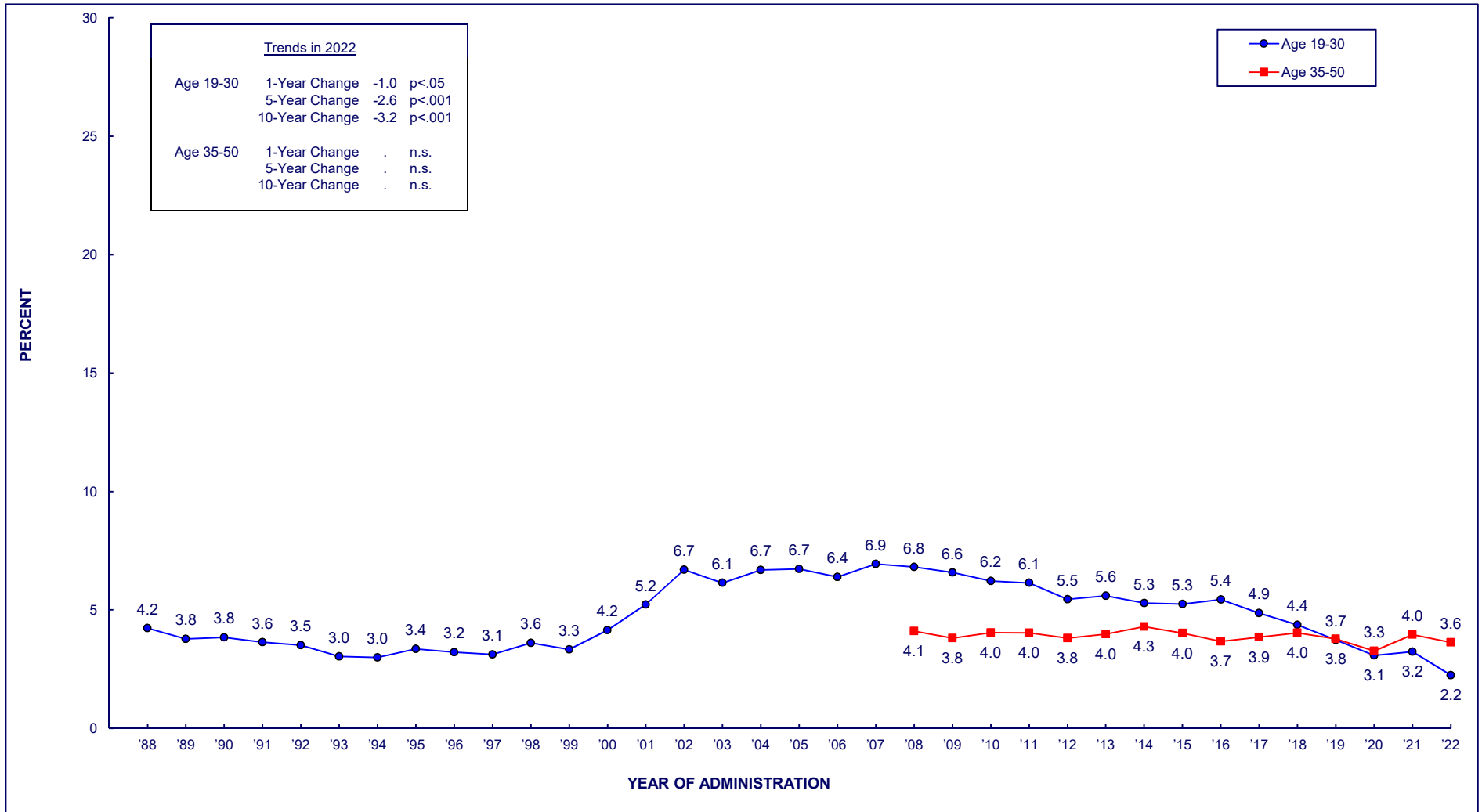
**TABLE/FIGURE 53**  
**SEDATIVES (BARBITURATES)**  
**Trends in 12-Month Prevalence**  
**among Respondents of Modal Ages 18 through 60, by Age Group**

<u>Year</u>	<u>Age 18</u>	<u>Ages 19–20</u>	<u>Ages 21–22</u>	<u>Ages 23–24</u>	<u>Ages 25–26</u>	<u>Ages 27–28</u>	<u>Ages 29–30</u>	<u>Age 35</u>	<u>Age 40</u>	<u>Age 45</u>	<u>Age 50</u>	<u>Age 55</u>	<u>Age 60</u>
1976	9.6												
1977	9.3												
1978	8.1	6.3											
1979	7.5	6.9											
1980	6.8	4.7	5.6										
1981	6.6	5.1	5.8										
1982	5.5	4.5	4.2	4.1									
1983	5.2	3.7	3.4	3.8									
1984	4.9	3.4	2.5	2.7	3.2								
1985	4.6	2.2	2.3	3.1	3.5								
1986	4.2	2.5	2.7	2.3	1.9	2.2							
1987	3.6	2.0	2.7	1.6	2.2	2.4							
1988	3.2	2.0	2.0	2.2	1.5	1.3	2.0						
1989	3.3	1.5	1.9	1.9	1.4	1.9	1.4						
1990	3.4	1.8	1.9	2.4	2.2	1.8	1.7						
1991	3.4	1.8	1.3	2.2	2.5	1.3	1.9						
1992	2.8	1.7	1.7	1.9	1.5	1.4	2.0						
1993	3.4	1.9	1.8	1.7	2.1	2.2	1.1						
1994	4.1	2.8	2.3	1.7	1.3	1.7	1.4	1.7					
1995	4.7	3.3	2.8	1.5	1.3	1.5	1.7	1.6					
1996	4.9	3.7	2.5	2.4	1.0	2.0	1.5	1.6					
1997	5.1	4.1	3.6	1.7	1.5	1.3	1.9	1.4					
1998	5.5	3.4	3.0	2.5	1.6	1.8	1.1	1.0	0.9				
1999	5.8	5.0	2.6	3.0	2.0	1.0	1.2	1.5	1.5				
2000	6.2	4.6	3.5	3.8	2.6	1.6	1.1	0.7	1.7				
2001	5.7	5.4	4.8	4.0	2.6	2.2	1.3	1.8	1.4				
2002	6.7	5.6	3.8	4.1	2.7	2.8	2.0	1.9	1.1				
2003	6.0	5.3	4.6	3.9	2.6	3.4	1.5	1.2	0.8	0.9			
2004	6.5	5.8	4.3	4.9	3.3	2.6	2.4	1.2	1.1	1.0			
2005	7.2	5.0	5.2	3.8	4.1	2.7	4.6	1.6	1.2	1.5			
2006	6.6	4.3	5.2	4.8	3.2	2.7	3.8	0.9	1.4	1.4			
2007	6.2	4.5	4.2	4.4	4.2	4.3	3.6	3.6	2.7	2.7			
2008	5.8	5.7	5.2	5.1	4.8	3.9	3.1	3.9	3.3	3.2	3.0		
2009	5.2	3.8	5.9	2.7	4.6	3.0	2.8	3.1	3.4	2.8	3.2		
2010	4.8	3.0	3.7	3.7	2.7	4.5	2.6	3.2	1.9	3.0	3.0		
2011	4.3	3.2	3.0	3.7	4.4	2.7	2.8	4.6	1.9	2.0	2.9		
2012	4.5	2.5	3.1	2.8	2.2	3.6	2.9	2.7	3.0	2.5	2.4		
2013	4.8	3.0	4.0	3.4	4.5	2.7	2.8	2.6	3.2	3.0	1.7	2.1	
2014	4.3	3.9	4.6	3.1	2.8	3.7	3.0	3.8	2.8	2.5	2.3	1.7	
2015	3.6	2.7	3.9	3.0	2.6	2.9	2.2	2.3	2.2	3.0	3.4	2.5	
2016	3.0	2.4	3.3	2.6	2.5	2.9	3.1	2.0	2.0	2.0	1.6	2.4	
2017	2.9	2.1	2.3	2.5	2.9	2.7	2.4	2.9	2.0	2.7	2.0	1.7	
2018	2.7	2.0	3.3	3.2	3.0	3.0	2.4	3.0	2.0	1.9	3.3	1.7	1.8
2019	2.5	1.5	2.2	2.4	1.8	2.8	1.7	1.8	1.9	1.3	2.4	3.0	1.9
2020	2.4	1.8	0.9	2.1	2.4	1.7	2.0	3.4	1.7	1.9	1.7	2.0	2.0
2021	1.8	1.4	1.6	1.5	1.4	1.4	1.6	1.4	1.3	3.1	2.3	2.2	2.7
2022	2.0	2.9	1.2	1.3	1.4	1.1	1.3	2.4	3.0	1.8	1.7	3.0	2.8

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

**TRANQUILIZERS**

**Trends in 12-Month Prevalence  
among Respondents of Modal Ages 19 through 50, by Age Group**



(Age-specific data provided in the following table.)

**TABLE/FIGURE 55**  
**TRANQUILIZERS**  
**Trends in 12-Month Prevalence**  
**among Respondents of Modal Ages 18 through 60, by Age Group**

<u>Year</u>	<u>Age 18</u>	<u>Ages 19-20</u>	<u>Ages 21-22</u>	<u>Ages 23-24</u>	<u>Ages 25-26</u>	<u>Ages 27-28</u>	<u>Ages 29-30</u>	<u>Age 35</u>	<u>Age 40</u>	<u>Age 45</u>	<u>Age 50</u>	<u>Age 55</u>	<u>Age 60</u>
1976	10.3												
1977	10.8												
1978	9.9	9.3											
1979	9.6	9.7											
1980	8.7	8.9	8.7										
1981	8.0	7.6	7.2										
1982	7.0	5.6	7.1	8.4									
1983	6.9	5.3	6.1	6.4									
1984	6.1	5.3	5.4	5.8	6.6								
1985	6.1	4.5	4.8	6.2	6.9								
1986	5.8	4.3	5.5	5.1	5.6	6.5							
1987	5.5	4.2	5.4	4.2	5.9	6.1							
1988	4.8	3.5	4.4	4.1	4.0	5.0	4.4						
1989	3.8	3.4	3.5	4.0	2.9	4.9	4.0						
1990	3.5	3.0	3.7	4.1	4.8	3.2	4.3						
1991	3.6	2.7	3.2	4.0	4.0	3.7	4.3						
1992	2.8	2.3	3.8	3.5	4.6	3.3	3.5						
1993	3.5	2.2	3.0	3.1	3.8	3.6	2.6						
1994	3.7	2.1	3.1	2.9	3.3	3.7	2.9	3.0					
1995	4.4	3.6	3.4	3.2	2.9	3.5	3.6	3.5					
1996	4.6	3.7	4.1	3.0	2.2	3.2	3.0	3.5					
1997	4.7	4.7	3.5	2.7	1.8	2.2	3.9	3.1					
1998	5.5	3.8	4.4	4.1	3.4	3.1	2.9	1.8	2.8				
1999	5.8	4.3	4.1	4.1	3.3	2.3	1.9	3.2	2.2				
2000	5.7	5.2	5.1	4.9	4.1	2.9	2.9	3.0	2.9				
2001	6.9	5.7	7.0	5.8	5.1	3.9	4.0	4.1	3.4				
2002	7.7	8.4	7.6	6.3	7.1	5.9	5.1	4.4	3.9				
2003	6.7	7.6	6.8	7.1	6.2	5.3	4.2	4.1	2.1	2.7			
2004	7.3	7.6	7.1	8.1	6.3	6.0	5.3	3.6	3.9	3.5			
2005	6.8	6.3	8.2	6.5	7.5	4.3	7.6	4.7	4.0	2.8			
2006	6.6	5.9	7.7	6.8	5.6	6.1	6.3	3.9	3.5	3.9			
2007	6.2	5.7	7.5	7.5	7.7	7.9	5.5	3.6	4.9	4.1			
2008	6.2	7.8	6.1	8.3	6.7	5.8	6.4	5.7	2.9	3.8	4.0		
2009	6.3	4.7	7.2	6.9	7.3	6.0	7.3	4.8	4.5	3.0	2.9		
2010	5.6	5.0	6.9	7.3	7.1	5.3	5.6	4.4	3.6	4.5	3.8		
2011	5.6	6.1	5.3	6.7	7.2	5.4	6.1	6.2	3.0	4.0	3.0		
2012	5.3	5.1	4.7	5.8	5.8	7.0	4.2	2.9	3.2	4.5	4.5		
2013	4.6	5.4	5.3	6.7	4.1	6.3	5.8	4.7	4.3	3.4	3.7	2.5	
2014	4.7	6.4	3.7	4.0	5.7	6.0	5.9	6.8	3.9	2.7	3.8	2.7	
2015	4.7	5.4	5.0	5.4	5.1	4.7	5.8	5.0	4.2	3.6	3.3	3.5	
2016	4.9	4.1	7.7	5.3	4.9	4.5	6.2	3.5	3.5	3.7	4.0	2.9	
2017	4.7	3.8	4.8	4.8	5.9	5.0	4.7	4.5	4.2	2.2	4.4	3.0	
2018	3.9	3.6	3.9	4.5	5.2	3.8	5.1	5.3	3.0	3.7	4.1	3.3	2.9
2019	3.4	2.3	4.2	3.4	3.9	4.1	4.5	4.7	4.1	3.6	2.9	3.4	2.8
2020	3.2	2.3	2.5	2.9	4.4	3.2	3.1	3.7	3.6	3.3	2.5	3.3	3.2
2021	1.2	2.2	3.2	2.6	3.3	3.3	4.3	4.0	3.4	5.0	3.4	3.0	2.9
2022	1.5	1.0	1.6	1.1	3.2	2.6	3.1	4.5	4.7	2.7	2.8	3.1	3.0

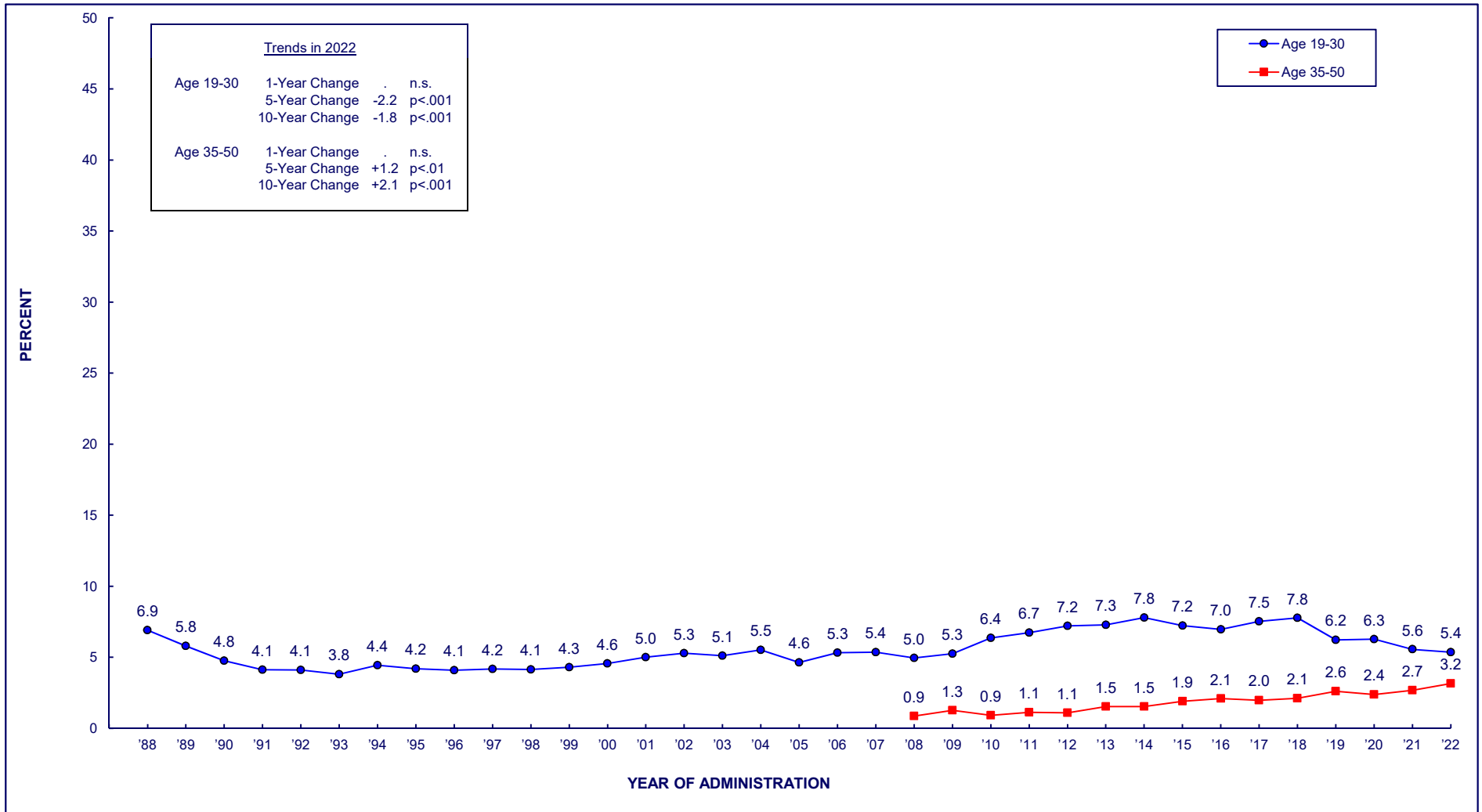
Source. The Monitoring the Future study, the University of Michigan.



TABLE/FIGURE 56

**AMPHETAMINES**

**Trends in 12-Month Prevalence  
among Respondents of Modal Ages 19 through 50, by Age Group**



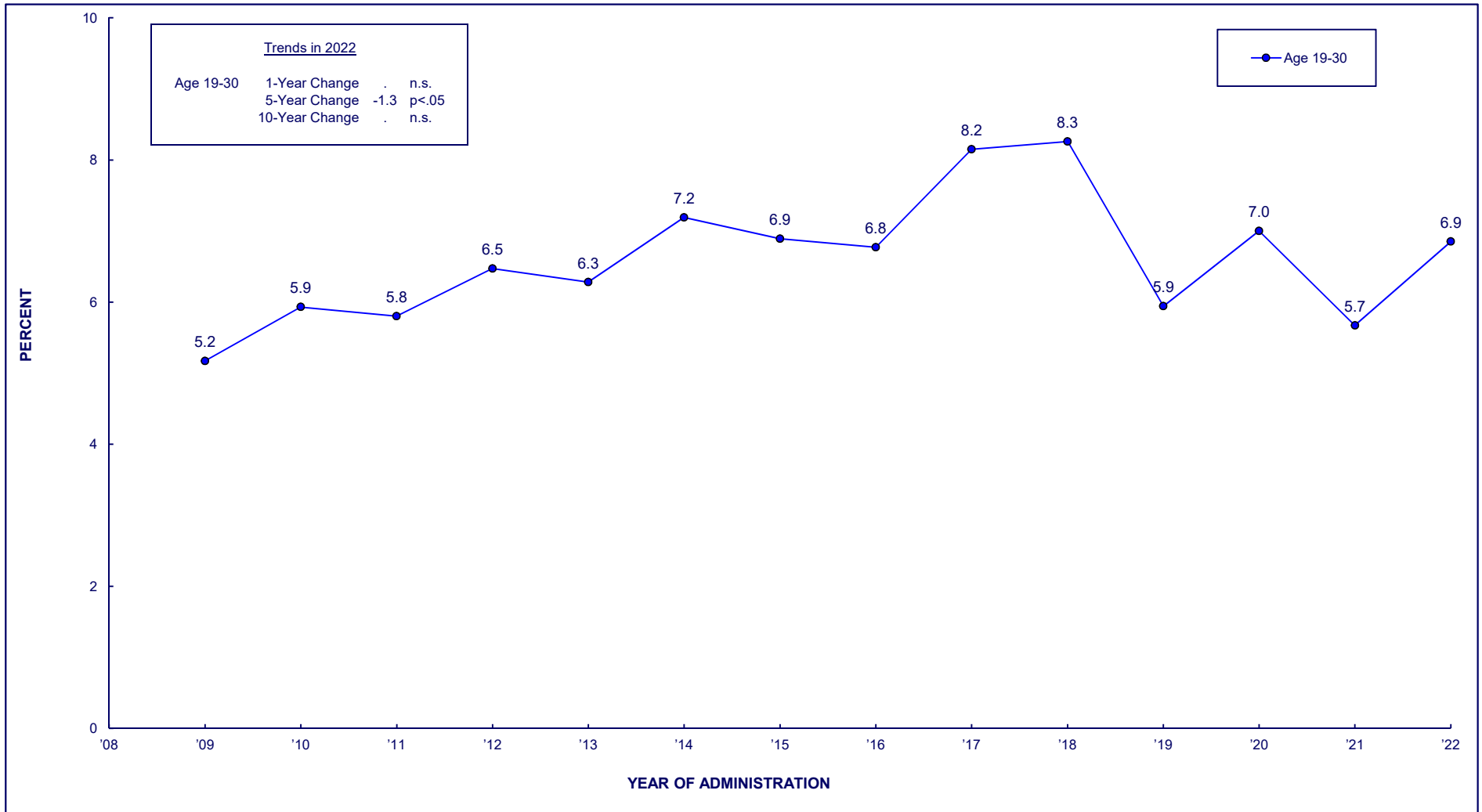
(Age-specific data provided in the following table.)

**TABLE/FIGURE 57**  
**AMPHETAMINES**  
**Trends in 12-Month Prevalence**  
**among Respondents of Modal Ages 18 through 60, by Age Group**

<u>Year</u>	<u>Age 18</u>	<u>Ages 19–20</u>	<u>Ages 21–22</u>	<u>Ages 23–24</u>	<u>Ages 25–26</u>	<u>Ages 27–28</u>	<u>Ages 29–30</u>	<u>Age 35</u>	<u>Age 40</u>	<u>Age 45</u>	<u>Age 50</u>	<u>Age 55</u>	<u>Age 60</u>
1976	15.8												
1977	16.3												
1978	17.1	17.7											
1979	18.3	21.5											
1980	20.8	24.1	25.1										
1981	26.0	26.3	26.7										
1982	20.3	23.9	22.5	21.4									
1983	17.9	20.3	20.2	18.6									
1984	17.7	15.7	17.4	14.5	14.6								
1985	15.8	15.1	13.3	14.3	12.9								
1986	13.4	11.1	12.7	11.6	8.8	8.7							
1987	12.2	9.4	10.0	8.3	8.3	8.0							
1988	10.9	9.0	8.0	7.4	6.5	5.0	5.5						
1989	10.8	7.1	7.2	5.4	5.5	4.7	5.1						
1990	9.1	6.7	5.6	5.2	4.0	4.4	2.9						
1991	8.2	5.0	5.1	3.9	3.5	4.0	3.2						
1992	7.1	6.2	4.3	4.1	3.1	3.9	3.3						
1993	8.4	5.5	5.0	3.9	3.2	2.9	2.6						
1994	9.4	6.0	5.9	4.7	4.5	3.0	2.6	2.5					
1995	9.3	7.4	5.8	3.2	3.5	2.8	2.5	2.0					
1996	9.5	7.1	5.1	4.4	2.8	2.5	2.8	1.9					
1997	10.2	6.0	7.2	3.7	3.2	2.1	2.9	1.8					
1998	10.1	7.2	4.8	5.0	3.4	2.6	2.0	1.7	1.6				
1999	10.2	7.9	5.1	4.6	3.4	2.5	2.6	1.8	1.4				
2000	10.5	9.2	5.8	4.5	4.3	2.7	1.5	1.5	1.5				
2001	10.9	8.5	7.8	5.6	3.7	3.4	1.8	1.9	1.1				
2002	11.1	8.2	6.8	6.0	4.5	4.4	2.2	1.5	1.4				
2003	9.9	8.2	7.7	5.7	3.5	3.6	2.7	2.6	1.1	1.5			
2004	10.0	8.7	6.7	7.0	4.9	4.0	2.5	1.9	1.1	1.1			
2005	8.6	6.5	6.9	5.4	3.9	2.5	3.0	1.3	0.8	0.5			
2006	8.1	6.2	8.2	6.3	4.7	3.5	3.3	1.3	1.5	1.4			
2007	7.5	6.7	7.6	6.6	5.1	3.8	2.5	1.3	0.8	1.2			
2008	6.8	6.1	6.5	5.9	3.8	4.7	2.6	0.7	1.3	0.9	0.6		
2009	6.6	6.3	8.0	5.1	5.4	3.9	2.9	1.7	1.5	0.9	1.1		
2010	7.4	8.5	8.7	7.6	6.3	4.0	3.0	1.4	1.0	0.6	0.7		
2011	8.2	9.3	8.8	8.8	4.8	4.6	3.8	1.5	0.4	1.3	1.3		
2012	7.9	9.1	9.0	8.0	6.6	5.6	4.8	1.9	1.2	0.9	0.4		
2013	9.2	9.2	10.9	7.4	6.4	5.1	4.7	2.2	1.9	1.3	0.9	0.7	
2014	8.1	11.2	9.2	6.7	7.9	6.6	5.4	2.9	1.3	1.1	1.0	0.2	
2015	7.7	8.8	10.1	7.9	7.0	4.9	5.0	3.7	2.0	1.1	1.0	0.3	
2016	6.7	7.9	10.9	7.4	6.0	5.2	4.9	3.6	3.0	0.9	1.2	0.7	
2017	5.9	6.0	9.7	9.2	8.0	7.3	5.1	3.7	1.9	2.0	0.6	0.8	
2018	5.5	4.6	8.5	11.4	7.9	6.7	7.4	3.0	1.8	1.3	2.4	1.2	0.7
2019	4.5	4.3	7.6	7.0	6.8	6.0	5.8	4.9	2.6	1.9	1.4	1.3	0.7
2020	4.3	5.9	6.6	7.2	7.3	6.4	4.3	3.7	2.8	2.3	0.8	1.0	0.6
2021	2.3	4.4	5.8	6.2	6.9	4.9	5.0	3.2	3.3	2.1	2.2	0.7	0.6
2022	2.8	2.3	4.2	4.9	6.1	6.9	6.0	5.0	3.2	2.1	2.4	0.7	0.8

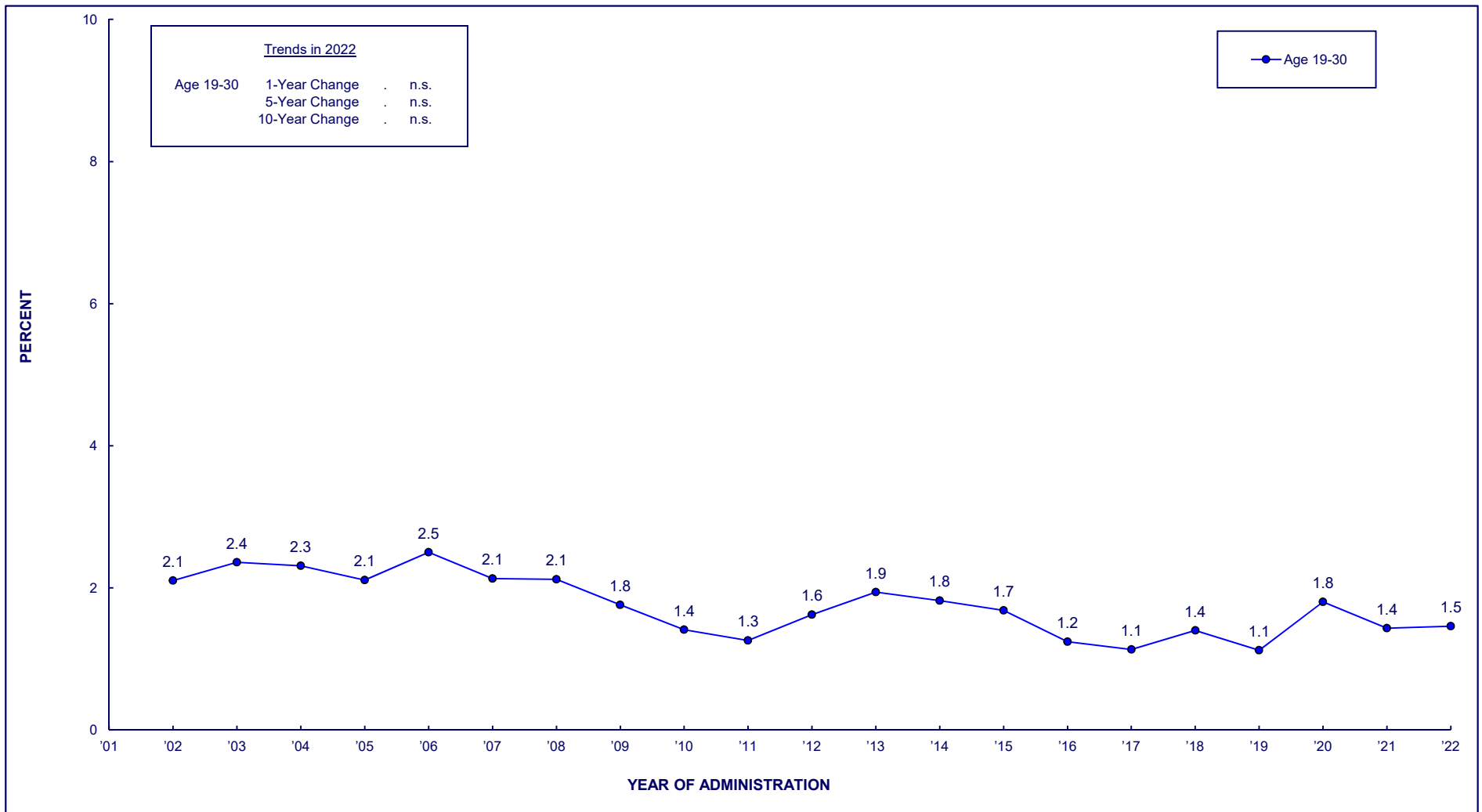
Source. The Monitoring the Future study, the University of Michigan.

Trends in 12-Month Prevalence  
among Respondents of Modal Ages 19 through 30



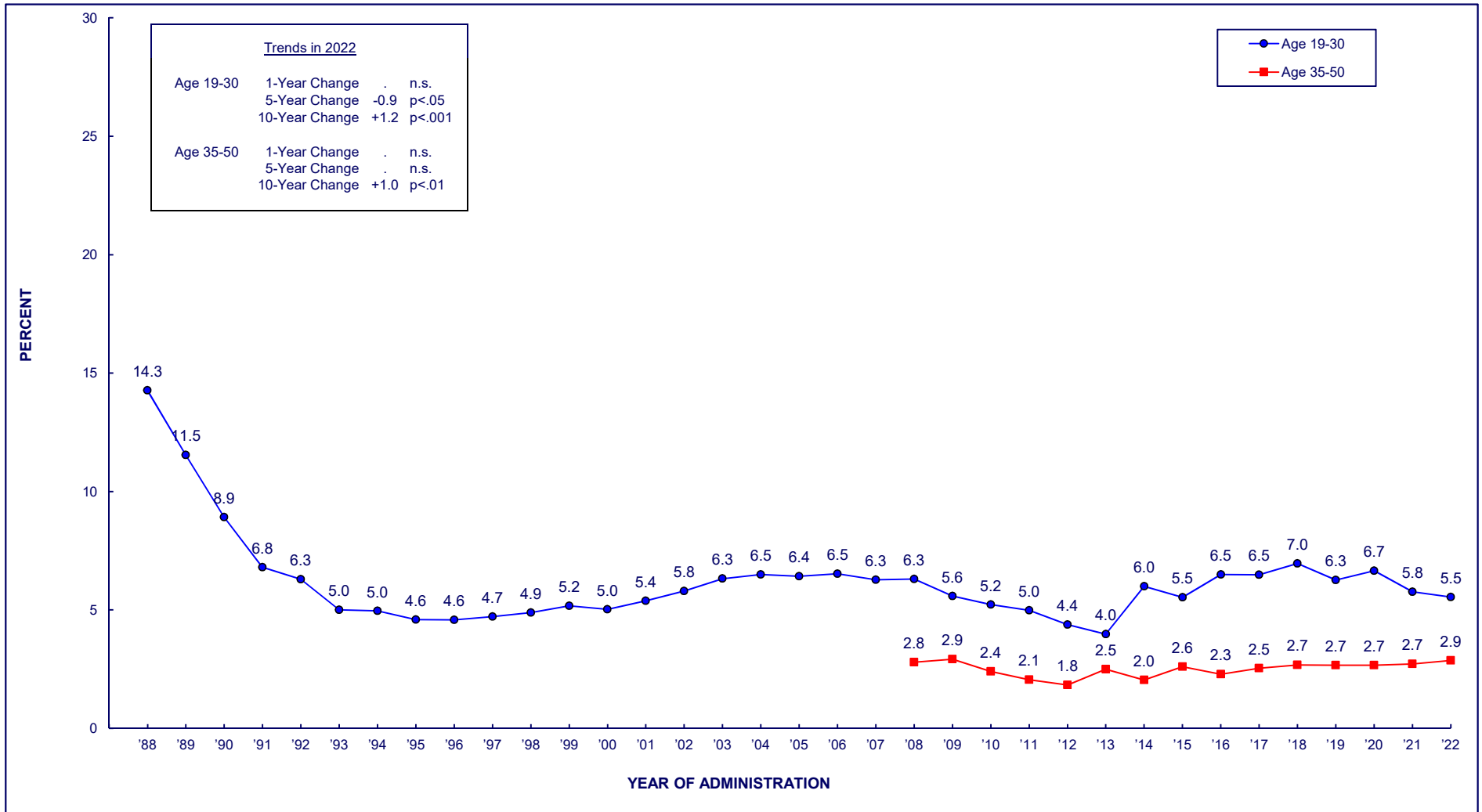
**RITALIN**

Trends in 12-Month Prevalence  
among Respondents of Modal Ages 19 through 30



**COCAINE**

**Trends in 12-Month Prevalence  
among Respondents of Modal Ages 19 through 50, by Age Group**



(Age-specific data provided in the following table.)

**COCAINE**

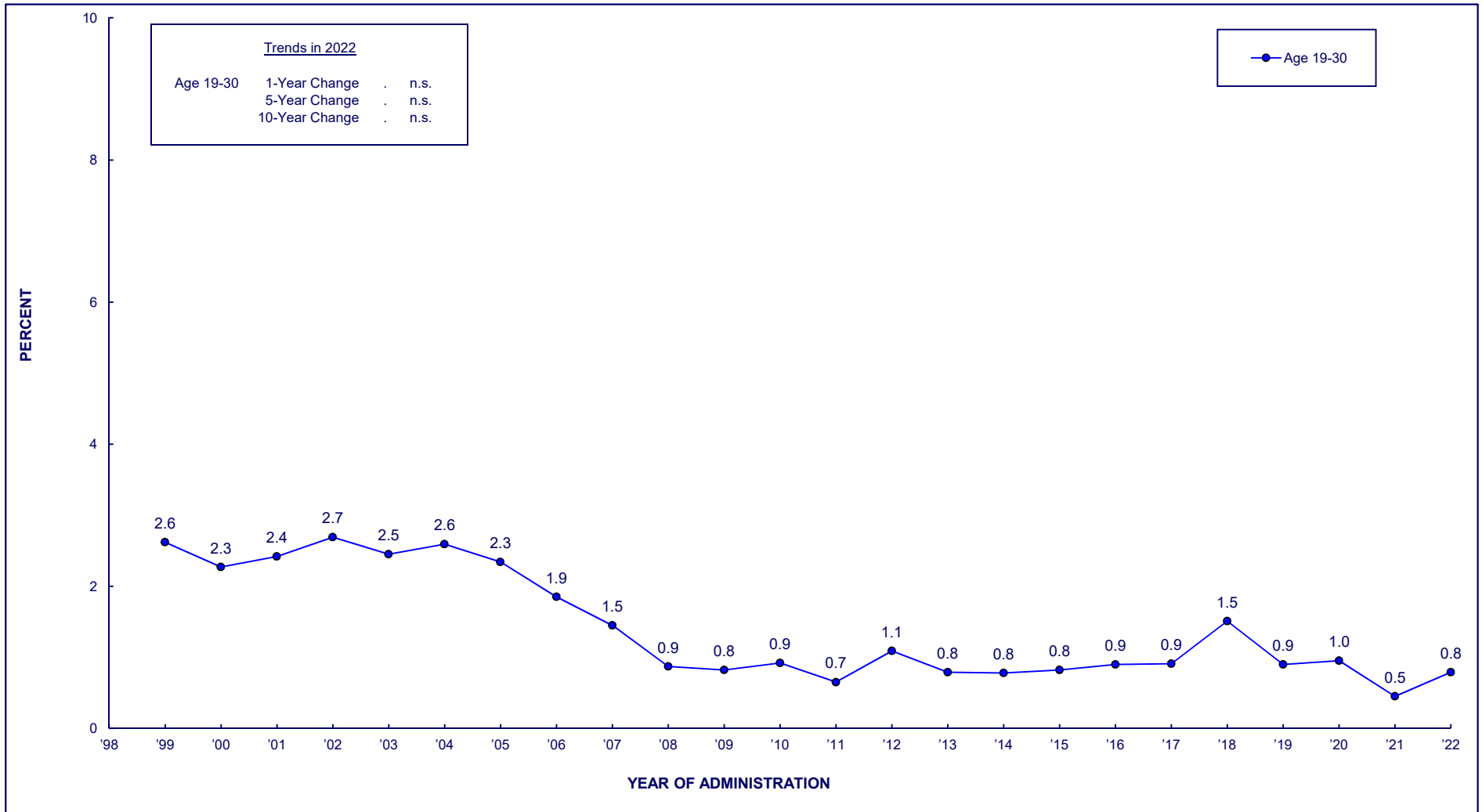
**Trends in 12-Month Prevalence  
among Respondents of Modal Ages 18 through 60, by Age Group**

<u>Year</u>	<u>Age 18</u>	<u>Ages 19–20</u>	<u>Ages 21–22</u>	<u>Ages 23–24</u>	<u>Ages 25–26</u>	<u>Ages 27–28</u>	<u>Ages 29–30</u>	<u>Age 35</u>	<u>Age 40</u>	<u>Age 45</u>	<u>Age 50</u>	<u>Age 55</u>	<u>Age 60</u>
1976	6.0												
1977	7.2												
1978	9.0	11.9											
1979	12.0	14.9											
1980	12.3	16.7	20.5										
1981	12.4	16.8	20.5										
1982	11.5	16.9	21.8	23.4									
1983	11.4	14.5	21.6	21.0									
1984	11.6	15.3	20.9	21.0	21.9								
1985	13.1	17.2	19.5	24.4	21.9								
1986	12.7	16.8	20.6	23.2	20.2	20.8							
1987	10.3	14.5	16.9	16.8	17.8	16.0							
1988	7.9	10.7	14.7	15.0	15.3	14.9	14.9						
1989	6.5	7.7	12.9	12.9	10.8	12.8	12.2						
1990	5.3	5.6	9.0	9.9	10.4	10.3	8.4						
1991	3.5	4.2	6.2	7.8	8.1	7.2	7.3						
1992	3.1	4.3	5.1	6.7	6.9	7.6	7.0						
1993	3.3	3.2	4.3	4.6	6.8	6.2	4.8						
1994	3.6	3.7	4.4	4.8	4.8	5.6	6.4	5.1					
1995	4.0	4.0	4.1	4.6	4.8	5.3	4.7	4.3					
1996	4.9	4.0	4.8	5.3	4.2	4.7	4.5	5.2					
1997	5.5	4.8	5.4	5.1	4.3	4.1	4.7	4.1					
1998	5.7	4.9	6.0	6.0	4.5	4.0	3.9	4.4	4.5				
1999	6.2	5.8	5.6	6.9	5.1	3.9	3.9	5.1	4.5				
2000	5.0	6.2	5.9	5.7	5.6	3.8	3.0	3.9	3.4				
2001	4.8	6.1	7.6	5.6	5.7	5.0	2.5	3.2	2.8				
2002	5.0	7.0	7.6	5.6	5.6	4.3	5.1	4.1	3.7				
2003	4.8	6.1	7.6	8.1	5.3	5.9	5.1	2.8	3.7	4.1			
2004	5.3	6.1	8.4	8.8	6.3	5.4	4.4	3.2	4.0	4.5			
2005	5.1	5.8	7.0	6.8	8.3	6.0	4.8	2.9	3.3	2.9			
2006	5.7	6.4	8.4	6.5	7.6	5.4	5.0	2.8	3.1	3.5			
2007	5.2	5.9	7.8	6.4	7.2	6.1	4.3	2.5	3.3	3.6			
2008	4.4	5.4	8.1	5.8	6.4	6.5	5.6	3.9	2.0	3.0	2.2		
2009	3.4	3.2	6.7	6.8	5.2	5.2	6.2	2.8	2.2	3.8	2.8		
2010	2.9	3.6	5.6	7.1	5.0	5.4	4.5	2.6	2.3	2.9	1.9		
2011	2.9	4.5	4.5	6.4	6.4	3.9	4.0	3.1	1.1	2.2	1.8		
2012	2.7	4.0	3.7	5.8	4.7	4.5	3.5	2.2	1.6	1.6	1.9		
2013	2.6	2.8	5.1	4.4	4.6	3.4	3.5	3.2	3.0	2.4	1.6	1.1	
2014	2.6	6.5	5.5	5.8	6.9	6.3	5.0	3.1	1.9	1.2	2.0	1.5	
2015	2.5	5.1	5.5	7.7	6.7	5.2	3.0	4.7	1.5	1.9	2.5	1.0	
2016	2.3	3.7	8.6	8.2	5.9	6.4	5.9	3.3	2.2	1.4	2.4	1.2	
2017	2.7	3.6	8.6	7.6	9.3	4.8	4.9	5.0	2.0	1.5	2.0	1.7	
2018	2.3	3.9	6.9	10.1	8.9	5.5	6.2	3.3	3.0	3.0	1.5	1.8	1.5
2019	2.2	2.9	7.1	7.4	6.7	7.1	6.3	4.7	3.4	2.3	0.6	1.4	0.9
2020	2.9	4.3	6.0	7.6	10.0	6.4	5.3	4.7	3.2	1.6	1.3	2.1	1.2
2021	1.2	2.5	4.2	6.5	8.7	6.3	5.2	4.2	2.9	2.1	1.7	1.2	0.6
2022	1.5	1.7	4.0	7.3	5.5	7.2	5.6	4.1	4.0	2.1	1.3	0.8	0.9

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

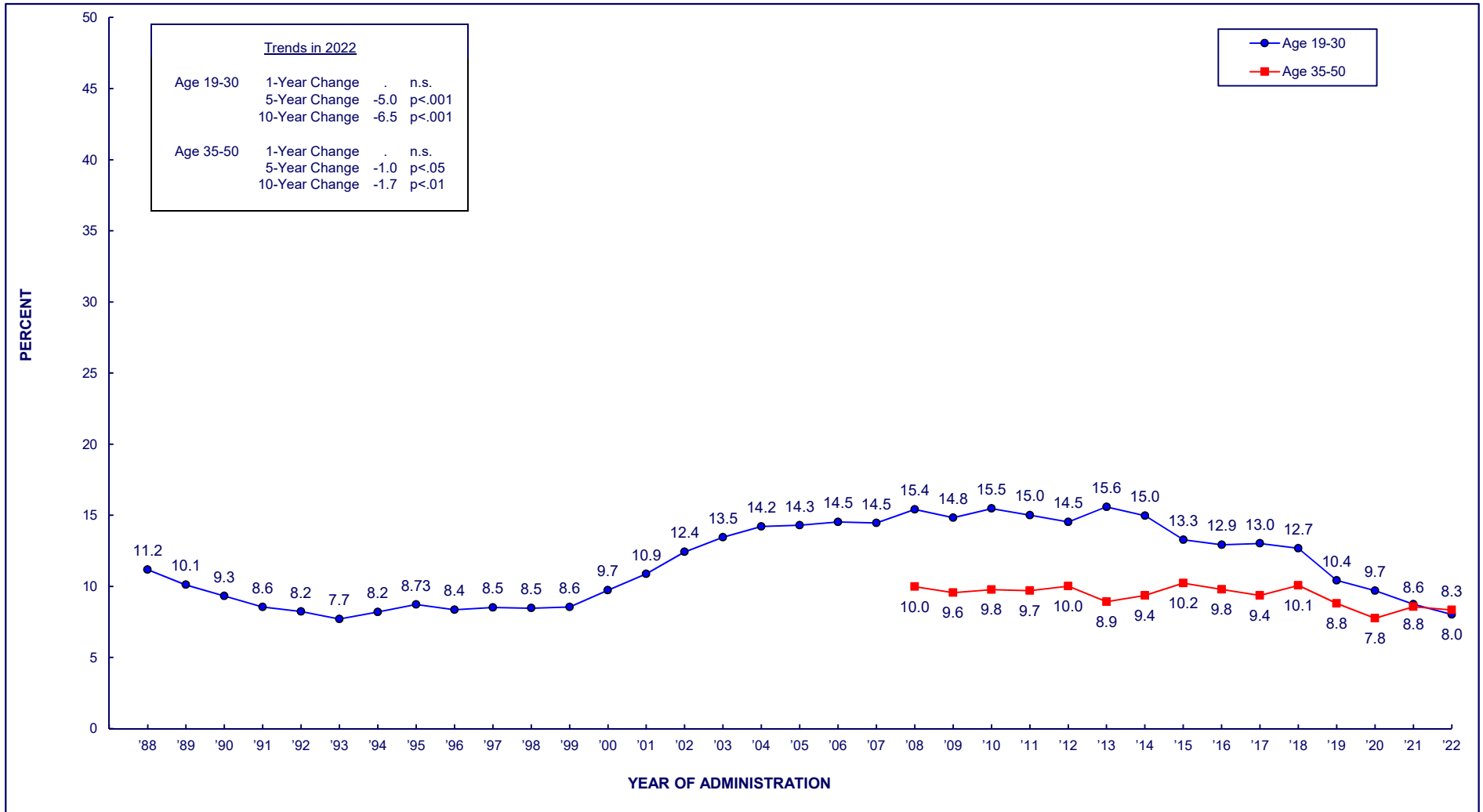
**TABLE/FIGURE 62**  
**METHAMPHETAMINE**

**Trends in 12-Month Prevalence**  
**among Respondents of Modal Ages 19 through 30**



**ANY PRESCRIPTION DRUG<sup>1</sup>**

**Trends in 12-Month Prevalence  
among Respondents of Modal Ages 19 through 50, by Age Group**



<sup>1</sup>An index of non-medical use of any prescription drug includes amphetamines, sedatives (barbiturates), tranquilizers, and narcotics other than heroin.

(Age-specific data provided in the following table.)



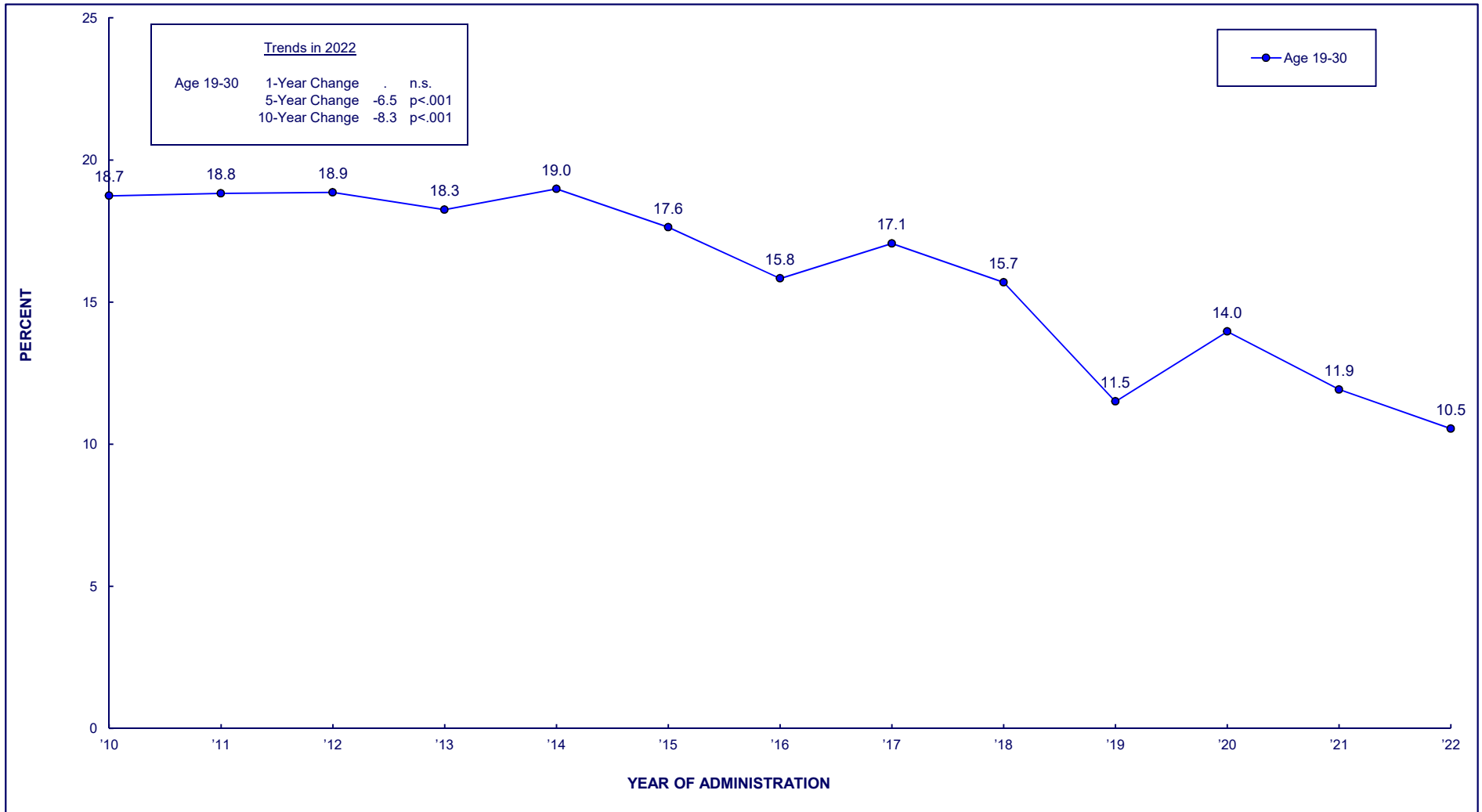
**TABLE/FIGURE 64**  
**ANY PRESCRIPTION DRUG<sup>1</sup>**  
**Trends in 12-Month Prevalence**  
**among Respondents of Modal Ages 18 through 60, by Age Group**

<u>Year</u>	<u>Age 18</u>	<u>Ages 19-20</u>	<u>Ages 21-22</u>	<u>Ages 23-24</u>	<u>Ages 25-26</u>	<u>Ages 27-28</u>	<u>Ages 29-30</u>	<u>Age 35</u>	<u>Age 40</u>	<u>Age 45</u>	<u>Age 50</u>	<u>Age 55</u>	<u>Age 60</u>
1976													
1977													
1978		23.7											
1979		25.5											
1980		28.2	29.6										
1981		29.8	30.2										
1982		27.0	26.4	26.2									
1983		24.5	23.6	23.5									
1984		20.1	21.2	19.0	18.6								
1985		18.7	17.9	19.1	18.9								
1986		15.2	17.1	16.7	13.0	13.7							
1987		13.3	15.1	12.6	13.2	13.2							
1988		13.0	12.7	11.6	10.2	9.9	9.9						
1989		10.9	11.4	10.3	9.9	9.5	8.7						
1990		11.1	9.9	10.0	10.0	7.7	7.4						
1991		9.3	9.2	8.5	8.2	8.2	7.9						
1992		8.8	9.2	8.4	8.5	8.0	6.6						
1993		8.6	8.9	8.0	7.8	7.0	6.1						
1994		10.0	9.4	8.4	8.2	7.0	6.4	7.5					
1995		12.4	10.3	7.4	7.2	7.8	7.4	6.9					
1996		12.1	9.5	8.8	6.1	6.9	6.9	6.9					
1997		11.6	12.8	7.3	6.4	5.6	7.6	6.5					
1998		11.7	9.8	9.9	7.6	6.7	5.3	4.4	5.6				
1999		13.5	9.3	9.7	8.0	5.9	5.3	6.3	4.7				
2000		15.7	11.3	10.1	9.5	6.8	5.6	5.6	5.3				
2001		13.7	14.9	11.6	9.8	8.7	7.1	7.2	5.4				
2002		15.5	14.9	13.8	12.0	10.6	8.3	8.3	6.8				
2003		17.1	16.5	16.4	11.8	11.4	8.5	8.9	4.1	6.1			
2004		17.4	16.1	17.0	12.9	12.3	10.5	8.5	6.4	7.1			
2005	17.1	15.6	17.1	13.9	15.0	10.8	13.7	9.4	7.2	6.4			
2006	16.8	14.3	18.6	15.6	14.0	12.7	12.3	9.3	8.4	7.8			
2007	15.8	14.6	17.3	16.9	13.6	13.5	11.1	9.5	10.2	8.7			
2008	15.4	14.8	15.3	17.9	15.7	15.5	13.5	12.5	10.4	8.5	8.8		
2009	14.4	12.2	19.0	14.1	16.4	12.0	15.2	11.4	9.5	8.5	9.1		
2010	15.0	14.7	17.6	17.3	17.2	13.5	12.3	11.0	8.4	10.3	9.4		
2011	15.2	15.7	15.3	15.8	15.6	14.4	13.1	12.4	8.3	8.7	9.5		
2012	14.8	13.7	16.0	16.0	14.0	15.2	12.1	11.0	9.3	10.4	9.3		
2013	15.9	16.5	19.0	15.0	15.0	14.6	13.2	10.7	9.7	8.7	7.1	6.0	
2014	13.9	16.0	16.6	14.0	15.4	13.3	14.6	14.1	7.8	7.8	8.2	6.4	
2015	12.9	13.1	14.9	15.2	12.4	12.3	11.7	12.3	10.0	9.3	9.5	7.9	
2016	12.0	12.1	18.1	11.7	12.1	11.6	12.3	13.0	10.8	8.0	8.0	7.9	
2017	10.9	10.8	13.8	14.7	13.7	12.1	12.7	11.4	9.5	8.6	8.3	6.9	
2018	9.9	8.3	14.3	14.8	12.6	12.4	13.5	12.9	8.2	8.5	10.9	8.0	6.2
2019	8.6	6.6	12.0	11.0	9.9	11.4	11.6	10.9	8.9	7.9	7.8	8.2	6.0
2020	7.6	7.9	9.3	9.6	11.5	10.0	9.4	10.4	7.7	7.4	5.8	7.3	6.7
2021	4.4	5.8	8.2	8.7	10.7	8.5	9.4	8.6	8.2	9.6	7.8	6.4	7.7
2022	5.0	5.5	5.2	8.5	9.9	8.9	8.8	9.8	9.1	7.2	7.3	7.6	7.0

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

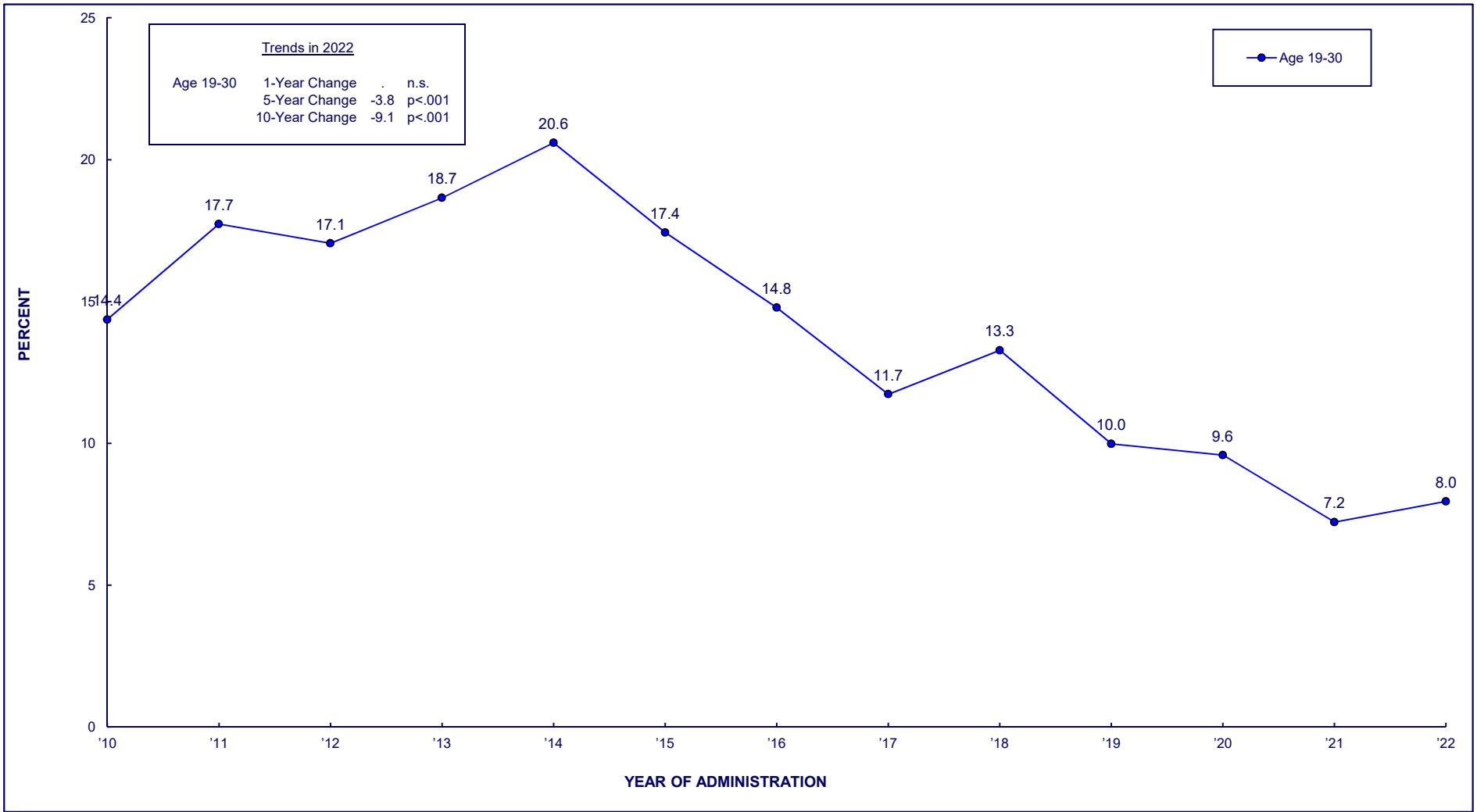
<sup>1</sup>An index of non-medical use of any prescription drug includes amphetamines, sedatives (barbiturates), tranquilizers, and narcotics other than heroin.

Trends in 12-Month Prevalence  
among Respondents of Modal Ages 19 through 30

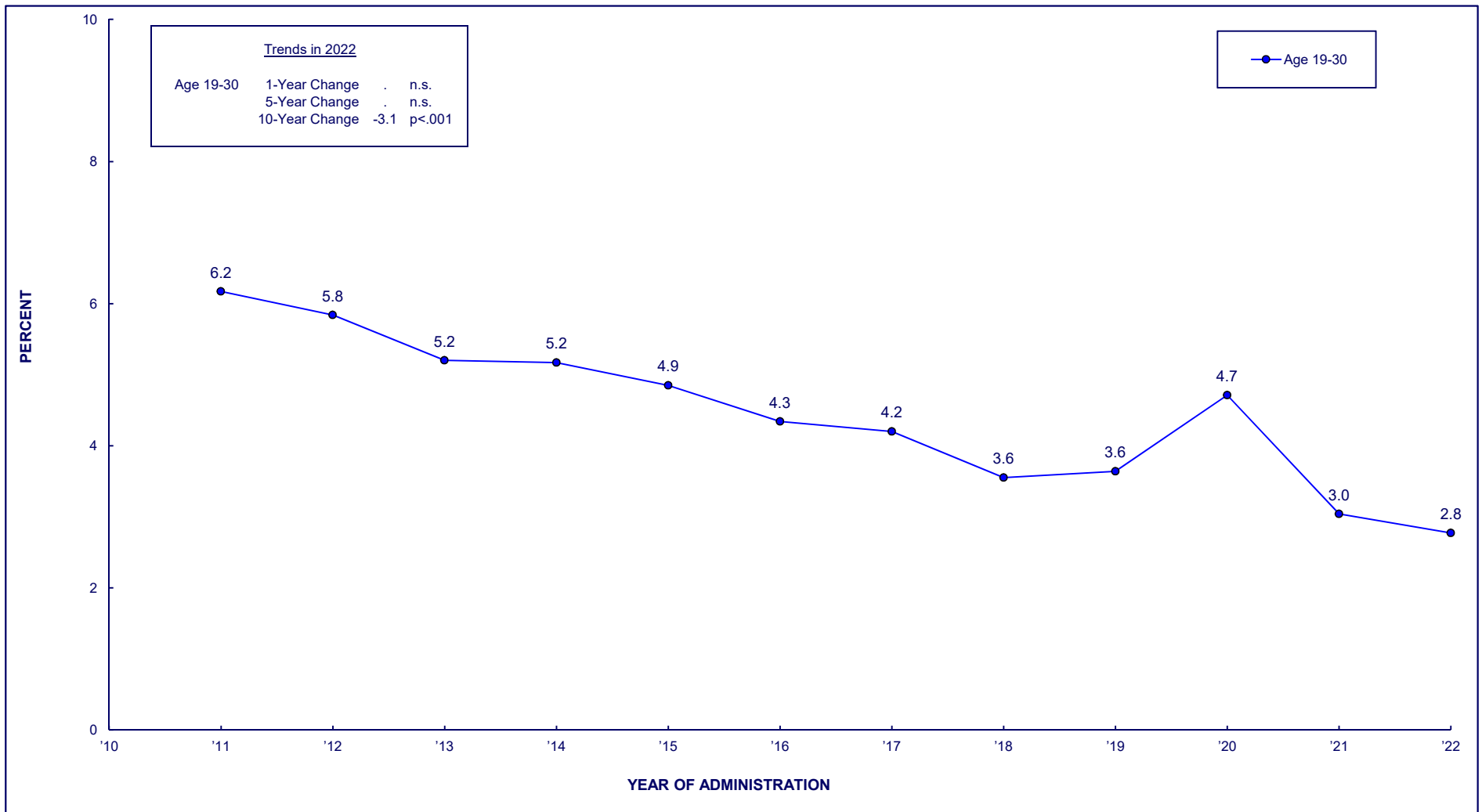


TABLE/FIGURE 66  
TOBACCO WITH A HOOKAH

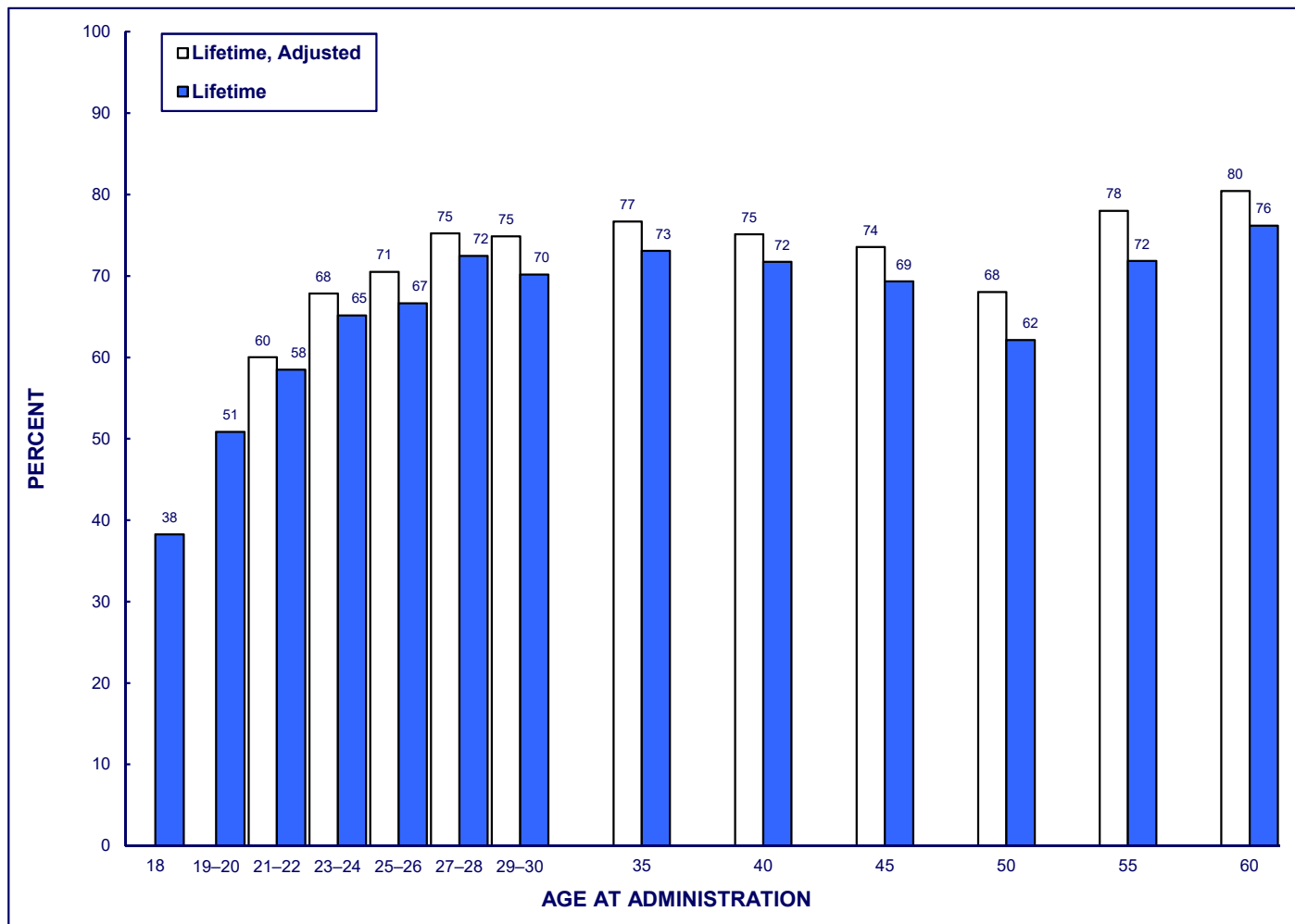
Trends in 12-Month Prevalence  
among Respondents of Modal Ages 19 through 30



Trends in 12-Month Prevalence  
among Respondents of Modal Ages 19 through 30



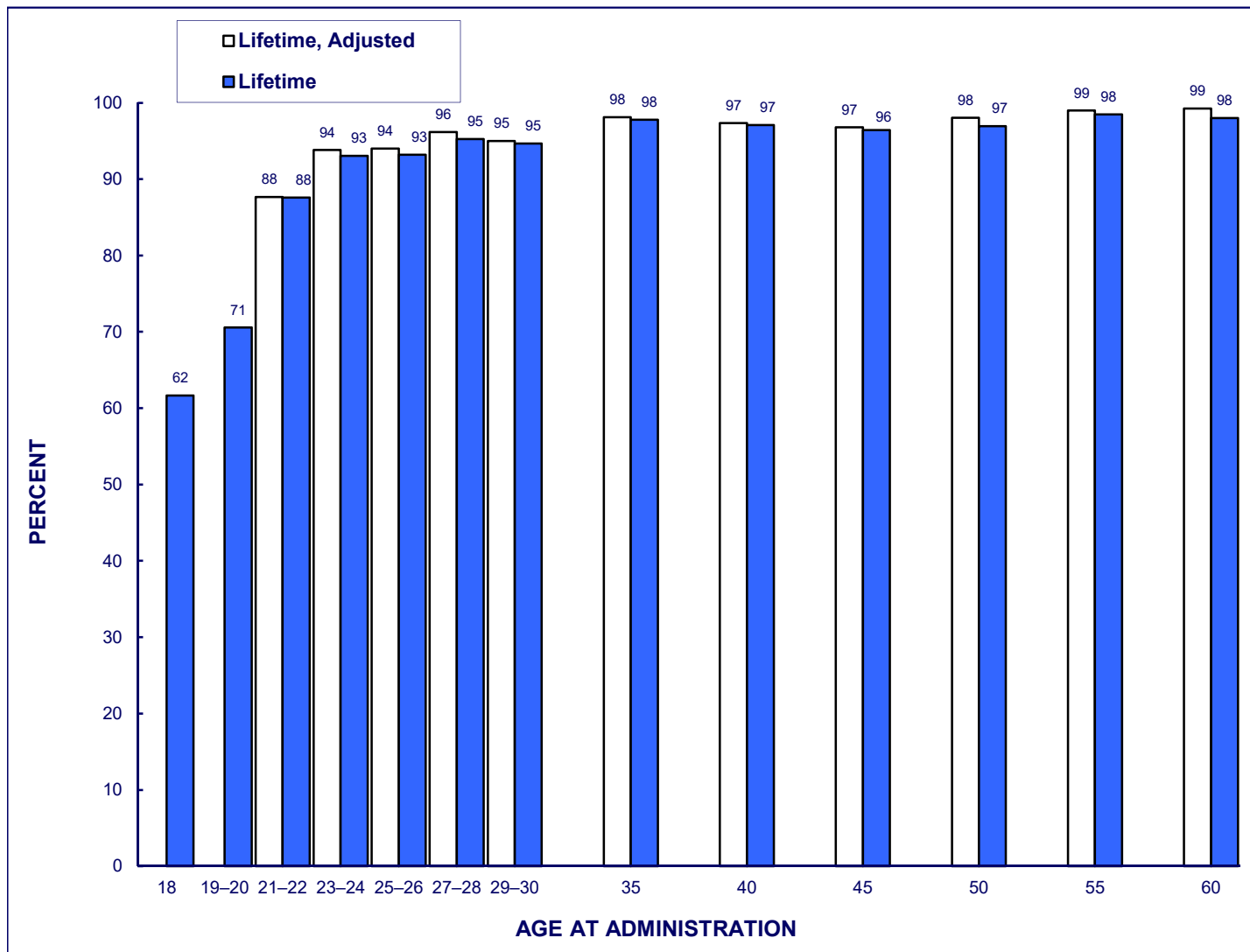
**TABLE/FIGURE 68**  
**MARIJUANA**  
**Adjusted and Unadjusted Lifetime Prevalence**  
**among Respondents of Modal Ages 18 through 60**  
**by Age Group, 2022**



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

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.  
 Due to rounding some bars with the same number may have uneven height.

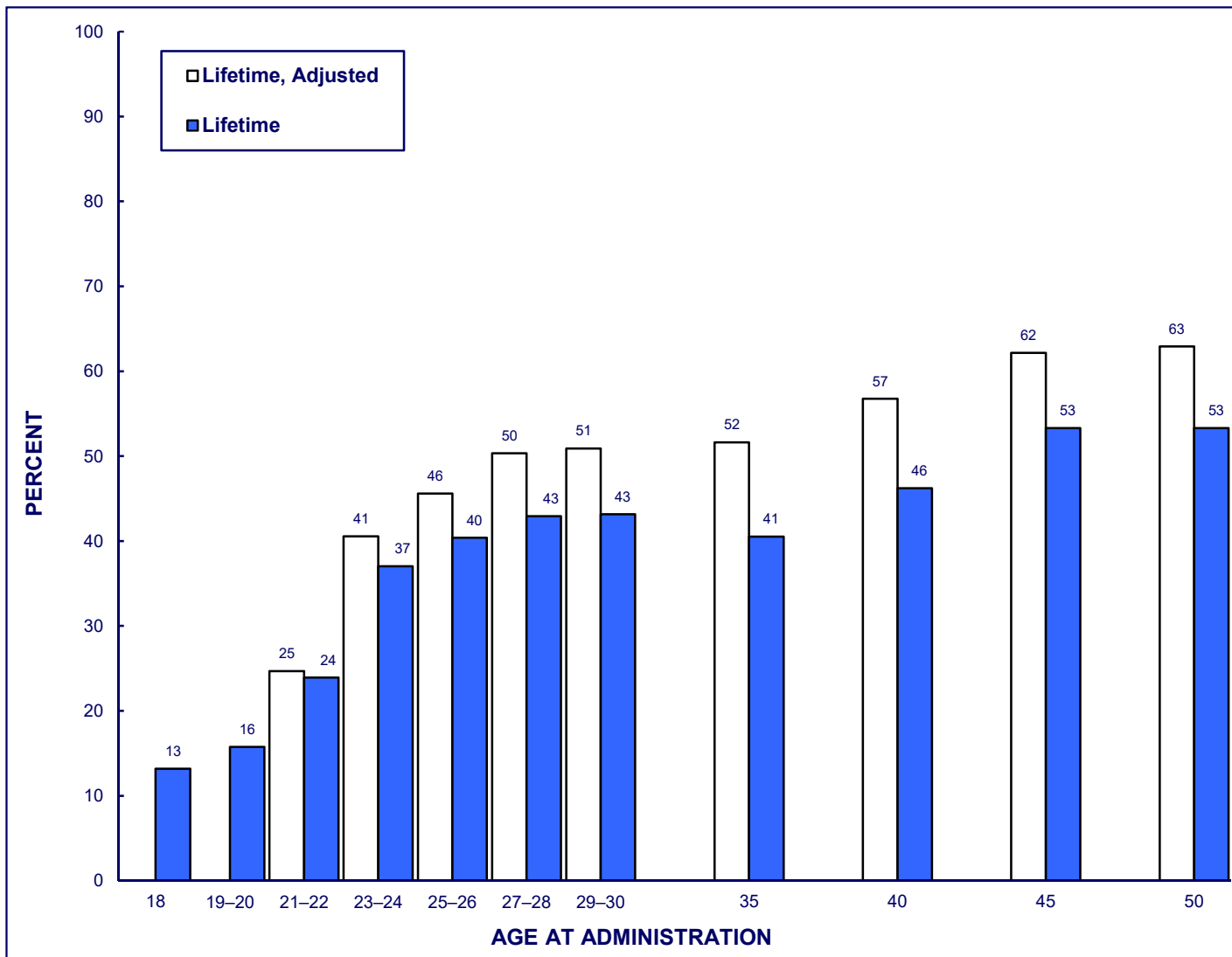
**TABLE/FIGURE 69**  
**ALCOHOL**  
**Adjusted and Unadjusted Lifetime Prevalence**  
**among Respondents of Modal Ages 18 through 60**  
**by Age Group, 2022**



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

*Notes.* Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.  
 Due to rounding, some bars with the same number may have uneven height.

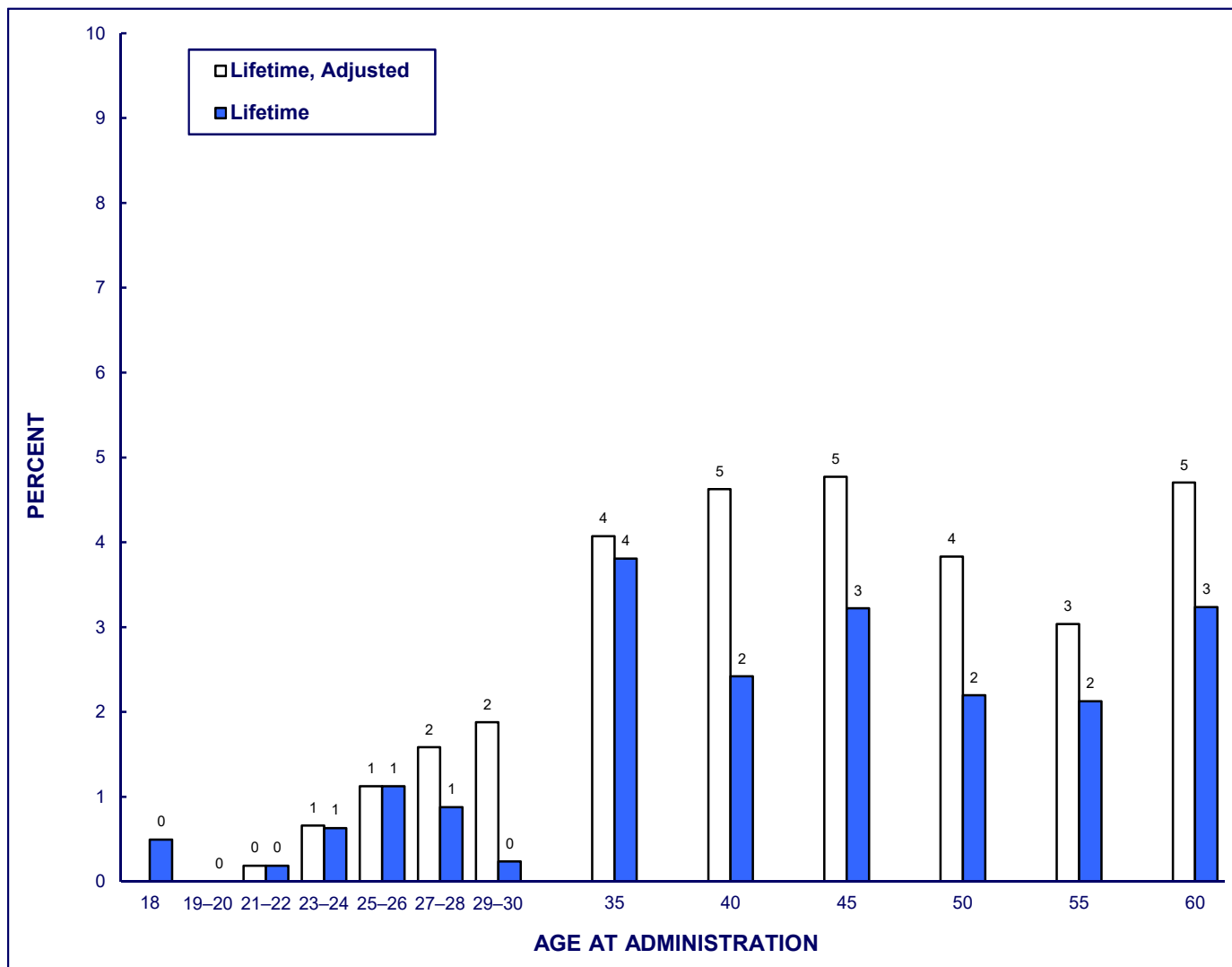
**TABLE/FIGURE 70**  
**ANY DRUG OTHER THAN MARIJUANA**  
**Adjusted and Unadjusted Lifetime Prevalence**  
**among Respondents of Modal Ages 18 through 50**  
**by Age Group, 2022**



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

*Notes.* Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.  
 Due to rounding, some bars with the same number may have uneven height.

**TABLE/FIGURE 71**  
**HEROIN**  
**Adjusted and Unadjusted Lifetime Prevalence**  
**among Respondents of Modal Ages 18 through 60**  
**by Age Group, 2022**

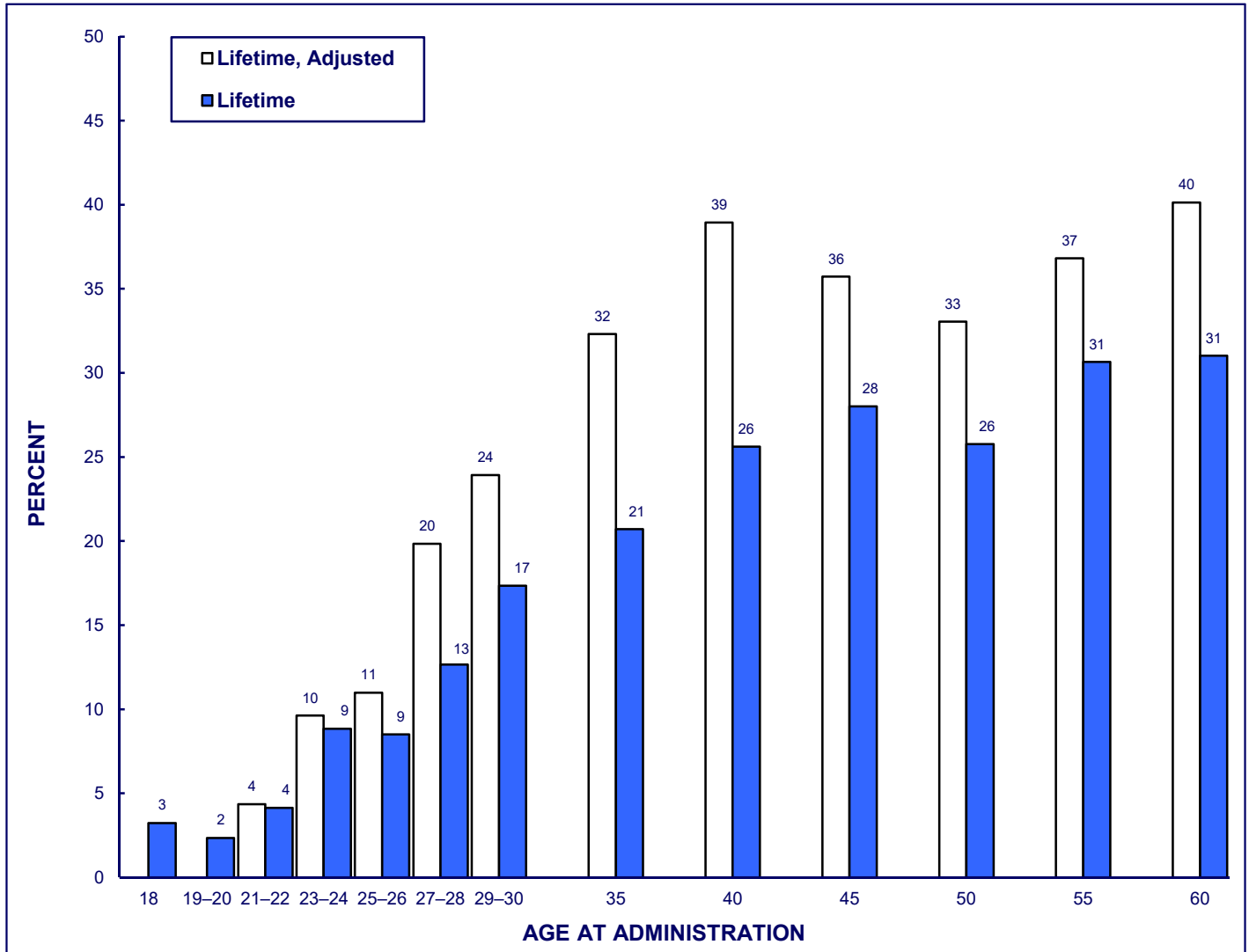


Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.  
 Due to rounding, some bars with the same number may have uneven height.



**TABLE/FIGURE 72**  
**NARCOTICS OTHER THAN HEROIN**  
**Adjusted and Unadjusted Lifetime Prevalence**  
**among Respondents of Modal Ages 18 through 60**  
**by Age Group, 2022**

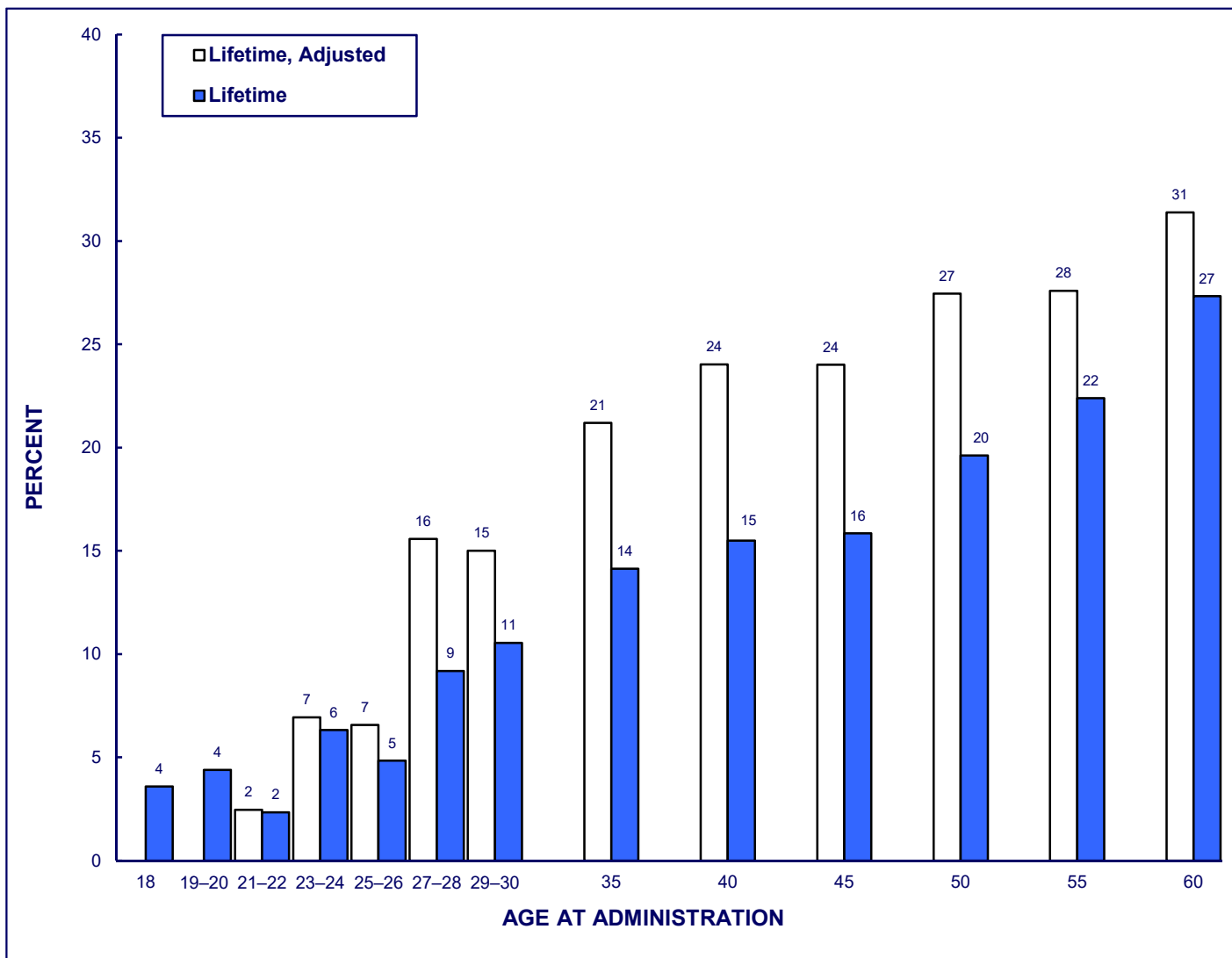


*Source.* The Monitoring the Future study, the University of Michigan.

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

Due to rounding, some bars with the same number may have uneven height.

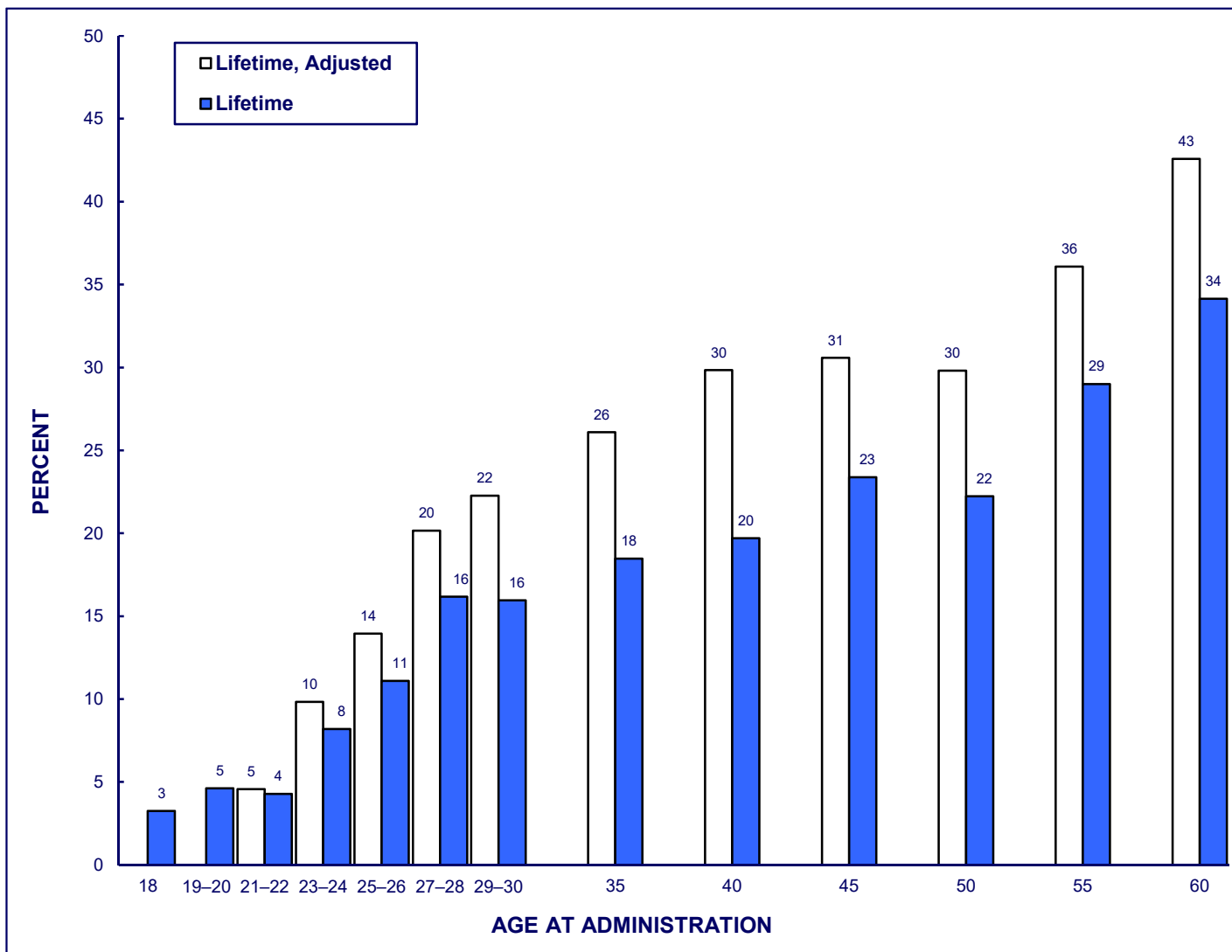
**TABLE/FIGURE 73**  
**SEDATIVES (BARBITURATES)**  
**Adjusted and Unadjusted Lifetime Prevalence**  
**among Respondents of Modal Ages 18 through 60**  
**by Age Group, 2022**



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

*Notes.* Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.  
 Due to rounding, some bars with the same number may have uneven height.

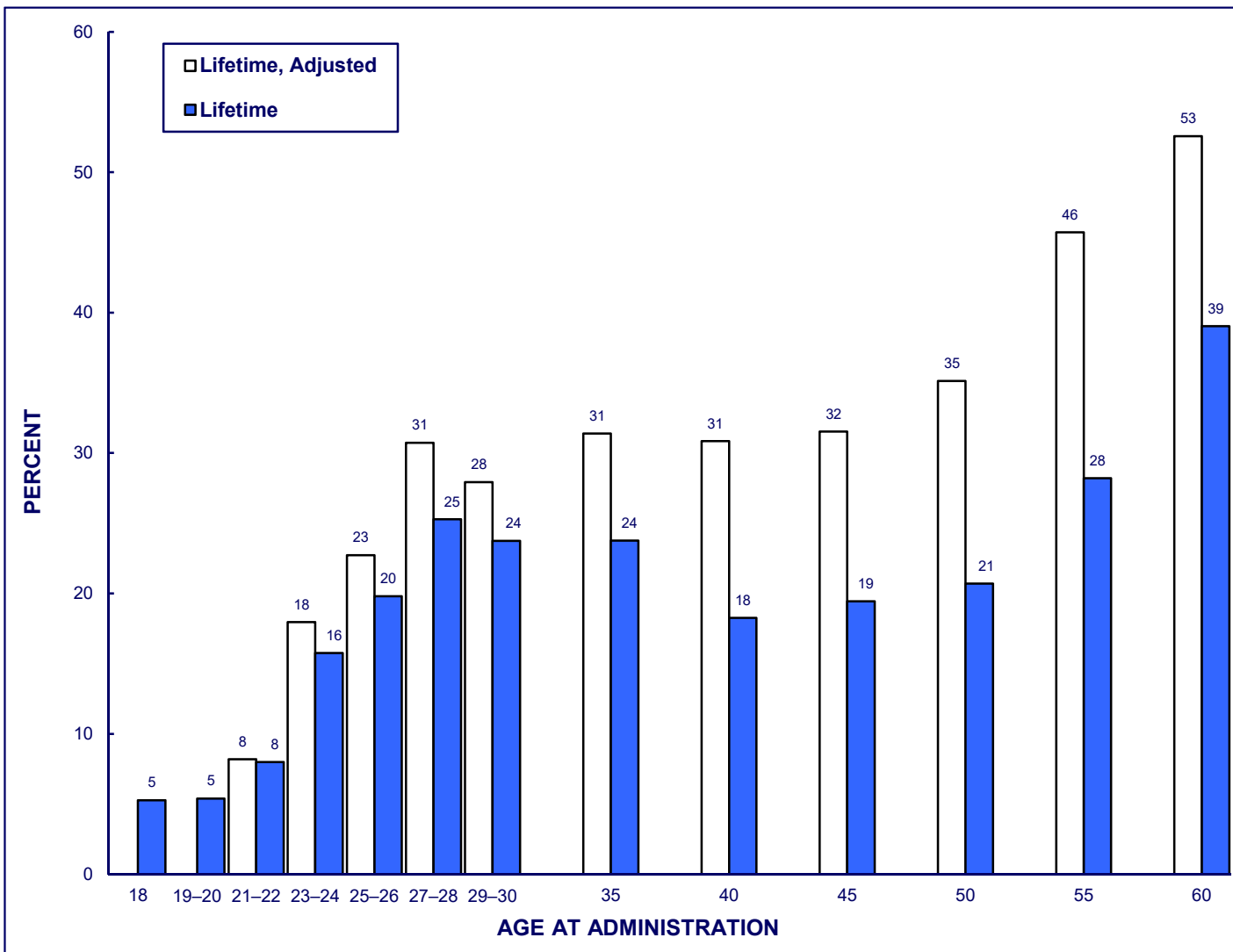
**TABLE/FIGURE 74**  
**TRANQUILIZERS**  
**Adjusted and Unadjusted Lifetime Prevalence**  
**among Respondents of Modal Ages 18 through 60**  
**by Age Group, 2022**



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

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.  
 Due to rounding, some bars with the same number may have uneven height.

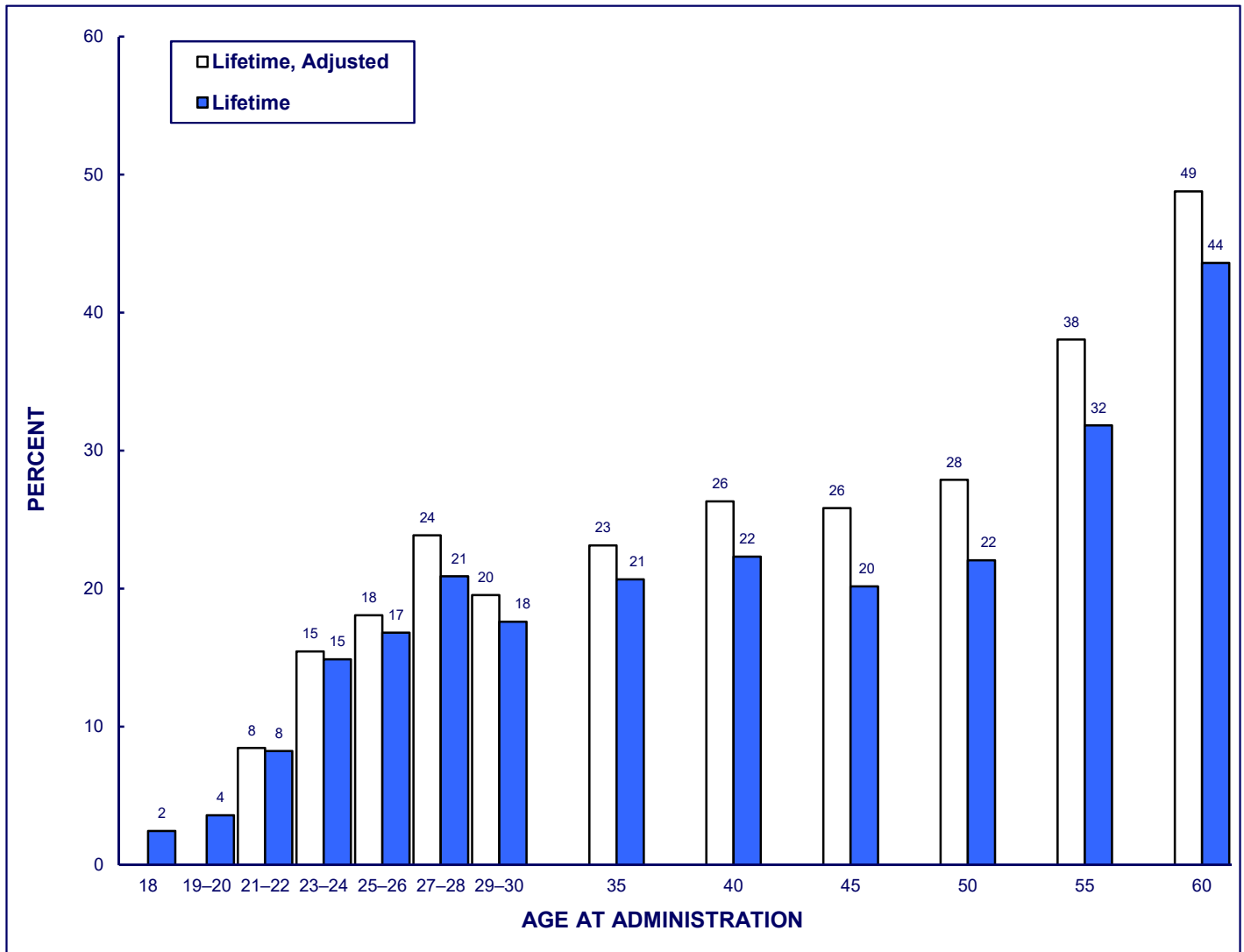
**TABLE/FIGURE 75**  
**AMPHETAMINES**  
**Adjusted and Unadjusted Lifetime Prevalence**  
**among Respondents of Modal Ages 18 through 60**  
**by Age Group, 2022**



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

*Notes.* Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.  
 Due to rounding, some bars with the same number may have uneven height.

**TABLE/FIGURE 76**  
**COCAINE**  
**Adjusted and Unadjusted Lifetime Prevalence**  
**among Respondents of Modal Ages 18 through 60**  
**by Age Group, 2022**



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

*Notes.* Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.  
 Due to rounding some bars with the same number may have uneven height.

**TABLE/FIGURE 77**  
**12-Month Prevalence of Use for Various Types of Drugs, 2022:**  
**College vs. Noncollege Young Adults 1 to 4 Years beyond High School**  
**by Gender**  
 (Entries are percentages.)

	<b>Total</b>			<b>Men</b>		<b>Women</b>		<b>Sex Differences</b>	
	<b>Full-Time College</b>	<b>Non- College</b>	<b>College/Non-College Differences</b>	<b>Full-Time College</b>	<b>Non- College</b>	<b>Full-Time College</b>	<b>Non- College</b>	<b>Full-Time College</b>	<b>Non- College</b>
<b>Marijuana</b>	40.9	41.6	n.s.	38.4	40.3	42.7	41.4	n.s.	n.s.
<b>Vaping Marijuana</b>	19.9	26.6	p<.05	23.9	25.3	17.8	26.6	n.s.	n.s.
<b>Alcohol</b>	80.5	72.7	p<.05	77.4	68.4	82.4	77.0	n.s.	n.s.
<b>Cigarettes</b>	15.6	16.7	n.s.	15.7	20.2	15.0	11.1	n.s.	p<.05
<b>Vaping Nicotine</b>	26.4	30.9	n.s.	26.4	31.7	25.0	28.7	n.s.	n.s.
<b>Any Drug other than Marijuana</b>	10.7	14.0	n.s.	14.0	14.9	8.4	12.5	n.s.	n.s.
<b>Hallucinogens</b>	5.0	8.5	n.s.	6.4	11.3	3.6	5.2	n.s.	n.s.
<b>LSD</b>	1.4	2.9	n.s.	1.7	3.9	1.0	1.8	n.s.	n.s.
<b>Hallucinogens other than LSD</b>	4.6	7.2	n.s.	5.8	9.5	3.3	4.3	n.s.	n.s.
<b>Ketamine</b>	0.4	0.9	n.s.	0.4	0.3	0.5	1.8	n.s.	n.s.
<b>MDMA (ecstasy, molly)</b>	1.7	2.0	n.s.	2.5	1.1	1.2	3.4	n.s.	n.s.
<b>Heroin</b>	*	0.3	n.s.	*	0.5	*	*	p<.001	n.s.
<b>Narcotics other than Heroin</b>	0.8	1.1	n.s.	0.5	0.1	0.7	1.5	n.s.	p<.05
<b>OxyContin</b>	0.1	1.6	n.s.	*	0.2	0.2	3.3	n.s.	n.s.
<b>Vicodin</b>	0.1	0.1	n.s.	*	0.2	0.1	*	n.s.	n.s.
<b>Sedatives (Barbiturates)</b>	0.6	2.7	p<.05	*	3.1	1.0	1.7	p<.05	n.s.
<b>Tranquilizers</b>	1.3	1.6	n.s.	0.8	1.1	1.7	1.5	n.s.	n.s.
<b>Amphetamines, Adjusted</b>	4.8	2.6	n.s.	6.3	2.2	3.8	2.7	n.s.	n.s.
<b>Adderall</b>	3.6	4.5	n.s.	3.0	2.8	4.1	6.8	n.s.	n.s.
<b>Ritalin</b>	0.2	0.8	n.s.	*	0.2	0.3	1.5	n.s.	n.s.
<b>Any Prescription Drug</b>	5.6	5.0	n.s.	6.6	4.4	5.1	5.3	n.s.	n.s.
<b>Cocaine</b>	3.3	3.3	n.s.	5.3	3.1	1.9	3.8	n.s.	n.s.
<b>Methamphetamine</b>	*	0.5	n.s.	*	0.2	*	0.7	p<.001	n.s.
<b>Small Cigars</b>	2.9	9.3	p<.05	3.5	15.8	2.3	2.3	n.s.	p<.05
<b>Tobacco using a Hookah</b>	5.6	5.7	n.s.	10.2	3.1	2.9	7.6	n.s.	n.s.
<b>Snus</b>	*	0.7	n.s.	*	0.6	*	0.8	p<.001	n.s.

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

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

**TABLE/FIGURE 78**  
**Thirty-Day Prevalence of Use for Various Types of Drugs, 2022:**  
**College vs. Noncollege Young Adults 1 to 4 Years beyond High School**  
**by Gender**

(Entries are percentages.)

	Total			Men		Women		Sex Differences	
	Full-Time College	Non- College	College/Non-College Differences	Full-Time College	Non- College	Full-Time College	Non- College	Full-Time College	Non- College
<b>Marijuana</b>	22.1	28.2	n.s.	19.8	28.9	23.3	25.9	n.s.	n.s.
<b>Vaping Marijuana</b>	11.2	18.9	p<.01	13.5	18.7	10.1	16.8	n.s.	n.s.
<b>Alcohol</b>	62.5	54.1	p<.05	56.8	52.7	65.8	57.8	n.s.	n.s.
<b>Cigarettes</b>	6.4	7.0	n.s.	8.0	8.2	5.4	3.7	n.s.	n.s.
<b>Vaping Nicotine</b>	18.9	23.2	n.s.	18.2	24.6	19.0	20.7	n.s.	n.s.
<b>Any Drug other than Marijuana</b>	2.9	4.2	n.s.	4.4	3.7	2.1	4.3	n.s.	n.s.
<b>Hallucinogens</b>	1.1	2.0	n.s.	2.0	2.6	0.5	1.5	n.s.	n.s.
<b>LSD</b>	*	0.9	n.s.	*	*	*	2.1	p<.001	n.s.
<b>Hallucinogens other than LSD</b>	0.7	1.2	n.s.	1.1	1.1	0.5	1.5	n.s.	n.s.
<b>MDMA (ecstasy, molly)</b>	*	0.1	n.s.	*	0.2	*	0.1	n.s.	n.s.
<b>Heroin</b>	*	0.3	n.s.	*	0.5	*	*	p<.001	n.s.
<b>Narcotics other than Heroin</b>	0.1	0.8	n.s.	0.2	0.1	0.1	1.0	n.s.	n.s.
<b>Sedatives (Barbiturates)</b>	0.1	0.9	n.s.	*	1.0	0.1	0.1	n.s.	n.s.
<b>Tranquilizers</b>	0.6	0.8	n.s.	0.7	0.5	0.5	0.3	n.s.	n.s.
<b>Amphetamines, Adjusted</b>	1.5	1.0	n.s.	1.9	0.8	1.3	0.6	n.s.	n.s.
<b>Any Prescription Drug</b>	2.0	1.7	n.s.	2.8	1.2	1.5	1.8	n.s.	n.s.
<b>Cocaine</b>	1.1	0.8	n.s.	1.8	0.8	0.7	1.0	n.s.	n.s.
<b>Large Cigars</b>	3.7	3.7	n.s.	3.2	3.6	3.4	*	n.s.	n.s.
<b>Flavored Little Cigars</b>	1.3	3.4	n.s.	1.4	0.7	0.4	7.9	n.s.	n.s.
<b>Regular Little Cigars</b>	1.6	2.8	n.s.	0.7	2.7	1.5	3.2	n.s.	n.s.

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

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

**TABLE/FIGURE 79**  
**Thirty-Day Prevalence of **Daily** Use for Various Types of Drugs, 2022:**  
**College vs. Noncollege Young Adults 1 to 4 Years beyond High School**  
**by Gender**

(Entries are percentages.)

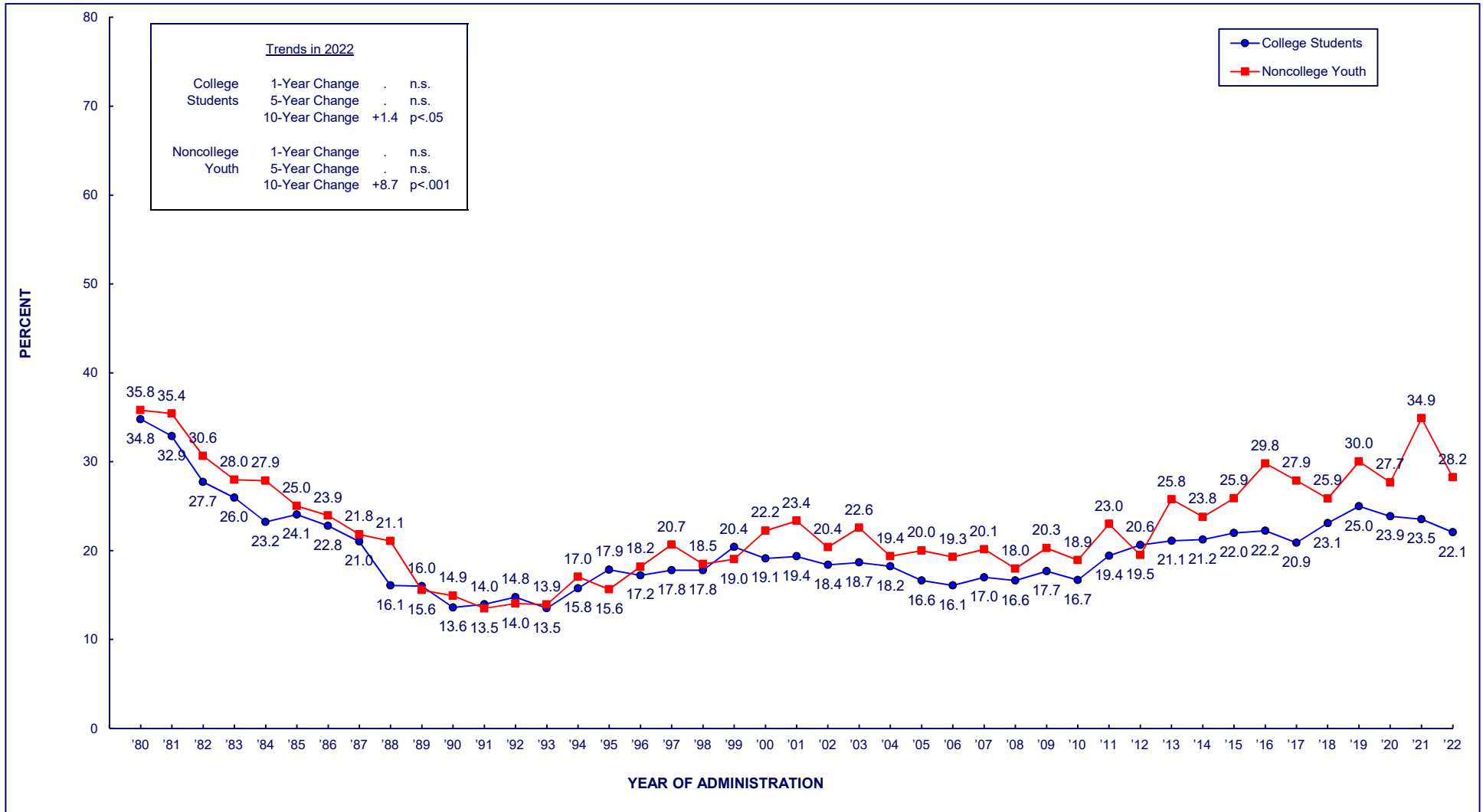
	<b>Total</b>			<b>Men</b>		<b>Women</b>		<b>Sex Differences</b>	
	<b>Full-Time College</b>	<b>Non- College</b>	<b>College/Non-College Differences</b>	<b>Full-Time College</b>	<b>Non- College</b>	<b>Full-Time College</b>	<b>Non- College</b>	<b>Full-Time College</b>	<b>Non- College</b>
Marijuana	4.7	14.5	p<.001	3.6	15.3	5.8	11.8	n.s.	n.s.
Alcohol									
Daily	1.7	1.6	n.s.	2.6	2.3	1.3	0.7	n.s.	n.s.
5+ Drinks in a Row in Last 2 Weeks	27.7	23.9	n.s.	26.8	23.5	27.5	25.3	n.s.	n.s.
10+ Drinks in a Row in Last 2 Weeks	5.2	7.8	n.s.	8.0	9.9	3.4	5.7	n.s.	n.s.
Cigarettes									
Daily	1.1	3.8	p<.05	0.6	4.8	1.2	1.6	n.s.	n.s.
1/2 Pack+/Day	0.1	1.6	p<.01	*	1.4	0.2	0.7	n.s.	n.s.

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

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



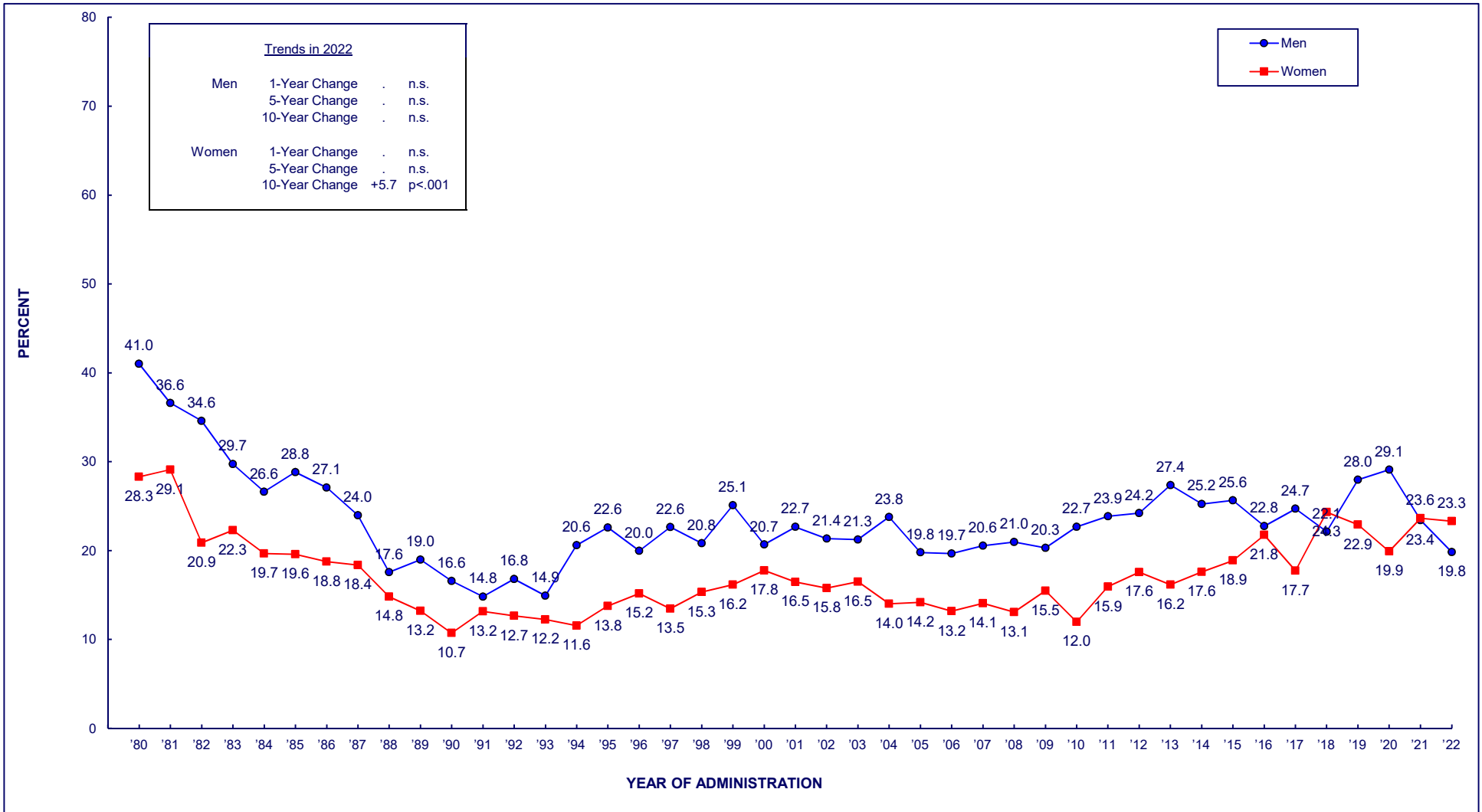
Trends in 30-Day Prevalence among College Students vs. Noncollege Youth 1 to 4 Years beyond High School



TABLE/FIGURE 81

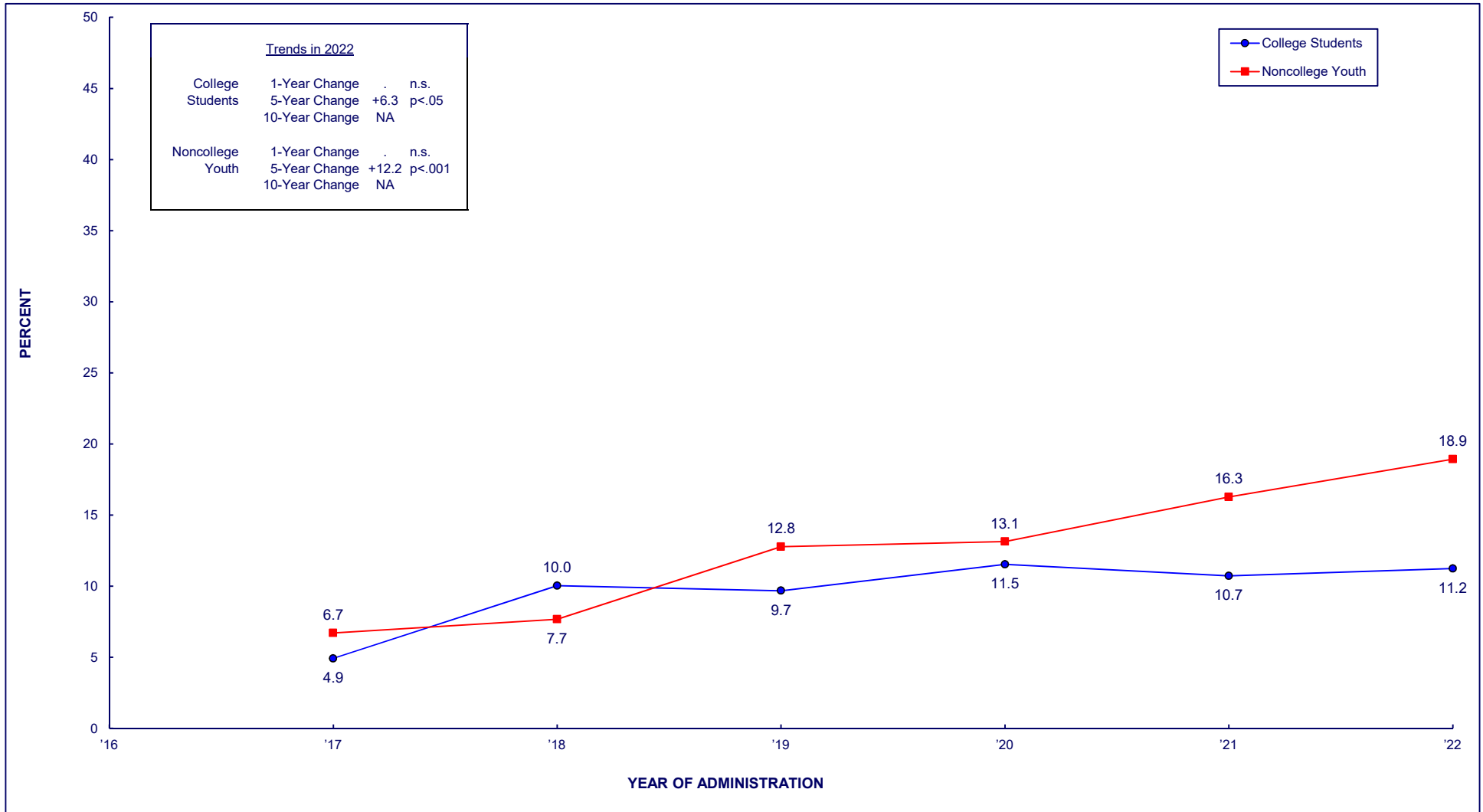
MARIJUANA

Trends in 30-Day Prevalence  
among College Students 1 to 4 Years beyond High School, by Sex



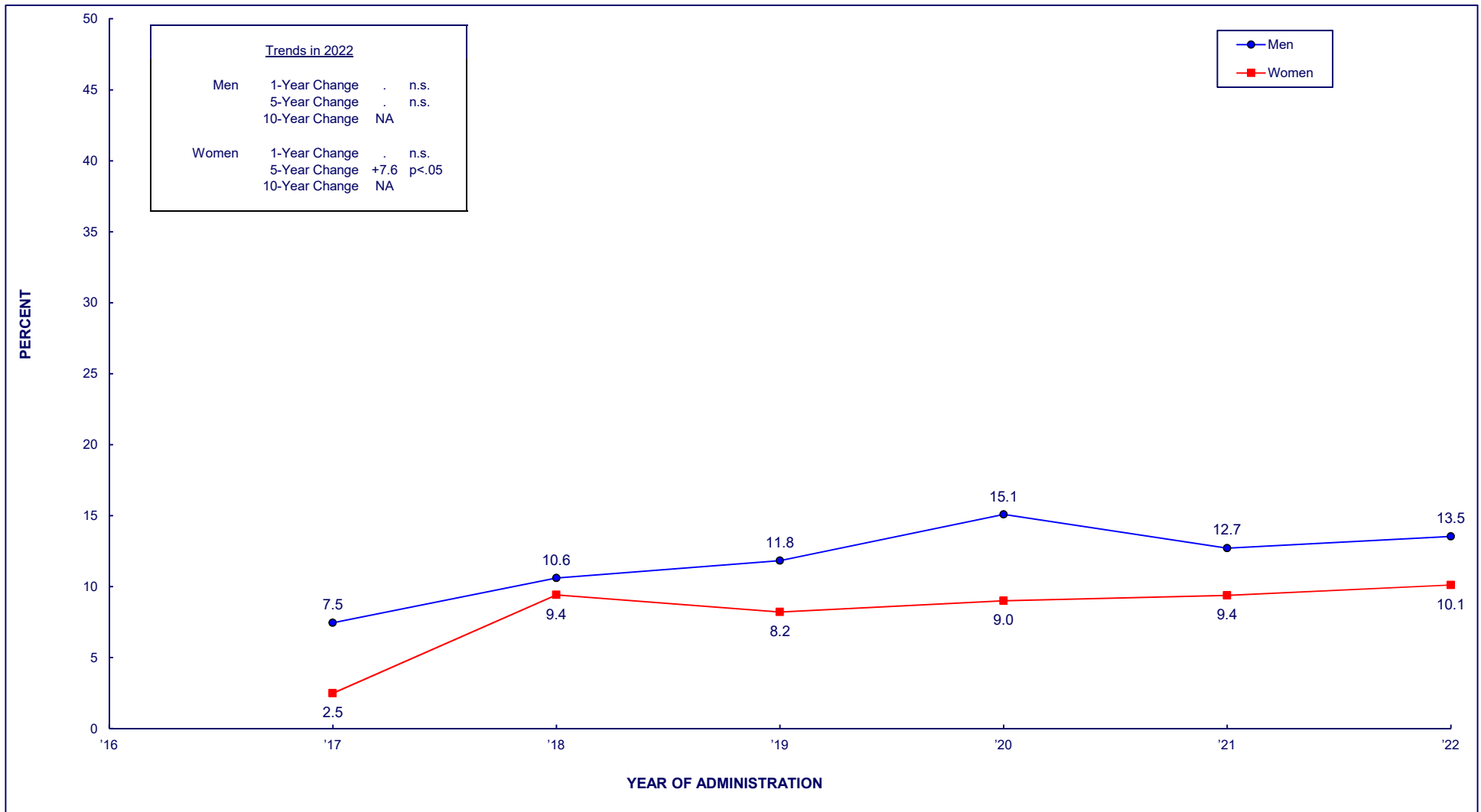
**TABLE/FIGURE 82**  
**VAPING MARIJUANA**

**Trends in 30-Day Prevalence among College Students vs. Noncollege Youth 1 to 4 Years beyond High School**



**TABLE/FIGURE 83**  
**VAPING MARIJUANA**

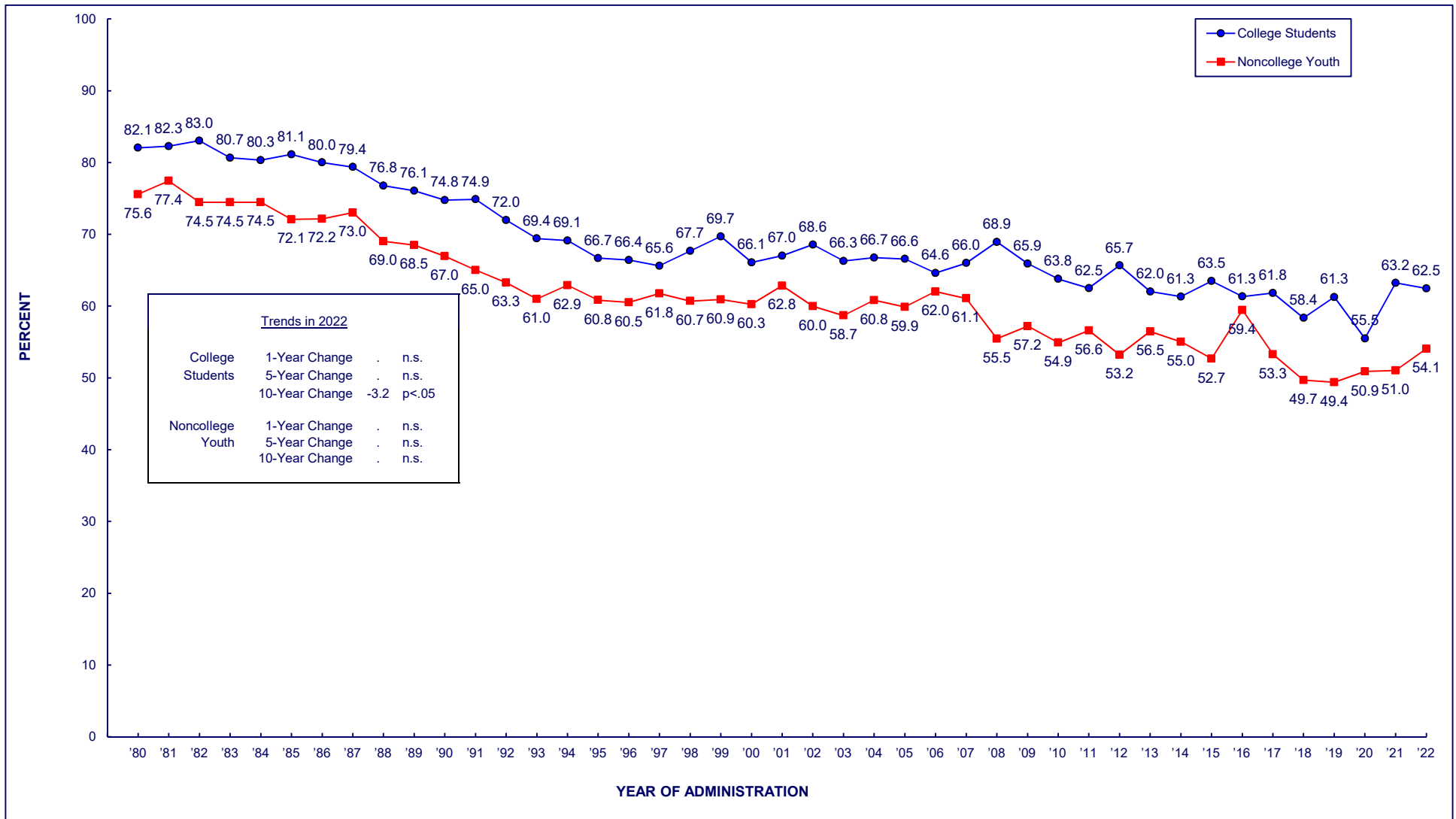
**Trends in 30-Day Prevalence**  
**among College Students 1 to 4 Years beyond High School, by Sex**



TABLE/FIGURE 84

ALCOHOL

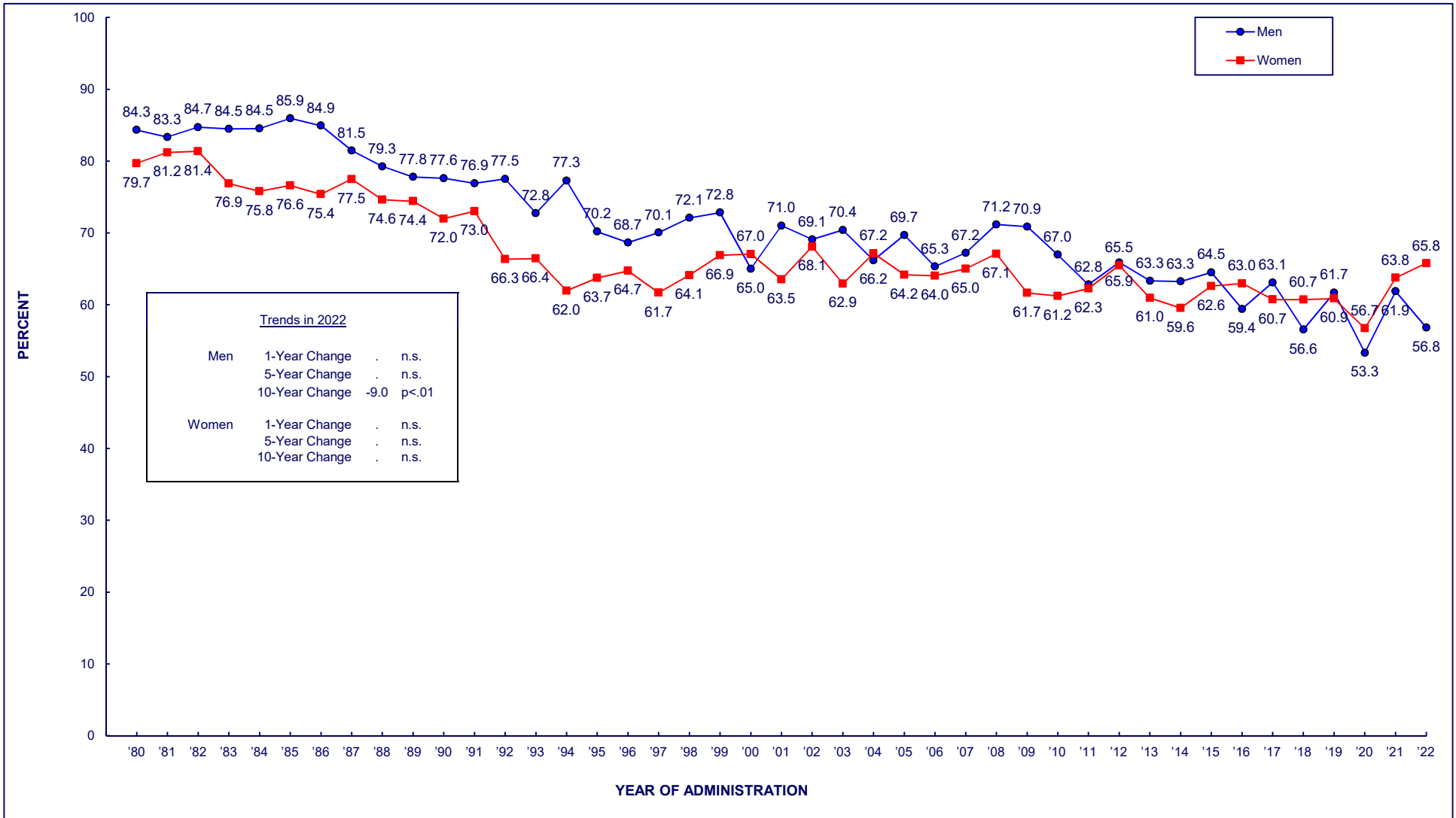
Trends in 30-Day Prevalence among College Students vs. Noncollege Youth 1 to 4 Years beyond High School



TABLE/FIGURE 85

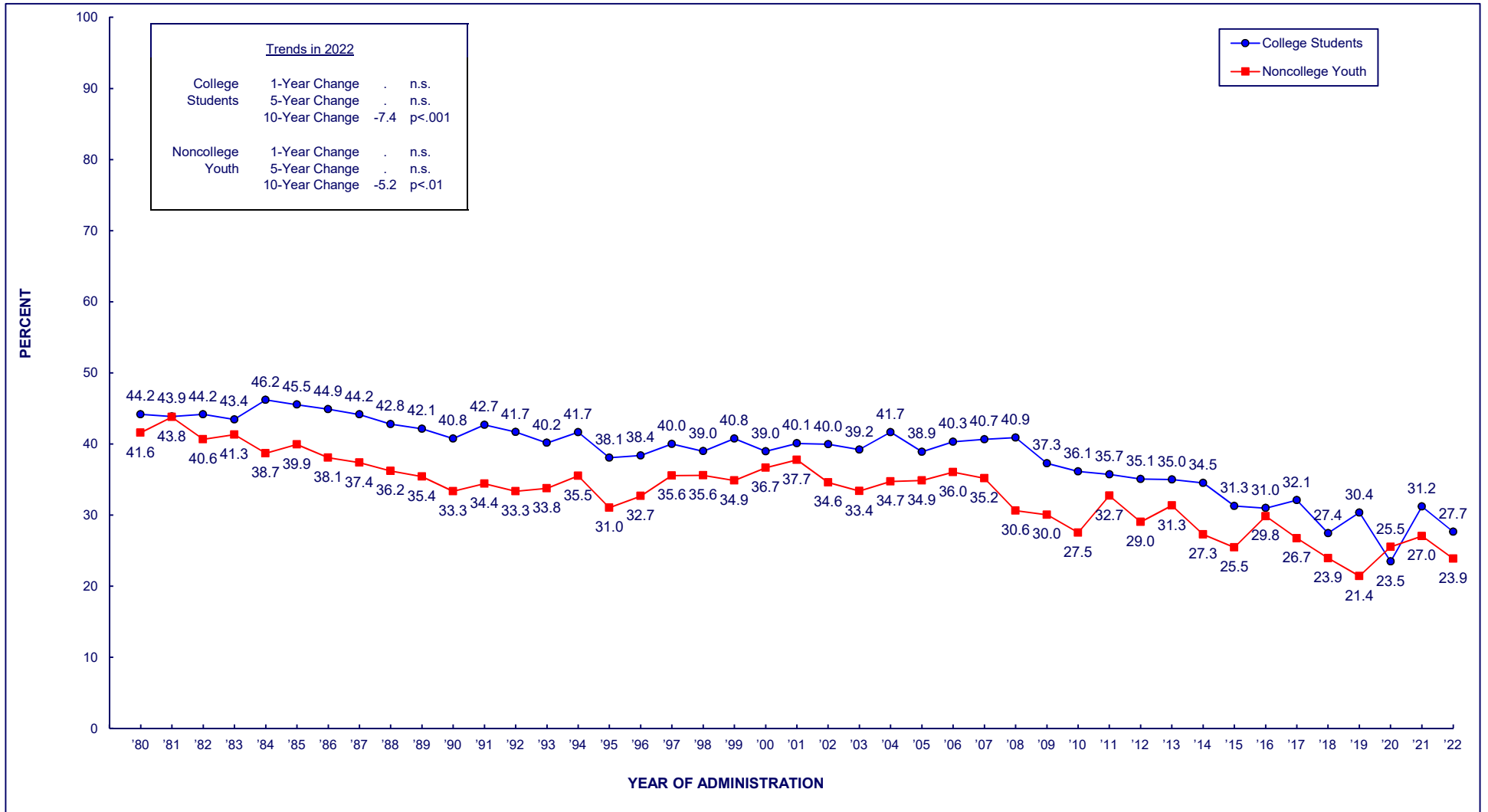
ALCOHOL

Trends in 30-Day Prevalence  
among College Students 1 to 4 Years beyond High School, by Sex



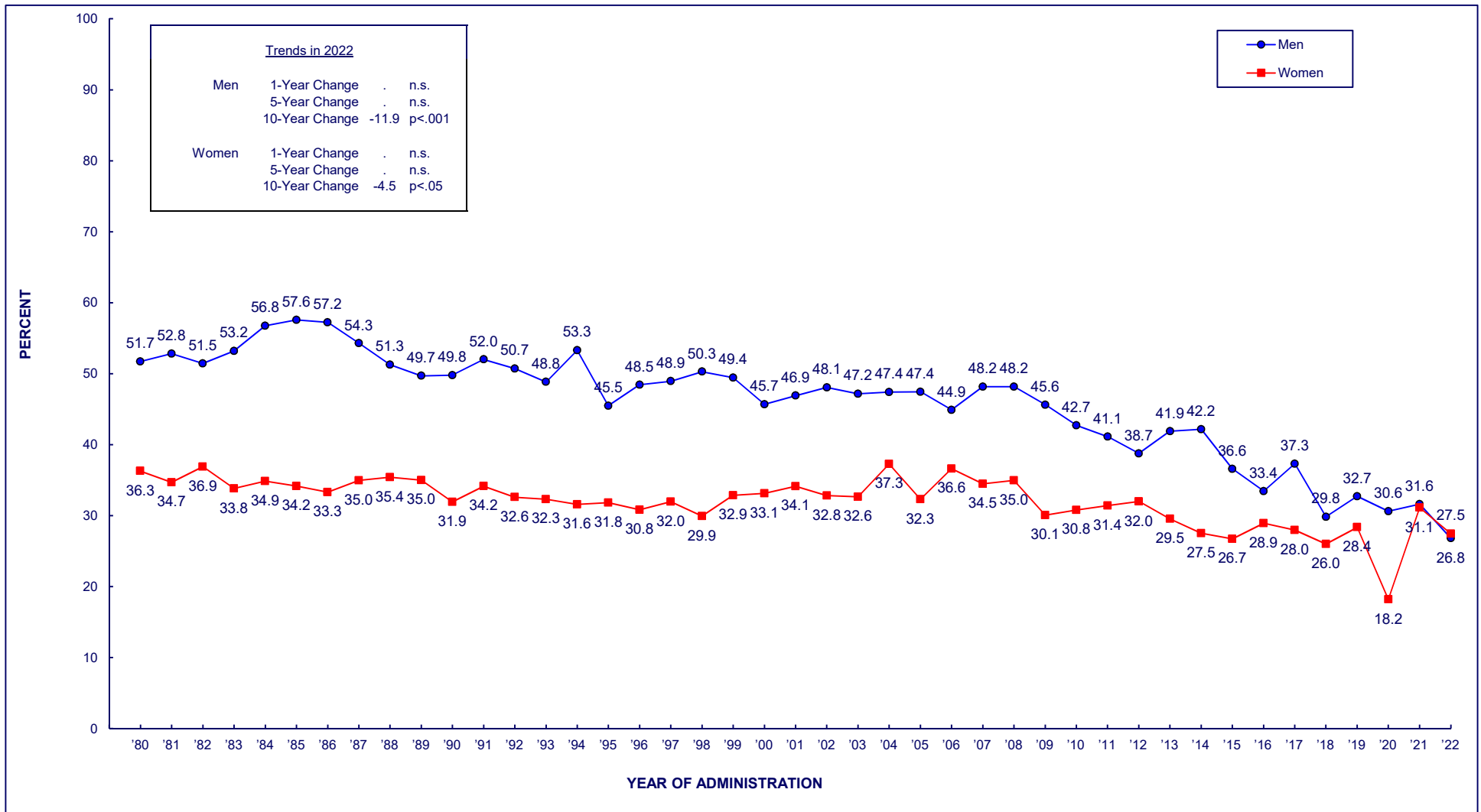
ALCOHOL

Trends in 2-Week Prevalence of Having 5 or More Drinks in a Row among College Students vs. Noncollege Youth 1 to 4 Years beyond High School



ALCOHOL

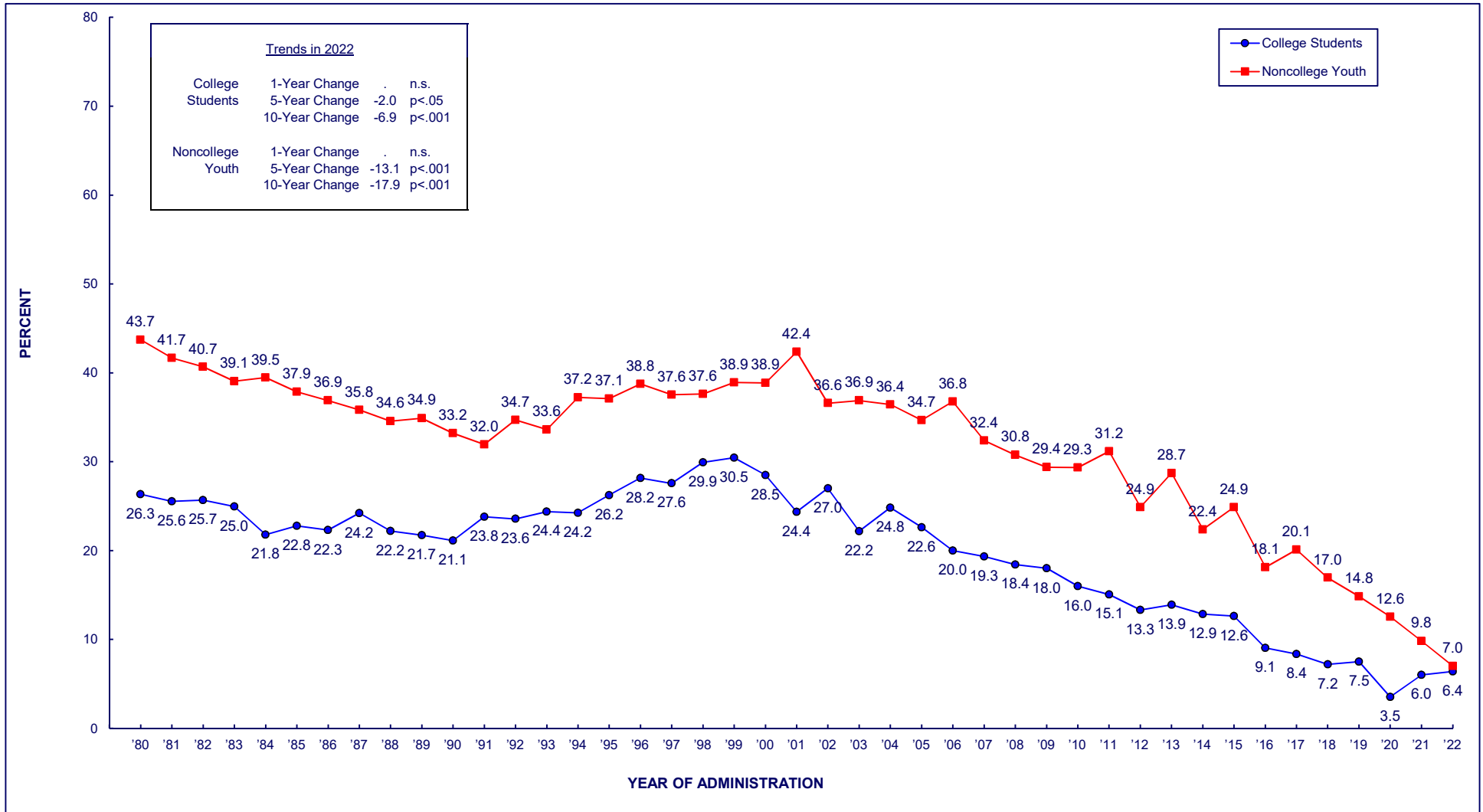
Trends in 2-Week Prevalence of Having 5 or More Drinks in a Row among College Students 1 to 4 Years beyond High School, by Sex





**CIGARETTES**

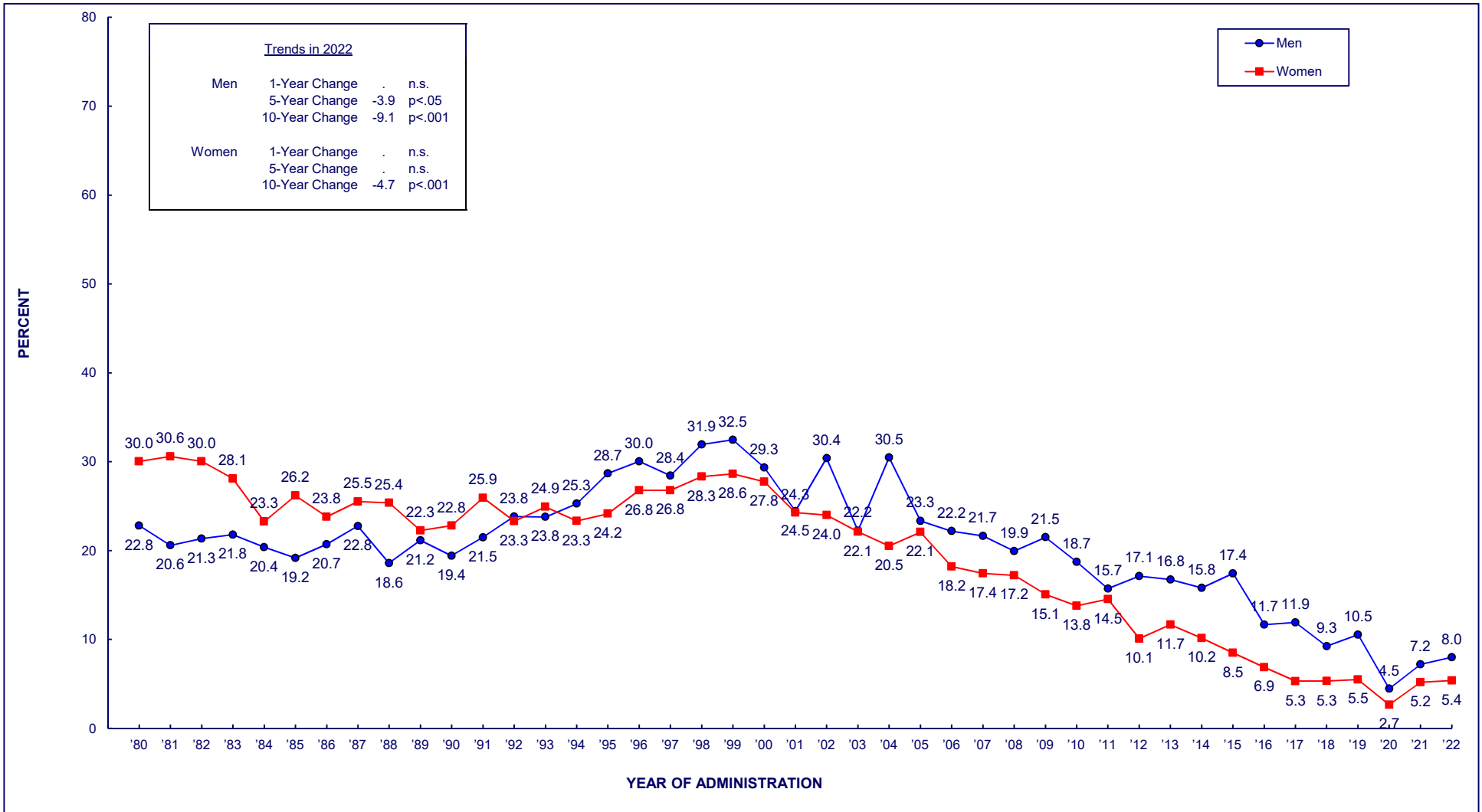
**Trends in 30-Day Prevalence among College Students vs. Noncollege Youth 1 to 4 Years beyond High School**



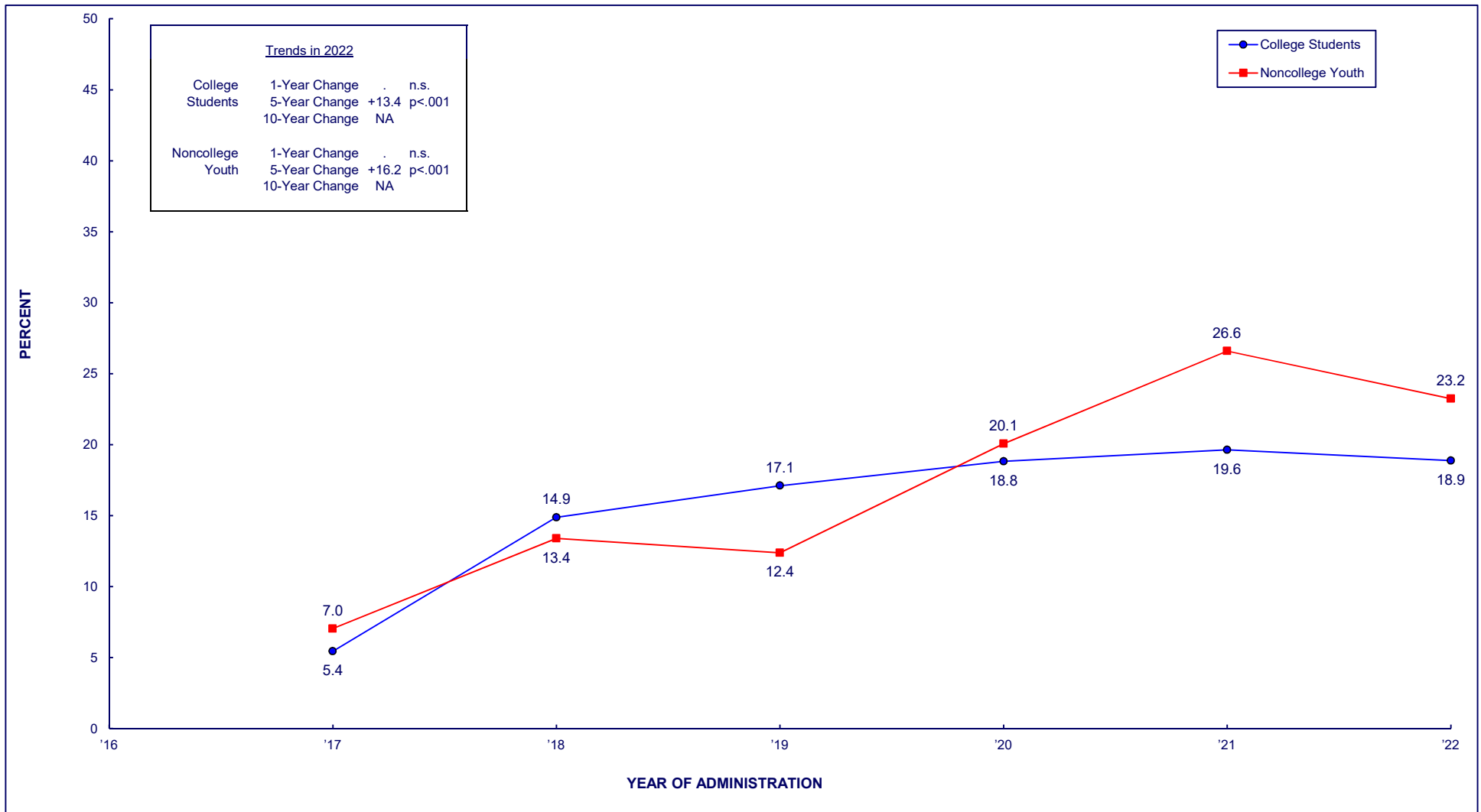
TABLE/FIGURE 89

**CIGARETTES**

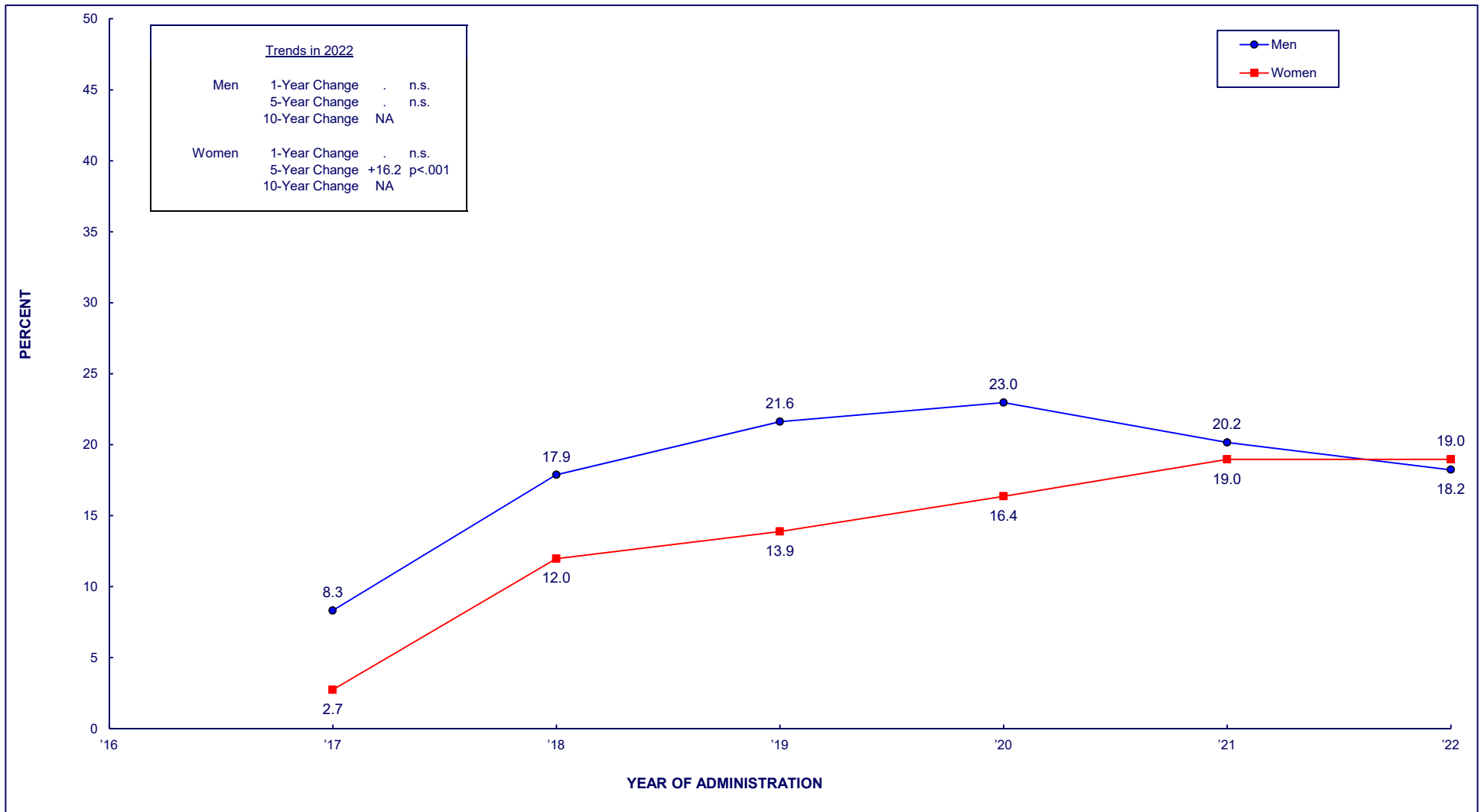
**Trends in 30-Day Prevalence  
among College Students 1 to 4 Years beyond High School, by Sex**



Trends in 30-Day Prevalence among College Students vs. Noncollege Youth 1 to 4 Years beyond High School



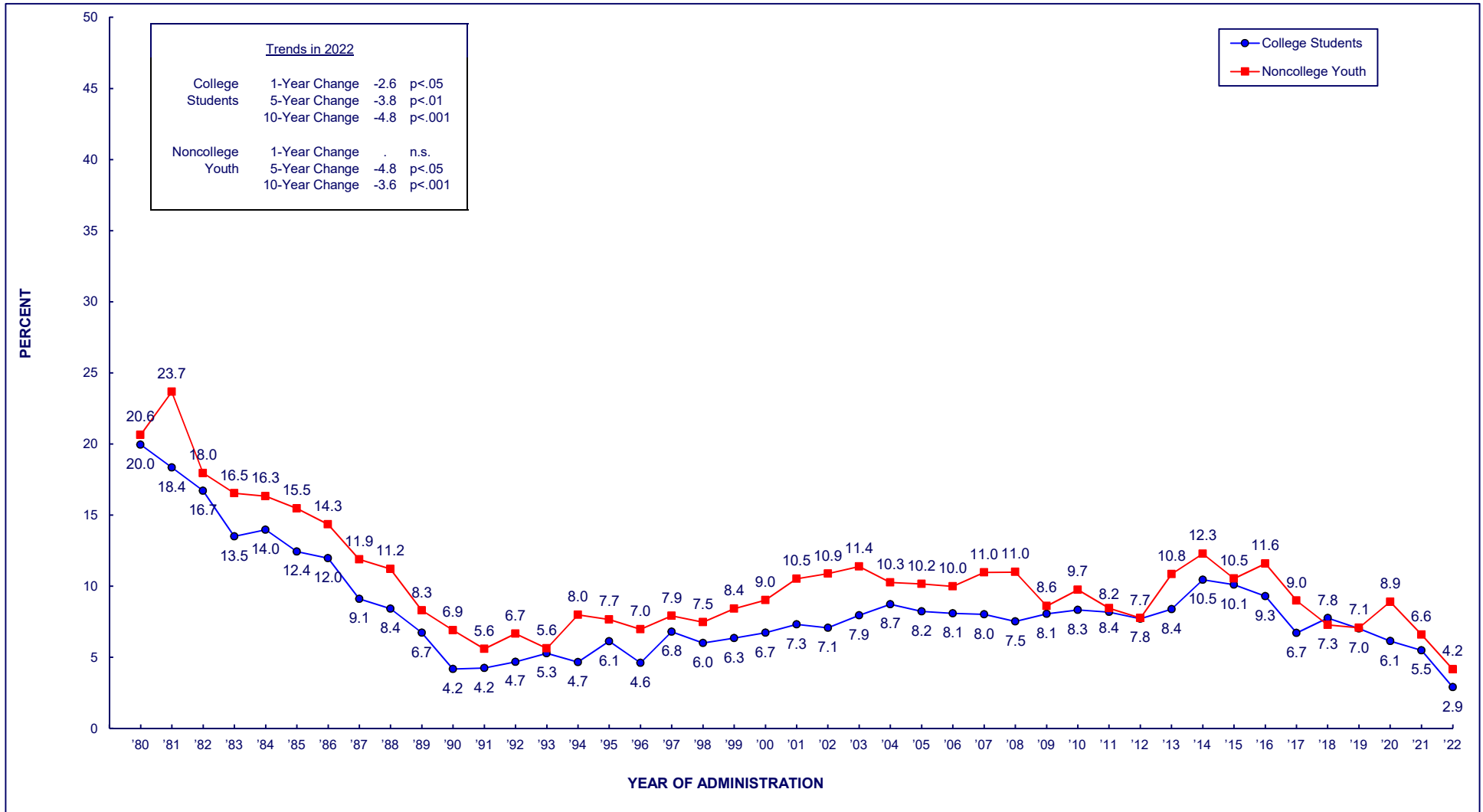
Trends in 30-Day Prevalence  
among College Students 1 to 4 Years beyond High School, by Sex



TABLE/FIGURE 92

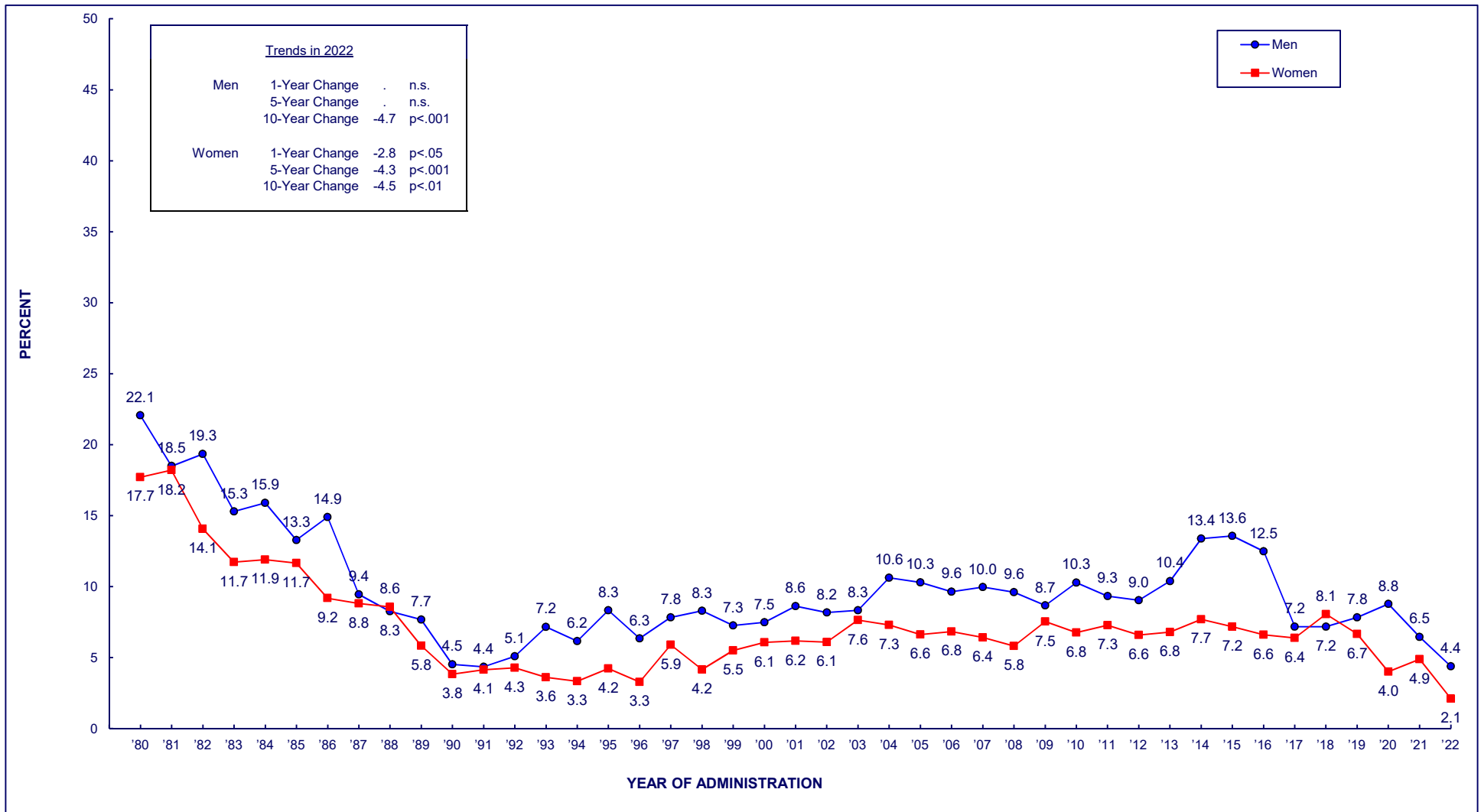
**ANY DRUG OTHER THAN MARIJUANA**

**Trends in 30-Day Prevalence among College Students vs. Noncollege Youth 1 to 4 Years beyond High School**



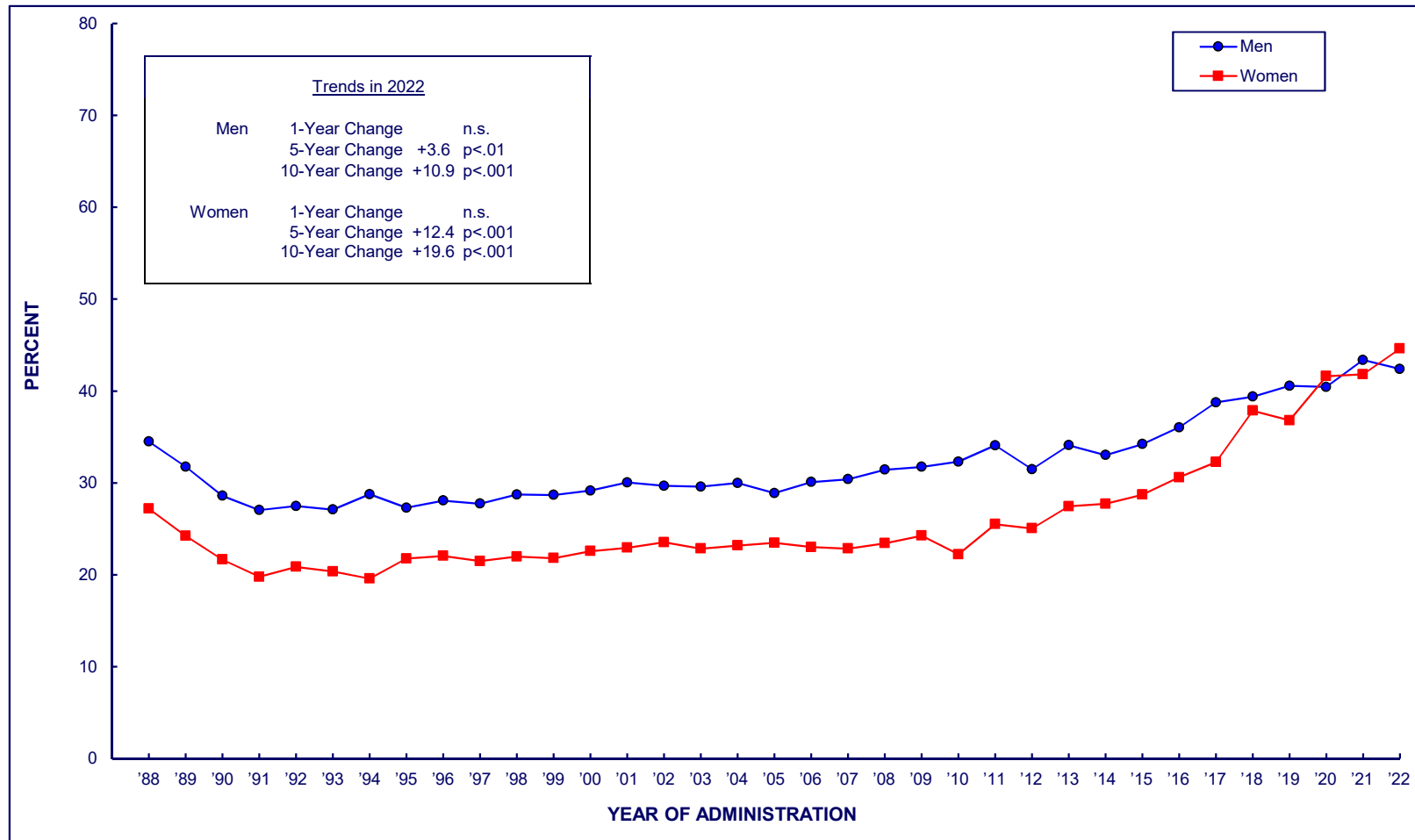
**TABLE/FIGURE 93**  
**ANY DRUG OTHER THAN MARIJUANA**

**Trends in 30-Day Prevalence**  
**among College Students 1 to 4 Years beyond High School, by Sex**



**MARIJUANA**

Trends in 12-Month Prevalence  
among Respondents of Modal Ages 19 through 30, by Sex



Trends in 2022

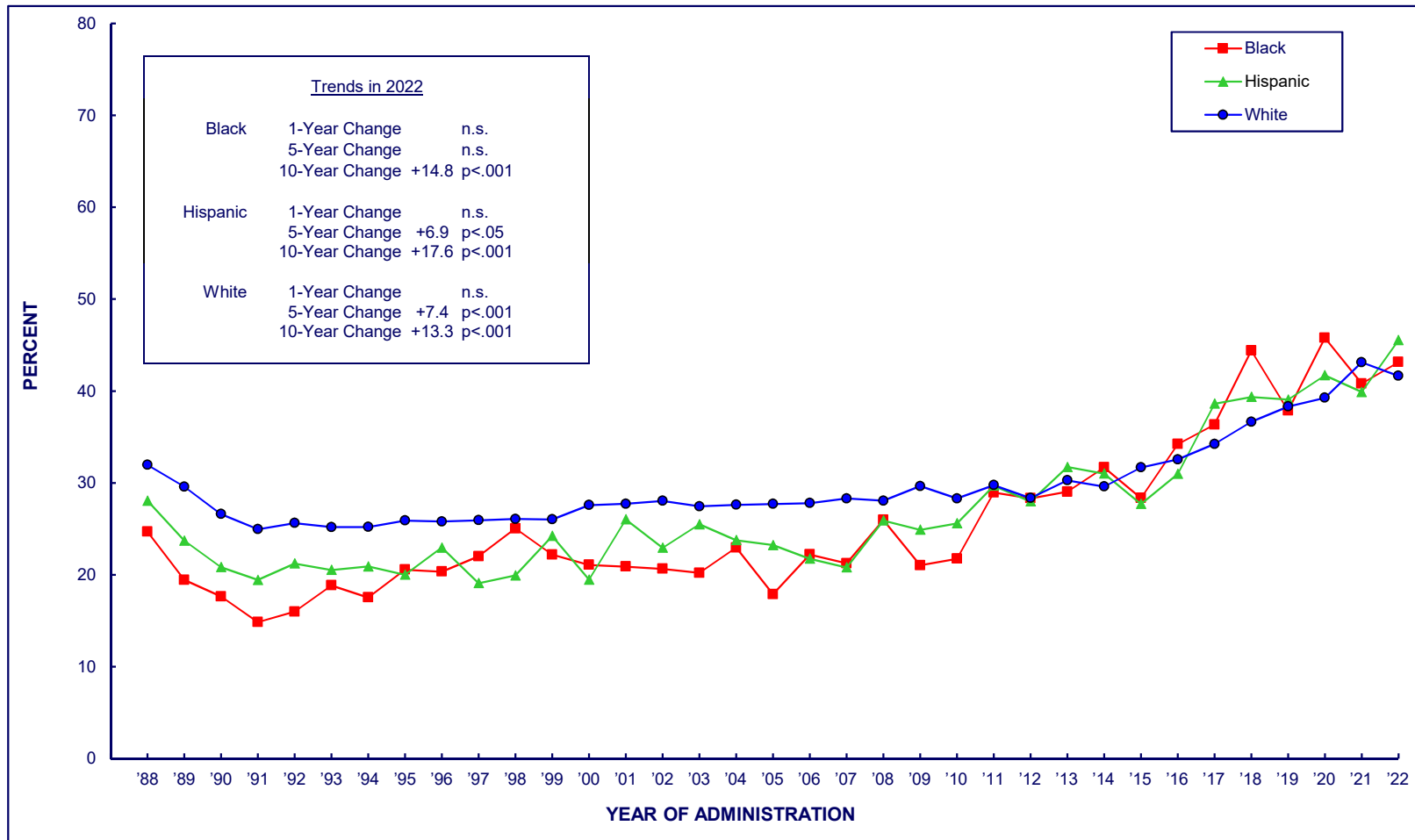
Men	1-Year Change	n.s.
	5-Year Change	+3.6 p<.01
	10-Year Change	+10.9 p<.001
Women	1-Year Change	n.s.
	5-Year Change	+12.4 p<.001
	10-Year Change	+19.6 p<.001

	1988	1989	1990	1991	1992	1993	1994	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	2020	2021	2022
Men	34.5	31.8	28.6	27.0	27.5	27.1	28.8	27.3	28.1	27.7	28.7	29.2	30.1	29.7	29.6	30.0	28.9	30.1	30.4	31.4	31.7	32.3	34.1	31.5	34.1	33.0	34.2	36.0	38.8	39.4	40.6	40.4	43.4	42.4	
Women	27.2	24.2	21.7	19.8	20.9	20.4	19.6	21.8	22.1	21.5	22.0	21.8	22.6	22.9	23.5	22.8	23.2	23.5	23.0	22.8	23.4	24.3	22.2	25.5	25.0	27.5	27.7	28.7	30.6	32.3	37.9	36.8	41.6	41.8	44.6

TABLE/FIGURE 95

**MARIJUANA**

**Trends in 12-Month Prevalence  
among Respondents of Modal Ages 19 through 30, by Race/Ethnicity**



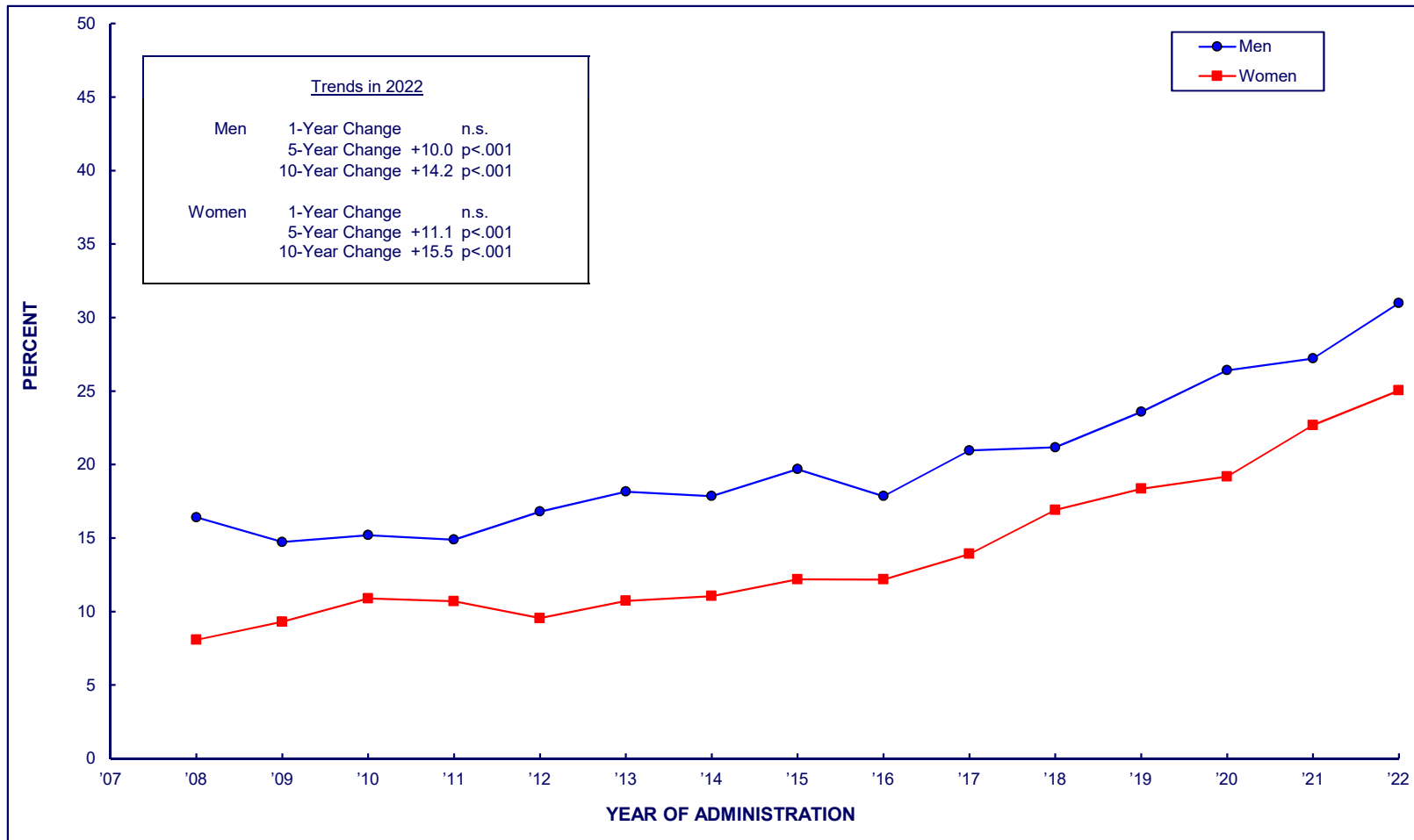
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
White	32.0	29.6	26.6	25.0	25.6	25.2	25.2	25.9	25.8	25.9	26.1	26.0	27.6	27.7	28.0	27.5	27.6	27.7	27.8	28.3	28.1	29.7	28.3	29.8	28.4	30.3	29.6	31.7	32.6	34.2	36.7	38.3	39.3	43.1	41.6
Black	24.7	19.4	17.6	14.8	16.0	18.8	17.5	20.6	20.3	22.0	25.0	22.2	21.1	20.9	20.6	20.2	23.0	17.9	22.2	21.2	26.0	21.0	21.7	29.0	28.3	29.0	31.7	28.4	34.2	36.3	44.4	37.9	45.8	40.8	43.1
Hispanic	28.1	23.7	20.8	19.4	21.2	20.5	20.9	20.0	23.0	19.1	19.9	24.2	19.5	26.0	22.9	25.5	23.8	23.2	21.8	20.8	25.9	24.9	25.6	29.7	28.0	31.7	31.0	27.7	31.0	38.6	39.4	39.1	41.7	39.9	45.5



TABLE/FIGURE 96

**MARIJUANA**

**Trends in 12-Month Prevalence  
among Respondents of Modal Ages 35 through 50, by Sex**

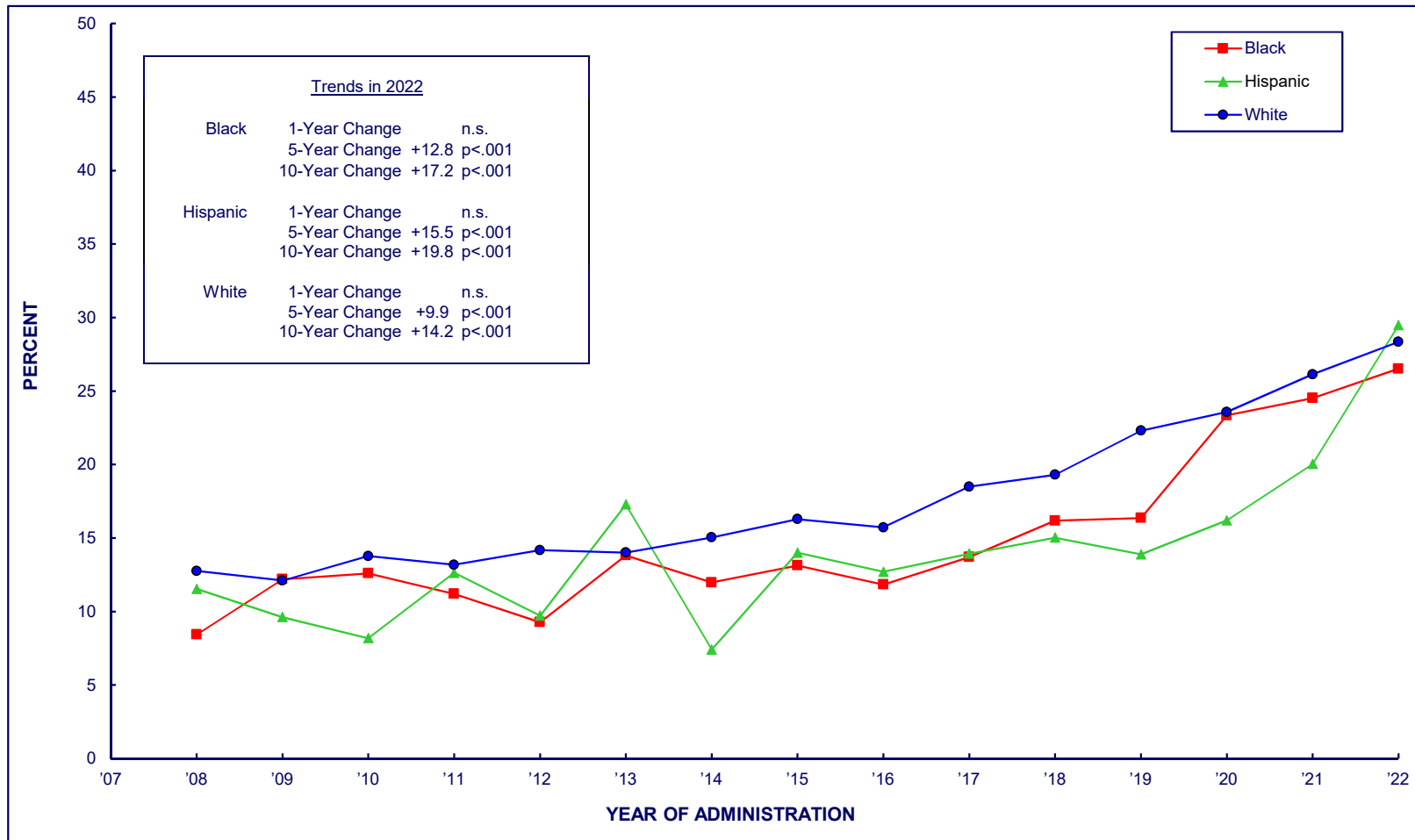


	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Men	16.4	14.7	15.2	14.9	16.8	18.2	17.9	19.7	17.9	21.0	21.2	23.6	26.4	27.2	31.0
Women	8.1	9.3	10.9	10.7	9.6	10.7	11.1	12.2	12.2	13.9	16.9	18.4	19.2	22.7	25.0

TABLE/FIGURE 97

**MARIJUANA**

**Trends in 12-Month Prevalence  
among Respondents of Modal Ages 35 through 50, by Race/Ethnicity**

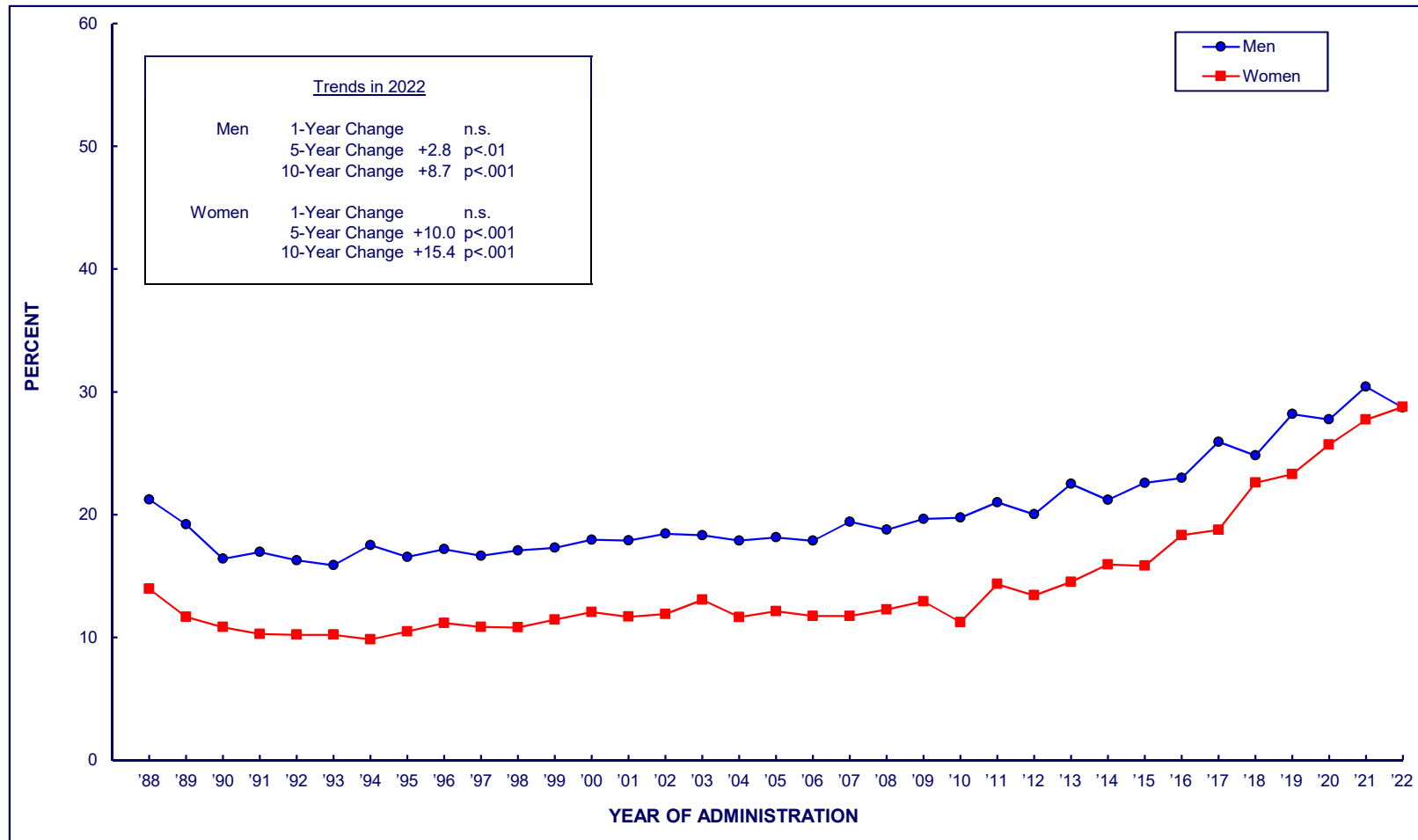


	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
White	12.8	12.1	13.8	13.2	14.2	14.0	15.0	16.3	15.7	18.5	19.3	22.3	23.6	26.1	28.3
Black	8.4	12.2	12.6	11.2	9.3	13.8	12.0	13.1	11.8	13.7	16.2	16.4	23.3	24.5	26.5
Hispanic	11.5	9.6	8.2	12.6	9.7	17.3	7.4	14.0	12.7	13.9	15.0	13.9	16.2	20.0	29.5

TABLE/FIGURE 98

**MARIJUANA**

**Trends in 30-Day Prevalence  
among Respondents of Modal Ages 19 through 30, by Sex**

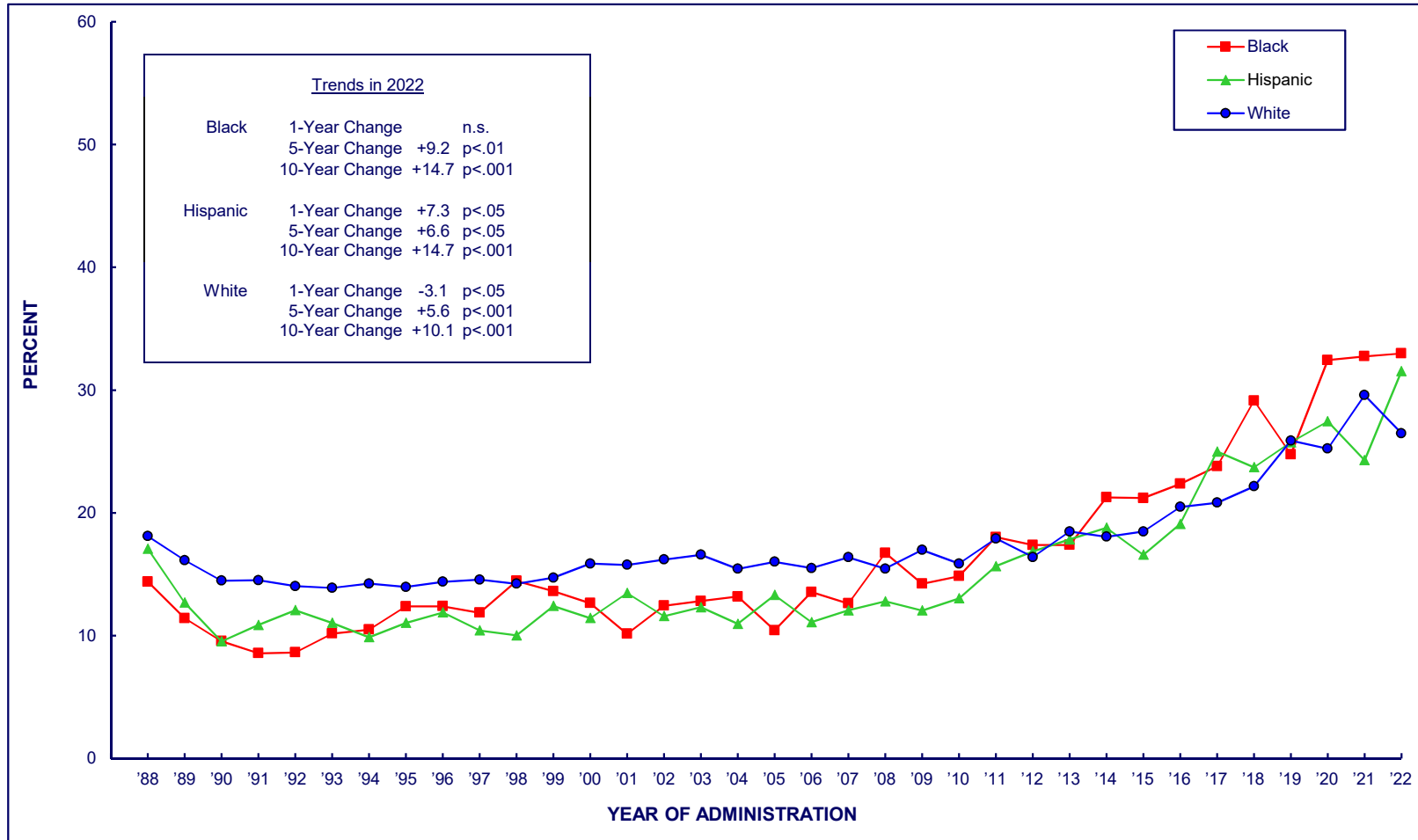


	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Men	21.2	19.2	16.4	17.0	16.3	15.9	17.5	16.6	17.2	16.6	17.1	17.3	18.0	17.9	18.4	18.3	17.9	18.1	17.9	19.4	18.8	19.6	19.8	21.0	20.0	22.5	21.2	22.6	23.0	25.9	24.8	28.2	27.8	30.4	28.7
Women	14.0	11.7	10.8	10.3	10.2	10.2	9.8	10.5	11.2	10.8	10.8	11.4	12.1	11.7	11.9	13.1	11.6	12.1	11.7	11.7	12.3	12.9	11.2	14.3	13.4	14.5	15.9	15.8	18.3	18.8	22.6	23.3	25.7	27.7	28.8

TABLE/FIGURE 99

**MARIJUANA**

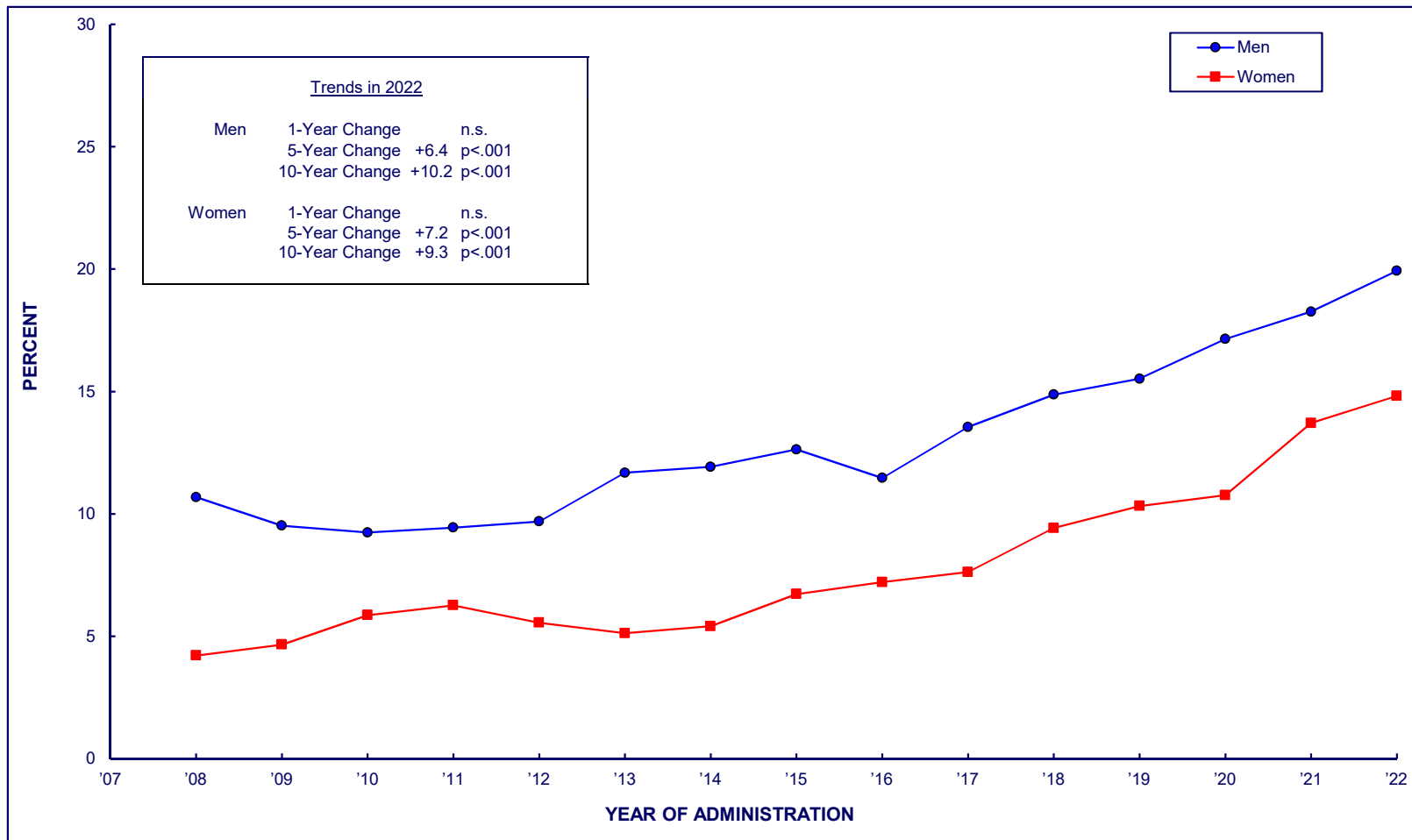
**Trends in 30-Day Prevalence  
among Respondents of Modal Ages 19 through 30, by Race/Ethnicity**



	1988	1989	1990	1991	1992	1993	1994	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	2020	2021	2022
White	18.1	16.1	14.5	14.5	14.0	13.9	14.2	14.0	14.4	14.6	14.2	14.7	15.9	15.8	16.2	16.6	15.4	16.0	15.5	16.4	15.5	17.0	15.9	17.9	16.4	18.5	18.1	18.5	20.5	20.8	22.2	25.9	25.2	29.6	26.5
Black	14.4	11.4	9.5	8.6	8.6	10.2	10.5	12.4	12.4	11.9	14.5	13.6	12.6	10.1	12.4	12.8	13.2	10.4	13.6	12.6	16.7	14.2	14.8	18.0	17.4	17.4	21.3	21.2	22.4	23.8	29.1	24.8	32.4	32.8	33.0
Hispanic	17.1	12.7	9.5	10.9	12.1	11.0	9.9	11.0	11.9	10.4	10.0	12.4	11.4	13.5	11.6	12.3	11.0	13.3	11.1	12.1	12.8	12.0	13.0	15.7	16.9	17.8	18.8	16.6	19.1	25.0	23.7	25.7	27.5	24.3	31.5

**MARIJUANA**

Trends in 30-Day Prevalence  
among Respondents of Modal Ages 35 through 50, by Sex

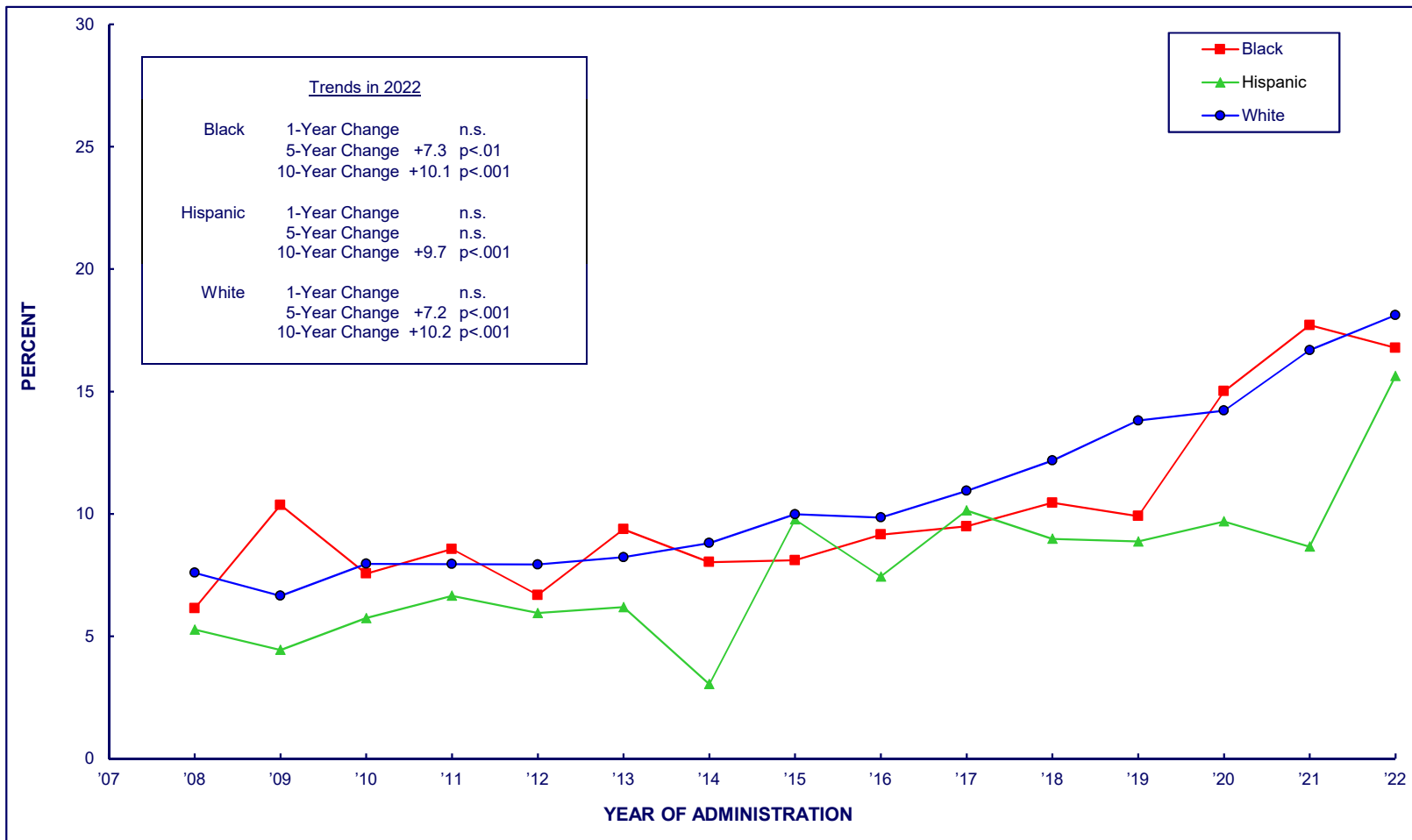


	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Men	10.7	9.5	9.2	9.4	9.7	11.7	11.9	12.6	11.5	13.6	14.9	15.5	17.1	18.3	19.9
Women	4.2	4.7	5.9	6.3	5.6	5.1	5.4	6.7	7.2	7.6	9.4	10.3	10.8	13.7	14.8

**TABLE/FIGURE 101**

**MARIJUANA**

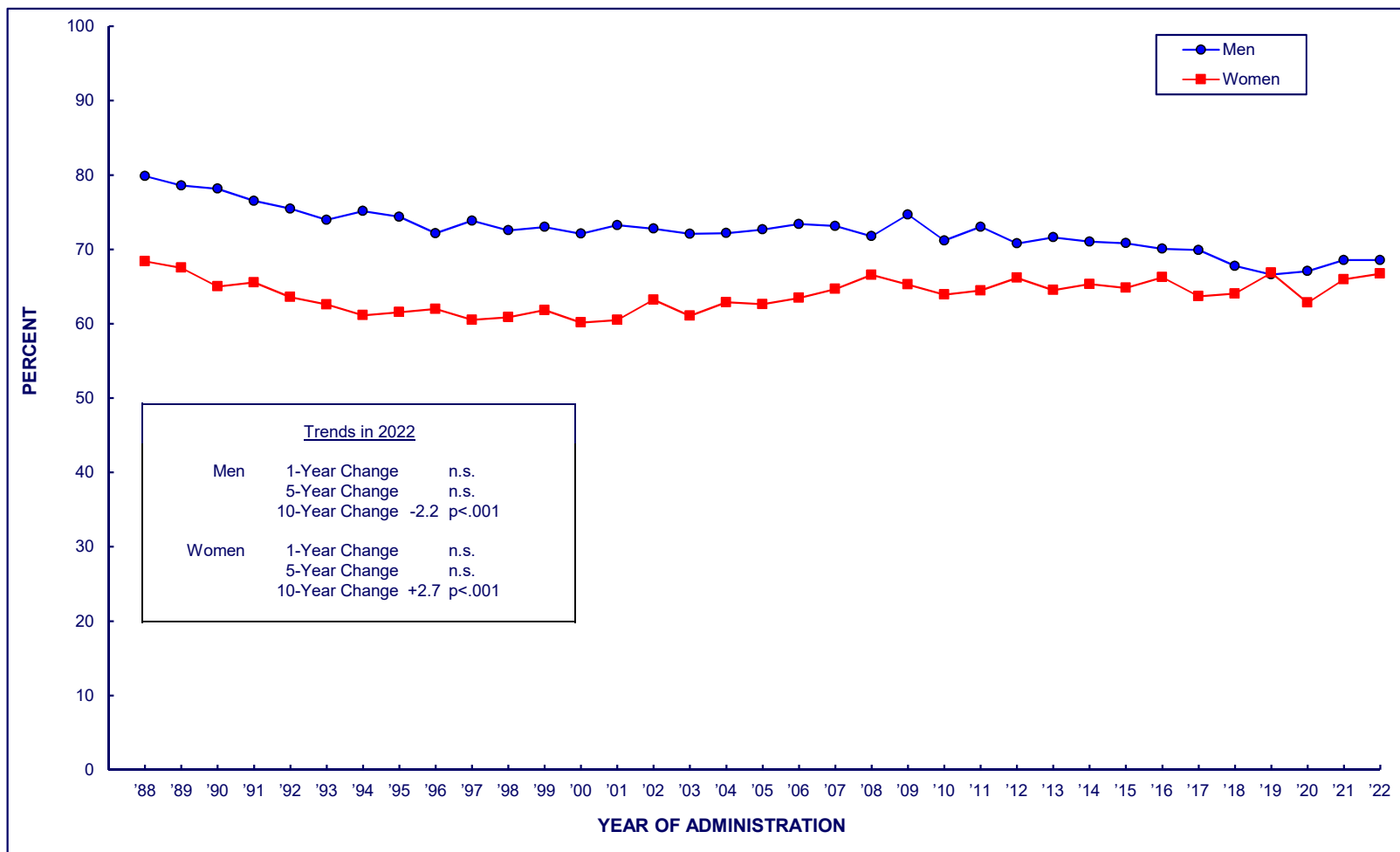
**Trends in 30-Day Prevalence  
among Respondents of Modal Ages 35 through 50, by Race/Ethnicity**



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
White	7.6	6.7	8.0	8.0	7.9	8.2	8.8	10.0	9.9	10.9	12.2	13.8	14.2	16.7	18.1
Black	6.1	10.4	7.6	8.6	6.7	9.4	8.0	8.1	9.2	9.5	10.5	9.9	15.0	17.7	16.8
Hispanic	5.3	4.4	5.7	6.7	6.0	6.2	3.0	9.8	7.4	10.1	9.0	8.9	9.7	8.7	15.6

**ALCOHOL**

Trends in 30-Day Prevalence  
among Respondents of Modal Ages 19 through 30, by Sex

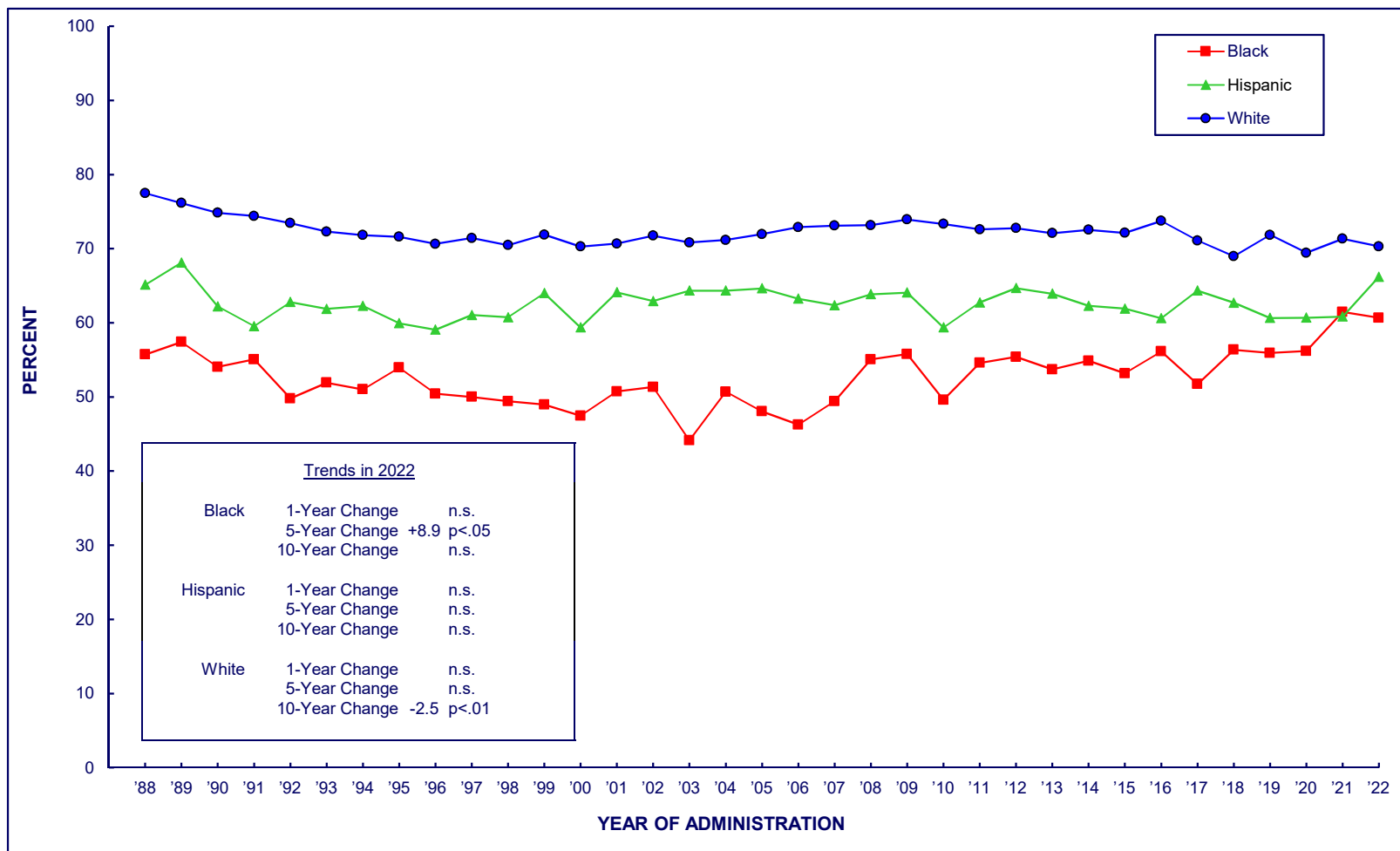


	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Men	79.8	78.6	78.2	76.5	75.5	74.0	75.1	74.4	72.2	73.9	72.6	73.0	72.1	73.2	72.8	72.1	72.2	72.7	73.4	73.1	71.8	74.7	71.2	73.0	70.8	71.6	71.0	70.8	70.1	69.9	67.8	66.6	67.1	68.6	68.6
Women	68.4	67.5	65.0	65.6	63.6	62.6	61.1	61.6	62.0	60.5	60.9	61.8	60.2	60.5	63.2	61.1	62.9	62.6	63.5	64.7	66.6	65.3	63.9	64.5	66.2	64.5	65.3	64.8	66.2	63.7	64.1	66.9	62.8	66.0	66.7

TABLE/FIGURE 103

ALCOHOL

Trends in 30-Day Prevalence  
among Respondents of Modal Ages 19 through 30, by Race/Ethnicity

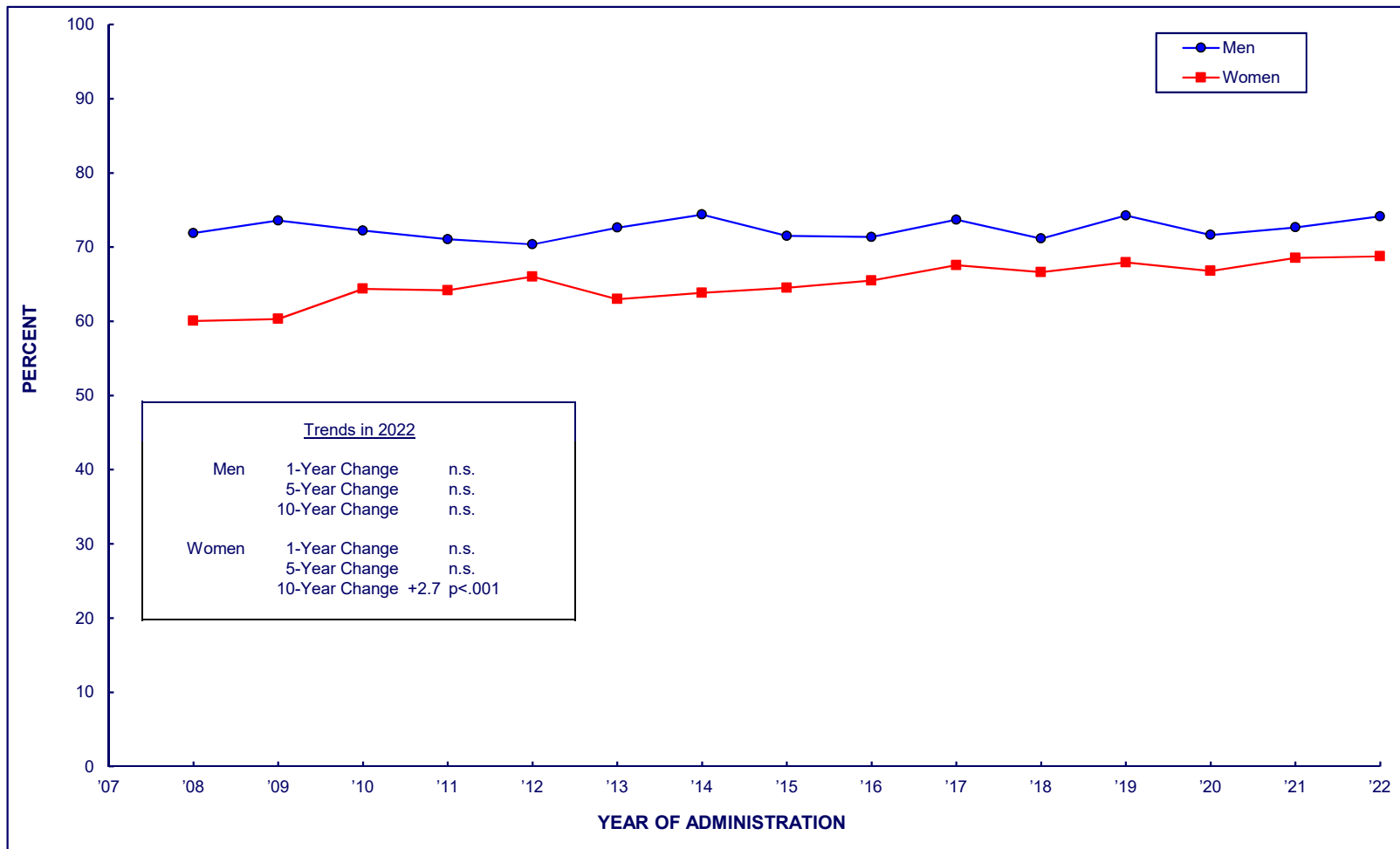


	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
White	77.5	76.2	74.8	74.4	73.4	72.3	71.8	71.6	70.7	71.4	70.5	71.9	70.3	70.7	71.8	70.8	71.2	72.0	72.9	73.1	73.2	73.9	73.3	72.6	72.8	72.1	72.5	72.1	73.7	71.1	69.0	71.8	69.4	71.3	70.3
Black	55.7	57.4	54.0	55.1	49.8	51.9	51.0	54.0	50.4	50.0	49.4	49.0	47.5	50.7	51.3	44.1	50.7	48.0	46.3	49.4	55.1	55.8	49.6	54.6	55.4	53.7	54.9	53.2	56.1	51.7	56.4	55.9	56.2	61.5	60.7
Hispanic	65.1	68.1	62.2	59.5	62.8	61.9	62.3	59.9	59.1	61.0	60.8	64.0	59.4	64.1	62.9	64.3	64.3	64.6	63.2	62.4	63.9	64.1	59.4	62.7	64.7	63.9	62.3	61.9	60.6	64.3	62.7	60.7	60.7	60.8	66.2



**ALCOHOL**

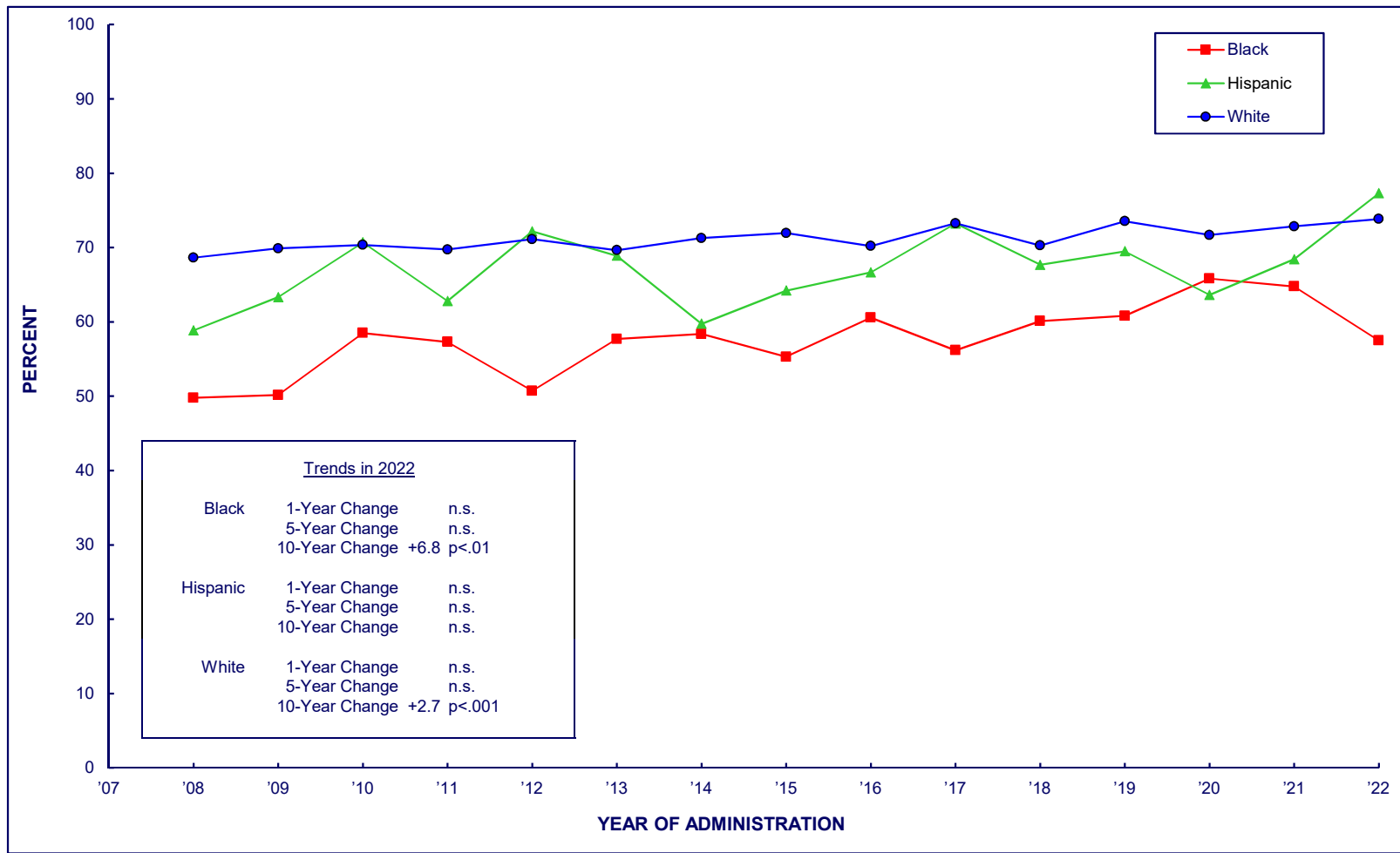
Trends in 30-Day Prevalence  
among Respondents of Modal Ages 35 through 50, by Sex



	<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>2020</u>	<u>2021</u>	<u>2022</u>
Men	71.9	73.6	72.2	71.1	70.4	72.6	74.4	71.5	71.4	73.7	71.2	74.3	71.6	72.7	74.1
Women	60.0	60.3	64.4	64.2	66.0	63.0	63.8	64.5	65.5	67.6	66.6	67.9	66.8	68.5	68.7

**ALCOHOL**

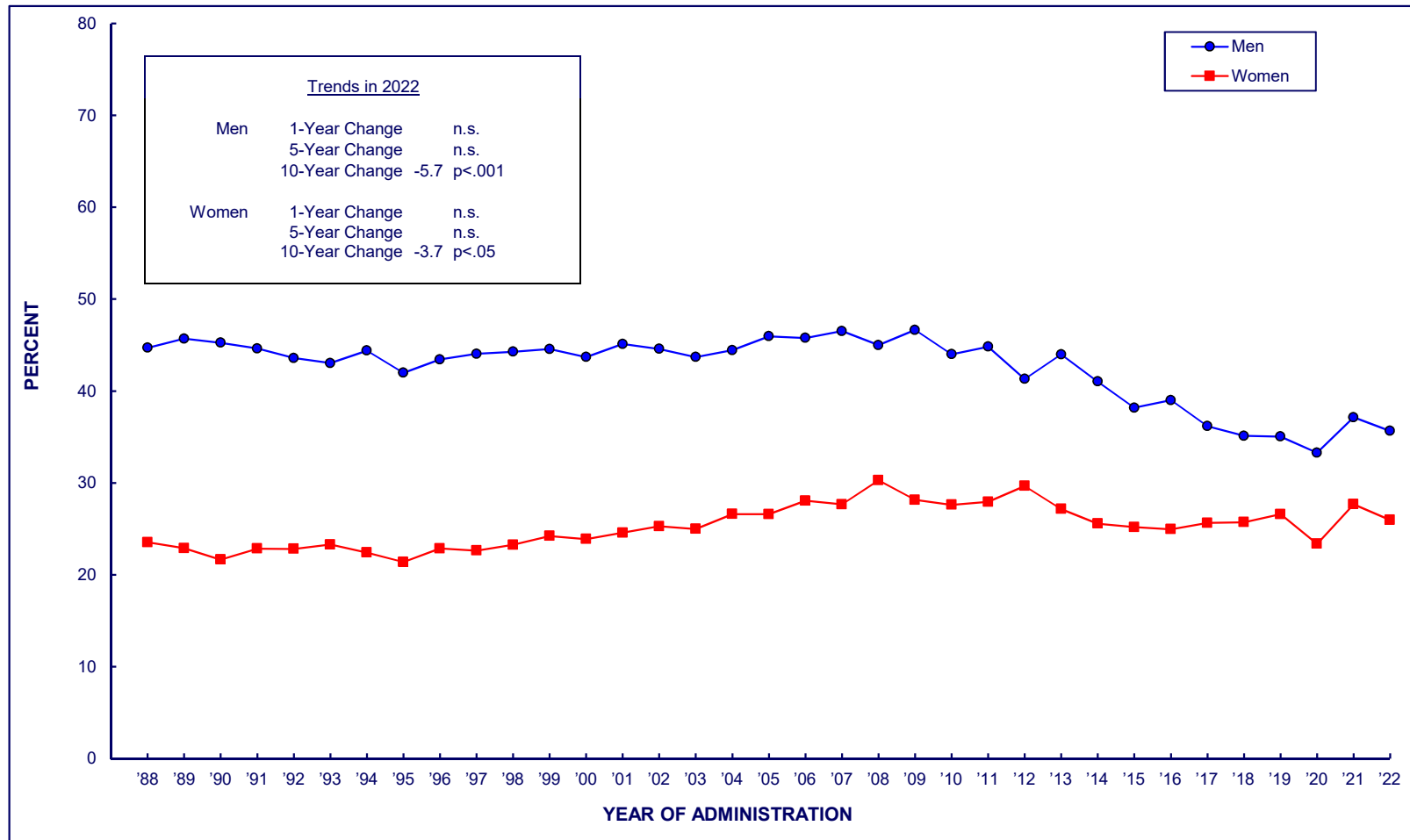
**Trends in 30-Day Prevalence  
among Respondents of Modal Ages 35 through 50, by Race/Ethnicity**



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
White	68.6	69.9	70.4	69.7	71.1	69.6	71.3	71.9	70.2	73.3	70.3	73.5	71.7	72.8	73.8
Black	49.8	50.2	58.5	57.3	50.7	57.7	58.4	55.3	60.6	56.2	60.1	60.8	65.8	64.8	57.5
Hispanic	58.9	63.3	70.7	62.8	72.2	68.9	59.7	64.2	66.7	73.2	67.7	69.5	63.6	68.4	77.3

ALCOHOL

Trends in 2-Week Prevalence of Binge Drinking (5+ Drinks in a Row) among Respondents of Modal Ages 19 through 30, by Sex

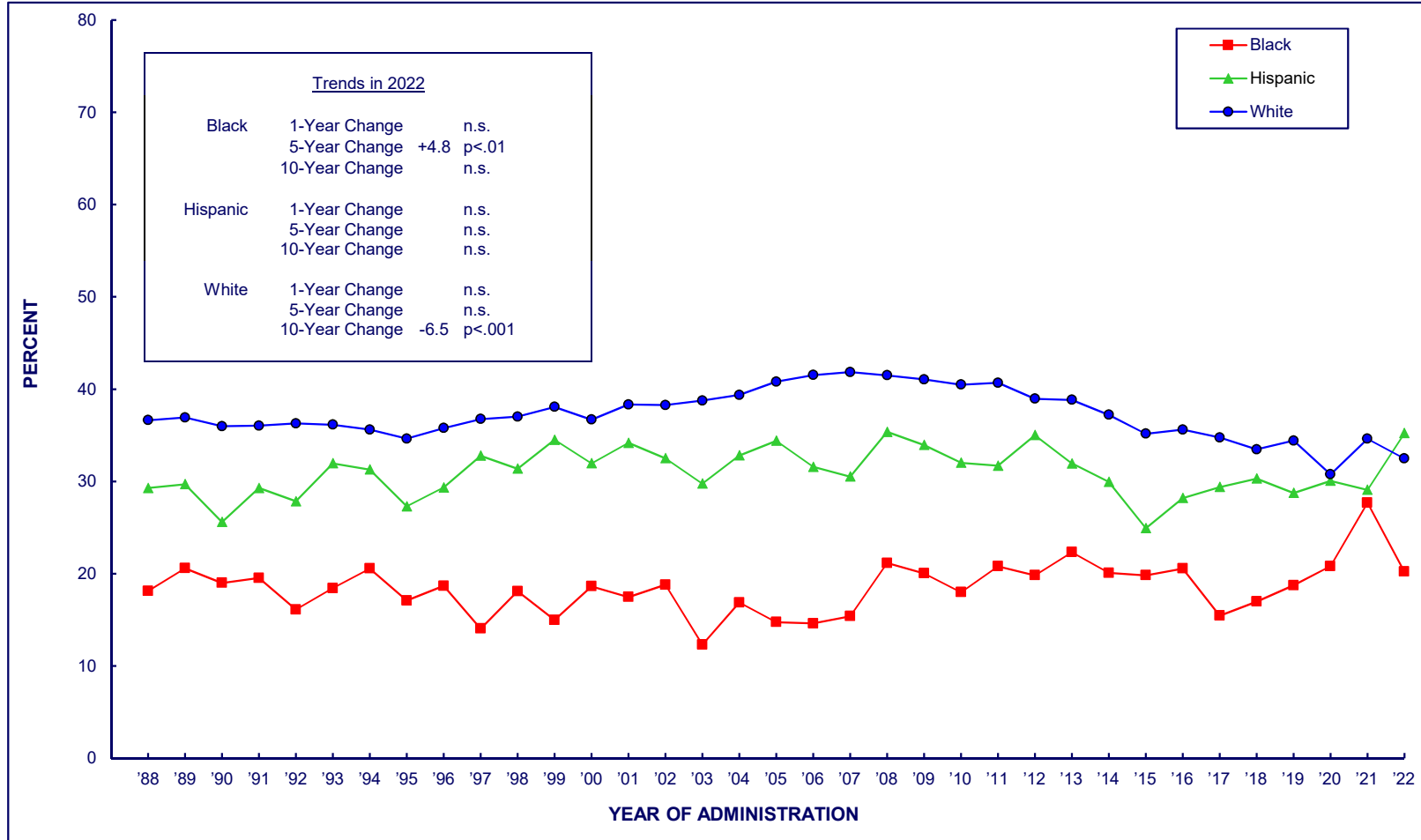


	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Men	44.7	45.7	45.3	44.6	43.6	43.0	44.4	42.0	43.4	44.0	44.3	44.6	43.7	45.1	44.6	43.7	44.5	46.0	45.8	46.5	45.0	46.7	44.0	44.8	41.3	44.0	41.0	38.2	39.0	36.2	35.1	35.1	33.3	37.1	35.7
Women	23.5	22.9	21.7	22.9	22.8	23.3	22.4	21.4	22.9	22.6	23.3	24.2	23.9	24.6	25.3	25.0	26.6	26.6	28.1	27.7	30.3	28.2	27.6	27.9	29.7	27.2	25.6	25.2	25.0	25.6	25.7	26.6	23.4	27.7	26.0

TABLE/FIGURE 107

ALCOHOL

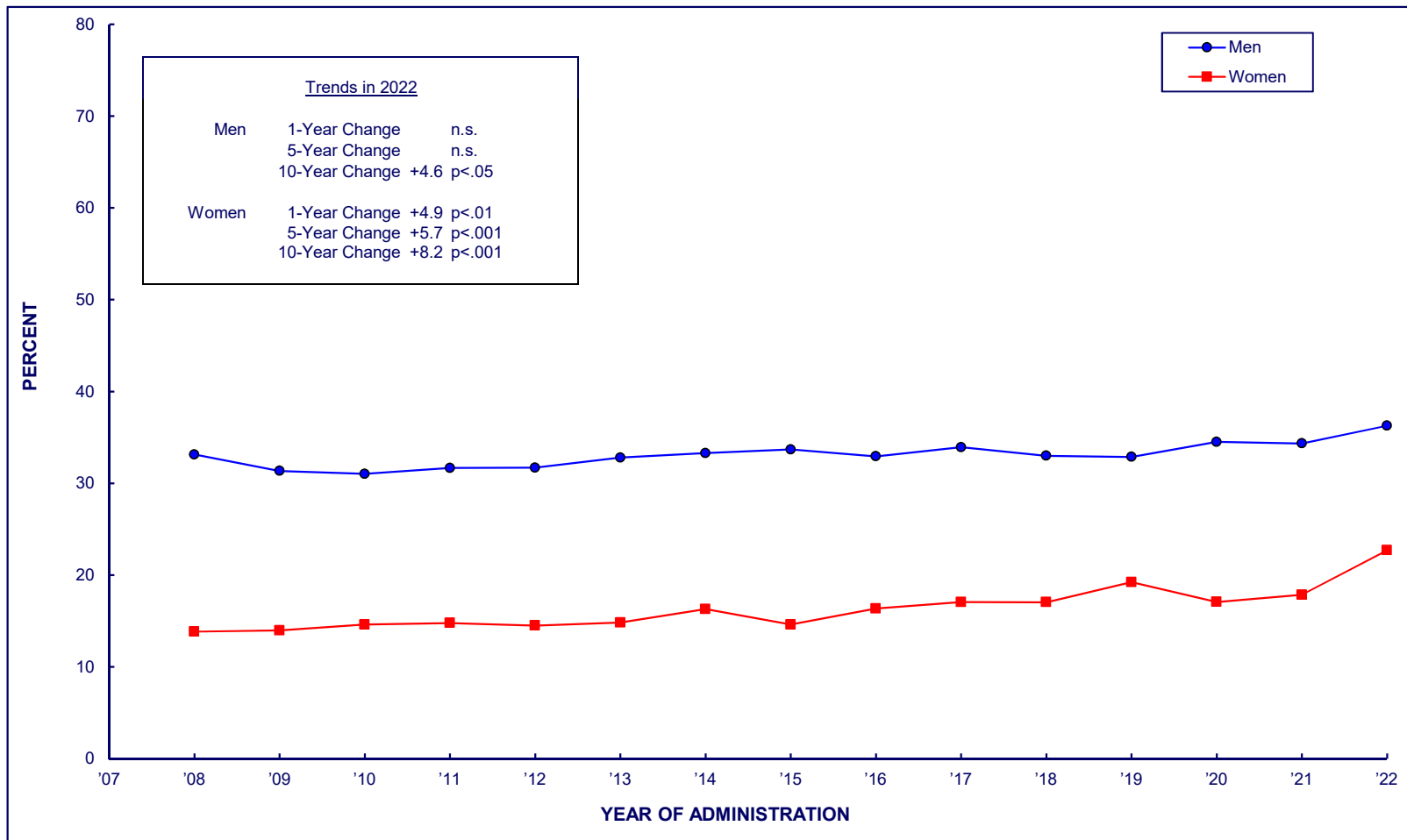
Trends in 2-Week Prevalence of Binge Drinking (5+ Drinks in a Row) among Respondents of Modal Ages 19 through 30, by Race/Ethnicity



	1988	1989	1990	1991	1992	1993	1994	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	2020	2021	2022
White	36.6	36.9	36.0	36.0	36.3	36.2	35.6	34.6	35.8	36.8	37.0	38.1	36.7	38.3	38.3	38.8	39.4	40.8	41.5	41.9	41.5	41.1	40.5	40.7	39.0	38.8	37.2	35.2	35.6	34.8	33.5	34.4	30.8	34.6	32.5
Black	18.1	20.6	19.0	19.5	16.1	18.4	20.6	17.1	18.7	14.0	18.1	15.0	18.6	17.5	18.8	12.3	16.9	14.7	14.6	15.4	21.2	20.0	18.0	20.8	19.8	22.3	20.1	19.8	20.6	15.5	17.0	18.7	20.8	27.7	20.2
Hispanic	29.3	29.7	25.6	29.3	27.9	32.0	31.3	27.3	29.3	32.8	31.4	34.5	32.0	34.2	32.5	29.8	32.8	34.4	31.6	30.5	35.4	33.9	32.0	31.7	35.0	31.9	29.9	24.9	28.2	29.4	30.3	28.8	30.1	29.1	35.2

**ALCOHOL**

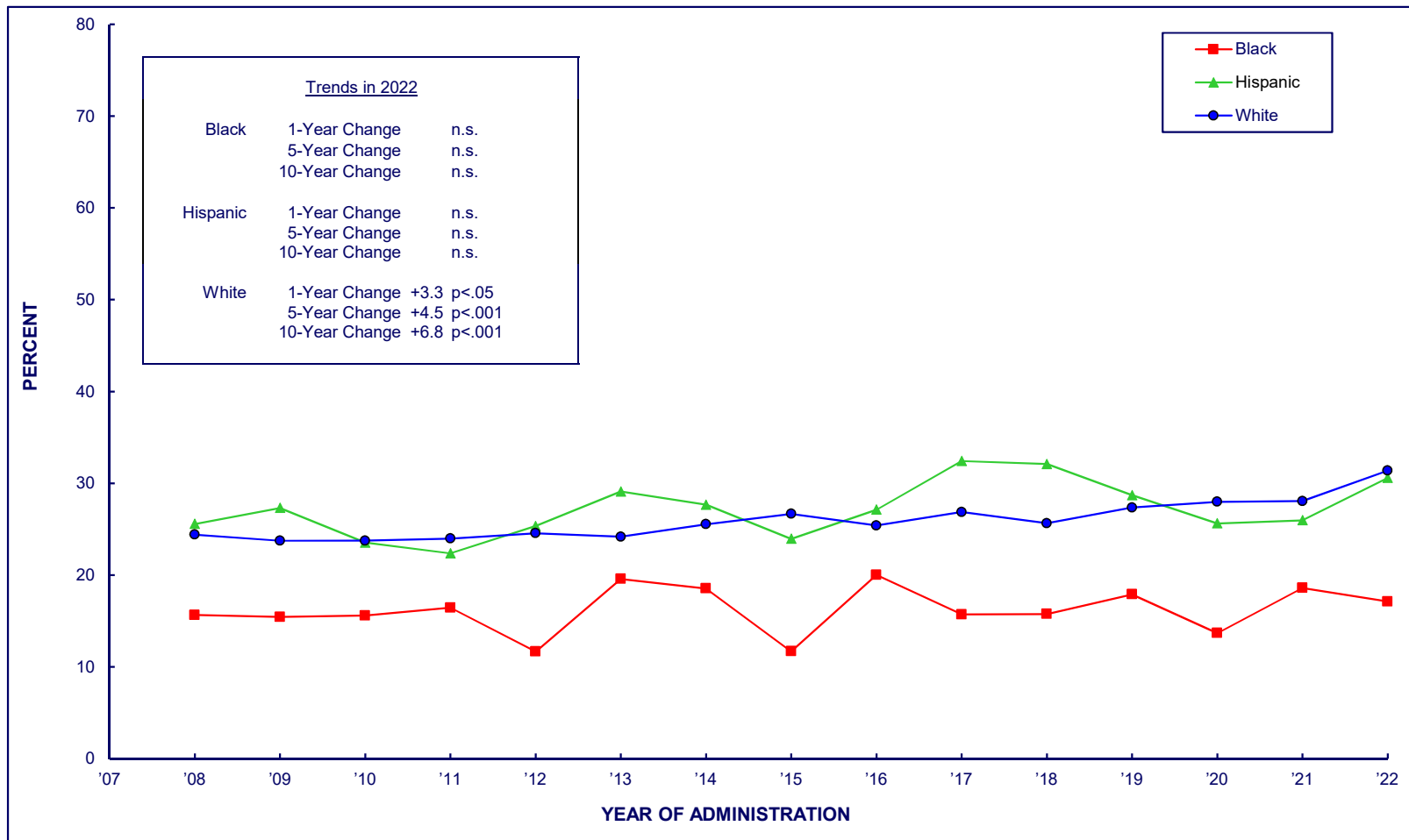
**Trends in 2-Week Prevalence of Binge Drinking (5+ Drinks in a Row) among Respondents of Modal Ages 35 through 50, by Sex**



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Men	33.1	31.3	31.0	31.7	31.7	32.8	33.3	33.7	32.9	33.9	33.0	32.9	34.6	34.3	36.3
Women	13.8	14.0	14.6	14.8	14.5	14.8	16.3	14.6	16.4	17.1	17.0	19.2	17.1	17.8	22.7

**ALCOHOL**

**Trends in 2-Week Prevalence of Binge Drinking (5+ Drinks in a Row) among Respondents of Modal Ages 35 through 50, by Race/Ethnicity**

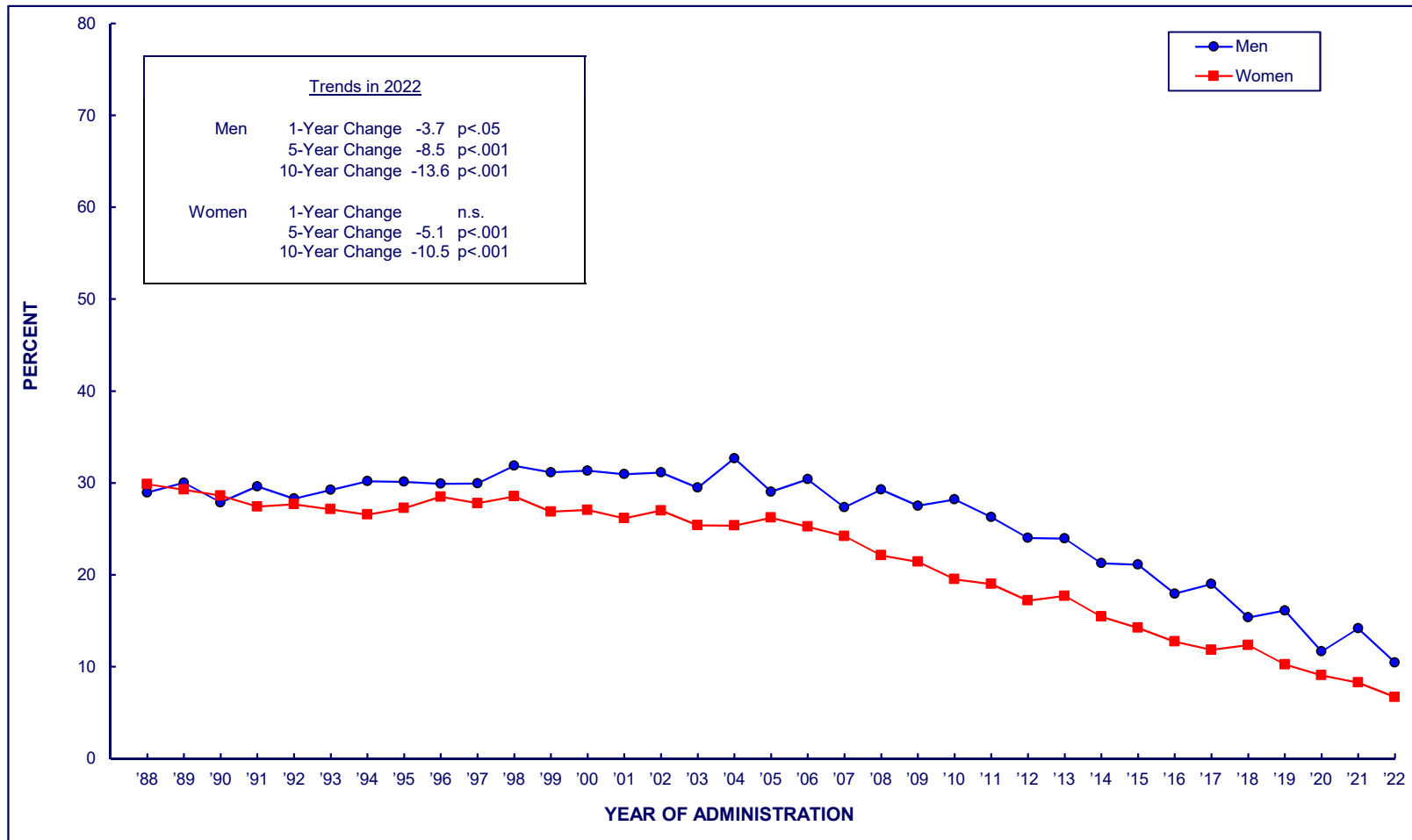


	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
White	24.4	23.7	23.8	24.0	24.6	24.2	25.5	26.7	25.4	26.9	25.6	27.4	28.0	28.1	31.4
Black	15.6	15.4	15.6	16.4	11.7	19.6	18.5	11.7	20.0	15.7	15.8	17.9	13.7	18.6	17.1
Hispanic	25.6	27.3	23.5	22.4	25.3	29.1	27.7	24.0	27.1	32.4	32.1	28.7	25.9	26.0	30.6

TABLE/FIGURE 110

**CIGARETTES**

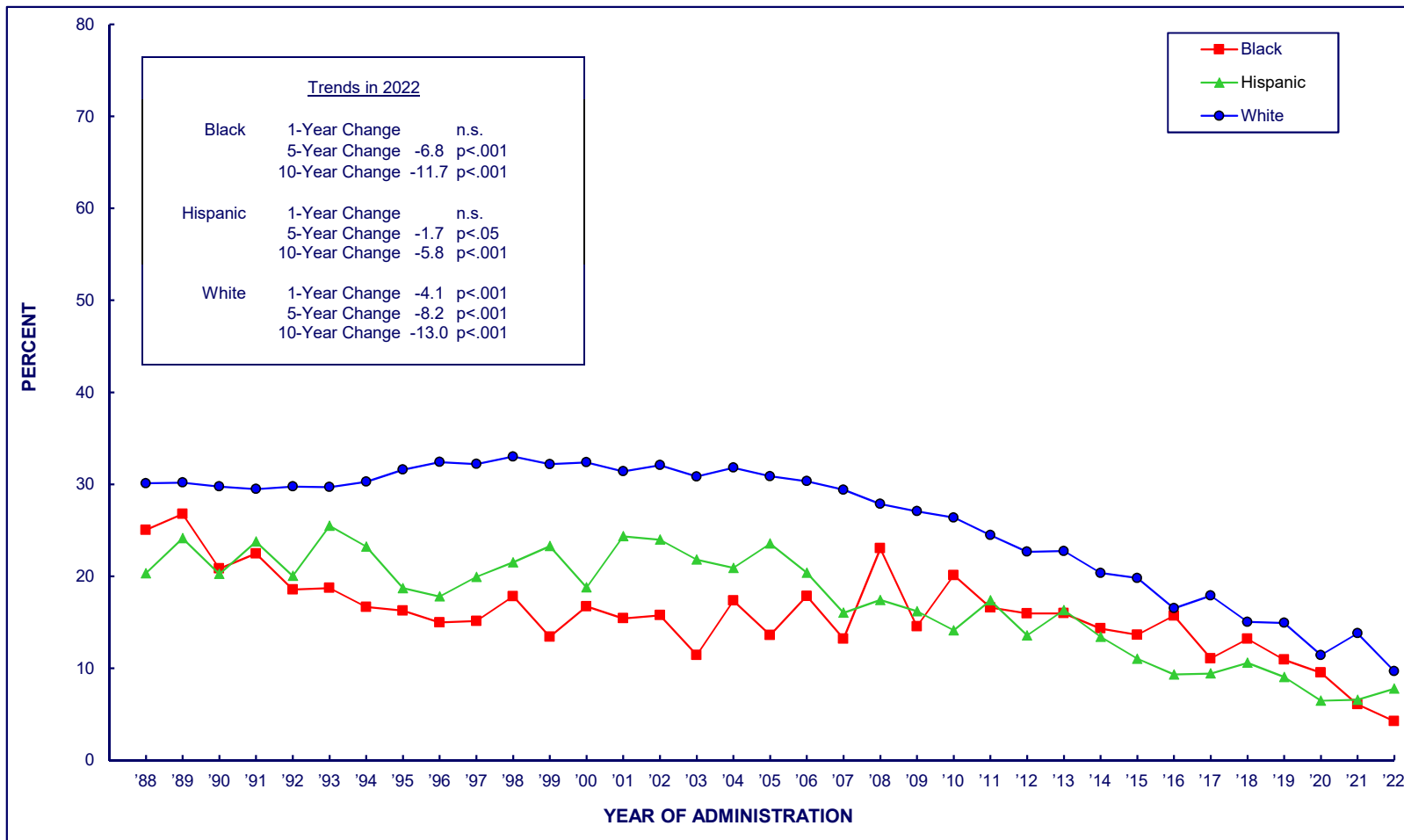
Trends in 30-Day Prevalence  
among Respondents of Modal Ages 19 through 30, by Sex



	1988	1989	1990	1991	1992	1993	1994	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	2020	2021	2022
Men	28.9	30.0	27.9	29.6	28.3	29.2	30.2	30.1	29.9	29.9	31.9	31.1	31.3	31.0	31.1	29.5	32.7	29.0	30.4	27.3	29.3	27.5	28.2	26.3	24.0	23.9	21.3	21.1	17.9	19.0	15.4	16.1	11.7	14.2	10.4
Women	29.9	29.3	28.6	27.4	27.7	27.1	26.6	27.2	28.5	27.8	28.5	26.9	27.1	26.1	27.0	25.4	25.4	26.2	25.2	24.2	22.1	21.4	19.5	19.0	17.2	17.7	15.5	14.2	12.7	11.8	12.3	10.2	9.1	8.3	6.7

**CIGARETTES**

Trends in 30-Day Prevalence  
among Respondents of Modal Ages 19 through 30, by Race/Ethnicity

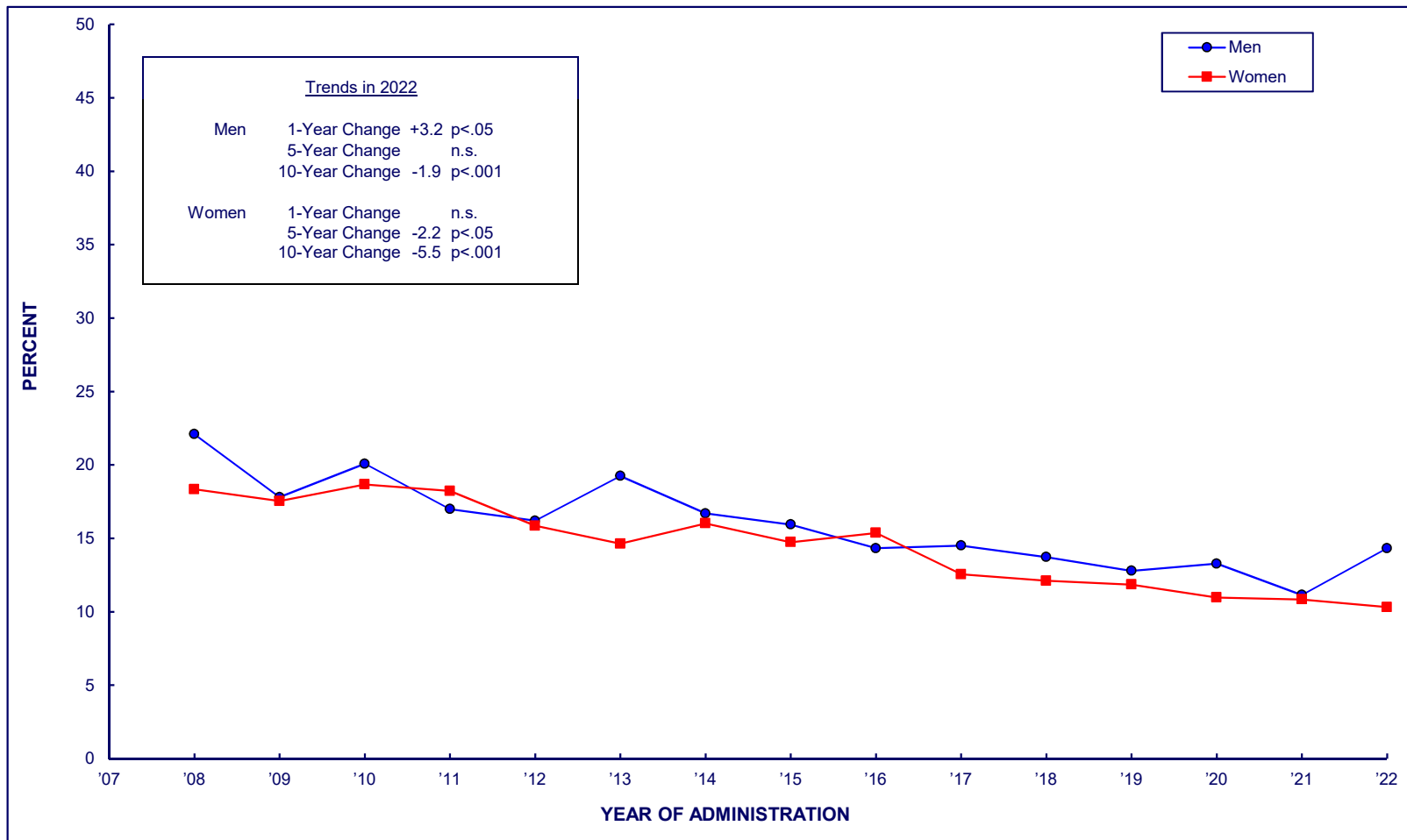


	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
White	30.1	30.2	29.8	29.5	29.8	29.7	30.3	31.6	32.4	32.2	33.0	32.2	32.4	31.4	32.1	30.8	31.8	30.9	30.3	29.4	27.9	27.1	26.4	24.5	22.7	22.7	20.4	19.8	16.5	17.9	15.0	14.9	11.4	13.8	9.7
Black	25.0	26.8	20.8	22.5	18.6	18.7	16.7	16.3	15.0	15.1	17.8	13.4	16.7	15.4	15.8	11.4	17.3	13.6	17.9	13.2	23.0	14.5	20.1	16.6	16.0	16.0	14.3	13.6	15.7	11.1	13.2	10.9	9.5	6.1	4.2
Hispanic	20.3	24.1	20.3	23.8	20.0	25.5	23.2	18.7	17.8	19.9	21.5	23.3	18.8	24.4	24.0	21.8	20.9	23.6	20.4	16.0	17.4	16.2	14.1	17.4	13.6	16.3	13.4	11.0	9.3	9.4	10.6	9.1	6.5	6.6	7.8



**CIGARETTES**

Trends in 30-Day Prevalence  
among Respondents of Modal Ages 35 through 50, by Sex

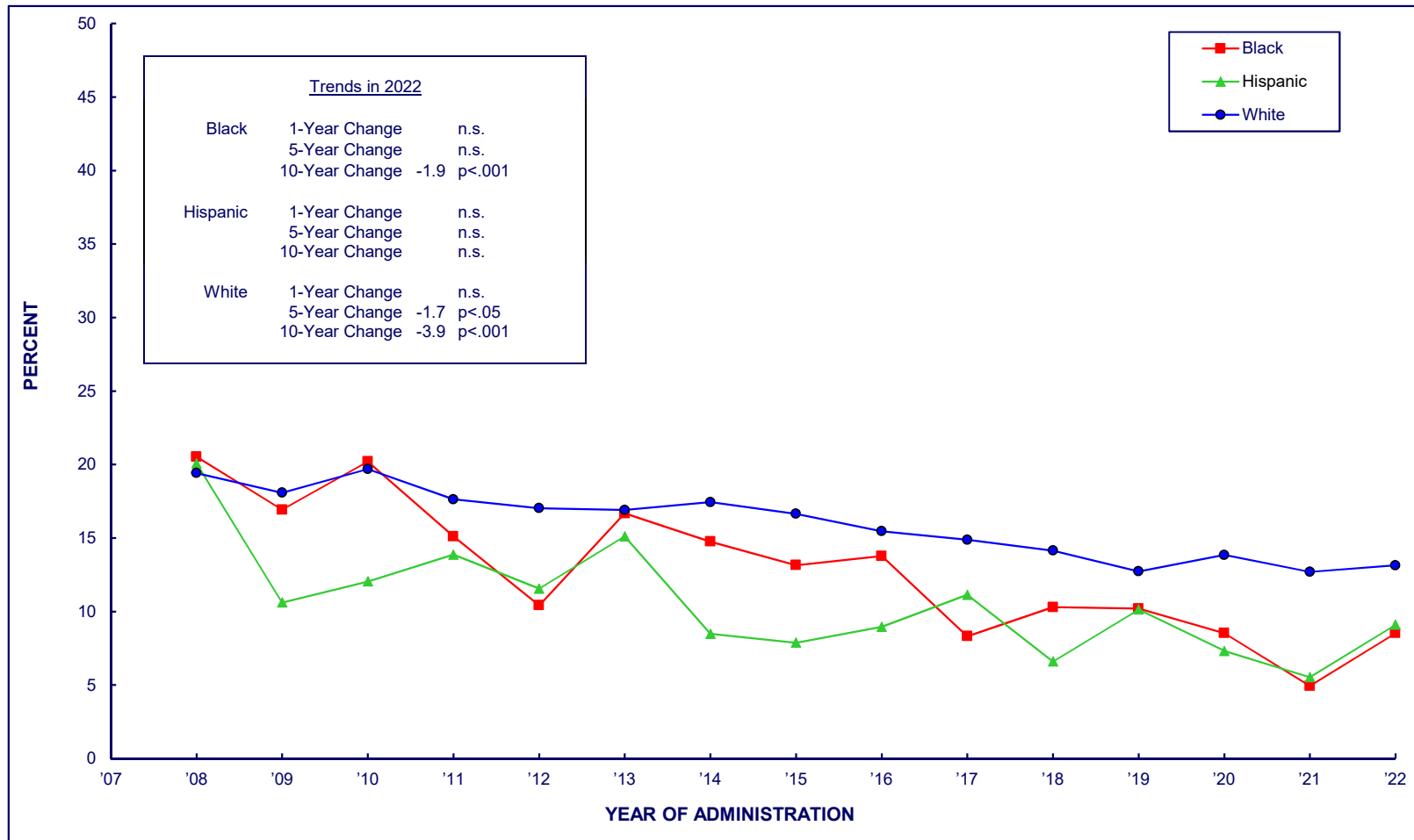


	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Men	22.1	17.8	20.1	17.0	16.2	19.3	16.7	15.9	14.3	14.5	13.7	12.8	13.3	11.1	14.3
Women	18.3	17.5	18.7	18.2	15.9	14.6	16.0	14.7	15.4	12.6	12.1	11.9	11.0	10.8	10.3

TABLE/FIGURE 113

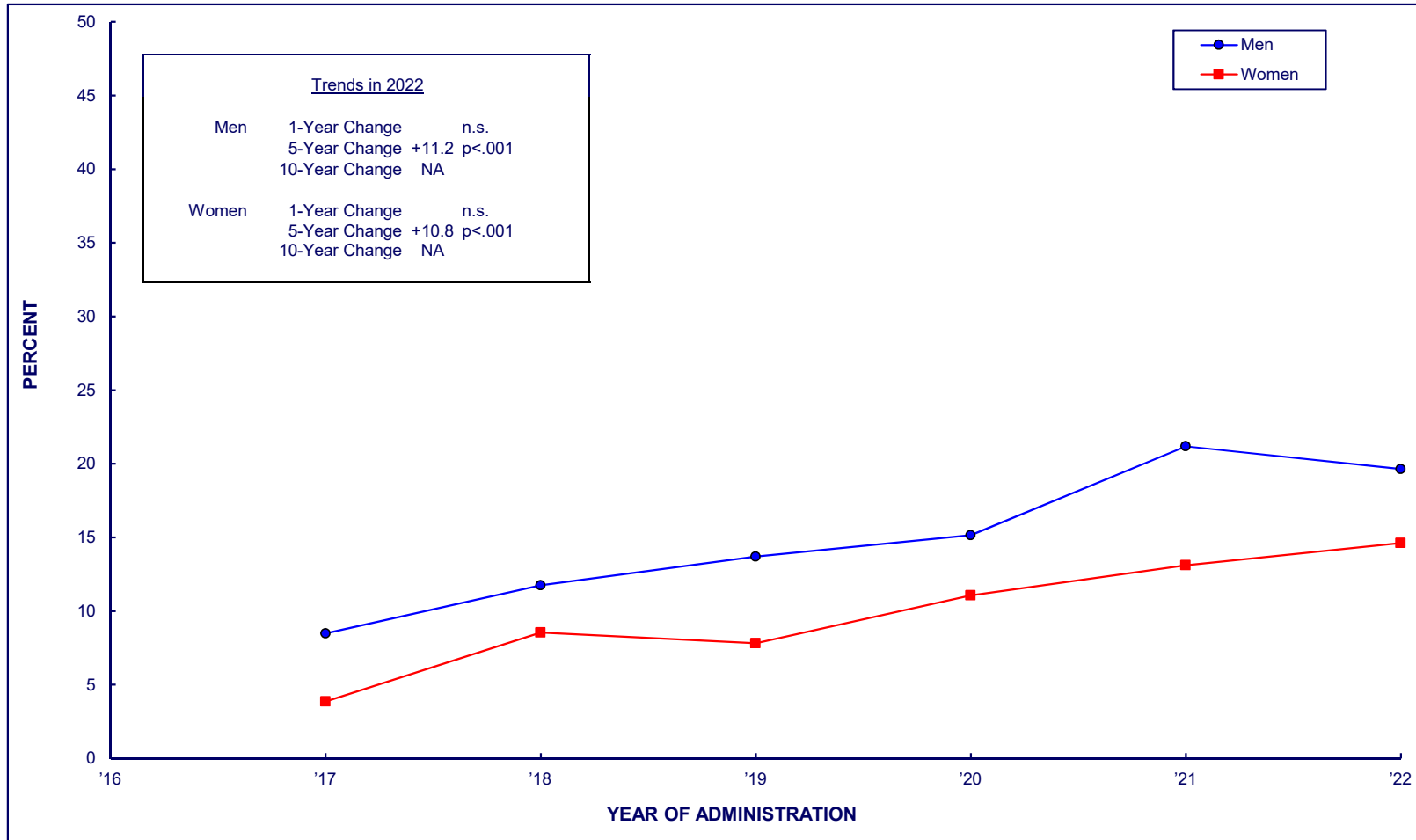
**CIGARETTES**

Trends in 30-Day Prevalence  
among Respondents of Modal Ages 35 through 50, by Race/Ethnicity



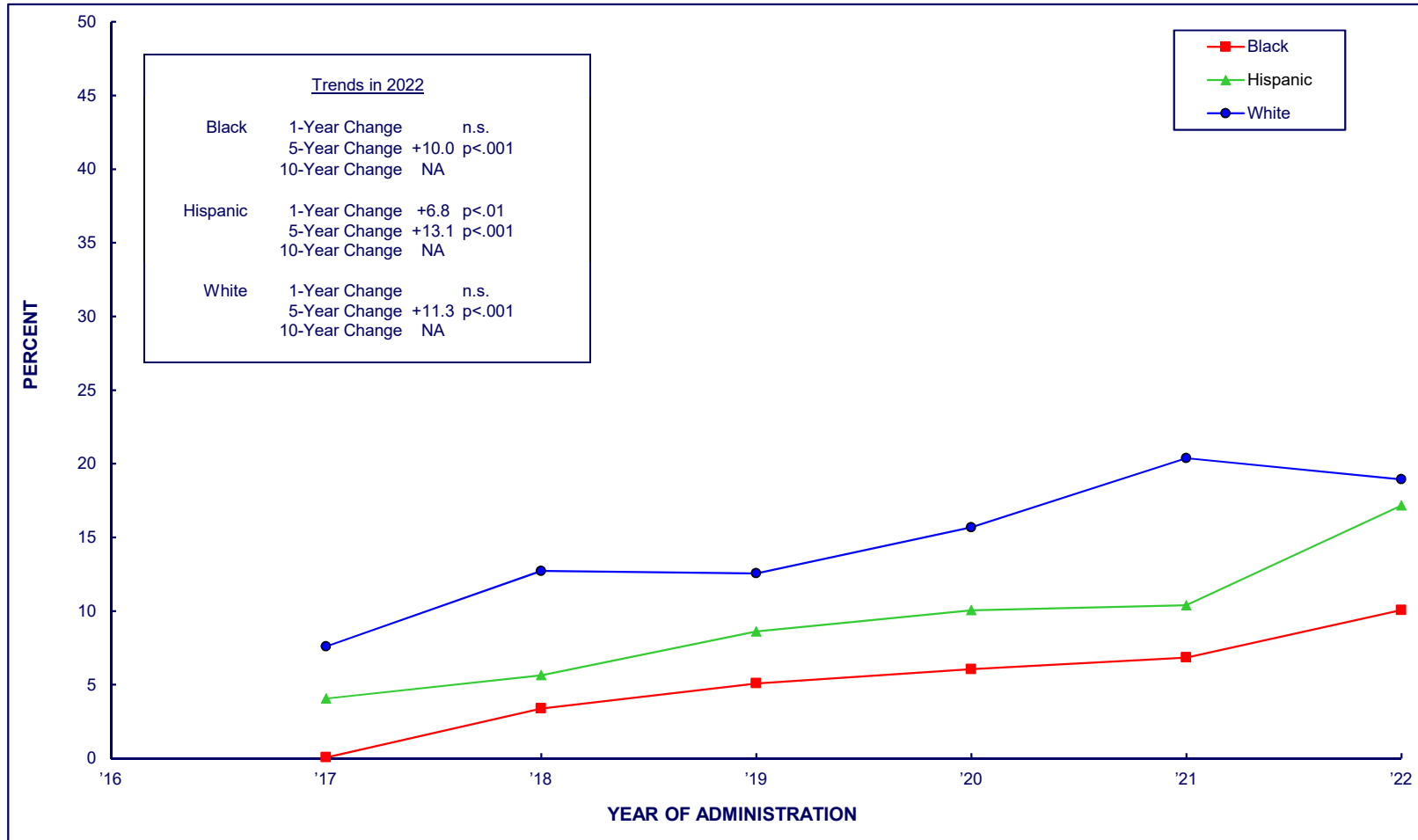
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
White	19.4	18.1	19.7	17.6	17.0	16.9	17.4	16.7	15.5	14.9	14.1	12.7	13.9	12.7	13.1
Black	20.5	16.9	20.2	15.1	10.4	16.7	14.8	13.2	13.8	8.3	10.3	10.2	8.5	4.9	8.5
Hispanic	20.1	10.6	12.0	13.9	11.6	15.1	8.5	7.9	9.0	11.1	6.6	10.1	7.3	5.5	9.1

**TABLE/FIGURE 114**  
**VAPING NICOTINE**  
**Trends in 30-Day Prevalence**  
**among Respondents of Modal Ages 19 through 30, by Sex**



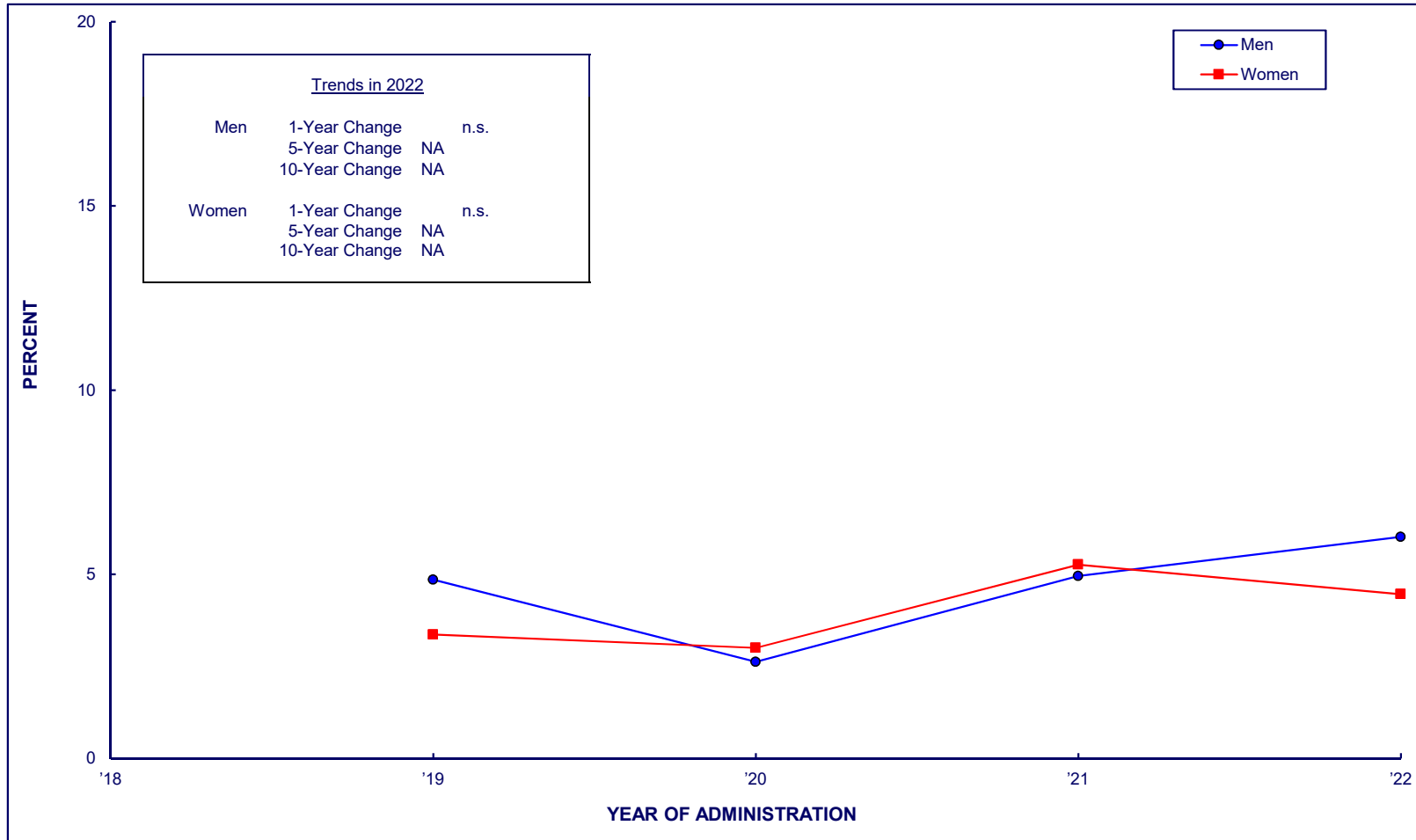
	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
Men	8.5	11.8	13.7	15.2	21.2	19.6
Women	3.9	8.5	7.8	11.1	13.1	14.6

**TABLE/FIGURE 115**  
**VAPING NICOTINE**  
**Trends in 30-Day Prevalence**  
**among Respondents of Modal Ages 19 through 30, by Race/Ethnicity**



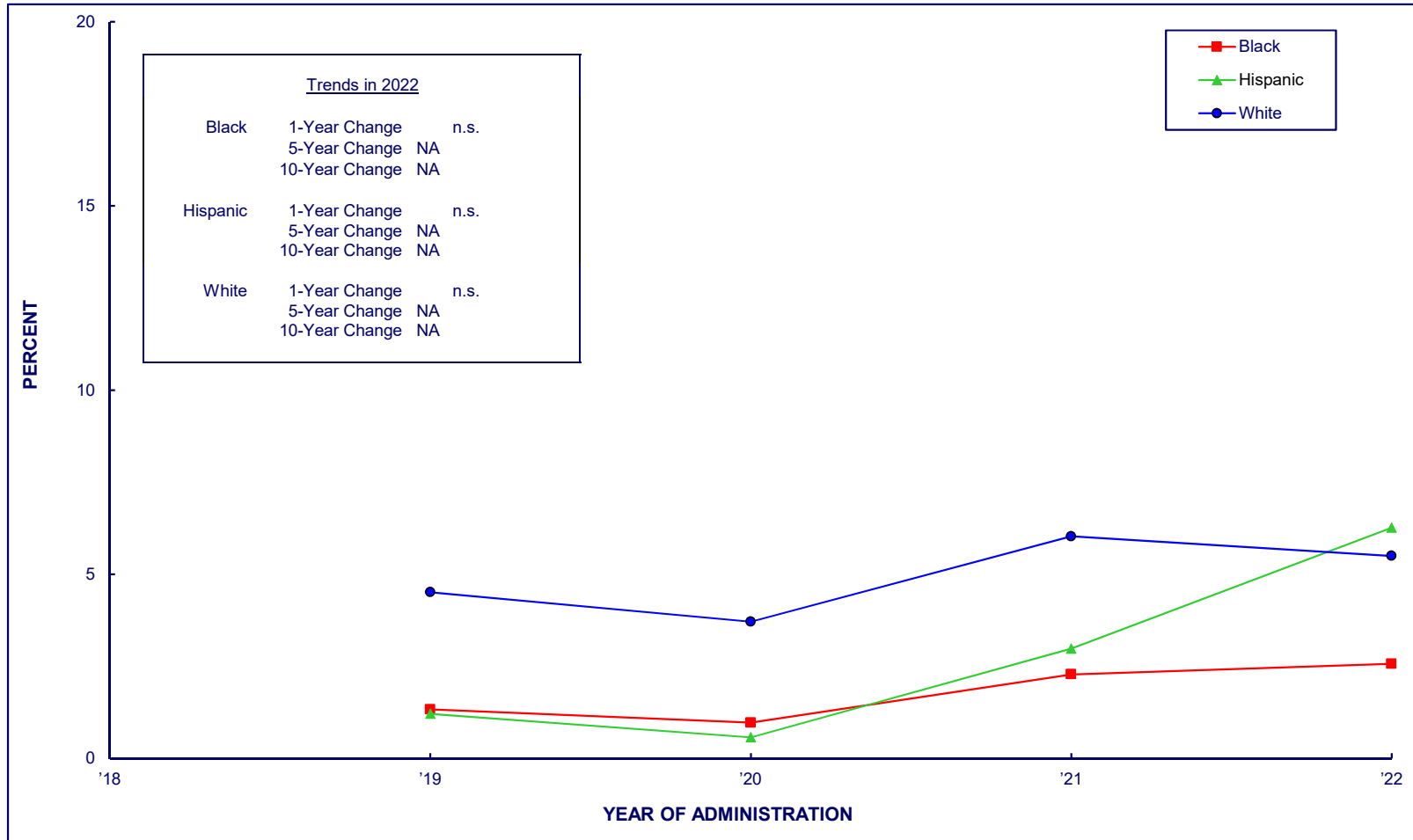
	2017	2018	2019	2020	2021	2022
White	7.6	12.7	12.6	15.7	20.4	18.9
Black	0.1	3.4	5.1	6.1	6.9	10.1
Hispanic	4.1	5.6	8.6	10.1	10.4	17.2

**TABLE/FIGURE 116**  
**VAPING NICOTINE**  
**Trends in 30-Day Prevalence**  
**among Respondents of Modal Ages 35 through 50, by Sex**



	2019	2020	2021	2022
Men	4.9	2.6	5.0	6.0
Women	3.4	3.0	5.3	4.5

**TABLE/FIGURE 117**  
**VAPING NICOTINE**  
**Trends in 30-Day Prevalence**  
**among Respondents of Modal Ages 35 through 50, by Race/Ethnicity**

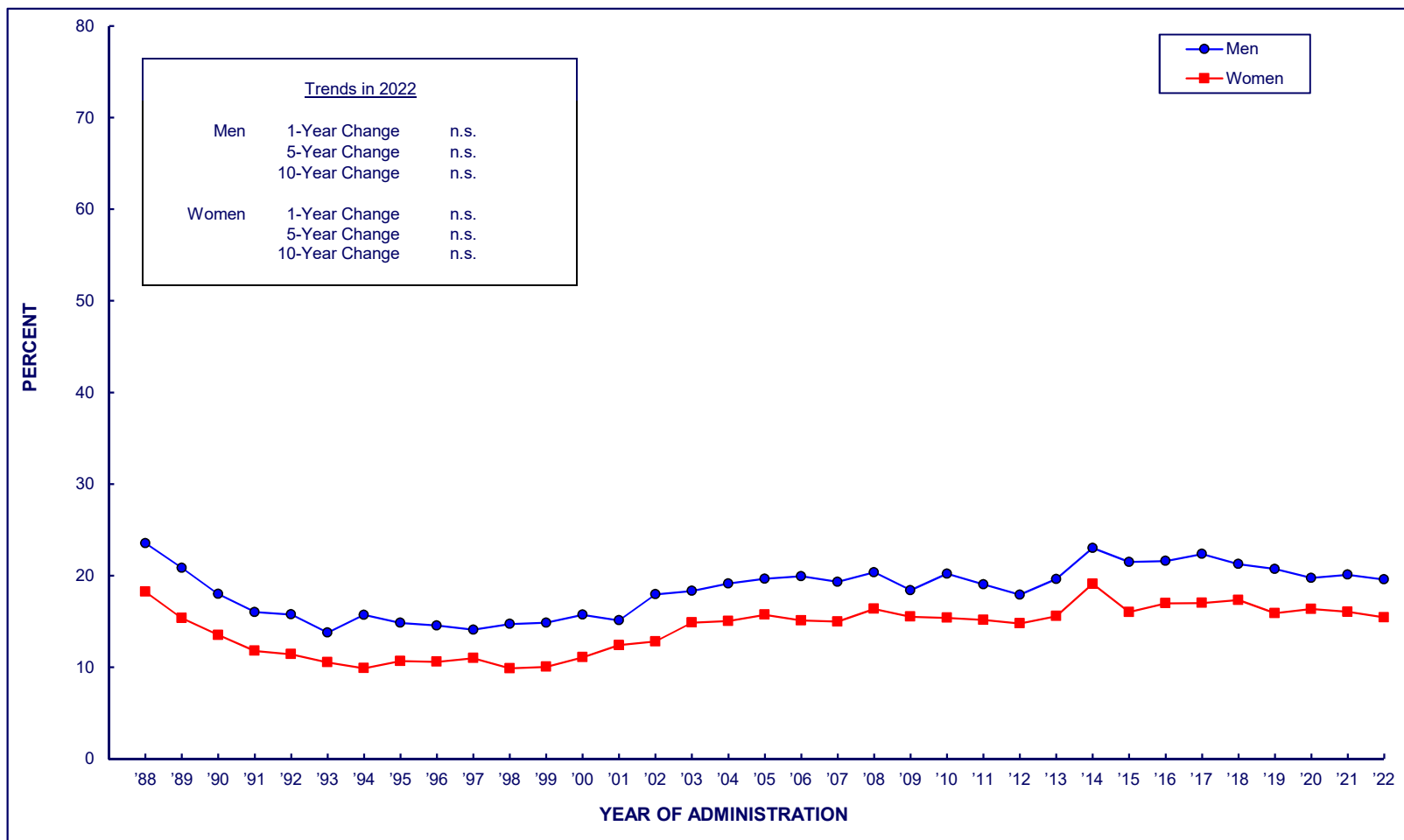


Trends in 2022

Black	1-Year Change	n.s.
	5-Year Change	NA
	10-Year Change	NA
Hispanic	1-Year Change	n.s.
	5-Year Change	NA
	10-Year Change	NA
White	1-Year Change	n.s.
	5-Year Change	NA
	10-Year Change	NA

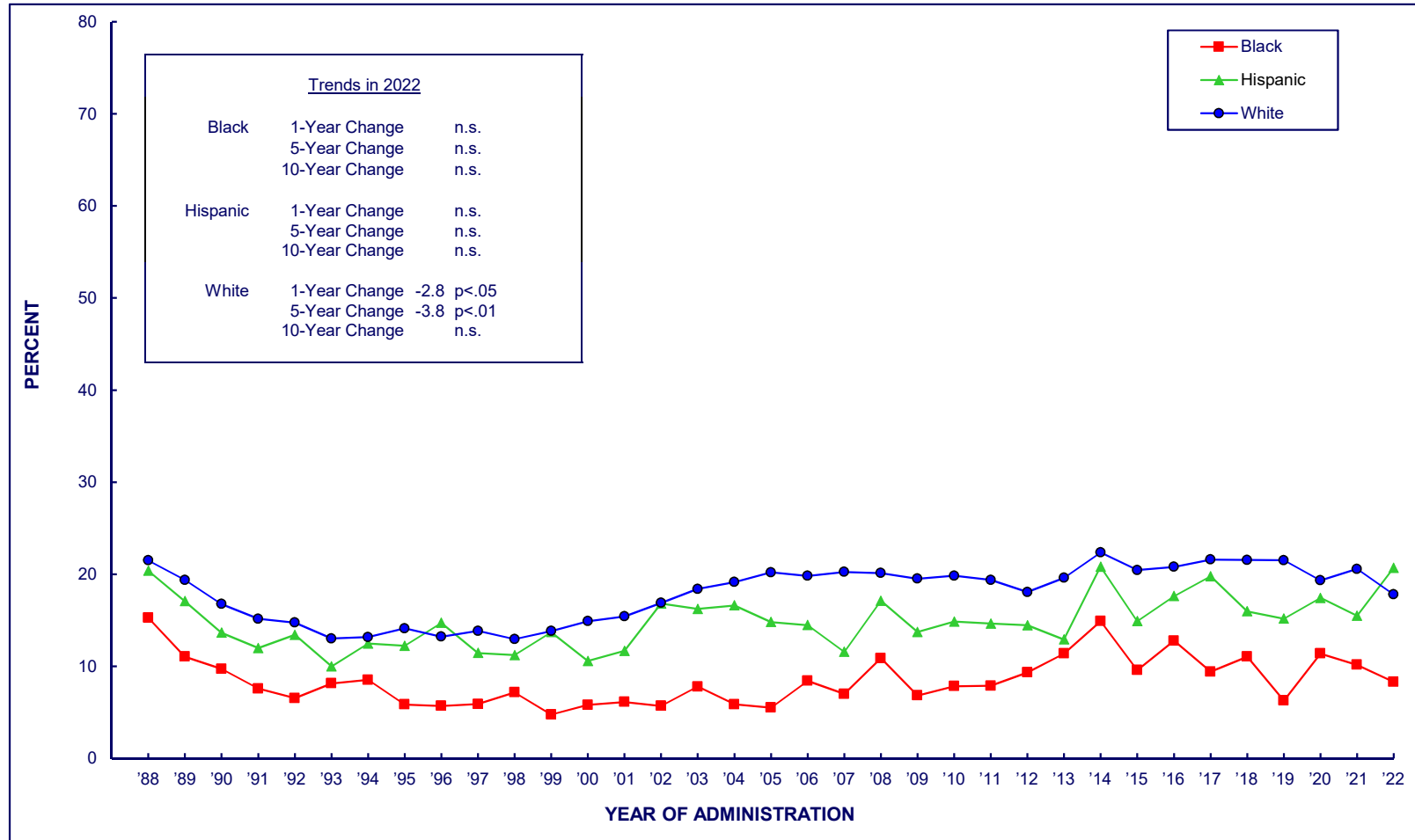
	2019	2020	2021	2022
White	4.5	3.7	6.0	5.5
Black	1.3	1.0	2.3	2.6
Hispanic	1.2	0.6	3.0	6.3

**TABLE/FIGURE 118**  
**ANY DRUG OTHER THAN MARIJUANA**  
**Trends in 12-Month Prevalence**  
**among Respondents of Modal Ages 19 through 30, by Sex**



	1988	1989	1990	1991	1992	1993	1994	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	2020	2021	2022
Men	23.5	20.9	18.0	16.0	15.8	13.8	15.7	14.8	14.5	14.1	14.7	14.9	15.7	15.1	18.0	18.3	19.1	19.7	19.9	19.3	20.4	18.4	20.2	19.0	17.9	19.6	23.0	21.5	21.6	22.4	21.3	20.7	19.7	20.1	19.6
Women	18.2	15.4	13.5	11.8	11.4	10.5	9.9	10.7	10.6	11.0	9.9	10.0	11.1	12.4	12.8	14.9	15.0	15.7	15.1	15.0	16.4	15.5	15.4	15.2	14.8	15.6	19.1	16.0	17.0	17.0	17.3	15.9	16.4	16.1	15.4

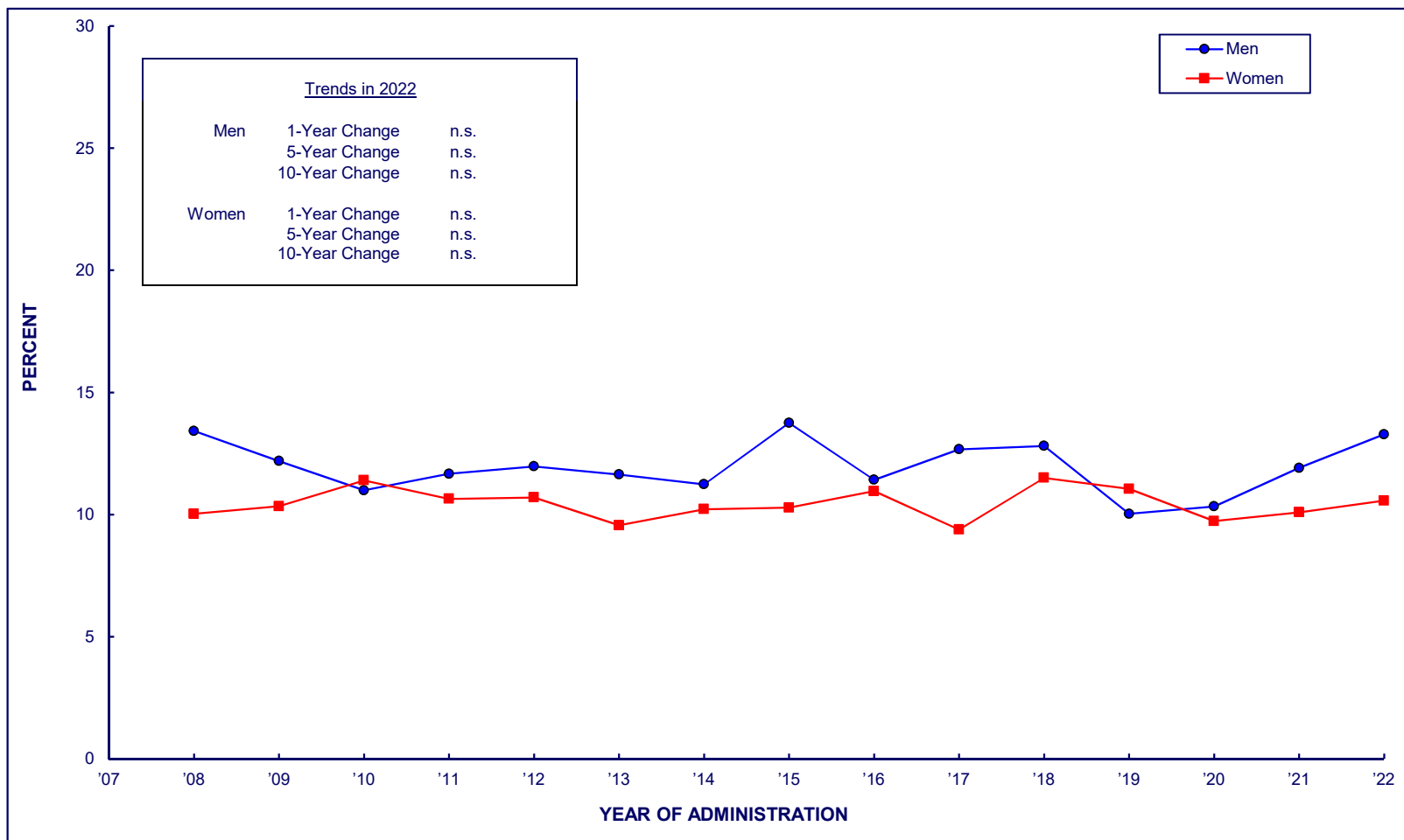
**TABLE/FIGURE 119**  
**ANY DRUG OTHER THAN MARIJUANA**  
**Trends in 12-Month Prevalence**  
**among Respondents of Modal Ages 19 through 30, by Race/Ethnicity**



	1988	1989	1990	1991	1992	1993	1994	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	2020	2021	2022
White	21.5	19.4	16.8	15.2	14.8	13.0	13.2	14.1	13.2	13.8	13.0	13.8	14.9	15.4	16.9	18.4	19.2	20.2	19.8	20.2	20.1	19.5	19.8	19.4	18.1	19.6	22.4	20.5	20.8	21.6	21.6	21.5	19.3	20.6	17.8
Black	15.3	11.0	9.7	7.6	6.5	8.1	8.5	5.9	5.7	5.9	7.2	4.8	5.8	6.1	5.7	7.8	5.9	5.5	8.4	7.0	10.9	6.8	7.8	7.9	9.3	11.4	14.9	9.6	12.8	9.4	11.1	6.3	11.4	10.2	8.3
Hispanic	20.4	17.1	13.7	12.0	13.4	10.0	12.5	12.2	14.7	11.4	11.2	13.7	10.6	11.7	16.8	16.2	16.6	14.8	14.5	11.6	17.1	13.7	14.9	14.6	14.5	12.9	20.8	14.9	17.6	19.8	16.0	15.2	17.4	15.5	20.7

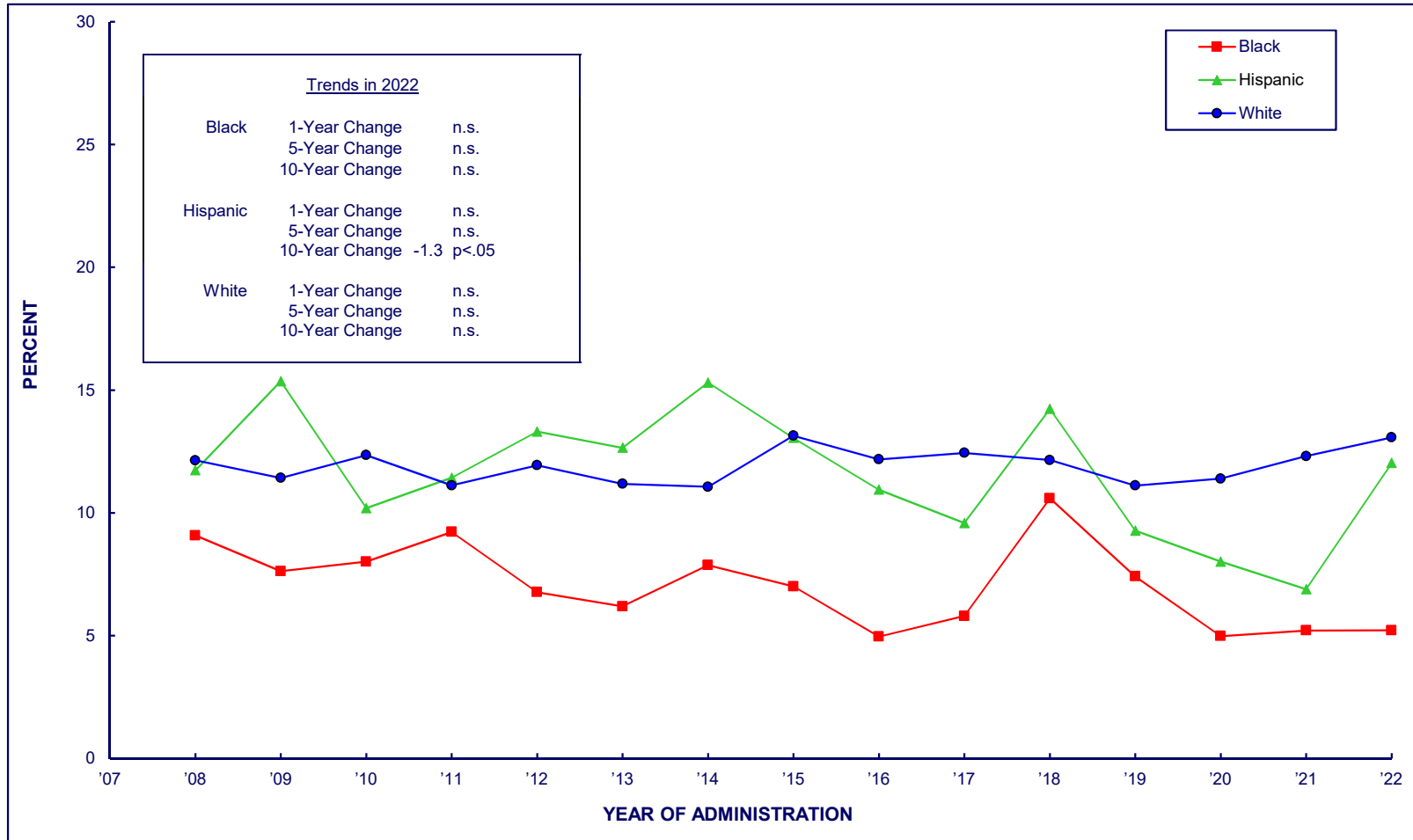


**TABLE/FIGURE 120**  
**ANY DRUG OTHER THAN MARIJUANA**  
**Trends in 12-Month Prevalence**  
**among Respondents of Modal Ages 35 through 50, by Sex**



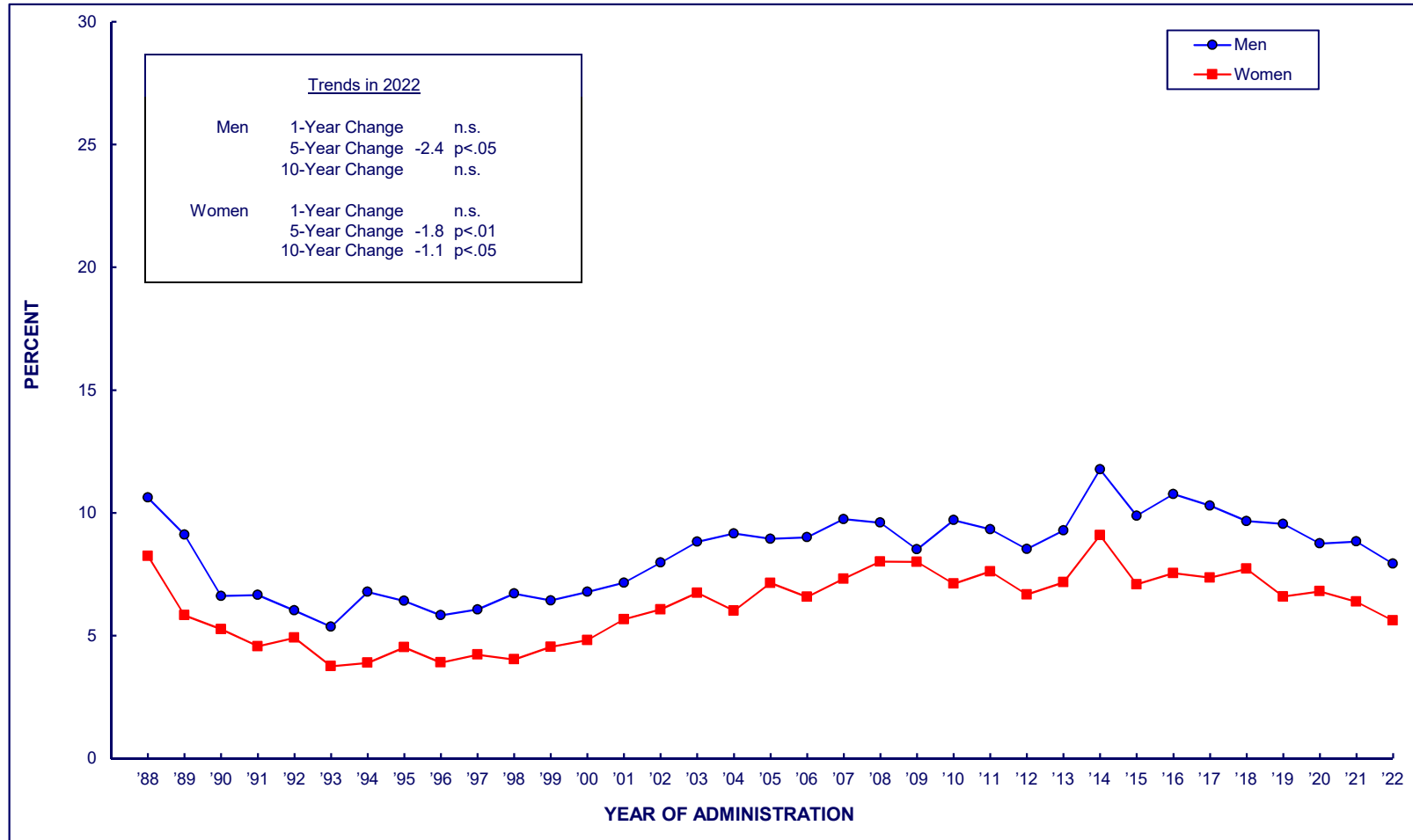
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Men	13.4	12.2	11.0	11.7	12.0	11.6	11.2	13.8	11.4	12.7	12.8	10.0	10.3	11.9	13.3
Women	10.0	10.3	11.4	10.6	10.7	9.6	10.2	10.3	11.0	9.4	11.5	11.1	9.7	10.1	10.6

**TABLE/FIGURE 121**  
**ANY DRUG OTHER THAN MARIJUANA**  
**Trends in 12-Month Prevalence**  
**among Respondents of Modal Ages 35 through 50, by Race/Ethnicity**



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
White	12.1	11.4	12.4	11.1	11.9	11.2	11.1	13.1	12.2	12.4	12.2	11.1	11.4	12.3	13.1
Black	9.1	7.6	8.0	9.2	6.8	6.2	7.9	7.0	5.0	5.8	10.6	7.4	5.0	5.2	5.2
Hispanic	11.7	15.4	10.2	11.4	13.3	12.7	15.3	13.1	10.9	9.6	14.2	9.3	8.0	6.9	12.0

**TABLE/FIGURE 122**  
**ANY DRUG OTHER THAN MARIJUANA**  
**Trends in 30-Day Prevalence**  
**among Respondents of Modal Ages 19 through 30, by Sex**

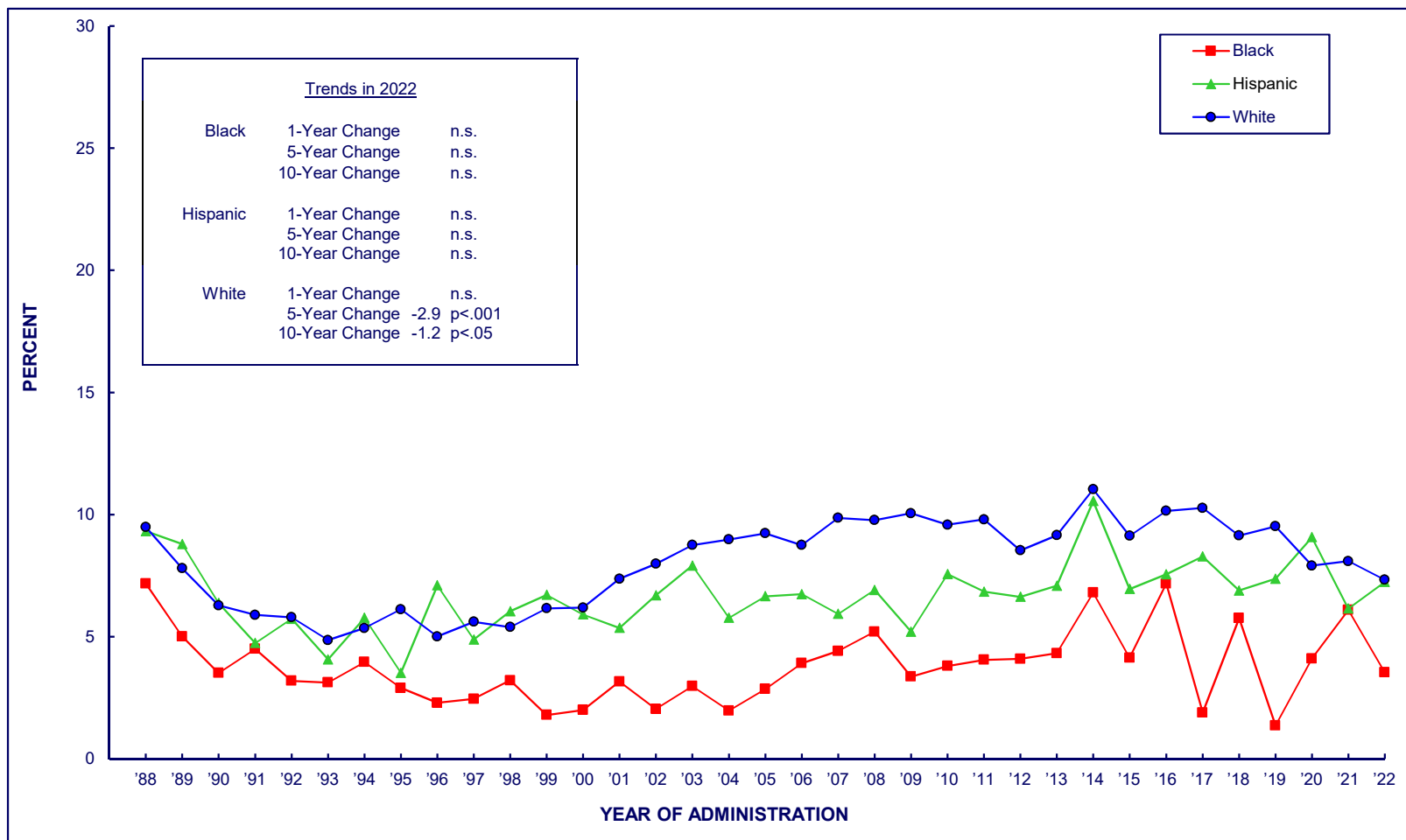


	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Men	10.6	9.1	6.6	6.7	6.0	5.4	6.8	6.4	5.8	6.1	6.7	6.4	6.8	7.2	8.0	8.8	9.2	8.9	9.0	9.7	9.6	8.5	9.7	9.3	8.5	9.3	11.8	9.9	10.8	10.3	9.7	9.6	8.8	8.8	7.9
Women	8.2	5.8	5.3	4.6	4.9	3.8	3.9	4.5	3.9	4.2	4.0	4.5	4.8	5.7	6.1	6.7	6.0	7.1	6.6	7.3	8.0	8.0	7.1	7.6	6.7	7.2	9.1	7.1	7.5	7.4	7.7	6.6	6.8	6.4	5.6

TABLE/FIGURE 123

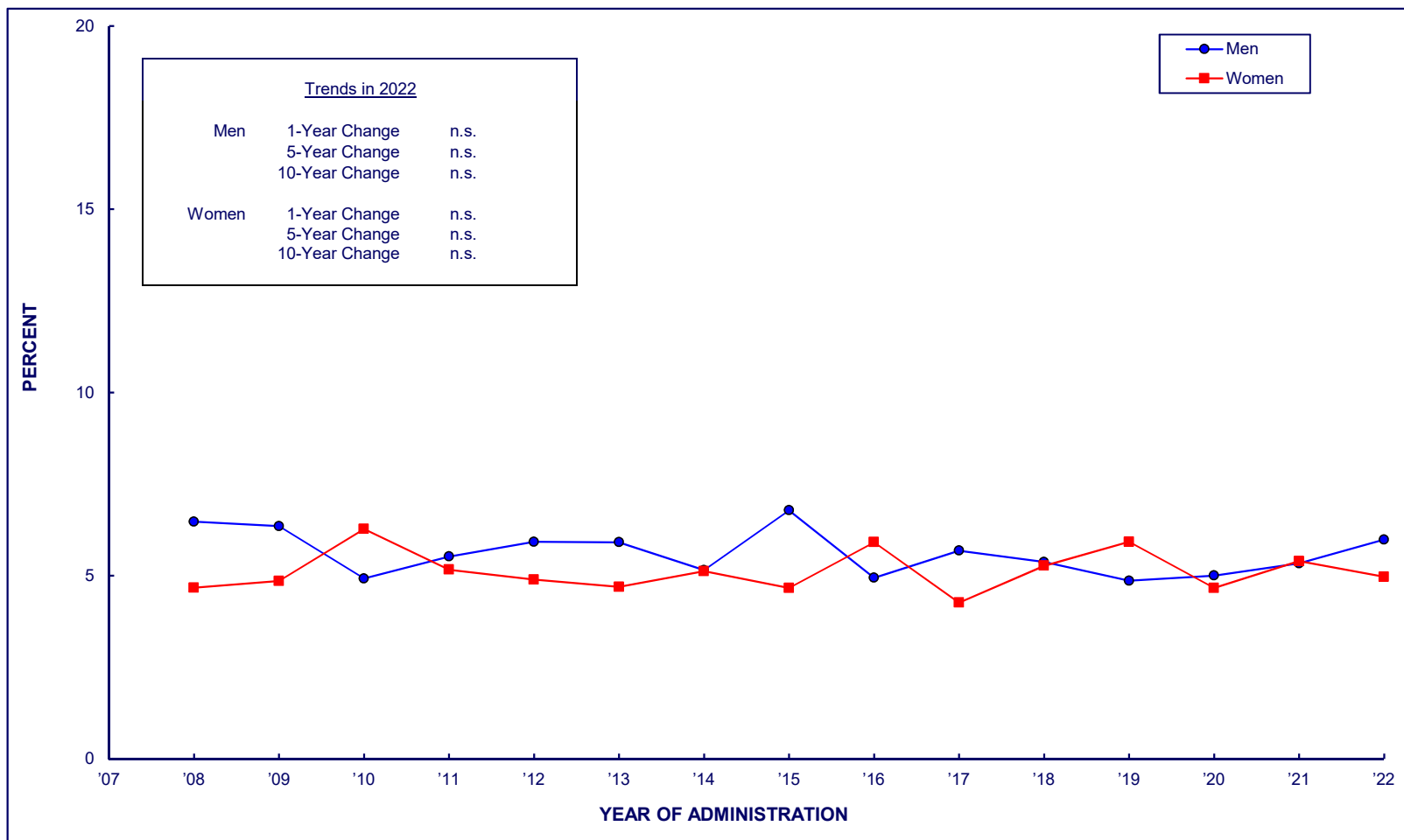
**ANY DRUG OTHER THAN MARIJUANA**

**Trends in 30-Day Prevalence  
among Respondents of Modal Ages 19 through 30, by Race/Ethnicity**



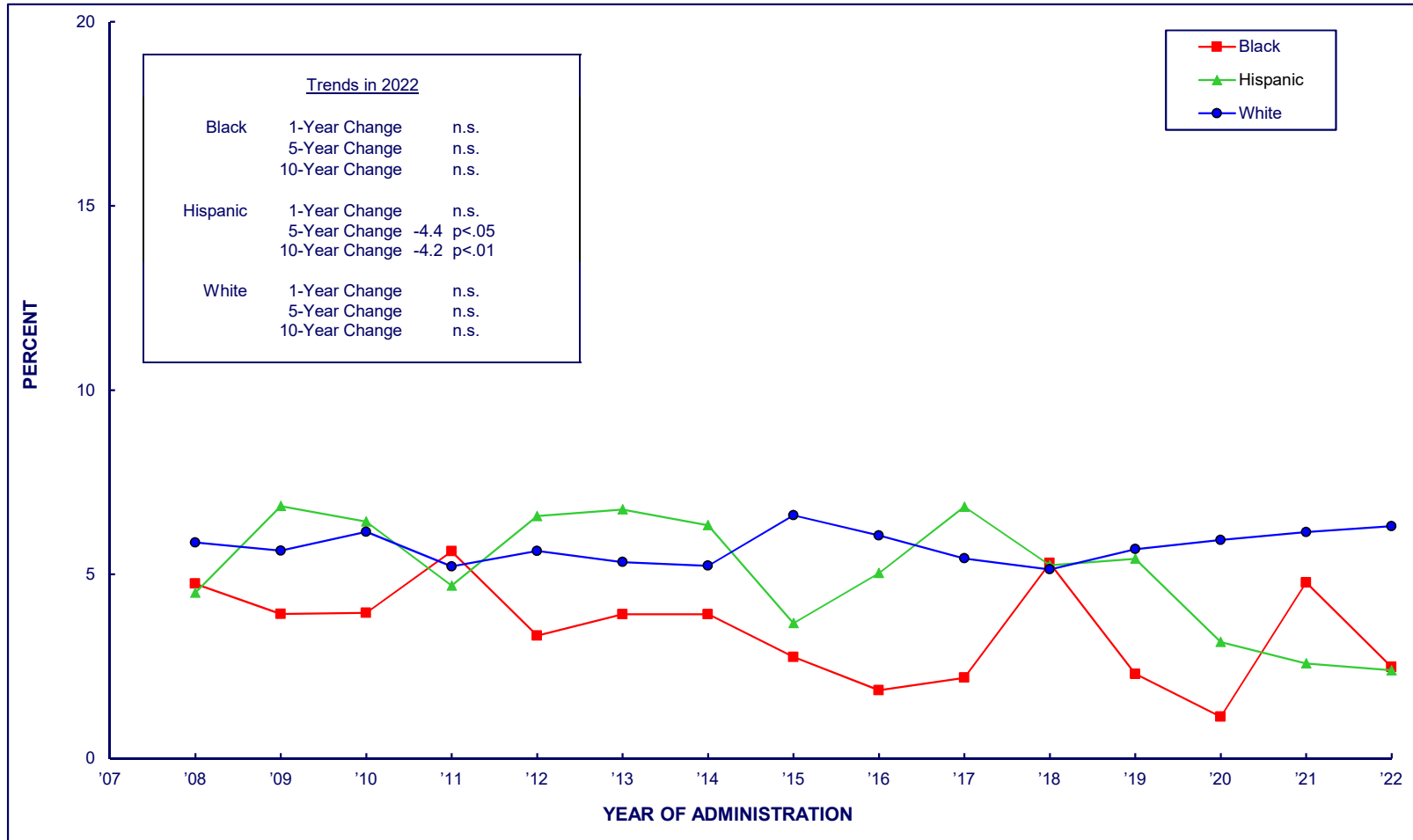
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
White	9.5	7.8	6.3	5.9	5.8	4.9	5.4	6.1	5.0	5.6	5.4	6.2	6.2	7.4	8.0	8.8	9.0	9.2	8.8	9.9	9.8	10.1	9.6	9.8	8.5	9.2	11.0	9.1	10.2	10.3	9.1	9.5	7.9	8.1	7.3
Black	7.2	5.0	3.5	4.5	3.2	3.1	4.0	2.9	2.3	2.5	3.2	1.8	2.0	3.2	2.0	3.0	2.0	2.9	3.9	4.4	5.2	3.4	3.8	4.1	4.1	4.3	6.8	4.1	7.2	1.9	5.8	1.4	4.1	6.1	3.5
Hispanic	9.3	8.8	6.4	4.7	5.7	4.1	5.8	3.5	7.1	4.9	6.0	6.7	5.9	5.4	6.7	7.9	5.8	6.7	6.7	5.9	6.9	5.2	7.6	6.8	6.6	7.1	10.6	7.0	7.6	8.3	6.9	7.4	9.1	6.2	7.2

**TABLE/FIGURE 124**  
**ANY DRUG OTHER THAN MARIJUANA**  
**Trends in 30-Day Prevalence**  
**among Respondents of Modal Ages 35 through 50, by Sex**



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Men	6.5	6.4	4.9	5.5	5.9	5.9	5.2	6.8	4.9	5.7	5.4	4.9	5.0	5.3	6.0
Women	4.7	4.9	6.3	5.2	4.9	4.7	5.1	4.7	5.9	4.3	5.3	5.9	4.7	5.4	5.0

**TABLE/FIGURE 125**  
**ANY DRUG OTHER THAN MARIJUANA**  
**Trends in 30-Day Prevalence**  
**among Respondents of Modal Ages 35 through 50, by Race/Ethnicity**



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
White	5.9	5.6	6.2	5.2	5.6	5.3	5.2	6.6	6.1	5.4	5.1	5.7	5.9	6.1	6.3
Black	4.7	3.9	4.0	5.6	3.3	3.9	3.9	2.8	1.9	2.2	5.3	2.3	1.1	4.8	2.5
Hispanic	4.5	6.9	6.4	4.7	6.6	6.8	6.3	3.7	5.0	6.8	5.2	5.4	3.2	2.6	2.4

**TABLE/FIGURE 126**  
**Differences in Prevalence of Use for Various Types of Drugs**  
**Among Respondents Modal Ages 19 through 30,**  
**by Sex and Race/Ethnicity, 2022**

	Differences by		Differences by Race/Ethnicity		
	Sex				
	Men vs. Women	Black vs. Hispanic	Black vs. White	Hispanic vs. White	
<b>Marijuana:</b>					
12-month	n.s.	n.s.	n.s.	n.s.	n.s.
30-day	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Alcohol:</b>					
30-day	n.s.	n.s.	p<.05	n.s.	n.s.
5+ drinks in row in two weeks	p<.001	p<.001	p<.001	n.s.	n.s.
<b>Cigarettes:</b>					
30-day	p<.001	n.s.	p<.001	n.s.	n.s.
<b>Vaping Nicotine:</b>					
30-day	p<.001	p<.05	p<.001	n.s.	n.s.
<b>Any Drug other than Marijuana:</b>					
12-month	p<.05	p<.001	p<.001	n.s.	n.s.
30-day	p<.05	n.s.	p<.05	n.s.	n.s.

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

**TABLE/FIGURE 127**  
**Differences in Prevalence of Use for Various Types of Drugs**  
**Among Respondents Modal Ages 35 through 50,**  
**by Sex and Race/Ethnicity, 2022**

	Differences by		Differences by Race/Ethnicity		
	Sex				
	Men vs. Women	Black vs. Hispanic	Black vs. White	Hispanic vs. White	
<b>Marijuana:</b>					
12-month	p<.01	n.s.	n.s.	n.s.	n.s.
30-day	p<.001	n.s.	n.s.	n.s.	n.s.
<b>Alcohol:</b>					
30-day	p<.001	n.s.	n.s.	n.s.	n.s.
5+ drinks in row in two weeks	p<.001	p<.001	p<.001	p<.001	n.s.
<b>Cigarettes:</b>					
30-day	p<.05	n.s.	p<.01	n.s.	n.s.
<b>Vaping Nicotine:</b>					
30-day	n.s.	n.s.	p<.05	n.s.	n.s.
<b>Any Drug other than Marijuana:</b>					
12-month	p<.05	p<.05	p<.001	n.s.	n.s.
30-day	n.s.	n.s.	p<.001	n.s.	n.s.

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