Executive Summary

In 2021, differences in substance use for college vs. noncollege young adults ages 19 to 22 showed that:

- Noncollege young adults had higher prevalence of using marijuana in the past 30 days, using marijuana daily, daily cigarette smoking, nicotine vaping in the past 12 months and 30 days, and past 12 month use of hallucinogens, narcotics, sedatives, and tranquilizers.
- College students had higher prevalence of drinking in the past 12 months, drinking in the past 30 days, binge drinking in the past 2 weeks, and past 12 months use of cocaine.
- However, noncollege young adults had higher prevalence of high-intensity drinking (10+ drinks) in the past 2 weeks.
- Daily cigarette smoking remained more prevalent among noncollege young adults.

Trends over time revealed that:

- The gap between college and noncollege young adults in cigarette use narrowed as prevalence among both groups declined over the past two decades, such that they had similar levels of smoking cigarettes in the past 12 months and past 30 days in 2021.
- The pandemic-related dip in binge drinking in 2020 and rebound to match pre-pandemic levels in 2021 that was observed for young
adults overall (see Chapter 2) was most notable in college students, and in particular in college women.

- In 2021 amphetamine use overall was similar for college and noncollege young adults, although the prevalence of non-medical use of Adderall was higher for college than noncollege young adults.

**Introduction**

The Monitoring the Future (MTF) study tracks multiple forms of substance use among U.S. 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 (1980–2021); previous results are available elsewhere.

MTF draws the college sample prospectively in the senior year of high school, so it has considerable advantages for generating a broadly representative 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\(^1\) and the National Center on Education Statistics,\(^2\) 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 over three fifths (62%) 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 2021 they were 63%. 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.\(^3\)

**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

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1 U.S. Census Bureau, October 2014. Available at: [http://www.census.gov/](http://www.census.gov/)
2 National Center on Education Statistics. Fall 2019 Enrollment. Available at: [https://nces.ed.gov/](https://nces.ed.gov/)
3 In 2018, 2019, and 2020 only, the total sample included a small proportion who were missing on sex.
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 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 for College and Noncollege**

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

**Marijuana**

**12 month.** Prevalence of marijuana use (in any form) in the past 12 months was similar for college (40.3%) and noncollege young adults (44.3%) in 2021 (Table 27).

**30 day.** Prevalence of marijuana use in the past 30 days was higher for noncollege (32.4%) than for college young adults (24.2%) (Table 28).

**Daily.** The prevalence of current daily marijuana use was higher for noncollege (14.3%) compared to college young adults (5.6%; Table 29).

**Vaping marijuana.** Prevalence of vaping marijuana was similar for college and noncollege young adults in the past 12 months (19.5% vs. 21.3%) and in the past 30 days (11.8% vs. 15.3%; Figure 50 and Tables 27, 28).
Alcohol

12 month & 30 day. College young adults had significantly higher prevalence than noncollege young adults of alcohol use in the past 12 months (76.4% vs. 68.6%) and past 30 days (59.6% vs. 48.4%) (Figure 52 & Tables 27, 28).

Daily. The prevalence of daily drinking was higher for noncollege than college young adults (3.5% vs. 2.1%; Table 29).

Binge drinking. In 2021, college students had a higher prevalence of binge drinking in the past 2 weeks than noncollege young adults (30.4% vs. 24.5%; Table 29). Binge drinking had typically been more prevalent among college students than noncollege youth over the years prior to 2020, but in 2020 converged at 24%. The gap opened again in 2021 after a significant increase for college but not noncollege young adults (Figure 54).

High-intensity drinking. The prevalence of high-intensity drinking (i.e., 10+ drinks in a row) in the past 2 weeks was higher for noncollege than college young adults (15.1% vs. 10.5%; Table 29), which was the opposite of the pattern for binge drinking.

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. College and noncollege young adults had similar prevalence levels of smoking in the past 12 months (16.6% vs. 17.6%) and past 30 days (5.9% vs. 7.4%; Tables 27, 28) in 2021.

Daily smoking. Noncollege young adults continued to have higher prevalence of daily smoking (3.6% vs. 0.9%) and a half a pack a day or more smoking (1.8% vs. 0.6%) than college students in 2021 (Table 29).

Vaping Nicotine

12 month & 30 day. The prevalence of nicotine vaping was higher among noncollege than college students in 2021 over the past 12 months (31.7% vs.
28.0%) and past 30 days (25.4% vs. 20.4%; Tables 27, 28). This was a reversal from 2018 and 2019 when college students had a higher prevalence of vaping nicotine (Figure 58).

**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 drugs other than marijuana was only slightly higher among noncollege than college young adults in 2021, over the past 12 months (16.6% vs 14.6%) and the past 30 days (7.1% vs. 5.8%; Tables 27, 28).

**Other Substances: Prevalence for College and Noncollege**

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

**Hallucinogens**

The use of hallucinogens was somewhat higher among noncollege than college young adults in 2021, for use in the past 12 months (9.1% vs. 6.8%), LSD (5.7% vs. 4.3%), hallucinogens other than LSD (6.4% vs. 4.6%), and MDMA (ecstasy, Molly) (2.4% vs. 1.6%). Ketamine use was higher among college than noncollege young adults (1.4% v. 0.6%; Table 27).

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⁴ Monitoring the Future: Restricted-Use Panel Data, United States, 1976-2019 (ICPSR 37072) [https://www.icpsr.umich.edu/web/NAHDAP/studies/37072](https://www.icpsr.umich.edu/web/NAHDAP/studies/37072)
Narcotics (Opioids)

Use of heroin and narcotics other than heroin without medical supervision in the past 12 months was higher for noncollege than college young adults in 2021 (0.5% vs. 0.1% for heroin; 1.7% vs. 0.9% for other narcotics). For specific drugs, Vicodin use was rare but more common among college than noncollege young adults (0.8% vs. 0.4%), while the prevalence of OxyContin use in the past 12 months was higher for noncollege than college young adults (3.3% vs. 0.3%; Table 27).

Sedatives & Tranquilizers

Noncollege young adults had somewhat higher prevalence levels than college young adults for use of sedatives (barbiturates) (2.0% vs. 0.9%) and tranquilizers (3.6% vs. 1.7%) in the past 12 months in 2021 (Table 27).

Stimulants

**Amphetamine** use without a doctor’s prescription in the past 12 months was similar for college and noncollege young adults (5.2% vs. 5.0%; Table 27). 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.

**Adderall**. Use of Adderall, a subclass of amphetamines, without medical supervision was higher for college than noncollege young adults in 2021 (4.3% vs. 2.2% in the past 12 months; Table 27).

**Ritalin**. The nonmedical use of Ritalin, another but now less common stimulant drug prescribed for ADHD, was low among college and noncollege young adults in 2021 (1.7% and 0.9%, respectively, in the past 12 months; Table 27).

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5 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.
**Cocaine** use in the past 12 months was higher among college than noncollege young adults (3.9% vs. 3.3%) in 2021 (Table 27).

**Methamphetamine** use was the same for college and noncollege young adults at 0.3% in the past 12 months 2021 (Table 27).

**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 similar for college and noncollege young adults for small cigars (both 8.8% in 2021) and snus (3.5% for college, 3.1% for noncollege in 2021; Table 27). Noncollege young adults had a higher prevalence than college young adults of using tobacco with a hookah (6.7% vs. 4.5% in the past 12 months in 2021; Table 27).

**Trends for College and Noncollege Young Adults: Most Common Substances**

**Marijuana**

Marijuana use trends showed that, for both college and noncollege young adults, there were no significant trends over the past 1 or 5 years, but there has been an increase over the past 10 years in use in the past 30 days (from 19.4% to 24.2% from 2011 to 2021 for college; from 24.0% to 32.4% for noncollege; Figure 48).

**Alcohol**

Trends in alcohol use showed that the prevalence of alcohol use in the past 30 days has been fairly flat among college students over the past 10 years (at 59.6% in 2021), but decreasing among noncollege young adults over the past 5 years (from 59.2% in 2016) and 10 years (from 55.9% in 2011) to 48.4% in 2021. In the longer term, since 1982 the predominant trend has been one of decline for both groups (Figure 52).

**Binge drinking.** As noted in the overall trends for young adults in Chapter 2, there was a rebound in prevalence of binge drinking from 2020 to 2021.
Figure 54 shows that this was concentrated in the college students. There was a significant increase from the pandemic-related low of 24.2% in 2020 to 30.4% in 2021, which was similar to the few years before the pandemic (Figure 54). There was still an overall 10 year trend of decreasing binge drinking among college students (from 36.1% in 2011 to 30.4% in 2021). The pandemic-related low and rebound was not seen for noncollege young adults. Among noncollege young adults, there has been a negative trend over the past 10 years (from 31.6% in 2011 to 24.5% in 2021; Figure 54).

**Cigarettes**

Trends in cigarette use showed very large and continuing decreases for both college and noncollege young adults over the past 5 and 10 years (Figure 56). However, in 2021, there was a non-significant increase in smoking in the past 30 days among college students (from 4.1% in 2020 to 5.9% in 2021), and a large and significant decrease among noncollege young adults by almost half—from 13.1% in 2020 to 7.4% in 2021. This shift brought the gap in prevalence of cigarette smoking among college and noncollege young adults to smaller than ever previously observed since 1980.

**Any Drug Other Than Marijuana**

There were no significant changes in past 30 day use of any drug other than marijuana from 2020 to 2021 among either college or noncollege young adults. However, there were significant trends of decreasing use of drugs other than marijuana among college students over the past 5 and 10 years and for noncollege young adults over the past 5 (but not 10) years (Figure 60).

**Sex Differences among College Students: Most Common Substances**

**Marijuana**

In 2021, marijuana use in the past 30 days was nearly the same for college men and women, due to somewhat stable levels of use among men and an
increasing trend among women in college over the past 10 years (from 16.1% in 2011 to 24.2% in 2021; Figure 49).

**Alcohol**

In 2021, alcohol use in the past 30 days was nearly identical across sex, with trends flat for both college men and women over the past 10 years (Figure 53). Prior to 2000, college men consistently had a higher 30 day prevalence. For binge drinking, there was a significant increase from 2020 to 2021 for college women but not college men, indicating that the pandemic-related low and rebound was especially concentrated in college women (Figure 55).

**Cigarettes**

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, but not over in the past 1 or 5 years (Figure 57).

**Vaping Nicotine**

The prevalence of vaping nicotine observed for college men and women was virtually the same in 2021, with nonsignificant trends from 2020 to 2021. However, there was a sex difference with college men reporting a higher prevalence of nicotine vaping in 2019 that has now vanished (Figure 59).

**Any Drug Other Than Marijuana**

Trends in 30 day use of any drugs other than marijuana have been non-significant and relatively flat among both college men and women over the past 10 years (Figure 61).
Recommended Citation


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