Cannabis Use Among Youth in Minnesota

2022

Summary

- In 2022, 6% of Minnesota students reported past month cannabis use. Despite an overall decrease in the state, there are differences in cannabis use across youth of different races and ethnicities.
- Youth cannabis use can have permanent effects on the developing brain, particularly with regular or heavy use.
- Cannabis use has been linked to poorer mental health outcomes including depression, social anxiety, psychosis, and schizophrenia.
- Programs should aim to prevent youth from using cannabis to reduce risk of negative outcomes.

Background

Cannabis—which may also be called marijuana, weed, or pot—refers to the dried flowers, leaves, stems, and seeds of the cannabis plant. It is the most used federally illegal drug by youth in the United States and is the main drug that youth present with for substance use treatment.[1]

In the U.S., 6.4% of youth between the ages of 12 and 17 (over 1.6 million individuals) reported cannabis use in the past month.[2] In Minnesota, 6% of students reported past month cannabis use in 2022; 3% of 8th grade students, 4.5% of 9th grade students, and 12% of 11th grade students.[3]

In 2016, 6.5% of Minnesota students reported having initiated cannabis use at 13 years old or younger.[4] Because cannabis use can have permanent effects on the developing brain, especially with regular or heavy use, efforts should aim to prevent cannabis use among adolescents to reduce risk of drug use in adulthood and other negative outcomes.[1,5,6,7]

Negative effects of youth cannabis use include cognitive impairment, problems with school and social life, poor mental health, and increased risk of psychotic, mood, and alcohol and/or drug use disorders in during adolescence and adulthood.[8]

Youth who use cannabis

Cannabis use among Minnesota youth has declined over the past decade; in 2013, 10% of students reported using cannabis during the past 30 days, compared to 6% of students in 2022.[4]

While cannabis use appears to be declining for Minnesota students, this trend is not observed equally among groups of youth. By understanding disparities among youth who use cannabis, specific and effective policies and programs can be implemented to reduce the adverse outcomes associated with youth cannabis use.[5]

Between 2013 and 2022, cannabis use declined among students in all grades surveyed.

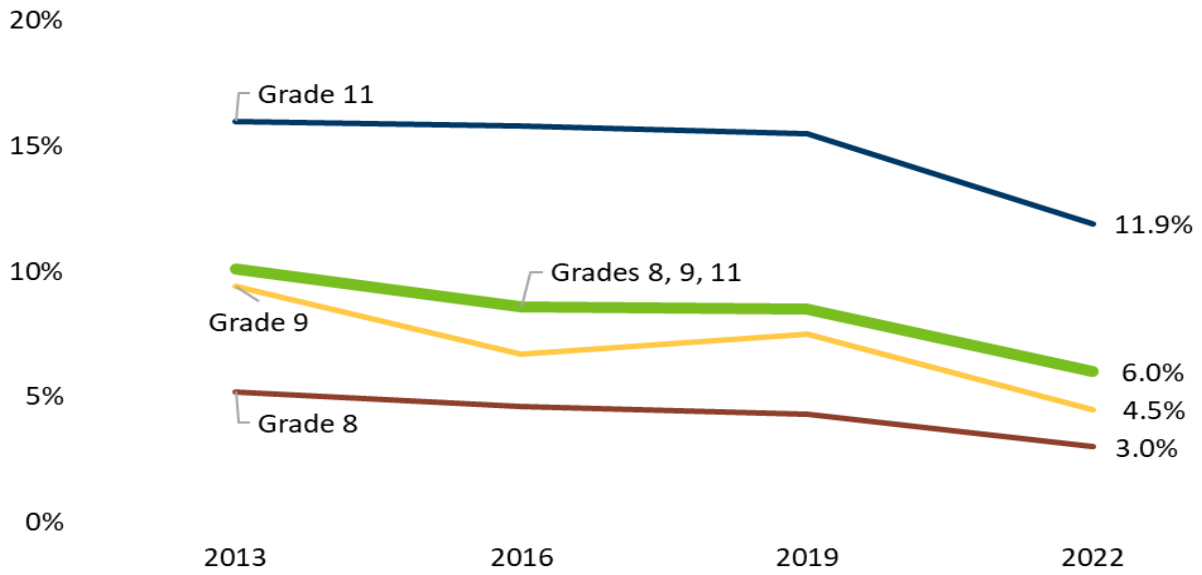

Figure 1: Percent of students who report cannabis use at least once in the last 30 days by grade (8, 9, 11, and all grades combined) from 2013 – 2022. Data obtained from the Minnesota Student Survey.[3,4]

Sex differences

Historically, males reported higher rates of cannabis use and were more likely to engage in cannabis use as compared to their female peers.[5] Figure 2 demonstrates that in 2022 females reported higher rates of cannabis use compared to their male peers.

Cannabis use declined more among males than females.

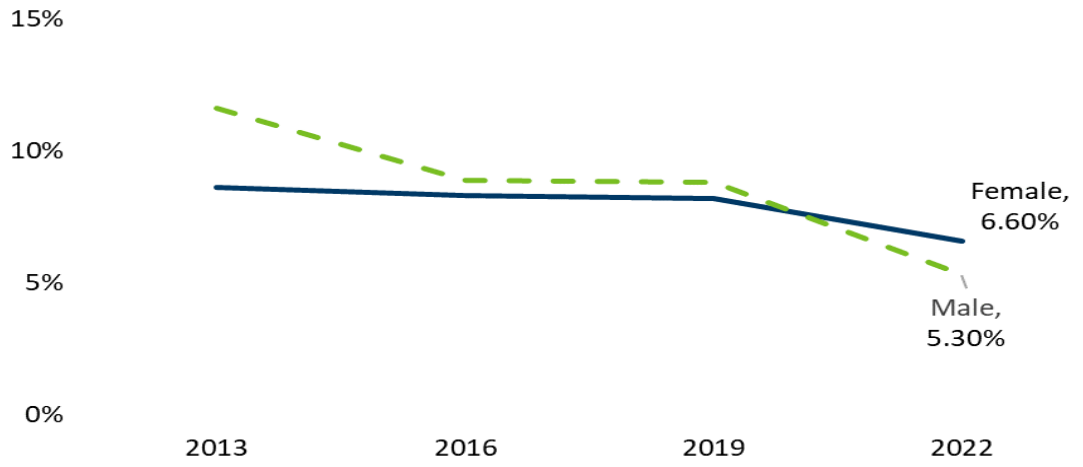

Figure 2: Percent of students who report cannabis use at least once in the last 30 days by grade sex (female and male) from 2013 – 2022. Data obtained from the 2022 Minnesota Student Survey.[3,4]

Gender identity

Research demonstrates youth who identify as nonbinary report higher levels of mental health problems compared to their peers who do not identify as nonbinary.[5] Youth may use cannabis as a strategy to cope with mental health, but research indicates youth cannabis use is associated with poorer mental health outcomes and/or substance use challenges in adulthood.[5,8]

Figure 3 demonstrates that the rates of youth cannabis use vary among youth reporting different gender identities. For example, nonbinary and Two spirit identities reported the highest rates of cannabis use whereas cis males and cis females reported the lowest rates of cannabis use in 2022.

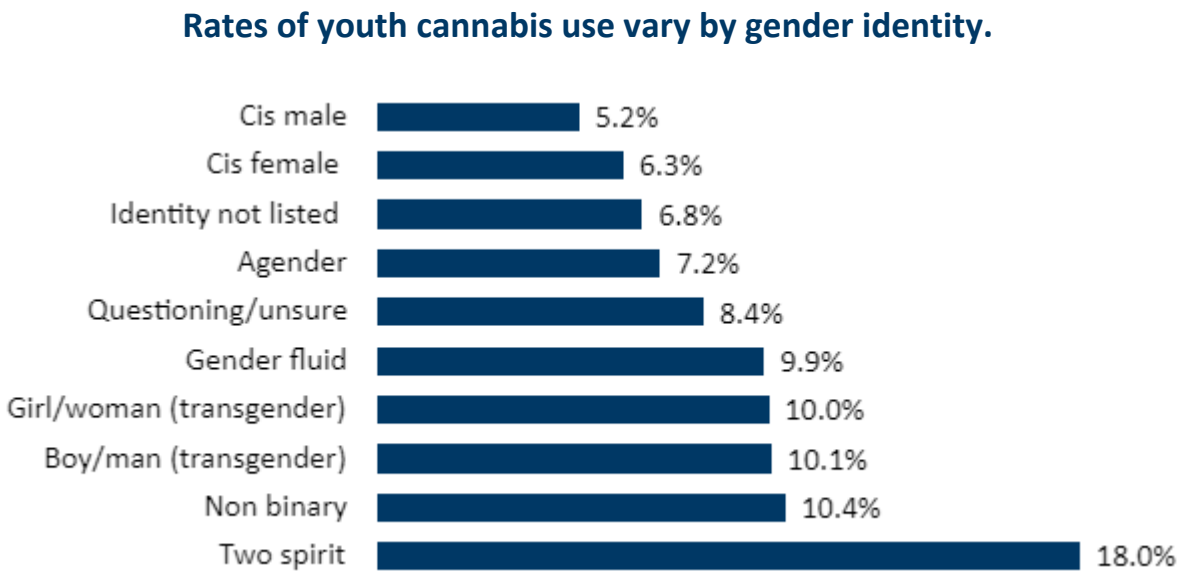

Figure 3: Percent of students in grades 8, 9 and 11 who report cannabis use at least once in the last 30 days by gender identity in 2022. Data obtained from the 2022 Minnesota Student Survey.[3]

Racial/Ethnic groups

While the rate of cannabis use among youth in Minnesota appears to be decreasing overall, Figure 4 shows that cannabis use increases by grade for all racial/ethnic groups. For some racial/ethnic groups, cannabis use is disproportionately increasing by grade compared to other groups. For example, about 9% of American Indian or Alaskan Native students and 1% of Asian or Asian American students in grade 8 reported cannabis use in the past 30 days whereas 23% of American Indian or Alaskan Native students and 4.8% of Asian or Asian American students in grade 11 reported cannabis use in the past 30 days.

Additionally, American Indian or Alaskan Native, Native Hawaiian, other Pacific Islander students, and those that selected multiple races reported the highest rates of cannabis use for all grade levels. This trend appears constant up until grade 11, where a greater percentage of White and Middle Eastern or North African students reported cannabis use compared to previous grade levels.

Cannabis use increases from grade 8 to grade 11 for all racial ethnic groups.

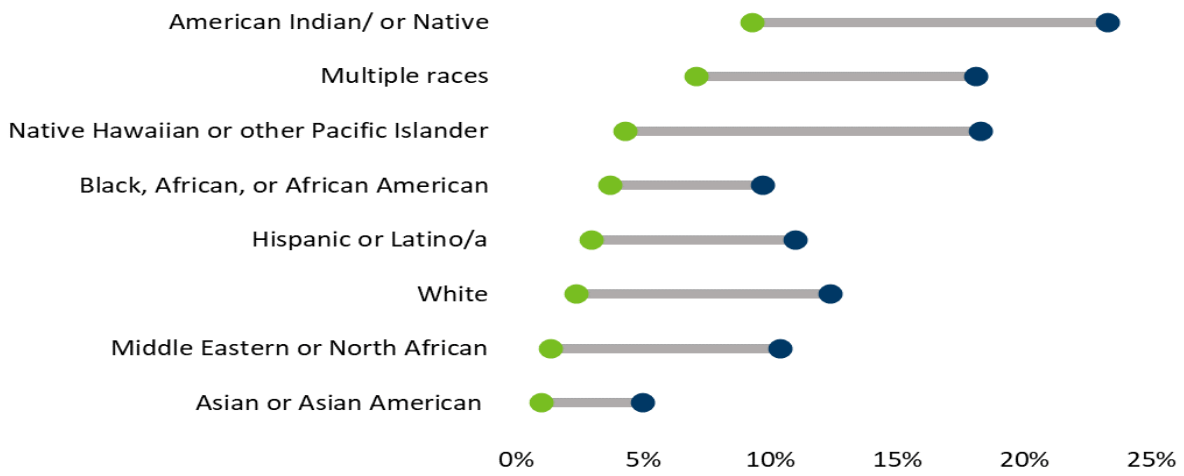

Figure 4: Percent of students in grades 8 and 11 who report cannabis use at least once in the last 30 days by race/ethnicity. Data obtained from the 2022 Minnesota Student Survey.3

ACEs

Adverse Childhood Experiences (www.cdc.gov/aces/about/index.html) (ACEs) are potentially traumatic events that occur in childhood between birth to 17 years of age. ACEs can include experiencing abuse, witnessing violence, growing up in a household with substance use or mental health problems, or parental incarceration.[10]

Young people who reported **two** ACEs were 3.3 times more likely to report cannabis use at least once in the last 30 days than students who reported no ACEs.

Young people who reported **four or more** ACEs were 7.7 times more likely to report cannabis use at least once in the last 30 days than students who reported no ACEs.

Youth who report more ACEs are more likely to report current cannabis use.

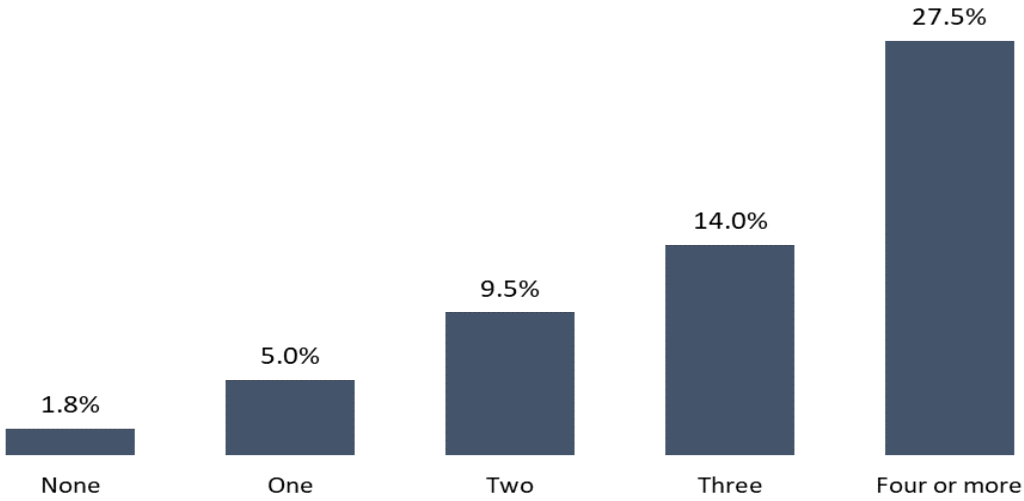

Figure 5: Percent of Minnesota students in grades 8, 9, and 11 who report cannabis use at least once in the last 30 days by ACEs score in 2022. Data obtained from 2022 Minnesota Student Survey.[3]

Consequences of early cannabis use

Mental health and psychosis

Youth cannabis use has been linked to poorer mental health outcomes including depression, social anxiety, schizophrenia, and other mood disorders.[5] The association between cannabis and these outcomes are stronger in relation to age of first use, duration of use, and potency of cannabis.[1,8] For example, frequent use of cannabis during youth is associated with an increased risk of developing psychotic symptoms, such as psychosis and paranoia.[5]

Cognitive impairment and brain health

Negative effects of youth cannabis use include difficulty with problem-solving, memory, learning, maintaining attention, and problems with school and social life.[11]

Because the brain is not fully developed until age 25, youth are more prone to damages by substance use, such as cannabis. The impact of cannabis use on the brain is dependent on factors including age of first use, frequency of use, and polysubstance use.[11,12]

Substance use disorder

Early cannabis use is associated with substance use challenges in adulthood and a greater likelihood of developing a substance use disorder.[1] The odds of developing substance use disorder symptoms by age 28 were reduced by 31% for each year of delayed cannabis use onset.[13, 14]

Resources

- Cannabis and Your Health - MN Dept. of Health (https://www.health.state.mn.us/communities/cannabis/yourhealth.html)
    - Provides information on the health effects on cannabis.
- Cannabis and Teens - CDC (https://www.cdc.gov/cannabis/health-effects/cannabis-and-teens.html)
    - Provides needed information and facts on cannabis use and teens.

Citations

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