

The association between ACEs, protective factors, and alcohol use among youth in Minnesota

2022

This data brief reports on ACEs, protective factors, and alcohol use among youth as measured by the [2022 Minnesota Student Survey \(MSS\)](https://www.health.state.mn.us/data/mchs/surveys/mss/index.html) (<https://www.health.state.mn.us/data/mchs/surveys/mss/index.html>). The MSS is a survey of 5th, 8th, 9th, and 11th grade students in all participating school districts in the state. Participation was voluntary and surveys were anonymous. School district participation rates was 70% in 2022.

Alcohol use among youth

In 2022, about 1 in 10 Minnesota youth reported drinking alcohol in the past month, and about 4% reported binge drinking (i.e., more than four drinks on an occasion for females, and more than five drinks for males). For all grades, female students were more likely to report alcohol consumption as compared to their male peers (Figure 1). In fact, female students in the 11th grade were the most likely to report engaging in alcohol-related behaviors such as current alcohol use (19%) and binge drinking (8%).

Female students were more likely to report drinking than male students.

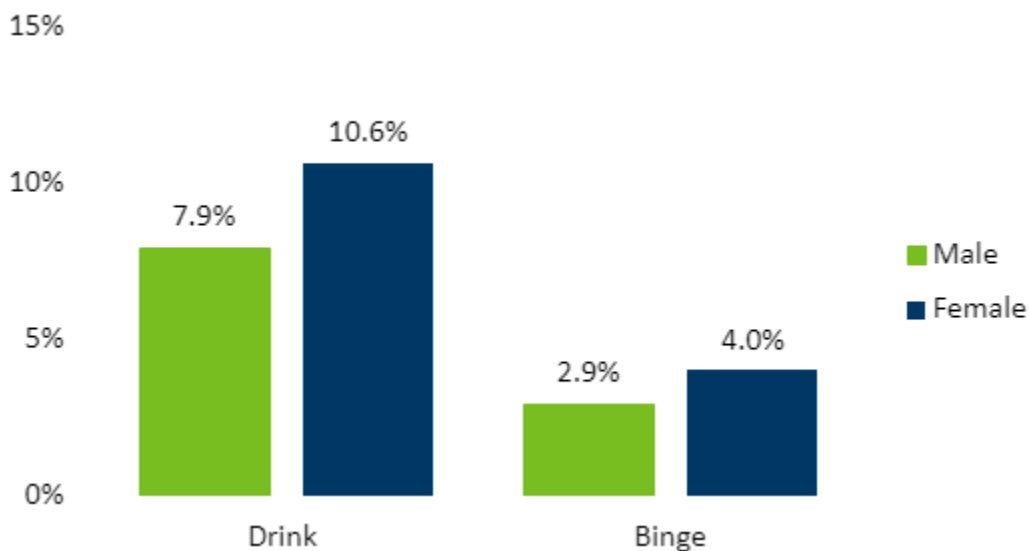


Figure 1: Percent of male and female students in all grades who reported any alcohol consumption [in the past 30 days] and percent of male and female students who reported binge drinking (i.e., >4 drinks on an occasion for females, and >5 drinks for males) [in the past 30 days] in 2022. Data obtained from the 2022 Minnesota Student Survey.¹

Overall, alcohol use among Minnesota youth has been declining for the past 10 years for students in all grades. For example, in 2013, almost 17% of youth reported any 30-day alcohol use compared to about 9% of youth in 2022. Additionally, 9% of 8th grade students reported alcohol use in 2013 compared to 5% in 2022 and 16% of 11th grade students reported binge drinking in 2013 whereas less than 8% reported binge drinking in 2022.

Adverse Childhood Experiences (ACES)

Adverse Childhood Experiences (ACEs)(<https://www.cdc.gov/aces/about/index.html>) are potentially traumatic events that occur in childhood between birth to 17 years of age. These experiences can have long-term impacts on health, opportunity, and well-being.² About 64% of US adults reported that they had experienced at least one type of ACE before the age of 18.³

ACEs can include:

- Experiencing abuse
- Witnessing violence
- Growing up in a household with substance use or mental health problems
- Parental incarceration
- Not having enough food to eat
- Experiencing homelessness or unstable housing
- Experiencing Discrimination²

Disparities in ACEs

Although all youth are at risk of experiencing ACEs, some groups disproportionately experience more ACEs than others. These inequalities are linked to the historical, social, and economic environments in which some families live.^{2,3}

Among students in Minnesota, American Indian/Native American students were the most likely to report ACEs; 9% of American Indian/Native American male students reported four or more ACEs compared to 1.7% of Middle Eastern/North African male students who reported four or more ACEs. Among female students in Minnesota, a quarter (25.6%) of American Indian/Native American students reported four or more ACEs whereas about 5% of Asian or Asian American students reported four or more ACEs.

By understanding disparities among youth who experience ACEs, effective policies and programs can be developed to reduce associated risks such as greater risk of substance use and alcohol consumption.

Young people who reported **two** ACEs were 2.6 times more likely to report binge drinking at least once in the last 30 days than students who reported no ACEs. Young people who reported **four or more** ACEs were 6.1 times more likely to report binge drinking at least once in the last 30 days than students who reported no ACEs.

Additionally, ACEs can put youth at risk of experiencing alcohol-related harms. Research has shown that rates of alcohol-attributable hospital contacts were higher in adolescents with parents of low socioeconomic status compared to adolescents with parents of higher socioeconomic status.⁴

Protective factors can reduce youth alcohol use

Preventing alcohol use requires understanding and addressing protective factors. Protective factors are characteristics that may decrease the negative impacts of experiencing ACEs and prevent youth alcohol use.⁵

Protective factors can include:

- Safe school environment
- Participating in after-school activities
- Feeling parents/guardians care about them
- Caregivers who have steady employment
- Having positive friendships and peer networks⁴

Protective factors such as building on positive relationships and opportunities in a young person's life, can reduce the risk of youth engaging in substance use. In 2022, students who reported between five and eight protective factors were less likely to report using alcohol in the last 30 days (10%) compared to students that reported four or less protective factors (21%).

Adult role models

Having adult role models is important to youth. Students who reported having at least one adult to talk to were less likely to report alcohol use in the past 30 days (8%) than students who did not have at least one adult to talk to (16%).

After-school activities

Students who reported that their school or community offered a variety of programs for youth to participate in outside of the regular school day were less likely to report any 30-day alcohol use (8%) than students who reported their school or community did not offer after-school programs (17%).

After-school activities have shown to protect against drinking behaviors, but only to a point. For example, figure 2 demonstrates that moderate participation (one to three times per week) in different types of after-school activities such as sports teams, tutoring, student government, and religious activities can protect youth from drinking behaviors such as any alcohol use or binge drinking whereas no participation (zero activities per week) and more intense participation (four to eight activities per week) can increase the risk of drinking behaviors.

Participation in after-school activities can be protective against drinking behaviors, but over-involvement can increase risk.

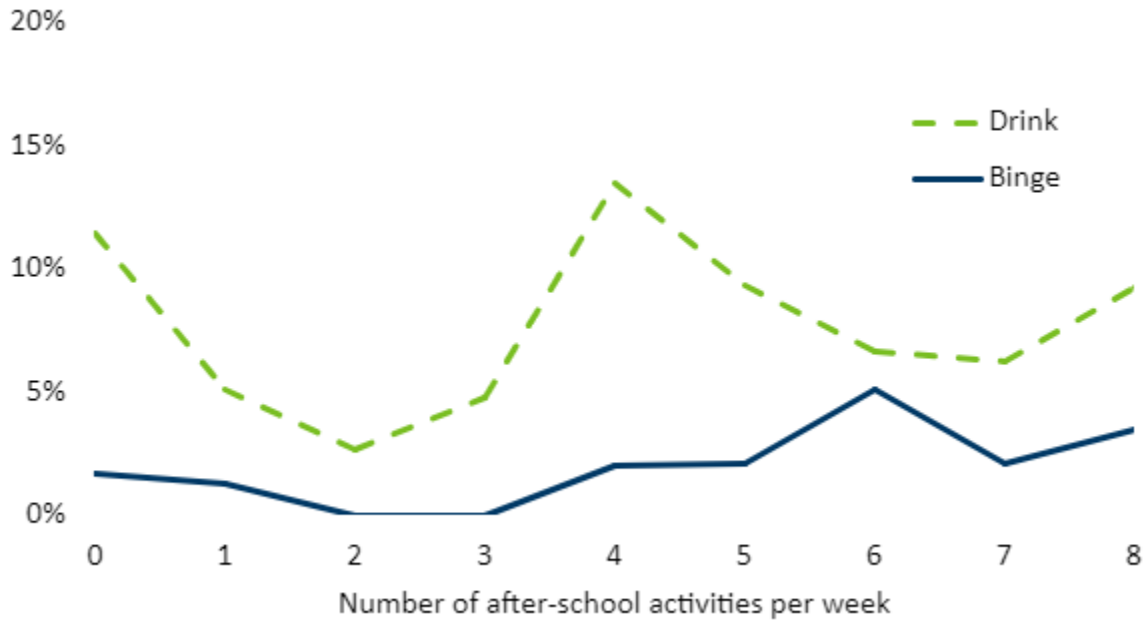


Figure 2: Percent of students who report any 30-day alcohol consumption and any 30-day binge (i.e., >4 drinks on an occasion for females, and >5 drinks for males) by number of after-school activities per week. Data obtained from the 2022 Minnesota Student Survey.¹

Recommended resources

[CDC - Adverse Childhood Experiences \(https://www.cdc.gov/aces/communication-resources/index.html\)](https://www.cdc.gov/aces/communication-resources/index.html)

- Resources from the CDC such as publications, data sources, trainings, and graphics on ACEs and protective factors.

[The Community Guide - Preventing Excessive Alcohol Use \(https://www.thecommunityguide.org/topics/excessive-alcohol-consumption.html\)](https://www.thecommunityguide.org/topics/excessive-alcohol-consumption.html)

- Evidence-based findings and resources from The Community Guide to prevent excessive alcohol consumption.

References

1. Minnesota Student Survey - MN Dept. of Health. <https://www.health.state.mn.us/data/mchs/surveys/mss/index.html>. Accessed 01 July 2024.
2. CDC. "About Adverse Childhood Experiences." *Adverse Childhood Experiences (ACEs)*, 11 July 2024, <https://www.cdc.gov/aces/about/index.html>.
3. Swedo EA, Aslam MV, Dahlberg LL, et al. Prevalence of Adverse Childhood Experiences Among U.S. Adults — Behavioral Risk Factor Surveillance System, 2011–2020. *MMWR Morb Mortal Wkly Rep* 2023;72:707–715. DOI: <http://dx.doi.org/10.15585/mmwr.mm7226a2>.

ROLE OF PROTECTIVE FACTORS

4. Janne S. Tolstrup, Sofie Kruckow, Ulrik Becker, Ove Andersen, Susan M. Sawyer, Srinivasa Vittal Katikireddi, Sanne Pagh Møller, Socioeconomic inequalities in alcohol-related harm in adolescents: a prospective cohort study of 68,299 Danish 15–19-year-olds, *eClinicalMedicine*, Volume 62, 2023, 102129, ISSN 2589-5370, <https://doi.org/10.1016/j.eclinm.2023.102129> (<https://www.sciencedirect.com/science/article/pii/S2589537023003061>)
5. CDC. “Risk and Protective Factors.” *Adverse Childhood Experiences (ACEs)*, 11 July 2024, <https://www.cdc.gov/aces/risk-factors/index.html>.

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