

Somerville Health Survey

Summary Report from the 2021 Pulse Check

SUBMITTED TO

The City of Somerville, Massachusetts

SUBMITTED BY

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Introduction

Background

In May of 2021, 821 Somerville middle school students (grades 6-8) and 601 Somerville high school students (grades 9-12) took part in the 2021 Somerville Health Survey Pulse Check to capture vital information related to health status and certain behaviors that put the health of Somerville students at risk. Somerville Public Schools engaged with John Snow, Inc. (JSI), a public health consulting firm with expertise in survey administration, to support this initiative. JSI and Somerville Public Schools worked to develop a targeted health survey (pulse check) based on past Somerville health surveys, the Center for Disease Control and Prevention (CDC) Youth Risk Behavior Survey (YRBS), and the Massachusetts Department of Public Health's Youth Health Survey (YHS).

Survey Content

The Somerville Health Survey Pulse Check asked students to report risk behaviors that contribute to the leading causes of death, disability, and social problems among youth and adults. Six major health behaviors that are related to the leading causes of illness and death among youth in the United States have been identified and categorized into the following domains:

- Behaviors that contribute to unintentional injuries and violence
- Behaviors related to mental health
- Smoking and tobacco use
- Alcohol and other drug use
- Sexual behaviors related to unintended pregnancy and sexually transmitted infections (STIs)
- Unhealthy dietary behaviors and physical inactivity.

In addition, given the unique circumstances related to the COVID-19 public health emergency, questions were added this year to gather relevant information to assess the impact of COVID-19 and put the consequences of this emergency in the appropriate context.

Survey Administration & Consent Process

Once the survey content was finalized, JSI designed self-administered, online surveys for the middle and high school using a nationally recognized, specialized survey platform called Alchemer (formerly SurveyGizmo). In addition to English, the survey was translated into Spanish, Portuguese, and Haitian. JSI then worked with each school to develop a survey administration plan and schedule. Schools were given a period of 2 weeks to administer surveys (between late April and early May 2021). Survey administration occurred over 1 to 5 day period, during the students' regular class time. Given the COVID-19 public health emergency, the 2021 survey process was typically administered while students were participating in remote learning, although some students take it in the school setting.

Prior to administration, Somerville was provided assistance with respect to implementing the student opt-out process, confidentiality practices, and other procedures to ensure the quality and integrity of the data collection process. Schools obtain passive parental permission, and parents are mailed a form explaining the purpose of the survey and given the opportunity to have their child opt out of taking it. JSI is wholly responsible for protecting data and ensuring student confidentiality. The surveys are considered anonymous in that students are not asked to provide their names and no identifying information (e.g., Geodata, IP address) is collected. Individual student surveys are never shared, but are combined to create school and district datasets.

Introduction

Data Cleaning & Analysis

Online administration of the survey allowed for results to be immediately transferred to JSI's secure computer servers, where the data were aggregated and analyzed using SAS 9.4 (SAS Institute Inc., Cary, NC). Overall rate of completion was checked for each survey. Records with fewer than 30 valid responses for high schools and fewer than 25 responses for middle schools (shorter overall survey length) were removed. Logical edits on each questionnaire were performed and responses that conflicted in logical terms were both set to missing. A descriptive analysis of survey responses was conducted.

Purpose of Report

The purpose of this report is to highlight key findings for each of the six core domains and the COVID-19 questions. Data is reported and analyzed for all students in Somerville, as well as by race, gender identity, school (middle or high school), and grade when relevant. The report includes a brief narrative summary of each domain to provide national context. This narrative is then followed by a series of bulleted statements and graphs, which together summarize the survey finding by domain. The information provided is meant to highlight key themes and provide a perspective on how the data compares to prior year data. Somerville has been provided detailed data outputs and raw reports that allow them to look more carefully at data from each question on the survey, including information that allows the school districts to analyze their data by specific demographic cohorts, such as for girls, boys, different racial categories, middle school students, or high school students. The 2021 school year was unprecedented with the impact of the pandemic, and therefore, comparisons to state and national data were not included this year.

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Respondent Characteristics

How do Somerville students describe themselves?

A total of 821 middle school (MS) and 601 high school (HS) students were included in the Somerville Health Survey Pulse Check analysis. Tables 1 and 2 show the distribution of survey respondents by grade, race, ethnicity, and gender.

Table 1. Distribution of Somerville MS respondents

Total	821	100%
Grade		
6 th Grade	275	34.0%
7 th Grade	270	33.4%
8 th Grade	263	32.6%
Race/Ethnicity		
AI/AN*	23	2.9%
Asian	32	4.1%
Black or African American	69	8.8%
NH/PI**	3	0.4%
White	290	36.8%
Other	284	36.0%
Multi-Racial	88	11.2%
Hispanic/Latino	338	42.7%
Gender		
Male	418	52.0%
Female	345	42.9%
Genderqueer	31	3.9%
I don't know	10	1.2%

*American Indian/Alaska Native
 **Native Hawaiian/Pacific Islander

Table 2. Distribution of Somerville HS respondents

Total	601	100%
Grade		
9 th Grade	201	33.8%
10 th Grade	163	27.4%
11 th Grade	133	22.4%
12 th Grade	97	16.3%
Race/Ethnicity		
AI/AN*	4	0.7%
Asian	41	7.0%
Black or African American	60	10.3%
NH/PI**	2	0.3%
White	268	46.1%
Other	153	26.3%
Multi-Racial	24	9.3%
Hispanic/Latino	245	41.7%
Gender		
Male	280	47.1%
Female	282	47.5%
Genderqueer	24	4.0%
I don't know	8	1.4%

*American Indian/Alaska Native
 **Native Hawaiian/Pacific Islander

Key Findings

Coronavirus Pandemic

Beginning in early 2020, the United States experienced the coronavirus (COVID-19) pandemic. While the extent of the pandemic's effects on adolescents is unknown, early evidence shows that it has had a profound effect on student's mental and physical well-being. Major findings conclude that more than one-quarter of students (29%) say they do not feel connect at all to school adults.¹ A similar percentage do not feel connected to their classmates or school community. Additionally, more than 1 in 4 young people report sleeping fewer hours because of worry, loss of self-confidence, and feelings of unhappiness, depression, and constant strain. The distress that students face has been greatly exacerbated by COVID-19, however, it follows the historical trend of increasing depression, anxiety, and stress experienced by young people.

Pulse Check Summary

- Over one-third of HS students and almost one-fourth of MS students reported that they struggled with their mental health most of the time or always during the coronavirus pandemic.
- Genderqueer students were significantly more likely to report struggling with their mental health.
- While the majority of students did not experience adverse financial or health-related effects of the coronavirus pandemic, **20% of HS students and 21% of MS students had a family member or close friend who died.**
- More than half of HS students and almost half of MS students reported experiencing feelings of anger, sadness, worry, numbness, or frustration in reaction to the coronavirus pandemic.
- Almost one-fourth of HS students and 10% of MS students reported that they did not feel close to people in their school.

Core Survey Questions Analyzed

- During the coronavirus pandemic, how often did you struggle with your mental health?
- During the past 12 months, did any of these things happen to you?
- Do you agree or disagree that you feel close to people at your school?
- During the coronavirus pandemic, have you experienced any of the following?

¹ <https://www.americaspromise.org/press-release/national-survey-high-school-students-during-covid-19-finds-widespread-negative-impact>

Key Findings

Coronavirus Pandemic

During the coronavirus pandemic, how often did you struggle with your mental health?

- **Overall:** Over one-third of HS students and about one-fifth of MS students reported that they struggled with their mental health (most of the time or always) during the coronavirus pandemic.
- **Race/Ethnicity:** Multi-Racial students were more likely to report that they struggled with their mental health.
- **Gender:** Genderqueer students were significantly more likely to report that they struggled with their mental health.
- **Grade:** Student reports of struggling with their mental health increased by grade.

Figure 1. Percent of Somerville students who reported that they struggled with their mental health (most of the time or always) during the coronavirus pandemic

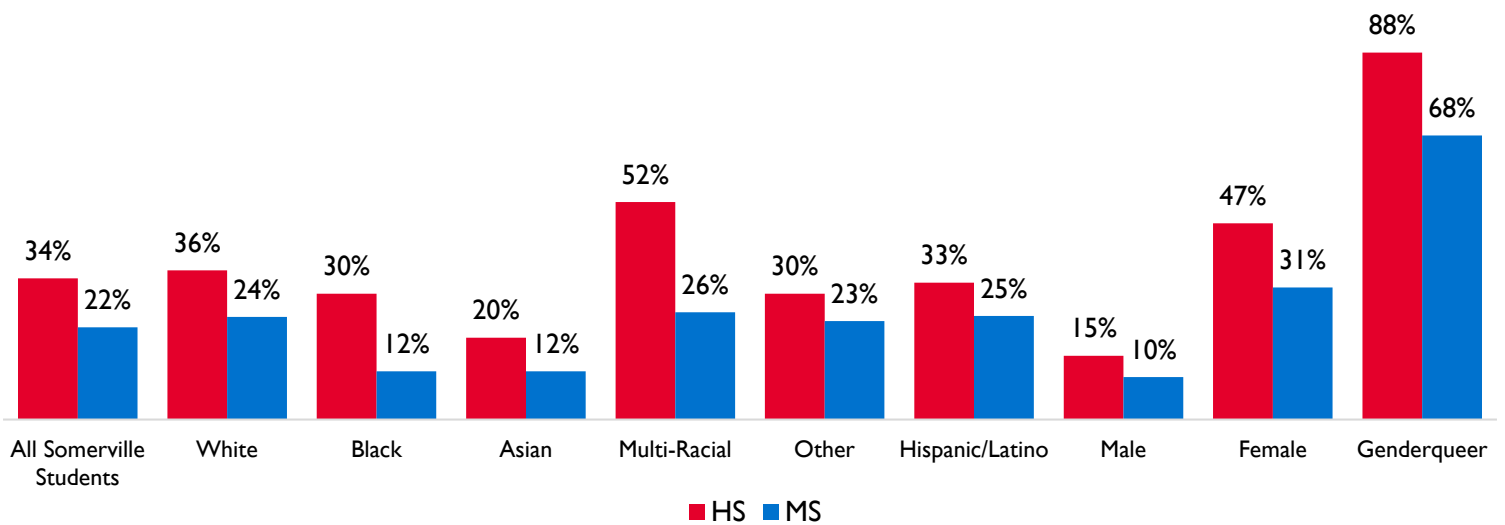
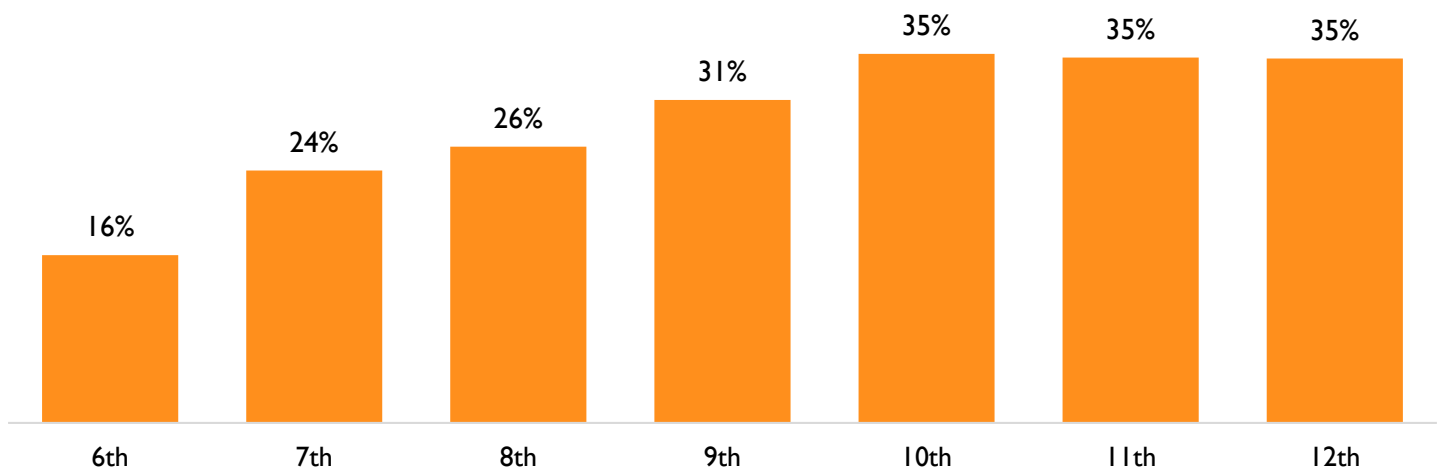


Figure 2. Percent of Somerville students who reported that they struggled with their mental health (most of the time or always) during the coronavirus pandemic by grade



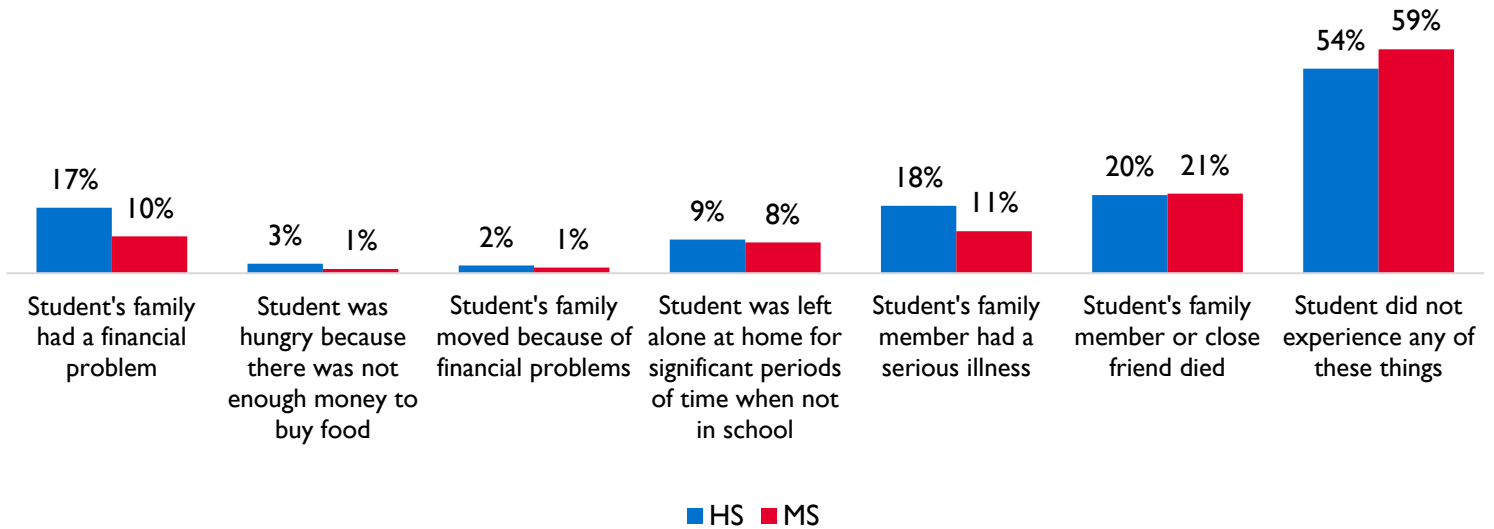
Key Findings

Coronavirus Pandemic

During the past 12 months, did any of these things happen to you?

- **Overall:** HS and MS students were most likely to report that they did not experience adverse effects of the coronavirus pandemic (54% and 59%, respectively), followed by the death of a family member or close friend (20% and 21%, respectively) and a family member having a serious illness (18% and 11%, respectively).

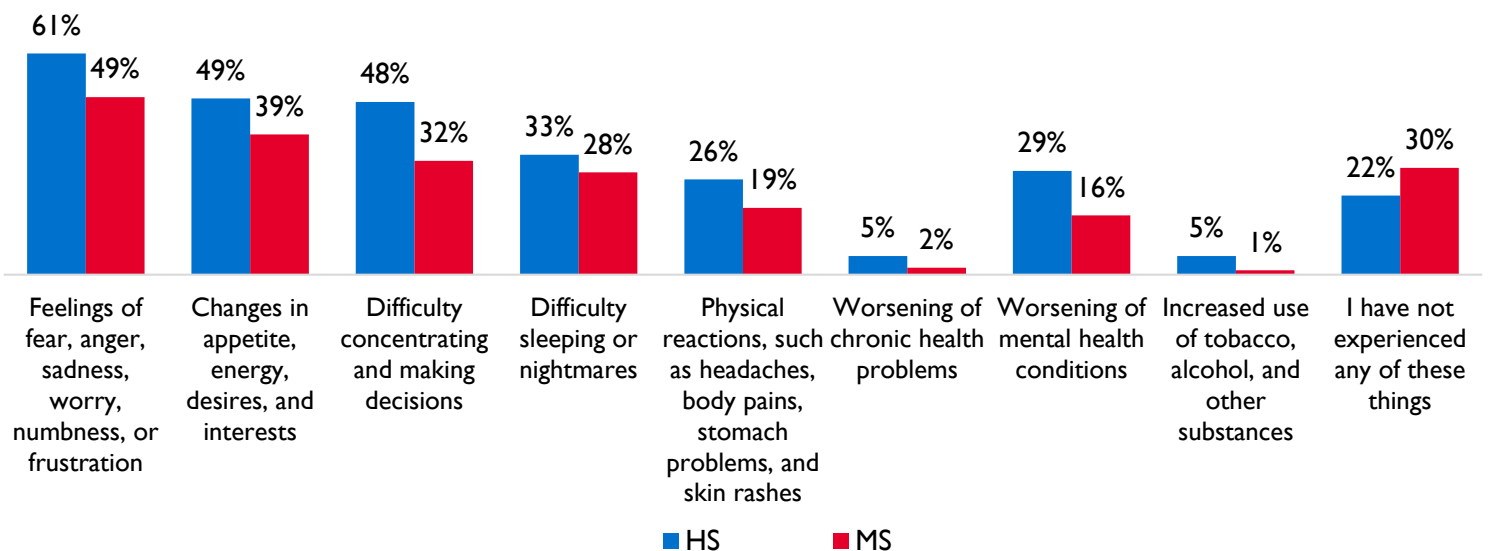
Figure 3. Percent of Somerville students who reported that their family experienced adverse financial or health effects from the coronavirus pandemic



During the coronavirus pandemic, have you experienced any of the following?

- **Overall:** HS students are more likely than MS students to report having experienced emotional and physical stress reactions to the coronavirus, as well as increased substance use.

Figure 4. Somerville student reactions to the coronavirus pandemic



Key Findings

Coronavirus Pandemic

During the coronavirus pandemic, have you experienced any of the following? (Continued)

- **Gender:** Female and genderqueer students were more likely to report negative reactions to coronavirus pandemic than male students.

Table 3. Somerville student reactions to the coronavirus pandemic by gender

	High School			Middle School		
	Male	Female	Genderqueer	Male	Female	Genderqueer
Feelings of fear, anger, sadness, worry, numbness, or frustration	48%	73%	100%	35%	65%	81%
Changes in appetite, energy, desires, and interests	33%	63%	83%	27%	53%	55%
Difficulty concentrating and making decisions	33%	60%	88%	20%	42%	71%
Difficulty sleeping or nightmares	22%	44%	58%	18%	39%	58%
Physical reactions, such as headaches, body pains, stomach problems, and skin rashes	14%	37%	54%	10%	26%	48%
Worsening of chronic health problems	3%	7%	21%	1%	2%	6%
Worsening of mental health conditions	14%	39%	75%	9%	23%	48%
Increased use of tobacco, alcohol, and other substances	4%	5%	13%	0.2%	2%	3%
I have not experienced any of these things	34%	13%	0%	42%	18%	3%

Key Findings

Coronavirus Pandemic

Do you agree or disagree that you feel close to people at your school?

- **Overall:** Almost one-fourth of HS students and 10% of MS students report that they do not (disagree or strongly disagree) feel close to people in their school.
- **Race/Ethnicity:** Multi-Racial HS students and Black MS students were more likely to report not feeling close to people in their school.
- **Gender:** Genderqueer students were more likely to report not feeling close to people at their school.
- **Grade:** MS students are more likely than HS students to report feeling close to people in their school.

Figure 5. Percent of Somerville students who reported that they do not (disagree or strongly disagree) feel close to people in their school

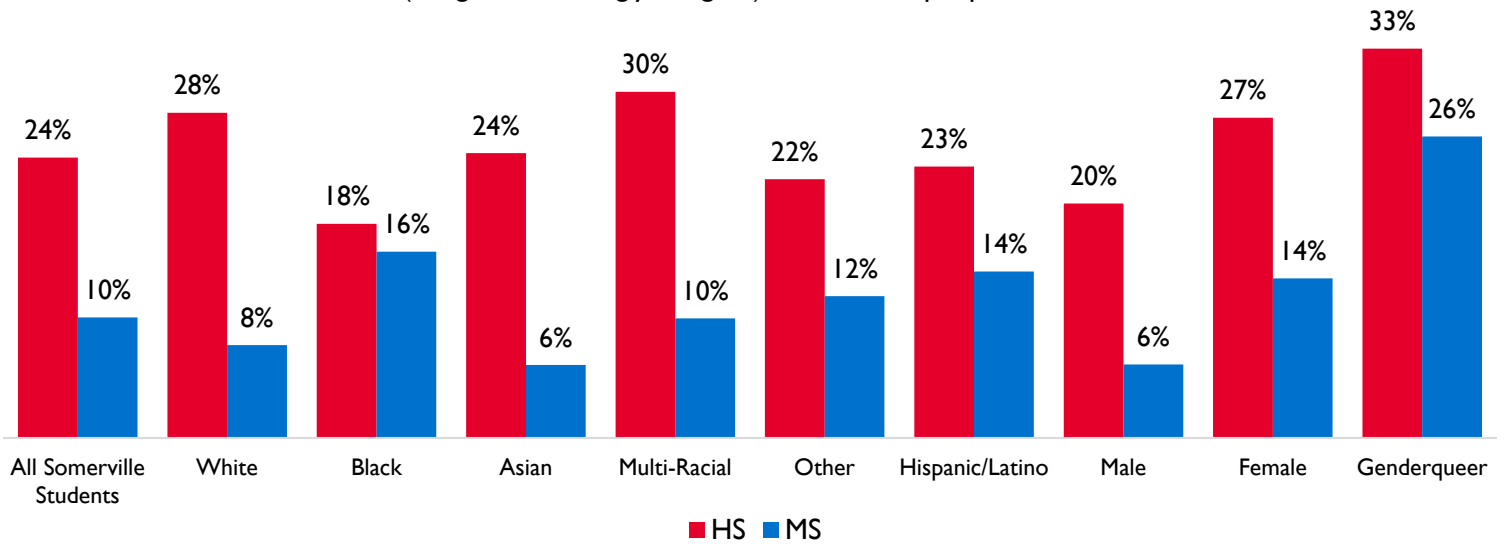
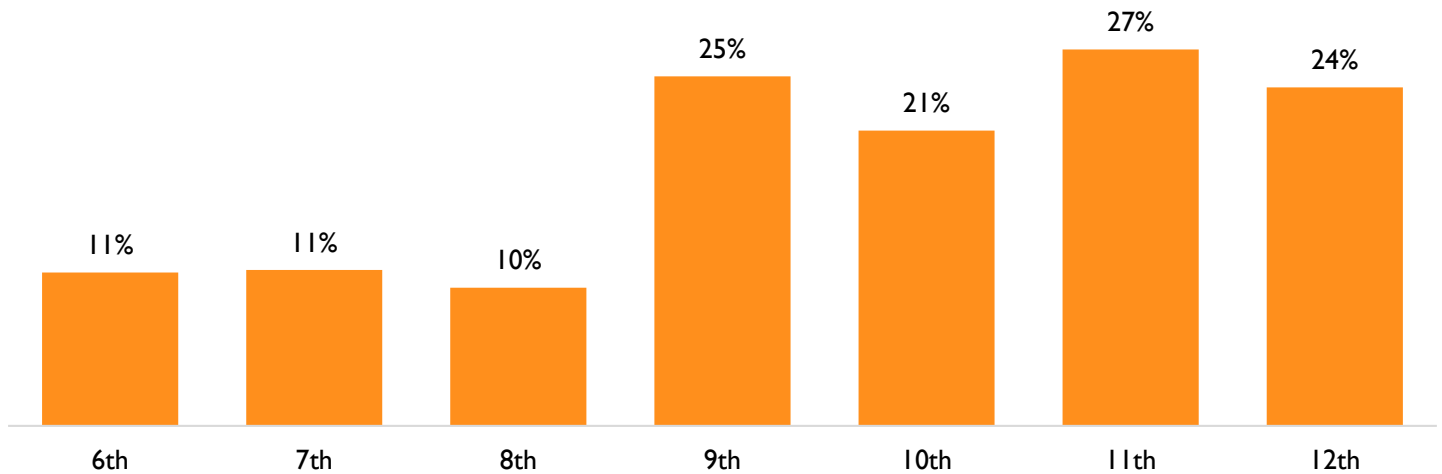


Figure 6. Percent of Somerville students who reported that they do not (disagree or strongly disagree) feel close to people in their school by grade



Key Findings

Substance Use

Studies show that the earlier substance use begins, the more likely an individual will continue to use substances and develop a substance use problem. Adolescents use alcohol, marijuana, and tobacco most commonly with about two-thirds of students across the country having tried alcohol by 12th grade.¹ From 2017 to 2019, the national percentage of teenagers who said they have vaped nicotine in the past 12 months roughly doubled for 8th graders from 7.5% to 16.5%, for 10th graders from 15.8% to 30.7% and for 12th graders from 18.8% to 35.3%.² While rates steadied in 2020, they have not decreased and remain a cause for health concern amongst youth.³

As the COVID-19 pandemic continues, it remains to be analyzed whether reduced ability to interact with peers and having access to other sources of drugs may be a mitigating factor in youth substance use.

Pulse Check Summary

- Overall, lifetime and current (past 30 days) use increased as students increased in grade.
- Alcohol was most commonly used by HS and MS students. About one-third of HS students report having drunk alcohol in their lifetime.
- Current use of substances has decreased across years.
- Current use of substances varied by race/ethnicity across substances, but Asian HS students were less likely to report overall use. Multi-Racial HS students were more likely to report current alcohol use.
- HS and MS students perceived using non-prescribed medication as the most risky and marijuana as the least risky.
- Perceived access of substances by HS students has decreased across years. Electronic vapor products were perceived as the easiest to access.
- Students were most likely to be exposed to cigarettes, marijuana, and alcohol in their household.

Survey Questions Analyzed

- **Students' use of substances**
 - How old were you when you used a substance for the first time (lifetime use)? (Asked for each substance)
 - During the past 30 days, on how many days did you use part of all of a substance (current use)? (Asked for each substance)
 - During the past 30 days, on how many days did you have 4 or more drinks of alcohol in a row (binge drinking)?
- **Risk of substance use**
 - How much do you think people risk harming themselves physically or in other ways if they use a substance? (Asked for each substance)
- **Access and exposure to substances**
 - How did you usually get the substance that you used?
 - If you wanted to get a substance, how easy would it be?
 - Is there anyone (other than you) living in your household who [uses the following substances]?

¹ <https://www.cdc.gov/ncbddd/fasd/features/teen-substance-use.html>

² <https://teens.drugabuse.gov/teachers/stats-trends-teen-drug-use>

³ Ibid.

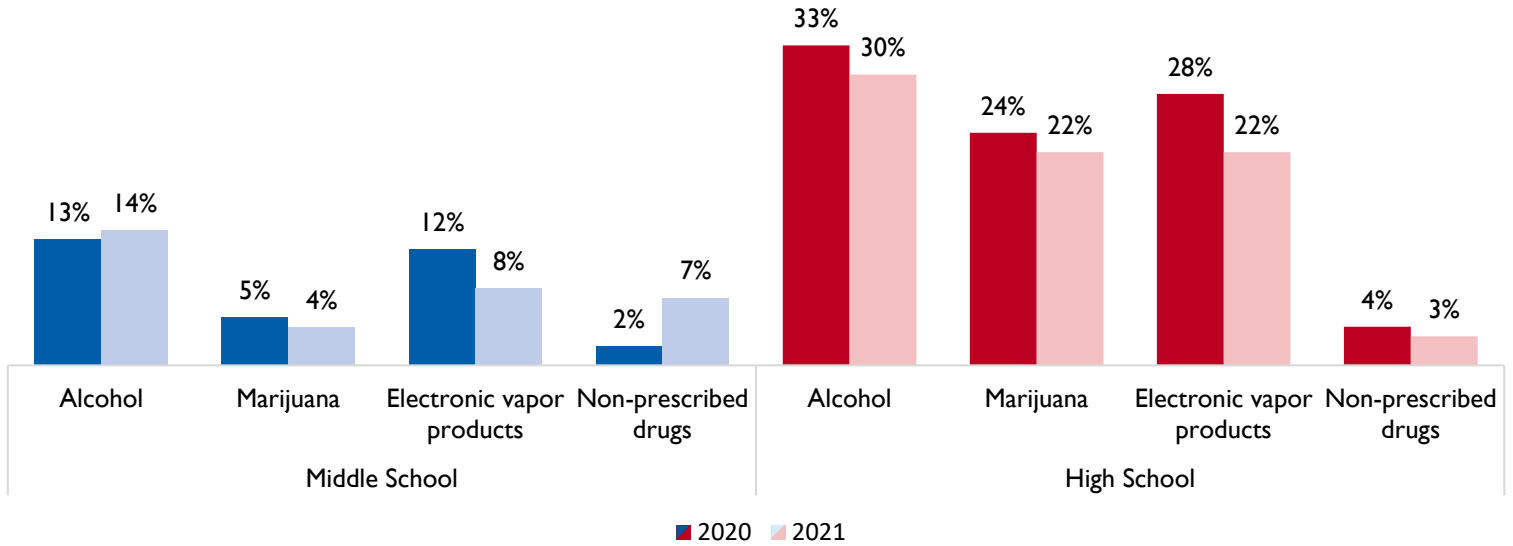
Key Findings

Substance Use

Lifetime use

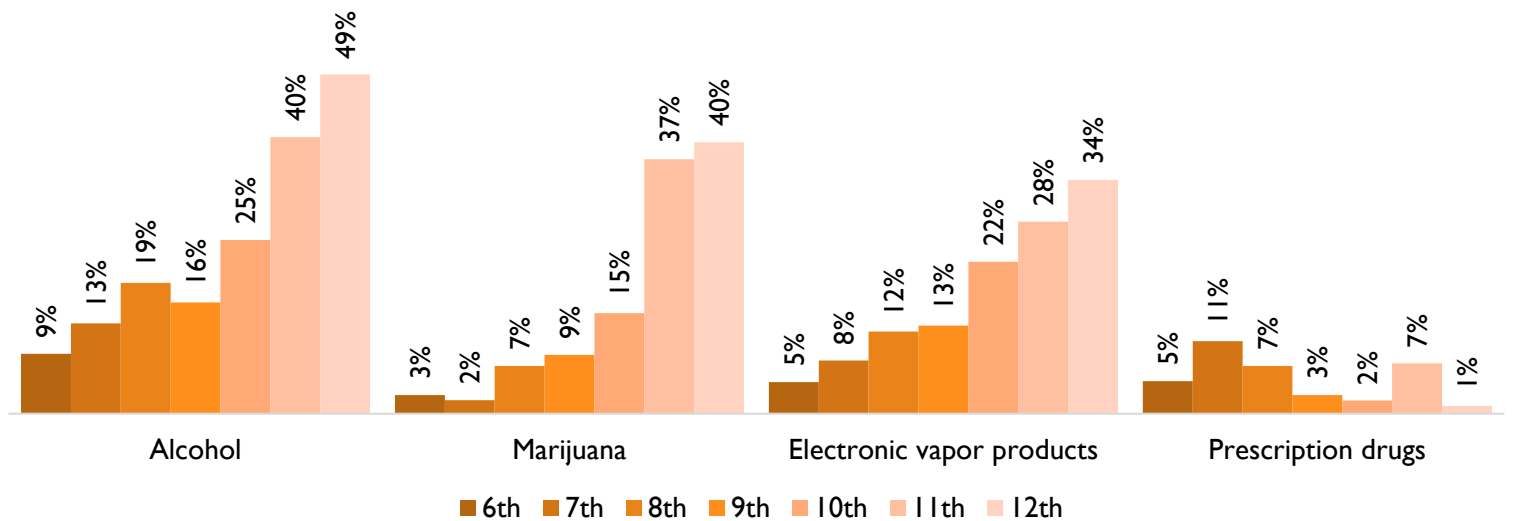
- **Overall:** Alcohol is the most reported lifetime substance used by both HS and MS students.
- **Trend:** Reported lifetime substance use varied by substance for MS students and decreased for HS students compared to prior years.

Figure 7. Percent of Somerville students reporting lifetime use of substances



- **Overall:** The percent of students reporting lifetime use of any substance increases by grade.
- **Trend:** Reported lifetime substance use by grade is similar to prior years.

Figure 8. Percent of Somerville students reporting lifetime use of substances by grade



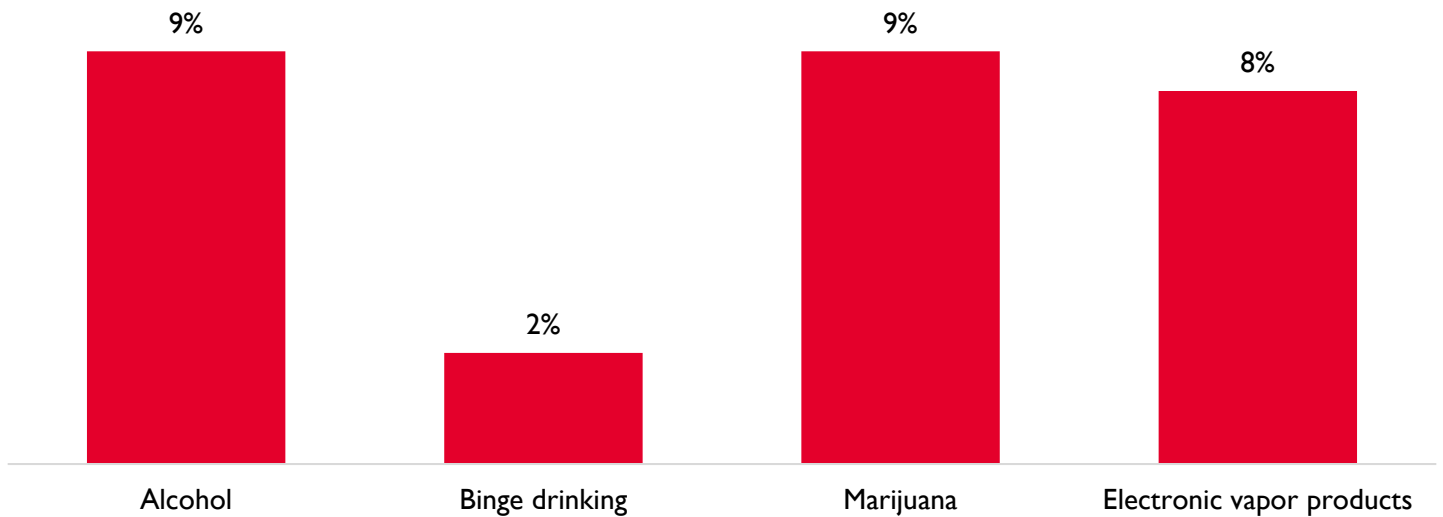
Key Findings

Substance Use

Current (past 30 day) use

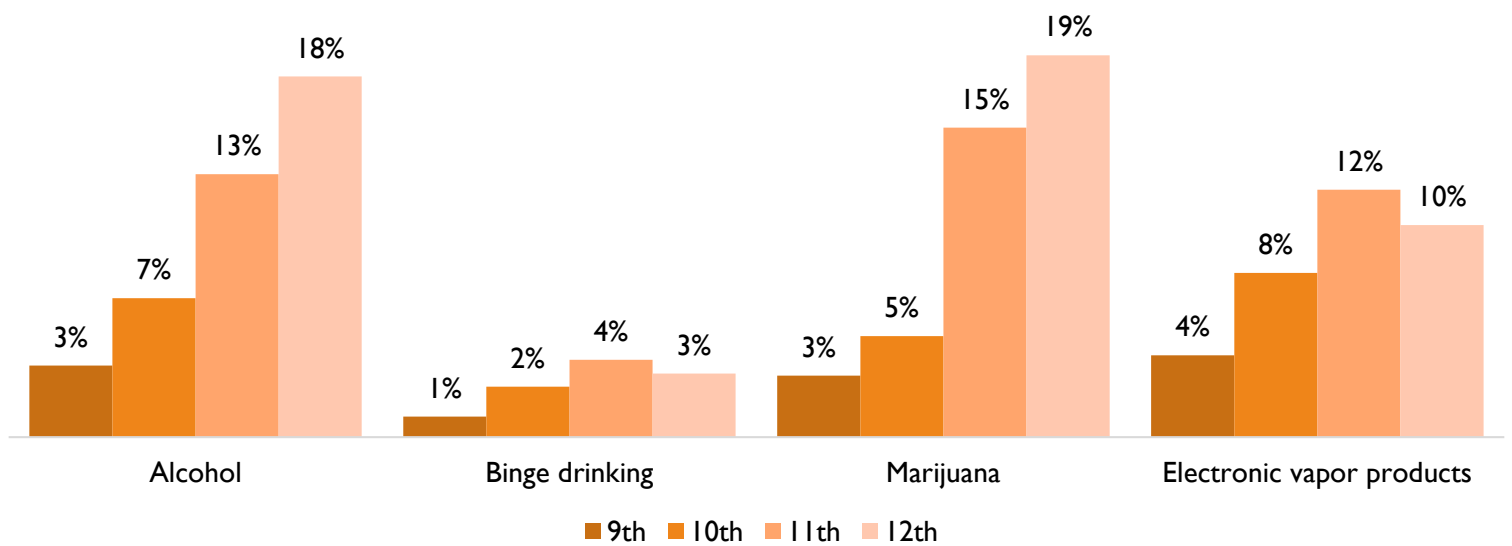
- **Overall:** Somerville HS students reported similar rates of current alcohol, marijuana, and electronic vapor products use.

Figure 9. Percent of Somerville HS students reporting current (past 30 day) use of substances



- **Grade:** Generally, the percent of Somerville HS students reporting current use of any substance increases by grade.

Figure 10. Percent of Somerville HS students reporting current (past 30 day) use of substances by grade



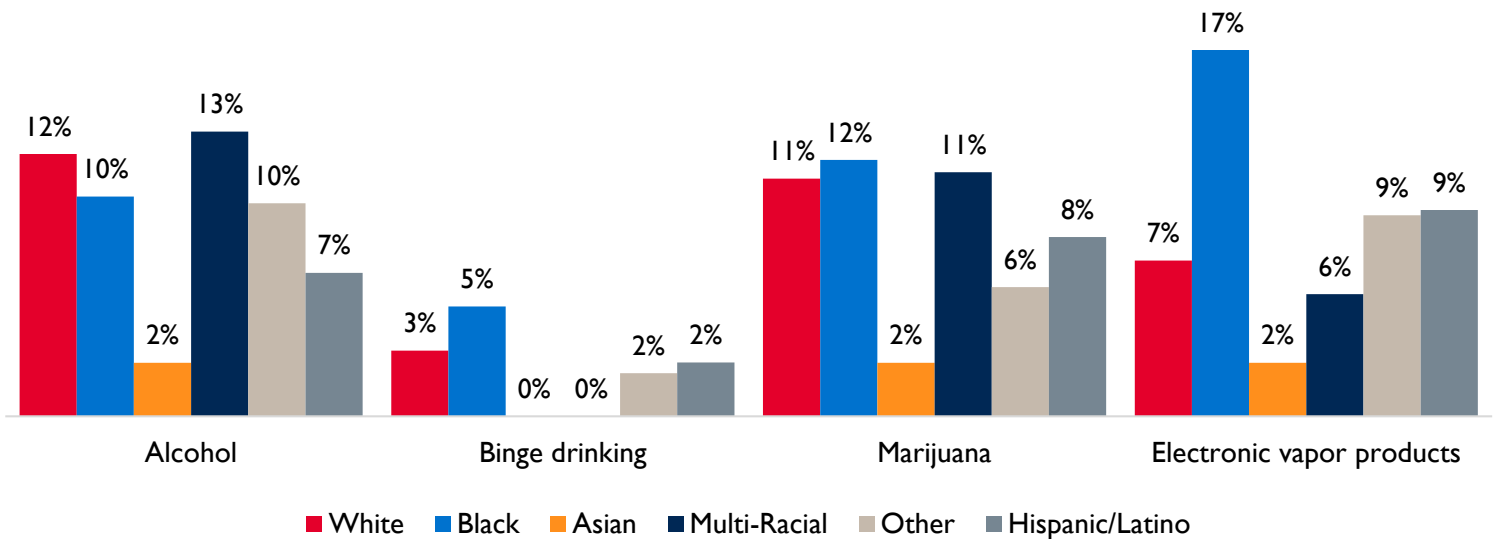
Key Findings

Substance Use

Current (past 30 day) use

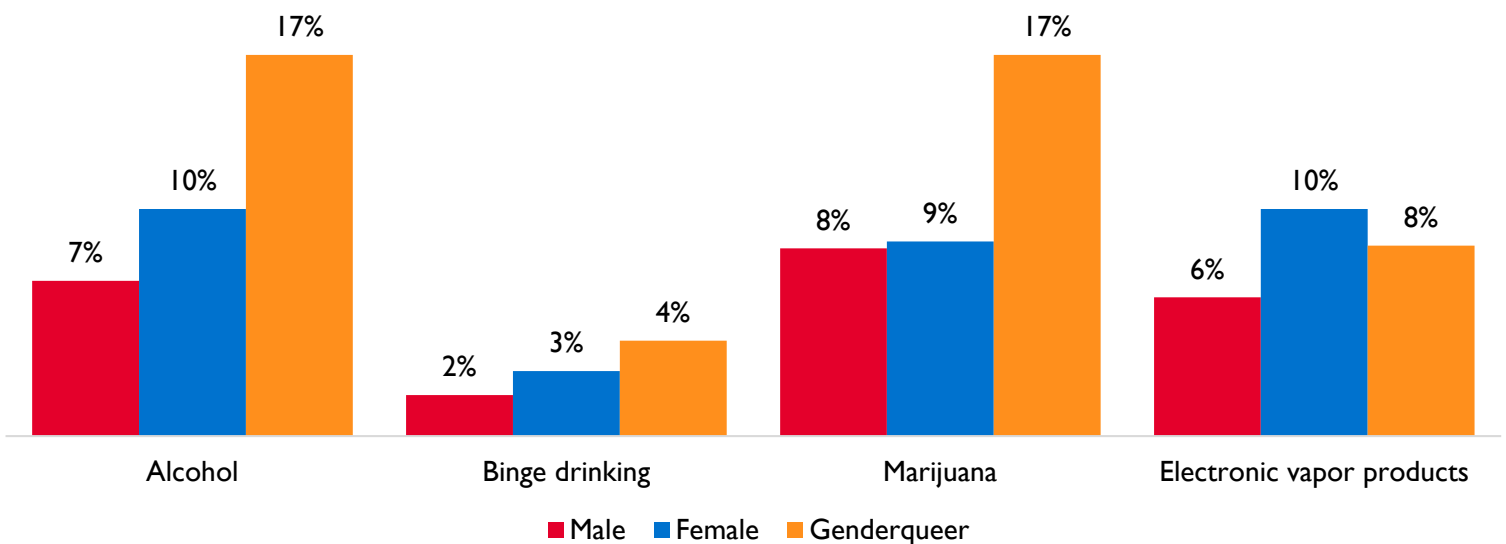
- **Race/Ethnicity:** Use of substances varied across race/ethnicity. Asian students were least likely to report current overall substance use.

Figure 11. Percent of Somerville HS students reporting current (past 30 day) use of substances by race/ethnicity



- **Gender:** Overall, genderqueer students were more likely to report current substance use, followed by female and male students.

Figure 12. Percent of Somerville students reporting current (past 30 day) use of substances by gender



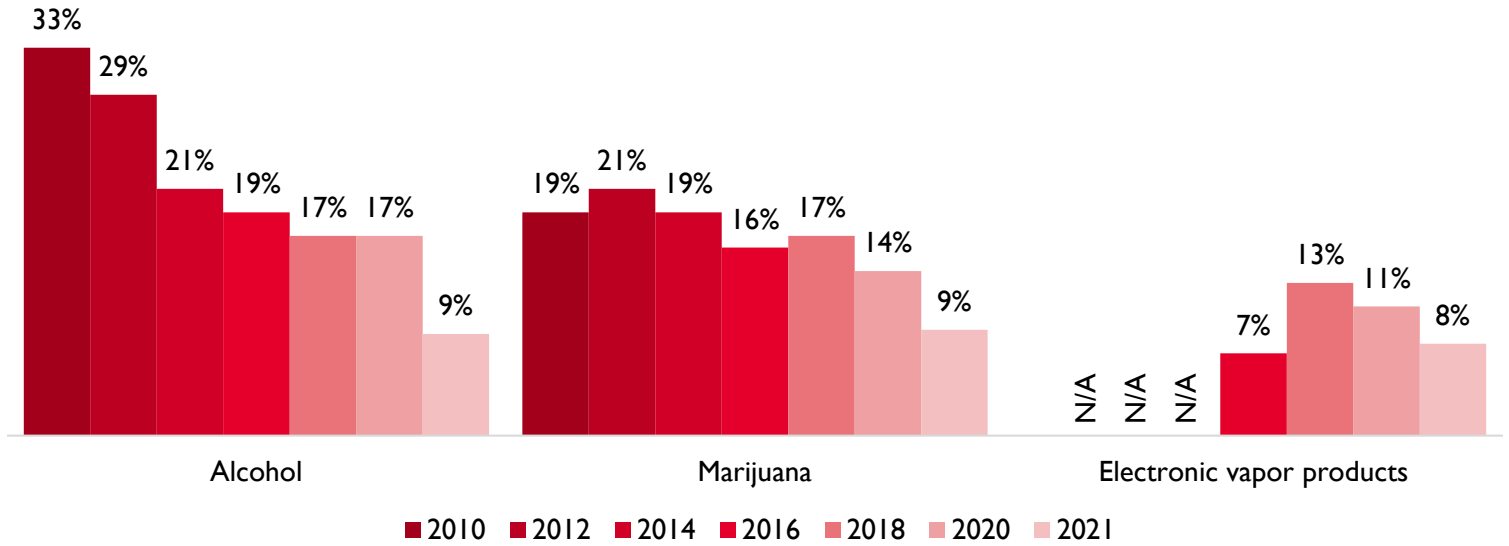
Key Findings

Substance Use

Current (past 30 day) use

- **Trend:** Current use of substances by Somerville HS students has decreased over time.

Figure 13. Percent of Somerville HS students reporting current (past 30 day) use of substances across years



Key Findings

Substance Use

How much do you think people risk harming themselves (physically or in other ways) if they use the following substances?

- **Overall:** Somerville students perceived using prescription drugs that are not prescribed to them as the most risky, followed by smoking one or more packs of cigarettes per day, and using electronic vapor products.
- **Trend:** The perceived harm of most substances was similar over time, however the perceived risk of marijuana use has decreased significantly.

Figure 14. Percent of Somerville HS students reporting perceived risk (moderate risk or great risk) of use of substances across years

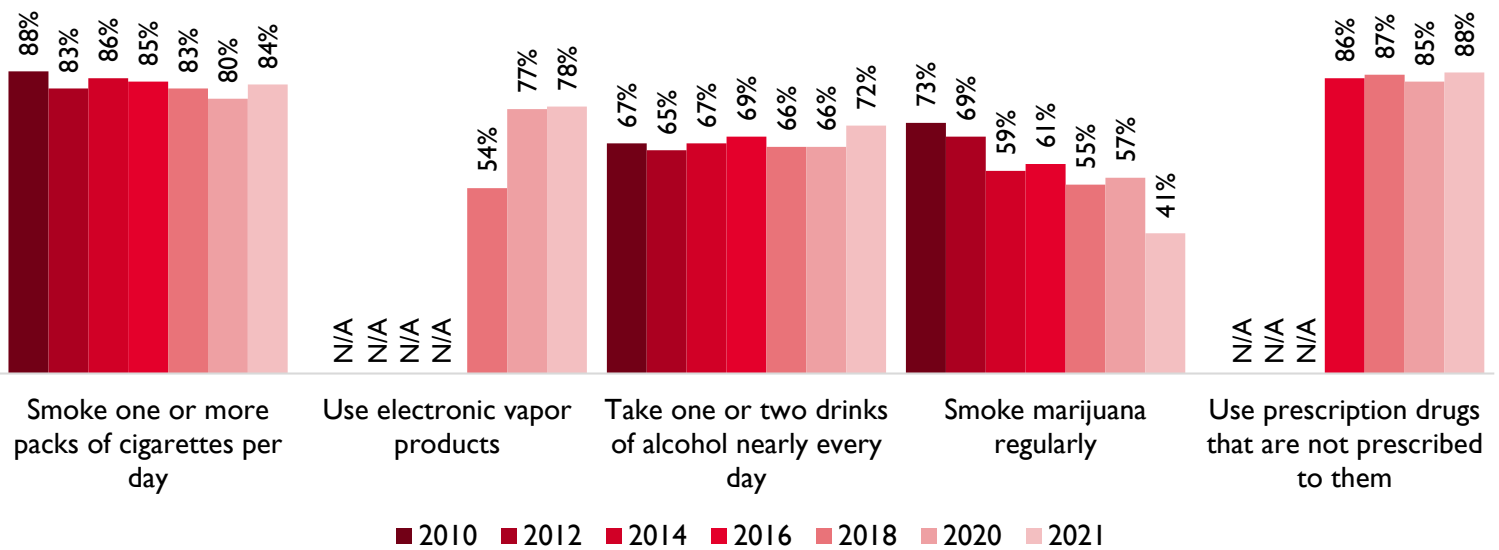
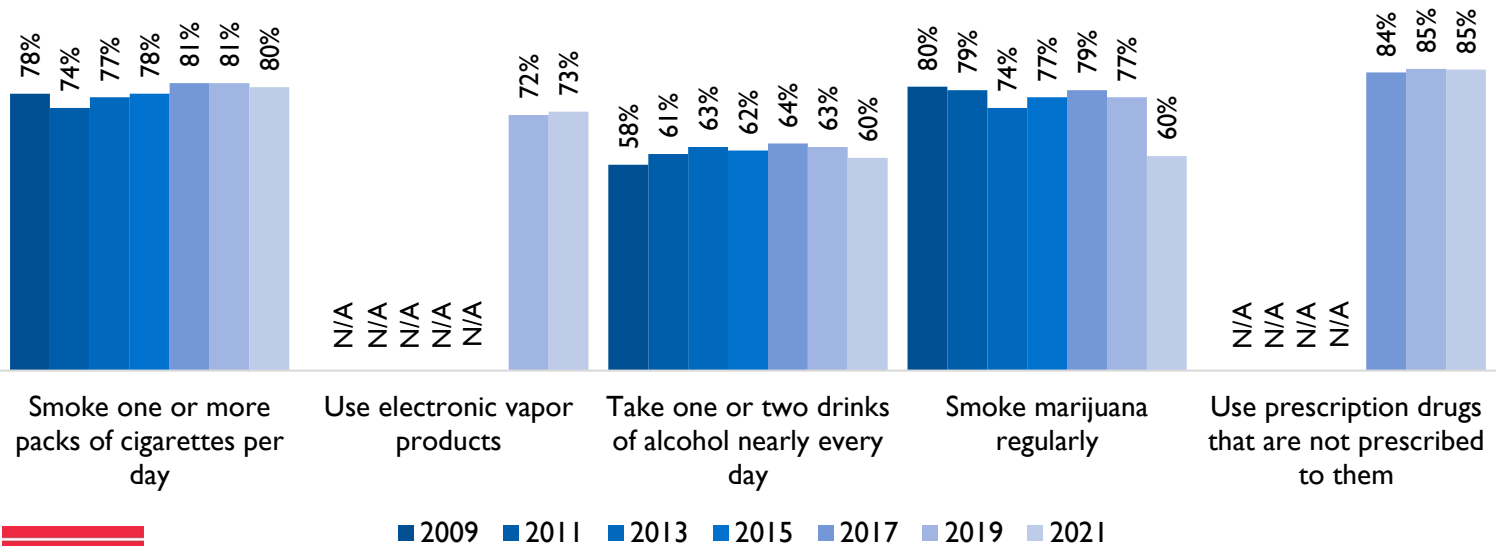


Figure 15. Percent of Somerville MS students reporting perceived risk (moderate risk or great risk) of use of substances across years



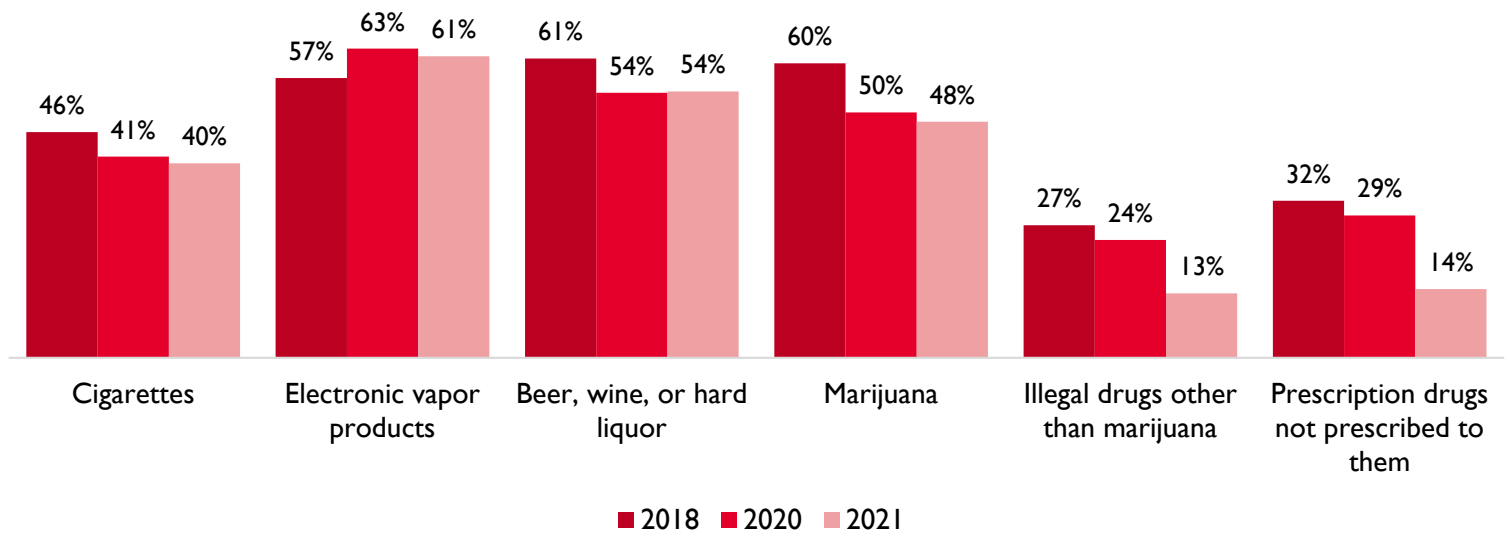
Key Findings

Substance Use

If you wanted to get the following substances how easy would it be?

- **Overall:** Somerville HS students perceived electronic vapor products as the easiest to obtain, followed by alcohol, marijuana, cigarettes, prescription drugs not prescribed to them, and illegal drugs other than marijuana.
- **Trend:** Overall, perceived access to obtaining substances decreased between 2018 and 2021 with the largest decrease in the ease of access to prescription drugs (32% in 2018 compare to 14% in 2021).

Figure 16. Percent of Somerville HS students reporting perceived ease (sort of easy or very easy) of obtaining substances across years



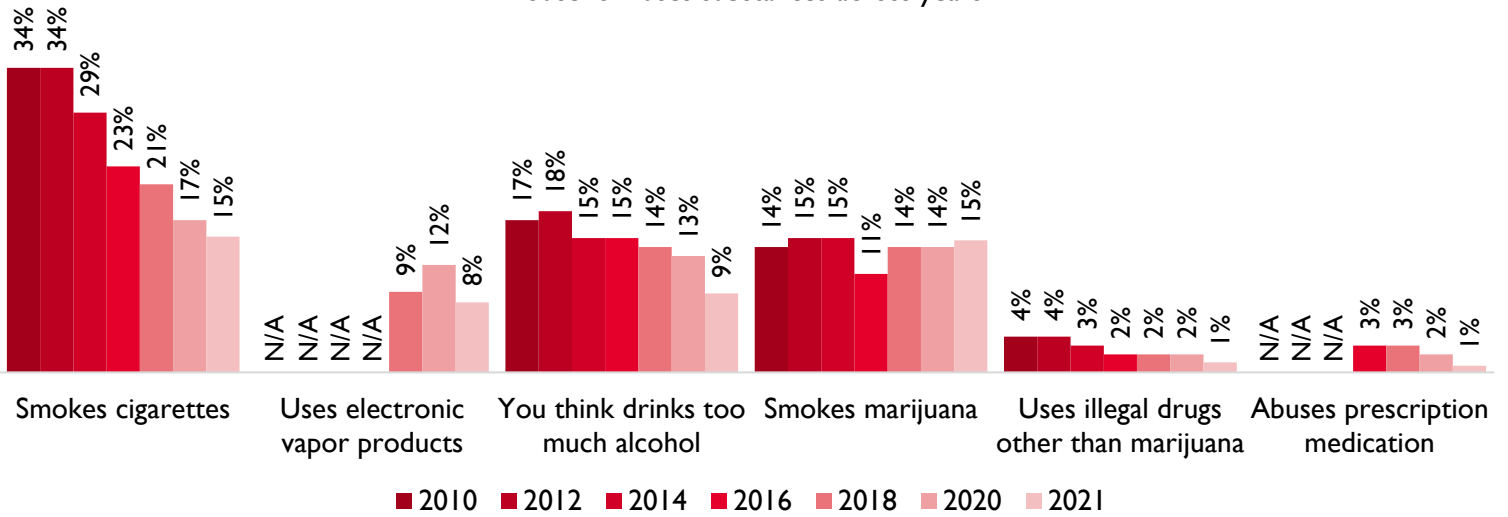
Key Findings

Substance Use

Other than you is there anyone living in your household who uses the following substances?

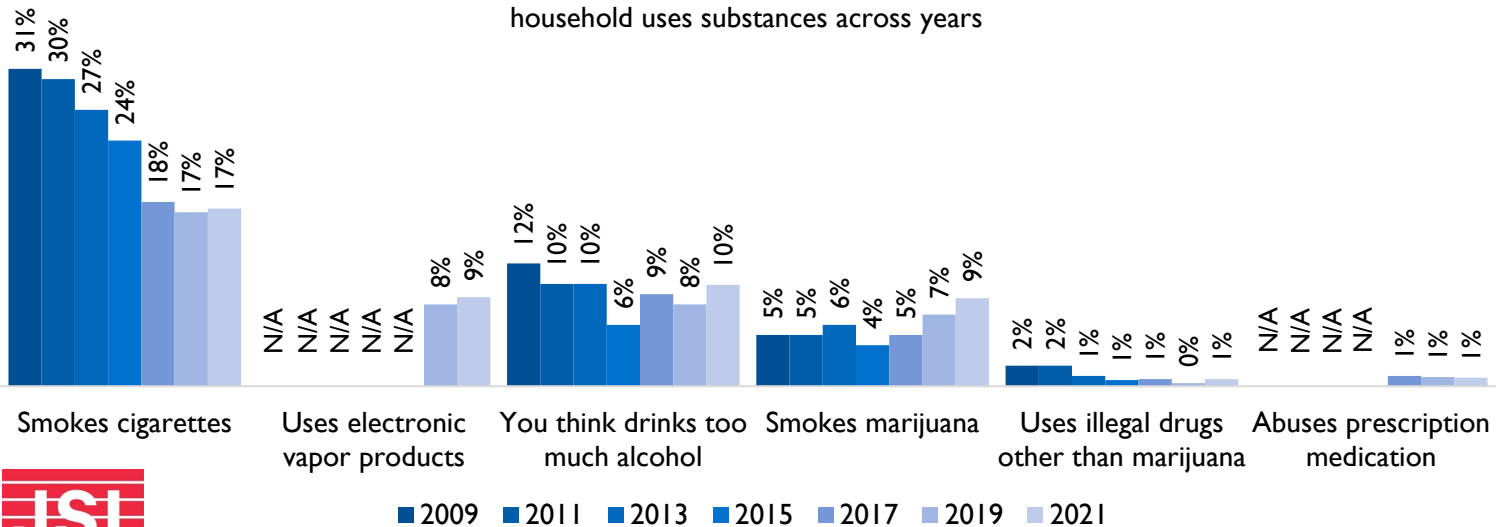
- Overall:** Somerville HS students were similarly likely to report living with someone who smokes cigarettes or marijuana (15%, respectively) followed by drinks too much alcohol (9%), uses electronic vapor products (8%), uses illegal drugs (1%), and uses prescription drugs not prescribed to them (1%).
- Trend:** Somerville HS students' exposure to substance use has relatively decreased over time, however exposure to marijuana remains at similar levels.

Figure 17. Percent of Somerville HS students reporting that someone in their household uses substances across years



- Overall:** Somerville MS students were most likely to report living with someone who smokes cigarettes (17%), followed by drinks to much alcohol (10%), smokes marijuana (9%), uses electronic vapor products (9%), uses illegal drugs (1%), and abuses prescription medication (2%).
- Trend:** Somerville MS students' exposure to substance use varies across substances over time. Exposure to cigarette smoking and use of illegal drugs have decreased, exposure to electronic vapor products and marijuana has increased, and exposure to prescription medication abuse and too much alcohol consumption is consistent with prior years.

Figure 18. Percent of Somerville MS students reporting that someone in their household uses substances across years



Key Findings

Unintentional Injury and Violence

Unintentional injuries are defined as accidental injuries where the harmful outcome was not sought, occurred in a short period of time, or normal body functions were blocked by external means. Some of the most common unintentional injuries result from motor vehicle crashes, falls, fires and burns, drowning, poisonings, and suffocations. According to a new analysis by CDC, between 1999-2016, mortality from all three forms of injury death – unintentional injury/accidents, suicide, and homicide – have increased for children and adolescents ages 10-19, after years of sharp decline.¹

This section also reports data on sexual or physical dating violence amongst students. Unhealthy relationship dynamics during adolescence can be detrimental to emotional development and lead to other long-term negative impacts on future relationships. Teen dating violence (TDV) occurs between two people in a close relationship and includes four types of behavior; physical violence, sexual violence, stalking, and psychological aggression. The CDC reports nationally, nearly 1 in 9 female teens and 1 in 13 male teens report experiencing physical dating violence in the last 12 months.² Primary prevention initiatives include early education about safe dating practices, problem-solving skills, and avoidance of risky behaviors. In the state of Massachusetts, 2010 Mass. Acts, Chap. 256 requires school districts to implement a specific policy to address teen dating violence in public schools.

Pulse Check Summary

- Overall, 5% of HS and 4% of MS students reported experiencing sexual violence in the past 12 months.
- Black HS and Hispanic/Latino MS students were more likely to report experiencing sexual violence.
- Genderqueer students were more likely to report experiencing sexual violence.
- Reports of electronic bullying decreased as students increased in grade.
- Genderqueer students were more likely to report being electronic bullying in the past 12 months.
- Electronic bullying in MS increased significantly in 2021 while electronic bullying in HS decreased significantly compared to prior years.

Survey Questions Analyzed

- **General**
 - During the past 12 months, how many times were you in a physical fight?
 - During the past 12 months, how many times did anyone force you to do sexual things that you did not want to do?
- **Dating violence**
 - During the past 12 months, how many times did someone you were dating or going out with force you to do sexual things that you did not want to do?
 - During the past 12 months, how many times did someone you were dating or going out with physically hurt you on purpose?
- **Bullying**
 - During the past 12 months, have you been electronically bullied?

¹ https://www.cdc.gov/nchs/pressroom/nchs_press_releases/2018/201806_Youth_Injury_Mortality.htm

² <https://www.ncsl.org/research/health/teen-dating-violence.aspx>

Key Findings

Unintentional Injury and Violence

Sexual violence and dating violence in the past 12 months

- **Overall:** Somerville HS and MS students reported low percentages of forced sexual activity by anyone. However, of the students who reported forced sexual activity by anyone, 56% of HS students and 42% of MS students reported experiencing sexual violence by someone they were dating or going out with.
- **Race/Ethnicity:** Black HS students and Hispanic/Latino MS students were more likely to experience sexual violence by anyone.
- **Gender:** Genderqueer students are more likely to experience sexual violence by anyone.

Figure 19. Percent of Somerville students who reported experiencing sexual or physical violence in the past 12 months

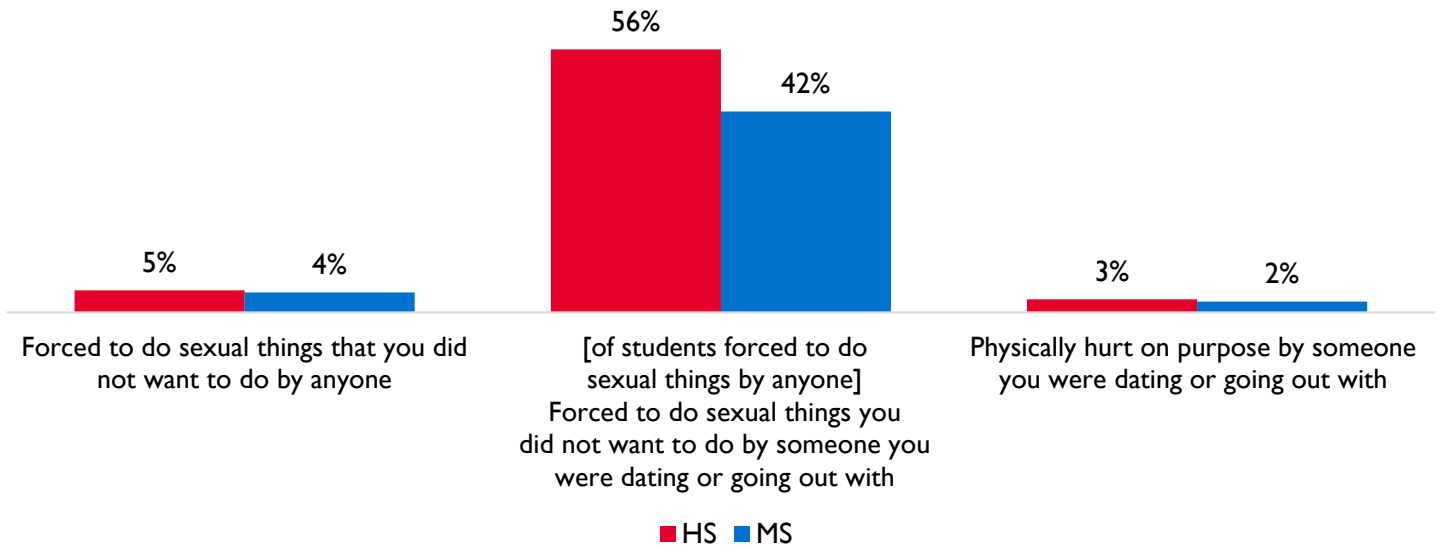
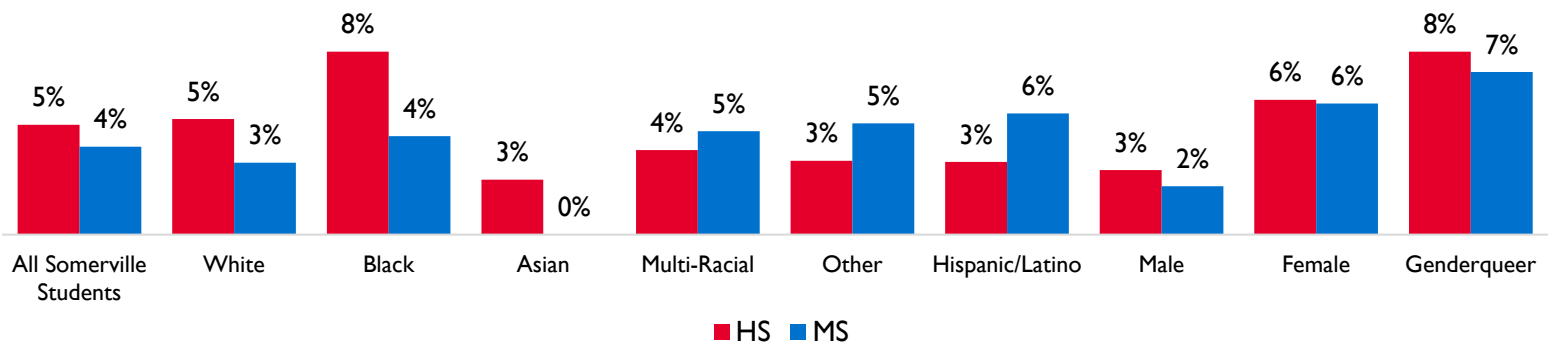


Figure 20. Percent of Somerville students who reported being forced to do sexual things that you did not want to do by anyone in the past 12 months



Key Findings

Unintentional Injury and Violence

During the past 12 months, have you been electronically bullied?

- **Race/Ethnicity:** Black HS students and Multi-Racial MS students were more likely to report having been electronically bullied in the past 12 months.
- **Gender:** Genderqueer students are more likely to report having been electronically bullied.
- **Grade:** MS students were significantly more likely to report having been electronically bullied. As students increased in grade, they were generally less likely to report having been electronically bullied.

Figure 21. Percent of Somerville students who reported having been electronically bullied in the past 12 months

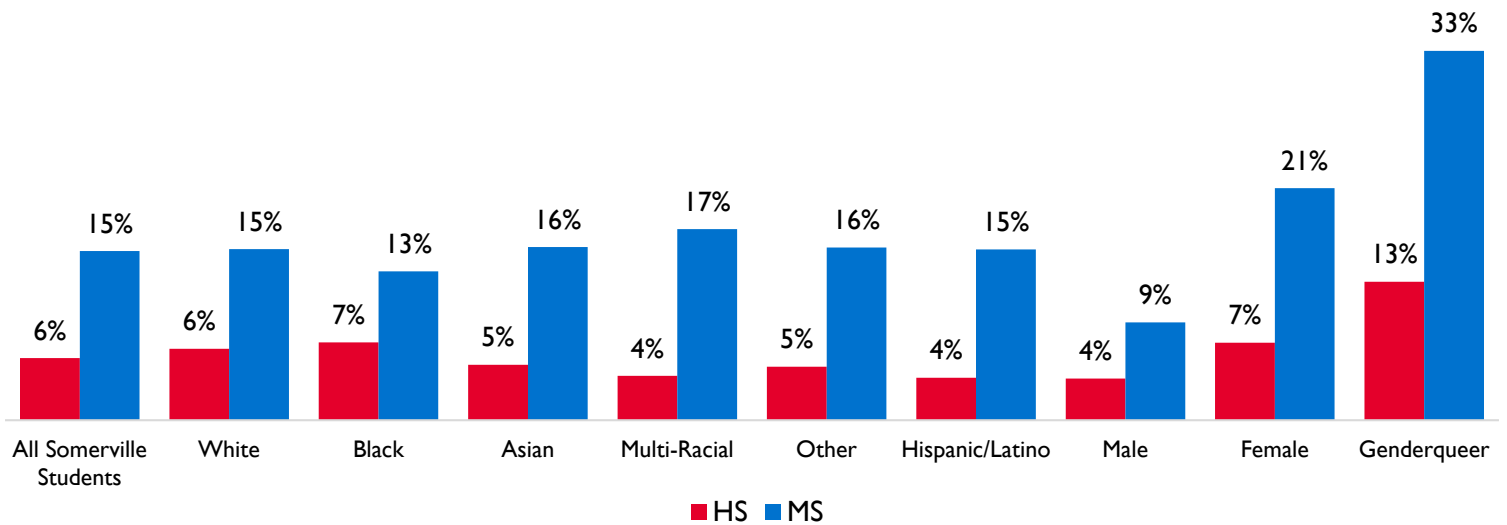
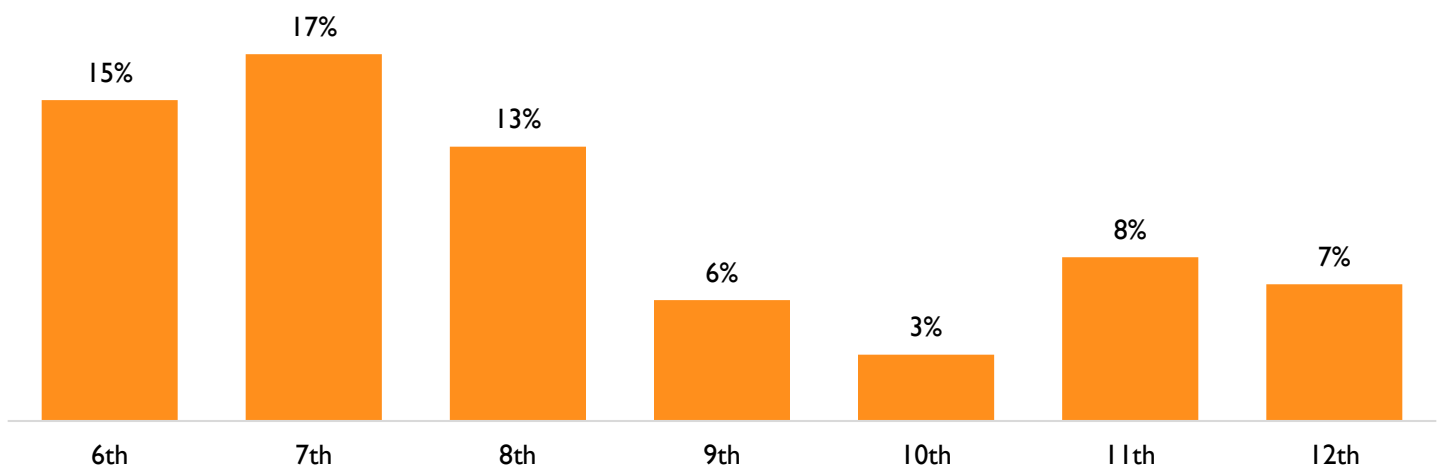


Figure 22. Percent of Somerville students who reported having been electronically bullied in the past 12 months by grade



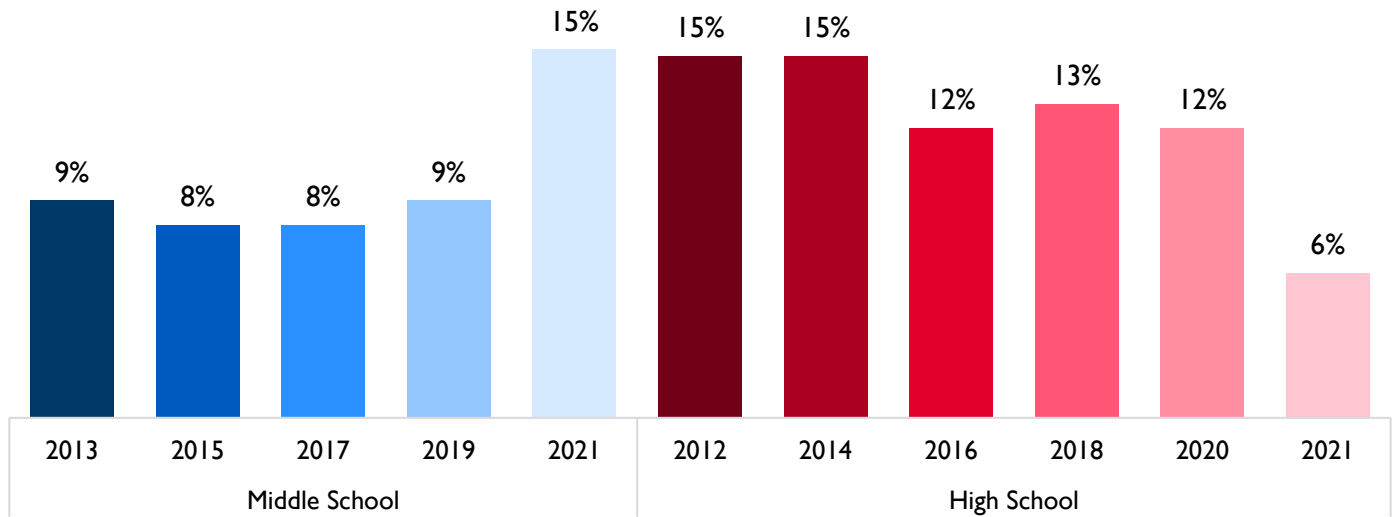
Key Findings

Unintentional Injury and Violence

During the past 12 months, have you been electronically bullied?

- **Trend:** Electronic bullying in MS increased significantly in 2021 while electronic bullying in HS decreased significantly compared to prior years.

Figure 23. Percent of Somerville HS students who reported having been electronically bullied in the past 12 months across years



Key Findings

Mental Health

In the United States, approximately 1 in 4 youth meet criteria for a lifetime mental disorder such as depression, anxiety, or Attention Deficit Hyperactivity Disorder (ADHD).¹ This can cause serious changes in the way youth learn, behave, or handle their emotions, causing distress and problems getting through the day. The CDC reports that 7.4% of children aged 3-17 years (~4.5 million) have a diagnosed behavior problem, 7.1% (~4.4 million) have diagnosed anxiety, and 3.2% (~1.9 million) have diagnosed depression.² According to data from the National Centers for Disease Control and Prevention (CDC). In addition, the CDC reports that the rate of suicide for youth and young adults ages 10 to 24 increased nearly 60% between 2007 and 2018.³

Pulse Check Summary

- School-related issues were the most common cause of stress for HS and MS students. The greatest reported source of stress in school was keeping up with school work.
- Genderqueer students were more likely to report experiencing overwhelming stress, depression, and suicidal ideations compared to male and female students.
- Suicidal ideation and attempts were similar to prior reporting years, although MS students were significantly more likely to report engaging in self-harm. 11th grade students were at greater risk of seriously considering suicide and 12th grade students were at greater risk of attempting suicide.
- Students most often identified an adult outside of school or a coping strategy as their support network.

Survey Questions Analyzed

- **Stress**
 - Which of the following do you find causes the most negative stress for you?
 - Which of the following do you find the most stressful about school?
 - During the past 12 months, how often did you feel like you were under overwhelming stress?
- **Self-harm and suicide**
 - During the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities?
 - During the past 12 months, how many times did you do something to purposely hurt yourself without wanting to die, such as cutting or burning yourself on purpose?
 - Have you ever seriously consider attempting suicide?
 - During the past 12 months, did you make a plan about how you would attempt suicide?
 - During the past 12 months, did you attempt suicide?
- **Support networks and treatment access**
 - Do you have a healthy activity or behavior (coping strategy) that helps you relieve stress?
 - Is there at least one teacher or other adult in your school that you can talk to if you have a problem?
 - Outside of school, is there an adult (or adults) you can talk to about things that are important to you?
 - Are you taking medicine/receiving counseling prescribed doctor or other health professional for any type of behavioral health, mental health condition or emotional problem?

¹ <https://youth.gov/youth-topics/prevalence-mental-health-disorders-among-youth#:~:text=Click%20to%20Enlarge%20Most%20youth,with%20anxiety%20disorders%2C%20and%209.6>

² <https://www.cdc.gov/childrensmentalhealth/features/anxiety-depression-children.html>

³ <https://www.cdc.gov/nchs/data/nvsr/nvsr69/NVSR-69-11-508.pdf>

Key Findings

Mental Health

Which of the following do you find causes the most negative stress for you?

- **Overall:** Students were more likely to report that school demands or expectations, busy schedules, and worrying about the future (e.g., college) were the most frequent cause of negative stress.
- **Gender:** Causes of negative stress varies by gender, though female and genderqueer students were more likely to report negative stresses than male students.
- **Trend:** Similar to prior years, school issues were the most frequent cause of negative stress. Family issues and demands remained relatively consistent, while social issues have decreased significantly. In 2020, 31% of HS students reported social issues as causing the most negative stress, while in 2021, only 8% reported social pressures from friends or peers as causing the most negative stress.

Figure 24. Causes of the most negative stress for Somerville students

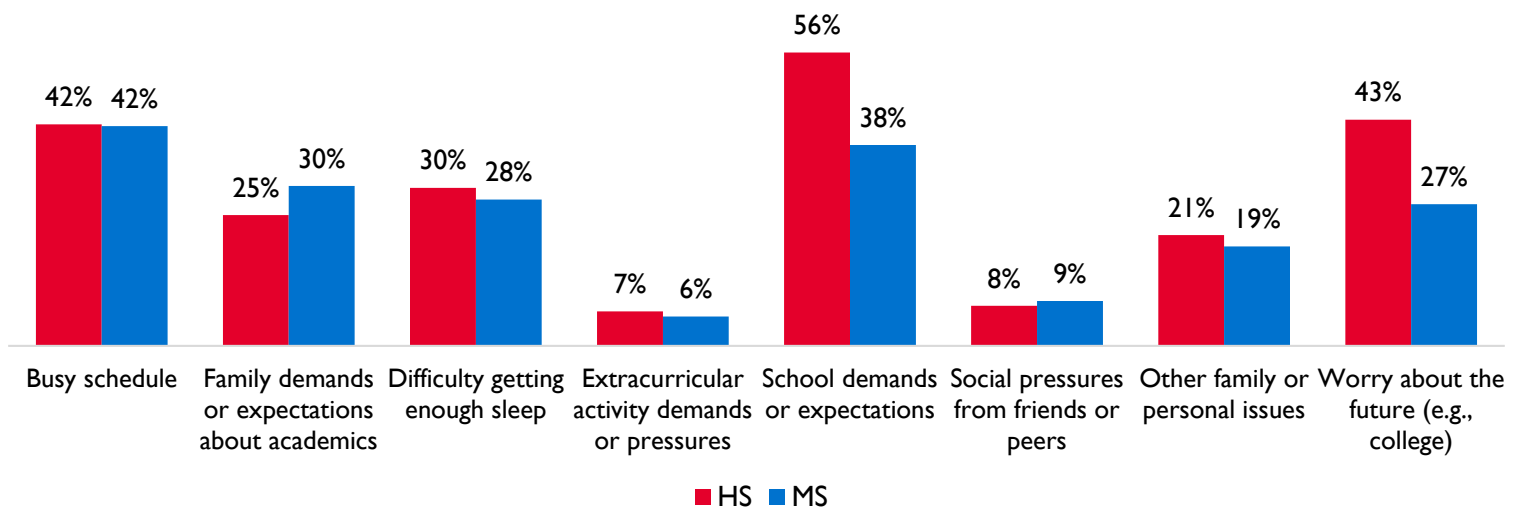


Table 4. Causes of the most negative stress for Somerville students by gender

	High School			Middle School		
	Male	Female	Genderqueer	Male	Female	Genderqueer
Busy schedule	39%	44%	58%	41%	44%	37%
Family demands or expectations about academics	19%	29%	50%	21%	39%	57%
Difficulty getting enough sleep	32%	29%	33%	25%	30%	33%
Extracurricular activity demands or pressures	5%	8%	4%	5%	6%	7%
School demands or expectations	48%	64%	63%	32%	44%	60%
Social pressures from friends or peers	6%	9%	4%	4%	13%	20%
Other family or personal issues	15%	26%	29%	14%	23%	47%
Worry about the future (e.g., college)	43%	44%	33%	27%	28%	13%

Key Findings

Mental Health

Which of the following do you find the most stressful about school?

- **Overall:** In both MS and HS the greatest source with stress about school was keeping up with schoolwork.
- **Gender:** The causes of the most stress about school varied by gender, though female and genderqueer students were more likely to report that something was most stressful than male students.

Figure 25. Causes of the most stress about school by Somerville students

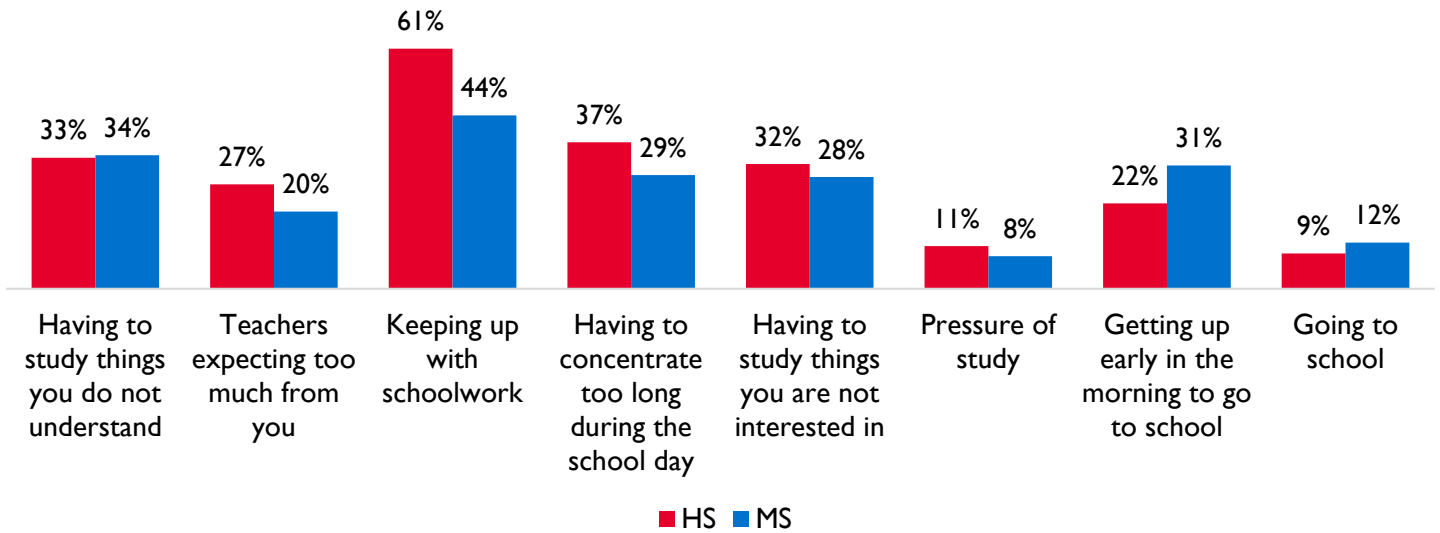


Table 5. Causes of the most stress about school for Somerville students by gender

	High School			Middle School		
	Male	Female	Genderqueer	Male	Female	Genderqueer
Having to study things you do not understand	27%	42%	21%	29%	43%	33%
Teachers expecting too much from you	20%	33%	21%	16%	24%	17%
Keeping up with schoolwork	56%	65%	88%	39%	50%	53%
Having to concentrate too long during school	30%	43%	58%	22%	37%	43%
Having to study things you are not interested in	38%	27%	25%	26%	31%	40%
Pressure of study	9%	14%	4%	7%	11%	10%
Getting up early in the morning to go to school	23%	21%	13%	32%	32%	30%
Going to school	7%	9%	17%	11%	11%	33%

Key Findings

Mental Health

During the past 12 months, how often did you feel like you were under overwhelming stress?

- **Overall:** 35% of HS and 21% of MS students reported that they were under overwhelming stress (most of the time or always) in the past 12 months.
- **Race/Ethnicity:** Black HS students and Multi-Racial and Asian MS students were more likely to report that they were under overwhelming stress.
- **Gender:** In both MS and HS, female students were two to three times and genderqueer students were three to six times more likely than male students to report that they were under overwhelming stress.
- **Grade:** Student reports of overwhelming stress increased by grade.

Figure 26. Percent of Somerville students who reported that they were under overwhelming stress (most of the time or always) in the past 12 months

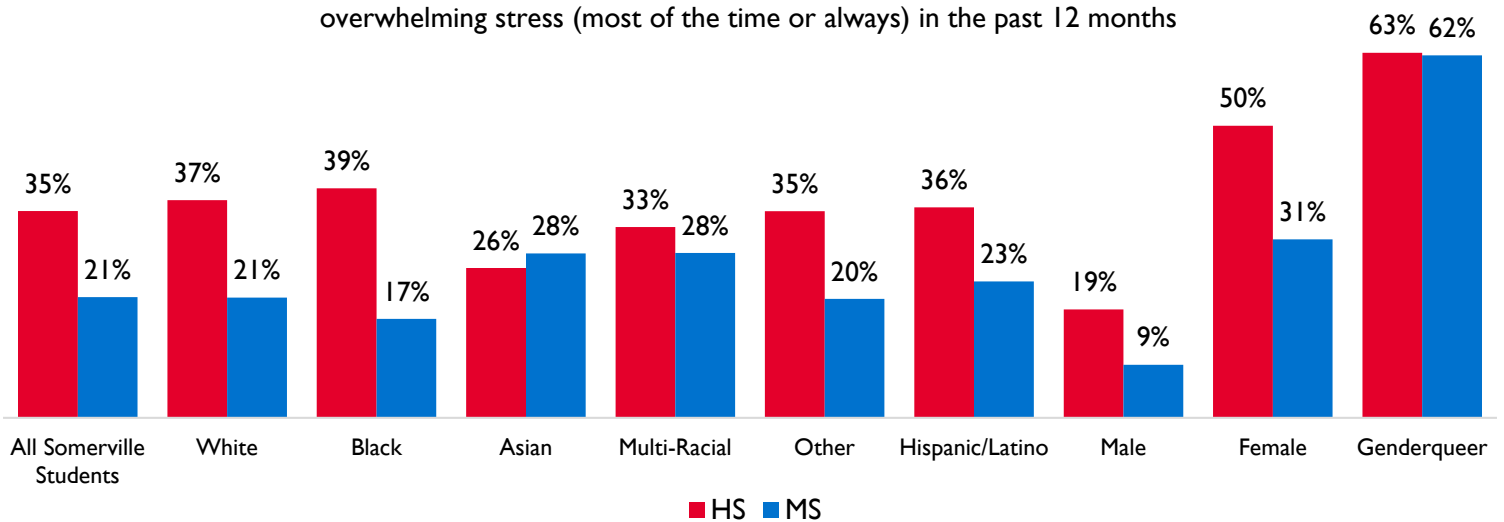
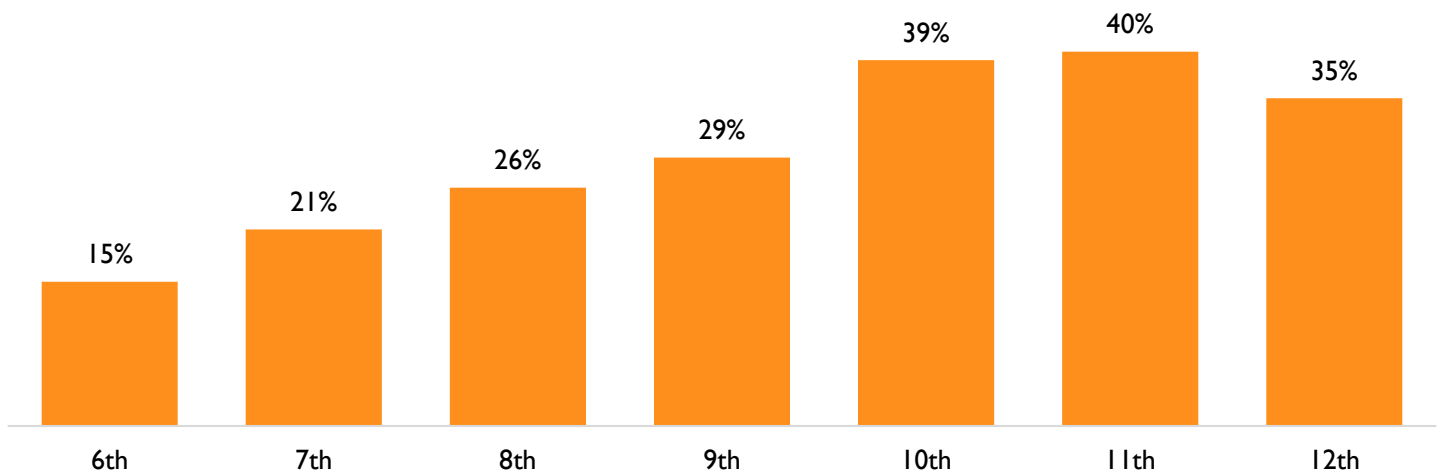


Figure 27. Percent of Somerville students who reported that they were under overwhelming stress (most of the time or always) in the past 12 months by grade



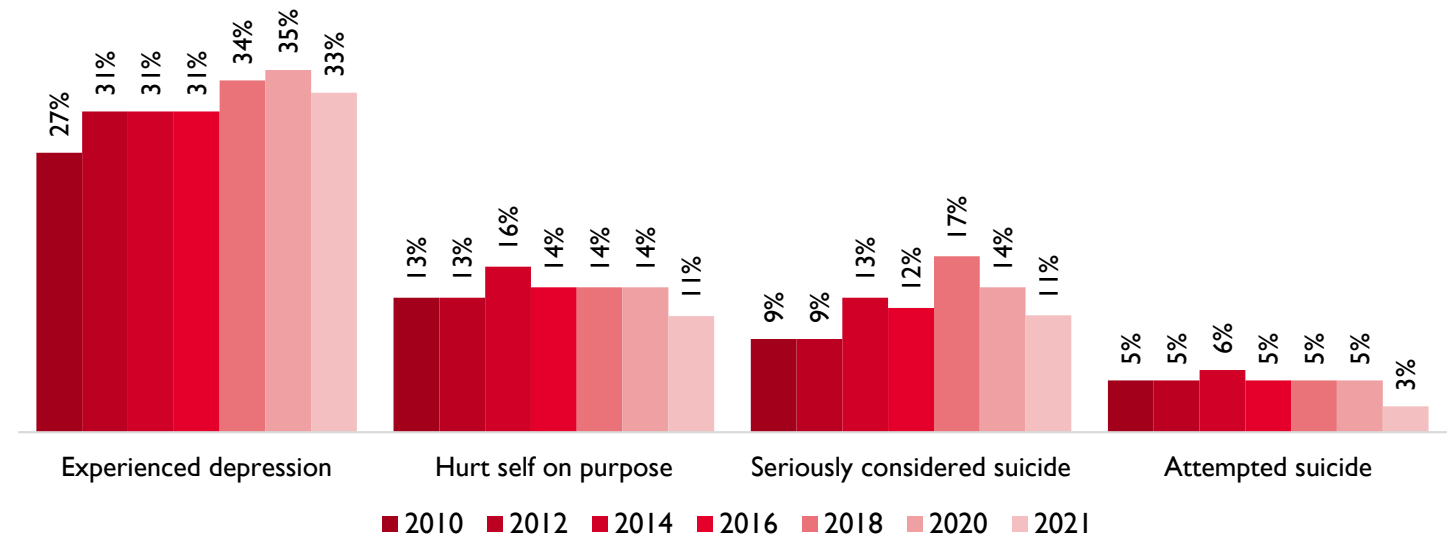
Key Findings

Mental Health

Reports of depression, self-harm, and suicide among Somerville HS students

- **Race/Ethnicity:** Multi-Racial HS students were more likely to report experiencing depression, White HS students were more likely to report engaging in self-harm, Multi-Racial HS students were significantly more likely to report seriously considering attempting suicide and attempting suicide.
- **Gender:** Genderqueer HS students were significantly more likely to report mental health concerns.
- **Trend:** In 2021, HS students reported mental health concerns similarly to prior years with a slight decrease from 2020.

Figure 28. Percent of Somerville HS students who reported mental health concerns in the past 12 months by year



	Experienced depression	Hurt self on purpose	Seriously considered suicide	Attempted suicide
Overall	33%	11%	11%	3%
White	32%	16%	14%	3%
Black	40%	7%	8%	0%
Asian	11%	5%	5%	2%
Multi-Racial	43%	12%	20%	6%
Other	34%	6%	7%	2%
Hispanic/Latino	37%	8%	9%	2%
Male	19%	3%	5%	0%
Female	42%	15%	14%	3%
Genderqueer	79%	42%	46%	17%

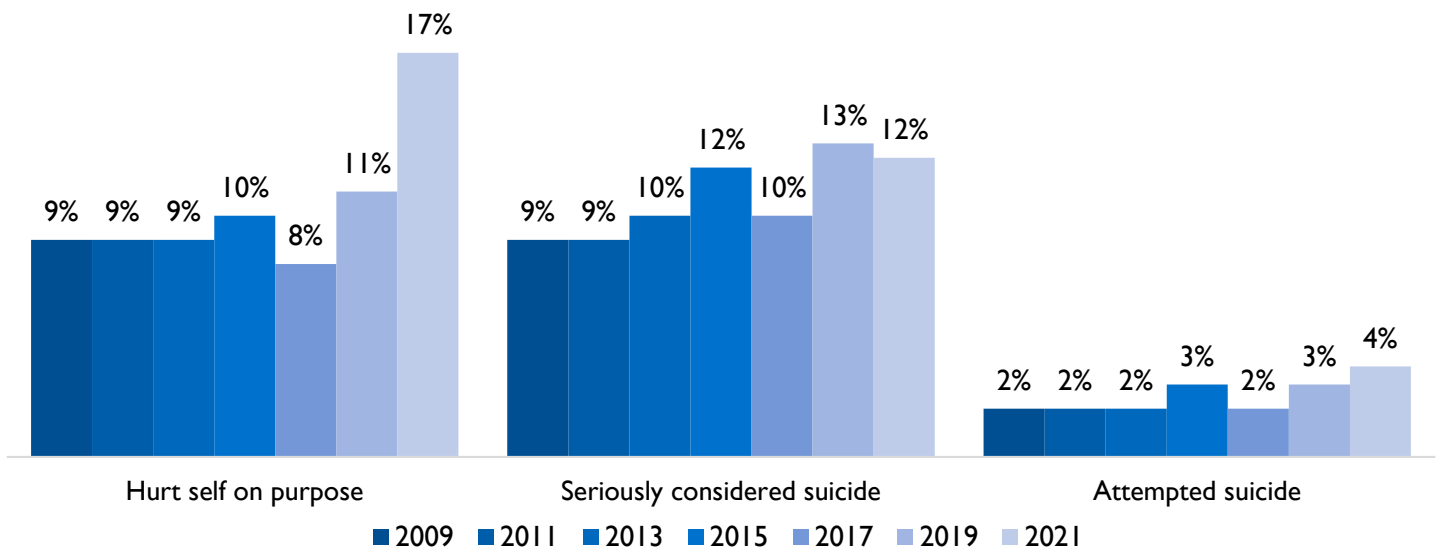
Key Findings

Mental Health

Reports of depression, self-harm, and suicide among Somerville MS students

- **Race/Ethnicity:** Multi-Racial and Hispanic/Latino MS students were more likely to report experiencing depression. Multi-Racial MS students were more likely to report engaging in self-harm and seriously considering attempting suicide. Hispanic/Latino, Black, and students reporting an Other race were more likely to report attempting suicide.
- **Gender:** Female and genderqueer students are two and three times more likely, respectively, to suffer from depression than male students.
- **Trend:** In 2021, there was a significant increase in the percent of MS students reporting self-harm and a slight increase in attempted suicides. MS students reported seriously considering suicide similarly to prior years.

Figure 29. Percent of Somerville MS students who reported mental health concerns in the past 12 months by year



	Experienced depression	Hurt self on purpose	Seriously considered suicide	Attempted suicide
Overall	26%	17%	12%	4%
White	21%	17%	12%	2%
Black	20%	21%	12%	5%
Asian	28%	16%	9%	3%
Multi-Racial	32%	23%	18%	4%
Other	29%	14%	12%	5%
Hispanic/Latino	32%	17%	14%	5%
Male	15%	8%	6%	1%
Female	36%	23%	16%	6%
Genderqueer	66%	58%	59%	25%

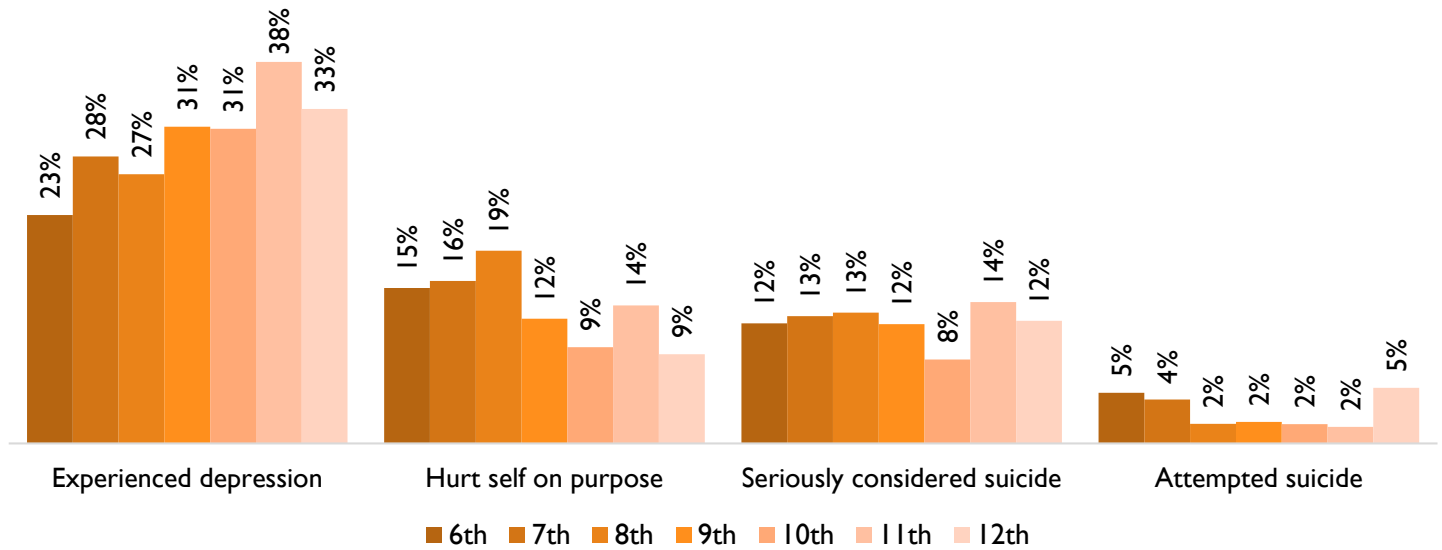
Key Findings

Mental Health

Reports of depression, self-harm, and suicide among Somerville students

- **Trend:** Similar to 2020, reports of mental health concerns varied slightly but inconsistently with by grade.

Figure 30. Percent of Somerville students who reported mental health concerns in the past 12 months by grade



Key Findings

Mental Health

Support networks and treatment access (overall)

- **Overall:** The majority of Somerville HS and MS students have one teacher or adult at school, an adult outside of school, or a coping strategy to help with their stress.
- **Gender:** Male students were generally more likely to report having access to support networks and a coping strategy, while female and genderqueer students were more likely to reporting taking medication or receiving counseling from a health professional.

Figure 31. Percent of Somerville students who reported having a support network or access to treatment

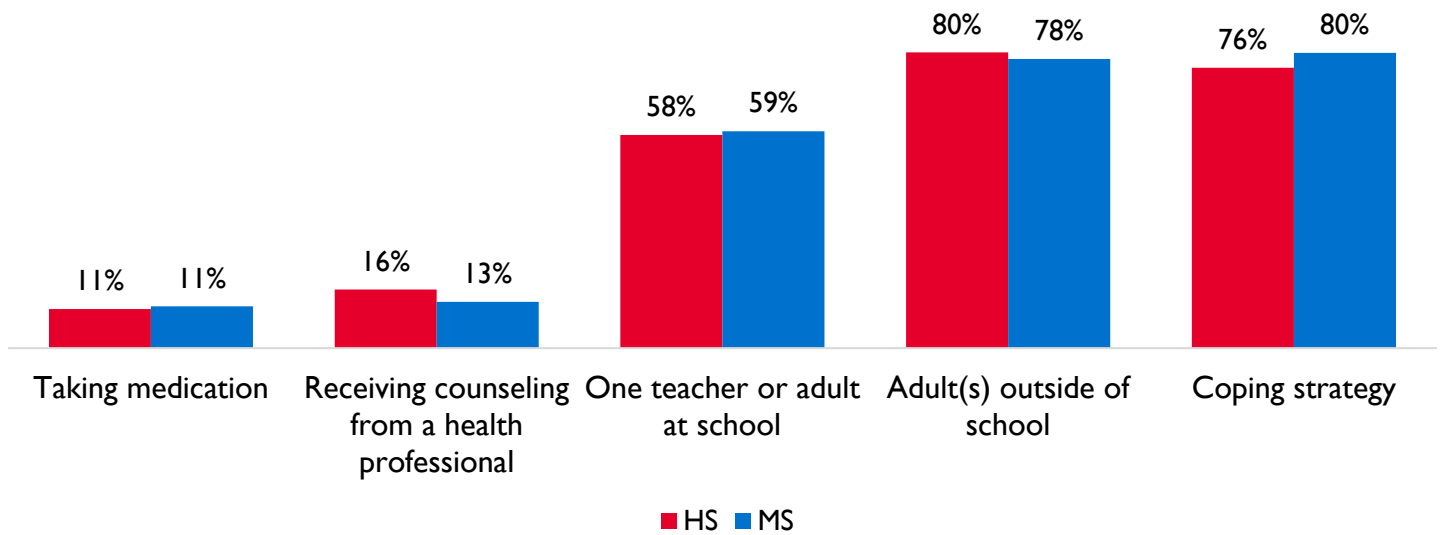


Table 8. Support networks or access to treatment for Somerville students by gender

	High School			Middle School		
	Male	Female	Genderqueer	Male	Female	Genderqueer
Taking medication	7%	11%	42%	14%	8%	24%
Receiving counseling	5%	21%	63%	11%	14%	28%
One teacher or adult at school	60%	55%	63%	62%	57%	38%
Adult(s) outside of school	84%	78%	71%	84%	74%	39%
Coping strategy	79%	74%	71%	80%	80%	76%

Key Findings

Sexual Behavior

Youth who engage in sexual behaviors are at risk for unintended health outcomes such as human immunodeficiency virus (HIV), other sexually transmitted diseases (STDs), and unintended pregnancy. Sexual minority youth including lesbian, gay, and bisexual high school students in particular are at substantial risk for serious health outcomes relative to their peers. The CDC reports that nationwide, 11% of students identifying as LGBT have had sex with four or more partners, compared to 8% of students identifying as heterosexual.¹

Despite a decline in high school student sexual risk behavior from 2009 to 2019, students continue to engage in risky health-related behaviors. For example, there has been a decline in condom use among sexually active students from 61% in 2009 to 54% in 2019.²

Pulse Check Summary

- Overall, 24% of HS students and 3% of MS students reported that they had ever had sexual intercourse
- Asian and female HS students who reported ever having had sexual intercourse were more likely to report using alcohol or drugs the last time they had sexual intercourse.
- Multi-Racial and male HS students who reported ever having had sexual intercourse were more likely to report that they or their partner used a condom the last time they had sexual intercourse.

Survey Questions Analyzed

- Sexual activity
 - Have you ever had sexual intercourse?
 - Did you drink alcohol or use drugs before you had sexual intercourse the last time? (HS)
- Methods of protection
 - The last time you had sexual intercourse, did you or your partner use a condom?

¹ https://www.cdc.gov/healthyyouth/youth_hiv/hiv-information-and-youth.htm

² <https://www.cdc.gov/mmwr/volumes/69/su/su6901a2.htm>

Key Findings

Sexual Behavior

Have you ever had sexual intercourse?

- **Overall:** 24% of HS students and 3% of MS students reported that they had ever had sexual intercourse.
- **Race/Ethnicity:** Multi-Racial HS students and Black MS students were more likely to report ever having had sexual intercourse.
- **Gender:** Genderqueer HS students were about twice as likely as male and female students to report ever having had sexual intercourse.
- **Grade:** Students were more likely to report ever having had sexual intercourse as they increased in grade.
- **Trend:** The percent of students who reported ever having had sexual intercourse has decreased over time.

Figure 32. Percent of Somerville students who reported that they had ever had sexual intercourse

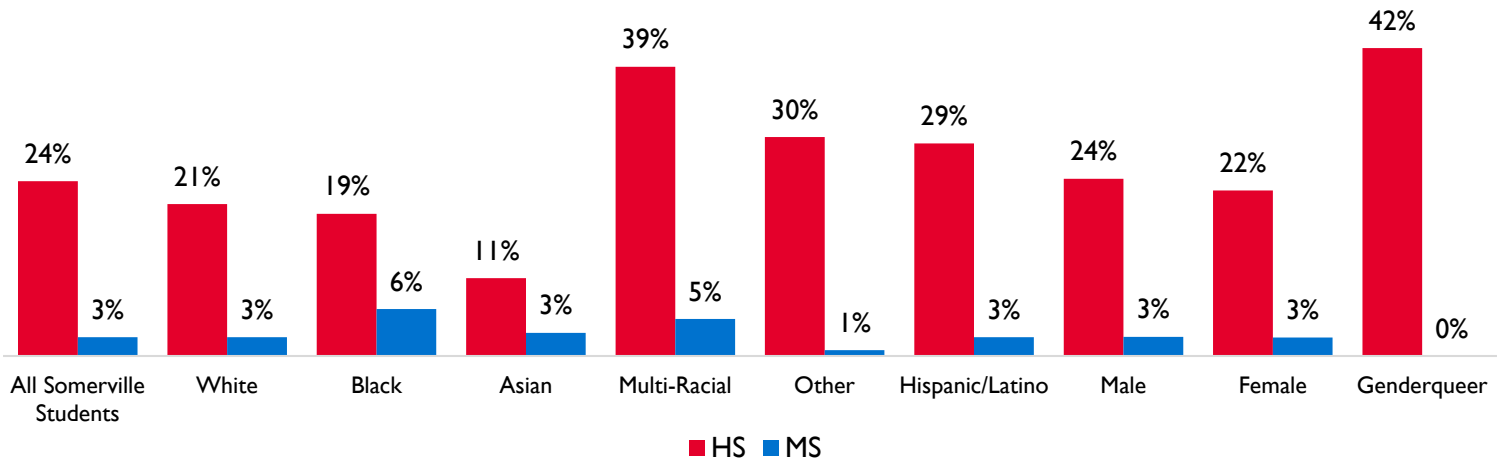
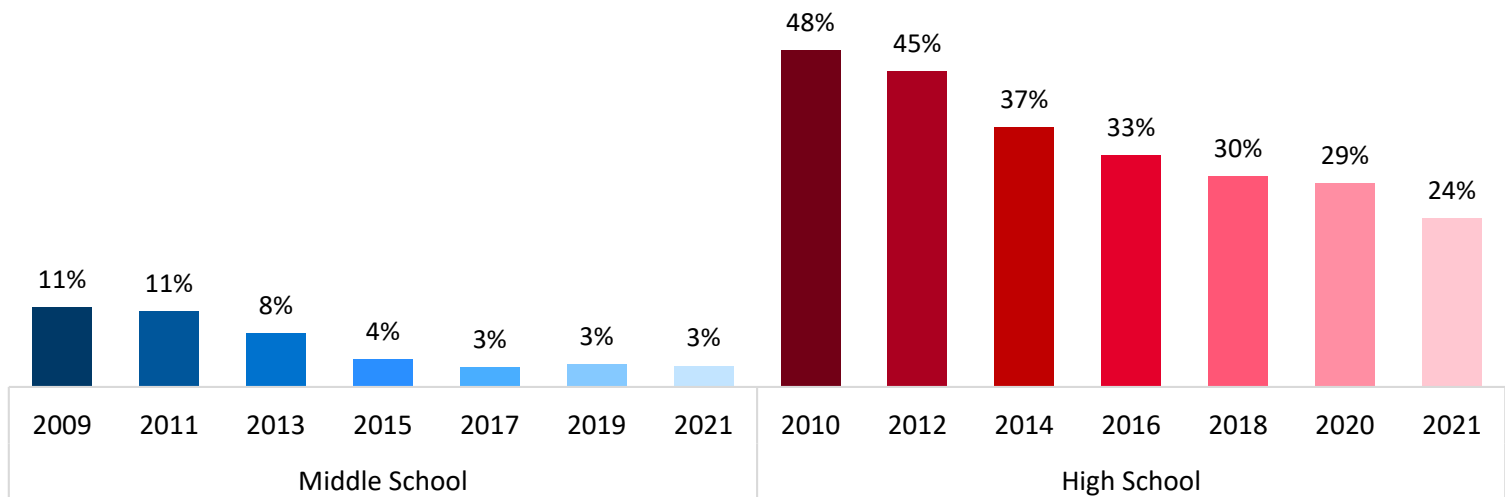


Figure 33. Percent of Somerville students who reported that they had ever had sexual intercourse across years



Key Findings

Sexual Behavior

Did you drink alcohol or use drugs before you had sexual intercourse the last time?

- **Overall:** Of the students who reported ever having had sexual intercourse, 11% of HS students reported that they drank alcohol or used drugs the last time they had sexual intercourse.
- **Race/Ethnicity:** Asian HS students were significantly more likely to report drinking alcohol or using drugs the last time they had sexual intercourse.
- **Gender:** Female HS students were more likely to report drinking alcohol or using drugs the last time they had sexual intercourse.
- **Grade:** Use of alcohol or drugs before sexual intercourse increased as HS students increased in grade (0% in 9th, 6% in 10th, 11% in 11th, and 20% in 12th).
- **Trend:** The percent of HS students reporting that they drank alcohol or used drugs the last time they had sexual intercourse has varied across years, but is on a general decline.

Figure 34. Percent of Somerville HS students who ever had sexual intercourse who reported that they drank alcohol or used drugs the last time they had sexual intercourse

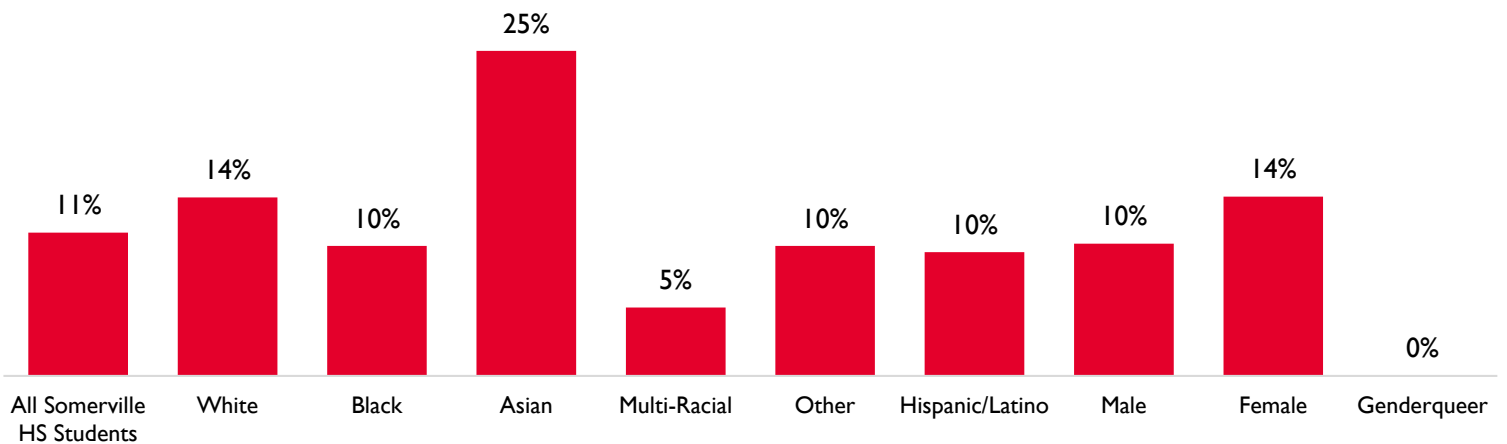
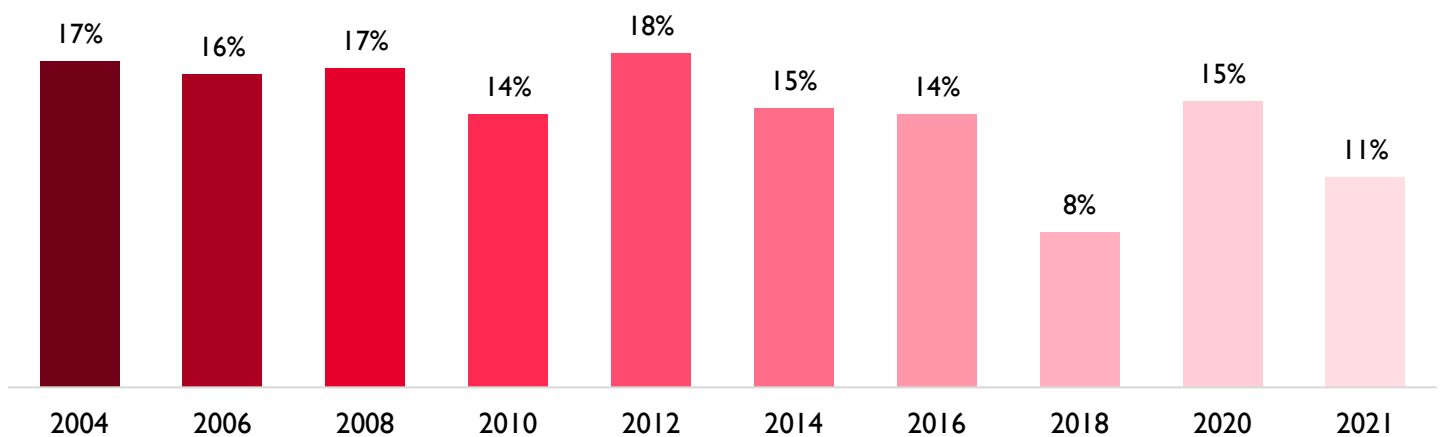


Figure 35. Percent of Somerville HS students who ever had sexual intercourse who reported that they drank alcohol or used drugs the last time they had sexual intercourse across years



Key Findings

Sexual Behavior

Did you or your partner use a condom the last time you had sexual intercourse?

- **Overall:** Of the students who reported ever having had sexual intercourse, 63% of HS students and 72% of MS students reported that they or their partner used a condom the last time they had sexual intercourse.
- **Race/Ethnicity:** Multi-Racial HS students, Asian MS, and MS students of an Other race were more likely to report using a condom.
- **Gender:** Male HS students and female MS students were more likely to report using a condom.
- **Grade:** Use of condoms decreased as students increased in grade.
- **Trend:** Somerville students were slightly more likely to report condom use compared to 2020.

Figure 36. Percent of Somerville students who had ever had sexual intercourse who reported that they or their partner used a condom the last time they had sexual intercourse

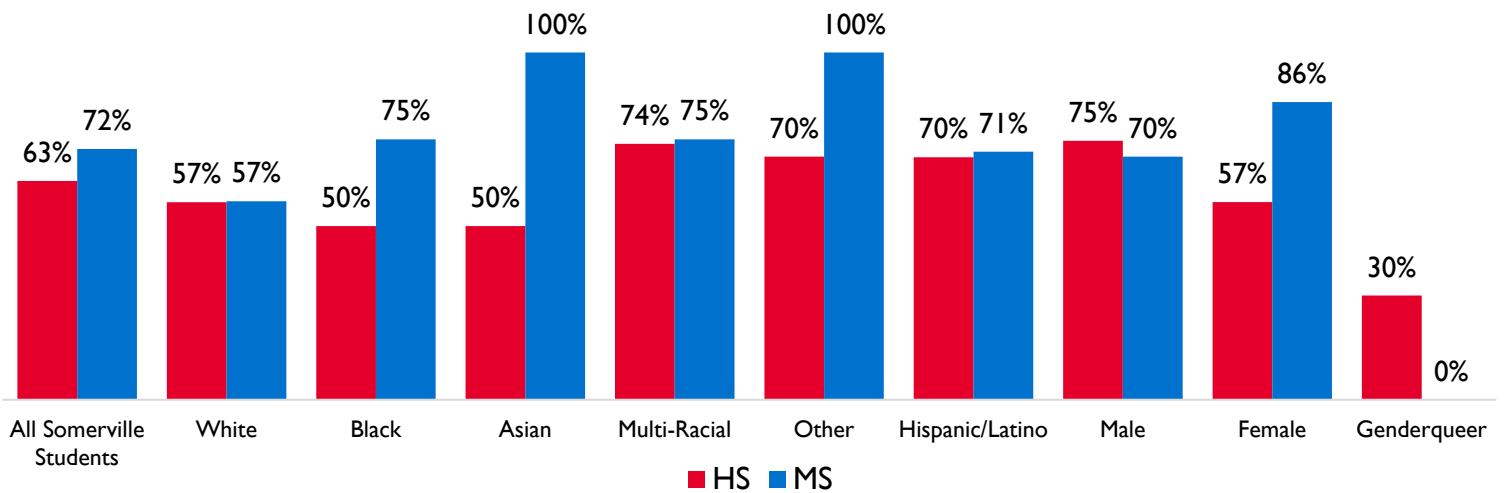
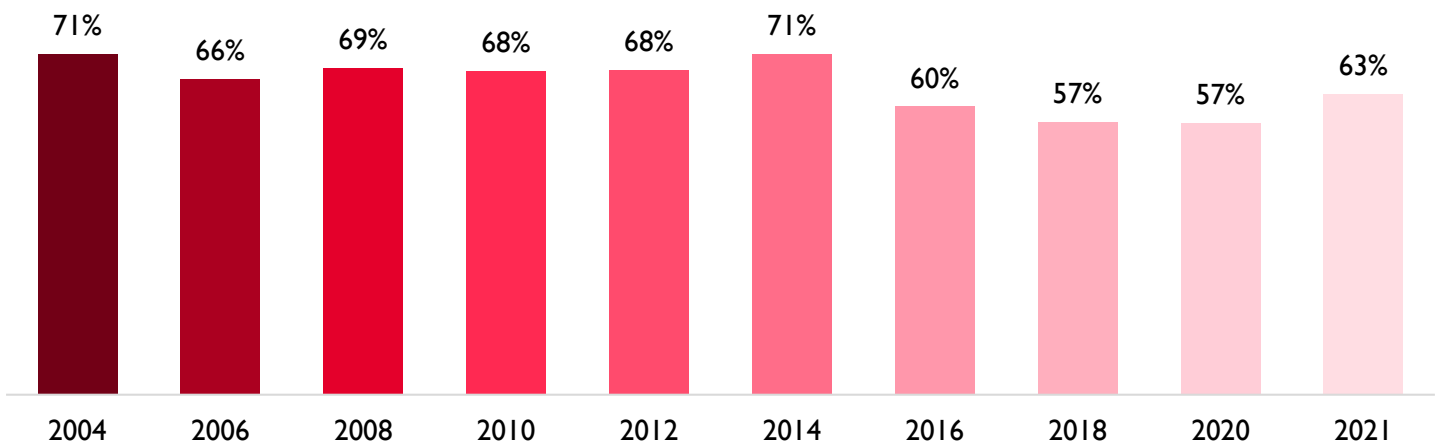


Figure 37. Percent of Somerville HS students who had ever had sexual intercourse reported that they or their partner used a condom the last time they had sexual intercourse across years



Key Findings

Dietary Behaviors and Physical Activity

Nutrition and physical activity are important for optimal growth and development and chronic disease prevention. Establishing healthy dietary and physical activity behaviors early in life is a vital public health strategy for promoting lifelong physical health. The CDC recommends that children and adolescents ages 6-17 years eat a variety of vegetables, fruits, and whole grains, and engage in more than 60 minutes of moderate-to-vigorous physical activity daily.¹ Data analyzed by the CDC indicates that most American adolescents are not meeting these recommendations for healthy eating or physical activity, which puts them at increased risk for chronic diseases, (e.g., type 2 diabetes, cardiovascular diseases, or obesity).²

Sugar-sweetened beverages (SSBs) are the primary source of added sugars in U.S. youths' diets. Studies show higher SSB intake among male adolescents compared to female adolescents and among Black and Hispanic adolescents compared to White adolescents.³

Pulse Check Summary

- 50% of HS students and 49% of MS students report that they are about the right weight.
- Female students were more likely to report that they wanted to lose weight.
- White HS students and Asian MS students were more likely to report that they were physically active for 60 minutes on 5 out the past 7 days. Students of an Other Race were less physically active.
- Rates of physical activity were consistent across grades.
- Students were less likely to report being physically active compared to 2020.

Survey Questions Analyzed

- Dietary Behaviors
 - How would you describe your weight?
 - Which of the following are you trying to do about your weight?
- Physical Activity
 - During the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day?

¹ <https://www.cdc.gov/mmwr/volumes/69/su/su6901a8.htm>

² <https://www.cdc.gov/healthyschools/obesity/index.htm>

³ <https://www.cdc.gov/mmwr/volumes/69/su/su6901a8.htm>

Key Findings

Dietary Behaviors and Physical Activity

How do students describe their weight?

- **Overall:** 50% of HS students and 49% of MS students report that they are about the right weight.
- **Gender:** HS students reported the description of their weight similarly across genders. Genderqueer MS students were less likely to report that they are about the right weight.
- **Trend:** Students reported the description of their weight similarly compared to 2020.

Figure 38. Percent of Somerville HS students who described themselves as slightly or very overweight by gender

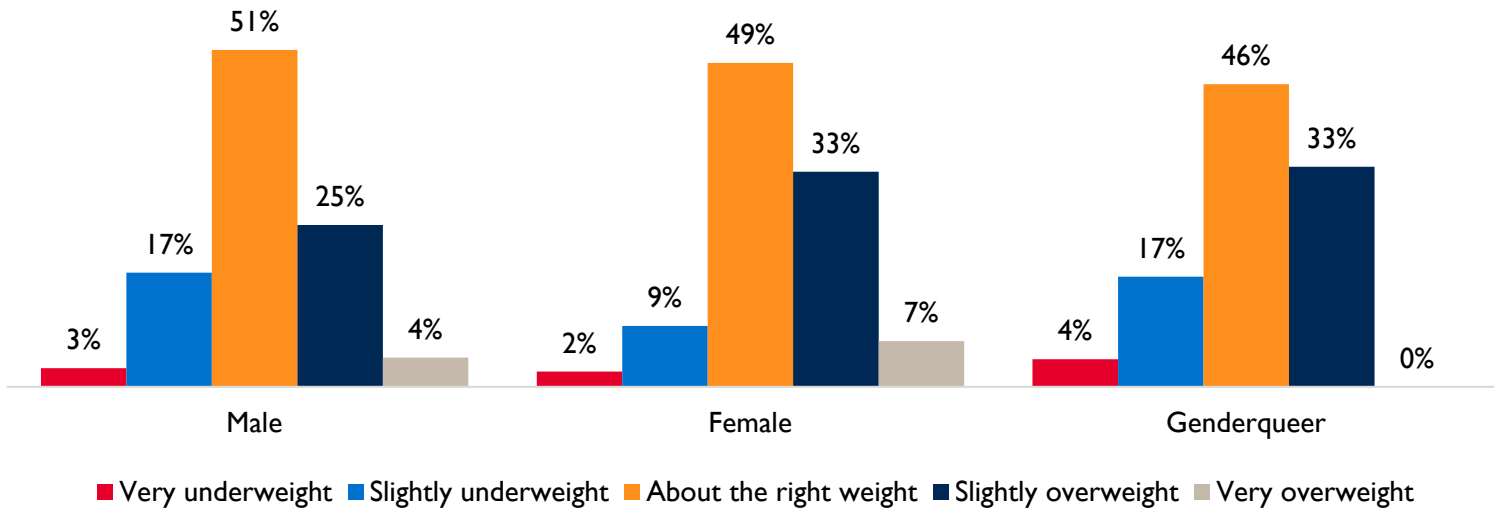
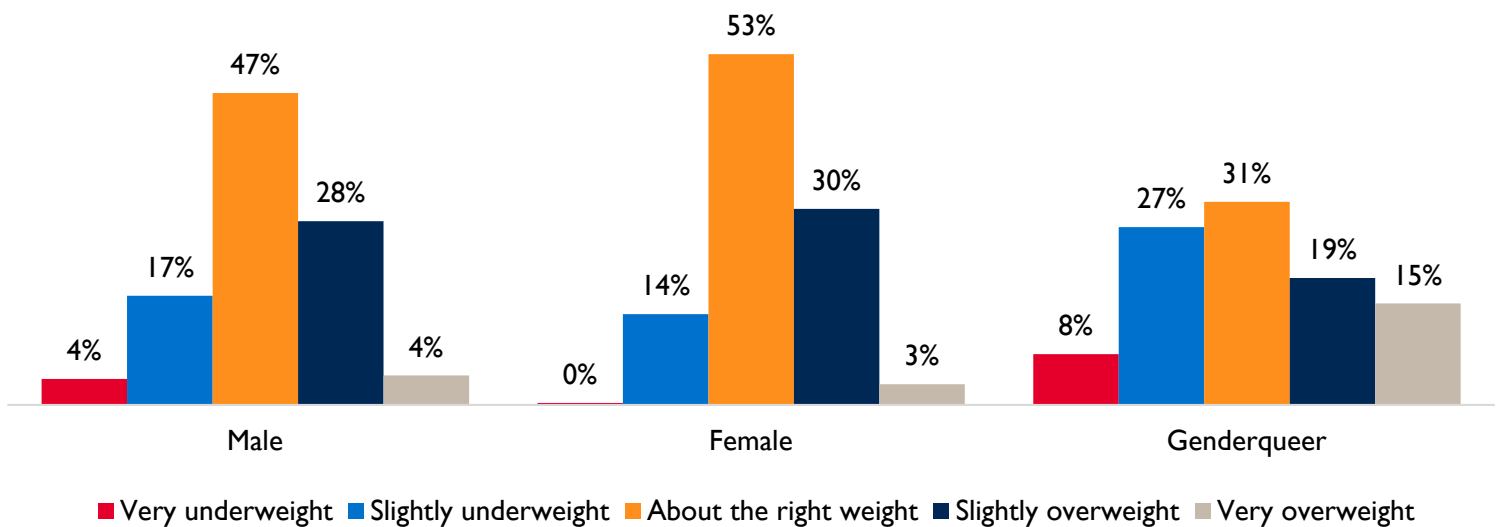


Figure 39. Percent of Somerville MS students who described themselves as slightly or very overweight by gender



Key Findings

Dietary Behaviors and Physical Activity

What students want to do about their weight?

- **Overall:** 48% of HS and MS students report that they are trying to lose weight.
- **Gender:** Female students are more likely to report trying to lose weight and genderqueer students are more likely to report not wanting to do anything about their weight. Male HS students were more likely to report trying to gain weight and male MS students were more likely to report that they want to stay the same weight.
- **Trend:** Students reported the what they are trying to do about their weight similarly compared to 2020.

Figure 40. What Somerville HS students are trying to do about their weight by gender

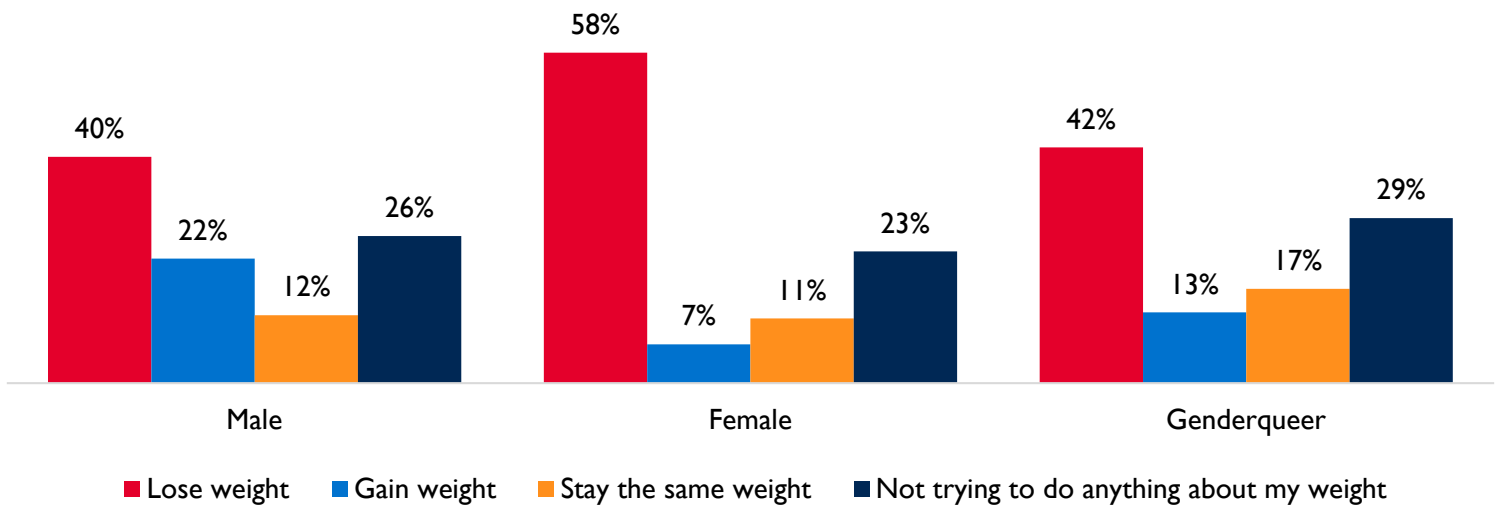
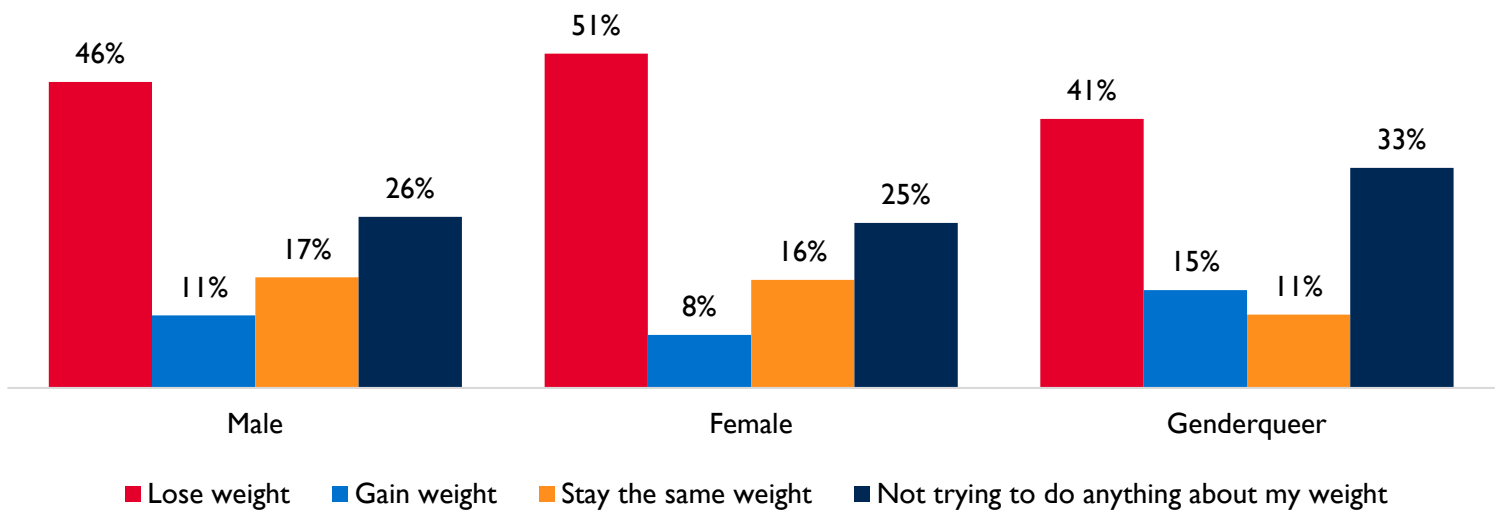


Figure 41. What Somerville MS students are trying to do about their weight by gender



Key Findings

Dietary Behaviors and Physical Activity

Were you physically active for 60 minutes for 5 out of the past 7 days?

- **Overall:** 34% of HS students and 37% of MS students reported that they were physically active (60 minutes for 5 out of the past 7 days).
- **Race/Ethnicity:** White HS students and Asian MS students were more likely to report that they were physically active. The difference between Asian MS students and MS students of other races is significant.
- **Gender:** Male HS and MS students are more likely to be physically active.
- **Grade:** Physical activity is similar across grades.
- **Trend:** Students were slightly less likely to report that they were physically active compared to 2020.

Figure 42. Percent of Somerville students who reported that they were physically active (60 minutes on at least 5 of the past 7 days)

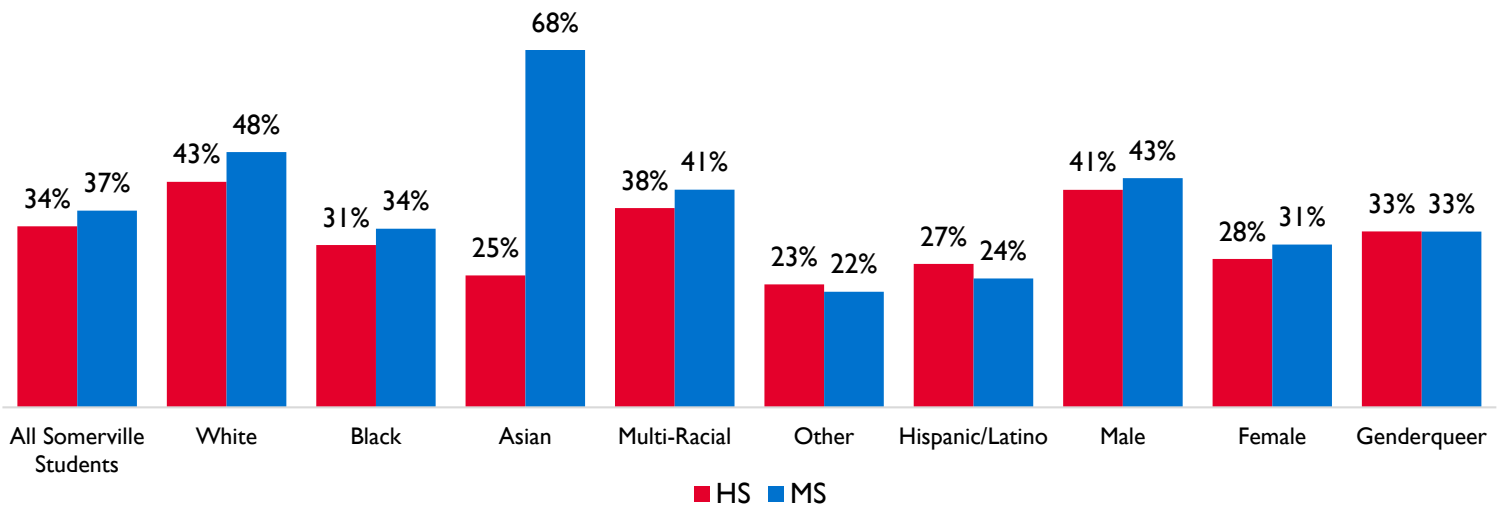
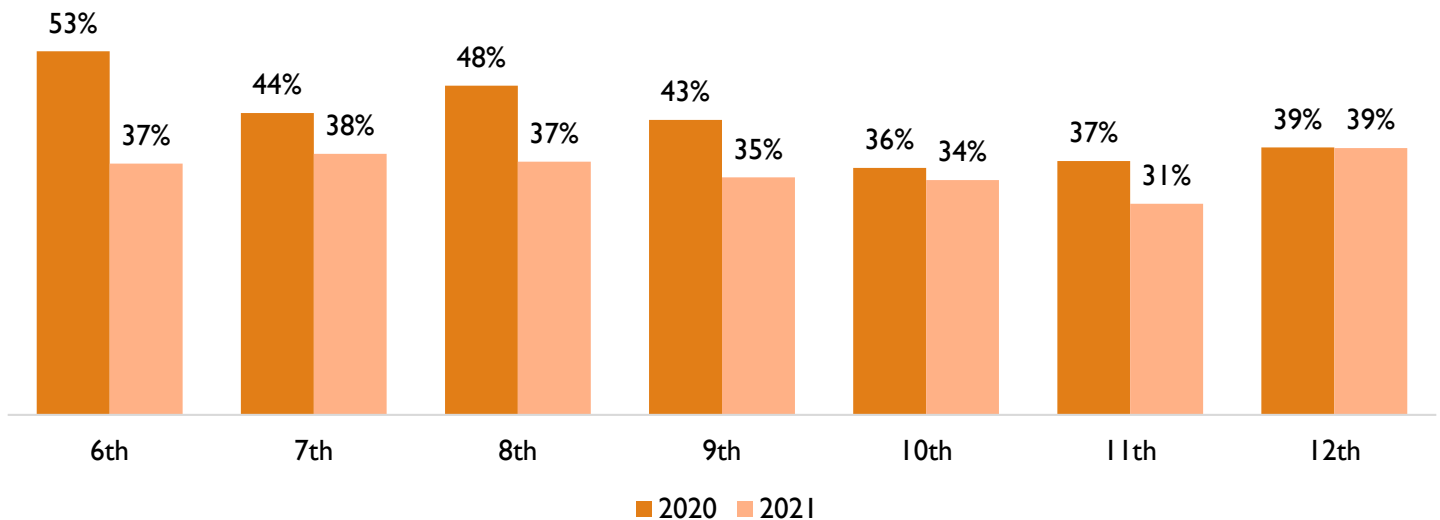


Figure 43. Percent of Somerville students who reported that they were physically active (60 minutes on at least 5 of the past 7 days) by grade



Key Findings

Organized Activities

Organized, or extracurricular, activities help adolescents build social skills, self-esteem, and stay mentally, emotionally, and physically healthy. For older adolescents, these activities offer an opportunity to assume meaningful roles and responsibilities. Reports from the U.S. Census Bureau show that children involved in one or more activities (sports, lessons or clubs) are more likely to have higher levels of school engagement.¹

In 2021, it was expected that student participation in organized activities would drop as in-person gatherings were cancelled due to the COVID-19 pandemic. However, across the United States, about 75% of students reported that they participated sports, school clubs, community groups, drama, etc.

Pulse Check Summary

- Overall, almost half of HS and MS students reported that they did not participate in any out of school time programs (48% and 45%, respectively).
- Students of an Other race were more likely to report not participating in out of school programs, and White students were more likely to report that there were no barriers to their participation in after school programs.

Survey Questions Analyzed

- During this school year (since September), how many days per week did you typically participate in out of school time programs such as after school program, youth center, club, arts, sports, tutoring, etc.?)
- During this school year (since September), which programs, teams, or activities did you participate in?
- During this school year (since September), which if any of the following barriers kept you from accessing or participating in an afterschool program, team, or activity?

¹ <https://www.census.gov/newsroom/press-releases/2018/childs-day.html>

Key Findings

Organized Activities

During this school year (since September), how many days per week did you typically participate in out of school time programs such as after school program, youth center, club, arts, sports, tutoring, etc.?

- **Overall:** Students are more likely to report no participation in out of school programs.
- **Race/Ethnicity:** Students of an Other Race are more likely to report no participation in out of school programs.
- **Gender:** Students reported no participation in out of school programs at similar rates.
- **Grade:** Students reported similar participation in out of school programs across grades.

Figure 44. Frequency in which Somerville students participated in out of school time programs

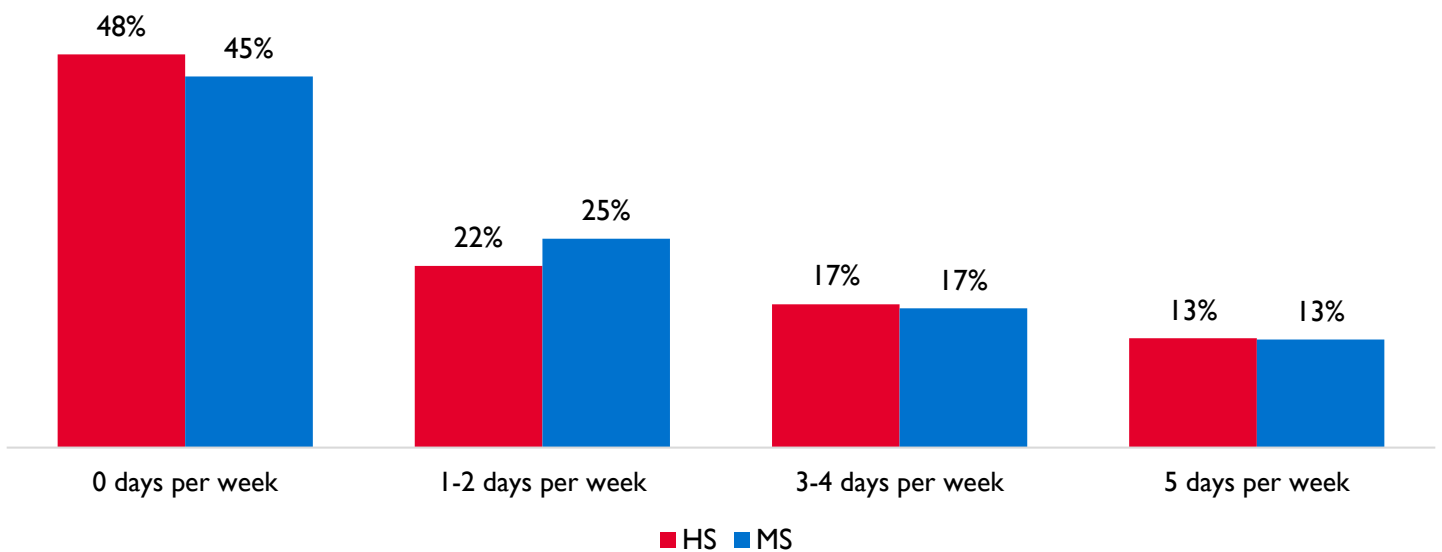
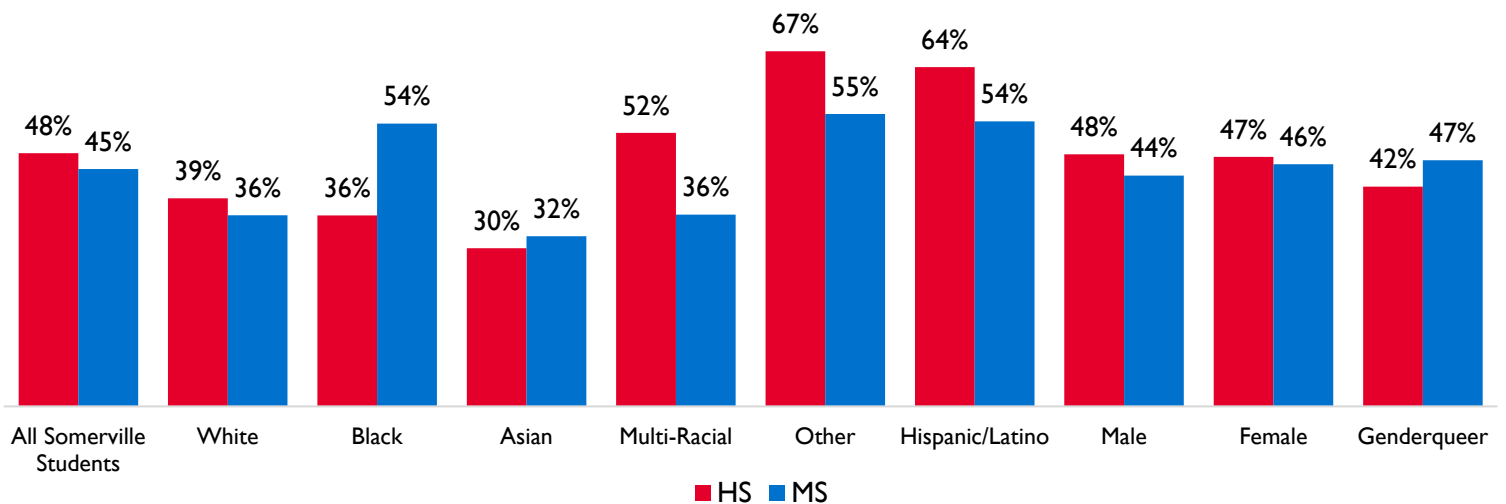


Figure 45. Percent of Somerville students who report no participation in out of school programs



Key Findings

Organized Activities

During this school year (since September), which programs, teams, or activities did you participate in?

- **Overall:** Of students that participated in out of school programs, they were most likely to report participating in school or organized sports.

During this school year (since September), which if any of the following barriers kept you from accessing or participating in an afterschool program, team, or activity?

- **Overall:** Students were most likely to report that they had no barriers to accessing after school programs. If there were barriers, students were more likely to report that they didn't know about the activities or they had too much homework.
- **Race/Ethnicity:** White students were more likely to report no barriers to participating in after school programs.

Figure 46. Somerville students' reported barriers to participating in after school programs

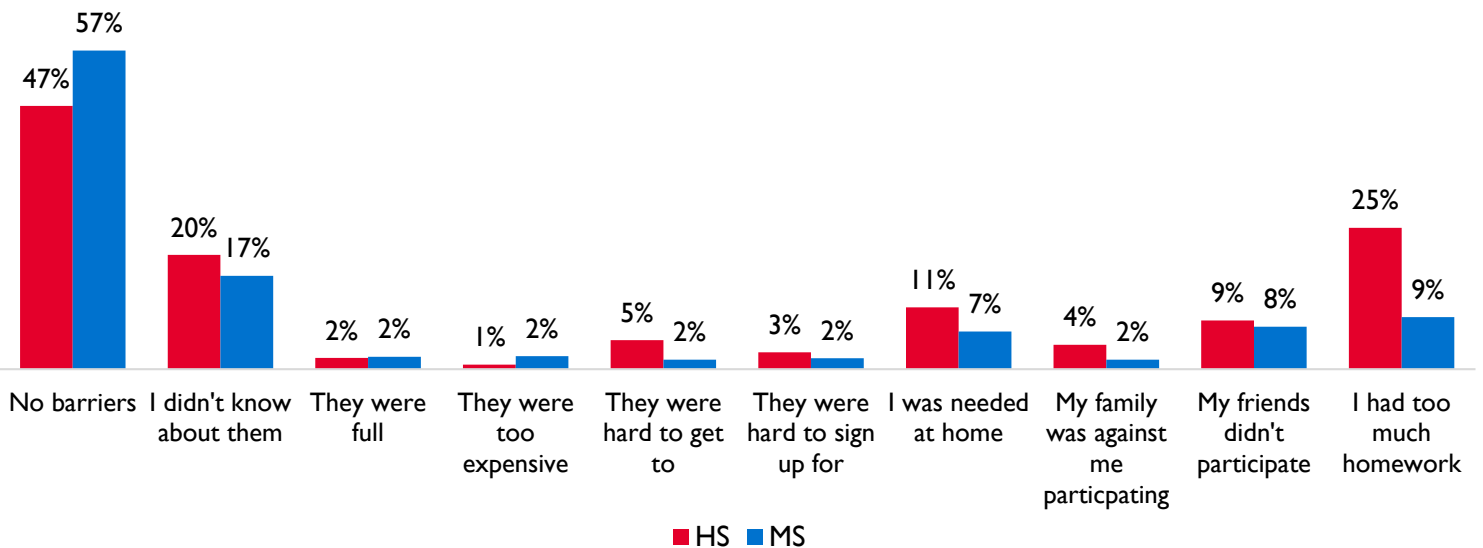


Figure 47. Somerville students reporting no barriers to participating in after school programs by race and gender

