

# 2021 Middlesex Youth Behavioral Health Survey Regional Report



# Introduction

## Middlesex League YRBS

Since 2017, 11 school districts in Middlesex County, Massachusetts, collectively called the Middlesex League, have collaborated to jointly conduct a youth health survey to capture vital information related to health status and certain behaviors that have been deemed as putting the health of students in middle and high school at-risk. Local superintendents have engaged the services of John Snow, Inc. (JSI) a public health consulting firm with expertise in survey administration, to support this initiative. The superintendents and health coordinators work with JSI to develop a common middle and high school youth health survey instrument based on the United States Centers for Disease Control and Prevention (CDC) Youth Risk Behavior Survey (YRBS) and the Massachusetts Department of Public Health's Youth Health Survey. These national and State instruments, as well as the Middlesex League Youth Health Survey instruments, are updated every two years in response to emerging health issues. Individual school districts are also given the opportunity to incorporate additional questions, tailored to their unique circumstances and needs, which are added to the standard core survey, to create their specific district survey. This process allows individual school districts and the region, overall, to better understand and respond to the health risks facing youth in their communities, as well as to promote information sharing and coordination across school districts, health officials, and other community-based service providers.

The 2021 YRBS builds upon the 2017 and 2019 assessments, and includes the districts of Arlington, Belmont, Burlington, Melrose, Reading, Stoneham, Wakefield, Wilmington, Winchester, Woburn, and Watertown.

## Survey Administration & Consent Process

Once the content for each school district survey is finalized, JSI designed self-administered, online surveys for each district using a nationally recognized, specialized survey platform called Alchemer (formerly SurveyGizmo). JSI then created a series of unique URLs for each district to use to administer their survey. Typically, JSI creates a URL for each of the district's middle and high schools, so that school-specific data can be captured and then aggregated to create a district-level dataset. JSI then worked with each school district to develop a survey administration plan and schedule. Schools were given a period of 2 months to administer surveys (between March and April 2021). At the district-level, survey administration occurred over 1 to 3 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 districts had students take the it in the school-setting.

Prior to administration, the districts are provided additional, tailored 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. Parents are mailed a form explaining the purpose of the survey and given the opportunity to have their child out "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-specific datasets. The individual district datasets are then combined to create a Middlesex League or regional dataset, which provides benchmark data for the schools to compare themselves against.

## 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 and summary reports were developed for each district and the Middlesex League Region.

# Content of the Survey and Reporting

## Survey Content

The Middlesex Youth Health Survey asks 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), including HIV infection
- Unhealthy dietary behaviors and physical inactivity.

In addition, given the unique circumstances related to the COVID-19 public health emergency, questions have been 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.

## Purpose

The purpose of this report is to highlight key findings for each of the six core domains, and the COVID-19 questions across the Middlesex Region. Data is reported and analyzed for students in all surveyed districts, as well as by grade, gender identity, and race 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 below is meant to highlight key themes. The school districts have been provided detailed data outputs and raw reports that allow them to look more carefully at the survey data and compare their district's to the region. The 2021 school year was unprecedented with the impact of the pandemic, and therefore, comparisons to prior year data will be limited.

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# Key Findings

## Respondent Characteristics

How do you describe yourself?

A total of 7,337 middle school (MS) and 8,852 high school (HS) students were included in the Middlesex League Regional analysis. Tables 1 and 2 show the distribution of survey respondents by grade, race/ethnicity, sex assigned at birth, and gender.

<b>Total</b>	<b>7337</b>	<b>100%</b>
<b>Grade</b>		
6 <sup>th</sup> Grade	1771	24.5%
7 <sup>th</sup> Grade	2798	38.6%
8 <sup>th</sup> Grade	2667	36.8%
<b>Race/Ethnicity</b>		
AI/AN*	102	1.5%
Asian	682	9.7%
Black or African American	366	5.2%
NH/PI**	31	0.4%
White	5323	75.8%
Multi-Racial	516	7.4%
Hispanic/Latino	477	9.3%
<b>Sex Assigned at Birth</b>		
Male	3582	49.8%
Female	3612	50.2%
<b>Gender</b>		
Male	3568	49.4%
Female	3307	45.8%
Genderqueer	221	3.1%

\*American Indian/Alaska Native

\*\*Native Hawaiian/Pacific Islander

<b>Total</b>	<b>8852</b>	<b>100%</b>
<b>Grade</b>		
9 <sup>th</sup> Grade	2363	26.8%
10 <sup>th</sup> Grade	2295	26.0%
11 <sup>th</sup> Grade	2238	25.4%
12 <sup>th</sup> Grade	1885	21.4%
<b>Race/Ethnicity</b>		
AI/AN*	50	0.6%
Asian	876	10.1%
Black or African American	393	4.5%
NH/PI**	25	0.3%
White	6765	78.2%
Multi-Racial	544	6.3%
Hispanic/Latino	592	9.0%
<b>Sex Assigned at Birth</b>		
Male	4144	47.1%
Female	4658	52.9%
<b>Gender</b>		
Male	4058	46.1%
Female	4375	49.7%
Genderqueer	249	2.8%

\*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.<sup>1</sup> 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.

### Regional Summary

- Over one-third of HS students and about one-fourth of MS students reported that their mental health was not good most of the time or always. Genderqueer students were significantly more likely to report experiencing poor mental health.
- While the majority of students did not experience any adverse financial or health-related affects of COVID-19, 11% of HS students and 6% of MS students experienced a family financial problem **and 23% of HS students and 22% of MS students had a family member or close friend who died.**
- More than half of HS and MS students reported experiencing feelings of anger, sadness, worry, numbness, or frustration in reaction to the coronavirus.
- Just over half of HS and MS students reported feeling close to people in their school (52% and 53%, respectively).

### Core Survey Questions Analyzed

- During the coronavirus pandemic, how often was your mental health not good?
- 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?

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

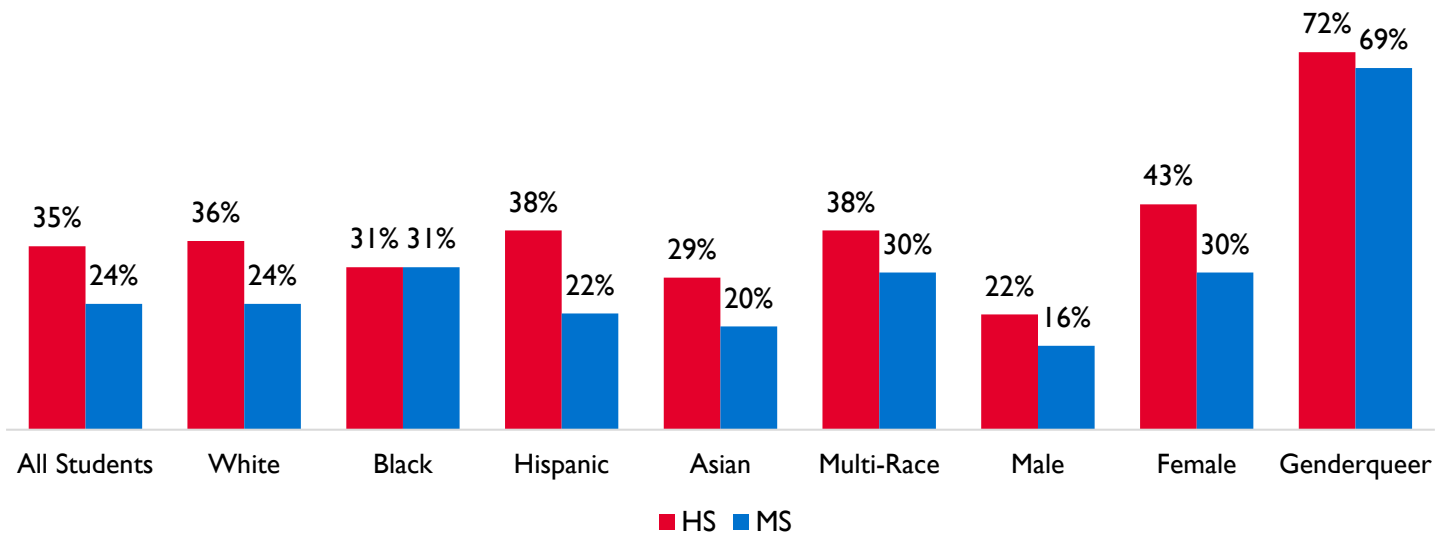
# Key Findings

## Coronavirus Pandemic

During the coronavirus pandemic, how often was students' mental health not good?

- **Overall:** Over one-third of HS students and about one-fourth of MS students reported that their mental health was not good most of the time or always.
- **Race/Ethnicity:** Multi-Racial students were more likely to report that their mental health was not good most of the time or always, followed closely by students of other races.
- **Gender:** Genderqueer students were significantly more likely to report that their mental health was not good most of the time or always followed by female and male students.
- **Grade:** Students reported similarly that their mental health was not good most of the time or always

Figure 1. Percent of students who reported that their mental health was not good most of the time or always due to the coronavirus pandemic



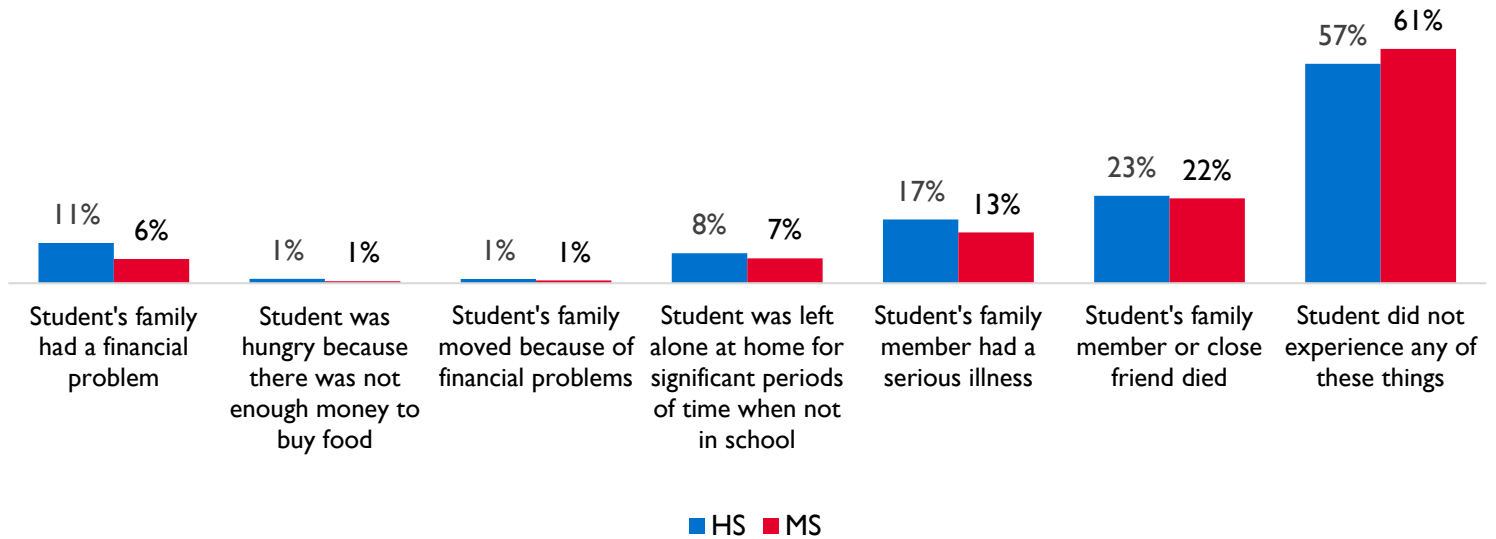
# Key Findings

## 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 any adverse effects of coronavirus (61% and 57%, respectively), followed by the death of a family member or close friend (22% and 23%, respectively) and a family member having a serious illness (13% and 17%, respectively).

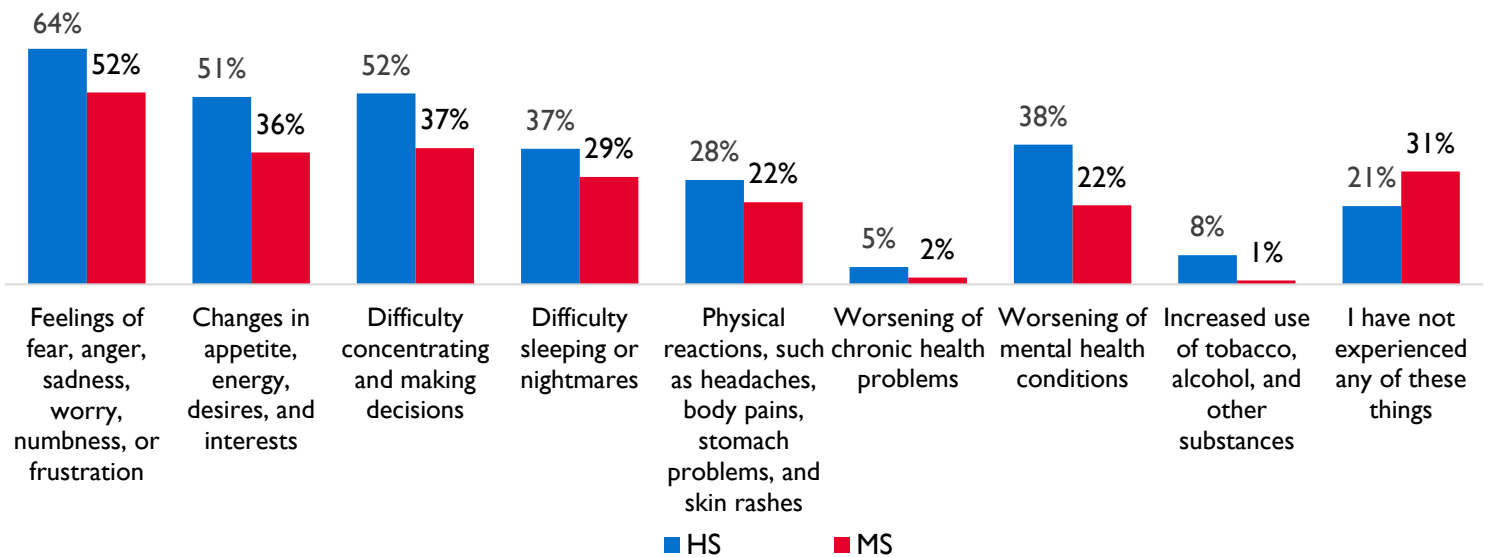
Figure 2. Percent of students who reported that their family experience adverse financial or health effects from the coronavirus pandemic



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 3. Student reactions to the stress of the coronavirus pandemic





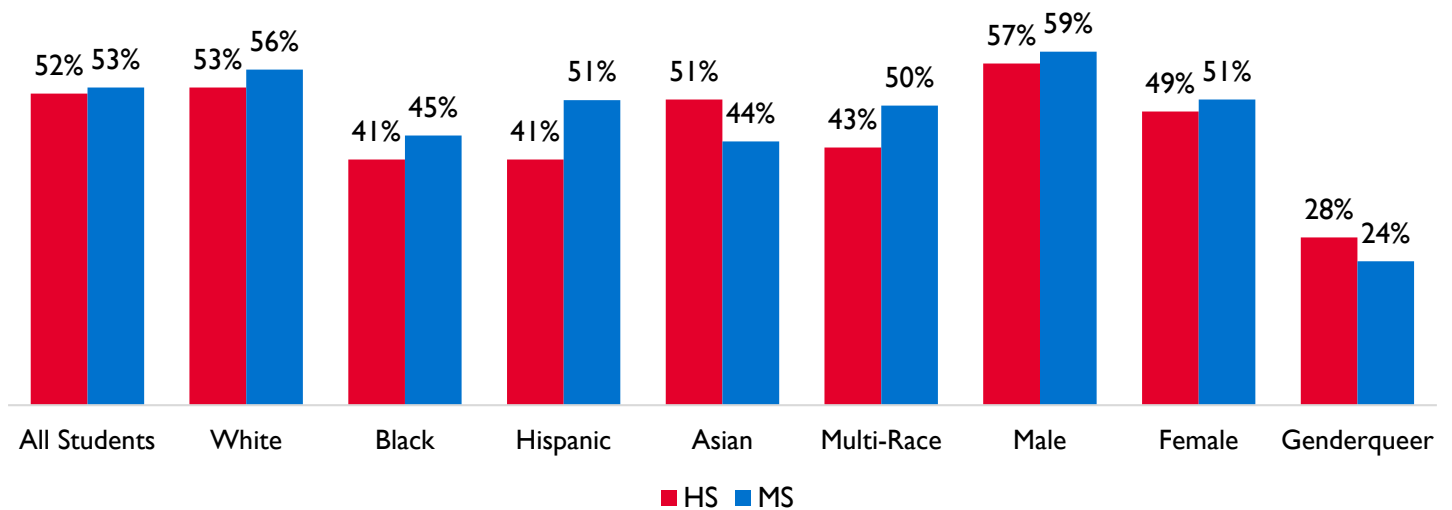
# Key Findings

## Coronavirus Pandemic

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

- **Overall:** The majority of MS and HS students agree or strongly agree that they feel close to people in their school (53% and 52%, respectively).
- **Race/Ethnicity:** White students were more likely to agree or strongly agree that they feel close to people in their school (56%), compared to students of other races.
- **Gender:** Genderqueer students were significantly less likely to agree or strongly agree that they feel close to people at their school than female and male students.
- **Grade:** Students responded similarly by grade.

Figure 4. Percent of students who reported that they agree or strongly agree that they feel close to people in their school



# 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).<sup>1</sup> 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.<sup>2</sup> 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.<sup>3</sup>

### Regional Summary

- 29% of HS and 21% of MS students reported that their mental health was not good most of the time or always.
- Genderqueer students were more likely to report experiencing overwhelming stress, depression, and suicidal ideations than male or female students.
- School demands and expectations continued to cause students the most negative stress, with keeping up with schoolwork reported as the primary contributing factor.
- Suicidal ideation and attempts were reported at similar rates compared to prior YRBS data. Students in 8<sup>th</sup> grade are at particularly high risk for planning and attempting suicide.
- Students most often identified a parent as their support network.

### Core Survey Questions Analyzed

- General
  - During the past 30 days, how often was your mental health not good?
- 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?
- Depression
  - 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?
- Self-harm and suicide
  - 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?
  - Did you ever seriously consider attempting suicide in the past 12 months (HS) or ever (MS)?
  - Did you ever attempt suicide in the past 12 months (HS) or ever (MS)?
  - If you attempted suicide during the past 12 months, did any attempt result in an injury, poisoning, or overdose that had to be treated by a doctor or nurse?
- 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?
  - Can you talk with at least one of your parents or other adult family members about things that are important to you?
  - Are you taking medicine or receiving treatment from a doctor or other health professional for any type of behavioral health, mental health condition or emotional problem?

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

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

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

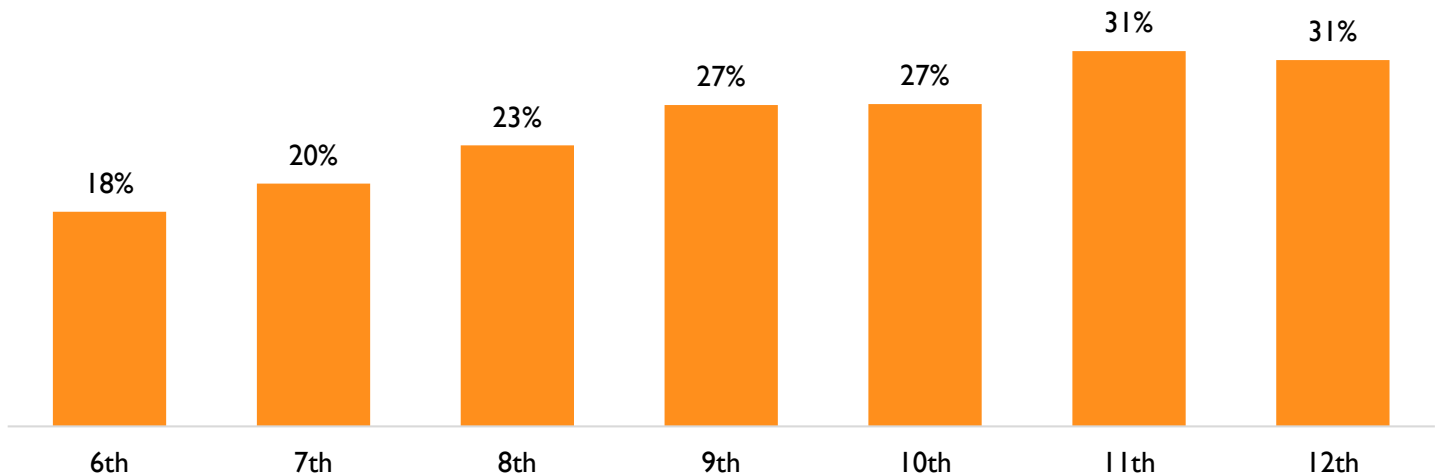
# Key Findings

## Mental Health

During the past 30 days, how often was your mental health not good?

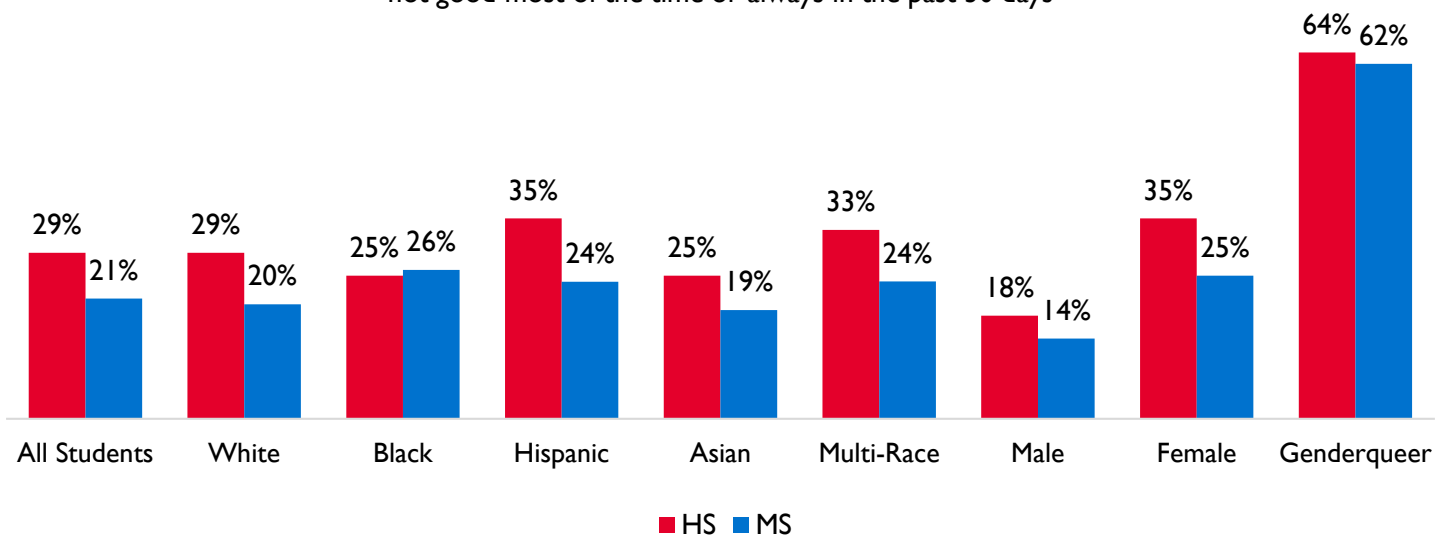
- **Overall:** 29% of HS and 21% of MS students reported that their mental health was not good most of the time or always.
- **Grade:** Mental health struggles increase with grade level from 18% to 31%.

Figure 5. Percent of students who reported having “poor” mental health in the past 30 days by grade



- **Gender:** In both MS and HS, female students are about two times and genderqueer students about three to four times more likely than male students to report their mental health was not good most of the time or always in the past 30 days.

Figure 6. Percent of students who reported that their mental health was not good most of the time or always in the past 30 days



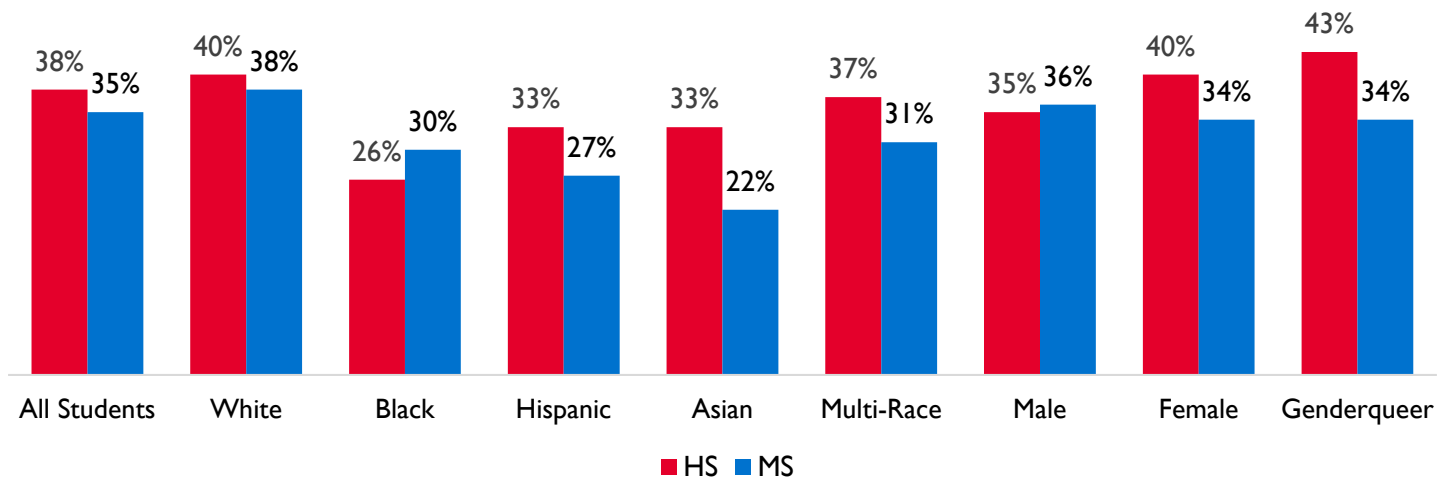
# Key Findings

## Mental Health

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

- **Overall:** HS students reported that they most frequent cause of negative stress is school demands/expectations, followed by busy schedules (25%), and family demands/expectations (10%). MS students reported that school demands (35%) and busy schedules as causing the most negative stress.
- **Gender:** For genderqueer students “family expectations” and “other personal issues” are rated highest after school demands.

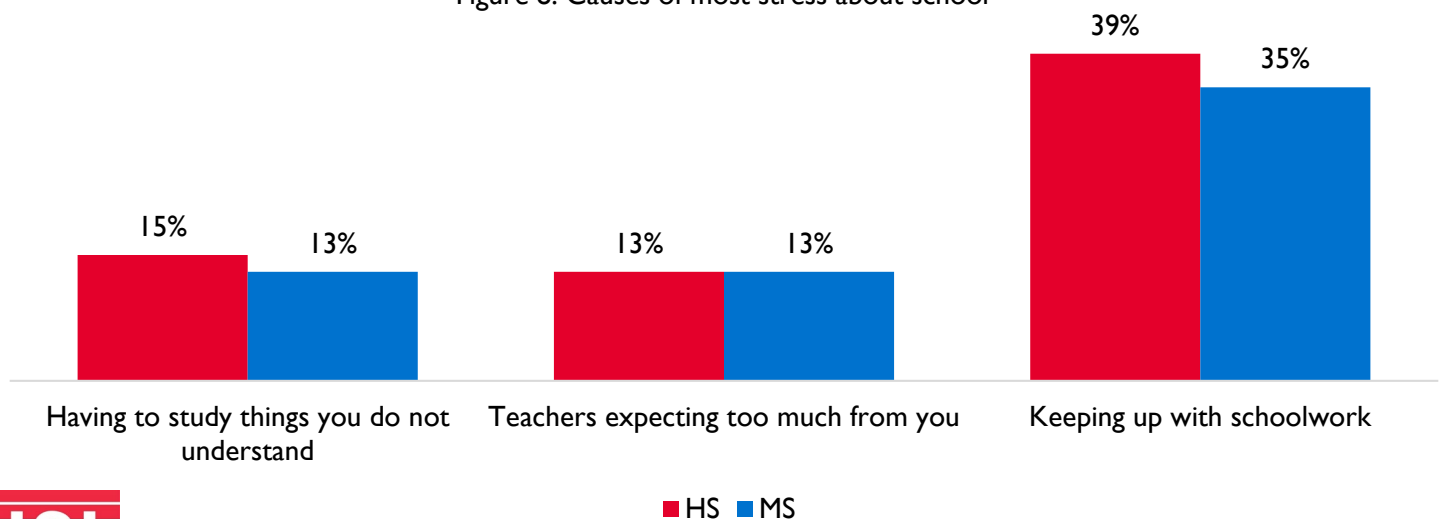
Figure 7. Percent of students who worry about school demands/expectations



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

- **Overall:** In both MS and HS the greatest sources of stress for students are:
  - Keeping up with schoolwork (35-39%)
  - Teachers expecting too much (13-15%)
  - Having to study things you they do not understand (13%)

Figure 8. Causes of most stress about school



# Key Findings

## Mental Health

### Reports of depression, self-harm, and suicide among Middlesex League Region students

- **Race/Ethnicity**: Hispanic students were more likely to report experiencing depression, Multi-Racial students were more likely to report engaging in self-harm and considering suicide, Multi-Racial and Hispanic students were more likely to make a plan to and attempt suicide.
- **Gender**: Genderqueer students were significantly more likely to report mental health concerns.
- **Trend Data**: In 2021, HS students reported mental health concerns similarly to prior years.

Figure 9. Percent of Middlesex HS students who reported mental health concerns in the past 12 months across years

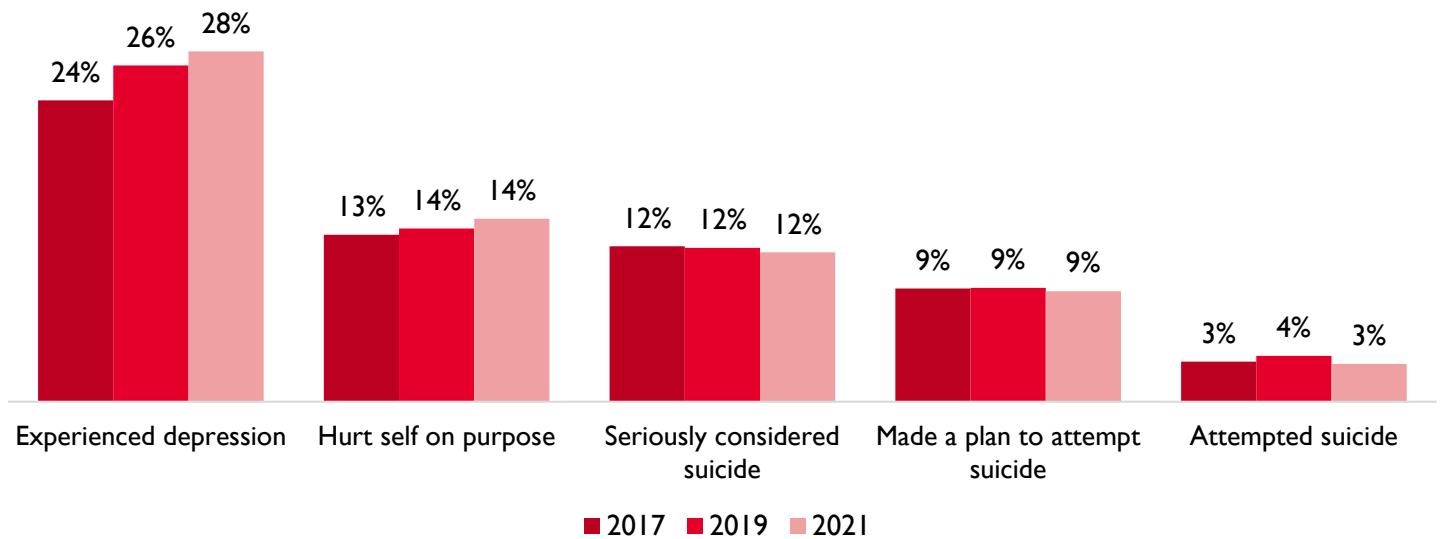


Table 3. Percent of Middlesex HS students who reported depression, self-harm, and suicide in the past 12 months in 2021

	Experienced depression	Hurt self on purpose	Seriously considered suicide	Made a plan to attempt suicide	Attempted suicide
<b>Overall</b>	<b>28%</b>	<b>14%</b>	<b>12%</b>	<b>9%</b>	<b>3%</b>
White	27%	14%	11%	8%	3%
Black	31%	11%	12%	10%	3%
Asian	25%	12%	10%	9%	2%
Multi-Racial	34%	21%	19%	14%	6%
Hispanic	38%	17%	18%	14%	6%
Male	18%	7%	8%	6%	2%
Female	33%	18%	14%	9%	3%
Genderqueer	64%	55%	42%	32%	13%

# Key Findings

## Mental Health

### Reports of depression, self-harm, and suicide among Middlesex League Region students

- **Race/Ethnicity:** Black students were more likely to report experiencing depression, Hispanic students were more likely to report engaging in self-harm or seriously considering suicide, Black students were more likely to make a plan to attempt suicide, and Hispanic/Latino students were more likely to attempt suicide.
- **Gender:** Genderqueer students were significantly more likely to report mental health concerns.
- **Trend Data:** 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 10. Percent of Middlesex MS students who reported mental health concerns in the past 12 months by year or ever

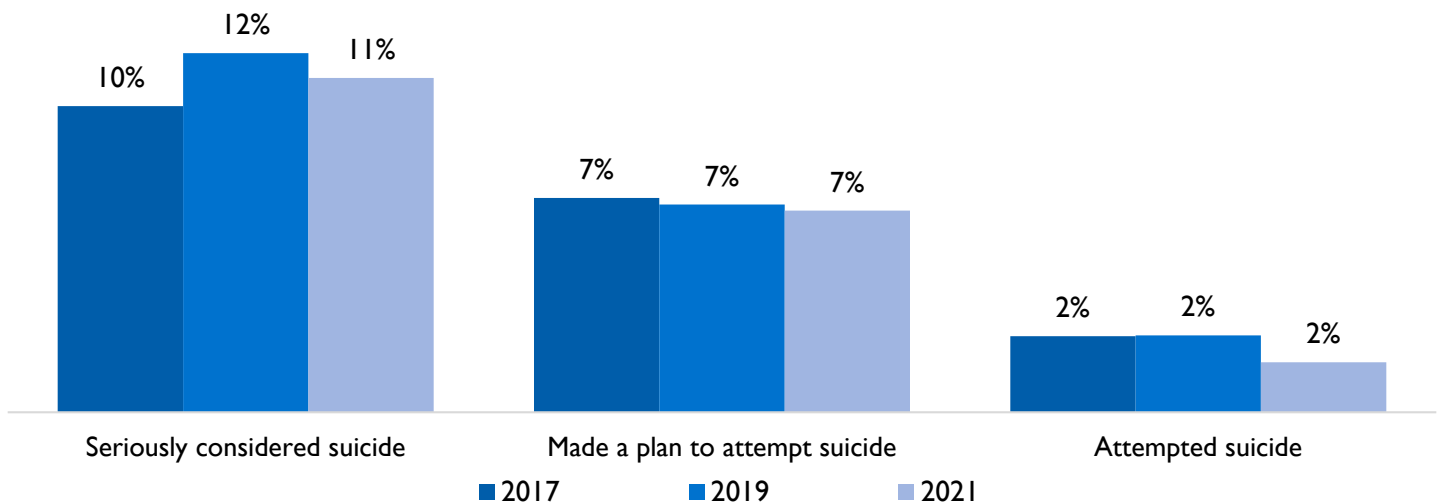


Table 4. Percent of Middlesex MS students who reported depression, self-harm, and suicide ever

	Experienced depression*	Hurt self on purpose*	Seriously considered suicide	Made a plan to attempt suicide	Attempted suicide
<b>Overall</b>	<b>24%</b>	<b>18%</b>	<b>17%</b>	<b>10%</b>	<b>3%</b>
White	22%	16%	15%	9%	3%
Black	38%	24%	26%	19%	7%
Asian	19%	20%	19%	11%	4%
Multi-Racial	27%	24%	26%	14%	6%
Hispanic	-	27%	28%	18%	9%
Male	15%	11%	10%	6%	2%
Female	29%	20%	20%	11%	4%
Genderqueer	68%	69%	65%	49%	23%

\*Depression and self-harm were asked over a 12 month period.

# Key Findings

## Mental Health

### Support networks and treatment access (overall)

- Most students (79%) are able to use a coping strategy to relieve stress
- A majority students (55-60%) have at least one teacher or other adult at school they can talk to
- Most students (81-84%) have at least one parent they can talk to
- 11-16% of students receive care through prescribed medications
- **Trend Data:** Between 2019 and 2021 there was a small decrease (7% vs 6%) in the number of HS students in the Middlesex Region who reported receiving treatment from a doctor or other health professional for any type of behavioral health, mental health condition or emotional problem.

Figure 11. Percent of students who reported having a support network or access to treatment

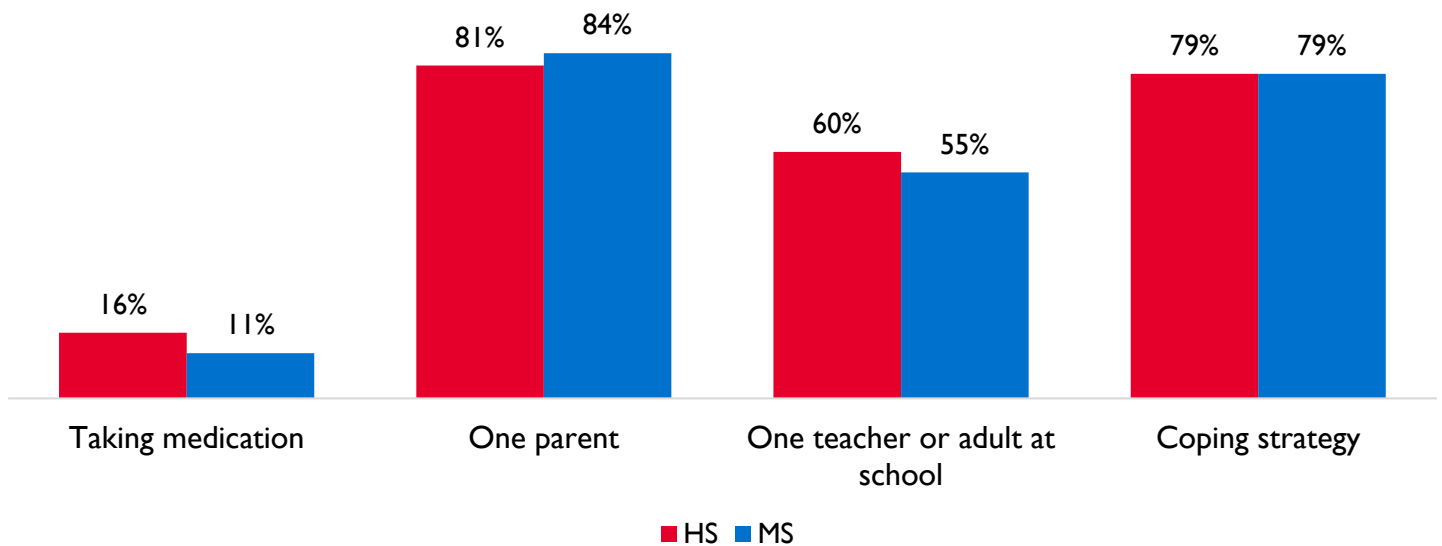
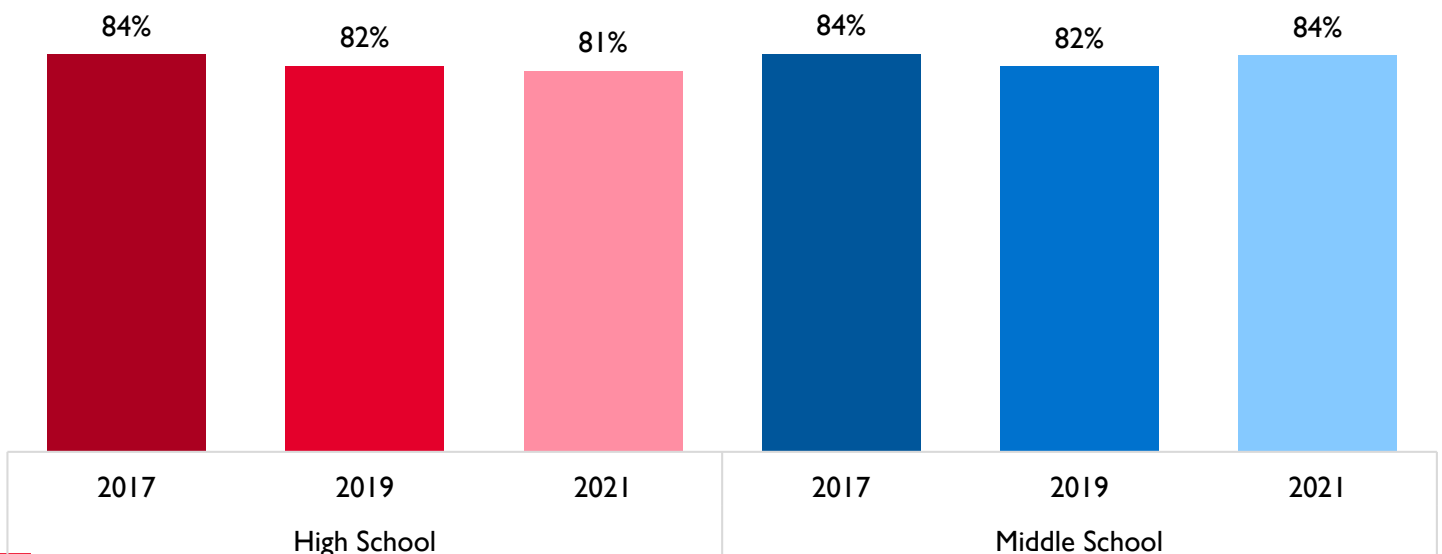


Figure 12. Percent of students who reported having a parent or other adult family member to talk to across years



# Key Findings

## Substance Use

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

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.

### Regional Summary

- Overall, substance use increased as students increased in grade.
- Alcohol was most commonly used by HS and MS students. About one-fifth of HS students report having drunk alcohol in the past 30 days.
- White and female HS students were more likely to report drinking alcohol.
- Hispanic HS students were more likely to report marijuana and electronic vapor product use.
- HS students generally accessed substances through friends or family members.
- Smoking cigarettes was perceived as the most risky and marijuana use the least among HS students.
- Trend data between 2019 and 2021 shows a decline in overall alcohol consumption amongst HS students by 12% and a 3% decline amongst MS students.
- Similar trend data across marijuana use was reported, with a 10% decline in usage amongst HS students and a 1% decline amongst MS students.

### Core Survey Questions Analyzed

- 30 day (current) use
  - During the past 30 days, on how many days did you smoke part of all of a substance? (Question was asked for each substance)
- Access to substances
  - During the past 30 days, how did you usually get a substance that you used? (Question was asked for each substance)
- Risk of substance use
  - How much do you think people risk harming themselves physically or in other ways if they use a substance? (Question was asked for each substance)

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.



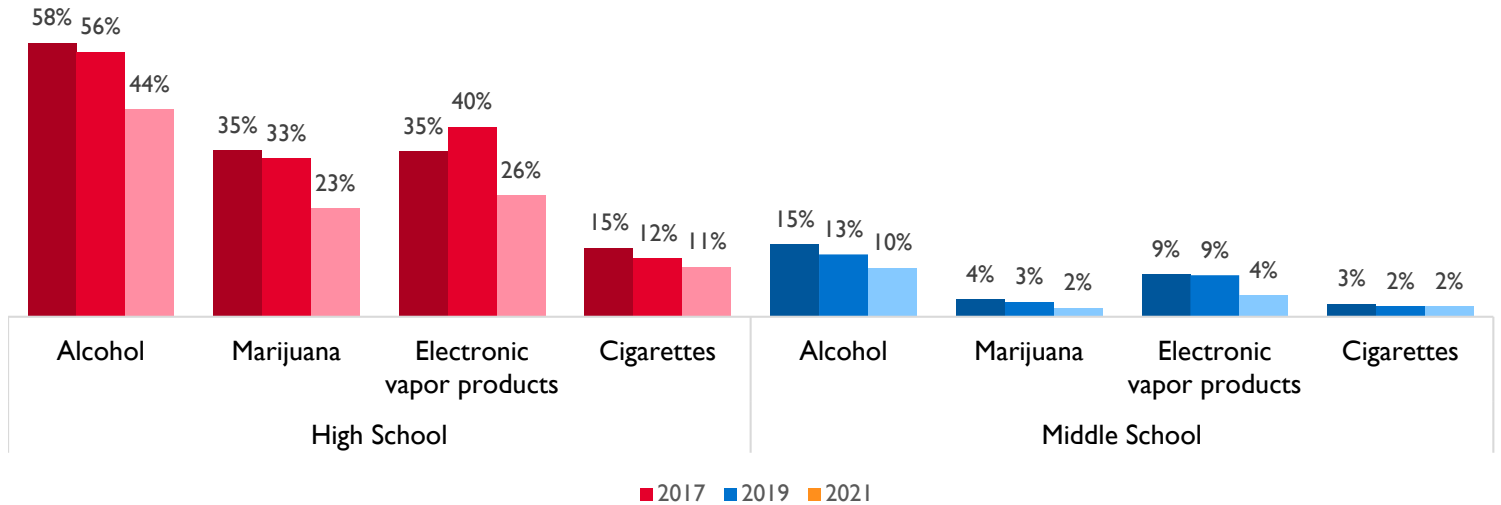
# Key Findings

## Substance Use

### Lifetime use

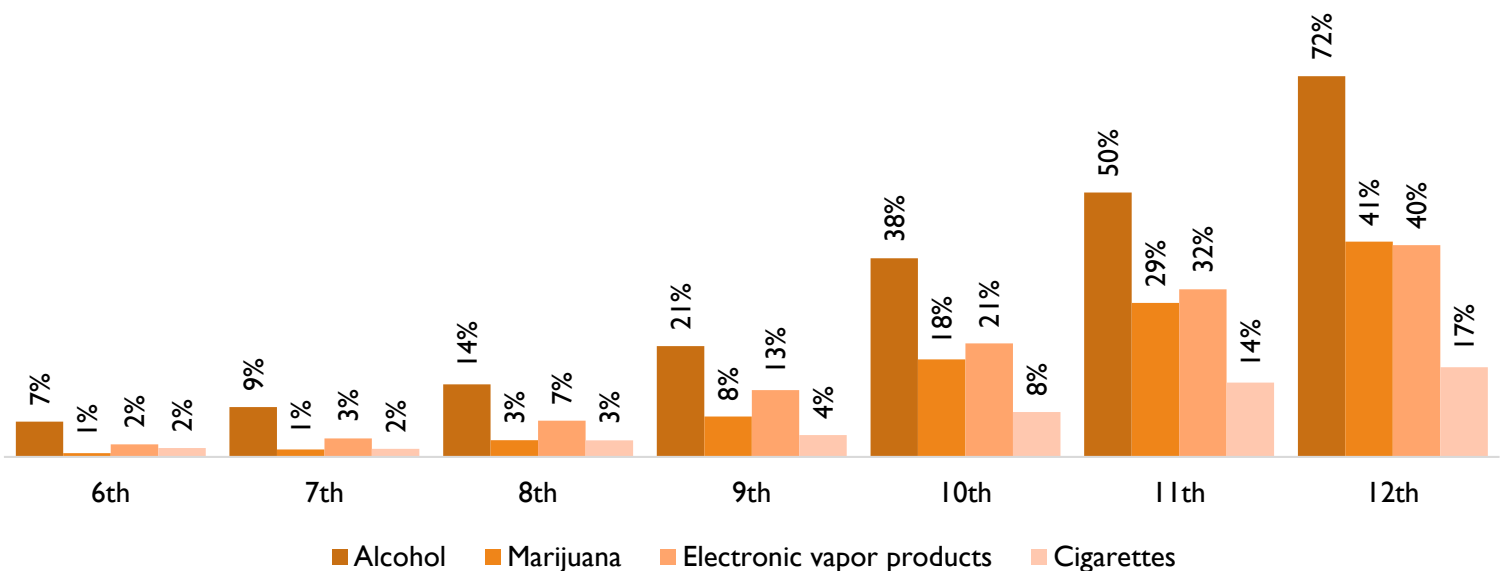
- **Overall:** Alcohol is the most reported substance used by both HS and MS students in 2021.
- **Trend Data:** In general, lifetime use by Middlesex League students has decreased across years.

Figure 13. Percent of students who reported ever using substances across years



- **Grade:** In 2021, the percentage of students reporting lifetime use of any substance increases by grade.

Figure 14. 2021 percent of students reporting ever using substances by grade



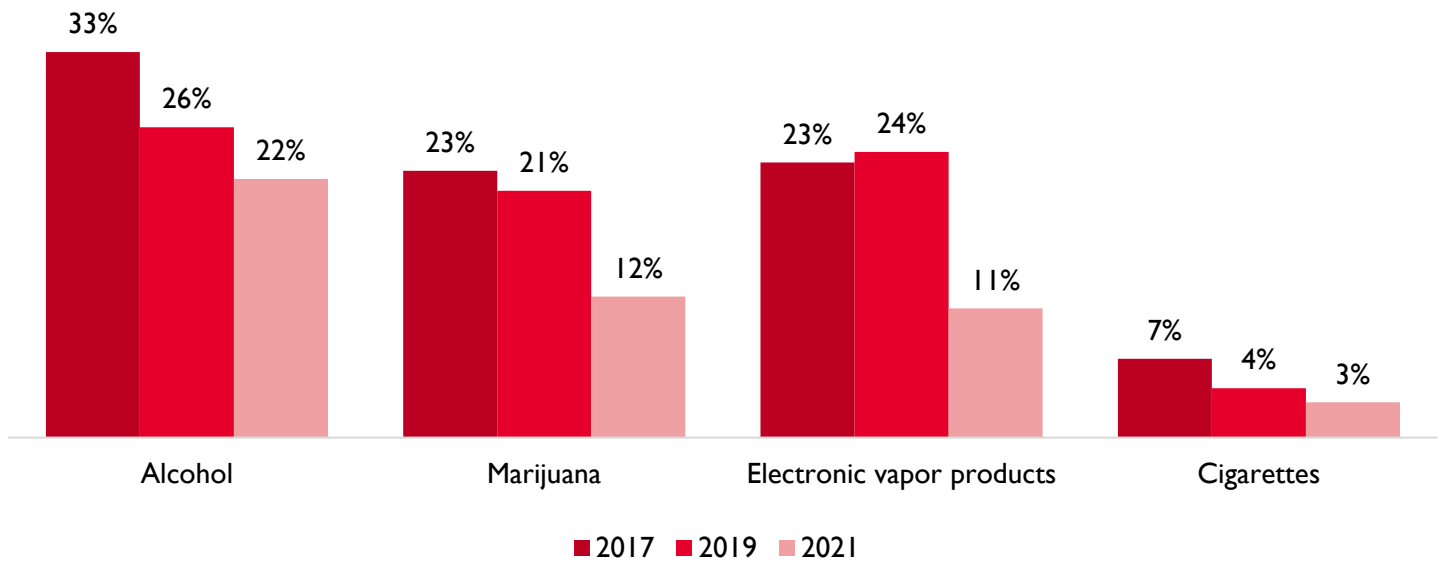
# Key Findings

## Substance Use

Past 30 day (current) use

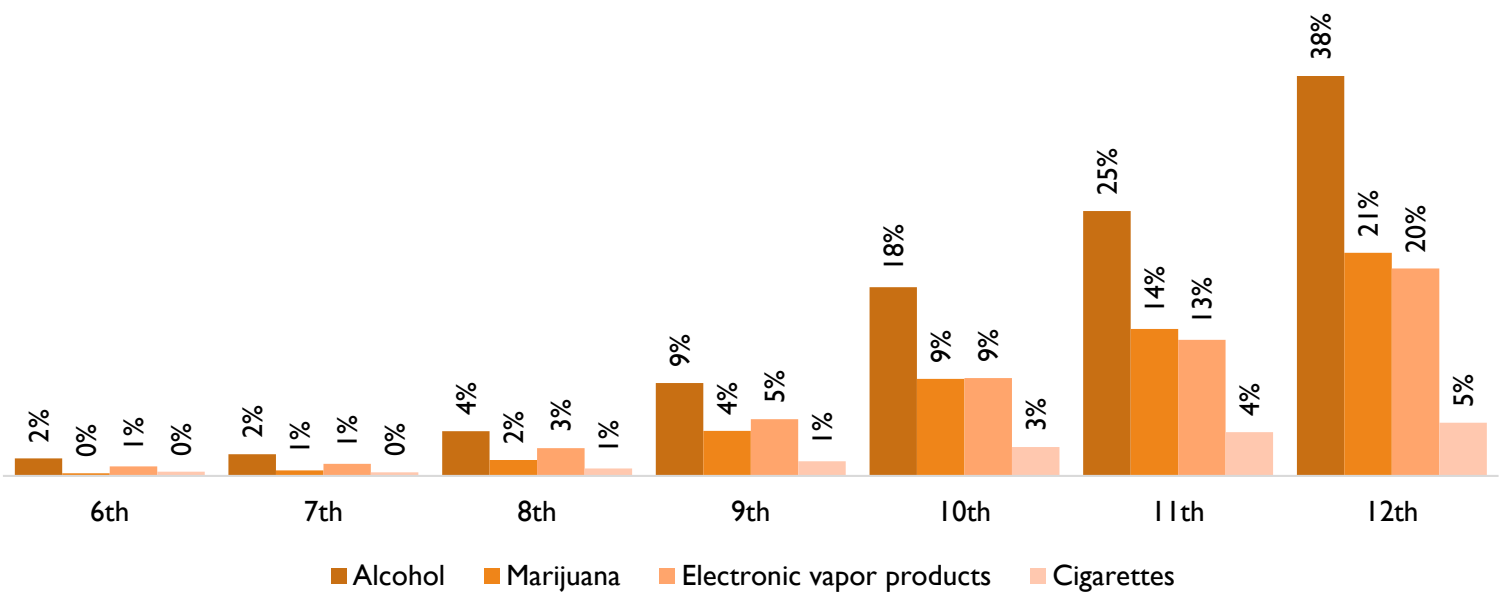
- **Overall:** Alcohol is the most reported substance used by both HS and MS students in 2021.
- **Trend Data:** In general, past 30 day (current) use by Middlesex League students has decreased across years.

Figure 15. Percent of HS students reporting past 30 day (current) use of substances across years



- **Grade:** In 2021, the percentage of students reporting use of any substance increases by grade.

Figure 16. 2021 percent of students reporting past 30 day (current) use of substances by grade



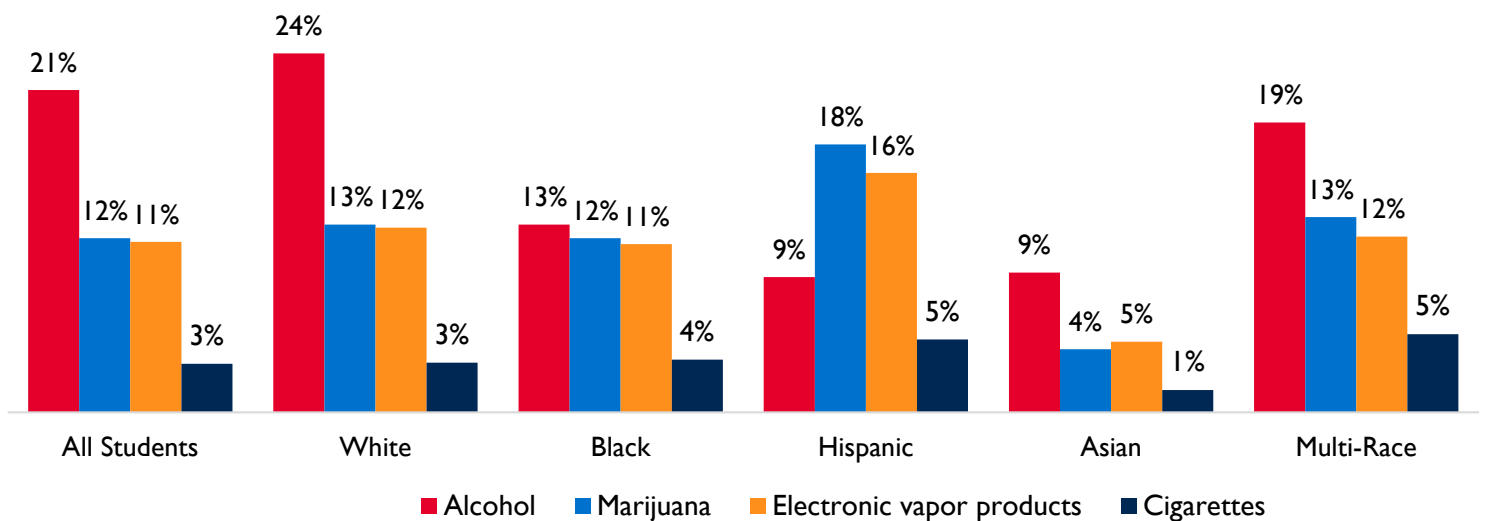
# Key Findings

## Substance Use

Past 30 day (current) use

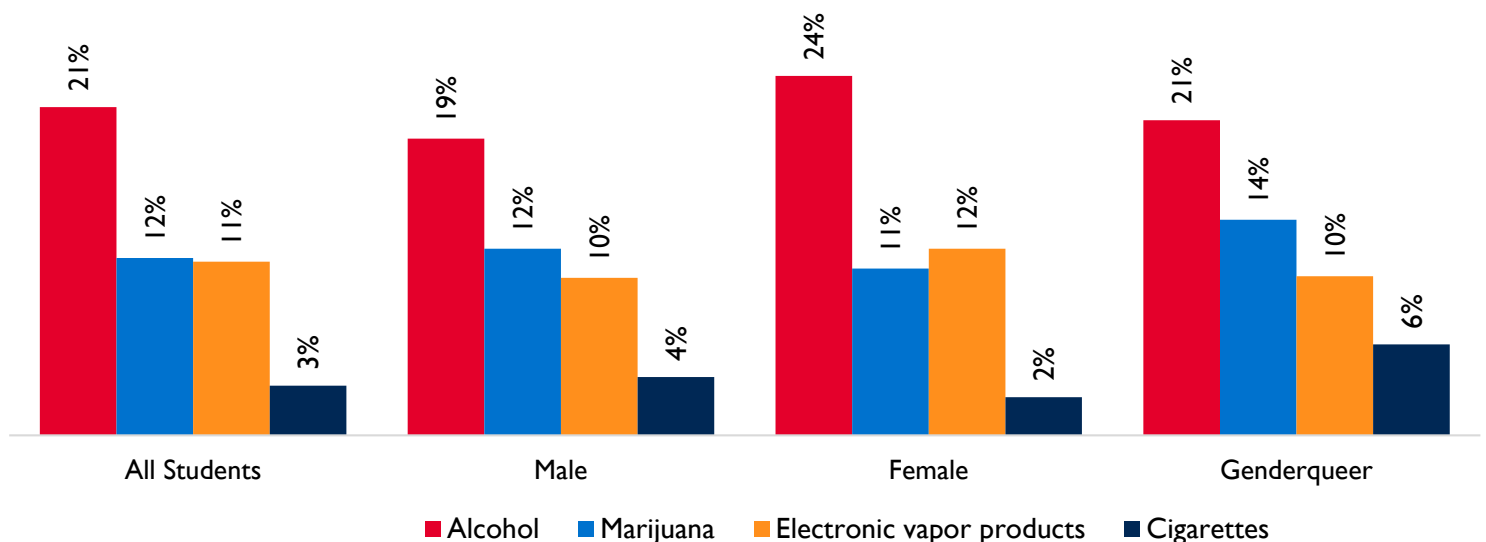
- **Overall:** Alcohol was the most reported substance currently used by HS students.
- **Race/Ethnicity:** White and Multi-Racial HS students are more likely to report current use of alcohol. Hispanic students were more likely to report using marijuana and electronic vapor products.

Figure 17. Percent of students reporting past 30 day (current) use of substances by race



- **Gender:** HS students reported substance use similarly across genders, although female students were more likely to report using alcohol and electronic vapor products and genderqueer students were more likely to report using marijuana.

Figure 18. 2021 percent of students reporting past 30 day (current) use of substances by gender



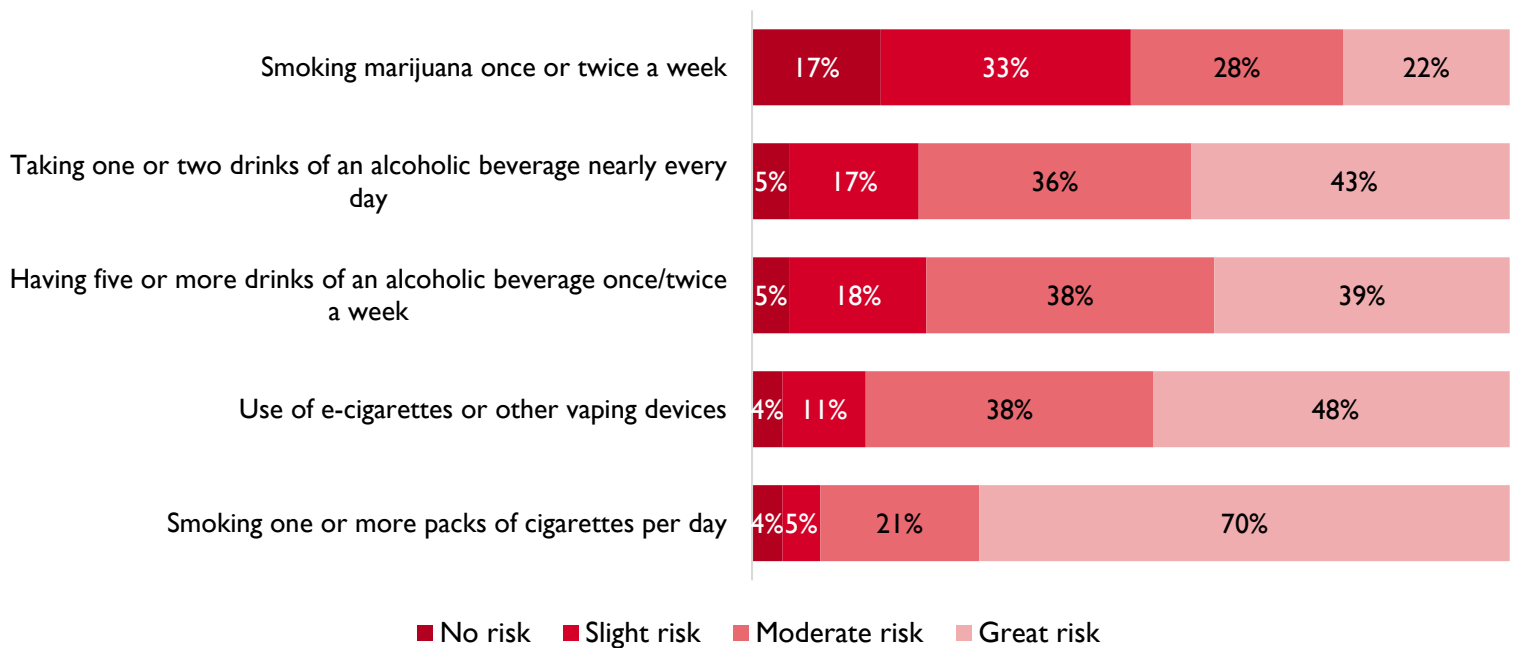
# Key Findings

## Substance Use

### Perception of risk among HS students

- **Overall:** HS students perceived smoking one or more packs of cigarettes per day as the greatest risk, followed by the use or e-cigarettes or other vaping devices, and taking two or more drinks of an alcoholic beverage nearly every day. HS students perceived smoking marijuana once or twice a week as the least risky, with 17% reporting that they believe there is no risk.
- **Race/Ethnicity:** White students were less likely to report a great risk of harm from having five or more drinks of an alcoholic beverage once or twice a week (37%), while Asian students were more likely to report a great risk of harm (53%). Asian students were more likely to report a great risk from smoking marijuana (36%) compared to other races.
- **Gender:** Female students were more likely to report a great risk of harm from using substances than male or genderqueer students.

Figure 19. Perceived risk of substance use among HS students



# Key Findings

## Substance Use

### Availability of substances

- **How did you usually get the alcohol you drank?**
  - HS: Got it from a friend or family member (63%), gave someone else money to buy it (20%), got it some other way (17%), bought it myself in liquor store (7%).
  - MS: Got or bought them from a friend, family member, or someone else (61%), took it from a store or family member (3%), got it some other way (36%).
- **How did you usually get the marijuana you smoked?**
  - HS: Got it from friends (41%), bought it from someone else (32%), got it some other way (14%), got it at home with permission from parent or family member (5%).
  - MS: Got it from someone under the age of 21 (40%), took it from some other place without permission (10%), got it from parent or family over 21 (20%), bought from someone else (30%).
- **How did you usually get the electronic vapor products you used?**
  - HS: Got or bought them from a friend, family member, or someone else (49%), bought them myself in a tobacco shop or vape shop (10%), got them some other way (25%).
  - MS: Got or bought them from a friend, family member, or someone else (57%), took them from a store or another person (8%), got them some other way (31%).

# 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 suffocation.

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.<sup>1</sup>

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.<sup>2</sup> 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.

### Regional Summary

- Overall, HS students are more likely to report driving under the influence of marijuana than alcohol.
- Hispanic and Multi-Racial students are most likely to report driving under the influence of alcohol or marijuana.
- About one-fifth of HS students report that they check their cell phone while driving.
- White and female students are most likely to report that they check their cell phone while driving.
- Forced sexual behavior was consistent across reporting years.
- Genderqueer students were significantly more likely to experience electronic bullying than male or female students.
- Trend data shows a 10% decline in experiencing electronic bullying amongst Middlesex MS students from 30% in 2019 to 20% in 2021.
- Trend data indicates the number of HS students who reported having been forced to do sexual things they did not want to do as similar to previous years (7-8% across 2017, 2019 and 2021).

### Core Survey Questions Analyzed

- Driving while under the influence
  - How many times did you drive a car or other vehicle when you had been drinking alcohol or using marijuana? (HS)
- Texting or emailing while driving
  - How many days did you check your cell phone, text, or e-mail while driving a car or other vehicle? (HS)
- Sexual or physical dating violence
  - Did someone you were dating or going out with physically hurt you or force you to do sexual things that you did not want to do in the past 12 months?
- Bullying
  - Have been electronically bullied in the past 12 months (HS) or ever (MS)?

<sup>1</sup> [https://www.cdc.gov/nchs/pressroom/nchs\\_press\\_releases/2018/201806\\_Youth\\_Injury\\_Mortality.htm](https://www.cdc.gov/nchs/pressroom/nchs_press_releases/2018/201806_Youth_Injury_Mortality.htm)

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

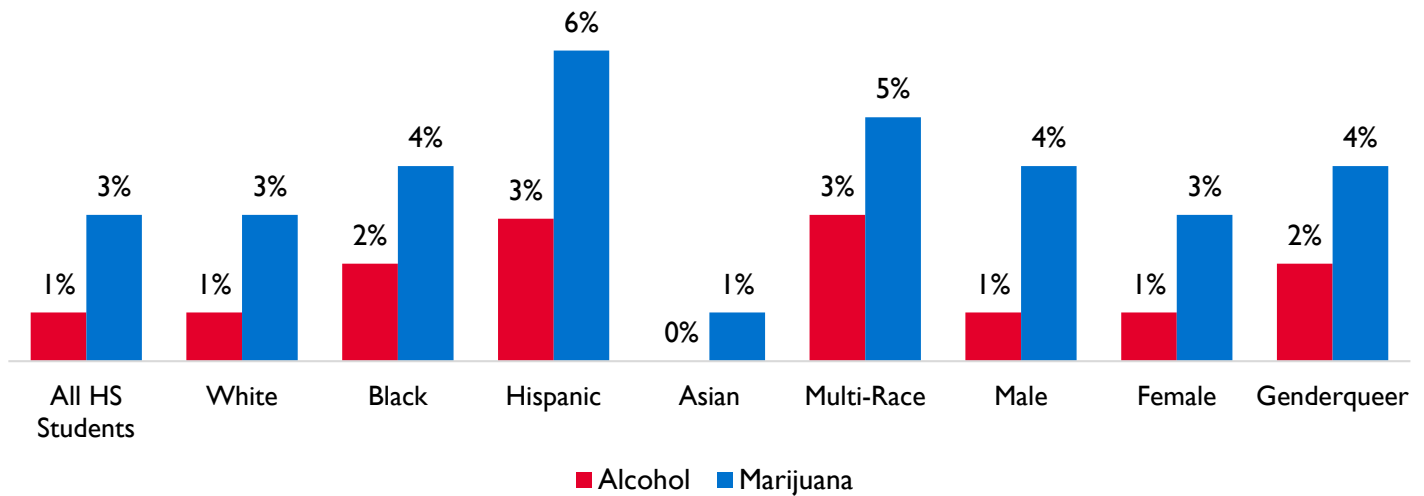
# Key Findings

## Unintentional Injury and Violence

### Driving under the influence of alcohol and marijuana in the past 30 days

- **Overall:** 3% of HS students reported that they drove a car or other vehicle when under the influence of alcohol or marijuana in the past 30 days.
- **Race/Ethnicity:** Hispanic and Multi-Racial students were more likely to report driving under the influence of alcohol or marijuana.
- **Gender:** Driving while under the influence of alcohol or drugs was report similarly across genders.

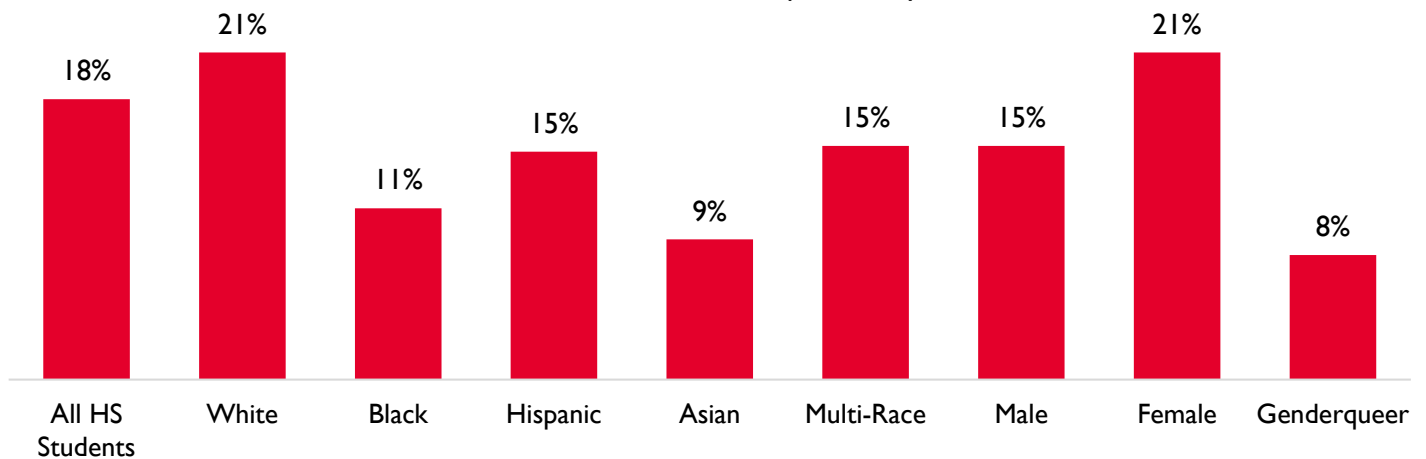
Figure 20. Percent of HS students who drove a car or other vehicle when under the influence of alcohol or marijuana



### Cell phone use while driving a car or other vehicle in the past 30 days

- **Overall:** 18% of HS students reported that they checked their cell phone, texted, or e-mailed while driving a car or other vehicle. in the past 30 days.
- **Race/Ethnicity:** White students were more likely to report checking their phone while driving.
- **Gender:** Female students were more likely to report checking their phone while driving.

Figure 21. Percent of HS students who checked their cell phone, texted, or e-mailed while driving a car or other vehicle, in the past 30 days



# Key Findings

## Unintentional Injury and Violence

### Forced sexual behavior in the past 12 months (HS) or ever (MS)

- **Overall:** 4% of HS and MS students reported that they forced to do sexual things they did not want to do in the past 12 months (HS) and ever (MS).
- **Race/Ethnicity:** Hispanic students were more likely to report forced sexual behaviors (7% HS, 10% MS), followed by Black and Multi-Racial students.
- **Gender:** Female HS students were more likely to report forced sexual behaviors. Genderqueer MS students were significantly more likely to report forced sexual behaviors.
- **Trend Data:** Forced sexual activity is reported similarly across years, however there was a decrease among genderqueer students.

Figure 22. Percent of students who reported being forced to do sexual things they did not want to do In the past 12 months (HS) or ever (MS)

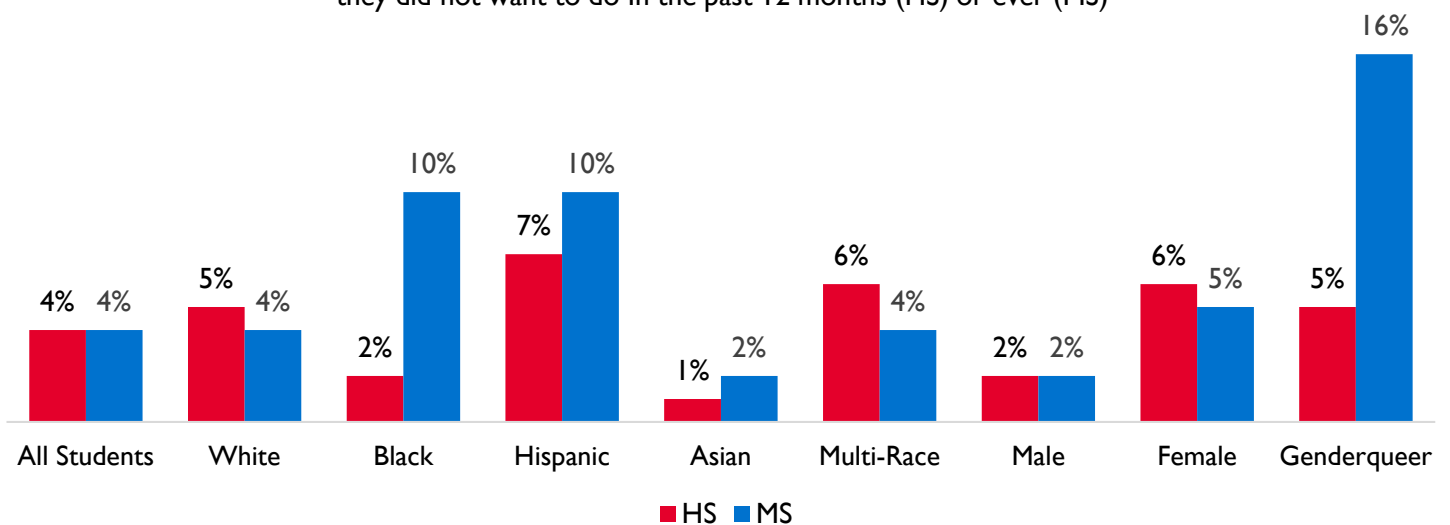
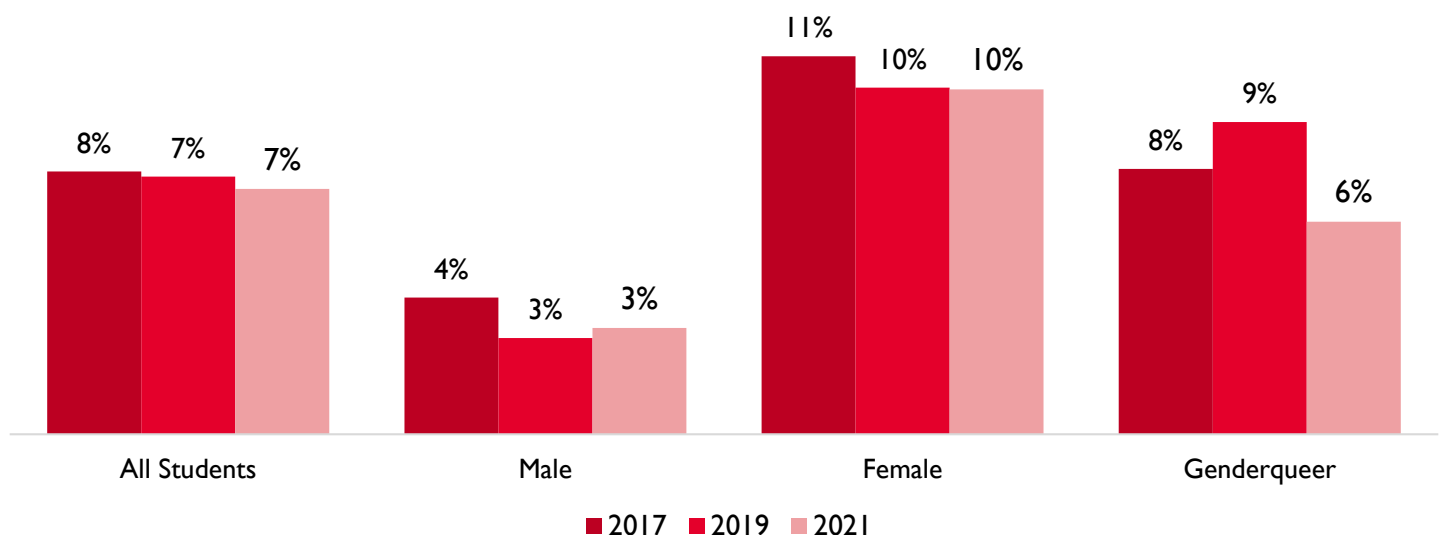


Figure 23. Percent of HS students who reported being forced to do sexual things they did not want to do In the past 12 months by gender across years





# Key Findings

## Unintentional Injury and Violence

### Electronic bullying in the past 12 months (HS) or ever (MS)

- **Overall:** 10% of HS students reported that they had been electronically bullied in the past 12 months and 20% of MS students reported that they had ever been electronically bullied.
- **Race/Ethnicity:** Students experienced electronic bullying at similar rates across races, with Hispanic students reporting at a slightly higher rate in HS and MS.
- **Gender:** Genderqueer students are significantly more likely to experience electronic bullying compared to female and male students.
- **Trend Data:** HS students reported being electronically bullied in the past 12 months at similar rates across years. There was more variation in MS reporting ever being electronically bullied. Rates did decrease from 2019 to 201, but are still higher than 2017.

Figure 24. Percent of students who reported that they had been electronically bullied in the past 12 months (HS) or ever (MS)

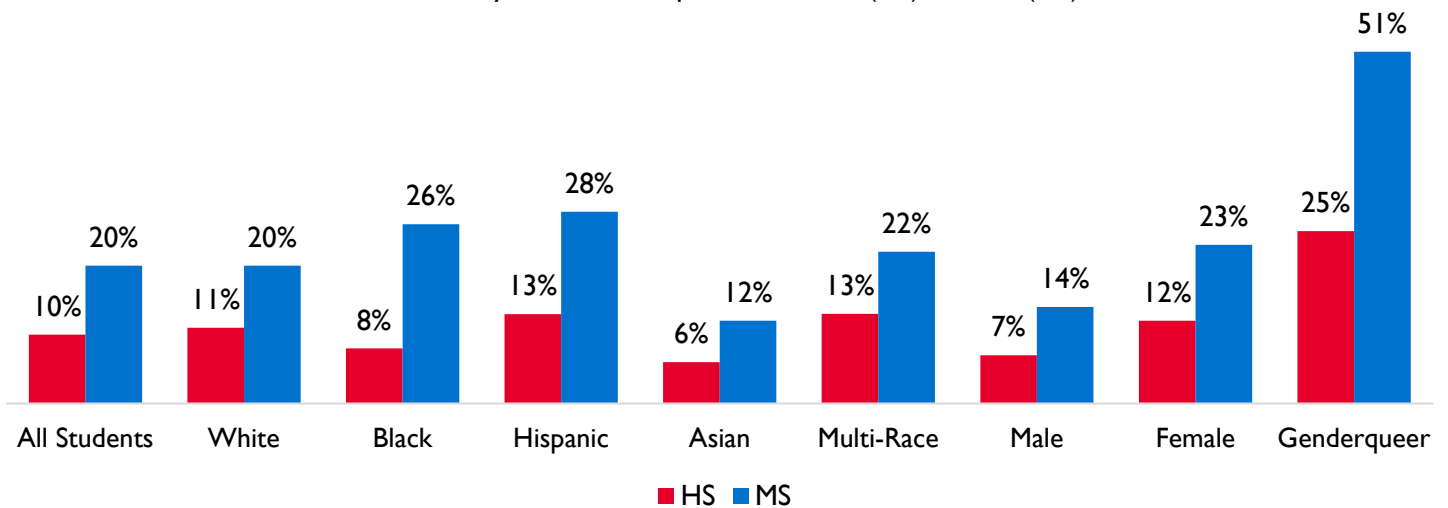
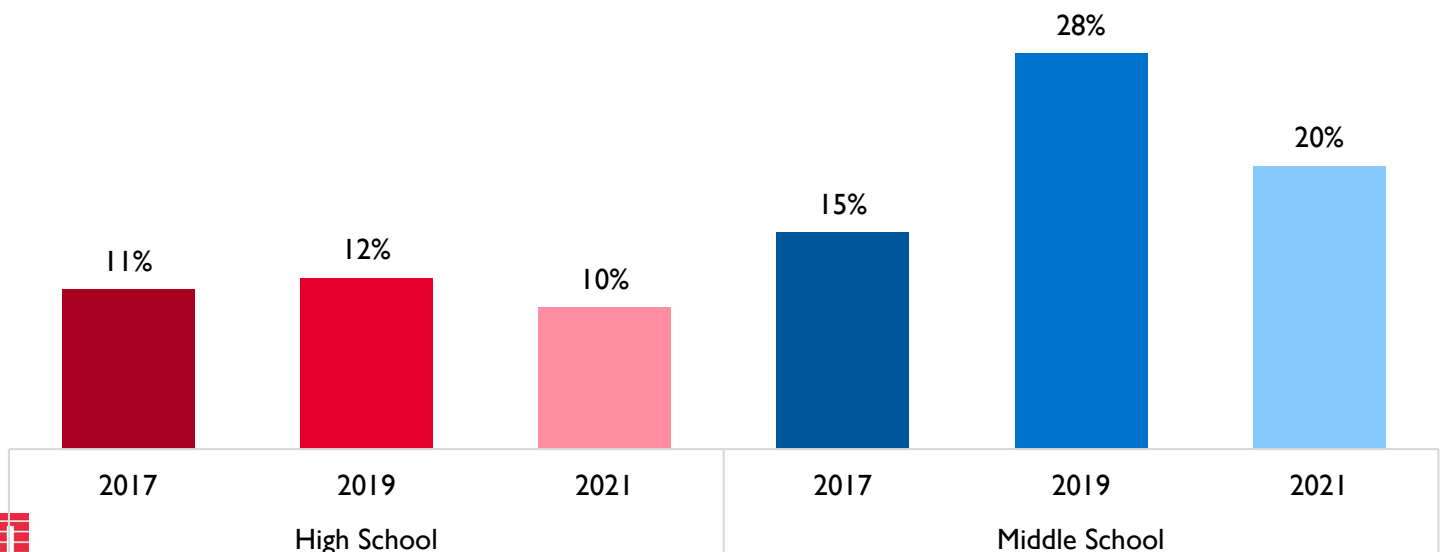


Figure 25. Percent of students who reported that they had been electronically bullied in the past 12 months (HS) or ever (MS) across years



# 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.<sup>1</sup>

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.<sup>2</sup>

## Regional Summary

- Overall, 19% of HS students and 2% of MS students reported that they had ever had sexual intercourse
- Hispanic, Multi-Racial, and genderqueer students were more likely to report drinking alcohol or using drugs before sexual intercourse.
- Trend data indicates an overall decrease in the number of Middlesex HS students who report having had sexual intercourse. This decreased from 28% in 2017 to 26% in 2019 to now 19% in 2021.
- HS students reported that condoms were the most common method used to prevent pregnancy.

## Core Survey Questions Analyzed

- Sexual intercourse
  - Have you ever had sexual intercourse?
- Sexual partners
  - How many people have you had sexual intercourse with?
- Use of alcohol or drugs before sex
  - Did you use alcohol/drugs before you had sexual intercourse the last time?
- Methods of protection
  - Did you use any of the following methods to prevent pregnancy?

<sup>1</sup> [https://www.cdc.gov/healthyyouth/youth\\_hiv/hiv-information-and-youth.htm](https://www.cdc.gov/healthyyouth/youth_hiv/hiv-information-and-youth.htm)

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

# Key Findings

## Sexual Behavior

### Ever had sexual intercourse

- **Overall:** 19% of HS students and 2% of MS students reported that they had ever had sexual intercourse.
- **Race/Ethnicity:** Black, Multi-Racial, and White students were more likely to report ever having had sexual intercourse.
- **Trend Data:** The percent of students reporting that they ever had sexual intercourse has decreased across years.

Figure 26. Percent of students who reported that they had ever had sexual intercourse

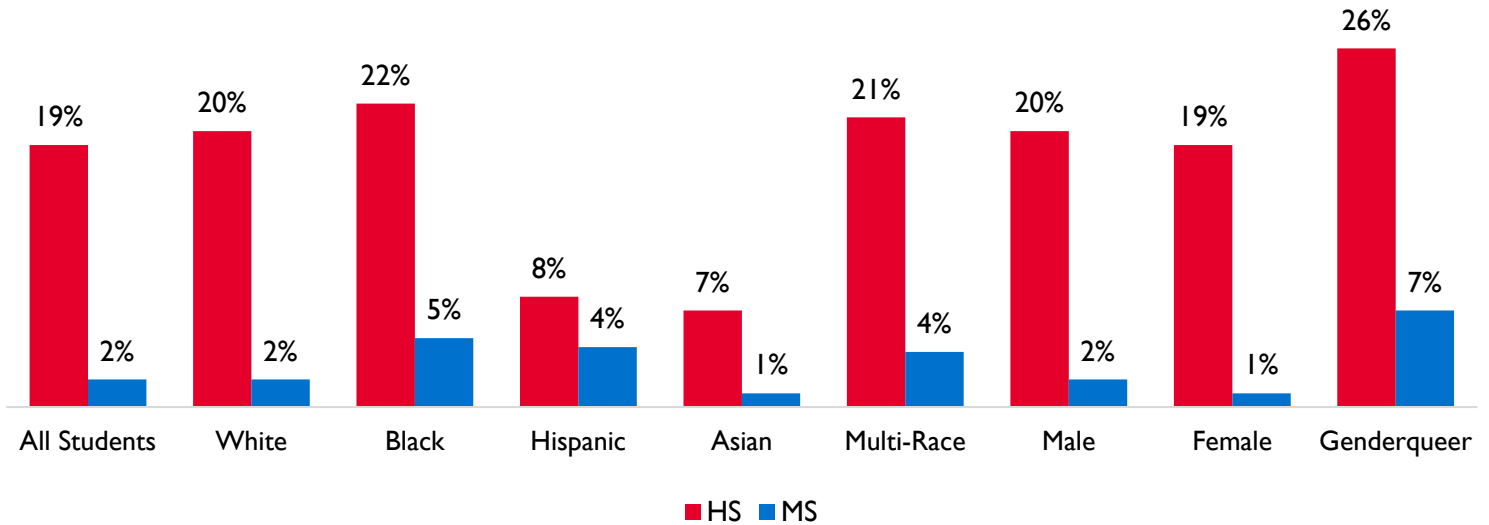
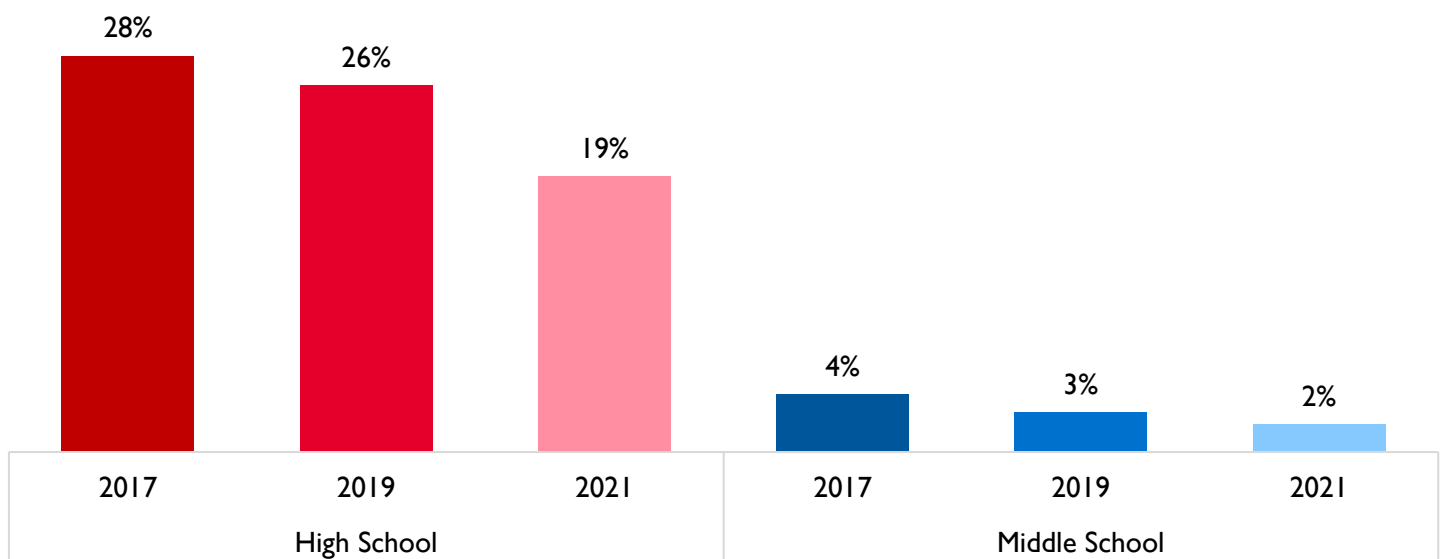


Figure 27. Percent of students who reported that they had ever had sexual intercourse across years



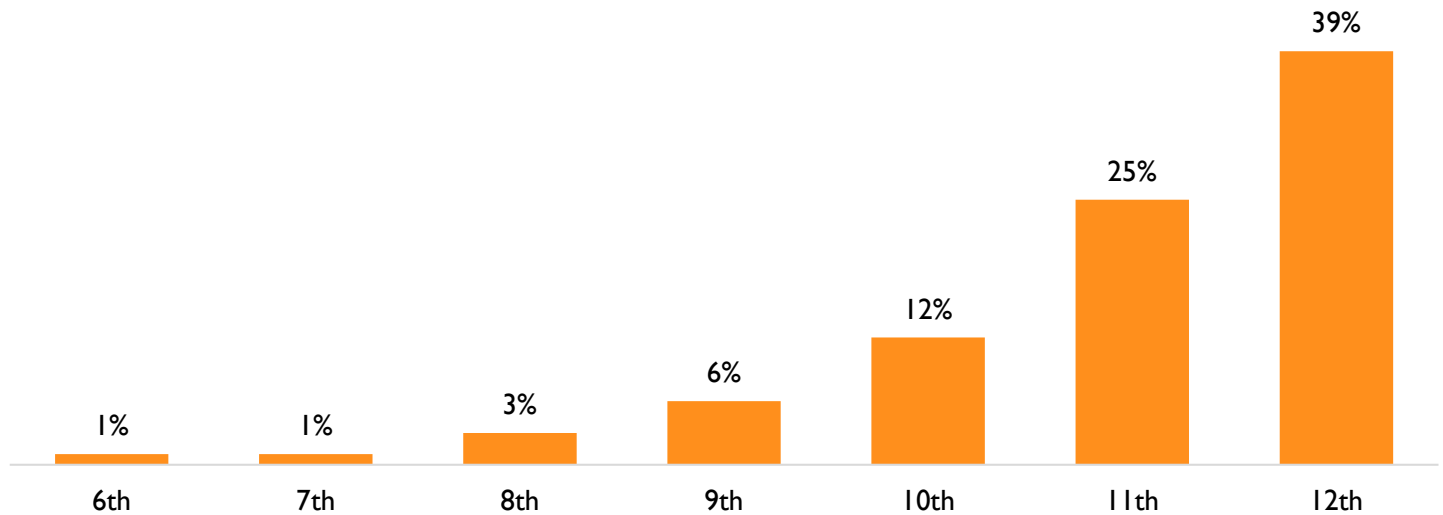
# Key Findings

## Sexual Behavior

### Ever had sexual intercourse

- **Grade:** 39% of 12<sup>th</sup> graders reported that they had ever had sexual intercourse, compared to 6% of 9<sup>th</sup> graders and only 1% of 6<sup>th</sup> graders.

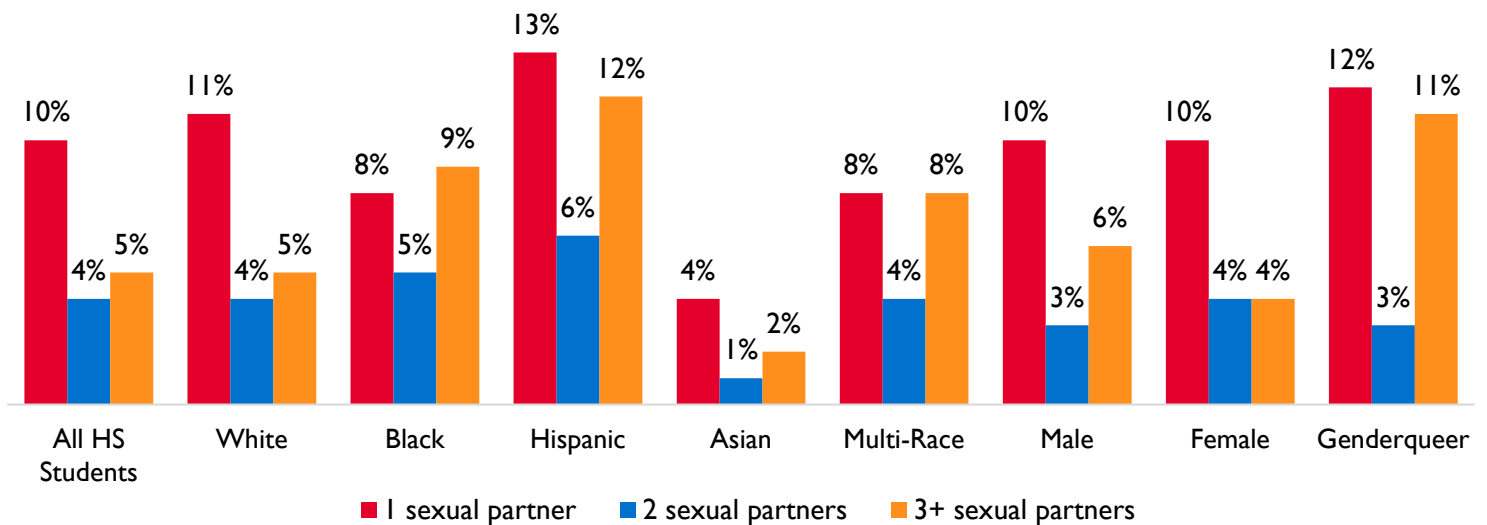
Figure 28. Percent of students who reported that they had ever had sexual intercourse by grade



### Number of sexual partners

- **Overall:** 5% of HS students reported having more than 2 sexual partners.
- **Race/Ethnicity:** Hispanic and Black students are more likely to report having more than 2 sexual partners.
- **Gender:** Genderqueer (12%) students were more likely to report more than 2 sexual partner than male or female students.

Figure 29. Percent of HS students who reported 1, 2, or 3+ sexual partners.



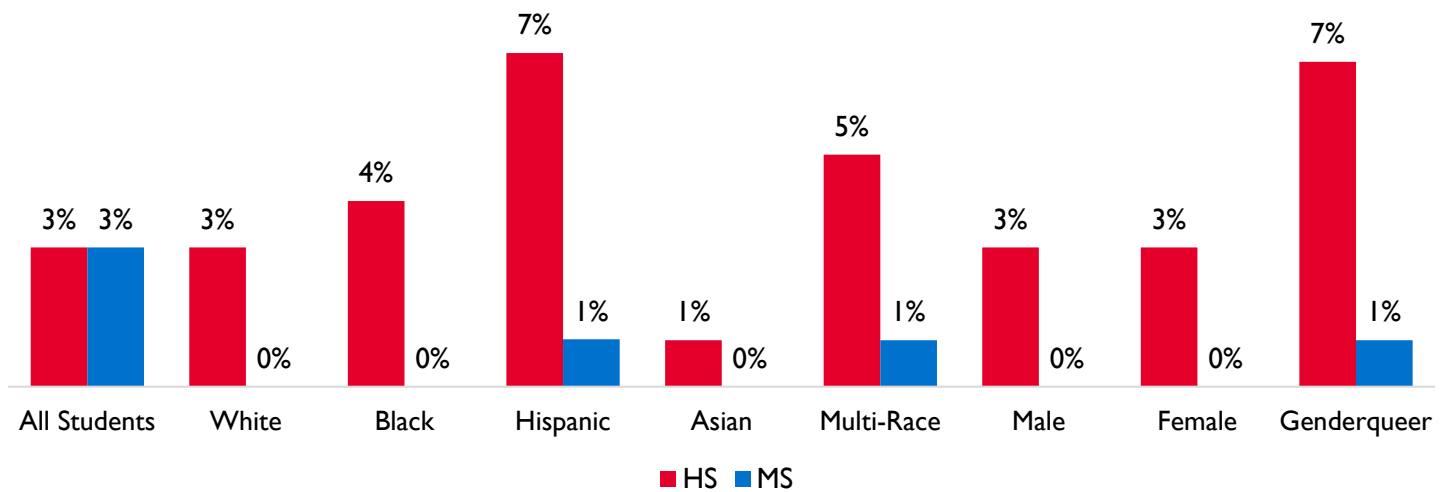
# Key Findings

## Sexual Behavior

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

- **Race/Ethnicity:** Hispanic and Multi-Racial students were more likely to report drinking alcohol or using drugs before they had sexual intercourse the last time.
- **Gender:** Genderqueer students were more likely to report drinking alcohol or using drugs before they had sexual intercourse the last time.

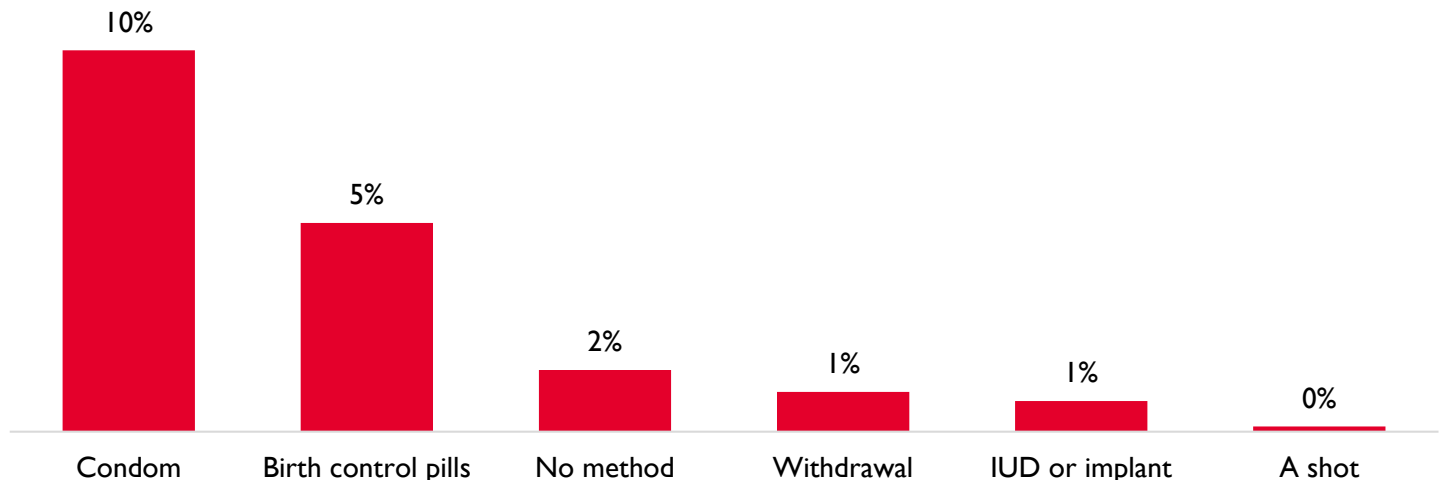
Figure 30. Percent of students reporting that they drank alcohol or used drugs before they had sexual intercourse the last time



## Methods of pregnancy prevention

- **Overall:** Condoms were the most common method reportedly used by HS students to prevent pregnancy (10%).

Figure 31. Methods used by HS students to prevent pregnancy



# 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.<sup>1</sup> 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).<sup>2</sup>

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.<sup>3</sup>

### Regional Summary

- About 7% of HS students were obese ( $\geq$  95th percentile for body mass index, based on sex- and age-specific reference data from the 2000 CDC growth charts) and 14% were overweight ( $\geq$  85th percentile but  $<$ 95th percentile for body mass index).
- The percent of HS students who were obese decreased from 8% to 7% while overweight rates increased from 13% to 14% compared from 2019 to 2021.
- The majority of MS and HS students report that they are about the right weight.
- HS students reporting eating fruit in the past 7 days slightly more often in 2021 compared to 2019 (95% vs 92%) and similar rates of vegetable consumption (94% vs 95%).
- The majority of HS students did not drink soda (53%) or an energy/sports drink (69%) in the past 7 days. White students were most likely to have drunk soda or an energy/sports drink in the past 7 days, while Asian students were least likely.
- Physical activity per week decreased while average screen time per day increased as students increased in age.
- Amongst MS Middlesex Students there was a 5% increase in students who reported “not trying to do anything about my weight” from 31% in 2019 to 36% in 2021.

### Core Survey Questions Analyzed

- Dietary Behaviors
  - How would you describe your weight?
  - Which of the following are you trying to do about your weight?
  - During the past 7 days, how many times did you: (HS)
    - Eat fruit?
    - Eat vegetables?
    - Drink a can, bottle or glass of soda or pop?
    - Drink a can, bottle or glass of an energy or sports drink?
- 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?
  - On an average school day, how many hours do you spend in front of a screen other than to do schoolwork?

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

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

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

# Key Findings

## Dietary Behaviors and Physical Activity

How do students describe their weight?

- Overall:** Students are most likely to report that they are about the right weight, followed by slightly overweight and slightly underweight. Compared to last year, students were less likely to report themselves as slightly or very overweight (28% vs 22% for HS, 24% vs 22% for MS).
- Race/Ethnicity:** In HS, Hispanic students were most likely to report being slightly or very overweight (31%). In MS, Black students were most likely to report that they were slightly or very overweight (32%).
- Gender:** Genderqueer students were most likely to report that they were slightly or very overweight.
- Grade:** There were no significant differences in student description of their weight by grade.

Figure 32. Student description of their weight

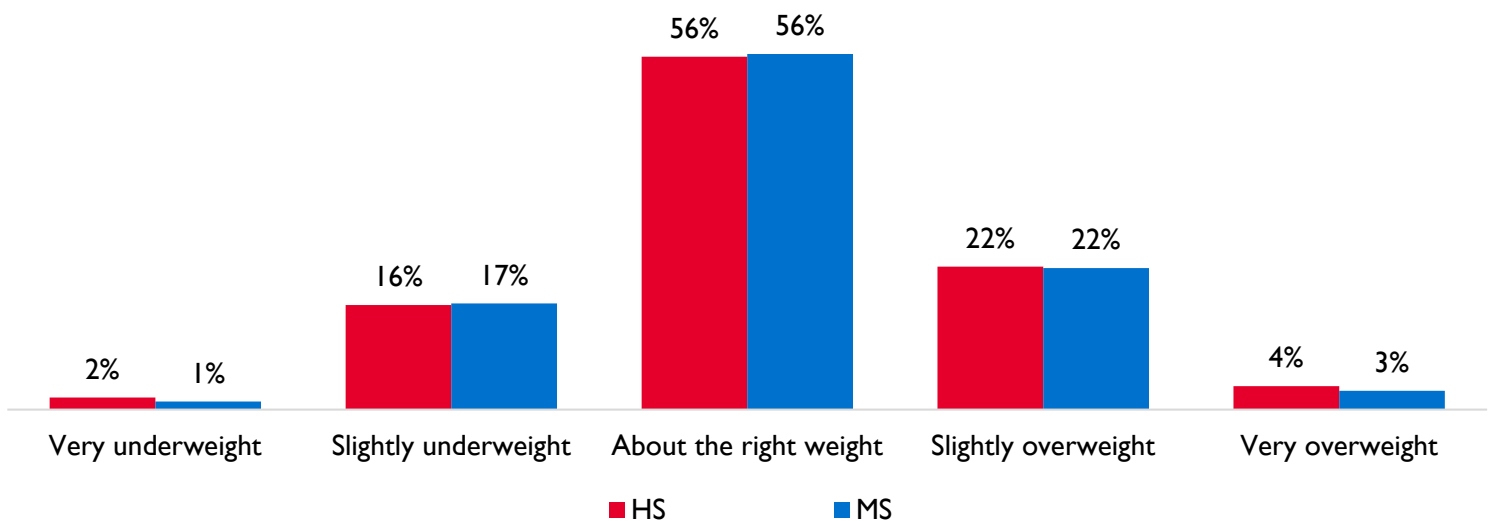
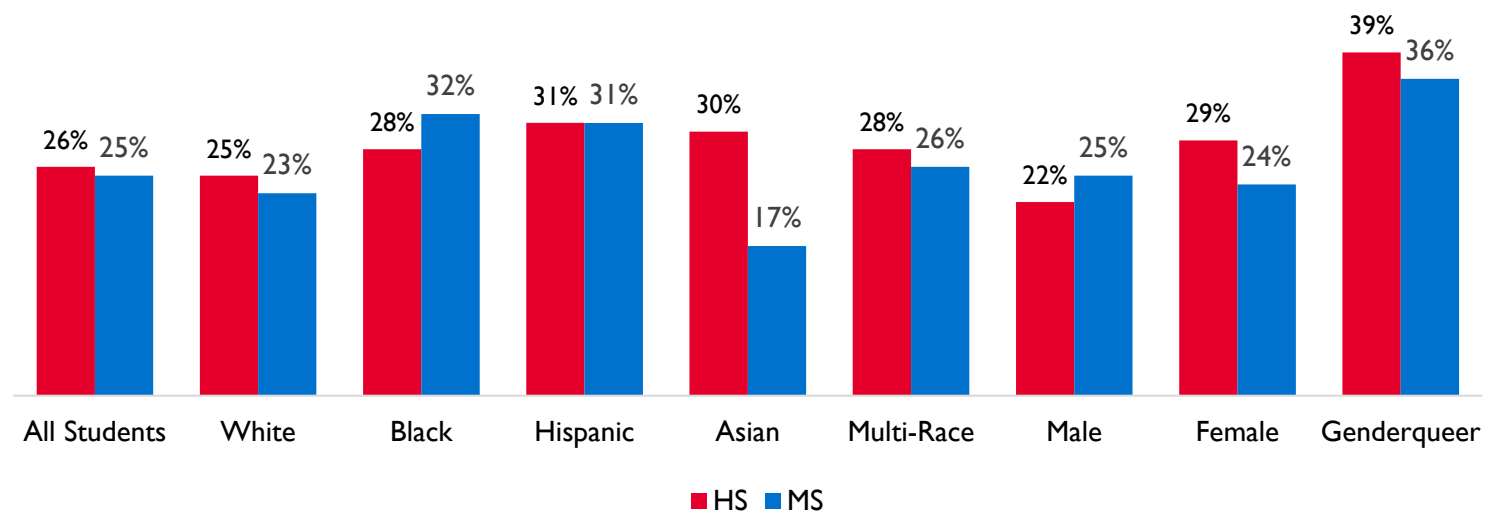


Figure 33. Percent of students who described themselves as slightly or very overweight



# Key Findings

## Dietary Behaviors and Physical Activity

What are students doing about their weight?

- **Overall:** HS students were more likely to report that they are trying to lose weight (39%). MS students were more likely to report that they are not trying to do anything about their weight (36%).
- **Race/Ethnicity:** There were no significant differences in student reporting on losing weight by race.
- **Gender:** More than half of HS female students reported that they are trying to lose weight (51%). MS genderqueer students were more likely to report that they are trying to lose weight (48%) than male or female students.
- **Grade:** Student reporting that they are trying to lose weight increased from 6<sup>th</sup>-12<sup>th</sup> grade.
- **Trend Data:** Amongst Middlesex MS Female students, there was a 6% increase in students who reported not trying to do anything about their weight (31% in 2019 vs. 38% in 2021). Amongst HS Female students there was a 8% increase in this category (19% in 2019 vs. 27% in 2021).

Figure 34. What students are trying to do about their weight

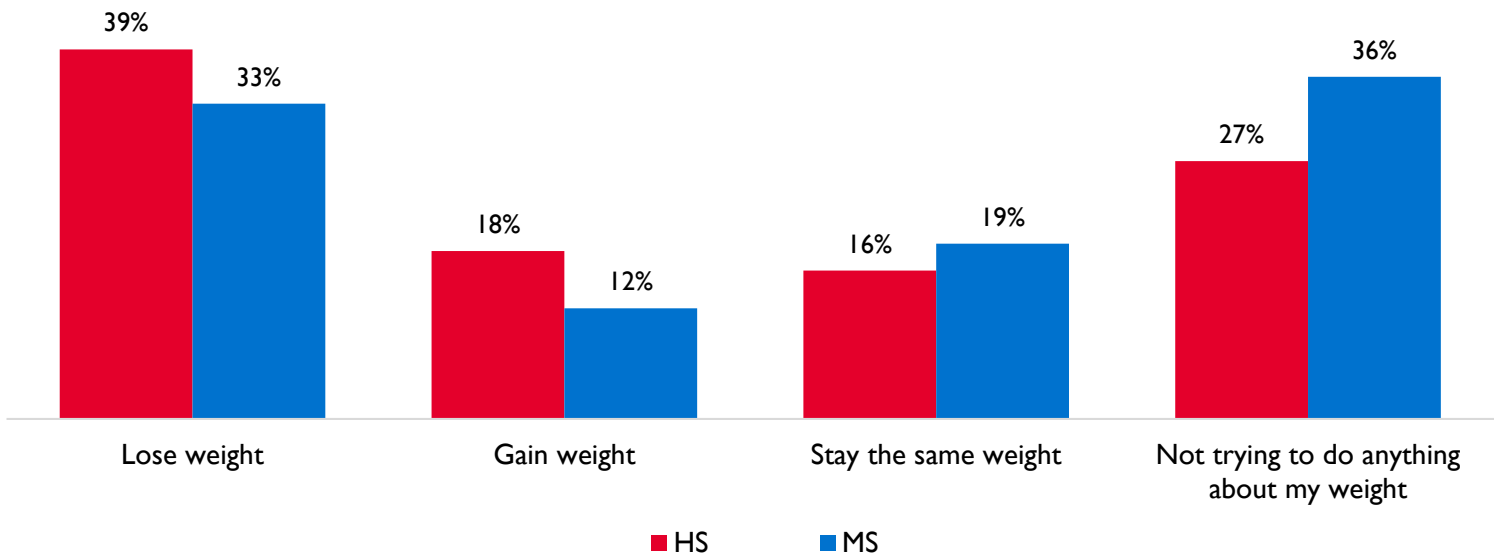
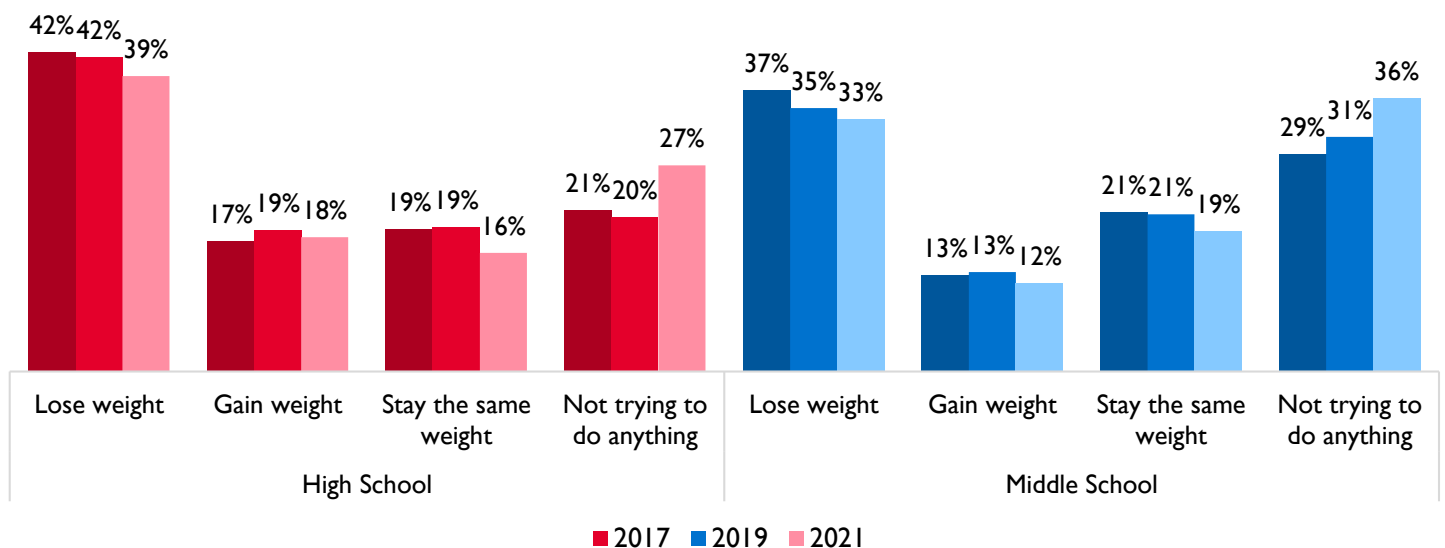


Figure 35. Percent of students trying to lose weight across years





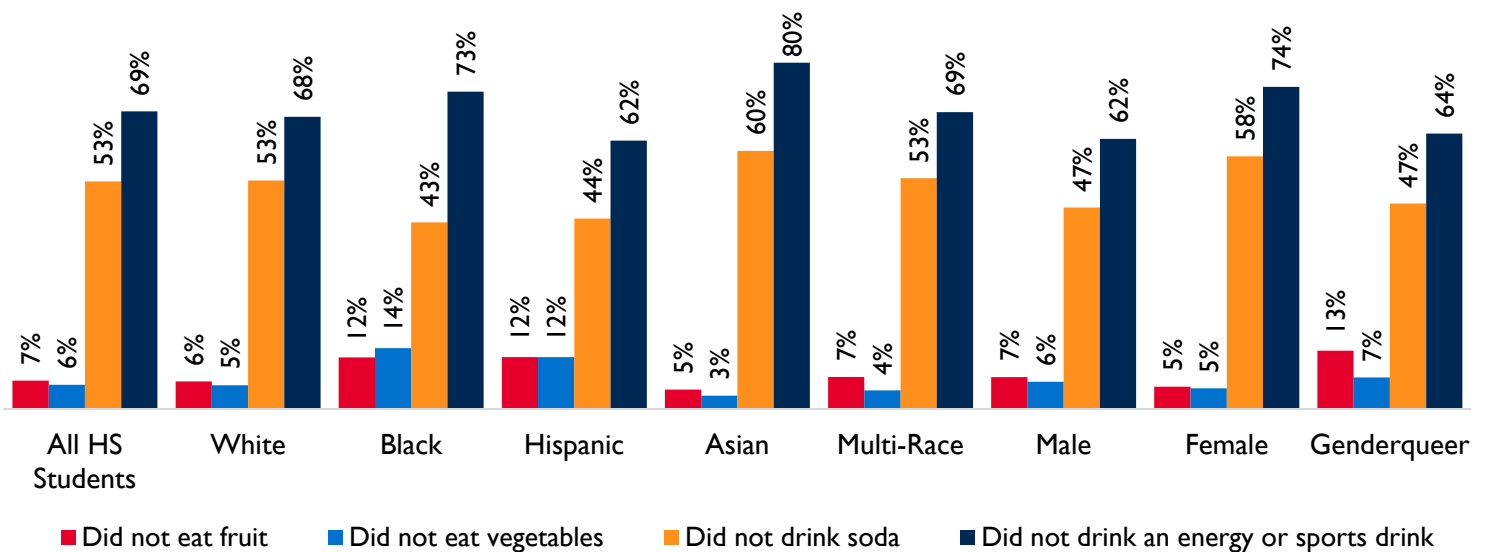
# Key Findings

## Dietary Behaviors and Physical Activity

In the past 7 days, on how many days did HS students eat fruit and vegetables, and drink soda and energy/sports drinks?

- **Overall:** Students' consumption was similar to 2019 rates.
- **Race/Ethnicity:** Black students were less likely to report eating fruits and vegetables and more likely to report drinking soda. Asian students were more likely to report eating fruits and vegetables and less likely to report drinking soda.
- **Gender:** Genderqueer students were less likely to report eating fruits and vegetables and reported similar consumption of soda as male students. Female students were more likely to eat fruits and vegetables and less likely to drink soda or energy/sports drinks.
- **Grade:** 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup>, and 12<sup>th</sup> graders reported similarly across consumption categories.

Figure 36. Food and drink consumption by HS students in the past 7 days



# Key Findings

## Dietary Behaviors and Physical Activity

In the past 7 days, on how many days were students physically active for more than 60 minutes per day?

- **Race/Ethnicity:** White students were most likely to report being physically active on 5 out of the past 7 days. Black and Hispanic students were significantly more likely to report no physical activity in the past 7 days.
- **Gender:** Genderqueer students were significantly less likely to report being physically active than male and female students.
- **Grade:** Students were less likely to be physically active as they increased in grade.
- **Trend Data:** HS and MS students were more likely to be physically active in 2021 compared to 2019.

Figure 37. Physical activity for 60 minutes on at least 5 of the past 7 days by grade

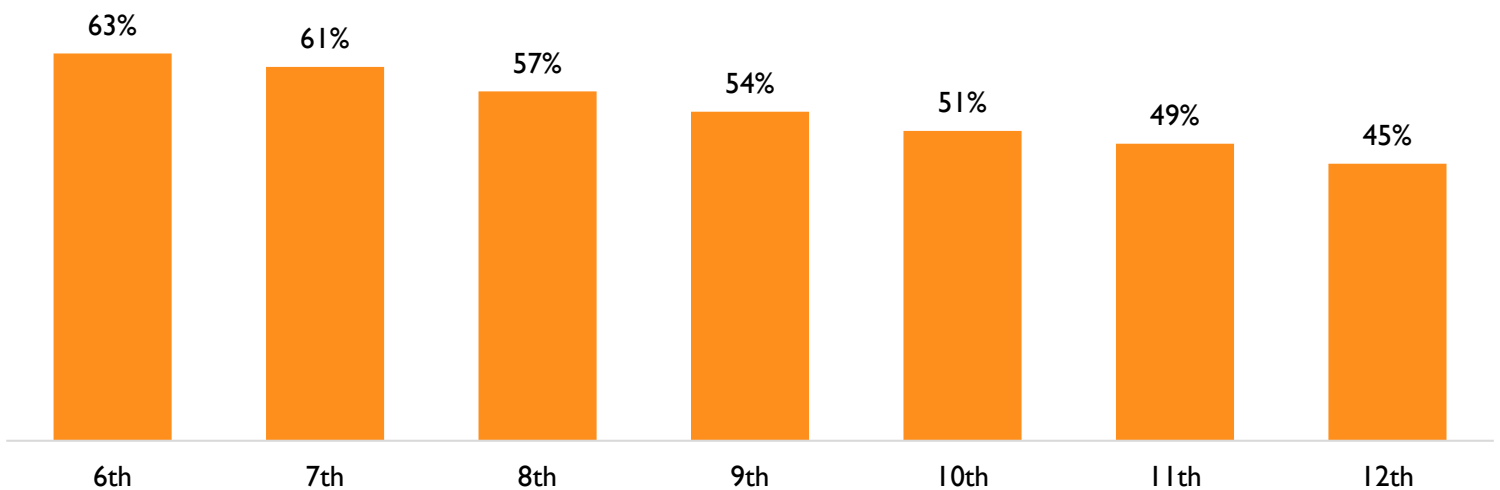
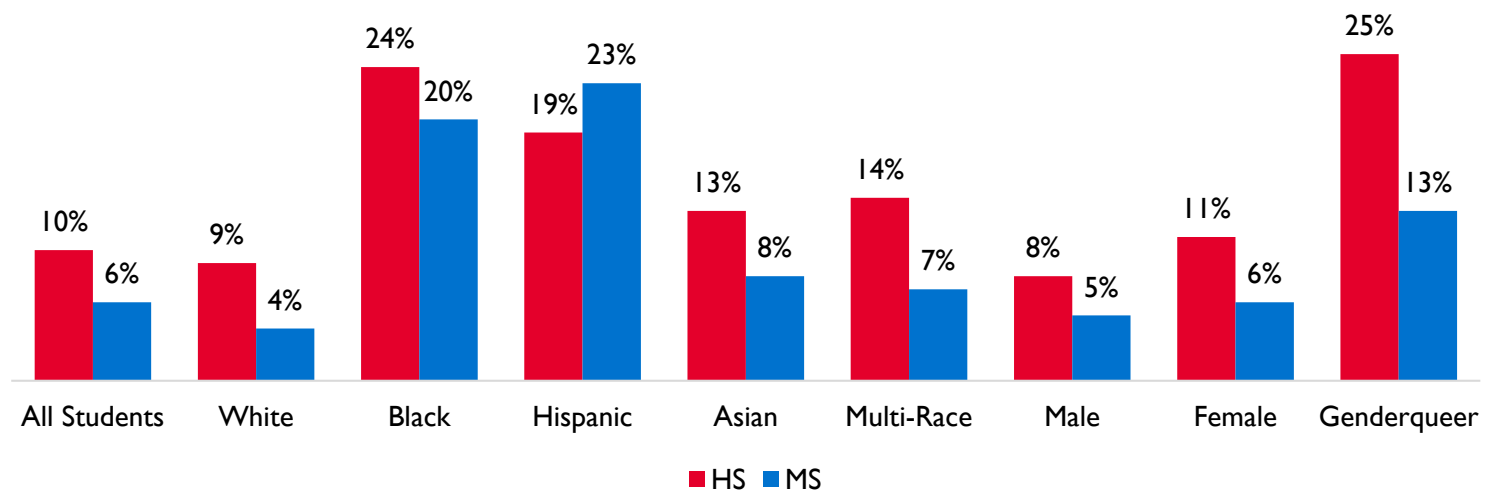


Figure 38. Percent of students who reported no physical activity in the past 7 days



# Key Findings

## Dietary Behaviors and Physical Activity

On an average school day, how many hours or screen time (not including school work) did students have?

- **Overall:** Students reported a significant amount of screen time per day.
- **Race/Ethnicity:** Black students were more likely to report 5 or more hours of screen time, followed by Hispanic, Asian, Multi-Racial, and White students.
- **Gender:** Genderqueer students were significantly more likely to report 5 or more hours of screen time per day compared to male and female students.
- **Grade:** Students had more screen time as they increased by grade.

Figure 39. Five or more hours of screen time per day during the past 7 days by grade

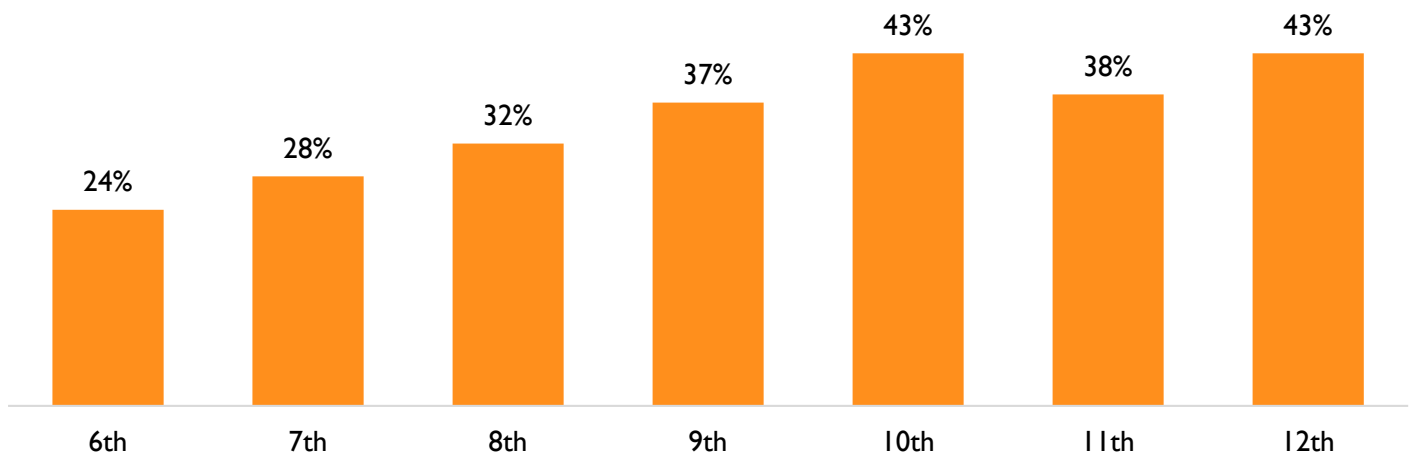
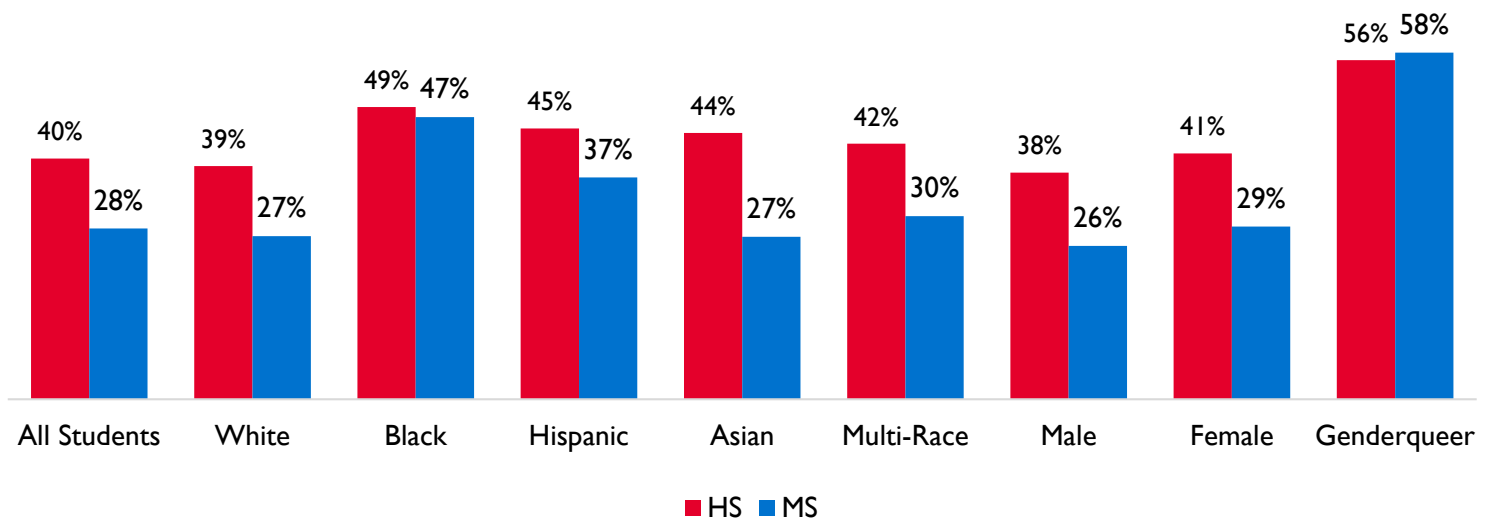


Figure 40. Percent of students who reported 5 or more hours of screen time per day during the past 7 days



# 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.<sup>1</sup>

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.

### Regional Summary

- Overall, about 75% of students reported that they were involved in extracurricular activities.
- Genderqueer students were most likely to report that they are not involved in extracurricular activities.
- Black and NH/PI students were most likely to report that they were not involved in extracurricular activities in MS and HS.
- Extracurricular involvement was similar across grades with 10th graders reporting to be the most involved (77%) and 8th graders the least (72%).

### Core Survey Questions Analyzed

- In a typical week, how many days are you involved in organized activities?
- During this school year (since September), did you do any of these [afterschool activities]?

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

# Key Findings

## Organized Activities

In a typical week, on how many days were students involved in organized activities?

- **Overall:** 75% of HS students and 74% of MS students reported that they were involved in organized activities.
- **Race/Ethnicity:** Black and Hispanic students were more likely to report not being involved in extracurricular activities.
- **Gender:** Genderqueer students were more likely to report not being involved in extracurricular activities than male and female students.
- **Grade:** Students reported participation in organized activities similarly across grades.

Figure 41. Percent of students who report no involvement in organized activities on a typical day by grade

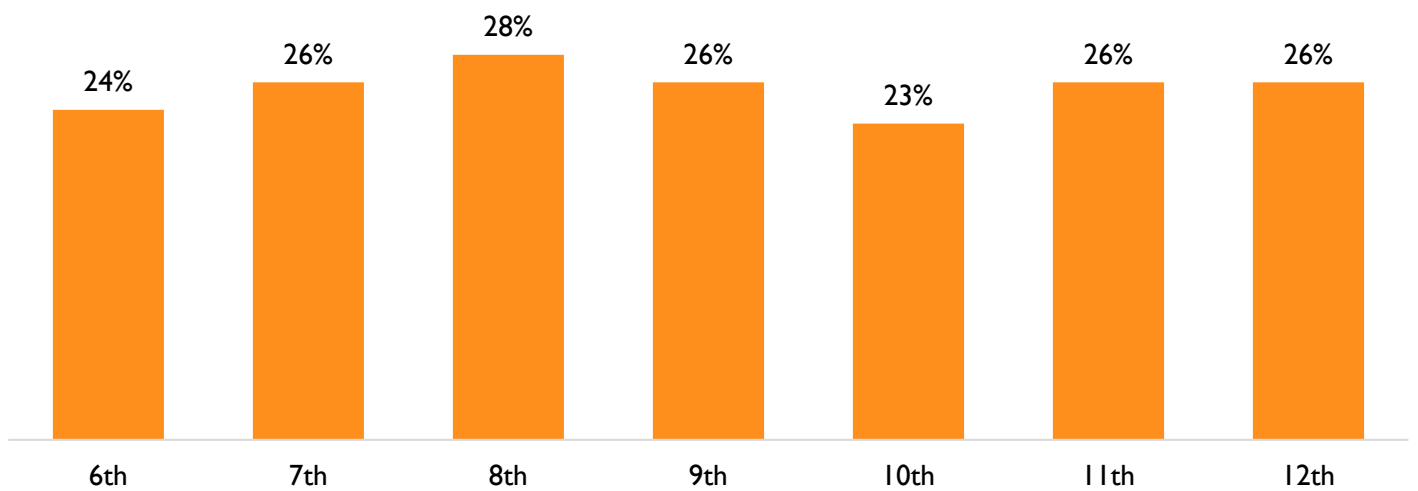
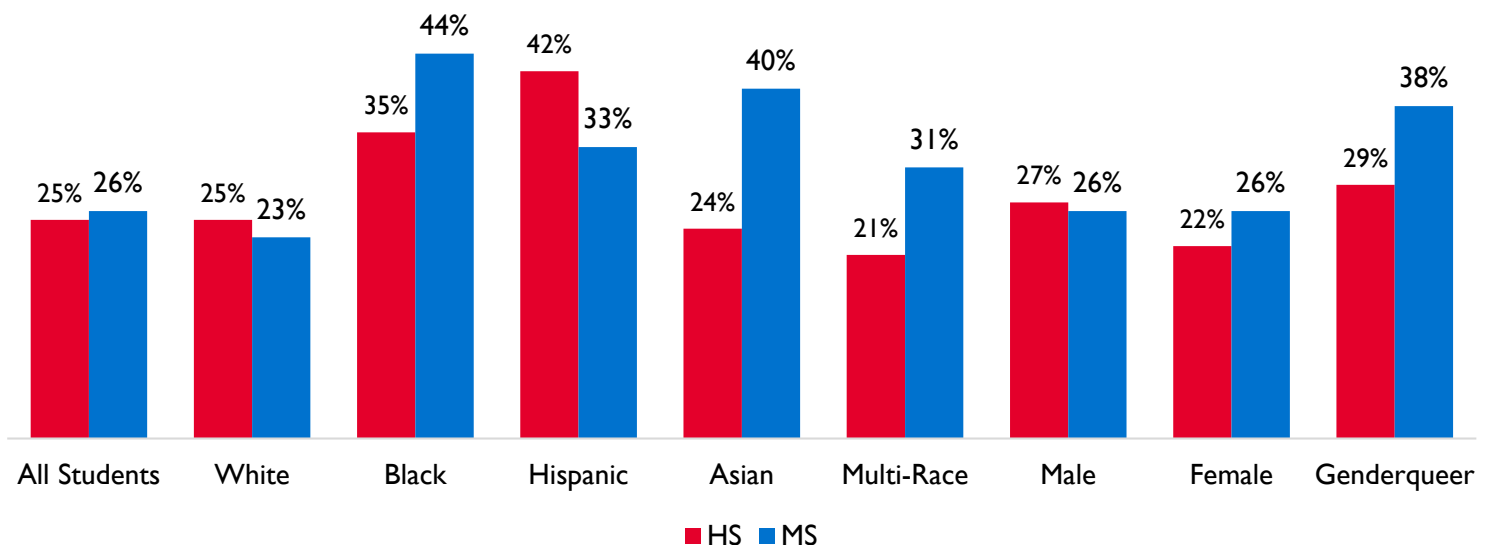


Figure 42. Percent of students who report no involvement in organized activities



# Key Findings

## Organized Activities

During this school year (since September), did you do any of these things?

- **Overall:** MS and HS students participated in at least one school or afterschool activity (68% and 73%, respectively).

Figure 43. Student participation in afterschool activities

