

**2021 CAMBRIDGE TEEN HEALTH SURVEY  
SUMMARY OF FINDINGS  
(HIGH SCHOOL AND MIDDLE SCHOOL REPORT)**

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**John Snow, Inc.**

# Executive Summary

## Introduction

The Youth Risk Behavior Surveillance System (YRBSS) monitors health behaviors, conditions, and experiences among middle and high school-aged students throughout the United States. The system includes a national Youth Risk Behavior Survey (YRBS), conducted by CDC, and separate state, local school district, territorial, and tribal school-based YRBSSs, which are referred to as site-level surveys. These site level surveys use sampling methodologies that collect information from a relatively small but representative group of youth, which allows for these sites to generalize to the broader population. In turn, many municipalities, like Cambridge, conduct their own version of the YRBS so that they can gather information on their entire student body, and then segment their analysis by age, race, ethnicity, grade, special education status, and other respondent characteristics.

The ongoing public health crisis has had major consequences on young people and their families, which have impacted learning, social and family relations, and physical and mental health. The results of this survey show very clearly that many youth are experiencing trauma during the pandemic that needs to be addressed. The survey results also show that the social isolation that students have experienced have decreased some risk factors such as substance use and sexual activity.

## Approach and Methodology

The YRBSS is designed to gather information related to a series of prioritized health risk behaviors that are known to contribute to the leading causes of mortality, morbidity, and social problems among youths and adults. The following categories of behaviors were included on the survey: 1) Unintentional, injury and violence; 2) substance use; 3) Mental health and self-harm, 4) Sexual behaviors; and, 5) Dietary behaviors and physical inactivity. In addition, the survey captured information on a limited number of social, economic, and environmental factors or conditions that are known to impact health, well-being, and quality of life. The survey also gathered important information related to the impacts of the COVID-19 public health emergency.

The Cambridge Youth Health Survey project was overseen and managed by a Steering Committee of staff from Cambridge Public Schools (CPS) and the Cambridge Public Health Department (CPHD). The survey was administered in May 2021 to all middle and high school students in Cambridge. The survey, administered through an online, web-based tool, included 63 questions and was based on the United States CDC Youth Risk Behavior Survey (YRBS), the Massachusetts Department of Public Health's Youth Health Survey, and Cambridge's prior Youth Health Surveys. Given the burdens of the COVID-19 public health emergency on students and school staff, the 2021 survey was shorter than in prior years and was designed as a "pulse check" to ascertain quickly, with less student burden, the health status and risk factors present for Cambridge's middle and high schools students, particularly in the context of the pandemic.

## Summary of Findings

A total of 2,029 students participated in the 2021 Cambridge Youth Health Survey (990 middle school and 1,030 high school students). This represents a 66% participation rate. The following is a brief summary of key findings by domain. Please refer to the full report, included below, for a more detailed review of the survey's findings, including graphs and tables.

### Social Determinants of Health

- Overall, the survey results showed that students in Cambridge are well supported and are not as impacted by economic factors as students in the Commonwealth.
  - 8% of respondents reported that their family had experienced serious financial problems in the past year. Only 1% of respondents reported that they were hungry due to financial problems during this period.
  - 13% of those responding to the survey reported that they lived in public, subsidized housing, 30% reported living in rental housing, and 55% in family owned-housing.
  - More than one in five students (22%) reported that a family member or close friend died in the past 12 months.
  - Nearly 1 in 6 students (16%) reported that a family member or close friend had a serious illness.

### Mental Health, Self-harm, and Suicide

- Mental health issues continue to be one of the leading health issues for middle school and high school students.
  - In 2021, 46% of high school students and 31% of middle school students reported feeling tense, nervous, or worried every day for two or more weeks in a row, compared to 34% high school students in 2018 and 27% of middle school students in 2019.
  - In 2021, 35% of high school students and 27% of middle school students reported feeling so sad or hopeless almost every day for 2 weeks or more that they stopped doing usual activities. This compares to 26% of high school students in 2018 and 24% of middle school students in 2019.
  - In 2021, 12% of high school students and 10% of middle school students reported doing something to purposely hurt themselves without wanting to die, such as cutting or burning themselves on purpose. This compares to 15% of high school students in 2018 and 18% of middle school students in 2019.
  - In 2021, 15% of high school students and 11% of middle school students reported considering attempting suicide. This compares to 12% of high school students in 2018 and 11% of middle school students in 2019.
  - In 2021, of the students who reported that they considered attempting suicide, 35% of high school students and 42% of middle school students reported making a plan about how they would attempt suicide. This data is not comparable to prior year data (8% of high school students in 2018 and 9% of middle school students in 2019) because in 2021 the survey only asked this question to those that reported that they considered attempting suicide, not all students.

- In 2021, of the students who reported that they considered attempting suicide, 11% of high school students and 13% of middle school students reported attempting suicide. This compares to 3% of high school students in 2018 and 3% of middle school students in 2019. Similar to the question about making a plan to commit suicide, the 2018 and 2019 surveys asked all students if they had attempted suicide, not only those that reported that they considered attempting suicide.
- Critical to issues of mental health and self-harm are the existence of support networks and services, such as counseling and medication.
  - In 2021, 59% of high school students and 68% of middle school students reported having at least one close friend, which reflects a significant decrease from data gathered in 2018 for high school students and 2019 for middle school students.
  - In addition, the 2021 data shows that a relatively low number of high school and middle school students who said that they were depressed or anxious reported that they met with a mental health therapist (12%), saw a school counselor about a mental health issue (9%), or took medication for a mental health issue (5%).

### Substance Use

One of the most significant findings from the 2021 Youth Health Survey was the decline in current substance use. These declines were seen across the most commonly used substances, such as alcohol, marijuana, cigarettes, and electronic vapor products. The declines in use reflect local and national trends that have been occurring for a number of years. The decline in 2020 seems to be extreme and is thought to be due to the social isolation that students experienced during COVID-19.

- In 2021, 16% of all high school students reported current use of alcohol, compared to 28% in 2018. Similarly, 15% of high school students reported using marijuana in 2021, compared to 24% in 2018.
  - Most high school students reported that they were given the substances that they used or bought them from a friend.
  - With respect to ease of access, most reported that, overall, it was not easy to obtain the substances they use. Alcohol was the easiest substance to access, with 11% of high school and middle school student reporting that it was very easy to obtain, followed by electronic vapor products (6%), prescription drugs not prescribed to them (5%), marijuana (4%), cigarettes (3%), and other illegal drugs (1%).

### Unintentional Injuries, Safety/Violence, Victimization, and Discrimination

- In 2021, 63 students (3%) reported that they were forced to do sexual things that they did not want to do, which represented a decrease from 2018 and 2019.
  - Female students were much more likely to report forced sex with 44 of the 63 (70%) cases reported by female students.
- With respect to dating violence, 49 students (3%) reported that someone they were dating or going out with physically hurt them or forced them to do sexual things that they did not want to do.

- With respect to bullying, including electronic bullying, 7% of students reported that they had been bullied in the past 12 months and 10% reported specifically that they had been electronically bullied.
  - Middle school students (13%, 125 students) were nearly three times as likely to report bullying than high school students (5%, 46 students).

### Sexual Behaviors

- In 2021, among high school students, 20% reported that they had ever had intercourse, compared to 28% in 2018. Among those who reported having sexual intercourse, 15% reported that they used alcohol or drugs before intercourse the last time.
- Sixty-six percent of high school students reported using a condom the last time they had sex, 33% reported using birth control pills, 8% reported using an IUD, 2% reported using a shot, 9% reported withdrawal or some other method, and 2% reported that they were not sure.

### Dietary Behaviors, Physical Activity, and Extracurricular Activities

- With respect to dietary behaviors, 78% of students reported eating fruit and 37% reported drinking 100% fruit juice the previous day. Sixty-three percent of students reported eating raw vegetables and 65% reported eating cooked vegetables the previous day.
- With respect to physical activity, 30% of students were physically active for at least 60 minutes a day for five or more days in a week. Middle school students were more likely to be physically active (33%) than high school students (28%). These figures represent a decrease from 2018 and 2019, although the middle school 2021 figure is essentially the same as 2019.

### Conclusion

While it is difficult to make definitive statements as to underlying reasons for the increases or decreases in the student behaviors discussed above, it seems fair to suggest that the COVID-19 public health emergency and the social isolation that it created for many students has had a significant impact. Specifically, the isolation that students experienced led to lower rates of substance use and sexual activity but higher rates of mental health issues, emotional distress, and suicidality.

## Acknowledgements

The Cambridge Youth Health Survey was overseen and managed by a Steering Committee of staff from Cambridge Public Schools (CPS) and the Cambridge Public Health Department (CPHD), with the support of a public health consulting firm, John Snow, Inc. (JSI). Below is a listing of the project's steering committee members.

### Cambridge Public Health Department

Mary Kowalczyk, Manager, Substance Use Prevention Programs  
Kristin Ward, Performance Management and Quality Improvement Specialist  
Josefine Wendel, Associate Chief, Population Health Initiatives

### Cambridge Public Schools

Jennifer Amigone, Director Research, Assessment & Evaluation  
Kimona Cameron, Assistant Program Manager | Research, Assessment, & Evaluation  
Jamie McCarthy, K-12 Curriculum Coordinator, Health, Physical Education and Wellness  
Shantu Salvi, Teacher  
Justin McNulty, Teacher  
Anthony Dumerant, Student  
Hannah Ahmed, Student  
Bethel Hineshim, Student  
Camilla Tineo Herrera, Student  
Kidus Kebede, Student  
Weyni Kidanemariam, Student

### John Snow, Inc.

Alec McKinney, Project Director  
Rebecca Millock, Project Manager  
Tabeth Jiri, Epidemiologist  
Mihaly Imre, Data Analyst

The Steering Committee met on nearly a weekly basis to oversee the process. The leadership at CPS and CPHD would like to express their deepest appreciation to the members of the Steering Committee for their time and commitment to this project. This project would not have been successful were it not for the tremendous amount of time and effort that they put into it. The Steering Committee and the CPS and CPHD leadership would also like to thank a dedicated group of students who met three times during the survey development and planning process to provide their feedback on the survey tool and the data collection process. They also developed a video to encourage students to complete the survey and provide honest, candid, responses. The Steering Committee believed from the outset that student involvement was critical to success and would help to ensure that the survey tool and data collection process was developed with student perspectives in mind.

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# Background

## Introduction

Adolescence is typically a healthy period of life, and the United States Centers for Disease Control and Prevention (CDC) reports that youth and adolescents continue to make better decisions for their health. However, middle and high school-aged youth still experience a broad range of health risks that impact their health and well-being, including substance use, mental health problems, interpersonal violence, sexually transmitted diseases, unintentional injury, and self-harm. Risky health behaviors practiced during adolescence often persist into adulthood. In 2018, CDC reported that the leading causes of death among U.S. adolescents were attributable to motor-vehicle crashes, followed by suicide and homicide. In contrast, that same year, a separate study reported the leading causes of death among persons of all ages were heart disease, followed by cancer and unintentional injuries.

The Youth Risk Behavior Surveillance System (YRBSS) monitors health behaviors, conditions, and experiences among middle and high school-aged students throughout the United States. The system includes a national Youth Risk Behavior Survey (YRBS), conducted by CDC, and separate state, local school district, territorial, and tribal school-based YRBSSs, also known as site-level surveys. These site level surveys use sampling methodologies that collect information from a relatively small but representative group of youth, which allows sites to generalize to the broader population. In turn, many municipalities, like Cambridge, conduct their own version of the YRBS so that they can gather information on their entire student body, and then segment their analysis by age, race, ethnicity, gender, grade, special education status, and other respondent characteristics.

The ongoing public health crisis has had major consequences on young people and their families, which have impacted learning, social and family relations, and physical and mental health. The results of this survey show very clearly that many youth are experiencing trauma during the pandemic. The survey results also show that the social isolation that students have experienced have also decreased some risk factors such as substance use and sexual activity

## Who Conducted the Survey?

The Cambridge Youth Health Survey project was developed and overseen by a Steering Committee of staff from the Cambridge Public Schools (CPS) and the Cambridge Public Health Department (CPHD), with the support of an independent, public health consulting firm, John Snow, Inc. (JSI). A listing of the members of the Steering Committee is provided in the acknowledgements section of this report. JSI staff worked closely with the Steering Committee and supported all aspects of the process, including survey development, survey administration, data analysis, and reporting. Given the sensitivity of the information gathered from students, JSI also provided important safeguards to protect the confidentiality of the information compiled. The survey was administered online, students were not asked for their name, and no one at CPS or CPHD had access to students' individual responses. The information was gathered and managed by JSI and reported only in the aggregate for all student respondents as well as by grade, gender identity, race, Hispanic/LatinX identity, and special education status.

## How and When Was the Survey Conducted?

### Survey Development

The first step in the process was to develop a tailored survey instrument to be administered to all Cambridge middle and high school students in April 2021 using an automated, web-based survey platform. The development of the survey was conducted by the Steering Committee in February and March 2021 with input from JSI and a group of high school students at the Cambridge Rindge and Latin School (CRLS). The final survey was 63 questions long and was based on the United States CDC Youth Risk Behavior Survey (YRBS), the Massachusetts Department of Public Health's Youth Health survey, and Cambridge's prior Youth Health Survey. Given the burdens of the COVID-19 public health emergency on students and school staff, the 2021 survey was designed as a "pulse check" to quickly ascertain the health status and risk factors present for Cambridge's middle and high schools students in the context of the pandemic. To this effect, great efforts were made to streamline and shorten the 2021 survey to reduce student burden. A copy of the survey can be found in Appendix A. To ensure that the survey could be completed effectively by all students, it was translated and administered in seven languages in addition to English: Spanish, Portuguese, Haitian Creole, Chinese, Bengali, and Amharic.

It should be noted that in prior years, the Cambridge Youth Health Survey was conducted using a paper survey that was administered to high school and middle school students separately in alternating years. Middle school students were last surveyed in 2019 and high school students were last surveyed in 2018. This year's survey effort involved both middle school and high school students and was administered via an on-line web-based questionnaire. Given that the survey this year was designed as a shorter "pulse check", there is not as much opportunity to compare this year's findings to prior years. Care was taken to ensure consistency on many of the core questions, including questions related to depression, anxiety, and current substance use, and many others, but the ability to compare against prior years is more limited.

### Survey Administration and Consent

Once the content of the survey was finalized, JSI staff developed a self-administered, online survey using a state-of-the-art survey platform called Alchemer. The survey included a range of skip patterns that served to shorten the survey as it allowed students to skip over questions depending on their response to the initial root question. For example, if a student reported that they did not drink alcohol then they could skip over a series of questions that described in more depth their drinking habits. The survey was designed to take 15 minutes on average to complete, compared to upwards of 30 minutes in prior years. JSI staff then created a series of unique URLs or web hyperlinks for each of Cambridge's middle and high schools to use to administer the survey so that school-specific data could be captured and then aggregated to create a district-level dataset. Once the online instrument was finalized and the hyperlinks created, JSI worked with CPS staff to develop a survey administration plan and schedule when the survey would be administered in each of Cambridge's schools. This activity included careful considerations with respect to implementing and supporting students to protect confidentiality, facilitate the student "opt-out" process, and other procedures to ensure the quality and integrity of data collection. With respect to student consent, CPS obtained passive parental permission; families were mailed a form explaining the purpose of the survey and given the opportunity to formally "opt out". It should be noted that participation was voluntary.

The survey was administered at all middle schools and the high school over a two-week period in late April and early May 2021. Schools were responsible for identifying a series of class periods that would allow each student the opportunity to complete the survey. During this time, Cambridge students were attending school in a hybrid fashion with some students participating in school settings and others participating remotely.

### **Data Management, Cleaning, & Analysis**

Once the survey was administered across all schools, the data were combined to create school-specific, middle school, high school and District-wide datasets. 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 (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 school and the District overall, highlighting key findings. These summary reports allowed CPS and individual school staff to act on the data immediately, as appropriate, while waiting for the final report of findings to be developed.

### **What Is the Content of the Survey?**

The YRBSS is designed to gather information related to a series of prioritized health risk behaviors that are known to contribute to the leading causes of mortality, morbidity, and social problems among youths and adults. The following categories of behaviors are included on the survey: 1) Unintentional, injury and violence; 2) Substance use; 3) Mental health and self-harm, 4) Sexual behaviors; and, 5) Dietary behaviors and physical inactivity. In addition, the survey captured information on a limited number of social, economic, and environmental factors or conditions that are known to impact health, well-being, and quality of life. These factors are described in more detail below. Given the tremendous influence that the coronavirus pandemic had on the population in 2020, the survey also gathered important information related to its impact.

## Respondent Characteristics

Below is a comparison of school enrollment and YHS data collected. A total of 2,029 students participated in the 2021 Cambridge Youth Health Survey (990 middle school and 1,030 high school students).

Table 1. School Enrollment Data Versus YHS Data Collected <sup>1</sup>

School Name	Total Enrollment		Total YHS Data		Participation by School
	N	%	N	%	%
Amigos School	117	3.8	111	5.5	<b>94.9</b>
Cambridge Rindge and Latin School	1830	59.8	1032	50.9	<b>56.4</b>
Cambridge Street Upper School	297	9.7	212	10.4	<b>71.4</b>
Putman Avenue Upper School	262	8.6	192	9.5	<b>73.3</b>
Rindge Ave Upper School	264	8.6	222	10.9	<b>84.1</b>
Vassal Lane Upper School	290	9.5	260	12.8	<b>89.7</b>
<b>Total</b>	<b>3060</b>	<b>100</b>	<b>2029</b>	<b>100</b>	<b>66.3</b>

A large proportion of the students participating in the survey were White (34%) followed by Black/African American (22%), Asian (10%), Multi-Racial (9%), Other (5%), and American Indian or Alaska Native (1%). About one in five students identified as Hispanic (19%). These estimates are representative of the current racial and ethnic distribution of students in the school district.

Table 2. Respondent Characteristics

Characteristic	High School		Middle School		Total
	N	%	N	%	%
<b>Grade</b>					
6th	-	-	355	35.8	<b>17.5</b>
7th	-	-	317	31.9	<b>15.6</b>
8th	-	-	321	32.3	<b>15.8</b>
9th	267	25.9	-	-	<b>13.2</b>
10th	313	30.4	-	-	<b>15.4</b>
11th	253	24.6	-	-	<b>12.5</b>
12th	197	19.1	-	-	<b>9.7</b>
<b>Race/Ethnicity</b>					
White	368	35.9	317	32.2	<b>34.0</b>
Black or African American	233	22.8	214	21.7	<b>22.2</b>

<sup>1</sup> Efforts were made to administer the survey to students at the High School Extension Program. However, despite considerable efforts on behalf of the program's staff, it was not possible to administer the survey in this setting.

Asian or Pacific Islander	104	10.2	90	9.1	9.6
American Indian or Alaska Native	4	0.4	13	1.3	0.8
Multi-Racial	97	9.5	82	8.3	9.0
Other	37	3.6	71	7.2	5.4
Hispanic or LatinX	181	17.7	199	20.2	18.9
<b>Gender Identity</b>					
Male	467	45.5	477	48.1	46.9
Female	517	50.4	460	46.4	48.4
Genderqueer	36	3.5	42	4.2	3.8
Other	6	0.6	12	1.2	0.9
<b>Special Education Status</b>					
Is in special education	121	11.9	102	10.4	14.5

## Summary of Key Findings by Domain

### Social Determinants of Health

*Social determinants of health (SDOH) are the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.<sup>2</sup>*

- CDC Healthy People 2030

One's ability to live a happy, productive life is fundamentally linked to a range of social, economic, and environmental factors that together have a tremendous impact on health, well-being, and quality of life. These underlying factors and an individual's ability to create a healthy, supportive, nurturing environment around themselves or their families are at the root of the differences in health status that exist among various segments of the population. These factors include issues such as education, racism/discrimination, disability status, mental health, or substance use status, where you live, and your connectedness to your family or community.

Historically, when it comes to health status a great deal of emphasis has been placed on trying to address the acute health issue that is impacting one's health, well-being, or ability to learn at a particular moment in time rather than the underlying factors that are at the heart of this issue. The coronavirus pandemic has highlighted how social determinants such as employment status and housing impact one's health and well-being. The Cambridge Youth Health Survey was designed to capture information related to some of these underlying social determinants so that CPS and its partners can better understand the challenges that its students face and work to address these issues. Given the tremendous impact of the coronavirus pandemic on all segments of the community, especially children and youth, the survey also captured information regarding how the pandemic impacted students.

### Key Findings

#### Housing Stability and Food Security

Homeownership is commonly seen as an indicator of financial security. With this in mind, the survey asked about whether students lived in a home owned by a parent/guardian, a home rented by a parent/guardian, in public housing, a shelter, a halfway house, family or friend's house, or another setting. In addition to home ownership, the survey also asked about food security.

In previous years, the survey assessed financial security by asking students whether they qualified for public benefits, such as free or reduced school meals, SNAP, Medicaid, etc. This question was not asked in 2021 because school meals were free for everyone during the pandemic and extended public benefits such as pandemic EBT were available to much larger groups of people.

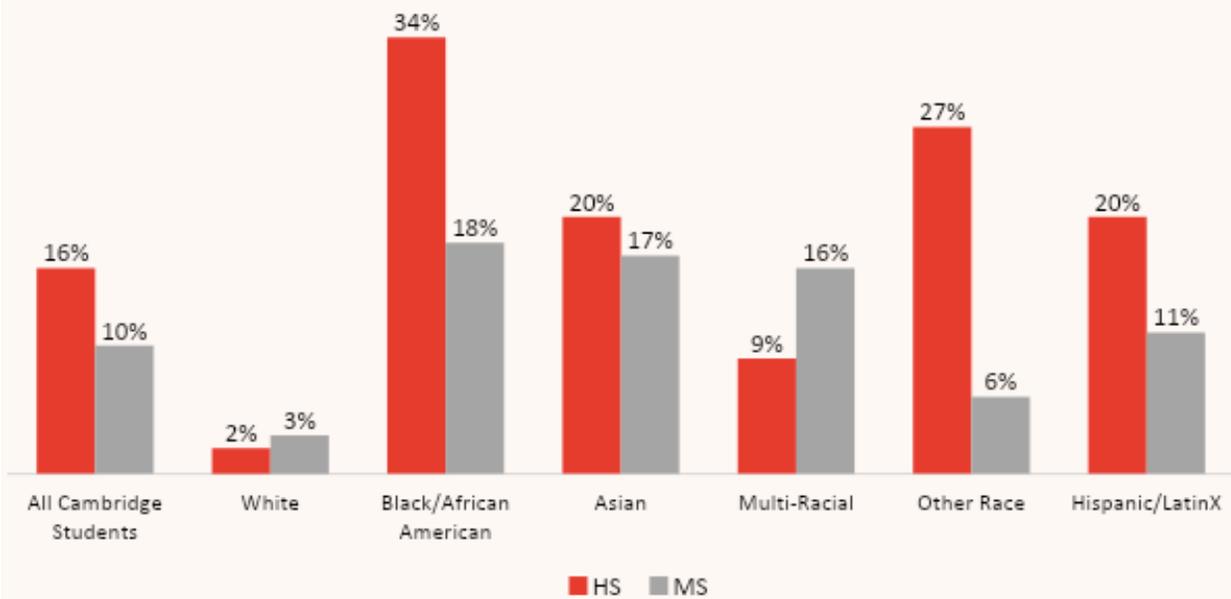
- In 2021, 55% (1,115) of students reported living in a home owned by their parent or guardian, 30% in a home rented by their parent or guardian, and 13% in affordable housing. There was limited variation regarding these statistics by gender identity, grade, and whether the student was in middle school or high school.

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<sup>2</sup> <https://health.gov/healthypeople/objectives-and-data/social-determinants-health>

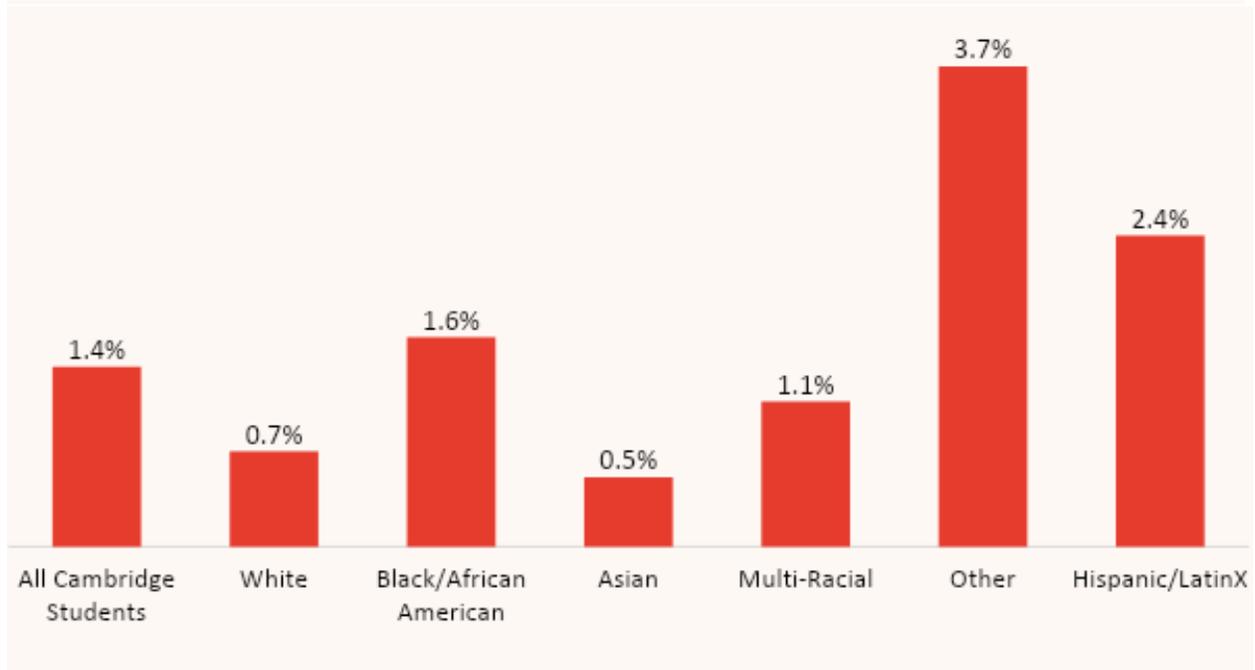
- In 2021, with respect to race and Hispanic/LatinX identity, American Indian or Alaska Native students were most likely to report living in a home rented by their parent or guardian (63%), followed by Black/African American (38%), Hispanic/LatinX (37%), Other Race (32%), Asian (27%), Multi-Racial (27%), and White (20%) students.
- In 2021, Black/African American students (26%) were more likely than students of any other race category to report living in public housing, followed by Asian (19%), Hispanic/LatinX (15%), Other Race (13%), Multi-Racial (12%) American Indian/Alaskan Native (6%), and White (2%) students.
- There was limited to no variation in these data findings with respect to gender identity, grade, or special education status.

Figure 1. Percent of Cambridge Students who Reported Currently Living in Affordable Housing by Race/Ethnicity



- In 2021, only 1.4% of students reported going hungry due to financial problems.
  - While the numbers are very small, students reporting in the Other Race category were 4 times more likely to report going hungry and Hispanic/LatinX students and Black/African American students were two times more likely to report going hungry due to financial problems.

Figure 2. Percent of Cambridge Students who Reported Going Hungry Due to Financial Problems in the Past 12 Months



## Impacts of the Coronavirus Pandemic

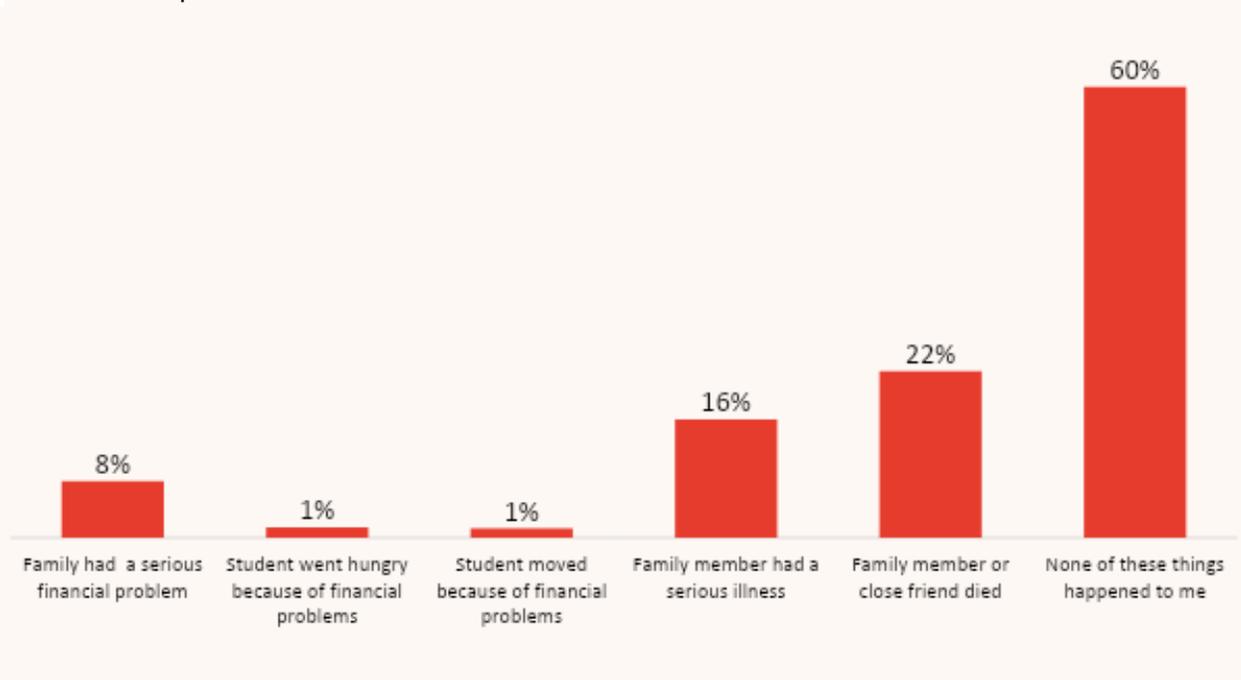
The ongoing public health crisis has had major consequences for young people and their families, which have impacted learning, social and family relations, and physical and mental health. The results of this survey show very clearly that many youth are experiencing trauma during the pandemic. To better understand its impact on students, the 2021 Cambridge Youth Health Survey was designed to capture information about whether students experienced a range of pandemic-related hardships in the past 12 months such as loss of a loved one, illness, and mental and emotional health.

### Key Findings

#### COVID-19 Related Hardships

- In 2021, 22% of all students reported that a family member or close friend had died (441) and 16% reported that a family member had a serious illness (314).
- In 2021, while very few students reported that they went hungry or moved because of financial problems (1% in both cases), 8% reported that their family had a serious financial problem.

Figure 3. Percent of Cambridge Students who Reported that Their Family Experienced Adverse Financial or Health Effects from the Coronavirus Pandemic



- In 2021, the most common experience students reported was trouble concentrating or paying attention (47%), followed by fear of contracting the coronavirus (45%), attempts to stay away from people because of fear of contracting the coronavirus (37%), and anxiety about returning to school (36%).
  - In 2021, high school students were more likely to report experiencing nearly all of the listed possible impacts than their middle school counterparts. For example, 57% of high school students reported having trouble concentrating or paying attention, compared to 37% of middle school students. Similarly, 55% of high school students reported that they were fearful of contracting COVID-19, compared to only 35% of middle school students.
  - In 2021, with respect to gender identity, genderqueer and female students were considerably more likely to report experiencing the listed impacts than male students. In some cases, those identifying as genderqueer or female were two times more likely to report these negative experiences than their male counterparts. For example:
    - With respect to having trouble concentrating or paying attention, 79% of genderqueer students reported having trouble concentrating compared to 57% of female and 34% of male students.
    - With respect to fear of contracting the virus, 62% of genderqueer students reported this fear compared to 53% of female and 36% of male students.

- In 2021, with respect to race and Hispanic/LatinX identity, students reporting as White were generally more likely to report experiencing the selected possible impacts and Black/African American students were the least likely, but the variation was somewhat limited.

Figure 4. Cambridge Student Reactions to the Coronavirus Pandemic

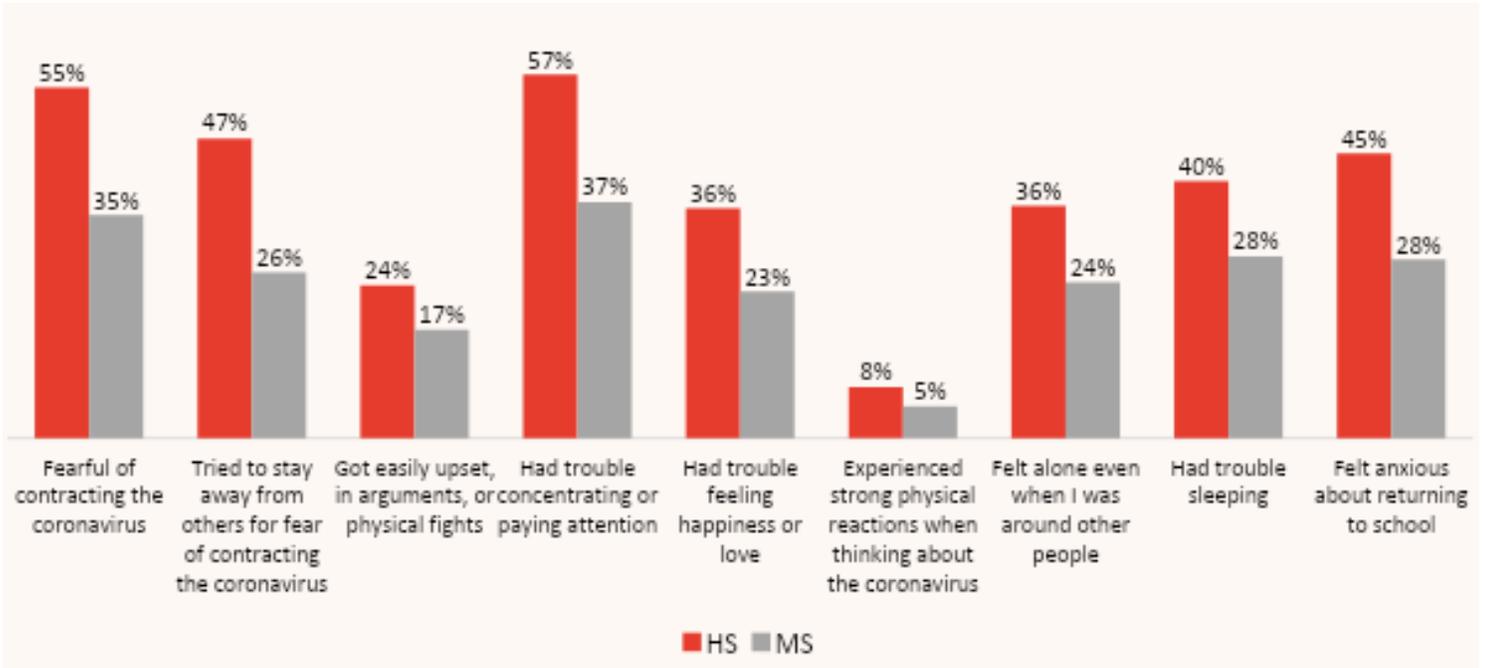
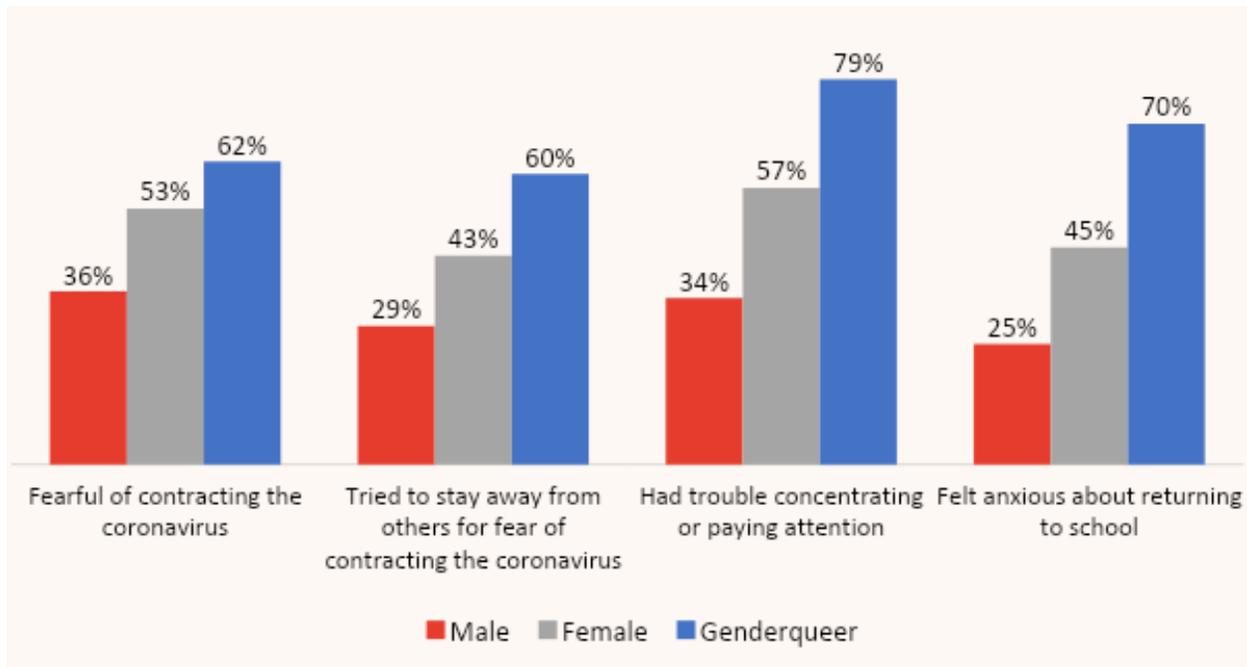


Figure 5. Cambridge Student Reactions to the Coronavirus Pandemic by Gender Identity



## Mental Health, Self-harm, and Suicide

Most youth are healthy, physically and emotionally, yet in the United States today approximately one in every four youth in the general population meet criteria for a lifetime mental disorder such as depression, anxiety, or Attention Deficit Hyperactivity Disorder (ADHD). A national and international literature review found that an average of 17% of young people (12-17 years old) experience an emotional, mental, or behavioral disorder. According to data from the National Centers for Disease Control and Prevention (CDC), the rate of suicide for youth and young adults ages 10 to 24 increased nearly 60% between 2007 and 2018.<sup>3</sup>

There is a growing understanding of and appreciation for the tremendous impact that mental health issues have on youth. The Cambridge Youth Health Survey has always captured a great deal of information related to mental health, including information related to depression, anxiety, suicide, and students' efforts to do self-harm. This year is no different and some of the leading findings from this year's survey relate to the high levels of emotional distress that Cambridge students experience. The distress that students face has been greatly exacerbated by COVID-19, but a look at the historical data shows that depression, anxiety, and stress have been among the leading issues for years.

The 2021 Cambridge Youth Health Survey was designed to capture information related to anxiety, depression, self-harm, and suicide, as well as the extent to which students have social networks that support their ability to cope with any emotional distress they may be experiencing.

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

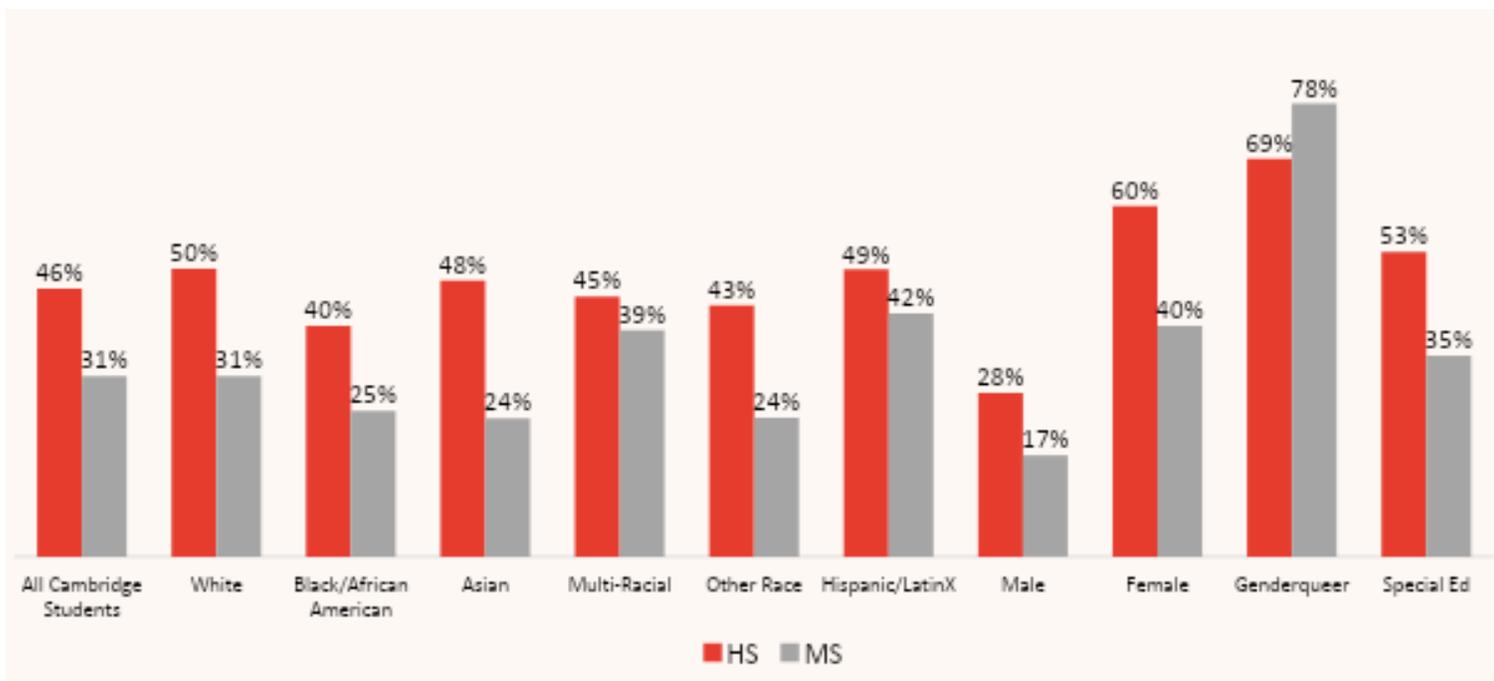
## Key Findings

Overall, mental health worsened during the pandemic, except for decreases in the area of self-harm. In general, high school students experienced steeper decreases in their mental health than middle school students. Hispanic/LatinX, genderqueer and, female students reported higher levels of mental health issues.

### Anxiety

- In 2021, 46% of high school students and 31% of middle school students reported feeling tense, nervous, or worried every day for two or more weeks in a row, compared to 34% high school students in 2018 and 27% of middle school students in 2019.
  - In 2021, 62% of high school students surveyed and 31% of middle school students reported that they worry very often or fairly often about schoolwork. This compares to 37% of high school students in 2018 and 32% of middle school students in 2019.
  - In 2021, 30% of students reported that they were worried very often or fairly often about appearance, while 22% were worried about social issues.
- With respect to gender identity, in 2021 female high school students (60%) were twice as likely to reporting being tense, nervous, or worried than male students (28%) and genderqueer students were three times more likely to report being anxious (83%).
- With respect to race and Hispanic identity, in 2021 among 50% of high school students who identified as American Indian/Alaskan Native, Hispanic/LatinX, or White reported being tense, nervous, or worried. Among middle school students, students identifying as Hispanic/LatinX and those in the Multi-race category were the most likely to report being tense, nervous, or worried at 42% and 39% respectively.
- In 2021, 44% of students who reported that they received special education services also reported being tense, nervous, or worried, compared to 38% of those who reported not receiving special education services.

Figure 6. Percent of Cambridge Students who Reported that They Felt Tense, Nervous, or Worried Every Day for Two or More Weeks in a Row During the Past 12 Months



### Depression

- In 2021, 35% of high school students and 27% of middle school students reported feeling so sad or hopeless almost every day for 2 weeks or more that they stopped doing usual activities. This compares to 26% of high school students in 2018 and 24% of middle school students in 2019.
- In 2021, with respect to gender identity, female students across all grades (40%) were more than 2 times more likely to suffer from depression than male students across all grades (18%) and genderqueer students (59%) were more than 3 times more likely to report depression than their male counterparts.
- In 2021, with respect to race and Hispanic identity, Hispanic/LatinX students in both high school and middle school reported the highest levels of depression (44% of Hispanic/LatinX high school students and 35% of Hispanic/LatinX middle school students). Among high school students, the second most likely race category to report being depressed was Black/African American (34%) students, followed by Multi-Racial (33%), and White (32%) students. Among middle school students, the second most likely race category to report being depressed was Multi-Racial (28%) students, followed by Other Race (27%) and Asian (25%) students.
- In 2021, 41% of students who reported that they received special education services reported being depressed compared to only 29% of those who reported not receiving special education services.

Table 3. Percent of Cambridge HS and MS Students who Experienced Anxiety or Depression by Year

	Felt tense, nervous, or worried every day for two or more weeks in a row*	Felt so sad or hopeless almost every day for two or more weeks in a row that stopped them from doing regular activities**
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<b>High School</b>		
2012	22%	20%
2014	28%	21%
2016	29%	25%
2018	34%	26%
2021	46%	35%
<b>Middle School</b>		
2015	N/A	21%
2017	19%	17%
2019	27%	24%
2021**	31%	27%

\*Asked over 30 days on middle school prior year surveys and over 12 months for 2021 survey

\*\*Anxiety asked over 12-month period

### **Self-harm**

- In 2021, with respect to self-harm 12% of high school students and 10% of middle school students reported doing something to purposely hurt themselves without wanting to die, such as cutting or burning themselves on purpose. This compares to 15% of high school students in 2018 and 18% of middle school students in 2019. This marks a significant decline over this period.
- In 2021, 8<sup>th</sup>, 9<sup>th</sup>, and 10<sup>th</sup> graders were more likely to hurt themselves on purpose than students in other grades.
- In 2021, female and genderqueer students were much more likely to report hurting themselves on purpose than male students. Six percent of male students reported hurting themselves on purpose, compared to 16% of female students and 40% of genderqueer students.
- In 2021, with respect to race and Hispanic/LatinX identity, Hispanic/LatinX students across all grades were most likely to report self-harm (17%). All other racial groups were roughly equally likely to report hurting themselves on purpose (ranging from 8-11%).

### **Suicide**

- In 2021, 15% of high school students and 11% of middle school students reported considering attempting suicide. This compares to 12% of high school students in 2018 and 11% of middle school students in 2019.
- In 2021, of the students who reported that they considered attempting suicide, 35% of high school students and 42% of middle school students reported making a plan about how they would attempt suicide. This data is not comparable to prior year data (8% of high school students in 2018 and 9% of middle school students in 2019) because in 2021 the survey only asked this question to those that reported that they considered attempting suicide, not all students.
- In 2021, of the students who reported that they considered attempting suicide, 11% of high school students and 13% of middle school students reported attempting suicide. This compares to 3% of high school students in 2018 and 3% of middle school students in 2019. Similar to the question

about making a plan to commit suicide, the 2018 and 2019 surveys asked all students if they had attempted suicide, not only those that reported that they considered attempting suicide.

- With respect to gender identity, in 2021, 47% of high school genderqueer students reported considering attempting suicide, compared to 19% of female and 9% of male students. In middle school, there were similar statistics with 44% of genderqueer students reporting that they considered attempting suicide, compared to 15% of female and 4% of male students.
- In 2021, with respect to race and Hispanic identity, Hispanic/LatinX students were the most likely to consider attempting suicide in the past 12 months (17%), followed by White (14%), American Indian/Alaskan Native (13%), Multi-Racial (12%), Black/African American (12%), Asian (11%), and Other Race (5%) students.
- In 2021, 21% of students who reported that they received special education services also reported considering attempting suicide compared to only 12% of those who reported not receiving special education services.

Table 4. Percent of Cambridge Students with Mental Health Concerns

	Experienced depression	Engaged in self-harm	Considered attempting suicide	Made a plan about how to commit suicide*	Attempted suicide*
<b>High School</b>					
Overall	35%	12%	15%	35%	11%
White	32%	13%	16%	28%	7%
Black/African American	34%	10%	14%	40%	20%
Asian	31%	11%	15%	36%	7%
Multi-Racial	33%	9%	9%	63%	0%
Other	35%	11%	8%	33%	33%
Hispanic/LatinX	44%	15%	20%	34%	11%
Male	22%	6%	9%	34%	18%
Female	44%	16%	19%	33%	6%
Genderqueer	59%	40%	47%	44%	13%
Special Ed	45%	20%	27%	35%	9%
<b>Middle School</b>					
Overall	27%	10%	11%	42%	13%
White	24%	9%	12%	32%	9%
Black/African American	23%	9%	11%	43%	13%
Asian	25%	7%	8%	29%	14%
Multi-Racial	28%	13%	15%	33%	0%
Other	27%	7%	3%	50%	0%
Hispanic/LatinX	35%	18%	14%	59%	22%
Male	14%	5%	5%	45%	15%

Female	35%	12%	15%	40%	13%
Genderqueer	60%	32%	44%	41%	12%
Special Ed	37%	13%	12%	50%	17%

\*Questions were only asked of students who reported considering attempting suicide.

Table 5. Percent of Cambridge Students with Mental Health Concerns by Year

	Engaged in self-harm	Considered attempting suicide	Made a plan about how to commit suicide*	Attempted suicide*
<b>High School</b>				
2012	10%	8%	6%	2%
2014	12%	8%	7%	2%
2016	14%	10%	8%	2%
2018	15%	11%	8%	3%
2021	12%	15%	35%	11%
<b>Middle School</b>				
2019	18%	11%	9%	3%
2021	10%	11%	42%	13%

\*Questions were only asked of students who reported considering attempting suicide in 2021.

### Support Networks

- In 2021, 59% of high school students and 68% of middle school students reported having at least one close friend. This compares to 71% of high school students in 2018 and 82% of middle school students in 2019.
- In 2021, by gender identity, female and genderqueer students were much more likely to report not having three close friends.
- In 2021, by race and Hispanic identity, Hispanic/LatinX and Black/African American students were two to three times more likely, respectively, to report having no friends than the overall average.
- In 2021, 11% of high school students and 17% of middle school students reported not having a friend in their peer group, an adult in their family or community, an adult in an after-school program, or an adult schoolteacher or guidance counselor that they can talk to about a problem.
- In 2021, 34% of high school students and 29% of middle school students reported having a teacher or other adult at school with whom they can talk. This compares to 65% of high school students in 2018 and 59% of middle school students in 2019.
- In 2021, students were most likely to reported having a friend similar in age to talk to about a problem at 62%, followed by an adult in their family (56%), a teacher (24%), or another adult in the school setting (17%).

- In 2021, 14% of high school students reported that they met with a mental health therapist, 9% reported that they met with a school counselor about a mental health issue, and 5% reported taking medication for a mental health issue in the past 12 months.

Table 6. Percent of Cambridge Students Who Can Talk to a Trusted Adult

	Teacher in your school	Adult after school	Adult in the family	Adult in the community
Overall	25%	7%	57%	12%
White	29%	5%	70%	15%
Black/African American	18%	8%	41%	8%
Asian	29%	12%	48%	12%
Multi-Racial	35%	5%	57%	12%
Other	30%	3%	57%	14%
Hispanic/LatinX	21%	8%	55%	13%
Male	29%	8%	65%	13%
Female	24%	6%	51%	11%
Genderqueer	28%	11%	47%	11%
Special Ed	32%	7%	53%	15%
<b>Middle School</b>				
Overall	22%	4%	56%	10%
White	26%	4%	68%	13%
Black/African American	19%	2%	50%	6%
Asian	33%	12%	61%	12%
Multi-Racial	18%	5%	62%	12%
Other	27%	3%	46%	7%
Hispanic/LatinX	15%	4%	43%	8%
Male	23%	5%	61%	10%
Female	21%	4%	52%	9%
Genderqueer	19%	5%	40%	14%
Special Ed	25%	5%	56%	4%

Table 7. Percent of Cambridge Students who Accessed Mental Health Supports by Year

	Met with a school counselor	Met with a Teen Health Center counselor	Met with a therapist	Took medication
<b>High School</b>				

2012	-	14%	18%	10%
2014	9%	10%	19%	8%
2016	11%	8%	19%	11%
2018	12%	8%	19%	12%
2021	10%	3%	23%	11%
<b>Middle School</b>				
2015	14%	-	15%	9%
2017	16%	-	15%	10%
2019	20%	-	18%	10%
2021	9%	0.4%	14%	5%

## Substance Use

Substance use by middle school and high school youth is one of the leading concerns for adolescents in the United States and can have a major impact on their health, well-being, and ability to learn. For example, substance use can affect growth and development of teens, especially brain development. It also occurs with and reinforces other risky behaviors in youth, such as unprotected sex and dangerous driving. In addition, substance use contributes to the development of adult health problems, such as heart disease, high blood pressure, and sleep disorders. Finally, the earlier teens start using substances, the greater their chances of continuing to use substances and developing substance use problems later in life.

Nationally, alcohol, marijuana, and tobacco are the substances most used by adolescents. By 12<sup>th</sup> grade, about two-thirds of students have tried alcohol.<sup>4</sup> About half of 9<sup>th</sup> through 12<sup>th</sup> grade students reported ever having used marijuana.<sup>5</sup> Among 12<sup>th</sup> graders, close to 2 in 10 report using prescription medicine without a prescription.<sup>3</sup> Although it is illegal for people under 21 years of age to drink alcohol, the findings show that people from 12 to 20 years of age consume about one-tenth of all alcohol consumed in the United States. These statistics from the CDC are corroborated by the findings from this survey and highlight the importance of this issue to CPS and its partners.

The Cambridge Youth Health Survey was designed to capture information related to current substance use, where they obtained their drugs/alcohol (e.g., availability), ease of access, and secondhand exposure to alcohol and drugs.

### Key Findings

One of the most significant findings from the 2021 Youth Health Survey was the decline in current substance use. These declines were seen across the most commonly used substances, such as alcohol, marijuana, cigarettes, and electronic vapor products. The declines in use reflect national trends that have

<sup>4</sup> Johnson LD, O'Malley PM, Bachman JG, Schulenberg JE, Miech RA. Monitoring the Future national survey results on drug use, 1975-2013: Volume 1, Secondary school students. Ann Arbor, MI: Institute for Social Research, University of Michigan, 2014: 32-36.

<sup>5</sup> The Partnership™ at Drugfree.Org. 2012 Partnership Attitude Tracking Study: Teens and Parents. 2013.

been occurring for a number of years. The decline in 2020 seems to be extreme and is thought to be due the social isolation that students experienced during COVID-19.

### **Current Substance Use (Past 30 days)**

- In 2021, across all survey respondents, alcohol and marijuana are the most reported substances of use, followed by electronic vapor products, cigarettes, prescription drugs, and other illegal substances. It should be noted that the percentages of middle school students using substances deemed risky are extremely low overall, ranging from 1% for alcohol and marijuana to nearly 0% for all other substances.
  - Among high school students, in 2021, 16% of all students who responded to the survey reported using alcohol in the last 30 days, compared to 28% in 2018. Similar trends were seen with all other substances.
    - 15% of high school students reported using marijuana in 2021, compared to 24% in 2018.
    - 9% of high students reported using vaping products in 2021, compared to 18% in 2018.
    - 4% of high students reported smoking cigarettes in 2021, compared to 5% in 2018.
    - The percent of high school students reporting using prescription drugs and other illegal substances were roughly the same in 2021 as they were in 2018 at 2% and 1% respectively.

Figure 7. Percent of Cambridge Students who Reported Using Substances in the Past 30 Days

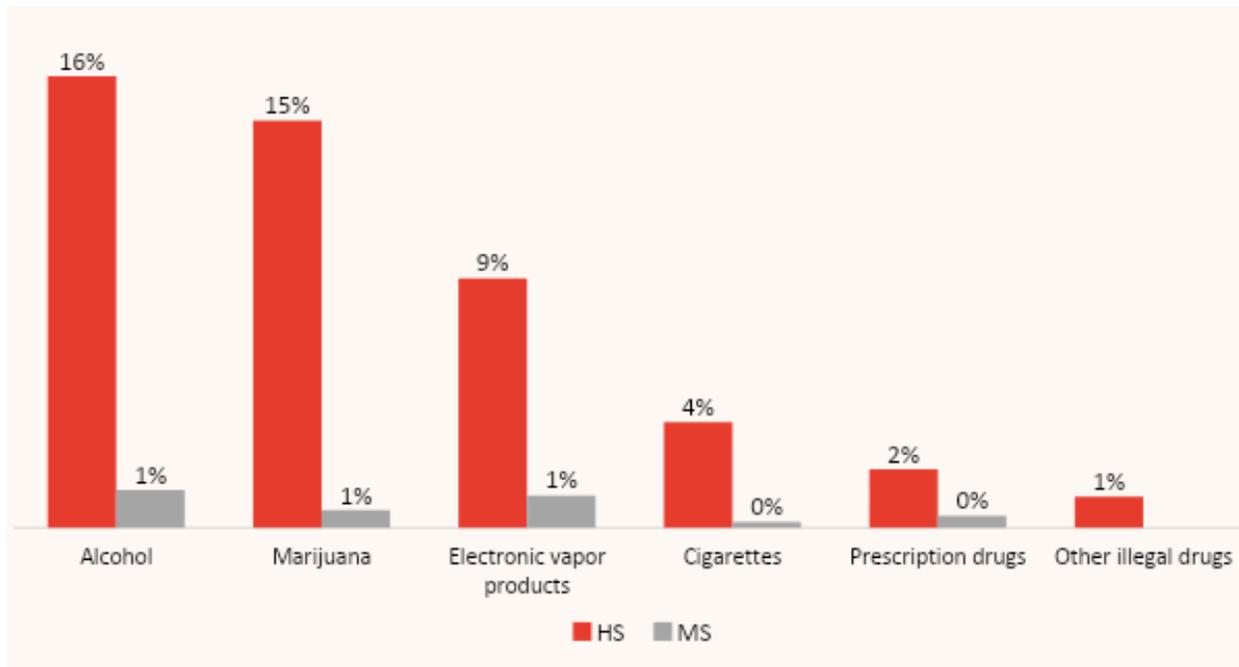


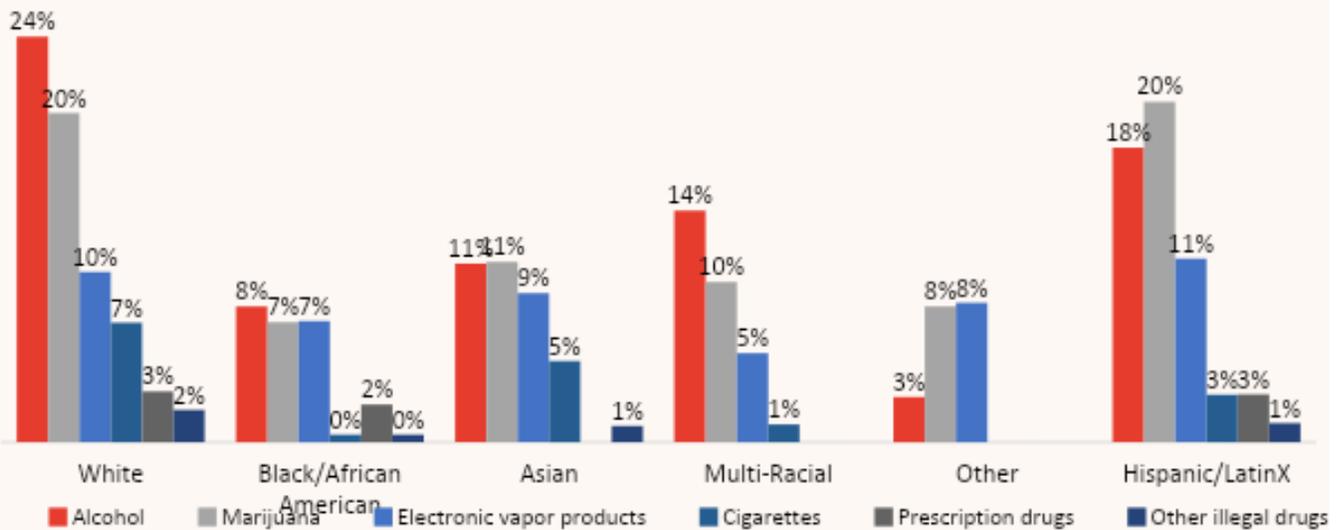
Table 8. Current Use (Past 30 Days) of Substances by Year

	Alcohol	Marijuana	Electronic vapor products	Cigarettes	Prescription drugs
<b>High School</b>					
2012	40%	26%	N/A	9%	N/A
2014	35%	30%	5%	9%	2%
2016	32%	28%	5%	6%	3%
2018	28%	24%	18%	5%	2%
2021	16%	15%	9%	4%	2%
<b>Middle School</b>					
2017	4%	2%	-	0.8%	1%
2019	4%	3%	3%	0.9%	0.5%
2021	1%	0.6%	1%	0.2%	0.4%

- Hispanic/LatinX identity
  - In 2021, with respect to alcohol, White students were more likely to report current use (24%), followed by Hispanic/LatinX (18%), Multi-Racial (14%), Black/African American (8%), Other Race (3%), and American Indians/Alaskan Native (0%) students.
  - In 2021, with respect to marijuana, White and Hispanic/LatinX students were more likely to report current use (20%), followed by Asian (11%), Multi-Racial (10%), Other Race (8%), Black/African American (7%), and American Indians/Alaskan Native (0%) students.

- In 2021, with respect to electronic vapor products, Hispanic/LatinX students were more likely to report current use (11%), followed by White (10%), Asian (9%), Other Race (8%), Black/African American (7%), Multi-Racial (5%), and American Indians/Alaskan Native (0%) students.
- In 2021, with respect to cigarettes, White students were more likely to report current use (7%), followed by Asian (5%), Hispanic/LatinX (3%), Multi-Racial (1%), and students in all other race categories at 0%.
- In 2021, with respect to prescription drugs, White and Hispanic/LatinX students were more likely to report current use (3%), followed by Black/African American students (2%). Other race categories reported no use.
- In 2021, with respect to other illegal drugs, White students were more likely to report current use (2%), followed by Asian and Hispanic/LatinX students (1%, respectively), and all other race categories at 0%.

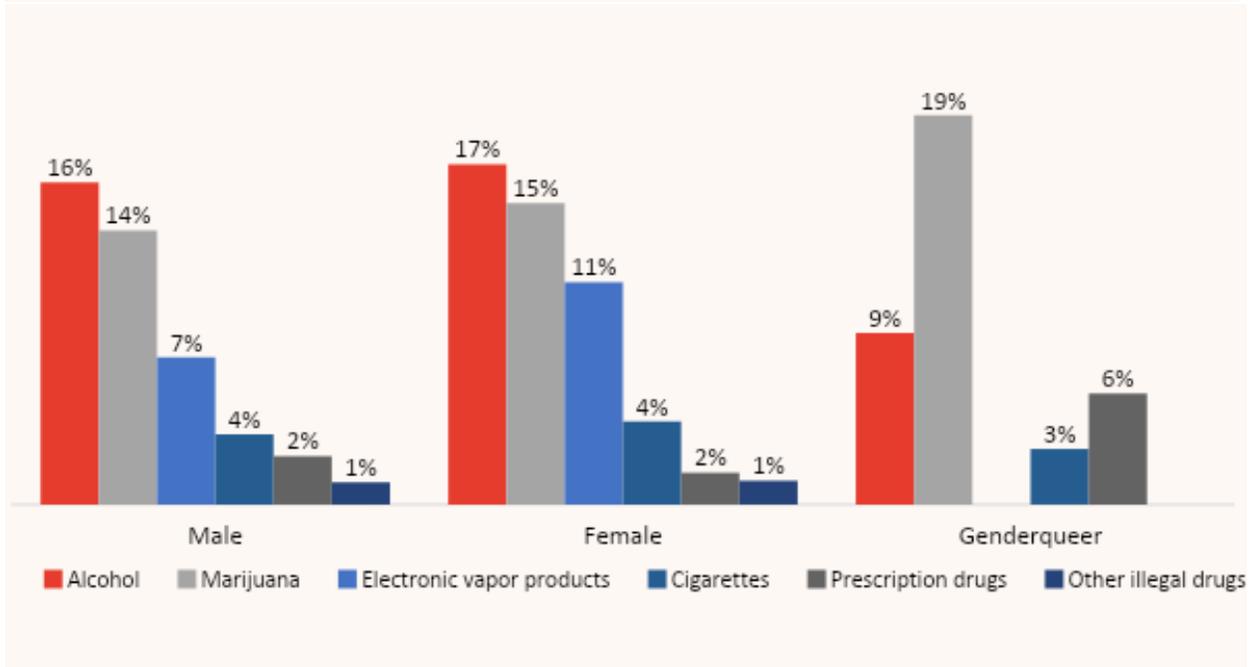
Figure 8. Percent of Cambridge HS Students who Reported Using Substances in the Past 30 Days by Race/Ethnicity



- Gender Identity

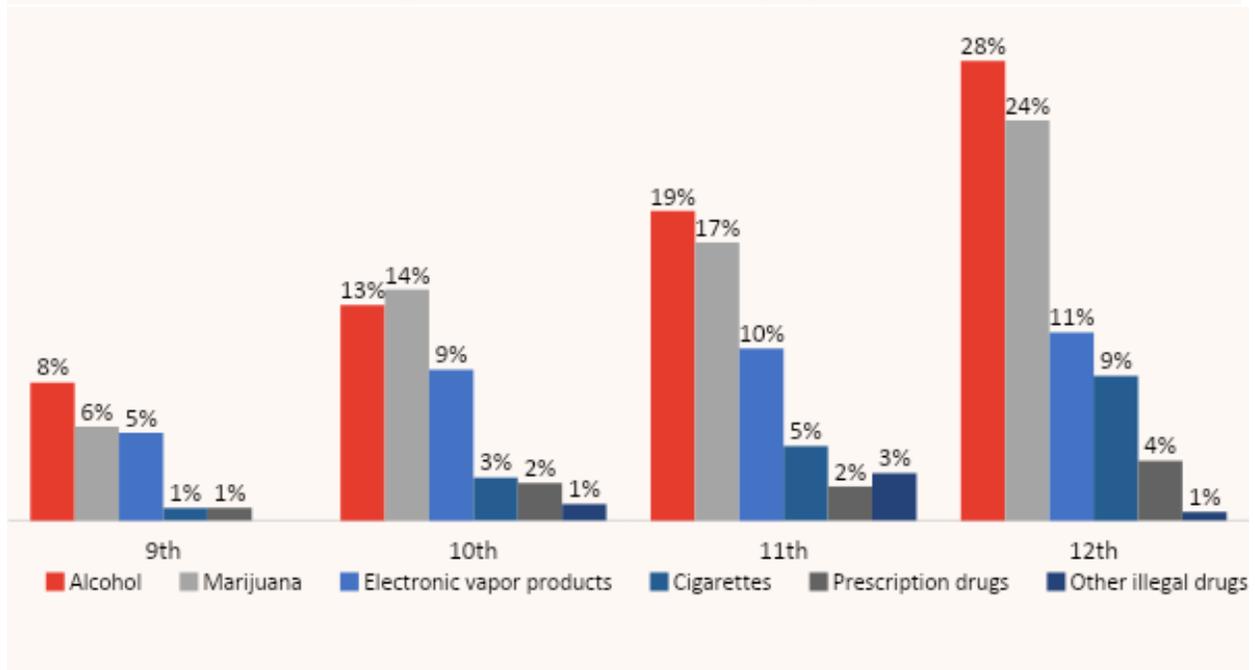
- In 2021, among high school students, female students were more likely to report use of alcohol (17%), electronic vapor products (11%), and cigarettes (4%). Genderqueer students were more likely to report marijuana (19%) and prescription drug (6%) use.
- Among middle school students, female students were more likely to report use of alcohol (2%), marijuana (1%), and prescription drug use (1%). Genderqueer students were more likely to report electronic vapor product use (2%).

Figure 9. Percent of Cambridge HS Students who Reported Using Substances in the Past 30 Days by Gender



- Grade
  - In 2021, the percent of students reporting use of any substance increased gradually by grade. For example, 1% of students in 6<sup>th</sup> and 7<sup>th</sup> grade reported using alcohol in the past 30 days. By 12<sup>th</sup> grade, this percentage had increased to 29%, increasing steadily by grade, 2% in 8<sup>th</sup> grade, 8% in 9<sup>th</sup> grade, 13% in 10<sup>th</sup> grade, and 19% in 11<sup>th</sup> grade.
  - In 2021, with respect to special education status, high school students who reported receiving special education services were more likely to report current use of marijuana and electronic vapor products.

Figure 10. Percent of Cambridge HS Students who Reported Using Substances in the Past 30 Days by Grade



### Availability of Substances

- Alcohol
  - In 2021, among high school students who reported drinking alcohol, most students reported that someone gave it to them (41%), followed by “I took it from a store or family member” (20.1%) and “I got it in some other way” (20.1%).
  - In 2021, among middle school students, 39% of students reported getting the alcohol they drank by taking it from a store or family member and 16% of students reported that someone gave it to them. Nearly half of the students who responded to the survey (46.1%) said that they got alcohol in some other way.
  - In 2021, the other choices that were given on the survey related how students obtained their substances involved buying it from some kind of a store or giving people money to buy the substance, which were selected to a relatively lesser extent.
- Marijuana
  - In 2021, among high school students, 49% of students reported that they got their marijuana from friends, 31% reported that they bought it from someone, and 10% reported that they got it in some other way.

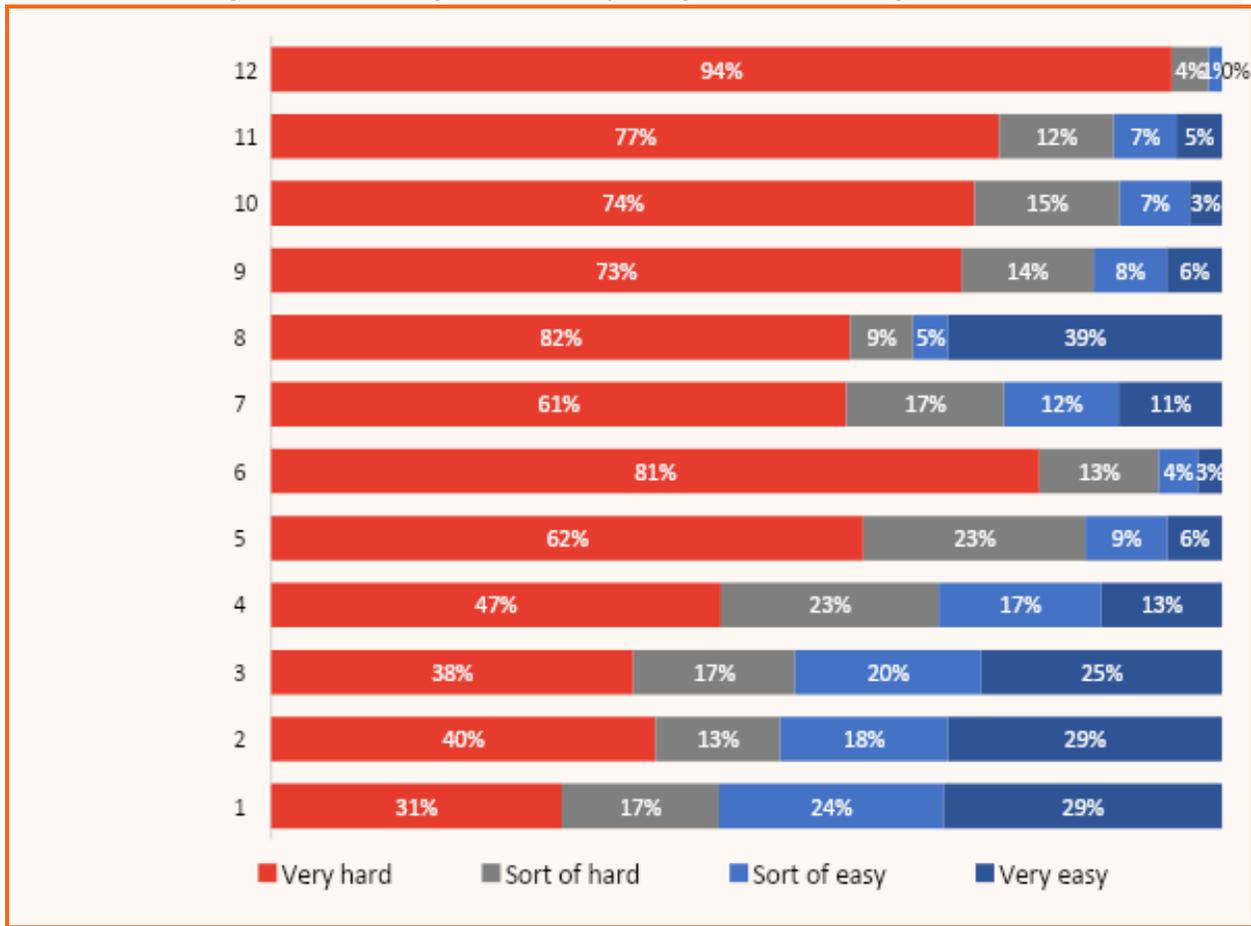
- In 2021, among middle school students, 60% of students reported that they got their marijuana from friends, 20% reported that they took it from some place without permission (20%), and the remaining 20% reported that they got it some other way.
- Prescription drugs
  - In 2021, among high school students, 43% of students reported that they bought the drugs from a friend, family member, or someone else, 29% reported that they took them from a family member, and 24% reported that they got it in some other way.
  - In 2021, among middle school students, 33% of students reported that they bought the drugs from a friend, family member, and the remaining 66% reported that they got it in some other way.
- Cigarettes
  - In 2021, among high school students, 53% of students reported that they bought the cigarettes from a friend, family member, or someone else, 16% reported that they bought them from a store or gas station, and 26% reported that they got it in some other way.
  - In 2021, among middle school students, 100% reported that they got or bought them from a friend, family member, or someone else.
- Electronic Vapor Products
  - In 2021, among high school students, 64% reported that they bought them from a friend, family member, or someone else, 15% reported that they bought them from a store, and 14% reported that they got them some other way.
  - In 2021, among middle school students, 40% reported that they bought them from a friend, family member, or someone else, 10% said that they took them from a store or another person, and 50% reported that they got them some other way.

### **Ease of Access**

- In 2021, across all students who responded to the survey, alcohol was the substance that students felt was the easiest to access with 11% of high school and middle school student reporting that it was very easy to get, followed by electronic vapor products (6%), prescription drugs (5%), marijuana (4%), cigarettes (3%), and other illegal drugs (1%).
- In 2021, high school students were more likely to report very easy access to all substances. Specifically, 44% of 12th grade students reported that it was very easy to access marijuana compared to 37% reporting very easy access to alcohol, 35% for electronic vapor products, and 19% for cigarettes.
- In 2021, with respect to race and Hispanic/LatinX identity, Multi-Racial or White students were more likely to report that it was very easy to get alcohol at 15% and 14% respectively.

- o Black/African American and Hispanic/LatinX students were more likely to report that it was very easy to get marijuana (7% and 6% respectively), electronic vapor products (8%), and prescription drugs (6%) than other racial groups.
- o Black/African American students were more likely to report easy access to illegal drugs at 2%.

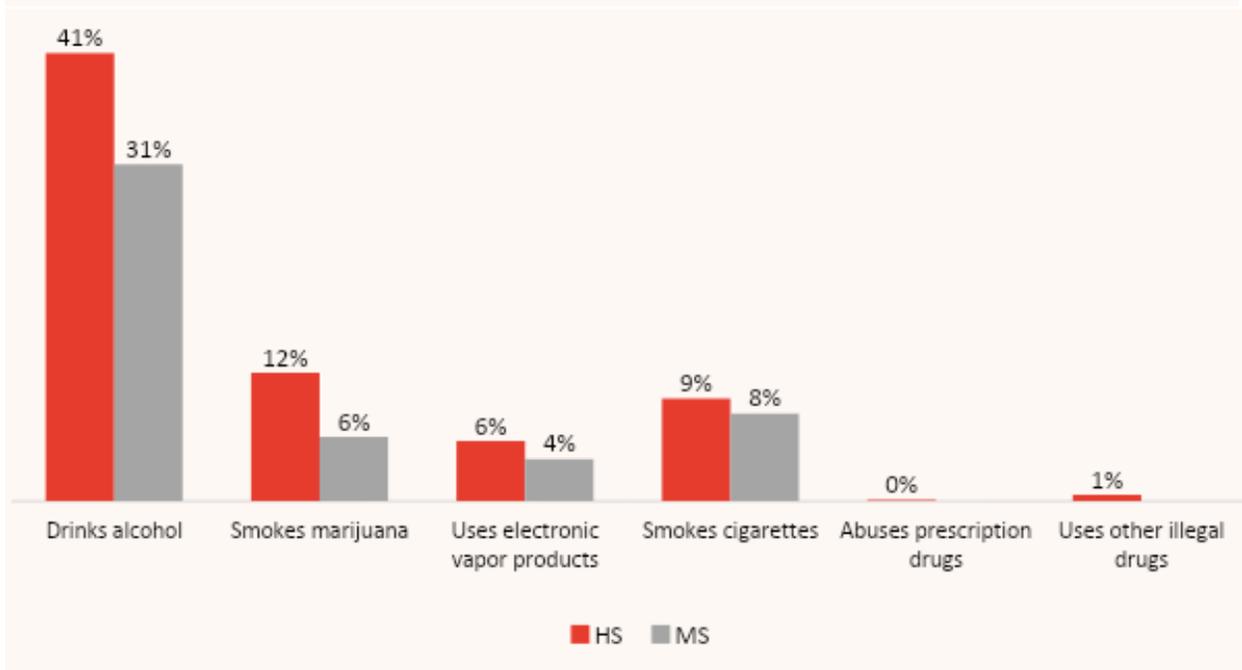
Figure 11. Cambridge Students Reporting Ease of Obtaining Substances



### Exposure to Substances

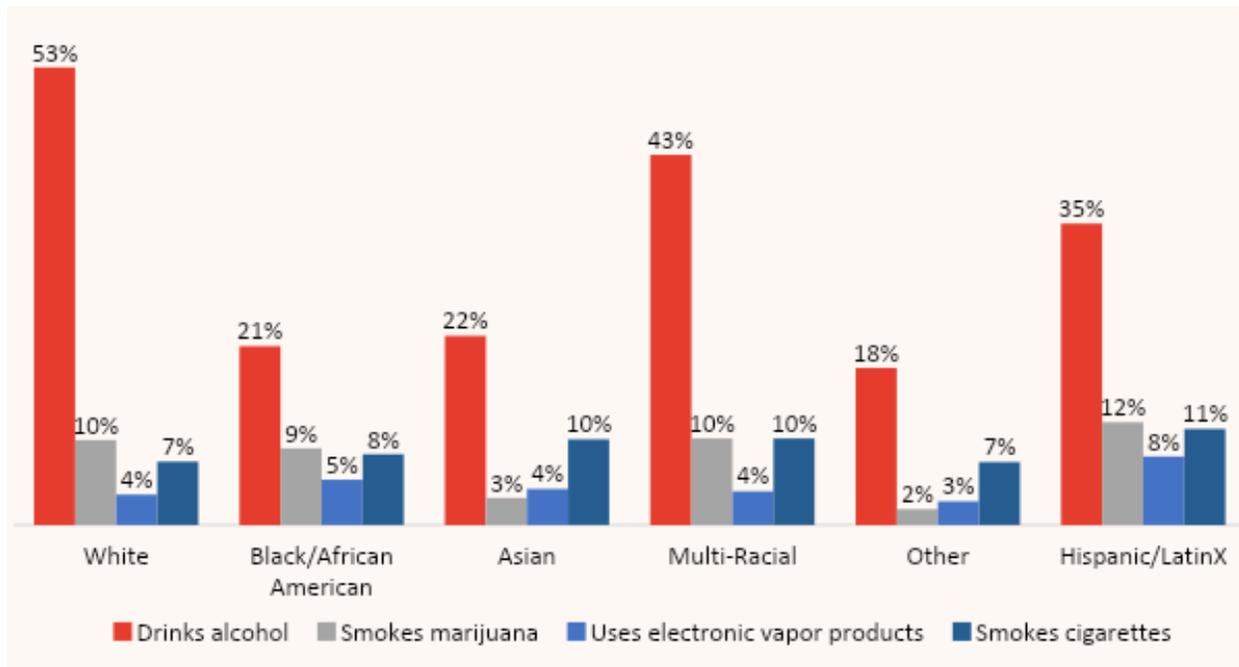
- In 2021, high school students are more likely to report exposure to alcohol (41%), marijuana (12%), cigarettes (9%) and electronic vapor products (6%).
- In 2021, middle school students are more likely to report exposure to alcohol (31%), cigarettes (8%), marijuana (6%), and electronic vapor products (3%), but no exposure to abuse of prescription drugs or use of illegal drugs.

Figure 12. Percent of Cambridge Students Reporting that Someone in Their Household Uses Substances



- In 2021, with respect to race and Hispanic identity, White students were more likely to report exposure to alcohol. Hispanic/LatinX students were more likely to report exposure to marijuana, electronic vapor products, and cigarettes.

Figure 13. Percent of Cambridge Students Reporting That Someone in Their Household Uses Substances by Race/Ethnicity



## Unintentional Injuries, Safety/Violence, Victimization, and Discrimination

Injuries and violence among young people continue to have a substantial emotional, physical, and economic toll on society. On average, a child dies every hour in the United States from an injury or violent act, and over 30% of all deaths among children age 1–19 years are from injuries or violence<sup>6 7</sup>. Another 22,200 children on average are seen every day in U.S. emergency departments (ED) seeking treatment for nonfatal injuries. Injuries can be intentional, such as from an assault, homicide, or suicide/self-harm, or they can be unintentional, such as from motor vehicle crashes, drowning, poisoning, fires/burns, falls, or suffocation. Included in this category are also issues of bullying, physical and electronic/cyberbullying, which can cause tremendous emotional harm and trauma. Injuries can have lasting consequences and result in a substantial economic burden on society. Each year, injuries to U.S. children 0–19 years of age result in an estimated \$94 billion in lifetime medical and work-loss costs.<sup>8</sup>

The Cambridge Youth Health Survey was designed to capture information related to bullying, electronic/cyberbullying, forced sexual activity, sexual or physical dating violence, and discrimination.

### Key Findings

Overall, safety concerns appear to be higher for females and genderqueer, with the exception of violence, which is more of a concern for Black/African American and Asian youth.

<sup>6</sup> Centers for Disease Control and Prevention Web-Based Injury Statistics Query and Reporting System (WISQARS) [(accessed on 9 August 2017)]; Available online: <https://www.cdc.gov/injury/wisqars/>

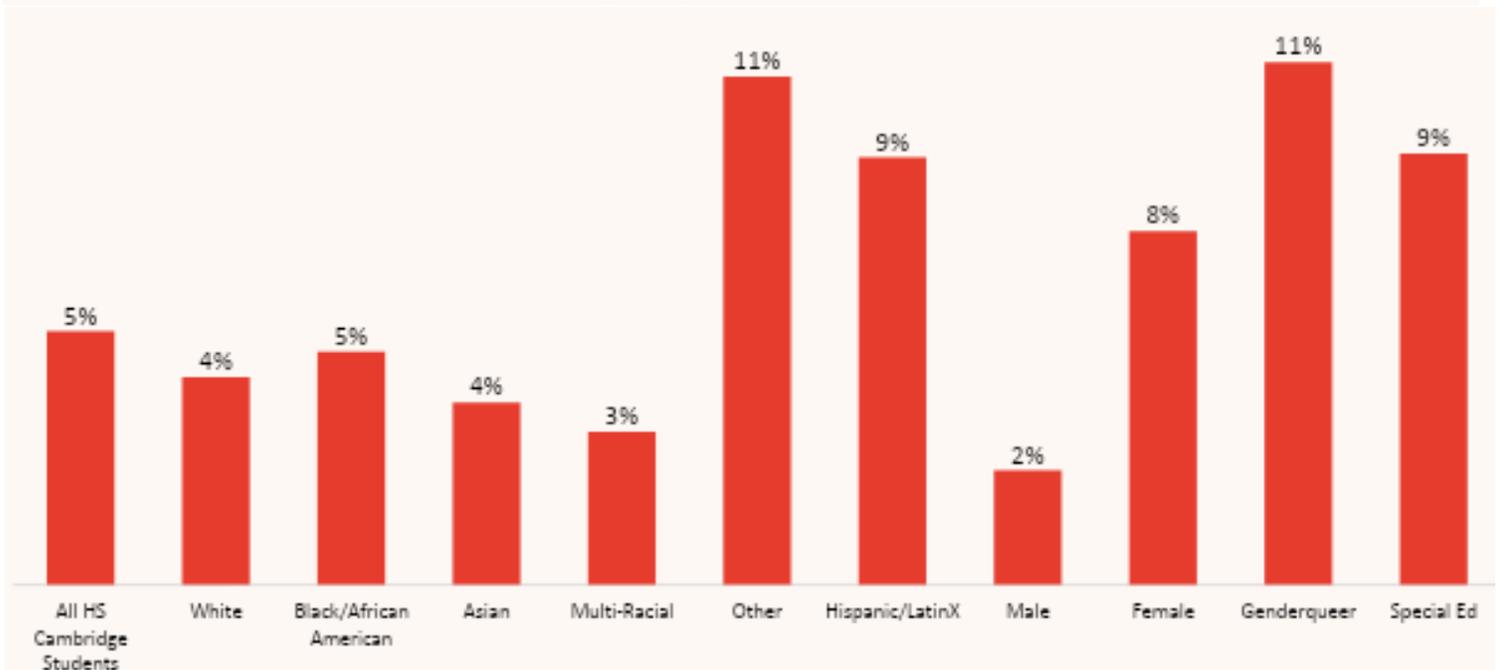
<sup>7</sup> Dellinger A.M., Gilchrist J. Leading Causes of Fatal and Nonfatal Unintentional Injury for Children and Teens and the Role of Lifestyle Clinicians. *Am. J. Lifestyle Med.* 2017 doi: 10.1177/1559827617696297. [CrossRef] [Google Scholar]

<sup>8</sup> Centers for Disease Control and Prevention Web-Based Injury Statistics Query and Reporting System (WISQARS) [(accessed on 9 August 2017)]; Available online: <https://www.cdc.gov/injury/wisqars/>

## Forced sexual activity

- In 2021, among all survey respondents, 3% or 63 students reported that they were forced to do sexual things that they did not want to do.
  - In 2021, 5% of high school students (54 students) reported forced sex, compared to 4% in 2018.
  - In 2021, 9% of middle school students who responded to the survey (9 students) reported forced sex compared to 0.7% in 2019.
  - With respect to gender identity, in 2021, genderqueer students (6%, 5) were twice as likely to report forced sex than the overall population, and female students (5%, 44) were more than three times more likely to report forced sex than male students (1%, 13).
  - In 2021, with respect to race and Hispanic identity, in 2021, Hispanic/LatinX students (5%, 19) or students of an Other Race (5%, 5) were considerably more likely to report forced sex than Asian (2%, 4), Multi-Racial (2%, 4), or White (3%, 17) students. Black/African American students (4%, 15) were slightly less likely to report forced sex than Hispanic/LatinX students or students of an Other Race.
  - In 2021, with respect to special education status, in 2021, 5% (12 students) reported that they were forced to do sexual things.

Figure 14. Percent of Cambridge HS Students Reporting that Anyone Forced Them to do Sexual Things They Did Not Want To in the Past 12 Months



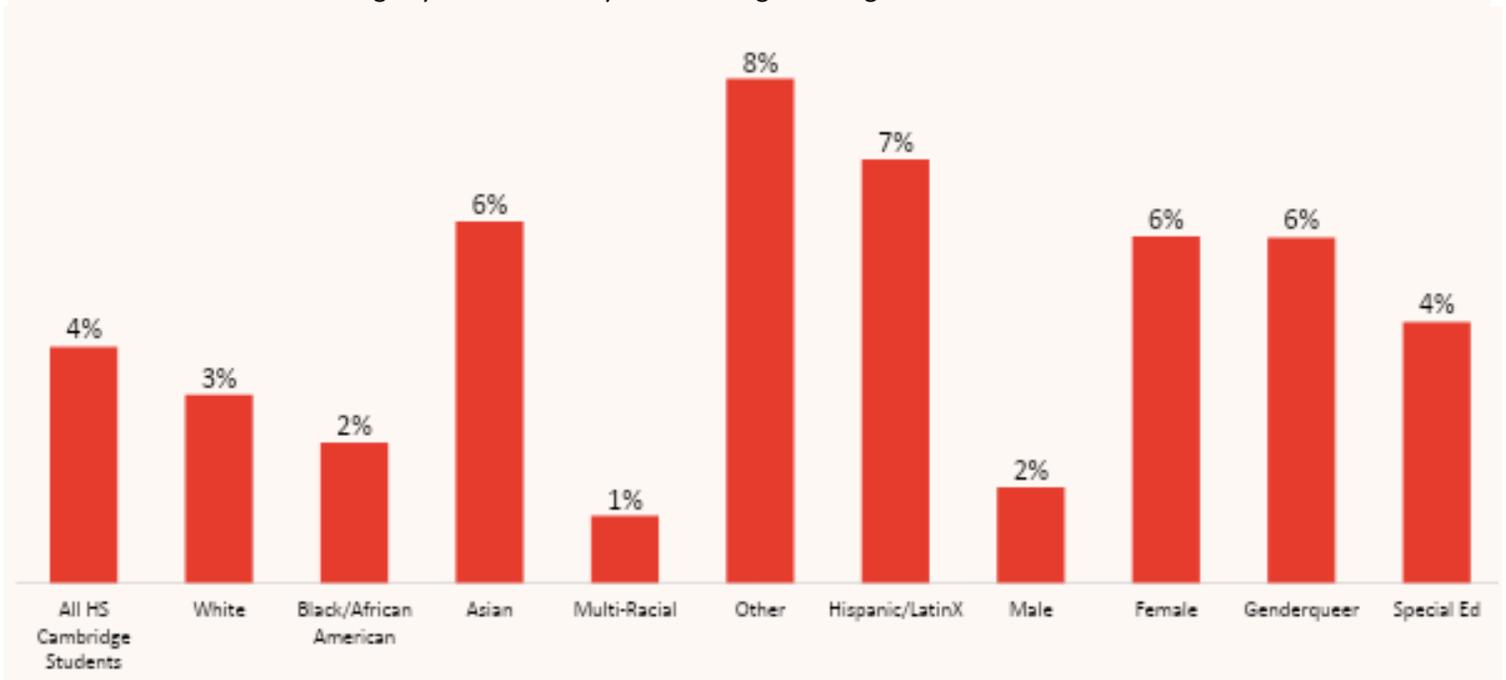
## Sexual or physical dating violence

- In 2021, among all survey respondents, 3% or 49 students reported that someone they were dating or going out with physically hurt them or forced them to do sexual things that they did not want to

do. High school students (4%, 38) were three times more likely to report that someone they were dating or going out with physically hurt them or forced them to do sexual things than middle school students (1%, 11).

- o In 2021, with respect to gender identity, genderqueer students (3%, 2) were just as likely to report that that someone they were dating or going out with physically hurt them or forced them to do sexual things that they did not want to do. Female students (3.6%, 34) were nearly three times more likely to report that someone they were dating or going out with physically hurt them or forced them to do sexual things than males (1.3%, 12).
- o In 2021, students who reported as receiving special education services (4%, 8) were more likely than the overall student population to report dating violence.
- o In 2021, with respect to race and Hispanic identity, Hispanic/LatinX students (5%, 17) were considerably more likely to report that someone they were dating or going out with physically hurt them or forced them to do sexual things than those reporting as Other Race (1%, 1) or Multi-Racial (1%, 2). Asian students (3%, 6) were the second most likely to report dating violence, followed by White (2%, 12) and Black/African American (2%, 9) students.

Figure 15. Percent of Cambridge HS students Reporting that they were Physically Hurt or Forced to do Sexual Things by Someone They Were Dating or Going Out With in the Past 12 Months



### Bullying / Cyberbullying

- In 2021, among all survey respondents, 7% of students reported that they had been bullied in the past 12 months and 10% reported that they had been cyber or electronically bullied in the past 12 months. This was a relative decrease in reported bullying compared to 2019 and 2018 (see below).

In 2021, middle school students (13%, 125 students) were nearly three times as likely to report bullying than high school students (5%, 46 students).

- In 2019, 32% of middle school students reported being bullied on school property, 16% reported being bullied when not at school, and 12% reported being electronically bullied. In 2018, 14% of high school students reported being bullied on school property, 11% reported being bullied when not at school, and 8% reported being electronically bullied.
- In 2021, with respect to gender identity, genderqueer students were considerably more likely to report being bullied (17%). Female students were slightly more likely (8%) than male students (6%). Similarly, genderqueer students were more likely to report being cyberbullied (19%), compared to female (11%) and male (8%) students.
- In 2021, with respect to race and Hispanic/ identity, while the numbers are very small, American Indian/Alaskan Native students were the most likely to report being bullied (12%, 2) or cyberbullied (18%, 3). Black/African American (5%, 23) and Multi-Racial (6%, 10) students were least likely to report being bullied. Those in the remaining racial categories, White (53), Hispanic/LatinX (32), Asian (15), and Other Race (10) were equally likely to report being bullied (8-9%).
  - In 2021, White (8%, 58), Multi-Racial (8%, 15) and Black/African American (9%, 41) students were least likely to report being cyberbullied and the remaining racial categories (Hispanic/LatinX (12%, 45), Asian (11%, 21), Other Race (14%, 15)) were roughly equally likely to report being cyberbullied.

Figure 16. Percent of Cambridge Students Reporting that they were Electronically Bullied in the Past 12 Months

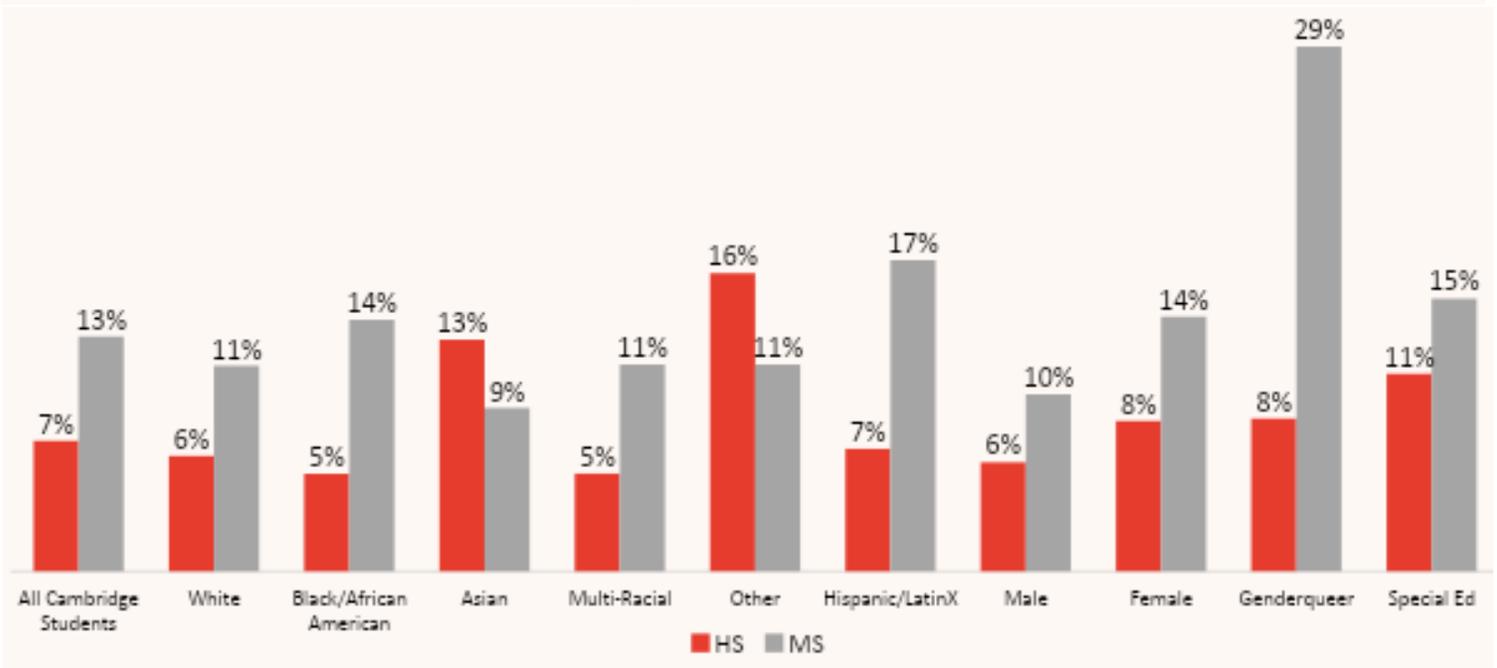


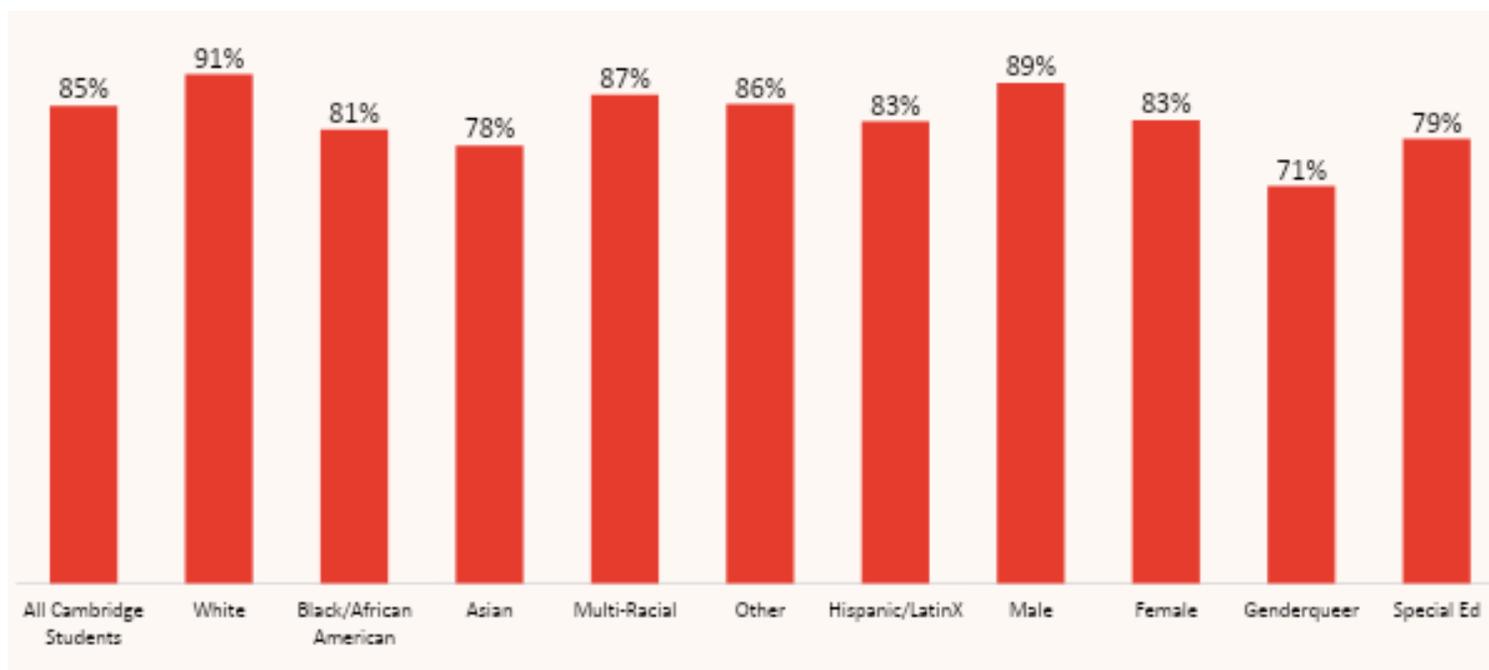
Table 9. Experienced Electronic Bullying in the Past 12 Months by Year

Electronic / Cyberbullying Victim	
<b>High School</b>	
2012	8%
2014	8%
2016	9%
2018	8%
2021	7%
<b>Middle School</b>	
2015	14%
2017	12%
2019	12%
2021	13%

### Feel Unsafe Due to Violence in Community

- Among all survey respondents, 85% of students said that they never or almost never felt unsafe due to violence in their community.
  - Genderqueer students were the least likely to report feeling safe (71%), male students were most likely (90%), and female students (83%) fell in between.
  - With respect to race and Hispanic identity, White students were the most likely to report feeling safe (90-91%), and Asian (78%) and Black/African American (81%) students were the least likely.
  - Students who reported as receiving special education services (79%) were considerably less likely than the overall student population to report feeling safe in their community.

Figure 17. Percent of Cambridge Students who Report Feeling Unsafe Due to Violence in their Community Never or Almost Never in the Past 30 Days



## Discrimination

In 2021, among all survey respondents,

- 16% reported that they had been treated badly because of their **race or ethnicity** and 15% reported hearing someone insulted or verbally assaulted because of their **race or ethnicity**.
- 21% reported that they had been treated badly because of their **sex** (e.g., female) **or gender identity** (e.g., transgender).
- 10% reported that they had been treated badly because of their **sexual orientation** (e.g., gay, straight)
- 10% reported that they had been treated badly because of their **faith or religious beliefs**.

Figure 18. Percent of Cambridge Students who Reported Discrimination

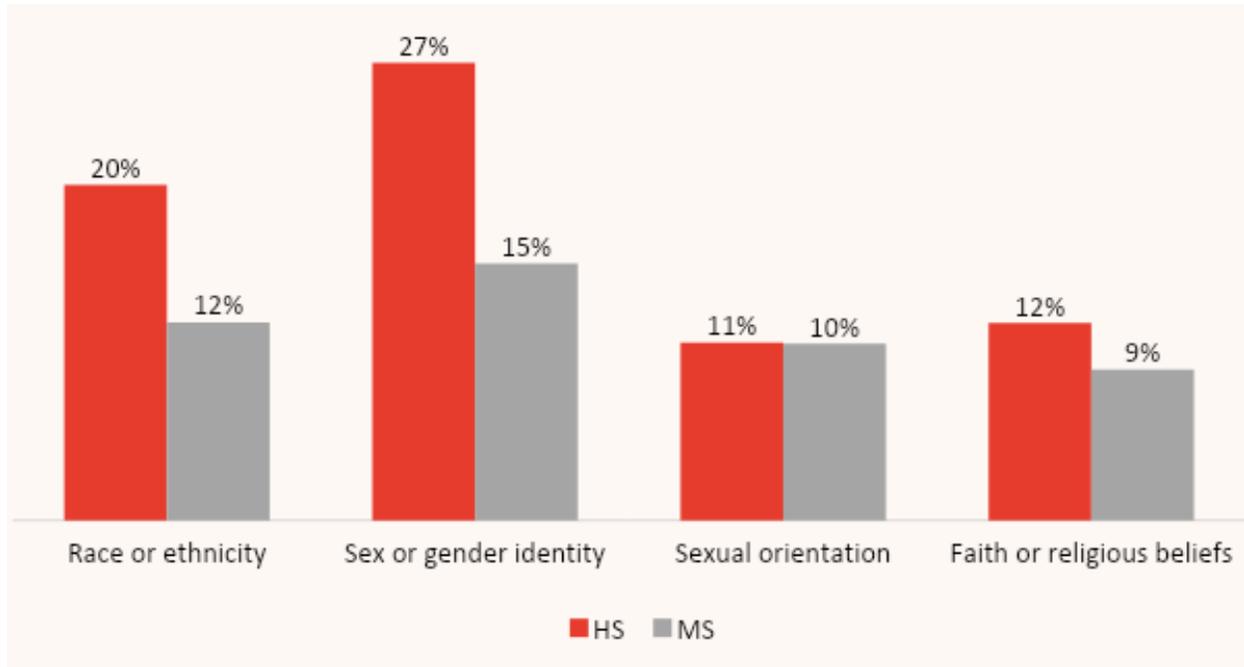


Table 10. Percent of Cambridge Students Who Report Experiencing Discrimination

	Race or Ethnicity	Gender Identity	Sexual Orientation	Faith or Religious Beliefs
<b>High School</b>				
Overall	20%	27%	11%	12%
White	5%	32%	13%	9%
Black/African American	30%	20%	8%	16%
Asian	41%	27%	8%	14%
Multi-Racial	23%	22%	8%	6%
Other	35%	25%	11%	28%
Hispanic/LatinX	20%	30%	10%	10%
Male	17%	9%	6%	8%
Female	22%	42%	13%	15%
Genderqueer	19%	47%	39%	17%
Special Ed	25%	31%	18%	15%
<b>Middle School</b>				
Overall	12%	15%	10%	9%
White	3%	17%	13%	7%
Black/African American	15%	11%	4%	8%
Asian	13%	17%	11%	10%
Multi-Racial	20%	16%	9%	9%

Other	16%	15%	9%	16%
Hispanic/LatinX	17%	17%	14%	10%
Male	8%	6%	4%	8%
Female	14%	21%	12%	9%
Genderqueer	20%	52%	49%	20%
Special Ed	9%	11%	12%	7%

Table 11. Treated Unfairly in School in the Past Year (2021) or Past 12 Months (prior years) by Year

	Race or ethnicity	Sex or gender identity	Sexual orientation
<b>High School</b>			
2012	8%	4%	-
2014	6%	5%	-
2016	11%	9%	-
2018	11%	7%	3%
2021	20%	27%	11%
<b>Middle School</b>			
2013	8%	5%	-
2015	13%	9%	-
2017	12%	7%	2%
2019	16%	14%	3%
2021	12%	15%	10%

## Sexual Behaviors

Sexual risk behaviors place youth at risk for HIV infection, other STDs, and unintended pregnancy. With respect to HIV, 21% of all new HIV diagnoses were among young people (aged 13-24) in 2018; 88% were young men and 12% were young women.<sup>9</sup> Half of the 20 million new STDs reported each year were among young people (aged 15 to 24)<sup>10</sup> Nearly 180,000 babies born in the United States in 2018 were born to teen girls (aged 15–19 years).<sup>11</sup> While not all of these births were unintended or unwanted, it is important that adolescents understand their options with respect to preventing pregnancy to reduce the number of unwanted or mistimed pregnancies. It is also critically important, given the statistics above that youth understand how to prevent STDs. Finally, it is important to note that CDC data show that lesbian, gay, and bisexual high school students are at substantial risk for serious health outcomes related to violence, substance use, poor mental health, and sexual behaviors as compared to their peers. All of this information underscores the importance of the issues addressed in this section.

<sup>9</sup> CDC. Diagnoses of HIV infection in the United States and dependent areas, 2018 (Updated). HIV Surveillance Report 2020;31.

<sup>10</sup> CDC. Sexually Transmitted Disease Surveillance 2018. Atlanta: U.S. Department of Health and Human Services; 2019.

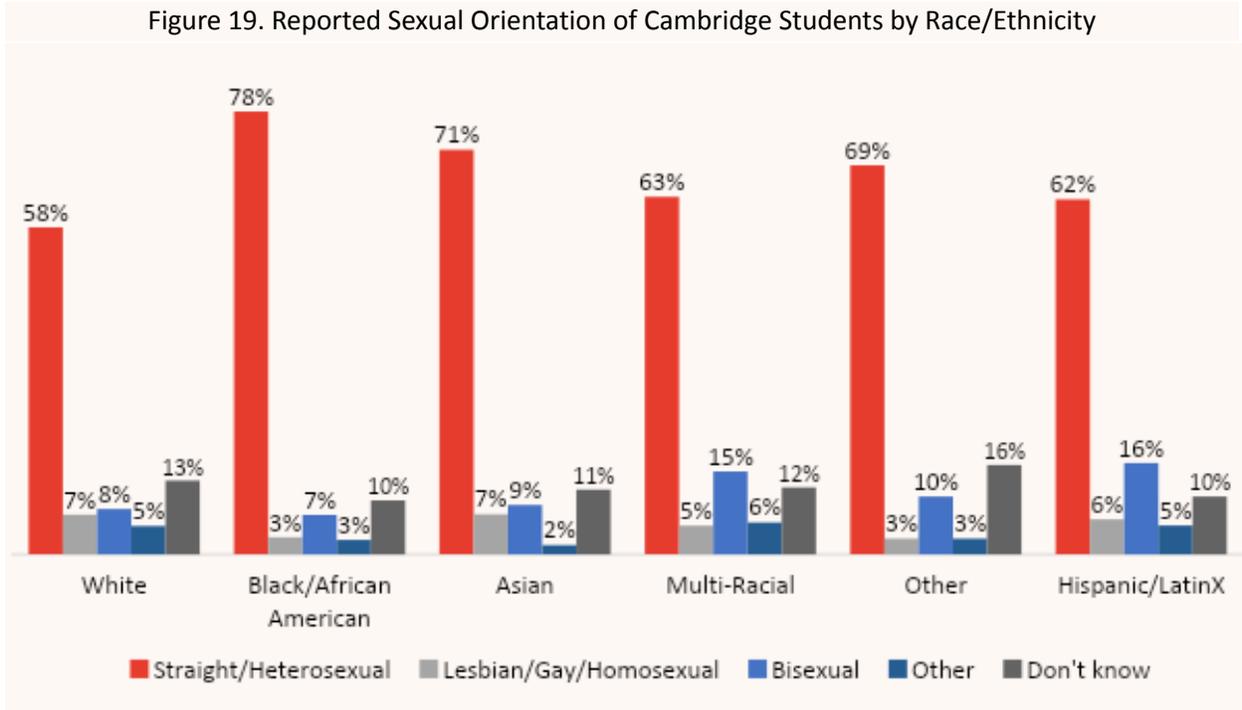
<sup>11</sup> Martin JA, Hamilton BE, Osterman MJK, Driscoll AK. Births: Final data for 2018. National Vital Statistics Reports; vol 68, no 13. Hyattsville, MD: National Center for Health Statistics. 2019.

The Cambridge Youth Health Survey was designed to capture information related to sexual orientation, intercourse, whether you had alcohol or drugs during sex, and for those who had sex methods to prevent pregnancy or sexually transmitted diseases (STDs).

**Key Findings**

**Sexual Orientation**

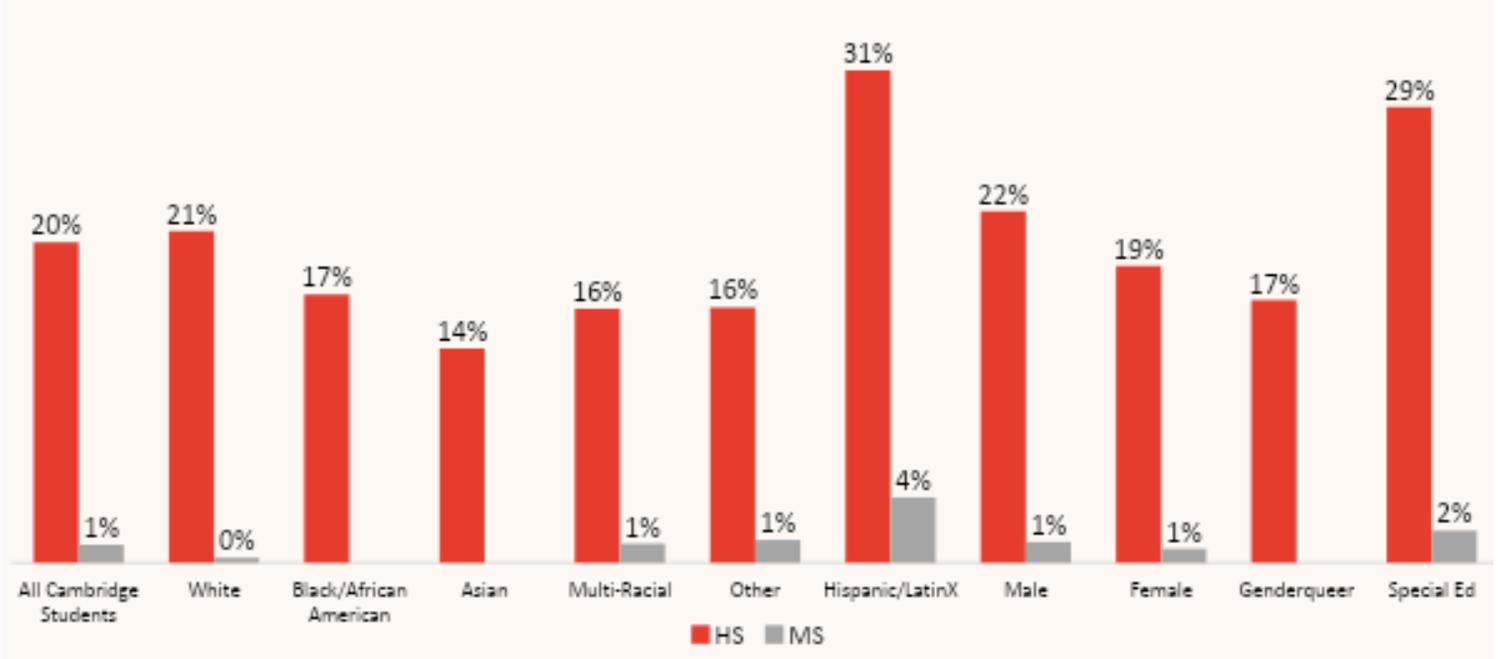
- In 2021, among all survey respondents, 65% reported as being straight or heterosexual, 14% as bisexual, 5% reported being lesbian, gay, or homosexual, 4% as some other sexual orientation, and 12% reported that they did not know. The percentages were similar whether you were in high school or middle school.



**Sexual Intercourse**

- In 2021, among high school students, 20% reported that they had ever had intercourse, compared to 28% in 2018. In 2021, only 1% of middle school students reported that they had ever had sexual intercourse, compared to 3% in 2019.
  - In 2021, with respect to grade in high school, 35% of 12<sup>th</sup> graders, 26% of 11<sup>th</sup> graders, 18% of 10<sup>th</sup> graders, and 7% of 9<sup>th</sup> graders reported ever having sexual intercourse.
  - In 2021, with respect to race and Hispanic identity, Hispanic/LatinX students were most likely to report ever having sexual intercourse (31%), followed by White students (21%), and students of all other races (14-17%).
  - In 2021, with respect to gender identity, male students were more likely to report ever having sexual intercourse (22%) than female (19%) and genderqueer (17%) students.

Figure 20. Percent of Students who Reported Ever Having Sexual Intercourse



### Number of Sexual Partners

- In 2021, among all students who reported having sexual intercourse, 59% reported having one sexual partner, 25% reported have 2-3 partners, and 16% reported having 3 or more partners.
  - In 2021, the figures were similar whether you were a middle school student or a high school student
  - In 2021, with respect to race and Hispanic identity, Asian students were less likely to report having more than 1 partner. Otherwise, there was a similar distribution across races/ethnicities.
  - In 2021, with respect to gender identity, female students were slightly less likely to report having more than one sexual partner than male or genderqueer students.

### Use of Alcohol or Drugs Before Sex

- In 2021, among students who reported ever having sexual intercourse, 15% reported that they used alcohol or drugs before intercourse the last time.
  - In 2021, by grade, students who reported that they ever had sexual intercourse were increasingly more likely to report using alcohol and/or drugs before intercourse as they progressed through school.
  - In 2021, with respect to race and Hispanic identity, White students (22%) were considerably more likely to report using alcohol and/or drugs before intercourse. Asian students (7%) were least likely and Hispanic/LatinX (15%), Multi-Race (13%) and Black/African American (11%) students fell in between.

- In 2021, genderqueer students (33%) were twice as likely to report using alcohol and/or drugs as male and female students (15%, respectively).
- In 2021, students who reported receiving special education services were slightly less likely than the overall student population to report using alcohol or drugs before intercourse the last time (14%, 5).

**Methods to Prevent Pregnancy and Sexual Transmitted Diseases (STDs)**

- In 2021, among all survey respondents who reported having sexual intercourse, 66% reported using a condom the last time they had sex, 33% reported using birth control pills, 8% reported using an IUD, 2% reported using a shot, and 9% reported withdrawal or some other method, and 2% reported that they were not sure. (Note: The percentage figures add up to more than 100% due to the use of multiple methods.)
  - There is considerable variation in these statistics by gender identity, race, and Hispanic/LatinX identity.

Figure 21. Methods Cambridge HS Students Used to Prevent Pregnancy and Sexually Transmitted Diseases the Last Time they had Sexual Intercourse by Race/Ethnicity

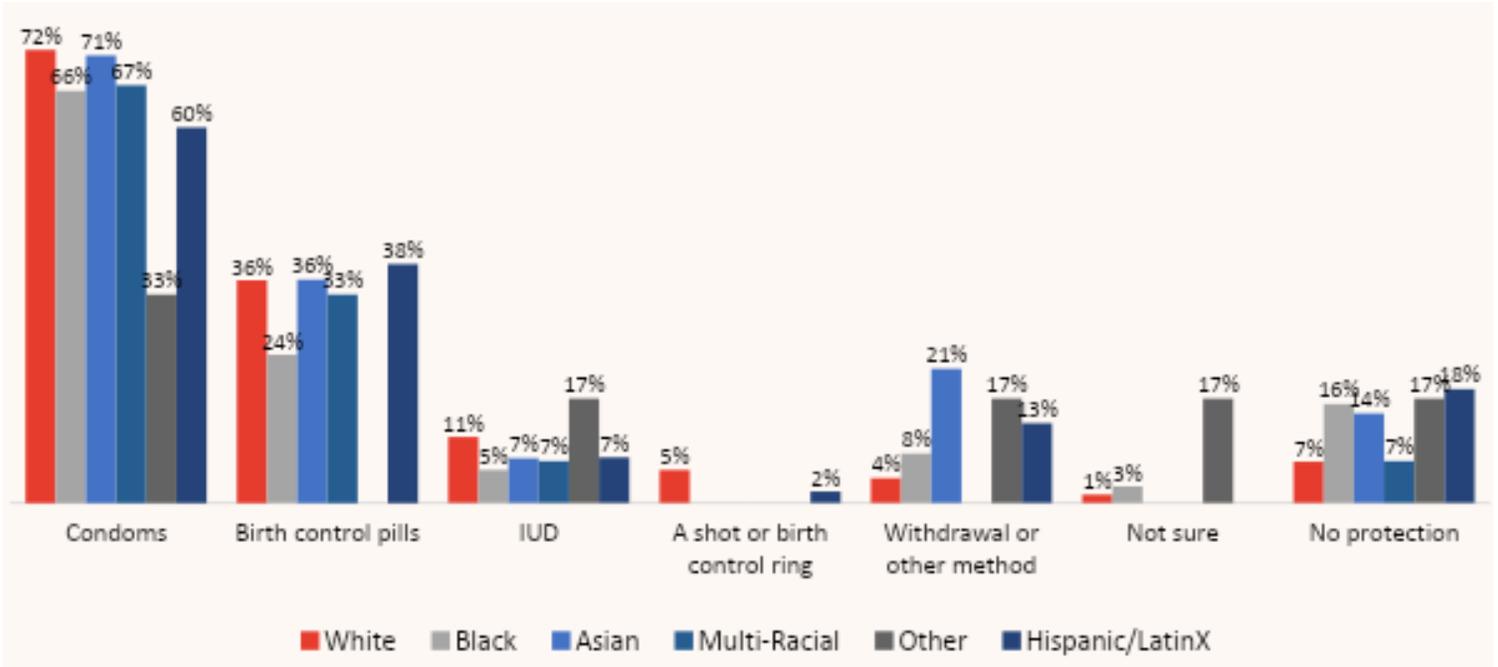
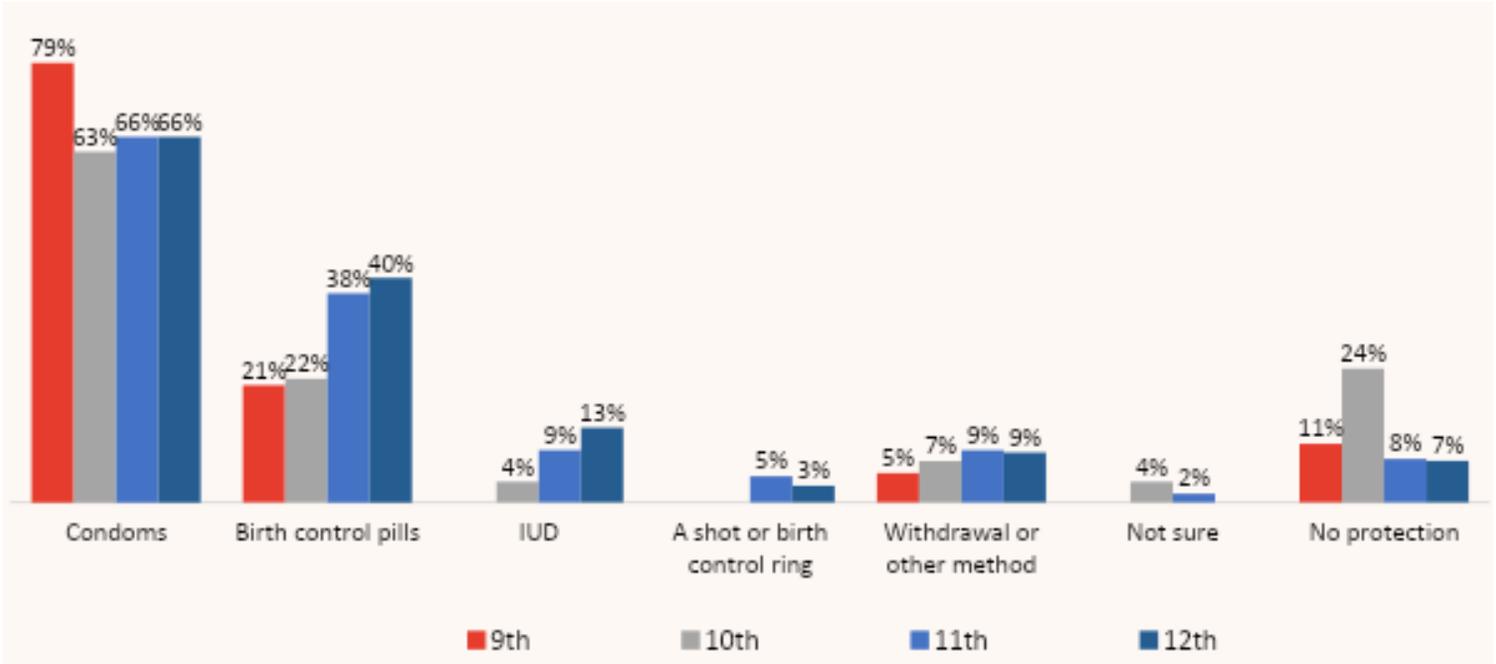


Figure 22. Methods Cambridge HS Students Used to Prevent Pregnancy and Sexually Transmitted Diseases the Last Time they had Sexual Intercourse by Grade



## Healthy Eating, Active Living, and Extracurricular Activities

Good nutrition and increased physical activity are vital for healthy growth and development. In contrast, poor nutrition and low levels of physical activity contribute to childhood obesity, chronic diseases (e.g., diabetes, heart disease, depression, and stroke), disability, and premature death. This is true for people across the age spectrum, including adolescents aged 12-18. Fewer than 1 in 10 US children and adults eat the recommended daily amount of vegetables. Among children and adolescents aged 2-19 years the prevalence of obesity in 2017-2018 was 19.3% and affected about 14.4 million children and adolescents.<sup>12</sup> A recent study showed significant weight gain during the pandemic, especially among 5-11 year old youth.<sup>13</sup>

The Cambridge Youth Health Survey was designed to capture information related to dietary habits and physical activity.

<sup>12</sup> Centers for Disease Control and Prevention. Childhood Obesity Facts: Prevalence of Childhood Obesity in the United States. [(accessed on 5 April 2021)]; Available online: <https://www.cdc.gov/obesity/data/childhood.html>

<sup>13</sup> Woolford SJ, Sidell M, Li X, et al. Changes in Body Mass Index Among Children and Adolescents During the COVID-19 Pandemic. JAMA. Published online August 27, 2021. doi:10.1001/jama.2021.15036

## Summary of Key Findings

Overall, there are stable percentages of students reporting of fruit and vegetable consumption compared with prior years. White and Asian students report the highest frequency of vegetable consumption. Sugar sweetened beverage consumption shows an overall decline, which is consistent with national trends.<sup>14</sup>

Physical activity has declined overall, which makes sense given that most students were not in school, and out of school sports and other activities were much less available. As in prior years, male students are more likely to report being physically active as compared with female students.

### Ate fruit or drank 100% fruit juice

- In 2021, 78% of students reported eating fruit and 37% reported drinking 100% fruit juice the previous day.
  - In 2021, middle school students were more likely to report eating fruit than high school students, with 82% middle school and 75% of high school students reporting eating fruit. In 2019, 84% of middle school students reported eating fruit and, in 2018, 78% of high school students reported eating fruit.
  - In 2021, with respect to race and Hispanic/LatinX identity, White students were most likely to report eating fruit (83%), followed by Multi-Racial (81%), Other Race (77%), Asian (77%), Black/African American (75%), and Hispanic/LatinX (74%) students.
  - In 2021, students who reported receiving special education services were less likely to report eating fruit than those who did not report receiving special education services (71% vs 89%).

### Ate raw or cooked vegetables

- In 2021, 63% of students reported eating raw vegetables and 65% reported eating cooked vegetables the previous day.
  - In 2021, among high school students, 64% of students reported eating green salad or raw vegetables, compared to 65% in 2018. Similarly, in 2021, 62% of middle school students reported eating green salad or raw vegetables, compared to 62% in 2019.
  - In 2021, with respect to race or Hispanic/LatinX identity, American Indian/Alaskan Native and Black/African American students were least likely to report eating raw vegetables and cooked vegetables. White students were most likely to report eating raw vegetables (75%) and Asian students were most likely to report eating cooked vegetables (83%).

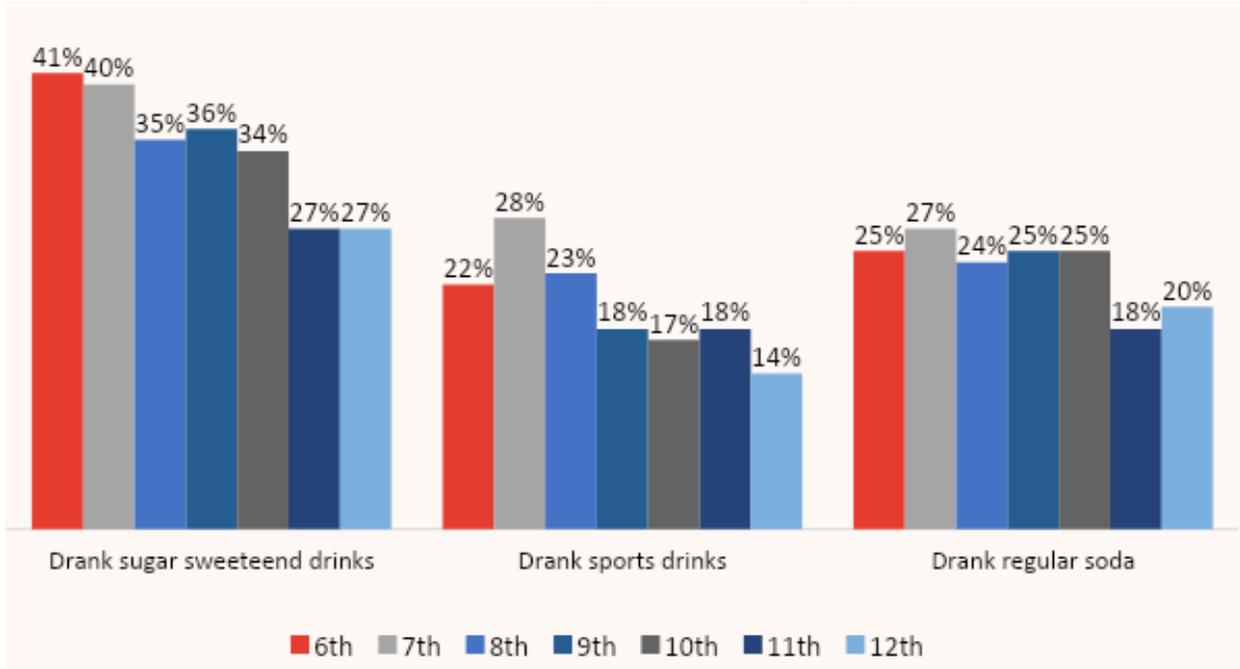
### Drank sugar sweetened beverages

- In 2021, 35% of students reported drinking sugar-sweetened drinks, 20% reported drinking sports drinks, and 24% reported drinking regular soda the previous day.
  - In 2021, 32% of high school students and 39% of middle school students reported drinking sugar sweetened drinks.

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<sup>14</sup> Miller G, Merlo C, Demissie Z, Sliwa S, Park S. Trends in Beverage Consumption Among High School Students — United States, 2007–2015. *MMWR Morb Mortal Wkly Rep* 2017;66:112–116. DOI: <http://dx.doi.org/10.15585/mmwr.mm6604a5>

Figure 23. Percent of Cambridge Students who Drank Sugar-Sweetened Beverages One or More Times a Day in the Past 7 Days by Grade



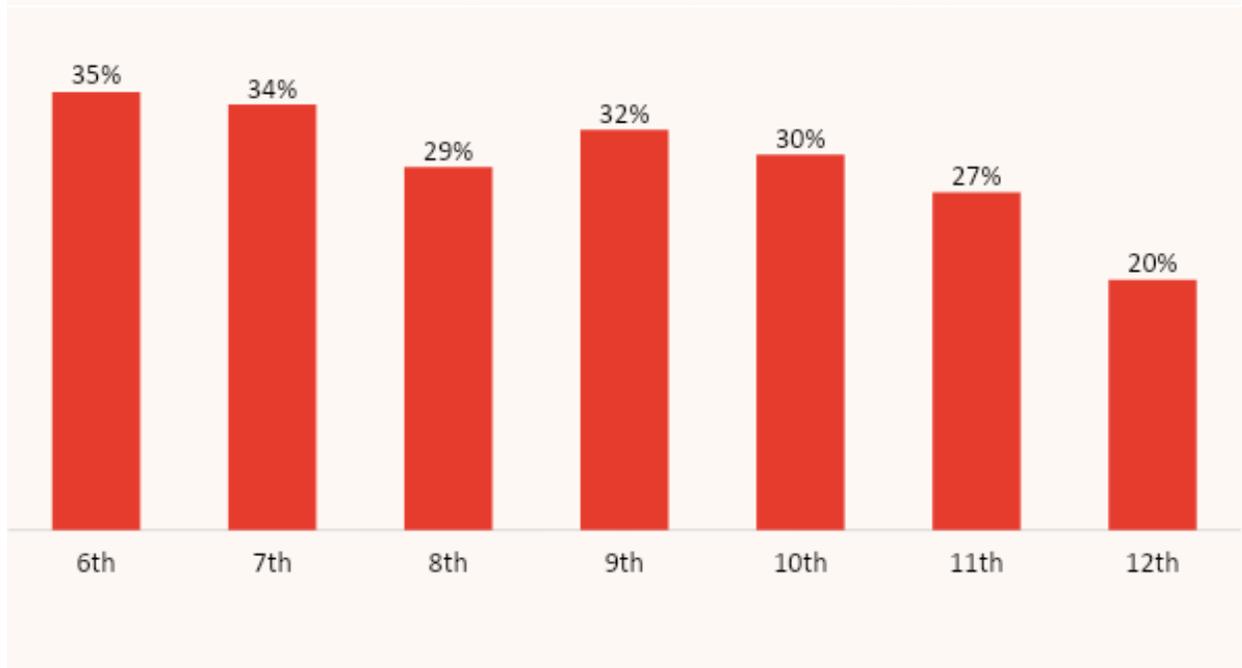
### Other beverages

- In 2021, 30% of students reported drinking tap water, 55% reported drinking bottled water, 37% reported drinking caffeine, and 7% reported drinking energy drinks the previous day.
  - In 2021, 71% of high school students and 69% of middle school students reported drinking tap water.
  - In 2021, 51% of high school students and 58% of middle school students reported drinking bottled water.
  - In 2021, 42% of high school students and 30% of middle school students reported drinking caffeine.
  - In 2021, 7% of high school students and 7% of middle school students reported drinking energy drinks.

### Physical activity (total of 60 minutes per day)

- In 2021, among those who responded to the survey, 30% of students were physically active 5 or more days a week. Middle school students were more likely to be physically active 5 or more days a week (33%), compared to high school students (28%). In 2018, 40% of high school students reported being physically active more than 5 days a week and, in 2019, 29% of middle school students reported being physically active more than 5 days a week.
  - While middle school student physical activity levels were similar to prior years, high school physical activity levels dropped significantly. This drop could be explained by the impact of COVID-19, as studies have shown reductions in self-reported physical activity levels in children associated with implementation of COVID-19 mitigation measures.<sup>15</sup>
  - In 2021, with respect to gender identity, male students were most likely to report being physically active 5 or more days a week (38%), compared to female students (24%) and students who identified as genderqueer (17%).
  - In 2021, with respect to race and Hispanic/LatinX identity, White students were most likely to report being physically active 5 or more days a week (39%), followed by Multi-Race (34%), Other Race (30%), Hispanic/LatinX (28%), Asian (24%), Black/African American (20%), and American Indian/Alaska Native (6%) students.

Figure 24. Percent of Cambridge Students who were Physically Active for 60 minutes Per Day for 5 or More Days in the Past 7 Days by Grade



<sup>15</sup> [Early effects of the COVID-19 pandemic on physical activity and sedentary behavior in children living in the U.S. and Association of COVID-19 Mitigation Measures With Cardiorespiratory Fitness and Body Mass Index Among Children in Austria.](#)