

IMPACT OF THE CORONAVIRUS PANDEMIC ON YOUTH RISK BEHAVIOR: AGGREGATE FINDINGS

Follow-Up on the 2020 Emerson Hospital YRBS

Prepared For



May 2021

Emerson Hospital YRBS COVID Response Survey

Coronavirus Pandemic and the 2020 Emerson YRBS

In March 2020, public school districts across Massachusetts were asked by the state’s Division of Elementary and Secondary Education to close due to the emerging coronavirus (COVID-19) pandemic. Students were sent home and schools began an unprecedented experiment in virtual learning that continues to this day. The shutdown began just as school districts participating in Emerson Hospital’s biennial Youth Risk Behavior Survey (YRBS) were surveying students. Not all schools were able to finish the YRBS before shutting down, and Emerson Hospital made the decision to suspend all YRBS activities until January 2021.

Emerson Hospital is very concerned about challenges students are facing as they grapple with remote learning and the social and economic impacts of COVID-19 on their families and communities. The fact that 2020 YRBS data collection for at least some of the school districts occurred immediately prior to the pandemic’s onset means it is possible to assess whether any changes have occurred in students’ experiences with:

- Drug, alcohol, and tobacco use
- Use of electronic devices, exposure to social media, and the impact on risk behaviors
- Stress, depression, suicidality, and responses to mental health challenges such as self-injury
- Bullying, cyberbullying, sexual harassment, and other forms of violence
- Sexual behavior

Three school districts collaborated with Emerson Hospital to conduct a follow-up survey of 6th graders, 8th graders, and high school students in March 2021, and this report presents the findings for these districts. The questionnaire covers most of the topics included in the 2020 YRBS along with new items specifically about students’ perspectives on how the pandemic has affected them.



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Participating School Districts

- Acton-Boxborough Regional School District
- Groton-Dunstable Regional School District
- Maynard Public Schools



Methodology

Emerson YRBS, most recently conducted in March 2020, is a census of students in 6th grade, 8th grade, and high school. Questionnaires are age-appropriate and based on the Massachusetts YRBS and U.S. Centers for Disease Control and Prevention versions. The survey is done at school and depending on grade, either online or on paper.

Emerson 2021 COVID Response Survey, conducted in March 2021, includes 3 school districts: Acton-Boxborough, Groton-Dunstable, and Maynard, all three of whom also participated in the Emerson YRBS in 2020.

A total of 2,451 students from these three districts completed the Covid Response Survey either from home (if accessing school virtually) or at school (if attending in-person). Student responses to this survey are guaranteed confidential, which means no identifying information has been retained, results are presented in this report in grouped form only with no way of identifying individuals, and the raw data will not be made available to school districts or Emerson Hospital.

At the same time, virtual learning means parents, guardians, siblings, and other adults may have been present while students were answering questions, which means the survey was not necessarily private.

Response Rate for Emerson 2021 COVID Response Survey

- Estimating a response rate for this survey is difficult, as schools were not always able to estimate how many students were “signed in” (actually attending school) on the days the survey was conducted
- Given attendance information available, we estimate that between 75% and 85% of students present on the days the surveys were being conducted, participated in the survey
- Parents were given the option of “opting out” their children, and 15 did so (combined for all 3 districts)



Comparing YRBS Results Over Time

To the best of our ability given the constraints imposed by the pandemic on districts' ability to reach students, whenever possible we compare findings from the Emerson YRBS conducted in March 2020 with current results from March 2021:

- There are some cases in which we compare 2021 results with the March 2018 YRBS because comparable data from 2020 is not available; these are noted in the report where applicable.
- Because there were changes in the schools and/or grades surveyed from 2020 to 2021, the emphasis in this report is on **combined totals for 6th graders, 8th graders, and high school students**
- Results for each school district are also presented, but readers should note that there may be differences in percentages reported in the 2020 Emerson YRBS reports and this report, because of differences in who was surveyed each year.

Interpreting Differences and Changes:

In this report, differences across time or between groups of students that are statistically significant are indicated in two ways:



Arrows in charts and graphs indicate differences that are significant ($p < .05$). The direction of the arrow shows whether a change represents an increase or decrease



Color-coding in tables indicates significant differences between columns, and the meaning of the colors is footnoted after each table

Important caveats about comparisons with results presented in previous Emerson YRBS reports:

- *Not all grades were surveyed in both 2020 and 2021*
- *Different schools may be represented*
- *The same question in 2020 and 2021 may refer to different time periods (e.g., past 3 months, past year)*



Lessons Learned: Surveying Students During a Pandemic

The Emerson YRBS has traditionally been conducted the 2nd week of March while students are at school, which gives districts the ability to proctor the data collection process to make sure all students have the ability to participate if they want to and aren't doing the survey more than once.

This study demonstrates that it is definitely possible to survey 6th graders, 8th graders, and high school students in remote learning circumstances. Large numbers do respond, but there are some challenges:

- Districts across Massachusetts—including the districts participating in this study—are still working to make sure **all students are actually attending school**. How many students haven't engaged at all during the pandemic and/or never heard about the YRBS this year (e.g., because their video is turned off) is not known.
- **The survey isn't confidential if adults or siblings are watching students complete it.** Some of the findings relating to declines in substance use during the pandemic, for example, may reflect students' unwillingness to answer sensitive questions in front of their parents/guardians.
- **Connectivity has been a challenge** across the Commonwealth and it impacts schools and students in different ways. Being able to respond quickly and efficiently to connectivity issues that are outside districts' or researchers' control will be a challenge for the YRBS moving forward.

YRBS CHALLENGES IN AN ERA OF REMOTE LEARNING

- *Are all students coming to and engaged with schools?*
 - *Is the YRBS really confidential for students if they do it at home when parents, guardians, siblings, and other adults are present?*
 - *Connectivity (or lack of connectivity)?*
 - *Parent engagement and concern about the YRBS?*
 - *How to reach ELL and special needs students?*
- **Many schools have engaged with large numbers of parents during the pandemic and have explored new ways of getting parents involved in their children's education.** This has meant an increase in some parents' concerns about the questions we ask in the YRBS, particularly for 6th graders. Being able to respond to parents' concerns is important, and districts may need to increase communication with parents about the YRBS in future surveys.
 - **Accommodating the needs of English language learners (ELL) and special needs students has been especially challenging with remote learning.** Some ELL and special needs students are already back in classrooms in the districts participating in this study; these students were assisted in completing the YRBS by teachers and aides at school, but those who are still at home may not have been able to do it.



Lessons Learned: Differential Impact of an Unprecedented Event

In March of 2020, students were surveyed right before schools closed; in some cases they were sent home within a few days of having completed the YRBS questionnaires. We have no way of knowing how the pandemic impacted students' mental health and wellbeing during the initial months of the pandemic; what we do know, from surveying them a year later, is that:

- The majority of students in Acton-Boxborough, Groton-Dunstable, and Maynard school districts are doing as well as they were prior to the pandemic. They are managing the stresses in their lives in healthy ways, and are coping and adapting to new ways of learning
- Some students are thriving; they are less stressed learning at home than they were at school, they have more access to adults in their lives who they trust and can talk to if they need help, and they are less likely, now, to engage in many of the risk behaviors covered in the YRBS
- That said, for some students, the pandemic has been extremely hard; they are depressed, suicidal, cutting themselves, and engaging in the full range of risk behaviors they were engaging in before the pandemic

In terms of **stress**, the pandemic has been hardest on:

- High school students
- Female students
- LGBTQ students
- Students experiencing hunger

Many students have found themselves feeling sad or hopeless during the pandemic, but it hasn't increased the proportion who are actively suicidal



Lessons Learned (cont.)

Some risks and risk behaviors **did not change** during the pandemic:

- Cyberbullying, and cyberbullying others
- Risky behavior involving the internet (such as viewing porn, having unwanted contact with people met online, risky situations resulting from having shared information online)
- Students' body image, including what they think about their weight, whether they are trying to do something about their weight, and the strategies they use to lose weight

Some things **improved** during the pandemic:

- Students are more willing to talk to trusted adults
- Students are getting somewhat more sleep at night
- Substance use declined (alcohol, vaping, tobacco, marijuana, drugs)
- Sexual behavior declined, as did risky sexual behavior (e.g., no condoms)

Things that have **gotten worse** during the pandemic:

- The pandemic has definitely caused stress, on par with the stress students feel as a result of their home life
- Students are spending more time using technology, and less time exercising (the same is true for U.S. adults)
- Some behaviors that are relatively easy to engage in via technology increased, such as sexting
- Alcohol use by 8th graders during school or at school events, either virtual or in person, increased

Why Did Some Risks Decline During the Pandemic? Possibly a combination of:

- The survey, while confidential, wasn't **private** for virtual students
- Parents are monitoring students more, because they are home with them
- Quarantining means students may lack access to substances and supplies

The key factor suggesting that the declines are “real” and not solely a function of students' concerns about privacy is that **not everything changed**: many risks and behaviors stayed the same or increased during the pandemic



Students and Time

Hours in a Day: Students and Time

The pandemic has had some impact on students' use of time over the past year:

- Students are getting somewhat more **sleep** on average, but there are some for whom sleep is elusive: the proportion getting 5 or fewer hours per night went up for 6th graders and high school students from 2020 to 2021
- Students are spending somewhat more time on **technology** for non-school activities, and on **social media**
- Students are spending less time **exercising** or engaging in vigorous physical activity; the proportion who haven't done any physical activity at all during the past 7 days went up significantly for 6th graders and high school students


Significant
Change
2020-2021

How Much Time Do Students Spend Each Day on Various Activities	6TH GRADE		8TH GRADE		HIGH SCHOOL		HOW ATTENDING SCHOOL AS OF MARCH 2021*		
	2020 YRBS	2021 COVID Response	2020 YRBS	2021 COVID Response	2020 YRBS	2021 COVID Response	Virtual Only	In Person Only	Hybrid
Median hours spent in school each day, online and/or in person (Q105)	(not asked)	6 hours	(not asked)	6 hours	(not asked)	7 hours	6 hours	7 hours	7 hours
Median hours spent doing homework each day (Q106)	1 hour	1 hour	3 hours	2 hours	3 hours	3 hours	3 hours	1 hour	3 hours
Median hours of sleep each school night (Q107)	8 hours	8 hours	7 hours	8 hours	7 hours	7 hours	7 hours	7 hours	7 hours
Percent who sleep 7 or fewer hours per night (Q107)	52%	46%	79%	66%	87%	82%	70%	64%	78%
Percent who sleep 5 or fewer hours per night (Q107)	9%	12%	16%	15%	18%	19%	15%	20%	18%
Median hours spent weekdays using technology for non-school activities** (Q108)	3 hours	3 hours	3 hours	4 hours	3 hours	4 hours	4 hours	4 hours	4 hours
Median hours spent weekdays on social media*** (Q109)	(not asked)	1 hour	(not asked)	2 hours	(not asked)	2 hours	2 hours	2 hours	2 hours
Vigorous physical activity at least 20 minutes on 3 or more of the past 7 days (Q104)	77%	66%	73%	64%	72%	62%	52%	70%	66%
No vigorous physical activity at all (0 days) during the past 7 days (Q104)	7%	12%	10%	14%	12%	15%	23%	15%	13%

Medians are mid-points; for example, half of the 6th graders surveyed in 2021 sleep more than 8 hours on school nights, and half sleep less than 8 hours.

* Four students participated in the 2021 survey who were unclear about whether they were virtual, in person, or hybrid. These students are not included in this analysis.
 ** Such as computers, television, phones, game consoles, or other virtual technology.
 *** Such as Facebook, Twitter, Instagram, SnapChat, Tik Tok, etc.



Hours in a Day: Students and Time by District

How Much Time Do Students Spend Each Day on Various Activities (All Grades)	ACTON-BOXBOROUGH		GROTON-DUNSTABLE		MAYNARD	
	2020 YRBS	2021 COVID Response	2020 YRBS	2021 COVID Response	2020 YRBS	2021 COVID Response
Median hours spent in school each day, online and/or in person (Q105)	(not asked)	7 hours	(not asked)	7 hours	(not asked)	8 hours
Median hours spent doing homework each day (Q106)	3 hours	3 hours	1 hour	2 hours	1 hour	3 hours
Median hours of sleep each school night (Q107)	7 hours	7 hours	8 hours	7 hours	7 hours	7 hours
Percent who sleep 7 or fewer hours per night (Q107)	70%	75%	62%	77%	70%	80%
Percent who sleep 5 or fewer hours per night (Q107)	12%	15%	12%	23%	16%	19%
Median hours spent weekdays using technology for non-school activities* (Q108)	3 hours	4 hours	3 hours	4 hours	4 hours	5 hours
Median hours spent weekdays on social media** (Q109)	(not asked)	2 hours	(not asked)	2 hours	(not asked)	3 hours
Vigorous physical activity at least 20 minutes on 3 or more of the past 7 days (Q104)	76%	62%	74%	68%	67%	54%
No vigorous physical activity at all (0 days) during the past 7 days (Q104)	9%	13%	9%	13%	14%	25%

 Significant Change 2020-2021

Medians are mid-points; for example, half of the 6th graders surveyed in 2021 sleep more than 8 hours on school nights, and half sleep less than 8 hours.

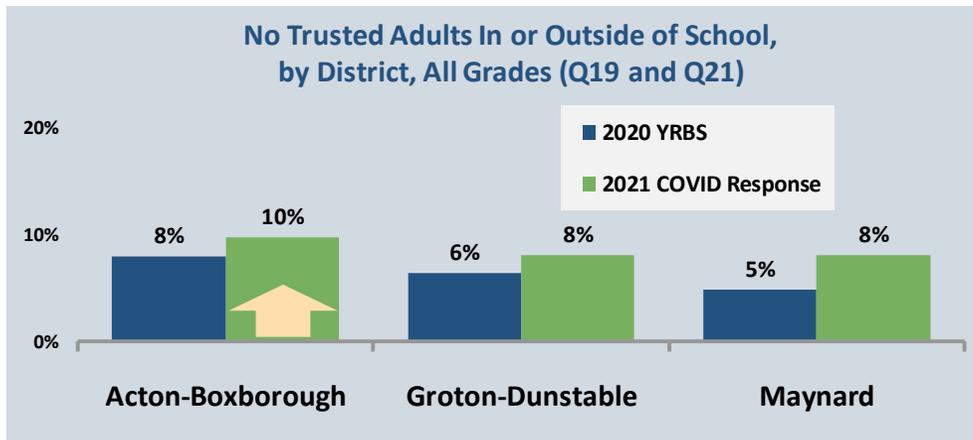
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Students' Emotional Wellbeing

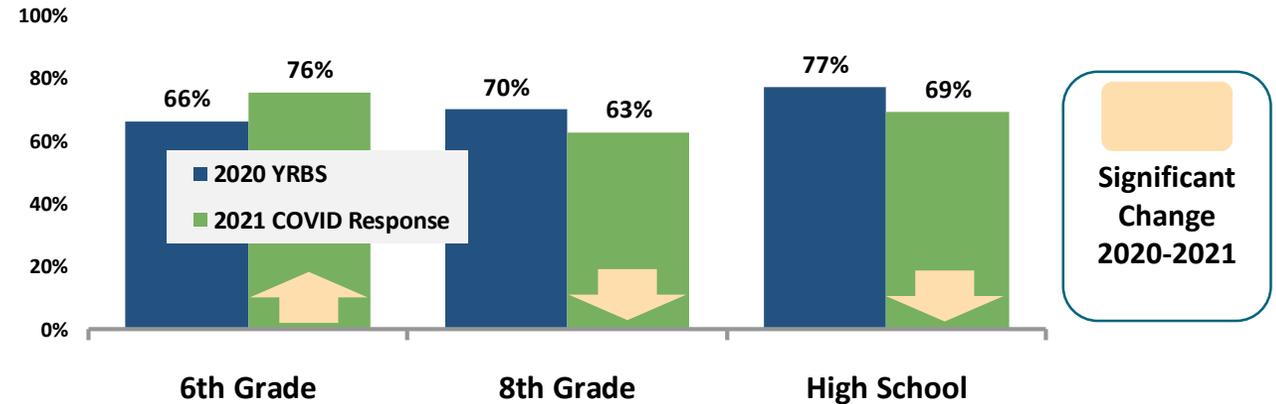
Trusted Adults

Students who have adults they trust and can talk to if they need help or have a problem are much less likely to engage in many of the risk behaviors discussed in the YRBS:

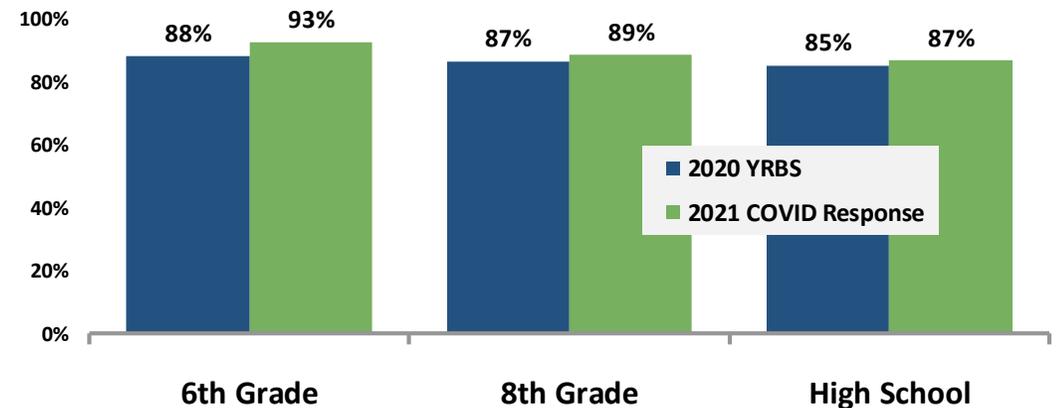
- The pandemic has affected students' likelihood of having a trusted adult **at school**. For 6th graders, the proportion increased, but for 8th graders and high school students, it decreased. For 8th graders and high school students, reliance on trusted adults **outside of school** made up some of the difference.
- Before the pandemic in March 2020, between 6% and 9% of students in the participating school districts reported that they had **no trusted adults at school or outside of school**. That proportion went up in all three districts from 2020 to 2021, and significantly for Acton-Boxborough.



Has Trusted Teacher or Adult At School (Q19)

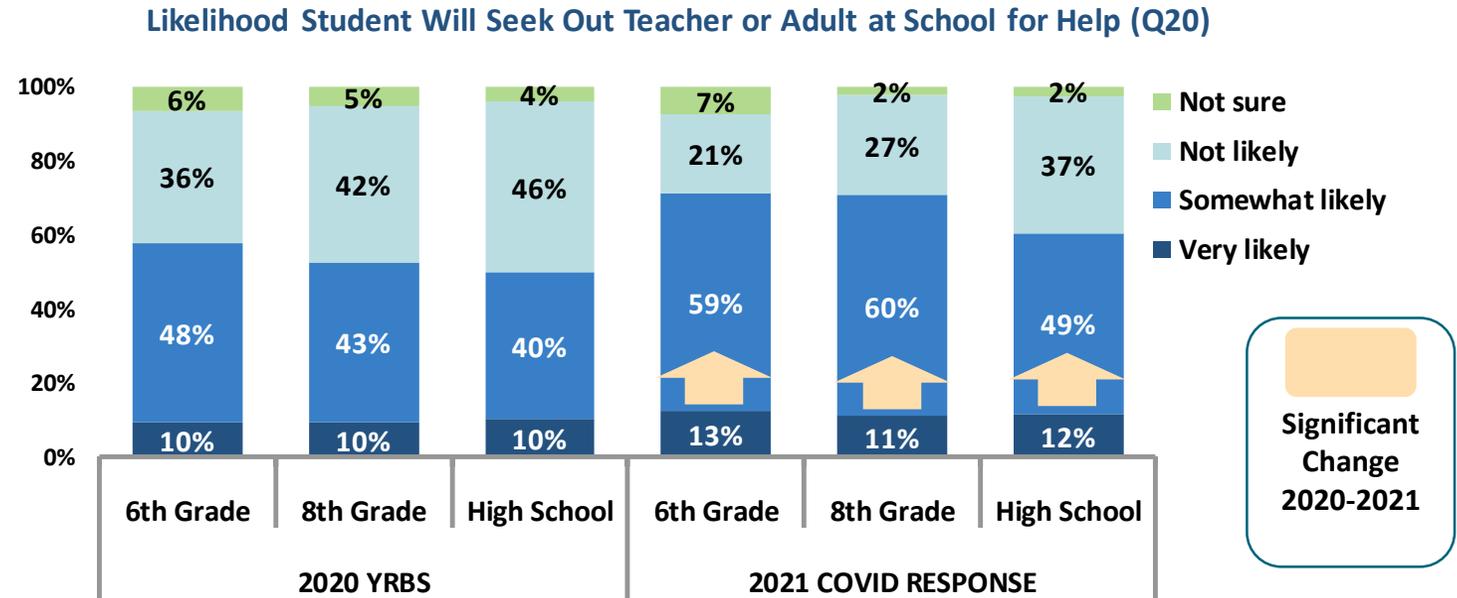


Has Trusted Adult Outside of School (Q21)



Likelihood of seeking out a trusted teacher or adult at school has increased significantly during the pandemic, at all grade levels

- Students aren't always likely to seek out a trusted teacher or adult at school if they need help. There are some students who won't do this even if they have someone at school they trust.
- That said, at this point during the pandemic, students at all grade levels appear somewhat more likely to seek out a trusted teacher or adult at school if they need help.
- The difference is especially apparent for 8th graders: before the pandemic, 53% said they would be "very likely" or "somewhat likely" to seek out a trusted resource at school. In March 2021, this proportion increased to 71%.



The likelihood of having a trusted adult in one's life varies among demographic groups; compared with 91% of students overall, groups least likely to report having trusted adults include:

- African-American students (76%)
- Middle Eastern American students (77%)
- Students who identify as "something else" when asked about sexual orientation, such as asexual, pansexual, etc. (79%)
- Students who identify as transgender or "other gender" (79%)

School as Major Source of Stress for Students

For most adults in the U.S., work is consistently the top source of stress in their lives. For students within Emerson Hospital's service area, school is the top source of stress. School-related stress increases as students age and is most acute for 11th and 12th graders.

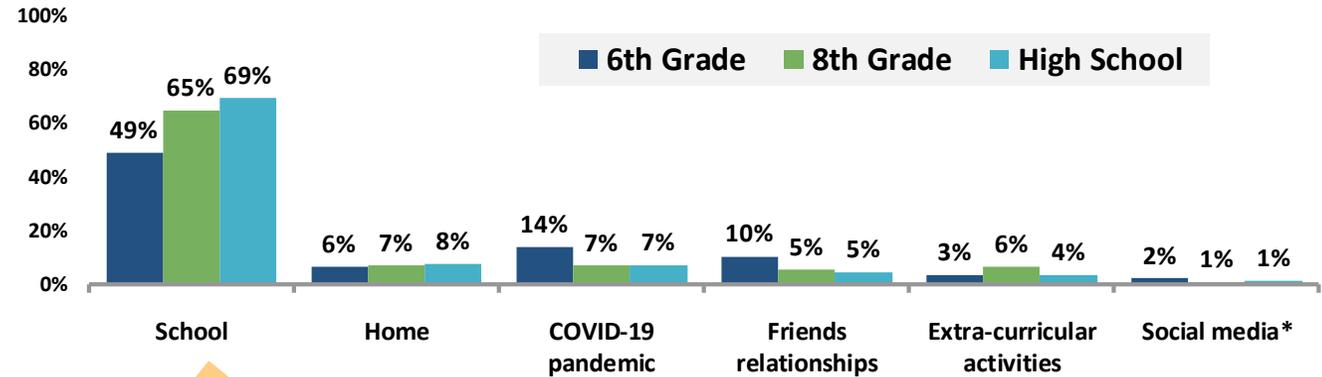
There have been significant changes in students' reports about stress since the pandemic began. For 6th and 8th graders, school has declined significantly as a top source of stress—it still is the main category, but the COVID-19 pandemic has been a major stressor for at least some students, particularly 6th graders:

- In March 2021, 14% of 6th graders said the pandemic was the greatest source of stress in their lives, compared with 7% of 8th graders and high school students
- Friends/relationships, home life, extra-curricular activities, and social media are also major stressors for some students, roughly on par with the pandemic

The highest levels of school-related stress are consistently reported by:

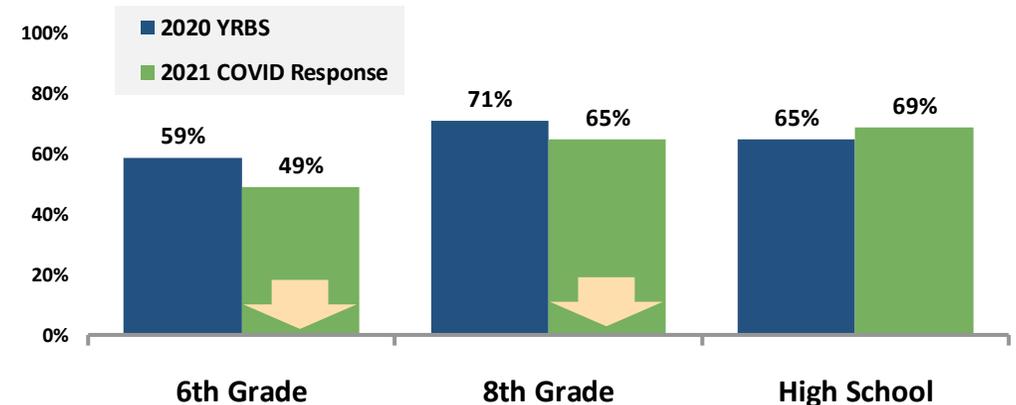
- Students who identify as transgender or non-binary
- Gay, lesbian, bisexual, and questioning students and those who identify as "something else"
- Hispanic or Latinx students

What Is the Greatest Source of Stress in Your Life? 2021 (Q52)



Significant Change 2020-2021

School is Greatest Source of Stress in Student's Life (Q52)

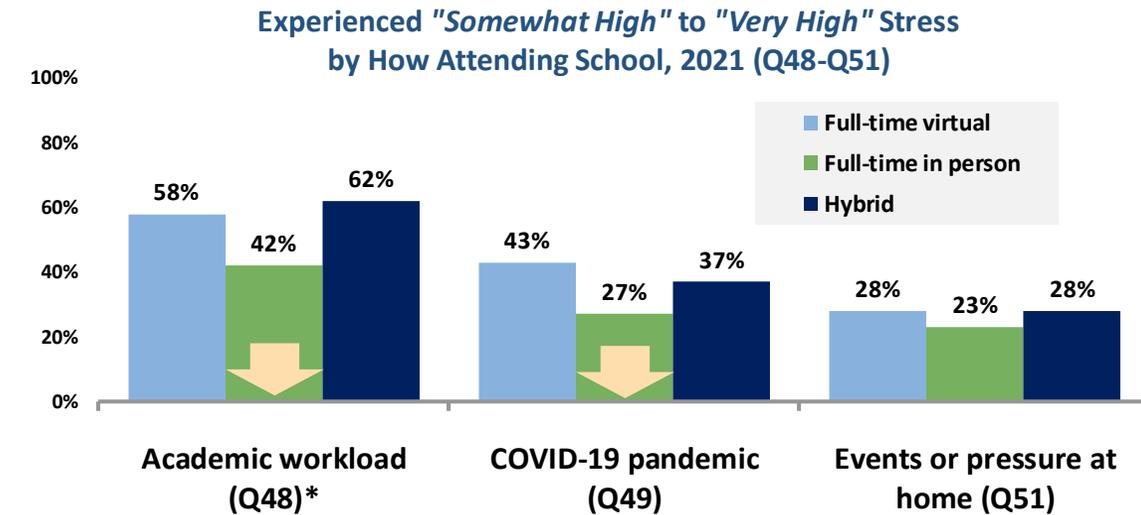
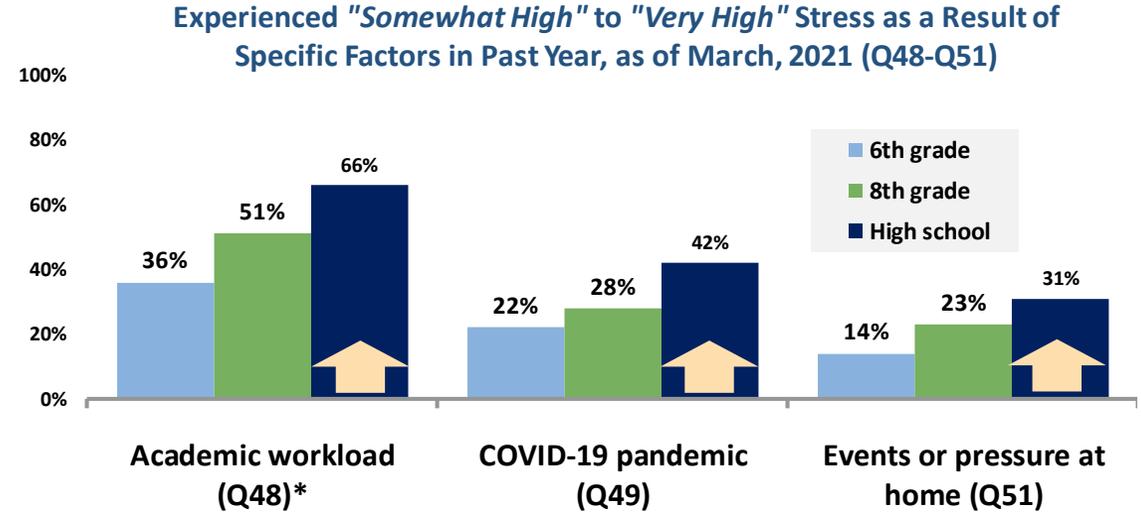


* Social media such as Facebook, Twitter, Instagram, Snapchat, Tik Tok, etc.

The pandemic has been a major source of stress for students at all grade levels, on par with stress due to events or pressure at home

- High school students experience greater levels of stress than 6th and 8th graders regardless of the source. Furthermore, high school students are twice as likely as younger students to say they have experienced “*somewhat high*” to “*very high*” stress as a result of the COVID-19 pandemic.
- Students who were attending school in-person on a full-time basis in March 2021 report significantly lower levels of stress due to their academic workload and the COVID-19 pandemic, compared with students attending virtually or hybrid. Stress due to home life was the same for all groups.

Significant Differences for These Groups

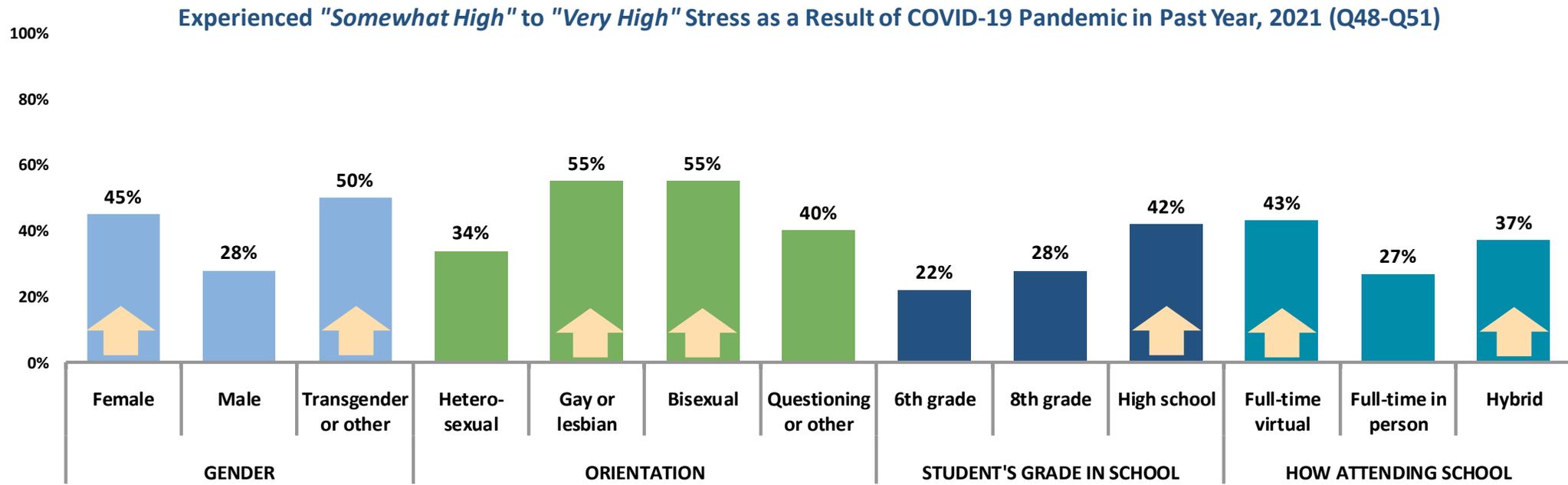


* Q48 was inadvertently asked twice in 2021, in Q48 and Q50. These are results for Q48, relating to “school/academic workload.”

The pandemic has had differential impacts on student stress

Students vary in the extent to which the COVID-19 pandemic has resulted in stress in their lives—some students have been highly stressed, while others report no stress, or only low levels of stress. In general, groups experiencing the highest levels of stress (e.g., whose stress is “*somewhat high*” to “*very high*”) include:

- Students who identify as female, transgender or “*other gender*”
- Students who identify as gay, lesbian, or bisexual
- High school students—the cutoff seems to be 14 years of age, with those 15 and older experiencing the most stress
- Students attending school virtually, either full-time or hybrid



Depression and Suicide

Many students, at all grade levels, struggle with symptoms of depression. Among U.S. adults, depression has increased significantly during the pandemic, especially among young adults,* and this study suggests that the pandemic has also had some impact on students' experiences with depression:

- Self-injury and feeling so sad or hopeless that one stops doing one's usual activities increased for high school students from 2020 to 2021, but remained stable for 6th and 8th graders
- The proportion of 6th graders who reported seriously attempting suicide went down from 2020 to 2021
- Students attending school virtually full-time in March 2021 had the highest rate of feeling sad or hopeless in the past year, compared with students attending in-person full-time and those in hybrid situations

Experienced Symptoms of Depression in Past Year	6th GRADE		8th GRADE		HIGH SCHOOL		HOW ATTENDING SCHOOL AS OF MARCH 2021*		
	2020 YRBS	2021 COVID Response	2020 YRBS	2021 COVID Response	2020 YRBS	2021 COVID Response	Virtual Only	In Person Only	Hybrid
Self-injured on purpose (Q63)	13%	15%	15%	17%	11%	15%	15%	21%	16%
Felt so sad or hopeless, stopped doing usual activities (Q64)	18%	15%	25%	23%	24%	30%	32%	24%	26%
Seriously considered attempting suicide (Q65)	9%	4%	14%	11%	15%	13%	10%	10%	13%
Made a plan for attempting suicide (Q66)	7%	5%	10%	6%	10%	9%	7%	7%	8%
Actually attempted suicide (Q67)	3%	2%	4%	3%	3%	3%	3%	4%	3%
Suicide attempt resulted in need for medical treatment (Q68)	0%	0%	1%	0%	1%	1%	1%	2%	1%

 Significant Differences for These Groups

* See Daly, Michael, et al, "Depression reported by US adults in 2017-2018 and March and April 2020." *Journal of Affective Disorders* 278 (2021) pp. 131-135 (<https://doi.org/10.1016/j.jad.2020.09.065>).

** Four students participated in the 2021 survey who were unclear about whether they were virtual, in person, or hybrid. These students are not included in this analysis.



Many students are concerned about peers and depression

Many students worry about peers who they think may be hurting themselves or considering suicide. For 2021, students were asked a detailed question about: (1) whether anyone they know at school was thinking about self-harm or suicide; and (2) how they heard about that person's struggles:

- Concerns about peers increase as students age: one-sixth of 6th graders, compared with one-fourth of 8th graders and high school students, have concerns about peers and self-harm or suicide
- Most often, students are told directly by the person who is considering self-harm or suicide, either in person, on a phone or video call, in a text, or online directly (such as direct message, email, etc.). Less often, students see or hear about someone considering self-harm or suicide from someone else, but it does happen
- Students attending school in-person full-time are least likely to be concerned about peers and depression, and those attending virtually full-time are most concerned about it

Concern About Peers at School Hurting Themselves or Suicide, 2021 (Q69)**	HOW ATTENDING SCHOOL AS OF MARCH, 2021**					
	6th Grade	8th Grade	High School	Virtual Only	In Person Only	Hybrid
Person told me in person, on a phone/video call, or in a text	6%	10%	11%	8%	7%	11%
Person told me online (direct message, email, social media etc.)	2%	5%	7%	8%	2%	6%
Saw or heard about person from a friend	1%	3%	3%	2%	0%	3%
Saw or heard about person online	3%	2%	3%	1%	4%	3%
TOTAL: Anyone from school told you they were thinking about hurting themselves/suicide	12%	21%	24%	20%	14%	24%
TOTAL: Nobody at school has told you they were thinking about hurting themselves/suicide	88%	79%	76%	80%	86%	76%

 Significant Differences for These Groups

* Four students participated in the 2021 survey who were unclear about whether they were virtual, in person, or hybrid. These students are not included in this analysis.

** The way this question was asked changed from 2020 to 2021, so direct comparisons between 2020 and 2021 results are not possible.



Students don't always know what to do if a peer tells them they are thinking about hurting themselves or suicide

In 2021, students who heard someone at school was thinking about hurting themselves or suicide were asked what they did about it. Many of these students, especially 6th graders, aren't sure what to do or they don't do anything. Of those who do respond, the most frequent, concrete actions are to tell a parent or guardian, tell a friend or other students at school, or to tell an adult at school.

Many students checked *"I did something else"* when answering this question. It is not clear from this study what other actions students could have taken; it might be worthwhile for districts to investigate this issue in more detail, to determine whether the alternatives concerned students are considering are appropriate.

When You Heard Someone Was Thinking About Hurting Themselves or Suicide, What Did You Do About It? 2021 (Q70)	HOW ATTENDING SCHOOL AS OF MARCH, 2021*					
	6th Grade	8th Grade	High School	Virtual Only	In Person Only	Hybrid
Told an adult at school	5%	11%	11%	12%	5%	11%
Told parent, guardian, or other adult at home	9%	31%	23%	24%	11%	25%
Told friends or students at school	14%	10%	19%	15%	0%	18%
Did something else	36%	49%	53%	61%	26%	50%
Didn't do anything	18%	9%	11%	11%	21%	10%
Not sure	27%	13%	9%	5%	37%	10%

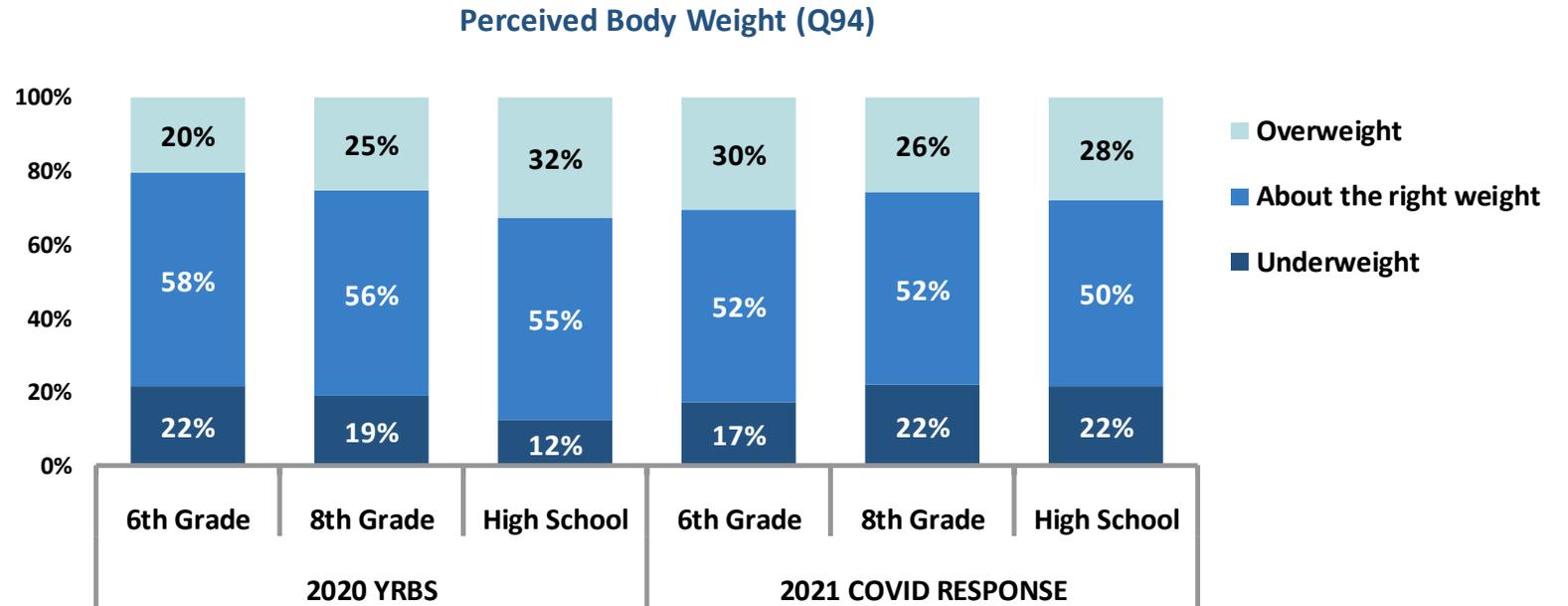
Significant Differences for These Groups

* Four students participated in the 2021 survey who were unclear about whether they were virtual, in person, or hybrid. These students are not included in this analysis.



Students and Body Image

Overall, students' perceptions about their body weight did not change significantly during the pandemic, for any age group. Roughly half of students think they are *"about the right weight."* The remainder tend to think they are overweight, although there are some students who consider themselves to be underweight.



Groups most likely to think they are **overweight** during the pandemic:

- Female students
- Students who identify as bisexual
- Students attending school virtually full-time

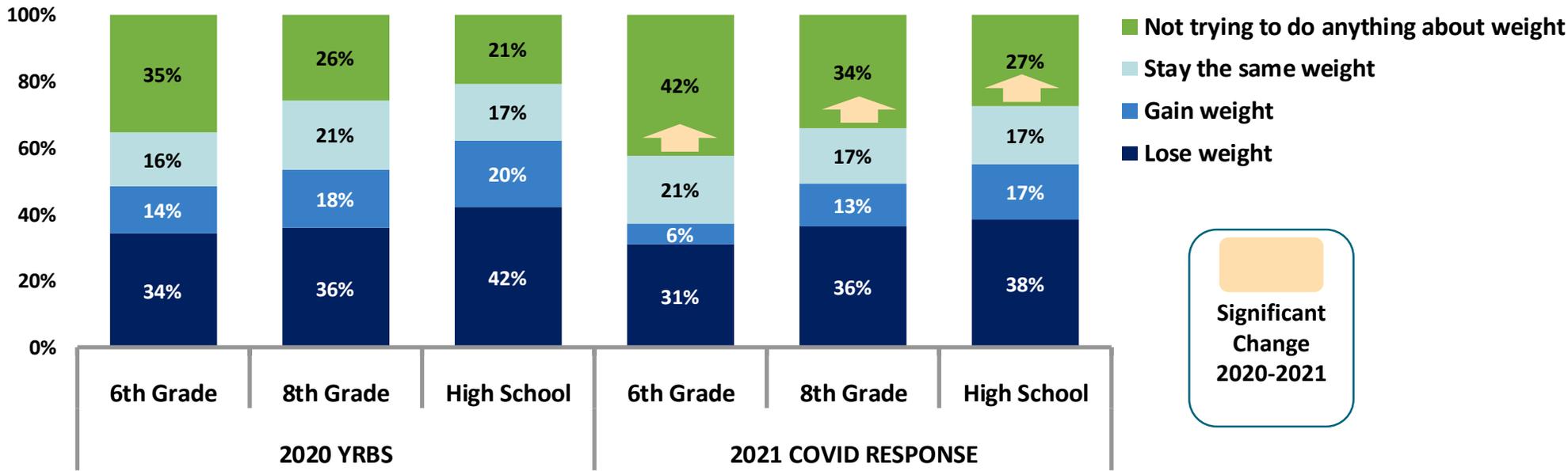
Groups most likely to think they are **underweight** during the pandemic:

- Male students
- High school students



A key change during the pandemic, for all age groups, is that more students are “not trying to do anything about their weight”

What are You Trying to Do About Your Weight? (Q95)



Groups most likely to be trying to **lose weight** during the pandemic:

- Female students
- Students who identify as transgender or non-binary
- Students who identify as bisexual
- Hispanic/Latinx students

Groups most likely to be trying to **gain weight** during the pandemic:

- Male students
- Students who identify as heterosexual
- High school students



* Q69 changed from 2020 to 2021 so direct comparisons aren't possible, and Q70 wasn't asked in the 2020 YRBS.

Many students exercise and/or diet in an effort to lose weight (or not gain weight), and their strategies have not changed significantly during the pandemic

- Students attending school in-person, full time, are more likely than students attending virtually to have fasted, gone on a cleansing diet, or used a colon cleanse without a doctor's advise during the past 30 days
- Male students tend to use exercise exclusively to lose weight, whereas female students are more likely to mix exercise and dieting (eating less food, fewer calories, etc.)

Strategies for Losing Weight or Not Gaining Weight, Past 30 Days	6th GRADE		8th GRADE		HIGH SCHOOL		HOW ATTENDING SCHOOL AS OF MARCH, 2021*		
	2020 YRBS	2021 COVID Response	2020 YRBS	2021 COVID Response	2020 YRBS	2021 COVID Response	Virtual Only	In Person Only	Hybrid
Exercised (Q96)	57%	52%	55%	56%	57%	53%	54%	53%	53%
Ate less food, fewer calories, low fat foods, cleansing diet (Q96)	20%	19%	24%	21%	30%	29%	25%	27%	27%
Did Without Doctor's Advise Within Past 30 days (Q97-Q102)	2020 YRBS	2021 COVID Response	2020 YRBS	2021 COVID Response	2020 YRBS	2021 COVID Response	Virtual Only	In Person Only	Hybrid
Fasted	4%	5%	6%	8%	5%	7%	7%	14%	6%
Went on a cleansing diet	2%	2%	3%	2%	4%	3%	2%	7%	3%
Colon cleanse	0%	1%	0%	0%	1%	0%	0%	3%	0%
Made myself vomit	1%	1%	2%	3%	2%	2%	2%	4%	2%
Took laxatives, diet pills, powders, liquids	1%	0%	2%	1%	3%	2%	2%	3%	1%

 Significant Difference for This Group

* Four students participated in the 2021 survey who were unclear about whether they were virtual, in person, or hybrid. These students are not included in this analysis.



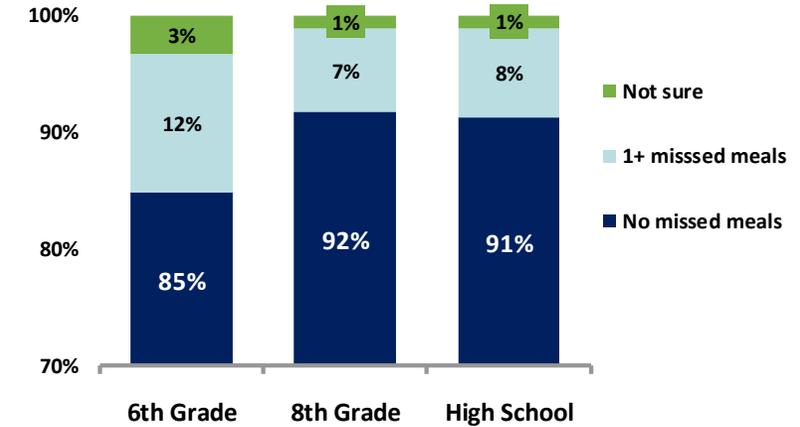
Students and Hunger

For a variety of reasons, the Emerson YRBS has traditionally not included questions relating to students' socioeconomic status or home environment. For the 2021 COVID Response survey, one question was included relating to students' experiences at home: whether they had gone without food or not eaten meals because there wasn't enough food in the past 30 days. This question is important, because students who experienced hunger—even a single day—during the pandemic, are much more likely than students who haven't experience hunger at all to be at risk and to engage in risky behaviors.

Students who experienced hunger during the pandemic are significantly more likely to:

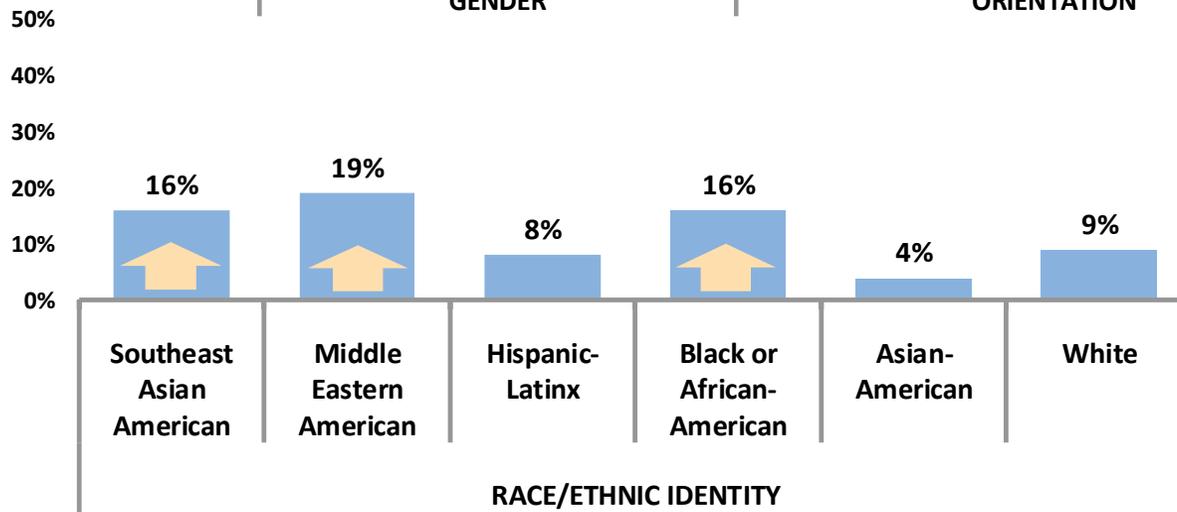
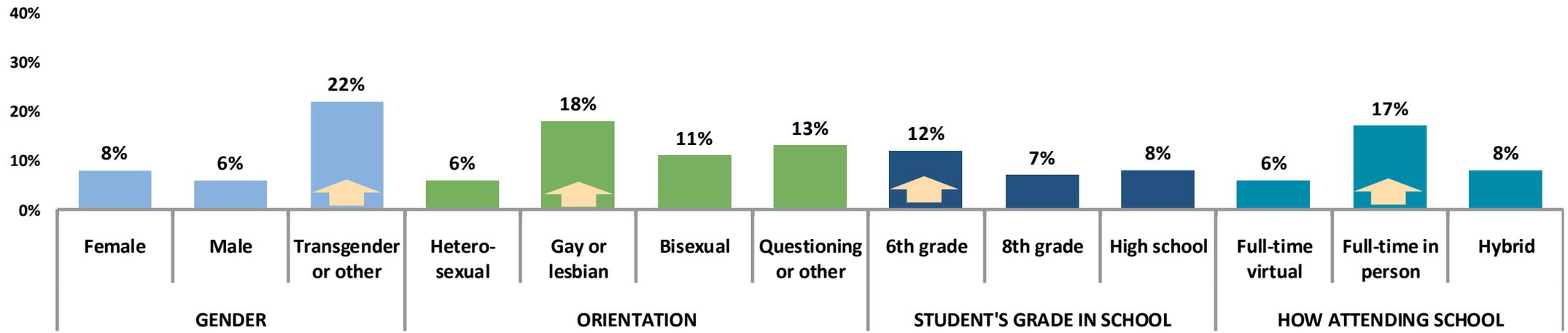
- Not have a trusted adult they can talk to, at school or outside of school
- Have been cyberbullied, or cyberbullied someone else
- Find themselves in risky or unwanted situations involving the internet
- Engaged in negative behaviors involving the internet (such as sexting or viewing pornography)
- Have recently been hurt either physically or sexually, or been sexually harassed
- Experienced high levels of stress at school, at home, and because of the pandemic
- Show signs of serious depression, such as self-injury or suicide attempts
- Consume alcohol, marijuana, tobacco, and/or other drugs
- To be sexually active, and to have been pressured into consenting to sexual encounters
- To think of themselves as overweight
- To sleep less
- Spend more time using electronic devices, and more unmonitored time on social media

Went Without Food or Didn't Eat Meals in Past 30 Days Because There Wasn't Enough Food, 2021 (Q103)



Hunger affects all demographic groups although there are differences

Went Without Food or Didn't Eat Meals in Past 30 Days Because There Wasn't Enough Food (Q103)



 Significant Difference for This Group



Students and Violence

Cyberbullying, Sexual Harassment, and Sexting

- Rates of experiencing **cyberbullying**, and of perpetuating it, did not change significantly during the pandemic, and are roughly the same regardless of how students are currently attending school (virtual vs. in person vs. hybrid).
- **Sexual harassment** did change, however. The reported rate increased significantly for high school students during the pandemic but stayed the same for younger students. In 2021, students were asked to differentiate between online vs. in-person sexual harassment and it is clear that while both forms occur, online sexual harassment is more common.
- Between 10% and 16% of students, depending on grade, have had **unwanted contact** in the past year from someone they talked to online; this is a new question for 2021.
- Rates of **sexting**, on the other hand, have declined substantially, for all age groups.

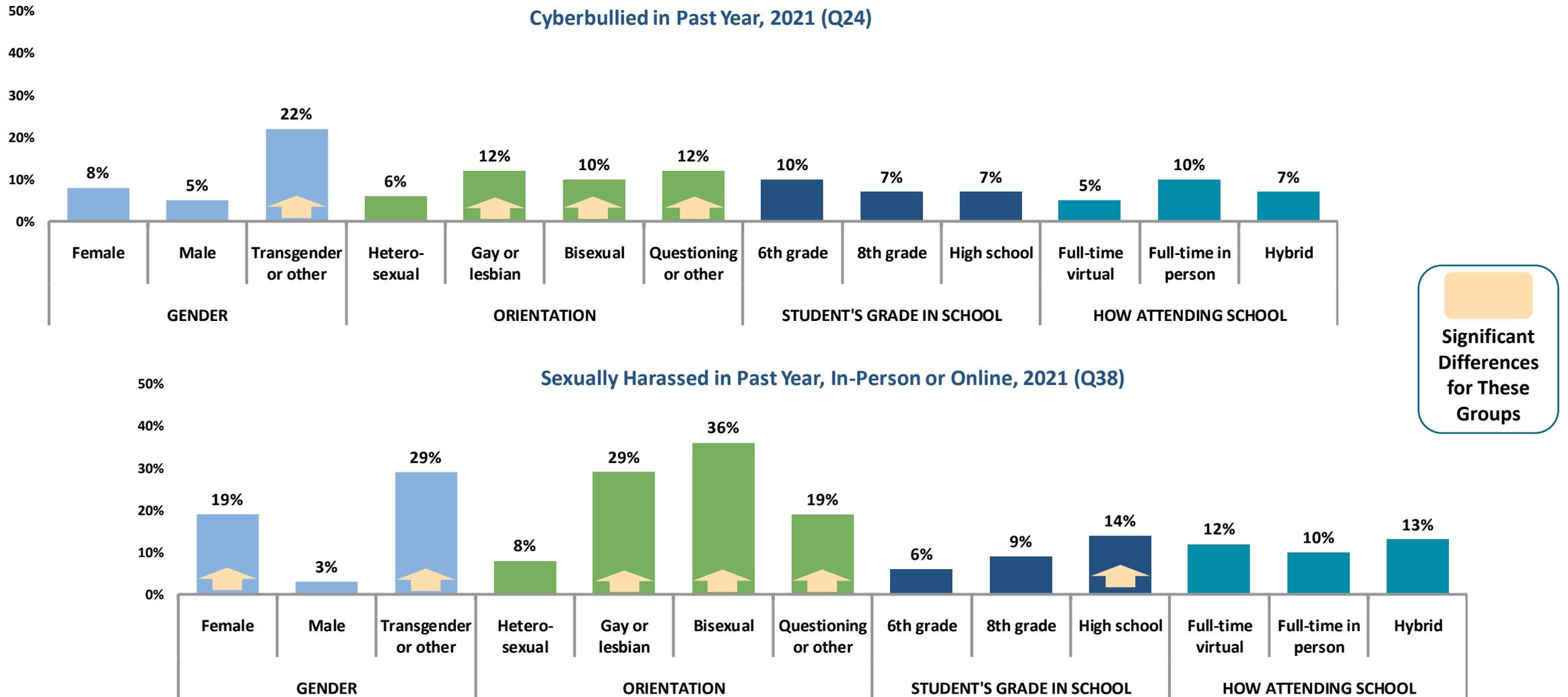
Experiences with Bullying and Sexual Harassment in Past Year	6th GRADE		8th GRADE		HIGH SCHOOL		HOW ATTENDING SCHOOL AS OF MARCH 2021*		
	2020 YRBS	2021 COVID Response	2020 YRBS	2021 COVID Response	2020 YRBS	2021 COVID Response	Virtual Only	In Person Only	Hybrid
Student has been cyberbullied (Q24)	8%	10%	10%	7%	7%	7%	8%	10%	10%
Student has cyberbullied others (Q33)	1%	4%	3%	2%	2%	2%	1%	4%	2%
Student has been sexually harassed online (Q38)	(not asked)	6%	(not asked)	8%	(not asked)	10%	5%	6%	6%
Student has been sexually harassed in person (Q38)	(not asked)	1%	(not asked)	4%	(not asked)	8%	6%	4%	7%
Total percent sexually harassed, online or in person (Q38)	8%	6%	11%	9%	11%	14%	12%	10%	13%
Unwanted contact from someone talked to online (Q23)	(not asked)	10%	(not asked)	13%	(not asked)	16%	6%	4%	7%
Sent/received sexually explicit messages or photos, "sexted" (Q34)	10%	2%	18%	7%	25%	16%	6%	4%	7%

Significant Change 2020-2021

* Four students participated in the 2021 survey who were unclear about whether they were virtual, in person, or hybrid. These students are not included in this analysis.



LGBTQ students and female students have experienced the highest levels of cyberbullying and sexual harassment during the pandemic



Students do not always know how to respond when they are cyberbullied or experience sexual harassment

Students are, however, increasingly likely to use electronic tools to thwart these forms of unwanted behavior:

- In 2021, most 8th grade and high school students who were **cyberbullied** during the pandemic were able to do something about it; only about 1 in 6 said they did “*nothing*”
- Strategies for dealing with cyberbullying during the pandemic have included blocking accounts, telling peers, telling adults at home or at school, and reporting the behavior to website administrators
- Similarly, in 2021 most 8th grade and high school students who experienced **sexual harassment** during the pandemic were able to do something about it; only about 1 in 6 said they did “*nothing*”
- Strategies for dealing with sexual harassment during the pandemic have included walking away, telling the perpetrator to stop, blocking accounts or reporting to website administrators, and talking with peers, adults at home, and adults at school
- Comparisons of students’ responses to cyberbullying and sexual harassment from 2020 to 2021 are not directly possible, because the response categories changed (electronic tools were added)

Students' Responses to Cyberbullying, 2021 (Q25)*	8 th Grade	High School
NOTHING	16%	15%
I blocked the account of the person who was bullying me	53%	54%
I told a friend or other student at school	47%	47%
I told my parent guardian or other adult at home	33%	30%
I told an adult at school	5%	13%
I reported it to the website administrator	2%	12%
I reported it to the police	2%	6%
I did something else about it	33%	25%
Students' Responses to Sexual Harassment, 2021 (Q39)*	8 th Grade	High School
NOTHING	16%	16%
I stopped talking to the person or I walked away	47%	52%
I told the person to stop	42%	37%
I blocked the person's account	51%	32%
I told a friend or other student at school	36%	28%
I told my parent guardian or other adult at home	9%	12%
I reported it to the website administrator	7%	4%
I told an adult at school	4%	4%
I reported it to the police	0%	3%
I did something else about it	13%	10%

* 6th graders were asked these questions, but too few reported having been cyberbullied and/or sexually harassed to report their responses here.

** Sexual harassment defined as “receiving unwelcome comments or actions of a sexual nature which made you uncomfortable.”

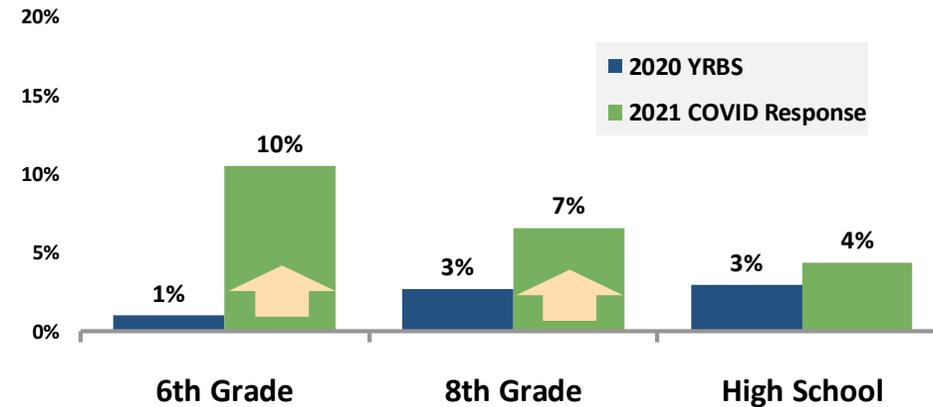


Physical and Sexual Violence

Students were asked whether they had been hurt physically or sexually by someone in the 30 days prior to the survey:

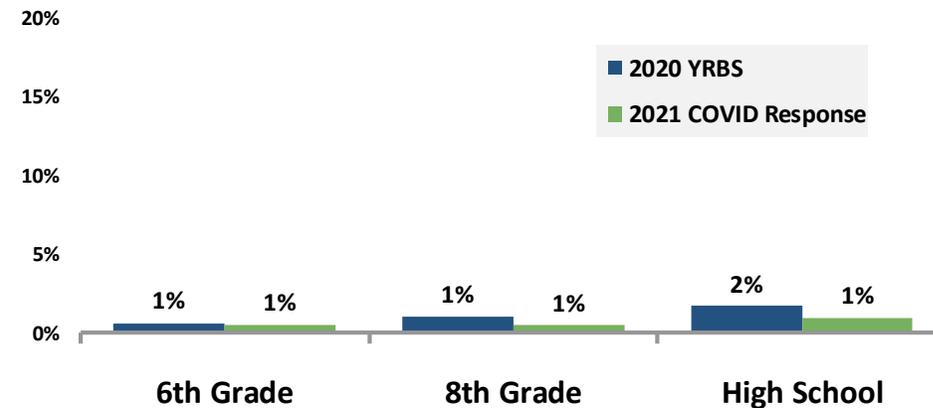
- Rates of **physical harm** went up significantly during the pandemic for 6th graders and 8th graders; the rate also went up for high school students but change isn't statistically significant
- Rates of **sexual harm** did not change during the pandemic, at any grade level
- LGBTQ students and students who identify as African-American or American Indian/Native Hawaiian consistently report the highest levels of physical or sexual harm during the pandemic

Hurt Physically by Someone in Past 30 Days (Q36)



Significant change 2020-2021

Hurt Sexually by Someone in Past 30 Days (Q37)

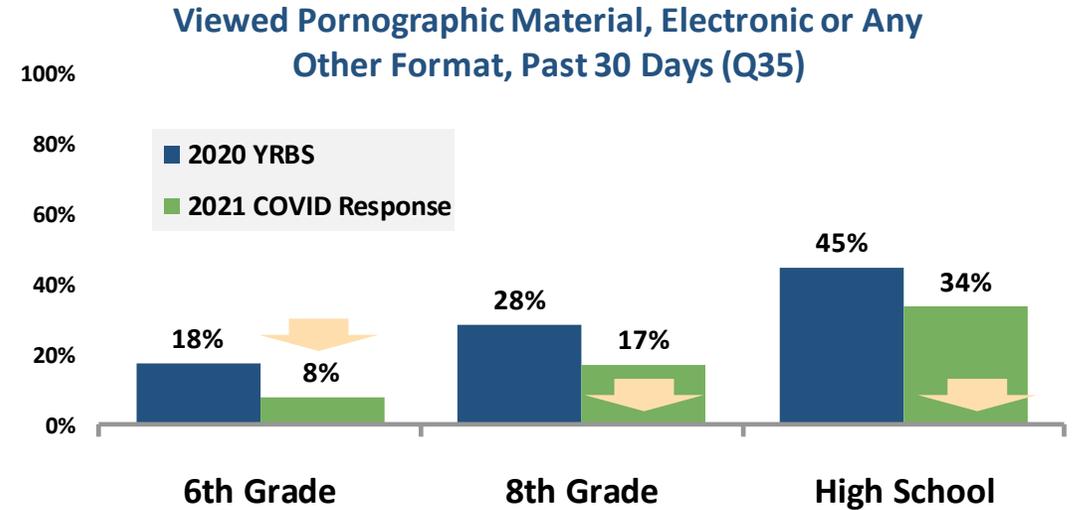


Pornography

Likelihood of viewing pornography increases as students age and is most common among high school students. Viewership of pornography declined significantly for all grades from 2020 to 2021.

Students who viewed pornography in the 30 days prior to the 2021 survey are most likely to be:

- Male
- Transgender or non-binary
- Heterosexual



Significant change 2020-2021



Student Use of Tobacco, Alcohol, Marijuana and Prescription Drugs

6th Grade Students and Substance Use

6th graders are least likely of any age group surveyed in the YRBS to use any substances, but it does happen:

- Before the pandemic, the most common substance used by 6th grade students was alcohol, followed by vaping
- **6th graders' use of nearly all substances dropped significantly** from March 2020 to March 2021. Cigarette smoking increased slightly but is still only at 1% of 6th graders
- In March 2021 we asked 6th graders whether they had misused their own or someone else's prescription drugs, and small proportions admitted to doing so (2% own prescriptions, 1% someone else's)

What Substances are 6th Graders Using?

Substances Used in Past 30 Days by 6th Grade Students	2020 YRBS	2021 COVID Response
Alcohol, at least 1 drink (Q74)	5%	2%
Binge drinking (Q75)	2%	0%
Smoked cigarettes (Q78)	0%	1%
Vaped, electronic cigarette (Q79)	3%	1%
Chewing tobacco (Q80)	0%	0%
Marijuana or marijuana products** (Q81)	2%	0%
Synthetic marijuana** (Q82)	2%	1%
Misused own prescription drugs* (Q83)	***	2%
Misused someone else's prescription drugs (Q84)	***	1%



* For example, taking more than the doctor prescribed, or taking someone else's prescription that wasn't prescribed for the student.

** Marijuana or marijuana-related products not including CBD oil or CBD products.

*** These questions were changed from lifetime misuse of prescription drugs (2020 YRBS) to use within the past 30 days.



8th Grade Students and Substance Use

Before the pandemic, 2% and 18% of 8th grade students reported using at least one substance, most often alcohol, vaping, or marijuana:

- 6th graders' use of all substances except cigarettes dropped significantly from March 2020 to March 2021. Cigarette smoking also dropped, but the difference is not statistically significant
- In March 2021 we asked 8th graders whether they had misused their own or someone else's prescription drugs within the past 30 days, and small proportions (3% or less) admitted to doing so

What Substances are 8th Graders Using?

Substances Used in Past 30 Days by 8th Grade Students	2020 YRBS (N=1,095)	2021 COVID Response (N=598)
Alcohol, at least 1 drink (Q74)	18%	4%
Binge drinking (Q75)	8%	1%
Smoked cigarettes (Q78)	2%	0%
Vaped, electronic cigarette (Q79)	10%	1%
Chewing tobacco (Q80)	2%	1%
Marijuana or marijuana products** (Q81)	9%	1%
Synthetic marijuana** (Q82)	4%	1%
Misused own prescription drugs* (Q83)	***	3%
Misused someone else's prescription drugs (Q84)	***	2%

 Significant change 2020-2021

* For example, taking more than the doctor prescribed, or taking someone else's prescription that wasn't prescribed for the student.

** Marijuana or marijuana-related products not including CBD oil or CBD products.

*** These questions were changed from lifetime misuse of prescription drugs (2020 YRBS) to use within the past 30 days.

High School Students and Substance Use

Use of alcohol, marijuana, and tobacco (via vaping) is fairly common among high school students, and while rates have fluctuated to some extent, there have not been major declines over the past decade and vaping has increased substantially.

The pandemic has had a major impact on high school students' use of every substance discussed in the 2021 survey:

- Alcohol use by high school students has dropped by half, and only 7% of high school students report binge drinking in the past 30 days compared with 20% before the pandemic
- Vaping and marijuana use declined by more than half
- In March 2021 we asked high school students whether they had misused their own or someone else's prescription drugs within the past 30 days, and small proportions (3% or less) admitted to doing so. Before the pandemic, 6% to 8% of high school students reported lifetime misuse of prescription drugs

What Substances are High School Students Using?

Substances Used in Past 30 Days by High School Students	2020 YRBS (N=897)	2021 COVID Response (N=1,668)
Alcohol, at least 1 drink (Q74)	35%	17%
Binge drinking (Q75)	20%	7%
Smoked cigarettes (Q78)	5%	2%
Vaped, electronic cigarette (Q79)	18%	7%
Chewing tobacco (Q80)	3%	1%
Marijuana or marijuana products** (Q81)	23%	9%
Synthetic marijuana** (Q82)	8%	4%
Misused own prescription drugs* (Q83)	***	3%
Misused someone else's prescription drugs (Q84)	***	1%

 Significant change 2020-2021

* For example, taking more than the doctor prescribed, or taking someone else's prescription that wasn't prescribed for the student.

** Marijuana or marijuana-related products not including CBD oil or CBD products.

*** These questions were changed from lifetime misuse of prescription drugs (2020 YRBS) to use within the past 30 days.

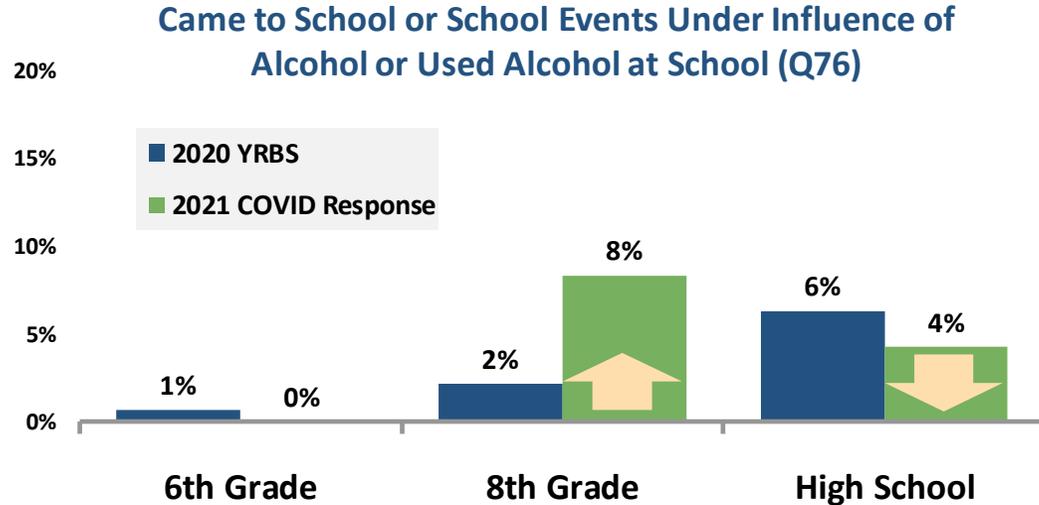


School, Parties, and Substance Use

Attending School Under the Influence of Alcohol

Before the pandemic, about 6% of high school students reported coming to school under the influence of alcohol at least once in the 30 days prior to the YRBS.

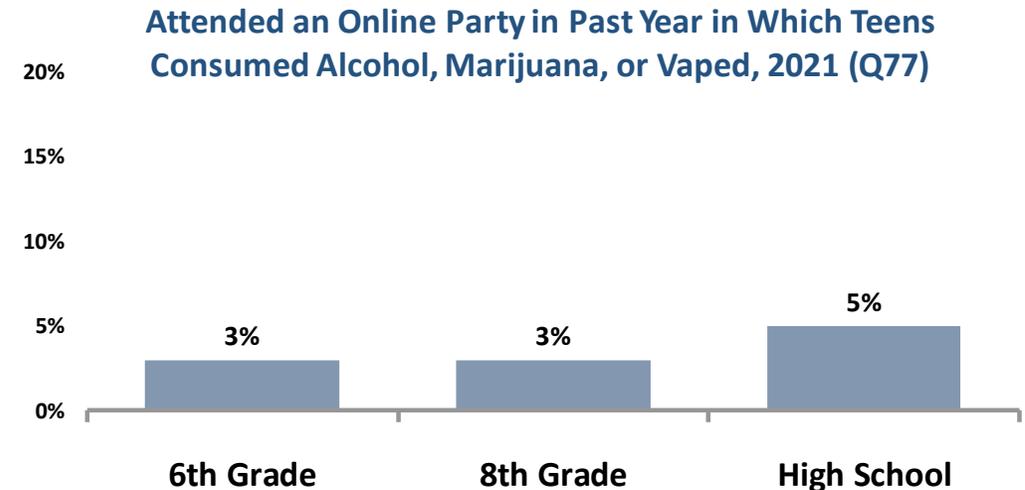
This year, we expanded the question to include attending school either *in person* or *online*. Rates of attending school under the influence of alcohol increased among 8th graders during the pandemic but declined slightly for high school students.



Online Parties and Substance Use

“Online parties” or “Zoom parties” have emerged as a behavioral risk during the pandemic, as teens sometimes consume alcohol, marijuana, or other drugs or vape during the parties or are encouraged to do so by peers.

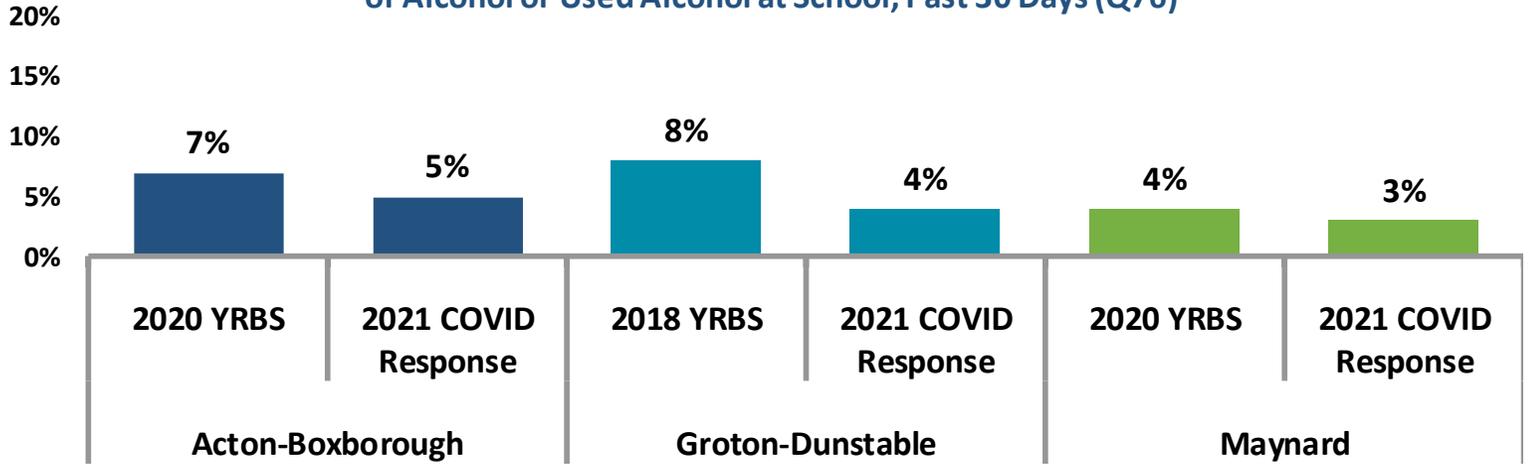
In the past 12 months, about 5% of high school students, and about 3% of 6th and 8th graders, have attended online parties in which either they or other teens were drinking, using drugs, or vaping. This percentage is highest for students attending school in person full time (6%) and is lower for students attending virtually full time (2%).



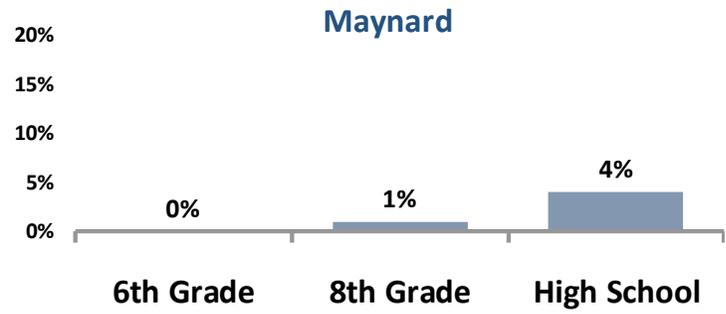
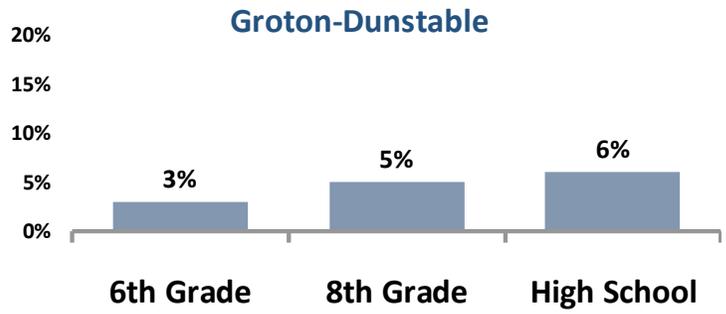
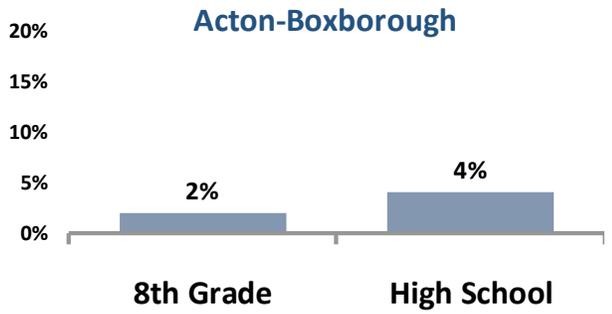
School, Parties, and Substance Use by District

Results for coming to school under the influence of alcohol and attending online parties at which teens consume alcohol or other substances during the pandemic are similar across school districts.

HIGH SCHOOL STUDENTS: Came to School or School Events Under Influence of Alcohol or Used Alcohol at School, Past 30 Days (Q76)*



Attended an Online Party in Which Teens Consumed Alcohol, Marijuana, or Vaped, Past Year (2021)



* Although this question was asked of 6th and 8th graders who consumed alcohol in the past year, the number is too small to break down by district.

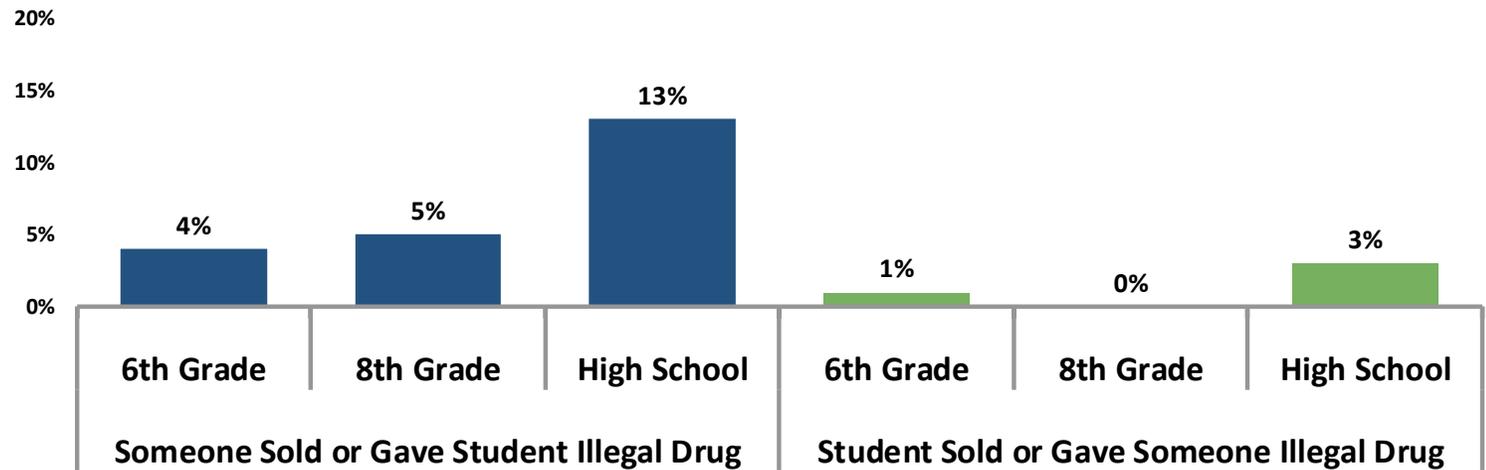
Receiving and/or Selling Illegal Drugs

The YRBS includes questions about whether students have been offered, given, or sold illegal drugs on school property, and whether they have offered, given, or sold illegal drugs to anyone else, again, on school property.

For the COVID Response Survey, we changed the question to reflect any receipt or selling of illegal drugs in the prior year, not just on school property:

- High school students are most likely to have been offered and/or sold illegal drugs during the pandemic
- Younger students are unlikely to have sold illegal drugs, but about 1 in 20 have been offered or given illegal drugs during the pandemic
- Students' experiences with receiving and/or selling illegal drugs during the pandemic are similar to what was occurring before the pandemic on school property

Receiving and/or Selling Illegal Drugs in Past Year, 2021 (Q85)



In 2020, 10% of students reported being offered, given, or sold illegal drugs on school property in the prior year*

In 2020, 3% of students said they had offered, given, or sold someone else illegal drugs on school property in the prior year*

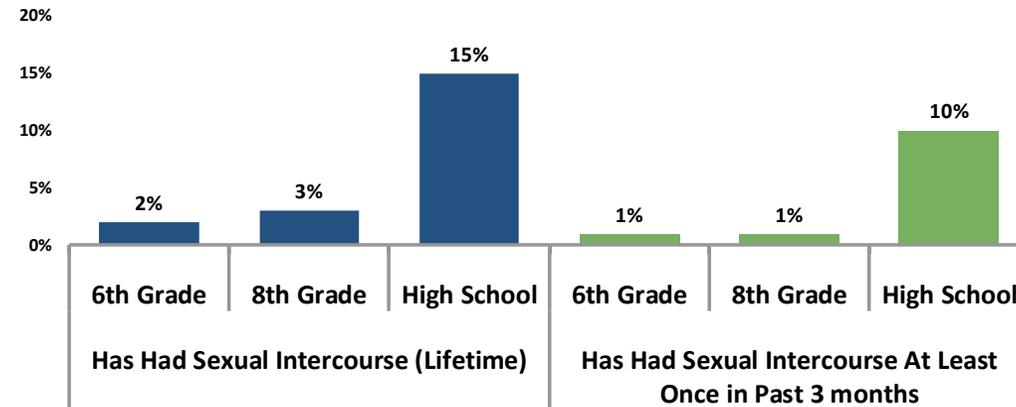
Students and Sexual Behavior

Sexual Behavior

During the pandemic, the proportion of students reporting that they engage in sexual intercourse or oral sex has declined significantly. This is true for 6th graders, 8th graders, and high school students.

Among high school students who have had sexual intercourse, use of condoms and other forms of pregnancy prevention stayed about the same between 2020 and 2021, except that the proportion who said they didn't use any form of pregnancy prevention the last time they had sexual intercourse went down, from 8% to 3%.

Experiences With Sexual Intercourse During the Pandemic, 2021 (Q87)



Sexual Behavior	6th GRADE		8th GRADE		HIGH SCHOOL		HOW ATTENDING SCHOOL AS OF MARCH 2021*		
	2020 YRBS	2021 COVID Response	2020 YRBS	2021 COVID Response	2020 YRBS	2021 COVID Response	Virtual Only	In Person Only	Hybrid
Has never had sexual intercourse (Q87)	93%	98%	87%	97%	70%	85%	8%	10%	10%
Has had sexual intercourse, lifetime (Q87)	7%	2%	13%	3%	30%	15%	1%	4%	2%
Has had sexual intercourse, past 3 months (Q87)	6%	1%	9%	1%	23%	10%	5%	6%	6%
Uses condom "most of the time" or "always" during sexual intercourse (Q89)	**	**	**	**	62%	66%	6%	4%	7%
"Rarely or never" uses condom during sexual intercourse, or doesn't know (Q89)	**	**	**	**	28%	26%	12%	10%	13%
No pregnancy prevention method used during most recent sexual intercourse (Q90)	**	**	**	**	8%	3%	6%	4%	7%
Ever pressured into consenting to a sexual encounter (Q92)	2%	1%	4%	3%	8%	8%	6%	4%	7%
Has had oral sex at least once, past year (Q93)	9%	1%	15%	3%	32%	15%	6%	3%	6%

Significant change 2020-2021

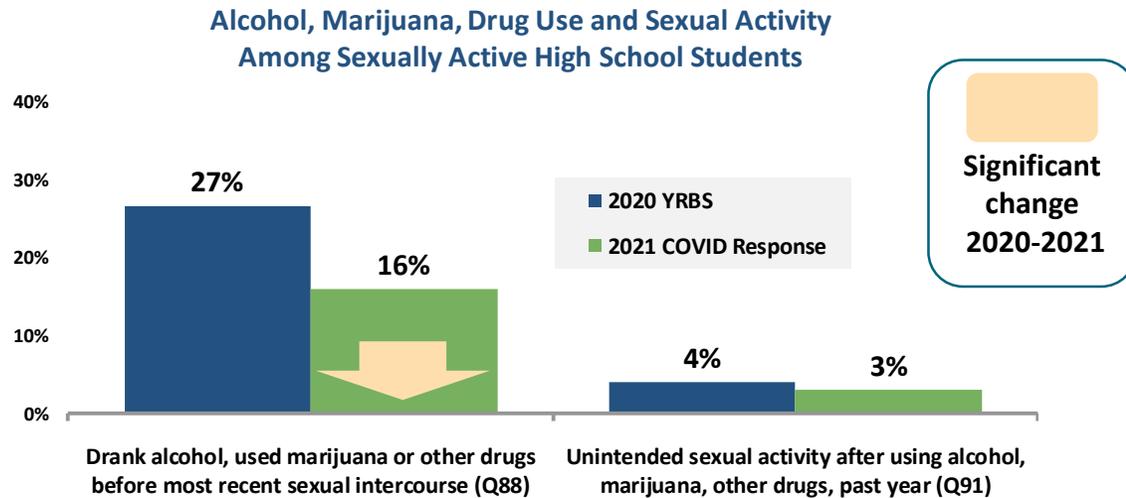
* Four students participated in the 2021 survey who were unclear about whether they were virtual, in person, or hybrid. These students are not included in this analysis.

** Question not asked in 2021 or number of responding students is small, so results are not presented to protect student confidentiality

Alcohol and Drug Use and Sexual Behavior

Among sexually active high school students, reports of substance use before sexual intercourse, and reports of unintended sexual activity after substance use, both went down significantly during the pandemic:

- These questions were asked of 6th and 8th graders in the 2021 COVID Response survey, but the number of younger students surveyed in these districts who are sexually active is very small (less than 10), so their responses are not reported here.
- The results for these questions for 2021 are consistent between school districts.



Students, Electronic Devices, and Social Media

Students and Electronic Devices

Most students have access to cell phones, tablets, computers, game consoles, and other technology—and a surprising number keep these items in their bedrooms at night. Although the proportions vary from district to district:

- All students participating in the 2020 COVID Response survey reported that they have access to at least one electronic device, at minimum a tablet assigned to them by the school they attend
- While not all students keep devices in their bedrooms at night, most often they report keeping cell phones in their bedrooms, followed by computers. Comparatively fewer students keep tablets and/or game consoles in their bedrooms at night

The devices students keep in their bedrooms at night vary by gender:

- Female students = cell phones, computers
- Male students = game consoles, cell phones

What's In Your Bedroom at Night? 2021 (Q120)

6th Graders	N=180
Cell phone	58%
Tablet	22%
Computer	49%
Game console	18%
Has devices, but not in bedroom at night	23%
8th Graders	N=595
Cell phone	69%
Tablet	19%
Computer	60%
Game console	15%
Has devices, but not in bedroom at night	18%
High School Students	N=1,670
Cell phone	82%
Tablet	15%
Computer	67%
Game console	15%
Has devices, but not in bedroom at night	11%

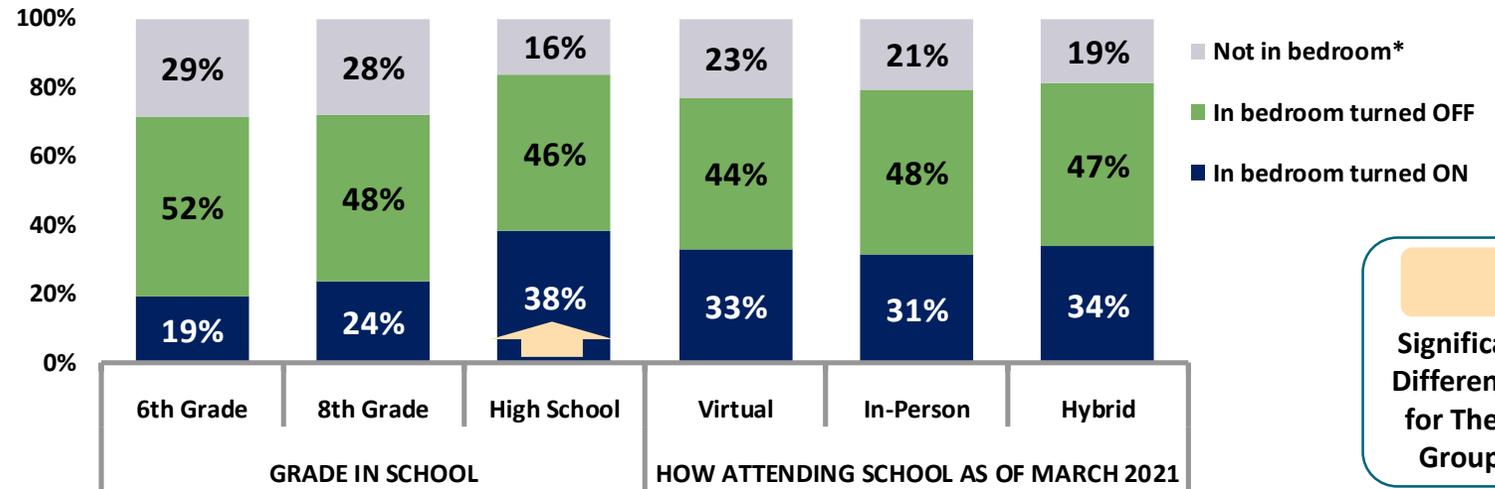


The majority of students with cell phones keep their cell phones in their bedrooms when they go to sleep, and many don't turn their cell phones off at night

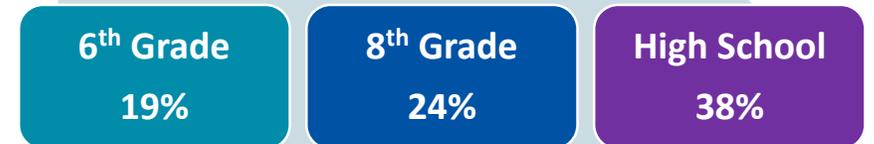
More often than not, students with cell phones have their phones in their bedrooms at night – and often, their phones are turned on all night.

6th graders with cell phones are least likely to keep them in their bedrooms turned on at night (although many do), and high schoolers are most likely to do so.

Where Is Your Cell Phone When You Go To Sleep At Night?
All Grades, Among Students With Cell Phones, 2021 (Q124)



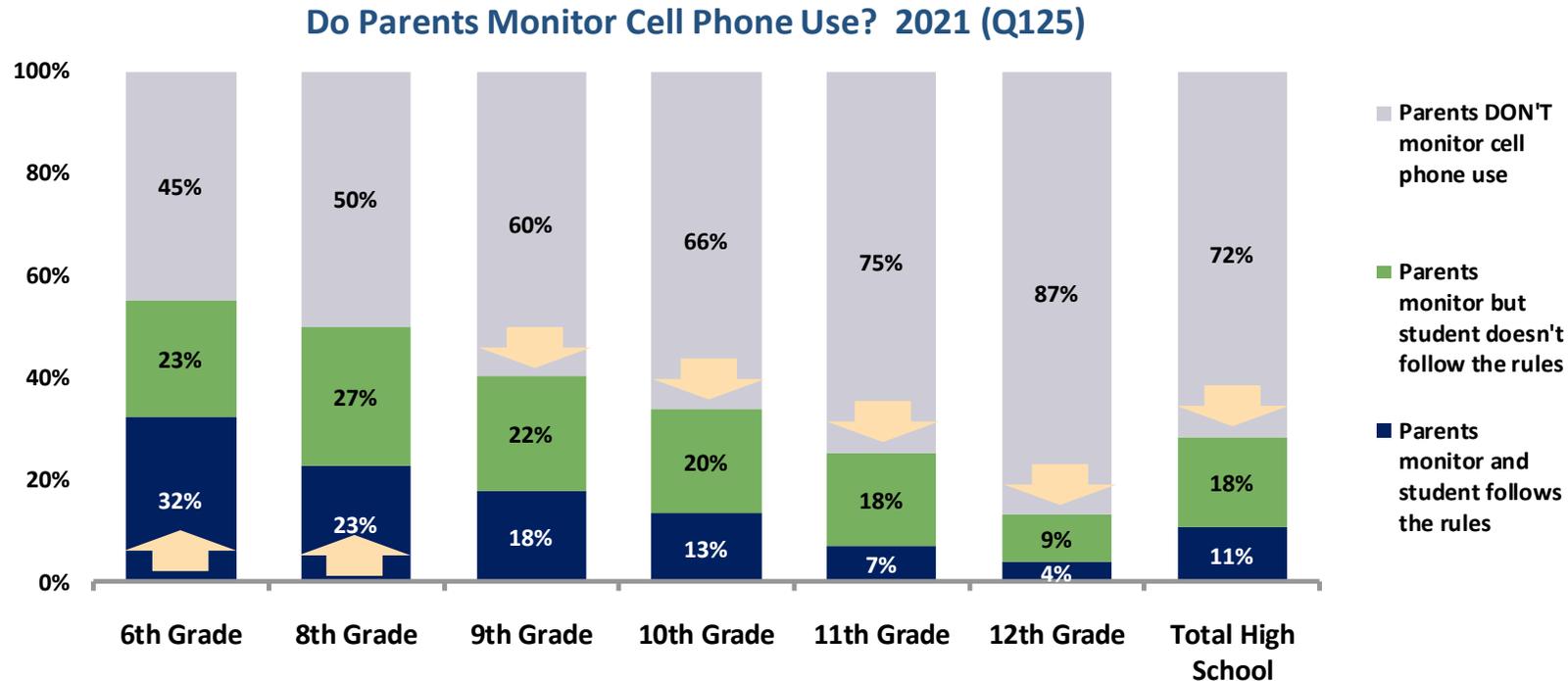
Cell Phone ON in Bedroom at Night:



* Cell phone is kept somewhere else in the house at night (not in bedroom), parent or guardian takes the phone at night, or something else happens that doesn't involve the cell phone being in the student's bedroom at night.

More often than not, parents don't monitor students' cell phone use—and even when they do, students don't always follow the rules

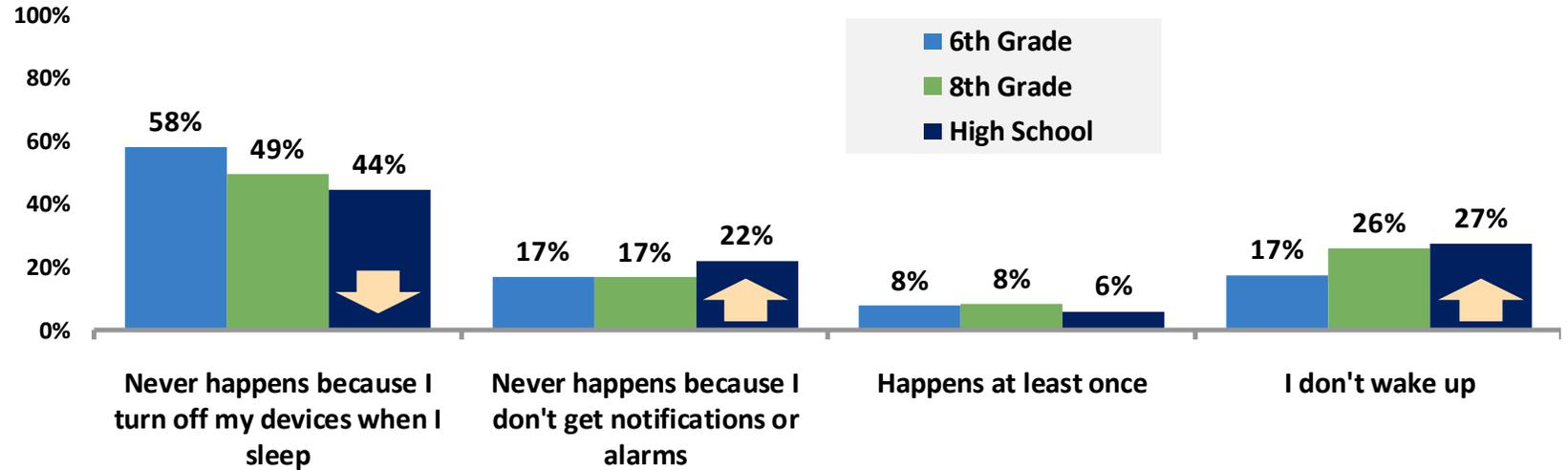
- Parent/guardian monitoring of cell phone use declines steadily with age; half of 6th graders are monitored, compared with about one-tenth of 12th graders
- Compliance with rules about cell phone use increases with age—high school students whose parents monitor their cell phone use tend to follow the rules, whereas many 6th and 8th graders say they don't follow the rules



Students tend to claim they aren't disturbed at night by their electronic devices

- 6th graders' most often report that they turn their devices off at night, so it *"never happens"* that their devices wake them up
- High school students often report that they turn their devices off at night, but many also claim they *"don't get notifications or alarms"* or that they don't wake up when their devices make noise
- 8% of 6th and 8th graders, and 6% of high school students, say that their devices wake them up at least once every night

How Many Times Do You Wake Up Each Night Because Electronic Device Rings, You Get Notifications, or You Hear Alarms or Other Noise, 2021 (Q126)



Significant Differences for These Groups

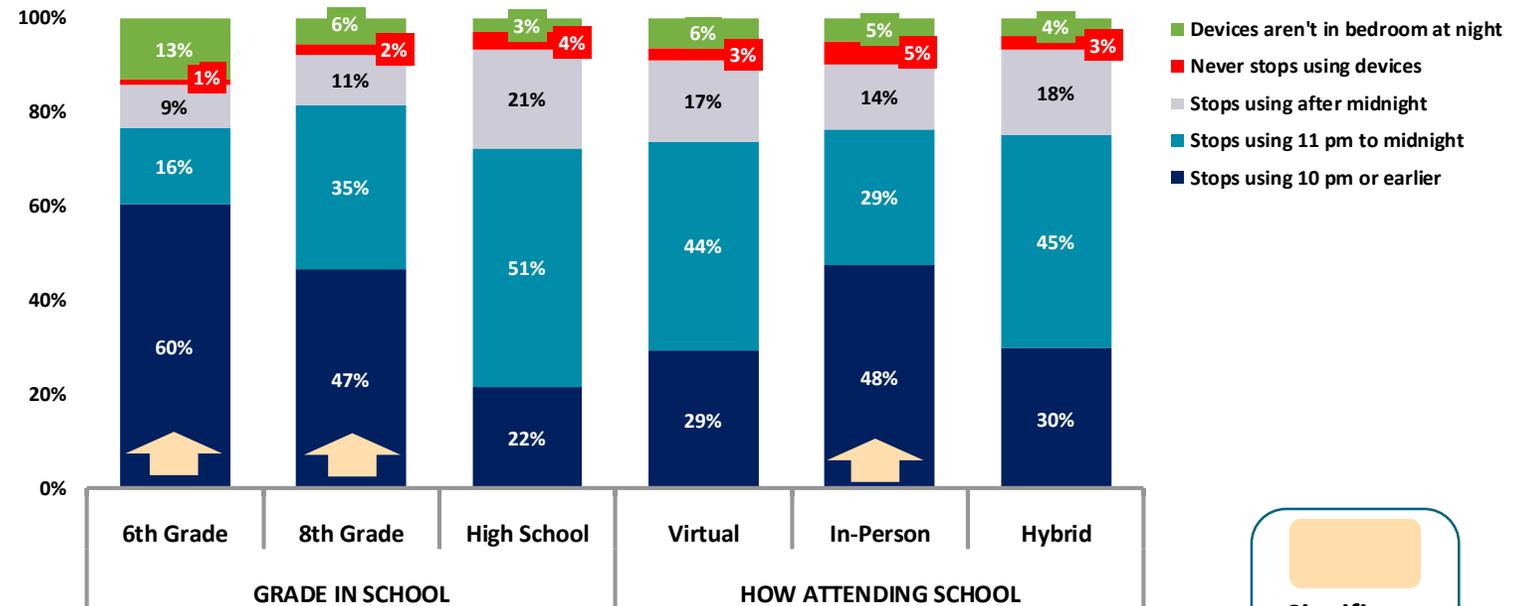


Many students use their electronic devices past midnight; some never stop

In previous YRBS surveys, students have been asked what time they usually *turn off* their cell phones before going to sleep. For the 2021 survey, we asked what time they usually *stop using all of their electronic devices* at night before going to bed. How the question is asked is important, as many students don't turn off their electronic devices, but they do eventually stop using them:

- Depending on grade, 1% to 4% of students never stop using their electronic devices at night
- Many students at all grade levels keep using their devices well past midnight; 9% of 6th graders and 21% of high schoolers say they stop using all of their devices after midnight
- Students who attend school in-person, full-time, tend to stop using their devices earlier in the evening, while students attending virtually (full-time or hybrid) tend to use their devices until later

What Time Do You Usually Stop Using All of Your Electronic Devices at Night Before Going to Sleep? 2021 (Q127)



Significant Differences for These Groups



Students and Social Media

On average, students report spending between 2 and 3 hours every weekday on social media (e.g., Facebook, Twitter, Instagram, SnapChat, Tik Tok, etc.). This is probably an underestimate; many national studies of youth and young adults suggest the average can exceed 4 hours per day.

- Depending on grade, between 7% and 21% of students surveyed during the pandemic say they have social media accounts their parents don't know about; these percentages did not change significantly from 2020 to 2021. Students attending school in-person are more likely than students attending virtually (either full-time or hybrid) to report that their parents/guardians monitor their social media use
- Parental monitoring of social media use increased somewhat during the pandemic, especially for 6th graders, although the ways in which students are monitored have stayed relatively the same

Students and Social Media	6th GRADE		8th GRADE		HIGH SCHOOL		HOW ATTENDING SCHOOL AS OF MARCH 2021*		
	2020 YRBS	2021 COVID Response	2020 YRBS	2021 COVID Response	2020 YRBS	2021 COVID Response	Virtual Only	In Person Only	Hybrid
Has social media accounts parents/guardians don't know about (Q110)	13%	7%	17%	16%	29%	21%	19%	11%	19%
Parents/guardians DON'T monitor student's social media use (Q111)	32%	26%	51%	37%	71%	60%	51%	39%	53%
Student doesn't know if parents/guardians monitor social media use (Q111)	17%	15%	16%	16%	14%	12%	12%	10%	14%
Parents/guardians DO monitor student's social media use (Q111):	45%	34%	33%	36%	16%	24%	23%	38%	28%
I have a contract and ground rules for my phone/tablet/computer	17%	12%	11%	11%	4%	6%	6%	11%	8%
They follow my social media accounts weekly or more often	13%	9%	13%	11%	7%	12%	9%	16%	12%
They use monitoring blocking or filtering software	9%	9%	6%	9%	2%	4%	6%	11%	5%
They put parental controls on my devices	16%	11%	9%	14%	3%	6%	7%	10%	8%
I am only allowed to use my devices at certain times	14%	7%	7%	9%	3%	5%	6%	5%	6%
I am only allowed to use my devices in certain places in our home	4%	3%	3%	3%	1%	2%	2%	6%	2%
They monitor my social media accounts or use in some other way	11%	9%	9%	10%	4%	7%	9%	12%	8%
Student doesn't have any social media accounts (Q111)	16%	29%	7%	14%	3%	6%	15%	15%	8%

Significant Differences for These Groups

* Four students participated in the 2021 survey who were unclear about whether they were virtual, in person, or hybrid. These students are not included in this analysis.



Risky behavior involving the internet is common; even young students find themselves in situations they did not anticipate when engaging with social media

Depending on grade level, between one-fifth and one-fourth of students have found themselves in risky or unwanted situations because of information they shared electronically.

Students at all grade levels report that they have had unwanted contact with people they talked to online in the past year—this happens most often in high school, but 10% of 6th graders also report it.

During the pandemic, risky situations involving the internet have happened most often to:

- Female students
- LGBTQ students, particularly those identifying as transgender or non-binary

Risks Involving the Internet	6th GRADE		8th GRADE		HIGH SCHOOL		HOW ATTENDING SCHOOL AS OF MARCH 2021*		
	2020 YRBS	2021 COVID Response	2020 YRBS	2021 COVID Response	2020 YRBS	2021 COVID Response	Virtual Only	In Person Only	Hybrid
Ever found self in risky/unwanted situation because of info shared electronically (Q22)	20%	18%	21%	22%	25%	23%	21%	23%	23%
Had unwanted contact from someone talked to online, past year (Q23)	(not asked)	10%	(not asked)	13%	(not asked)	16%	12%	14%	16%

