



2017 YOUTH HEALTH SURVEY

**WORCESTER
DIVISION OF
PUBLIC HEALTH**

*Shrewsbury High
School*



Public Health
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BACKGROUND

Report Format

The RYHS is heavily modeled after the national Centers for Disease Control and Prevention Youth Risk Behavior Surveillance System that is tailored to meet the needs of the school district. The questionnaire is designed to gather information on the important issues facing youth in the town of Shrewsbury and towns and cities in the Central Massachusetts Regional Public Health Alliance (CMRPHA) district. Topics include substance use, violence and safety, dietary behavior, and sexual health. This is the third administration of the RYHS in Shrewsbury High (2013, 2015, and 2017).

This report summarizes the findings from the Regional Youth Health Survey (RYHS) conducted in Shrewsbury High School, located in Worcester County, in the 2017-2018 school year. Overall, **1670** youth in grades 9-12 participated in this survey accounting for **91%** of total students enrolled.

Methods

The Survey was conducted by the Shrewsbury Public Schools, the Worcester Division of Public Health and the University of Massachusetts Medical School. The survey was administered as a pen and paper questionnaire. Teachers were given instructions on how to administer the survey and were responsible for passing out the questionnaires in the classroom.

Validity

Participation in the survey is voluntary, which research has found increases the likelihood for students to respond truthfully. In efforts to further increase validity students were asked how honest they were in taking the survey, at the end of the survey; **99%** of students reported that they were either ‘completely’, ‘very’, or ‘pretty honest’; while **1%** responded that they were not very or at all honest.

Further steps to increase validity include screening individual questionnaires for patterns of frivolous and inconsistent responses and omitting them from the analyses.

Trends

Because this is the third iteration of the RYHS in Shrewsbury, it is possible to look at trend comparisons to ascertain whether behaviors among Shrewsbury youth have improved, worsened, or remained the same, over the years. However, the questionnaire underwent a partial redesign of some questions in 2017 which caused some questions to be not comparable from prior years creating a break in trend analyses.

Accountability

It is important to note that the RYHS is primarily designed to assess the risky behaviors of youth, and does not highlight many of the positive aspects of their life. Also very important to note is that, although the surveys are administered in the schools, it should not be interpreted that the schools should be held solely accountable for the behaviors of youth. “Issues such as those addressed in the survey are not school problems; they are community problems that require the attention of all community members and organizations.”¹

¹ Summary of Results from the 2016-2017 Cambridge Middle Grades Health Survey.

DEMOGRAPHIC CHARACTERISTICS OF SHREWSBURY STUDENT PARTICIPANTS

Among student participants there were 47% males and 53% females; however, around 4% of students report they are transgender or identify themselves in some other way. The majority of participants were between 15 and 17 years old (Figures 1).

Approximately 58% of students identified as White, Caucasian, or European American. Students who identified as Asian or Asian American accounted for 22% of participants while 7% of students identified as Hispanic, Latina, or Latino. Four percent (4%) identified as African-American or Black and another 4%, Arab or Middle Eastern (Figure 3). Further, 81% of students report they most often speak English at home, and the majority of students (85%) are from the United States (chart not shown).

Figure 1. Age Distribution of Shrewsbury High Participants, 2017

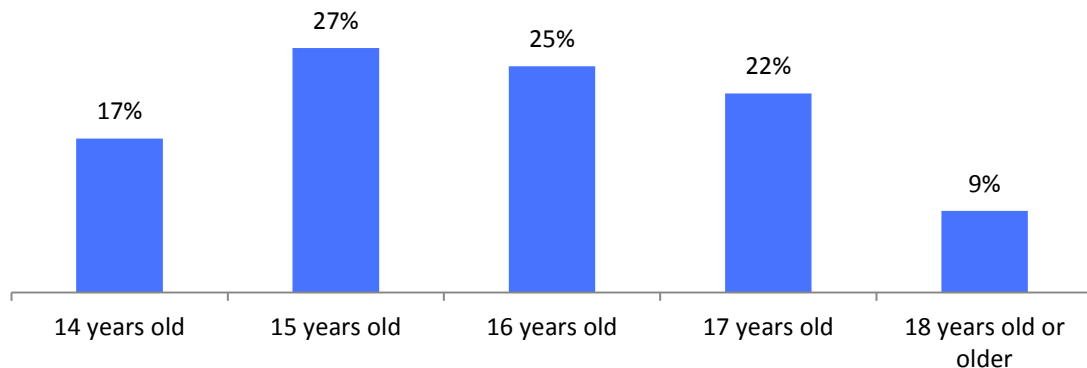


Figure 2. Grade Level Distribution of Shrewsbury High Participants, 2017

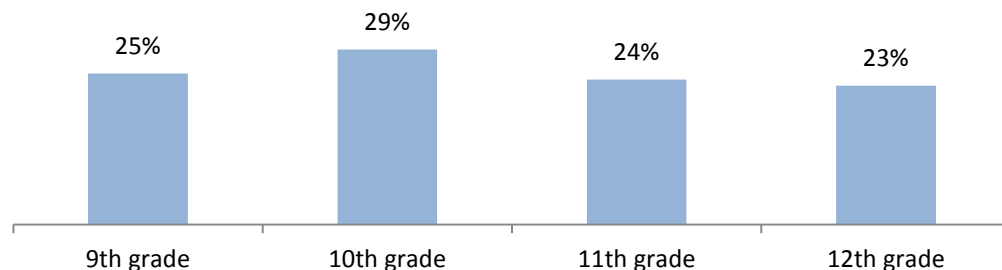
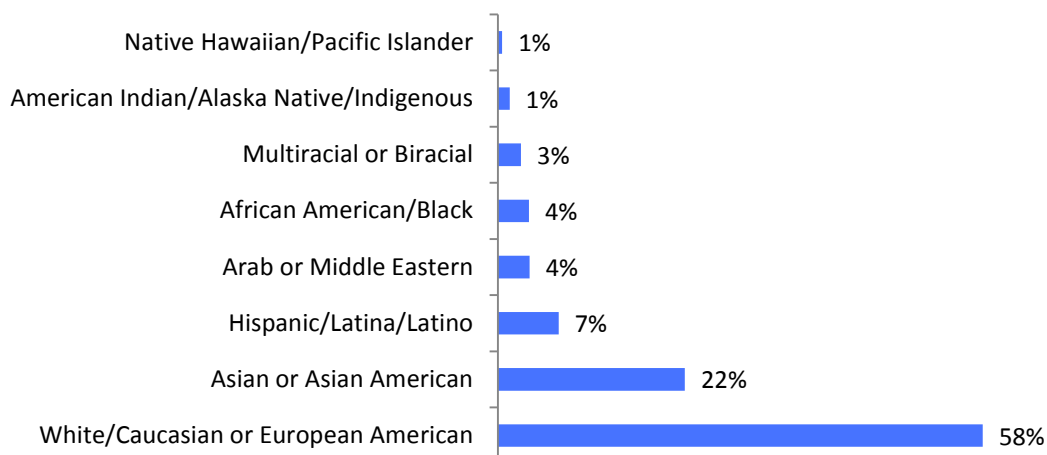


Figure 3. Race and Ethnicity of Shrewsbury High Participants, 2017



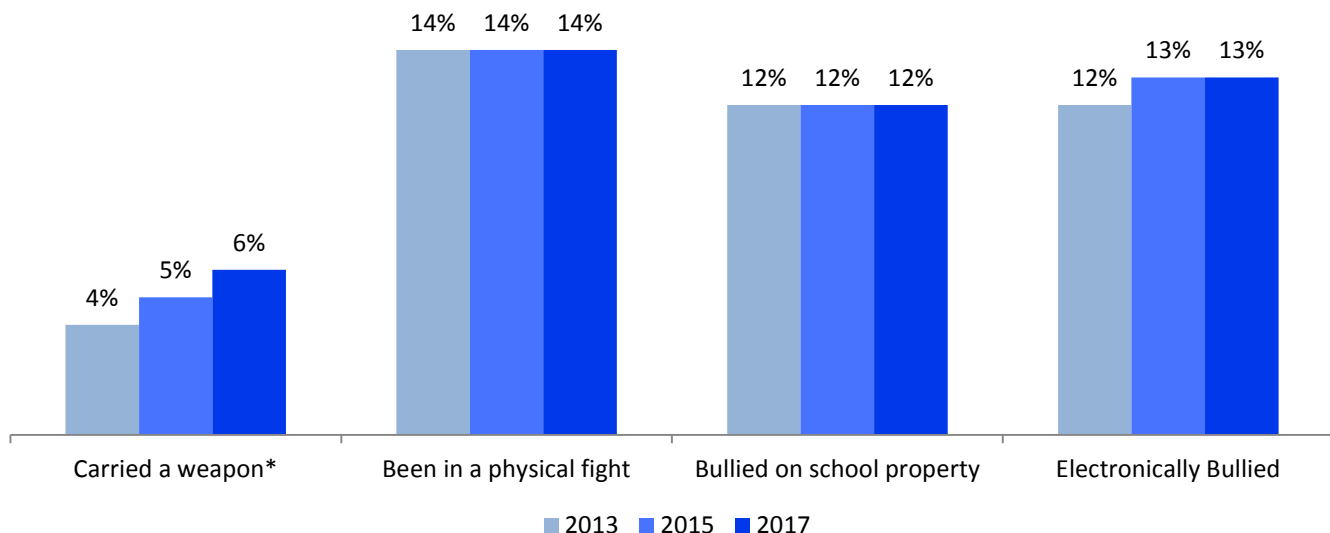
THEMES AMONG SHREWSBURY HIGH YOUTH

Results from the RYHS reflect the status of risk and protective factors among Shrewsbury high school-aged youth. The survey assessed different major domains of health behaviors in this population. In order to better illustrate the results, data has been divided into 10 main categories.

Violence

The RYHS includes questions about 5 main factors that contribute to violence. These factors include carrying a weapon (such as a knife, gun, club), social pressure to join a gang within the last 12 months, being engaged in a physical fight, witnessing or experiencing family violence in the last 12 months, and bullying. Violence-related behaviors are a significant public health concern. Nationwide, homicide remains the third leading cause of death among youth ages 13-19 years (5.1 deaths per 100,000).² Physical fighting is linked to serious injury-related health outcomes, and firearms are specifically responsible for 65% of all violent deaths on school property from 1994-2006.²

Figure 4. Violence and Bullying among Shrewsbury High Participants, 2013, 2015 and 2017



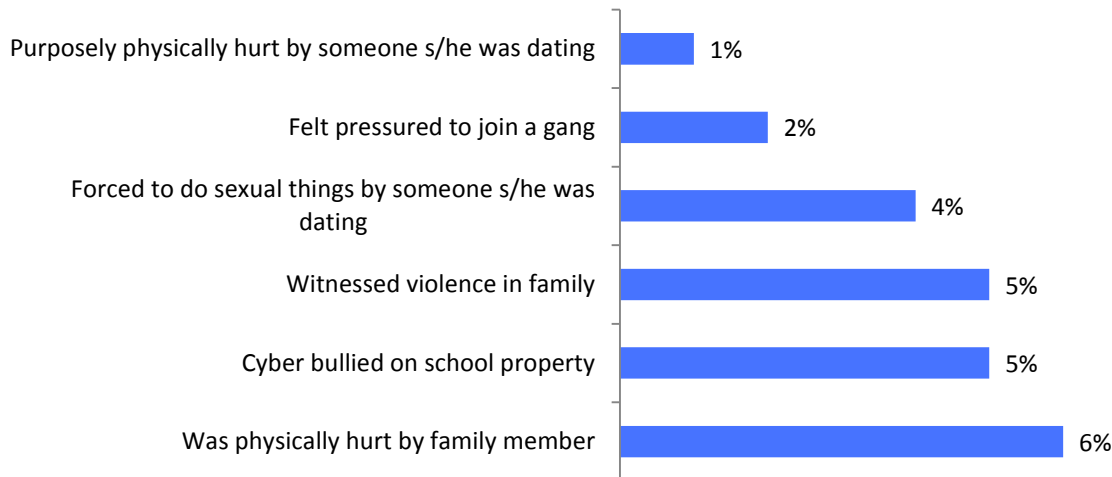
Rates around measures of violence have been stable since 2013 to 2017 (Figure 4). The 2017 questionnaire included a modified version of the question asking whether youth had carried a weapon to protect themselves in the past 30 days from a “yes/no” in previous years to a “check all that apply” in 2017. The rationale for this change was to better ascertain the types of weapons youth report carrying (Figure 4). The percentage of youth in Shrewsbury who reported carrying a weapon in the past 30 days of taking the survey is less than the regional (11%), state (11%) and national (15.7%) averages (see Appendix).

Figure 5. highlights other important determinants of violence. Fewer students report being cyber bullied on school property (5%) (Figure 5) than being bullied in person, on school property (12%) (Figure 4). Additionally, 2% of students reported they did not go to school in the past month because they felt it

² Center for Disease Control and Prevention. (2017). Youth risk behavior survey (YRBS) 2017 standard questionnaire item rationale. Retrieved from <https://www.cdc.gov/healthyyouth/data/yrbs/questionnaires.htm>

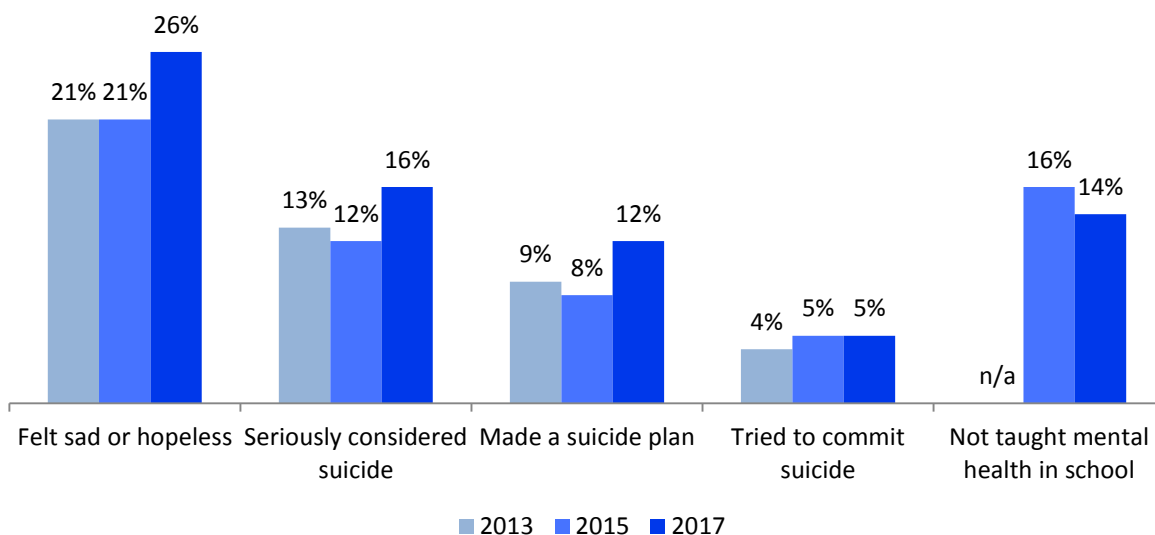
would be unsafe at school or on their way to or from school; consistent with that observed (2%) in 2015 (chart not shown).

Figure 5. Other Determinants of Violence among Shrewsbury High Participants, 2017



Emotional Health

Figure 6. Suicidal Ideations among Shrewsbury High Participants, 2013, 2015 and 2017



Overall, there are modest increases in rates around measures of depression and suicidal ideation among Shrewsbury youth in 2017 as compared with 2013 and 2015. It is important to note the 5% increase in youth who report they have felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities (Figure 6), which could be an indication of depression. Also important to remember is that a previous suicide attempt is a high-risk factor for a suicide fatality.³

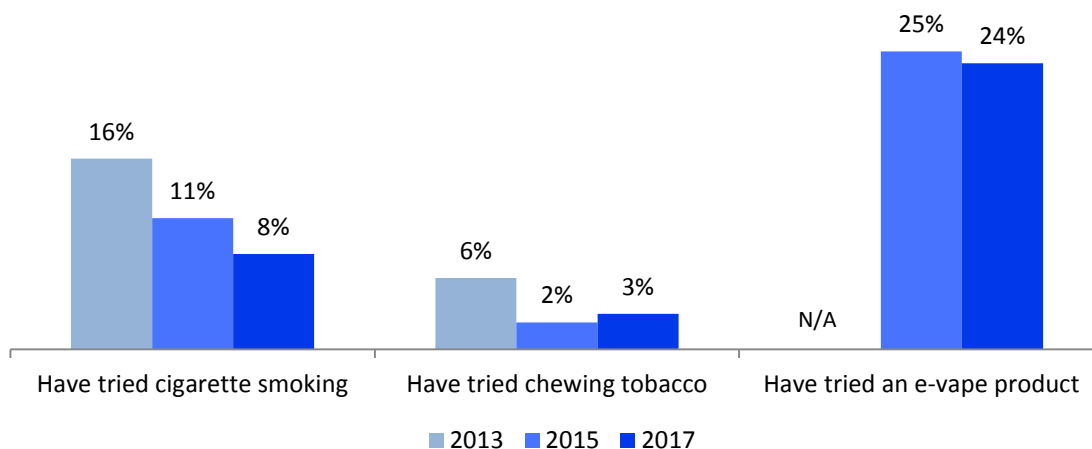
A similar percentage of youth indicated that they hurt or injured themselves (cutting, burning or bruising) on purpose without wanting to die, in the past year, (14% in 2015 and 15% in 2017) (chart not shown).

³ Center for Disease Control and Prevention. (2017). Youth risk behavior survey (YRBS) 2017 standard questionnaire item rationale. Retrieved from <https://www.cdc.gov/healthyyouth/data/yrbs/questionnaires.htm>

Tobacco Use

Across the country, 3,800 youth under 18 years old begin smoking every day.³ In addition to the negative health consequences, cigarette smokers are more likely to engage in other risky health behaviors including drinking alcohol, using marijuana and cocaine, sexual behaviors, physical fighting, carrying a weapon, and attempting suicide.⁴

Figure 7. Nicotine Product Use among Shrewsbury High Participants, 2013, 2015 and 2017



Among Shrewsbury youth, overall tobacco use has declined over the past years. The percentage of youth who report that they have tried cigarette smoking in their life, (even one or two puffs) has decreased by 50% from 16% in 2013 to 8% in 2017. In the same fashion, reporting on having tried chewing tobacco, snuff or dip has decreased since 2013 (Figure 7). In 2017 the percentage of youth who report they have tried an e-vape product has remained consistent with the response in 2015 (24% and 25%, respectively), however, Shrewsbury's rate remains lower compared with the state and national rates (41% and 42%, respectively) (see Appendix).

The U.S. Food and Drug Administration finalized a rule in 2016 to regulate electronic vapor products by preventing sales to minors, prohibiting few samples and vending machine sales, and mandating warning labels on packaging.⁵ Of youth who report having tried e-cigarettes and other nicotine products, the majority stated that they received it from a friend (47% in 2017 and 55% in 2015) (chart not shown).

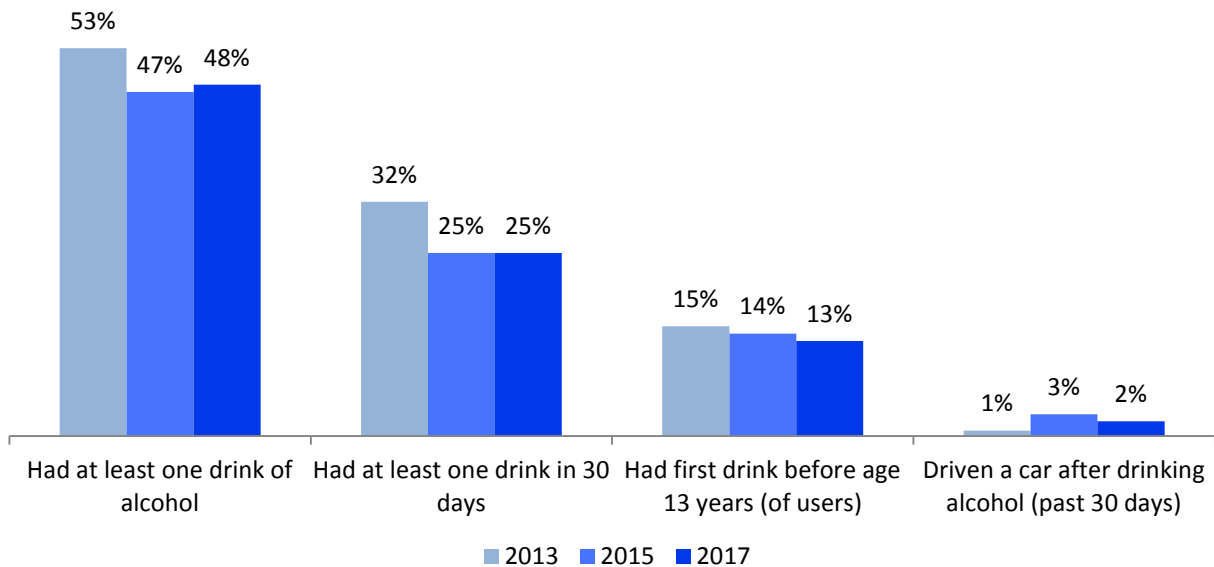
Shrewsbury youths' perception around the risk of using e-cigarettes on a regular basis has remained unchanged since 2015. Thirty-seven percent (37%) and 38% of youth in 2015 and 2017, respectively, believe it to be of no or slight risk and; 63% and 62% of youth in 2015 and 2017, respectively, believe it to be of moderate or great risk (chart not shown).

⁴ Center for Disease Control and Prevention. (2017). Youth risk behavior survey (YRBS) 2017 standard questionnaire item rationale. Retrieved from <https://www.cdc.gov/healthyyouth/data/yrbs/questionnaires.htm>

⁵ Center for Disease Control and Prevention. (2017). Youth risk behavior survey (YRBS) 2017 standard questionnaire item rationale. Retrieved from <https://www.cdc.gov/healthyyouth/data/yrbs/questionnaires.htm>

Alcohol Use

Figure 8. Alcohol Use among Shrewsbury High Participants, 2013, 2015 and 2017



Rates in measures of alcohol use among Shrewsbury youth have slightly decreased from 2013 to 2015 (Figure 8). The proportion of youth that report ever having a drink in their lifetime, in 2017, is less among Shrewsbury youth than in the state and in the nation (48% vs 56% and 60%, respectively) (Figure 8) (see Appendix). The rate of youth that had at least one drink of alcohol in the past 30 days of taking the survey has been trending downward from 2013 to 2017.

Marijuana Use

Figure 9. Marijuana Use among Shrewsbury High Participants, 2013, 2015 and 2017

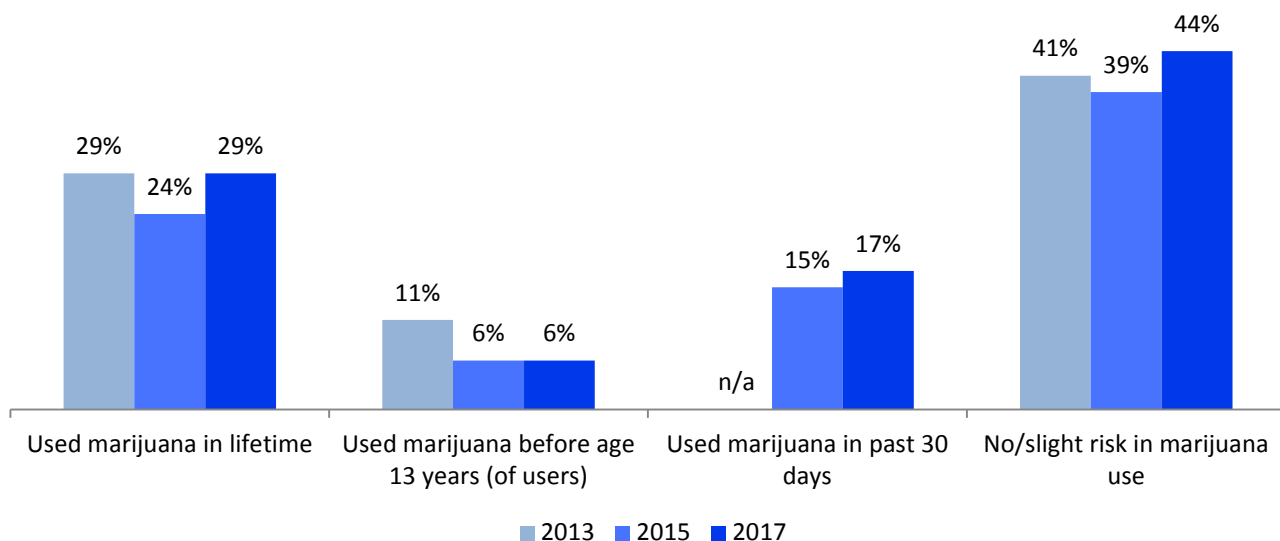
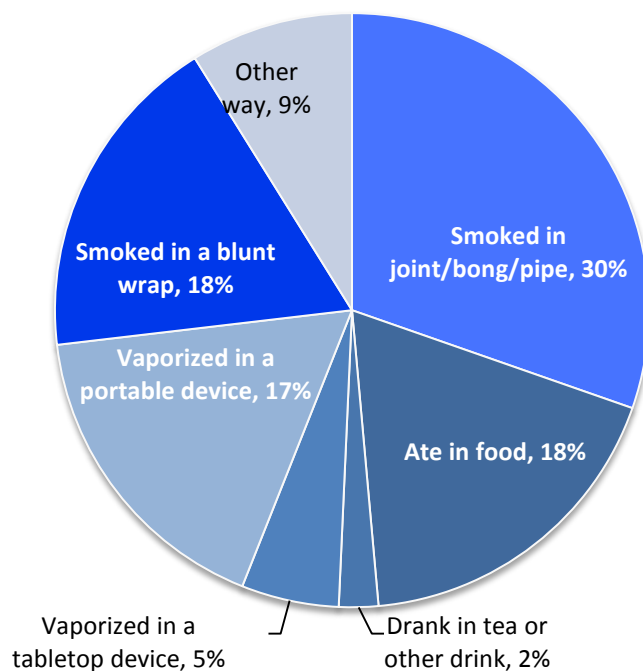


Figure 10. Mode of Marijuana Use among Shrewsbury High Youth, 2017



Ever/lifetime use of marijuana has increased from 2015 to 2017 among Shrewsbury high youth (24% vs. 29%, respectively) (Figure 9). Nonetheless, the rate of ever use of marijuana among Shrewsbury youth remains lower than the state (38%) and in the U.S. (36%) (see Appendix). The rate of youth who report current use of marijuana has modestly increased from 2015 (15%) to 2017 (17%). Similarly, this rate is less than both the state's (24%) and nation's (20%) averages (see Appendix).

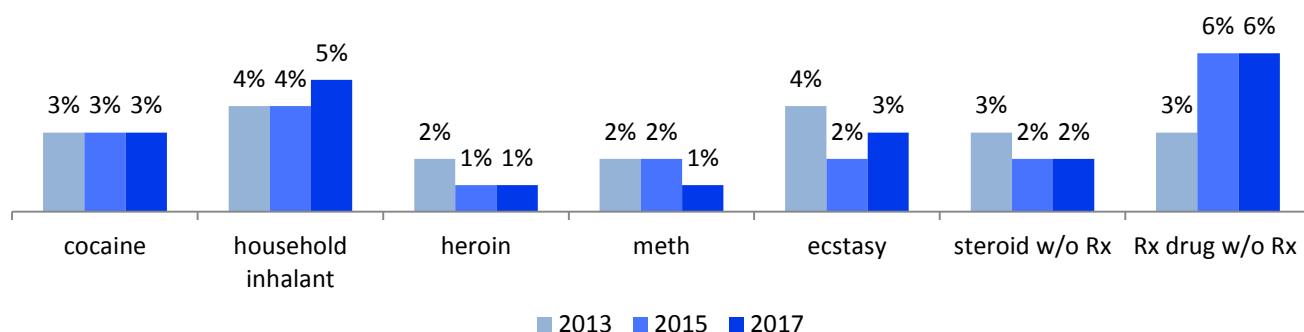
Among youth who report that they have used marijuana, the majority has smoked it in a joint/bong or pipe (30%), followed by in blunt wraps (18%), ate it in food, such as brownies, or smoked it in a portable vaporized device (Figure 10).

Other Substance Use

Rates on the use of individual substances remain somewhat consistent from 2013 to 2017. The only notable increase is observed in those students who report taking prescription drugs without a doctor's prescription (3% in 2013 to 6% in 2015 and 2017). However, the overall rates of substance use among Shrewsbury youth are lower compared to that of the state and national average (see Appendix).

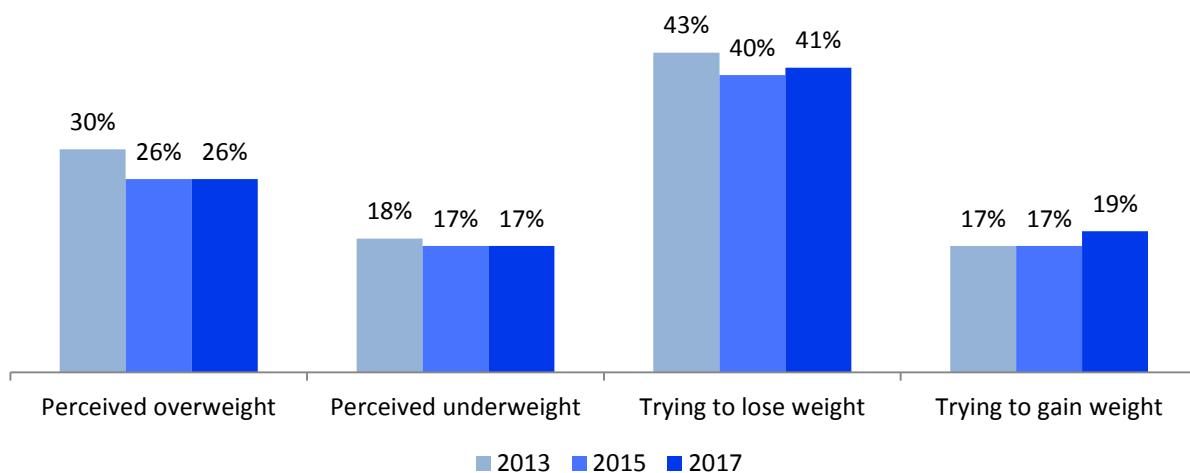
Also noteworthy, is in response to a new question asked in 2017, 4% of respondents indicated that they have used opioids to get high, where an additional 2% of respondents noted that they were not sure (chart not shown).

Figure 11. Lifetime Substance Use among Shrewsbury High Participants, 2013, 2015 and 2017



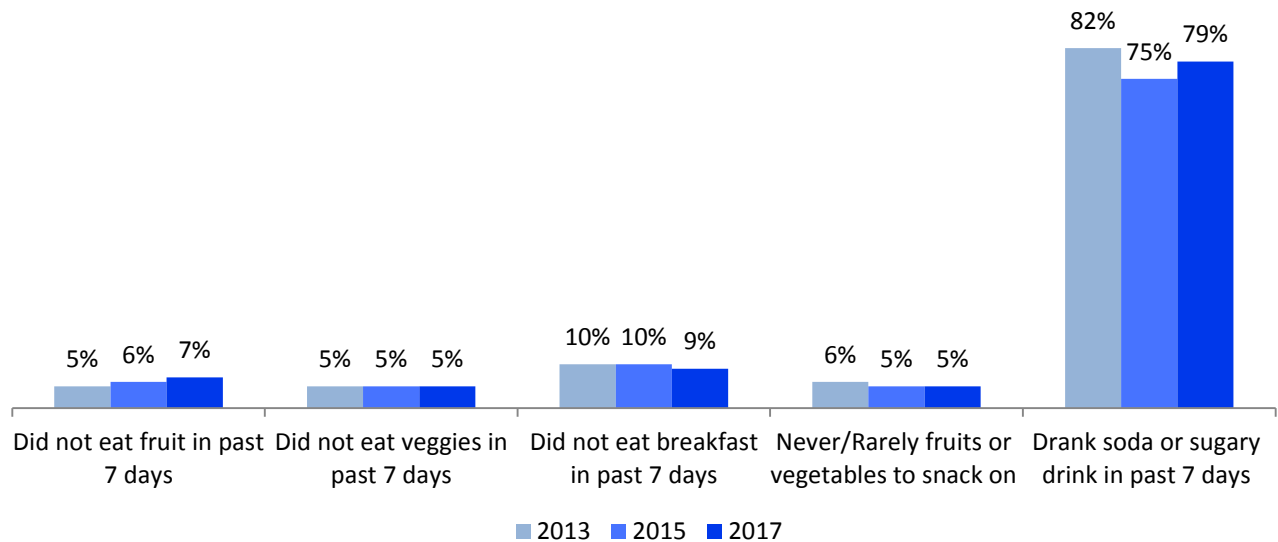
Self-Image and Dietary Behaviors

Figure 12. Perception of Body Weight among Shrewsbury High Youth, 2013, 2015 and 2017



Shrewsbury's youth perception around their body weight has remained consistent over the years (Figure 12). A higher percentage of respondents perceive themselves as overweight and trying to lose weight compared to those who think they are underweight and trying to gain weight. Consumption of soda, and other sugary drinks, has slightly increased from 2015 (75%) to 2017 (79%) (Figure 13). However, the rates among youth reporting they neither ate fruits, vegetables, nor breakfast during the past 7 days of taking the survey have remained consistent over the years (Figure 13).

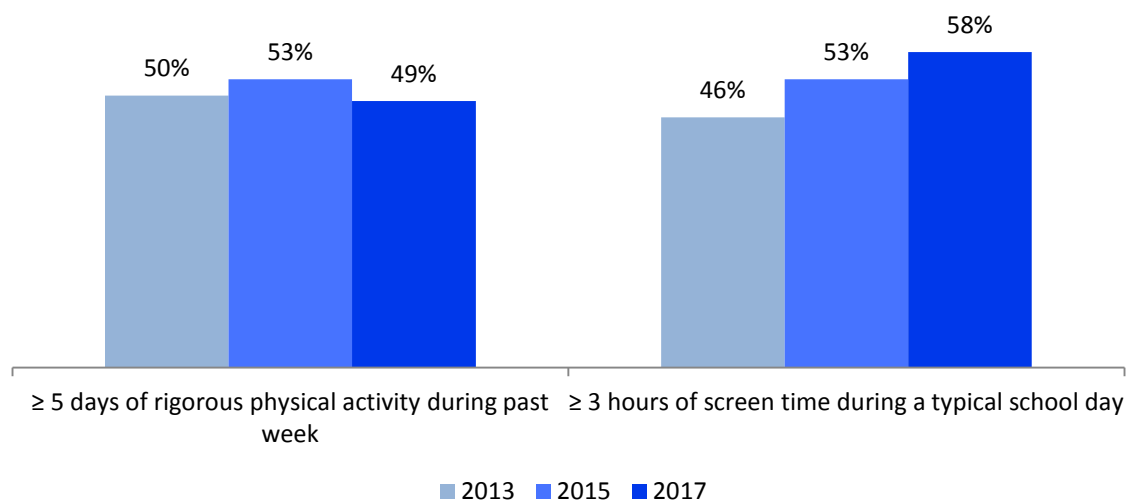
Figure 13. Dietary Habits among Shrewsbury High Youth, 2013, 2015 and 2017



Physical Activity and Screen Time

The percentage of youth that report they engaged in physical activity for a total of 60 minutes for 5 or more days in the week prior to taking the survey is somewhat consistent compared to 2013 and 2015 (49% vs. 50% and 53%, respectively) (Figure 14). These averages are comparable to the State's and the U.S.'s (46% and 47%). The percentage of youth reporting they spent three or more hours on screen time during a typical school day has steadily increased from 46% in 2013 to 58% in 2017. This [2017] rate is higher than the State (48%) and the national averages (43%) (see Appendix).

Figure 14. Physical Activity and Screen Time among Shrewsbury High Youth, 2013, 2015 and 2017

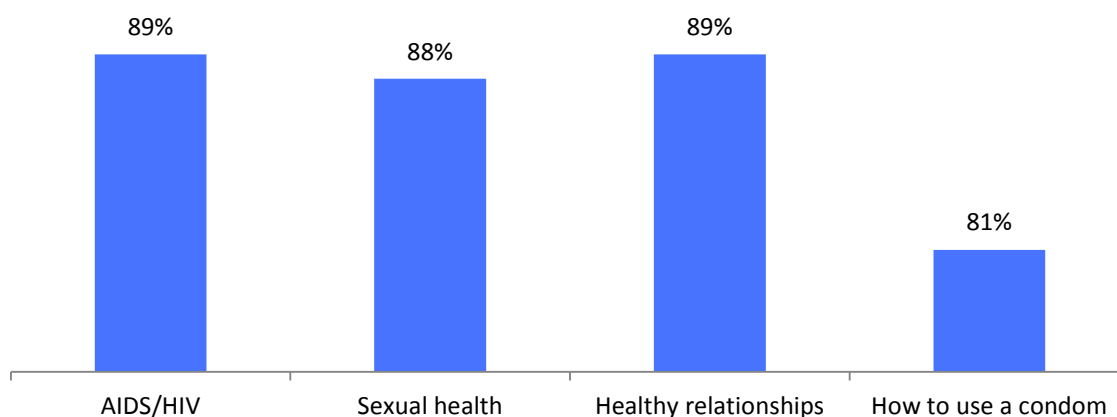


Sexual Health and Other Health Behaviors

Roughly a quarter (24%) of youth responded that they have had sexual intercourse. Of youth who report they have had sexual intercourse, the majority (51%) has had sex with one partner, 32% did not use a condom and 24% drank alcohol or used drugs the last time they had sex (chart not shown).

The most commonly reported methods of contraceptives among Shrewsbury youth are condoms (53%) and birth control pills (24%). Nine percent (9%) of youth reported they did not use any method to prevent pregnancy during last sexual intercourse (chart not shown).

Figure 15. Shrewsbury High Youth who Report being Taught Sexual Health and Healthy Relationships in School, 2017



The vast majority of Shrewsbury high youth report they have been taught about sexual health, AIDS/HIV and healthy relationships (Figure 15). In addition 76% of Shrewsbury youth reported that they have talked about ways to prevent HIV infection, other sexually transmitted infection (STIs), or pregnancy with their parents or other adults in their family, in school, or in the community.

LIFE ADJUSTMENT AND FUTURE PLANS

Figure 16. Post High School Attitudes among Shrewsbury High Participants, 2017

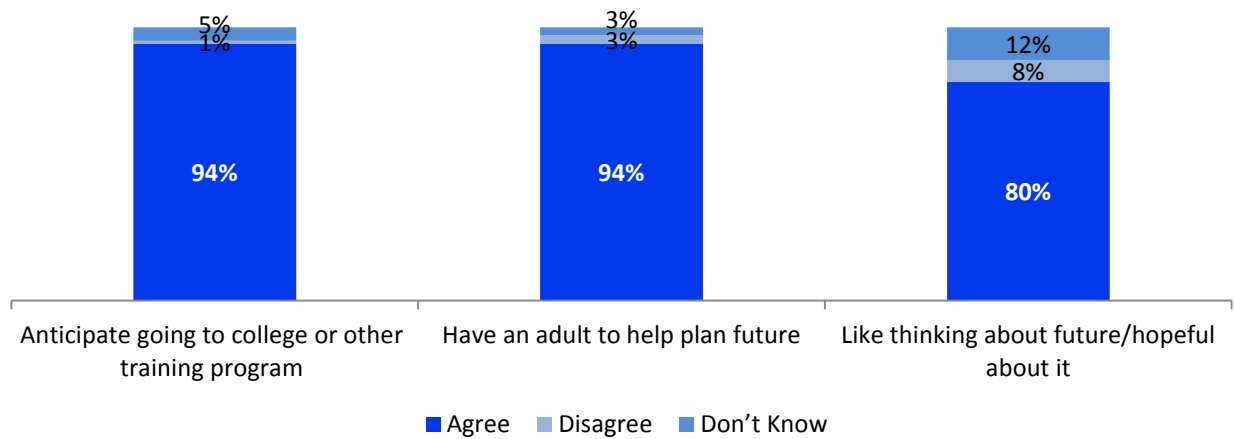
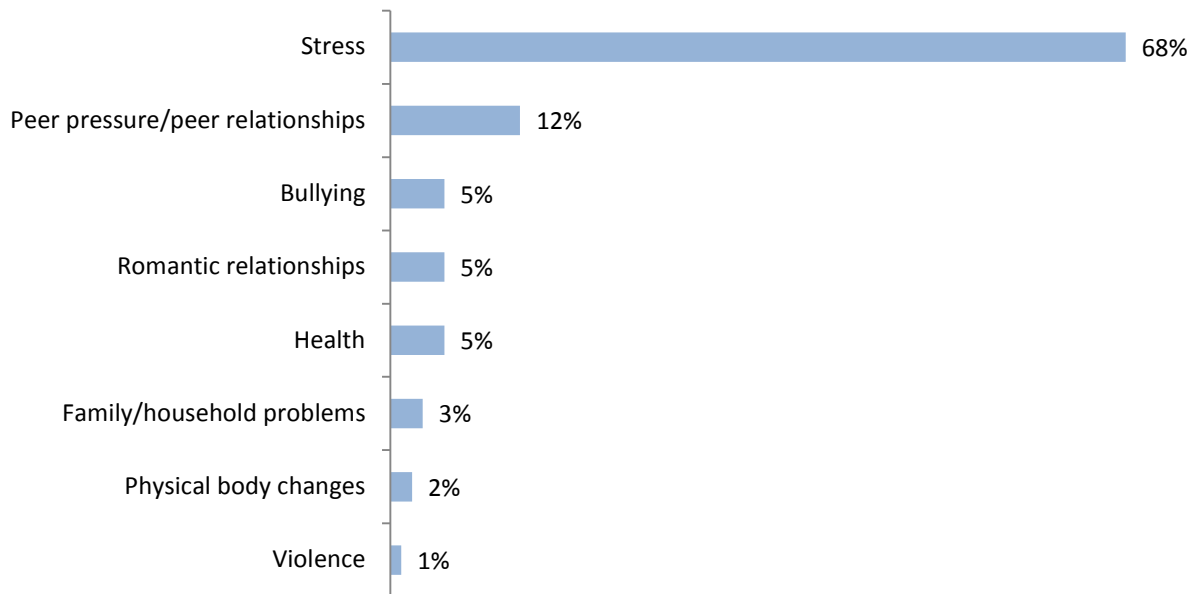


Figure 17. Top Reported Issues Facing Shrewsbury High Youth, 2017



The vast majority (80%) of Shrewsbury high youth is hopeful about their future and anticipate going to college or other training institution (94%). In addition, 94% have an adult present in their life to help plan their future (Figure 16).

As illustrated in Figure 17, stress is the top reported issue among Shrewsbury high youth (68%), followed by peer pressure and peer relationships (12%).

APPENDIX

High School Youth Risk Behavior Survey			
	Regional 2017 (%)	Massachusetts 2017 (%)	United States 2017 (%)
Unintentional Injuries and Violence			
Rode with a driver who had been drinking alcohol (in a car or other vehicle, one or more times during the 30 days before the survey)	12.1	14.4	16.5
Drove when they had been drinking alcohol (in a car or other vehicle, one or more times during the 30 days before the survey, among students who had driven a car or other vehicle during the 30 days before the survey)	5.0	5.7	5.5
Drove when they had been using marijuana (also called grass, pot, or weed, in a car or other vehicle, one or more times during the 30 days before the survey, among students who had driven a car or other vehicle during the 30 days before the survey)	12.0	n/a	13
Texted or e-mailed while driving a car or other vehicle (on at least 1 day during the 30 days before the survey, among students who had driven a car or other vehicle during the 30 days before the survey)	28.0	35.6	39.2
Carried a weapon (such as a gun, knife, or club, on at least 1 day during the 30 days before the survey)	11.0	11.1	15.7
Carried a gun (on at least 1 day during the 12 months before the survey, not counting the days when they carried a gun only for hunting or for a sport such as target shooting)	2.0	2.7	4.8
Were threatened or injured with a weapon on school property (such as a gun, knife, or club, one or more times during the 12 months before the survey)	5.2	4.8	6
Were in a physical fight (one or more times during the 12 months before the survey)	16.5	17.8	23.6
Were electronically bullied (counting being bullied through texting, Instagram, Facebook, or other social media, during the 12 months before the survey)	11.6	13.6	14.9
Were bullied on school property (during the 12 months before the survey)	13.2	14.6	19
Did not go to school because they felt unsafe at school or on their way to or from school (on at least 1 day during the 30 days before the survey)	3.9	4.5	6.7
Experienced sexual dating violence (being forced to do sexual things (counting such things as kissing, touching, or being physically forced to have sexual intercourse) they did not want to do by someone they were dating or going out with, one or more times during the 12 months before the survey, among students who dated or went out with someone during the 12 months before the survey)	3.2	5.8	6.9
Experienced physical dating violence (being physically hurt on purpose (counting such things as being hit, slammed into something, or injured with an object or weapon) by someone they were dating or going out with, one or more times during the 12 months before the survey, among students who dated or went out with someone during the 12 months before the survey)	1.9	5.6	8
Felt sad or hopeless (almost every day for 2 weeks or more in a row so that they stopped doing some usual activities, during the 12 months before the survey)	28.5	27.4	31.5
Seriously considered attempting suicide (during the 12 months before the	14.7	12.4	17.2

survey)			
Made a plan about how they would attempt suicide (during the 12 months before the survey)	11.4	10.9	13.6
Attempted suicide (one or more times during the 12 months before the survey)	6.6	5.4	7.4
Suicide attempt resulted in an injury, poisoning, or overdose that had to be treated by a doctor or nurse (during the 12 months before the survey)	2.3	1.9	2.4
Tobacco Use			
Ever tried cigarette smoking (even one or two puffs)	7.6	19.6	28.9
Ever used an electronic vapor product (including e-cigarettes, e-cigars, e-pipes, vape pipes, vaping pens, e-hookahs, and hookah pens)	16.2	41.1	42.2
Alcohol and Other Drug Use			
Ever drank alcohol (at least one drink of alcohol, on at least 1 day during their life)	44.1	56.2	60.4
Had their first drink of alcohol before age 13 years (other than a few sips)	9.2		15.5
Currently drank alcohol (at least one drink of alcohol, on at least 1 day during the 30 days before the survey)	20.9	31.4	29.8
Usually got the alcohol they drank by someone giving it to them (during the 30 days before the survey, among students who currently drank alcohol)	25.9	n/a	43.5
Reported 10 or more as the largest number of drinks they had in a row (within a couple of hours, during the 30 days before the survey)	1.9	n/a	4.4
Ever used marijuana (also called grass, pot, or weed, one or more times during their life)	31.3	37.9	35.6
Tried marijuana for the first time before age 13 years (also called grass, pot, or weed)	5.0	4.4	6.8
Currently used marijuana (also called grass, pot, or weed, one or more times during the 30 days before the survey)	18.7	24.1	19.8
Ever used synthetic marijuana (also called "K2," "Spice," "fake weed," "King Kong," "Yucatan Fire," "Skunk," or "Moon Rocks," one or more times during their life)	4.7	5	6.9
Ever used cocaine (any form of cocaine, such as powder, crack, or freebase, one or more times during their life)	3.1	4.1	4.8
Ever used inhalants (sniffed glue, breathed the contents of aerosol spray cans, or inhaled any paints or sprays to get high, one or more times during their life)	5.3	n/a	6.2
Ever used heroin (also called "smack," "junk," or "China White," one or more times during their life)	2.0	1.4	1.7
Ever used methamphetamines (also called "speed," "crystal," "crank," or "ice," one or more times during their life)	2.3	1.7	2.5
Ever used ecstasy (also called "MDMA," one or more times during their life)	3.4	2.8	4
Ever used hallucinogenic drugs (such as LSD, acid, PCP, angel dust, mescaline, or mushrooms, one or more times during their life)	4.9	n/a	6.6
Ever took steroids without a doctor's prescription (pills or shots, one or more times during their life)	2.5	n/a	2.9
Ever took prescription pain medicine without a doctor's prescription or differently than how a doctor told them to use it (counting drugs such as codeine, Vicodin, Oxycontin, Hydrocodone, and Percocet, one or more times during their life)	6.2	n/a	14

Sexual Behaviors			
Ever had sexual intercourse	28.5	35.3	39.5
Had sexual intercourse for the first time before age 13 years	2.7	2.4	3.4
Had sexual intercourse with four or more persons during their life	5.8	6.7	9.7
Did not use a condom during last sexual intercourse (among students who were currently sexually active)	41.0	42.2	46.2
Did not use birth control pills before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active)	80.9	65.2	79.3
Did not use an IUD (e.g., Mirena or ParaGard) or implant (e.g., Implanon or Nexplanon) before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active)	94.0	96.4	95.9
Did not use a shot (e.g., Depo-Provera), patch (e.g., OrthoEvra), or birth control ring (e.g., NuvaRing) before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active)	95.9	96.5	95.3
Did not use birth control pills; an IUD (e.g., Mirena or ParaGard) or implant (e.g., Implanon or Nexplanon); or a shot (e.g., Depo-Provera), patch (e.g., OrthoEvra), or birth control ring (e.g., NuvaRing) before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active)	70.7	58.2	70.6
Did not use any method to prevent pregnancy during last sexual intercourse (among students who were currently sexually active)	11.8	9.6	13.8
Drank alcohol or used drugs before last sexual intercourse (among students who were currently sexually active)	22.5	18.2	18.8
Were never tested for human immunodeficiency virus (HIV) (not counting tests done if they donated blood)	76.9	89.5	90.7
Dietary Behaviors			
Did not eat fruit or drink 100% fruit juices (such as orange juice, apple juice, or grape juice, not counting punch, Kool-Aid, sports drinks, or other fruit-flavored drinks, during the 7 days before the survey)	12.0	5.8	5.6
Did not eat vegetables (green salad, potatoes (not counting French fries, fried potatoes, or potato chips), carrots, or other vegetables, during the 7 days before the survey)	14.0	6.9	7.2
Drank soda or pop (such as Coke, Pepsi, or Sprite, not counting diet soda or diet pop, during the 7 days before the survey)	82.4	62.9	72.2
Drank a can, bottle, or glass of soda or pop one or more times per day (such as Coke, Pepsi, or Sprite, not counting diet soda or diet pop, during the 7 days before the survey)	20.3	10.5	18.7
Drank a can, bottle, or glass of soda or pop two or more times per day (such as Coke, Pepsi, or Sprite, not counting diet soda or diet pop, during the 7 days before the survey)	14.0	6.3	12.5
Drank a can, bottle, or glass of soda or pop three or more times per day (such as Coke, Pepsi, or Sprite, not counting diet soda or diet pop, during the 7 days before the survey)	7.7	3.2	7.1
Did not eat breakfast (during the 7 days before the survey)	16.5	12.9	14.1
Did not eat breakfast on all 7 days (during the 7 days before the survey)	67.3	63.7	64.7
Physical Activity			
Were not physically active for a total of at least 60 minutes on at least 1 day (doing any kind of physical activity that increased their heart rate and made them breathe hard some of the time, during the 7 days before the survey)	18.8	15.1	15.4

Were not physically active at least 60 minutes per day on 5 or more days (doing any kind of physical activity that increased their heart rate and made them breathe hard some of the time, during the 7 days before the survey)	58.9	54.3	53.5
Were not physically active at least 60 minutes per day on all 7 days (doing any kind of physical activity that increased their heart rate and made them breathe hard some of the time, during the 7 days before the survey)	78.1	77.3	73.9
Played video or computer games or used a computer for 3 or more hours per day (counting time spent on things such as Xbox, PlayStation, an iPad or other tablet, a smartphone, texting, YouTube, Instagram, Facebook, or other social media, for something that was not school work, on an average school day)	62.1	47.9	43
Described themselves as slightly or very overweight	30.3	28.1	31.5
Were not trying to lose weight	56.3	56.2	52.9
Other Health Topics			
Did not get 8 or more hours of sleep (on an average school night)	75.7	80.2	74.6
Used an indoor tanning device (such as a sunlamp, sunbed, or tanning booth, not counting getting a spray-on tan, one or more times during the 12 months before the survey)	3.5	n/a	5.6



Public Health
Prevent. Promote. Protect.



WORCESTER DIVISION OF PUBLIC HEALTH

YOUTH HEALTH SURVEY

FOR SHREWSBURY HIGH SCHOOL

2017