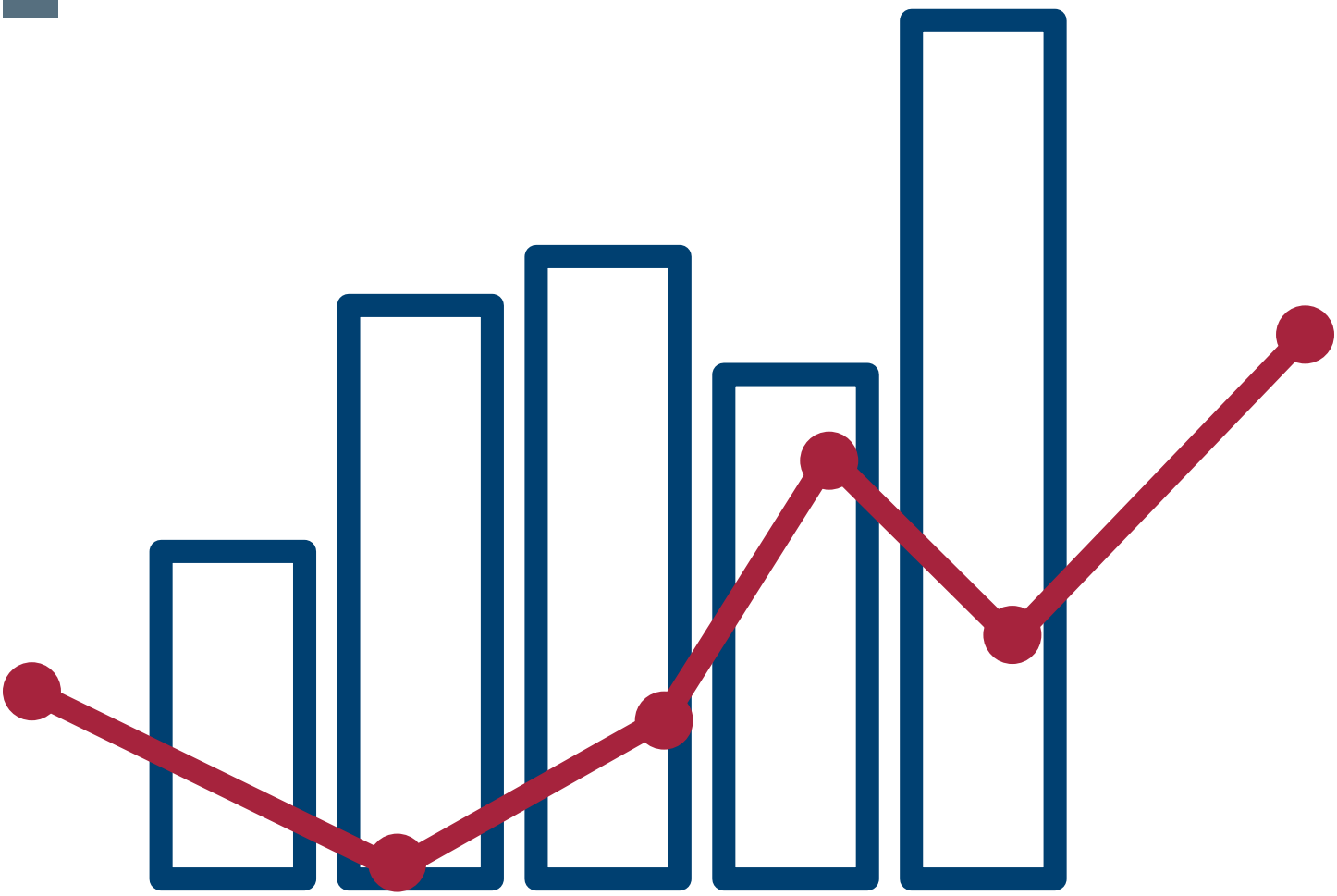
WEST VIRGINIA YOUTH RISK BEHAVIOR SURVEY, 2015:

Drug Use



West Virginia Department of EDUCATION
Research, Accountability, & Data Governance

West Virginia Youth Risk Behavior Survey, 2015: Drug Use Report

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West Virginia Department of EDUCATION

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March 2017

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Suggested Citation
Shanholtzer, B. A. (2017). *West Virginia Youth Risk Behavior Survey, 2015: Drug use report*. Charleston, WV: West Virginia Department of Education, Division of Technology, Office of Research, Accountability, and Data Governance.

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This publication was supported by Cooperative Agreement Number 1U87PS004130 from the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention.

This research study was reviewed and approved by the West Virginia Department of Education Institutional Review Board (WVDE-IRB-025). Should you desire additional details about this study's approval status, contact the WVDE IRB chairperson, Patricia Cahape Hammer (phammer@k12.wv.us).

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Introduction

The Youth Risk Behavior Surveillance System was developed by the Centers for Disease Control and Prevention (CDC) in collaboration with state and local departments of education and health, national education and health organizations, and other federal agencies. The Youth Risk Behavior Survey (YRBS), the state and local level component of this system, assesses how certain youth risk behaviors change over time. The YRBS focuses on priority health risk behaviors established during youth that may affect academic performance and result in significant mortality and morbidity rates during both youth and adulthood. It assesses behaviors in six categories: (a) injury and violence, (b) tobacco use, (c) alcohol and other drug use, (d) sexual behaviors, (e) dietary behaviors, and (f) physical activity.

With funding from CDC and with the assistance of the RESA Regional School Wellness Specialists, the YRBS has been conducted by the West Virginia Department of Education (WVDE) since 1993 for high schools and since 1999 for middle schools.

The following series of YRBS topical reports, available at http://wvde.state.wv.us/research/reports2017.html, give a detailed snapshot of particular student risk behaviors across programmatic levels from high school back to early middle school ages:

- West Virginia Youth Risk Behavior Survey, 2015: Alcohol Use
- West Virginia Youth Risk Behavior Survey, 2015: Bullying and Suicidal Ideation
- West Virginia Youth Risk Behavior Survey, 2015: Dietary Behavior
- West Virginia Youth Risk Behavior Survey, 2015: Disease Prevention
- West Virginia Youth Risk Behavior Survey, 2015: Drug Use
- West Virginia Youth Risk Behavior Survey, 2015: Injury Risk
- West Virginia Youth Risk Behavior Survey, 2015: Physical Activity
- West Virginia Youth Risk Behavior Survey, 2015: Sexual Behavior
- West Virginia Youth Risk Behavior Survey, 2015: Tobacco Use
- West Virginia Youth Risk Behavior Survey, 2015: Violence
- West Virginia Youth Risk Behavior Survey, 2015: Weight Management

Methods

See the Appendix, page 22 for details about sampling procedures, sample characteristics, questionnaires, weighting of the raw data, data analysis, and interpretation of the results.

Results

The results include time trend graphs to show how youth behaviors have changed over time through 2015. Results include prevalence by demographic characteristics such as gender and grade level. High school results are presented first, followed by middle school data where applicable. Results are not available for high school students for 2001 and middle school students for 2003 and 2005.

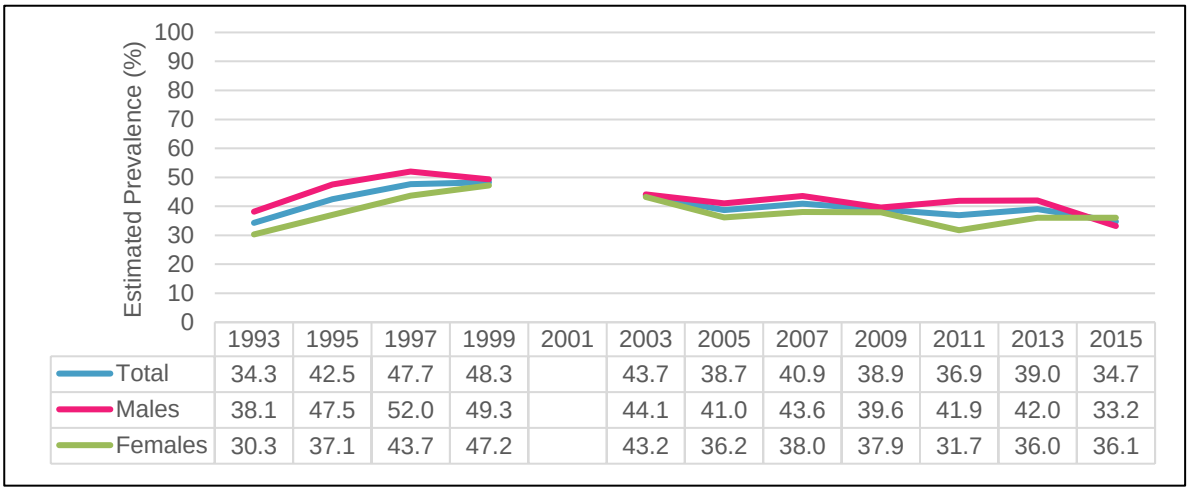
Ever Used Marijuana

Definition: Weighted percentage of students who used marijuana one or more times during their life.

High school students

The prevalence of ever used marijuana among high school students was 34.7% in 2015.

Figure 1 displays the prevalence of this level of use among high school students for the years 1993-2015. The results show that the prevalence increased from 1993 to 1997 and decreased from 1997 to 2015 for the total population and among both males and females.



	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
Total	34.3	42.5	47.7	48.3		43.7	38.7	40.9	38.9	36.9	39.0	34.7
Males	38.1	47.5	52.0	49.3		44.1	41.0	43.6	39.6	41.9	42.0	33.2
Females	30.3	37.1	43.7	47.2		43.2	36.2	38.0	37.9	31.7	36.0	36.1

Figure 1. Prevalence of Ever Used Marijuana Among West Virginia High School Students
Data source: WV Department of Education, Youth Risk Behavior Survey

Table 1 displays the prevalence of ever used marijuana among high school students by demographic characteristics for 2015. While there was no significant gender difference, the results indicate that the prevalence was significantly higher among 11th-grade and 12th-grade students than among 9th-grade students.

Table 1. Prevalence of Ever Used Marijuana Among WV High School Students by Gender and Grade Level, 2015

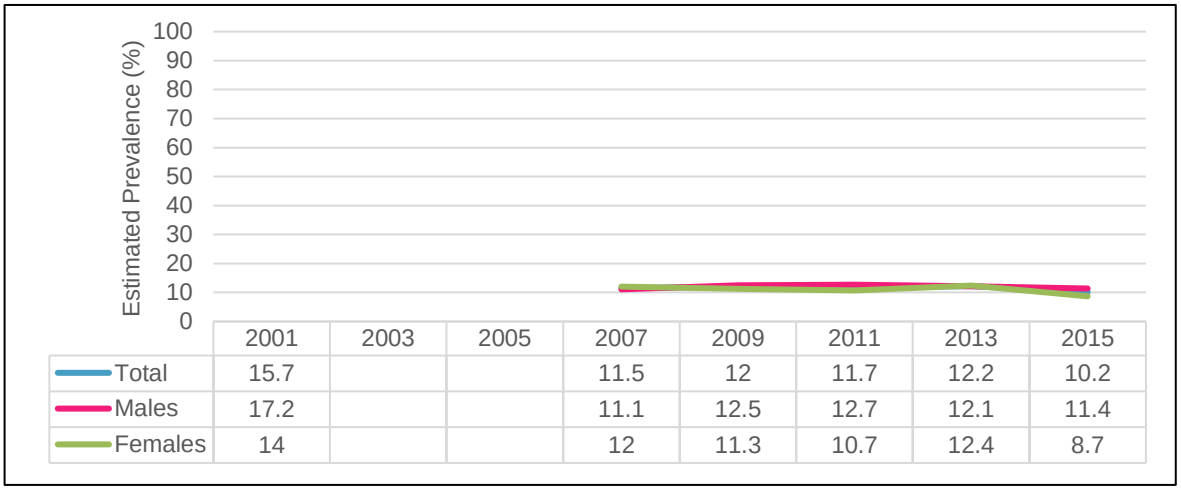
Characteristic	Estimated prevalence (%)	95% confidence interval	Weighted frequency
Total	34.7	30.1-39.3	26,421
Male	33.2	27.8-38.6	12,599
Female	36.1	31.0-41.1	13,742
9th	25.2	18.0-32.3	5,296
10th	34.6	23.8-45.3	6,656
11th	38.8	34.0-43.6	7,064
12th	41.8	37.1-46.5	7,237

Data source: West Virginia Department of Education, Youth Risk Behavior Survey, 2015

Middle school students

The prevalence of ever used marijuana among middle school students was 10.2% in 2015.

Figure 2 shows that while the prevalence of ever used marijuana among middle school students significantly decreased from 2001 to 2015 for the total population, there was no significant change among males or females.



	2001	2003	2005	2007	2009	2011	2013	2015
Total	15.7			11.5	12	11.7	12.2	10.2
Males	17.2			11.1	12.5	12.7	12.1	11.4
Females	14			12	11.3	10.7	12.4	8.7

Figure 2. Prevalence of Ever Used Marijuana Among West Virginia Middle School Students
Data source: WV Department of Education, Youth Risk Behavior Survey

Table 2 displays the prevalence of ever use marijuana among middle school students by demographic characteristics for 2015. While there was no significant gender difference, the results indicate that the prevalence was significantly higher among 8th-grade students than among 6th-grade students.

Table 2. Prevalence of Ever Used Marijuana Among WV Middle School Students by Gender and Grade Level, 2015

Characteristic	Estimated prevalence (%)	95% confidence interval	Weighted frequency
Total	10.2	8.4-11.9	5,664
Male	11.4	8.3-14.6	3,255
Female	8.7	7.0-10.5	2,357
6th	5.9	3.3-8.4	1,022
7th	8.7	5.1-12.3	1,667
8th	15.5	11.3-19.7	2,914

Data source: West Virginia Department of Education, Youth Risk Behavior Survey, 2015

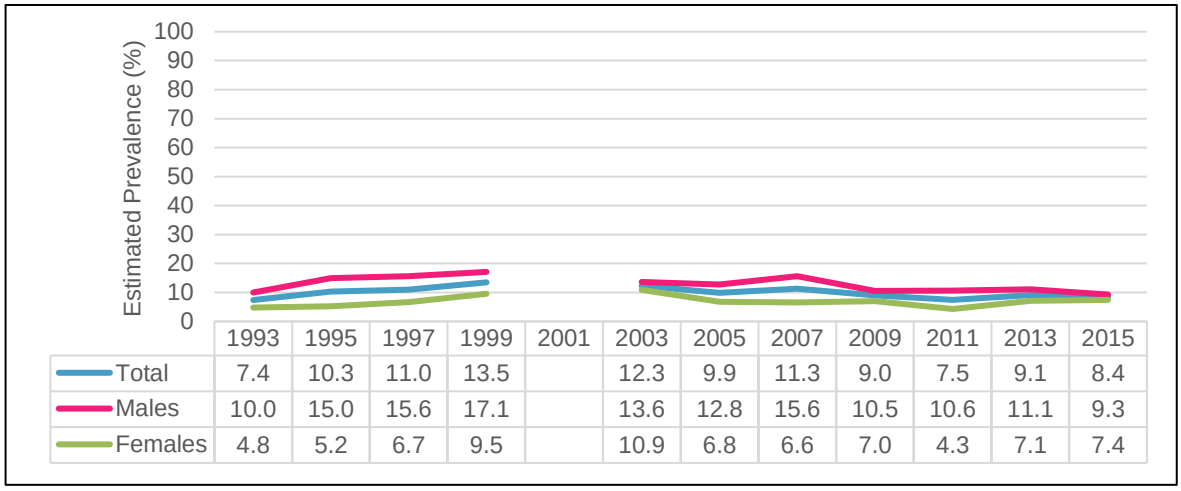
Used Marijuana Before Age 13

Definition: Weighted percentage of high school students who tried marijuana for the first time before age 13, or middle school students before age 11.

High school students

The prevalence of used marijuana before age 13 among high school students was 8.4% in 2015.

Figure 3 displays the prevalence of used marijuana before age 13 among high school students for the years 1993-2015. The results indicate that the prevalence of early marijuana use significantly increased from 1993 to 1999 and significantly decreased from 1999 to 2015.



	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
Total	7.4	10.3	11.0	13.5		12.3	9.9	11.3	9.0	7.5	9.1	8.4
Males	10.0	15.0	15.6	17.1		13.6	12.8	15.6	10.5	10.6	11.1	9.3
Females	4.8	5.2	6.7	9.5		10.9	6.8	6.6	7.0	4.3	7.1	7.4

Figure 3. Prevalence of Used Marijuana Before Age 13 Among West Virginia High School Students

Data source: WV Department of Education, Youth Risk Behavior Survey

Table 3 displays the prevalence of used marijuana before age 13 among high school students by demographic characteristics for 2015. The results indicate no significant gender or grade differences in the prevalence of this indicator.

Table 3. Prevalence of Used Marijuana Before Age 13 Among WV High School Students by Gender and Grade Level, 2015

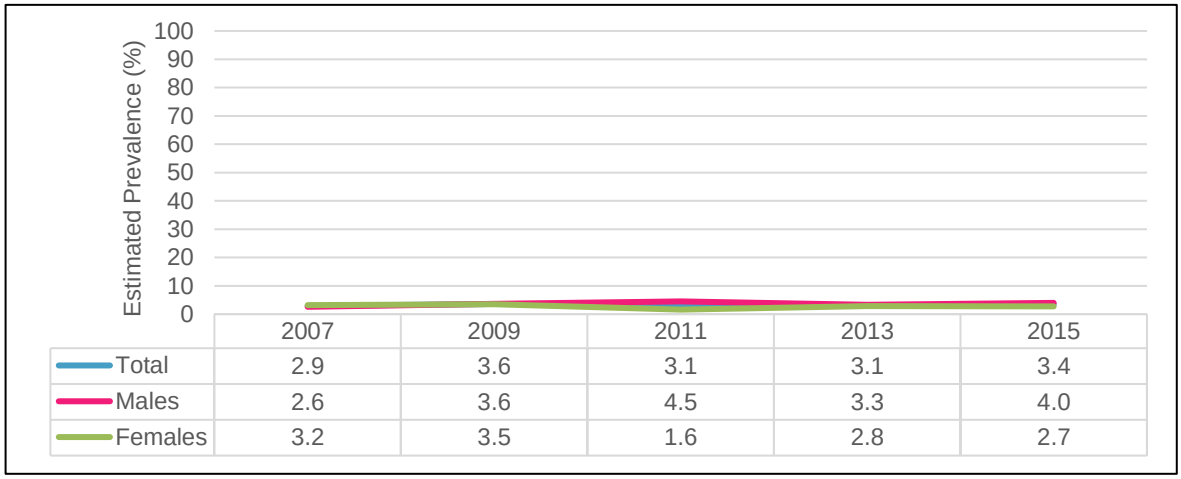
Characteristic	Estimated prevalence (%)	95% confidence interval	Weighted frequency
Total	8.4	5.6-11.1	6,471
Male	9.3	5.7-13.0	3,608
Female	7.4	5.2-9.6	2,834
9th	8.1	3.4-12.9	1,732
10th	10.3	6.1-14.5	2,015
11th	6.9	3.7-10.0	1,269
12th	7.7	3.2-12.2	1,345

Data source: West Virginia Department of Education, Youth Risk Behavior Survey, 2015

Middle school students

The prevalence of used marijuana before age 11 among middle school students was 3.4% in 2015.

Figure 4 displays the prevalence of used marijuana before age 11 among middle school students for the years 2007-2015. No significant change is indicated for this prevalence.



	2007	2009	2011	2013	2015
Total	2.9	3.6	3.1	3.1	3.4
Males	2.6	3.6	4.5	3.3	4.0
Females	3.2	3.5	1.6	2.8	2.7

Figure 4. Prevalence of Used Marijuana Before Age 11 Among West Virginia Middle School Students

Data source: WV Department of Education, Youth Risk Behavior Survey

Table 4 displays the prevalence of used marijuana before age 11 among middle school students by demographic characteristics for 2015. The results indicate no significant gender or grade differences in the prevalence of this indicator.

Table 4. Prevalence of Used Marijuana Before Age 11 Among WV Middle School Students by Gender and Grade Level, 2015

Characteristic	Estimated prevalence (%)	95% confidence interval	Weighted frequency
Total	3.4	2.3-4.6	1,916
Male	4.0	2.4-5.7	1,156
Female	2.7	1.3-4.2	734
6th	3.8	1.1-6.5	663
7th	2.9	1.5-4.3	562
8th	3.5	1.2-5.7	655

Data source: West Virginia Department of Education, Youth Risk Behavior Survey, 2015

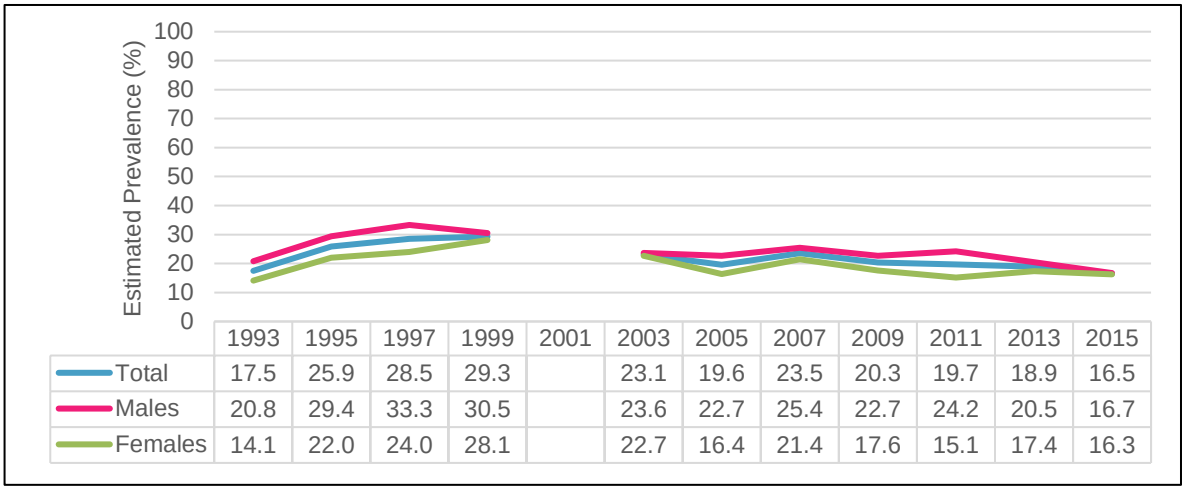
Currently Used Marijuana

Definition: Weighted percentage of students who currently used marijuana one or more times during the 30 days before the survey.

High school students

The prevalence of currently used marijuana among high school students was 16.5% in 2015.

Figure 5 displays the prevalence of current marijuana use among high school students for the years 1993-2015. The results indicate that the prevalence significantly increased from 1993 to 1997 and significantly decreased from 1997 to 2015 for the total population and among both males and females.



	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
Total	17.5	25.9	28.5	29.3		23.1	19.6	23.5	20.3	19.7	18.9	16.5
Males	20.8	29.4	33.3	30.5		23.6	22.7	25.4	22.7	24.2	20.5	16.7
Females	14.1	22.0	24.0	28.1		22.7	16.4	21.4	17.6	15.1	17.4	16.3

Figure 5. Prevalence of Currently Used Marijuana Among West Virginia High School Students

Data source: WV Department of Education, Youth Risk Behavior Survey

Table 5 displays the prevalence of currently used marijuana among high school students by demographic characteristics for 2015. The results indicate no significant gender or grade differences in the prevalence of this indicator.

Table 5. Prevalence of Currently Used Marijuana Among West Virginia High School Students by Gender and Grade Level, 2015

Characteristic	Estimated prevalence (%)	95% confidence interval	Weighted frequency
Total	16.5	13.1-20.0	12,714
Male	16.7	12.7-20.8	6,421
Female	16.3	12.7-19.9	6,254
9th	13.7	7.0-20.3	2,912
10th	18.9	12.1-25.7	3,666
11th	17.5	14.0-20.9	3,224
12th	16.0	11.6-20.4	2,787

Data source: West Virginia Department of Education, Youth Risk Behavior Survey, 2015

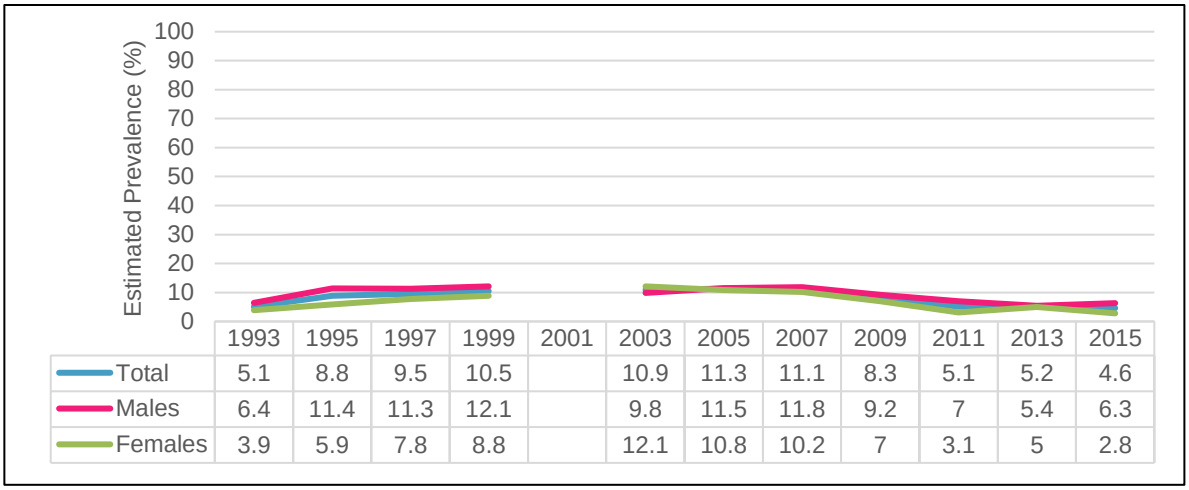
Ever Used Cocaine

Definition: Weighted percentage of students who ever used cocaine (any form of cocaine, such as powder, crack, or freebase) one or more times during their life.

High school students

The prevalence of ever used cocaine among high school students was 4.6% in 2015.

Figure 6 displays the prevalence of ever used cocaine among high school students for the years 1993-2015. The results indicate the prevalence significantly increased from 1993 to 2003 and has significantly decreased since 2003 for the total population and among females. A similar pattern was found for the prevalence of ever used cocaine among males which significantly increased from 1993 to 2007 and significantly decreased from 2007 to 2015.



	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
Total	5.1	8.8	9.5	10.5		10.9	11.3	11.1	8.3	5.1	5.2	4.6
Males	6.4	11.4	11.3	12.1		9.8	11.5	11.8	9.2	7	5.4	6.3
Females	3.9	5.9	7.8	8.8		12.1	10.8	10.2	7	3.1	5	2.8

Figure 6. Prevalence of Ever Used Cocaine Among West Virginia High School Students
Data source: WV Department of Education, Youth Risk Behavior Survey

Table 6 displays the prevalence of ever used cocaine among high school students by demographic characteristics for 2015. The results indicate no significant gender or grade differences in the prevalence of this indicator.

Table 6. Prevalence of Ever Used Cocaine Among WV High School Students by Gender and Grade Level, 2015

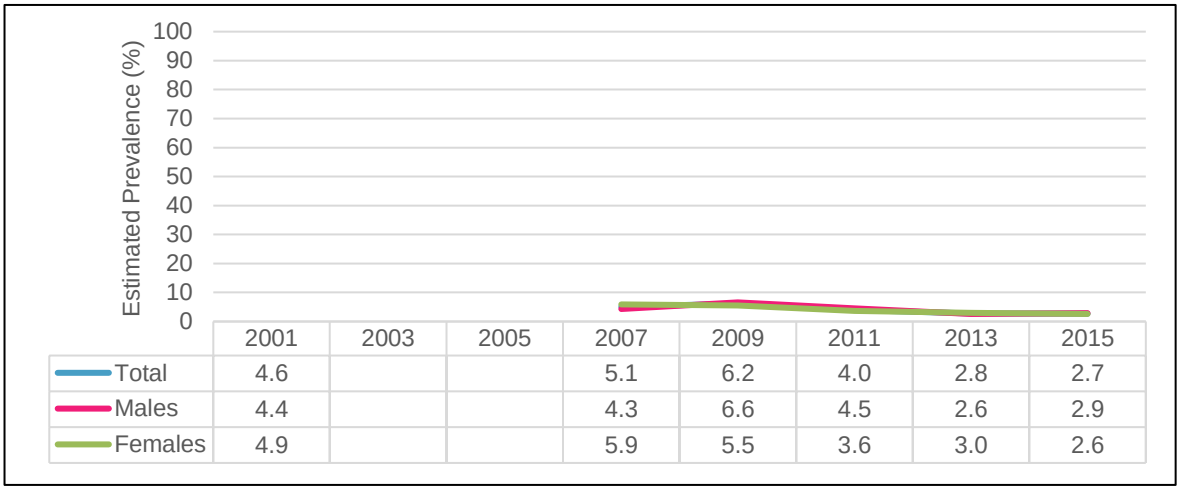
Characteristic	Estimated prevalence (%)	95% confidence interval	Weighted frequency
Total	4.6	2.7-6.5	3,593
Male	6.3	3.0-9.6	2,495
Female	2.8	1.4-4.2	1,067
9th	4.1	0.1-8.1	891
10th	5.2	2.8-7.6	1,037
11th	3.8	1.6-6.0	710
12th	4.7	1.4-8.1	843

Data source: West Virginia Department of Education, Youth Risk Behavior Survey, 2015

Middle school students

The prevalence of ever used cocaine among middle school students was 2.7% in 2015.

Figure 7 displays the prevalence of ever used cocaine among middle school students for the years 2001-2015. The results indicate that the prevalence significantly decreased during that time for the total population and among females, with no significant change among males.



	2001	2003	2005	2007	2009	2011	2013	2015
Total	4.6			5.1	6.2	4.0	2.8	2.7
Males	4.4			4.3	6.6	4.5	2.6	2.9
Females	4.9			5.9	5.5	3.6	3.0	2.6

Figure 7. Prevalence of Ever Used Cocaine Among West Virginia Middle School Students
Data source: WV Department of Education, Youth Risk Behavior Survey

Table 7 displays the prevalence of ever used cocaine among middle school students by demographic characteristics for 2015. The results indicate no gender or grade differences in the prevalence of this indicator.

Table 7. Prevalence of Ever Used Cocaine Among WV Middle School Students by Gender and Grade Level, 2015

Characteristic	Estimated prevalence (%)	95% confidence interval	Weighted frequency
Total	2.7	1.8-3.7	1,616
Male	2.9	1.4-4.5	888
Female	2.6	1.6-3.5	728
6th	2.2	1.0-3.4	409
7th	2.7	1.5-3.8	536
8th	3.4	1.2-5.6	671

Data source: West Virginia Department of Education, Youth Risk Behavior Survey, 2015

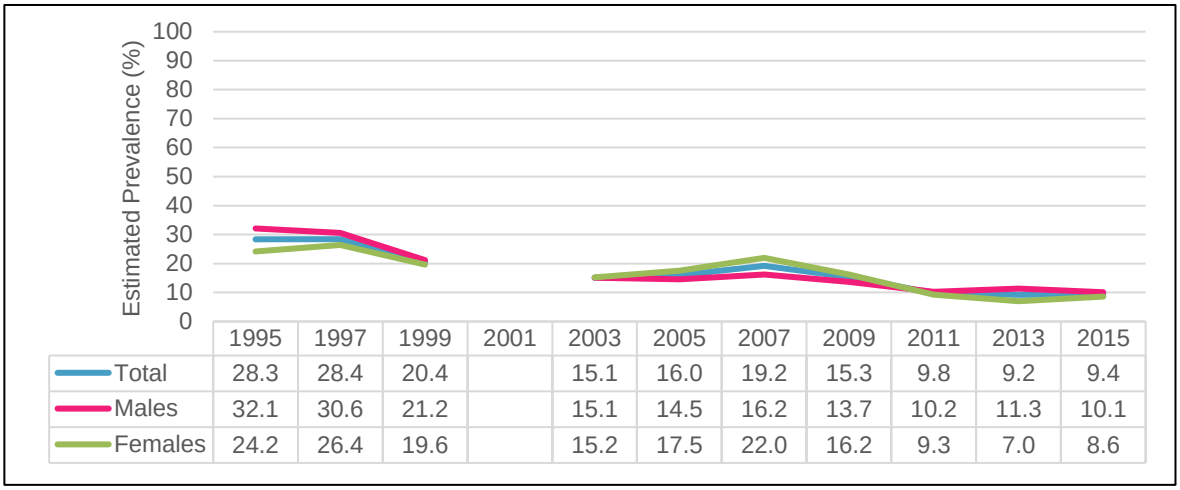
Ever Used Inhalants

Definition: Weighted percentage of students who 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.

High school students

The prevalence of ever used inhalants among high school students was 9.4% in 2015.

Figure 8 displays the prevalence of ever used inhalants among high school students for the years 1995-2015. The results indicate that the prevalence significantly decreased during that time for the total population and among both males and females.



	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
Total	28.3	28.4	20.4		15.1	16.0	19.2	15.3	9.8	9.2	9.4
Males	32.1	30.6	21.2		15.1	14.5	16.2	13.7	10.2	11.3	10.1
Females	24.2	26.4	19.6		15.2	17.5	22.0	16.2	9.3	7.0	8.6

Figure 8. Prevalence of Ever Used Inhalants Among West Virginia High School Students
Data source: WV Department of Education, Youth Risk Behavior Survey

Table 8 displays the prevalence of ever used inhalants among high school students by demographic characteristics for 2015. The results indicate no gender or grade differences in the prevalence of this indicator.

Table 8. Prevalence of Ever Used Inhalants Among West Virginia High School Students by Gender and Grade Level, 2015

Characteristic	Estimated prevalence (%)	95% confidence interval	Weighted frequency
Total	9.4	7.3-11.4	7,333
Male	10.1	7.7-12.5	4,000
Female	8.6	6.3-10.9	3,304
9th	9.7	6.1-13.3	2,099
10th	11.5	7.8-15.2	2,279
11th	6.5	3.7-9.6	1,232
12th	9.0	4.2-13.8	1,612

Data source: West Virginia Department of Education, Youth Risk Behavior Survey, 2015

Middle school students

The prevalence of ever used inhalants among middle school students was 7.0% in 2015.

Figure 9 displays the prevalence of ever used inhalants among middle school students for the years 2011-2015. The results indicate the prevalence significantly decreased during that time for the total population and among both males and females.

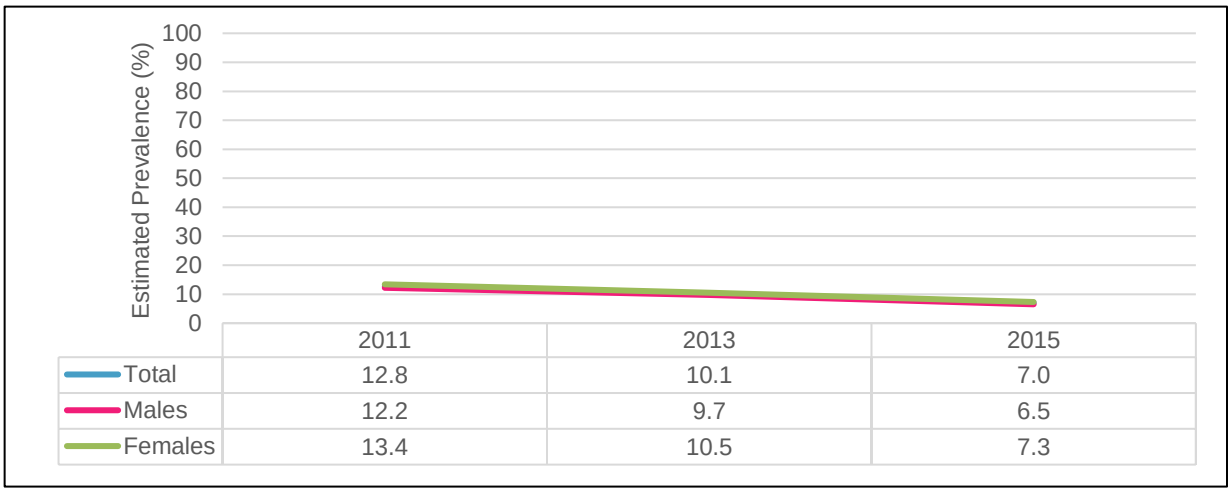


Figure 9. Prevalence of Ever Used Inhalants Among West Virginia Middle School Students
Data source: WV Department of Education, Youth Risk Behavior Survey

Table 9 displays the prevalence of ever used inhalants among middle school students by demographic characteristics for 2015. The results indicate no gender or grade differences in the prevalence of this indicator.

Table 9. Prevalence of Ever Used Inhalants Among WV Middle School Students by Gender and Grade Level, 2015

Characteristic	Estimated prevalence (%)	95% confidence interval	Weighted frequency
Total	7.0	5.0-9.1	4,124
Male	6.5	4.6-8.5	1,974
Female	7.3	4.7-9.9	2,065
6th	6.3	4.2-8.4	1,163
7th	6.5	3.9-9.0	1,293
8th	8.3	3.4-13.2	1,642

Data source: West Virginia Department of Education, Youth Risk Behavior Survey, 2015

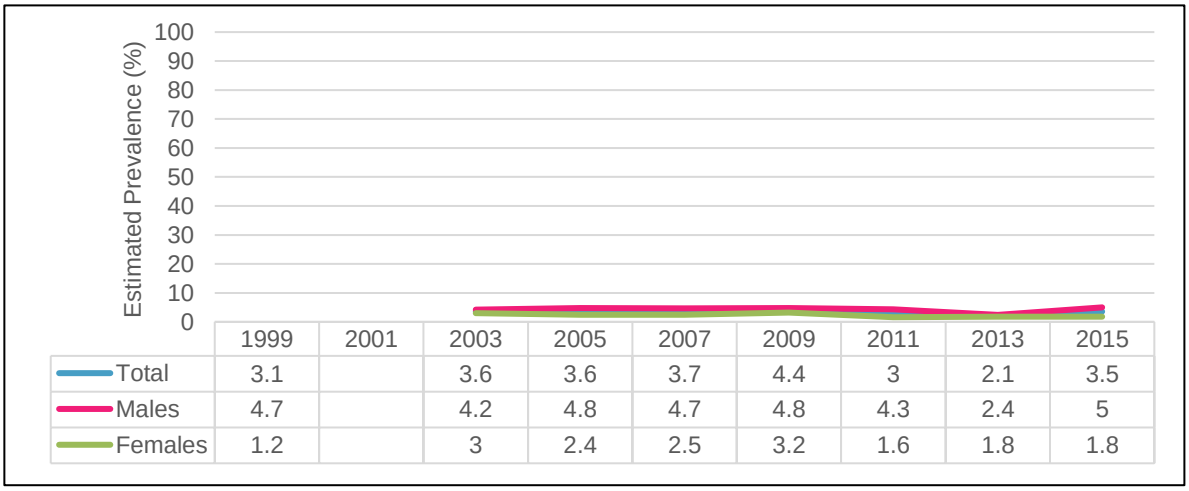
Ever Used Heroin

Definition: Weighted percentage of students who ever used heroin (also called smack, junk, or China white) one or more times during their life.

High school students

The prevalence of ever used heroin among high school students was 3.5% in 2015.

Figure 10 displays the prevalence of ever used heroin among high school students for 1999-2015. The results indicate no significant change in the prevalence for the total population and among males. The prevalence among females significantly increased from 1999 to 2005 with no change since 2005.



	1999	2001	2003	2005	2007	2009	2011	2013	2015
Total	3.1		3.6	3.6	3.7	4.4	3	2.1	3.5
Males	4.7		4.2	4.8	4.7	4.8	4.3	2.4	5
Females	1.2		3	2.4	2.5	3.2	1.6	1.8	1.8

Figure 10. Prevalence of Ever Used Heroin Among West Virginia High School Students
Data source: WV Department of Education, Youth Risk Behavior Survey

Table 10 displays the prevalence of ever used heroin among high school students by demographic characteristics for 2015. The prevalence was significantly higher among males than among females. There were no significant grade differences in the prevalence of this indicator.

Table 10. Prevalence of Ever Used Heroin Among WV High School Students by Gender and Grade Level, 2015

Characteristic	Estimated prevalence (%)	95% confidence interval	Weighted frequency
Total	3.5	2.1-4.8	2,718
Male	5.0	3.0-7.0	1,986
Female	1.8	1.0-2.7	702
9th	4.1	0.9-7.3	884
10th	2.9	0.0-6.2	573
11th	2.2	0.7-3.7	411
12th	4.1	0.6-7.7	738

Data source: West Virginia Department of Education, Youth Risk Behavior Survey, 2015

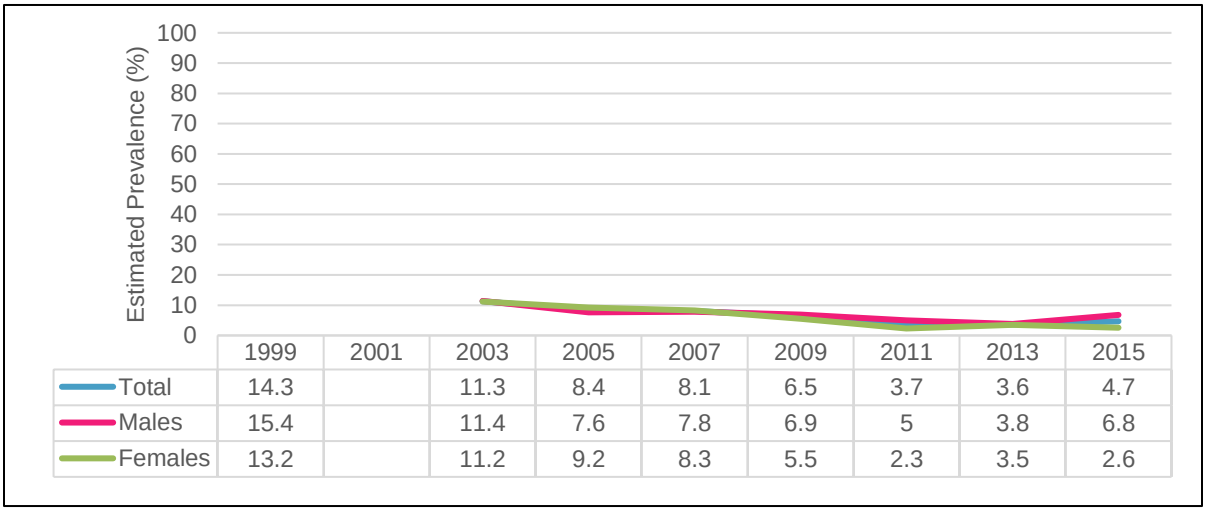
Ever Used Methamphetamines

Definition: Weighted percentage of students who ever used methamphetamines (also called speed, crystal, crank, or ice) one or more times during their life.

High school students

The prevalence of ever used methamphetamines among high school students was 4.7% in 2015. West Virginia ranked third highest in the nation for methamphetamine use among high school students (Kann et al., 2016).

Figure 11 shows the prevalence of ever used methamphetamines among high school students has significantly decreased since 1999 for the total population and among both males and females.



	1999	2001	2003	2005	2007	2009	2011	2013	2015
Total	14.3		11.3	8.4	8.1	6.5	3.7	3.6	4.7
Males	15.4		11.4	7.6	7.8	6.9	5	3.8	6.8
Females	13.2		11.2	9.2	8.3	5.5	2.3	3.5	2.6

Figure 11. Prevalence of Ever Used Methamphetamines Among West Virginia High School Students

Data source: WV Department of Education, Youth Risk Behavior Survey

Table 11 displays the prevalence of ever used methamphetamines among high school students by demographic characteristics for 2015. The results indicate no gender or grade differences in the prevalence of this indicator.

Table 11. Prevalence of Ever Used Methamphetamines Among WV High School Students by Gender and Grade Level, 2015

Characteristic	Estimated prevalence (%)	95% confidence interval	Weighted frequency
Total	4.7	2.7-6.7	3,700
Male	6.8	3.5-10.1	2,692
Female	2.6	1.6-3.6	994
9th	3.8	1.5-6.1	824
10th	5.4	1.5-9.3	1,081
11th	3.4	1.6-5.2	629
12th	5.9	1.0-10.7	1,054

Data source: West Virginia Department of Education, Youth Risk Behavior Survey, 2015

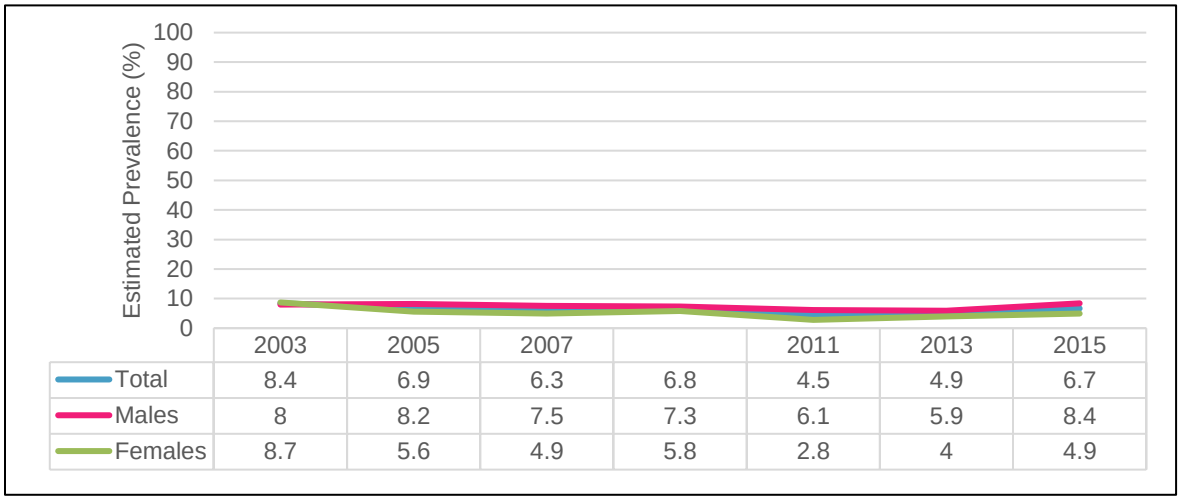
Ever Used Ecstasy

Definition: Weighted percentage of students who ever used ecstasy (also call MDMA) one or more times during their life.

High school students

The prevalence of ever used ecstasy among high school students was 6.7% in 2015.

Figure 12 displays the prevalence of ever used ecstasy among high school students for the years 2003-2015. The results indicate the prevalence significantly decreased from 2003 to 2015 for the total population and among females but there was no significant change among males.



	2003	2005	2007		2011	2013	2015
Total	8.4	6.9	6.3	6.8	4.5	4.9	6.7
Males	8	8.2	7.5	7.3	6.1	5.9	8.4
Females	8.7	5.6	4.9	5.8	2.8	4	4.9

Figure 12. Prevalence of Ever Used Ecstasy Among West Virginia High School Students
Data source: WV Department of Education, Youth Risk Behavior Survey

Table 12 displays the prevalence of ever used ecstasy among high school students by demographic characteristics for 2015. The results indicate no gender or grade differences in the prevalence of this indicator.

Table 12. Prevalence of Ever Used Ecstasy Among WV High School Students by Gender and Grade Level, 2015

Characteristic	Estimated prevalence (%)	95% confidence interval	Weighted frequency
Total	6.7	4.7-8.7	5,261
Male	8.4	5.6-11.2	3,360
Female	4.9	2.9-6.8	1,872
9th	6.2	2.4-10.0	1,351
10th	6.9	3.5-10.2	1,366
11th	4.5	1.9-7.0	829
12th	8.8	4.4-13.1	1,575

Data source: West Virginia Department of Education, Youth Risk Behavior Survey, 2015

Ever Used Synthetic Marijuana

Definition: Weighted percentage of students who 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.

High school students

The prevalence of ever used synthetic marijuana among high school students was 14.6% in 2015. West Virginia ranked the highest in the nation in 2015 for synthetic marijuana use among high school students (Kann et al., 2016).

No time trend results are available for this indicator as it was first assessed in 2015.

Table 13 displays the prevalence of ever used synthetic marijuana among high school students by demographic characteristics for 2015. The results indicate no gender or grade differences in the prevalence of this indicator.

Table 13. Prevalence of Ever Used Synthetic Marijuana Among WV High School Students by Gender and Grade Level, 2015

Characteristic	Estimated prevalence (%)	95% confidence interval	Weighted frequency
Total	14.6	12.1-17.1	11,424
Male	14.8	11.5-18.1	5,862
Female	14.3	11.2-17.4	5,507
9th	10.5	5.8-15.3	2,294
10th	15.1	11.7-18.4	2,987
11th	14.0	9.9-18.2	2,591
12th	19.4	13.6-25.3	3,482

Data source: West Virginia Department of Education, Youth Risk Behavior Survey, 2015

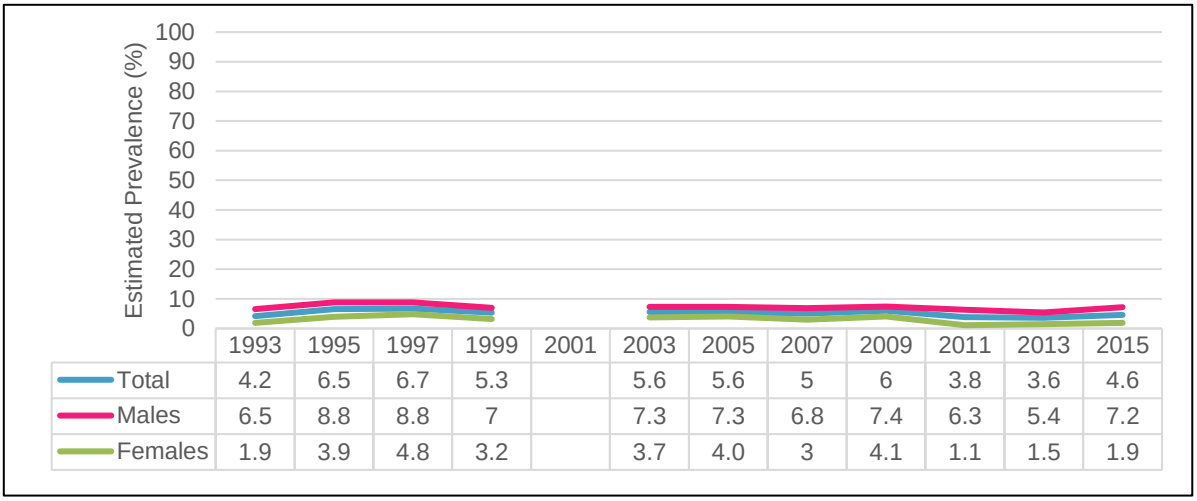
Ever Took Steroids Without a Doctor's Prescription

Definition: Weighted percentage of students who ever took steroids without a doctor's prescription, pills or shots, one or more times during their life.

High school students

The prevalence of ever took steroids without a doctor's prescription among high school students was 4.6% in 2015.

Figure 13 displays the prevalence of ever took steroids without a doctor's prescription among high school students for the years 1993-2015. The results indicate the prevalence significantly increased from 1993 to 1997 and significantly decreased from 1997 to 2015 for the total population and among females. There was no significant change in the prevalence among males during that time period.



	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
Total	4.2	6.5	6.7	5.3		5.6	5.6	5	6	3.8	3.6	4.6
Males	6.5	8.8	8.8	7		7.3	7.3	6.8	7.4	6.3	5.4	7.2
Females	1.9	3.9	4.8	3.2		3.7	4.0	3	4.1	1.1	1.5	1.9

Figure 13. Prevalence of Ever Took Steroids Without a Doctor's Prescription Among West Virginia High School Students

Data source: WV Department of Education, Youth Risk Behavior Survey

Table 14 displays the prevalence of ever took steroids without a doctor's prescription among high school students by demographic characteristics for 2015. The results show the prevalence was significantly higher among males than among females. There were no significant grade differences observed.

Table 14. Prevalence of Ever Took Steroids Without a Doctor's Prescription Among WV High School Students by Gender and Grade Level, 2015

Characteristic	Estimated prevalence (%)	95% confidence interval	Weighted frequency
Total	4.6	3.3-6.0	3,668
Male	7.2	5.0-9.4	2,889
Female	1.9	0.6-3.3	749
9th	5.5	3.0-8.7	1,213
10th	4.4	2.1-6.7	882
11th	2.0	0.7-3.3	367
12th	6.1	1.9-10.3	1,095

Data source: West Virginia Department of Education, Youth Risk Behavior Survey, 2015

Middle school students

The prevalence of ever took steroids without a doctor's prescription among middle school students was 1.4% in 2015.

Figure 14 shows the prevalence of ever took steroids without a doctor's prescription among middle school students remained stable from 2011 to 2015.

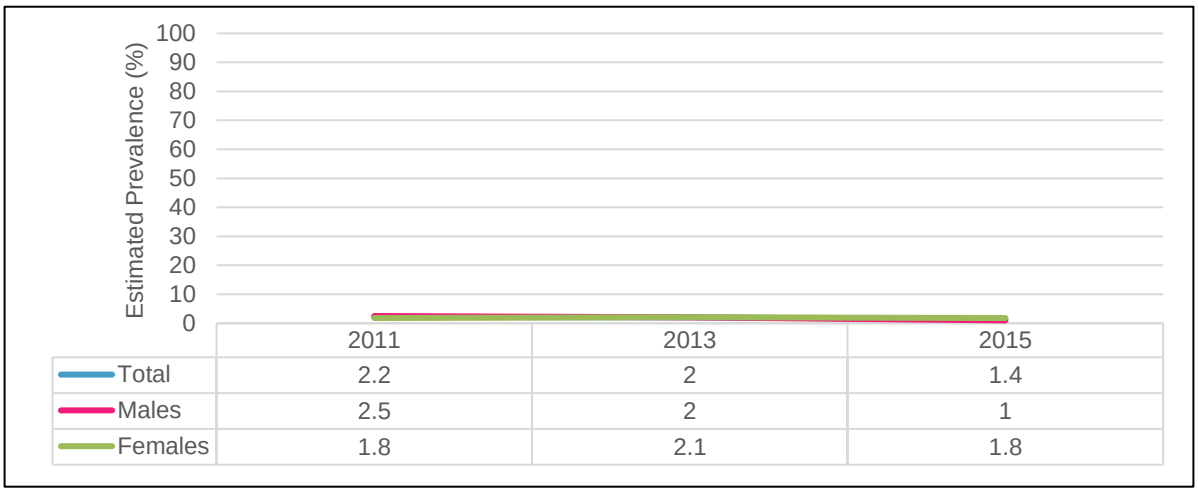


Figure 14. Prevalence of Ever Took Steroids Without a Doctor's Prescription Among West Virginia Middle School Students

Data source: WV Department of Education, Youth Risk Behavior Survey

Table 15 displays the prevalence of ever took steroids without a doctor's prescription among middle school students by demographic characteristics for 2015. The results indicate no gender or grade differences in the prevalence of this indicator.

Table 15. Prevalence of Ever Took Steroids Without a Doctor's Prescription Among WV Middle School Students by Gender and Grade Level, 2015

Characteristic	Estimated prevalence (%)	95% confidence interval	Weighted frequency
Total	1.4	0.6-2.2	803
Male	1.0	0.0-2.0	295
Female	1.8	1.0-2.6	508
6th	0.5	0.0-1.1	82
7th	1.3	0.3-2.4	265
8th	2.3	0.5-4.1	456

Data source: West Virginia Department of Education, Youth Risk Behavior Survey, 2015

Ever Took Prescription Drugs Without a Doctor's Prescription

Definition: Weighted percentage of students who ever took prescription drugs, such as OxyContin, Percocet, Vicodin, codeine, Adderall, Ritalin, or Xanax, without a doctor's prescription one or more times during their life.

High school students

The prevalence of ever took prescription drugs without a doctor's prescription among high school students was 15.5% in 2015.

Figure 15 displays the prevalence of this indicator among high school students for 2011-2015. The results indicate that the prevalence remained stable during that time period.

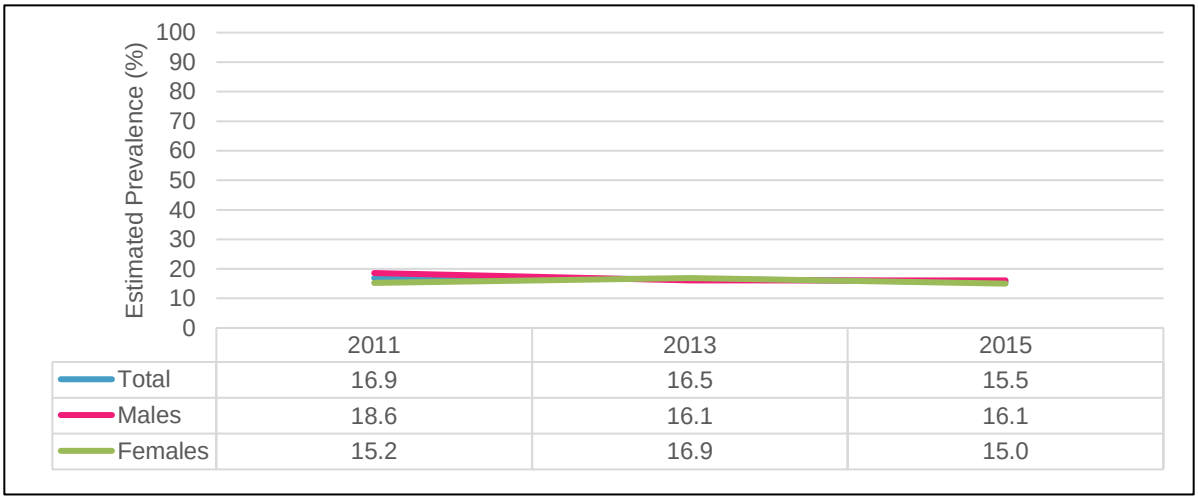


Figure 15. Prevalence of Ever Took Prescription Drugs Without a Doctor's Prescription Among West Virginia High School Students

Data source: WV Department of Education, Youth Risk Behavior Survey

Table 16 displays the prevalence of ever took prescription drugs without a doctor's prescription among high school students by demographic characteristics for 2015. The results indicate no gender or grade differences in the prevalence of this indicator.

Table 16. Prevalence of Ever Took Prescription Drugs Without a Doctor's Prescription Among WV High School Students by Gender and Grade Level, 2015

Characteristic	Estimated prevalence (%)	95% confidence interval	Weighted frequency
Total	15.5	12.1-18.9	12,157
Male	16.1	11.6-20.5	6,395
Female	15.0	11.6-18.4	5,748
9th	13.7	7.3-20.1	2,975
10th	16.6	10.3-22.9	3,309
11th	13.2	9.2-17.2	2,437
12th	18.3	12.8-23.9	3,295

Data source: West Virginia Department of Education, Youth Risk Behavior Survey, 2015

Middle school students

The prevalence of ever took prescription drugs without a doctor's prescription among middle school students was 4.5% in 2015.

Figure 16 displays the prevalence of this indicator among middle school students for 2011-2015. The prevalence significantly decreased from 2011 to 2015 for the total population and among males with no significant change among females.

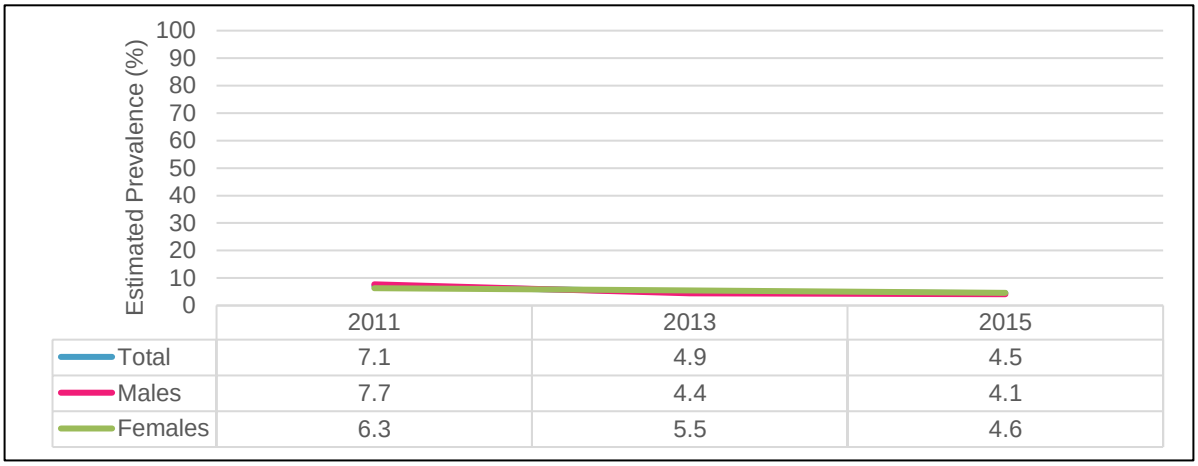


Figure 16. Prevalence of Ever Took Prescription Drugs Without a Doctor's Prescription Among West Virginia Middle School Students

Data source: WV Department of Education, Youth Risk Behavior Survey

Table 17 displays the prevalence of ever took prescription drugs without a doctor's prescription among middle school students by demographic characteristics for 2015. There was no gender difference for this indicator in 2015. The results show prevalence was significantly higher among 8th-grade students than among 6th-grade students.

Table 17. Prevalence of Ever Took Prescription Drugs Without a Doctor's Prescription Among WV Middle School Students by Gender and Grade Level, 2015

Characteristic	Estimated prevalence (%)	95% confidence interval	Weighted frequency
Total	4.5	3.4-5.7	2,629
Male	4.1	2.7-5.6	1,235
Female	4.6	2.9-6.3	1,271
6th	1.9	0.8-3.0	345
7th	3.3	1.7-4.9	653
8th	7.7	4.1-11.3	1,510

Data source: West Virginia Department of Education, Youth Risk Behavior Survey, 2015

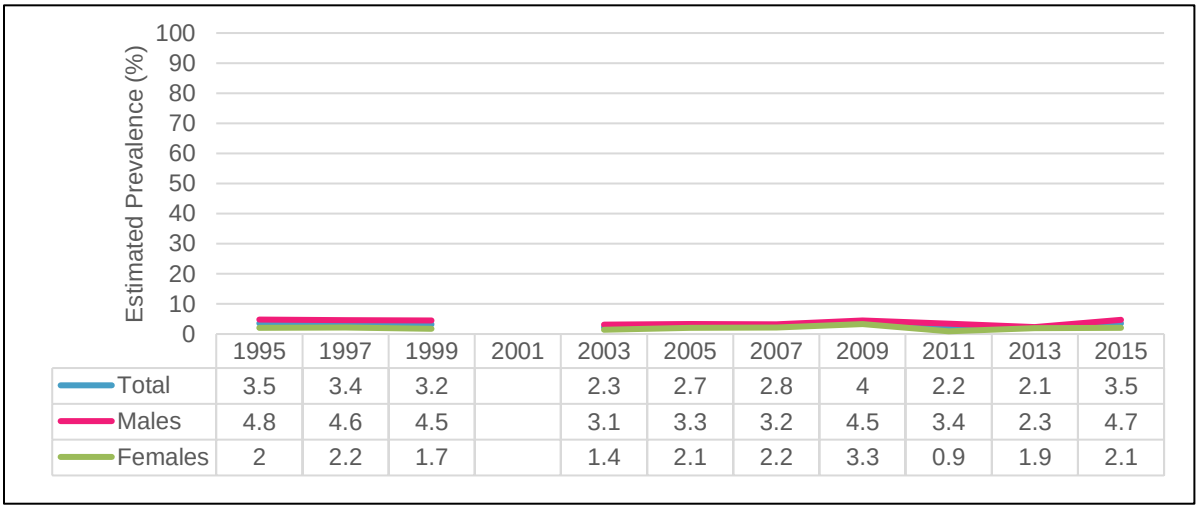
Ever Injected an Illegal Drug

Definition: Weighted percentage of students who ever injected any illegal drug (used a needle to inject any illegal drug into their body) one or more times during their life.

High school students

The prevalence of ever injected an illegal drug among high school students was 3.5% in 2015.

Figure 17 displays the prevalence of this indicator among high school students for the years 1995-2015. The results indicate the prevalence has remained stable over the past two decades.



	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
Total	3.5	3.4	3.2		2.3	2.7	2.8	4	2.2	2.1	3.5
Males	4.8	4.6	4.5		3.1	3.3	3.2	4.5	3.4	2.3	4.7
Females	2	2.2	1.7		1.4	2.1	2.2	3.3	0.9	1.9	2.1

Figure 17. Prevalence of Ever Injected an Illegal Drug Among West Virginia High School Students

Data source: WV Department of Education, Youth Risk Behavior Survey

Table 18 displays the prevalence of ever injected an illegal drug among high school students by demographic characteristics for 2015. The results indicate no gender or grade differences in the prevalence of this indicator.

Table 18. Prevalence of Ever Injected an Illegal Drug Among WV High School Students by Gender and Grade Level, 2015

Characteristic	Estimated prevalence (%)	95% confidence interval	Weighted frequency
Total	3.5	2.2-4.8	2,695
Male	4.7	2.6-6.9	1,866
Female	2.1	1.0-3.2	816
9th	4.0	1.8-6.1	855
10th	3.0	0.5-5.6	597
11th	2.5	0.9-4.2	467
12th	3.7	0.8-6.6	665

Data source: West Virginia Department of Education, Youth Risk Behavior Survey, 2015

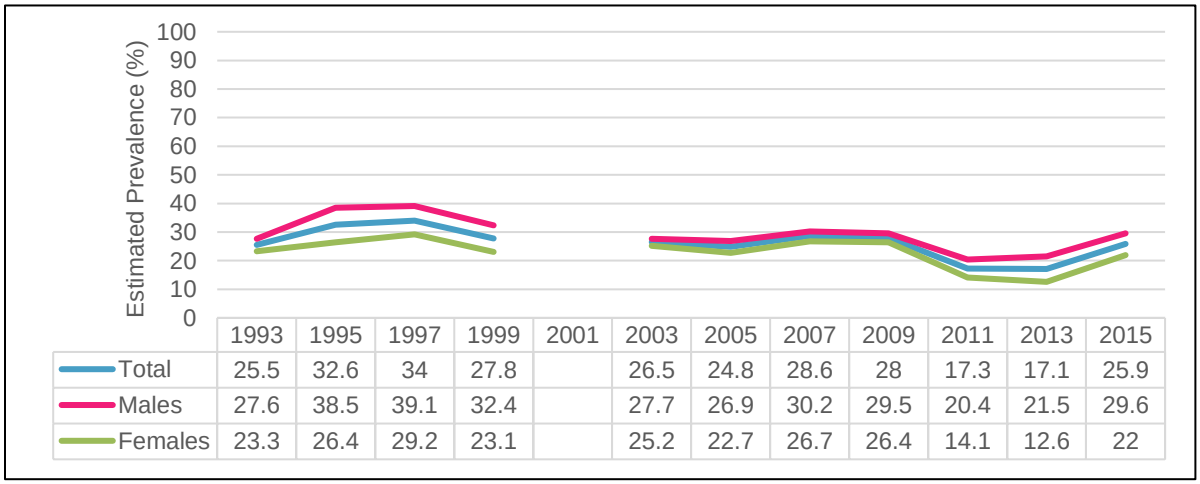
Offered, Sold, or Given an Illegal Drug on School Property in the Past Year

Definition: Weighted percentage of students who were offered, sold, or given an illegal drug on school property during the 12 months before the survey.

High school students

The prevalence of offered, sold, or given an illegal drug on school property in the past year among high school students was 25.9% in 2015.

Figure 18 displays the prevalence of this indicator for the years 1993-2015. The prevalence for the total population significantly increased from 1993 to 1997 and significantly decreased from 1997 to 2015. Among males, the prevalence significantly decreased from 1993 to 2015. Among females, the prevalence was stable from 1993 to 2007, and significantly decreased from 2007 to 2015.



	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
Total	25.5	32.6	34	27.8		26.5	24.8	28.6	28	17.3	17.1	25.9
Males	27.6	38.5	39.1	32.4		27.7	26.9	30.2	29.5	20.4	21.5	29.6
Females	23.3	26.4	29.2	23.1		25.2	22.7	26.7	26.4	14.1	12.6	22

Figure 18. Prevalence of Offered, Sold, or Given an Illegal Drug on School Property in the Past Year Among West Virginia High School Students

Data source: WV Department of Education, Youth Risk Behavior Survey

Table 19 displays the prevalence of offered, sold, or given an illegal drug on school property by demographic characteristics for 2015. The results indicate no gender or grade differences for this indicator.

Table 19. Prevalence of Offered, Sold, or Given an Illegal Drug on School Property in the Past Year Among WV High School Students by Gender and Grade Level, 2015

Characteristic	Estimated prevalence (%)	95% confidence interval	Weighted frequency
Total	25.9	22.8-29.0	20,297
Male	29.6	25.9-33.4	11,722
Female	22.0	17.8-26.2	8,499
9th	23.6	18.0-29.2	5,132
10th	30.2	23.7-36.6	5,989
11th	25.0	20.4-29.6	4,624
12th	24.5	18.7-30.4	4,388

Data source: West Virginia Department of Education, Youth Risk Behavior Survey, 2015

Discussion

The research base indicates that many risky behaviors in adolescence are interrelated. For example, Sneed, Mehdiyoun, Matsumura, and Hess (2014) found that smoking on school property was associated with other types of drug use. Alcohol and marijuana use have also been found to be related to verbal dating violence (Parker, Debnam, Pas, & Bradshaw, 2015). An abundance of research has been conducted linking adolescent behaviors to suicidal thought and suicide attempts including bullying and sadness (Sibold, Edwards, Murray-Close, & Hudziak, 2015), maladaptive dieting (Thullen, Taliaferro, & Muehlenkamp, 2015; Brown, Kola-Palmer, & Dhingra, 2015), binge drinking, daily smoking, and marijuana use (Brown, Kola-Palmer, & Dhingra, 2015).

Research has also found that several other factors influence adolescent behavior. Jeon and Goodson (2015) also found that friendship types influenced risky behavior including alcohol use, smoking, sexual behavior, and marijuana use.

Factors related to the prevention of risky behavior during adolescence have also been extensively investigated. The research base indicates several methods of preventing risky behaviors among adolescents. Turpyn and Chaplin (2015) found that mindful parenting was associated with less substance use among teenagers. Banspach et al (2016) recommend a variety of family-based approaches, school-based approaches, and health services to help prepare adolescents for lifelong health and wellness.

Collaborations among community organizations, local social networks, school health centers, public health departments, and effective school programs can play a large role in prevention of many of these high risk behaviors among adolescents. Promoting healthy behaviors during adolescence can lead to healthy lifestyle and behavioral choices in adulthood thereby preventing major chronic diseases and leading to less disability and greater health-related quality of life in adulthood and through the aging continuum.

Appendix: Survey Methods

The West Virginia Youth Risk Behavior Survey (YRBS) was most recently administered in public middle schools and high schools during the spring of 2015. The following sections describe the methodology of the YRBS.

Sampling Procedures

Because it is not feasible to administer the YRBS questionnaire to all students in the state, a sample of students complete the questionnaires. The West Virginia Department of Education (WVDE) and The Centers for Disease Control and Prevention (CDC) employ a two-stage, cluster sample design. All public high schools and middle schools in the state were included in the sampling frame, which includes enrollment by grade for each school. During the 2015 YRBS administration, a total of 35 randomly selected public high schools and 49 middle schools from around the state participated in the survey. In sampled schools, the survey was administered in a random selection of second period classes.

Sample Characteristics, 2015

A total of 1,622 students enrolled in Grades 9–12, participated in the survey, representing a school response rate of 100% and a student response rate of 77%. A total of 1,854 students enrolled in Grades 6–8, participated in the survey, representing a school response rate of 100% and a student response rate of 75%.

Data Collection

Survey procedures protected the privacy of students by allowing for anonymous and voluntary participation. Passive parental permission was obtained before surveys were administered to students. Data collection was conducted by regional education service agency (RESA) school wellness specialists with coordination by the YRBS coordinator with the WVDE Office of Research, Accountability, and Data Governance. Completed response forms were sent to CDC for processing and weighting.

Questionnaires

Standard questionnaires for middle school students and high school students are provided by CDC. The WVDE modifies the questionnaires by adding or deleting questions based on the needs of WVDE offices and external stakeholders such as the WV Bureau for Public Health. The standard questionnaires are changed by CDC for each administration. The standard high school questionnaire provided by CDC included 89 questions. The 2015 West Virginia version of the high school questionnaire was a 92-item self-administered questionnaire that included all of the topics mentioned in the Introduction as well as three state added questions about dieting practices. The standard middle school questionnaire included 49 questions covering the standard topics listed previously. The West Virginia version of the 2015 middle school questionnaire was 48 questions in length and excluded questions regarding sexual behavior and included three state-added questions about dieting practices.

Weighting of Raw Data

The student responses were scientifically weighted, which allows the results to be generalized to all public middle school and high school students in West Virginia. West Virginia YRBS data have been weighted for high school students each year the survey has been conducted, except 2001, while the middle school data was weighted for all years conducted except 2003 and 2005. The raw data collected are weighted to West Virginia's public school student population based on grade, sex, and race/ethnicity.

Data Analysis

Once the raw data are processed by CDC, WVDE receives the weighted middle school and high school datasets. CDC also provides time trend analyses and standard tables detailing student behavior by demographic characteristics including sex, age, grade, and race/ethnicity. The WVDE YRBS coordinator then performs analyses of the datasets to produce weighted prevalence estimates and weighted frequencies. In general terms, the prevalence is the proportion or percentage of the population t hat has a specific characteristic or displays a specific behavior during a given time frame. Because the YRBS data are collected from a sample of students, and not all students, and are weighted in order to apply to the population of all students, a prevalence estimate is generated. The prevalence estimate is the weighted percentage of students who engaged in the behavior during a specific period of time. A weighted frequency is calculated based on the prevalence estimate, and estimates the number of students who engage in a specific behavior during a given time period. Additionally, analyses of comorbid behaviors (i.e. behaviors that occur simultaneously) are conducted.

Interpretation of Results

Once the weighted data are analyzed, the results must be interpreted in a scientifically acceptable manner. For comparison of prevalence estimates by demographic characteristics such as gender, age, grade, and race/ethnicity, a conservative statistical procedure is used that involves comparison of 95% confidence intervals. The 95% confidence interval is a range of prevalence estimates within which it is expected that the actual prevalence falls. If the 95% confidence intervals of two prevalence estimates overlap, the estimates are considered to be statistically equivalent or the same. If the 95% confidence intervals of two prevalence estimates do not overlap, the estimates are considered to be significantly different from a statistical perspective. When examining changes in prevalence estimates over time, logistic regression analysis is conducted in order to determine if the changes are statistically significant.

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