

Emotional health is essential to overall health and is associated with risk behaviors such as alcohol and drug use, academic achievement, overweight and obesity, school connectedness, and neighborhood safety.^{1,2} The Youth Risk Behavior Survey (YRBS) includes the question: “**During the past 12 months, did you ever feel so sad or hopeless for two or more weeks in a row that you stopped doing some usual activities?**”. This one survey item assesses three indicators of a major depressive episode: experience of (1) extended (2) sadness and hopelessness, resulting in (3) interruptions of usual activities. Therefore, for the purpose of this brief, an affirmative response to this item will be referred to as “depressive symptoms.”

This brief looks at reported rates of depressive symptoms from the 2017 YRBS (n=13,907) survey of Cuyahoga County public high school students (grades 9-12) and the 2016 YRBS (n=13,261) survey of Cuyahoga County public middle school students (grades 7 and 8). Through collaboration with CWRU’s Schubert Center for Child Studies, this brief also includes information about awareness, action recommendations, and local resources.

Which Students Experience the Highest Levels of Depressive Symptoms?

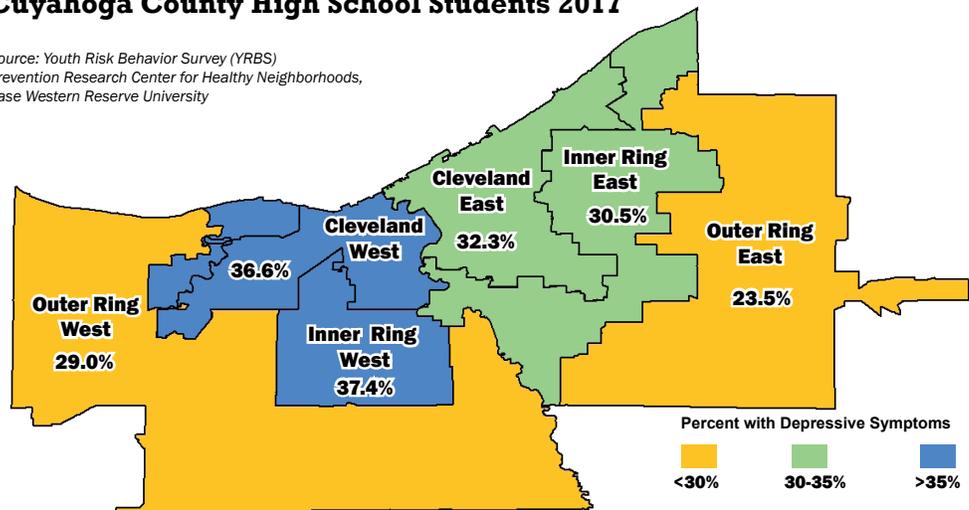
Overall, 30.9% of Cuyahoga County high school students reported experiencing depressive symptoms in 2017. This is a significant increase from the 2013 and 2015 Cuyahoga YRBS (25.6% and 28.4%, respectively) but not significantly different than the 2017 national rate of 31.5%. The overall prevalence of depressive symptoms among middle school students continues to rest at 20.1%-22.4% since 2010 with 22.4% of students in 2016 reporting depressive symptoms.

By Region

The highest prevalence of depressive symptoms for high school students in Cuyahoga County was within the Inner Ring West (37.4%) followed by Cleveland West (36.6%). The lowest prevalence for high school students in Cuyahoga County was in the Outer Ring East (23.5%). Both Cleveland East and the Inner Ring West have experienced significant increases in reporting of depressive symptoms since 2013, with Cleveland East reporting 26.3% in 2013 vs 32.3% in 2017 and the Inner Ring West reporting 26.8% in 2013 vs 37.4% in 2017 (see Fig. 1).

Fig. 1 Prevalence of Depressive Symptoms among Cuyahoga County High School Students 2017

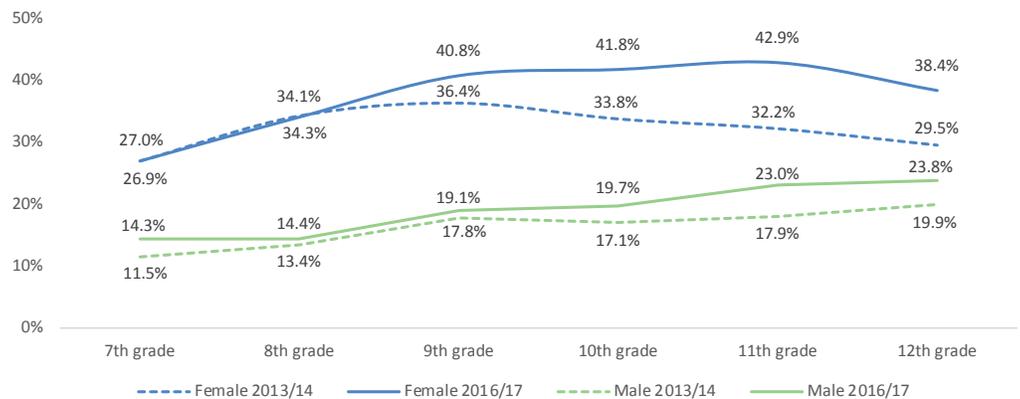
Source: Youth Risk Behavior Survey (YRBS)
Prevention Research Center for Healthy Neighborhoods,
Case Western Reserve University



By Gender

Among Cuyahoga County middle and high school students, females were significantly more likely than males to report having experienced depressive symptoms at every grade. For females, depressive symptoms increased from 7th to 8th grade, peaked in 11th grade, and decreased in 12th grade. For males, depressive symptoms increased from 7th to 12th grade. Overall, both males and females reported an increase in depressive symptoms in 2017 compared to 2013 (see Fig. 2).

Fig. 2 Depressive Symptoms among Cuyahoga County Youth by Grade

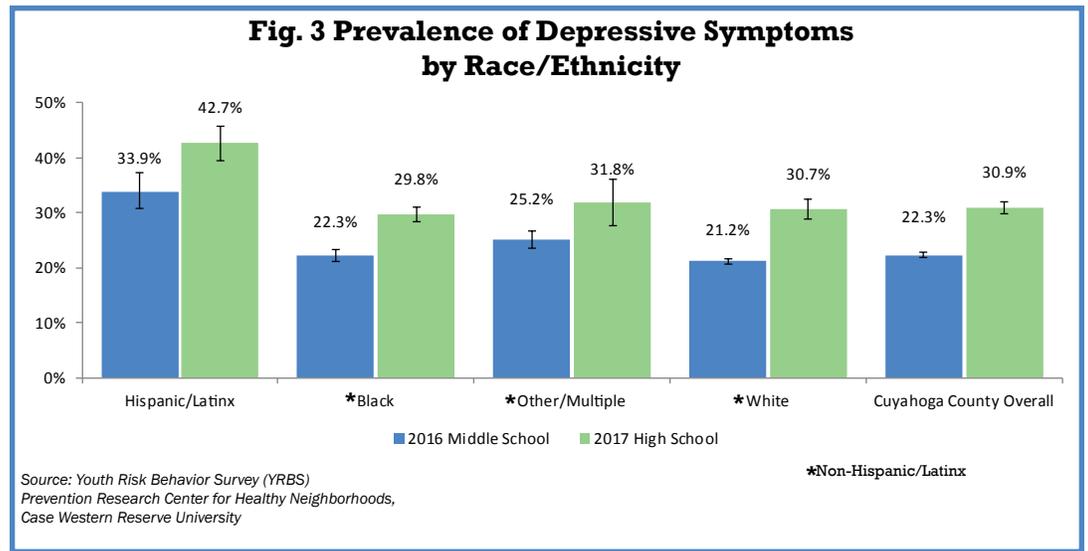


Source: Youth Risk Behavior Survey (YRBS)
Prevention Research Center for Healthy Neighborhoods,
Case Western Reserve University

By Race

Students of different race and ethnicity reported differing rates of depressive symptoms. Latinx students reported the highest prevalence of depressive symptoms at 42.7% in high school and 33.9% in middle school. Other/multiple race students reported the next highest prevalence of depressive symptoms with very similar rates for Black and White students (see Fig. 3).

A significantly higher percentage of Hispanic/Latinx female students reported depressive symptoms than White female students. At the high school level, 57.1% of Hispanic/Latinx females vs 41% of White females reported depressive symptoms. At the middle school level, 44.9% of Hispanic/Latinx females vs 29.3% of White females reported depressive symptoms. Lastly, a higher percentage of White students reported depressive symptoms in 2017 than 2013 (30.7% vs 23.1%, respectively).

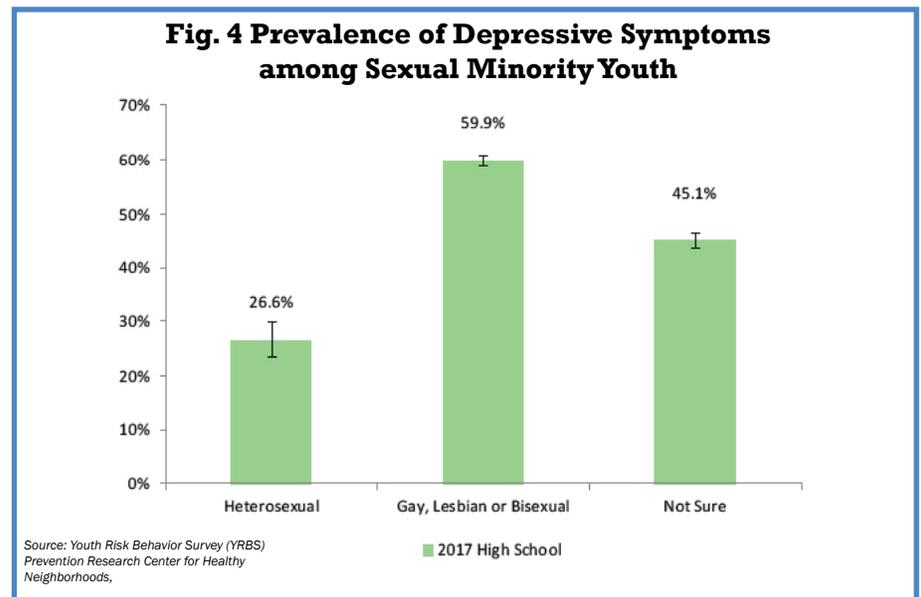


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Sexual Minority Youth

Overall, the prevalence of depressive symptoms has increased among high school sexual minority youth with 51.6% of students reporting depressive symptoms in 2015 and 59.9% in 2017. Furthermore, high school students who identified as gay, lesbian, or bisexual reported significantly higher rates of depressive symptoms compared with students who identified as heterosexual (59.9% vs 26.6%). In addition, students who were not sure of how they identified reported higher rates of depressive symptoms than heterosexual students (45.1% vs 26.6%, respectively; see Fig. 4).

Of note, 1.4% of high school students who completed the YRBS identified as transgender. Further data will be provided following guidance from the Centers for Disease Control and Prevention.



Self-Harm and Suicidality

Overall, the rates of self-harm and suicidal behaviors were significantly higher among high school students reporting depressive symptoms in the past 12 months. Specifically, of those who reported depressive symptoms: 40.7% also reported purposely hurting themselves, 41.1% had seriously considered suicide, and 20.7% had ever attempted suicide. The prevalence rates of those who reported purposely hurting themselves and ever considered suicide are more than four times greater for those who reported depressive symptoms compared with those who did not report depressive symptoms (40.7% vs 8.2% and 41.1% vs 6.8%, respectively). Furthermore, the prevalence rates were more than two times higher for “ever attempted suicide” among those who reported depressive symptoms compared with those who did not (20.7% vs 7.2%). See the “What to Look For” section for signs of adolescent depression.



What Are Students Who Reported Depressive Symptoms Also Experiencing

Assets and Protective Factors

Research has demonstrated that assets and protective factors can provide insulation from risk behavior engagement and promote emotional well-being. Six items from the YRBS comprise the Brief Assets Scale which has been found to be comparable in validity to the Search Institute's 40 Developmental Assets scale.³ Two of the 6-items in the brief index ask about student participation in non-school youth programs and how many hours they have spent volunteering in the past 7 days. Assets are scored on a scale of 0 (no assets) to 6 (having all of the assets assessed). The prevalence of depressive symptoms was lower in students with 4 or more assets compared to those students who possessed 3 or fewer assets (23.9% vs 35.2%, respectively). In addition, students who possessed 4 or more assets were significantly less likely to engage in risk behaviors.

Risk Behaviors

At both the middle and high school levels, students who reported depressive symptoms participated in risk behaviors at higher levels than did students not reporting depressive symptoms. These students were significantly more likely to have tried cigarettes, alcohol, marijuana, illicit drugs, and unprescribed pain medication than students who did not report depressive symptoms (see Fig. 5).

School Performance

Depressive symptoms are not clearly associated with poor academic achievement. The converse is also true: high academic achievement does not insulate students from experiencing depressive symptoms. Of those high school students reporting depressive symptoms, 70.5% reported earning A's and B's and 29.5% reported earning C's or lower. Among high school students not reporting depressive symptoms, 78.9% reported A's and B's, and 21.1% reported earning C's or lower.

Bullying and Violence

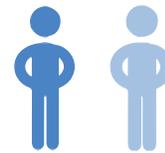
High school students who reported depressive symptoms also reported higher rates of external factors, such as bullying and violence (see Fig. 6). Of those reporting depressive symptoms, 29.7% had been bullied on school property during the past 12 months and 25% had been bullied through email, text, the Internet, etc. (cyberbullying). These rates compare to 11.8% and 9.9%, respectively, for those students not reporting depressive symptoms. A larger proportion of high school students reported being in a physical fight in the last year if they reported depressive symptoms (31.5% of students compared to 23.9%). Around 17% of those who reported depressive symptoms had been physically hurt (on purpose) by someone they were dating, while 6.8% of those not reporting depressive symptoms had been physically hurt by a dating partner.

Fig. 5 Substance Use among High School Students Reporting Depressive Symptoms

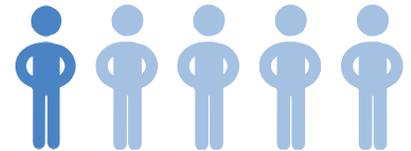
Of those high school students who reported depressive symptoms:



More than two in three (71.5%) have tried alcohol.



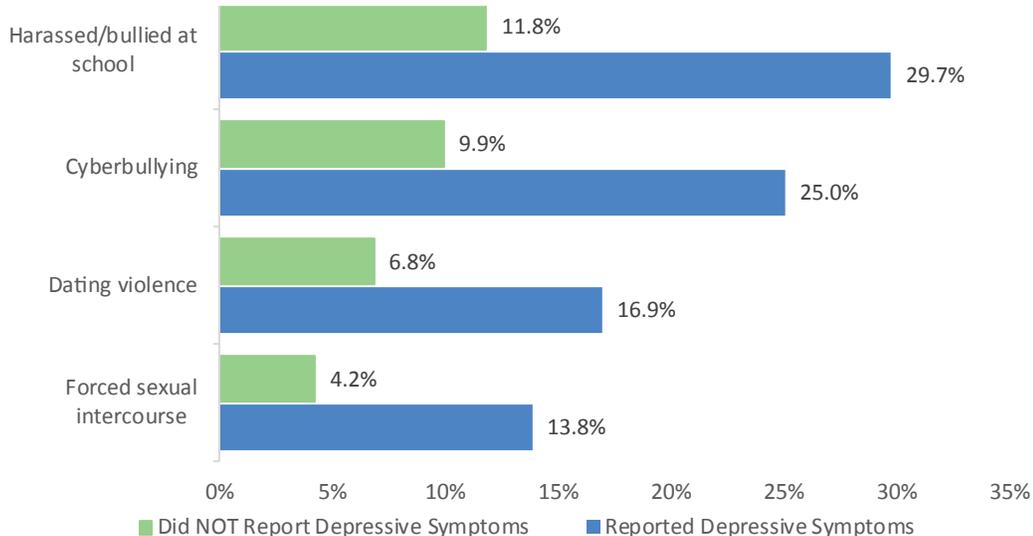
More than one in two (51.8%) have tried marijuana.



More than one in five (21.8%) have taken an unprescribed pain medication.

Source: Youth Risk Behavior Survey (YRBS)
Prevention Research Center for Healthy Neighborhoods,
Case Western Reserve University

Fig. 6 External Risk Factors Associated with High School Students Reporting Depressive Symptoms



Source: Youth Risk Behavior Survey (YRBS)
Prevention Research Center for Healthy Neighborhoods,
Case Western Reserve University

What to Look For:

Parents and educators should be aware of signs of adolescent depression. The American Medical Association recommends that pediatricians screen for depression annually beginning at age 11. **While all adolescents may exhibit some of these behaviors some of the time, consider seeking professional help if a child (1) shows several signs at the same time, (2) has symptoms over a long period of time, and (3) is having difficulty functioning due to these symptoms.** Adolescent girls may be more likely to exhibit depression as guilt, body image issues, self-blame, feelings of failure, sleep difficulties, fatigue, and physical ailments. Adolescent boys may show greater morning tiredness and sadness and inability to find pleasure in typical activities.^{4,5} The National Alliance on Mental Illness (NAMI) has some resources specifically related to minority students. Some common signs for all students include:

Behavioral Problems

- A sudden or unusual change in behavior or mood
- Moodiness throughout the day: sulking, irritability, restlessness, inappropriate and frequent anger or rage, frequent whining or crying; or extreme “highs” or feelings of euphoria
- Withdrawal or isolation from others, extreme fear of rejection
- Over-activity, increased physical agitation
- Unusual interest or pleasure in violence, threats, or bullying
- Self-destructive behaviors: recklessness, substance abuse, self-injury, eating disorders
- Running away, acting out in school, skipping school, dropping out of sports, hobbies, or activities

Thinking Difficulties

- A sudden drop in grades or in the quality of schoolwork, difficulty concentrating or making decisions
- Forgetfulness, confusion, doing the wrong assignments, missing parts of tests
- Difficulty perceiving reality (delusions or hallucinations)

Physical Problems

- Significant weight gain or loss, changes in appetite
- Excessive fatigue or sleepiness and/or inability to fall asleep or stay asleep
- Multiple, vague physical complaints without obvious causes: headaches, stomach aches, fainting, nausea

Troubled Feelings

- Prolonged periods of sadness, excessive worrying or fear, feelings of emptiness or hopelessness
- Loss of interest or pleasure in most activities
- Unnecessary anxiety, tension, high stress, frequent nightmares, low tolerance for frustration, inappropriate feelings of guilt

Suicide Risk

- Prolonged or repeated interest in death, morbidity, or suicide

Resources

General:

- www.adamhsc.org or 216-241-3400 (ADAMHS Board of Cuyahoga County supports several providers of school-based mental health services throughout the county and can refer caregivers to children’s providers in their specific area.)
- www.nami.org (National Alliance on Mental Illness)
- www.mentalhealthamerica.net/conditions/childrens-depression-checklist
- www.mentalhealthfirstaid.org (training course)
- www.cprn.net (Cleveland Regional Perinatal Network, addressing maternal, adolescent and child mental health from a public health perspective)

For Parents and Teachers:

- www.units.miamioh.edu/csbnhp/network/toolkit.pdf (School-based mental health toolkit developed for Cuyahoga County schools in 2008)
- www.redflags.org (Framework and toolkit for school-based mental health)

Culturally competent mental health care:

- www.nami.org (Diverse Communities program)
- www.psychiatry.org/mental-health/people/hispanics-latinos (American Psychiatric Association Hispanic/Latino resources)
- MetroHealth (Cleveland): Latina Clinic 216-778-2222
- Neighborhood Family Practice (Cleveland): Works with immigrant populations
- Cleveland Catholic Charities: Works with immigrant populations
- Cleveland Clinic: Pediatric psychiatry fellows program

1. Brooks T, Sion K, Thrall J, Woods E. Association of Adolescent Risk Behaviors with Mental Health Symptoms in High School Students. *J of Adolesc Health*. 2002; 31:240-246.
2. Fergusson D, Woodward L. Mental Health, Educational, and Social Role Outcomes of Adolescents with Depression. (reprinted) *Arch Gen Psychiatry*. 2002; 59:225-231.
3. Murphey DA, Lamonda KH, Carney JK, Duncan P. Relationships of a brief measure of youth assets to health-promoting and risk behaviors. *J of Adolesc Health*. 2004; 34:184-191.
4. Bennett DS, Ambrosini PJ, Kudes D, Metz C, Rabinovich H. Gender differences in adolescent depression: Do symptoms differ for boys and girls? *J Affect Disord*. 2005;89(1-3):35-44. doi:10.1016/j.jad.2005.05.020.
5. Khan AA, Gardner CO, Prescott CA, Kendler KS. Gender Differences in the Symptoms of Major Depression in Opposite-Sex Dizygotic Twin Pairs. *Am J Psychiatry*. 2002;159(8):1427-1429. doi:10.1176/appi.ajp.159.8.1427.

Full data modules from the YRBS are available online at:

<http://www.prchn.org/YRBSResults.aspx>



Methods: The Prevention Research Center for Healthy Neighborhoods (PRCHN) regularly uses a two-stage cluster sample design that mimics the sampling method of the Centers for Disease Control and Prevention (CDC) and its national Youth Risk Behavior Survey (YRBS). In 2017, 45 of 58 Cuyahoga County high schools (77.6%) participated in the survey and 13,907 of 18,098 county students (76.8%) had usable surveys. In 2016, 95 of 104 Cuyahoga County middle schools (91.3%) participated in the survey and 13,261 of 14,809 students (89.5%) had useable surveys. Each year, overall response rates of at least 60% (81.8% in 2016 and 60.0% in 2017) allowed the data to be weighted to the entire population of 7th–12th grade students in Cuyahoga County. Analyses were conducted using SAS/SPSS Statistical software survey procedures to account for the sampling design.

Contributors: The information in this report was obtained from the 2016 and 2017 Youth Risk Behavior Survey. These surveys were modeled after the CDC state-based system of health surveys administered by each state. This data brief was prepared and authored by the PRCHN (Jean Frank, MPH; Marisa Hollinshead, BS; Audrey Kinsella, MPH; Briana McIntosh, MPH; Sarah Koopman Gonzalez, PhD; Susan Petrone, MA and Erika Trapl, PhD), with additional content from the Schubert Center for Child Studies (Gabriella Celeste, JD). For more information contact Jean Frank (Jean.Frank@case.edu) or Dr. Erika Trapl (Erika.Trapl@case.edu).

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