Case Western Reserve University

Youth Risk Behavior Survey

2018 Cuyahoga County Questionnaire Item Rationale

Prevention Research Center for Healthy Neighborhoods
at Case Western Reserve University

This item rationale is a product of a Health Promotion and Disease Prevention Research Center supported by Cooperative Agreement Number 1U48DP005030 from the Centers for Disease Control and Prevention. This product is also supported by the Cleveland Foundation, the Educational Service Center of NE Ohio, the George Gund Foundation, and the Sisters of Charity Foundation of Cleveland. The background work that has amounted to this product and supports its' subsequent contribution to future administrations would not have been possible without the guidance and expertise of the YRBS Community Advisory Committee. The findings and conclusions in this item rationale are those of the author(s) and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

The 2018 Cuyahoga County Middle School YRBS questionnaire was adopted from the Standard Middle School YRBS published by the CDC. To fulfill local health data needs, the Standard Middle School YRBS questionnaire was supplemented with validated questions from the Standard High School YRBS questionnaire, CDC's YRBS optional question list, and organizations with invested interest in a specific health topic/outcome (such as the American Civil Liberties Union-Wisconsin). The core questions of this questionnaire are designated as ***standard*** or ***local*** in the rationale that follows: these questions form the backbone of the questionnaire and their presence is undisputable. Questions labelled as ***optional*** were selected to tailor this questionnaire to the local context of Cuyahoga county. Community health priorities were considered when selecting the optional questions to be included in this questionnaire.

Question Priority Type:

Standard, Local, Optional

Demographics

QUESTION(S):

1. How old are you? **Standard**
2. What is your sex? **Standard**
3. In what grade are you? **Standard**
4. Are you Hispanic or Latino? **Standard**
5. What is your race? **Standard**

RATIONALE:

These are general demographic questions. They are used to break the survey responses into more meaningful categories.

QUESTION(S):

6. Which of the following best describes you? **Standard**

RATIONALE:

This question measures sexual identity. Sexual minority youth— those who identify as gay, lesbian, or bisexual are part of every community. They are diverse, representing all races, ethnicities, socioeconomic statuses, and parts of the country. While many sexual minority youth cope with the transition from childhood to adulthood successfully and become healthy and productive adults, others struggle as a result of challenges such as stigma, discrimination, family disapproval, social rejection, and violence. [1] YRBS data indicate that

sexual minority students are more likely to engage in health-risk behaviors than other students. [2] Data on the sexual minority status of young people are critical for continuing to demonstrate the disproportionate rates at which sexual minority students experience many health risks compared to non-sexual minority students and for developing, implementing, and evaluating policies and programs designed to mitigate these disparities.

A Pew Research Center survey on LGBT Americans found that the median age at which lesbian, gay, and bisexual adults first felt they did not identify with being heterosexual was 12 years. [3] The median age at which LGBT Americans knew for certain that they were not heterosexual was 17. [3] Middle school years are particularly important for young adolescents' sexual identity as it is within these years that youth go through puberty and physical attraction develops into romantic relationships. As a young adolescent issue[4], questioning one's sexuality is part of the larger critical period of development that adolescents begin to traverse, and it can pose health challenges and risks with long term effects. While available data on young adolescents who identify as LGBT is minimal, the YRBS has reported on sexual identity in high school students. In 2017, 85.4% of high school students nationwide identified as heterosexual, 2.4% identified as gay or lesbian, 8.0% identified as bisexual, and 4.2% were not sure of their sexual identity [5].

REFERENCES:

1. Pope M. Sexual minority youth in the schools: Issues and desirable counselor responses. In: Walz G, Yep R, eds. Vistas: Perspectives on Counseling 2004. Alexandria, VA: American Counseling Association; 2004. Available at: http://studentservices.dadeschools.net/SMN/pdfs/SMY_counselor.pdf. Accessed May 17, 2016.

2. Centers for Disease Control and Prevention. Sexual identity, sex of sexual contacts, and health-risk behaviors among students in grades 9–12—Youth risk behavior surveillance, selected sites, United States, 2001–2009. Morbidity and Mortality Weekly Report 2011;60(No. SS-7):1–133.

3. Pew Research Center. A Survey of LBGT Americans. June 13, 2013. Available at: http://www.pewsocialtrends.org/2013/06/13/a-survey-of-lgbt-americans/.

4. Norma J. Bailey. Let Us Not Forget to Support LGBT Youth in the Middle School Years. Middle School Journal 2005:37(2);31-36.

5. Centers for Disease Control and Prevention. Youth risk behavior surveillance—United States, 2017. Morbidity and Mortality Weekly Report 2018;67(No. SS-8):1–114.

Obesity, Overweight, and Weight Control

QUESTION(S):

7.	How tall are you without your shoes on?	**Standard**
8.	How much do you weigh without your shoes on?	**Standard**
49.	How do you describe your weight?	**Standard**

RATIONALE:

These questions measure self-reported height and weight and perceived body weight. Data on self-reported height and weight are used to calculate body mass index (BMI) and determine the corresponding BMI-for-age percentile for adolescents. BMI-for-age percentile is a proxy measure of weight status, correlates with body fat, (1) and is recommended for assessing weight status in youth ages 2–20. (2) Although BMI calculated from self-reported height and weight underestimates the prevalence of obesity compared to BMI calculated from measured height and weight, (3) self-reported height and weight are useful for tracking BMI trends over time. In addition, obesity prevalence trends from national surveys of adults using self-reported height and weight(4) have been consistent with trend data from national surveys using measured height and weight.(5)

Obesity during adolescence is associated with negative psychological and social consequences and health problems such as type 2 diabetes, obstructive sleep apnea, hypertension, dyslipidemia, and metabolic syndrome. (6) Further, obese adolescents are more likely to become obese adults.(7,8,9) Continued monitoring of height and weight data through the YRBS provides information at the national, state, and local levels that can be used to track progress in efforts to curb the spread of obesity. Among youth aged 2-19 years nationwide, 16.6% are overweight, 18.5% are obese, and 5.6% are severely obese. (10) Results from the National Health and Nutrition Examination survey showed that in 2015-2016, the prevalence of obesity was 18.4% among youth aged 6-11 years and 20.6% for youth aged 12-19 years. (11) From 1971-2016, the national obesity trend among youth aged 2-19 years has followed a linear increase, with obesity prevalence rates reaching a percentage of 18.5% (compared to 5.2% in 1971). (10) Obesity prevalence among youth aged 2-19 increased (not significantly) between the periods of 2013-2014 and 2015-2016.(11)

REFERENCES:

1. Mei Z, Grummer-Strawn LM, Pietrobelli A, Goulding A, Goran MI, Dietz WH. Validity of body mass index compared with other body-composition screening indexes for assessment of body fatness in children and adolescents. American Journal of Clinical Nutrition 2002;75(6):978–985.

2. Krebs NF, Himes JH, Jacobson D, Nicklas TA, Guilday P, Styne D. Assessment of child and adolescent overweight and obesity. Pediatrics 2007;120: S193–S228. Item Rationale for the 2015 Standard High School YRBS

3. Brener ND, McManus T, Galuska DA, Lowry R, Wechsler H. Reliability and validity of self-reported height and weight among high school students. Journal of Adolescent Health 2003;32: 281–287.

4. Galuska DA, Serdula M, Pamuk E, Siegel PZ, Byers T. Trends in overweight among US adults from 1987 to 1993: a multistate telephone survey. American Journal of Public Health 1996; 86:1 729–1735.

5. Centers for Disease Control and Prevention. Update: Prevalence of overweight among children, adolescents, and adults – United States, 1988–1994. Morbidity and Mortality Weekly Report 1997;46 (9):199–202.

6. Daniels SR, Arnett DK, Eckel RH, et al. Overweight in children and adolescents: Pathophysiology, consequences, prevention, and treatment. Circulation 2005; 111:1999–2012.

7. Guo SS, Wu W, Cameron W, Roche AF. Predicting overweight and obesity in adulthood from body mass index values in childhood and adolescence. American Journal of Clinical Nutrition 2002; 76:653–658.

8. Freedman DS, Khan LK, Serdula MK, Dietz WH, Srinivasan SR, Berenson GS. The relation of childhood BMI to adult adiposity: The Bogalusa Heart Study. Pediatrics 2005; 115 (1):22– 27.

9. The NS, Suchindran C, North KE, Popkin BM, Gordon-Larsen P. Association of adolescent obesity with risk of severe obesity in adulthood. Journal of the American Medical Association 2010; 304 (18):2042-2047. doi:10.1001/jama.2010.1635.

10. Fryar CD, Carroll MD, Ogden CL. Prevalence of Overweight, Obesity, and Severe Obesity Among Children and Adolescents Aged 2-19 Years: United States, 1963-1965 Through 2015-2016. National Center for Health Statistics, Health E-Stats: Sept 2018. Available at: https://www.cdc.gov/nchs/data/hestat/obesity_child_15_16/obesity_child_15_16.pdf.

11. Hales CM, Carroll MD, Fryar CD, Ogden CL. Prevalence of Obesity Among Adults and Youth: United States, 2015-2016. NCHS Data Brief, Oct 2017: No. 288.

QUESTION(S):

50. Which of the following are you trying to do about your weight? **Standard**

RATIONALE:

This question measures weight goals. The prevention of childhood obesity involves maintaining energy balance at a healthy weight while protecting overall health, growth and development, and nutritional status. [1] The weight goal for overweight and obese adolescents (12–18 years) is to achieve a body mass index (BMI) less than the 85th percentile for age and sex. [2] An expert committee on preventing, assessing, and treating child and adolescent overweight and obesity recommends that overweight adolescents (85th percentile < BMI < 95th percentile) achieve a healthy weight by maintaining their current weight while stature increases; obese adolescents (BMI >95th percentile) can pursue weight loss that is not to exceed an average of 2 pounds per week. [3] The goals of obesity prevention in children and adolescents also include the avoidance of potentially harmful weight concern and restrictive eating behaviors. For these reasons, understanding adolescents' weight goals, both independently and relative to weight status, is of public health importance.[4]

REFERENCES:

1. Institute of Medicine. Preventing Childhood Obesity: Health in the Balance. Washington, DC: The National Academies Press; 2005. Available at: http://books.nap.edu/openbook.php?record_id=11015&page=1. Accessed May 5, 2016.

2. Spear BA, Barlow SE, Ervin C, et al. Recommendations for treatment of child and adolescent overweight and obesity. Pediatrics 2007;120: S254.

3. Barlow SE and Expert Committee. Expert Committee Recommendations Regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity: Summary Report. Pediatrics 2007: 120; Issue Supplement 4.

4. Institute of Medicine. Progress in Obesity Prevention: Solving the Weight of the Nation. Washington, DC: The National Academies Press; 2012. Available at: http://www.nap.edu/read/13275/chapter/5#82. Accessed May 5, 2016.

Behaviors that Result in Unintentional Injuries

QUESTION(S):

9. When you ride a bicycle, how often do you wear a helmet? **Standard**

RATIONALE:

This question measures the frequency of helmet use while riding a bicycle. In 2011, 10% of bicyclists who were killed and 19% of those injured in traffic crashes were under the age of 16. [1] Head injury is the leading cause of death in bicycle crashes [2,3] and youth aged 10-14 years have the highest rates of fatality related to bicycle accidents. [4] Use of bicycle helmets is the single most effective way of reducing head injuries and fatalities. [1] In 2012, 65% of bicyclists killed were not wearing helmets. [5] Estimates indicate bicycle helmets may prevent approximately 56% of bicycle-related deaths, [6] 65%–88% of bicycle-related brain injuries, [7,8] and 65% of serious facial injuries to the upper and middle regions of the face.[9]

REFERENCES:

1. National Highway Traffic Safety Administration. Traffic Safety Facts, 2011 Data: Bicyclists and Other Cyclists. Washington, DC: U.S. Department of Transportation, National Highway Traffic Safety Administration; 2013. Publication no. DOT-HS-811-743. Available at http://www-nrd.nhtsa.dot.gov/pubs/811743.pdf. Accessed May 14, 2014.

2. Centers for Disease Control and Prevention. Injury-control recommendations: bicycle helmets. Morbidity and Mortality Weekly Report 1995;44(RR-1):1–17.

3. Sosin DM, Sacks JJ, Webb KW. Pediatric head injuries and deaths from bicycling in the United States. Pediatrics 1996:98:868-870.

4. Sleet DA, Ballesteros MF, and Borse NN. A Review of Unintentional Injuries in Adolescents. Annual Review of Public Health 2010: 31;195-212.

5. Highway Loss Data Institute. Fatality facts: Bicyclists 2012. Arlington, VA: Insurance Institute for Highway Safety, Highway Loss Data Institute; 2014. Available at http://www.iihs.org/iihs/topics/t/pedestrians-and-bicyclists/fatalityfacts/bicycles. Accessed May 16, 2014.

6. Rivara FP. Traumatic deaths of children in the United States: Currently available prevention strategies. Pediatrics 1985;75:456–462.

7. Thompson DC, Rivara FP, Thompson RS. Effectiveness of bicycle safety helmets in preventing head injuries: A case-control study. Journal of the American Medical Association 1996; 276:1968–1973.

8. Thompson RS, Rivara FP, Thompson DC. A case-control study of the effectiveness of bicycle safety helmets. New England Journal of Medicine 1989; 320:1361–1367.

9. Thompson DC, Nunn MW, Thompson RS, Rivara FP. Effectiveness of bicycle safety helmets in preventing serious facial injury. Journal of the American Medical Association 1996; 276:1974–1975.

QUESTION(S):

10. How often do you wear a seat belt when riding in a car? **Standard**

RATIONALE:

This question measures the frequency with which seat belts are worn when riding in a car driven by someone else. In 2017, accidents involving motor vehicles were the leading cause of death from unintentional injuries (responsible for 49.8% (428) of total deaths from unintentional injuries) among youth aged 10-14 years. (1) Of those 428 deaths, occupants (as opposed to pedestrians and cyclists, for example) of motor vehicles involved in accidents accounted for 115 deaths. (1) On a larger scale, 2,734 teenagers aged 13-19 years died from a motor vehicle crash in 2017, and vehicle passengers made up 76% of these deaths.(2) Among 13 year olds who died from motor vehicle crashes in 2017, 55% were vehicle passengers; for 14 and 15 year olds, that number was 59% and 73%, respectively.(2) With regards to seat belt use, among 13 year olds fatally injured as passengers in motor vehicle crashes, 40% did not use their seatbelt; for 14 and 15 year olds, that percentage was 40% and 48%, respectively.(2) Seat belts remain the most effective instrument to reduce serious injury and death in motor vehicle crashes. (3) And while overall, seat belt use has increased in the US, use among teens remains less than use among adults aged 25 and older. (3)

REFERENCES:

1. Web-based Injury Statistics Query and Reporting System (WISQARS) [database online]. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control; 2017.

2. Highway Data Loss Institute. Fatality facts: Teenagers 2017. Insurance Institute for Highway Safety; 2018. Available at: https://www.iihs.org/iihs/topics/t/teenagers/fatalityfacts/teenagers/2017.

3. Shults RA, Haegerich TM, Bhat G, and Xhang X. Teens and seat belt use: What makes them click? Journal of Safety Research 2016:57;19-25.

Behaviors that Result in Violence

QUESTION(S):

11.. During the past 30 days, on how many days did you carry a weapon such as a gun, knife, or club?
Standard

12. During the past 30 days, on how many days did you carry a weapon, such as a gun, knife, or club on school property?
Standard

15. During the past 30 days, on how many days did you not go to school because you felt you would be unsafe at school or on your way to or from school?
Standard

16. How long would it take you to get and be ready to fire a loaded gun? The gun could be yours or someone else's and it could be located in your home or car or someone else's home or car.
Optional

RATIONALE:

These questions measure violence-related behaviors and school-related violent behaviors. Violence is a significant public health issue among youth, with homicide being the third leading cause of death among youth ages 13–19 years (5.1 per 100,000).(1) Homicide is the leading cause of death among non-Hispanic black youth ages 13–19 years (26.3 per 100,000) and the second leading cause of death for Hispanic youth ages 13–19 years (5.7 per 100,000).(1) Approximately 10% of homicide victims in the United States in 2016 were aged 13–19 years; of these victims, 88% were killed with a firearm.(1) Of all violent deaths that occurred on school property between July 1994 and June 2016, 73% involved firearms.(2) Nearly 100% of school districts have a policy prohibiting weapon possession or use by high school students on school property.(3) Also, in 2016, 204,020 (695.5 per 100,000) nonfatal, physical assault injuries among youth aged 13–19 years were treated in U.S. emergency departments.(1)

In 2015-2016, the rate of violence among middle school students was 27 incidents per 1000 students, higher than the high school rate which was 16 incidents per 1000 students.(4) The School Survey on Crime and

Safety (SSOCS) reported that during the 2015-2016 school year, 88.0% of middle schools experienced "violent incidents", 22.9% experienced "serious violent incidents", 54.7% experienced theft, and 76.5% experienced "other" violent incidents all at school.[4] The SSOCS defines "violent incidents" as physical attacks and fights (including threats of) without a weapon; "serious violent incidents" include rape, sexual assault (and threat of), physical attack (and threat of) with a weapon, and robbery with or without a weapon; theft is the taking of another person's property without confrontation or threat; and "other" incidents include possession of weapons like a gun, knife, or explosive device, vandalism, and possession and distribution of illegal drugs or alcohol.[4]

Like bullying, experiencing violence at school negatively affects the health of adolescents involved, whether they be the victim, perpetrator, or witness of a violent incident. In addition to possibly contributing to health risks such as depression, anxiety, and substance use, school-based violence can create a negative learning environment and has been associated with school absenteeism and suspension[5,6,7]. One research study involving 6th graders found that exposure to violence is "strongly correlated" to unexcused school absenteeism and suspension.[6] Some findings of this study include: school absenteeism and suspension were consistently higher among students who were exposed to violence, the odds ratios for suspension increased in order from least involved in a violent incident to most (witness, victim, perpetrator, victim-perpetrator), and girls exposed to verbal threats presented the highest correlations with absenteeism and suspension in the study's sample.[6] Increased school absenteeism and/or suspension can negatively impact a student's academic record and weaken their relationship with teachers, imparting instability in a student's life. School absenteeism has also been associated with dropping out of school, involvement with the juvenile justice system, and social isolation. [8]

Additionally, many unintentional injuries and suicides among youth happen because an unauthorized young person operated a firearm that was obtained from home.[9] National studies have reported that more than one third of gun owners keep their weapons loaded either some or all of the time, approximately half of gun owners keep them unlocked, and 20% of firearm-owning households have a loaded unlocked firearm in the home.[10] Gun access and bullying are risk factors for sustaining or perpetrating violence among adolescents. Studies show that adolescents who experience bullying, particularly those who report both traditional bullying and cyberbullying, are more likely to report access to a loaded gun without adult permission. [11]

REFERENCES:

1. Web-based Injury Statistics Query and Reporting System (WISQARS) [database online]. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control; 2018. Accessed June 15, 2018.

2. School-Associated Violent Death Surveillance System (SAVD-SS). Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control; 2018. Accessed June 15, 2018.

3. Jones SE, Fisher CJ, Greene BZ, Hertz MF, Pritzl J. Healthy and safe school environment, part I: Results from the School Health Policies and Programs Study 2006. Journal of School Health 2007;77(8):522–543.

4. U.S. Department of Education, National Center for Educational Statistics. Crime, Violence, Discipline, and Safety in U.S. Public Schools: Findings From the School Survey on Crime and Safety: 2015-16, First Look. July 2017.

5. Janosz M, Brière FN, Galand B, et al. Witnessing violence in early secondary school predicts subsequent student impairment. Journal of Epidemiology and Community Health 2018; 72(12):1117-1123.

6. Ramirez M, Wu Y, Kataoka S, et al. Youth Violence across Multiple Dimensions: A Study of Violence, Absenteeism, and Suspensions among Middle School Children. The Journal of Pediatrics 2012;161(3):542-546.

7. Watts SJ, Province K, Toohy K. The Kids Aren't Alright: School Attachment, Depressive Symptoms, and Gun Carrying at School. American Journal of Criminal Justice 2019;44(1):146-165.

8. Kyleigh Skedgell and Christopher A. Kearney. Predictors of school absenteeism severity at multiple levels: A classification and regression tree analysis. Children and Youth Services Review 2018; 86:236-245.

9. Grossman D, Reay D, Baker S. Self-inflicted and unintentional firearm injuries among children and adolescents: the source of the firearm. Arch Pediatric Adolescent Medicine. 1999;153875- 878.

10. Cook PJ, Ludwig J. Guns in America: National Survey on Firearms Ownership and Use. Washington, DC Office of Justice Programs, National Institute of Justice, US Dept of Justice: 1997.

11. Simckes, MS et al. Access to a Loaded Gun Without Adult Permission and school-based bullying. Journal of Adolescent Health: 2017. Available at https://www.jahonline.org/article/S1054-139X(17)30195-7/pdf. Accessed on July 20, 2017.

QUESTION(S):

13. During the past 12 months, how many times were you in a physical fight? **Standard**

14. During the past 12 months, how many times were you in a physical fight on school property? **Standard for every other administration**

RATIONALE:

These questions measure the frequency of physical fights in general and on school property during the 12 months before the survey. Physical fighting is a marker for other problem behaviors [1] and is associated with serious injury-related health outcomes.[2,3] In the 2015-2016 school year, 88.0% of U.S. public middle schools reported that "violent incidents" had occurred in that year, including physical attacks without weapons (and the threat of them).[4] Compared to high school students, middle school students nationwide are more likely to get into a physical fight at school (43% of middle school students compared to 35% of high school students) and feel that, more so than high school students, in order to defend themselves, they need to be prepared to fight (40% of middle school students, compared to 28% of high school students).[5]

REFERENCES:

1. Sosin DM, Koepsell TD, Rivara FP, Mercy JA. Fighting as a marker for multiple problem behaviors in adolescents. Journal of Adolescent Health 1995; 16:209–215.

2. Borowsky IW, Ireland M. Predictors of future fight-related injury among adolescents. Pediatrics 2004; 113:530–536.

3. Pickett W, Craig W, Harel Y, et al. Cross-national study of fighting and weapon carrying as determinants of adolescent injury. Pediatrics 2005; 116:855–863.

4. U.S. Department of Education, National Center for Educational Statistics. Crime, Violence, Discipline, and Safety in U.S. Public Schools: Findings From the School Survey on Crime and Safety: 2015-16, First Look. July 2017

5. YouthTruth Student Survey. Spotlight on School Safety. Aug 23, 2018. Available at: file:///C:/Users/jxf443/AppData/Local/Temp/YouthTruth_Spotlight_On___School_Safety.pdf.

QUESTION(S):

17. During the past 12 months, have you ever been bullied away from school property? **Optional**

18. During the past 12 months, have you ever been bullied on school property? **Standard**

19. During the past 12 months, have you ever bullied someone on school property? **Optional**

20. During the past 12 months, have you ever been electronically bullied? (Count being bullied through texting, Instagram, Facebook, or other social media.) **Standard**

21. During the past 12 months, have you ever electronically bullied someone (Count bullying through texting, Instagram, Facebook, or other social media.) **Optional**

RATIONALE:

These questions measure the frequency of bullying victimization. Bullying victimization is associated with depression,[1-2] suicidal ideation,[1,3-4] self-injury,[1] suicide attempts,[1,3-4] increased odds of repeated common health problems,[5] school absenteeism,[6] psychological distress,[5] externalizing problems,[7] sleep disturbances,[3] and feeling unsafe at school. [6] Bullying happens both at school and away from it, and bullies have taken advantage of social media platforms to bully others from anywhere. Electronic bullying victimization has been associated with discipline problems in school, skipping school, weapon carrying,[8] psychological distress,[9] lower self-esteem,[10] depression,[1] suicidal ideation,[4] self-injury,[1] and suicide attempts.[1,4] In 2016, 33.8% of US middle and high school students reported ever being electronically bullied in their lifetime, up from 18.8% in 2007.[11] In addition to victims of bullying, bullies themselves are at risk for negative health outcomes. Research shows that those who bully others are at a higher risk of dropping out of

school, are more likely to be diagnosed with anxiety disorders and antisocial behavior, and have a fourfold increase in criminal behavior in adulthood. [12] Children who bully others also experience problems in being employed and in maintaining stable romantic relationships later in adulthood.[12]

In the 2017-2018 school year, the YouthTruth student survey, a survey focused on assessing bullying in schools from grade 5 to grade 12, found that 1 in 3 students were bullied. [13] This ratio represents an increase in 5 percentage points over two years (since 2015-2016, from 28% to 33%). [13] The survey identified the top three reasons students believed they were bullied as: appearance (44%), race or skin color (17%), and sexual orientation (15%). [13] The survey also found that most bullying occurs in person with verbal and social harassment being more common than physical bullying and cyberbullying. [13] Compared to high school students, more middle school students experience being bullied: almost 40% of middle school students compared to 27% of high school students reported being bullied in school in 2017-2018. [13]

REFERENCES:

1. Kessel Schneider S, O'Donnell L, Stueve A, Coulter RWS. Cyberbullying, school bullying, and psychological distress: A regional census of high school students. American Journal of Public Health 2012; 102:171–177.

2. Hawker DS, Boulton MJ. Twenty years' research on peer victimization and psychosocial maladjustment: A meta-analytic review of cross-sectional studies. Journal of Child Psychology and Psychiatry 2000;41(4):441-455.

3. van Geel M, Vedder P, Tanilon J. Relationship between peer victimization, cyberbullying, and suicide in children and adolescents. Journal of American Medical Association Pediatrics 2014;168(5):435-442.

4. Klomek AB, Sourander A, Gould M. The association of suicide and bullying in childhood to young adulthood: A review of cross-sectional and longitudinal research findings. The Canadian Journal of Psychiatry 2010;55(5):282-288.

5. Rigby K. Consequences of bullying in school. The Canadian Journal of Psychiatry 2003;48(9):583–590.

6. Glew GM, Fan MY, Katon W, Rivara FR, Kernic MA. Bullying, psychosocial adjustment, and academic performance in elementary school. Archives of Pediatrics & Adolescent Medicine 2005; 159:1026–1031.

7. McDougall P, Vaillancourt T. Long-term adult outcomes of peer victimization in childhood and adolescence: Pathways to adjustment and maladjustment. American Psychologist 2015;70(4):300-310.

8. Ybarra ML, Diener-West M, Leaf PJ. Examining the overlap in internet harassment and school bullying: Implications for school intervention. Journal of Adolescent Health. 2007; 41:42–50.

9. Kiriakidis SP, Kavoura A. Cyberbullying. A review of the literature on harassment through the internet and other electronic means. Family & Community Health 2010;33(2):82–93.

10. Patchin JW, Hinduja S. Cyberbullying and self-esteem. Journal of School Health 2010; 80:614–621.

11. Justin W. Patchin. Summary of Our Cyberbullying Research (2004-2016). Cyberbullying Research Center. 2016. Available at: https://cyberbullying.org/summary-of-our-cyberbullying-research. Accessed on Feb 18, 2019.

12. Vanderbilt D, Augustyn M. The Effects of Bullying. Paediatrics and Child Health 2010;20(7):315-320.

13. YouthTruth Student Survey. Learning From Student Voice: Bullying Today. Available at: file:///C:/Users/jxf443/Desktop/Youth%20Truth-Bullying%20in%20Middle%20Schools.pdf. Accessed Feb, 18 2019.

QUESTION(S):

22. During the past 12 months, how many times did you do something to purposely hurt yourself without wanting to die, such as cutting or burning yourself on purpose? **Standard**

23. During the past 12 months, did you ever feel so sad and hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities? **Standard**

24. During the past 12 months, did you ever seriously consider attempting suicide? **Standard**

25. During the past 12 months, did you make a plan about how you would attempt suicide? **Standard**

26. During the past 12 months, how many times did you actually attempt suicide? **Standard**

27. Have you known someone who has completed suicide? **Local**

RATIONALE:

These questions measure sadness, suicidal ideation and planning, attempted suicide, and the severity of suicide attempts. Suicide is the second leading cause of death among youth aged 13– 19 years.(1) A prior suicide attempt is one of the most significant risk factors for a suicide fatality.(2,3) A study examining the validity of retrospective reports of suicide attempts found that 40% of participants who attempted suicide made their first attempt in elementary/middle school.(4) Furthermore, compared to single attempters of suicide, those who attempted suicide multiple times were more likely to commit their first suicide attempt in elementary/middle school.(4) Suicide rates have been steadily increasing throughout the years, hiking up to an age-adjusted rate of 33% in 2017 for the US population.(5) In 2014, death rates from suicide surpassed death rates from motor vehicle crashes for youth aged 10-14 years in the US.(6) Furthermore, suicide rates for the US population aged 10-14 years doubled between 2007 and 2014, reaching 425 deaths/100,000.(6) For females aged 10-14 years, suicide rates (per 100,000) significantly increased from 0.5 in 1999 to 1.7 in 2017, and for males aged 10-14 years, suicide rates (per 100,000) significantly increased from 1.9 in 1999 to 3.3 in 2017.(5)

Harming oneself without the intent of committing suicide, or nonsuicidal self-injury (NSSI), is a strong risk factor of suicide.(7) Such injuries include imparting deliberate, physical harm on oneself, such as: cutting, burning, hitting, bone-breaking, and as recent research shows, even participating in digital self-

harm through posting or sending hurtful content about oneself online.[8] One study assessing NSSI in a sample of 6th-8th graders (N=508) found that 7.5% of the sample engaged in NSSI within the past year.[9] Moreover, results from this study showed that engagement in NSSI increased throughout early adolescence, with 13 years being the average age for youth to engage in NSSI.[9] Research shows that the number of ER visits for non-fatal self-inflicted injury (including both suicidal and nonsuicidal intent) were steady for males aged 10-14 years from 2001-2015; however, the number of visits for females in that same age group increased by 18.8% per year from 2009-2015 (rates went from 109.8 in 2009 to 317.7 in 2015, per 100,000).[7]

Question 27 was added in support of the Cuyahoga County Educational Service Center (CCESC). The CCESC is an advisory board member of the Cuyahoga County YRBS and is one of three counties in Ohio piloting Project AWARE Ohio. Project AWARE Ohio is a partnership between the Ohio Department of Education, the Center for School Based-Mental Health Programs at Miami University, and the CCESC and the Department of Health and Human Services. Project AWARE aims to raise awareness of behavioral issues among school-aged youth, increase access to services, and increase skills to identify and respond to signs of mental health.[10]

REFERENCES:

1. Web-based Injury Statistics Query and Reporting System (WISQARS) [database online]. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control; 2018. Accessed June 15, 2018.

2. Borowsky IW, Ireland M, Resnick MD. Adolescent suicide attempts: Risks and protectors. Pediatrics 2001; 107:485-493.

3. Bridge JA, Goldstein TR, Brent DA. Adolescent suicide and suicidal behavior. Journal of Child Psychology and Psychiatry 2006; 47(3/4):372-394.

4. Mazza JJ, Catalano RF, Abbott RD, Haggerty KP. An Examination of the Validity of Retrospective Measures of Suicide Attempts in Youth. Journal of Adolescent Health 2011; 49(5):532-537.

5. Hedegaard H, Curtin SC, and Warner M. Suicide Mortality in the United States, 1999-2017. National Center for Health Statistics, Data Brief 2018, No. 330.

6. Centers for Disease Control and Prevention. QuickStats: Death Rates for Motor Vehicle Traffic Injury, Suicide, and Homicide Among Children and Adolescents aged 10-14 Years-United States, 1999-2014. Morbidity and Mortality Weekly Report 2016; 65(43):1203.

7. Mercado MC, Holland K, Leemis RW et al. Trends in Emergency Department Visits for Nonfatal Self-inflicted Injuries Among Youth Aged 10-24 Years in the United States, 2001-2015. JAMA 2017; 318(19):1931-1933.

8. Patchin JW and Hinduja S. Digital Self-Harm Among Adolescents. Journal of Adolescent Health 2017; 61:761-766.

9. Hilt LM, Nock MK, Lloyd-Richardson EE, Prinstein MJ. Longitudinal Study of Nonsuicidal Self-Injury Among Young Adolescents. Journal of Early Adolescence 2008; 28(3):455-469.

10. Project AWARE Ohio. Ohio Department of Education. Available at http://education.ohio.gov/Topics/Other-Resources/School-Safety/Building-Better-Learning-Environments/PBIS-Resources/Project-AWARE-Ohio.

Tobacco Use

QUESTION(S):

28. Have you ever tried cigarette smoking, even one or two puffs? **Standard**

29. During the past 30 days, on how many days did you smoke cigarettes? **Standard**

RATIONALE:

These questions measure lifetime and current smoking patterns. Cigarette smoking is the leading cause of preventable death in the United States[1] and accounts for approximately 440,000 deaths each year.[1,2] Each day across the United States more than 3,800 youth under 18 years of age start smoking and more than 80% of adult smokers begin before the age of 18.[3] Cigarette smoking increases risk of heart disease; chronic obstructive pulmonary disease; acute respiratory illness; stroke; and cancers of the lung, larynx, oral cavity, pharynx, pancreas, and cervix.[1,3] In addition, as compared to nonsmokers, cigarette smokers are more likely to drink alcohol, use marijuana and cocaine, engage in risky sexual behaviors, engage in physical fighting, carry a weapon, and attempt suicide.[3–4]

In 2018, 1 in 14 (7.2%) middle school students were currently using a tobacco product (using at least once in the 30 days prior to taking the National Youth Tobacco Survey (NYTS)), a significant increase from the 2017 reported ratio of 1 in 18 (5.6%).[5,6] Among middle school students nationwide in 2018, cigarettes were the second most commonly used tobacco product (1.8%).[5] In 2018, middle school students who smoked cigarettes accounted for 19.7% of current and frequent (≥20 days in the 30 days prior to taking NYST) users of a tobacco product in their age-group, up from 17.5% in 2017.[5,7] While cigarette use among middle school students decreased between 2011 and 2018 (dropping from 4.3% to 1.8%), cigarette use was included in two of the three most common product combinations reported by middle school students who use 2 or more tobacco products.[5,6]

REFERENCES:

1. U.S. Department of Health and Human Services. The Health Consequences of Smoking – 50 Years of Progress: A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services; Centers for Disease Control and Prevention; National Center for Chronic Disease Prevention and Health Promotion; Office on Smoking and Health; 2014. Available at: https://www.surgeongeneral.gov/library/reports/50-years-of-progress/full-report.pdf. Accessed June 4, 2018.

2. Centers for Disease Control and Prevention. Annual smoking-attributable mortality, years of potential life lost, and productivity losses—United States, 2000–2004. Morbidity and Mortality Weekly Report 2008;57(45):1226–1228.

3. U.S. Department of Health and Human Services. Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2012. Available at: https://www.surgeongeneral.gov/library/reports/preventing-youth-tobacco-use/index.html. Accessed June 4, 2018.

4. Substance Abuse and Mental Health Services Administration. Results from the 2010 National Survey on Drug Use and Health: Summary of National Findings. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2011. NSDUH Series H-41, HHS Publication No. (SMA) 11-4658. Available at: https://www.samhsa.gov/data/sites/default/files/NSDUHNationalFindingsResults2010-web/2k10ResultsRev/NSDUHresultsRev2010.pdf. Accessed June 4, 2018.

5. Centers for Disease Control and Prevention. Vital Signs: Tobacco Product Use Among Middle and High School Students-United States, 2011-2018. Morbidity and Mortality Weekly Report (MMWR) 2019;68(6):157-164.

6. Centers for Disease Control and Prevention. Tobacco Product Use Among Middle and High School Students-United States, 2011-2017. Morbidity and Mortality Weekly Report (MMWR) 2018;67(22):629-633.

7. Centers for Disease Control and Prevention. Frequency of Use Among Middle and High School Student Tobacco Product Users-United States, 2015-2017. Morbidity and Mortality Weekly Report (MMWR) 2018;67(49):1353-1357.

QUESTION(S):

30. During the past 30 days, on how many days did you smoke cigars, cigarillos, or little cigars, such as Black & Milds, Swisher Sweets, or Phillies? **Local**

RATIONALE:

This question measures current cigar smoking patterns. Like cigarettes, cigar smoking can cause lung cancer, coronary heart disease, and chronic obstructive pulmonary disease.[1-3] The overall risk of oral and pharyngeal cancer is 7–10 times higher among cigar smokers compared to those who never smoked.[4] This question was modified to include common brands and the indication of flavor which has been shown to increase reporting of cigar use, specifically among African American adolescents in urban areas. [5.6]

Of the 7.2% of middle school students that reported current use of any tobacco product in 2018, 1.6% used cigars, which is a significant decrease from 3.5% in 2011.[7] Current use (measured as 30-day prevalence) of flavored and unflavored little cigars or cigarillos among 8th grade students in 2018 was 2.6% and 1.6%, respectively.[8] Cigarillos and little cigars cost less than cigarettes, can be sold as singles, and include flavor options-making them more appealing to youth and more easy to access.[9] Cigar use is higher among youth who use other tobacco products, drugs, and alcohol than those who do not.[9]

REFERENCES:

1. World Health Organization. Smokeless Tobacco and Some Tobacco-Specific Nitrosamines. Lyon, France: World Health Organization; 2007. International Agency for Research on Cancer Monographs on the Evaluation of Carcinogenic Risks to Humans, Vol. 89. Available at: http://monographs.iarc.fr/ENG/Monographs/vol89/mono89.pdf. Accessed June 4, 2018.

2. Wells Fargo Securities. Equity Research/Tobacco. Nielsen: Tobacco 'All Channel' Data 4/21. May 2018.

3. Johnson GK, Slach NA. Impact of tobacco use on periodontal status. Journal of Dental Education 2001;65:313–321.

4. U.S. Department of Health and Human Services. Oral Health in America: A Report of the Surgeon General. Rockville, MD: U.S. Department of Health and Human Services, National Institute for Dental and Craniofacial Research, National Institutes of Health; 2000. Available at: https://www.nidcr.nih.gov/sites/default/files/2017-10/hck1ocv.%40www.surgeon.fullrpt.pdf. Accessed June 4, 2018.

5. Centers for Disease Control and Prevention. Youth risk behavior surveillance—United States, 2017. Morbidity and Mortality Weekly Report Surveillance 2018;67(No. SS-8);1-114.

6. U.S. Department of Health and Human Services. Smoking and Tobacco Control Monograph No. 9: Cigars: Health Effects and Trends. Bethesda, MD: U.S. Department of Health and Human Services, National Cancer Institute; 1998. No. 98-4302:217. Available at: http://cancercontrol.cancer.gov/brp/tcrb/monographs/9/m9_complete.PDF. Accessed June 4, 2018.

7. Gentzke AS, Creamer M, Cullen KA, et al. Vital Signs: Tobacco Product Use Among Middle and High School Students-United States, 2011-2018. Morbidity and Mortality Weekly Report, Early Release. 2019;68:1-8.

8. Johnston LD, Miech RA, O'Malley PM, et al. Monitoring the Future: National Survey Results on Drug Use 1975-2018. Overview 2018: Key Findings on Adolescent Drug Use. Jan 2019. Institute for Social Research, The University of Michigan.

9. Centers for Disease Control and Prevention. National Center for Chronic Disease Prevention and Health Promotion. Cigars. Oct 2, 2018. Available at: https://www.cdc.gov/tobacco/data_statistics/fact_sheets/tobacco_industry/cigars/index.htm. Accessed Feb 13, 2019.

QUESTION(S):

31. During the past 30 days, on how many days did you smoke tobacco out of a water pipe or hookah? **Local**

32. How old were you when you used your first tobacco product? (Include things such as cigarettes, cigars, little cigars, flavored cigars, hookah, and chewing tobacco)? **Local**

RATIONALE:

These questions are used to assess the use of non-traditional tobacco products. Hookah use, along with other tobacco products, has recently emerged in research.[1,2] Hookah is a form of water pipe smoking in which hot coal burns flavored tobacco. The resulting tobacco vapors then get filtered through water before being inhaled via a long pipe. The tobacco used in hookah is available in a variety of flavors, including fruity ones that are appealing to youth, such as: blue raspberry, grape, and pink lemonade. Increasing rates of other tobacco product use among

adolescents seems to be two-fold; they are perceived as less harmful than cigarettes[3] and are often more accessible and affordable than cigarettes.[4] First tobacco product tried is used to ascertain which products may be considered "gateway" products.

For the year 2018, the YRBS reported that 7.2% of middle school students were currently using a tobacco product, 1.2% of which were using hookah.[5] Between 2011-2018, use of hookah among middle school students experienced a significant non-linear change from 1.0% to 1.2%.[5] While adolescents and young adults perceive hookah to be less harmful and addictive than cigarettes, it contains the same harmful substances (nicotine, carbon monoxide, and carcinogens) and has been associated with similar health risks like cancer, nicotine addiction, and heart disease.[2] Furthermore, because the burning coal in hookah lasts longer than a burning cigarette, it is easier to "puff" more in a single session while smoking hookah, and therefore inhale more of the toxic chemicals in tobacco. The World Health Organization reported that a 200 puff session of hookah is equivalent to smoking 100 cigarettes.[2]

Research shows that smoking initiation peaks in adolescents between the ages of 11 and 13.[6] Adolescents occupy an important and sensitive stage of development and are particularly vulnerable to the highly addictive nature of nicotine.[6] Early initiation of tobacco use makes it difficult for adolescents to quit and avoid becoming regular users: research shows that around three out of four teen smokers end up smoking into adulthood.[6] Early initiation of tobacco use also implies a longer time span of inhaling the toxic chemicals within cigarettes, hookah etc. which increases the risk of developing health problems associated with smoking later in life.[6]

REFERENCES:

1. Jordan H, Delnevo C. Emerging tobacco products: Hookah use among New Jersey youth. Preventive Medicine. 2010; 51(5):394-396.

2. Dugas E, Tremblay M, Low N, Cournoyer D, O'Loughlin J. Water-pipe smoking among North American youths. Pediatrics. 2010; 125(6):1184-1189.

3. Soldz S, Dorsey E. Youth attitudes and beliefs toward alternative tobacco products: Cigars, bidis, and kreteks. Health Education & Behavior. 2005; 32(4):549-566.

4. O'Connor RJ. Non-cigarette tobacco products: What have we learnt and where are we headed? Tobacco Control. 2012; 21(2):181-190.

5. Gentzke AS, Creamer M, Cullen KA, et al. Vital Signs: Tobacco Product Use Among Middle and High School Students-United States, 2011-2018. Morbidity and Mortality Weekly Report, Early Release. 2019;68:1-8.

6. Laura Bach. Campaign for Tobacco-Free Kids: The Path to Tobacco Addiction Starts at Very Young Ages. Sept 28, 2018. Available at: https://www.tobaccofreekids.org/assets/factsheets/0127.pdf. Accessed Feb 13, 2019.

QUESTION(S):

33. During the past 30 days, on how many days did you use an electronic vapor product? **Standard**

RATIONALE:

This question measures the prevalence of use of electronic vapor products. Electronic vapor products are battery-powered electronic devices that usually contain a nicotine-based liquid that is vaporized and inhaled by the user. [1] Electronic vapor products come in many shapes and sizes, and may be shaped like cigarettes or other tobacco products, USB devices, pen-shaped devices, or tank-style devices. Electronic vapor products include electronic cigarettes (e-cigarettes), vapes, vape pens, electronic cigars (e-cigars), electronic hookahs (e-hookahs), hookah pens, and mods. Depending on the brand, e-cigarette cartridges or refillable e-liquids typically contain nicotine, a component to produce the aerosol (e.g., propylene glycol or glycerol), and flavorings (e.g., fruit, mint, or chocolate).[2] In 2016, the U.S. Food and Drug Administration finalized a rule to regulate e-cigarettes and other electronic vapor products as tobacco products.[3] This rule prevents sales to minors, prohibits samples, prohibits vending machine sales (unless in a facility that never admits minors), and mandates warning labels on packaging.[3]

According to the National Youth Tobacco Survey (NYTS), e-cigarettes have remained the most commonly used tobacco product among middle school students since 2014.[4] Between 2011 and 2018, e-cigarette use among middle school students increased from 0.6% to 4.9%, and current use of e-cigarettes (used within 30 days prior to taking the NYTS) among middle school students significantly increased by 48.5% between 2017 and 2018.[5] Furthermore, e-cigarettes were the most commonly reported tobacco product used in combination with other products among middle school students in 2018.[5] Research on what US youth think of e-cigarettes shows that nearly 75% of them believe e-cigarettes to be less harmful than cigarettes, and nearly 50% believe e-cigarettes to be less addictive than cigarettes [6]. Confidence in such beliefs has increased between 2012 and 2014 among US youth, pointing to what some researchers have dubbed a “renormalization” of smoking.[6]

REFERENCES:

1. U.S. Department of Health and Human Services. E-Cigarette Use Among Youth and Young Adults. A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2016. Available at: https://www.cdc.gov/tobacco/data_statistics/sgr/e-cigarettes/index.htm. Accessed June 4, 2018.

2. Cobb NK, Byron MJ, Abrams DB, Shields PG. Novel nicotine delivery systems and public health: The rise of the "e-cigarette." American Journal of Public Health 2010;100:2340–2342.

3. Food and Drug Administration. Deeming Tobacco Products To Be Subject to the Federal Food, Drug, and Cosmetic Act, as Amended by the Family Smoking Prevention and Tobacco Control Act; Regulations on the Sale and Distribution of Tobacco Products and Required Warning Statements for Tobacco Products; Final Rule. Federal Register 2016;81(90): 28973-29106.

4. Centers for Disease Control and Prevention. Tobacco product use among middle and high school students — United States, 2011–2017. Morbidity and Mortality Weekly Report 2018;67(22):629-633.

5. Centers for Disease Control and Prevention. Vital Signs: Tobacco Product Use Among Middle and High School Students-United States, 2011-2018. Morbidity and Mortality Weekly Report (MMWR) 2019;68(6):157-164.

6. Amrock SM, Lee L, and Weitzman M. Perceptions of e-Cigarettes and Noncigarette Tobacco Products Among US Youth. Pediatrics 2016;138(5).

Alcohol and Other Drug Use

QUESTION(S):

34. Have you ever had a drink of alcohol, other than a few sips? **Standard**

35. How old were you when you had your first drink of alcohol other than a few sips? **Standard**

36. During the past 30 days, on how many days did you have at least one drink of alcohol? **Standard**

RATIONALE:

These questions measure ever use of alcohol, age of initiation, and current use of alcohol. Excessive drinking is responsible for more than 4,300 deaths among underage youth each year, and cost the U.S. $24 billion in 2010.[1,2] Underage drinking contributes to a wide range of health and social problems, including motor vehicle crashes, suicide, interpersonal violence (e.g., homicides, assaults, rapes), unintentional injuries (e.g., burns, falls, drowning), risky sexual activity, academic problems, and alcohol and drug poisoning.[3,4] Early initiation of drinking is also associated with increased risks of developing an alcohol use disorder later in life, suicide, and lower rates of college completion.[3, 5-8] Binge drinking is the most common pattern of excessive alcohol use in the United States, and about 90% of the alcohol consumed by youth is in the form of binge drinks.[7,9] The National Institute on Alcohol Abuse and Alcoholism defines binge drinking as a pattern of drinking that brings a person's blood alcohol concentration to 0.08% or above. This typically happens when males consume 5 or more drinks and when females consume 4 or more drinks in about 2 hours.[10] Limiting youth access to alcohol has reduced underage alcohol use and alcohol-related problems.[11-13] However, youth continue to obtain alcohol from a variety of sources, particularly from adults of legal drinking age.[14] While perceived availability of alcohol among 8th graders has substantially declined since 1996, a little more than 50% of 8th graders reported that alcohol would be "fairly easy" or "very easy" to get in 2018.[15]

The National Survey on Drug Use and Health (NSDUH) reported that in 2017, 8.0% of 12 or 13 year olds and 24.6% of 14 or 15 year olds had consumed alcohol in their lifetime.[16] In the 30 days before taking the survey in 2017, 1.6% of 12 or 13 year olds consumed alcohol, of which 0.6% consumed it in a binge drinking manner (up significantly from 0.3% in 2016).[16] In the 30 days before taking the survey in 2017, 7.9% of 14 or 15 year olds consumed alcohol, of which 3.8% consumed it in a binge drinking manner.[16] Factors such as having positive expectations of drinking and having friends who drink were shown to be consistent predictors for consuming alcohol among middle school children.[8]

REFERENCES:

1. Stahre M, Roeber J, Kanny D, Brewer RD, Zhang X. Contribution of excessive alcohol consumption to deaths and years of potential life lost in the United States. Preventing Chronic Disease 2014; 11:130293.

2. Sacks JJ, Gonzales KR, Bouchery EE, Tomedi LE, Brewer RD. 2010 national and state costs of excessive alcohol consumption. American Journal of Preventive Medicine 2015; 49(5): e73–e79.

3. U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration. 2017. Report to Congress on the Prevention and Reduction of Underage Drinking. Available at: https://alcoholpolicy.niaaa.nih.gov/sites/default/files/imce/users/u1743/stop_act_rtc_2017.pdf. Accessed May 30, 2018.

4. Miller JW, Naimi TS, Brewer RD, Jones SE. Binge drinking and associated health risk behaviors among high school students. Pediatrics 2007; 119:76–85.

5. Swahn MH, Bossarte RM, Sullivent EE. Age of alcohol use initiation, suicidal behavior, and peer and dating violence victimization and perpetration among high-risk, seventh grade adolescents. Pediatrics 2008; 121:297–305.

6. Bossarte RM, Swahn MH. The associations between early alcohol use and suicide attempts among adolescents with a history of major depression. Addictive Behaviors 2011; 36:532–535.

7. Centers for Disease Control and Prevention. Binge Drinking Fact Sheet. Available at: http://www.cdc.gov/alcohol/fact-sheets/binge-drinking.htm. Accessed May 30, 2018.

8. Anderson KG and Brown SA. Middle School Drinking: Who, Where, and When. Journal of Child and Adolescent Substance Abuse 2010; 20(1): 48-62.

9. Office of Juvenile Justice and Delinquency Prevention. Drinking in America: Myths, Realities, and Prevention Policy. Washington, DC: U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention, 2005. Available at: http://web.archive.org/web/20150910124238/http://www.udetc.org/documents/Drinking_in_America.pdf . Accessed May 30, 2018.

10. National Institute of Alcohol Abuse and Alcoholism. NIAAA council approves definition of binge drinking. NIAAA Newsletter 2004; No. 3, p. 3. Available at: http://pubs.niaaa.nih.gov/publications/Newsletter/winter2004/Newsletter_Number3.pdf. Accessed May 30, 2018.

11. DeJong W, Blanchette J. Case closed: research evidence on the positive public health impact of the age 21 minimum legal drinking age in the United States. Journal of Studies on Alcohol and Drugs 2014;75(Suppl 17):108–115.

12. Klepp KI, Schmid LA, Murray DM. Effects of the increased minimum drinking age law on drinking and driving behavior among adolescents. Addiction Research 1996; 4:237– 244.

13. Centers for Disease Control and Prevention. Age 21 Minimum Legal Drinking Age Fact Sheet. Available at: https://www.cdc.gov/alcohol/fact-sheets/minimum-legal-drinking-age.htm. Accessed May 30, 2018.

14. Centers for Disease Control and Prevention. Youth risk behavior surveillance—United States, 2017. Morbidity and Mortality Weekly Report 2018;67(No. SS-8);1-114.

15. Johnston LD, Miech RA, O'Malley PM, et al. Monitoring the Future: National Survey Results on Drug Use 1975-2018. Overview 2018: Key Findings on Adolescent Drug Use. Jan 2019. Institute for Social Research, The University of Michigan.

16. Substance Abuse and Mental Health Services Administration. Results from the 2017 National Survey on Drug Use and Health: Detailed Tables. Available at: https://www.samhsa.gov/data/sites/default/files/cbhsq-reports/NSDUHDetailedTabs2017/NSDUHDetailedTabs2017.htm#tab1-4B. Accessed Feb 6, 2019.

QUESTION(S):

37. Have you ever used marijuana? **Standard**

38. How old were you when you tried marijuana for the first time? **Standard**

39. During the past 30 days, how many times did you use marijuana? **Standard**

40. Have you ever sniffed glue, or breathed the contents of spray cans, or inhaled any paints or sprays to get high? **Standard**

41. During the past 12 months, how many times have you taken a prescription pain medicine without a doctor's prescription or differently than how a doctor told you to use it? (Count drugs such as codeine, Vicodin, OxyContin, Hydrocodone, and Percocet.) **Optional**

42. During your life, how many times have you taken any other prescription drug that was not a prescription pain medicine without a doctor's prescription or differently than how a doctor told you to use it? (Count drugs such as Adderall, Ritalin, Valium, or Xanax.) **Local**

43. During the past 12 months, how many times have you used any illicit drug, such as any form of cocaine, heroin, methamphetamines, speed, LSD, or ecstasy? **Optional**

44. During the past 12 months, has anyone offered, sold or given you an illegal drug on school property? **Standard**

RATIONALE:

These questions measure lifetime and current use of marijuana and ever use of cocaine, heroin, methamphetamines, ecstasy; use of prescription pain medicine without a doctor's prescription, or used in a manner differently than instructed by the doctor; and illegal drug activity on school property. Among youth, illicit drug use is associated with heavy alcohol and tobacco use,[1] violence and delinquency,[2-4] and suicide.[5] All school districts prohibit illegal drug possession or use by students on school property.[6]

The National Survey on Drug Use and Health (NSDUH) reports annually on substance use and mental health relating to members of the US population aged 12 years or older. The survey's detailed report for 2017 includes data divided into specific age groups, of which the 12 or 13 years old and 14 or 15 years old grouping is helpful in gaining a more accurate picture on substance use in middle school students (for the YRBS, 7th and 8th graders who range in age from 12-14). In 2017, 17,033 adolescents aged 12-17 were surveyed for NSDUH. For 12 or 13 year olds, the survey found 2.3% had used marijuana in their lifetime; 0.7% used marijuana in the 30 days prior to the survey; 1.5% misused prescription pain medications in the past year; 0.1% used cocaine in the past year; and 0.2% used LSD in the past year.(7) For 14 or 15 year olds, the survey found 12.7% used marijuana in their lifetime; 5.0% used marijuana in the 30 days prior to taking the survey; 2.8% misused prescription pain medications; 0.2% used cocaine in the past year; 0.6% used LSD in the past year; 0.6% used Ecstasy in the past year; and 0.1% used methamphetamines in the past year.(7) Another national study monitoring the behaviors, attitudes, and values of American secondary school students and young adults found that annual marijuana use in 8th graders leveled off in 2018 at 10.5%.(8) The ongoing study also reported that, among 8th graders, the perceived risk of using marijuana has continued to decrease since the mid-2000s, and 35% of 8th graders reported that marijuana would be easy to get in 2018.(8) Research shows that 1 in 6 people who use marijuana as adolescents become addicted to it.(9)

Inhalant use, including sniffing glue and spray can products (such as paint and household cleaning products), is more popular among younger adolescents because of low cost and easy accessibility to such products.(8) Among 8th graders, the perceived risk of using inhalants significantly decreased in 2018.(8) The NSDUH reported that 2.6% of 12 or 13 year olds and 2.4% of 14 or 15 year olds used inhalants in 2017.(7) Health Risks of using inhalants include: brain damage, kidney damage, choking, and acute respiratory failure.(10)

REFERENCES:

1. Substance Abuse and Mental Health Services Administration. Results from the 2010 National Survey on Drug Use and Health: Summary of National Findings. NSDUH Series H-41, HHS Publication No. (SMA) 11-4658. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2011. Available at: https://www.samhsa.gov/data/sites/default/files/NSDUHNationalFindingsResults2010-web/2k10ResultsRev/NSDUHresultsRev2010.pdf. Accessed June 18, 2018.

2. Substance Abuse and Mental Health Services Administration. Youth violence and illicit drug use. The NSDUH Report 2006; 5:1–3. Available at: http://files.eric.ed.gov/fulltext/ED495798.pdf. Accessed June 18, 2018.

3. Substance Abuse and Mental Health Services Administration. Marijuana use and delinquent behaviors among youths. The NSDUH Report January 9, 2004. Available at: http://www.samhsa.gov/data/2k4/MJdelinquency/MJdelinquency.pdf. Accessed June 18, 2018.

4. Young AM, Glover N, Havens JR. Nonmedical use of prescription medications among adolescents in the United States: A systematic review. Journal of Adolescent Health 2012;51(1):6–17.

5. Substance Abuse and Mental Health Services Administration. Substance use and the risk of suicide among youths. The NHSDA Report July 12, 2002. Available at: http://www.samhsa.gov/data/2k2/suicide/suicide.htm. Accessed June 18, 2018.

6. Everett Jones S, Fisher CJ, Greene BZ, Hertz MF, Pritzl J. Healthy and safe school environment, part I: Results from the School Health Policies and Programs Study 2006. Journal of School Health 2007;77(8):522–543.

7. Substance Abuse and Mental Health Services Administration. Results from the 2017 National Survey on Drug Use and Health: Detailed Tables. Available at: https://www.samhsa.gov/data/sites/default/files/cbhsq-reports/NSDUHDetailedTabs2017/NSDUHDetailedTabs2017.htm#tab1-4B. Accessed Feb 6, 2019.

8. Johnston LD, Miech RA, O'Malley PM, et al. Monitoring the Future: National Survey Results on Drug Use 1975-2018. Overview 2018: Key Findings on Adolescent Drug Use. Jan 2019. Institute for Social Research, The University of Michigan.

9. Teen marijuana use increases, especially among eighth-graders. NIDA's Monitoring the Future Survey shows increases in Ecstasy use and continued high levels of prescription drug abuse. Dec 2010. National Institute on Drug Abuse, Archives. Available at: https://archives.drugabuse.gov/news-events/news-releases/2010/12/teen-marijuana-use-increases-especially-among-eighth-graders. Accessed Feb 6, 2019.

10. Roland, James. How Sniffing Glue Affects Your Health. Healthline Newsletter. Aug 7, 2018. Available at: https://www.healthline.com/health/sniffing-glue. Accessed Feb 7, 2019.

Sexual Behaviors that Contribute to Unintended Pregnancy and Sexually Transmitted Diseases, Including HIV Infection

QUESTION(S):

45.	Have you ever had sexual intercourse?	**Standard**
46.	With how many people have you ever had sexual intercourse?	**Standard**
47.	During the past 3 months, with how many people did you have sexual intercourse?	**Optional**
48.	The last time you had sexual intercourse, did you or your partner use a condom?	**Standard**

RATIONALE:

These questions measure the prevalence of sexual activity, number of sexual partners, age at first intercourse, and condom use. Early initiation of sexual intercourse is associated with having a greater number of lifetime sexual partners.[1,2] In addition, adolescents who initiate sexual intercourse early are less likely to use contraception[2,3] and are at higher risk for STDs[4] and pregnancy.[5,6] Estimates suggest that while representing 25% of the ever sexually active population, persons aged 15 to 24 years acquire more than half of all new STDs.[7] Data also shows that 1 in 8 youth have engaged in intercourse, oral sex, or both before the age of 14.[8] In 2016, there were an estimated 2,041 persons ages 13–19 years newly diagnosed with HIV infection and 7,878 living with

diagnosed HIV infection.[9] In 2014, young people aged 13–24 accounted for 21% of all new HIV infections in the United States.[10]

Among middle school students nationwide in 2005, a range of 13.4%-16.1% 7th graders and 17.9%-18.2% 8th graders reported ever having sexual intercourse.[11] Furthermore, 4.5%-5.9% 7th graders and 6.4%-7.6% 8th graders reported ever having sexual intercourse with 3 or more people, and 70.0% of 7th graders and 69.2%-77.3% of 8th graders who had sexual intercourse used a condom the last time they had intercourse (or their partner did).[11] Evidence shows that, compared to their peers, adolescents who engage in sexual activity before the age of 15 (7th and 8th graders age range is 12-14 years) are more likely to have multiple sex partners, engage in more frequent intercourse, and have higher STD and pregnancy rates, highlighting that young adolescents are less likely to practice protective behaviors or be screened for STDs.[12] Factors that may affect initiation of sexual behavior include parental approval/disapproval, peer pressure, and early romantic relationships with a boyfriend or girlfriend.[12]

REFERENCES:

1. Santelli JS, Brener ND, Lowry R, et al. Multiple sexual partners among U.S. adolescents and young adults. Family Planning Perspectives 1998; 30:271–275.

2. Martinez G, Copen CE, Abma JC. Teenagers in the United States: Sexual activity, contraceptive use, and childbearing, 2006–2010 National Survey of Family Growth. National Center for Health Statistics. Vital and Health Statistics Series 2011; 23(31). Available at: http://www.cdc.gov/nchs/data/series/sr_23/sr23_031.pdf. Accessed April 26, 2016.

3. Manning WD, Longmore MA, Giordano PC. The relationship context of contraceptive use at first intercourse. Family Planning Perspectives 2000;32(3):104–110.

4. Kaestle CE, Halpern CT, Miller WC, Ford CA. Young age at first sexual intercourse and sexually transmitted infections in adolescents and young adults. American Journal of Epidemiology 2005;161(8):774–780.

5. Manlove J, Terry E, Gitelson L, Papillo AR, Russell S. Explaining demographic trends in teenage fertility, 1980–1995. Family Planning Perspectives 2000;32(4):166–175.

6. Thornberry TP, Smith CA, Howard GJ. Risk factors for teenage fatherhood. Journal of Marriage & Family 1997; 59:505–522.

7. Satterwhite CL, Torrone E, Meites E, Dunne EF, Mahajan R, Ocfemia MC, Su J, Xu F, Weinstock H. Sexually transmitted infections among US women and men: Prevalence and incidence estimates, 2008. Sexually Transmitted Diseases 2013;40(3):187–193.

8. De Rosa CJ, Kim DH, Kerndt PR, et al. Middle School Students' Sexual Behavior: New Insights. Journal of Adolescent Health. 2006; 38(2):154.

9. Centers for Disease Control and Prevention. HIV Surveillance Report, 2016. Volume 28. Atlanta, GA: Centers for Disease Control and Prevention, Division of HIV/AIDS Prevention; 2017.

10. Centers for Disease Control and Prevention. Diagnoses of HIV Infection among Adolescents and Young Adults in the United States and 6 Dependent Areas 2011-2016. HIV Surveillance Supplemental Report 2018;23(No. 3).

11. Shanklin SL et al., 2005 Middle School Youth Risk Behavior Survey, Atlanta: CDC, 2007.

12. De Rosa CJ, Ethier KA, Kim DH et al. Sexual Intercourse and Oral Sex Among Public Middle School Students: Prevalence and Correlates. Perspectives on Sexual and Reproductive Health. 2019; 42(3): 197-205.

Dietary Behaviors

QUESTION(S):

51. Yesterday, how many times did you eat fruit? (Foods like apple, papaya, banana, orange, applesauce or pear. Do not count fruit juices.) **Local**

52. Yesterday, how many times did you eat vegetables? (Foods like broccoli, spinach, carrots, squash, tomatoes, or green beans.) **Local**

53. Yesterday, how many times did you eat green salad? (Salads that contain lettuce, spinach, or other greens.) **Local**

54. Yesterday, how many times did you drink a can, bottle, or glass of soda or pop, such as Coke, Pepsi, or Sprite? (Do not include diet soda or pop.) **Local**

RATIONALE:

These questions measure dietary behaviors, including consumption of fruits, vegetables, and beverages. The fruit and vegetable questions are similar to questions asked of adults on the Centers for Disease Control and Prevention's Behavioral Risk Factor Surveillance System 2009 survey questionnaire.[1] Fruits and vegetables are good sources of complex carbohydrates, vitamins, minerals, and other substances that are important for good health.[2] There is probable evidence to suggest that dietary patterns with higher intakes of fruits and vegetables are associated with a decreased risk for some types of cancer,[3–5] cardiovascular disease,[6] and stroke.[7] Although data are limited, an increased intake of fruits and vegetables appears to be associated with a decreased risk of being overweight.[8–10] In addition, consumption of leafy greens, like those in a salad, has been associated with reduced risk of type II diabetes, reduced risk for a variety of cancers, and even affects mental health through reducing depression.[26]However, most youth do not meet the recommendations for fruit and vegetable consumption.[11–13] It is well known that vegetable intake in adulthood is related to childhood experiences, and that eating habits and food preferences transfer from childhood into adulthood.[26]

Although total sugar-sweetened beverage consumption has significantly decreased during the last decade, mainly due to the decrease in regular soda intake, the calorie intake from sugar-sweetened beverages remain high.[14-18] Furthermore, sugar-sweetened beverages are a primary source of added sugars in the diet of U.S. children,[19] and contribute on average 143 kcal/day (7.3% of daily energy intake).[17] Consumption of sugar-sweetened beverages is associated with a less healthy diet[20] and dental decay, [21] and appears to be associated with increased risk of being overweight among children[22-24] and the development of metabolic syndrome and type 2 diabetes.[25]

Research shows that younger children are more likely to consume fruits compared to adolescents.[27] In fact, overall dietary quality (based off of adherence to the 2010 Dietary Guidelines for Americans-DGA) was found to decrease with age: 4-8 year olds adhered to the DGA significantly more than both 9-13 year olds and 14-18 year olds. [28] Furthermore, 9-13 year olds adhered to the DGA significantly more than 14-18 year olds. [28] While dietary quality among 6-11 and 12-18 year olds has significantly improved from 1999-2012, it remains low with regards to standards for a healthy, preventative diet. [29]

REFERENCES:

1. Centers for Disease Control and Prevention. Behavioral Risk Factor Surveillance System survey questionnaire. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 2009. Available at: http://www.cdc.gov/brfss/questionnaires/pdf-ques/2009brfss.pdf. Accessed May 18, 2016.

2. U.S. Department of Agriculture, U.S. Department of Health and Human Services. Dietary Guidelines for Americans 2015–2020. 8th Edition. Washington, DC: U.S. Government Printing Office, 2015. Available at: https://health.gov/dietaryguidelines/2015/resources/2015-2020_Dietary_Guidelines.pdf. Accessed June 6, 2018.

3. Key T, Schatzkin A, Willet WC, Allen NE, Spencer EA, Travis RC. Diet, nutrition, and the prevention of cancer. Public Health Nutrition 2004;7(1A):187–200.

4. Kushi LH, Byers T, Doyle C, et al. American Cancer Society guidelines on nutrition and physical activity for cancer prevention: Reducing the risk of cancer with healthy food choices and physical activity. CA: A Cancer Journal for Clinicians 2006; 56:254–281.

5. Vainio H, Weiderpass E. Fruit and vegetables in cancer prevention. Nutrition and Cancer 2006;54(1):111–142.

6. Bazzano LA, He J, Ogden LG, et al. Fruit and vegetable intake and risk of cardiovascular disease in US adults: The first National Health and Nutrition Examination Survey Epidemiologic Follow-up Study. American Journal of Clinical Nutrition 2002;76(1):93– 99.

7. He FJ, Nowson CA, MacGregor GA. Fruit and vegetable consumption and stroke: Metaanalysis of cohort studies. Lancet 2006;367(9507):320–326.

8. Rolls BJ, Ello-Martin JA, Tohill BC. What can intervention studies tell us about the relationship between fruit and vegetable consumption and weight management. Nutrition Reviews 2004;62(1):1–17.

9. He K, Hu FB, Colditz GA, Manson JE, Willett WC, Liu S. Changes in intake of fruits and vegetables in relation to risk of obesity and weight gain among middle-aged women. International Journal of Obesity 2004; 28:1569–1574.

10. Goss J, Grubbs L. Comparative analysis of body mass index, consumption of fruits and vegetables, smoking, and physical activity among Florida residents. Journal of Community Health Nursing 2005;22(1):37–46.

11. Kim SA, Moore LV, Galuska D, Wright AP, Harris D, Grummer-Strawn LM, Merlo CL, Nihiser AJ, Rhodes DG. Vital signs: fruit and vegetable intake among children — United States, 2003–2010. Morbidity and Mortality Weekly Report 2014;63(31):671–676.

12. Krebs-Smith SM, Guenther PM, Subar AF, Kirkpatrick SI, Dodd KW. Americans do not meet dietary recommendations. Journal of Nutrition 2010; 140:1832–1838.

13. Moore LV, Thompson FE, Demissie Z. Percentage of youth meeting federal fruit and vegetable intake recommendations, Youth Risk Behavior Surveillance System, United States and 33 States, 2013. Journal of the Academy of Nutrition and Dietetics 2017; 117:545-553.

14. Mesirow MS, Welsh JA. Changing beverage consumption patterns have resulted in fewer liquid calories in the diets of US children: National Health and Nutrition Examination Survey 2001–2010. Journal of the Academy of Nutrition and Dietetics 2015;115(4):559- 566.

15. Kit BK, Fakhouri THI, Park S, Nielsen SJ, Ogden CL. Trends in sugar-sweetened beverage consumption among youth and adults in the United States: 1999–2010. American Journal of Clinical Nutrition 2013; 98:180–188.

16. Welsh JA, Sharma AJ, Grellinger L, Vos MB. Consumption of added sugars is decreasing in the United States. American Journal of Clinical Nutrition 2011; 94:726–734.

17. Rosinger A, Herrick K, Gahche J, Park S. Sugar-sweetened beverage consumption among U.S. youth, 2011–2014. NCHS data brief, no 271. Hyattsville, MD: National Center for Health Statistics; 2017.

18. Bleich SN, Vercammen KA, Koma JW, Li Z. Trends in beverage consumption among children and adults, 2003–2014. Obesity 2018;26(2):432-441.

19. Drewnowski A, Rehm CD. Consumption of added sugars among US children and adults by food purchase location and food source. American Journal of Clinical Nutrition 2014;100(3):901–907.

20. Marshall T, Gilmore J, Broffitt B, et al. Diet quality in young children is influenced by beverage consumption. Journal of the American College of Nutrition 2005;24(1):65–75.

21. Tahmassebi JF, Duggal MS, Malik-Kotru G, Curzon ME. Soft drinks and dental health: A review of the current literature. Journal of Dental Research 2006;34(1):2–11.

22. Vartanian LR, Schwartz MB, Brownell KD. Effects of soft drink consumption on nutrition and health: A systematic review and meta-analysis. American Journal of Public Health 2007;97(4):667–675.

23. Malik VS, Pan A, Willett WC, Hu FB. Sugar-sweetened beverages and weight gain in children and adults: A systematic review and meta-analysis. American Journal of Clinical Nutrition 2013;98(4):1084–1102.

24. Luger M, Lafontan M, Bes-Rastrollo M, Winzer E, Yumuk V, Farpour-Lambert N. Sugar-sweetened beverages and weight gain in children and adults: A systematic review from 2013 to 2015 and a comparison with previous studies. Obesity Facts 2017;10(6):674-693.

25. Malik VS, Popkin BM, Bray GA, Despres JP, Willett WC, Hu FB. Sugar-sweetened beverages and risk of metabolic syndrome and type 2 diabetes: A meta-analysis. Diabetes Care 2010; 33:2477–2483.

26. Appleton KM, Hemingway A, Saulais L, et al. Increasing vegetable intakes: rationale and systematic review of published interventions. European Journal of Nutrition. 2016; 55: 869-896.

27. Herrick KA, Rossen LM, Nielsen SJ, et al. Fruit Consumption by Youth in the United States. Pediatrics 2015:136(4):664-671.

28. Banfield EC, Liu Y, Davis JS, et al. Poor adherence to U.S. dietary guidelines for children and adolescents in the NHANES population. Journal of the Academy of Nutrition and Dietetics 2016;116(1):21-27.

29. Xiao Gu and Katherine L. Tucker. Dietary quality of the US child and adolescent population: trends from 1999-2012 and associations with the use of federal nutrition assistance programs. The American Journal of Clinical Nutrition 2017;105(1):194-202.

QUESTION(S):

55. In an average school week, on how many days do you drink water at school, including water from a fountain, a sink, or faucet, a bottle, a reusable bottle you brought from home, or some other source?

Optional

RATIONALE:

Water is vital for life, and plain water is a calorie-free option for hydration.[1] Getting enough water every day is important for one's health. Healthy people meet their fluid needs by drinking when thirsty and drinking with meals. Most of one's fluid needs are met through the water and beverages they drink. [2] When selecting beverages, adolescents should be aware that water and low-fat or fat-free milk are the most healthy. [2] Providing students with access to safe, free drinking water throughout the school day is one strategy schools can use to create an environment that supports health and learning. Providing access to drinking water gives students a healthy alternative to sugar-sweetened beverages. It helps to increase students' overall water consumption, maintain hydration, and reduce energy intake if substituted for sugar-sweetened beverages.[1-3] Adequate hydration may also improve cognitive function in children and adolescents.[4-8]

REFERENCES:

1. GoodmanAB, Blanck HM, Sherry B, Park S, Nebeling L, Yaroch AL. Behaviors and Attitudes Associated with Low Drinking Water Intake Among US Adults, Food Attitudes and Behaviors Survey, 2007. Preventing Chronic Disease 2013; 10:120248. DOT: http://dx.doi.org/10.5888/pcd10.120248.

2. CDC. Beverage Consumption among High School Students – United States, 2010. MMWR Morbidity and Mortality Weekly Report. 2011;60(23):778-780.

3. CDC. CDC Healthy Schools-Water Access. Available at: https://www.cdc.gov/healthyschools/npao/wateraccess.htm.

QUESTION(S):

56. During the past 7 days, on how many days did you eat breakfast? **Standard**

57. During the past 7 days, on how many days did you eat fast food? (like McDonald's, Burger King, Pizza Hut, Taco Bell, or Kentucky Fried Chicken, or Subway). **Optional**

RATIONALE:

Eating breakfast is associated with weight loss and weight loss maintenance,[1] improved nutrient intake,[1] and better cognitive function, academic performance, school attendance rates, psychosocial function, and mood.[3-6] Breakfast and lunch are the common meals adolescents are likely to skip, and older adolescents aged 15-18 years are twice as likely to skip breakfast compared to their younger counterparts.[2]

In 2011-2012, a little more than a third (34.3%) of children and adolescents aged 2-19 years consumed fast food on a given day.[7] More particularly, and in that same time frame, an average of 12.4% of the daily caloric intake of children and adolescents came from fast food.[7] Diet and nutrition have important links to adolescent health and well-being, as well as to major causes of morbidity and mortality later in life. As children grow into adolescents with more independence, their consumption of fast food increases. An average adolescent visits a fast food restaurant twice a week.[8] A longitudinal study that followed participants for 15 years found that consuming fast food is strongly associated with weight gain and insulin resistance, suggesting that it also increases the risk of obesity and type 2 diabetes.[9]

REFERENCES:

1. U.S. Department of Agriculture, U.S. Department of Health and Human Services. Dietary Guidelines for Americans 2015–2020. 8th Edition. Washington, DC: U.S. Government Printing Office, 2015. Available at: https://health.gov/dietaryguidelines/2015/resources/2015-2020_Dietary_Guidelines.pdf. Accessed June 6, 2018.

2. Debby Demory-Luce and Kathleen J Motil. Adolescent eating habits. UpToDate 2018. Available at: https://www.uptodate.com/contents/adolescent-eating-habits#H1.

3. Rampersaud GC, Pereira M, Girard BL, Adams J, Metzl JD. Breakfast habits, nutritional status, body weight, and academic performance in children and adolescents. Journal of the American Dietetic Association 2005; 105:743–760.

4. Hoyland A, Dye L, Lawton CL. A systematic review of the effect of breakfast on the cognitive performance of children and adolescents. Nutrition Research Reviews 2009; 22:220–243.

5. Michael SL, Merlo CL, Basch CE, Wentzel KR, Wechsler H. Critical connections: Health and academics. Journal of School Health 2015; 85:740–758.

6. Rasberry CN, Tiu GF, Kann L, et al. Health-related behaviors and academic achievement among high school students — United States, 2015. Morbidity and Mortality Weekly Report 2017; 66:921–927.

7. Vikraman S, Fryar CD, Ogden CL. Caloric Intake From Fast Food Among Children and Adolescents in the United States, 2011-2012. National Center for Health Statistics, Data Brief 2015. No. 213.

8. French SA, Story M, Neumark-Sztainer D, et al. Fast food restaurant use among adolescents: associations with nutrient intake, food choices and behavioral and psychosocial variables. International Journal of Obesity. 2001;25: 1823-1833.

9. Pereira MA, Kartashov AI, Ebbeling CB, et al. Fast-food habits, weight gain, and insulin resistance (the CARDIA study): 15-year prospective analysis. The Lancet. 2005 Jan 1;365(9453):36-42.

QUESTION(S):

58. During the past 30 days, how often did you go hungry because there was not enough food in your home? **Local**

RATIONALE:

Food insecurity refers to not being able to afford enough nutritious food to healthily feed one's family. (1) In 2016, the United States Department of Agriculture Economic Research Service reported that 42 million people in the US are food-insecure, and youth between the ages of 10 and 17 make up close to 7 million of that total (almost 16.7%). (2, 1) While the percentage of children (under the age of 18) living in food insecure households significantly decreased between 2014 and 2015 (from 20.9% to 17.9%), children carry higher food insecurity rates compared to the general US population. (2)

Children aged 12-15 who are food insecure are nearly 3 times more likely to have iron deficiency anemia than those in the same age range who are food secure. (3) Furthermore, food insecurity in children and adolescents has been associated with insufficient nutrient intake, increased risk for development of chronic disease, and poor cognitive functioning. (4) Beyond this, experiencing hunger also has social impacts for adolescents and can push them to partake in risky behaviors to get by. A study involving focus groups with teens who are food insecure found that teens turn to criminal behavior (shoplifting and selling drugs) and sexual exploitation (mainly through transactional dating with older adults) to be able to feed themselves, and sometimes, other family members. (1)

REFERENCES:

1. Popkin SJ, Scott MM, Galvez MM. Impossible Choices: Teens and Food Insecurity in America. Urban Institute, 2016. Available at: https://www.urban.org/sites/default/files/publication/83971/impossible-choices-teens-and-food-insecurity-in-america_1.pdf.

2. Feeding America. Map the Meal Gap 2017: Highlights of Findings for Overall and Child Food Insecurity. Available at: https://www.feedingamerica.org/sites/default/files/research/map-the-meal-gap/2015/2015-mapthemealgap-exec-summary.pdf.

3. Eicher-Miller, H.A., Mason, A.C., Weaver, C.M., McCabe, G.P., & Boushey, C.J. Food Insecurity is associated with iron deficiency anemia in US adolescents. The American Journal of Clinical Nutrition 2009;90(5):1358-1371.

4. David Holben. Position of the American Dietetic Association: Food Insecurity in the United States. Journal of the American Dietetic Association 2010; 110(9):1366-1377.

Physical Activity

QUESTION(S):

59. During the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day? (Add up all the time you spend in any kind of physical activity that increases your heart rate and makes you breathe hard some of the time). **Standard**

60. On an average school day, how many hours do you watch TV? **Standard**

61. On an average school day, how many hours do you play video or computer games or use a computer for something that is not school work? (Count time spent on things such as Xbox, PlayStation, an iPod, an iPad or tablet, a smartphone, YouTube, Facebook or other social networking tools, and the Internet.) **Standard**

62. During the past 12 months, on how many sports teams did you play? (Count any teams run by your school or community groups.) **Standard**

RATIONALE:

These questions measure participation in physical activity and team sports and attendance in physical education classes. These questions also examine time spent watching television (TV) and using a computer or playing video games. Participation in regular physical activity among young people can help build and maintain healthy bones and muscles, maintain body weight and reduce body fat, reduce feelings of depression and anxiety, and promote psychological wellbeing.(1) Over time, regular physical activity decreases the risk of high blood pressure, heart disease, diabetes, obesity, some types of cancer, and premature death.(1) In 2008, the U.S. Department of Health and Human Services recommended that young people aged 6–17 years participate in at least 60 minutes of physical activity daily.(2) The National Physical Activity Plan Alliance (NPAP) reported in 2018 that 24% of children aged 6-17 years did not meet the recommended 60 minutes of activity/day.(3) Furthermore, participation in physical activity seems to decrease with age: NPAP reported that 6-11 year olds are more physically active than 12-15 year olds, and compared to 15% of elementary schools, only 9% of middle schools require students to take PE at least 3 days/week.(3)

In 2012, the U.S. Department of Health and Human Services released a mid-course report on the Physical Activity Guidelines for Americans. (4) This report focused on strategies to increase physical activity among youth. The report concluded that school-based settings had the strongest evidence and multi-component physical activity programs, including physical education, had the most promise for increasing physical activity. In 2013, the Institute of Medicine (IOM) released Educating the Student Body: Taking Physical Activity and Physical Education to School.(5) This report also stressed the importance of a comprehensive, multi-component, whole school approach to physical activity in schools. CDC and many other federal and national partners are promoting Comprehensive School Physical Activity Programs (CSPAP) to create school environments that offer many opportunities for students to be physically active throughout the school day.(6) A CSPAP includes strong coordination across five components: physical education, physical activity during school, physical activity before and after school, staff involvement, and family and community engagement. Physical education is the cornerstone of CSPAP with research showing that school physical

education classes can increase adolescent participation in physical activity [7–13] and help high school students develop the knowledge, attitudes, and skills they need to engage in lifelong physical activity.[4,14,15]

Watching TV and using a computer are considered sedentary behaviors. Among youth, time spent watching TV is associated with childhood and adult obesity, consumption of fast food, soft drinks, and high-fat snacks, and consumption of fewer fruits and vegetables. [16–22] In addition, youth who spend excessive time in sedentary activities are more likely to have lower academic performance, a lower quality of life, and poorer motor skills. Youth who engage in less than 2 hours of TV viewing per day tend to be more active. [16] Computer usage and video game playing are associated with physical inactivity among adolescents and young adults. [23]

Between 2004 and 2009, daily media consumption among youth aged 8-18 years increased by an hour and seventeen minutes, hiking from 6 hrs and 21 minutes in 2004 to 7 hrs and 38 minutes in 2009. [24] In 2009, media use (including TV, music, computers and video games) among 11-14 year olds averaged 8 hours and 40 minutes of their typical day, more than both 8-10 year olds and 15-18 year olds. [24] The more striking factor is that of multitasking, which reveals that while youth aged 11-14 years consume almost 9 hours of media per day, they actually are exposed to almost 12 hours' worth of media per day. [24] Even though time spent watching regular TV programming among youth aged 8-18 years decreased by 13.5% between 1999-2009, the availability of various forms of media has driven an 18.5% increase in TV content consumed/day among youth aged 8-18 years in that same time period. [25]

REFERENCES:

1. 2018 Physical Activity Guidelines Advisory Committee. 2018 Physical Activity Guidelines Advisory Committee Scientific Report. Washington, DC: U.S. Department of Health and Human Services; 2018. Available at: https://health.gov/paguidelines/second-edition/report.aspx. Accessed June 25, 2018.

2. U.S. Department of Health and Human Services. 2008 Physical Activity Guidelines for Americans. Washington, DC: U.S. Department of Health and Human Services; 2008. Available at: http://www.health.gov/PAguidelines/pdf/paguide.pdf. Accessed June 25, 2018.

3. National Physical Activity Plan Alliance. The 2018 United States Report Card on Physical Activity for Children and Youth. Washington, DC: National Physical Activity Plan Alliance, 2018.

4. U.S. Department of Health and Human Services. Physical Activity Guidelines for Americans Midcourse Report: Strategies to Increase Physical Activity among Youth. Washington, DC: U.S. Department of Health and Human Services; 2012. Available at: https://health.gov/paguidelines/2008/midcourse/pag-mid-course-report-final.pdf. Accessed June 25, 2018.

5. Institute of Medicine. Educating the Student Body: Taking Physical Activity and Physical Education to School. Washington, DC: The National Academies Press; 2013. Available Item Rationale for the 2019 Standard High School YRBS 40 at: http://books.nap.edu/openbook.php?record_id=18314&page=R1. Accessed June 25, 2018.

6. Centers for Disease Control and Prevention. Comprehensive School Physical Activity Programs: A Guide for Schools. Atlanta, GA: US Department of Health and Human Services; 2013. Available at: https://www.cdc.gov/healthyschools/professional_development/e-learning/cspap.html. Accessed June 25, 2018.

7. Metcalf B, Henley M, Wilkin T. Effectiveness of intervention on physical activity of children: Systematic review and meta-analysis of controlled trials with objectively measured outcomes. British Medical Journal 2012; e345–347.

8. Dobbins M, Husson H, DeCorby K, LaRocca RL. School-based physical activity programs for promoting physical activity and fitness in children and adolescents aged 6 to 18 (Review). Cochrane Database of Systematic Reviews 2013, Issue 2. Art. No.: CD007651. DOI: 10.1002/14651858.CD007651.pub2.

9. Lonsdale C, Rosenkranz RR, Peralta LR, Bennie A, Fahey P, Lubans DR. A systematic review and meta-analysis of interventions designed to increase moderate-to-vigorous physical activity in school physical education. Preventive Medicine 2013; 56(2):152–161.

10. Bassett DR, Fitzhugh EC, Heath GW, et al. Estimated energy expenditures for school-based policies and active living. American Journal of Preventive Medicine 2013;44 (2):108-113.

11. McKenzie TL, Li DL, Derby CA, Webber LS, Luepker RV, Cribb P. Maintenance of effects of the CATCH physical education program: Results from the CATCH-ON Study. Health Education & Behavior 2003; 30:447–462.

12. McKenzie TL, Sallis JF, Prochaska JJ, Conway TL, Marshall SJ, Rosengard P. Evaluation of a two-year middle-school physical education intervention: M-SPAN. Medicine & Science in Sports & Exercise 2004;36:1382–1388.

13. Pate R, Ward DS, Saunders RP, Felton G, Dishman RK, Dowda M. Promotion of physical activity among high school girls: A randomized controlled trial. American Journal of Public Health 2005; 95:1582–1587.

14. Dishman RK, Motl RW, Saunders R, et al. Enjoyment mediates effects of a school-based physical-activity intervention. Medicine & Science in Sports & Exercise 2005;37(3):478– 487.

15. SHAPE America. The Essential Components of Physical Education. Reston, VA: SHAPE America – Society of Health and Physical Educators; 2015. Available at: http://www.shapeamerica.org/upload/TheEssentialComponentsOfPhysicalEducation.pdf. Accessed June 25, 2018.

16. Fulton JE, Wang X, Yore MM, Carlson SA, Galuska DA, Caspersen CJ. Television viewing, computer usage, and BMI among U.S. children and adolescents. Journal of Physical Activity and Health 2009;6(Suppl 1): S28–S35.

17. Kaur H, Choi WS, Mayo MS, Harris KJ. Duration of television watching is associated with increased body mass index. Journal of Pediatrics 2003;143(4):506–511.

18. Sisson SB, Shay CM, Broyles ST, Leyva M. Television-viewing time and dietary quality among U.S. children and adults. American Journal of Preventive Medicine 2012; 43(2):196–200.

19. Pearson N, Biddle SJH. Sedentary behavior and dietary intake in children, adolescents, and adults: A systematic review. American Journal of Preventive Medicine 41(2): 2011;178-188.

20. Fuller-Tyszkiewicz M, Skouteris H, Hardy LL, Halse C. The associations between TV viewing, food intake, and BMI. A prospective analysis of data from the Longitudinal Study of Australian Children. Appetite 2012; 59(3):945–948.

21. Salmon J, Campbell KJ, Crawford DA. Television viewing habits associated with obesity risk factors: A survey of Melbourne schoolchildren. Medical Journal of Australia 2006; 184:64–67.

22. Demissie Z, Lowry R, Eaton DK, Park S, Kann L. Electronic media and beverage intake among United States high school students—2010. Journal of Nutrition Education and Behavior 2013;45(6):756–760.

23. Fotheringham MJ, Wonnacott RL, Owen N. Computer use and physical inactivity in young adults: Public health perils and potentials of new information technologies. Annals of Behavioral Medicine 2000; 22:269–275.

24. Rideout VJ, Foehr UG, Roberts DF. Generation M²: Media in the Lives of 8-to18-Year Olds. A Kaiser Family Foundation Study, Jan 2010. Available at: https://kaiserfamilyfoundation.files.wordpress.com/2013/01/8010.pdf. Accessed Mar 1, 2019.

25. Robert Wood Johnson Foundation. Active Living Research, Research Review. Sedentary Behaviors and Youth: Current Trends and the Impact on Health. Active Living Research, Research Review: Jan 2014. Available at: https://activelivingresearch.org/sites/activelivingresearch.org/files/ALR_Brief_SedentaryBehavior_Jan2014.pdf. Accessed: Mar 1, 2019.

QUESTION(S):

63. In an average school week, on how many days do you walk or ride your bike to or from school when the weather allows you to do so? **Optional**

RATIONALE:

Active travel to school provides an opportunity for daily physical activity. Studies have shown that walking and biking to school are associated with higher physical activity levels.[1,2] Adolescents who bike to school are more fit than those who walk or travel by motorized transport.[3] This question also supports research for the YMCA REACH Grant.

REFERENCES:

1. Cooper AR, Andersen LB, Wedderkopp N, Page AS, Froberg K. Physical activity levels of children who walk, cycle, or are driven to school. American Journal of Preventive Medicine. 2005; 29:179-184.

2. Sirard JR, Riner WF, McIver KLR, Pate R. Physical activity and active community to elementary school. Medical Science and Sports Exercise. 2005; 37:2062-2069.

3. Cooper AR, Wedderkopp N, Wang H, Andersen LB, Froberg K, Page AS. Active travel to school and cardiovascular fitness in Danish children and adolescents. Medical Science and Sports Exercise. 2006; 38(10):1724-1731.

Developmental Assets and Protective Factors

QUESTION(S):

64. During the past 7 days, on how many days did you take part in organized after school, evening, or weekend activities other than sports teams such as school clubs, community center groups, music/art/dance lessons, drama, church, or other supervised activities? **Local**

65. During the past 7 days, how many hours did you spend helping other people without getting paid (such as helping out at a hospital, daycare center, food shelter, youth program, community service agency, or doing other things) to make your community a better place for people to live? **Local**

66. How often does one of your parents talk with you about what you are doing in school? **Local**

67. Do you agree or disagree that in your school students help decide what goes on? **Local**

68. Do you agree or disagree that in your community you feel like you matter to people? **Local**

69. Besides your parents, how many adults would you feel comfortable seeking help from if you had an important issue or question affecting your life? **Local**

RATIONALE:

These questions, along with grades in school are considered developmental assets. Developmental assets are grouped into external (support, empowerment, boundaries and expectations, and constructive use of time) and internal (commitment to learning, positive values, social competencies, and positive identity) assets.[1] The dichotomized variables are used to determine associations between developmental assets and risk behaviors.

Students were asked about the number of trusted adults that they felt they have. Over time it has been determined that promoting positive asset building and considering young people as resources could be critical strategies. As a result, the field of youth development began examining the role of protective factors in a young person's environment and how these factors could influence one's choices. [2] Protective factors include, but are not limited to: family support, caring adults, positive peer groups, strong sense of self and self-esteem, and engagement in school and community activities.

REFERENCES:

1. Leffert N, Benson PL, Scales PC, Sharma A, Drake D, Blyth DA. Developmental assets: measurement and prediction of at-risk behaviors among adolescents. Applied Developmental Science. 1998; 2(4):209-230.

2. Positive Youth Development. 2010. Web Site http: https://youth.gov/youth-topics/positive-youth-development. Accessed on September 20, 2010.

Other Health-Related Topics

QUESTION(S):

70. Have you ever been taught about AIDS or HIV infection in school? **Local**

RATIONALE:

This question seeks to find out if students have been taught about HIV or AIDS in school. [1] In 2016, 21% of new HIV diagnoses were among youth between the ages 13-24. [2] The CDC reports that at the end of 2015, 60,300 youth were living with HIV, but only 1 in 2 knew they had the virus. [2] While sexual health education at schools varies across the U.S, it does not start early enough and the requirement to teach HIV prevention has declined overtime (dropped from 64% to 41% between 2000-2014). [3] HIV and AIDS education in schools is important in many respects for adolescent health, including: preventing transmission of HIV/AIDS, serving as a source of answers and support for those affected by HIV/AIDS, and providing opportunities for students to address stigma, stereotypes, and bullying surrounding this topic. [1] In addition, learning about HIV and how to prevent it crosses over with supporting overall sexual health, which adolescents can benefit from as well. [1]

REFERENCES:

1. Ophea: Teaching Tools. The Importance of School-Based HIV Education. Available at https://teachingtools.ophea.net/supplements/hivaids-online-school-support-kit/importance-school-based-hiv-education. Accessed January 29, 2019.

2. Centers for Disease Control and Prevention. HIV and Youth. 2018. Available at https://www.cdc.gov/hiv/pdf/group/age/youth/cdc-hiv-youth.pdf. Accessed January 29, 2019.

3. Centers for Disease Control and Prevention. HIV among Youth. 2018. Available at https://www.cdc.gov/hiv/group/age/youth/index.html. Accessed January 29, 2019.

Sleep

QUESTION(S):

71. On an average school night, how many hours of sleep do you get? **Standard**

RATIONALE:

This question measures the amount of sleep students get on an average school night. Sleep is necessary for physical and mental health and is particularly important during adolescence, a phase of rapid biologic growth and development.[1] According to the 2006 Sleep in America poll, more than half of adolescents get insufficient sleep on school nights.[2] Lack of adequate sleep among adolescents is associated with daytime sleepiness,[3,4] falling asleep during class,[5] general inattentiveness,[5] classroom

behavioral problems,[5] drowsy driving,[1,3] depressed mood, [1,3,6] headaches,[6] and poor school performance.[7] Evidence tying insufficient sleep to poor health outcomes such as obesity, cardiovascular disease, and diabetes is also growing.[8–10] In addition, adolescents with mental health disorders struggle more with getting enough sleep due to the nature of their condition (for example, anxiety) and/or as a side effect of their medications. [11]

Analysis of data from the national YRBS has shown that insufficient sleep is associated with higher odds of current use of cigarettes, marijuana, and alcohol; current sexual activity; seriously considering attempting suicide; feeling sad or hopeless; physical fighting; physical inactivity; obesity; engaging in injury-related risk behaviors; and engaging in unhealthy weight-control behaviors.[12-15]

In 2016, the American Academy of Sleep Medicine recommended that children aged 6–12 years should regularly sleep 9–12 hours per 24 hours and teens aged 13–18 years should sleep 8–10 hours per 24 hours. [16] Healthy People 2020 contains four sleep health-related objectives, including one for adolescents. This objective is to "increase the proportion of students in grades 9 through 12 who get sufficient sleep (defined as 8 or more hours of sleep on an average school night)."[17] According to YRBS data from 2015, close to 60% of students in grades 6-8 did not get enough sleep on an average school night.[18] The distribution of hours in that 2015 sample across 9 states was as follows: 5.9% got ≤4 hours of sleep, 6.0% got 5 hours of sleep, 11.0% got 6 hours of sleep, 20.0% got 7 hours of sleep, 29.9% got 8 hours of sleep, 17.2% got 9 hours of sleep, and 10.0% slept for 10 hours or more.[18]

REFERENCES:

1. Owens J, Adolescent Sleep Working Group, Committee on Adolescence. Insufficient sleep in adolescents and young adults: An update on causes and consequences. Pediatrics 2014;134(3):e921-32.

2. National Sleep Foundation. 2006 Sleep in American Poll. Summary of Findings. Washington, DC: National Sleep Foundation; 2006. Available at: http://www.sleepfoundation.org/sites/default/files/2006_summary_of_findings.pdf. Accessed June 25, 2018.

3. Millman RP, Working Group on Sleepiness in Adolescents/Young Adults, AAP Committee on Adolescence. Excessive sleepiness in adolescents and young adults: Causes, consequences, and treatment strategies. Pediatrics 2005;115(6):1774–1786.

4. Moore M, Meltzer LJ. The sleepy adolescent: Causes and consequences of sleepiness in teens. Pediatric Respiratory Reviews 2008;9(2):114–120; quiz 120–1.

5. Beebe DW. Cognitive, behavioral, and functional consequences of inadequate sleep in children and adolescents. Pediatric Clinics of North America 2011;58(3):649–665.

6. Smaldone A, Honig JC, Byrne MW. Sleepless in America: Inadequate sleep and relationships to health and well-being of our nation's children. Pediatrics 2007;119 (Suppl 1):S29–37.

7. Wolfson AR, Carskadon MA. Sleep schedules and daytime functioning in adolescents. Child Development 1998;69(4):875–887.

8. Taheri S. The link between short sleep duration and obesity: We should recommend more sleep to prevent obesity. Archives of Disease in Childhood 2006; 91:881–884.

9. Matthews KA, Pantesco EJ. Sleep characteristics and cardiovascular risk in children and adolescents: An enumerative review. Sleep Medicine 2016; 18:36-49.

10. Knutson KL, Ryden AM, Mander VA, Van Cauter E. Role of sleep duration and quality in the risk and severity of type 2 diabetes mellitus. Archives of Internal Medicine 2006; 166:1768–1764.

11. Nationwide Children's. Experts Note Children with Mental Health Disorders May Be More Sensitive to Daylight Savings Time Change. Mar 1, 2019. Available at: https://www.nationwidechildrens.org/newsroom/news-releases/2019/03/mental-health-and-sleep. Accessed 3/1/19.

12. McKnight-Eily LR, Eaton DK, Lowry R, Croft JB, Presley-Cantrell L, Perry GS. Relationships between hours of sleep and health-risk behaviors in US adolescent students. Preventive Medicine 2011;53(4–5):271–273.

13. Lowry R, Eaton DK, Foti K, McKnight-Eily L, Perry G, Galuska DA. Association of sleep duration with obesity among US high school students. Journal of Obesity 2012; 2012:476914.

14. Wheaton AG, Olsen EO, Miller GF, Croft JB. Sleep duration and injury-related risk behaviors among high school students—United States, 2007–2013. Morbidity and Mortality Weekly Report 2016;65(13):337–341.

15. Wheaton AG, Perry GS, Chapman DP, Croft JB. Self-reported sleep duration and weight control strategies among U.S. high school students. Sleep 2013;36(8):1139–1145.

16. Paruthi S, Brooks LJ, D'Ambrosio C, et al. Consensus statement of the American Academy of Sleep Medicine on the recommended amount of sleep for healthy children: Methodology and discussion. Journal of Clinical Sleep Medicine 2016; 12:1549–61.

17. U.S. Department of Health and Human Services. Healthy People 2020: Sleep health. Available at: http://www.healthypeople.gov/2020/topicsobjectives2020/nationaldata.aspx?topicId=38. Accessed June 25, 2018.

18. Centers for Disease Control and Prevention. Short Sleep Duration Among Middle school and High School Students-United States, 2015. Morbidity and Mortality Weekly Repot (MMWR) 2018;67(3):85-90.

Access to Care, Preventive Health Care and Perception of Health

QUESTION(S):

72. When was the last time you saw a doctor or nurse for a check-up or physical exam when you were not sick or injured? **Local**

73. During the past 12 months, did you see a doctor, nurse, or counselor about stress, depression, or problems with your emotions? **Local**

74. When you feel sad, empty, hopeless, angry or anxious, how often do you get the kind of help you need? **Optional**

RATIONALE:

These questions asked students about seeing health professionals for their health needs and general assessment of health. Nationwide, adolescents have the lowest utilization rate of health care services of any age group. Barriers to care include cost of care; low family income; stigma; distrust; confidentiality and parental consent; lack of medical insurance; embarrassment about and lack of transportation to reproductive health services; lack of knowledge about where or how to access care; and lack of adolescent-friendly services.(1)

A social stigma continues to surround mental health disorders, and mental health care is frequently difficult to access. According to the National Alliance on Mental Illness (NAMI), 1 in 5 children (ages 13-18 years) have a mental illness.(7) In addition, 70% of adolescents with mental health needs do not receive the necessary services, and data shows that an 8-10 year delay exists between the onset of mental illness and an intervention to improve the health of those experiencing it.(3,7) Unattended mental health problems in adolescents can lead to engagement in risky behavior (such as poor academic performance, school dropout, involvement with child welfare and/or juvenile systems, substance abuse, and risky sexual behavior), which can have long term negative effects on their health and wellness.(3) Knowing if students are accessing the mental health help they may need when they need it can inform schools about programs and interventions to guide students to engage in protective factors rather than risky behavior as a way to improve their mental health.(8) Initially identifying a mental health disorder is also challenging—issues are often first identified at school. Researchers have also documented a number of disparities in access to mental health services. In addition to disparities across racial lines, adolescents who are homeless; served by state child welfare and juvenile justice systems; and are lesbian, gay, bisexual, and/or transgender are often the least likely to receive services. (4-6) In 2013, 10 percent of adolescents lacked insurance and, (2) even with insurance, the amount of mental health services they can receive is often limited. (3)

REFERENCES:

1. Association of State and Territorial Health Officials. Adolescent and School Health Fact Sheet. Association of State and Territorial Health Officials Web site. Available at http://www.astho.org/index.php?template=access.html. Accessed July 6, 2017

2. Child Trends. (2014). Child Trends analysis of 2013 National Health Interview Survey data. Bethesda, MD.

3. Schwarz, S W. Adolescent mental health in the United States: Facts for Policymakers. Available at from http://nccp.org/publications/pdf/text_878.pdf. Accessed July 20, 2017

4. Mustanski, BS., Garofalo, R., & Emerson, EM. (2010). Mental health disorders, psychological distress, and suicidality in a diverse sample of lesbian, gay, bisexual, and transgender youth. American Journal of Public Health, 100(12), 2426-2432.

5. Morrow, S., & Howell, E. (2010). State mental health systems for children. Washington, DC: Urban Institute.

6. United States Interagency Council on Homelessness. (2010). Opening doors: Federal strategic plan to prevent and end homelessness, executive summary. Available at http://www.va.gov/HOMELESS/docs/OpeningDoors2010FSP.pdf. Accessed on July 20, 2017.

7. National Alliance on Mental Illness. Mental Health Facts: Children and Teens. Available at: https://www.nami.org/NAMI/media/NAMI-Media/Infographics/Children-MH-Facts-NAMI.pdf. Accessed on January 28, 2019.

8. World Health Organization. Adolescent Mental Health. 2018. Available at: https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health. Accessed January 28, 2019.

Additional Information

QUESTION(S):

75.	Who do you live with most of the time?	**Optional**
76.	During the past 30 days, where did you usually sleep?	**Local**
80.	How often do you feel safe and secure in your neighborhood?	**Optional**

RATIONALE:

These questions are used to determine household and family structure. They can be used as risk or protective factors in association with many risk behaviors. Most often, they are used to determine whether a student lives in a two-parent, one-parent, or non-parental guardian home and to examine behaviors with relationship to stability of family structure.[1, 2] Additionally, adverse childhood experiences such as childhood abuse, neglect, and childhood health problems are strongly associated with frequent residential mobility.[3] Neighborhoods with high levels of crime are often densely populated, mixed use (businesses and residences in the same area) areas, with concentrated poverty, a transient population, a high proportion of single-parent households, and dilapidated buildings. [4,5] Children and adolescents living in neighborhoods characterized by crime or disorganization are more likely to become victims of violent crime [6] and to perpetrate acts of violence. [7] Children who witness crime and violence are more likely to experience social and emotional problems such as aggression, stress, and withdrawal, as well as delinquency and low school achievement. [8,9] Having a safe neighborhood is important for positive child and youth development.[10] Neighborhoods that are unsafe are associated with high rates of infant mortality and low birthweight, juvenile delinquency, high school dropout, child abuse and neglect, [11] and poor motor and social development among pre-school children. [12] Conversely, children who live in highly supportive neighborhoods have positive outcomes such as stronger connections with family, peers and community, and greater participation in out-of-school time programs, volunteering, and religious services. [13]

REFERENCES:

1. Santelli JS, Lowry R, Brener ND, Robin L. The association of sexual behaviors with socioeconomic status, family structure, and race/ethnicity among US adolescents. American Journal of Public Health. 2000; 90:1582-1588.

2. Rindfleich A, Burroughs JE, Denton F. Family structure, materialism, and compulsion consumption. Journal of Consumer Research. 1997; 25:312-325.

3. Dong M, Anda RF, Felitti VJ, et al. Childhood Residential Mobility and Multiple Health Risks During Adolescence and Adulthood: The Hidden Role of Adverse Childhood Experiences. Arch Pediatric Adolescent Med. 2005;159 (12):1104-1110. doi:10.1001/archpedi.159.12.1104.

4. Wilkenfeld, B., Moore, K. A., Lippman, L. (2008). Neighborhood support and children's connectedness. Washington, DC: Child Trends from https://www.childtrends.org/wp-content/uploads/2013/03/Child_Trends-2008_02_05_ConnectednessFS.pdf.

5. Sampson, RJ., Groves, WB. Community structure and crime: Testing social-disorganization theory. American Journal of Sociology:1989, 94(4), 774-802.

6. Sampson, RJ, Raudenbush, SW. Systematic social observation of public spaces: A new look at disorder in urban neighborhoods. American Journal of Sociology:1999,105(3), 603-651.

7. Kendrick, D., Mulyaney, C., Burton, P., Watson, M. (2005). Relationships between child, family and neighborhood characteristics and childhood injury: A cohort study. Social Science & Medicine, 60,1905-1915.

8. Herrenkohl, TI., Maguin, E., Hill, KG., Hawkins, JD., Abbott, RD., & Catalano, RF. Developmental risk factors for youth violence. Journal of Adolescent Health: 2000, 26(3), 176-186.

9. Reich, K, Culross, PL, & Behrman, RE. Children, youth, and gun violence: Analysis and recommendations. Future of Children: 2002, 12(2), 5-23.

10. Finkelhor, D, Turner, H, Ormrod, R, Hamby, S, & Kracke, K. Children's exposure to violence: A comprehensive national survey. Available at http://www.ncjrs.gov/pdffiles1/ojjdp/227744.pdf. Accessed on July 20, 2017.

11. Evans, G. (2006). Child development and the physical environment. Annual Review of Psychology, 57, 423-451.

12. Sampson, RJ, Morenoff, JD, Gannon-Rowley, T. Assessing 'neighborhood effects': Social processes and new directions in research. Annual Review of Sociology: 2002, 28, 443-478.

13. To, T, Cadarette, SM, Liu, Y. Biological, social, and environmental correlates of preschool development. Child Care Health Development: 2002, 27(2), 187-200.

QUESTION(S):

77. Does your family own a car, van or truck? **Local**

78. Do you have your own bedroom for yourself? **Local**

79. During the past 12 months, how many times did you travel away on vacation with your family? **Local**

RATIONALE:

These three questions comprise the Family Affluence Scale (FAS). The FAS is a measure of family wealth developed in the WHO Health Behavior in school-aged Children Study.(1) It is an alternative measure to parent-based income and occupation measures previously used to assess SES in youth. These previous measures have been proven inconsistent and inadequate.(2) The FAS is proven to be relevant in 35 countries and can be used to determine relationships between SES and adolescent health.(3)

REFERENCES:

1. Currie C, Molcho M, Boyce W, Holstein B, Torsheim T, Richter M. Researching health inequalities in adolescents: The development of the Health Behaviour in School-Aged Children (HBSC) Family Affluence Scale. Social Science & Medicine. 2008; 66:1429-1436.

2. Boyce W, Torsheim T, Currie C, Zambon A. The family affluence scale as a measure of national wealth: validation of an adolescent self-report measure. Social Indicators Research. 2006; 78:473-487.

3. Currie CE, Elton RA, Todd J, Platt S. Indicators of socioeconomic status for adolescents: the WHO Health Behaviour in School-aged Children Survey. Health Education Research. 1997; 3:385-397.

QUESTION(S):

81. During the past 12 months, have your parent(s) or guardian(s) ever been in prison or jail? **Local**

RATIONALE:

Several local agencies and organizations in the greater Cleveland area have joined forces and launched an initiative to address the numerous challenges faced by children of incarcerated parents. [1, 2] Examples of challenges faced by children of incarcerated parents include: trauma related to parent's arrest and criminal activity, visitation environment, loss of financial support from parent, and loss of family access to a social safety net.[2] One of the difficulties in addressing such challenges is estimating the number of children involved (who have parents in prison or jail). [3] The information collected by this question will help the initiative (and others nationwide who are providing services to children of incarcerated parents) obtain basic prevalence data for this population. Currently, information about children with an incarcerated parent or guardian is piecemeal in nature, supplied in non-standardized ways from multiple sources (e.g., corrections, schools, child welfare department). The percentage of U.S. children with a parent in prison increased by 80% between 1991-2007. [2]

REFERENCES:

1. Shlafer RJ, Gerrity E, Ruhland E, Wheeler M. Children with Incarcerated Parents – Considering Children's Outcomes in the Context of Family Experiences. Children's Mental Health eReview. 2013; 4-5.

2. Schubert Center for Child Studies. Children of Incarcerated Parents: An Overview. Issue Brief. October, 2014; 3.

3. Murray J, Farrington DP, Sekol I. Children's Antisocial Behavior, Mental Health, Drug Use, and Educational Performance After Parental Incarceration: A Systematic Review and Meta-Analysis. Psychological Bulletin. 2012; 138, 2, 176.

QUESTION(S):

82. During the past 12 months, have you been stopped, questioned, or searched by police? **Optional**

83. During the past 12 months, how would you describe any encounters (at home, in school, in the neighborhood, etc.) with the police? **Optional**

RATIONALE:

Prior studies indicate that one primary influence on a youth's attitudes toward police officers is the youth's own past experiences with police officers. [1] Police serve as significant gatekeepers between youth and the juvenile justice system, yet a large proportion of interactions between police and youth can be categorized as negative. [2] Because juvenile arrests increase the likelihood of negative outcomes for youth later in life, understanding the predictions of negative interactions is important. [3] However, interactions that end in arrest are only a small portion of the encounters that occur between police and youth. Adolescents may develop negative attitudes from other negative interactions with police that do not end in legal action. For example, youth who have a negative, non-arrest experience with police, whether such experience was youth-initiated (e.g., asking an officer for information, asking for help in non-criminal matters) or police-initiated (e.g., being stopped while standing on the street or when driving or riding in a car), report less positive attitudes toward the police than youth who had positive contacts. [5] American Civil Liberty Union's across the nation are interested in youth and adult experiences with police. These questions were taken from the ACLU of Wisconsin's "A Survey about Police". [6] Additionally, these questions were added to the survey per request and input from Chief Gonzalez of the Cleveland Metropolitan Housing Authority and Gabriella Celeste from the Schubert Center for Child Studies at Case Western Reserve University.

REFERENCES:

1. Bradford, B., Jackson, J., & Stanko, E. A. (2009). Contact and confidence: Revisiting the impact of public encounters with the police. Policing and Society, 19(1), 20–46.

2. Liederback J. Controlling Suburban and small-town hoods: An examination of police encounters with juveniles. Youth Violence and Juvenile Justice. 2007;5, 107-124.

3. Friedman W, Lurigio AJ, Greenleaf R, Albertson S. Encounters between police officers and youths: The social costs of disrespect. Journal of Crime and Justice. 2004;27(2), 1-25.

4. Goodrich SA, Anderson SA. Evaluation of a program designed to promote positive police and youth interactions. Journal of Juvenile Justice. 2014; 3(2).

5. Hurst, YG. Juvenile attitudes toward the police: An examination of rural youth. Criminal Justice Review. 2007; 32, 121–141.

6. American Civil Liberties Union of Wisconsin. A survey about the police. Retrieved from: https://www.acluwi.org/sites/default/files/resources/documents/MPD%20Attitudes%20Survey.pdf. Accessed on July 20, 2017.

QUESTION(S):

85. What is your Zip Code? **Local**

RATIONALE:

Data analyzed using zip codes indicate that environmental factors as well as individual factors increase the risk of poor health outcomes. (1) Residential segregation by race and ethnicity between zip codes affects health care utilization and provides insight into preferences for healthcare use, inequities in healthcare access, and disparities in environmental risk factors across communities and neighborhoods. (2)

REFERENCES:

1. Kent, S.T., McClure, L.A., Zaitchik, B.F., & Gohlke, J.M. (2013). Area-level risk factors for adverse birth outcomes: Trends in urban and rural settings. BMC Pregnancy & Childbirth, 13:129.

2. Gaskin, D.J., Dinwiddie, G.Y., Chan, K.S., & McCleary, R. (2012). Residential segregation and disparities in health care utilization. Medical Care Research and Review 69(2):158-175.

Grades

QUESTION(S):

84. During the past 12 months, how would you describe your grades in school? **Standard**

RATIONALE:

This question measures academic grades in school. The academic success of America's youth is strongly linked with their health. Health-related factors such as hunger, physical and emotional abuse, and chronic illness can lead to poor school performance.(1-4) Health-risk behaviors such as early sexual initiation, violence, and physical inactivity are consistently linked to poor grades and test scores and lower educational attainment.(2–8) In turn, academic success is an excellent indicator for the overall well-being of youth and a primary predictor and determinant of adult health outcomes.(9–11) Leading national education organizations recognize the close relationship between health and education, as well as the need to foster health and well-being within the educational environment for all students.(12–14) This question provides data to monitor the important link between health-risk behaviors and academic achievement.

REFERENCES:

1. Dunkle MC, Nash MA. Beyond the Health Room. Washington, DC: Council of Chief State School Officers, Resource Center on Educational Equity; 1991. Available at: http://files.eric.ed.gov/fulltext/ED340681.pdf. Accessed June 25, 2018.

2. Michael SL, Merlo C, Basch C, Wentzel K, Wechsler H. Critical connections: Health and academics. Journal of School Health 2015;85(11):740–758.

3. Bradley BJ, Greene AC. Do health and education agencies in the United States share responsibility for academic achievement and health? A review of 25 years of evidence about the relationship of adolescents' academic achievement and health behaviors. Journal of Adolescent Health 2013;52(5):523–532.

4. Basch CE. Healthier students are better learners: a missing link in school reforms to close the achievement gap. Journal of School Health 2011;81(10):593–598.

5. Rasberry CN, Tiu GF, Kann L, et al. Health-related behaviors and academic achievement among high school students — United States, 2015. Morbidity and Mortality Weekly Report 2017; 66:921–927.

6. Carlson SA, Fulton JE, Lee SM, et al. Physical education and academic achievement in elementary school: Data from the Early Childhood Longitudinal Study. American Journal of Public Health 2008;98(4):721–727.

7. Spriggs AL, Halpern CT. Timing of sexual debut and initiation of postsecondary education by early adulthood. Perspectives on Sexual and Reproductive Health 2008;40(3):152–161.

8. Srabstein J, Piazza T. Public health, safety and educational risks associated with bullying behaviors in American adolescents. International Journal of Adolescent Medicine and Health 2008;20(2):223–233.

9. Harper S, Lynch J. Trends in socioeconomic inequalities in adult health behaviors among U.S. states, 1990–2004. Public Health Reports 2007;122(2):177–189.

10. Vernez G, Krop RA, Rydell CP. The public benefits of education. In: Closing the Education Gap: Benefits and Costs. Santa Monica, CA: RAND Corporation; 1999:13– 32.

11. National Center for Health Statistics. Health, United States, 2010: With Special Feature on Death and Dying. Hyattsville, MD: U.S. Department of Health and Human Services; 2011. Available at: http://www.cdc.gov/nchs/data/hus/hus10.pdf. Accessed June 25, 2018.

12. Council of Chief State School Officers. Policy statement on school health; 2004. Available at: https://files.eric.ed.gov/fulltext/ED486226.pdf. Accessed June 25, 2018.

13. American Association of School Administrators. AASA position statements. Position statement 3: Getting children ready for success in school, July 2006; Position statement 18: Providing a safe and nurturing environment for students, July 2007. Available at: http://www.aasa.org/uploadedFiles/About/_files/AASAPositionStatements072408.pdf. Accessed June 25, 2018.

14. Association for Supervision and Curriculum Development. Making the Case for Educating the Whole Child. Alexandria, VA: ASCD; 2011. Available at: http://www.wholechildeducation.org/assets/content/mx-resources/WholeChild-MakingTheCase.pdf. Accessed June 25, 2018.