



# Sexual Risk Behaviors and Academic Achievement In Cuyahoga County

### What is the Relationship between Sexual Risk Behaviors and Academic Achievement?

Data from the Youth Risk Behavior Survey (YRBS) of Cuyahoga County show a negative association between sexual risk behaviors and academic achievement for both high school (2017) and middle school (2018) students after controlling for demographic factors (Fig. 1).

Students with higher grades (mostly A's, B's, and C's) are less likely to engage in sexual risk behaviors than their classmates with low grades (mostly D's and F's). This relationship between sexual risk behaviors and academic achievement in Cuyahoga County students is similar to that seen nationally.<sup>1</sup>

**Figure 1: Percent and Likelihood Ratio of Students Engaged in Sexual Risk Behaviors by Academic Achievement**

Sexual Risk Behaviors	High School: 9th to 12th Grade (2017)		Middle School: 7th and 8th Grade (2018)			
	High Grades vs. Low Grades (% and AOR*)		High Grades vs. Low Grades (% and AOR*)			
<b>Ever had sexual intercourse<sup>†</sup></b>	37%	1.0 2.7	60%	7%	1.0 3.5	28%
<b>Currently sexually active<sup>†</sup></b> (had sexual intercourse during the three months before taking the survey)	27%	1.0 1.8	39%	4%	1.0 3.0	19%
<b>Had sexual intercourse with four or more persons during their life</b>	8%	1.0 2.9	21%	1%	1.0 4.5	12%
<b>Did not use a condom during last sexual intercourse<sup>‡</sup></b>	42%	1.0 1.9	58%	33%	1.0 1.0	58%
<b>Had sexual intercourse before age 13 years<sup>‡</sup></b>	4%	1.0 2.3	11%	* Adjusted Odds Ratio (AOR) based on logistic regression controlling for gender, race/ethnicity, and grade level comparing students with A's, B's, and C's to students with D's and F's. Those with 1.0: 1.0 had no significant risk increase associated with low grades.		
<b>Drank alcohol or used drugs before last sexual intercourse<sup>‡ †</sup></b>	18%	1.0 1.6	25%	† Significant increase in risk behavior participation with each decrease in letter grades earned after controlling for gender, race/ethnicity, and grade level.		
<b>Ever been or gotten someone else pregnant<sup>‡ †</sup></b>	2%	1.0 4.1	8%	‡ Among the students who were currently sexually active.		
<b>Used an ineffective pregnancy prevention method during last sexual intercourse<sup>‡ †</sup></b>	28%	1.0 1.9	42%	‡ Question not asked on the 2018 Middle School Cuyahoga County YRBS.		

While more high school students report high rates of sexual risk behaviors, the strength of the association of lower grades and risk engagement is stronger at the middle school level. For example, middle school students with low grades are 4.5 times more likely to have had four or more sexual partners than students with high grades (12% vs. 1%).

High school students with low grades are 1.9 times more likely to have not used a condom (58%) during their last sexual intercourse than students with high grades (42%). At the middle school level, condom usage is not significantly associated with academic achievement. High school students with low grades are 4.1 times more likely to have ever been or gotten someone else pregnant (8% vs. 2%).

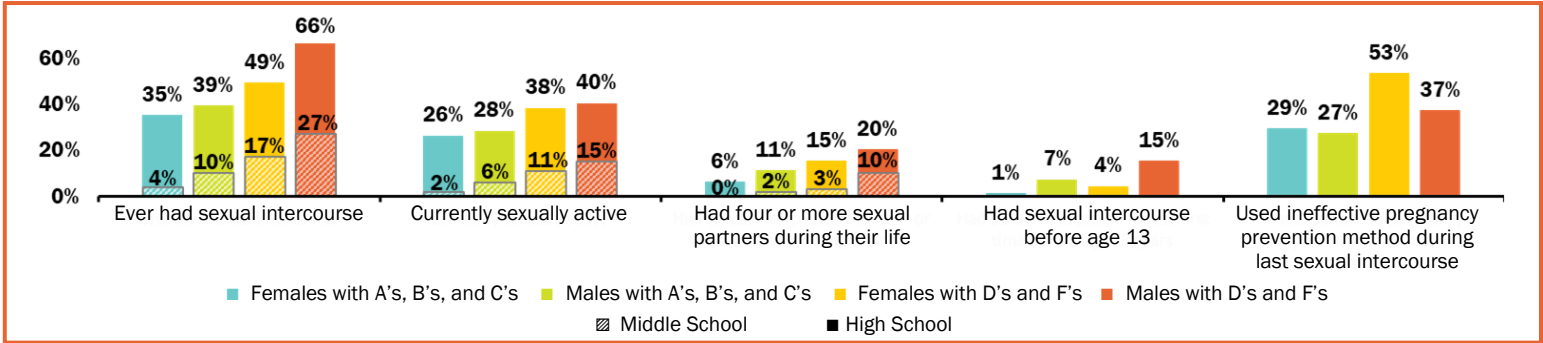
With each decrease in average letter grade, both middle and high school students are more likely to have had sexual intercourse or be currently sexually active. For example, high school students with mostly B's are 1.5 times more likely to have had sexual intercourse (39% vs. 30%) and 1.3 times more likely to be currently sexually active (27% vs. 23%) than students with mostly A's. For middle school students, those with mostly B's are 1.7 times more likely than students with mostly A's to have had sexual intercourse (9% vs. 4%) or be currently sexually active (5% vs. 2%).

1. Division of Adolescent and School Health, Centers for Disease Control and Prevention. 2016. *Making the Connection: Sexual Behaviors and Academic Grades.* [https://www.cdc.gov/healthyyouth/health\\_and\\_academics/pdf/DASHfactsheetSexualBehaviors.pdf](https://www.cdc.gov/healthyyouth/health_and_academics/pdf/DASHfactsheetSexualBehaviors.pdf)

## Does Engagement in Sexual Risk Behaviors and Academic Achievement Vary by Gender?

While the likelihood of engaging in sexual risk behaviors is greater for students with low grades, the strength of the association between risk behavior and academic achievement varies by gender. For middle and high school students, males with low grades are most likely to have had sexual intercourse (27% and 66%), be currently sexually active (15% and 40%), had four or more sexual partners (10% and 20%), and had sexual intercourse before age 13 (HS - 15%) (Fig. 2).

**Figure 2: Sexual Risk Behavior by Gender and Academic Achievement**



When comparing students with the same grades, males are more likely to engage in most risk behaviors than females (Fig. 3). For example, high school males are more likely (6.4 times for both high and low grades) to have had sexual intercourse before age 13 than females earning the same grades. Similarly, middle school males are more likely (3.4 times for high grades and 1.9 times for low grades) to have had sexual intercourse than females earning the same grades. This pattern is reversed for the two contraception-related questions as high school females are more likely than males to not use a condom or to use an ineffective pregnancy prevention method during their last sexual intercourse.

The association between academic achievement and risk engagement is stronger for high school males for some behaviors (Ex: ever having sexual intercourse, ever getting someone else pregnant) and stronger for high school females for other behaviors (ex: having four or more sexual partners during their life).

**Figure 3: High School Adjusted Likelihood of Participation in Sexual Risk Behaviors by Gender and Academic Achievement**

Sexual Risk Behavior	Same Grades Earned between Genders <sup>‡</sup>		Same Gender between Grades Earned <sup>‡</sup>	
	High Grades: Females vs. Males	Low Grades: Females vs. Males	Females: High vs. Low Grades	Males: High vs. Low Grades
Ever had sexual intercourse	1.0 1.3	1.0 2.0	1.0 2.3	1.0 3.3
Currently sexually active	1.0 1.2	1.0 1.0	1.0 2.4	1.0 1.7
Had four or more sexual partners during their life	1.0 2.1	1.0 1.9	1.0 4.0	1.0 2.8
Did not use a condom during last sexual intercourse	1.7 1.0	1.9 1.0	1.0 1.7	1.0 1.9
Had sexual intercourse before age 13	1.0 6.4	1.0 6.4	1.0 2.2	1.0 2.3
Ever been or gotten someone else pregnant	1.0 1.0	1.0 3.0	1.0 1.0	1.0 6.3
Used ineffective pregnancy prevention method during last sexual intercourse	1.0 1.0	1.8 1.0	1.0 2.1	1.0 1.6

<sup>‡</sup> Comparison of gender and grades likelihood of participating in risk behavior based on logistic regression analysis controlling for race/ethnicity and grade level.

**Methods:** The Prevention Research Center for Healthy Neighborhoods (PRCHN) regularly uses a two-stage cluster sample design that mimics the sampling method of the Centers for Disease Control and Prevention (CDC) and its national Youth Risk Behavior Survey (YRBS). In 2017, 45 of 58 high schools (77.6%) and 18,098 students (76.8%) participated in the survey. In 2018, 94 of 103 middle schools (91.3%) and 12,936 of 14,560 students (81.1%) participated in the survey. These response rates allowed data to be weighted to the entire population of Cuyahoga County 7th-12th grade students. Analyses were conducted using SPSS statistical software survey procedures to account for the sampling design. Unless otherwise noted, differences in behavior are significant at the  $p < 0.05$  level. In 2017, students reported receiving the following grades: 38% mostly A's, 32% mostly B's, 17% mostly C's, and 7% mostly D's or F's. In 2018, students reported receiving the following grades: 45% mostly A's, 31% mostly B's, 13% mostly C's, and 5% mostly D's and F's. Additionally, 6% of all students reported "not sure" or "other grades," and were not included in the analyses.

**Contributors:** The information in this report was obtained from the 2017 and 2018 Youth Risk Behavior Survey project. This survey was modeled after the CDC state-based system of health surveys administered at the high school level every other year by each state department of health. This data brief was prepared by the PRCHN and authored by Catherine Osborn, MA; Jean Frank, MPH; Audrey Kinsella, MPH; Sarah Koopman Gonzalez, Ph.D; and Erika Trapl, Ph.D. For more information contact Jean Frank (jean.frank@case.edu).

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