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**Correlates of Adverse Childhood Events
(ACE)**

In Wayne County High School Students

**Results from
Evalumetrics Youth Survey
2017**

The Evalumetrics Youth Survey (EYS) was administered to students in all middle and high schools in Wayne County in the winter of 2017. The survey is based on the Risk and Protective Factor model and includes 33 risk scales and numerous items asking about opinions, attitudes and health risk behaviors.

Adverse Childhood Experiences (ACE) have been shown to be related to a variety of problem behaviors. The Evalumetrics Youth Survey (EYS) included a question about the number of adverse experiences students recalled. The item asked:

The following are common challenges that youth commonly encounter:

- *death of a parent;*
- *parental divorce or separation;*
- *incarceration of a parent;*
- *someone in your family or in your home has/had a drug or alcohol abuse problem;*
- *someone in your family or in your home has/had a mental health problem;*
- *domestic violence;*
- *physical neglect;*
- *physical abuse;*
- *emotional neglect;*
- *emotional abuse or*
- *sexual abuse.*

How many of these experiences have happened to you in your lifetime?

	High School	
N	1,540	
None	38.6%	594
One	19.2%	296
Two	12.7%	196
Three	8.4%	130
Four	5.4%	83
Five	5.0%	77
Six	3.4%	53
Seven	1.9%	30
Eight	1.2%	19
Nine	1.0%	16
Ten	0.8%	13
Eleven	2.1%	33
Mean	2.02	*
Two or more	42.2%	650

The EYS was completed by 1,540 Wayne County high school students of which 650 (42.2%) reported they had two or more adverse childhood experiences. More than one in five (21.0%) reported four or more adverse experiences. The average student had an ACE score of 2.02.

The following tables provide results of crosstabulation of ACE scores and problem behaviors.

Overall Risk

The EYS includes 33 scales represent risk factors or protective factors. Each student is given a score on each scale that is then standardized to determine level of risk. Students who score at risk on two or more scales are at increased risk of developing problems such as substance abuse or behavioral health issues. Nearly nine of ten (88.8%) high school students who reported two or more adverse childhood event (ACE) scored above the risk level on two or more risk factors. They were significantly more likely than those with ACE scores less than two to be at high risk (88.8% vs. 56.0%) ($\chi^2=206.15, p<.001$).

	High Risk for Problem Behavior	ACE<2	ACE2 or more			
	N=	1237	650	ratio	chi2	p
Two or more Risk Factors		56.0%	88.8%	1.58	206.15	<.001

Substance Use

Compared to students with low ACE scores, students with two or more adverse childhood experiences were significantly more likely to report use of alcohol, cigarettes, marijuana and another drug. Students with two or more childhood trauma were nearly three times more likely (1.98) to report drinking alcohol; more than twice likely to smoke cigarettes (2.70) or marijuana (2.29) and; more than three times (3.49) more likely to use another drug. All these differences are statistically significant.

In the past 30 days did you...	ACE<2	ACE2 or more	ratio	chi2	p
N=	1237	650			
Smoke cigarettes	3.9%	10.5%	2.70	30.86	<.001
Drink Alcohol	14.2%	28.2%	1.98	52.14	<.001
Smoke Marijuana	9.9%	22.6%	2.29	55.66	<.001
Used other substance	1.0%	3.4%	3.49	12.71	<.001

Depression

Nearly two of three (62.6%) students with two or more adverse childhood experiences reported feeling sad most of the time. That is a two and a half (2.47) times greater proportion than for students with low ACE scores.

Risk Behaviors	ACE<2	ACE2 or more	ratio	chi2	p
N=	1237	650			
In the past year have you felt depressed or sad MOST days, even if you felt OK sometimes?	25.3%	62.6%	2.47	249.81	<.001

Self-efficacy

Lack of self-efficacy, that is, the belief that one's efforts can result in desired outcomes, has been shown to be related to academic failure, substance abuse and other problem behaviors.

Students with two or more adverse childhood experiences are more than three times as likely to have a significant lack of self-efficacy. Nearly one in three (32.9%) student with an ACE score of two or more lacked self-efficacy.

Self-efficacy	ACE<2	ACE2 or more	ratio	chi2	p
N=	851	925			
At risk from lack of self-efficacy	10.6%	32.9%	3.11	130.3	<.001

Based on results of the 2017 Evalumetrics Youth Survey, it is clear that high school students who reported two or more adverse childhood experiences are significantly more likely to display higher levels of overall risk (above the risk level on two or more factors) and to report substance use, depression, and a lack of self-efficacy.