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**Patterns of Problem Behaviors
and
Root Causes
Among Wayne County High School Females**

**Results from the Evalumetrics Youth Survey
(EYS)
October 2023**

Research Brief EYS-23-01

Summary - This research brief investigates patterns and trends in problem behaviors and root causes, i.e., risk and protective factors, among middle and high school females in Wayne County schools. Analysis of data from the Evalumetrics Youth Survey (EYS) indicated that 10th grade is the peak year, i.e., highest prevalence, for many problem behaviors and for factors that have been shown to be related to these problems. For example, self-injury (cutting or burning oneself when upset) prevalence increases from 14.0% in 6th grade to 15.9% in 8th and peaks at nearly one in four (23.3%) among 10th grade girls. Cohort analysis showed that prevalence of problem behaviors and lack of protective factors increased dramatically as the cohort progressed from 6th grade to 10th grade.

Background - While adolescence is known to be a time of significant, at times tumultuous social-emotional growth, the transition from elementary and middle school to high school can also be a time of exposure to increased risk factors, reduced protective factors, and initiation of numerous health risk behaviors. In February of 2023, the Centers for Disease Control and Prevention (CDC) released the results of its 2021 Youth Risk Behavior Survey. The report indicated that “While all teens reported increasing mental health challenges, experiences of violence, and suicidal thoughts and behaviors, girls fared worse than boys across nearly all measures.” CDC reported that teen girls are experiencing record high levels of violence, sadness, and suicide risk.

The Wayne County Partnership for Strengthening Families was established to “collaborate to strengthen individuals and families through agency cooperation and resource alignment.” Finger Lakes Community Schools evolved with a mission to support the development of culturally responsive, trauma-informed community schools that have the capacity to deliver a continuum of evidence-based and restorative practices organized using multi-tiered systems of supports. Strategic planning, driven by timely information and data, provide the basis for developing and evaluating strategies to address this mission. Community Schools utilizes the Collaboration-ARCH model as the basis for logic models to quantify issues, examine underlying or root causes, and develop and evaluate interventions. ARCH stands for **A**ttachment, **R**egulation of self, **C**ompetency, and **H**ealth.

The Evalumetrics Youth Survey (EYS) has been conducted in schools throughout Wayne County in every odd-numbered year since 2013. The EYS is based on the Risk and Protective Factor Model developed at the University of Washington by J. David Hawkins, Richard Catalano, and Janet Miller¹. The EYS asks students about several critical health risk behaviors such as substance use, violence, and depression. The EYS includes questions about students’ attitudes toward and attachment to school, family, and community. EYS measures of regulation of self includes factor scales for impulsiveness, sensation seeking, and numerous questions related to behavior. Competency is represented by a self-efficacy scale and individual items about perceived abilities. EYS provides some insight into students’ health by recording information about exercise and diet as well as self-reported behavioral health issues such as self-injury and suicide ideation. The 2023 EYS also includes measures of students’ social emotional distress

¹ Hawkins, J.D., Catalano, R.F., and Miller, J.Y., Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: implications for substance abuse prevention. *Psychol Bull.* 1992 Jul;112(1):64-105.

(SED), Adverse Childhood Experiences, and other underlying factors that predict the need for services at all levels of the Multi-Tiered Systems of Support model.

Method - The EYS was conducted online on a web-based platform that was accessed by students clicking on a URL address provided by the school. Surveys were completed in school with adult supervision. Basic demographic information was collected including grade, age, gender, and race. No individual identifying information was collected. Parents were notified of the surveys prior to implementation and were instructed on how to “opt out” if, for any reason, they preferred not to have their child participate. Unless parents opted out, students were asked to complete the survey (i.e., passive consent). At the start of the survey, students were informed that participation was voluntary, and they could elect not to take the survey or to skip any questions that they did not want to answer. This information is repeated on the first survey page. Surveys that were incomplete or met other criteria, (e.g., same answer to all questions, suspect answer patterns) were culled from the final database.

Two primary analyses were conducted. First, prevalence of risk behavior and risk and protective factors were calculated for female students at each grade level in the survey, 6th, 8th, 10th, and 12th. Second, cohort analysis compared prevalence among 6th grade students in the 2019 EYS to the same cohort as 10th grade students in the 2023 EYS to determine initiation of risk behaviors and changes in risk factors.

Cohort Analysis - Table 1 shows the changes in prevalence of health risk behaviors for the cohort of female students who were in 6th grade in 2019, i.e., class of 2025. In the 2019 EYS, fewer than one in 20 6th grade females reported initiation of alcohol use, i.e., lifetime use. By the time that cohort reach 10th grade in 2023, one in four (24.0%) had initiated alcohol use, a fivefold increase. Initiation of marijuana use increased by a factor of 19 from .09% of the cohort when in 6th grade to 17.1% when they reached 10th grade. Suicide ideation increased by 1.5 times (6.0% to 9.1%) and self-injury doubled from 12.2% in 6th grade to 23.3% in 10th grade. The proportion of the cohort reporting two or more adverse childhood experiences increased from 28.4% to 51.5%.

Table 1. Wayne County EYS	Female Students Class of 2025 Cohort		
	6th Grade	10th Grade	
	2019	2023	Ratio
Lifetime Alcohol	4.8%	24.0%	5.0
Lifetime Cigarettes	2.8%	6.3%	2.3
Lifetime Marijuana	0.9%	17.1%	19.0
Depressed	45.9%	47.4%	1.0
Suicide Ideation	6.0%	9.1%	1.5
Self-injury	12.2%	23.3%	1.9
ACE 2+	28.4%	51.5%	1.8

Table 2 shows cohort changes in attachment and regulation of self. The prevalence of lack of attachment to community increased 2.5 times from 9.9% in 6th grade to 25.1% in 10th grade. Similarly, lack of attachment to family increased 2.6 times from 4.8% to 12.5% and lack of attachment to school doubled from 6.7% to 14.3%. Sensation seeking increased from 10.6% to 19.2%.

Table 2. Wayne County EYS	Female Students Class of 2025 Cohort		
	6th Grade	10th Grade	
	2019	2023	Ratio
Lack Attachment to Community	9.9%	25.1%	2.5
Lack Attachment to Family	4.8%	12.5%	2.6
Lack of Attachment to School	6.7%	14.3%	2.1
Sensation Seeking	10.6%	19.2%	1.8

Grade Comparison – Table 3 shows the prevalence of health risk behaviors for female students in each grade level in 2023. On almost every measure of health risk behaviors, 10th grade females had the highest prevalence ranging from one in 14 (7.0%) reporting having made a plan to commit suicide (ideation), to more than half (56.5%) reporting that they had bullied other students more than twice in the past 30 days.

Table 3.**Wayne County EYS 2023****Vaping in past 30 days****Sad or Depressed Most of the Time in Past Year****Suicide Ideation Past Year****Attempted Suicide****Self-Injury Cut or Burn****Life Lacks Meaning and Purpose****Bullied Others More than Twice**

Female Students			
6th	8th	10th	12th
3.8%	6.2%	12.9%	11.6%
41.4%	38.6%	47.4%	37.2%
6.3%	10.6%	9.1%	5.8%
5.2%	6.5%	7.0%	1.7%
14.0%	15.9%	23.3%	20.7%
25.1%	32.9%	33.2%	31.3%
39.1%	48.8%	56.5%	52.0%

Table 4 shows the prevalence of risk and protective factors and root causes of health risk behaviors. Wayne County 10th grade females had the highest prevalence of almost every factor that predict health risk behavior. More than half (56.5%) reported being physically inactive (exercised less than twice a week), More than half (54.9%) reported feeling nervous or anxious more than half the time and saying they hated being in school (54.9%). More than half (51.6%) had two or more adverse childhood experiences (ACE). Nearly one in four (22.2%) had a significant lack of self-efficacy.

Discussion – Many health risk behaviors and related risk and protective factors are most prevalent among 10th grade female students in Wayne County schools.

More than half (51.6%) scored above the risk level for perceived lack of opportunities for positive involvement in the community while 10th grade girls had the highest prevalence of lack of perceived opportunities in school (19.5%).

Conclusions – Female high school students, particularly those in 10th grade (11th grade in 2023-24), would benefit from opportunities to increase attachment and decrease social isolation, increase competencies, and mitigate social-emotional distress.

Table 4.**Wayne County EYS 2023****Female Students**

	6th	8th	10th	12th
ACE 2+	24.6%	40.8%	51.6%	45.0%
Attachment				
Lack Attachment to Family	4.9%	8.7%	12.5%	12.8%
Family Conflict	8.5%	4.0%	9.1%	8.3%
Lack Attachment to Community	9.9%	16.5%	25.1%	28.9%
Lack Rewards in School	7.1%	10.3%	11.8%	11.6%
Lack Attachment to School	4.7%	12.5%	14.3%	11.6%
Do not feel safe at school	20.6%	31.2%	40.4%	31.7%
Often or Always Hate Being in School	28.9%	49.0%	54.9%	42.3%
Regulation of Self				
Impulsiveness	16.4%	15.6%	17.8%	14.5%
Competency				
Lack Self-efficacy	18.1%	19.5%	22.2%	19.7%
Believe they cannot learn about careers they could have after graduation	32.8%	27.9%	36.5%	35.5%
Health (Physical)				
Poor Diet (<3 vegetables)	37.5%	27.8%	34.9%	27.1%
Food Insecure	24.4%	20.1%	29.0%	23.3%
Physically Inactive	47.7%	49.2%	56.5%	43.0%
Health (Behavioral)				
Felt Nervous or Anxious More Than Half the Time	41.5%	53.0%	54.9%	46.7%
Felt Sad Depressed or Hopeless More Than Half the Time	20.8%	32.2%	34.7%	28.1%
Felt Connected and Supported Less Than Half the Time	33.6%	41.6%	56.1%	48.2%
Perceived Opportunity				
Lack Opportunities for Involvement in Comm	42.2%	47.7%	51.6%	53.3%
Lack Opportunities in Family	7.9%	9.0%	16.4%	13.6%

Discussion –

Middle and high school students report high rates of health risk behaviors. For most health risk indicators, 10th grade females had the highest prevalence. More than half (51.5%) of tenth grade females reported two or more adverse childhood experiences, one in four (25.1%) lack attachment to the community, and one in eight (12.5%) lack attachment to school. More than half (51.6%) lack opportunities for pro-social involvement in the community. More than one in three (36.5%) believe that in school they cannot learn about careers they could have after graduation. Nearly one in four (22.2%) had a significant lack of self-efficacy, the belief that they can control outcomes in their lives.

Results indicate the need for programming aimed at increasing female students' self-efficacy and attachment to school and community.