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Self-Reported Mental Health Issues and Social Media Use by Middle and High School Students

Results From 2023 Evalumetrics Youth Survey

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Summary

The impact of social media on young people's mental health has been a concern for more than a decade¹ leading the Yale School of Medicine to issue a guide for parents related to their children's use of social media². Compounded by the school and life disruption and social isolation of the 2020 COVID pandemic, students have demonstrated significant social-emotional distress, health risk behaviors, and mental health symptoms. Results from the Evalumetrics Youth Survey (EYS)³ conducted in 35 schools in the Finger Lakes and Southern Tier of New York State quantify the level of student mental health issues. Nearly half (46.4%) of middle school students and more than half (54.8%) of high school reported feeling sad or depressed most days. One in 12 (8.7%) middle school and one in 15 (6.8%) high school students reported suicide ideation. Nearly one in five (18.1%) middle school and 18.3% of high school students reported self-injury such as cutting or burning when upset. More than four of 10 (42.4%) middle school students and more than one in three (37.6%) high school students reported that they felt nervous, anxious or on edge half of the time or more. Nearly one in five (18.5%) middle school and more than one in 10 (10.6%) high school students scored above the risk level on the Social-emotional Distress scale.

Middle school students averaged 7.8 hours per week (1.1 hours/day) using social media. High school students averaged 9.4 hours per week (1.3 hours per day). More than one in five (20.5%) high school students reported 20 or more hours of social media time per week.

Cross-sectional analysis of high school students from 35 regional schools compared reported use of social media and various health risk behaviors. The analysis showed that compared to infrequent social media users, i.e., one hour or less per day, frequent social media users, i.e., three or more hours per day, were significantly more likely to feel depressed, think about suicide, plan a suicide attempt, i.e., ideation, make a suicide attempt, self-injure, think life lacks meaning, and have overall high social-emotional distress.

Background

The Evalumetrics Youth Survey (EYS) has been conducted in schools in 35 rural school districts in upstate New York for over a decade and most recently, in 2023. 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 Miller⁴. The EYS asks students about several critical

¹ Khalaf A M, Alubied A A, Khalaf A M, et al. (August 05, 2023) The Impact of Social Media on the Mental Health of Adolescents and Young Adults: A Systematic Review. Cureus 15(8): e42990. doi:10.7759/cureus.42990

² https://www.yalemedicine.org/news/social-media-teen-mental-health-a-parents-guide

³ See www.evalumetrics.org

⁴ 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.

health risk behaviors such as substance use, violence, and depression. The EYS also includes questions about students' attitudes toward and connection to school, family, and community.

The 2023 EYS also includes measures of students' health risk behaviors, social-emotional distress (SED), Adverse Childhood Experiences (ACE), and other underlying factors that predict the need for prevention and intervention services.

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.

The following tables provide response rates for items related to mental health, social-emotional distress, and students' attitudes toward sources of help for personal problems.

Health Risk Behaviors

EYS includes several measures of health risk behaviors. Items related to depression and suicide are based on the Youth Risk Behavior Survey (YRBS) from the Centers for Disease Control and Prevention (CDC). More than a third (35.4%) of middle school students and 37.9% of high school students reported feeling sad or depressed most days. One in 15 (6.6%) middle school and one in 12 (8.3%) high school students reported suicide ideation. Nearly one in seven (13.3%) middle school and 17.5% of high school students reported self-injury such as cutting or burning when upset.

In the past year have you felt depressed or sad MOST days, even if you felt OK sometimes?

	Middle School Students		High School Students	
B01 Depressed Past Year	Frequency	Percent	Frequency	Percent
1 Was Sad or Depressed	1387	35.4%	1230	37.9%
2 Not Sad or Depressed	2526	64.6%	2019	62.1%
TOTAL	3913	100.0%	3249	100.0%

During the past 12 months did you make a plan about how you would attempt suicide?

	Middle School Students		High School Students	
B03 Suicide Ideation Past Year	Frequency	Percent	Frequency	Percent
1 Yes	258	6.6%	269	8.3%
2 No	3655	93.4%	2980	91.7%
TOTAL	3913	100.0%	3249	100.0%

Have you ever hurt or injured yourself by cutting or burning yourself when you were upset about something?

	Middle School Students		High School Students	
B05 Self Injury Cut or Burn	Frequency	Percent	Frequency	Percent
1 Yes	519	13.3%	560	17.2%
2 No	3394	86.7%	2689	82.8%
TOTAL	3913	100.0%	3249	100.0%

My life has clear direction and purpose Agree/Disagree)

	Middle School Students		High School Students	
B06 Life Has Meaning and Purpose	Frequency	Percent	Frequency	Percent
1 Life Lacks Meaning	929	30.2%	887	33.3%
2 Life Has Meaning	2144	69.8%	1779	66.7%
TOTAL	3073	100.0%	2666	100.0%

Trauma

ACE- Adverse childhood experiences (ACE) have been shown to be a major influence on every aspect of children's lives. ACEs are a significant source of trauma and can disrupt social emotional development, academic performance, and can lead to destructive behaviors such as delinquency and substance abuse. An ACE score of two or more has been shown to predict problematic behaviors⁵. Students were given a list of 11 adverse childhood experiences and asked to report how many of these they had experienced in their lifetime. Nearly one third (30.1%) of middle school students and four of 10 (40.5%) high school students reported two or more Adverse Childhood Experiences.

	Middle School Students		High School Students	
B13a ACE 2 or More	Frequency	Percent	Frequency	Percent
1 ACE2+	930	30.1%	1085	40.5%
2 ACE<2	2162	69.9%	1592	59.5%
TOTAL	3092	100.0%	2677	100.0%

Social-emotional distress

EYS includes 10 items related to social-emotional distress. These items were first used in the Youth Voice Survey conducted by Wayne County Community Schools to measure the impact of school closings during COVID. A scale of overall social-emotional distress was developed, and scores were calculated for each student. Nearly four of 10 (39.8%) middle school students and more than one in four (42.9%) high school students reported that they felt nervous, anxious or on edge half of the time or more. More than one in 10 (12.7%) middle school and 7.7% of high school students scored above the risk level on the Social-Emotional Distress scale.

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⁵ Relationship Between Adverse Childhood Experiences and Risk Behaviors Among Wayne County High School Students Evalumetrics Youth Survey 2023 March 2024 Research Brief EYS-23-02

Students were asked, "Over the past two (2) weeks, approximately how often have you had the following feelings?"

	Middle School Students		High School Students	
sed01 Felt Safe	Frequency	Percent	Frequency	Percent
(1) Not at All	110	3.5%	159	5.9%
(2) Once	115	3.7%	94	3.5%
(3) On Several Days	335	10.7%	346	12.8%
Felt Safe < Half the Time	560	17.9%	599	22.2%
(4) More Than Half the Time	656	20.9%	569	21.1%
(5) Nearly All the Time	1922	61.2%	1529	56.7%
TOTAL	3138	100.0%	2697	100.0%

	Middle School Students		High School Students	
sed02 Felt Nervous	Frequency	Percent	Frequency	Percent
(1) Not at All	524	16.8%	425	15.8%
(2) Once	591	18.9%	401	14.9%
(3) On Several Days	767	24.5%	709	26.4%
(4) More Than Half the Time	592	18.9%	533	19.8%
(5) Nearly All the Time	652	20.9%	622	23.1%
Felt Nervous Half the Time or More	1244	39.8%	1155	42.9%
TOTAL	3126	100.0%	2690	100.0%

	Middle School Students		High School Students	
sed03 Felt Happy	Frequency	Percent	Frequency	Percent
(1) Not at All	127	4.0%	162	6.0%
(2) Once	170	5.4%	163	6.1%
(3) On Several Days	615	19.6%	724	27.0%
Felt Happy < Half the Time	912	29.0%	1049	39.1%
(4) More Than Half the Time	935	29.8%	779	29.0%
(5) Nearly All the Time	1289	41.1%	855	31.9%
TOTAL	3136	100.0%	2683	100.0%

"Over the past two (2) weeks, approximately how often have you had the following feelings?"

	Middle School Students		High School Students	
sed04 Felt Calm	Frequency	Percent	Frequency	Percent
(1) Not at All	176	5.7%	199	7.4%
(2) Once	224	7.2%	230	8.6%
(3) On Several Days	709	22.8%	763	28.4%
Felt Calm < Half the Time	1109	35.7%	1192	44.4%
(4) More Than Half the Time	912	29.3%	735	27.4%
(5) Nearly All the Time	1094	35.1%	760	28.3%
TOTAL	3115	100.0%	2687	100.0%

	Middle School Students		High School Students	
sed05 Worried About Getting Sick	Frequency	Percent	Frequency	Percent
(1) Not at All	1331	42.5%	1164	43.3%
(2) Once	679	21.7%	582	21.6%
(3) On Several Days	484	15.5%	453	16.8%
(4) More Than Half the Time	322	10.3%	276	10.3%
(5) Nearly All the Time	316	10.1%	214	8.0%
Worried About Getting Sick Half				
the Time or More	638	20.4%	490	18.3%
TOTAL	3132	100.0%	2689	100.0%

	Middle School Students		High School Students	
sed06 Worried About Family Member Getting Sick	Frequency	Percent	Frequency	Percent
(1) Not at All	1186	38.0%	1212	45.1%
(2) Once	554	17.8%	532	19.8%
(3) On Several Days	558	17.9%	428	15.9%
(4) More Than Half the Time	327	10.5%	245	9.1%
(5) Nearly All the Time	494	15.8%	268	10.0%
Worried About Family Getting Sick				
Half the Time or More	821	26.3%	513	19.1%
TOTAL	3119	100.0%	2685	100.0%

"Over the past two (2) weeks, approximately how often have you had the following feelings?"

	Middle School Students		High School Students	
sed07 Felt Sad Depressed or Hopeless	Frequency	Percent	Frequency	Percent
(1) Not at All	1194	38.2%	918	34.2%
(2) Once	589	18.9%	492	18.3%
(3) On Several Days	551	17.6%	545	20.3%
(4) More Than Half the Time	348	11.1%	351	13.1%
(5) Nearly All the Time	441	14.1%	377	14.1%
Felt Sad or Depressed Half the				
Time or More	789	25.2%	728	27.2%
TOTAL	3123	100.0%	2683	100.0%

	Middle Scho	ool Students	High School Students		
sed08 Felt Connected and Supported	Frequency	Percent	Frequency	Percent	
(1) Not at All	328	10.5%	349	13.0%	
(2) Once	245	7.9%	253	9.4%	
(3) On Several Days	566	18.2%	680	25.4%	
Felt Connected < Half the Time	1139	36.6%	1282	47.8%	
(4) More Than Half the Time	758	24.3%	643	24.0%	
(5) Nearly All the Time	1218	39.1%	755	28.2%	
TOTAL	3115	100.0%	2680	100.0%	

	Middle Scho	ool Students	High School Students		
sed09 Felt Lonely	Frequency	Percent	Frequency	Percent	
(1) Not at All	1115	35.9%	848	31.6%	
(2) Once	610	19.6%	483	18.0%	
(3) On Several Days	558	17.9%	552	20.6%	
(4) More Than Half the Time	368	11.8%	369	13.8%	
(5) Nearly All the Time	459	14.8%	429	16.0%	
Felt Lonely Half the Time or More	827	26.6%	798	29.8%	
TOTAL	3110	100.0%	2681	100.0%	

"Over the past two (2) weeks, approximately how often have you had the following feelings?"

	Middle Scho	ool Students	High School Students		
sed10 Enjoyed Things I Usually Like	Frequency	Percent	Frequency	Percent	
(1) Not at All	166	5.3%	201	7.5%	
(2) Once	164	5.3%	166	6.2%	
(3) On Several Days	413	13.3%	556	20.7%	
Enjoyed Things < Half the Time	743	23.9%	923	34.4%	
(4) More Than Half the Time	635	20.4%	641	23.9%	
(5) Nearly All the Time	1733	55.7%	1122	41.8%	
TOTAL	3111	100.0%	2686	100.0%	

Total SED Scale scores were normalized to the population means. Students more than one standard score above the mean were considered, "At SED Risk".

	Middle Scho	ool Students	High School Students		
sed11High Social Emotional Distress	Frequency	Percent	Frequency	Percent	
(1) At SED Risk	378	12.7%	198	7.7%	
(2) Not at Risk	2593	87.3%	2381	92.3%	
TOTAL	2971	100.0%	2579	100.0%	

Social Media Use

Students were asked, "In an average week how many hours do you spend using Social Media such as Facebook, Twitter, Snapchat, Instagram, TikTok, or Tumbler?" Middle school students averaged 7.8 hours per week (1.1 hours/day) using social media. High school students averaged 9.4 hours per week (1.3 hours per day). More than one in five (20.5%) high school students reported 20 or more hours of social media time per week.

Social Media use as a root cause for behavioral issues

EYS results are used to identify underlying or root causes of various problem behaviors. Cross-sectional analysis of high school students from 35 regional schools compared reported use of social media and various health risk behaviors. The analysis showed that compared to infrequent social media users, i.e., one hour or less per day, frequent social media users, i.e., three or more hours per day, were significantly more likely to feel depressed, think about suicide, plan a suicide attempt, i.e., ideation, make a suicide attempt, self-injure, think life lacks meaning, and

have overall high social-emotional distress. For example, students who were on social media three or more hours a day were 2.27 times more likely to have high social-emotional distress $(chi^2 = 25.92, p < .001)$.

Social Media Use by Regional							
EYS Sample High School	One hour or less per		Three or more				
Students	day		hours per day				
B01 Depressed Past Year	Frequency	Percent	Frequency	Percent	Ratio	chi ²	Prob
1 Was Sad or Depressed	512	40.2%	321	59.7%	1.49	56.99	<.001
2 Not Sad or Depressed	762	59.8%	217	40.3%			
TOTAL	1274	100.0%	538	100.0%			
B02 Though About Suicide Past							
Year	Frequency	Percent	Frequency	Percent	Ratio	chi ²	Prob
1 Yes	204	16.0%	166	30.9%	1.93	50.37	<.001
2 No	1070	84.0%	372	69.1%			
TOTAL	1274	100.0%	538	100.0%			
B03 Suicide Ideation Past Year	Frequency	Percent	Frequency	Percent	Ratio	chi ²	Prob
1 Yes	103	8.1%	90	16.7%	2.06	28.8	<.001
2 No	1171	91.9%	448	83.3%			
TOTAL	1274	100.0%	538	100.0%			
B04 Attempted Suicide	Frequency	Percent	Frequency	Percent	Ratio	chi ²	Prob
1 Attempted 1 or More Times	60	4.7%	55	10.2%	2.17	18.43	<.001
2 Did Not Attempt	1214	95.3%	483	89.8%			
TOTAL	1274	100.0%	538	100.0%			
B05 Self Injury Cut or Burn	Frequency	Percent	Frequency	Percent	Ratio	chi ²	Prob
1 Yes	213	16.7%	171	31.8%	1.90	50.51	<.001
2 No	1061	83.3%	367	68.2%			
TOTAL	1274	100.0%	538	100.0%			
sed11High Social Emotional							_
Distress	Frequency	Percent	Frequency	Percent	Ratio	chi ²	Prob
(1) At SED Risk	71	5.9%	68	13.4%	2.27	25.92	<.001
(2) Not at Risk	1134	94.1%	440	86.6%			
TOTAL	1205	100.0%	508	100.0%			

Discussion -

Social emotional distress and behavioral health risk behaviors are prevalent among middle and high school students. Mental health screening and intervention and trauma-informed education are vital to mitigating these conditions.

The past decade has seen a "normalizing" of social-media use by young people. The current analyses demonstrate the relationship between frequent use of social media and behavioral health risk behaviors and social-emotional distress. Parents should address their children's use of social media and be aware of the frequency of use. Resources, including guidelines for parent are available.⁶

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⁶ https://www.yalemedicine.org/news/social-media-teen-mental-health-a-parents-guide