



**Evalumetrics Research  
58 Scotland Road  
Canandaigua, New York 14424  
585-394-5811  
rlillis@rochester.rr.com  
www.evalumetrics.org**

**Relationship Between  
Student Competencies  
and  
Social-emotional Distress  
Among Wayne County  
Middle School Students**

**March 2021**

**Evalumetrics Research Brief 2021-W-002**

## Summary-

The results of analyses described in this research brief support the ARCH Model prediction that individuals' competencies mitigate negative conditions such as social-emotional distress. Analysis of middle school student survey data found that higher levels of competencies in the form of life skills was related to lower levels of social-emotional distress. Specifically:

- Students who got higher grades were significantly less likely to have high social emotional distress.
- Students with higher levels of self-efficacy were significantly less likely to have high social emotional distress.
- Students with higher levels of resistance skills were significantly less likely to have high social emotional distress.
- Students with higher levels of assertiveness were significantly less likely to have high social emotional distress.
- Students with higher levels of perseverance were significantly less likely to have high social emotional distress.

## Background-

Finger Lakes Community Schools (FLXCS) utilizes the ARCH (Attachment, self-Regulation, Competency, and Health) model as a rubric for assessing issues facing students in Wayne County, New York, and to organize data for identifying needs and developing and evaluating interventions. The Youth Voice Survey, conducted in May of 2020, immediately after school closures due to the COVID-19 pandemic, measured Social-emotional Distress (SED) and found that nearly six of 10 (58.0%) Wayne County middle school students said they *felt nervous, anxious, or on edge* on several days or more, with 33.5% feeling that way more than half the time. More than half (52.3%) reported *worrying about a family member getting sick*, more than four in 10 (46.4%) said they felt *lonely*, and 43.9% said *they could not stop or control worrying*. However, attachment (e.g., to family or school) and self-regulation (e.g., low rebelliousness or sensation seeking) were significant mitigating factors in SED during that high stress time.<sup>1</sup>

Life Skills Training (LST), an evidence-based substance abuse prevention program, has been implemented in middle schools throughout Wayne County since 2017. All sixth, seventh, and eighth grade students in all 11 Wayne County school districts complete the LST Health Survey prior to LST implementation in the fall of each school year. In 2020, the LST Survey was supplemented with items related to social-emotional distress. These items were developed in the spring of 2020 for the Finger Lakes Community Schools Youth Voice Survey to measure the impact of school building closures due to the COVID-19 pandemic.

---

<sup>1</sup> Youth Voice Survey 2020: Academic, Social, and Emotional Impact of COVID-19 School Building Shutdown and Shelter at Home: Wayne County Results. Finger Lakes Community Schools Research Report 2020-1-W. August 2020.

## Method-

In the fall of 2020, 2,358 middle school students, (i.e., grades 6, 7, and 8) in 11 rural school districts in Wayne County, New York completed the Life Skills Training Survey. The LST survey includes 52 multiple-choice items. Multi-item scales were calculated to measure each of 11 learning objective areas representing skills or competencies that are addressed in the LST course. Scale raw scores were converted to a percentage of the total possible score for each scale. Scales include:

- ATOD Norms- This scale measures students' perceptions related to levels of use of various substances by adults and peers.
- Self-efficacy- Measures the extent to which students perceive they have control over events and outcomes in their lives.
- ATOD Knowledge- Measures students' knowledge about the effects of substances on the body.
- Media Literacy- Measures students' understanding of how media, (e.g., advertising) is intended to change people's perception of alcohol or tobacco.
- Relaxation Technique- Measures students' knowledge of ways to reduce stress.
- Social Skills- Measures students' knowledge of strategies to resist substance use.
- ATOD Image- Measures students' perception of how their peers view substance use.
- Resistance- Measures students' ability to resist pressure to use substances.
- Assertiveness- Measures the ability to act positively on one's own behalf.
- Relaxation Skills- Measures students' use of positive strategies to reduce stress.
- Perseverance- Measures students' skills at staying with tasks until completed.

Youth Voice Survey social-emotional distress items were added to the 2020 LST Survey. There were 11 items that asked about specific feelings. The questions asked students to rate their feelings on a five-point scale of: Not at All, Once, On several days, More than half the time, or Nearly every day. The question was worded as follows:

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

- Feeling safe.
- Feeling nervous, anxious, or on edge.
- Feeling happy.
- Not being able to stop or control worrying.
- Feeling calm
- Worried about getting sick.
- Worried about a family member getting sick.
- Feeling sad, down, depressed, or hopeless
- Feeling connected and supported
- Feeling lonely
- Enjoying doing things I usually like to do.

A Social-emotional Distress (SED) scale was constructed by assigning each response an ordinal value, (e.g., Not at All=0, Nearly every day=4). Positive feelings, (e.g., feeling happy) were given the reverse values (e.g., Not at all=4) so that a higher score represented greater SED. The scale raw scores were calculated by summing responses for the 11 items, thus, possible SED scale scores ranged from 0 to 44.

Survey responses were analyzed to determine the relationship between social-emotional distress (SED) and life skills represented by the 11 LST Survey scales and with self-reported academic performance.

**Results -**

Table 1 shows the differences in mean Social-emotional Distress (SED) scale scores comparing students who scored at a high level ( $\geq 85\%$ ) on each skill scale to those who scored below 85%. In terms of specific competencies, students who demonstrated a high level of academic achievement, (i.e., reported getting mostly As or Bs), had significantly lower SED scores than students who lacked academic skill, (19.82 vs. 21.95,  $t=5.64$ ,  $p<.001$ ). Students who scored at a high level of Self-efficacy had significantly lower SED scores (19.51 vs. 20.61,  $\chi^2=9.19$ ,  $p<.003$ ). Significant differences were also found for competencies such as Resistance Skills (19.74 vs. 22.83,  $t=7.60$ ,  $p<.001$ ); Relaxation Skills (19.42 vs. 21.44,  $\chi^2=39.45$ ,  $p<.001$ ); and Perseverance (17.96 vs. 21.76,  $\chi^2=145.18$ ,  $p<.001$ ).

**Table 1.**  
**LST Survey 2020 - Wayne County Middle Schools**  
**N=2,358**

Life Skills Scales	Social Emotional Distress (mean score)		(chi <sup>2</sup> )/t	p
	Low Skill	High Skill		
Grades Mostly As and Bs	21.95	19.82	5.64	<.001
ATOD Norms-	20.13	21.10	4.74	<.03
Self-efficacy-	20.61	19.51	(9.19)	<.003
ATOD Knowledge-	20.41	19.46	2.20	<.03
Media Literacy-	20.46	19.94	1.60	ns
Relaxation Technique-	20.31	18.95	(1.58)	ns
Social Skills-	20.35	20.09	0.77	ns
ATOD Image-	22.01	19.82	5.70	<.001
Resistance-	22.83	19.74	7.60	<.001
Assertiveness-	20.42	18.63	3.23	<.002
Relaxation Skills-	21.44	19.42	(39.45)	<.001
Perseverance-	21.76	17.96	(145.18)	<.001

*T-test is used when variances are homogeneous with 95% confidence.  
When variances in the samples differ, a non-parametric (chi<sup>2</sup>) is used.*

## **Discussion-**

Results of analyses of student surveys indicated that students with higher levels of competency are significantly less likely to show social-emotional distress. During the 2020-2021 school year, students continue to face learning environments unlike any other in recent history. Some students are learning virtually at home. Others are physically in school either full time or part of the time, (i.e., hybrid learning). Students in school are subject to environmental stressors such as required social distancing, physical barriers in classrooms and common areas, and lack of extra-curricular activities. Students learning at home are faced with the stress of isolation from other students and learning remotely with the distractions of being at home. These learning environment stressors are in addition to the population-wide stress of COVID-19 pandemic societal restrictions, concern about illness, economic hardship, and, in many cases, the loss of a loved one or friend to COVID.

While the current analyses are cross-sectional, they are consistent with the ARCH model that predicts that competency can be a mitigating factor in social-emotional distress. Subsequent surveys in fall of 2021 and 2022 will provide data to conduct cohort analysis and assess the relationship between changes in competency and changes in SED.

Communities and schools need to develop and implement strategies to cope with social-emotional stress by identifying and intervening with students with high levels of SED and by implementing prevention strategies that reduce SED by fostering attachment, self-regulation, competency, and health.

Life Skills Training has been demonstrated to increase the skills and competencies addressed by course learning objectives. Consequently, LST can potentially aid in mitigating the impact of trauma on social-emotional distress.