High School Student Stress and School Improvement

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Abstract

Enabling students, teachers, and parents to become more informed about stress during adolescence can improve student emotional and social support. This article documents the growing problem of student stress and resulting effects on mental health. Students (Grades 9–12) at one public high school in the southern United States were invited by the principal to complete an anonymous online poll about sources of stress in their lives. The intent of the school principal was to use the findings to strengthen student support and contribute to the Continuous School Improvement Plan. Results of the 17-item Stress Poll are presented by frequency and percentages for the 349 students and compared by gender responses (females n = 172, males n = 177). Results indicated the most prominent student stresses at school involved worrying about getting good grades in required courses, not understanding some of their courses, being unable to concentrate, and having poor time management practices. Students felt that teachers should collaborate to reduce undue student stress by avoiding overloading and letting students make mistakes without affecting grades. Outside of school the main stress was getting along with relatives; in addition, parents should set more reasonable expectations for academic achievement. Students felt that workshops about stress could improve understanding and influence their parents and teachers.

Key Words: adolescents, stress, teachers, mental health, high school, Continuous School Improvement Plan, student voice polls, parents, students

Introduction

Emotional health depends on being able to cope with anticipated and unforeseen sources of stress, respond to frustration in a healthy way, and avoid preoccupation with worries about the future. Some adults believe that students lack stressful experiences because they do not yet have mortgage payments, property taxes, aging relatives to care for, and a need to save money for retirement. However, students must contend with other sources of stress that parents and teachers should be aware of to foster mental health and academic achievement (Strom & Strom, 2021a, 2021b).

The goals for this article are to (a) document the increase of adolescent student stress in a fast-paced environment; (b) describe the influence of resilience in managing stress; (c) explain why anxiety and uncertainty are more prominent than for previous generations; (d) provide an online, empirically based, data gathering method that allows student input to decision-making about stressful experiences at school; (e) explore views of adolescents at one high school about the stress they experience; and (f) identify ways that parents, teachers, and classmates can minimize undue stress they impose on students.

Prevalence of Stress

The American Psychological Association (2020) conducts annual surveys on *Stress in America*. This national data gathering effort examines sources of stress, intensity of anxiety, and how people of various ages respond to stress. The 2020 findings show that Generation Z, ages 13 to 23, reported higher levels of COVID-related stress than all older generations. High school students struggled with uncertainty about their future and consequent inability to make plans. In addition, they reported less motivation to do school work, felt that they did not learn as much as in previous years, and had a difficult time concentrating.

Public surveys during the COVID-19 pandemic found many people felt the crisis had adversely influenced their mental health (Benenson Strategy Group, 2020; Brenan, 2020; Holmes et al., 2020). Twenge and Joiner (2020) tried to verify these subjective perceptions by empirical comparisons. They examined views of a nationally representative sample of adults reporting in 2020 during the pandemic with a similar population that reported in 2018. Both groups (N = 21,000) completed the Kessler-6 scale, a commonly applied and validated measure of mental distress. The respondents in 2020 were eight times more likely to fit the criteria for serious mental distress (28% vs. 3%), and three times more likely to fit the criteria for moderate mental distress (70% vs. 22%). Differences appeared across all demographics with the largest among younger

adults and those with children in their household. These outcomes reveal that mental distress was considerably more prevalent during the pandemic than in 2018. Specifically, differences implicated every item on the Kessler scale with the greatest differences reported for feeling hopeless and sad. The respondents in 2020 were four times more likely to report feeling sad (46% vs. 11%) and six times more likely to feel hopeless (38% vs. 6%). Fears about the virus, closure of public schools, disruption of businesses, and loss of employment continued as prominent sources of stress. Mental health has emerged as a higher priority for every generation (Fazel & Hoagwood, 2021).

Health and Resilience

Nowicki (2016) documented how people differ in sources of stress they experience and extent to which they are influenced by external pressures. The weight imposed by external stress is not the only factor to require consideration. Another variable is the way people perceive their situation. At one pole of vulnerability are those who appear to be stress resistant—able to manage considerable pressure and still carry on effectively. At the opposite pole are persons who appear to break down when confronted by even slight pressure. Fricchione et al. (2016) observed that people who appear stress-resistant have shared characteristics. They recognize their environment includes negative forces but are not preoccupied by them, and they remain willing to make changes in personal behavior. In addition, they view unfamiliar situations as opportunities for growth, feel a need to be involved if they believe their actions could make a difference, and regard themselves as in charge of most things that happen to them (Fricchione et al., 2016).

The way an individual sees a situation can be more important than the objective reality. According to Abramowitz and Blakey (2020), individuals who readily adapt to new conditions while also retaining a sense of control demonstrate greater tolerance for stress. Resilience is the ability to restore balance following some difficult experience and integrating it into the total life perspective. Southwick and Charney (2018) reported resilient individuals are inclined to strive toward a good outcome without feeling overwhelmed by risks that can threaten development. They experience doubts and uncertainties like everyone else but possess the ability to recover quickly from setbacks or disappointments that might cause others to give up. The resilient are flexible and share faith, hope, and optimism regarding their future. Resilience has been observed in students from hostile environments who beat the odds, overcame difficulties of their adverse circumstance, and became healthy adults recognized for achievement (Goldstein & Brooks, 2021; Lustig, 2020).

Masten (2015) has led a 45-year longitudinal study, following 205 ordinary students from the public schools in Minneapolis. The goal of her study was to

trace student resilience over a long period of time. When Project Competence began in 1976, the subjects were 8- to 12-year-olds and Grades 3 through 6 in school. Follow-ups have been carried out every few years, maintaining a 90% retention rate of the participants. In Masten's book *Ordinary Magic,* she described obstacles and protective influences in the lives of these students. An important finding was that individuals who overcame risks early in life, such as poverty and family instability, had greater protection and more resources than less successful peers who lacked the same access to external assets.

Lustig (2020) reported that resilience is a skill everyone has to some extent from an early age. Resilience is at highest levels when children are young, but when they become teenagers, resilience levels drop sharply, as much as 50% by the time youth are 18 to 23 years old. This resilience curve is alarming because it also revealed that Generation Z is the least resilient among all of the generations and appear to be the loneliest. Other researchers have reported similar findings (Goldstein & Brooks, 2021; Mayo Clinic, 2022).

Symptoms of Stress

The symptoms of student stress that get most attention from teachers and parents are aggressive actions, destruction of property, bullying, stealing, and other anti-social behaviors. However, mental health professionals explain these indicators are not the primary symptoms of stress. Such behaviors are bothersome, and they inform others that a person is experiencing stress and needs help. These individuals may feel threatened or overburdened but continue to struggle and, if provided mental health intervention, could become able to effectively manage stress (Neill et al., 2021).

Severe symptoms of stress include depression, withdrawal, and resignation. Students who demonstrate these behaviors have quit. Depression is a serious threat to mental health at all ages through life. An estimated 4.1 million adolescents (ages 12 to 17) in the United States must manage depression (National Institute of Mental Health, 2022). According to the Mayo Clinic (2022), depression is not just a problem of being moody or having to cope with a difficult environment; instead, individuals have given up hope so they no longer try to adjust to situations that are seen as overwhelming. Despite fairly equal depression rates during childhood, rates change during adolescence when teen females become three times more likely than teen males to have recent experiences with depression (Geiger & Davis, 2019).

Anxiety and Uncertainty

Abramowitz and Blakey (2020) described anxiety as the feelings of uncertainty that arise when an unfamiliar situation or event is anticipated. In

previous generations the slower pace of change meant feelings of certainty were more pervasive; the future seemed more predictable so anxiety was less common. Certainty has great appeal to people in modern societies where daily affairs present continuous uncertainty. Individuals worry about what is going to happen next and have doubts about what to expect. Schulte (2015) observed that youth commonly have to manage anxiety related to school performance, uncertainty regarding choice of a career, worries about the cost of higher education, doubts about readiness to become qualified for employment, concerns for maintaining friendships, living with parents while attending college, getting along with a romantic partner, establishing intimacy while knowing that some relationships do not last, and balancing time to avoid continually overscheduling themselves. Feeling uncertain and having doubts can be beneficial when it stimulates the expression of curiosity and creative thinking. However, when uncertainty becomes excessive, the resulting stress can lead to emotional disturbance. Schools and families should help students to avoid this dangerous outcome of anxiety (Brooks & Lasser, 2018; Jackson, 2018; Turkle, 2015).

Managing Stress

Optimism, the expression of hope, is considered an aspect of emotional intelligence that can have enormous influence on a person's ability to deal with frustration. Keefer, Parker, and Saklofske (2018) suggested that the way individuals explain their failures and successes to themselves mediates how they process frustration. An optimistic self-explanatory style enables a student to see failure as a temporary setback, an outcome the individual has the power to change by increasing time for study, reading more carefully, and paying attention in taking notes from teacher presentations. A pessimistic self-explanatory style causes someone to believe the reasons for their failure reflect personal shortcomings over which they lack control and should accept instead of making vain attempts to improve their behavior (Seligman, 2018). In a study of 500 college freshmen at the University of Pennsylvania, Seligman (2018) found that their scores on a measure of optimism were the best predictor of grades during the first year of higher education.

There is evidence that cognitive orientation influences emotions and behaviors. The key factor seems to implicate reliance on accurate thinking more than only positive thinking. Goleman and Davidson (2018) documented that resilience is supported in schools and homes where lessons are continually provided and reinforced about the importance of hope, optimism, assertiveness, and flexibility. This strategy can improve an individual's outlook about life, motivate better academic performance, and diminish the probability of experiencing depression. Seligman (2018) conducted international studies with

2,000 students from ages 5 to 18 who were taught to think more realistically and flexibly about concerns. Emphasis was placed on slowing down the problem-solving process, clarifying goals, retrieving data without emphasis on speed, and generating options to attain their purposes. Over the next two years the rates of optimism rose while rates of depression declined by half.

Relatives and friends should recognize the powerful influence of encouragement for one another, admitting their own setbacks, resolving to overcome obstacles, and identifying attitudes and behaviors that require correction (Damour, 2019; Southwick & Charney, 2018). This resilience enables confidence to regard difficulties in the future as opportunities. When relatives try to protect students from exposure to the stress of adversity, their efforts can have an unintended effect of rendering individuals less capable of managing unforeseen challenges that will inevitably be experienced by everyone. Fricchione et al. (2016) and Jensen and Nutt (2016) agree that development of resilience requires some exposure to risk.

Stress and Social Status

A widespread belief is that the amount of stress someone experiences depends on their social status. By this reasoning, the president of a company, manager of a business, or a school principal is exposed to greater stress than the employees for whom they are responsible. Is this impression accurate? Marmot (2005, 2015) tracked 28,000 British Civil Service employees over a 40-year period. All subjects in the study were assigned a rank that identified relative standing within the status hierarchy. They all had job stability and equal access to the same government health care system. Marmot discovered that high status employees were much less likely to present elevated levels of stress and cholesterol. They had cleaner arteries, fewer heart attacks, and a lower disability index than colleagues whose rank in the status hierarchy was beneath their own.

These counterintuitive outcomes suggest that improvement of social environments can contribute to better physical and mental health. School principals encounter daily challenges of management involving students, teachers, staff, parents, and the community. Teachers also feel extensive demands that often require them to take work home after school. Students occupy the lowest status level in the school hierarchy and have little input into decisions about institutional changes they believe would improve their instruction and achievement; they are often exposed to stress that adults are unaware of or underestimate but have the power to diminish. In a socially responsive school environment where student voice is heard, they can contribute a unique perspective to improve institutional effectiveness and be assured the faculty will take their ideas seriously (Lubelfeld et al., 2018; Strom & Strom, 2016).

Importance of Student Voice

A movement called *student voice* has gained international attention over the past decade. The goals of this movement are to (a) describe aspirations of youth, (b) explain their perceptions about the strengths and shortcomings of education, (c) reveal how adolescents believe that their instruction could be improved, and (d) identify ways to ensure educational equity. Three award-winning American school superintendents—Lubelfeld, Polyak, and Caposey (2018)—documented their experiences in *Student Voice: From Invisible to Invaluable*. The premise of their book is that student voices have not been heard, and this was a possible reason why middle schools and high schools have failed to innovate to the extent they should to better serve students. They urged administrators to connect directly with students by finding out their ideas on ways to improve instruction and relevance of curriculum.

A meta-analysis of 49 studies on student voice reported by Gonzalez et al. (2017) confirmed that student voice reveals insights not otherwise available in research framed from the view of administrators or teachers. The studies generally recommended that schools consider ways to shift from the present adult-centric pattern to become more student-centric. Students are stakeholders with the most to gain or lose from innovation to keep American education globally competitive. Southwick and Charney (2018) recommended that when the opinions of students and educators are considered together, an intergenerational perspective emerges to portray school strengths and limitations. Empirical data analysis should be applied to track continuous school improvement (Bernhardt, 2017).

Polling Students for School Improvement

Prior to the current investigation, Strom and Strom (2016) constructed 10 online multiple-choice polls to access student voice. Each poll focused on a separate condition of learning, including career exploration and identity, time management, selective attention and distraction, motivation to learn from the Internet, tutoring, peer support, cheating, student frustration, cyberbullying, and school stress. Students at several secondary schools were invited to judge the relevance of the poll topics, ease of understanding item content, and suitability of the response options. Based on student feedback, some polls were modified and then reexamined by students. The Flesch-Kinkaid Readability Index indicated that difficulty levels of the 10 polls ranged from grade level 5 to grade level 8.

Following poll development, administration methods and software were field-tested at eight underperforming schools that enrolled substantial proportions of minorities (Strom et al., 2008). The students who participated in the

field-test (N = 2,575) completed polling at their school computer labs where they were provided password-protected entry data for poll access and an individual code drawn from a random generator. This method guaranteed the anonymity of students and ensured no one could participate more than once. Student responses exceeded 75% at each of the eight schools. Each principal was provided a full report about their school only with overall findings and breakdown of student responses by grade, age, gender, and race. All student polls were submitted anonymously.

The purposes for the field-test were to analyze whether relationships were dependent or independent between student responses and variables of gender, grade, race, and school location (Strom et al., 2008). Non-parametric chi-square testing was conducted on poll items that allowed multiple options. Each response had to be tested because students could choose more than a single option as their response; therefore, each had a separate data field. Chi-square was also applied to assess responses at specific schools to detect significant differences between student views from school to school. Overall, the variable of school location had the most significant influence in shaping student perceptions about conditions of learning. The results of the field-test meant that polling students at a single school ensured the findings had local relevance, motivated stakeholder involvement, and guided plans for continuous school improvement.

In summary, the review of literature on stress confirmed it is a widespread concern and represents a significant obstacle to well-being. Symptoms of stress have been identified along with benefits of an orientation that embraces hope and optimism. Educators should strive to be better informed about the student experience to find out what schools can do to reduce unnecessary stress and improve conditions of learning. The student voice movement has motivated greater willingness by the public to consider student recommendations for changing some school practices.

Method

Purposes of the Current Study

The goals of the current study were to determine stressful experiences of adolescents at one school, identify how they felt their stress could be reduced, and determine the overall results. The intent of the principal was to use the findings of the study to strengthen student support and to contribute to the Continuous School Improvement Plan.

Subjects

A public high school in a rural area of the southeastern United States was the site for this investigation. The school principal invited all 466 students to volunteer to complete the online Stress Poll. Students were informed that their opinions would be anonymous, and taking the poll was not a required assignment. The number of students who volunteered was 349; this was 74.9% of the school population. Average age of students was 16.08 (*SD* = 1.26). Respondents were 172 females (49.4%) and 177 males (50.6%); they classified themselves as White (55.6%), Black (37.5%), Hispanic (2.3%), and Other (4.6%). The students were in Grade 9 (24.4%), Grade 10 (25.5%), Grade 11 (25.2%), and Grade 12 (24.9%). Demographics were recorded by each participant when completing the poll.

Procedures for Faculty and Students

Before poll administration, the school principal and faculty were oriented to the origins of student polling, previous research outcomes, administration procedures, feedback method, and ways to use results for the Continuous School Improvement Plan. Students were given passwords and went online using their computer or smart phone to complete the poll. They were provided the following written directions about how to complete the poll:

> The purpose of the Stress Poll is to find out how students at this high school feel about their stress. Some stress can help students perform better. However, too much stress can jeopardize learning and undermine mental health. Teachers and parents can be more helpful when they are aware of conditions that cause student stress. For each of the 17 multiple-choice items, select the answer(s) that tell how you feel. On 14 of these 17 items you may choose more than one answer. If an answer you want is not listed, type it on the line marked *Other*. Your responses are anonymous and will be combined with others in a report for students, faculty, and parents.

The school principal and institutional review board approved use of the Stress Poll for the purpose of gathering student impressions for the current study. All data collected and analyzed remained anonymous regarding individual student identification. Scheduling for administration of the Stress Poll was planned at a time when there was no conflict with semester testing. The length of time to complete the poll was approximately 15 minutes. The period of poll taking occurred in 2021. No part of the Stress Poll included questions about COVID-19; no *Other* comments were entered by respondents regarding the pandemic.

Results

Table 1 presents overall findings reported by frequencies and percentages for each of the 17 Stress Poll items. In addition, poll data were analyzed using a series of Chi-square independence tests to compare the gender (female vs. male) responses. Cramer's *V* was applied to detect effect size.

There was a surprisingly large proportion of students' who typed in *Other* comments for item 3, *My sources of stress outside of school*. More than half of these comments indicated the students did not experience stress outside of school. Additional comments were related to time management and included finishing homework along with household chores, having a part-time job, babysitting for nieces and nephews, and being assigned too much schoolwork.

Table 1 presents a statistical comparison of gender differences. Both female and male students reported that expectations by their teachers were easy to manage. A greater proportion of females indicated that worrying about getting good grades and not understanding some of their courses were sources of stress at school. When considering stress outside of school, females were more likely than males to report stress in getting along with family members.

A majority of males and females agreed that expectations of teachers are usually easy to manage and were optimistic about their future most of the time or some of the time. However, the ways students handled feelings of stress differed by gender. Males were far more likely than females to play video games, watch tv, and do physical exercise to reduce stress. Sources of stress while at school showed that males did not worry as much as females about getting good grades and not understanding some courses. Getting enough sleep on weeknights was reported as less of a problem for males than for females.

In contrast, females were more likely to talk with friends, parents/teachers, or sleep as ways to cope with stress. In addition, more female students knew they were stressed when they had headaches or stomachaches, could not sleep well, felt helpless or hopeless, upset, and mad. More females than males worried about how well they performed in class and how they will pay for college; they also reported more often that teachers should plan together to avoid overloading students and allow students to make mistakes in class without affecting grades. Also, more females than males wanted parents to set reasonable academic expectations and would like to spend more family time together. More females stated classmates could reduce stress by not expecting them to quickly answer text messages, respect their decisions, and tutor them if needed. Female students were more likely than males to report a lack of resilience after experiencing most problems.

Table 1. Overall Results and Comparison of Gender Responses for the High School Stress Poll

Stress Poll Items©	Overall (N = 349)		Females (n = 172)		Males (n = 177)		χ^2	p	Cramer's V
	f	%	f	%	f	%			
1. Expectations of teachers							2.22	.53	.08
Cause little stress	77	22.1	33	19.2	44	24.9			
Are easy to manage	192	55.0	101	58.7	91	51.4			
Are too demanding	59	16.9	28	16.3	31	17.5			
Are beyond my skills	21	6.0	10	5.8	11	6.2			
2. My sources of stress at school are									
Worrying about grades	272	77.9	159	92.4	113	63.8	41.50	<.001***	.35
Not understanding some courses	209	59.9	122	70.9	87	49.2	17.22	<.001***	.22
How my classmates feel about me	40	11.5	24	14.0	16	9.0	2.08	.15	.08
Not getting tutoring	35	10.0	21	12.2	14	7.9	1.79	.18	.07
Poor time management	126	36.1	65	37.8	61	34.5	0.42	.52	.04
Other comments	40	11.5	11	6.4	29	16.4	8.58	.003**	.16
3. My sources of stress outside school are									
Getting along with family	107	30.7	70	40.7	37	20.9	16.08	<.001***	.22
Related to boyfriend or girlfriend	47	13.5	27	15.7	20	11.3	1.45	.23	.06
Being bullied or teased	37	10.6	23	13.4	14	7.9	2.75	.10	.09
Friends on social media	55	15.8	27	15.7	28	15.8	0.001	.98	.002
Other comments	177	50.7	70	40.7	107	60.5	13.62	<.001***	.20

Table 1, Continued

4. Ways I handle stress are to									
Talk with friends	183	52.4	101	58.7	82	46.3	5.37	.02*	.12
Talk to parents or teachers	82	23.5	51	29.7	31	17.5	7.15	.01*	.14
Smoke or drink	12	3.4	5	2.9	7	4.0	0.29	.59	.03
Play video games	113	32.4	23	13.4	90	50.8	55.95	<.001***	.40
Watch TV	123	35.2	56	32.6	67	37.9	1.07	.30*	.06
Do physical exercise	95	27.2	37	21.5	58	32.8	5.58	.02*	.13
Sleep	213	61.0	131	76.2	82	46.3	32.65	<.001***	.31
Other comments	63	18.1	24	14.0	39	22.0	3.85	.05*	.11
5. Signs that tell me I am stressed are									
Headache and stomachache	154	44.1	114	66.3	40	22.6	67.51	<.001***	.44
Inability to sleep	143	41.0	92	53.5	51	28.8	21.96	<.001***	.25
Feeling helpless or hopeless	146	41.8	91	52.9	55	31.1	17.09	<.001***	.22
Getting upset	206	59.0	128	74.4	78	44.1	33.23	<.001***	.31
Unable to concentrate	202	57.9	108	62.8	94	53.1	3.36	.07	.10
Other comments	47	13.5	24	14.0	23	13.0	0.07	.79	.01
6. Things that worry me are									
Doing well in classes	246	70.5	147	85.5	99	55.9	36.57	<.001***	.32
How I look compared with peers	56	16.0	29	16.9	27	15.3	0.17	.68	.02
Figuring out my career	164	47.0	88	51.2	76	42.9	2.37	.12	.08
How to pay for college	101	28.9	65	37.8	36	20.3	12.92	<.001***	.19
Other comments	53	15.2	13	7.6	41	23.2	16.24	<.001***	.22

Table 1, Continued

7. Ways my parents taught me to handle stress are									
Show patience	130	37.2	67	39.0	63	35.6	0.42	.52	.04
Stop over-scheduling	79	22.6	44	25.6	35	19.8	1.68	.20	.07
Balance work and play	117	33.5	64	37.2	53	29.9	2.07	.15	.08
Do physical exercise	45	12.9	16	9.3	29	16.4	3.90	.05*	.11
They have not taught me	85	24.4	48	27.9	37	20.9	2.32	.13	.08
Other comments	54	15.5	16	9.3	38	21.5	9.87	.002**	.17
8. Ways teachers can help reduce student stress are to									
Plan together to avoid overloading	209	59.9	116	67.4	93	52.5	8.06	.005**	.15
Assign group tasks to share the load	108	30.9	54	31.4	54	30.5	0.03	.86	.01
Have class discussions about stress	70	20.1	41	23.8	29	16.4	3.02	.08	.09
Allow mistakes without grading	174	49.9	104	60.5	70	39.5	15.27	<.001***	.21
Teach students about meditation	66	18.9	42	24.4	24	13.6	6.71	.01**	.14
Other comments	44	12.6	13	7.6	31	17.5	7.85	.005**	.15
9. Ways parents can help reduce my stress are to									
Not expect me to out-perform others	151	43.3	96	55.8	55	31.1	21.75	<.001***	.25
Prevent over-scheduling	130	37.2	69	40.1	61	34.5	1.19	.28	.06
Plan more family time together	91	26.1	57	33.1	34	19.2	8.78	.003**	.16
Show me how to relax	103	29.5	53	30.8	50	28.2	0.28	.60	.03
Other comments	78	22.3	33	19.2	45	25.4	1.96	.16	.08
10. Getting enough sleep on school nights is							19.95	<.001***	.24
Always a problem	86	24.6	57	33.1	29	16.4			
Often a problem	89	25.5	48	27.9	41	23.2			

Table 1, Continued

Seldom a problem	74	21.2	32	18.6	42	23.7			
Never a problem	100	28.7	35	20.3	65	36.7			
11. I am resilient									
After a failure at school	137	39.3	71	41.3	66	37.3	0.58	.45	.04
After breakup of a romance	60	17.2	33	19.2	27	15.3	0.95	.33	.05
After losing a competition	104	29.8	49	28.5	55	31.1	0.28	.60	.03
I am not resilient	117	33.5	73	42.4	44	24.9	12.10	.001**	.19
Other comments	65	18.6	18	10.5	47	26.6	14.90	<.001***	.21
12. Ways classmates could reduce my stress are to									
Stop cheating	41	11.7	19	11.0	22	12.4	0.16	.69	.02
Not expect quick texts	70	20.1	45	26.2	25	14.1	7.88	.005**	.15
Respect my decisions	162	46.4	95	55.2	67	37.9	10.59	.001**	.17
Not bother my studying	111	31.8	63	36.6	48	27.1	3.64	.06	.10
Tutor me if I need help	71	20.3	46	26.7	25	14.1	8.57	.003**	.16
Other comments	93	26.6	37	21.5	56	31.6	4.58	.03*	.12
13. The decisions I make about situations									
Affect most things that happen to me	228	65.3	125	72.7	103	58.2	8.08	.004**	.15
Do not matter because others decide	45	12.9	26	15.1	19	10.7	1.49	.22	.07
Seldom happen since parents decide	23	6.6	9	5.2	14	7.9	1.02	.31	.05
Should allow me to change my goals	69	19.8	36	20.9	33	18.6	0.29	.59	.03
Are too hurried for good judgment	46	13.2	25	14.5	21	11.9	0.54	.46	.04
Other comments	55	15.8	19	11.0	36	20.3	5.67	.02*	.13

Table 1, Continued

14. I am optimistic about my future							9.91	.02*	.17
Most of the time	129	37.0	63	36.6	66	37.3			
Some of the time	146	41.8	83	48.3	63	35.6			
Seldom	35	10.0	14	8.1	21	11.9			
Never	39	11.2	12	7.0	27	15.2			
15. My teachers could benefit from workshops about									
Stress faced by students	131	37.5	80	46.5	51	28.8	11.65	.001*	.18
Helping students deal with stress	159	45.6	95	55.2	64	36.2	12.80	<.001***	.19
Understanding stress and its effects	178	51.0	105	61.0	73	41.2	13.69	<.001***	.20
How to deal with their job stress	124	35.5	72	41.9	52	29.4	5.93	.02*	.13
Other comments	56	16.0	16	9.3	40	22.6	11.45	.001**	.18
16. My parents could benefit from workshops about									
Stresses faced by young people	116	33.2	67	39.0	49	27.7	4.99	.03*	.13
Helping their kids deal with stress	157	45.0	99	57.6	58	32.8	21.66	<.001***	.25
Understanding stress and its effects	168	48.1	104	60.5	64	36.2	20.64	<.001***	.24
How to deal with parent stress	127	36.4	80	46.5	47	26.6	15.01	<.001***	.21
Other comments	70	20.1	24	14.0	46	26.0	7.88	.005**	.15
17. Ways that dating stresses me are									
Being rejected	57	16.3	28	16.3	29	16.4	0.001	.98	.001
Not getting along well	50	14.3	30	17.4	20	11.3	2.68	.10	.09
Breaking up	76	21.8	42	24.4	34	19.2	1.39	.24	.06
I am not stressed	150	43.0	78	45.3	72	40.7	0.78	.38	.05
Other comments	88	25.2	35	20.3	53	29.9	4.26	.04*	.11

*$p < .05$. **$p < .01$. ***$p < .001$.

Female students anticipated greater benefits than male students about the prospective benefits of stress workshops offered by the school for parents and teachers. They felt their parents and teachers could benefit from the workshop recognizing student stress, ways to help students deal with stresses, and how to deal with their own stress on the job and as a parent. There were no statistically significant differences on their stress related to dating or romantic relationships.

Discussion

Implications for Teachers

Most students reported that teacher expectations were usually easy to manage and did not cause them much stress. However, students expressed disappointment about their instruction, specifically how teachers explained concepts and problem solving in class. A majority (59.9%) reported feeling stressed because they did not understand content presented in some courses. The teacher practice of asking students to raise their hand to show lack of understanding seldom produces a response because students see this request as a cause for embarrassment. Students do not want to be seen by classmates as incapable (Allouche et al., 2021; Neill et al., 2021).

A one-time teacher demonstration on solving a mathematics problem is usually insufficient. A more effective teaching strategy is to provide students access to video presentations of lessons they identify as difficult and then post step-by-step procedures on the school learning management system. Teachers could recommend short videos for any curriculum subject posted online at the Khan Academy (Khan, 2020) and place links to these on the course management system used by the school for ongoing free student access (e.g., see Khan Academy khanacademy.org). In this way, students can review the steps in a problem-solving process on video at home many times, pause when needed, and avoid peer embarrassment.

Students thought teachers could reduce school stress by planning together to avoid overloading students, allowing mistakes without affecting grades, and increasing cooperative learning group assignments so teammates could share the load and become peer teachers (Strom et al., 2022). Teachers and parents need to support resilience knowing that resilience levels drop sharply during the adolescent years (Goleman & Davidson, 2018; Lustig, 2020). Students reported that workshops should be offered at the school to help teachers deal with student stress and their own stress as educators. These considerations can contribute to the mental health of students and faculty (National Institute of Mental Health, 2022). When a school implements these measures of assessment polling followed by intervention workshops, the outcomes can also

contribute to continuous school improvement planning (Bernhardt, 2017; Strom & Strom, 2016).

Implications for Parents

Students felt their greatest stress outside school was getting along with family members. A common view was that relatives could reduce the undue pressure they impose by setting more reasonable expectations for academic achievement. In addition, parents should strive to be continually aware of the emotional and behavioral well-being of their adolescent. This includes parent–child discussions about what is expected of being a teenager or to help determine symptoms of teen depression, especially for daughters (Geiger & Davis, 2019). By talking together, parents can try to determine if their adolescent appears to be able to manage life's challenges or if life seems overwhelming (Brooks & Lasser, 2018; Mayo Clinic, 2022). Parents should watch for extreme signs of withdrawal, smoking or drinking (American Academy of Pediatrics, 2022), skipping school, deciding to drop out of school, or attempting suicide (Damour, 2019).

Adolescents also need resilience (American Psychological Association, 2020; Fricchione, 2016). Not being resilient after experiencing most problems was the self-assessment of 33.5% of the overall students in the study school. The development of resilience is hampered by self-centeredness. Parents should understand the importance and need for resilience and how parents influence self-centeredness when they discourage children from admitting personal limitations or failures.

Narcissism is defined as excessive self-admiration, demonstrated by inflated self-impression. *The Narcissism Personality Inventory* was initially field-tested by Raskin and Terry (1988). Since then, Twenge (2018) analyzed data from 16,000 students who had completed the inventory; results indicated that two-thirds of adolescents agreed they are more narcissistic and self-centered than previous generations.

Twenge (2018) pointed out that the hyper-individualistic orientation seems to be the result of a non-stop parent promotion of child self-esteem, independent of their academic performance. This happens in families where parents too often tell children they are special, urge them to pursue unrealistic and narrow definitions of success, and protect them from admitting their failures and limitations. The result of such actions by so-called "tiger moms" and "helicopter parents" is that they prevent the growth of resilience needed to recover from setbacks when things go wrong (Levine, 2020; Masten, 2015). Adolescents whose parents cause them to suppose they always perform well do not learn how to process criticism. Accepting and interpreting criticism in a constructive

manner should become a priority goal during the teenage years (Mintz, 2015; Scott, 2016; Strom & Strom, 2021b).

There was a high proportion of agreement among students, mostly females, that parents should reduce their imposition of excessive stress caused by expecting them to perform better academically than peers. Students also wanted parental guidance to prevent overscheduling (Schulte, 2015). Reduction of stress for students could be provided by workshops for parents sponsored by the school. Parents could benefit from workshops on understanding stress and its effects on individuals, helping adolescents manage stress, becoming aware of stresses students face, and learning to better manage their own individual stress as parents (Geiger & Davis, 2019; Levine, 2020; Mayo Clinic, 2022).

Implications for Peers

The good news is that, at the high school in this study, only a small proportion of students (3.4%) reported that they deal with stress by smoking or drinking (American Academy of Pediatrics, 2022). Students preferred to process stress by talking to friends more often than sharing their concerns with parents or teachers. However, they reported that friends don't respect their goals, too often interrupt during study times, and pressure them to quickly answer all text messages. Faculty should encourage more favorable peer norms by reminding students to think about how they define friendship. One definition of friendship is to always look out for the best interests of someone we care about, mutually sharing feelings and ideas, and providing advice that is intended to support development (Turkle, 2015). Classmates should support the self-declared assets of peers such as showing resilience after failure, seeking help when it is needed, being optimistic about the future, and recognizing personal accountability for most things that happen to them. Friends can also motivate one another by reinforcing healthy behaviors they observe (Allouche et al., 2021; Strom et al., 2019).

Implications for Individual Students

Most respondents reported that they worried about not getting good grades in school (77.9%) and how well they performed in classes (70.5%). Overcoming these worries can relate to poor time management habits that were recognized by the students as a self-imposed source of stress (36.1%). Time management should be seen as a necessary condition to reach personal goals (Brooks & Lasser, 2018). Individuals whose priorities receive enough attention are more able to govern events in their lives. When adolescents lack time to process ideas or think about options for solving problems, they may reject reflective thinking in favor of hasty methods of information processing. As a

result, instead of deferring judgment until multiple options are examined, students accustomed to being hurried tend to reach premature conclusions based on partial information (Schulte, 2015; Seligman, 2018). Strom and Strom (2021b) determined that time management should be the focus of continuous lessons taught at home and at school for adolescents.

Spending many hours daily phoning and texting friends and participating in e-media are distractions from the primary obligation of students to invest time on learning (Jackson, 2018). Establishing rules that limit the amount of time adolescents are permitted to communicate with friends is a practical way courageous parents support self-regulation and school success (Anderson & Jiang, 2018; Jensen & Nutt, 2016; Keefer et al., 2018; Strom et al., 2019).

In a rapid-paced environment with competing priorities and information overload, some decisions are based on impulse, stress, and expedience (Schulte, 2015). Adolescents should be able to learn from adults who help them appreciate the mental health benefits that accompany time management. Individuals who possess this ability generally avoid taking on too many responsibilities, breaking promises made to others, ignoring the people and activities they say matter most to them, and organizing a personal calendar that reflects a sensible distribution of their time. When parents cannot provide a healthy example of time management, adolescents may repeat the same dysfunctional behavior by overscheduling themselves, experiencing undue stress, and being unable to control their lives (Strom & Strom, 2021a, 2021b; Wojcicki, 2020).

Most adolescents would prefer to make decisions for themselves (Brooks & Lasser, 2018; Levine, 2020). The scope of individual independence was evident by the finding that a majority of students (65.3%) believed the decisions they make about situations are responsible for most things that happen to them. Few students (6.6%) indicated that parents made their decisions for them.

Connecting Student Voice to School Improvement

The importance of student voice is being recognized by an increasing number of disciplines, including medicine. In the international medical journal *The Lancet: Child and Adolescent Health*, Fazel and Hoagwood (2021) commented about the need to expand sources of future data gathering methods to determine the medical needs of young people: "We have entered a new stage in research in which young people's participation in the development and assessment of an intervention needs to be at the forefront" (p. 157). Student mental health must integrate young people's voices to identify problems they face and their views about how to solve them. Polling should become a prominent tool in the future to understand the views of students about conditions of learning and for development of the Continuous School Improvement Plan.

Limitations of This Study

Limitations of the study were that the poll was a self-report which took place at one school and lack of an existing measure on student stress for comparison. Students receiving special education services were not identified as a population for separate data analysis; having such information could be helpful and will be proposed to principals in future high school polling studies.

Conclusion

Stress and emotional health are linked. The pressures adolescents experience are reflected by their reports of anxiety, frustration, uncertainty, and depression. Exceptions are the resilient who see setbacks and failures as opportunities to overcome obstacles and improve their behavior. The optimistic thinking of resilient students enables them to accept unfamiliar challenges, retain a consistently positive outlook, and persevere when tasks become difficult. Being disadvantaged can occur when parents prevent students from acknowledging academic failure because adults mistakenly believe that setbacks reduce student self-esteem.

Teachers should continually observe how students react to stress. Advocating an internal locus of control motivates confidence, sustained effort, and resilience. Educators can minimize student uncertainty by presenting easily understood goals for lessons and giving clear directions for assignments. There is evidence that more tutoring is needed than provided at this school. Teachers should video lessons that students commonly identify as difficult and place them on the course management system or school website. In this way students can view step-by-step methods to reach solutions at home without suffering embarrassment from insensitive classmates. The most prominent source of worry for students is how well they perform in required classes.

Guided discussions about time management, friendship, and emotional support can offer lessons that are a valuable use of class time as part of the school improvement procedures. Some students reveal stress by aggressive behavior and drawing attention to themselves. The more severe symptoms of stress include depression, withdrawal, and resignation. Teachers should strive to be seen as approachable so students can feel comfortable talking about their stress. To further the efforts of teachers, schools should consider increasing counseling staff as we face the rise in student stress and depression. When students show signs of excessive stress, educators should make referrals to mental health professionals for screening and possible intervention.

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