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Success with Less Stress

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In the last three years, lead articles in newspapers such as *The Wall Street Journal* (Keates, 2007), *The Philadelphia Inquirer* (Boccella, 2007) and *The San Francisco Chronicle* (McMahon, 2007) have directed attention to what some are calling an epidemic of student stress in our nation's top schools. These articles describe how the pressure that students feel to succeed has led to rampant cheating, sleepless nights, and increases in depression, drug use, and self-mutilation or cutting. In this article, we present empirical data that corroborate these alarming reports, and we offer recommendations for developing healthier school environments that promote student engagement and well-being.

Our data come from 3,645 students, attending seven high-performing high schools in the California Bay Area.¹ On measures commonly used to gauge student success, these students appear to be exemplars. Their schools all meet their Adequate Yearly Progress benchmarks under No Child Left Behind and have high rates of student proficiency. The vast majority (85%) of our sample reported a grade point average of 3.0 or higher; and most (63%) reported that they often or always worked hard in school. These are students who value achievement and care about learning. In addition, 89% of the respondents participate in an extra-curricular activity after school, and most aspire to attend a four-year college after graduating from high school. By most indicators, these are the kinds of students we would like our high schools to produce.

A different storyline emerges, however, from the data we collected. While some students at these schools are able to navigate these high-pressure environments without negative consequences, many of the students in this sample report feeling stressed-out,

over-worked, and sleep-deprived. They speak of the tolls of the pressure on their mental and physical well-being and on their ability to learn academic material. Ultimately, they raise questions about whether a student's grade point average, frequently used as a marker of student success, is a good indicator of what students are actually learning and accomplishing in high school.

Academic Stress and Its Causes

Science has long recognized that some level of stress can be adaptive and even healthy (Seyle, 1956); however, chronic student stress has been consistently associated with negative outcomes (Grant, Compas, Thurn, McMahon, & Gipson, 2004; Kaplan, D., Liu, & Kaplan, H., 2005). For the majority of students in this study, academic stress is a constant condition. More than 70% of students reported that they felt often or always stressed by their schoolwork, and 56% reported often or always worrying about such things as grades, tests, and college acceptance.

Analyses of students' responses to the open-ended question, "Right now in your life, what causes you the most stress?" confirm that academics and schoolwork are a major stressor for these youth. Representative quotations depicting the most common categories of responses to this question appear in Table 1.

Table 1. Top Stressor Categories and Examples

What causes you the most stress?	Representative student response
Schoolwork (in general)	School, because it takes up all of my time. I wake up, go to school for 7 hours, go home, and study for 3-4 hours, go to sports, and go to sleep, then do the same the next day.
Homework	Homework load. I rarely make it to bed before midnight and wake up early to finish it
Tests and quizzes	Tests are the worst because you don't know what to

Grades	<p>expect, and it affects your grade so much. I usually have at least one or two tests or quizzes everyday of every week.</p> <p>Grades. They are all that matters. You don't need to learn, you need to get good grades because grades are everything here.</p>
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Other high frequency answers included stress over the college admissions process, large projects/assignments, and standardized tests. For each of our sample schools, students highlighted these academic-related factors as causing the most stress in their lives, as opposed to other life stressors, such as social issues or family life. Answers such as “family pressure,” “divorce,” and “parent/sibling illness” did not fall into the top 10 most frequent answers at any school.

Students' responses to the question about the sources of their stress demonstrate that many feel that schoolwork dominates their day. Certainly, a large share of their time each weekday is spent in school, but the demands of schoolwork do not let up after the last bell rings. On average, students in our study reported spending 3.07 hours on homework, not including time spent online, chatting with friends, or browsing the internet. One student explained:

For some reason all teachers love to assign huge amounts of homework on the same nights, which keeps me awake till all hours trying to find the best possible answers because there is a lot of pressure put on us kids to do so well.

Another lamented, “It is not necessarily the difficulty of the work, but the workload itself causes me the most stress, since the average is about 4-5 hours a night.”

On average, these students also spent another two hours each weeknight on extracurricular activities, not including time spent commuting to and from these activities

and their associated events. More than a quarter (28%) of the sample reported six or more hours of afterschool commitments, including homework, each night. The busy schedules these students maintain leave little room for downtime and rest. In fact, 60.9% of the students feel that schoolwork or homework has frequently kept them from other things, such as spending time with family and friends, and a similar percentage (60.3%) reported having to drop an activity they enjoyed because of schoolwork and other demands.

Effects of Academic Stress on Learning

While reflecting on their busy schedules and the sources of their stress, several students commented that the pressure they feel to succeed was compromising their intellectual development and stymieing their efforts to learn. One student explained:

I'm stressed because I have so many pointless, mundane assignments that take up large amounts of time, without actually [resulting in] learning anything in class. I don't mind working if I'm actually learning something. I hate wasting my valuable time on assignments that don't accomplish anything for teachers and classes that don't respect me as an intellectual.

Another student wrote, "If teachers stopped giving out busy work, I'd be able to focus more on important assignments. I always get burnt out when I have to spend a lot of time on useless work." And another commented, "[Give us] fewer mindless homework assignments...Often the homework takes an eternity to finish and has little educational value, which makes me less motivated and more stressed."

These students have high grade point averages, but they are frustrated by tedious assignments and work that holds little meaning for them. Many admit to cheating (in fact, 95% of the 11 and 12th grade students in our sample report at least one instance of

cheating), including copying homework and cheating on tests and quizzes, because of the pressure to get high grades and scores. Even when the work is meaningful, the pressure of an excessive workload, combined with a busy schedule of outside activities, becomes too much for many of these kids to handle.

Effects of Academic Stress on Student Well-Being

The stress these students feel not only compromises their learning experience, but also takes a toll on their health and well-being. It is no wonder given the amount of time they spend completing homework, studying, and pursuing extracurricular activities that the majority of students in our study reported sleeping fewer hours per night than the 9.25 hours experts suggest they need for optimal, healthy functioning. On average, the respondents reported getting 6.8 hours of sleep each weeknight. Over one-third (34.6%) reported six or fewer hours of sleep each night. Two-thirds of the respondents indicated that homework or schoolwork often or always kept them from sleeping. Fifty-four percent reported difficulty sleeping, 56% reported experiencing exhaustion due to academic stress, and quite a few students at each school listed *not* “getting enough sleep” as a stressor in and of itself! These students’ comments reflect the extent of their sleep-deprivation:

“There are times I do schoolwork from 3 PM to 3 AM even when I DON’T procrastinate.”

“I just want more time to sleep and maintain a healthy lifestyle, but school keeps inundating me with work and tests at such a fast and constant rate that I’m always tired and stressed.”

“Just this week I had three all nighters in a row.”

In addition to exhaustion, students attributed other physical symptoms to their level of academic stress, including headaches and stomach problems. Although 19% of students reported experiencing no physical symptoms in the past month due to academic stress, 44% reported experiencing three or more physical symptoms in one month alone because of academic stress. For these youth, it becomes hard to maintain the argument that stress can be healthy or adaptive.

Stress also adversely impacted some students' mental health. Nearly one-quarter of the respondents (24%) indicated that they felt frequently depressed in the last month, and 252 students (7%) had cut themselves one or more times during the same time period. These statistics are similar in other samples (Nevius, 2005; Ross & Heath, 2002).

Some students also turned to stimulants to boost their performance. Twenty-four percent of the respondents reported that they had used over-the-counter or legal stimulants, such as caffeine or NoDoze, to help them stay up to study in the last month, and another 274 students (8.0%) reported using illegal stimulants or prescription drugs, such as Adderall, for the same reason. Other research indicates that these numbers rise dramatically once students enter college (McCabe, Boyd, & Teter, 2009; Johnston, O'Malley, Buchman, & Schulenberg, 2007)

Students' comments on the survey revealed the extent to which some of them are suffering physically and mentally:

“The most stressful part of school for me is when a teacher and parents put pressure on me. It makes it a lot more difficult for work to get done since I already am on anti-depressants for extreme anxiety issues.”

“I get emotionally stressed and have break downs or I go the completely opposite way and stop caring. I wish the administrators would take initiative. I cry all the time!!! Last time I was studying AP Bio for so long that I got sick on test day.”

“I was in therapy for anxiety issues last year...depression from extreme homework and expectations of coach.”

“I am stressed to the point of developing chronic insomnia.”

“The constant pressures related to family, and specifically to school, have single-handedly caused me to abuse alcohol and marijuana on a weekly basis. When I feel especially stressed out, I feel like intoxication is the best way out of it.”

Clearly, these students are experiencing distress. Their grades may indicate that they are meeting or exceeding academic standards, but their words indicate that they are sacrificing their health and well-being in the process.

The Challenge Success Model and Strategies Schools Have Used

The schools that participated in this study joined a research-based intervention program known as Challenge Success. This program, based at the Stanford University School of Education, guides school teams of multiple stakeholders as they design and implement site-based policies and practices that reduce student stress and promote greater student engagement, academic integrity, health and well-being.

Soon after joining the program, these schools administered a baseline survey to a representative sample of their student bodies. The survey was designed to help the schools determine the extent to which their students experienced academic stress and to examine links among physical and mental health, student motivation, and achievement. The Challenge Success model reflects the belief that reforms will be both more

meaningful and more effective when they arise out of a deep understanding of the nature of the problem, its sources, and its correlates. The survey data help participating schools not only to diagnose the specific problem-areas on their campuses, but also to generate community-wide understanding of these problems and support for the change process through the use of shared data. In fact, all of the participating schools reported having presented survey data to faculty and/or parents and students, and nearly all have worked with a broad array of stakeholders to create vision and mission statements to guide the school reform work.

After developing this shared understanding, schools implemented a variety of strategies to reduce student stress and increase well-being. Most commonly, Challenge Success schools created more opportunities for students to receive support from staff, developed test and project calendars to help ease students' workload, and revised homework policies. Some schools also modified college counseling practices, reformed the grading system or grading policies, and created honor codes or new academic integrity policies.

When asked to list "best practices" or actions that had the greatest impact, Challenge Success schools were most likely to list the following strategies:

- Changes to the schedule (including changing the weekly schedule to allow for fewer transitions and more down-time/free periods, adding more tutorial time or advisory periods, and/or going to block or modified block schedule)
- Staff training and development (including workshops on teaching for engagement and using alternative assessments)

- Altering exams (including reducing their weight, moving them to before winter break, increasing time between exams, and replacing exams with projects)

At one school, where the daily bell schedule and the exam schedule were significantly modified, students reported experiencing less stress. The vast majority of 10th and 11th graders (86% and 83% respectively) agreed that adding free periods to the schedule, increasing class period times and advisories, and reducing the number of classes each day had effectively eased their workload. More than three-quarters of these same students (77% and 76% respectively) agreed that moving exams from after the winter break to before the break reduced their stress levels. After implementing these changes at the school, administrators attested to the positive effects of the reforms and commented that “student grades, test scores, and college admissions all stayed high, but the stress went down.”

Positive results can be seen even with seemingly modest reform efforts as well. At another participating school, for instance, some Advanced Placement teachers worked to decrease student stress in their classes and increase student engagement with learning. One AP Biology teacher cut the homework load in half for his course, eliminated summer work, and encouraged frequent dialogue with students and parents about student well-being. For two years in a row now, the AP Biology test scores in his class have gone up, and students have reported higher levels of engagement with the material and less stress. An AP Calculus teacher at another participating school had similar success when he reduced homework and cut back on the number of problems he had students do each

night. His students did less homework than students in other high level math classes, but they scored as well on the AP exams – with a lot less stress.

Conclusion

In response to the overwhelming workload at her school, one student makes this plea:

Don't push students farther than their limit. All my teachers say, "I'm treating you like this because that's how you'll be treated in college." Guess what? I'm not in college; I'm 15 and in high school FOR A REASON.

This student is right. The physical and mental health tolls depicted above are not appropriate for any youth, and educators and parents need to be aware of the extent of the problem and attuned to the signs of student stress.

The Challenge Success program is not advocating that teachers water-down their curricula or eliminate homework or even abolish tests and exams, but we see the negative ramifications of a system that pushes students too far, and we know that schools can achieve similar positive results without the undue pressures.

To be fair, the schools are not the sole source of this problem—parents, students, federal policies, colleges and universities all play a role in increasing student stress levels. In recognition of the multi-faceted nature of the problem, the Challenge Success model encourages multiple stakeholders to work together to formulate site-based plans for change. When everyone recognizes the need for change and has a say in the reform process, we have found that schools can indeed foster healthier environments in which student learning and student well-being are mutually reinforcing.

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ⁱ Because of rising concern about the prevalence of student stress on their campuses, the seven schools in our study, including four public and three private, all joined a research and intervention program at Stanford University known as Challenge Success. More details on the Challenge Success model can be found at the end of the article.