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Student Stress

At a Glance

Students are under pressure from teachers, parents, and college admissions counselors to maintain high grade point averages, score well on high-stakes tests, participate in a variety of extracurricular activities, and gain admission to top colleges. In fact, surveys have found that most students identify academic pressure as the main reason for their stress. While it has long been assumed that struggling students are most prone to academic stress, recent studies indicate that high achievers are especially vulnerable to school-related stress. This Information Capsule summarizes the consequences of chronic school-related stress, including decreases in academic performance, frequent physical illnesses, and cheating. Causes of school-related stress, such as overly demanding academic content, overbooked schedules, and pressure to maintain high grades and gain acceptance to prestigious colleges, are also reviewed. Finally, strategies designed to help schools, parents, and students alleviate school-related stress are presented.

Researchers have recently called attention to high levels of student stress in our nation's schools. Studies show that students are under pressure from teachers, parents, and college admissions counselors to maintain high grade point averages, score well on high-stakes tests, participate in a variety of extracurricular activities, and gain admission to top colleges (Pope, 2010; Sedere, 2010; Conner et al., 2009; Ramírez, 2009; Cech, 2008; Scott, 2007; Pascucci, 2006). Furthermore, researchers have found that students are becoming stressed at an earlier age, often at the elementary school level (McClure, 2009; Clemmitt, 2007; Delisio, 2006; Palmer, 2005; Large, 1999).

All types of students are subject to school-related stress. While it has long been assumed that struggling students are most prone to academic stress, recent studies indicate that high achievers are especially vulnerable to school-related stress. While some students are able to handle high pressure school environments, others report feeling chronically stressed, overworked, and sleep deprived. Some use whatever means necessary to earn high grades and test scores. Consequently, researchers have chronicled increases in cheating, sleepless nights, depression, drug use, and self-mutilation (Dinesh & Kumari, 2010; Ghezzi, 2010; Pope, 2010; Conner et al., 2009; Mathews, 2006).

How Prevalent Is School-Related Stress?

In most surveys, students identify academic pressure as the main reason for their stress (Parent Institute, 2010; Ramírez, 2009; Aratani, 2007; Boyce, 2003; de Anda, 1997). In *The State of Our Nation's Youth, 2008-09*, the Horatio Alger Association (2008) surveyed a nationwide sample of over 1,000 students ages 13-19. Almost four in five respondents (79 percent) said that pressure to get good grades created a problem for them. Sixty-two percent of students agreed with this statement in 2001, an increase of 17

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percent from 2001 to 2008. Over the same time period, the percentage of those classifying grade pressure as “major” increased 19 percentage points, to 45 percent.

American Psychological Association’s 2009 *Stress in America Survey* polled a nationally representative sample of over 1,200 children ages 8-17. As can be seen in Table 1, school-related pressures were the primary sources of stress for the majority of younger and older children (Munsey, 2010).

Table 1. Sources of Stress Reported by Children in 2009 *Stress in America Survey*

Source of Stress	Ages 8-12	Ages 13-17
Managing school pressure/responsibilities/homework/doing well in school	44%	43%
Getting into a good college/deciding what to do after high school	5%	29%
Pressure managing extracurricular commitments	7%	12%

Source: Munsey, 2010.

Conner, Pope, and Galloway (2009) surveyed over 3,500 students attending seven high-performing high schools in the California Bay Area. More than 70 percent of the respondents reported that they “often” or “always” felt stressed by their schoolwork, and 56 percent reported “often” or “always” worrying about grades, tests, and college acceptance. In all seven schools, students reported that academic-related factors caused the most stress in their lives, as opposed to other life events, such as family or social issues. Responses such as “family pressure,” “divorce,” and “parent/sibling illness” did not fall into the top 10 most frequent causes of stress at any school.

KidsHealth (2005) surveyed 875 students ages 9-13 while they were visiting health education centers and museums in six cities. The top reasons students said they worried were grades, school, and homework (36 percent); family (32 percent); friends, peers, gossip, and teasing (21 percent); brothers and sisters (20 percent); and mean or annoying people (20 percent).

The vast majority of studies have found that girls report higher levels of academic stress than boys (Bhansali & Trivedi, 2008; Byrne et al., 2007; Margot, 2007; Dorland, 2005; de Anda, 1997). Contrary to most findings, however, Shih and colleagues’ (2006) study of 816 fifteen-year-old children in Australia concluded that boys experienced significantly higher levels of chronic academic stress than girls. Girls, on the other hand, reported significantly more episodic stress than boys (discrete life events with a discernable beginning and end, as opposed to ongoing stressors).

Consequences of Chronic Stress

A certain amount of stress is good and has been found to foster motivation and healthy competition in the classroom, on tests, and in extracurricular activities. But chronic stress, as a result of the feeling that one cannot possibly meet all of the demands placed upon him, has been consistently associated with negative outcomes. Continued exposure to school-related stressors often leads to physical, emotional, and behavioral symptoms, such as fatigue, irritability, depression, and decreases in academic performance (Sedere, 2010; Conner et al., 2009; Copeland, 2008; Wilde, 2008; Muir, 2006). The most frequent consequences of intense or ongoing stress include:

- **Physical illness.** When students experience high levels of stress, they often complain of frequent headaches or stomach aches and tiredness or lethargy (University of Wisconsin, 2010; Jackson, 2009; Copeland, 2008; Hofferth et al., 2008; Reece, 2008; Lucile Packard Foundation for Children’s Health, 2005; Pomfret, 2004; Round Rock Independent School District, n.d.). Conner and colleagues’

(2009) study of 3,645 students attending seven high-performing high schools in the California Bay Area found that 44 percent of students reported experiencing three or more physical symptoms, including headaches and stomach problems, in the last month because of academic stress. A study conducted in the highly competitive Chinese educational system found that primary school children identified as highly stressed were four times more likely to have psychosomatic symptoms (Hesketh et al., 2010).

- **Insufficient sleep.** As schedules get busier, students of all ages are finding themselves habitually sleep-deprived (Pope, 2010; University of Wisconsin, 2010; Copeland, 2008; Hofferth et al., 2008; Scott, 2008; Clemmitt, 2007; Lucile Packard Foundation for Children's Health, 2005; Pomfret, 2004; de Anda, 1997; Round Rock Independent School District, n.d.). Conner and colleagues (2009) found that the majority of students reported sleeping fewer hours per night than the eight or nine hours experts recommend for optimal functioning. On average, students reported getting 6.8 hours of sleep each night. Over half of the respondents reported difficulty sleeping (54 percent) and exhaustion (56 percent) due to academic stress.
- **Anxiety and depression.** Students in high-stress environments often demonstrate increased levels of anxiety and new or recurring fears, such as fear of the dark, fear of being alone, or fear of strangers (University of Wisconsin, 2010; Copeland, 2008; de Anda, 1997). Students often regress to behaviors or habits that are typical of an earlier developmental stage, including hair twirling, thumb sucking, or bed wetting (University of Wisconsin, 2010; Jackson, 2009; Copeland, 2008; Hofferth et al., 2008; Pomfret, 2004).

Studies have also found that students who feel pressured to succeed are more likely to experience depression (University of Wisconsin, 2010; Lucile Packard Foundation for Children's Health, 2005). In Conner and colleagues' (2009) study of students attending high-performing high schools, 24 percent of students reported that they frequently felt depressed in the last month. A KidsHealth Poll asked 875 children ages 9-13 how they handled stress. When asked: "Have you ever hurt yourself on purpose when you were stressed or upset?" 25 percent of the respondents said "yes." Children reported banging their head or body on an object, cutting or stabbing themselves, and hitting, biting or burning themselves (KidsHealth, 2005).

- **Irritability or unusual emotionality or volatility.** Students experiencing high levels of school-related stress often exhibit mood swings or the inability to control their emotions (University of Wisconsin, 2010; Jackson, 2009; Copeland, 2008; Pomfret, 2004; Round Rock Independent School District, n.d.). Research indicates that when exposed to chronic or intense academic stress, girls tend to become quieter and introspective, while boys tend to become more aggressive. Older children may begin to lie, bully, or defy authority (Pomfret, 2004).
- **Decrease in academic performance.** Studies indicate that high-stress school environments lead to decreases in students' academic performance (Sedere, 2010; Peterson et al., 2009; Suldo et al., 2009; Copeland, 2008; Reece, 2008; Malik & Balda, 2006; Dorland, 2005; Kaplan et al., 2005; Lucile Packard Foundation for Children's Health, 2005; de Anda, 1997; Whitman et al., 1985).
- **Social withdrawal.** Students exposed to high levels of stress often withdraw from family and friends. They spend more time alone than usual, choosing not to participate in social activities with family members or peers (University of Wisconsin, 2010; Jackson, 2009; Copeland, 2008; Pomfret, 2004; Round Rock Independent School District, n.d.).
- **Drug or alcohol experimentation.** When students experience high levels of stress, they are more likely to use drugs or alcohol (Copeland, 2008; Reece, 2008). Conner and colleagues' (2009) study of students attending seven high-performing high schools in the California Bay Area found that 24

percent of respondents reported using over-the-counter or legal stimulants, such as caffeine or NoDoze, to help them stay awake to study in the last month. An additional eight percent of students reported using illegal stimulants or prescription drugs to stay awake to study. The Partnership for a Drug-Free America's (2008) nationwide survey of 6,511 students in grades 7-12 found that the top reason respondents thought students used drugs was "to help with pressures and stress of school" (73 percent). [Other top reasons included "to help them feel better about themselves" (65 percent) and "to look cool" (65 percent).]

- **Cheating.** Cheating has become common in schools across the country (Garrett, 2009; Pytel, 2007; Palmer, 2005). The most common forms of cheating are unpermitted collaboration (working on a project, paper, or report together when specifically assigned to do individual work) and getting answers or questions before a test (Margot, 2007). Conner and colleagues' (2009) study of students attending high-performing high schools in the California Bay Area found that 95 percent of eleventh and twelfth grade students reported at least one instance of cheating, including copying homework or cheating on tests and quizzes, because of the pressure to get high grades and test scores.

Honors and advanced placement students appear even more likely to cheat on a regular basis (Garrett, 2009; Pope, cited in McMahon, 2007). McMahon (2007) reported that nationally, 80 percent of honors and advanced placement students admitted to cheating, compared to 75 percent of all high school students. This number climbed to 90 percent when copying another student's homework was included in the definition of cheating. He concluded:

"It used to be that cheating was done by the few, and most often they were the weaker students who couldn't get good grades on their own. Now, it is accepted as a normal part of school life, and is more likely to be done by the good students, who are fully capable of getting high marks without cheating. It's the kids who are under so much pressure to keep their grades up and get into the best colleges."

Causes of School-Related Stress

Different children respond to school-related pressures in different ways. The American Academy of Pediatrics (2010) stated: "How a child perceives and responds to stress depends in part on development, in part on experience, and in part on a child's individual temperament." In addition, certain situations are more stressful at different ages. For example, changing teachers at mid-year may be a major stressor for a first grade child, but only an annoyance for a sixth grader. Ramírez (2009) quoted a high school principal who noted: "Not every kid is stressed out, and not every kid is stressed out by the same thing."

Schools are not the only source of stress for children. Parents, other students, state and federal policies, and the college admissions process all play a role in increasing students' stress levels (Conner et al., 2009). Following is a summary of the most common causes of school-related stress.

- **Academic kindergartens.** A few decades ago, kindergarten was a time for learning letters, numbers, and playtime, but today these activities have been replaced with reading exercises, test preparation, homework, and reduced recess periods. Some kindergartners are being pushed to learn content that experts believe they aren't ready to master, which can lead to early burnout (Jacobson, 2008; Scott, 2008; Clemmitt, 2007; Curwood, 2007). Tyre (2006) noted that many parents mistakenly believe that the earlier their children learn to read independently, write legibly, and do arithmetic, the more success they will have throughout school. Researchers also point out that low-income students in particular are more likely to feel pressured in kindergarten. In low-income schools, many kindergartners start out with less than half of the skills and knowledge that school-ready children are expected to have, so their classrooms have to cover much more material over the course of the school year (Clemmitt, 2007).

- **Developmentally inappropriate classrooms.** Several studies have been conducted to determine if young children in developmentally appropriate classrooms have lower stress levels than those in settings where developmentally inappropriate practices are predominant. Developmentally appropriate classrooms emphasize the whole child (physical, social, emotional, and cognitive), while taking into account gender, culture, income level, and family factors in order to meet the individual child's needs, developmental level, and learning style. The curriculum integrates the content areas and provides for active exploration and concrete, hands-on activities. In contrast, developmentally inappropriate classrooms use lectures, drill-and-practice, and worksheet activities. There is little if any integration between the content areas and students rarely engage in hands-on activities. Findings indicate that preschool and kindergarten children in developmentally inappropriate classrooms exhibit more stress than children in developmentally appropriate classrooms, regardless of gender, ethnicity, and income level. Research has found that male, low income, and Black students are most adversely affected by developmentally inappropriate programs (Jackson, 2009; Charlesworth, 1998; Burts et al., 1992). In addition, studies suggest that unstructured classrooms with unclear or unreasonable expectations can lead to increases in students' stress at both the primary and secondary school levels (Killby, 2009; Copeland, 2008).
- **High-stakes tests.** Test anxiety has become more common as schools have placed increased emphasis on the results of high-stakes tests. Schools, principals, teachers, and communities are judged on their test scores and students' results often drive decisions such as school funding, teacher pay, student promotions to the next grade level, and awarding of diplomas (Chinappi, 2010; Ghezzi, 2010; Sedere, 2010; Killby, 2009; Ramírez, 2009; Suldo et al., 2009; Reece, 2008; Scott, 2008; Wilde, 2008; Dorland, 2005; Murphy, 2005). Studies have found that between 55 and 61 percent of students report being affected by test anxiety (Bradley et al., 2007; King, 2006). Furthermore, high levels of test anxiety appear to hinder students' test performance (Scott, 2008; King, 2006). Bradley and colleagues (2007), for example, found that California high school students who reported high levels of test anxiety scored, on average, 15 points lower in both English-Language Arts and Mathematics on the California High School Exit Examination.

Some researchers, in contrast, argue there is no evidence that testing is creating anxious students or lowering test performance (Clemmitt, 2007; Mulvenon et al., 2001). Mulvenon and associates' (2001) study of fifth grade students from 10 elementary schools in Arkansas concluded that test anxiety was not significantly related to students' performance on the Stanford Achievement Test. The authors noted that although studies have reported an association between low test scores and test anxiety, they have failed to address whether the low scores are a reflection of students' poor performance or if they are purely attributable to test anxiety.

Regardless of the effect of anxiety on test scores, Chinappi (2010) recommended that students understand it is "not the end of the world" if they don't earn high scores. She noted: "These tests are not meant to mark a child's intellectual ability for the rest of his or her life and the children should know this."

- **Pressure from parents.** Many experts maintain that parents' unrealistically high expectations create pressure and foster performance anxiety in their children (Sedere, 2010; McClure, 2009; Ramírez, 2009; Cech, 2008; Clemmitt, 2007; Pascucci, 2006; Pomfret, 2004; Johns Hopkins University Center for Talented Youth, 2002). Interestingly, many parents seem unaware of the pressure they are putting on their children. For example, the 2009 American Psychological Association's *Stress in America Survey* found that while 44 percent of children reported stress-related sleeping difficulties, only 13 percent of parents thought their children had trouble sleeping because of stress. Similarly, over one-third of children reported experiencing stress-related headaches within the past month, but only 13 percent of parents believed their children had headaches caused by stress (Munsey, 2010). Scott (2008) hypothesized that many parents are not knowledgeable about the issues their children face because busy schedules leave less time available for parent-child discussions and recaps of the day.

- **Demanding academic content.** Another source of school-related stress occurs when students are placed in overly demanding classroom environments (Sedere, 2010; Ramírez, 2009; Suldo et al., 2009; Reece, 2008; Scott, 2008; Wilde, 2008; Fallin et al., 2001). Wilde (2008) noted that there has been enormous growth in the number of students taking advanced placement courses. In 2004, for example, one-quarter of all high school graduates took at least one advanced placement course. Several studies, summarized below, indicate that more advanced academic programs may be associated with added stress.
 - Suldo and colleagues' (2009) study of Southeast U.S. high school students' sources of stress compared International Baccalaureate (IB) High School Diploma Program students and General Education (GE) program students. They found that the primary source of stress experienced by IB students was related to academic requirements, while their peers in GE programs reported higher levels of stress associated with a variety of influences, such as family, peers, and life events, in addition to moderate stress associated with academic requirements.
 - Ollfors and Andersson (2007) reported that Swedish high school students in academic programs reported more stress related to managing their academic workload and meeting high academic standards than their peers in vocational programs. Vocational students reported more stress related to other school issues (such as course schedule, teacher assignment, and school climate) and family and peer relationship difficulties.
 - Mates and Allison (1992) studied tenth grade Canadian students in three different academic tracks. They found that the major sources of stress for students in the two most academically oriented tracks (advanced and general) were associated with school and sports, while the major sources of stress for students in the basic track were gangs and drugs.
- **Peer relationships.** Social relationships at school are a source of stress for many students. Stress can come from competition among students, concerns about not having enough friends, or not being in the same class as friends (Sedere, 2010; Ramírez, 2009; Reece, 2008; Scott, 2008; Mathews, 2006; Fallin et al., 2001). Some students experience the stress of victimization at school when they are teased, intimidated, or bullied by other students (Killby, 2009; Scott, 2008; Large, 1999).
- **Fear of failure.** For some students, stress comes from the pressure they put on themselves to live up to their own high expectations. They feel like failures when they don't earn high grades, participate in a multitude of extracurricular activities, and gain acceptance into top colleges or universities (Sedere, 2010; Killby, 2009; Ramírez, 2009; Copeland, 2008; Pascucci, 2006; Fallin et al., 2001).
- **Lack of preparation.** For younger children, not having the necessary supplies can be a very stressful experience. For example, if a child doesn't have an adequate lunch, didn't bring his signed permission slip, or doesn't have a red shirt to wear on "Red Shirt Day," he or she may experience high levels of stress (Scott, 2008).
- **Excessive homework.** Homework is often a source of student stress (McClure, 2009; Suldo et al., 2009; Scott, 2008; Round Rock Independent School District, n.d.). Conner, Pope, and Galloway (2009) reported that 61 percent of students at seven high-achieving California Bay Area schools agreed that their schoolwork or homework frequently kept them from other activities, such as spending time with family and friends, and 60 percent said they had to drop an activity they enjoyed because of schoolwork or homework. Wilde (2008) noted that while experts debate whether homework loads are heavier now than in the past, many nevertheless agree that it is being assigned at an earlier age. Homework demands place greater stress on low-income students, who often have more family responsibilities and lack the basic supports for doing homework, such as a quiet place to study and Internet access (Clemmitt, 2007).

- **Overbooked schedules.** A source of stress that has become more prevalent for school-age children is the pressure related to the over-scheduling of extracurricular activities (Killby, 2009; McClure, 2009; Scott, 2008; Clemmitt, 2007; Pytel, 2007; Murphy, 2005; Fallin et al., 2001). Many students simultaneously participate in sports teams, music ensembles, dance troupes, theatre groups, and other clubs. High school students report that balancing leisure time with schoolwork is one of their greatest stressors (Suldo et al., 2009). Pope (2010) found that many students say they spend between four and six hours participating in extracurricular activities daily, in addition to seven classes and several hours of homework each night. On average, students report participating in 2-3 hours of extracurricular activities each weekday, not counting travel time to and from the activities (Pope, 2010; Conner et al., 2009).

Hofferth and colleagues (2008) reported that between 1981 and 1997, American children's leisure time changed in two major ways. First, their amount of free time declined about 7.5 hours per week (from 56.5 hours to 49 hours). The authors pointed out that although 7.5 hours in a week may not seem significant, it represents more than one entire school day. Second, children's time became more scheduled and organized, with structured activities like sports and dance lessons taking up an increasing proportion of the after-school hours, compared to unstructured play time. For example, from 1981 to 1997, participation in sports rose 35 percent and participation in the arts rose 145 percent for children between the ages of 9 and 12.

Contrary to the picture painted by many researchers of overbooked and highly stressed youth, Hofferth and colleagues (2008) surveyed a nationally representative sample of children and their families and found that only 26 percent of children met the criteria of "hurried" (three or more activities or more than four hours devoted to activities within a two-day period). The remainder of children pursued only one or two activities, or no activities at all. Hofferth and colleagues also reported that "hurried" children were not more likely to exhibit higher levels of stress or lower levels of self-esteem. Instead, children with no activities were found to be the most withdrawn, socially immature, and have the lowest self-esteem. Children with one or two activities totaling less than four hours over two days had the lowest levels of stress and highest levels of self-esteem.

- **Pressure to maintain high grades.** Many students are under tremendous pressure from parents, peers, and school staff to get good grades. Low or failing grades can become a source of chronic and intense school-related stress (McClure, 2009; Suldo et al., 2009; Reece, 2008; Pytel, 2007; Pascucci, 2006; Fallin et al., 2001). Kohn (1999) stated: "Too many students have been led to believe that getting A's is the point of going to school" and Hu (2008) noted that it is not uncommon for students to track their grade point averages to multiple decimal places.
- **Pressure to gain acceptance to prestigious colleges.** Many students overload their schedules with advanced placement classes and extracurricular activities, compete for top grades, and sit for multiple SAT and ACT testing sessions in order to get accepted into the best colleges and universities (Alberts, 2010; Bowie, 2009; Ramírez, 2009; Clemmitt, 2007; Pytel, 2007; Delisio, 2006; Mathews, 2006; Pascucci, 2006). Researchers report that children as young as seven years old are already worrying about earning the high grades they will need to get into college (McCloud, 2007; Murphy, 2005).

According to the Department of Education's National Center for Education Statistics, the number of high school graduates increased 24 percent from 1991 and 2004, and the number is expected to grow another 5 percent before 2017. This translates into an additional 700,000 high school graduates seeking college admission, while the actual number of colleges has remained the same (Wilde, 2008). As a result, colleges have become more selective and the college admissions process has become more demanding. The less competitive colleges accept approximately 50 to 70 percent of their applicants; however, the more selective colleges accept a third or less of their applicants and Ivy League schools accept fewer than 15 percent (Bowie, 2009; Newsweek, 2008; Wilde, 2008).

- **Conflicts with teachers.** Negative interactions with teachers can increase students' stress levels. Sources of teacher-related stress include a mismatch between student and teaching style; lack of respect from teachers; disagreements between students and teachers; and insufficient feedback on schoolwork from teachers (Suldo et al., 2009; Reece, 2008; Scott, 2008; Byrne et al., 2007; Fallin et al., 2001). de Anda's (1997) survey of Los Angeles area middle school students found that 59 percent of students viewed their teachers as a source of stress. Pope's (2010) study of 5,000 students in 13 high-achieving middle and senior high schools found that students who believed their teachers cared about them, valued and listened to their ideas, and got to know them personally showed fewer signs of stress and physical health problems.
- **Transitioning to secondary school.** The transition from elementary to secondary school represents a period of stress and uncertainty in students' lives. Stress can be caused by the move to a larger school building, interactions with a new and larger peer group, more rigorous academic standards, and the change from a protective, familiar environment to an often impersonal and intimidating atmosphere (Killby, 2009; Suldo et al., 2009; Ebata, 1996; Berliner, 1993).
- **Poor diet and lack of sleep.** A poor diet, containing more sugar and less nutritious content than is recommended, can lead to mood swings, lack of energy, and other negative effects that impact stress levels. Students who do not get a sufficient amount of sleep are also more likely to have higher stress levels (Scott, 2008).

How to Alleviate School-Related Stress

The following sections of this report summarize strategies that can be used by schools, parents, and students to alleviate school-related stress.

School Strategies

Researchers have suggested that schools are the ideal place in which to conduct stress-related intervention and prevention programs because so many stressors are directly related to the school environment and these stressors affect students' performance in school (Fallin et al., 2001; de Anda, 1997).

In 2004, in response to high levels of adolescent anxiety disorders, depression, substance abuse, and disengagement, educators and health specialists created a research-based intervention at the Stanford University School of Education. The initiative, *Challenge Success*, works with schools to design and implement site-based policies and practices that reduce student stress and promote greater student engagement, academic integrity, and physical and mental health. Schools send multi-stakeholder teams of principals, counselors, teachers, students, and parents to conferences and the teams work with Stanford coaches throughout the year to plan and implement school reform efforts (Challenge Success, 2010; Pope, 2010).

While the stress reduction process varies based on each school's unique circumstances, some strategies that have been used successfully at *Challenge Success* schools and at schools across the U.S. include:

- **Reduce the preoccupation with “grades for the sake of grades” and shift the focus to learning and understanding.** Many schools have stopped publishing the honor roll in local newspapers and eliminated class rankings, awards for perfect grade point averages, and valedictorian status (Pope, 2010; Ramírez, 2009; Wilde, 2008; Aratani, 2007; Delisio, 2006). At some middle schools, guidance counselors have been asked not to talk to students about the need to prepare for college (Delisio, 2006).

- **Identify students demonstrating high levels of stress.** Teachers should identify children who frequently visit the school nurse, are habitually absent due to illness, or regularly appear tired or malnourished. It is sometimes necessary for teachers to educate parents about their children's physical needs (such as adequate sleep and proper nutrition) and provide them with referrals to outside agencies (Fallin et al., 2001). Many schools require teachers to attend professional development sessions so they are aware of the stressors that commonly affect children and learn to recognize signs of stress, such as regressive behaviors, withdrawal, irritability, inability to concentrate, and difficulty getting along with peers (Conner et al., 2009; Wilde, 2008). Teachers can sometimes act to reduce the severity of stressors. For example, they can separate children who persistently tease or annoy each other or they can provide more difficult assignments to students who complain of being bored (Fallin et al., 2001).
- **Incorporate stress education into the curriculum.** Teachers can conduct classroom discussions about stress and academic pressure, providing an opportunity for students to express themselves and understand that their peers also find certain events to be stressful. Lessons about stress and coping can also be incorporated into various subject areas. Examples include painting or drawing to express emotions in art class; journaling about emotions or writing a story in language arts class; learning about biological responses to stress in science class; and learning about the importance of exercise, proper hygiene, and a well-balanced diet in health class. In addition, teenagers should be educated on the dangers of using cigarettes, alcohol, and drugs to cope with stress. School psychologists can assist in the selection of effective curricular materials (Medical News Today, 2009; Reece, 2008; Fallin et al., 2001; Large, 1999).
- **Change the school's daily schedule.** No one type of schedule works best for all schools, but many schools have revised their schedules to allow for fewer transitions, more free periods, more tutorials, and late starts to minimize students' stress. Some schools have limited the number of advanced placement courses each student can take. Others have moved from the traditional seven or eight period day to a rotating block or modified block schedule that offers fewer courses each day for longer periods of time (Pope, 2010; Conner et al., 2009; Hu, 2008; Delisio, 2006). Some schools have even made lunch breaks mandatory to force over-scheduled students to slow down during the school day (Hu, 2008; Hausman, 2005). Conner and colleagues (2009) found that over 80 percent of the tenth and eleventh grade students they surveyed reported that adding free periods to the schedule, increasing the duration of classes, and reducing the number of classes each day had eased their workload.
- **Revise homework policies.** Some schools have imposed limits on how much homework teachers can assign and many have also eliminated summer assignments in order to provide students with real time off from school. Others have developed project calendars so students don't have too many projects due at once (Wilde, 2008; Aratani, 2007; Delisio, 2006). A few *Challenge Success* high schools have experimented with course scheduling guides. The guides list every course offered at a school and provide an approximation of how much homework is to be expected each night in each class. When students enroll in courses, they add up the total hours of nightly homework, the number of hours they will spend on extracurricular activities, and nine hours for sleep. Parents and counselors must then approve each schedule (Pope, 2010).
- **Revise testing policies.** Some schools have developed testing calendars so students aren't required to take several tests and quizzes on the same day. Others have reduced the importance of exams, moved exams to before the winter break, increased the time between scheduled exams, and replaced exams with projects (Pope, 2010; Conner et al., 2009; Wilde, 2008). Delisio (2006) reported on one school that dropped midterms because they were scheduled at the same time as the state's high-stakes tests. Conner and colleagues (2009) found that more than three-quarters of the tenth and eleventh grade students they surveyed agreed that moving exams from after the winter break to

before the break reduced their stress levels. Pope (2010) urged schools to use alternative assessments for learning. She noted: "In the real world it is extremely rare to have one's performance evaluated via tests and quizzes."

- **Reduce test anxiety.** As the pressure to succeed on high-stakes tests has increased, schools have begun to take test anxiety more seriously. Some schools use techniques designed to help students relax and focus before exams in order to enhance their cognitive abilities and recollection of facts. Programs utilize a variety of techniques such as deep breathing, movements designed to improve blood flow to the brain, and emotion refocusing (Bradley et al., 2007; King, 2006).
- **Ensure that students receive adequate support.** Teachers should assess students' levels of social support, understanding that those who lack adequate support from family members and peers need greater support from adults at school. Teachers can promote positive interactions among students by providing opportunities for children to socialize at school and promoting teamwork within the classroom setting (Fallin et al., 2001).

Margot (2007) reported that positive teacher support is directly linked to less student academic stress. She therefore advocated that schools ensure that every student has a significant connection with a caring adult. One way to ensure that students receive support from at least one teacher is to schedule advisory periods multiple times per week. During advisory periods, teachers and students discuss personal issues, work on organizational and study skills, and participate in small group activities that promote social and emotional skills. Advisors are often assigned groups of students that stay with them for several years (Pope, 2010).

- **Communicate with all stakeholders about the causes and consequences of school-related stress.** Districts and schools should raise awareness among students, staff, parents, and the community about the damaging effects of high-pressure schools (Delisio, 2006). Wilde (2008) suggested that schools develop a Web site with a list of resources about stress and publish articles about stress in the student newspaper.
- **Promote healthy behaviors.** A study conducted by researchers at the University at Buffalo (2010) concluded that walking to school reduces stress reactivity in children during the school day, curbing increases in heart rate and blood pressure that could lead to cardiovascular disease later in life. The authors concluded that, because of the protective cardiovascular effect of exercise, educators should provide ample opportunities for physical activity throughout the day. Jacobson (2008) reported that 40 percent of elementary schools offer less than 20 minutes of recess in a six-hour school day. Dorland (2005) urged schools to provide all students with healthy meals and snacks.
- **Help students develop effective coping strategies.** Students need certain competencies to deal with stressful situations. Teaching positive coping strategies should be a team effort involving teachers, counselors, and administrators (Conner et al., 2009; Large, 1999). Some schools conduct stress management workshops to equip students with problem-solving, anger management, and conflict resolution skills, and to help them develop the ability to manage their emotions (Wilde, 2008; Large, 1999; de Anda, 1997). Others teach children and teenagers relaxation techniques such as deep breathing, yoga, meditation, and positive imagery (Ramírez, 2009; Aratani, 2007; Delisio, 2006; Fallin et al., 2001).

Parent Strategies

Parents should pay attention when their child complains of stress, anxiety, depression, or hopelessness. Different children show stress in different ways, so it isn't always easy to recognize when a child is affected. There are many children who don't or can't verbalize their stress. In these cases, parents

should be on the lookout for other signs and symptoms, such as frequent physical ailments, a drop in academic performance, or unusual irritability (Conner et al., 2009; Wilde, 2008; Pomfret, 2004). Following are strategies parents can use to help their children manage school-related stress.

- **Emphasize learning over grades.** Some parents increase the pressure on their children by talking frequently about tests and grades and sending the message that they measure their children's worth in terms of these outcomes. Children should be praised for other accomplishments so they understand that pursuits such as the arts, sports, and relationships are important too. Parents should also communicate that their children don't have to be at the top of every class and that doing their best is enough. Children should not be punished for poor academic performance and rewarded for academic success. Instead, the concept of effort should be emphasized by recognizing hard work (Ghezzi, 2010; Garrett, 2009; McCloud, 2007).

Similarly, children should understand that there are different ways to succeed in life (Ghezzi, 2010; Wilde, 2008; Pomfret, 2004). Ghezzi (2010) noted: "It's tempting to focus on doctors, lawyers, scientists, and other fields associated with prestige and big salaries. Make sure your kids know there are other satisfying career options, and that the most important thing is that they are happy in their career choice."

- **Encourage healthy habits.** Parents need to encourage their children to eat healthy meals, exercise regularly, and get a good night's sleep (Ghezzi, 2010; University of Wisconsin, 2010; Copeland, 2008; Wilde, 2008; McCloud, 2007; Pomfret, 2004). The National Sleep Foundation recommends 9-11 hours of sleep for children 5-12 years old and 8.5-9.5 hours of sleep for adolescents (Centers for Disease Control and Prevention, 2010).
- **Set a good example.** Children, especially at young ages, tend to emulate their parents' behaviors. Parents should find time to relax each day and encourage children to follow their example. In addition, parents should model good emotional responses to stress (Garrett, 2009; Copeland, 2008; McCloud, 2007; Ebata, 1996).
- **Increase family time.** Experts recommend that families spend time together each day, especially at meal time. Parents should share in some of the activities their children enjoy (University of Wisconsin, 2010; Wilde, 2008; McCloud, 2007).
- **Talk to children.** One of the most important things parents can do is talk to their children about school-related stress. Parents should encourage their children to tell them if they feel overwhelmed and build a relationship so their children feel comfortable asking for help when they are struggling (University of Wisconsin, 2010; Garrett, 2009; Copeland, 2008; Wilde, 2008; McCloud, 2007; Ebata, 1996). Ebata (1996) urged parents to listen to their children. He noted that adolescents may not want advice; they may just want to be understood. Furthermore, he encouraged parents not to treat problems as trivial. Minimizing a problem sends the message that the parent doesn't understand or is unwilling to listen.
- **Provide structure, stability, and predictability.** Whenever possible, parents should maintain the same rules and routines for their children. Children have been found to exhibit lower levels of stress when they are provided with safe, secure, familiar, consistent, and dependable home environments (University of Wisconsin, 2010; Pomfret, 2004; Ebata, 1996).
- **Limit extracurricular activities.** Extracurricular activities should be scheduled in moderation. Not every minute of every day needs to be planned. Parents and children should choose activities with the child's age, temperament, interests, and abilities in mind (Copeland, 2008; KidsHealth, 2008; Wilde, 2008; McCloud, 2007; Murphy, 2005).

- **Monitor television viewing.** Parents should monitor their children's television viewing habits, paying attention to programs that might increase their stress levels. Especially at younger ages, certain television programs, including news broadcasts, can generate fears and anxiety. The use of computer games, movies, and the Internet should also be supervised (University of Wisconsin, 2010; Copeland, 2008; Wilde, 2008).
- **Build feelings of self-worth.** Studies have found that children with higher levels of self-esteem respond better to stressful events. Parents should involve children in situations where they can succeed and use positive encouragement and reward instead of punishment. All children improve their ability to handle stress when they have previously succeeded in overcoming challenges (American Academy of Pediatrics, 2010; University of Wisconsin, 2010; Wilde, 2008; Fallin et al., 2001).
- **Suggest ways of coping with difficult situations.** Parents can teach children specific decision-making skills and show them how to manage their emotions. Parents can also teach their children study skills and test-taking strategies to minimize their academic-related anxiety (Ghezzi, 2010; University of Wisconsin, 2010; Copeland, 2008; Ebata, 1996).

Student Strategies

Researchers have identified strategies that can help students deal with school-related stress.

- **Eat well.** It's easy to eat on the run or eat junk food or fast food when stress levels are high. But the body needs balanced nutrition and vitamins and minerals, especially under stressful conditions (Copeland, 2008; TeensHealth, 2007; Swiercinsky, 2001; Round Rock Independent School District, n.d.).
- **Exercise.** Researchers agree that physical activity reduces stress. Studies show that exercising 30 minutes a day can help alleviate stress and boost confidence (University of Wisconsin, 2010; Copeland, 2008; TeensHealth, 2007; Swiercinsky, 2001; Round Rock Independent School District, n.d.).
- **Sleep at night, not in class.** The National Sleep Foundation recommends 9-11 hours of sleep for children 5-12 years old and 8.5-9.5 hours of sleep for adolescents (Centers for Disease Control and Prevention, 2010). Experts suggest that realistically, children should try to get at least seven or eight hours of sleep each night. Without sleep, it's hard to concentrate or make good decisions. An all-nighter may seem like a great way to catch up on studying, but students usually crash the following day. Students should arrange their schedules so they get enough sleep at night or have time to take power naps during the day (Scott, 2007; TeensHealth, 2007; Round Rock Independent School District, n.d.).
- **Don't use drugs, alcohol, or tobacco.** Alcohol, drugs, and tobacco may seem like a good idea for easing stress temporarily, but relying on them to cope with stress eventually creates more stress (University of Wisconsin, 2010; TeensHealth, 2007; Swiercinsky, 2001; Round Rock Independent School District, n.d.).
- **Set realistic goals for yourself.** When students expect themselves to be perfect and excel in all areas, their stress levels actually increase (University of Wisconsin, 2010; TeensHealth, 2007).
- **Learn stress management skills, such as relaxation techniques and problem solving.** Relaxation techniques, such as meditation or deep breathing, counteract the effects of stress because they lower blood pressure and reduce muscle tension. Learning coping skills, such as how to calmly look at a problem, figure out options, and take action toward a solution, also helps to reduce stress (Copeland, 2008; Scott, 2007; TeensHealth, 2007; Swiercinsky, 2001). TeensHealth (2007) recommended that adolescents practice resolving everyday problems in order to gain a sense of control over their lives. The ability to solve small problems builds confidence to move on to bigger problems.

- **Don't over-schedule activities.** Students must learn to say no to extra activities. If students start to feel overwhelmed, they should consider cutting out one or two activities and choose only the ones that are most important to them (TeensHealth, 2007; Round Rock Independent School District, n.d.).
- **Find time to relax.** Children and teens should regularly find time to enjoy a hobby or favorite activity (University of Wisconsin, 2010; Copeland, 2008; TeensHealth, 2007).
- **Keep a schedule.** Keeping a schedule helps students tackle one hurdle at a time and, as a result, feel more in control of their schedules and the academic and extracurricular demands placed upon them. Students should take a few minutes each night to organize the next day. They may want to make a weekly planning calendar that includes time for homework, extracurricular activities, exercise, relaxation, and socialization with family and friends (Scott, 2007; Round Rock Independent School District, n.d.).
- **Get organized.** Students feel less stressed when they are more organized. Experts suggest students use a system for note-taking, filing, and keeping track of all projects and assignments (Scott, 2007).
- **Be optimistic.** Students' outlook, attitudes, and thoughts influence the way they handle stressful situations. Studies have found that optimists are more likely to successfully adapt to stressful encounters (Scott, 2007; TeensHealth, 2007; Huan et al., 2006; Swiercinsky, 2001; Round Rock Independent School District, n.d.).
- **Build resiliency.** Researchers have identified qualities that make some people naturally resilient even when faced with high levels of stress. To build resilience, TeensHealth (2007) recommended that adolescents work on developing the following attitudes and behaviors:
 - think of change as a challenging and normal part of life;
 - see setbacks and problems as temporary and solvable;
 - believe that working toward goals will lead to success;
 - take action to solve problems; and
 - build strong relationships with family and friends and ask for help if needed.
- **Talk to an adult about unmanageable stress.** Social contacts and family relationships provide an important form of support. If adolescents can't communicate with their parents, they should talk to someone else they can trust, such as a friend, counselor, or teacher. Adolescents should tell their parents or another trusted adult if they are having problems managing stress or believe they are in need of counseling (University of Wisconsin, 2010; Swiercinsky, 2001; Round Rock Independent School District, n.d.).

Summary

Studies have recently called attention to high levels of student stress in our nation's schools. Surveys have found that most students identify academic pressure as the main reason for their stress. Consequently, researchers have chronicled increases in cheating, sleepless nights, depression, drug use, and self-mutilation. While it has long been assumed that struggling students are most prone to academic stress, recent studies indicate that high achievers are especially vulnerable to school-related stress.

Chronic school-related stress often leads to physical, emotional, and behavioral symptoms, such as frequent illnesses, depression, irritability, decreased academic performance, drug or alcohol experimentation, and cheating. Causes of school-related stress include high-stakes tests, pressure from parents, overly demanding academic content, overbooked schedules, pressure to gain admittance to prestigious colleges and universities, and conflicts with teachers.

Researchers have identified strategies schools, parents, and students can use to manage school-related stress. School strategies include reducing the preoccupation with “grades for the sake of grades,” incorporating stress education into the curriculum, and revising homework and testing policies. Parents can use several strategies to help their children cope with school-related stress, such as emphasizing learning over grades, talking openly with their children about the pressures at school, limiting extracurricular activities, and building their children’s feelings of self-worth. Student strategies for reducing stress include setting realistic goals, learning stress management skills, finding time to relax, and talking to a trusted adult about their problems.

All reports distributed by Research Services can be accessed at <http://drs.dadeschools.net>.

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