

**Effects of Standardized Testing  
on Students' Well-Being**

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The impact of standardized testing is frequently discussed in terms of how it affects teaching and learning. Testing is often cited as contributing to a narrowing of the curriculum and as resulting in inappropriate test preparation practices (Jerald, 2006; Koretz, 2005). Cheating scandals, such as the ones in Atlanta and Washington, D.C., have been widely publicized as well (Wong & Ross, 2015).

While the effects of standardized testing on teaching and learning are grounds for concern, the effects it has on students' physical and emotional well-being are also quite troubling and deserve attention. Students often face high levels of stress, from pressure related to college admissions to the demands of school more generally. This paper will explore the extent to which standardized testing contributes to this culture of stress. It will argue that standardized testing contributes to student stress for many students and that there are signs indicating that test-related stress has worsened in recent years. Many educators, parents, and students perceive testing as being stressful and often express concerns on the impact of testing on students' physical and emotional well-being, engagement in school, and self-efficacy. The amount of time students spend on testing and the high-stakes nature of these exams likely contribute to the stress students experience around standardized testing. The responses that teachers have in relation to standardized testing have the potential to affect students as well and will be explored.

## **Stress on Students**

Teens are reporting high levels of stress, according to a survey conducted by the American Psychological Association (2014). The American Psychological Association (APA) surveyed teens, ages 13 to 17, living in the United States to understand how teens experience stress and the impact that stress is having on their lives. Respondents reported stress levels far above what they view as healthy, and on average, teens' reported stress levels were higher than adults' reported stress levels

(APA, 2014). Eighty-three percent of teens surveyed cited school as a source of stress, sixty-nine percent cited, “getting into a good college or deciding what to do after high school,” and sixty-five percent cited, “financial concerns for their family” (APA, 2014, p. 35). While many teens surveyed believe that stress has no or only a slight impact on their health, teens report experiencing a variety of symptoms of stress, both physical and psychological (APA, 2014). Thirty-six percent of teens reported feeling nervous or anxious, thirty-one percent reported feeling overwhelmed, and thirty percent reported feeling depressed or sad as a result of stress in the month prior to the survey. The findings suggest that many teens are experiencing symptoms of stress in their daily lives and that school is contributing to student stress.

## **Standardized Testing and Stress**

Much discussion has centered on whether students are spending an excessive amount of time on standardized testing as well as on the effects of overtesting on students. In *Beyond Measure: Rescuing an Overscheduled, Overtested, Underestimated Generation*, Abeles (2015) highlights this sentiment, describing the emphasis on testing as out of control and calling today’s students, “the most tested generation in history” (p. 101). Abeles argues that this excessive focus on testing has negative consequences, including placing unhealthy stress on students.

A number of recent reports provide insights into the amount of time that students are spending on testing. In a report from the Center for American Progress, Lazarín (2014) found that students in grades 3 through 8, as compared with students in earlier and later grades, spend the most time on testing during the school year, averaging around 15 to 16 hours. On average, students in grades 3 through 8 are taking 10 exams throughout the school year, as compared to around 6 exams for students in grades K-2 and 9-12 (Lazarín, 2014). In part because of state-mandated summative tests, many districts have imposed additional testing requirements, including “interim” or

“benchmark” assessments, which contribute to the time students spend testing each year. In many cases, these district assessments require more time than state testing (Lazarín, 2014).

There are some signs that students in urban districts are spending more time on testing than students in suburban districts. In a report from Teach Plus, Teoh, Coggins, Guan, & Hiler (2014) found that while there is variation in the amount of time urban districts spend on testing, they do spend more time, on average, than surrounding suburban districts. The report includes both state-level and district-level assessments within their definition of testing time. Furthermore, in a report from the Council of the Great City Schools, which surveyed urban school districts within the Council, Hart et al. (2015) found that students spend between 20 and 25 hours on mandated testing each school year. The figure reported by Hart et al. is higher than the one reported by Lazarín (2014), which further supports the notion that urban districts likely spend more time on testing.

Polls provide insights into how parents feel about the amount of time students spend testing. While parents often value having an accurate measure of their children’s knowledge, many parents feel that students spend too much time on testing (Hart et al., 2015; Lazarín, 2014). The Center for American Progress commissioned a poll that indicates that 49 percent of responding parents are concerned that students are experiencing too much standardized testing (Lazarín, 2014). The results of the poll suggest that misinformation about the Common Core State Standards may contribute to this perspective on standardized testing; 40 percent of respondents believe, incorrectly, that rather than changing the current tests, the Common Core State Standards require students to participate in additional school testing (Omero, 2014). The 47<sup>th</sup> annual PDK/Gallup Poll on attitudes towards public schools reported similar results (Layton, 2015). Sixty-seven percent of public school parents surveyed felt that too much emphasis is placed on standardized testing in the public schools in their communities (Layton, 2015).

Teachers also express concerns that students are spending too much time on testing and preparing for testing. The Northwest Evaluation Association (2014) found that while the number of teachers who believe that too much time is spent on testing has decreased since 2011, many do still think the amount of testing is excessive. Fifty-three percent of respondents reported in 2013 that the amount of time students spend preparing for and taking assessments is too much (Northwest Evaluation Association, 2014). A survey conducted by the National Education Association reported similar results and highlighted that the time-consuming nature of standardized testing contributes to many teachers' frustrations about testing (Walker, 2014).

One of the reasons teachers likely report concerns about the amount of time students spend on testing-related activities is that it results in lost instructional time. The Northwest Evaluation Association (2014) found that 70 percent of teachers surveyed feel that the focus on high-stakes testing takes too much time away from learning. Teoh, Coggins, Guan, & Hiler (2014) found that many teachers feel that test preparation takes up instructional time as well. A third grade teacher is quoted as saying: "The prepping for the test takes a lot of time. Instead of possibly doing projects or more hands-on learning, we really focused on the testing format and preparing our students to be comfortable taking the test. The prepping starts at the beginning of the year and ends in April" (Teoh, Coggins, Guan, & Hiler, 2014).

In addition to the amount of time students spend on standardized testing, the stakes associated with these assessments have been cited as contributing to student stress as well (Larson, El Ramahi, Conn, Estes, & Ghibellini, 2010). As would be expected, students often experience more stress from high-stakes tests than from low-stakes tests. Segool, Carlson, Goforth, von der Embse, and Barterian (2013) found that elementary school students experienced greater test anxiety on a high-stakes assessment, mandated by No Child Left Behind (NCLB), than on classroom tests and hypothesized that one contributing factor may be the emphasis placed on it by educators (Segool et

al., 2013). Heiser et al. (2015) shares similar findings to Segool et al. in a report prepared by the New York State School Boards Association and the New York State Association of School Psychologists on test anxiety in New York. A survey of school psychologists in New York's public schools found that 76 percent of respondents feel that test anxiety is higher for state assessments than it is for local assessments (Heiser et al., 2015).

While some tests do have direct consequences for students, such as grade retention, students often still perceive the tests as high-stakes and stressful because they understand that standardized testing has consequences for their schools, teachers, and administrators. A study of children's perspectives on testing indicates that even third grade children have some understanding of the consequences of high-stakes testing for their school and teachers (Dutro & Selland, 2012). A survey conducted by the Northwest Evaluation Association (2014) reports that 55 percent of students surveyed believe one reason they take state-mandated tests is to evaluate their schools. Elementary school students in El Paso, Texas were asked to describe their fears related to the state-mandated test, and one student's response provides an example of the degree to which students understand the impact of standardized testing for teachers: "Your teacher will feel bad because you didn't try. She gets paid for teaching you. She wants her boss to see what a good teacher she is, but if you don't try, her boss won't know what a good teacher she is" (Strauss, 2014). The students' comment also highlights how consequences for schools and educators may cause some students to feel pressure to perform well on high-stakes testing.

### **Physical and Emotional Symptoms of Stress**

Concerns about the impact of standardized testing on students' health have been expressed in the past. The pressure was already high in many states before NCLB, and prior to NCLB being signed into law, a number of child and adolescent psychiatrists, child development experts, and educators signed a statement advising against the additional standardized testing that NCLB would

require (Alliance for Childhood, 2001). The statement argued that, “test-related stress is literally making many children sick” and that ignoring the adverse health consequences of additional standardized testing is inadvisable (Alliance for Childhood, 2001, para. 1). A school nurse and former board member of the National Association of School Nurses shared that she had witnessed an increase in anxiety-related complaints in connection with the increased emphasis on standardized testing (Alliance for Childhood, 2001). Health consequences associated with standardized testing were cited as including stomachaches and vomiting, headaches, sleep problems, depression, attendance problems, and acting out (Alliance for Childhood, 2001). Particular concern was expressed for students with existing mental health issues (Alliance for Childhood, 2001). In an article published around the same time as the Alliance for Childhood statement, Dounay (2000) noted that articles in the press suggested an increase in stress-related symptoms, including sleep disorders, in the past few years as well.

Students continued to experience test-related stress from the standardized testing required by NCLB. Articles in the press provide reports of individual students experiencing a variety of stress-related symptoms in connection to standardized testing, such as stomachaches, sleep problems, headaches, and anxiety attacks. Parents are often quoted in these articles expressing concerns about the impact of standardized testing on their children’s well-being. A quote from a parent in Florida provides a relevant example, “I have friends whose children are vomiting because they are so stressed. They’re having anxiety attacks” (Schulzke, 2015). Johnson, Johnson, Farenga, and Ness (2008) quote a father in New York discussing his son’s experience with testing under NCLB:

My son is about to take the fourth-grade ELA exams this week. He has experienced extreme anxiety, vomiting, diarrhea, and has been unable to sleep in his own bed for the last three days. It’s breaking my heart. He wants to do so well. A nine-year-old should not be subjected

to this. No Child Left Behind is not a remedy, it's a horror for our children. (Johnson et al., 2008, p. 15).

Educators expressed concerns about the impact of standardized testing on students' well-being in the press as well. Toppo (2007) described a director of testing and accountability in North Carolina who, "told the *American School Board Journal* in 2003 that administrators discard as many as 20 test booklets on exam days because children vomit on them" (para. 19). A letter from principals in New York even goes so far as to say, "We know that many children cried during or after testing, and others vomited or lost control of their bowels or bladders. Others simply gave up" (Fougner et al., 2014). The letter led to significant media coverage, with one headline even saying, "Common Core testing makes children vomit, wet their pants: N.Y. principals" (Chasmar, 2013).

Vomiting is frequently cited in the press as one of the stress-related symptoms that students experience, and while the frequency with which students are vomiting because of testing is unclear, it is striking that manuals for test administrators and coordinators often contain guidelines for what to do in the event a student becomes ill during standardized testing. In reviewing test administrator manuals for ten geographically diverse states and for the Partnership for Assessment of Readiness for College and Careers (PARCC), five contained guidelines for what to do in the event that test documents become soiled by vomit (California Department of Education, 2016; Georgia Department of Education, 2016; Ohio Department of Education, 2015; PARCC, 2016; Pennsylvania Department of Education, 2016). PARCC's Test Coordinator Manual for grades 3 through 8, which is provided to eight fully participating states and three additional partners, provides a relevant example of these guidelines. The manual asks that the soiled test booklet or answer document be placed in a resealable, plastic bag, and if possible, responses are to be transcribed into a replacement document (PARCC, 2016). A list of contaminated test documents must be maintained,

but PARCC recommends the actual contaminated documents be securely destroyed according to district biohazard protocols (PARCC, 2016).

There are some signs, from press reports and surveys, suggesting that test-related stress has worsened in recent years. Heiser et al. (2015) report that 61 percent of responding school psychologists in New York feel that levels of test anxiety have risen since the advent of Common Core aligned assessments. The New York State Parent Teacher Association (PTA) surveyed parents and teachers and found that respondents reported that 75 percent of students, those who do not receive additional educational support, were more stressed about testing than they had been in previous years (Klein, 2014). A pediatrician from Florida shares that she sees an increase in patients with stress-related symptoms around the time of testing, such as stomachaches and panic attacks, and even says that for some children the anxiety makes it difficult to get them to school (Thompson, 2014). She feels that the impact of standardized testing has worsened over the past twenty years and particularly in the last five to eight years, indicating that the number of children she sees with stress-related symptoms around the time of testing has grown (Thompson, 2014).

### **Student Engagement and Self-Efficacy**

Another concern frequently expressed is how standardized testing is affecting students' engagement and interest in school and students' beliefs in their own abilities. Pedulla et al. (2003) found that many teachers surveyed agreed or strongly agreed with the statement that, "Many students in my class feel, that, no matter how hard they try, they will still do poorly on the state-mandated test" (p. 25). High school teachers in particular reported concerns around students' beliefs in their abilities to be successful on the state-mandated test; 62% of high school teachers agreed with the statement, as compared with 59% of middle school teachers and 49% of elementary school teachers (Pedulla et al., 2003, p. 27). Paris, Lawton, Turner, and Roth (1991) note that by middle

school, visible signs of achievement, such as test scores, affect students' perceptions of their own competence.

Students' perspectives are also valuable in understanding how testing may negatively affect students' self-efficacy. Dutro and Selland (2012) explored the perspectives of students in a high-poverty, urban elementary school on standardized testing and found that how students perform on high-stakes testing can affect their beliefs about their own competence and potential as learners. Dutro and Selland argue that by classifying students as either proficient or less than proficient, high-stakes tests have the ability to inform and affect how children construct their identities as learners. Dutro and Selland note that only the students who scored proficient or above in the study expressed positive feelings about the test-taking experience; none of the students scoring less than proficient, in contrast, held such positive views. Dutro and Selland express concern around how, "students' knowledge of their position as less than proficient in key content areas such as reading may discourage, rather than encourage, students' investment in school" (p. 359). Harlen and Deakin Crick (2003) argue as well that labeling low achieving students as "failures" impacts their beliefs in their ability to learn and lowers their self-esteem.

Articles in the press report individual cases in which standardized testing has impacted students' engagement and self-efficacy. Mulholland (2015) reports that one New York parent witnessed a change in her son's beliefs in his own abilities and interest in school in connection to a heightened focus on standardized testing: "He would be doing homework, and he would be sobbing, he'd be trying to wipe tears away while he's trying to finish his homework so he could see the paper. He would constantly talk about how stupid he was, how 'I can't wait until I can drop out of school.'" In an article about the National Education Association's campaign to end "toxic testing," Long and Robertson (2014) quote a parent expressing similar concerns about the effects of standardized testing on students: "The kids pay a very high price. It chips away at their sense of

selves as learners from a young age; telling them that there is one way to learn and boxing them into narrow ways of seeing their skills and their contributions.”

## **Teacher Behavior that Contributes to Student Stress**

The way in which educators approach and talk about standardized testing can affect students’ perceptions of the testing experience. New York State’s School Administrator Manual recognizes the importance of the tone and language used by educators when speaking about standardized testing, and it recommends that announcements about test dates be made in, “such a way as to convey information without causing students to become overly anxious” (New York State Education Department, 2016, p. 11). Similar statements were found in a test coordinator’s manual for the Connecticut Academic Performance Test in science and in an archived version of a PARCC test coordinator manual (Connecticut State Board of Education, 2016; PARCC, 2014). Connecticut’s manual notes that, “excessive emphasis on the importance of the test may cause students to become too anxious” (Connecticut State Board of Education, 2016, p. 17).

Despite guidelines such as these, teachers do not always avoid stress-inducing language. “Fear appeals” represent one such example. Putwain and Remedios (2014) note that when educators speak with students about upcoming exams, these communications typically include logistical details, such as the date and time of the exam, but they may also include messages, “regarding the consequences of examinations, why they might be considered high-stakes, and what the consequences of success and/or failure might be” (p. 504). They argue that often these messages draw students’ attention to the possible consequences of failure as well as the need for students to avoid failure, and they term these messages “fear appeals.” Messages that draw students’ attention to the possible consequences of success, however, are not considered fear appeals (Putwain & Remedios, 2014). They present an example of a fear appeal: “If you fail GCSE maths, you will

never be able to get a good job or go to college. You need to work hard in order to avoid failure” (p. 504).

Fear appeals have the potential to increase students’ anxiety about standardized testing (Putwain & Roberts as cited in Saeki, Pendergast, Segool, & von der Embse, 2015; Putwain & Symes, 2011). Putwain and Symes (2011) found that when students perceive these messages as threatening, it contributes to students’ test anxiety and fear of failure. Saeki et al. (2015) argue that while teachers often intend to motivate students through the use of fear appeals, negative effects may result from the use of these messages. More motivating messages focus on, “the use of assessment as a measure of what the students know and can do” (Saeki et al., 2015, p. 94).

Success Academy, a network of charter schools in New York, provides an example of educators emphasizing the need to avoid failure on standardized testing. Taylor (2015) describes an email sent to fourth-grade teachers by a school leader at Success Academy Harlem 2 expressing frustrations about the results of a practice test and the fact that a number of students had not used the appropriate test-taking strategies, or “plan of attack.” The email message states that: “Any scholar who is not using the plan of attack will go to effort academy, have their parent called, and will miss electives. This is serious business, and there has to be misery felt for the kids who are not doing what is expected of them” (Taylor, 2015, “A Demanding Culture,” para. 5). These practices likely affect students’ feelings around testing. One student is quoted as saying: “I know that it’s here to help us. But sometimes when people don’t get the best score, they seem to feel, like, really down on themselves. And when effort academy and detention and stuff like that is introduced one gets – me personally – really angry and upset” (Taylor, 2015, “Carrots and Sticks,” para. 14). Taylor further notes that incidents of students wetting themselves during practice tests were not uncommon and may be attributed to pressure from teachers in some cases. Specifically, the incidents are cited as occurring, “either because teachers did not allow [students] to go to the restroom...or because the

students themselves felt so much pressure that they did not want to lose time on the test” (Taylor, 2015, para. 16).

## Discussion

It seems clear that efforts need to be made to minimize the negative effects of standardized testing on students’ physical and emotional well-being. While standardized testing, when used properly, can provide valuable information, the testing experience should not result in students experiencing an array of stress-related symptoms, as is the case currently for many students across the country. Students appear to understand the consequences associated with standardized testing for their schools, teachers, and administrators and often feel pressure to perform well, likely as a result of the perceived importance and high-stakes nature of standardized testing (Dutro & Selland, 2012; Harlen & Deakin Crick, 2003). Larson et al. (2010) argue that students today associate testing with a “greater sense of consequence” (p. 3). Minimizing this sense of consequence as well as the actual consequences of standardized testing are likely necessary steps in reducing the prevalence of students’ stress-related symptoms.

## Implications for Practice

Educators and parents should avoid overemphasizing the importance of standardized testing, and, in particular, caution should be taken to avoid messages that draw students’ attention to the consequences of failure. Placing too much emphasis on standardized testing is associated with higher levels of student anxiety and lower levels of self-efficacy beliefs (Knehta, 2016). The messages educators and parents use to communicate about testing matter, and efforts should be made to reduce students’ anxiety around testing and increase students’ self-efficacy beliefs. Focusing messages related to testing on the role of assessments as a measure of students’ knowledge and

ability may be more motivating and effective (Saeki et al., 2015). Harlen and Deakin Crick (2003) also recommend that rather than sharing performance goals with students, learning goals should be emphasized. In addition, efforts should also be made to reduce the amount of time that students spend preparing for standardized testing, as engaging in repeated practice tests may increase students' perceptions of the importance of the tests (Harlen & Deakin Crick, 2003).

Teaching students relaxation techniques may be another avenue for reducing test anxiety. Larson et al. (2010) found that teaching third-grade students deep breathing exercises and progressive muscle relaxation was associated with lower levels of test anxiety. Specifically, children learned how to engage in diaphragmatic breathing, or "belly breathing," and were guided through a progressive muscle relaxation exercise two days a week, over the course of five weeks. Larson et al. recommend school personnel schedule time in the day to teach students how to respond to anxiety and stress by using these strategies. Teaching students how to respond more effectively to anxiety and stress will help to minimize the effects of standardized testing on students' well-being.

### **Implications for Policy**

Reducing the stakes associated with standardized testing would also be beneficial in minimizing the amount of stress-related symptoms students experience in connection with testing. Even when standardized tests do not have stakes for students, students often perceive the tests as stressful and recognize that the results may have consequences for their teachers, administrators, and schools. In addition, students recognize that educators experience stress in connection with standardized testing, which in turn may affect students' anxiety around standardized testing (Barksdale-Ladd & Thomas, 2000). By lowering the stakes associated with standardized testing, educators and students would likely experience less stress and anxiety in connection with testing. With fewer stakes associated with standardized testing, teachers would likely be less inclined to

utilize messages such as fear appeals when discussing testing, and students would likely feel less pressure in connection with testing.

In conclusion, the effects of standardized testing on students' physical and emotional well-being are worrisome and equally as deserving of attention as the effects of standardized testing on teaching and learning. As Paris et al. (1991) note students are the major participants in standardized testing and are spending much time and energy throughout their educational careers preparing for and taking these assessments. As a result, how standardized testing affects students clearly matters. The effects of standardized testing on students' well-being are varied, from incidents of vomiting to anxiety attacks, and standardized testing contributes to the high levels of stress many students are already facing. As such, efforts should be made in both policy and practice to minimize these effects on students and to reduce the pressure that students often feel related to standardized testing.

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