



Perceived Test Stakes, Test Anxiety, and Reading Comprehension in High School Seniors

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Abstract: Test anxiety is an issue many students experience. While educators are usually aware of the existence of test anxiety, they may be less aware of its effects on cognitive functioning. Research supports the view that test anxiety can negatively affect both working memory and information processing. Numerous previous studies have investigated test anxiety under laboratory conditions; however, very limited research examines its effect on performance in actual classroom environments. This study collected empirical data to measure the effect of test anxiety on high school seniors' academic achievement in an educational context representative of what students encounter during the academic year. The sample consisted of 49 high school seniors, all aged 18 or older, who completed two separate 15-minute assessments: one low-stakes and one high-stakes. Both assessments contained reading comprehension items similar to those found on the SAT. All participants completed both assessments, so the study used a within-subjects design. Participants also rated their anxiety immediately before each assessment on a scale from 1 to 10. The perceived stakes were altered through standardized verbal communication to manipulate the level of importance and stress associated with the assessments. To ensure that no other variables affected the results, all other aspects of the assessments, including format, length, and difficulty, were kept consistent. Mean reported anxiety increased from 3.10 in the low-stakes condition to 4.02 in the high-stakes condition; conversely, mean reading comprehension decreased from 7.35 to 6.78. Since the same group completed both assessments, paired-samples t-tests were used to determine whether statistically significant differences existed across conditions. Results demonstrated that higher test apprehension was accompanied by lower reading comprehension, providing evidence that how tests are presented may directly or indirectly affect students' ability to perform well. These findings have important implications for designing assessments that promote better academic performance and for supporting students who may need additional assistance. This study investigates how psychological variables relate to academic performance in a setting that simulates authentic classroom conditions.

Keywords: Test Anxiety, Reading Comprehension, Perceived Test Stakes, Working Memory, Attentional Control, High School Students, Assessment Framing

INTRODUCTION

Test anxiety is common in schools, but its influence on performance is not limited to general nervousness. The present study focuses on whether the way a teacher frames an assessment can change students' immediate anxiety and reading comprehension. By comparing the same students under low-stakes and high-stakes verbal framing, the study examines a classroom variable that educators can directly control. This focus is important because students' scores may reflect not only what they know and how well they prepared, but also the psychological context in which they are asked to demonstrate that knowledge.

Given these concerns, this study investigates whether a relatively small change in how an assessment is verbally presented can influence both students' self-reported anxiety and their reading comprehension performance. Rather than examining test anxiety only as a fixed personal trait, this paper focuses on the role of classroom context, especially the language used to frame an assessment as low-stakes or high-stakes. By studying high school seniors in a realistic academic setting, the research aims to clarify whether perceived testing pressure can produce measurable changes in anxiety and performance even when the test format, timing, and difficulty remain consistent. In doing so, the study connects psychological research on working memory and attention to everyday classroom practices, showing how educators' presentation of assessments may shape students' ability to demonstrate what they know.

LITERATURE REVIEW

Many students experience anxiety while taking tests; however, the relationship between anxiety and academic performance is quite complicated. Research in educational and cognitive psychology indicates that anxiety can do more than simply make a student nervous. Anxiety disrupts the mental processes necessary to respond effectively to a test. Therefore, the objective of this literature review is to analyze how anxiety negatively affects working memory and reading comprehension during testing among high school students. This analysis helps explain why an increase in a student's perceived test stakes - such as verbal instruction from a teacher regarding the importance of a test - may lead to increased anxiety and decreased test performance.

Research has indicated that anxiety accounts for much of the reduction in academic performance because of its negative effects on working memory. Working memory is the cognitive process that temporarily stores and processes information simultaneously. It enables a student to read a passage, recall what they read, and use that recalled information to answer assessment questions. Ashcraft and Kirk (2001) reported that anxiety significantly reduces working memory capacity. As a result, anxious students have fewer mental resources available for their assessments. Similarly, Owens et al. (2012) demonstrated that anxious students experience difficulty maintaining focus and organizing material during assessments. Both of these skills are critical components of reading comprehension. While anxiety does not reduce intelligence, it temporarily diverts cognitive resources that could enhance learning and test performance.

Attentional Control Theory, developed by Eysenck et al. (2007), provides a theoretical basis for understanding this phenomenon. According to attentional control theory, when an individual experiences anxiety, it impairs their ability to filter out distractors and maintain focus on a task. For example, thoughts such as "I am going to fail" or "Everyone else finished the test before I did" may draw an individual's attention away from the test. Cassady and Johnson (2002) confirmed that these types of thoughts serve as predictive indicators of academic performance. Collectively, these studies demonstrate that anxiety is detrimental to a student's ability to think clearly and effectively during an assessment and can harm the academic performance of students who are experiencing distress.

In addition to examining students' natural tendencies toward anxiety, Ping et al. (2008) demonstrated that situational anxiety can have a significant effect on academic

performance. Situational anxiety refers to an individual's level of anxiety related to a particular event or situation. This research demonstrates that students who do not typically exhibit high levels of anxiety may still experience poor performance in situations where they become anxious. Furthermore, Jerrim (2023) observed that very little research exists regarding how aspects of a student's school environment, including how teachers present tests, contribute to situational anxiety. Much previous research treats anxiety as a stable aspect of a person's personality rather than something influenced by the person's surroundings. The goal of this study was to explore the possible impact of presenting tests with different verbal framings, which could produce variations in situational anxiety, and to assess the potential effects on reading comprehension performance.

Overall, research supports the association between anxiety and academic performance, with working memory serving as an intermediary factor in this relationship. Anxiety depletes the cognitive resources required for completing tasks such as reading comprehension, regardless of whether the cause stems from an individual's personality or the testing environment. Nevertheless, relatively little attention has been paid to assessing the effects of daily classroom activities - such as teachers' stress-related emphasis on a test - on added anxiety and student performance.

METHODOLOGY

In this study, we investigated how test anxiety influences reading comprehension performance under real-world classroom conditions. The study involved 49 high school seniors, all of whom were at least 18 years old. Because every student participated in both conditions and therefore served as their own control, we employed a within-subjects research design.

Both experimental conditions involved completing a 15-minute reading comprehension assessment using SAT-style passages and multiple-choice questions. We worked to make the assessments equivalent in difficulty. Our goal was to make them the same length, use the same types of questions at the same general difficulty level, and maintain the same overall format. Different questions were asked in each assessment, but multiple measures were taken to make the two assessments as similar in difficulty as possible.

We administered the study during regular class hours in a typical classroom. Students received an overview of the research and signed a consent form before participating. They knew that participation was optional and that they could withdraw from the study at any time without penalty.

Students reported their self-perceived anxiety on a 1-10 scale immediately before each assessment. These self-report measures were intended to reflect anxiety related to the perceived stakes of the assessment rather than the difficulty of answering the questions.

To manipulate test stakes, we provided students with standardized verbal statements from their teacher before each assessment. Before the first, low-stakes assessment, the teacher told students that it was simply a practice test and that there was no need to take it seriously. After completing this first assessment, students were presented with the second, high-stakes assessment. Before the second test, the teacher instructed students that it was crucial and that they should do their absolute best. There were no

consequences for students' academic standing in either experimental condition. All pressure applied to the students was strictly related to the verbal framing used to describe each assessment.

Student reading comprehension was evaluated based on the number of items answered correctly on each assessment. Each item was assigned equal weight, and total scores were calculated for both the low-stakes and high-stakes conditions.

Several variables were controlled to reduce variation in performance due to factors other than perceived differences in test stakes. Specifically, we maintained a consistent environment and timing across both assessments and ensured that they were formatted similarly. The intended difference between the two experimental conditions was the language used to frame the perceived importance of each assessment.

Paired-samples t-tests were used to evaluate differences between conditions in anxiety levels and reading comprehension scores. Because each participant was tested in both conditions, the analysis could directly assess changes in performance within the same students.

RESULTS

An analysis of data collected from 49 students tested whether a change in participants' perception of test "stakes" would influence their level of anxiety and how well they read. The descriptive statistics below show the results for each test condition: low-stakes and high-stakes.

Students' anxiety ratings and reading comprehension scores both reached a maximum of 10. In the low-stakes condition, mean anxiety was 3.10 (SD = 1.37), while in the high-stakes condition, mean anxiety was 4.02 (SD = 1.79). Conversely, mean reading comprehension was 7.35 (SD = 1.13) in the low-stakes condition, and 6.78 (SD = 1.75) in the high-stakes condition.

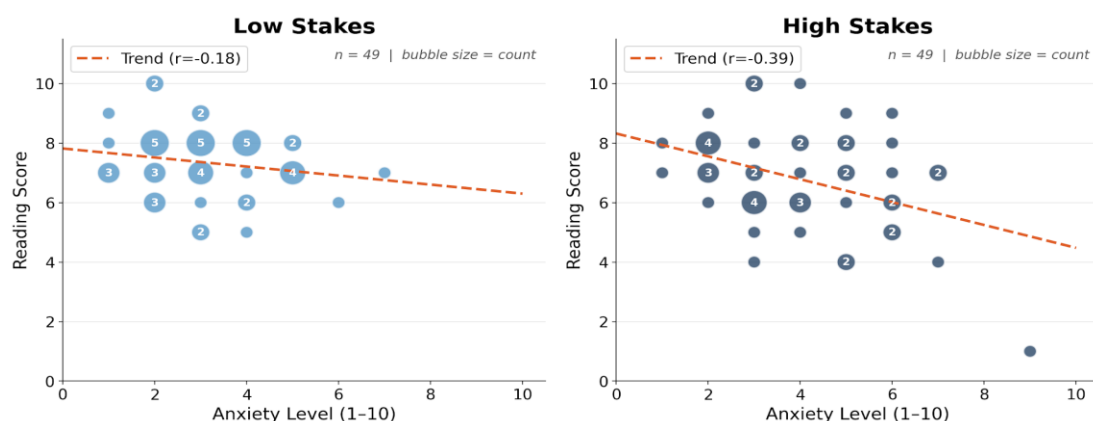


Figure 1: Relationship between self-reported anxiety and reading scores in the low- and high-stakes conditions. Bubble size indicates the number of students at each coordinate.

Because the experiment used a within-subjects design, paired-samples t-tests were used to assess whether these changes were statistically significant. The results indicate a

statistically significant increase in anxiety from the low-stakes to the high-stakes condition, $t(48) = 6.32$, $p < .001$. The results also indicate a statistically significant decrease in reading comprehension from the low-stakes to the high-stakes condition, $t(48) = -3.46$, $p = .001$.

Table 1: Anxiety and reading comprehension across test conditions

Measure	Low-Stakes Mean (SD)	High-Stakes Mean (SD)	Mean Difference	t(48)	p
Anxiety	3.10 (1.37)	4.02 (1.79)	+0.92	6.319	< .001
Reading Score	7.35 (1.13)	6.78 (1.75)	-0.57	-3.464	.001

Note. Anxiety ratings and reading scores were measured on 10-point scales.

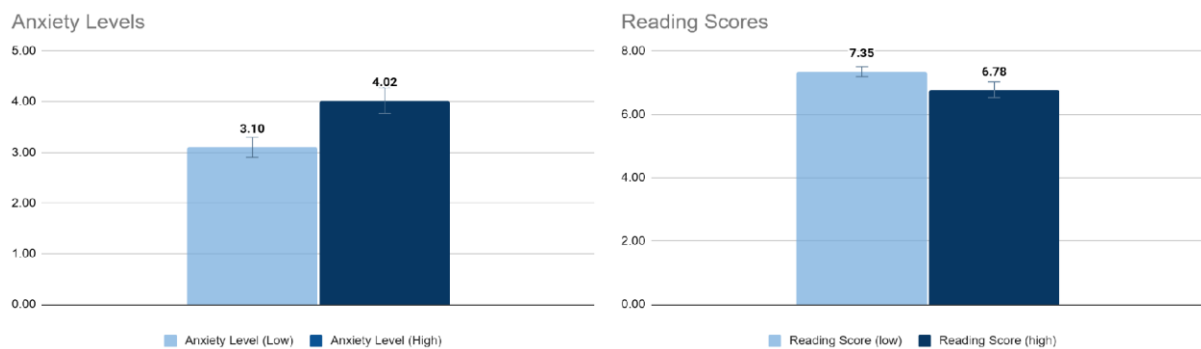


Figure 2: Mean anxiety levels and reading comprehension scores under low- and high-stakes conditions.

These results demonstrate that increases in perceived test stakes were accompanied by greater self-reported anxiety and lower reading comprehension performance among the participants. This indicates that even relatively small changes in what students perceive as important can affect anxiety levels and academic performance. Figures 1 and 2 graphically demonstrate the differences in anxiety and reading comprehension between the low-stakes and high-stakes conditions.

CONCLUSION

This research demonstrates that higher perceived test stakes among high school students are associated with greater anxiety during testing and lower reading comprehension performance. Because verbal framing was the intended independent variable in this study, small differences in how an assessment is presented can lead to quantitatively different anxiety levels and academic outcomes. Thus, the data suggest that academic performance is based not simply on a student's ability or preparedness for a particular assessment, but also substantially on the student's perception of the testing situation.

These findings support prior research demonstrating that anxiety negatively affects working memory and attention, the two processes most critical to completing complex tasks such as reading comprehension. When students believe they are under significant stress while completing an assessment, some portion of their cognitive resources may be redirected away from task processing and toward stress-related thoughts or efforts to

reduce distress. This redirection can result in a decrease in overall performance. Unlike research that treats anxiety primarily as an innate characteristic of a person, this study shows that anxiety can also be stimulated by contextual variables that occur in typical classroom settings.

Moreover, the relationship between anxiety and performance appears not only statistically significant but also educationally important within typical school environments. The consistent pattern of increased anxiety accompanied by decreased performance provides evidence that relatively minor increases in perceived pressure to perform on evaluations can affect learning processes. Therefore, both psychological factors and environmental factors should be considered when educators attempt to understand student performance.

This study's findings may also have practical applications for teachers and schools. Because relatively small variations in wording or presentation led to measurable changes in anxiety and performance, teachers may be able to reduce unnecessary test anxiety through common classroom practices. Examples include using more neutral language when presenting assessments, avoiding excessive references to the consequences of poor performance, and reframing assessments as opportunities for students to demonstrate knowledge and understanding rather than as high-stress judgments of ability. Although some form of evaluation is inevitable in education, reducing unnecessary psychological pressure may enable students to demonstrate their academic potential more effectively.

The results indicate that both the teacher and the classroom environment may have an effect on academic achievement that is greater than is typically perceived. Performance is influenced by what students are tested on as well as by the emotional atmosphere surrounding the test. The findings have important implications for how assessments are created and how students who struggle with assessments are supported. Since even slight variations in how an assessment is introduced or phrased can produce anxiety and lower scores, educators may affect students' ability to succeed in ways that extend beyond the subject matter being taught.

A limitation of this study was the relatively small number of participants and the fact that all participants were male. Additional research should examine whether the effects observed here hold across age groups, student populations, subject areas, and assessment types. Research should also examine whether long-term changes in classroom assessment practices lead to reduced student anxiety and improved academic performance.

Thus, educators would benefit from limiting unnecessary evaluation pressure while creating assessment conditions that do not cause undue stress. One sentence of framing can influence a student's reading performance. Therefore, the way a teacher describes a test is not simply a neutral introduction to the assessment process; it is a component of the assessment context itself.

Taken together, these findings suggest that assessment design includes not only the questions students answer, but also the language and atmosphere surrounding those questions. Reducing avoidable pressure does not require lowering academic standards; rather, it may allow an assessment to measure students' knowledge and skills more accurately.

Ultimately, this study suggests that reducing test anxiety does not require educators to lower academic standards or make assessments less meaningful. Instead, it requires greater awareness of how classroom language, tone, and expectations shape the conditions under which students perform. If a simple verbal framing can increase anxiety and reduce reading comprehension, then teachers and schools should treat assessment design as both an academic and psychological process. By presenting tests in ways that preserve seriousness without creating unnecessary pressure, educators may help students demonstrate their true ability more accurately. Future research should continue exploring this relationship across different grade levels, school settings, subject areas, and student populations so that assessment practices can better support both achievement and well-being.

IMPLICATIONS

These results point to a problem with what a test score measures. The students did not get worse at reading between the two tests. The passages were equally hard, the format was the same, and the same students took both. The only thing that changed was the framing, and their scores still dropped. So a score from the high-stakes version does not only measure how well a student reads. It measures how well they read and how much pressure they were under while reading. A test is meant to capture what a student knows. Framing that raises anxiety mixes in something the test was never meant to measure. This matters most for high-stakes tests. The passages here were built to match the SAT, a test treated as a fair measure of ability and used to decide a student's future. If one sentence of framing can pull scores down on material like this, then a high-pressure score may reflect not only what a student knows, but how much pressure they felt while showing it.

A standardized test tries to make every condition the same. Same time limit, same instructions, same room, all so scores can be compared fairly. But making the conditions the same does not make the perceived stakes the same. This study changed only the perceived stakes with words and scores still moved. So the pressure a student feels is a separate thing, one that standardizing the conditions does not control. Two students can take the exact same test, in the same room, with the same proctor, and still feel very different pressure. One treats the test as deciding their future. The other stays calm. The results here suggest that this difference alone can change a score. This likely reaches past a single classroom. Students do not feel the same way about every test. Many see the SAT and the ACT differently and choose the one that feels less threatening, even though a point on one is treated as equal to a point on the other. If perceived stakes go along with these tests, then part of a score gap, between students or between tests, may come from pressure rather than ability. This study did not test that directly, so it stays an open question for future research, but it follows from what the data show.

For classroom practice, the results support using consistent, neutral instructions before tests and avoiding language that exaggerates the consequences of a single score. Teachers can still communicate that an assessment matters while emphasizing preparation, effort, and the opportunity to demonstrate learning. Schools may also use brief anxiety check-ins, practice assessments, and targeted support for students who regularly experience high test anxiety. These strategies would not remove rigor from an assessment; they would reduce avoidable pressure that may interfere with students' ability to show what they know.

Future studies should use larger, more diverse samples, include students of different genders and ages, and examine assessments across multiple subject areas. Researchers should also counterbalance the order of low-stakes and high-stakes conditions so that practice or fatigue effects can be separated from the effect of verbal framing. Longitudinal research could then test whether sustained changes in teachers' assessment language produce lasting reductions in anxiety and improvements in academic performance. Future work should also test this outside a single classroom by measuring whether real high-stakes tests, such as the SAT and the ACT, carry different perceived stakes and whether those differences affect scores. Because this study did not measure working memory directly, future research could add a working-memory measure to confirm that it is the mechanism connecting framing to performance. Researchers could also examine whether students with higher baseline anxiety lose the most under high-stakes framing, which would show whether framing widens gaps that do not reflect what students actually know.

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