



Examining Anxiety Associated with Time-Based Assessments

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Abstract

A common obstacle faced by college students is anxiety associated with time-based assessments such as quizzes or exams. In this study, we wanted to gauge to what extent anxiety affects scores. To gain a better understanding of this, we administered surveys that asked PAL students about their anxiety and test taking strategies used in time-based assessments. In between the surveys we gave time-based quizzes, each decreasing in length over the duration of our data collection period. The results of our experiment found that students faced more anxiety during time-based assessments but felt their test-taking strategies for time-based assessments improved as the semester progressed.

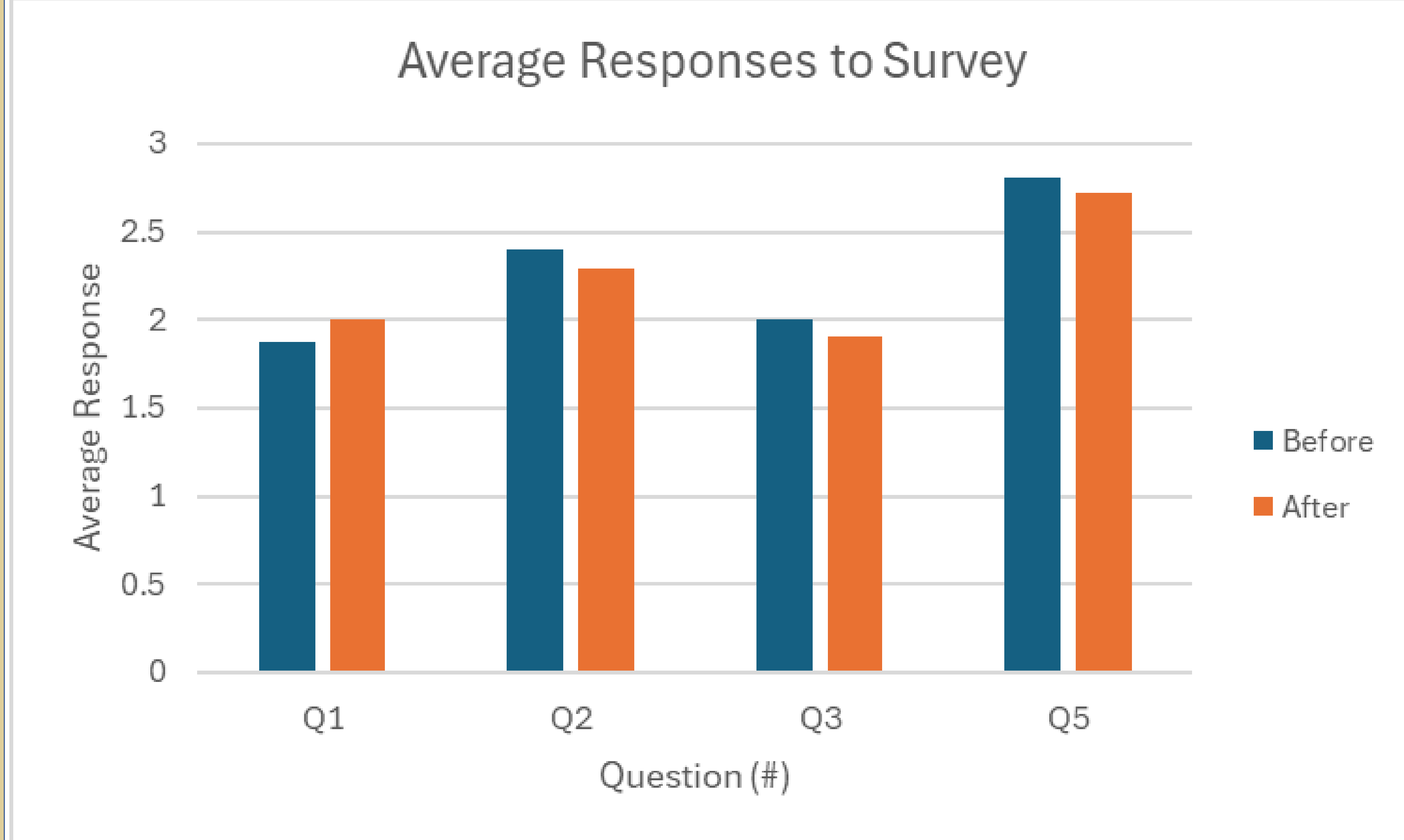
Background

Assessments within school often trigger anxiety which can negatively impact students' cognitive performance and emotional well-being (Dobson, 2012). This study aims to explore the relationship between time constraints and anxiety during assessments, seeking to alleviate anxiety through small interventions such as relaxing activities. While some interventions have shown promise in reducing anxiety (Krispenz et al., 2019), there's a lack of research specifically addressing time-based anxiety. Furthermore, the pressure of being timed creates physiological responses such as increased heart rate, sweating, impairing cognitive functions, and hindering students' ability to remember assessment information (Maier et al., 2021). Anxiety during assessments is negative as it can lead to frustration, fear, and underperformance (Sharma, 2014). However, research suggests that interventions such as meditation can decrease test anxiety and improve performance (Priebe & Kurtz-Costes, 2022). With a significant percentage of undergraduates experiencing test anxiety, mindfulness practices could offer relief from pressured thoughts and enhance performance.

Methods

We administered time-based quizzes, meant to mimic a "real" quiz. Our quiz environments were meant to simulate an instructional classroom's quizzes, so the time was announced by the facilitators at the half-way point of each quiz. However, this environment was not meant to induce anxiety. It is also key that the quiz was only meant to be a fun, challenging activity, meant to give students practice for when they take a real test. We provided surveys where we ask students how well they do on exams in general, how anxious they are during timed assessments, and how time affects them when taking an exam. The first survey was administered before any of the practice quizzes were given, and the final survey was given after the final quiz. By comparing the students' recorded feelings of anxiety in the first survey, to the feelings of anxiety in the second survey, we saw how the students' anxiety has changed. The total number of assessments per PAL class was six. The assessments themselves consisted of relatively simple problems from each respective course. As part of the goal of the experiment, the assessments themselves were relatively short, being only a few minutes.

Data & Results



Q1: How do you feel before a time-based assessment (tests, quizzes, etc.)?

Q2: How do you feel after a time-based assessment (tests, quizzes, etc.)?

Q3: To what extent do you believe that time constraints affect your scores on time-based assessments?

Q5: How well do you believe the strategies answered in Question 4 work?

The figure above depicts the averaged responses of students to the questions above (Q1, Q2, Q3, and Q5). The "Average Response" axis is based on responses of 1 (most anxious, least confident, greatly affects) to 4 (least anxious, most confident, least affects)

Q4: What are some of your strategies for handling the time constraints associated with time-based assessments?

"If I take too long on a question, I just skip it"

"I try to practice breathing techniques to help me relax."

"I try to work as efficient as possible and try to not second guess my answers."

"Studying way ahead of time so that I understand all concepts before assessments."

Discussion

Our results indicated that our study was statistically insignificant. Three of our four questions recorded a negative effect from the first survey to the second. We believe that a factor contributing to this could be the overall upward trend of stress levels of all students as the semester progresses. An important discovery was that the students reported an increased level of preparedness before a timed assessment. The students also reported increased confidence in their ability to cope with stress in the context of time-based Assessments. Although our data was statistically insignificant, We believe that our students were positively affected in regard of their stress management and preparedness.

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