

## **The Influence of Academic Anxiety on High School Students' Self-Esteem**

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### **Acknowledgements:**

I would like to thank my mentor at Ball State University, Ph.D., Jerrell Cassady. I would also like to thank my science research teacher Ms. Fleming, and my family and peers for support throughout the research process.

### **Abstract**

Academic anxiety is the feeling of uneasiness over academic tasks. As testing requirements have increased, more pressure has been put on students across the globe. The increase in pressure has taken a toll on high school students' mental health. Past studies have found that male students tend to have a higher self-esteem level than female students. My prediction is that female students will report higher academic anxiety with lower self-esteem. Skepticism is the doubt about something, specifically I am focusing on the skepticism of schools' relevance for future success. Additionally, I predicted that students who are skeptical about schools' relevance for future success will report lower levels of academic anxiety with higher levels of self-esteem. High school students completed various scales in an online environment evaluating demographics, academic anxiety, self-esteem, and skepticism about the relevance of school for future success. Participants were able to complete the questionnaire on their leisure time. Results were analyzed in Microsoft Excel to find a correlation between academic anxiety and self-esteem, skepticism scale and academic anxiety, and skepticism and self-esteem. Results found may be used by school counselors to develop programs aimed to reduce student academic anxiety and maintain a healthy self-esteem level. Researchers suggest future studies should include additional variables such as social and academic background.

### **Introduction**

Test anxiety has detrimental effects on the academic performance of many university students ( Nunez-Pena, Saurez-Pellicioni, Bono, 2016). As there is an increase in testing requirements for students, there is also an increase in the amount of pressure. According to the American College Health Association, in the spring of 2019 50.7% of male students and 71.8% of female students have felt an overwhelming amount of anxiety within the last 12 months. It is concerning to realize how much students are affected by anxiety. It is important to study this

topic because prolonged anxiety can interfere with social obligations, family and work settings. Additionally, prolonged anxiety can contribute to chemical imbalances which can put individuals at risk for emotional disorders or diseases.

A study conducted in 2011 (Bagana, Raciú & Lupu) demonstrated there is a negative relationship between test anxiety and self-esteem. Researchers collected data through various self-reported scales such as the Rosenberg Self-Esteem Scale (Rosenberg, 1965, 1989, Blascovich & Tomaka, 1991) and the Test Anxiety Scale (Spielberger 1979, 1980). The results of this study were correlated to past studies finding that self-esteem and test anxiety have a negative relationship (Spielberger, 1966; Rosenberg et al., 1989; Ringeisen and Buchwald, 2010). However, this 2011 study reported a larger sample size in future studies would be beneficial. Results from this study may be used by school counselors to develop programs to help with student anxiety.

Test anxiety is defined as the extreme feeling of nervousness before taking an exam. These feelings may stem from lack of preparation or the fear of failure (<https://adaa.org/living-with-anxiety/children/test-anxiety>). Studies have illustrated that test anxiety is more common in women than men. Additionally, ten million elementary students are not performing at their highest potential due to test anxiety (Ergene, 2003, p. 314).

Researchers have made the observation that an increase in student anxiety may be caused by the increase in testing requirements (Whitaker et al., 2007). Techniques such as deep breathing and muscle relaxation have been shown to decrease anxiety in individuals who have a hard time relaxing during stressful situations (Zuercher-White, 1998).

Through life experiences, and how we are treated, our successes and failures impact our self-esteem (Yaratan and Yucesoylu, 2010). Studies have shown that self-esteem and academic

achievement have a direct relationship. Therefore, as academic achievement increases, self-esteem will increase. However, when academic achievement is lacking, self-esteem tends to decrease (Bankston & Zhou, 2002; Lockett & Harrell, 2003; Schmidt & Padilla, 2003). Previous students have indicated that self-esteem may be related to either academic or verbal success (Purky, 1970). Thus, students associate their self-worth with school achievements.

Skepticism is the doubt about something. In this study, I am examining how the doubt about schools' relevance for future success impacts students' academic anxiety and self-esteem. However, few studies have researched skepticism about schools' relevance for future success and its relationship towards beliefs of students. Due to the lack of research regarding academic skepticism, there is a gap in my research.

I hypothesized that female students who experience higher levels of test anxiety will report a lower level of self-esteem and students who are skeptical about schools' relevance for future success will report a lower level of test anxiety and a higher level of self-esteem.

**Statement of Purpose:**

The purpose of my study is to explore and understand the influence of academic anxiety on high school students' self-esteem and to explore and understand the influence of skepticism on schools' relevance for future success on students' academic anxiety and self-esteem.

**Methodology:**

Originally, I was planning students to complete various scales on paper in a classroom setting to mock an academic test. However, due to the unforeseen events of

COVID - 19, the scales were transferred to a Microsoft Form where participants could engage virtually.

Digital flyers were posted on teachers homepages to encourage participation. Those interested would email the research supervisor and then the link to the online questionnaire would then be shared with participants. All participants are high school students whose age ranges from fourteen to eighteen years of age, participants range in ethnicity and grade, there were a total of 21 participants, 14 females, 6 males and 1 who chose not to disclose their gender.

The questionnaire consisted of consenting the use of responses in analysis, demographics (age, gender, grade, ethnicity), eleven items from the Academic Anxiety Scale, ten items from the Rosenberg Self-Esteem Scale and six items from the Skepticism about Schools Relevance for Future Success Scale. Additionally, there was a disclaimer stating participants who have been medically diagnosed with anxiety and/or taking anxiety medication should not participate as it may skew results. The questionnaire was left open for 6 weeks at a time which allowed participants to complete the questionnaire in their leisure time.

I first gathered participants in January of 2021 where only 10 individuals participated in which there were no male participants. Due to the low participation, I decided to re-open the questionnaire for an additional 6 weeks in October of 2021 to gain participation. Reopening the survey helped the data collection tremendously as there was an increase of 11 participants including male and female students.

**Results:**

Raw data was transferred from the questionnaire into a Microsoft Excel spreadsheet. For each question, descriptive statistics (mean, mode, range etc) was calculated. Then the Academic Anxiety Scale, Rosenberg Self-Esteem Scale and the Skepticism about Schools' Relevance for Future Success Scale was scored.

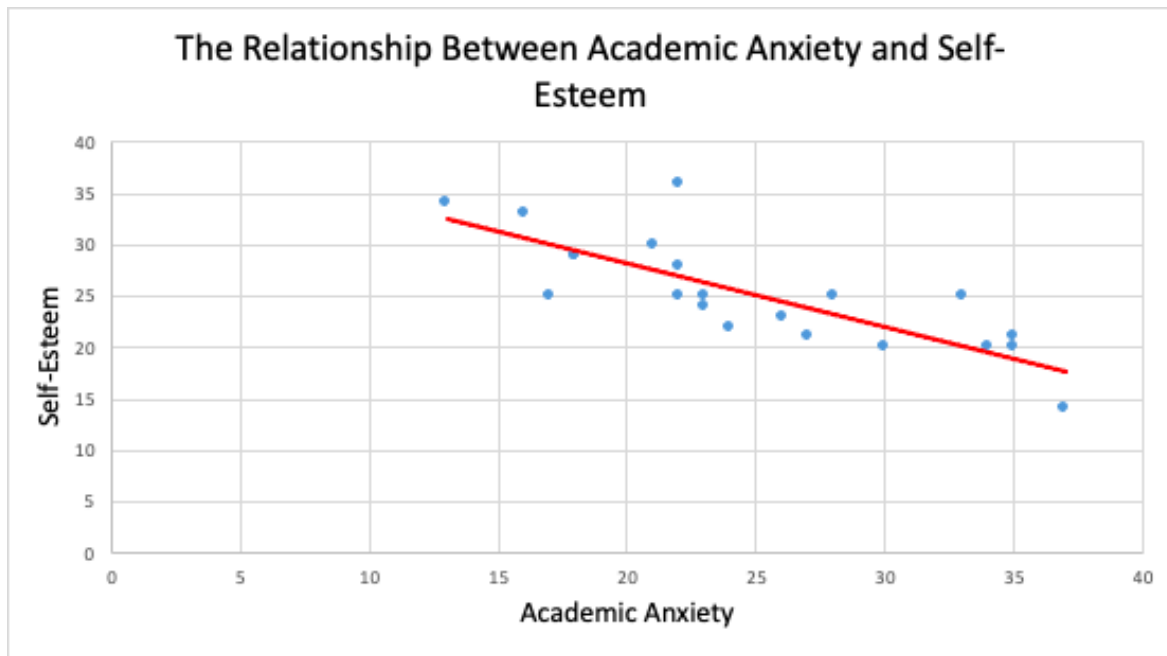
The Academic Anxiety Scale consists of 11 items that range from 1 (not typical of me) to 4 (very typical of me.) I added up the total score for each participant, the total score ranged from 13-37. The mean academic anxiety score across the ten participants was 24.95.

The Rosenberg Self-Esteem Scale (Rosenberg,1965) consists of 10 items, where questions 2,5,6,8 and 9 are reversed scored. The items range from 1 (strongly disagree) to 4 (strongly agree.) The reverse scored items range from 1 (strongly agree) to 4 (strongly disagree). I added up the total score for each participant, the total score ranged from 14-36 with a mean self-esteem score of 25.19.

The Skepticism about Schools' Relevance for Future Success consists of 6 items that range from 1 (not true at all) to 5 (very true.) I added up the responses from each participant and the total score of skepticism about schools' relevance for future success ranged from 6-22 and the mean score of skepticism is 11.80.

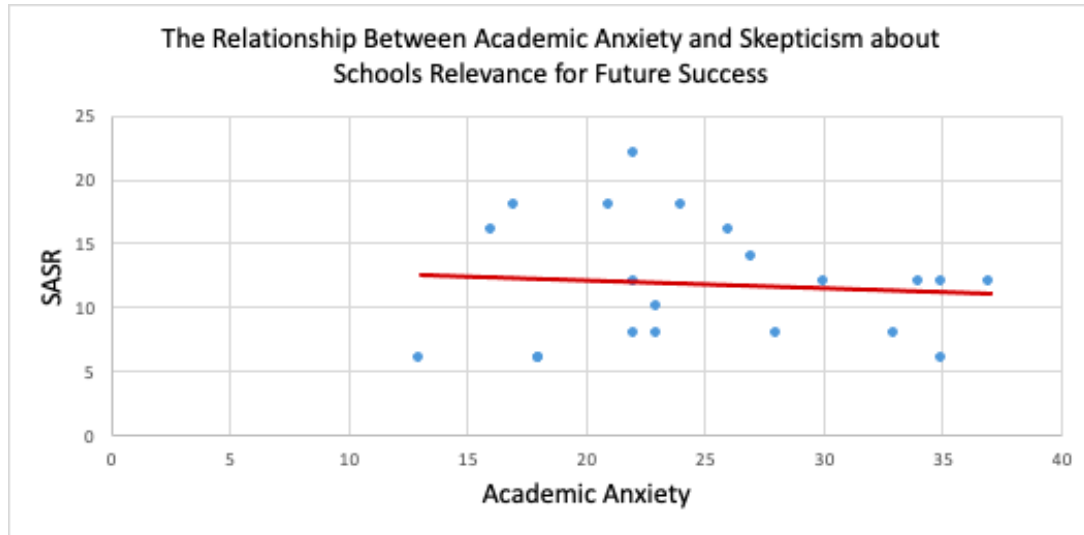
Following, I created correlation and regression between the Academic Anxiety Scale and the Rosenberg Self-Esteem Scale. I found there is a negative relationship between academic anxiety and self-esteem with a numerical value of -0.798. Next, a regression analysis was performed. A p-value of  $1.4 \times 10^{-5}$  was found which is less than

.05 so the relationship between academic anxiety and self-esteem is statistically significant.



**Figure 1** displays that there is a negative relationship between Academic Anxiety and Self-Esteem.

Then a correlation between the Academic Anxiety Scale and the Skepticism About Schools' Relevance for Future Success was found. There is a negative relationship between skepticism and academic anxiety with a numerical value of -0.09. A p-value of .69 was found which is greater than .05, therefore the relationship between skepticism about schools' relevance for future success and academic anxiety is not statistically significant.



**Figure 2** shows that there is a positive relationship between Skepticism About Schools' Relevance for Future Success and Academic Anxiety.

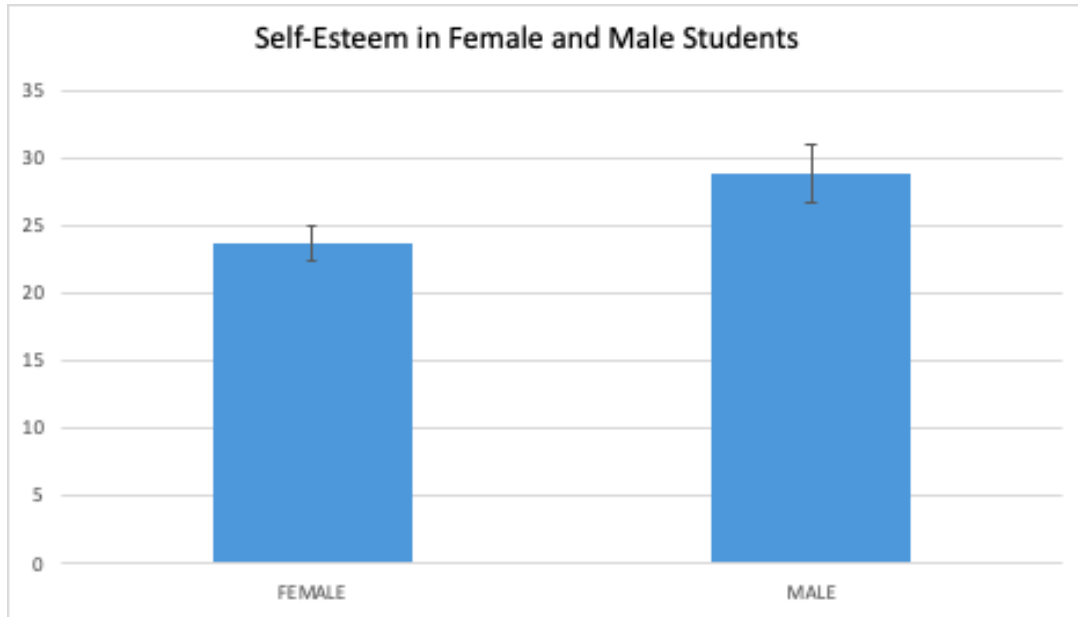
Lastly, a correlation was found between the Skepticism About Schools' Relevance for Future Success Scale and the Rosenberg Self-Esteem Scale. A negative relationship between skepticism and self-esteem was found with a numerical value of -0.11. A p-value of .61 was found which is greater than .05 demonstrates the relationship between skepticism and self-esteem is not statistically significant.



**Figure 3** depicts that there is a negative relationship between Skepticism About Schools' Relevance for Future Success and Self-Esteem

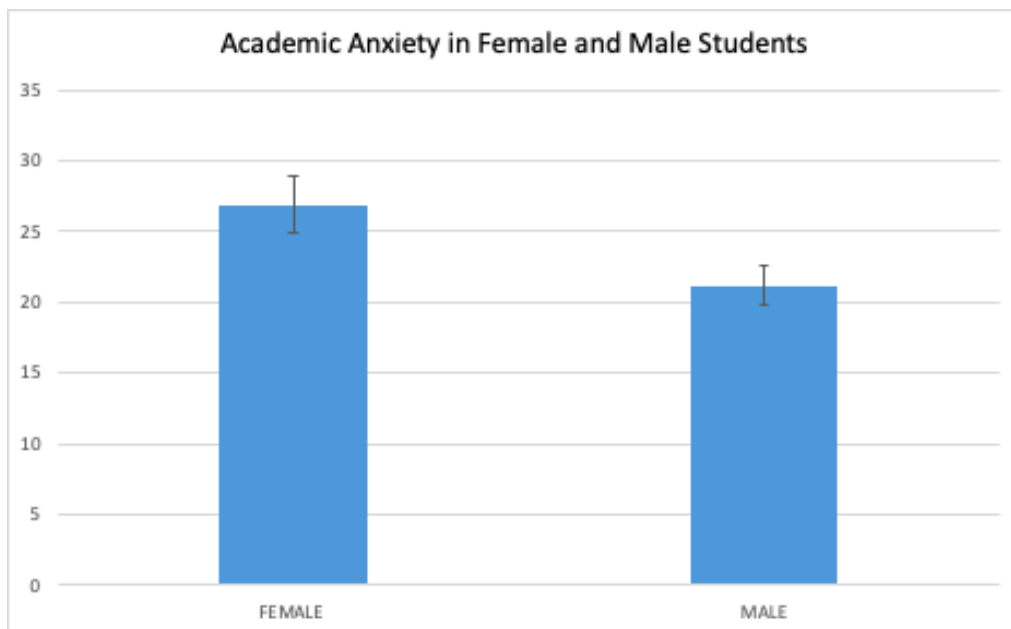
I then focused primarily on self-esteem and academic anxiety between male and females. Since there was one participant who chose not to disclose their gender, I had to exclude their responses for this specific analysis as I was just focusing on the comparison between female and male scores. So, I took the 14 female and 6 male scores for self-esteem and created a mean for females and males. Females reported a mean score of 23.64 where males had a mean score of 28.83.





**Figure 4** illustrates that males have a significantly higher self-esteem than their female peers. The error bars represent standard error.

Specifically focusing on academic anxiety scores, females reported to have a mean score of 26.85 where males had a mean score of 20.83.



**Figure 5** illustrates that females reported to have significantly higher academic scores than their male peers. The error bars represent standard error.

When comparing female and male academic anxiety and self-esteem scores, it is important to note that there is almost double the amount of female participants than male participants.

### **Conclusions:**

With the results, my research questions can now be answered. One of my research questions was: Are there differences in high school students' level of self-esteem and academic anxiety according to their gender? When comparing female and male scores, females reported to have a higher mean (26.85) of academic anxiety and a lower self-esteem level (23.64). So, there is a difference of academic anxiety and self-esteem levels based on gender. My second research question was: Are there differences in high school students' level of academic anxiety and self-esteem based on skepticism of schools' relevance for future success? I found that as skepticism increased, both academic anxiety and self-esteem decreased. So, as participants are increasingly skeptical of schools' relevance for future success their academic anxiety decreases and their perception of self-worth also decreases.

One of my hypotheses was: Female students who experience more academic anxiety than male students will have a lower self-esteem than male students. Based on the data I collected, the above hypothesis can be supported as female students reported higher academic anxiety and lower levels of self-esteem when compared to male peers. This

conclusion is in line with many previous studies. Additionally, I hypothesised that students who are skeptical about schools' relevance for future success will have a lower level of academic anxiety and a higher level of self-esteem. The above hypothesis can be partially supported as students who are skeptical about schools' relevance for future success reported a lower level of academic anxiety and self-esteem.

**Discussion:**

A limitation to my study was the small sample size. There were a total of 21 participants, 14 female, 6 male, and 1 who preferred not to disclose their gender. Due to the small sample size and the fact I only collected data from one high school, my data is not universally applicable. It is also important to note that in my data collection, there was almost double the number of female participants than male participants. So, when comparing female to male scores, my results may have been skewed. For future studies, I would keep the questionnaire open for an extended period of time and make the question available to various high schools across the country. Additionally, I would add variables such as social and academic background. The applications of this study can be using the gathered data to be used by school counselors and medical professionals to develop programs aimed to reduce high school students' academic anxiety and increase students' self-esteem.

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