An Investigation of Anxiety and Stress Among Freshmen and Seniors at Juniata College

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Abstract

Past research has shown that there is a correlation between anxiety, stress, and depression across class years in college. There have been multiple studies done that show if upper-classmen or under-classmen experience higher levels of anxiety, stress, or depression. My research focuses on the Freshman and Senior class at Juniata College and their levels of anxiety, stress, and coping methods. Participants completed an online survey answering questions involving anxiety, stress, and coping skills. At the end of the survey, students also listed three factors that gave them anxiety and/or stress.

The findings of this research show the relationship between anxiety and stress, the difference in the levels between the two classes, and the relationship between anxiety, stress, and coping methods. Along with this, the three factors written at the end of the survey are to see if there are common factors of anxiety or stress between the classes. Ultimately, this research could lead to incorporating strategies at school to help decrease anxiety and stress for college students. More research is needed to see the overall correlation between students in different years in college.

Methods and Materials

| Participants	Procedure
n = 47	Informed Consent
1st and 4th yr. undergrads	Demographics
Measures	DASS-42
Demographic Questionnaire	Coping Self-Efficacy Scale
DASS-42 (adapted)	Open-Ended Question
Coping Self-Efficacy Scale	**Analysis**
Open-Ended Question	Pearson's r
(**DV**: Anxiety/Stress ; **IV**: class)	Independent-Samples t-test
(**DV**: Anxiety/Stress; **IV**: Coping Method Level/Class)	2 x 3 Between-Groups ANOVA

Results

Relationship between Anxiety and Stress: I ran a Pearson's r analysis to see if there was a relationship between anxiety and stress scores. The raw scores of anxiety and stress showed a strong positive correlation between the two variables, $r(45) = .82$, $p < .001$.
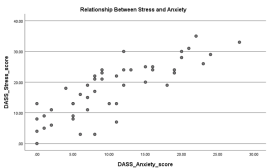
Difference in levels of Class Year and Anxiety and Stress: I used a one-tailed, independent-samples t-test analysis to see if there were any differences in the levels of anxiety and stress across the two classes. The raw scores for anxiety and stress failed to show differences between the classes. The results for class year and anxiety showed, $t(45) = .752$, $p = .228$, 95% CI [2.69, 5.88] and the results for class year and stress showed, $t(45) = 1.12$, $p = .134$, 95% CI [2.31, 8.12]. This analysis showed that Freshmen show about the same levels of anxiety stress as Seniors.
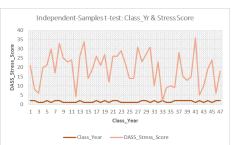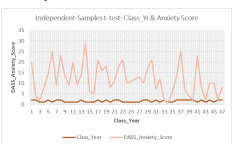
Relationship between Anxiety and Coping Methods and Stress and Coping Methods: I ran a Pearson's r analysis to see if there was a relationship between anxiety and coping methods and stress and coping methods. The raw scores of anxiety and coping methods showed a moderate negative correlation between the two variables, $r(43) = -.43$, $p = .003$ The raw scores of stress and coping methods showed a strong negative correlation between the two variables, $r(43) = -.52$, $p < .001$.
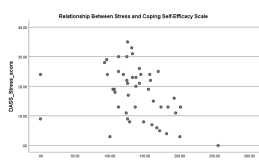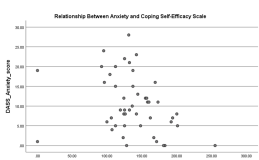
Difference between Coping Methods, Anxiety, and Stress: I used a 2 x 3, between-groups ANOVA to see if the level of coping methods (low, medium, high) affected anxiety ($F(2, 40) = 4.10$, $p = .024$, partial $\eta 2 = .17$) and stress ($F(2, 40) = 8.36$, $p < .001$, partial $\eta2 = .30$) level. The results looking at the difference between coping methods and anxiety shows a significant difference between low and medium coping methods ($p = .017$). The results looking at the difference between coping methods and stress shows a significant difference between low and medium coping methods ($p = .001$) and low and high coping methods ($p = .010$).

Open-Ended Results: At the end of the survey participants wrote three factors that create anxiety and stress for them. I analyzed the words used for this question in wordle (www.wordle.net) to see if there were common words between the Freshmen and Senior class. Common words that were seen include: *work, family, school, grades, relationships, covid-19, and money* (left: Freshmen Wordle; right: Senior Wordle).

Discussion

My data confirms that a) there is a strong positive relationship between anxiety and stress; b) a moderate negative correlation between anxiety and coping methods and; c) a strong negative correlation between stress and coping methods through a Person's r analysis. Along with a Person's r analysis, I conducted an Independent-Samples t-test looking at the difference of anxiety and stress levels between the Freshmen and Senior class and a 2 x 3, between-groups ANOVA to look at the differences between anxiety, stress, and coping methods. My analysis from the Independent t-test did not show significant results. This means that I failed to reject the null and find differences in the levels that the Freshmen and Seniors experience. The results show that the Freshmen and Senior class show about the same amount of anxiety and stress. The 2 x 3, between-groups ANOVA shows that there is a difference between coping methods, anxiety and stress. The differences seen between coping methods, anxiety, and stress involve differences between low and medium levels of coping methods. These differences show that the scores of anxiety and stress are related to the level of coping methods Freshmen and Seniors portray. Although I rejected the null for three of my hypotheses, I was unable to reject the null for finding differences between anxiety and stress and coping methods, anxiety, and stress. However, there are several limitations for this: 1) a small sample size was used in this study and; 2) the power of my study was low (for the t-test I would have needed at least 128 participants to find a difference, and at least 211 participants to see a difference in the 2 x 3, between-groups ANOVA).

Conclusions/Future Directions

- A strong positive correlation between anxiety and stress.
- A moderate negative correlation between coping methods and anxiety.
- A strong negative correlation between coping methods and stress.
- No differences found between the scores of anxiety and stress for Freshmen and Seniors.
- Differences between low and medium coping methods showed significant differences between coping methods, anxiety, and stress.

What's Next:

- Replication of the study is needed
- Different College Settings should be looked at with this research.
- Extended research can look at different factors of stress and anxiety.
- Future strategies can possibly be incorporated into college programs/curriculum

References

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