

Introduction

- Research suggests a moderate to high incidence of depression, anxiety, and especially stress among college students (Ramon-Arbues et al., 2020).
- It is reasonable to believe that these **mental health outcomes might be inversely correlated with resilience**, the ability to adapt to new challenges, especially in females (Ahmed & Julius, 2015).
- Further, we hope to examine these effects for sex differences and whether these effects hold up for first generation college students.

Research Questions

Due to unique challenges faced by males and females, are there sex differences in resilience in college students?

Are there unique correlations between resilience and mental health outcomes for males and females separately?

Are there differences in resilience for first generation vs. non-first-generation students?

Method

- Participants:**
 - $N = 183$ (Female $N = 108$, Male $N = 71$, Non-Binary $N = 4$)
 - Age $M = 20.02$, $SD = 2.12$
- Materials:**
 - Brief Resilience Scale (BRS, 6 items)*; measured resilience on a scale from 1-5,
 - Depression, Anxiety, and Stress Scale (DASS-21; 12 items)*; measured depression, anxiety, and stress on a scale from 0-3.
- Procedure:**
 - As part of a larger study, a survey was administered using the Qualtrics XM online survey platform to collect data on mental wellbeing.

Results

- An independent samples t -test indicates a **significant difference in resilience between males and females**, $t(175) = -2.19$, $p = .030$.
- There are **no significant differences between first generation and non-first-generation students** for any of the variables analyzed.

Table 1. Means, Standard Deviations, and Correlations of Measures

	Females ($n = 108$)	Males ($n = 71$)	Non-First Gen ($n = 123$)	First Gen ($n = 58$)
Resilience	3.29 (.88)*	3.59 (.88)*	3.37 (.88)	3.38 (.04)
Depression	1.77 (.87)	1.87 (.91)	1.84 (.89)	1.90 (.99)
Anxiety	1.91 (.88)	1.90 (.80)	1.96 (.81)	2.03 (.97)
Stress	2.20 (.83)	2.19 (.91)	2.21 (.84)	2.28 (.96)

Note. *Indicates a significant difference between groups.

- To test the research question that resilience is associated with these mental health outcomes, a series of bivariate correlations were run. As expected, **there is a moderate negative correlation for resilience and each of the outcomes.**
 - Depression ($r = -.43$, $p < .001$); Anxiety ($r = -.38$, $p < .001$); Stress ($r = -.43$, $p < .001$)
- Additional correlations for males and females can be seen in Table 2. Note that **there is not a significant correlation between resilience and stress in males, although it is trending.**
 - Follow-up correlations also showed an **inverse association between resilience and all three outcomes for both first-generation and non-first-generation students.**

Table 2. Correlations of Measures

	Resilience	Depression	Anxiety	Stress
Resilience	--	-.39**	-.33**	-.21
Depression	-.44***	--	.62***	.62**
Anxiety	-.38***	.69***	--	.65***
Stress	-.49***	.69***	.69***	--

Note. Correlations for Females are below the diagonal whereas correlations for males are above. * $p < .05$. ** $p < .01$. *** $p < .001$

Discussion

- Our findings support the hypothesis that there is an inverse correlation between resilience and stress, anxiety, and depression.
- Building on the research by Ahmed & Julius (2015), our findings suggest a **correlation between resilience and mental health outcomes for both females and males.**
- Contrary to findings by Alvarado et al. (2017) who suggest higher resilience levels in first-generation college students, our results showed **no difference between first-generation and non-first-generation college students in resilience.**

Take Home Messages

- There is a difference in resilience for males and females.
- Higher resilience is related to lower depression, anxiety, and stress.
- There is no difference in resilience between first-generation and non-first generation students.

References

- Ahmed, Z., & Julius, S. H. (2015). Academic performance, resilience, depression, anxiety and stress among women college students. *Indian Journal of Positive Psychology*, 6(4), 367-370.
- Alvarado, A., Spataru, A., & Woodbury, C. (2017). Resilience & emotional intelligence between first generation college students and non-first generation college students. *FOCUS on Colleges, Universities & Schools*, 11(1), 1-10.
- Ramón-Arbués, E., Gea-Caballero, V., Granada-López, J. M., Juárez-Vela, R., Pellicer-García, B., & Antón-Solanas, I. (2020). The Prevalence of Depression, Anxiety and Stress and Their Associated Factors in College Students. *International Journal of Environmental Research and Public Health*, 17(19), 7001. <https://doi.org/10.3390/ijerph17197001>