# Predictability of Personality Traits and Perfectionism Types on Test Anxiety in College Students

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## **Abstract**

This research (IRB Protocol #S2022-08) sought to understand how personality and perfectionism traits function together to affect test anxiety in college students. We compared personality, perfectionism, and test anxiety scores between male and female students and between Hispanic and non-Hispanic students. Overall, our results showed significant differences in emotional stability, rigid perfectionism, self-critical perfectionism, and overall test anxiety. Regression and correlation analyses were used to assess the relationships between the Big Five Personality traits, the Big Three Perfectionism types, and test anxiety. These factors collectively accounted for significant amounts of variance in test anxiety scores (33%–65%). Comparison analyses were performed to determine whether there were prediction differences by sex and ethnicity. While female students' test anxiety was significantly predicted by self-critical perfectionism, extraversion, and emotional stability, the same could not be said for male students. We share some limited findings regarding the male students in our sample but stop short of claiming that personality and perfectionism traits are not predictive of test anxiety in the population due to much smaller representation in our sample relative to female students. In our group of Hispanic students, self-critical perfectionism, rigid perfectionism, extraversion, and emotional stability all provided unique prediction of test anxiety. Similarly, non-Hispanic students' test anxiety was predicted by self-critical perfectionism, extraversion, and emotional stability; however, narcissistic perfectionism emerged as a significant predictor only for this group. If universities are concerned with implementing effective initiatives for support of student learning and success, it is imperative that intentional consideration of the impact of non-cognitive skills and intersectional identities be considered.

Keywords: Personality, Perfectionism, Test Anxiety

## **Introduction**

College is the steppingstone for a lot of young adults to help better themselves and begin forging their own identity and goals. Tests, exams, and assessments of learning have always been the standard of evaluating student learning. Exams can be particularly stressful when they influence an individual's career choices and future opportunities (Peleg-Popko, 2004). Some exams, such as the MCAT, can be barriers to whole professions and can only be taken a select number of times (Tello & Goode, 2023). The purpose of this research was to investigate the relationships between personality, perfectionism, and test anxiety. This research studied how psychological traits can factor into an individual's test anxiety experiences.

Test anxiety is a specific component of academic anxiety (Cassady et al., 2019). Some researchers

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have revealed that testing anxiety is a complex construct that has at least one cognitive, one affective, and one behavioral part (Zeidner, 1998). The cognitive side includes self-focused attention, fixation with failure, negative thoughts, and doubts about one's abilities. The affective side includes hand or body sweat, heart racing, stomach pain or tension, dryness of the mouth, trembling in the hands or body, and subjective feelings of stress. The behavioral component of test anxiety may manifest as faulty studying and poor test taking skills and/or procrastination, avoidance, and escaping behaviors (Zeidner, 1998). The focus of this study is to assess personality and perfectionism factors that relate to and predict test anxiety experiences. Additionally, we investigated whether there were sex-related or ethnic differences in test anxiety and the relationships between it, personality, and perfectionism. This study posits that socialization, or cultural histories may shape the connections between our topics of interest.

The Big Five Personality model theorizes the organization of personality traits according to five different dimensions: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience (McCrae & John, 1992). Personality traits are more reliable in differentiating individuals by predicting patterns of acting, reacting, observing, and using those observations to characterize people (McCrae et al., 1999). Chamorro-Premuzic and colleagues (2008) found that both neuroticism and extraversion had significant correlations with test anxiety. They concluded that these established traits are better predictors of test anxiety than the core self-evaluation (Chamorro-Premuzic et al., 2008). Core self-evaluation is defined as an individual's global self-assessment which includes self-esteem, generalized self-efficacy, locus of control, and neuroticism/emotional stability (Judge et al., 1998).

Perfectionism is defined as setting excessively high standards for oneself, followed by an overly critical sense of self (Frost et al., 1990). Many studies have been conducted over the years to measure perfectionism and its correlation with personality traits (Stoltz & Ashby, 2007). According to Smith and colleagues (2016), there are three big components of perfectionism. Their self-report measure of perfectionism was designed to measure three global perfectionism factors: rigid perfectionism, self-critical perfectionism, and narcissistic perfectionism, all of which are composed of 10 core perfectionism facets (Smith et al., 2016). The ten core facets of perfectionism include: self-oriented perfectionism, self-worth contingencies, concern over mistakes, doubts about actions, self-criticism, socially prescribed perfectionism, hypercriticism, other-oriented perfectionism, entitlement, and grandiosity (Smith et al., 2016). Burcas et al. (2021) explained that test anxiety experiences can be studied using the biopsychosocial model as this phenomenon is a result of biological, psychological, and social processes. Moreover, it is influenced by a student's personal characteristics and then is reinforced by their own perception of the threat to their social status (Burcaş et al.). Hamachek (1978) hypothesized that individuals with maladaptive perfectionism are worried about making mistakes, sensitive to criticism, and tended to ruminate on events (Vanstone & Hicks, 2019). Eum and Rice (2010) found that maladaptively perfectionistic students were more likely to experience cognitive test anxiety where their adaptive perfectionists did not.

Stricker and colleagues (2019a) investigated personality, perfectionism, and test anxiety. They reported that perfectionism was primarily associated with the Big Five Personality traits of neuroticism and conscientiousness. Their findings were consistent with previous researchers who found that perfectionistic strivings were positively related to conscientiousness characterized by commitments to high standards, responsibility, discipline (Dunkley et al., 2012), and timely task completion (Enns & Cox, 2002). Conscientiousness can help prevent test anxiety by reducing self-sabotaging actions such as poor time management and lack of organization (Kadhiravan, 2015).

Although there is robust literature on the relationships between personality and test anxiety, personality and perfectionism, and perfectionism and test anxiety, there is a scarcity of research studies where all three have been studied simultaneously. Our choice to use lesser known—yet still reliably validated—mea-

sures of the Big Five Personality traits and dimensions of perfectionism was intended to replicate results from previous studies referenced throughout this work (IRB Protocol ##S2022-08). We posited that perfectionism and personality traits would provide unique prediction of reported test anxiety. The results of this study demonstrated the combined influence of personality and perfectionism traits on test anxiety experience and can be used to inform evidence-based interventions for students. Secondly, we tested our hypotheses stratified by sex and ethnicity to determine if demographic characteristics influenced the results pattern. The sample consisted of mostly White, female, cis-gendered students; however, there was a sizable proportion of students who identified as Hispanic or Latino/a/x. Nuanced findings about whether student characteristics (e.g. personality and identity traits) play a marked role in test anxiety experiences can be utilized to implement proactive and effective academic support that is adaptive to student needs.

# Method

# **Participants**

Two hundred and eight college students participated in the survey. The participants were 18–41 years of age (mean age was 19.8). The sample was mostly female (84.1%), cisgender (98.1%), White (83.2%), full-time (47.1%) and undergraduate (99%). Psychology majors made up the largest proportion of the sample (34.1%) and 48.6% of the participants were first-year students. The primary language recorded was English (85.6%) and approximately 38% reported some kind of employment. Demographic data highlighted ethnicity to include Hispanic or Latino/a/x and Non-Hispanic or Non-Latino/a/x because the university is on its way to classification as a Hispanic Serving Institution (HSI). Complete demographic information is reported in Table 1. Students did not receive any financial compensation for their participation.

Table 1 Participant Demographics n = 208

Category	Mean (SD)/Frequency (%) 19.83 (11)/18–41		
Age, years			
Sex			
Female	179 (86.1%)		
Male	29 (13.9%)		
Gender			
Men	29 (13.9%)		
Women	175 (84.1%)		
Nonbinary	3 (1.4%)		
Genderqueer	1 (0.5%)		
Ethnicity			
Hispanic or Latino/a/x	73 (35.1%)		
Non-Hispanic or Non-Latino/a/x	135 (64.9%)		
Did not respond	1 (<1%)		
Race			
Asian or Asian American	8 (3.8%)		
American Indian or Alaska Native	15 (7.2%)		

Black or African American	25 (12%)
Multiracial	14 (6.7%)
White or Caucasian	173 (83.2%)
Native Hawaiian/Other Pacific Islander	2 (1%)
Class Rank	
Undergraduate Freshman	101 (48.6%)
Undergraduate Sophomore	43 (20.7%)
Undergraduate Junior	36 (17.3%)
Undergraduate Senior	26 (12.5%)
Graduate Student	2 (1%)
Highest Educational Level	
Some college (<1 year)	95 (45.7%)
1 or more years; no degree	82 (39.4%)
Associate's degree	30 (14.4%)
Bachelor's Degree (BA, AB, BS, BBA)	1 (0.5%)
Primary Occupational Status	
Full-Time Job	17 (8.2%)
Part-Time Job	60 (28.8%)
Self-Employed	3 (1.4%)
Full-Time Student/Not-Employed	128 (61.5%)
Native Language	
English	178 (85.6%)
Spanish	23 (11.1%)
Other	8 (3.8%)
Majors (Consolidated)	
College of Arts and Sciences	108 (51.9%)
College of Health and Human Services	66 (31.7%)
College of Business	14 (6.7%)
School of Entrepreneurship	8 (3.8%)
College of Education	5 (2.4%)
The Water School	2 (1%)
Graduate School	2 (1%)
College of Engineering	1 (<1%)
Undeclared	8 (3.8%)

### Materials

Participants completed a Qualtrics survey which included the Big Three Perfectionism scale (BTPS: Smith et al., 2016), the Big Five Personality Test (Goldberg, 1992), and a Test Anxiety Inventory (adapted using Sarason, 1977; Spielberger, 1980). The BTPS is a 45-item inventory with three subscales measuring dimensions of perfectionism (rigid perfectionism, self-critical perfectionism, narcissistic perfectionism) which further breakdown into 10 perfectionism sub-facets. The participants completed the 50-item Big Five test which measured the five dimensions of personality (extraversion, agreeableness, conscientiousness, emotional stability, and intellect/imagination). Ratings on both the BTPS and Big Five ranged from 1-very inac-

curate to 5-very accurate. To measure test anxiety, we utilized a Test Anxiety Inventory which focused on General Test Taking Anxiety, Bodily Reactions, and Thought Disruptions. Participants reported how often they experienced related thoughts and symptoms (never, sometimes, usually, always). They rated 50 items in total. Examples of items from each instrument are provided in Table 2. SPSS version 29 was used for data management and analysis.

Table 2

Example Items from Survey Instruments

Big 5 Personality Test	Example personality items
Imagination/Intellect	I sympathize with others feelings, spend time reflecting on things
Conscientiousness	I get chores done right away
Extraversion	I talk to a lot of different people at parties
Agreeableness	I make other people feel at ease
Emotional Stability	I get stressed out easily
Big 3 Perfectionism Scale	Example perfectionism items
Rigid Perfectionism	I always need to be aiming for perfection to feel "right" about myself.
Narcissistic Perfectionism	I feel dissatisfied with other people, even when I know they are trying their best.
Self-Critical Perfectionism	Making even a small mistake would upset me.
<b>Test Anxiety Inventory</b>	Example test anxiety items
General Test Taking Anxiety	It seems to me that test sessions should not be made the formal, tense situations they are
Bodily Reactions	I often find my fingers tapping or my legs jiggling while taking a test
Thought Disruptions	I cannot stand to have people walking around watching me while I take a test

### Procedure

Data were collected using a survey created and administered through Qualtrics® (an online survey platform). Survey questions included demographics (major, highest level of education, and occupational status) and the test anxiety, perfectionism, and personality instruments described previously. This online survey was completed in one sitting and was conducted after acquiring consent from participants. They were thoroughly debriefed after submitting their responses. Students accessed the survey through SONA and received 1 credit for a course research participation assignment upon completion.

## Results

For all analyses, our outcome variable test anxiety is operationalized as the *overall* score on the Test Anxiety Inventory and alpha was set *a priori* at 0.05. In the overall sample of students, emotional stability, self-critical perfectionism, and rigid perfectionism were the most significant in predicting test anxiety. Further analyses were conducting utilizing the demographics of sex and ethnicity. It should be noted that when stratifying by sex the majority of students were cisgendered and therefore the use of the binary 'male' and 'female' are

used in this study. In the overall sample, the averages for the Big Five Personality traits were: agreeableness M = 3.89 (SD = .58), conscientiousness M = 3.34 (SD = .51), emotional stability M = 2.9 (SD = .68), extraversion M = 2.9 (SD = .77), and intellect imagination M = 3.55 (SD = .48). Descriptives for the Big Three Perfectionism types were: rigid perfectionism M = 2.86 (SD = .79), self-critical perfectionism M = 3.26 (SD = .77), and narcissistic perfectionism M = 2.06 (SD = .58). Overall test anxiety scores averaged M = 2.94 (SD = .62). Additional descriptive statistics stratified by sex and ethnicity can be found in Table 3.

Table 3

Descriptive Statistics Values for Variables of Interest

	Female	Male	Hispanic/Lati-	Non-Hispanic/	Observed
	n = 179	n=29	no $n = 73$	Latino $n = 135$	Range
Trait	M(SD)	M(SD)	M(SD)	M(SD)	min-max
Agreeableness	3.90(.59)	3.82(.50)	3.92(.60)	3.87(.57)	3.82–3.92
Conscientiousness	3.36(.51)	3.23(.53)	3.34(.58)	3.34(.47)	3.23–3.36
Emotional Stability	2.82(.63)	3.39(.72)	2.97(.75)	2.86(.63)	2.82–3.39
Extraversion	2.92(.78)	2.74(.70)	2.76(.70)	2.97(.80)	2.74–2.97
Intellect/Imagination	3.54(.48)	3.62(.42)	3.57(.54)	3.53(.44)	3.53-3.62
Narcissistic Perfection- ism	2.07(.57)	2.01(.63)	2.08(.58)	2.05(.58)	2.01–2.08
Rigid Perfectionism	2.91(.78)	2.58(.80)	2.93(.84)	2.83(.76)	2.58–2.93
Self-Critical Perfectionism	3.32(.75)	2.86(.75)	3.33(.79)	3.22(.75)	2.86–3.33
Test Anxiety	2.99(.62)	2.63(.49)	2.91(.65)	2.96(.60)	2.63–2.99

Comparisons of Variables of Interest

When personality, perfectionism, and test anxiety scores were compared between cisgendered female and male students, there were significant differences for emotional stability t(206) = 4.38, p < .001, d = .65, rigid perfectionism t(206) = -2.09, p = .020, d = .78, self-critical perfectionism t(206) = -3.08, p < .001, d = .75, and overall test anxiety t(206) = -3.01, p < .001, d = .60. Male students reported higher levels of emotional stability, while female students reported higher levels of rigid perfectionism, self-critical perfectionism, and overall test anxiety (See Table 3 for group means).

Personality, perfectionism, and test anxiety scores were also compared between Hispanic and Non-Hispanic students. A significant difference was found in extraversion with the Hispanic students reporting a lower extraversion trait than their non-Hispanic peers, t(206) = -1.92, p = .028, d = .77. There were no other significant differences between the two groups on any other trait or overall test anxiety (see Table 3 for values).

## Correlations with Test Anxiety

The relationships between the Big Five Personality traits, the Big Three Perfectionism types, and test anxiety were assessed using Pearson Correlations (all correlations are reported in Table 4). Of the Big Five Personality traits, emotional stability had the strongest relationship with test anxiety r(202) = -.47, p < .001 where lower levels of emotional stability were associated with higher levels of test anxiety. For the Big Three Perfectionism types, both self-critical and rigid perfectionism were significantly related to test anxiety [self-critical: r(204) = .51, p < .01; rigid: r(204) = .29, p < .001]. Both positive correlations demonstrate that higher levels of test anxiety were reported by students with higher levels of these perfectionist characteristics.

When stratified by sex, female students reported conscientiousness and emotional stability out of the Big Five Personality traits that significantly related to test anxiety. Conscientiousness (r(170) = -.14, p < .05) and emotional stability (r(170) = -.46, p < .001) had a negative relationship with test anxiety. Out of the Big Three Perfectionism types, rigid perfectionism (r(170) = .28, p < .001), and self-critical perfectionism (r(170) = .50, p < .001) both positively related to test anxiety. Male students reported that out of the Big Five Personality traits and Big Three Perfectionism types, self-critical perfectionism positively related to test anxiety, r(20) = .38, p < .05.

When assessed by ethnicity, Hispanic students reported emotional stability out of the Big Five Personality traits was negatively related to test anxiety, r(64) = -.51, p < .001. Out of the Big Three Perfectionism types, Hispanic students reported that rigid (r(64) = .21, p = .037) and self-critical perfectionism (r(64) = .54, p < .001) positively related to test anxiety. Non-Hispanic students reported similarly to their Hispanic peers that emotional stability (r(126) = -.44, p < .001), rigid perfectionism (r(126) = .35, p < .001), and self-critical perfectionism (r(126) = .50, p < .001) all correlated with test anxiety.

Table 4

Pearson Correlations (r) between Personality/Perfectionism Traits and Test Anxiety

Test Anxiety						
Personality and Perfectionism Traits	Female	Male	Hispanic	Non-Hispanic		
	n = 179	n=29	n = 73	n = 135		
Agreeableness	.11	.16	.19	.09		
Conscientiousness	14*	22	11	14		
Emotional Stability	46***	30	54***	44***		
Extraversion	.07	16	.17	.01		
Intellect/Imagination	01	.23	05	.04		
Narcissistic Perfectionism	.05	13	.06	.02		
Rigid Perfectionism	.28***	.18	.21*	.35***		
Self-Critical Perfectionism	.50***	.38**	.54***	.50***		

Note. \*p<.05, \*\*p<.01, \*\*\*p<.001

# Regression Analyses

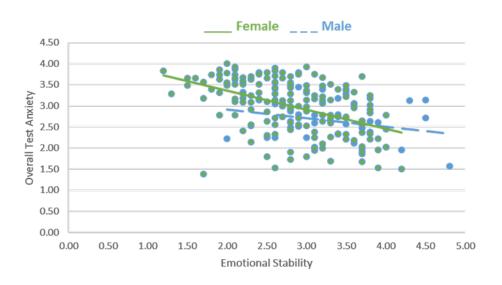
A multiple regression analysis was used to determine if personality traits and perfectionism types were

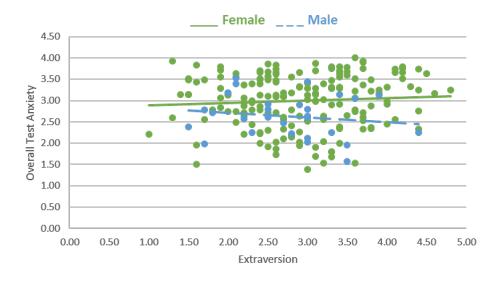
predictive of test anxiety in our sample. In the overall sample, the results showed that the combination of personality and perfectionism predictors explained 35% of the variance in test anxiety scores,  $R^2 = .35$ , F(8,199) = 13.46, p < .001. Specifically, emotional stability ( $\beta = -.25$ , p = .001) and extraversion ( $\beta = .19$ , p = .01) were the most significant predictors of test anxiety among the Big Five Personality traits. Self-critical perfectionism ( $\beta = .47$ , p < .001), was the most significant perfectionism traits for predicting test anxiety out of the Big Three Perfectionism types.

To determine if prediction differences were present when considering participant characteristics, stepwise regression analyses were conducted and stratified by sex and ethnicity. Results for female students showed that 35% of the predictor variables accounted for the variance in test anxiety,  $R^2 = .35$ , F(8,170) = 11.53, p < .001. Out of the Big Five Personality traits, emotional stability ( $\beta = -.27$ , p < .001) and extraversion ( $\beta = .21$ , p < .01) provided unique prediction of test anxiety for female students (Figure 1).

Figure 1

Personality Trait Predictors of Test Anxiety by Student Sex



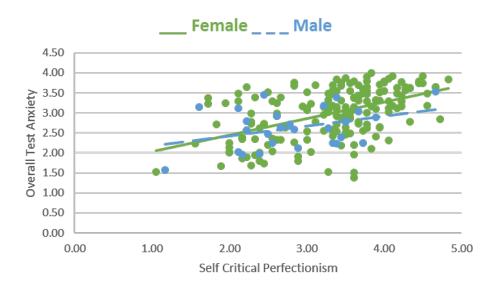


*Note.* Dashed trend lines indicate non-significant results.

Out of the Big Three Perfectionism types, self-critical perfectionism ( $\beta$  = .49, p < .001) predicted test anxiety (Figure 2).

Figure 2

Perfectionism Trait Predictor of Test Anxiety by Student Sex



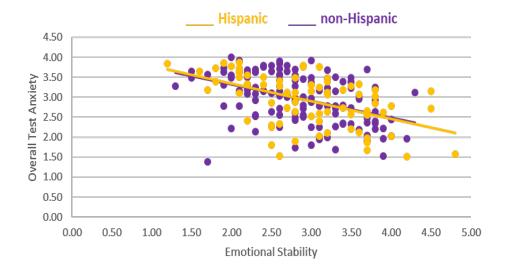
*Note.* Dashed trend lines indicate non-significant results.

Contrastingly, the results for male students did not show this pattern. Instead, we found no significant prediction of the personality and perfectionism traits on test anxiety scores,  $R^2 = .38$ , F(8,20) = 1.53, p = .21. It should be noted that the male proportion of our sample was much smaller (n = 29), and it is possible that analyses of just this group were underpowered (possible Type II error).

The stepwise linear regression analyses by ethnicity showed significant prediction of test anxiety for Hispanic students,  $R^2 = .43$ , F(1,68) = 4.82, p < .05 with self-critical perfectionism ( $\beta = .63$ , p < .001), emotional stability ( $\beta = -.22$ , p < .06), extraversion ( $\beta = .23$ , p < .05), and rigid perfectionism ( $\beta = -.28$ , p < .05) being significant predictors. Cumulatively, personality and perfectionism traits explained 43% of the variance in test anxiety scores for Hispanic students. Comparatively, the regression analysis was also significant for the non-Hispanic student group,  $R^2 = .33$ , F(1,130) = 6.02, p < .05 and we found that self-critical perfectionism ( $\beta = .49$ , p < .001), emotional stability ( $\beta = -.20$ , p < .05), extraversion ( $\beta = .19$ , p < .05), and narcissistic perfectionism ( $\beta = -.21$ , p < .01) were the significant predictors of test anxiety in this group. While significant, personality and perfectionism traits explained the variance in test anxiety scores to a lesser extent (33%) for the non-Hispanic students (Figures 3 and 4).

Figure 3

Personality Trait Predictors of Test Anxiety by Student Ethnicity



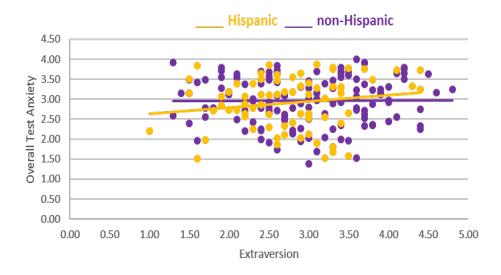
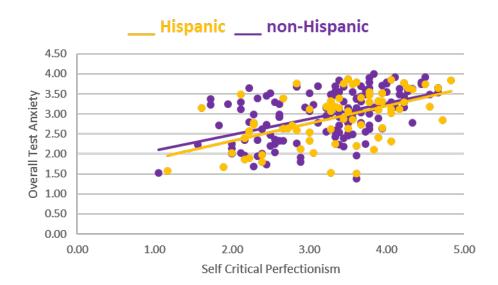
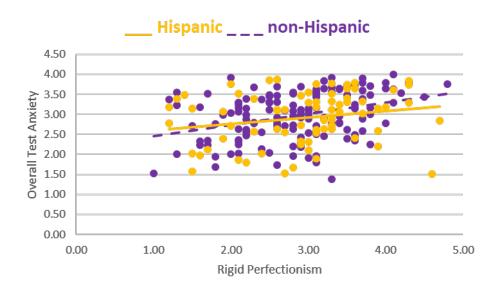
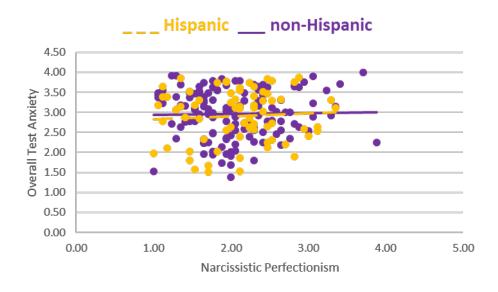


Figure 4

Perfectionism Trait Predictors of Test Anxiety by Student Ethnicity







*Note.* Dashed trend lines indicate non-significant results.

## Discussion

This research sought to understand the concurrent relationships between personality, perfectionism, and test anxiety within the college student population. The prediction that perfectionism and personality traits would explain significant variation in test anxiety was supported by the results. Emotional stability, self-critical perfectionism, and rigid perfectionism respectively were the most predictive of test anxiety amongst the student sample. This finding is in line with other studies focusing on personality and perfectionism (Lewis & Cardwell, 2020), as well as perfectionism and test anxiety (Gnilka et al., 2012). Lewis and Cardwell found, when researching medical students in the United Kingdom, that there was an association between neuroticism and self-critical perfectionism in mental ill-health amongst professional students. The current study's findings are further supported by research by Gnilka and colleagues who found positive associations between test anxiety and maladaptive perfectionism. This is one of the first studies to put all three of these variables together and test the combined prediction of personality and perfectionism on test anxiety in undergraduate students. The significant findings of this study emphasize the importance of this research and for institutions to carefully consider how best to utilize findings to inform student support initiatives.

Other studies have shown significant differences in test anxiety and academic performance in female and male students (Chapell et al., 2005; Peña et al., 2016). Female students were shown to have higher test anxiety and higher GPAs than their male counterparts. Due to these reported patterns, we stratified our investigation by sex to determine if there were differences in prediction by student sex. Interestingly, personality and perfectionism did not significantly predict test anxiety for male students. Results remained significant for female students where emotional stability, extraversion, and self-critical perfectionism were the most predictive of test anxiety for female students. These findings are consistent with Hartman and colleagues (2017) who also found that low emotional stability predicted higher test anxiety. While surprising, we recommend caution in broad generalization of our results to male college students in the population as our null finding may be due to underpowered analyses because of the smaller representation of males in our sample. The findings support the idea that student success interventions for female students who score higher in self-critical perfectionism and lower in emotional stability may need more initial support in their collegiate academic careers.

When considering student ethnicity, self-critical perfectionism, emotional stability, extraversion, and rigid perfectionism were significantly predictive of test anxiety in Hispanic or Latino/a/x students. Self-critical perfectionism was the strongest predictor. This finding supports the idea that universities should consider ethnic or cultural factors when implementing student support plans. Ethnic and cultural identities could matter for how personality and perfectionism traits impact student success and academic achievement. Swail et al. (2003) showed that for the retention of minority students, academic and student services were among the five factors that help retain these students. Our results support the assertion that universities attaining Hispanic Serving Institution (HIS) status should consider how best to implement student success programs that proactively consider how student groups who may hold higher levels of self-critical perfectionism can be empowered in a proactive way.

Administering the Big Five Personality and the Big Three Perfectionism scales to students at universities may lead to better student success and retention. According to this study, using these scales can predict the test anxiety of students. This study has shown that there are differences amongst students by sex and ethnicity, with how personality and perfectionism predict test anxiety. Institutions should consider how best to set up student success plans considering the effect of personality and perfectionism on test anxiety with

careful attention placed on the differences between sex and ethnicity.

## Limitations

Limitations of this study include limited sample representation for men, people of color, and non-cisgendered people. While there was significant data to stratify results by ethnicity the student sample contained mostly female White cis-gendered students. A broader demographic sample may have led to different results, so caution is needed when considering generalizing these results to students that were not represented in this sample. Another limitation to consider is the socioeconomic status and first-generation status of the student sample. This information was not collected in the present study but may be useful in understanding how other demographic factors might influence how personality and perfectionism predict test anxiety in college students.

These data were collected utilizing self-report instruments. Common criticisms of self-report measures include participants not being able to assess themselves objectively or concerns about participant honesty. It might be possible that students' reports of their personality, perfectionism, and test anxiety experiences were unreliable; however, the measures used are widely validated and deemed reliable. Alternate methods of assessing physiological aspects of test anxiety, e.g., blood pressure monitoring, skin conductivity recording, would provide objective data of physical responses; however, they are not accessible to most undergraduate student researchers and require expensive equipment and specialized training. Moreover, these methods are not effective ways to assess cognitive or emotional (i.e., affective) test anxiety experience.

## **Future Studies**

Future studies should aim to gather a more diverse sample of students, containing a more gender and ethnically diverse sample at different universities to better expound upon these findings. It may also be pertinent to expand upon the socioeconomic status and first-generation status of the student sample in future studies. This would give better understanding of how these variables impact personality traits, perfectionism types, and test anxiety levels of students to help elevate the student success and retention rates at universities.

### Conclusion

This study utilized the Big Three Perfectionism scale, the Big Five Personality Test, and a Test Anxiety Inventory to assess personality traits and perfectionism types in predicting test anxiety in undergraduate students. Of the personality traits and perfectionism types, emotional stability, self-critical perfectionism, and rigid perfectionism were the most predictive of test anxiety. Institutions wishing to gain higher student retention rates may wish to utilize the findings in this study to further their academic support especially when considering their students sex and ethnicity. Future studies may wish to compensate for this study's limitations by including consideration for student's socioeconomic background and first-generation status to further the study's generalization.

### References

Burcaş, S., & Creţu, R. Z. (2021). Multidimensional perfectionism and test anxiety: A meta-analytic review of two decades of research. *Educational Psychology Review*, *33*, 249–273. https://doi.org/10.1007/s10648-020-09531-3

- Cassady, J. C., Pierson, E. E., & Starling, J. M. (2019). Predicting student depression with measures of general and academic anxieties. *Frontiers in Education*, *4*, 1–9. https://doi.org/10.3389/fed-uc.2019.00011
- Chamorro-Premuzic, T., Ahmetoglu, G., & Furnham, A. (2008). Little more than personality: Dispositional determinants of test anxiety (the Big Five, core self-evaluations, and self-assessed intelligence). *Learning and Individual Differences*, 18(2), 258–263. https://doi.org/10.1016/j.lindif.2007.09.002
- Chapell, M. S., Blanding, Z. B., Silverstein, M. E., Takahashi, M., Newman, B., Gubi, A., & McCann, N. (2005). Test anxiety and academic performance in undergraduate and graduate students. *Journal of Educational Psychology*, 97(2), 268–274. https://doi.org/10.1037/0022-0663.97.2.268
- Dunkley, D. M., Blankstein, K. R., & Berg, J. L. (2012). Perfectionism dimensions and the five–factor model of personality. *European Journal of Personality*, 26(3), 233–244. https://doi.org/10.1002/per.829
- Enns, M. W., & Cox, B. J. (2002). The nature and assessment of perfectionism: A critical analysis. In G. L. Flett & P. L. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 33–62). American Psychological Association. https://doi.org/10.1037/10458-002
- Eum, K., & Rice, K. G. (2011). Test anxiety, perfectionism, goal orientation, and academic performance. Anxiety, Stress and Coping: An International Journal, 24, 167–178. https://doi.org/10.1080/1061580 6.2010.488723
- Frost, R. O., Marten, P., Lahart, C., & Rosenblate, R. (1990). The dimensions of perfectionism. *Cognitive Therapy and Research*, *14*(5), 449–468. https://doi.org/10.1007/BF01172967
- Gnilka, P. B., Ashby, J. S., & Noble, C. M. (2012). Multidimensional perfectionism and anxiety: Differences among individuals with perfectionism and tests of a coping-mediation model. *Journal of Counseling and Development: JCD*, 90(4), 427–436. https://doi.org/10.1002/j.1556-6676.2012.00054.x
- Goldberg, L. R. (1992). The development of markers for the Big-Five factor structure. *Psychological Assessment*, *4*, 26–42. https://doi.org/10.1037/1040-3590.4.1.26
- Hartman, S. D., Wasieleski, D. T., & Whatley, M. A. (2017). Just breathe: The effects of emotional dysregulation and test Anxiety on GPA. *College Student Journal*, *51*(1), 142–150.
- Kadhiravan, S. (2015). Personality and test anxiety of school students. *International Journal of Education and Psychological Research*, *2*, 9–13.
- Lewis, E. G., & Cardwell, J. M. (2020). The big five personality traits, perfectionism, and their association with mental health among UK students on professional degree programmes. *BMC Psychology*, 8(1), NA. https://link.gale.com/apps/doc/A627383077/AONE?u=gale15690&sid=book-mark-AONE&xid=13f7144a
- McCrae, R. R., Costa, P. T., de Lima, M. P., Simões, A., Ostendorf, F., Angleitner, A., ... & Piedmont, R. L. (1999). Age differences in personality across the adult life span: Parallels in five cultures. *Developmental Psychology*, 35(2), 466–477. doi:10.1037/0012-1649.35.2.466
- McCrae, R. R. & John, O. P. (1992). An introduction to the Five-Factor Model and its applications. *Journal of Personality*, 60(2),175–215. https://doi.org/10.1111/j.1467-6494.1992.tb00970.x
- Peleg-Popko, O. (2004). Differentiation and test anxiety in adolescents. *Journal of Adolescence*, 27(6), 645–662. https://doi.org/10.1016/j.adolescence.2004.06.002

- Peña, N., Suárez-Pellicioni, M., & Bono-Cabré, R. (2016). Gender differences in test anxiety and their impact on higher education students' academic achievement. *Procedia Social and Behavioral Sciences*, 228, 154–160. https://doi.org/10.1016/j.sbspro.2016.07.023
- Sarason, I. G. (1972). Experimental approaches to test anxiety: Attention and the uses of information. *Anxiety: Current trends in theory and research*, 2(5), 383–403.
- Smith, M. M., Saklofske, D. H., Stoeber, J., & Sherry, S. B. (2016). The big three perfectionism scale: A new measure of perfectionism. *Journal of Psychoeducational Assessment*, *34*(7), 670–687. <a href="https://doi.org/10.1177/0734282916651539">https://doi.org/10.1177/0734282916651539</a>
- Spielberger, C. D., Gonzalez, H. P., Taylor, C. J., Anton, E. D., Algaze, B., Ross, G. R., & Westberry, L. G. (1980). *Manual for the Test Anxiety Inventory*. Redwood City, CA: Consulting Psychologists Press.
- Stricker, J., Buecker, S., Schneider, M., & Preckel, F. (2019). Multidimensional Perfectionism and the Big Five Personality Traits: A Meta–Analysis. European Journal of Personality, *33*(2), 176–196. https://doi.org/10.1002/per.2186
- Stoltz, K., & Ashby, J. S. (2007). Perfectionism and lifestyle: Personality differences among adaptive perfectionists, maladaptive perfectionists, and nonperfectionists. *Journal of Individual Psychology*, 63(4): 414–423.
- Swail, W., Redd, K., & Perna, L. (2003). Retaining minority students in higher education. *ASHE-ERIC Higher Education Report*, 30(2). <a href="http://lst-iiep.uiep-unesco.org/cgi-bin/wwwi32.exe/[in=epidoc1.in]/?t2000=019635/(100).">http://lst-iiep.uiep-unesco.org/cgi-bin/wwwi32.exe/[in=epidoc1.in]/?t2000=019635/(100).</a>
- Tello, C., & Goode, C. A. (2023). Factors and barriers that influence the matriculation of underrepresented students in medicine. *Frontiers in Psychology*, *14*. https://doi.org/10.3389/fpsyg.2023.1141045
- Vanstone, D. M. & Hicks, R. E. (2019). Transitioning to university: Coping styles as mediators between adaptive-maladaptive perfectionism and test anxiety. *Personality and Individual Differences*, *141*, 68–75. https://doi.org/10.1016/j.paid.2018.12.026.
- Zeidner, M. (1998). Test anxiety: The state of the art. Plenum Press.