

The effects of personality, procrastination, and self-efficacy on academic success

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Abstract

Several variables, including personality, procrastination, and academic self-efficacy have been associated with academic success. This study assesses these associations and examines whether personality (specifically conscientiousness), procrastination, or self-efficacy is the strongest predictor of academic success. A survey assessing these variables was given to students in randomly selected upper level classes at LaGrange College. It was predicted that conscientiousness would be the strongest predictor of academic success. Results of this study showed a significant positive correlation between both conscientiousness and self-efficacy and academic success. A significant negative correlation was found between procrastination and academic success. Self-efficacy was found to be the strongest predictor of academic success overall. In males, conscientiousness was the strongest predictor, while, in females, no variable was a significant predictor.

Introduction

Academic success has been associated with several different behaviors and personality characteristics.

- Personality
 - Personality must be understood separately from intelligence (Nofle & Robins, 2007)
 - Most research has studied correlations between the Big Five personality traits and GPA and standardized test scores (Nofle & Robins, 2007)
 - Conscientiousness predicts GPA better than any other Big Five trait (McAbee & Oswald, 2013; Nofle & Robins, 2007)
 - Neuroticism has been associated with lower academic performance (McAbee & Oswald, 2013)
- Procrastination: “the irrational delay of behavior” (Steel, 2007)
- 70% of college students admit to procrastinating (McCloskey & Scielzo, 2015)
- Possible reason for prevalence of student procrastination is the unpleasantness of studying (Kaftan & Freund, 2019)
- Effects of procrastination have been widely disagreed upon with some researchers arguing that it is an acceptable study strategy that leads to success while others claim that it only causes negative side effects such as stress and physical illness (Brinthaup & Shin, 2001; Glick & Orsillo, 2015)
- Has been associated with low conscientiousness (Steel, 2007)
- Academic self-efficacy: one’s belief in themselves that they can perform an action involved with academic success (Wilcox & Nordstokke, 2019)
- Students with higher self-efficacy see tasks as challenges instead of threats (Aimé et al., 2017; Wilcox & Nordstokke, 2019)
- Positive feedback leads to higher self-efficacy which leads to more academic success (Brown, Peterson, & Yao, 2016)
- Associated with low procrastination (Wilcox & Nordstokke, 2019)
- Hypotheses
 - Significant positive correlation between conscientiousness and academic success
 - Significant positive correlation between academic self-efficacy and academic success
 - Significant negative correlation between procrastination and academic success
 - Conscientiousness will still be a significant predictor of academic success when controlling for procrastination and self-efficacy.

Materials & Methods

Participants

- 111 undergraduate students (32 males, 79 females) participated in this study
- Age – 18-50 years (\bar{x} = 22.32)
- Race – 82 European American or White, 21 African American or Black, 2 Asian, 2 Latinx, and 1 Native American
- Class Status – 8 second-year students, 64 third-year students, 32 fourth-year students, 7 fifth-year students
 - 4 first-year, first-semester students participated, but their data was not included due to their lack of a college GPA
- Participants came from randomly selected upper-level undergraduate courses at LaGrange College

Materials

- A pencil/paper survey was designed by combining the following:
- Big Five Inventory—2 Short Form (BFI-2-S)
 - Extraversion (α = .55, n = 6)
 - Agreeableness (α = .75, n = 6)
 - Conscientiousness (α = .71, n = 6)
 - Negative Emotionality (α = .78, n = 6)
 - Openness (α = .63, n = 6)
- Academic Procrastination Scale (APS)
 - α = .95, n = 25
- The “Class” portion of the Career Decision-Making Self-Efficacy Beliefs Instrument (CDMSE-SF)
 - α = .81, n = 7
- Questions developed to assess students’ academic success
 - α = .77, n = 2

Procedure

- Surveys were given either at the beginning or end of class, depending on instructors’ preferences
- After instructions were given, the survey was distributed to the class and adequate time was provided to provide accurate responses
- Upon completion, surveys were placed by the participants in a manila envelope at the front of the room

Results

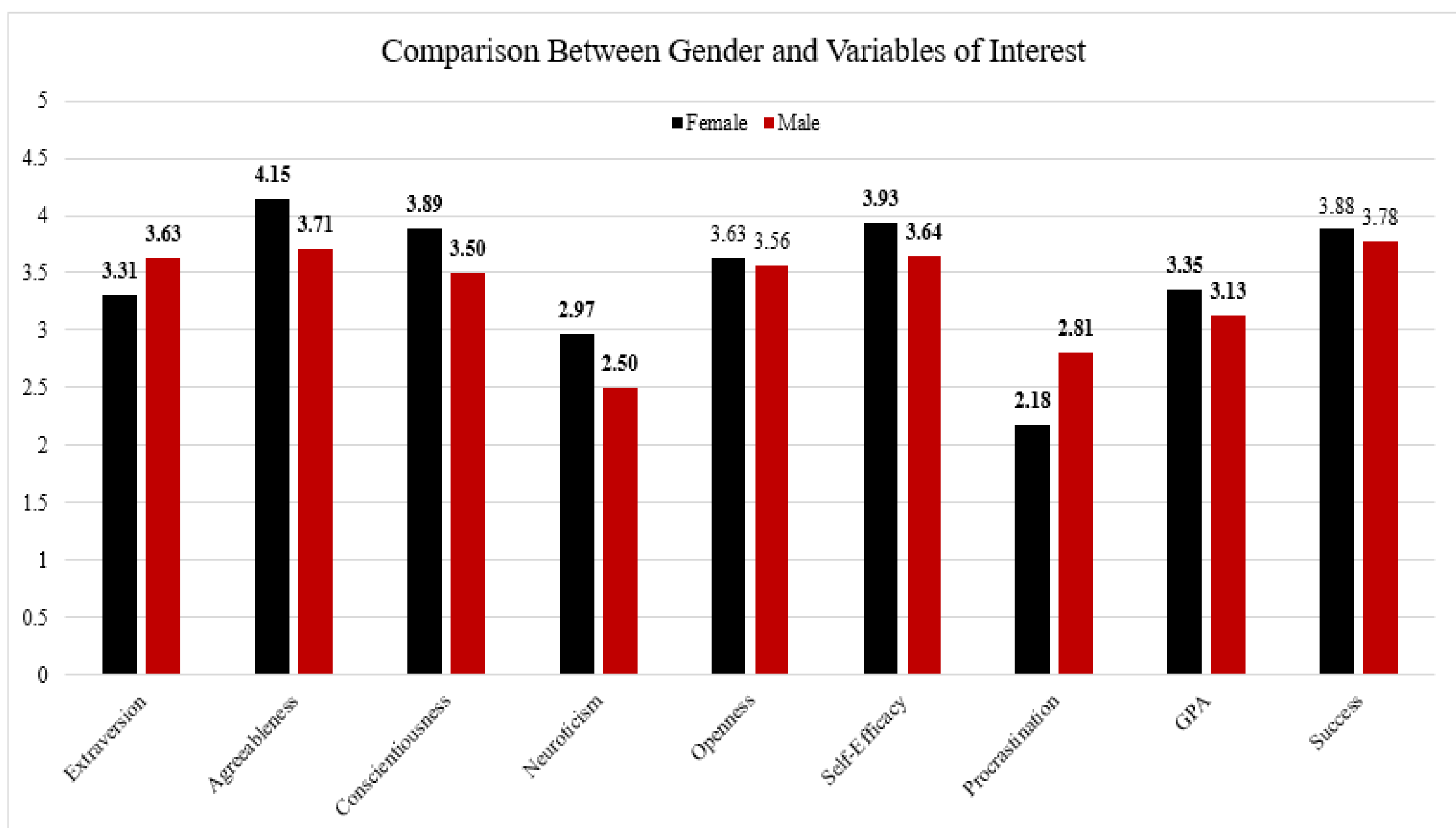
- Significant correlations were found between
 - conscientiousness and GPA, r = .34, p = .000
 - academic self-efficacy and GPA, r = .35, p = .000
 - procrastination and GPA, r = -.32, p = .001

Correlations Between All Variables of Interest

	Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness	Self-Efficacy	Procrastination	Success	GPA
Extraversion	1.00								
Agreeableness	.03	1.00							
Conscientiousness	.22*	.51**	1.00						
Neuroticism	-.50**	-.03	-.20*	1.00					
Openness	.12	.25**	.20*	-.07	1.00				
Self-Efficacy	.10	.31**	.56**	-.25**	.32**	1.00			
Procrastination	-.14	-.42**	-.70**	.21*	-.18	-.69**	1.00		
Success	.10	.21*	.37**	-.15	.01	.57**	-.45**	1.00	
GPA	-.02	.23*	.34**	.02	.09	.35**	-.32**	.53**	1.00

* p < .05 ** p < .01

- A hierarchical regression was done to determine which independent variable was the strongest predictor of academic success
 - Conscientiousness did not predict GPA while controlling for procrastination and self-efficacy, β = .20, $t(105)$ = 1.58, p = .116.
 - Procrastination did not predict GPA while controlling for conscientiousness and self-efficacy, β = -.02, $t(105)$ = -.13, p = .898.
 - Self-efficacy marginally significantly predicted GPA while controlling for conscientiousness and procrastination, β = .22, $t(105)$ = 1.73, p = .087.



Note. Compared means between genders for all variables of interest. Bolded text denotes p < .05 for independent samples t-test on that variable.

- Males had significantly higher...
 - Extraversion, $t(109)$ = -2.15, p = .033
 - Procrastination, $t(109)$ = -4.18, p = .000
- Females had significantly higher...
 - Agreeableness, $t(109)$ = 3.08, p = .003
 - Conscientiousness, $t(109)$ = 3.03, p = .003
 - Neuroticism, $t(109)$ = 3.01, p = .003
 - Self-efficacy, $t(109)$ = 2.14, p = .034
 - GPA, $t(104)$ = 2.32, p = .024

Exploratory analyses

- For males
 - Conscientiousness did significantly predict GPA while controlling for procrastination and self-efficacy, β = .56, $t(38)$ = 2.86, p = .007.
 - Procrastination did not predict GPA while controlling for conscientiousness and self-efficacy, β = .35, $t(38)$ = 1.24, p = .223.
 - Self-efficacy did not predict GPA while controlling for conscientiousness and procrastination, β = .39, $t(38)$ = 1.57, p = .125.
- For females
 - Conscientiousness did not predict GPA while controlling for procrastination and self-efficacy, β = -.05, $t(66)$ = -0.29, p = .772.
 - Procrastination did not predict GPA while controlling for conscientiousness and self-efficacy, β = -.05, $t(66)$ = -0.29, p = .775.
 - Self-efficacy did not predict GPA while controlling for conscientiousness and procrastination, β = 0.18, $t(66)$ = 1.16, p = .249.

Conclusion

- My hypothesis that personality and academic self-efficacy would each positively correlate with academic success and that procrastination would negatively correlate with academic success was supported.
- My second hypothesis that conscientiousness would be the strongest predictor overall was not supported.
 - At this point, it is unclear why conscientiousness was the strongest predictor of academic success in males but not overall while there was no significant predictor for females.
- A possible explanation for why academic self-efficacy was a marginally significant predictor of academic success overall is that students’ belief in themselves can help motivate them to complete their work and not shy away from a challenge.

Limitations

- Use of Big Five Inventory-2 Short Form instead of Long Form
- Participants from one private school in Georgia may not be generalizable

Future Research

- Examine why conscientiousness is a strong predictor in males but not in females or overall
- Examine whether there is a separate quality that is the strongest predictor for academic success in females

