



RESEARCH PAPER

The Role of Conscientiousness and Neuroticism in General Procrastination: Exploring the Evidences among University Student Athletes and Non-athletes

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ABSTRACT

The aim of this study was to investigate the association between big five personality traits and general procrastination among university student athletes and non-athletes. A cross-sectional design was utilized using a sample of 450 university students from eight universities. BFPTs were measured using (BFI-10), while general procrastination was assessed using (GPS-9). Hierarchical regression analyses revealed that conscientiousness was a significant negative predictor of general procrastination in both student athlete and non-athlete groups, suggesting that students with greater levels of conscientiousness were unlikely to procrastinate. In addition, among student athlete's neuroticism also strongly and positively associated with general procrastination, indicating that athletes with higher neuroticism tended to procrastinate more. These findings further highlighted the importance of personality in understanding general procrastination and recommend the use of personality-based therapies, to enhance academic results and sports performance.

KEYWORDS Big Five Personality Traits, General Procrastination, Conscientiousness, Neuroticism, Athletes, Non-Athletes

Introduction

Procrastination is a theoretical framework that defines intentional and inappropriate delay through behavioral, cognitive, and emotional points of view. It entails delaying one or more tasks, whether at beginning, throughout development, or upon completion, while carrying out additional redundant activities that hinder the accomplishment of the primary task (Ragusa et al., 2023). According to the recent evidences, the prevalence of procrastination were reported 80-90 percent (Araya-Castillo et al., 2023), 47.9 percent at moderate level and 29.25 percent always procrastinate (Hayat et al., 2020). This maladaptive tendency has been repeatedly linked to negative consequences, such as lower levels of academic achievement (Gustavson et al., 2017), increased psychological distress (Sirois, 2023) and a decline in general wellbeing (Rozenal et al., 2022). Significantly, raised level of procrastination among university students and associated negative consequences of this maladaptive behavior raised serious concern among the researchers related with university setting.

A huge volume of evidences concerning individual differences based on various personality traits has emerged as prevailing approach. In recent years, these individual differences based on personality traits further attracted the attention of the researcher to look into the linkages between general procrastination and personality traits. The

Individual differences in procrastinating tendencies can be examined theoretically using the Five Factor Model of Personality (McCrae & Costa, 2008). The BFPTs based on five different personalities, specifically extraversion, agreeableness, openness, conscientiousness and neuroticism. An individual's tendency to be well-organized, accountable, trustworthy, goal-oriented, and self-disciplined is referred to as conscientiousness (Soto & John, 2017). Neuroticism is the tendency to frequently and intensely experience unpleasant emotions, such as worry, anger, guilt, and depression (Widiger et al., 2019). Extroverts are frequently characterized as social, friendly, and enthusiastic (Soto, 2019). Individuals high in agreeableness are usually empathetic, generous, and considerate of other's needs (Jensen-Campbell et al., 2003). Individuals high in openness prefer variety, novelty, and deep thinking (Möttus et al., 2020).

In the context of university education setting, two major types of students including student athlete and non-athlete have been considering to hold distinct characteristics. In particular university student athletes, the disciplined character of athletic participation may serve as a discouragement to procrastination. In order to handle the demands of both academics and athletics, student-athletes need to acquire strong time management abilities (Gosai et al., 2023). This could help them overcome procrastination tendencies. Furthermore, the goal-oriented supervision of competitive sports may foster better self-regulation abilities (Hofseth et al., 2017). Athlete's dual responsibilities as academics and competition make it especially crucial to examine their personality-procrastination relationships. Frequent travel, competition schedules, and rigorous training demands that put their time management skills to the test are some of the particular academic difficulties faced by athletes (Gosai et al., 2023). Despite the belief that their structured environments would instantly reduce procrastination, athletes however struggle with academic delays, particularly during off-season periods (Trecroci et al., 2022).

The association between procrastination and personality may function differently for student non-athletes. Non-athletes are likely to rely more on their intrinsic personality assets to commence and continue academic assignments because they do not have the external structure that sports activity enforces. As a result, non-athletes may exhibit more robust traditional patterns of personality-procrastination connections, with high neuroticism and low conscientiousness making them especially vulnerable. Non-athletes might be more vulnerable to personality-based procrastination patterns since they may rely more on their own personality assets to control their procrastinating tendencies. These distinctions of two groups may impact on their personality and procrastination.

Despite growing interest in understanding why individuals procrastinate, there remains a lack of clarity about the underlying personality traits that may contribute to this behavior. The BFPTs offer a comprehensive framework to explore individual differences in behavior and motivation. While some studies have found strong associations, particularly between conscientiousness and lower levels of procrastination, and neuroticism and higher procrastination, findings have been inconsistent across populations. In contrast, procrastination and neuroticism have a positive association, most likely due to increased anxiety, emotional instability, and avoidance coping mechanisms (Rebetez et al., 2015). Procrastination has been found to have more significant and context-dependent relationships with the remaining traits of agreeableness, extraversion, and openness (Svartdal et al., 2022). But these recognized relationships might look different for different groups of students such as athletes and non-athletes, who generally have different personality types with greater degree of

extraversion and conscientiousness and reduced degree of neuroticism (Allen et al., 2024).

Particularly, no research on student procrastination has investigated whether personality traits associated significantly with academic success for athletes and non-athletes. Therefore, there is a strong need to look into how personality factors associate with general procrastination behaviors between university student athletes and non-athletes. By investigating the relationship between personality traits and general procrastination within the particular context of student athletics, this study added to the collection of prior research. In educational and sports psychology, identifying particular characteristics that expose students to procrastinate might guide towards the development of focused solutions. These could include stress-reduction seminars, goal-setting techniques targeted at lowering procrastination and enhancing academic and athletic performance, or personality-informed time management programs. The study aims to investigate the association between general procrastination and the Big Five personality traits among university student athletes and non-athletes.

Literature Review

Ocansey et al. (2022) investigated how personality factors predicted university students' academic procrastination. The findings showed that procrastination was significantly predicted by both neuroticism and openness to new experiences, with neuroticism being the most reliable and powerful predictor. Procrastination behaviors were more common among students with greater neuroticism scores, indicating a strong emotional and psychological background for delay tendencies. Despite having a relatively weaker predictive power, openness also shown a positive association with procrastination. Procrastination was not strongly predicted by other Big Five model characteristics.

Alzangana (2017) looked at how much academic procrastination among overseas graduate students was predicted by demographic variables and the Big Five personality traits. The findings showed a high negative correlation between academic procrastination and conscientiousness, the only personality trait that significantly predicted academic procrastination. The protective significance of qualities like organization, accountability, and self-discipline is highlighted by the fact that students who were more conscientious reported procrastinating less. On the other hand, the prediction model did not significantly benefit from the remaining personality factors which included agreeableness, openness, neuroticism, and extraversion.

Lai et al. (2015) examined the relationship between personality traits and procrastination behavior among undergraduates. According to the findings, procrastination was more common among students who scored highly on personality traits like conscientiousness, openness, and relationship tendencies.

Boysan and Kiral (2016) looked into the relationships between academic procrastination and a number of psychological factors, such as self-esteem, locus of control, perfectionism, and the BFPTs. Students who were more structured, disciplined, and cooperative were less likely to put off academic assignments, according to the results, which showed a significant negative relationship between procrastination and personality traits including conscientiousness, agreeableness, and organization.

Ljubin-Golub et al. (2019) investigated the relationship between academic procrastination and motivational self-regulation and personality factors. According to the results, procrastination was significantly predicted negatively by both conscientiousness and motivational self-regulation, especially the environmental control component. This suggests that students who are better organized and have the ability to manage their learning environments are less likely to procrastinate.

Material and Methods

The study investigated the association between BFPTs and General procrastination among university student athletes and non-athlete's. Cross-sectional design was implemented, which allows data collection from selected individuals at particular time, consequently allowing interactional investigation.

Data was collected from eight universities that had various sports athletes. Moreover, these athletes were also representing their particular universities at inter-arsity, national and international levels. Athletes from eight universities were selected as a sample of the study. An equal number of non-athlete's students were also selected as a control of university athletes. Hence, this study recruited a sample of 450 university students with mean age 20.49 and standard deviation ($SD = 1.842$) out of which 225 were university athletes with mean age 21.34 and standard deviation ($SD = 1.816$) and 225 were non-athletes with mean age 20.57 and standard deviation ($SD = 1.792$). The eligibility criteria specified that athletes must be enrolled in a BS program. Similarly, non-athletes who have not participated in sports teams or competitions were recruited. The exclusion criteria were individuals outside the age range of 18 to 25 years.

The BFI-10 tool assessed the personality traits of an individual. The BFI-10 composed of 10 items. The BFI-10 developed by (Rammstedt & John, 2007) which measures five different personalities, specifically extraversion, agreeableness, openness, conscientiousness and neuroticism. This tool consisted of two questions for each personality dimensions. The BFI-10 is a reliable and widely used tool for assessing personality traits in athletes. The earlier study (ur Rehman et al., 2025) founded that the BFI-10 total Cronbach's Alpha score was 0.94, suggesting that it has excellent validity and reliability.

The GPS-9 is a nine items questionnaire assessing the general procrastination. GPS-9 is also recognized as Lay's General Procrastination Scale and it was established by (Sirois et al., 2019). The General Procrastination Scale had very good Cronbach's alpha = 0.90 (Sirois et al., 2019). The GPS-9 is a valid and reliable scale to measure general procrastination and Cronbach alpha coefficient was 0.74 in an earlier research (Ahmad et al., 2024). Procrastinating tendencies of the participants were assessed by utilizing this scale. Procrastination was shown to be higher among those with higher scores on this scale and lower among those with lower scores. The score on this scale varied between nine and forty-five.

The participants' voluntary involvement was made understandable to them. The confidentiality of the collected data was guarantee. Before completing the questionnaire, the participants received complete guidance. To gather information from the participants, the researcher employed a face-to-face approach. Every participant obtained ten minutes to complete every section of the questionnaire. An email granting permission to use the questionnaire was sent by the concerned researchers.

The study employed SPSS version 27.0.1, a most common used statistical software, for data analysis, presenting tools for effective data processing and different statistical analyses. Descriptive statistics, Pearson correlation and Hierarchical Regression was utilized.

Results and Discussion

Table 1
Demographic Characteristics of Student Athletes and Non-Athletes Participants

| Variables | Student athletes | | Student non-athletes | |
|------------------------------|------------------|----------------|----------------------|----------------|
| | Frequency (f) | Percentage (%) | Frequency (f) | Percentage (%) |
| Gender | | | | |
| Male | 112 | 49.8 | 112 | 49.8 |
| Female | 113 | 50.2 | 113 | 50.2 |
| Residence | | | | |
| Urban | 128 | 56.9 | 156 | 69.3 |
| Rural | 97 | 43.1 | 69 | 30.7 |
| Athletic Status | 225 | 50.0 | 225 | 50.0 |
| Year of Study | | | | |
| 1 | 56 | 24.9 | 55 | 24.4 |
| 2 | 73 | 32.4 | 75 | 33.3 |
| 3 | 39 | 17.3 | 40 | 17.8 |
| 4 | 56 | 24.9 | 55 | 24.4 |
| Highest level of Competition | | | | |
| Inter-varsity | 128 | 28.4 | N/A | N/A |
| National | 86 | 19.1 | N/A | N/A |
| International | 11 | 2.4 | N/A | N/A |
| Experience in sports | M = 6.39 | SD = 1.710 | N/A | N/A |
| Age | M = 21.34 | SD = 1.816 | M = 20.57 | SD = 1.792 |

Note: M= mean, SD= standard deviation, f= frequency, %= percentage, N/A= no participation

Table 1 demonstrated the demographic characteristics of student athletes and non-athletes across numerous variables which included age, gender, residence, athletic status, highest level of competition, sports experience, university name and year of study. The mean age of the student athletes was 21.34 years, with a standard deviation of 1.816. Oppositely, the mean age of student non-athletes was 20.57 years, with a standard deviation of 1.792. The sample comprised of 112 males (49.8%) and 113 female (50.2%) in both athletes and non-athlete group. A more percentage of non-athletes were from urban areas (69.3%) as compared to the athletes (56.9%). In Contrast, more athletes were from rural areas (43.1%) as compared to non-athletes (30.7%). Furthermore, equal number of athletes (225) and non-athletes (225) were recruited for this study. Athletes competing (28.4%) at inter-varsity, (19.1%) at national and (2.4%) at the inter-national levels. Whereas, athletes had 6.39 years of experience in sports on average, indicating a prolonged dedication to their sports. Lastly, the distribution among academic years were similar for both athletes and non-athletes.

Table 2
Summary of ANOVA Predicting Big Five Personality for student non-athlete Sample

| Models | | Sum of squares | df | Mean squares | F | Sig. |
|---------|------------|----------------|-----|--------------|--------|------|
| Model 1 | Regression | 511.510 | 1 | 511.510 | 12.324 | .001 |
| | Residual | 9255.886 | 223 | 41.506 | | |
| | Total | 9767.396 | 224 | | | |
| Model 2 | Regression | 2022.384 | 6 | 337.064 | 9.487 | .000 |

| | | | |
|----------|----------|-----|--------|
| Residual | 7745.012 | 218 | 35.528 |
| Total | 9767.396 | 224 | |

a. Dependent Variable: General Procrastination

b. Predictors: (Constant), year of study

c. Predictors: (Constant), year of study, agreeableness, extraversion, conscientiousness, openness, neuroticism

Table 2 presented the complete results for both models on student non-athlete sample. In Model 1, 5.2% of the variance in general procrastination was explained by the predictor year of the study ($F = 12.32, p = .001$). In Model 2, there was a significant improvement in model fit, both year of study and personality factors collectively explained 20.7% of the variance ($F=9.48, p<.001$).

Table 3
Results of hierarchical regression analysis of general procrastination on non-athletes

| Dependent Variable | Model | Predictors | B | SE | β | R^2 | t | p |
|-------------------------|---------|-------------------|--------|-------|---------|-------|--------|-------|
| General Procrastination | Model 1 | | | | | 0.052 | | |
| | | Year of Study | 1.364 | 0.389 | 0.229 | | 3.511 | 0.001 |
| | Model 2 | | | | | 0.207 | | |
| | | Year of Study | 1.446 | 0.362 | 0.243 | | 3.990 | 0.000 |
| | | Extraversion | 0.093 | 0.229 | 0.025 | | 0.406 | 0.685 |
| | | Agreeableness | -0.102 | 0.247 | -0.027 | | -0.414 | 0.679 |
| | | Conscientiousness | -1.169 | 0.209 | -0.356 | | -5.592 | 0.000 |
| | | Neuroticism | 0.243 | 0.204 | 0.080 | | 1.192 | 0.235 |
| | | Openness | 0.160 | 0.266 | 0.038 | | 0.602 | 0.548 |

Note: SE = Standardized error, β = Beta, p = Significant

In model 1, year of study were considered as the predictor of the dependent variable general procrastination. The model was significant, $R^2 = 0.052, p = 0.001$, suggested that year of study considered for 5.2% of the variance in general procrastination. The greater years of study were associated with significantly greater levels of procrastination, as showed by the regression coefficient ($B = 1.364, SE = 0.389, \beta = 0.229, t = 3.511, p = 0.001$) in Table 3.

In model 2, the BFPTs were entered. This model significantly improved in predictive power, $R^2 = 0.207, p = 0.000$ indicated that personality traits unanimously described an extra 15.5% of the variance in general procrastination. Conscientiousness was the only personality trait that significantly predicted general procrastination ($B = -1.169, SE = 0.209, \beta = -0.356, t = -5.592, p = 0.000$), suggesting a strong negative relationship. This indicated that students who are more conscientious were less slightly to procrastinate.

Table 4
Summary of ANOVA Predicting Big Five personality for Student Athletes Sample

| Models | | Sum of squares | df | Mean square | F | Sig. |
|--------|------------|----------------|-----|-------------|-------|------|
| 1 | Regression | 307.426 | 1 | 307.426 | 8.001 | .005 |
| | Residual | 8567.970 | 223 | 38.421 | | |
| | Total | 8875.396 | 224 | | | |
| 2 | Regression | 1696.561 | 6 | 282.760 | 8.587 | .000 |
| | Residual | 7178.835 | 218 | 32.930 | | |
| | Total | 8875.396 | 224 | | | |

- a. Dependent Variable: General Procrastination
 b. Predictors: (Constant), year of study
 c. Predictors: (Constant), year of study, agreeableness, extraversion, conscientiousness, openness, neuroticism

. The results for both models on the student athlete sample were shown in Table 4. In Model 1, 3.5% of the variance in general procrastination ($F = 8.001, p = .005$), was explained by the predictor year of study. After adding six more predictors, Model 2 showed a considerable improvement ($F = 8.587, p < .001$), accounting for about 19.1% of the variance. This implied that the six additional predictors significantly contributed to the explanation of the variance in general procrastination.

Table 5
Results of Hierarchical Regression analysis of general procrastination on athletes

| Dependent Variable | Model | Predictors | B | SE | β | R^2 | t | p |
|-------------------------|---------|-------------------|--------|-------|---------|-------|--------|-------|
| General Procrastination | Model 1 | | | | | 0.035 | | |
| | | Year of Study | 1.038 | 0.367 | 0.186 | | 2.829 | 0.005 |
| | Model 2 | | | | | 0.191 | | |
| | | Year of Study | 0.819 | 0.344 | 0.147 | | 2.381 | 0.018 |
| | | Extraversion | 0.256 | 0.236 | 0.067 | | 1.085 | 0.279 |
| | | Agreeableness | -0.254 | 0.258 | -0.065 | | -0.982 | 0.327 |
| | | Conscientiousness | -1.055 | 0.222 | -0.310 | | -4.750 | 0.000 |
| | | Neuroticism | 0.407 | 0.188 | 0.135 | | 2.164 | 0.032 |
| | | Openness | 0.262 | 0.220 | 0.074 | | 1.195 | 0.233 |

Note: SE = Standardized error, β = Beta, p = Significant

In model 1, year of study were considered as the predictor of General Procrastination. The model was statistically significant, $R^2 = 0.035, p = 0.005$, suggesting that year of study considered for 3.5% of the variance in procrastination. The regression coefficient revealed that students in higher year of study demonstrate significantly higher levels of procrastination ($B=1.038, SE=0.367, \beta=0.186, t=2.829, p=0.005$) as showed in Table 5.

The BFPTs were included in model 2. The explanatory power of the model was considerably increased by including these factors ($R^2 = 0.191$), suggesting that personality traits explained an additional 15.6% of the variance in procrastination. Year of Study ($B = 0.819, p = 0.018$) remained a significant predictor, however its impact size decreases significantly, indicating that personality traits considered for some of the variance. Conscientiousness ($B = -1.055, p = 0.000$) was a strong negative predictor of procrastination, revealing that athletes with greater levels of conscientiousness were significantly less likely to procrastinate. Neuroticism ($B=0.407, p=0.032$) was a significant positive predictor, revealing that athletes with higher neuroticism levels procrastinate more.

The prime objective of this novel study was to investigate the association between BFPTs and general procrastination among university athletes and non-athlete's students. The current study is a unique and original inclusion to the literature on personality and procrastination in the setting of university sports and academics because as no previous research had particularly looked at this relationship within this particular population.

For university athletes, the results of the hierarchical regression analysis demonstrated that conscientiousness was a significant negative predictor of general procrastination. This finding suggested that athletes with higher levels of

conscientiousness were significantly less likely to procrastinate. Additionally, neuroticism was found to be a significant positive predictor of procrastination, indicating that athletes with greater neuroticism levels were more likely to procrastinate. Among non-athletes, conscientiousness also appeared as a significant negative predictor of procrastination. This indicated that non-athlete students who are more conscientious were less likely to procrastinate. However, other Big Five personality traits such as extraversion, agreeableness, neuroticism, and openness were not significant predictors in non-athlete group.

Even though it was not part of the main research objective, year of study was included as a control variable. Year of study was found to be a significant positive predictor of general procrastination in both athletes and non-athletes. These unexpected results showed that procrastination tended to rise as students higher in their academic careers.

For university athletes, the findings revealed that higher conscientiousness significantly predicted lower levels of general procrastination.

The findings that procrastination is negatively predicted by conscientiousness were in accordance with earlier studies. Procrastination tendencies are naturally addressed by conscientious individual's self-discipline, dedication, and good time management skills (Steel, 2007; Van Eerde, 2003). In their meta-analysis, (Steel & Ferrari, 2013) discovered that the most reliable negative predictor of procrastination was conscientiousness, which considered for a significant amount of the variance in procrastinating behavior.

Additionally, (Madigan et al., 2016) discovered that among high-performance athletes, conscientiousness predicted improved setting goals and mental toughness, qualities necessary for maintaining consistent performance as well as less procrastination. According to these results, conscientious athletes are better able to overcome avoidance tendencies even when faced with conflicting demands from their academic work and athletics.

However, some conflicting researches suggested that the relationship is not always obvious. In this regard, (Gao et al., 2021) discovered that under high-stress or unstructured academic settings, the predictive effectiveness of conscientiousness on procrastination lessened. This suggested that the effect of conscientiousness against procrastination may be diminished by environmental factors such as team relationships or performance anxiety.

Additionally, compared to individual sports athletes and team sports athletes displayed a negative relationship between conscientiousness and procrastination (Storch et al., 2005). This was probably because team-sport athletes share responsibility and depend on their teammates for performance outcomes. Personality qualities might have less impact on self-regulated behaviors in these kinds of settings.

Neuroticism significantly and positively predicted general procrastination, suggesting that athletes exhibiting higher neuroticism were more prone to procrastination.

Emotional instability, worry, and self-doubt are symptoms of neuroticism, which has been repeatedly associated with maladaptive coping strategies including

procrastination. (Steel, 2007) meta-analysis, founded that people with high neuroticism delay more because they are more likely to suffer stress, fear of failure, and have a negative self-perception, supported this finding. These emotional traits make it difficult to start tasks and manage time effectively. (Sirois & Pychyl, 2013) discovered that neurotic people frequently put off tasks in order to cope with sudden emotional distress, referred to as mood repair. They avoid tasks that make them anxious, which reinforces their procrastination habit rather than addressing the real causes of stress.

According to (Balkis & Duru, 2016), neurotic university students were more likely to struggle with self-control, which led to higher levels of procrastination. Stress levels may be increased by the combined pressure of academic and athletic performance, which makes neurotic people even more prone to procrastinate. Because of performance anxiety or a fear of being evaluated, athletes with high neuroticism may avoid activities or training regimens, which can ultimately affect their academic and athletic performance. According to (Svartdal et al., 2020), neuroticism may not necessarily have a direct impact on procrastination instead, it may be mediated by other elements like task avoidance or self-efficacy.

In non-athletes, conscientiousness was a significant negative predictor of procrastination, suggesting that students with higher conscientiousness were less prone to procrastination.

A meta-analysis by (Richardson et al., 2012) found that conscientiousness, mainly because of its negative relationship with procrastination, was the best personality-based predictor of academic achievement and self-regulation. Additionally, conscientiousness promotes good academic habits like breaking down tasks, using calendars, and preparing ahead, which helps non-athletes maintain task engagement, according to (Klassen et al., 2009). These actions exist as discouragement to procrastination and are frequently influenced by internal motivation and individual standards of excellence.

Gao et al., (2021) noted that procrastination and conscientiousness may have different relationships depending on the academic major. For instance, even after adjusting for gender and academic achievement, students in creative or arts-based programs, where deadlines are more flexible and work is more exploratory, exhibited fewer relationships between conscientiousness and procrastination.

The year of study was founded as a significant positive predictor of general procrastination among both athletes and non-athletes, suggesting that procrastination increased as students advanced in their academic year.

According to (Glick & Orsillo, 2015) upper-year university students frequently have higher levels of stress, academic exhaustion, and emotional burnout, all of which are factors that contribute to procrastinating behavior. According to (Grunschel et al., 2016) students may engage in avoidance behaviors like procrastination when graduation comes near due to the combination of perfectionism and higher expectations. Academic assignments may be put off by students as a coping mechanism for excessive demands and the stress of upcoming alterations.

According to (Klassen & Kuzucu, 2009) older students tend to procrastinate less as their time management and academic self-efficacy increase with time. Similarly, (Steel & Ferrari, 2013) emphasized that personality traits continue to be the most reliable and consistent indicators of procrastination, even when demographic factors like year of

study may have some influence. Environmental stresses specific to the academic and athletic environments in which the individuals were located may have controlled the greater procrastination seen in this study.

Conclusion

In conclusion, this study offered important knowledge about which traits of Big five personality was associated with general procrastination in both groups. In both groups, conscientiousness was consistently found to be negative predictor of procrastination, but neuroticism was a significant predictor of higher procrastination levels among athletes. In addition, a surprising finding founded that, students in later study years exhibited higher levels of procrastination. These findings highlighted the value of personality-informed approaches to stress management and procrastination in both academic and sports contexts. Improving student performance and well-being required specialized interventions that emphasize time management, emotional control, and academic support.

Recommendations

Programs aimed at improving self-discipline, goal-setting, and time management may help lower procrastination among students in general, as conscientiousness was found to be a strong negative predictor of procrastination in both athletes and non-athletes. Athletes' procrastination and neuroticism are positively associated, which emphasized the need for psychological support services such as stress management and emotional regulation training to help athletes deal with anxiety connected to performance. In order to manage increasing academic stress, educational institutions should also establish year-specific support systems, such as early intervention seminars in lower years and burnout prevention techniques in later years, as procrastination increased with study year in both groups. These results highlighted how important it is to include personality-informed strategies into systems of academic and athletic guidance in order to promote student achievement.

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