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EXAMINING THE RELATIONSHIP BETWEEN GRIT AND ACADEMIC PROCRASTINATION IN ADOLESCENTS

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ABSTRACT

Adolescence represents a critical developmental period characterized by rapid cognitive, emotional, and social changes that significantly influence academic behaviours and outcomes. During this stage, individuals are expected to develop self-regulatory capacities, goal-directed behaviours, and adaptive coping strategies that support academic success (Steinberg, 2014). However, many adolescents struggle with maintaining consistent effort toward long-term academic goals, often engaging in maladaptive behaviors such as academic procrastination. Academic procrastination, defined as the intentional delay of academic tasks despite anticipating negative consequences, is highly prevalent among students and has been associated with poorer academic performance, increased stress, and reduced psychological well-being (Steel, 2007; Tice & Baumeister, 1997).

KEYWORDS: *critical developmental , apid cognitive, emotional, and social changes.*

1. INTRODUCTION

In contrast to procrastination, the construct of grit has gained considerable attention in recent years as a positive psychological trait associated with sustained effort and perseverance toward long-term goals. Grit, conceptualized by Duckworth et al. (2007), comprises two primary components: perseverance of effort and consistency of interests over time. Individuals high in grit tend to maintain their commitment and motivation despite challenges, setbacks, and plateaus in progress. Empirical evidence suggests that grit is positively associated with academic achievement, persistence, and resilience across diverse populations (Credé, Tynan, & Harms, 2017; Duckworth & Quinn, 2009).

Theoretically, grit and academic procrastination appear to be inversely related constructs. While grit reflects sustained effort and goal commitment, procrastination reflects avoidance, delay, and difficulties in self-regulation. From a self-regulation perspective, procrastination is often conceptualized as a failure in executive functioning and emotional regulation, wherein individuals prioritize short-term mood repair over long-term goal attainment (Sirois & Pychyl, 2013). In contrast, gritty individuals are more likely to regulate their impulses effectively, maintain focus on long-term outcomes, and persist through discomfort (Duckworth et al., 2007). Thus, examining the relationship between these constructs is essential for understanding adaptive versus maladaptive academic behaviors among adolescents.

Research on academic procrastination has consistently highlighted its multifaceted nature, linking it to factors such as low self-control, fear of failure, task aversiveness, and poor time management (Ferrari, Johnson, & McCown, 1995; Klassen, Krawchuk, & Rajani, 2008). Adolescents, in

particular, may be especially vulnerable to procrastination due to ongoing neurodevelopmental changes affecting impulse control and decision-making (Steinberg, 2010). Simultaneously, adolescence is also a period during which personality traits such as grit begin to stabilize and exert stronger influences on behaviour (Duckworth & Gross, 2014). Therefore, understanding how grit functions in mitigating procrastinatory tendencies during this developmental stage is of significant theoretical and practical importance.

Although previous studies have examined grit in relation to academic achievement and motivation, and procrastination in relation to self-regulation and performance, there remains a relative paucity of research directly investigating the relationship between grit and academic procrastination, particularly among adolescents. Existing studies in adult and college populations suggest a negative association between grit and procrastination (Wolters & Hussain, 2015), but findings cannot be generalized to adolescents due to developmental differences in cognitive and emotional functioning. Moreover, cultural and contextual factors, such as educational pressures and socio-environmental expectations, may further influence this relationship, especially in academically competitive settings.

From a theoretical standpoint, integrating grit within the broader framework of self-regulated learning provides a useful lens for understanding its role in academic behaviour. Self-regulated learning involves goal setting, strategic planning, self-monitoring, and self-reflection (Zimmerman, 2000). Grit may enhance these processes by fostering persistence and long-term commitment, thereby reducing the likelihood of procrastination. Conversely, low levels of grit may contribute to inconsistent effort and disengagement, increasing susceptibility to procrastination. Thus, exploring the interplay between grit and academic procrastination can contribute to a more nuanced understanding of motivational and self-regulatory processes in adolescence.

1.1 Need and Significance of the Study

Academic procrastination is a pervasive issue among adolescents, with significant implications for academic performance, mental health, and overall well-being. Identifying protective psychological factors that can mitigate procrastinatory behaviour is essential for developing effective interventions. Grit, as a relatively malleable and developable trait, offers a promising avenue for promoting adaptive academic behaviours. Investigating the relationship between grit and academic procrastination can inform educational practices, counselling interventions, and skill-building programs aimed at enhancing students' perseverance and reducing maladaptive delay behaviours. The current study holds practical significance in educational and psychological contexts. By understanding how grit influences procrastination, educators and mental health professionals can design targeted interventions that foster resilience, goal commitment, and self-discipline among adolescents. Such interventions may include training in goal-setting, persistence-building strategies, and emotional regulation techniques, ultimately contributing to improved academic outcomes and psychological well-being.

1.2 Rationale of the Study

Despite the growing body of literature on grit and academic procrastination as independent constructs, there is a notable gap in research examining their direct relationship among adolescent populations. Given that adolescence is a formative period for the development of both personality traits and academic habits, it is crucial to explore how grit may function as a protective factor against procrastination during this stage. Additionally, most existing studies have been conducted in Western contexts, limiting the generalizability of findings across diverse cultural settings. The present study seeks to address these gaps by examining the relationship between grit and academic procrastination in adolescents within a specific sociocultural context. By doing so, it contributes to the existing literature and provides culturally relevant insights that can inform future research, policy, and practice.

2. REVIEW OF LITERATURE

Grit has emerged as a significant construct within educational and positive psychology, particularly in understanding sustained academic engagement and long-term achievement. Initially conceptualized by Duckworth et al. (2007) as perseverance and passion for long-term goals, grit has

been consistently associated with academic success beyond cognitive ability. Subsequent research has elaborated on its two core dimensions—perseverance of effort and consistency of interests—highlighting its role in maintaining motivation despite setbacks (Duckworth & Quinn, 2009). More recent studies have continued to reinforce the relevance of grit in academic settings. For instance, Credé et al. (2017), through a meta-analytic review, found that grit—particularly perseverance of effort—is a robust predictor of academic performance and persistence. Contemporary research has further linked grit to adaptive learning behaviours, such as sustained engagement, effective study strategies, and reduced academic burnout (Bachmann et al., 2024). Developmentally, adolescence is a critical period during which such non-cognitive traits begin to stabilize and influence behaviour more strongly, making grit particularly relevant in shaping academic trajectories during this stage (Park et al., 2020).

In contrast, academic procrastination has been extensively studied as a maladaptive academic behaviour characterized by the intentional delay of academic tasks despite anticipated negative consequences. Steel (2007) conceptualized procrastination as a self-regulatory failure, integrating motivational and temporal factors into a comprehensive framework. Empirical evidence has consistently demonstrated that academic procrastination is negatively associated with academic performance and positively associated with stress, anxiety, and reduced well-being (Tice & Baumeister, 1997). Among adolescents, procrastination is especially prevalent due to ongoing neurodevelopmental changes that affect executive functioning, impulse control, and emotional regulation (Steinberg, 2010). Research has also identified several contributing factors to procrastination, including fear of failure, task aversiveness, low self-control, and poor time management (Ferrari et al., 1995; Klassen et al., 2008). More recent perspectives emphasize the role of emotional regulation, suggesting that procrastination often functions as a short-term mood repair strategy, where individuals avoid tasks to alleviate negative emotions (Sirois & Pychyl, 2013).

The relationship between grit and academic procrastination has gained increasing attention, with a growing body of research suggesting that these constructs are inversely related. Individuals with higher levels of grit tend to demonstrate lower levels of procrastination, as their sustained effort and long-term focus enable them to overcome distractions and resist delay behaviours. Wolters and Hussain (2015) found that students with higher grit reported lower academic procrastination and better self-regulated learning strategies. Similarly, more recent studies have reported significant negative correlations between grit and procrastination across student populations, indicating that perseverance and consistency of interests may serve as protective factors against maladaptive delay (e.g., Pamuk, 2022). These findings are theoretically supported by self-regulation frameworks, which posit that procrastination arises from failures in goal-directed behaviour, whereas grit facilitates persistence and goal commitment.

Further expanding this perspective, recent research has begun to explore the mechanisms underlying the relationship between grit and procrastination. Evidence suggests that grit may operate through enhanced self-regulation, improved emotional control, and increased intrinsic motivation. For example, gritty individuals are more likely to engage in sustained effort, maintain focus on long-term goals, and effectively manage negative emotions associated with challenging tasks (Duckworth & Gross, 2014). In contrast, individuals low in grit may be more vulnerable to distraction, disengagement, and avoidance behaviours, thereby increasing their likelihood of procrastination. Some studies have also indicated that grit may mediate the relationship between maladaptive constructs, such as self-handicapping, and academic procrastination, further highlighting its regulatory role (Pamuk, 2022).

Despite these advancements, much of the existing research has been conducted in adult or university populations, limiting the generalizability of findings to adolescents. Adolescence is a unique developmental period characterized by heightened emotional reactivity, evolving identity, and increased academic demands, all of which may influence both grit and procrastination in distinct ways (Steinberg, 2014). Additionally, cultural context plays an important role in shaping academic behaviours and motivational constructs. However, the majority of studies examining grit and procrastination have been conducted in Western contexts, with limited research in non-Western or diverse educational settings. This raises important questions regarding the universality of these constructs and their interactions across different sociocultural environments.

2.1 Research Gap

Although the literature provides substantial evidence for the individual roles of grit and academic procrastination in academic functioning, there remains a lack of focused research examining their relationship specifically among adolescents. Most empirical studies have relied on college or adult samples, thereby overlooking developmental differences that may influence this relationship. Furthermore, there is limited research exploring this association within diverse cultural contexts, particularly in non-Western educational systems. Additionally, while existing studies establish a negative correlation between grit and procrastination, the underlying psychological mechanisms—such as self-regulation, emotional processes, and motivational pathways—are not sufficiently explored. There is also a tendency to treat grit and procrastination as unidimensional constructs, without examining their subcomponents in depth. Therefore, the present study aims to address these gaps by investigating the relationship between grit and academic procrastination among adolescents, contributing to a more nuanced and contextually relevant understanding of these constructs.

2.2 Objectives of the Study

The present study, adopting a correlational research design, aims to examine the relationship between grit and academic procrastination among adolescents, with a specific focus on gender differences. The objectives of the study are as follows:

- To assess the level of grit among adolescents.
- To assess the level of academic procrastination among adolescents.
- To examine the relationship between grit and academic procrastination among adolescents.
- To examine gender differences in levels of grit among adolescents.
- To examine gender differences in levels of academic procrastination among adolescents.

2.3 Hypotheses of the Study

1. There is no significant relationship between grit and academic procrastination among adolescents.
2. There is no significant difference in the level of grit between male and female adolescents.
3. There is no significant difference in the level of academic procrastination between male and female adolescents.

3. METHODOLOGY

The present study adopts a quantitative, correlational research design to examine the relationship between grit and academic procrastination among adolescents, with a particular focus on gender differences in these variables. A correlational approach is considered appropriate as the study seeks to identify the degree and direction of association between grit and academic procrastination without manipulating any variables. The study follows a cross-sectional design, wherein data are collected from participants at a single point in time. The sample for the study consists of 100 adolescents selected from secondary and higher secondary educational institutions. The participants fall within the age range of approximately 13 to 18 years, representing a crucial developmental stage characterized by significant academic and psychological changes. The sample includes both male and female adolescents to enable meaningful comparison of gender differences in grit and academic procrastination. A convenience sampling technique is employed, wherein participants are selected based on accessibility and willingness to participate in the study. The variables included in the study are grit, academic procrastination, and gender. Grit is treated as the independent variable and is further examined through its two dimensions, namely perseverance of effort and consistency of interests. Academic procrastination is considered the dependent variable, while gender serves as a grouping variable for comparative analysis.

3.1 Tools and Measures

The present study employs standardized self-report instruments to assess the key variables, namely grit and academic procrastination. These instruments were selected based on their established

psychometric properties, wide usage in psychological research, and suitability for adolescent populations. Grit is measured using the Short Grit Scale (Grit-S) developed by Angela Duckworth and Patrick D. Quinn (2009). The Grit Scale is a widely recognized psychological measure designed to assess the trait of grit, conceptualized as perseverance and passion for long-term goals. Although the original scale consisted of 17 items and later a 12-item version, the present study utilizes the 8-item short form (Grit-S) due to its brevity and strong psychometric support. The scale measures two core dimensions of grit: Perseverance of Effort and Consistency of Interests, which together reflect an individual's sustained commitment toward long-term objectives despite obstacles and setbacks.

The Grit-S is a self-report instrument in which participants respond to items on a 5-point Likert scale ranging from 1 ("Not like me at all") to 5 ("Very much like me"). Certain items are reverse-scored, particularly those assessing consistency of interests, to control for response bias. The total grit score is computed by averaging the responses across items, with higher scores indicating greater levels of grit. The scale is suitable for use with adolescents and adults and has been widely applied across educational and cultural contexts. The psychometric properties of the Grit-S are well established. The scale demonstrates satisfactory internal consistency, with Cronbach's alpha coefficients typically ranging from acceptable to high levels. It also exhibits good test–retest reliability, indicating that grit is a relatively stable personality trait over time. In terms of validity, the Grit-S has shown strong predictive validity, with grit scores positively associated with academic achievement, persistence, and success in demanding environments. The scale also demonstrates convergent validity through positive correlations with conscientiousness, while maintaining discriminant validity as a distinct construct separate from intelligence and other personality traits. Factor analytic studies support a two-factor structure corresponding to perseverance of effort and consistency of interests, confirming the theoretical conceptualization of grit.

Academic procrastination is assessed using the Academic Procrastination Scale – Short Form (APS-S) developed by James D. McCloskey (2011). The APS-S is a concise self-report instrument designed to measure procrastination specifically in academic contexts. It is derived from the original 25-item Academic Procrastination Scale but was shortened to a 5-item version to enhance efficiency and reduce respondent burden while maintaining psychometric robustness. The APS-S focuses on behaviours related to delaying academic tasks such as studying, completing assignments, and preparing for examinations. Participants respond to each item using a Likert-type scale, with higher scores indicating greater levels of academic procrastination. The short form is particularly advantageous in research settings where time constraints and participant fatigue are considerations, making it suitable for use among adolescent populations.

The psychometric evaluation of the APS-S has demonstrated strong reliability and validity. Studies have reported satisfactory internal consistency, indicating that the items consistently measure the construct of academic procrastination. Factor analysis, particularly principal component analysis, has supported a unidimensional structure, suggesting that the scale effectively captures a single underlying construct of academic procrastination. The APS-S also shows good convergent validity, correlating positively with other established measures such as the Tuckman Procrastination Scale and the Procrastination Assessment Scale–Students developed by Solomon and Rothblum (1984). The APS-S has demonstrated potential predictive validity, with recommendations for its use in examining academic outcomes such as performance and task completion. Its brevity, combined with its strong psychometric properties, makes it an effective tool for assessing procrastination in educational research. In addition to these scales, a demographic information sheet is administered to collect basic participant details, including age, gender, and grade level. Gender is used as a grouping variable in the study to examine differences in grit and academic procrastination.

3.2 Data collection and analysis

Prior to data collection, permission is obtained from the respective school authorities. Participants are approached in their classrooms and are provided with a clear explanation of the purpose and nature of the study. Informed consent is obtained, and participants are assured that their responses will remain confidential and anonymous. They are encouraged to respond honestly and

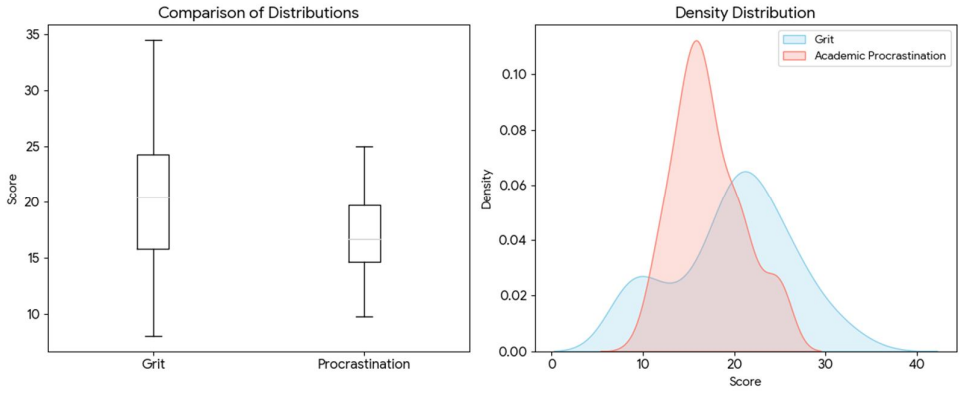
independently. The questionnaires are administered in a group setting, and participants typically take approximately 20 to 30 minutes to complete them. The collected data are analyzed using appropriate statistical techniques. Descriptive statistics, including mean and standard deviation, are computed to understand the levels of grit and academic procrastination among adolescents. Pearson's product–moment correlation coefficient is used to examine the relationship between grit and academic procrastination. Independent samples t-tests are conducted to assess gender differences in both variables. Additionally, regression analysis may be employed to determine the predictive role of grit in academic procrastination. Statistical analyses are carried out using software such as SPSS, with the level of significance set at $p < .05$. The study adheres to ethical guidelines in psychological research, ensuring voluntary participation, confidentiality, and the right to withdraw at any stage without any consequences. No personal identifying information is collected, and the data are used strictly for academic and research purposes.

4. RESULTS

Table 1: Descriptive Statistics of Grit and Academic Procrastination

Descriptive Statistics									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Grit	100	8	40	27.15	10.981	-.530	.241	-1.110	.478
Academic procrastination	100	5	25	11.44	7.004	1.024	.241	-.655	.478
Valid N (list wise)	100								

Figure 1: Histogram of Grit Scores and Academic Procrastination Scores



Descriptive statistical analyses were conducted to examine the central tendencies, variability, and distributional characteristics of the study variables—grit and academic procrastination—among adolescents (N = 100). These analyses provide a preliminary understanding of the data and help determine the suitability of subsequent parametric analyses. The results indicated that the mean score for grit was 27.15 (SD = 10.98), with observed scores ranging from 8 to 40. The relatively high mean score suggests that, on average, participants in the sample demonstrated a moderate to high level of grit, reflecting sustained perseverance and consistency of interests toward long-term goals. The standard deviation indicates a considerable degree of variability in grit levels among adolescents, suggesting that while some individuals exhibit high perseverance and passion, others report comparatively lower levels.

Examination of the distributional properties revealed a slight negative skewness (skewness = -0.53, SE = 0.24), indicating that the distribution is modestly skewed toward higher grit scores. This

suggests that a larger proportion of adolescents reported higher levels of grit. The kurtosis value for grit was -1.11 (SE = 0.48), indicating a platykurtic distribution, which is characterized by a flatter peak and thinner tails compared to a normal distribution. This reflects a relatively even spread of scores across the range, without extreme clustering around the mean. For academic procrastination, the mean score was 11.44 (SD = 7.00), with scores ranging from 5 to 25. The mean value suggests that participants, on average, reported relatively low to moderate levels of academic procrastination. The standard deviation again indicates notable variability, implying differences in procrastination tendencies across individuals within the sample.

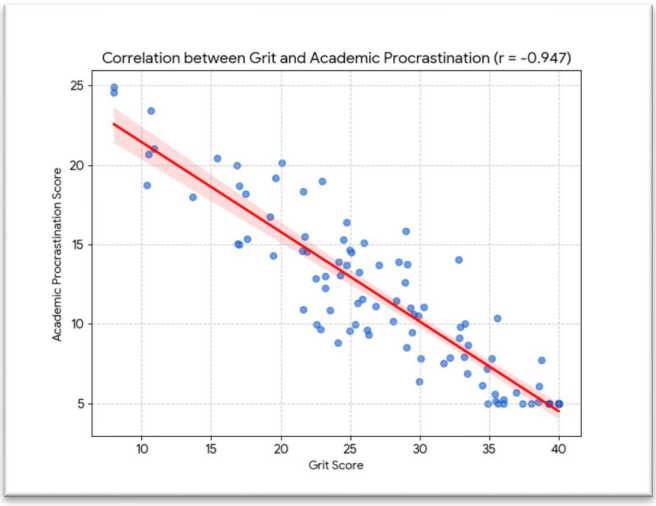
The distribution of academic procrastination scores showed a positive skewness (skewness = 1.02, SE = 0.24), indicating that the majority of participants reported lower levels of procrastination, with fewer individuals exhibiting higher levels. The kurtosis value was -0.66 (SE = 0.48), suggesting a slightly platykurtic distribution, indicative of a relatively flat distribution with fewer extreme values. Importantly, the skewness and kurtosis values for both variables fall within the commonly accepted range of ±2, indicating that the data do not substantially deviate from normality (George & Mallery, 2010). This supports the assumption of normality required for the application of parametric statistical techniques such as correlation, regression, and t-tests, which are employed in subsequent analyses.

The descriptive findings indicate that adolescents in the present sample generally exhibit moderate to high levels of grit and relatively lower levels of academic procrastination, with acceptable distributional properties. These patterns provide an appropriate foundation for further inferential analyses examining the relationships between grit and academic procrastination, as well as potential gender.

Table 2: Pearson Correlation between Grit and Academic Procrastination

Correlations			
		Grit	academicprocastination
Grit	Pearson Correlation	1	-.947**
	Sig. (2-tailed)		.000
	N	100	100
academicprocastination	Pearson Correlation	-.947**	1
	Sig. (2-tailed)	.000	
	N	100	100
****. Correlation is signi icant at the 0.01 level (2-tailed).**			

Figure 2: Scatter plot showing correlation between Grit and academic procrastination



To examine the relationship between grit and academic procrastination among adolescents, a Pearson product–moment correlation analysis was conducted. This analysis was performed to test the

null hypothesis stating that there is no significant relationship between grit and academic procrastination. The results revealed a strong, negative, and statistically significant correlation between grit and academic procrastination, r (98) = -0.947, p < .001**.** This indicates that higher levels of grit are associated with substantially lower levels of academic procrastination among adolescents. The magnitude of the correlation coefficient suggests a very strong inverse relationship**,** implying that grit plays a critical role in reducing procrastination tendencies in academic contexts.

Given that the obtained p-value is less than the 0.01 level of significance, the null hypothesis (**H_{01}**) stating that there is no significant relationship between grit and academic procrastination is rejected**.** Thus, the alternative hypothesis is supported. The strength of this relationship further suggests that adolescents who demonstrate greater perseverance and sustained interest in long-term goals are considerably less likely to engage in delaying academic tasks. Conversely, individuals with lower grit tend to exhibit higher levels of procrastination. These findings provide strong empirical support for the conceptualization of grit as a protective psychological factor against academic procrastination. The results also justify further analyses exploring the predictive role of grit and its dimensions, as well as potential moderating effects such as gender differences.

Table 3: Group Statistics for Gender Differences

Group Statistics					
	Gender	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Grit	Male	50	19.24	9.516	1.346
	Female	50	35.06	5.036	.712
academicprocastination	Male	50	16.14	7.169	1.014
	Female	50	6.74	1.626	.230

Table 4: Independent Samples t-Test Results Comparing Gender

Variable	Levene's F	p (Levene's)	t	df	p (2-tailed)	Mean Difference	Std. Error	95% CI Lower	95% CI Upper
Grit	49.76	.000	-10.39	74.45	.000	-15.82	1.52	-18.85	-12.79
Academic Procrastination	514.22	.000	9.04	54.03	.000	9.40	1.04	7.32	11.48

Independent samples *t*-tests were conducted to examine gender differences in grit and academic procrastination among adolescents. Since Levene's test for equality of variances was significant for both variables (p < .001), the results corresponding to "equal variances not assumed" were interpreted. The analysis revealed a statistically significant difference in grit scores between male and female adolescents, $t(74.45) = -10.39$, $p < .001$. Male adolescents (M = 19.24, SD = 9.52) reported significantly lower levels of grit compared to female adolescents (M = 35.06, SD = 5.04). The mean difference was -15.82, and the 95% confidence interval ranged from -18.85 to -12.79, indicating a substantial and reliable difference between the groups. Therefore, the null hypothesis ($H_0$2), which stated that there is no significant difference in grit between male and female adolescents, is rejected.

A statistically significant difference was also observed in academic procrastination between male and female adolescents, $t(54.03) = 9.04$, $p < .001$. Male adolescents (M = 16.14, SD = 7.17) exhibited significantly higher levels of academic procrastination compared to female adolescents (M = 6.74, SD = 1.63). The mean difference was 9.40, with a 95% confidence interval ranging from 7.32 to 11.48, confirming the robustness of the observed difference. Thus, the null hypothesis ($H_0$3), which stated that there is no significant difference in academic procrastination between male and female adolescents, is rejected. The results clearly indicate significant gender differences in both variables. Female adolescents demonstrated higher levels of grit and lower levels of academic procrastination, whereas male adolescents showed lower grit and higher procrastination tendencies. These findings suggest meaningful gender-based variations in perseverance and academic behaviour among adolescents.

5. DISCUSSION

The present study sought to examine the relationship between grit and academic procrastination among adolescents, with an additional focus on gender differences in both variables. The findings provide strong empirical support for the proposed associations and contribute to the growing body of literature on motivational traits and academic self-regulation. One of the most salient findings of the study is the exceptionally strong and statistically significant negative relationship between grit and academic procrastination ($r = -.947$, $p < .001$). This result suggests that adolescents who demonstrate higher levels of perseverance and sustained interest in long-term goals are considerably less likely to engage in procrastination of academic tasks. In other words, students who are more determined, consistent, and focused tend to manage their academic responsibilities more effectively and avoid unnecessary delays. This finding aligns with the theoretical framework proposed by Angela Duckworth and colleagues (2007), who conceptualized grit as a key determinant of long-term achievement through sustained effort and passion. Grit, as a construct, reflects an individual's ability to persist despite challenges, setbacks, or lack of immediate rewards—qualities that are directly relevant to overcoming procrastination.

The findings are also consistent with the broader literature on procrastination, particularly the work of Piers Steel (2007), who described procrastination as a failure of self-regulation. From this perspective, individuals who lack the ability to regulate their behaviour effectively are more likely to delay tasks, even when such delay is detrimental. The strong negative correlation observed in the present study suggests that grit may function as a critical self-regulatory resource that enables adolescents to initiate and complete academic tasks in a timely manner. Moreover, the magnitude of the correlation indicates that grit is not merely one of many contributing factors but may be a central determinant of procrastination behaviour in this sample. At the same time, the unusually high strength of the correlation warrants careful consideration. While it underscores the robustness of the relationship, it may also reflect shared variance between the constructs or specific characteristics of the sample. Previous meta-analytic evidence, such as the work by Credé, Tynan, and Harms (2017), has shown that while grit is related to performance and persistence, its effects are typically moderate rather than extremely high. Therefore, future studies should seek to replicate these findings using diverse samples and alternative measurement approaches to ensure the stability and generalizability of the results.

In addition to examining the relationship between the two variables, the present study also investigated gender differences in grit. The findings revealed that female adolescents reported significantly higher levels of grit compared to their male counterparts. This suggests that female students may possess greater perseverance and consistency in pursuing long-term academic goals. Such findings are consistent with earlier research indicating that females often exhibit higher levels of effort regulation, discipline, and academic engagement. For instance, Duckworth and Quinn (2009) found that grit is closely associated with sustained effort and goal commitment, traits that may be more strongly developed among female students due to both socialization processes and educational expectations. The observed gender difference in grit may also be understood within a socio-cultural context. In many educational settings, female adolescents are often encouraged to adopt behaviours such as diligence, responsibility, and persistence. These expectations may contribute to the development of grit-related characteristics over time. Additionally, females may be more likely to internalize academic goals and remain committed to them, even in the face of challenges. This could explain their higher scores on grit in the present study.

The study further found significant gender differences in academic procrastination, with male adolescents reporting higher levels of procrastination than females. This finding is consistent with existing literature suggesting that males tend to exhibit higher levels of delay, impulsivity, and lower academic self-regulation. The work of Steel (2007) highlights that procrastination is often associated with impulsiveness and a preference for immediate gratification, traits that may be more pronounced among male adolescents. The present findings reinforce this pattern, suggesting that male students may be more prone to postponing academic tasks, potentially due to lower levels of persistence and goal-oriented behaviour. When the findings on grit and procrastination are considered together, a coherent

pattern emerges. Female adolescents, who demonstrated higher levels of grit, also reported lower levels of academic procrastination, whereas male adolescents showed the opposite trend. This pattern strongly supports the notion that grit functions as a protective factor against procrastination. Adolescents who are more persistent and consistent in their efforts appear better equipped to regulate their academic behaviour, manage time effectively, and complete tasks without delay. Conversely, lower levels of grit may leave individuals more vulnerable to distractions, avoidance, and procrastination.

These findings have important implications for educational practice and psychological intervention. Enhancing grit among adolescents may be a valuable strategy for reducing academic procrastination and improving overall academic functioning. Schools and educators can incorporate programs that focus on goal-setting, resilience-building, and the development of perseverance. Interventions aimed at improving self-regulation skills, such as time management and task initiation strategies, may also be beneficial. Given the observed gender differences, it may be particularly important to design targeted interventions for male students, who appear to be at greater risk for procrastination and lower grit.

Despite the strengths of the study, certain limitations must be acknowledged. The correlational design of the study does not allow for causal inferences, and therefore it cannot be concluded that grit directly causes a reduction in procrastination. Additionally, the use of self-report measures may introduce biases such as social desirability or inaccurate self-assessment. The high correlation observed also suggests the need for further investigation into potential overlap between the constructs or measurement issues. Future research could address these limitations by employing longitudinal designs, experimental methods, and multi-informant approaches.

6. CONCLUSION

The present study aimed to examine the relationship between grit and academic procrastination among adolescents, with a particular focus on gender differences. The findings provide clear and compelling evidence that grit is a significant psychological factor associated with academic behaviour in this population. Specifically, the study revealed a strong and statistically significant negative relationship between grit and academic procrastination, indicating that adolescents who demonstrate higher levels of perseverance and consistency of interests are substantially less likely to engage in delaying academic tasks.

In addition to this relationship, the study identified notable gender differences in both variables. Female adolescents were found to exhibit significantly higher levels of grit and lower levels of academic procrastination, whereas male adolescents demonstrated lower grit and higher tendencies toward procrastination. These findings highlight the importance of considering gender as a meaningful factor in understanding variations in academic motivation and behaviour. The results suggest that grit functions as a protective factor against academic procrastination. Adolescents who are more persistent and committed to long-term goals appear better equipped to regulate their academic activities, manage time effectively, and overcome tendencies to delay important tasks. This underscores the relevance of grit not only as a predictor of academic success but also as a buffer against maladaptive behaviours that hinder performance.

The study contributes to the existing literature by strengthening the conceptual link between motivational traits and self-regulatory behaviours in adolescence. It also offers practical implications for educators, counsellors, and psychologists, emphasizing the need to foster grit and related self-regulation skills within educational settings. Interventions aimed at enhancing perseverance, goal commitment, and time management may be particularly beneficial in reducing procrastination and promoting academic well-being. Future research is needed to further explore the causal mechanisms underlying the relationship between grit and procrastination, as well as to examine the role of additional variables such as academic stress, motivation, and environmental influences. Expanding the research across diverse samples and contexts would also enhance the generalizability of the findings.

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