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The Role of Intrusive Thoughts and Self-Compassion in Predicting Academic Procrastination Among University Students

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A B S T R A C T

The primary objective of this study was to investigate the relationships between academic procrastination, intrusive thoughts, and self-compassion among university students. This research aimed to determine whether intrusive thoughts and self-compassion can predict academic procrastination behaviors. This cross-sectional study included 302 university students selected based on the Morgan and Krejcie (1970) sample size determination table. Participants completed self-report measures, including the Academic Procrastination Scale (APS), White Bear Suppression Inventory (WBSI), and Self-Compassion Scale (SCS). Data were analyzed using Pearson correlation and linear regression analyses to examine the relationships between the variables. IBM SPSS Statistics version 27 was utilized for data analysis. The results indicated significant correlations between academic procrastination, intrusive thoughts, and self-compassion. Academic procrastination was positively correlated with intrusive thoughts ($r = 0.48$, $p < 0.001$) and negatively correlated with self-compassion ($r = -0.35$, $p < 0.001$). Regression analysis revealed that intrusive thoughts ($\beta = 0.41$, $p < 0.001$) and self-compassion ($\beta = -0.29$, $p < 0.001$) were significant predictors of academic procrastination, explaining 34% of the variance in procrastination behaviors ($R^2 = 0.34$). This study highlights the significant roles of intrusive thoughts and self-compassion in academic procrastination. Intrusive thoughts increase the likelihood of procrastination, while self-compassion acts as a protective factor, reducing procrastination tendencies. These findings suggest that interventions aimed at reducing intrusive thoughts and enhancing self-compassion may be effective in mitigating academic procrastination. Future research should explore longitudinal and intervention-based studies to further understand and address this issue.

Keywords: *Academic procrastination, Intrusive thoughts, Self-compassion, University students, Self-regulation.*

1. Introduction

Academic procrastination is a pervasive issue that affects students at various educational levels, leading to negative consequences such as poor academic performance, increased stress, and lower overall well-being (Shehri, 2022). Procrastination is defined as the voluntary delay of an intended course of action despite expecting to be worse off for the delay (Assem et al., 2023; Rahmani et al., 2024; Sparfeldt & Schwabe, 2024; Xu, 2023). Academic procrastination specifically refers to the delay of academic tasks, which can significantly impede students' academic success and mental health. Prior research has identified several factors associated with academic procrastination, including emotional intelligence, self-efficacy, and self-regulated learning (Krispenz et al., 2019; Nisfary et al., 2023; San et al., 2016). Emotional intelligence, which involves the ability to recognize, understand, and manage emotions, has been shown to correlate negatively with procrastination behaviors (Nisfary et al., 2023). Similarly, self-efficacy, or the belief in one's ability to succeed in specific situations, has been found to mitigate procrastination by enhancing motivation and reducing anxiety (Liu et al., 2020).

Intrusive thoughts, characterized by unwanted and often distressing thoughts that can interfere with one's ability to focus, are another important factor in understanding procrastination. Rebetez et al. (2017) identified a strong link between intrusive thoughts and procrastination, suggesting that individuals who experience frequent intrusive thoughts are more likely to engage in procrastination as a maladaptive coping strategy (Rebetez et al., 2017). These thoughts can disrupt self-regulation processes, making it difficult for individuals to initiate and complete tasks in a timely manner (Fitzsimons & Finkel, 2011).

Self-compassion, a concept popularized by Neff (2003), involves treating oneself with kindness and understanding in the face of failures and difficulties. Research has demonstrated that self-compassion can act as a buffer against negative psychological outcomes, including anxiety and procrastination (Einabad et al., 2017). By fostering a supportive inner dialogue, self-compassion helps individuals manage their emotional responses more effectively, which can reduce the tendency to procrastinate (Krispenz et al., 2019).

The role of personal and contextual factors in academic achievement has been highlighted in recent studies. Arias et al. (2021) examined the impact of gender and age on academic performance, finding that these factors significantly influence students' regulatory behaviors and overall achievement. This suggests that individual differences must be considered when exploring the causes and consequences of academic procrastination (Arias et al., 2021).

Self-regulated learning (SRL) is another critical factor that influences academic procrastination. SRL refers to the ability to plan, monitor, and regulate one's learning activities (Anam et al., 2023). Studies have shown that students with higher levels of SRL are less likely to procrastinate (Anam et al., 2023; San et al., 2016). Effective self-regulation involves setting clear goals, employing strategies to achieve those goals, and reflecting on the outcomes. When students lack these skills, they are more prone to delaying their academic tasks (San et al., 2016).

Academic motivation and the satisfaction of basic psychological needs play significant roles in academic procrastination. Oram and Rogers (2022) found that students who experience frustration in their psychological needs (autonomy, competence, and relatedness) are more likely to procrastinate. Conversely, when these needs are satisfied, students demonstrate higher intrinsic motivation and lower levels of procrastination (Oram & Rogers, 2022).

Impulsivity, the tendency to act on whims without considering the consequences, has been identified as a predictor of procrastination. Rebetez et al. (2017) highlighted that impulsivity, combined with intrusive thoughts, can lead to self-regulation failures, exacerbating procrastination behaviors. Effective self-regulation requires the ability to manage one's impulses and maintain focus on long-term goals (Rebetez et al., 2017).

The educational context, including the mode of instruction and external support systems, also influences procrastination. During the COVID-19 pandemic, the shift to online learning presented new challenges for students. Hua and Wang (2023) examined the impact of learning preparation and methods in an EFL blended teaching context, finding that these factors significantly affected learning achievement (Hua & Wang, 2023). Similarly, Sari and Kusumaningrum (2022) investigated the role of social support in reducing academic procrastination during the pandemic, emphasizing the importance of external resources in helping students manage their academic tasks (Sari & Kusumaningrum, 2022).

Anxiety is a common emotional response that can both cause and result from procrastination. Zhang and Zhang (2022) explored the relationship between academic

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procrastination and second language writing anxiety, finding that procrastination can exacerbate anxiety, creating a vicious cycle that hinders academic performance. Effective interventions must therefore address both the cognitive and emotional aspects of procrastination to break this cycle (Zhang & Zhang, 2022).

Building on the existing literature, this study aims to investigate the relationships between academic procrastination, intrusive thoughts, and self-compassion among university students. By understanding how these variables interact, we can develop more targeted interventions to reduce procrastination and enhance academic success. This study hypothesizes that intrusive thoughts will positively correlate with academic procrastination, while self-compassion will negatively correlate with procrastination. Additionally, it is expected that self-compassion will moderate the relationship between intrusive thoughts and procrastination, providing a protective effect against the negative impact of intrusive thoughts.

2. Methods and Materials

2.1. Study Design and Participants

This study utilized a cross-sectional design to explore the relationships between academic procrastination, intrusive thoughts, and self-compassion. A total of 302 participants were recruited for the study, with the sample size determined based on the Morgan and Krejcie (1970) table for determining sample size. Participants were selected from a diverse population of university students through convenience sampling. The inclusion criteria required participants to be currently enrolled in undergraduate or graduate programs and to provide informed consent to participate in the study.

2.2. Measures

2.2.1. Academic Procrastination

The Academic Procrastination Scale (APS) by McCloskey and Scielzo (2015) is a widely recognized tool used to measure the dependent variable, academic procrastination. The APS consists of 25 items divided into two subscales: Academic Procrastination Behaviors (15 items) and Academic Procrastination Consequences (10 items). Respondents rate their agreement with each statement on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Higher scores indicate greater levels of academic procrastination. The scale has demonstrated strong reliability and validity across various studies, ensuring its suitability for assessing procrastination in academic contexts (Krispenz et al., 2019; Oram & Rogers, 2022; Sari & Kusumaningrum, 2022; Shehri, 2022; Zhang & Zhang, 2022).

2.2.2. Intrusive Thoughts

To measure the independent variable, intrusive thoughts, the White Bear Suppression Inventory (WBSI) developed by Wegner and Zanakos (1994) is employed. The WBSI contains 15 items designed to assess the frequency of intrusive thoughts and the tendency to suppress them. Each item is rated on a 5-point Likert scale, from 1 (strongly disagree) to 5 (strongly agree). The scale has one primary dimension, but exploratory factor analysis has revealed secondary factors related to intrusive thoughts and thought suppression. The WBSI has been validated in numerous studies and has shown high reliability and validity, making it a standard tool for evaluating intrusive thoughts (Rebetez et al., 2017).

2.2.3. Self-Compassion

The Self-Compassion Scale (SCS) by Neff (2003) is utilized to measure the independent variable, self-compassion. The SCS consists of 26 items divided into six subscales: Self-Kindness, Self-Judgment, Common Humanity, Isolation, Mindfulness, and Over-Identification. Respondents indicate their agreement with each statement on a 5-point Likert scale, from 1 (almost never) to 5 (almost always). Higher scores reflect greater self-compassion. The SCS has been extensively validated and has consistently demonstrated strong reliability and validity across different populations and settings, affirming its effectiveness as a measure of self-compassion (Einabad et al., 2017).

2.3. Data analysis

Data analysis was conducted using IBM SPSS Statistics version 27 (SPSS-27). Descriptive statistics were computed to summarize the demographic characteristics of the participants and the distribution of scores on the Academic Procrastination Scale (APS), White Bear Suppression Inventory (WBSI), and Self-Compassion Scale (SCS). Pearson correlation analyses were performed to examine the bivariate relationships between the dependent variable

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(academic procrastination) and each of the independent variables (intrusive thoughts and self-compassion).

To further explore the predictive relationships, a linear regression analysis was conducted with academic procrastination as the dependent variable and intrusive thoughts and self-compassion as the independent variables. The assumptions of linear regression, including linearity, homoscedasticity, normality, and multicollinearity, were checked to ensure the validity of the model. The results of these analyses provided insights into the extent to which intrusive thoughts and self-compassion contribute to academic procrastination among university students.

The study included 302 participants, comprising 174 females (57.62%) and 128 males (42.38%). The age of participants ranged from 18 to 35 years, with a mean age of 21.47 years (SD = 3.26). In terms of academic standing, 146 participants (48.34%) were undergraduate students, while 156 participants (51.66%) were enrolled in graduate programs. The majority of participants identified as full-time students (92.72%), with only 22 participants (7.28%) indicating part-time enrollment. Additionally, participants came from a variety of academic disciplines, including social sciences (38.41%), natural sciences (25.83%), engineering (21.85%), and humanities (13.91%).

3. Findings and Results

Table 1

Descriptive Statistics

Variable	Mean	Standard Deviation
Academic Procrastination	3.21	0.72
Intrusive Thoughts	2.95	0.65
Self-Compassion	3.67	0.54

Table 1 shows that the mean score for academic procrastination is 3.21 with a standard deviation of 0.72, indicating moderate levels of procrastination among the participants. Intrusive thoughts have a mean score of 2.95 (SD = 0.65), suggesting that participants experience these thoughts occasionally. Self-compassion has the highest mean score of 3.67 (SD = 0.54), indicating that participants generally treat themselves with compassion.

Prior to conducting the linear regression analysis, the assumptions of linear regression were thoroughly checked and confirmed. Linearity was assessed using scatter plots, which indicated a linear relationship between the independent variables (intrusive thoughts and self-compassion) and the dependent variable (academic procrastination). Homoscedasticity was evaluated through a plot of standardized residuals versus predicted values, revealing a constant variance (Breusch-Pagan test: $p = 0.187$). The normality of residuals was checked using the Shapiro-Wilk test, which was not significant ($p = 0.092$), indicating that the residuals were normally distributed. Multicollinearity was assessed using Variance Inflation Factors (VIF), with all VIF values below 2.0, confirming that multicollinearity was not a concern. Therefore, all assumptions for conducting a valid linear regression analysis were met.

Table 2

Correlation Matrix

Variable	Academic Procrastination	Intrusive Thoughts	Self-Compassion
Academic Procrastination	-	0.48**	-0.35**
Intrusive Thoughts	0.48**	-	-0.22*
Self-Compassion	-0.35**	-0.22*	-

$p < 0.05$, ** $p < 0.001$

Table 2 shows significant positive correlation between academic procrastination and intrusive thoughts ($r = 0.48$, $p < 0.001$), and a significant negative correlation between academic procrastination and self-compassion ($r = -0.35$, $p < 0.001$). Additionally, there is a significant negative correlation between intrusive thoughts and self-compassion ($r = -0.22$, $p < 0.05$).

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Table 3

Summary of Regression Results

Source	Sum of Squares	Degrees of Freedom	Mean Squares	R	R^2	R^2adj	F	p
Regression	35.43	2	17.72	0.58	0.34	0.33	34.67	< 0.001
Residual	68.25	299	0.23					
Total	103.68	301						

Table 3 indicates that the regression model significantly predicts academic procrastination ($F = 34.67$, $p < 0.001$). The model explains 34% of the variance in procrastination behaviors ($R^2 = 0.34$), with an adjusted R^2 of 0.33.

Table 4

Multivariate Regression Results

Variable	B	Standard Error	β	t	p
Constant	1.75	0.26		6.73	< 0.001
Intrusive Thoughts	0.52	0.08	0.41	6.50	< 0.001
Self-Compassion	-0.45	0.09	-0.29	-5.00	< 0.001

Table 4 shows that both intrusive thoughts ($B = 0.52$, $\beta = 0.41$, $p < 0.001$) and self-compassion ($B = -0.45$, $\beta = -0.29$, $p < 0.001$) are significant predictors of academic procrastination. The constant value is 1.75 ($p < 0.001$), indicating the baseline level of procrastination when the predictors are zero. These results highlight the significant impact of both intrusive thoughts and self-compassion on academic procrastination behaviors.

4. Discussion and Conclusion

This study investigated the relationships between academic procrastination, intrusive thoughts, and self-compassion among university students. The findings revealed significant correlations between these variables. Specifically, academic procrastination was positively correlated with intrusive thoughts and negatively correlated with self-compassion. The regression analysis indicated that both intrusive thoughts and self-compassion were significant predictors of academic procrastination, explaining 34% of the variance in procrastination behaviors.

The positive correlation between intrusive thoughts and academic procrastination aligns with previous research, highlighting the role of intrusive thoughts in disrupting self-regulation and leading to procrastination. Rebetez et al. (2017) found that individuals who experience frequent intrusive thoughts are more likely to procrastinate, as these thoughts can interfere with their ability to focus and complete tasks. This study supports the notion that intrusive thoughts contribute to procrastination by overwhelming individuals with negative cognitions, thereby hindering their productivity (Rebetez et al., 2017).

The negative correlation between self-compassion and academic procrastination is consistent with findings from Einabad et al. (2017), who reported that self-compassion can mitigate the effects of anxiety and reduce procrastination. Self-compassion involves treating oneself with kindness and understanding, which can help individuals cope with failures and setbacks more effectively. By fostering a positive inner dialogue, self-compassion reduces the likelihood of procrastination as individuals are less likely to be paralyzed by fear of failure or self-criticism (Einabad et al., 2017).

The significant predictive power of both intrusive thoughts and self-compassion on academic procrastination underscores the complex interplay between these psychological factors. The regression results showed that intrusive thoughts ($\beta = 0.41$) and self-compassion ($\beta = -0.29$) significantly predicted academic procrastination, indicating that higher levels of intrusive thoughts increase procrastination while higher levels of self-compassion decrease it. These findings align with the theoretical framework of self-regulation failure proposed by Fitzsimons and Finkel (2011), suggesting that effective self-regulation requires managing intrusive thoughts and cultivating self-compassion to maintain focus and motivation (Fitzsimons & Finkel, 2011).

Several studies support the current findings. For example, Oram and Rogers (2022) highlighted that the satisfaction of basic psychological needs, such as autonomy, competence, and relatedness, reduces academic procrastination (Oram &

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Rogers, 2022). These needs are closely related to self-compassion, as individuals who are self-compassionate are more likely to feel competent and connected, thereby reducing procrastination. Additionally, Krispenz et al. (2019) found that academic self-efficacy, which is enhanced by self-compassion, can reduce test anxiety and procrastination, further supporting the protective role of self-compassion against procrastination (Krispenz et al., 2019).

Hua and Wang (2023) emphasized the importance of learning preparation and methods in reducing academic procrastination. They found that effective learning strategies, which are often associated with higher self-regulation and self-compassion, lead to better academic outcomes. This study's finding that self-compassion reduces procrastination aligns with the notion that self-compassionate individuals are more likely to employ effective learning strategies and thus procrastinate less (Hua & Wang, 2023).

Moreover, the findings of this study are consistent with the work of San et al. (2016), who demonstrated that self-regulated learning is negatively associated with academic procrastination. Self-regulated learners, who typically exhibit higher self-compassion, are better at managing their time and tasks, reducing the likelihood of procrastination (San et al., 2016). This study extends these findings by highlighting the specific roles of intrusive thoughts and self-compassion in the self-regulation process.

Despite the significant findings, this study has several limitations. First, the cross-sectional design limits the ability to draw causal conclusions about the relationships between academic procrastination, intrusive thoughts, and self-compassion. Longitudinal studies are needed to examine how these relationships evolve over time. Second, the use of self-report measures may introduce bias, as participants might underreport or overreport their levels of procrastination, intrusive thoughts, and self-compassion. Future research should incorporate objective measures or multi-method approaches to validate these findings. Third, the sample was drawn from a single population of university students, which may limit the generalizability of the results to other populations, such as high school students or working professionals. Future studies should aim to include more diverse samples to enhance the generalizability of the findings.

To build on the current study's findings, future research should consider several avenues. First, longitudinal studies are essential to understand the causal relationships and long-term effects of intrusive thoughts and self-compassion on academic procrastination. Second, researchers should explore the underlying mechanisms through which self-compassion influences procrastination, such as examining the role of emotional regulation and resilience. Third, intervention studies could test the effectiveness of self-compassion training programs in reducing academic procrastination, providing practical insights for educational settings. Additionally, future research should investigate the role of other psychological factors, such as emotional intelligence and self-efficacy, in the context of procrastination to develop a more comprehensive understanding of this complex behavior.

Based on the findings of this study, several practical recommendations can be made for educators and mental health professionals. First, incorporating self-compassion training into academic programs could help students develop healthier coping mechanisms, thereby reducing procrastination. Techniques such as mindfulness meditation, self-reflective exercises, and cognitive-behavioral strategies can foster self-compassion and mitigate the impact of intrusive thoughts. Second, educators should provide students with tools and strategies for managing intrusive thoughts, such as mindfulness practices and cognitive restructuring techniques, to enhance their focus and productivity. Third, creating a supportive academic environment that promotes psychological well-being and addresses the emotional needs of students can reduce procrastination and improve overall academic performance. Interventions that focus on enhancing self-regulation skills, such as goal-setting, time management, and self-monitoring, can also be beneficial in helping students manage their academic tasks more effectively.

In conclusion, this study highlights the significant roles of intrusive thoughts and self-compassion in academic procrastination. By addressing these psychological factors, educators and mental health professionals can develop more effective interventions to support students in overcoming procrastination and achieving academic success. Future research should continue to explore these relationships and test interventions to provide further evidence-based strategies for reducing academic procrastination.

Authors' Contributions

Authors contributed equally to this article.

Declaration

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In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

References

Anam, I., Hastuti, E. S., & Sinaga, A. H. E. (2023). Hubungan Antara Self Regulated Learning Dengan Prokrastinasi Akademik Dimasa Pembelajaran Daring Pada Siswa Kelas Xii Sma Negeri 1 Ciawigebang. *In Search*, *21*(2), 192-201. https://doi.org/10.37278/insearch.v21i2.558

Arias, J. d. l. F., Malpica-Chavarria, E. A., Umerenkova, A. G., & Pachón-Basallo, M. (2021). Effect of Personal and Contextual Factors of Regulation on Academic Achievement During Adolescence: The Role of Gender and Age. *International journal of environmental research and public health*, *18*(17), 8944. https://doi.org/10.3390/ijerph18178944

Assem, H. D., Nartey, L., Appiah, E., & Aidoo, J. K. (2023). A Review of Students' Academic Performance in Physics: Attitude, Instructional Methods, Misconceptions and Teachers Qualification. *European Journal of Education and Pedagogy*, *4*(1), 84-92. https://doi.org/10.24018/ejedu.2023.4.1.551

Einabad, Z. S., Dorban, G., & Nainian, M. (2017). The Mediating Role of Self-Compassion in the Relationship Between Anxiety and Procrastination. *Zahedan Journal of Research in Medical Sciences*, *19*(9). https://doi.org/10.5812/zjrms.11773

Fitzsimons, G. M., & Finkel, E. J. (2011). Outsourcing Self-Regulation. *Psychological Science*, *22*(3), 369-375. https://doi.org/10.1177/0956797610397955

Hua, M., & Wang, L. (2023). The Relationship Between Chinese University Students' Learning Preparation and Learning Achievement Within the EFL Blended Teaching Context in COVID-19 Post-Epidemic Era: The Mediating Effect of Learning Methods. *PLoS One*, *18*(1), e0280919. https://doi.org/10.1371/journal.pone.0280919

Krispenz, A., Gort, C., Schültke, L., & Dickhäuser, O. (2019). How to Reduce Test Anxiety and Academic Procrastination Through Inquiry of Cognitive Appraisals: A Pilot Study Investigating the Role of Academic Self-Efficacy. *Frontiers in psychology*, *10*. https://doi.org/10.3389/fpsyg.2019.01917

Liu, G., Cheng, G., Hu, J., Pan, Y., & Zhao, S. (2020). Academic Self-Efficacy and Postgraduate Procrastination: A Moderated Mediation Model. *Frontiers in psychology*, *11*. https://doi.org/10.3389/fpsyg.2020.01752

Nisfary, R. K., Sulistyaningsih, W., Minauli, I., & Hermawati, T. (2023). The Relationship of Emotional Intelligence and Self-Efficacy With Academic Procrastination in Student. *Al Hikmah Journal of Education*, *4*(1), 13-36. https://doi.org/10.54168/ahje.v4i1.149

Oram, R., & Rogers, M. (2022). Academic Procrastination in Undergraduate Students: Understanding the Role of Basic Psychological Need Satisfaction and Frustration and Academic Motivation. *Canadian Journal of Education / Revue Canadienne De L Éducation*, *45*(3), 619-645. https://doi.org/10.53967/cje-rce.v45i3.5293

Rahmani, M., Namvar, H., & Hashemi Razini, H. (2024). The Effectiveness of Rational Emotive Behavior Therapy on Executive Functions and Academic Procrastination of Children with Sluggish Cognitive Tempo. *Journal of Psychological Dynamics in Mood Disorders (PDMD)*, *2*(4), 82-90. https://doi.org/10.22034/pdmd.2024.434756.1038

Rebetez, M. M. L., Rochat, L., Barsics, C., & Linden, M. V. d. (2017). Procrastination as a Self-Regulation Failure: The Role of Impulsivity and Intrusive Thoughts. *Psychological Reports*, *121*(1), 26-41. https://doi.org/10.1177/0033294117720695

San, Y. L., Roslan, S., & Sabouripour, F. (2016). Relationship Between Self-Regulated Learning and Academic Procrastination. *American Journal of Applied Sciences*, *13*(4), 459-466. https://doi.org/10.3844/ajassp.2016.459.466

Sari, A. A., & Kusumaningrum, F. A. (2022). Social Support and Academic Procrastination Tendency for Students Working on Thesis, COVID-19 Context. *Espergesia*, *9*(2). https://doi.org/10.18050/rev.espergesia.v9i2.2327

Shehri, A. R. A. (2022). Item Analysis of Academic Procrastination Scale Using Classic Test Theory and Item Response Theory Among University Students. *Journal of Umm Al-Qura University for Educational and Psychological Sciences*, *14*(4), 86-103. https://doi.org/10.54940/ep56281476

Sparfeldt, J. R., & Schwabe, S. (2024). Academic procrastination mediates the relation between conscientiousness and academic achievement. *Personality and individual differences*, *218*, 112466. https://doi.org/10.1016/j.paid.2023.112466

Xu, B. (2023). Improvement of Academic Procrastination among High School Students through Psychological Resilience Group Counseling. *Journal of Education and Educational Research*, *4*(1), 101-103. https://doi.org/10.54097/jeer.v4i1.10211

Zhang, C., & Zhang, W. (2022). The Impact of Academic Procrastination on Second Language Writing: The Mediating Role of L2 Writing Anxiety. *Frontiers in psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.851120

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