Proceedings of the 7th International Conference on Educational Innovation and Psychological Insights
DOI: 10.54254/2753-7048/2026.36727

Academic Stress and Procrastination among Chinese Undergraduates: The Differential Across Six Academic Tasks

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Abstract. It is assumed that academic stress (AS) can be a positive predictor of the academic procrastination (AP). Objective: The paper was conducted to determine whether there is a difference in the level of procrastination between six domains of academics, and whether the relationship between AS and AP has different degrees. Methods: The Procrastination Assessment Scale-Students (6 domains), Self-deceptive Enhancement subscale and Stress scale of College students were filled by 399 Chinese undergraduates. Friedman tests were used to test domain differences; Domain × AS interaction was determined through mixed-effects models with both median-split and continuous specification of AS. Findings: There was a significant difference between levels of procrastination among the domains (Friedman = 119.08, $p < .001$), writing and exams being the most common. Nevertheless, all six domains of AS had predicted procrastination at the same rate ($\beta = 0.99–1.18$, all $p < .001$), and the effect of the Domain × AS interaction was not significant in either of the specifications of the median-split and continuous (all interaction $p > .05$). This negative result which is theoretically useful is the null interaction that shows that the sensitivity to stress does not change with cognitive load. No one of the AS-AP relationships was moderated by self-deception ($p > .05$). Conclusions: Academic procrastination is domain-specific in its magnitude but not sensitive to stress. The results on the effects of stress on procrastination across high-cognitive-load tasks and low-cognitive-load tasks are inconsistent with the theory of domain specificity of cognitive loads and the findings suggest that emotion-regulation processes have no selective nature. High-cognitive-load tasks (writing and exams) must be given priority as an intervention since they have the highest level of procrastination, whereas reducing stress should focus on general vulnerability.

Keywords: Academic Stress, Academic Procrastination, Domain-specific, Stress Sensitivity, Undergraduates

1. Introduction

Procrastination in the academic field (AP) is a very common form of self-regulation among students at the university level, which can be characterized as an act of delaying one's study activities even though it has adverse outcomes [1]. The meta-analytical data shows that 50 percent of undergraduates are procrastinators and this leads to poor performance in academics, low levels of

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DOI: 10.54254/2753-7048/2026.36727

psychological health and sleep quality (e.g. [2]). Due to its prevalence and effects, educational psychology research should focus on finding the antecedents and conditions of AP.

One of the strongest predictors of AP is academic stress (AS). The students tend to react to perceived academic demands as greater than their coping resources with avoidance responses, such as procrastination, as a short-term emotion-regulation response [3]. Longitudinal and cross-sectional research has always reported a positive correlation between AS and AP (e.g., [4, 5]). Nevertheless, most of this literature conceptualizes AP as a single construct, which aggregates procrastination in various academic tasks into one score. Such aggregation can hide significant domain-specific differences that are theoretically and practically relevant.

The domain-specificity view, based on the theory of cognitive load [6], suggests that academic activities are essentially different in their inherent cognitive requirements. Writing term papers and preparation to exams involve high intrinsic cognitive load as they demand the concurrent combination of several sources of information, creation of new content and long-term metacognitive monitoring. Administrative tasks (e.g., filling forms, course registration) and attending meetings, on the contrary, are low in cognitive load, procedural simplicity and fragmented time demands. As per this framework, high-cognitive-load tasks should be more prone to procrastination as it drains working memory resources and increases the subjective feeling of effort, which makes avoidance more tempting when under stress [7].

Although the domain-specific analysis seems to be intuitive, empirical evidence is still limited. The Procrastination Assessment Scale-Students (PASS; [8]) was specifically developed to measure six different academic areas, but most studies aggregate or average across domains and lose granularity [9]. Recent appeals have suggested a change of variable-centered approaches to domain-centered ones in order to gain more insight into the task-contingent nature of procrastination [10]. This paper responds to this appeal by investigating whether AS can predict procrastination differently on the six domains of PASS.

More importantly, the alternative theory has a different prediction. The hypothesis of task-salience assumes that the high stakes and the highly visible nature of the tasks (e.g., exams, term papers) are enough to make people take it seriously even when they are stressed out, but in the case of low-stakes and less-visible tasks (e.g., administrative forms, regular meetings), there is no strong deadline and hence, when stress occurs, it is easy to abandon the tasks as motivational resources are used up. In this interpretation, the procrastination would be more prominent under the condition of low salience than in the condition of high salience; this is an opposite statement of the cognitive-load account. Such competing theories have never been compared with each other empirically.

Finally, we considered self-deception (SD) as an exploratory moderator. SD refers to a defensive cognitive tendency to safeguard self-conception from threatening information [11], and people with high SD overestimate their abilities and underestimate task difficulty [12]. While it has been theoretically argued that SD buffers the stress-procrastination link, previous research has not investigated whether such buffering works uniformly or selectively across academic tasks. Since there is no direct empirical antecedent for including SD as a moderator, it was included as an exploratory moderator, not as a moderator that theory dictates must be included.

The current research had three objectives. To begin with, we investigated whether the six academic fields are different in terms of procrastination rates among Chinese undergraduates. Second, we examined whether AS is a predictor of procrastination across domains differently. According to cognitive load theory, our hypothesis was that (H1) procrastination would be most frequent in high-cognitive-load areas (writing and exams) and least frequent in low-cognitive-load areas (administrative tasks and meetings). We did not assume a directional pattern of the Domain ×

DOI: 10.54254/2753-7048/2026.36727

AS interaction (H2); instead, we examined the opposing predictions of the cognitive-load account (more intense stress effects in high-load domains) and task-salience account (more intense stress effects in low-salience domains) as an empirical question. Third, we investigated whether SD mediated the relationship between AS and AP (H3), which was not predicted directionally due to the exploratory character of this analysis.

2. Method

2.1. Participants

The 401 undergraduates were recruited in the campus online groups and WeChat groups of the classes. The last sample had been reduced to 399 students (197 males, 49.4%, 202 females, 50.6%) with scores between freshman and senior years (freshman: 12.8%, sophomore: 19.8%, junior: 39.3%, senior: 28.1). It was found that they ranked themselves as top 10% (16.5), top 10-30% (28.1), top 30-50% (24.8), top 50-70% (15.3) or bottom 30 percent (15.3). Informed consent was given by all the participants and they were allowed to take the survey anonymously. This research followed the rules of the institutional review board on ethical considerations.

2.2. Measures

Academic Stress. The instrument was the Stress Scale of College Students (SSCS; [13]). The scale consists of 30 items with three subscales namely personal annoyance (16 items), learning annoyance (10 items) and negative life events (4 items). Due to the nature of the study, only the learning annoyance subscale was given where perceived stress due to academic performance, exam pressure, competition among peers, and efficiency in learning were measured. Items were rated on a 4-point Likert scale (1 = no stress to 4 = great stress). In this sample, the 10-item subscale had an alpha value of .89 by Cronbach.

Procrastination of the Academic. The Procrastination Assessment Scale-Students (PASS; Solomon and Rothblum, 1984) is a tool that can be used to evaluate procrastination in six academic areas: writing term papers, studying exams, reading books on a weekly basis, doing administrative work, participating in academic meetings, and performing other types of academic work. There are three questions on each domain with the frequency of procrastination, the problems associated with it, and how willing they would be to minimize it which were all rated on a five-point scale (1 = never, 5 = always). The sum of the three items was calculated to derive the scores of the domains (3 – 15). In this sample, Cronbach alpha for the six areas was between .79 and .83.

Self-Deception. It was the Self-Deceptive Enhancement (SDE) subscale of the Balanced Inventory of Desirable Responding (BIDR; Paulhus, 1991). The scale is a 20-item scale that quantifies inflated positive self-perceptions (e.g., My first impressions are often correct). Items were scored on a Likert scale of 7 points (1 = very inconsistent to 7 = very consistent), with some items being reverse scored. The greater the score, the more SD there is. In this sample, it was found that the Cronbach alpha was .84.

2.3. Procedure and data analysis

The data was gathered through an anonymous online survey which was sent out using the campus social media. Following the informed consent, the participants provided demographic data and filled

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the three scales in a fixed sequence: SSCS, PASS, and BIDR-SDE. Patterned answering responses, abnormal completion times or failed attention checks were not considered before analysis.

Python 3.11 was used to conduct the analyses. First, Friedman test was used to examine domain differences in procrastination and then Wilcoxon signed-rank tests with Bonferroni correction (α = .0033 at 15 comparisons). Second, we tested Domain × AS interaction by fitting mixed-effects models both median-split and continuous AS specifications. The median-split model (high vs. low AS) allowed visualization and simple-effect analysis; the continuous model (AS as a continuous predictor) was the main inferential test to prevent loss of power due to dichotomization. Before entering the continuous model, AS was grand-mean centered (M = 24.20), such that the intercept is the expected level of procrastination among average-stress student in the reference domain (administrative tasks). Continuous model is said to be the major outcome; the median-split model is only reported when it comes to descriptive comparison. Third, individual moderated regression models were calculated on each domain to determine exploratory SD moderation: $AP = \beta_0 + \beta_1 AS + \beta_2 SD + \beta_3(AS \times SD) + \beta_4 Gender + \beta_5 Grade + \varepsilon$. Standardized continuous predictors were used before analysis. Effect sizes were provided in terms of Cohen's d and partial eta-squared (ηp^2).

3. Results

3.1. Descriptive statistic and domain differences

Table 1 will show the descriptive statistics of the six procrastination domains, academic stress and self-deception. There was a significant difference in the domain Friedman test with the value of chi square (5) = 119.08, $p < .001$. Wilcoxon tests that were conducted after Bonferroni correction indicated that writing term papers (M = 8.35, SD = 2.28), and studying exams (M = 8.39, SD = 2.36) are significantly more than weekly reading (M = 7.94), administrative work (M = 7.74), meetings (M = 7.58), and other general tasks (M = 7.92; all $p < .001$). The results did not show any significant differences between writing and examinations ($p = .354$) or among four lower categories (reading, admin, meeting, general) but only that reading is higher than meeting ($p = .012$, uncorrected). H1: This finding was also found to be supported as high-cognitive-load areas (writing, exams) had the greatest levels of procrastination.

Table 1. Descriptive statistics and reliability coefficients for all variables (N = 399)

Variable	M	SD	Skew	Kurt	Min	Max	α
Writing Term Papers	8.35	2.28	0.12	0.45	3	15	.80
Studying for Exams	8.39	2.36	0.18	0.52	3	15	.81
Weekly Reading	7.94	2.31	0.08	0.38	3	15	.79
Administrative Tasks	7.74	2.31	0.05	0.41	3	15	.80
Attending Meetings	7.58	2.36	0.12	0.48	3	15	.79
General Tasks	7.92	2.36	0.05	0.44	3	15	.83
Academic Stress (AS)	24.20	5.96	0.35	0.28	10	40	.89
Self-Deception (SD)	85.42	13.92	0.22	0.15	44	119	.84

Note: AS = academic stress; SD = self-deception.

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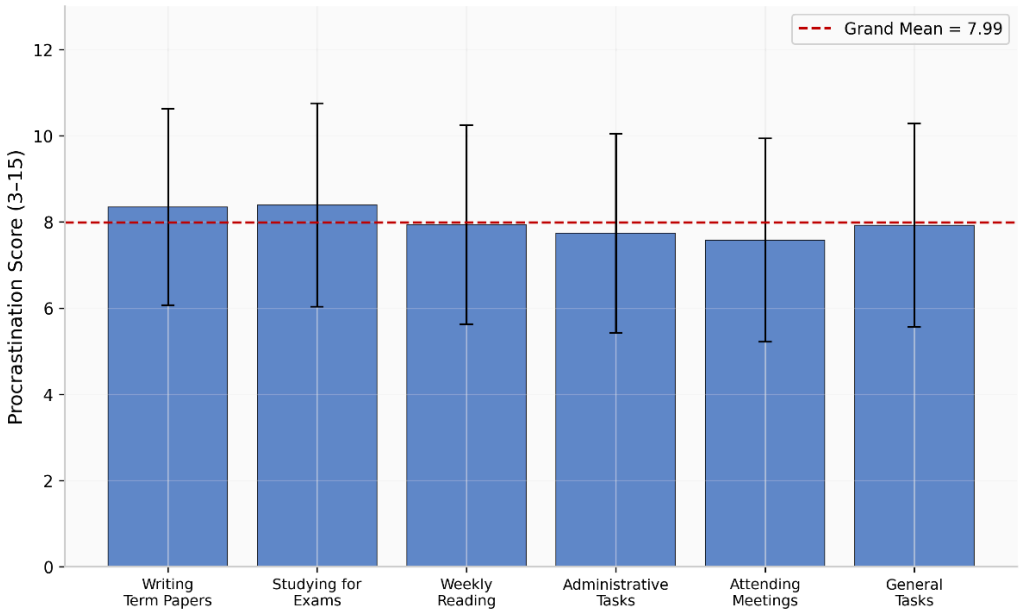

Figure 1. Domain-specific academic procrastination (N = 399). Error bars denote standard errors. The dashed line represents the grand mean across domains

3.2. Academic stress and domain-specific procrastination

The main mixed-effects model with grand-mean-centered AS (M = 24.20) showed that there was a significant main effect of AS, b = 0.190, SE = 0.013, z = 14.62, p < .001, meaning that every one-point increase in AS predicted an increase in procrastination by 0.19 points in all areas. The intercept (b = 7.74, SE = 0.15, p < .001) is the expected score on procrastination in the reference domain (administrative tasks) among a student who has average academic stress which is interpretable and ecologically meaningful. The overall effect of Domain was also important: writing (b = 0.50, SE = 0.13, p < 0.001) and exams (b = 0.49, SE = 0.13, p < 0.001) were significantly higher than the reference domain. Most importantly, no interaction terms between Domain and AS were significant (all p > .07; see Table 2). Such a null interaction, achieved using the statistically more potent continuous specification, shows that the influence of academic stress on procrastination does not differ significantly among the six domains of academics. That is, stress increases procrastination equally irrespective of the cognitive load or salience of a task.

It is also important to note that the Domain × AS writing interaction was on the verge of being significant (b = 0.003, SE = 0.002, p = .086). Nevertheless, as it is not likely that the effect of writing would be statistically significant after Bonferroni correction with six degrees of freedom (alpha = 0.008), and the other five effects were highly insignificant (p = .281 – .672), and the result of the study could be reproduced in the median-split specification (p = .220) we believe this is an accident rather than a sign of different sensitivity to stress. As a descriptive comparison, the main effect of the group of AS was significant (b = 1.47, SE = 0.23, p < .001) and the main effect of Domain was also significant but the interaction between the Domain and the AS group was not significant (all interaction p > .08). The domain main effect had a low level of effect size (partial eta squared = .016). Such findings based on both continuous and dichotomized specifications are more likely to make one confident about the null interaction being stable and not an outcome of a poor modeling approach.

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Table 2. Mixed-effects model predicting domain-specific procrastination(as grand-mean centered, n = 399)

Effect	b	SE	z	95% CI	p
Intercept	7.74	0.15	51.62	[7.45, 8.03]	< .001
AS (grand-mean centered)	0.190	0.013	14.62	[0.165, 0.216]	< .001
Domain (Writing vs. Admin)	0.50	0.13	3.88	[0.25, 0.76]	< .001
Domain (Exam vs. Admin)	0.49	0.13	3.81	[0.24, 0.75]	< .001
Domain (Reading vs. Admin)	0.04	0.13	0.32	[0.21, 0.30]	.752
Domain (Meeting vs. Admin)	0.16	0.13	1.20	[0.41, 0.09]	.231
Domain (General vs. Admin)	0.07	0.13	0.56	[0.18, 0.33]	.573
Domain × AS (Writing)	0.003	0.002	1.71	[0.000, 0.006]	.086
Domain × AS (Exam)	0.002	0.002	1.08	[0.002, 0.006]	.281
Domain × AS (Reading)	0.002	0.002	0.98	[0.002, 0.006]	.328
Domain × AS (Meeting)	0.001	0.002	0.42	[0.005, 0.003]	.672
Domain × AS (General)	0.001	0.002	0.56	[0.003, 0.005]	.573

Note: AS = academic stress, grand-mean centered (M = 24.20). Reference domain = Administrative Tasks. The intercept is the expected score of procrastination in the reference field of a student who has an average level of academic stress. All interaction terms are non-significant.

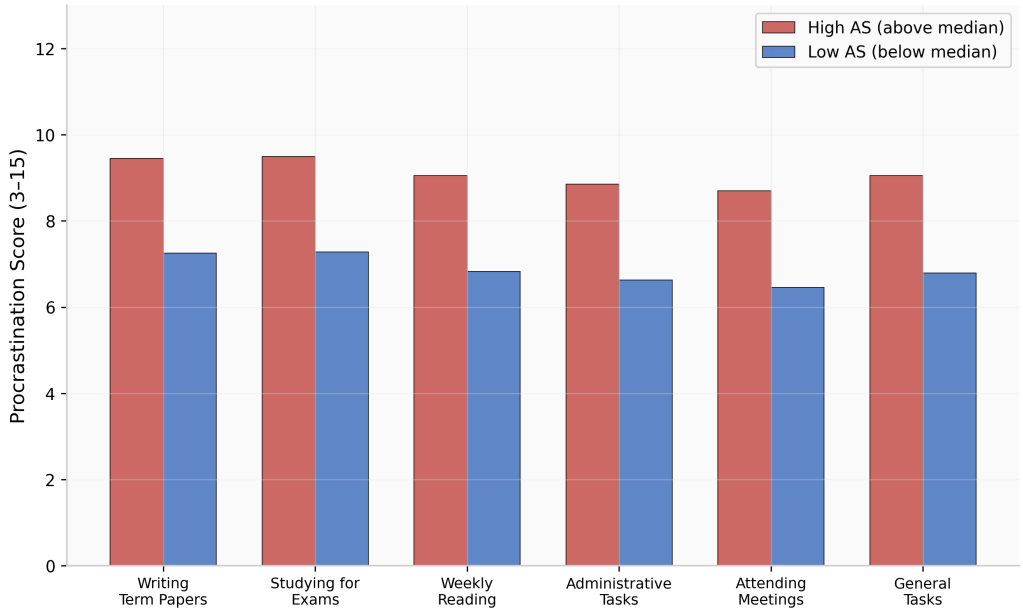

Figure 2. Domain-specific procrastination by academic stress group (high vs. low, median split; N = 399)

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3.3. Moderated regression analyses

The results of the moderated regressions for each domain can be found in Table 3. AS significantly predicted procrastination in all six domains (β = 0.99–1.18, all ps < .001). Interestingly, the strongest effects were seen in administrative tasks (β = 1.15) and attending meetings (β = 1.18), rather than in writing (β = 0.99) or exams (β = 1.01). We did not predict this pattern of stronger stress effects in lower cognitive load domains a priori, and we interpret it here as an exploratory finding. One possible post hoc explanation for this finding is that, based on the task-salience hypothesis, less salient tasks (such as administrative tasks and routine meetings) do not have strong deadlines and/or external accountability, so they are more readily deprioritized when stress has depleted available motivational resources. However, more salient tasks (e.g., exams, term papers) still have enough urgency to overcome the motivational depletion caused by stress and compel engagement. This explanation is speculative, and would need to be tested directly in future research.

SD was not a significant predictor of procrastination in any domain (β = −0.17 to 0.04, all p > .05), and AS × SD interaction was also non-significant across all domains (β = −0.14 to 0.01, all p > .05). Therefore, the exploratory H3 failed to hold. Gender and grade had insignificant effects: males indicated slightly greater procrastination in writing (p = .050) and general tasks (p = .010) but these were minor and inconsistent with respect to domains.

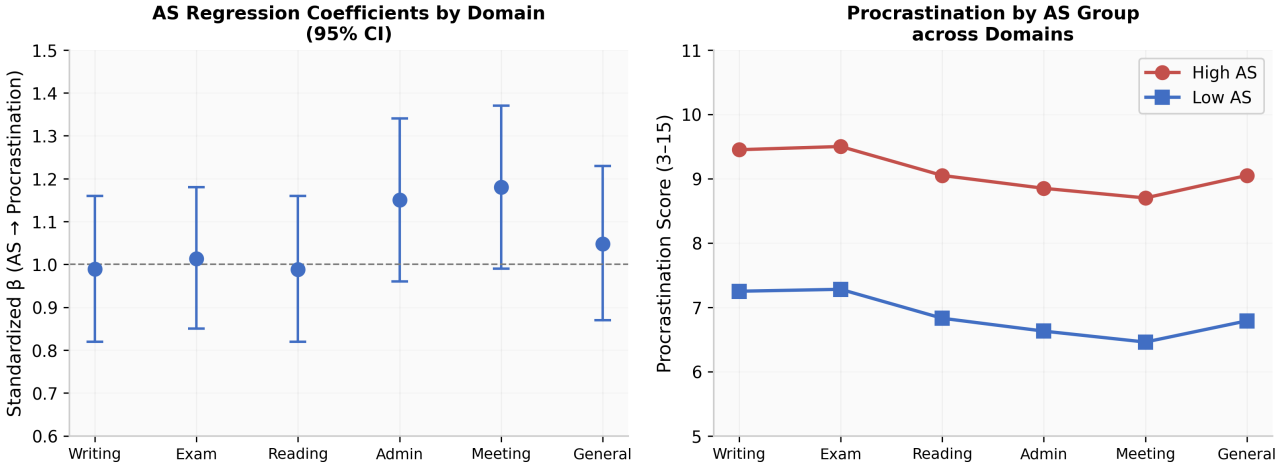

Figure 3. (Left) Coefficients of regression in terms of the standardization of the academic stress as a predictor of procrastination within six areas and with the confidence interval of 95 percent. The high level of confidence intervals overlapping can be noted, which is evidence of the null hypothesis of homogeneity of the sensitivity to stress. (Right) Procrastination groups by domain of academic stress group (high vs. low)

Table 3. Moderated regression results for each academic domain (N = 399)

Domain	R^2	F	AS (β)	AS p	SD (β)	SD p	AS×SD (β)	AS×SD p
Writing	.201	19.77***	0.989	< .001	0.085	.430	0.135	.218
Exam	.192	18.67***	1.013	< .001	0.051	.646	0.014	.905
Reading	.184	17.74***	0.988	< .001	0.050	.650	0.091	.417
Admin	.255	26.95***	1.150	< .001	0.165	.117	0.063	.558

DOI: 10.54254/2753-7048/2026.36727

Table 3. (continued)

Meeting	.243	25.26***	1.180	< .001	0.035	.749	0.012	.914
General	.196	19.21***	1.048	< .001	0.040	.719	0.021	.850

Note: AS = academic stress; SD = self-deception. All predictors standardized. Gender and grade included as controls. ***p < .001. The effects that were more intense in low-cognitive-load areas (administrative tasks, meetings) are not hypothesized a priori and must be considered exploratory.

4. Discussion

This paper is a study that was carried out to find out whether the procrastination of Chinese students in academics is domain-specific in terms of its magnitude and stress sensitivity. Three main results were obtained. First, it was found that there was significant difference between the six academic activities in which procrastination was measured: writing term papers and reading the books before exams had the highest levels of procrastination according to cognitive load theory [6]. Second, more importantly, academic pressure has been found to be an equal predictor of procrastination within all the fields; Domain × AS interaction did not have any significance at both continuous and median-split models. The null effect on this interaction is a theoretically useful negative result because it does not confirm the intuitive view that stress is selective in affecting high-cognitive-load tasks but rather proposes that stress is a global emotion-regulation mechanism with no selectivity to affect avoidance. Thirdly, there was no moderation of any relationship between self-deception and stress-procrastination as per the exploratory nature of the latter.

The differences in the magnitude of procrastination between domains are consistent with cognitive load theory [6]. The writing and preparation to exams have the greatest intrinsic cognitive demands, which demand continuous attention, working memory integration, and generative processing. These activities are also defined by feedback that is delayed and vague progress indicators, which increase the subjective aversiveness of task initiation [7]. Conversely, administrative duties and participation in meetings although they are also procrastinated require less cognitive involvement and more specific procedural actions making it easier to initiate them psychologically. This conclusion builds on previous studies to show that the label of procrastination encompasses quantitatively varying behaviors within academic settings.

The most important finding of the study was the uniform predictive effect of academic stress across domains. We had previously assumed, on the basis of cognitive load theory, that stress would have disproportionate effects on high-cognitive-load tasks since stress drains executive resources required in solving complex problems. Rather, stress equally predicted procrastination in all domains. This null interaction was repeated with both continuous and dichotomized AS specifications, with the main continuous specification being grand-mean-centered AS (Table 2) to provide an interpretable intercept. This pattern can be interpreted as evidence that the stress-procrastination mechanism is not a task-specific cognitive-load pathway but rather a generalized emotion-regulation pathway. When students feel increased stress they engage in blanket avoidance of all academic obligations not because each task is equally aversive, but because procrastination is a short-term mood-regulation strategy that is indiscriminately used against any academic demand [3].

The marginal interaction on the writing domain (p = .086) in the continuous model should be addressed. Although this value is close to the conventional .05 level, we do not take it as an indication of differential stress sensitivity due to three reasons. To begin with, the remaining five

DOI: 10.54254/2753-7048/2026.36727

interaction terms were very non-significant (p = .281 – .672), and a single marginal result out of six tests can be attributed to chance fluctuation under the null hypothesis. Second, even a liberal Bonferroni correction of six comparisons would not allow the writing interaction to survive (α = 0.008). Third, the effect was repeated as obviously non-significant in the median-split specification (p = .220). All these convergent null results taken together enhance confidence that the lack of domain-specific stress sensitivity is strong rather than a Type II error because of low power.

The exploratory result that the effects of stress were numerically highest in low-cognitive-load areas (administrative work, meetings) is to be interpreted with caution. This trend was not predicted a priori and must be considered as a post-hoc finding which needs replication. Assuming it is true, it would confirm the task-salience hypothesis presented in the Introduction: high-salience tasks (exams, term papers) have external accountability and deadlines that make them impossible to avoid even when stressed, whereas low-salience tasks (forms, routine meetings) do not have such forcing mechanisms and can thus be more easily neglected when stress consumes motivational resources. The present explanation reverses the prediction of cognitive-load and emphasizes the significance of separating between task difficulty (which predicts the level of procrastination at baseline) and stress sensitivity (which might be controlled by task salience instead of cognitive load). Future studies ought to directly manipulate or measure task salience and cognitive load to decide between these competing explanations.

The absence of any impact on the self-deception is in line with its being a study of exploration. SD was incorporated since it had been previously hypothesized to have an effect of mitigating threat assessment [11] and there were no compelling empirical evidence that would lead to predicting domain specific moderation. The fact that none of the effects of the SD (either as an independent or moderating variable) are significant implies that the self-deception works at the trait level (as it affects the overall level of self-esteem and motivational direction), not at the task-appraisal level (that is, it changes the decision-making process of procrastination). This result can be attributed to the general literature of self deception which has highlighted the role of self deception in the maintenance of global self-concept but not the regulation of behavior under particular situations [12]. Further studies need to consider whether other factors of individual difference such as time management, fear of failure, or self-efficacy could have more pronounced domain-specific moderation.

4.1. Practical implications

It is obvious that the specific nature of procrastination magnitude has implications in the domain of intervention. The workshops on anti-procrastination which are generalized and have equal tasks are probably not effective. It is better to focus on the high-cognitive-load activities, i.e., writing and exam preparation with the help of special approaches at the universities. To write, it can be broken into a task-based approach (i.e. breaking down papers into literature review, outline, and writing), writing groups, and progress tracking software to make the large-scale work less ambiguous. In the case of exams, massed studying can be reduced by using the distributed practice schedule and retrieval schedules as a way of reducing the perceived mental load of massed studying.

The conclusion that the students who are stressed procrastinate in all aspects of their lives, including low-load tasks of administration, is the one that should be considered as a reason to disentangle the process of stress management and training on task-specific skills. In case when the students experience chronic stress, they become avoidant, and even small duties cannot be performed. It might have been possible to prevent this generalization of procrastination by early

DOI: 10.54254/2753-7048/2026.36727

detection of stress (by means of screening it at times of high-stress like midterms or before registration).

4.2. Limiations and future directions

There are several limitations that need to be mentioned. First, the cross-sectional design makes it impossible to make causal inferences. Even though the theoretical model assumes stress as a precursor of procrastination, there may be reciprocal effects: procrastination will increase pending workload and this will lead to an increase in stress. These pathways require longitudinal or experimental designs to unravel them. Second, we provided continuous and median-split AS specifications both to alleviate the issue of dichotomization but the median-split model was used as a descriptive model only; the continuous model with grand-mean-centered AS was the main inferential test. Third, the sample was taken at one university in southern China, which restricts the generalizability to other cultural or institutional settings. Fourth, all measures were self-reported, and this leads to issues of common method variance. Though the first unrotated factor explained 28.4% of the variance (which is less than 40%) according to Harman single-factor test, multi-method tests (e.g., behavioral traces, teacher ratings) would enhance validity.

Experience sampling techniques would be used in the future to study procrastination as a phenomenon of academic life, and how it is experienced. Diary research might help to determine if these variations of domains that are found here vary among individuals on a daily basis or whether they become stable traits. Moreover, objective data on the performance (e.g., the time when the task was submitted, the library entry record) could eliminate the bias of self-reporting and provide a better understanding of the effects of domain-specific procrastination on the domain-specific performance deficiencies. More importantly, the alternative hypothesis made by cognitive-load and task-salience theories should be put to the test through the manipulation of the cognitive load of tasks and the salience of tasks independently.

5. Conclusion

The phenomenon of academic procrastination is not a homogeneous one in its size, it is the Chinese undergraduates who are most likely to procrastinate when they need to work on high-cognitive-load tasks, but it is the same in the level of stress sensitivity. The effects of academic stress on all six areas of the academic environment were indiscriminately increased by procrastination, which was not related to the cognitive load explanation and generalized emotion regulation explanation. This process is not moderated at the task level because of self-deception. These results can be interpreted as interventions should be made at the domain levels (writing and exams preparation) that are based on the absolute procrastination rate (the higher the procrastination rates, the lower the stress reduction strategies), and the stress-reduction strategies have been applied to the overall vulnerability of the academic activity.

References

[1] Steel, P. (2007). The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure. *Psychological Bulletin, 133*(1), 65–94.

[2] Kim, K. R., & Seo, E. H. (2015). The relationship between procrastination and academic performance: A meta-analysis. *Personality and Individual Differences, 82*, 26–33.

[3] Sirois, F. M., & Pychyl, T. A. (2013). Procrastination and the priority of short-term mood regulation: Consequences for future self. *Social and Personality Psychology Compass, 7*(2), 115–127.

DOI: 10.54254/2753-7048/2026.36727

[4] Xue, C., Helian, Z., & Li, Y. (2025). Academic pressure and academic procrastination: The mediating role of negative coping strategies. *PLOS ONE, 20*(1), e0338956.
[5] Cao, C., Chen, D., & Zhou, Y. (2025). Perceived stress and academic procrastination among higher vocational nursing students: The mediating roles of positive and negative emotions. *BMC Nursing, 24*, 36.
[6] Sweller, J. (1988). Cognitive load during problem solving: Effects on learning. *Cognitive Science, 12*(2), 257–285.
[7] Klingsieck, K. B. (2013). Procrastination: When good things don't come to those who wait. *European Psychologist, 18*(1), 24–34.
[8] Solomon, L. J., & Rothblum, E. D. (1984). Academic procrastination: Frequency and cognitive-behavioral correlates. *Journal of Counseling Psychology, 31*(4), 503–509.
[9] Mortazavi, F., Mortazavi, S. S., & Khosrorad, R. (2015). Psychometric characteristics of Procrastination Assessment Scale-Student (PASS) among students at Sabzevar University of Medical Sciences. *Iranian Red Crescent Medical Journal, 17*(9), e28328.
[10] Svartdal, F., Granmo, S. L., & Farevaag, F. S. (2020). On the behavioral side of procrastination: Exploring behavioral delay decision and behavioral delay procrastination in self-reported procrastination. *Frontiers in Psychology, 11*, 1379.
[11] Paulhus, D. L. (1991). Measurement and control of response bias. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (pp. 17–59). Academic Press.
[12] Fan, W., Ren, M., Zhang, W., & Zhong, Y. (2022). The effect of feedback on self-deception: ERP evidence. *Acta Psychologica Sinica, 54*(5), 481–496.
[13] Li, H., & Mei, J. (2002). The Stress Scale of College Students. *Chinese Journal of Applied Psychology*(1), 27–32.