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Time Management Disposition and Academic Procrastination among Chinese First-Year University Students: Examining Self-Control as a Mediator

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ABSTRACT: This study examined associations among time management disposition, self-control, and academic procrastination in first-year university students. Summary statistics for 1,046 students at University A in Zhejiang Province, China, were analyzed using ordinary least squares regression and the Sobel test. Time management disposition was positively associated with academic procrastination (B = 0.857, β = 0.727) and self-control (B = 0.512, β = 0.754; both $p < 0.001$). The positive association with procrastination was contrary to the hypothesized negative association. In the joint outcome model, self-control was not significantly associated with procrastination (B = 0.048, p = 0.397). The estimated indirect association was 0.024 (SE = 0.029), with a normal-theory 95% confidence interval of −0.032 to 0.081. The findings supported a positive association between time management disposition and self-control but did not support the proposed mediating role of self-control.

Keywords - academic procrastination, first-year university students, mediation, self-control, time management disposition

1. Introduction

Academic procrastination has attracted increasing attention in higher education. The first year of university marks a transition from the externally structured learning environment of secondary school to greater responsibility for managing one's own studies. Whereas school timetables and teacher supervision provide a relatively fixed learning schedule, university students generally have more flexibility in their course choices and must coordinate several tasks with different deadlines. Some first-year students find it difficult to allocate their time, organize competing demands, and sustain their engagement with academic work. These adjustment difficulties may be accompanied by academic procrastination.

Academic procrastination involves voluntarily delaying an intended academic task despite expecting the delay to have adverse consequences [1]. Reviews generally describe an association between effective time management and lower procrastination [2, 3]. Experimental evidence also suggests that time management training can change how students distribute work on an important academic task over time [4]. The transition to university provides a context in which to examine these relationships as students assume greater responsibility for coordinating their own academic work.

Time management concerns the organization of goal-directed activity, whereas self-control concerns regulating responses in the presence of competing temptations. Research relating time management practices and self-discipline to academic performance supports their relevance to learning [5, 6]. Examining both

constructs may help clarify whether students' reported planning and their capacity to regulate behavior make distinct contributions to academic procrastination.

The present study examined the associations among time management disposition, self-control, and academic procrastination in first-year students at University A in Zhejiang Province, China. The model assessed whether self-control statistically accounted for part of the relationship between time management disposition and procrastination.

2. Literature Review and Hypotheses

2.1 Time Management Disposition and Academic Procrastination

Time management includes setting goals, establishing priorities, allocating time, and monitoring progress [7, 8]. Time management disposition refers to a person's self-reported tendencies in organizing and using time. It is distinguishable from objectively demonstrated planning competence. Academic procrastination concerns the voluntary delay of intended academic activity despite anticipating adverse consequences [1].

Planning and prioritizing academic tasks can make intended actions more specific and reduce uncertainty about when to begin. The literature generally links more effective time management with lower procrastination [2, 3]. In an experimental study, students who received time management training distributed work on a self-selected academic task more evenly over the following weeks [4]. These findings provide a basis for expecting a negative relationship in first-year university students.

H1: Time management disposition is negatively associated with academic procrastination among first-year university students.

2.2 Time Management Disposition and Self-Control

Self-control involves regulating attention, emotion, and behavior when immediate impulses compete with valued goals [9, 10]. Time management disposition emphasizes the organization of tasks and time, whereas self-control emphasizes maintaining goal-consistent behavior. Students who plan and monitor their academic activities may also be more likely to resist distractions and persist with intended tasks. This conceptual connection provides a basis for hypothesizing a positive association between time management disposition and self-control.

H2: Time management disposition is positively associated with self-control among first-year university students.

2.3 Self-Control and Academic Procrastination

Self-control may help students maintain attention to academic tasks when more immediately rewarding alternatives are available. In a study of university students, Kim et al. linked stronger self-control to lower procrastination [11]. This evidence is consistent with the account of procrastination as a failure to regulate goal-directed activity [1]. Self-control may therefore be associated with less academic delay even when differences in time management disposition are considered.

H3: Self-control is negatively associated with academic procrastination among first-year university students after accounting for time management disposition.

2.4 The Proposed Mediating Role of Self-Control

The proposed model links the organization of academic work with the regulation of behavior needed to carry out that work. The expected positive association between time management disposition and self-control, together with the expected negative association between self-control and procrastination, implies a negative indirect association. The model therefore examines whether self-control statistically accounts for part of the relationship between time management disposition and academic procrastination.

H4: Time management disposition has a negative indirect association with academic procrastination through self-control among first-year university students.

3. Research Design

3.1 Participants and Procedure

Participants were recruited through convenience sampling from the first-year student population at University A in Zhejiang Province, China. The survey was administered online through Wenjuanxing. Of the 1,120 questionnaires returned, 1,046 were retained after excluding responses that were incomplete, showed patterned responding or logical inconsistencies, or contained missing data on key variables. The proportion retained for analysis was 93.39%. The sample included 455 men (43.50%) and 591 women (56.50%). Students were enrolled in humanities (n = 338, 32.31%), science (n = 320, 30.59%), engineering (n = 308, 29.45%), or arts and sports programs (n = 80, 7.65%).

Participants were informed of the research purpose, provided informed consent, and completed the survey anonymously.

3.2 Measures

The questionnaire used Chinese-language self-report item sets to assess time management disposition, self-control, and academic procrastination. Time management items addressed planning, prioritization, monitoring, and the implementation of academic tasks, drawing on the time management disposition framework of Huang and Zhang [12]. Self-control items concerned resistance to distraction, persistence with study goals, and regulation of emotion during academic work. Academic procrastination items concerned delays in starting or completing study tasks. Responses were recorded on five-point scales.

The scoring scheme specified reverse-coding negatively worded time management and self-control items before combining item scores. Higher scores were defined as stronger time management tendencies, greater self-control, and more frequent academic procrastination, respectively.

3.3 Analytical Strategy

Ordinary least squares regressions were estimated from the reported sample size (N = 1,046), means, standard deviations, and Pearson correlations originally obtained using SPSSAU. Calculations were performed in Python. Each model included an intercept and no additional covariates. Separate models examined the associations of time management disposition with self-control and academic procrastination, followed by a joint model of procrastination including both predictors. Conventional standard errors and two-sided t tests were used.

The indirect association was calculated as the product of the unstandardized a and b path coefficients. Its standard error was estimated using the first-order delta method, with the covariance between the two coefficient estimates set to zero. A two-sided Sobel test and a normal-theory 95% confidence interval were used to evaluate the indirect association [13]. Statistical significance was set at $\alpha = 0.05$.

4. Results

4.1 Descriptive Statistics and Correlations

The descriptive statistics and correlation matrix are presented in Table 1. Time management disposition was positively correlated with self-control (r = 0.754) and academic procrastination (r = 0.727). Self-control was also positively correlated with procrastination (r = 0.560; all $p < 0.001$).

Table 1. Descriptive Statistics and Correlations

Variable	*M*	*SD*	1	2	3
1 Time management disposition	3.47	0.84	—		
2 Self-control	3.38	0.57	0.754***	—	
3 Academic procrastination	2.24	0.99	0.727***	0.560***	—

*Note. N = 1,046. *** p < 0.001.*

4.2 Regression Analyses and the Indirect Association

The regression estimates are presented in Table 2. Time management disposition was positively associated with academic procrastination in the total-association model (B = 0.857, $p < 0.001$) and with self-control (B =

0.512, $p < 0.001$). In the joint outcome model, its association with procrastination remained positive after accounting for self-control ($B = 0.832$, $p < 0.001$). The conditional association between self-control and procrastination was not statistically significant ($B = 0.048$, $p = 0.397$).

Table 2. Ordinary Least Squares Regression Estimates

Path	*B*	*SE*	β	*t*	*p*
Time management disposition → academic procrastination (c)	0.857	0.025	0.727	34.210	< 0.001
Time management disposition → self-control (a)	0.512	0.014	0.754	37.088	< 0.001
Time management disposition → academic procrastination (c′)	0.832	0.038	0.706	21.829	< 0.001
Self-control → academic procrastination (b)	0.048	0.056	0.027	0.848	0.397

Note. B = unstandardized coefficient; SE = classical OLS standard error; β = standardized coefficient. Paths c′ and b are conditional associations in the joint model. Total procrastination model: $R^2 = 0.529$, adjusted $R^2 = 0.528$; self-control model: $R^2 = 0.569$, adjusted $R^2 = 0.568$; joint procrastination model: $R^2 = 0.529$, adjusted $R^2 = 0.528$. Residual df = 1,044 in the single-predictor models and 1,043 in the joint model. Displayed values are rounded to three decimal places.

The indirect association through self-control was 0.024 ($SE = 0.029$). The Sobel test yielded $z = 0.848$, $p = 0.396$, and the normal-theory 95% confidence interval was −0.032 to 0.081. These results did not support the proposed indirect association.

4.3 Summary of Hypothesis Tests

The positive association between time management disposition and procrastination was opposite to H1, so H1 was not supported. The positive association with self-control was consistent with H2. The conditional association predicted by H3 was nonsignificant, and the test did not support the negative indirect association proposed in H4 (Table 3).

Table 3. Summary of Hypothesis Tests

Hypothesis	Predicted association	Result
H1	Time management disposition is negatively associated with academic procrastination.	Not supported; opposite direction
H2	Time management disposition is positively associated with self-control.	Supported
H3	Self-control is negatively associated with academic procrastination after accounting for time management disposition.	Not supported
H4	Time management disposition has a negative indirect association with academic procrastination through self-control.	Not supported

5. Discussion

5.1 The Direction of the Time Management Association

Time management disposition was positively associated with academic procrastination, contrary to H1 and to the negative relationship generally reported in the literature [2, 3]. The positive zero-order association between self-control and procrastination also contrasted with the expected negative relationship [1, 11]. Together, these findings differ from the pattern anticipated by the self-regulation account used to develop the hypotheses.

A possible interpretation concerns the distinction between planning and implementation. Students may report organizing their time while still experiencing difficulty starting or completing academic tasks. Study logs,

assignment timestamps, and repeated measurements could clarify how reported time management tendencies correspond to everyday study behavior.

5.2 Time Management Disposition and Self-Control

Time management disposition and self-control were positively related, consistent with H2. Organizing academic tasks and regulating competing impulses are related aspects of goal-directed behavior. Students who reported more systematic time management also tended to report greater control over their behavior, suggesting that planning tendencies and behavioral regulation are closely connected in how they manage their studies.

5.3 The Proposed Indirect Association Through Self-Control

Self-control showed a small conditional association with academic procrastination (β = 0.027; B = 0.048, p = 0.397), providing no support for the negative association proposed in H3. The indirect association through self-control was also nonsignificant, with its 95% confidence interval including zero; H4 was therefore not supported.

The positive zero-order correlation between self-control and procrastination was substantially attenuated after time management disposition was included in the model. This pattern indicates that much of the bivariate association was shared with time management disposition, leaving little additional explanatory value for self-control in the joint model.

6. Conclusions and Implications

6.1 Conclusions

In this sample of first-year university students, time management disposition was positively associated with both academic procrastination and self-control. Self-control was not significantly associated with procrastination after accounting for time management disposition, and the proposed negative indirect association was not supported. The unexpected positive relationship between time management disposition and procrastination warrants further examination of how students' reported planning tendencies relate to the implementation of academic tasks.

6.2 Practical Implications

Experimental evidence suggests that time management training can help students distribute academic work more evenly before a deadline [4]. Academic guidance for first-year students could link planning activities with concrete steps for beginning and completing assignments. Evaluations of such support should consider both students' reported planning and their actual task progress.

6.3 Limitations

The single-university convenience sample limits generalizability, and the cross-sectional design precludes temporal or causal inference. Self-reports may be influenced by shared method variance. Incomplete documentation of the final item set, reverse-scoring key, and psychometric properties limits evaluation of measurement validity. The analysis assumes consistent samples and scoring across the reported summaries; rounded summary statistics also limit numerical precision and participant-level diagnostic checks. The models included no covariates, and the normal-theory interval may not capture asymmetry in the distribution of the indirect effect. Future research could use fully documented measures and longitudinal data to examine these relationships.

Thesis Declaration: This article is based on research conducted as part of Yixuan Xiong's master's thesis.

7. References

1. P. Steel, The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure, *Psychological Bulletin, 133(1)*, 2007, 65–94. https://doi.org/10.1037/0033-2909.133.1.65.

2. K. B. Klingsieck, Procrastination: When good things don't come to those who wait, *European Psychologist, 18(1)*, 2013, 24–34. https://doi.org/10.1027/1016-9040/a000138.
3. W. van Eerde, Time management and procrastination, in M. D. Mumford and M. Frese (Eds.), *The psychology of planning in organizations: Research and applications* (New York: Routledge, 2015) 312–333.
4. A. Häfner, V. Oberst, and A. Stock, Avoiding procrastination through time management: An experimental intervention study, *Educational Studies, 40(3)*, 2014, 352–360. https://doi.org/10.1080/03055698.2014.899487.
5. B. K. Britton and A. Tesser, Effects of time-management practices on college grades, *Journal of Educational Psychology, 83(3)*, 1991, 405–410. https://doi.org/10.1037/0022-0663.83.3.405.
6. A. L. Duckworth and M. E. P. Seligman, Self-discipline outdoes IQ in predicting academic performance of adolescents, *Psychological Science, 16(12)*, 2005, 939–944. https://doi.org/10.1111/j.1467-9280.2005.01641.x.
7. B. J. C. Claessens, W. van Eerde, C. G. Rutte, and R. A. Roe, A review of the time management literature, *Personnel Review, 36(2)*, 2007, 255–276. https://doi.org/10.1108/00483480710726136.
8. T. H. Macan, C. Shahani, R. L. Dipboye, and A. P. Phillips, College students' time management: Correlations with academic performance and stress, *Journal of Educational Psychology, 82(4)*, 1990, 760–768. https://doi.org/10.1037/0022-0663.82.4.760.
9. J. P. Tangney, R. F. Baumeister, and A. L. Boone, High self-control predicts good adjustment, less pathology, better grades, and interpersonal success, *Journal of Personality, 72(2)*, 2004, 271–324. https://doi.org/10.1111/j.0022-3506.2004.00263.x.
10. A. L. Duckworth and J. J. Gross, Self-control and grit: Related but separable determinants of success, *Current Directions in Psychological Science, 23(5)*, 2014, 319–325. https://doi.org/10.1177/0963721414541462.
11. J. Kim, H. Hong, J. Lee, and M.-H. Hyun, Effects of time perspective and self-control on procrastination and Internet addiction, *Journal of Behavioral Addictions, 6(2)*, 2017, 229–236. https://doi.org/10.1556/2006.6.2017.017.
12. X.-T. Huang and Z.-J. Zhang, the compiling of Adolescence Time Management Disposition Inventory, *Acta Psychologica Sinica, 33(4)*, 2001, 338–343. [In Chinese].
13. M. E. Sobel, Asymptotic confidence intervals for indirect effects in structural equation models, *Sociological Methodology, 13*, 1982, 290–312. https://doi.org/10.2307/270723.

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