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Relationship between self-control and Academic Procrastination among College Students in China: A General Perspective

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Abstract

This study aims to investigate the relationship between self-control and academic procrastination from a general perspective. Extensive data were collected through surveys employing the Aitken Academic Procrastination Inventory and the Self-Control Scale administered to 446 college students in China. The findings indicated a significant negative relationship between self-control and academic procrastination ($r = -0.623$, $p < 0.01$), with self-control acting as a negative predictor of academic procrastination. This discovery offers valuable insights into comprehending the relationship between self-control and academic procrastination. Furthermore, the implications of this study extend to educators, counselors, and policymakers, providing guidance for the formulation of targeted strategies and initiatives aimed at enhancing students' self-control capacities, effectively mitigating academic procrastination tendencies, and thereby enhancing students' academic achievement and overall well-being.

Keywords: Self-control, Academic Procrastination, Chinese College Students

Introduction

Academic procrastination is one of the primary manifestations of academic issues among college students, referring to the deliberate postponement of initiating or completing a task related to learning during the process of fulfilling academic obligations (Fentaw et al., 2022). The previous study on college students indicates that academic procrastination is quite prevalent, around 80% to 95% of college students experience issues with academic procrastination (Nadarajan et al., 2023). Among them, approximately 75% report engaging in frequent procrastination, while nearly 50% face more severe challenges resulting from

persistent procrastination. Moreover, the percentage of individuals reporting procrastination tendencies is increasing each year (Steinvik et al., 2023). However, the formation of academic procrastination is not simply a matter of study habits and time management; rather, it involves complex factors across multiple dimensions, including behavior, cognition, and emotion (Furlan & Cristofolini, 2022; Hailikari et al., 2021). Particularly in rigorous academic environments such as China, understanding the underlying factors of academic procrastination is crucial. Therefore, it is necessary not only to delve into its root causes but also to devise effective intervention measures to improve students' academic performance and psychological well-being.

The importance of investigating academic procrastination among Chinese college students cannot be overstated. Academic procrastination not only adversely affects academic performance Jin et al (2019) but also exacerbates stress levels, undermines students' confidence, and diminishes their motivation (To et al., 2021). Moreover, uncontrolled procrastination habits may impede students' long-term personal and professional growth, posing significant challenges to their future success (Schnauber-Stockmann et al., 2018).

Self-control refers to individuals' ability to inhibit immediate impulses and regulate their behavior in accordance with social norms and long-term goals (Gillebaart, 2018). According to Steel's integrated theory, self-control emerges as a profoundly significant individual difference variable, robustly explaining procrastination tendencies. Steel posits that the lack of self-control or self-regulation constitutes a primary determinant of academic procrastination. Self-control stands as a critical predictor of procrastination (Steel, 2007). Senécal et al (1995) found that students unable to effectively regulate their learning behaviors exhibited marked academic procrastination. Furthermore, individuals with stronger self-control demonstrate lower levels of academic procrastination (Uzun et al., 2020). Students lacking self-discipline are prone to distractions, easily drawn to external stimuli, struggle to concentrate on tasks at hand, and fail to effectively regulate their study behaviors, resulting in academic procrastination (Svartdal & Løkke, 2022).

Despite the close relationship between academic procrastination and self-control, research on their association among Chinese college students remains insufficient, necessitating further exploration. This gap underscores the need for tailored intervention measures aimed at enhancing self-control capabilities and mitigating academic procrastination behaviors.

For stakeholders such as educators, counselors, and policymakers, the insights from this study can offer valuable information for developing effective intervention strategies aimed at enhancing students' self-control abilities, thereby effectively alleviating academic procrastination behaviors and ultimately improving students' academic performance and overall well-being.

Consequently, this study will investigate the relationship between academic procrastination and self-control among Chinese college students and propose potential intervention measures to assist students in enhancing their self-control capabilities, thereby mitigating issues associated with academic procrastination.

Method

Participants

The research methodology employed in this survey study aimed to collect quantitative data from a specific population. Participants were selected through a simple random sampling method from college students in China. An anonymous self-report questionnaire was

administered via an online survey platform. The distribution of self-reported questionnaires was facilitated by faculty instructors at a university, who introduced the survey and provided the online survey link through study online groups of their respective classes. Participants were assured that their participation was voluntary and that their responses would be kept anonymous to safeguard their privacy. They were also informed of their right to withdraw from the survey at any time without facing any consequences. Additionally, participants were required to provide informed consent as instructed in the survey. Ultimately, 480 questionnaires were received, of which 446 met the eligibility criteria, resulting in an effective response rate of 92.9%.

Measurements

Academic Procrastination Scale

The Aitken's Procrastination Inventory (API), initially developed by Aitken (1982), was later translated by (Chen et al., 2008). Their research validated the utility of the scale in assessing academic procrastination among university students. This self-report questionnaire consists of 19 items and employs a 5-point rating scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The scale demonstrates strong internal consistency, with a coefficient of 0.85.

Self-control Scale

The Self-Control Scale, initially devised by Tangney et al (2004) and subsequently revised by Tan and Guo (2008), consists of 19 items. Respondents rate each item using a 5-point Likert scale, with options ranging from 1 for "strongly disagree," to 5 for "strongly agree." This scale exhibits robust internal consistency, boasting a coefficient of 0.86.

Data Analysis

The statistical analysis for this study will be conducted using SPSS software, wherein data obtained from the survey research will be analyzed. Various methods including correlation analysis and regression analysis will be employed to explore the relationships between self-control and academic procrastination.

Results

Reliability and Validity of Scales

Reliability

Reliability can be assessed using Cronbach’s alpha Tavakol & Dennick (2011), which also aids in determining the suitability of an instrument in a new context. According to the literature, a Cronbach's alpha coefficient value approaching 1 indicates high reliability, around 0.8 suggests good reliability, and values between 0.6 and 0.79 are considered acceptable. However, coefficients below 0.6 indicate a lower level of reliability (Abrara et al., 2021). As mentioned, this study will utilize Cronbach's alpha coefficient values to assess the reliability of the instruments. Table 1 shows that good indicators of internal consistency were found for self-control (Cronbach's $\alpha = 0.798$), firm's performance (Cronbach's $\alpha = 0.881$).

Table 1
The reliability of scales

Variables	Items	Cronbach's α
Self-control	19	0.798
Academic procrastination	19	0.881

Validity

In order to define the validity of the two scales, factor analysis was applied. This study utilized the Kaiser Meyer-Olkin (KMO) test and Bartlett's test (Shrestha, 2021). According to the statements of Williams et al (2010), the KMO test typically yields values ranging between 0 and 1, assessing the appropriateness of correlations among variables, where values closer to 1 indicate better suitability for factor analysis. It is noteworthy that a KMO test result should be at least 0.6 to ensure data adequacy for factor analysis ($p < 0.05$). Bartlett's Test of Sphericity was utilized to examine the suitability of factor analysis, with results ideally indicating a p-value below 0.05.

Table 2
KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.914
Bartlett's Test of Sphericity	Approx. Chi-Square	7137.788
	df	703
	Sig.	0.000

Note: * $p<0.5$, ** ; $p<0.01$, *** ; $p<0.001$.

Table 2 shows that the KMO value is 0.914 and P-value (sig= .000) is less than .05. Hence, the reliability and validity indicators have fulfilled the criteria, and the scale has successfully passed both reliability and validity tests. This outcome signifies the suitability of the dataset for factor analysis.

Common Method Biases Test

Due to the use of self-report questionnaires, there is a potential for common method biases (Podsakoff et al., 2003). To address this concern, the study employed the Harman single-factor test. A total of 38 items across three scales were analyzed. The findings indicated the extraction of seven factors with eigenvalues greater than 1. However, the variance explained by the primary factor amounted to only 23.98%, which fell below the critical threshold of 40% as suggested by (Tang, 2020).

Correlation Analysis

A bivariate correlation analysis was conducted to analyze the relationship between self-control and academic procrastination. Table 3 below shows that there is a significant negative relationship between self-control and academic procrastination ($r = -0.623$; $p < 0.01$).

Table 3
Relationship between the Research Variables

Variables	Academic procrastination
Self-control	-0.623**

Note: * $p < 0.5$, ** $p < 0.01$, *** $p < 0.001$.

Regression Analysis

To further confirm the impact of self-control on academic procrastination, regression analysis was conducted with self-control as the predictor variable and academic procrastination as the dependent variable. The results presented in Table 4 indicate that self-control significantly predicts academic procrastination in a negative direction, with an explanatory rate of 38.7%.

Table4
Regression analysis between the Research Variables

Predictor	Dependent variable	Beta	*t*	Adjusted R square	*F*
Self-control	Academic procrastination	-0.623	-16.788	0.387	281.829

Discussion

The findings of this study demonstrate a negative relationship between self-control and academic procrastination, with self-control serving as a negative predictor of academic procrastination. This observation is consistent with prior research in the field. For instance, a study conducted by Wijaya and Tori (2018) at an Islamic religious college in Yogyakarta, Indonesia, revealed that self-control significantly influences academic and general procrastination. It exhibits a negative correlation with procrastination and serves as a predictor of procrastination in both academic and non-academic settings. Similarly, findings from the study by Li et al (2022) indicate that individuals with low levels of self-control are more prone to procrastination in academic settings. The lack of self-control often leads to increased distractions and susceptibility to unrelated trivial matters, consequently delaying task completion and consequently resulting in academic procrastination (De Ridder & Gillebaart, 2017). These research findings resonate with the outcomes of the present study, underscoring the importance of self-control in academic procrastination.

The role of self-control in academic procrastination may be evident across various aspects. Firstly, individuals exhibiting higher levels of self-control are more proficient in orchestrating and completing learning tasks, consequently diminishing susceptibility to temptations, distractions, or external disturbances (Gunten et al., 2020). Secondly, students endowed with robust self-control are prone to delineate explicit learning goals and attain them through self-regulation, thereby mitigating the propensity for academic procrastination (Karampatzos, 2020). These findings offer valuable insights into comprehending the influence of self-control on academic procrastination, thereby underscoring the imperative of nurturing students' self-control capabilities.

The findings of this study carry significant implications for both practice and policy. Educators and counselors are well-positioned to aid students in bolstering their self-control capacities and mitigating academic procrastination challenges through avenues such as self-management skills training, personalized learning plans, or tailored learning support. Moreover, school administrators and policymakers ought to contemplate the integration of self-control development into school curricula as an essential component, facilitating the cultivation of favorable learning habits and behaviors among students.

Nevertheless, this study is not without its limitations. Firstly, it adopted a cross-sectional design, rendering it incapable of establishing causal inferences regarding the relationship between self-control and academic procrastination. Consequently, future research could employ longitudinal study designs to enhance comprehension of the interrelationship between these variables. Secondly, the study's sample was confined to college students from particular regions, potentially limiting its generalizability. Hence, further investigation into the validity across diverse samples and cultural contexts is warranted.

In future research, additional investigation into various potential factors impacting academic procrastination, including personality traits, learning environments, and social support, along with examining the interactions between these factors and self-control, should be pursued. Furthermore, the adoption of a mixed-methods research approach, incorporating both quantitative and qualitative data, could enrich the comprehension of the intricate mechanisms underlying students' academic procrastination behaviors.

Conclusion

This study offers valuable insights into elucidating the relationship between self-control and academic procrastination, furnishing practical recommendations for educational institutions and policymaking initiatives. Moreover, it delineates potential avenues for further scholarly inquiry. By nurturing students' self-control capacities, educators can facilitate more effective coping with academic hurdles, augmenting scholastic achievement, and laying a robust groundwork for their future educational and vocational endeavors.

This research on the relationship between self-control and academic procrastination among college students in China makes several significant theoretical and contextual contributions to the existing literature. Firstly, it adds to the growing body of research investigating the role of self-control in academic procrastination within the Chinese cultural context. While previous studies have explored this relationship in various cultural settings, the specific nuances of Chinese educational systems and societal expectations have not been extensively addressed. By focusing on college students in China, this study provides insights into how cultural factors may influence the manifestation and consequences of procrastination behaviors, thereby enriching our understanding of the universality versus cultural specificity of self-control processes.

Secondly, this research contributes to theoretical frameworks of academic procrastination by emphasizing the centrality of self-control as a predictor and mitigator of procrastination tendencies. By corroborating findings from previous studies and extending them to the Chinese context, this research reinforces the robustness of self-control as a key determinant of academic procrastination across different cultural and educational settings. Moreover, by highlighting the mechanisms through which self-control operates in mitigating procrastination behaviors, such as task management and goal setting, this study advances theoretical models of procrastination by providing empirical evidence for the underlying processes involved.

Furthermore, this research has practical implications for educational institutions and policymakers in China. By elucidating the relationship between self-control and academic procrastination among Chinese college students, this study offers insights that can inform the development of targeted interventions and support programs aimed at enhancing students' self-regulatory skills and reducing procrastination behaviors. Additionally, by emphasizing the importance of integrating self-control development into educational curricula and policies, this research underscores the potential impact of systemic changes in promoting academic success and student well-being within the Chinese higher education system.

In summary, this research contributes to both theoretical advancements and practical applications in understanding and addressing academic procrastination among college students in China. By shedding light on the role of self-control in procrastination behaviors within a specific cultural context, this study provides valuable insights that can inform future research endeavors and educational initiatives aimed at supporting students' academic success and personal development.

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Declaration of Conflicting Interests

The authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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