The Relationship Between Social Media Dependence and Academic Procrastination Among College Students: The Mediating Role of Time Management Tendency and Self-Control

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Abstract: This study examines the influence of social media dependence on academic procrastination and the mediating role of time management tendency and self-control. The study find that a. social media dependence has a positive correlation with academic procrastination. b. Time management tendency plays a partial mediating role in the influence of social media dependence on academic procrastination. c. Self-control partially mediates the influence of social media dependence on academic procrastination.

Keywords: Social media dependence; Academic procrastination; Time management tendency; Self-control

1. Introduction

Nowadays, the use of various social media can not only enrich the daily life of college students to the maximum extent, but also meet the needs of teaching and learning (Di, 2020). Through social media apps, college students can enjoy a convenient life without leaving home, and enjoy convenient and high-quality life services. College students' social communication has changed from real life communication to virtual communication, and the use of social media has gradually changed college students' social habits (Li, 2016), making them lose the opportunity to communicate with classmates and friends face to face. Excessive use of mobile phones by college students leads to finger pain, dry eyes, insomnia and other physical symptoms. Long-term procrastination will not only have a great impact on the formation of good learning habits, but also reduce the efficiency of learning, resulting in a lack of self-confidence and self-efficacy.Unreasonable use may even lead to cognitive confusion, resulting in psychological imbalance and an increase in psychological problems (Ke, 2019).

2. Problem Statement

The question of this study is, does social media dependence really cause academic procrastination? If so, what is the underlying mechanism of this relationship? Do time management tendency and self-control play a mediating role? Time management tendency reflects an individual's cognition and attitude towards time, as well as the strategies and skills for effective use of time. A student with good time management tendency is able to plan time rationally, balance study and leisure, and reduce procrastination. In the face of the temptations of social media, self-control may have a direct impact on whether students are able to focus on their studies and avoid procrastination.

3. Research Objective

The research objectives are as follows:

(1) Determine the correlation between social media dependence and academic procrastination.

(2) Determine the mediating effect of time management tendency on social media dependence and academic procrastination.

(3) Determine the mediating effect of self-control on the relationship between social media dependence and academic procrastination.

4. Research Questions

This study aims to answer the following research questions:

1. What is the relationship between social media dependence and academic procrastination?

2. Does time management tendency play a partially mediating role between social media dependence and academic procrastination?

3. Does self-control play a mediating role between social media dependence and academic procrastination?

5. Population and Sample

This study adopts stratified sampling method. Students aged 18-20 years old, are selected from the majors, grades as samples.A total of 682 questionnaires are issued in this survey, including 215 in year one, 231 in year two and 236 in year three. The recovered questionnaires are examined, 23 invalid questionnaires are excluded, and 659 valid questionnaires are obtained, with an effective rate of 96.63%.

6. Data Analysis

A population questionnaire and a four-variable scale are used to collect data. The completed survey results are transcribed into an electronic password protected spreadsheet, and the collected data is analyzed and processed using SPSS26.0. The data analysis process consists of the following main steps:

a. Clear analysis objectives. b. Data collection. c. The data are screened for missing and normal values to ensure the accuracy and reliability of the analysis. d. Reliability and validity analysis of data. e. Variable data analysis. f. Interpretation and reporting of results.

7. Results

7.1 Correlation Analysis

The correlation coefficient between social media dependency and academic procrastination is r = 0.674. This indicates a very significant correlation between academic procrastination and social media dependency, with a positive correlation coefficient.

The correlation coefficient between social media dependency and time management tendency is r=−0.530. This indicates a negative correlation coefficient.

The correlation coefficient between time management tendency and academic procrastination is r = −0.687. This indicates a negative correlation coefficient.

The correlation coefficient between social media dependency and self-control is r = −0.335. This indicates a negative correlation coefficient.

The correlation coefficient between self-control and academic procrastination is r = −0.556. This indicates a negative correlation coefficient.

Table 1 Correlation analysis of variables

	Mean	Standard. Deviation	Social media dependence	Academic Procrastination	Time Management Tendency	Self-Control
Social media dependence	5.87	2.952	1			
Academic procrastination	45.35	14.212	.674**	1		
Time Management Tendency	35.71	9.751	-.530**	-.687**	1	
Self-Control	25.49	5.128	-.335**	-.556**	.790**	1

7.2 Mediation Analysis

7.2.1 The mediating effect of time management tendency in the relationship between social media dependence and academic procrastination

In the first step, the regression coefficient (β = 0.674) is significant.

In the second step, the regression coefficient (β = -0.530) is significant.

In the third step, the obtained regression coefficient (β = -0.459) is significant.

Consequently, it is concluded that time management tendency significantly mediates the relationship between social media dependence and academic procrastination, and it is a partial mediation, with the mediation effect accounting for 36.09% of the total effect.

Table 2 Three-step regression analysis of the impact of social media dependence and time tendency on academic procrastination

	Regression Equation		Overall fit index			Regression coefficient significance		
	Dependent variable	Predictor variable	R^2	ΔR^2	F	β	t	p
Step one	Academic Procrastination	social media dependence	.454	.453	546.903	.674	23.386	.000
Step two	Time Management Tendency	social media dependence	.281	.280	256.374	-.530	-16.012	.000
Step three	Academic Procrastination	social media dependence	.606	.605	503.946	.431	14.907	.000
		Time Management Tendency				-.459	-15.875	.000

7.2.2 The Mediating Role of Self-control Between Social Media Dependence and Academic Procrastination

In the first step, the regression coefficient (β = 0.674) is significant.

In the second step, the regression coefficient (β = -0.335) is significant.

In the third step, the regression coefficient (β = -0.372) is significant.

Thus, it can be concluded that self-control significantly mediates the relationship between social media dependence and academic procrastination, with a partial mediation effect where the mediated effect accounts for 18.49% of the total effect.

Table 3 Three-step regression analysis of the impact of social media dependence and self-control on academic procrastination

	Regression Equation		Overall fit index			Regression coefficient significance		
	Dependent variable	Predictor variable	R^2	ΔR^2	F	β	t	p
Step one	Academic Procrastination	social media dependence	.454	.453	546.903	.674	23.386	.000
Step two	Self-control	social media dependence	.112	.111	83.021	-.335	-9.112	.000
Step three	Academic Procrastination	social media dependence	.577	.576	447.827	.549	20.390	.000
		Self-control				-.372	-13.812	.000

8. Discussion

8.1 Discussion on the Mediating Role of Time Management Tendency in the Relationship Between Social Media Dependence and Academic Procrastination

This study's data analysis results indicate that time management tendency partially mediate the relationship between social media dependency and academic procrastination.

When college students spend a lot of time on the internet, the time allocated for other tasks decreases accordingly, especially for tasks related to learning that are of certain difficulty, making procrastination and avoidance more likely to occur. The higher the level of academic procrastination among students, the higher their dependence on social media, and consequently, the lower their time management skills. Therefore, to fundamentally address the issue of excessive academic procrastination among college students, it is necessary to enhance their time management abilities.

8.2 Discussion on the Mediating Role of Self-Control in the Relationship Between Social Media Dependence and Academic Procrastination

Through mediation analysis of self-control, it was found that self-control partially mediates the impact of social media dependency on academic procrastination, indicating that the influence of social media dependency on academic procrastination partially operates through self-control.

Self-control, as an ability to regulate one's psychological state, plays a crucial role in learning. The higher an individual's tendency for time management in learning, the better they can prevent or suppress their academic procrastination behavior (Bai, 2021). This may be achieved through the enhancement of self-control as an intermediate variable.

To reduce such academic procrastination issues, it is essential to guide college students to enhance their self-control abilities, reduce phone usage time, and use social media in a healthy manner. Furthermore, self-control can help individuals change their inherent behaviors and ways of thinking, overcome the impulse to misuse social media at inappropriate times, and better adapt to their environment.

9. Research Limitations

This study still has the following limitations:

First, there are limitations in sample selection. The study only focuses on a single institution in a single city, and the narrow sample size limits the breadth and depth of the study.

Second, the measurement tools used are redundant. The questionnaire consists of four scales, with a total of 48 items, which causes students' negative reactions in practice, such as impatience, boredom, irritability and other emotions, which may adversely affect the accuracy and reliability of the data and affect the reliability and validity of the research.

Third, the research method is single. This study does not carry out case study, so it is impossible to deeply explore the deep reasons behind the problems.

Although this study has some limitations, it is still worth further research and exploration in the future.

10.Conclusion

The following conclusions were drawn from the research:

Firstly, there is a significant positive correlation social media dependence and academic procrastination.

Secondly, time management tendency play an important mediating role in the impact of social media dependence on academic procrastination.

Thirdly, self-control play an important mediating role in the impact of social media dependence on academic procrastination.

References

[1]   Bai, D. (2021). The relationship between students' self-control ability and academic procrastination and intervention strategies [J]. Exam Weekly, 25(46), 1-2.

[2]   Di, J. (2020). A study on college students' use and satisfaction with social media [J]. News Communication, 32-33.

[3]   Ke, C., & Li, S. (2019). Investigation and analysis of the impact of mobile social media dependence behavior on college students [J]. Science Popularization, Science Education, (5), 160-161.

[4]   Li, Q. (2016). Research on college students' dependence on mobile social media and interpersonal relationship satisfaction [D]. Baoding: Hebei University.