

The Differential Effects of FOMO on Academic Procrastination in Two Dimensions: A Seven-Day Longitudinal Study

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Abstract. A 7-day longitudinal design is used in this paper to investigate the impacts of two dimensions of Fear of Missing Out (FOMO) on academic procrastination: apprehension of missing out (AOMO) and constant connection desire (CD) were used as independent variables, academic procrastination was used as the dependent variable, perceived pressure was included as a moderating variable and social media use time was used as a mediating variable. 46 Chinese high school and college students participated in the survey, which measured FOMO, pressure, time spent on social media, and academic procrastination behavior using multiple questionnaires. The results indicate that neither dimension of FOMO can significantly predict academic procrastination. Perceived pressure was significantly positively correlated with academic procrastination, but no moderating effect was found. Social media usage did not mediate the relationship between FOMO and academic procrastination. The results show that in Chinese culture, the two-dimensional structure of FOMO has no significant predictive effect on academic procrastination, and pressure is a more direct influencing factor. Although the hypothesized pathways were not supported, these findings pave the way for more rigorous and comprehensive subsequent research. It may contribute to the development of targeted measures to help university students more effectively regulate their attention, time, and well-being in an interconnected world.

Keywords: Fear of Missing Out, social media use, academic procrastination, screen time, stress

1. Introduction

Social media is now more and more a part of academic life, and this brings about a number of complicated effects. On one hand, when educational activities are organized through social media in a structured way, they can help to boost students' grades [1]. On the other hand, if usage is not controlled, it might cause attention to become scattered and also make anxiety levels rise [2]. Crucially, this kind of uncontrolled use often results in academic procrastination. A study carried out

in China shows that 46.92% of college students are reliant on social media, and among those, 55.39% have problems with putting off their academic work [3]. Looking at the global situation, the rate of social media usage among teenagers in developed countries is now above 95%, and during the school term, they spend on average 4.8 to 8 hours each day looking at screens [4].

Also, the Fear of Missing Out (FOMO), a widespread anxiety based on the idea that other people are taking part in enjoyable activities while you yourself are left out, and people often have a strong urge to keep checking on others' activities [5], is a critical factor that can affect procrastination by influencing the way that people use social media [6]. Studies have shown that FOMO leads people to spend more time on social media, and that extra time, in turn, pulls their attention away from their schoolwork, and also messes up their study schedules, so academic procrastination ends up getting worse [7]. This line of reasoning suggests that FOMO may indirectly contribute to academic procrastination by affecting screen time and cognitive attention.

Recent progress has verified that FOMO can be attributed to two factors, as discussed by Groenestein and colleagues as "a pervasive apprehension for missed opportunities" (or "pervasive apprehension"), and "a desire to stay continually connected with what others are doing" (or "desire for connection"). Some studies show that the two-dimensional model of FOMO works better than the one-factor model. Elhai and colleagues used chi-square tests to demonstrate that the 2025 two-factor FOMO model had a better fit than the single-factor model in both the US and Italian samples. It is inspired by Elliot and Church, who distinguished between two distinct motivations: one that keeps people away from undesirable outcomes, and the other that leads people toward a desired goal [8]. Behaviors driven by different motivations can have different relations. People with a strong avoidance motivation, striving to avoid undesirable end states, correspond to "pervasive apprehension". In contrast, people with a strong approach motivation, looking forward to participating in social activities, correspond to "desire for connection" [9]. Elhai and colleagues noted that FOMO's constant connection desire factor is related to problematic social media use. Studies indicate that FOMO exhibits moderate to strong positive associations with the severity of anxiety, and anxiety itself is closely linked to depression [10], which may be associated with the pervasive apprehension factor. Also, FOMO negatively effects on academic performance, as people make more mistakes when multitasking while responding to notifications. It may also lead to sleeping problems and cause obesity and musculoskeletal pain [11].

Academic procrastination is delaying required academic work on purpose, even when knowing it may lead to negative outcomes [12]. Procrastination is a common behavior in daily life, but when it happens under stress, it becomes a distinct and maladaptive coping mechanism. In general, people delay tasks by choice, even though they can see the negative results ahead [12]. However, procrastination under stress works mainly as a way to avoid bad feelings, because people put off tasks to reduce the negative emotions that come from high pressure, and they do this even when they fully understand the long-term problems that can build up [13]. The key difference is in the trigger and function: for stress-related procrastination, the starting point is the bad feeling caused by pressure, and its job is to fix emotions in the short term, not just a simple problem with managing time. Studying procrastination under stress is crucial because it acts as a separate avoidance strategy that focuses on emotions, and it helps control immediate negative feelings, which is different from ordinary delay. Recent findings show stress causes special brain activity that weakens self-control and reveals a harmful cycle where anxiety and procrastination make each other stronger [14]. Knowing this is important for creating focused treatments that deal with the main part of stress-related procrastination.

Academic procrastination is influenced by a range of factors, including self-regulation deficits, task aversion, and emotional states such as anxiety and stress [12]. FOMO leads to more screen time, and this makes academic procrastination behaviors worse [15]. Social media usage driven by FOMO indicates an increase in screen time, which may affect how psychological needs are met [11]. As a motivation to make up for unmet needs, people may regard academic procrastination as a self-protection strategy [16]. When students' level of FOMO increases, their tendency to procrastinate also increases. Some correlations and interactions between these two variables can be detected, but further research is needed to explain this relationship more accurately. The present study focuses on the role of FOMO and stress, aiming to clarify whether and how these factors, particularly in their two-dimensional structure, contribute to academic procrastination among Chinese students.

In this set of variables, social media usage acts as a key behavioral mechanism. Social media is defined as internet-based platforms that enable users to establish personal or semi-personal profiles within a controlled environment, identify and display connections with other users, and explore both their own relationships and those formed by others on the platform [17]. Screen time is the usage or viewing of any screen-based technology, such as television, computers, and mobile devices, including smartphones and tablets [18]. In this study, social media screen time mainly is the usage of apps that let people to get in touch with their friends and read news online, so they don't miss connections and new topics with friends. Research has indicated that university students who use social media more often tend to have poorer academic outcomes [19, 20]. A two-variable analysis results indicated a significant positive link between the severity of social media use disorders and both FOMO and its harmful effects on daily productivity [21].

A positive link has been found between stress perception and FOMO as well as social network disorder. Furthermore, FOMO acted as a mediator connecting stress perception and problematic social network use among Chinese college students [22]. Since multiple studies have confirmed a positive relationship between stress and anxiety [23], and stress fosters anxiety [24], perceived stress may be more related to the apprehension of the missing out factor than the connection desire factor of FOMO.

Even though some studies have been done, there is still no clear understanding of how the two different parts of FOMO affect students' delaying of schoolwork in their own ways. This is especially true for Chinese students, who study in a culture that values collective goals and high academic achievement [25]. It is also unclear how the stress students feel influences these relationships. To fill this gap in knowledge, this study followed Chinese students for seven days. This approach allowed us to closely examine the changing connections between the two dimensions of FOMO, perceived stress, time spent on social media, and academic procrastination.

Based on the synthesized literature, the following hypotheses are advanced:

H1: FOMO's constant connection desire factor should be a better predictor of academic procrastination than the apprehension of missing out factor.

H2: Over time, changes, stress increases, and the proportion of the connection desire factor decreases, while the proportion of the apprehension of missing out factor increases.

H3: Stress moderates the effects of connection desire and apprehension of missing out on academic procrastination.

H4: Social media use will mediate the two factors in the prediction of academic procrastination.

2. Method

2.1. Participant and procedure

Participants from high school and university were recruited through both online apps (such as WeChat, Weibo, and Rednote) and offline channels one day before the experiment started. A convenience sampling method was used to select a total of 103 students, and the baseline questionnaire was distributed to those who were willing to participate. The participants finished the baseline questionnaire on Day 0 (T0). 91 participants were included in the initial sample. 12 were excluded due to the following reasons: refusal to provide contact details, failure to answer screening questions correctly, and reporting zero-hour study plans. After removing the ineligible participants in the screening phase, we contacted the remaining ones to send them follow-up questionnaires. The follow-up questionnaires were sent at 9 pm on Days 1 (T1), 3 (T3), 5 (T5), and 7 (T7) to the retained participants. Participants checked their daily social media usage time within the past 48 hours on their phones, recorded their daily study time (including active learning such as searching information and doing exercises, but excluding passive learning such as attending lectures), and then completed the questionnaire.

Removing voluntary withdrawals and lost-to-follow-up cases, we finally obtained 46 valid questionnaires. Among them, 5 were male, 41 were female; there were 6 high school students, 28 college students, and 12 graduate students. The participants' age spanned from 16 to 27 years ($M=21$; $SD=2.78$). Although the sample included both high school and university students, we controlled for academic level (as a categorical variable) in all subsequent regression analyses to account for potential confounding effects. It is acknowledged, however, that the two groups may experience different types and intensities of academic pressure.

2.2. Measures

2.2.1. Fear of Missing Out (FOMO)

We used the English version of the FOMO scale [5] and translated it into the Chinese version (see Questionnaire A, Additional File 1). It includes 10 items with a five-point Likert scale (1 = completely disagree, 5 = completely agree) that asks the participants to indicate their attitudes toward some statements (e.g. I feel others have more rewarding experiences than me). We separated the FOMO items into two categories as suggested by Elhai and colleagues: apprehension of missing out (AOMO) and constant connection desire (CD). A higher total score indicates more severe FOMO. In the follow-up questionnaire, we adapted the scale to test the participants' FOMO perception over 48 hours (see Questionnaire B, Additional File 1). The Cronbach's α of the pre-test questionnaire and the adapted scale are displayed in Table 1.

2.2.2. Social media usage

In the pre-test questionnaire, we assessed the duration and main purpose of social media use among the participants (see Questionnaire A, Additional File 1) (e.g. daily duration of social media use). In the follow-up questionnaire, we measured the time participants spent on social media over 48 hours (see Questionnaire B, Additional File 1).

2.2.3. Academic procrastination

In the pre-test questionnaire, we measured the average daily self-directed study time expected by the participants in the next seven days (see Questionnaire A, Additional File 1). In the follow-up questionnaire, we measured the time participants spent on self-directed study within 48 hours (see Questionnaire B, Additional File 1). Academic procrastination index = planned study time / actual study time - 1.

In the last follow-up questionnaire, we used the Procrastination Assessment Scale—Students (PASS), which is localized and translated into Chinese, and tested the validity and reliability [26] (see Questionnaire C, Additional File 1). It consists of two parts. The first part has 18 items with a five-point Likert scale (1 = never, 5 = always) and measures the degree of procrastination in six types of learning tasks (three of them are written by the participants themselves) (e.g. reviewing for a final exam). Higher combined scores on the first two questions show a greater level of procrastination. Also, the second part has 26 items with a five-point Likert scale (1 = completely disagree, 5 = completely agree) and provides a specific task scenario to measure the causes of procrastination (e.g. Starting early doesn't guarantee you'll do better than others on the final exam). The higher the score, the greater the impact. The adapted scale had a Cronbach's α of 0.89.

2.2.4. Perceived stress

The English version of the perceived stress scale (PSS-4) [27] was adopted, and we translated it into Chinese (see Questionnaire A, Additional File 1). There are 4 items in the scale, two positively-worded items and two negatively-worded items, measuring self-perceived global levels of stress, and each item is rated from 1 (completely disagree) to 5 (completely agree) to ask the participants to indicate their attitudes toward some statements (e.g. how often have you felt that you were unable to control the important things in your life). A higher score indicates greater self-perceived stress. Additionally, an open-ended question was included in the baseline questionnaire (T0) to identify primary sources of academic stress to provide contextual qualitative data. In the follow-up questionnaire, we adapted the scale to test the participants' self-perceived global levels of stress over 48 hours (see Questionnaire B, Additional File 1). The Cronbach's α of the pre-test questionnaire and the adapted scale are displayed in Table 1.

2.3. Data analysis

Analyses used SPSS to conduct descriptive statistical analysis, common method bias tests, confirmatory factor analysis, reliability analysis, and correlation analysis. For hypothesis 1, CD and AOMO from T0 were used for analysis with stress and social media use at several subsequent time points. For hypotheses 2, 3, and 4, data from T1, T3, T5, and T7 were used directly for analysis. Composite procrastination scores were obtained from a dimensionality reduction factor analysis of the academic procrastination index (planned study time / actual study time - 1) and overall procrastination (PASS score).

3. Result

3.1. Preliminary analyses

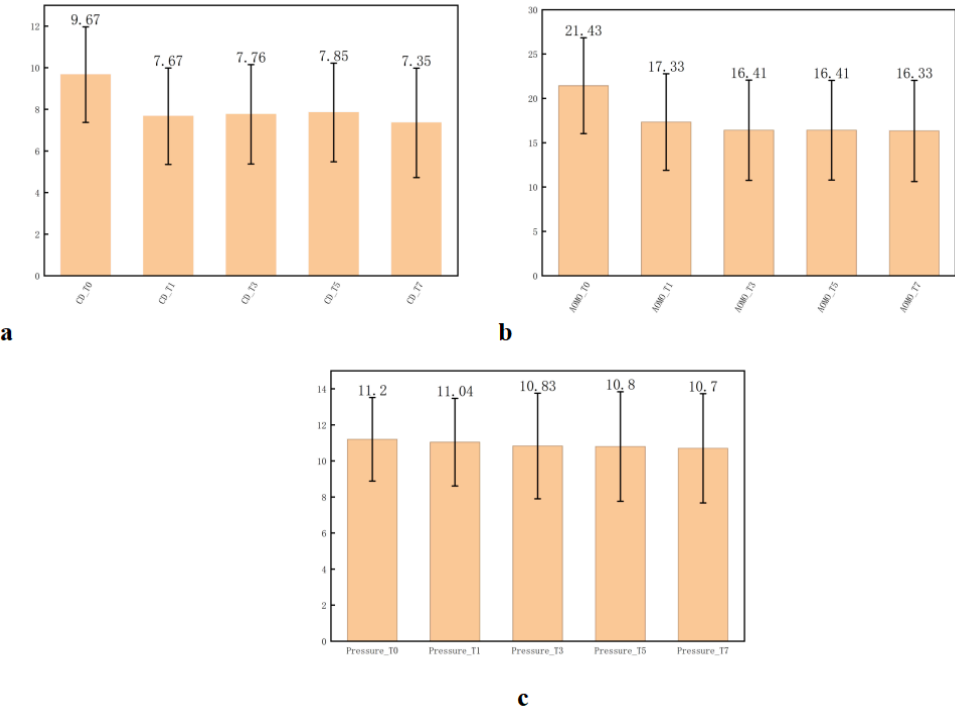


Figure 1. Mean and SD of CD, AOMO, and pressure at different time points

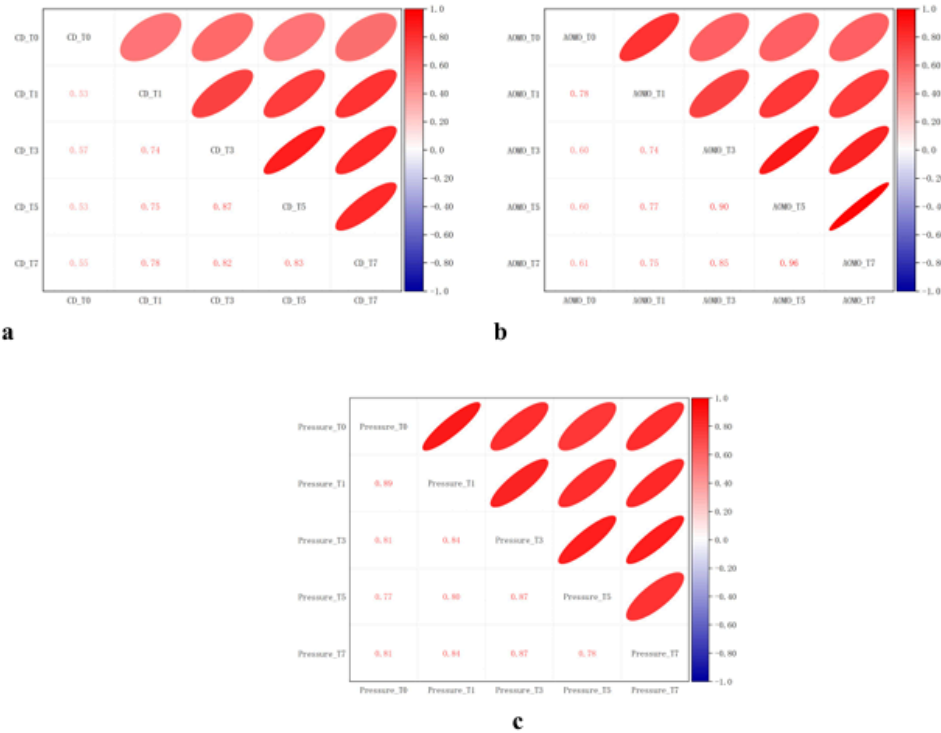


Figure 2. Correlations of CD, AOMO, and pressure at different time points

Table 1 displays the Cronbach's alpha coefficients for CD, AOMO, overall FOMO, and stress measured at different time points, as well as the Cronbach's alpha coefficient for procrastination at T7 and the Pearson correlation coefficients between CD and AOMO. Among these, except for the internal consistency of CD items at T0, T1, and T3, all items at other time points are suitable for subsequent testing. Figures 1 and 2 display the means, standard deviations, and correlations of CD, AOMO, and stress indicators at different time points. The figures indicate significant positive correlations among the dimensions and good validity.

Table 1. Reliability test

Time point	Cronbach's α					Pearson's r
	CD	AOMO	Overall FOMO	Pressure	Procrastination	CD and AOMO
T0	0.57	0.85	0.87	0.66		.64**
T1	0.66	0.86	0.89	0.79		.74**
T3	0.65	0.90	0.91	0.87		.69**
T5	0.71	0.89	0.89	0.88		.63**
T7	0.83	0.90	0.92	0.84	0.89	.77**

* $p < 0.05$ ** $p < 0.01$

3.2. Projections of procrastination

Table 2 displays the correlation analysis between CD and AOMO, and procrastination behavior. The results indicate that neither CD nor AOMO is an effective predictor of procrastination behavior, and there is no significant difference between the two. Hypothesis 1 is not supported.

Table 2. Pearson's r with procrastination

Variable	Pearson's r	p
CD_T0	.11	.48
AOMO_T0	.05	.74
Pressure_mean	.48**	.01
Social Media Use_mean	-.16	.30

Table 3. CD and AOMO's stratified regression for procrastination

Variable	Model 1		Model 2		Model 3	
	β	p	β	p	β	p
Constant	-.28	.85	-.13	.94	-.02	.99
Grade	.05	.75	.05	.74	.07	.70
Age	-.05	.57	-.06	.56	-.07	.55
Sex	-.09	.80	-.10	.78	-.11	.76
Pressure_mean	.14**	.00	.14**	.00	.14**	.00

Table 3. (continued)

Social Media Use_mean	-.06	.27	-.05	.30	-.05	.35
AOMO_T0	-	-	-.01	.78	-.01	.74
CD_T0	-	-	-	-	.01	.84
F	2.86	.03	2.34	.05	1.96	.09
R ²	.26	-	.27	-	.27	-
ΔR ²	-	-	.01	-	.00	-

3.3. Fluctuations over time

Table 4 displays the standard deviations of CD, AOMO, and pressure at several time points. The results indicate that CD, AOMO, and pressure did not fluctuate significantly over time, and the mean values at each time point in Figures 1 and 2 did not change significantly, with no significant upward or downward trends. Hypothesis 2 is not supported. Since there were no significant fluctuations in the data at several points, the analysis was conducted using the mean values of the T1, T3, T5, and T7 data.

Table 4. Standard deviation of CD, AOMO, and pressure at T1, T3, T5, and T7

	CD	AOMO	Pressure
SD	0.22	0.47	0.15

3.4. Regulatory role of pressure

Tables 5 and 6 are used to display the beta coefficients, t-values, and significance levels for the interaction terms (CD*pressure and AOMO*pressure), respectively. Pressure did not significantly moderate the relationship between CD, AOMO, and procrastination. Hypothesis 3 was not supported.

Table 5. Results of the analysis of the moderating effect of stress on CD

	Model 1	Model 2
Constant	-0.10 (-0.96)	-0.12 (-1.13)
CD_mean	0.01 (0.29)	0.03 (0.54)
Pressure_mean	0.13** (3.45)	0.14** (3.49)
CD_mean*Pressure_mean	-	0.02 (1.03)
R ²	0.23	0.25
F	F (2,43) =6.39, p=0.01	F (3,42) =4.62, p=0.01

Table 5. (continued)

ΔR^2	0.21	0.02
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Note: Dependent variable = combined procrastination

* $p < 0.05$ ** $p < 0.01$ t-values in parentheses

Table 6. Results of the analysis of the moderating effect of stress on AOMO

	Model 1	Model 2
Constant	-0.10 (-0.95)	-0.15 (-1.46)
AOMO_mean	0.001 (0.06)	0.01 (0.54)
Pressure_mean	0.14** (3.30)	0.12** (3.03)
AOMO_mean*Pressure_mean	-	0.01 (1.64)
R^2	0.23	0.27
F	$F(2,43) = 6.34, p = 0.01$	$F(3,42) = 5.29, p = 0.01$
ΔR^2	0.20	0.05

Note: Dependent variable = combined procrastination

* $p < 0.05$ ** $p < 0.01$ t-values in parentheses

3.5. Mediating effects of social media use

To examine the mediating role of social media usage in the relationship between the two dimensions of FOMO (CD and AOMO) and academic procrastination, we conducted mediation analyses using the PROCESS macro for SPSS. Model 4 was applied with 5,000 bootstrap samples to estimate the indirect effects. The 95% bias-corrected confidence intervals (CI) were used to determine the significance of the indirect effects: if the CI does not include zero, the indirect effect is considered statistically significant.

Tables 7 and 9 are used to display the path coefficients for CD/AOMO $\rightarrow$ social media use and social media use $\rightarrow$ procrastination. Tables 8 and 10 display the 95% confidence intervals (CI) and p-values for the indirect effects of the mediating paths. Social media use does not have a significant mediating effect between CD or AOMO and procrastination. Hypothesis 4 is not supported.

Table 7. Mediated effects model: procrastination in the impact of social media use on CD

	Procrastination	Social Media Use_mean	Procrastination
Constant	-0.51 (-1.21)	3.76** (2.93)	-0.30 (-0.65)
AOMO_mean	0.03 (0.86)	-0.07 (-0.69)	0.03 (0.74)

Table 7. (continued)

CD_mean	-0.01 (-0.12)	0.34 (1.38)	0.01 (0.11)
Social Media Use_mean	-	-	-0.06 (-1.14)
R^2	0.03	0.05	0.06
Adj- R^2	-0.01	0.01	-0.01
F	$F(2,43)=0.72, p=0.49$ $F(2,43)=1.11, p=0.34$ $F(3,42)=0.92, p=0.44$		

* $p < 0.05$ ** $p < 0.01$ t-values in parentheses

Table 8. The mediating role of social media use in procrastination and the impact of CD

Path	Effect	Effect Size	95% CI		SE	p
			Lower	Upper		
CD => Social Media Use => Procrastination	indirect effect	-0.02	-0.16	0.04	0.05	0.71
CD => Social Media Use	X => M	0.34	-0.14	0.81	0.24	0.18
Social Media Use => Procrastination	M => Y	-0.06	-0.15	0.04	0.05	0.26
CD => Procrastination	direct effect	0.01	-0.15	0.17	0.08	0.91
CD => Procrastination	aggregate effect	-0.01	-0.17	0.15	0.08	0.90

Table 9. Mediated effects model: procrastination in the impact of social media use on AOMO

	Procrastination	Social Media Use_mean	Procrastination
Constant	-0.51 (-1.21)	3.76** (2.93)	-0.30 (-0.65)
CD_mean	-0.01 (-0.12)	0.34 (1.38)	0.01 (0.11)
AOMO_mean	0.03 (0.86)	-0.07 (-0.69)	0.03 (0.74)
Social Media Use_mean	-	-	-0.06 (-1.14)
R^2	0.03	0.05	0.06
Adj- R^2	-0.01	0.01	-0.01
F	$F(2,43)=0.72, p=0.49$ $F(2,43)=1.11, p=0.34$ $F(3,42)=0.92, p=0.44$		

* $p < 0.05$ ** $p < 0.01$ t-values in parentheses

Table 10. The mediating role of social media use in procrastination and the impact of AOMO

Path	Effect	Effect Size	95% CI		SE	<i>p</i>
			Lower	Upper		
AOMO => Social Media Use => Procrastination	indirect effect	<0.01	-0.06	0.14	0.05	0.93
AOMO => Social Media Use	X=>M	-0.07	-0.28	0.13	0.10	0.49
Social Media Use => Procrastination	M=>Y	-0.06	-0.15	0.04	0.05	0.26
AOMO => Procrastination	direct effect	0.03	-0.04	0.09	0.03	0.46
AOMO => Procrastination	aggregate effect	0.03	-0.04	0.10	0.03	0.39

4. Discussion

4.1. Primary findings and comparison with previous research

The present study proposed and tested a conceptual model examining the differential effect of the two dimensions of FOMO on academic procrastination. The results went against all the hypotheses, and the proposed relationships were not supported: neither the apprehension of missing out (AOMO) nor the constant connection desire (CD) was a significant predictor of academic procrastination, and perceived stress did not change these relationships, while time spent on social media also failed to work as a significant mediator.

These null findings are different from many earlier studies that found a link between FOMO and procrastination [6, 7, 15]. For instance, studies in Western contexts have frequently reported that FOMO makes people use social media more, and this then leads to procrastination [7, 28]. The difference between our results and these known findings suggests that background factors, like culture and the way things are measured, may be important.

4.2. The salient role of perceived stress

A key finding is that perceived stress and academic procrastination have a clear and strong positive link, and this matches earlier studies ($\beta = .14$, $p < .01$; see Tables 2 and 3). This result is consistent with a multitude of studies confirming stress as a robust and direct predictor of procrastination [13, 29, 30]. Stress is a direct emotional response to academic demands, and seems to be a stronger driver of procrastinatory behavior in our sample. However, when stress was tested as a moderator, it did not significantly alter the link between either FOMO dimension and procrastination (see Tables 5 and 6). This suggests that for Chinese students, stress may affect procrastination so strongly that it overshadows any potential interactive effect with FOMO. Procrastination may be more directly driven by stress-induced avoidance (e.g., fear of failure) rather than being modulated by specific anxieties related to missing out.

4.3. Exploring cultural and methodological explanations

Several factors related to cultural context and methodological limitations may explain the divergence of our results from previous work.

Firstly, cultural context is a crucial consideration. The two-dimensional model of FOMO used in this paper was initially validated in Western, individualistic cultures [31]. In China's collectivist culture, which emphasizes academic achievement and collective harmony over unique individual social experiences [25], the manifestation and impact of FOMO might differ [32]. For Chinese students, the anxiety dimension (AOMO) might be more conflated with academic performance anxiety, while the behavioral compulsion (CD) might be suppressed by high academic pressure and self-control demands. This cultural difference could fundamentally alter how FOMO relates to outcomes like academic procrastination. Similarly, the cultural difference can affect academic procrastination criteria. The Western criteria for procrastination, based on individualism, are more defined as a matter of self-regulation [33]. By comparison, procrastination in the Chinese version is associated with collectivism and is more related to face, social expectations, and interpersonal harmony [34].

Although this paper used the FOMO scale commonly employed in most papers [5], the Chinese version has not been extensively validated and may have cultural adaptation issues. Certain items (e.g. "rewarding experience") may be interpreted differently in the Chinese context than in the original text. For longitudinal research purposes, the original scale instructions were changed from general situations to the last 48 hours, and this change may have affected the scale's measurement quality, leading to lower reliability (e.g., Cronbach's α for CD at T3 was only 0.65). Based on the FOMO two-dimensional experiment [27], the ten items were divided into two dimensions, but a confirmatory factor analysis (CFA) was not carried out in this sample to check whether this factor structure is suitable for Chinese students. The way the two dimensions of the FOMO scale are grouped is different across papers, and this raises uncertainty about the two-dimensional model used in this paper [35, 36]. In this paper, the CD dimension included fewer items, which may have caused less stability and measurement errors. The previous paper also pointed out issues with the low test-retest reliability [37].

The sample size for this paper was not big enough ($n = 46$), and the gender ratio was severely imbalanced (41 female, 5 male), which greatly limited the statistical power of the analysis, making it difficult to detect the effects. The 7-day follow-up period in the longitudinal study was too short to observe meaningful changes in perceived stress, CD, AOMO, and academic procrastination. Additionally, the five time points (T0, T1, T3, T5, T7) were quite intensive, which may have made participants tired and lowered the quality of their answers. The high dropout rate of 49% (from an initial sample of 91 down to 46 participants) may have introduced an unmeasurable selection bias, as students with more severe procrastination may have left the study earlier. This study could not include the participants with more severe procrastination that we need, which may affect the results. Meanwhile, the questionnaires used to measure the degree of procrastination varied, and differences in criteria can lead to inconsistent results. Also, most variables were measured through self-report, and potential biases may have influenced the correlations between variables. Self-assessment of study time might be inaccurate due to social desirability bias and recall bias.

4.4. Theoretical implications and future directions

Although this study did not confirm the hypothesis, it provides an important warning: psychological models and measurement tools based on Western culture need to be applied with caution when directly applied to the Chinese context. In the future, interviews and open-ended questionnaires among a larger, gender-balanced sample can be used to explore the localized connotations of FOMO (two-dimensional or more) among Chinese students, and on this basis, Chinese-language measurement tools with good reliability and validity can be developed or revised. Also, other

potential mediating variables (e.g. attention control, self-efficacy, guilt) and moderating variables (e.g. self-regulation, personality traits) can be investigated.

5. Conclusion

In summary, this 7-day longitudinal study did not validate the hypothesized differential effects of FOMO's two dimensions on academic procrastination among Chinese students, nor the moderating role of stress or the mediating role of social media use time. The most robust finding was the direct positive association between perceived stress and academic procrastination. The null findings regarding FOMO highlight the potential significance of cultural specificity in psychological constructs and the critical need for culturally adapted measurement tools. Future research should prioritize the development of localized instruments and employ more robust longitudinal designs to further elucidate the complex interplay between digital anxieties, stress, and academic behaviors in the Chinese educational context.

Declaration of interest

Ethics approval and consent to participate

This study was performed in line with the principles of the Declaration of Helsinki. Informed consent to participants was obtained from all the participants in the study. Approval was granted by the Ethics Committee of Fuzhou University (FZU-PSY2025-0297).

Author contribution

XinYun Jiang and QiaoYu Yang contributed equally to this work and should be considered co-first authors. All authors read and approved the final manuscript.

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