Association between Anxiety and Learning Adaptability in Post-epidemic College Students: The Role of Self-Management

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Abstract: Even in the late stages of the COVID-19, the physical and psychological trauma caused by the epidemic continues to affect people, particularly university students, whose physical and psychological health is vulnerable to environmental influences. The purpose of this article is to investigate the relationship between learning adaptability and "state" anxiety among university students enrolled during the COVID-19(2020-2022), as well as the role of self-management in mediating this process. The findings reveal a negative association between college students' academic adjustment and their state anxiety, a process that also includes a mediation role for self-management, with subjects in this research being college students enrolled during COVID-19. This study offers a theoretical foundation for investigating the factors influencing anxiety from an operationalized viewpoint, as well as for further effective regulation of university students' mental health and anxiety reduction.

Keywords: Anxiety; Learning Adaptability; COVID-19

1. Introduction

Since the beginning of the COVID-19 in 2020, people's lifestyles and habits have been greatly affected. Public management measures taken in reaction to outbreaks in nations like China can occasionally have a negative impact on people's physical and emotional health, despite their best intentions[1]. The effects of COVID-19 persisted after it ended, posing a hazard to the public's mental health and safety—a risk that most people have chosen to overlook[2]. Among every population, university students are more sensitive to their surroundings and more vulnerable to numerous negative stimuli, resulting in despair, anxiety, and other feelings[3].

But how can we effectively reduce anxiety among university students, particularly in light of the persistent effects of the epidemic? In this study, the following hypotheses are offered to analyze the internal logic of the formation of state anxiety in university students and its relationship with their academic performance:

H1: Self-management and learning adaptation are related;

H2: The moderating role of anxiety between self-management and learning adaptation.

2. Literature Review
2.1 Anxiety

Anxiety is a negative emotion characterised by somatic symptoms of physical tension and worry about the future, such as persistent worry, fear and panic[4]. As a common psychological disorder, anxiety was divided into two categories: "Trait" anxiety and "state" anxiety[5]. "Trait" anxiety is temporary, triggered by a sudden stressful stimulus or event. An intrinsic propensity to feel nervous, or an unconscious emotional state that happens in response to unexpected stimuli, is referred to as "state" anxiety.

In conclusion, current research has emphasized the connection between anxiety and personality, highlighting that it is tied to a person's character traits and tendencies, a kind of explanation that, from a practical standpoint, inhibits people from changing their anxious state.

2.2 Learning adaptability

The process by which people attempt to modify their psychological and behavioral selves to achieve harmony with the learning environment in accordance with needs of the environment and learning, is known as learning adaptability[6].

Previous studies focused on the relationship between academic flexibility and student academic achievement, as well as the impact on an individual's performance in society. However, current researches don't really address the positive psychological functions of learning adaptation in a post-epidemic context.

2.3 Self-management

According to Agolla[7] self-management is the ability to work toward long-term goals while remaining adaptable and efficient in the face of challenges. The degree of self-management is frequently assessed in connection to both academic performance and personal feelings. Since it has been shown that self-management is a crucial learning skill, this research will look at the mediating function that self-management plays between anxiety and learning adjustment. Little studies have been done on the impact of self-management on negative emotions like anxiety.

3. Research methods
3.1 Subjects

By referring to similar studies on mediating variables, the proposed number of subjects was determined to be 300. For this study, 300 university students will be chosen randomly, those who will be enrolled in 2020–2022. Because they began their studies at the same time as the COVID-19 epidemic, they had to deal with hitherto unheard-of difficulties in adapting to university life.

3.2 Measurement

The Self-Management Assessment Scale(SMASc) was developed by Öberg[8], and Al-Abyadh[9] improved its applicability to students' everyday lives.It has a Likert scale with 10 items and a six-point scale. The adapted SMASc can be used as a valid tool to measure the self-management ability of college students with a Cronbach alpha coefficient of 0.901.

The Learning Adaptability Measure for College Students, created by Feng and others[6] and consisting of 29 questions, was used in this study. The higher the scale score, the better the learning adaptability. With a Cronbach's alpha coefficient of 0.948.

In this study, respondents' anxiety throughout the previous week were evaluated using the anxiety self-assessment questionnaire, which Zung[10] established. Higher scores indicated that the person was more anxious. The scale's dependability was high, with a Cronbach coefficient of 0.92.

4. Results
4.1 Common method bias testing

The Harman one-way test was employed to avoid common procedure bias from compromising the accuracy of this study's conclusions(the first common component was 30.95%).

4.2 Descriptive statistics

The results of the descriptive statistics are shown in Table 1, where the mean anxiety level of university students was high and there were some differences in learning adaptation and self-management skills.

Table 1

	Max	Min	$M \pm SD$
Anxiety	71	20	35.40±10.71
Learning adaptability	145	37	107.70±19.12

Self-management	50	18	39.76±5.96

Independent sample t-tests were conducted on the three variables to examine the differences between males and females, and the results are shown in Table 2, which revealed that males were higher than females in anxiety levels, higher than females in self-management levels, and no differences existed in academic adjustment skills.

Table 2

|	Male($n = 119$)	Female($n = 173$)	t
Anxiety	37.81(12.38)	33.74(9.06)	-3.25**
Learning adaptability	106.57(21.93)	108.48(16.94)	0.84
Self-management	40.60(5.88)	39.19(5.96)	-2.00*

4.3 Correlation coefficients of variables

The correlation between the subjects' learning resilience and anxiety levels was tested using Pearson's correlation coefficient, and a significant negative correlation was found between them($r = -0.66, p < 0.01$).

4.4 The research structural model and hypotheses testing

As shown in Figure 1, the coefficient between learning adaptability and anxiety is significant, the coefficient between learning adaptability and self-management is significant, and the coefficient between self-management and self-management is not significant after self-management is included in the model, indicating that self-management plays a completely mediating role in it.

Figure 1

Hypothetical Model
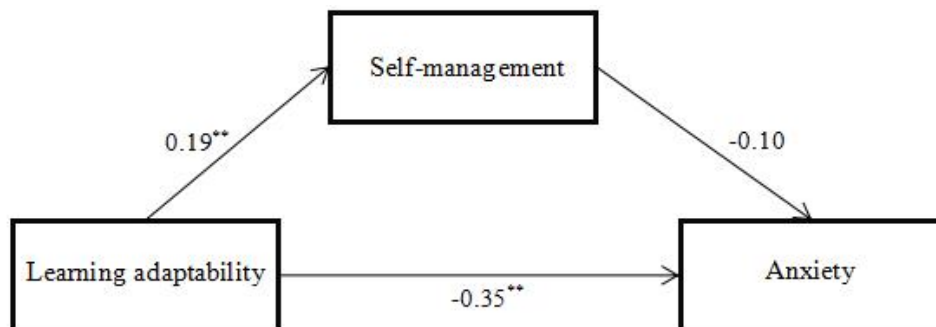
5. Discussion

This study first verified the relationship between university students' anxiety levels and their academic resilience in the post-epidemic period, which is in line with previous findings. Stockinger et al[11] found a negative correlation between college students' adaptability and anxiety and despair; Academic performance and strong academic performance are closely associated, and good academic achievement can increase students' self-efficacy and reduce their dread of the future.

This study's findings show how self-management has a significant mediating effect in university students' anxiety and learning adaption. The study's findings indicate that in order to improve students' academic performance and psychological well-being, particularly for university students in the post-epidemic period, where the develop systems that foster students' ability to cope with unsatisfactory studies, manage free time, adjust physically, adapt to new living environments, and maintain interpersonal relationships.

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