

Research on the Mediating Role of Mental Health Issues among Medical Students between Academic Stress and Academic Procrastination: Computational Analysis of the Moderating Effect of Campus Sense of Belonging

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Abstract: Academic procrastination is a common phenomenon among students in most educational fields, especially for medical students. This paper explores the relationship between academic stress and academic procrastination among medical students, as well as the roles of mental health issues and campus belongingness in this relationship. A total of 2,611 medical students in Wenzhou were surveyed through online questionnaires. They were evaluated and analyzed using the learning stress scale, academic procrastination scale, mental health problem scale, and campus belongingness scale. There were extremely significant differences ($p < 0.001$, $p < 0.05$) in mental health issues, academic stress, and campus belongingness among male and female medical students. Academic stress, mental health problems, campus belongingness, and academic procrastination were all correlated with each other in pairs. Mental health problems played a partial mediating role between academic stress and academic procrastination. At the same time, campus belongingness significantly moderated the influence of mental health problems on academic procrastination. That is, when mental health problems are low, campus belongingness in universities can alleviate the occurrence of academic procrastination.

Keywords: Academic stress; Academic procrastination; Mental health problems; Campus belongingness; Mediating role

1. Introduction

Medical students, as an important part of the future medical industry, bear significant academic pressure [1-2]. They need to cope with multiple challenges such as complex courses, clinical internships, and examinations, which may have a negative impact on their mental health and lead to serious consequences such as academic procrastination [3-5]. Therefore, understanding the mediating role of mental health issues among medical students in the relationship between academic pressure and academic procrastination is of great significance for helping them effectively cope with pressure, improve their mental health, and complete their studies successfully.

Academic procrastination is a common problem among many medical students, which not only affects learning outcomes but also may lead to increased academic pressure, increased anxiety, and a



series of negative effects [6-8]. Campus belongingness, as an individual's psychological trait, may have an impact on students' academic procrastination behavior [9-10]. Campus belongingness is regarded as one of the important psychological resources to combat stress and challenges, helping individuals maintain a good psychological state and enhance their ability to cope with difficulties [11-13]. Studies have shown that campus belongingness is negatively correlated with academic procrastination, that is, the higher the campus belongingness of students, the lower their academic pressure and the less their procrastination behavior [14-15]. This is because students with high campus belongingness are more likely to maintain a positive attitude when facing learning difficulties or pressures, and are more willing to confront challenges and difficulties, thereby reducing the possibility of academic procrastination [16-18].

Regarding the causes and effects of mental health problems among medical students, literature [19] emphasizes that medical students generally have higher mental health problems and psychological distress, which have a negative impact on personal and professional functions, and points out that the majority of medical mental health problems originate from academic, indicating the importance of providing mental health services. Literature [20] indicates that the number of medical students with severe mental disorders has significantly increased, resulting in cognitive dysfunction and reduced academic performance, and through experiments, it is pointed out that female students generally perceive that they face greater mental health challenges than male students. Literature [21] states that common mental health problems are very common among junior doctors and medical students, and through literature reviews, it is indicated that the prevalence of mindfulness health promotion is high, and anxiety symptoms remain relatively stable during the pandemic, while depression symptoms have slightly increased. Literature [22] aims to record the prevalence of mental health problems among medical students and their association with confounding factors, through literature reviews, to determine the overall prevalence of different mental health problems, including depression, common mental disorders, job burnout, and other factors related to mental health problems. Literature [23] states that medical students generally face serious mental health problems, including depression, anxiety, and job burnout symptoms, and examines the impact of curriculum reform on the mental health of medical students, indicating that curriculum reform cannot completely alleviate the mental health problems of medical students. Literature [24] states that the prevalence of mental health problems among medical students continues to rise, which may lead to adverse consequences, and elaborates on the differences between Chinese and Western medical education environments and medical work places, summarizing the prevalence of mental health problems among Chinese medical students. Literature [25] conducts a survey of medical students in Nepal, indicating that the poor mental health status of medical students in Nepal is very common, and continuous research is needed to determine the factors related to poor mental health. Literature [26] conducts a survey of medical students in Jordan to assess job burnout, mild mental disorders, and alcohol/substance abuse, and the results show that 91% of students experience high fatigue, 87% experience a sense of alienation, and 92% have "mild" mental disorders. Reference [27] emphasizes that mental health problems in the medical field are more prevalent among medical students than non-medical students, and assesses the mental health status of medical students at Shiraz University of Medical Sciences. By appropriately adjusting the educational curriculum and implementing other effective intervention measures, it is possible to alleviate the impact of other stress factors and improve mental health conditions. Reference [28] reveals that mental health problems among medical students may manifest in various forms. When they deal with multiple challenges such as academic pressure and financial burden, it helps to explain the more widespread phenomenon of psychological disorders in this group. Reference [29] points out the factors causing mental health problems among Chinese medical students, including long study hours, tense doctor-patient relationships, and limited medical resources. Based on the literature review, it reveals that the prevalence of chronic mental disorders among this group is relatively high, and targeted strategies are needed to improve mental health conditions. Reference [30] aims to assess the global prevalence and risk factors of mental health problems among medical students during the COVID-19 pandemic. The review results show that the prevalence of depression, anxiety, stress, etc. is relatively high. The causes include contracting the novel coronavirus, academic pressure, and financial difficulties, etc. These studies emphasize that mental health problems among medical students are widespread and severe. The causes include academic pressure and financial burden, which have had a severe negative impact on students' academic performance and career development. Taking targeted measures to address these issues is imperative.

The research focused on 2,611 medical students in Wenzhou as the research subjects, including 2,611 students from the first to the third year of study. The self-developed medical student basic situation survey scale, as well as the study pressure scale, academic procrastination scale, mental health problem scale, and campus belongingness scale were used to measure the mental health problems, study pressure, academic procrastination, and campus belongingness of the medical students. The single-sample

Kolmogorov-Smirnov test was used to compare the scores of various tasks and the total scores of academic procrastination among medical students with different demographic variables. Pearson correlation analysis was applied to clarify the correlations between academic pressure, mental health problems, campus belongingness, and academic procrastination among medical students. The mediating role of mental health problems and the moderating role of campus belongingness were revealed.

2. Object and Method

2.1. Research Subjects

This study adopted convenient sampling and conducted an online survey of medical students in Wenzhou through the Wenguanxing platform. Completing the questionnaire took approximately 10 minutes. A total of 2,611 questionnaires were collected. After excluding 172 questionnaires with completion times shorter than 100 seconds, random responses, or obvious data errors, 2,439 valid questionnaires were obtained, with a valid rate of 93.41%. Among them, there were 992 male students (40.67%) and 1,447 female students (59.33%); 1,609 students were in the first year of college (65.97%), 357 students were in the second year (14.64%), and 473 students were in the third year (19.39%); the age was 19 (18, 20) years old.

2.2. Research Tools

(1) Self-developed demographic information questionnaire

The self-developed demographic information questionnaire includes the subject's major, grade, gender, academic performance, etc.

(2) Learning stress scale

This study adopted the "Middle School Students' Academic Stress Questionnaire" proposed by relevant research scholars. It uses a 5-point scoring method, and the score level is positively correlated with the subject's stress level. The scoring situation of the questionnaire is divided into four grades: 35 points and below are recorded as no academic stress; between 35 and 50 points are recorded as relatively low stress; between 51 and 64 points are recorded as relatively high stress; and more than 65 points are recorded as very high stress. In this study, the α coefficient of this table is 0.922.

(3) Academic Procrastination Scale

In this study, the Aitken Procrastination Questionnaire was used, consisting of 13 questions. Each question was scored from 1 to 5, with 3, 5, 9, 11, 12, and 13 being reverse-scored. The total score reflects the severity of academic procrastination behavior, and the higher the score, the more severe the individual's academic procrastination situation. In this study, the alpha coefficient of the total scale was 0.825.

(4) Mental Health Questionnaire

The Chinese simplified version of the Depression and Anxiety Stress Scale [31] was adopted. This scale measures students' mental health status from three aspects of depression, anxiety, and stress, with a total of 21 items. It uses a 4-point scale (1 = never, 4 = often), and the score ranges for the three subscales are between 7 and 28, while the total score ranges from 21 to 84. The higher the score, the more obvious the corresponding symptoms. In this survey, the Cronbach's α coefficient of this scale was 0.94.

(5) Campus Belongingness Scale

The Campus Belongingness Scale consists of two core sub-dimensions: Belongingness and Resistance. Using a six-point rating scale, participants are asked to evaluate their feelings in the school environment, thereby reflecting their psychological identification with the school community and its opposite - the sense of exclusion from the school community. The Belongingness sub-dimension focuses on measuring the strength of the positive connection between the individual and the school environment, including whether students feel accepted, supported, and whether they consider themselves an indispensable part of the school community. On the other hand, the Resistance sub-dimension is used to identify those students who may experience feelings of being marginalized or excluded, which may weaken the connection between the students and the school. The design of this scale enables us to comprehensively evaluate the level of students' school belongingness by summarizing the scores of each sub-dimension. The Cronbach's α coefficients of the Belongingness and Resistance sub-dimensions are 0.70 and 0.90 respectively, and the internal consistency coefficient of the entire scale reaches 0.91, indicating that this tool has high reliability and validity. In the current research application, the overall internal consistency coefficient of the scale is 0.789, further confirming its effectiveness in assessing students' school belongingness.

2.3. Statistical Analysis Methods

The data were organized and analyzed using SPSS 26.0 software and the SPSS Process macro program. Statistical analysis was conducted. The common method bias test was performed using the Harman single-factor method [32]. The results of the Harman single-factor test showed that 9 principal components were extracted without rotation, and the single component explained the total variance variation by up to 22.16%, which was far below the critical value of 40%, indicating that there was no obvious common method bias in this study. The comparison of categorical data between groups was conducted using the χ^2 test, and the independent sample t-test was used for measurement data. To conduct moderated mediation analysis, the model in the SPSS Process macro program was used. First, through Pearson bivariate correlation analysis, the relationships between academic pressure, mental health problems, campus belongingness, and academic procrastination were determined. Secondly, with academic pressure as the independent variable, academic procrastination as the dependent variable, mental health problems as the mediating variable, and campus belongingness as the moderating variable, regression analysis was used to determine the influence of academic pressure, mental health problems, and campus belongingness on academic procrastination.

3. Research Results and Analysis

3.1. Overall Feature Analysis

The overall characteristics of the research subjects are shown in Table 1. As can be seen from the table, the average value of overall mental health problems is 28.41, which is at a medium level. The score range of academic pressure is between 43 and 220, with an average value of 129.39. The overall academic pressure status is moderately low. Among them, the average value of competitive pressure is the highest, and the average value of conditional pressure is the lowest. The academic procrastination score of medical students ranges from 30 to 141 and has an average value of 89.55, indicating that the overall academic procrastination status of students is relatively high. The average value of campus belongingness is 33.08, and the academic campus belongingness of medical students is at a moderately high level.

Table 1. Overall Characteristics (N=2439)

Class	n	Minimum	Maximum	Mean	SD
Mental health problems	2439	1	103	28.41	25.65
Academic pressure	2439	43	220	129.39	36.58
Academic procrastination	2439	30	141	89.55	16.62
Sense of Belonging to the Campus	2439	11	49	33.08	7.63

3.2. Analysis of Demographic Differences

(1) Differences in academic pressure among genders, grades and regions of origin

This study, through a one-sample Kolmogorov-Smirnov test (NPar test), found that the sample of physical exercise did not conform to a normal distribution ($p < 0.05$). Therefore, non-parametric tests such as the two-independent samples and multiple-independent samples tests were used for the difference analysis. The results are shown in Table 2.

From Table 2, it can be seen that academic pressure does not show significant differences in grades and regions of origin ($Z = -1.230$, $p > 0.05$; $Z = 5.673$, $p < 0.05$), but there is a significant difference in gender ($Z = 6.247$, $p < 0.001$), showing that boys have more pressure than girls, and senior year > sophomore year > freshman year.

Table 2. Analysis of demographic differences in academic stress

Class		PLT	Z and H(K)	p
Sex	Male	992	6.247	0.133***
	Female	1447		
	Freshman	1609		
Grade	Sophomore	257	5.673	0.071
	Junior	433		
Origin of student	City	892	-1.230	0.143
	Village	1547		

Note: *: $p < 0.05$, **: $p < 0.01$, ***: $p < 0.001$.

(2) Differences in mental health issues among genders, grades and regions of origin

Through independent sample t tests and one-way ANOVA analysis, the results are shown in Table

3. The mental health issues of medical students did not reach a significant level in terms of grade, region of origin ($t = 0.97$, $p > 0.05$; $t = -1.82$, $p > 0.05$), but showed a significant difference in gender ($t = -3.84$, $p < 0.001$), presenting a trend where girls had higher scores than boys, first-year students had higher scores than second-year and third-year students, and those from rural areas had higher scores than those from urban areas.

Table 3. Demographic Analysis of Mental Health Issues Differences

Class		($\bar{x} \pm s$)	t and F value
Sex	Male	122.33 $\pm$ 30.22	-3.84***
	Female	128.63 $\pm$ 30.06	
Grade	Freshman	125.02 $\pm$ 30.22	0.97
	Sophomore	121.83 $\pm$ 33.32	
	Junior	118.83 $\pm$ 29.09	
Origin of student	City	122.92 $\pm$ 33.45	-1.82
	Village	129.65 $\pm$ 26.53	

Note:*. $p < 0.05$, **. $p < 0.01$, ***: $p < 0.001$.

(3) Differences in Campus Belonging Sense by Gender, Grade and Place of Origin

Through independent sample t test and one-way ANOVA analysis, the results are shown in Table 4. There is a significant difference in campus belonging sense among medical students in terms of gender ($t = -2.99$, $p < 0.001$), but no significant difference in grade and place of origin ($t = 0.85$, $t = 0.72$, $p > 0.05$). Among them, the campus belonging sense level of female students is higher than that of male students, that of liberal arts is higher than that of science and technology, and that of urban areas is higher than that of rural areas. The campus belonging sense level decreases with the increase of grade.

Table 4. Demographic differences in the sense of belonging to campus

Class		($\bar{x} \pm s$)	t and F value
Sex	Male	83.57 $\pm$ 15.79	-2.99***
	Female	87.62 $\pm$ 12.83	
Grade	Freshman	86.41 $\pm$ 14.32	0.85
	Sophomore	84.88 $\pm$ 17.24	
	Junior	83.77 $\pm$ 17.08	
Origin of student	City	86.43 $\pm$ 15.11	0.72
	Village	85.47 $\pm$ 15.79	

Note:*. $p < 0.05$, **. $p < 0.01$, ***: $p < 0.001$.

(4) Differences in academic procrastination among genders, grades and regions of origin

Through independent sample t -tests and one-way ANOVA, the results are shown in Table 5. There were no significant differences in academic procrastination among medical students in terms of grade, gender and region of origin ($t = 0.31$, $p > 0.05$; $t = 0.533$, $p > 0.05$; $t = 0.41$, $p > 0.05$). Overall, male students showed more academic procrastination than female students, science students showed more procrastination than liberal arts students, and those from urban areas showed more procrastination than those from rural areas. Moreover, it presented an upward trend as the grade increased.

Table 5. Demographic Differences in Study Procrastination

Class		($\bar{x} \pm s$)	t and F value
Sex	Male	30.17 $\pm$ 7.83	0.533
	Female	29.87 $\pm$ 7.52	
Grade	Freshman	29.95 $\pm$ 7.68	0.31
	Sophomore	29.99 $\pm$ 7.83	
	Junior	30.81 $\pm$ 7.36	
Origin of student	City	30.27 $\pm$ 7.99	0.41
	Village	29.95 $\pm$ 7.58	

Note:*. $p < 0.05$, **. $p < 0.01$, ***: $p < 0.001$.

3.3. Correlation Analysis

A Pearson correlation analysis was conducted on the academic stress, mental health problems,

campus belongingness, and academic procrastination of medical students. The results are shown in Table 6. In the table, there are pairwise correlations among the four factors (academic stress, mental health problems, campus belongingness, and academic procrastination) ($p < 0.01$).

Table 6. Correlation analysis

	Academic pressure	Mental health problems	Sense of Belonging to the Campus	Academic procrastination
Academic pressure	1			
Mental health problems	0.525**	1		
Sense of Belonging to the Campus	-0.511**	-0.579**	1	
Academic procrastination	0.603**	0.704**	-0.641**	1

3.4. Test of the Mediating Effect of Mental Health Issues

Taking the standardized score of academic pressure as the predictor variable, the standardized score of academic procrastination as the outcome variable, and the standardized score of mental health problems as the mediating variable, under the condition of controlling 5 demographic variables such as gender, grade, and place of origin, the PROCESS plugin program in SPSS 25.0 software was used to conduct Model 4 of the test for the mediating effect of mental health problems between academic pressure and academic procrastination. The test results are shown in Tables 7 and 8.

According to the results shown in Table 7, the positive predictive effect of medical students' academic stress on academic procrastination was significant ($\beta = 0.64$, $t = 19.22$, $p < 0.001$). After including the mediating variable, this positive predictive effect remained significant ($\beta = 0.35$, $t = 11.34$, $p < 0.001$). Additionally, the positive predictive effect of medical students' academic stress on mental health problems was significant ($\beta = 0.52$, $t = 15.72$, $p < 0.001$), and the positive predictive effect of mental health problems on academic procrastination was also significant ($\beta = 0.56$, $t = 18.75$, $p < 0.001$).

Table 8 indicates that the total effect, direct effect, and mediating effect of medical students' academic stress on academic procrastination are all significant. This result shows that the academic stress of medical students not only directly affects students' academic procrastination, but also indirectly affects it through students' mental health problems. The mediating effect and direct effect account for 45.31% and 54.69% of the total effect, respectively.

Table 7. Mediation test for mental health issues

	Academic procrastination		Academic procrastination		Mental health problems	
Predictive variable	<i>t</i>	β	<i>t</i>	β	<i>t</i>	β
Sex	1.11	0.04	1.63	0.05	1.27	0.05
Grade	1.67	0.05	0.65	0.03	-1.32	-0.05
Origin of student	1.09	0.05	0.45	0.03	-0.85	-0.04
The only child	-0.51	-0.03	0.05	0.01	0.76	0.04
Current School	-0.88	-0.03	-1.15	-0.04	-0.72	-0.04
Academic pressure	11.34***	0.35	19.22***	0.64	15.72***	0.52
Mental health problems	18.75***	0.56	-	-	-	-
R^2		0.61		0.41		0.31
<i>F</i>		97.96***		48.92***		34.77***

Table 8. Decomposition of Total Effect, Direct Effect, and Mediating Effect

	Effect Size	Boot standard error	Boot CI Lower Limit	Boot CI Upper Limit	Effect Ratio
Mesomeric effect	0.29	0.03	0.26	0.35	45.31%
Direct effect	0.35	0.05	0.39	0.57	54.69%
Gross effect	0.64	0.05	0.79	0.95	-

The specific intermediary model diagram is shown in Figure 1.

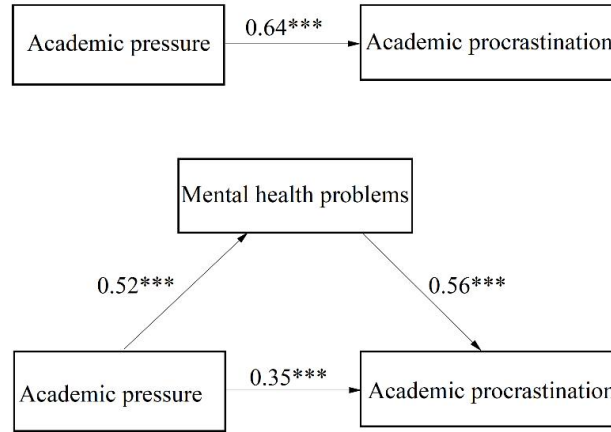


Figure 1. The mediating effect of mental health issues

3.5. The Moderating Effect of Campus Belongingness

The results of the moderation effect test for campus belongingness are shown in Table 9. Regression equation 1 was overall significant [$F = 109.533$, $p < 0.001$], and the positive predictive effect of academic pressure on mental health problems was significant ($B = 2.092$, $SE = 0.177$, $p < 0.001$), indicating that the greater the academic pressure, the higher the mental health problems. The negative predictive effect of campus belongingness on mental health problems was also significant ($B = -0.24$, $SE = 0.025$, $p < 0.001$), suggesting that the higher the campus belongingness, the lower the mental health. However, the interaction term between academic pressure and mental health problems had no significant effect on campus belongingness ($B = 0.005$, $SE = 0.028$, $p > 0.05$).

In Model 2, this study directly estimated the moderating effect of campus belongingness between academic pressure and academic procrastination. The results showed that equation 2 was overall significant [$F = 127.593$, $p < 0.001$], and the direct effect of academic pressure on academic procrastination was significant ($B = 2.225$, $SE = 0.177$, $p < 0.001$), and the negative predictive effect of mental health problems on academic procrastination was also significant ($B = -0.388$, $SE = 0.031$, $p < 0.001$). The main effect of campus belongingness on academic procrastination was not significant ($B = -0.041$, $SE = 0.283$, $p > 0.05$). The interaction term between academic pressure and campus belongingness had no significant effect on academic procrastination ($B = -0.017$, $SE = 0.031$, $p > 0.05$). However, the interaction term between mental health problems and campus belongingness had a significant effect on anxiety ($B = 0.014$, $SE = 0.005$, $p < 0.01$), indicating that campus belongingness moderated the relationship between mental health problems and academic procrastination.

Table 9. Regulated Mediation Test

Predictive variable	Model 1:Mental health problems			Model 2:Academic procrastination		
	B(SE)	t	95%CI	B(SE)	t	95%CI
X:Academic pressure	2.092 (0.177)	-13.072***	[-2.612,-1.936]	2.225 (0.177)	12.013***	[1.902,2.141]
M:Mental health problems				-0.388 (0.031)	-13.675***	[-0.437,-0.322]
W: Sense of Belonging to the Campus	-0.240 (0.025)	11.229***	[0.211,0.305]	-0.041 (0.283)	-1.672	[-0.092,0.009]
X×W	0.005 (0.028)	0.197	[-0.056,-0.063]	-0.017 (0.031)	-0.536	[-0.074,0.044]
M×W				0.014 (0.005)	2.615**	[0.004,0.023]
R ²		0.221			0.351	
F		109.533***			127.593***	

In order to further examine the regulatory mechanism of campus belongingness between mental health problems and academic procrastination, this study divided the campus belongingness into high group ($M + 1SD$) and low group ($M - 1SD$) based on ± 1 standard deviation for a simple slope analysis, as shown in Figure 2. Firstly, the moderating effect of campus belongingness on the influence of mental

health problems on academic procrastination was explored. The figure revealed that when the campus belongingness was low ($M - 1SD$), the negative predictive effect of mental health problems on academic procrastination was significant (simple slope = -0.45 , $SE = 0.03$, $p < 0.001$); when the campus belongingness was high ($M + 1SD$), the negative predictive effect of mental health problems on academic procrastination was also significant (simple slope = -0.33 , $SE = 0.04$, $p < 0.001$), but the simple slope value changed from -0.45 to -0.33 , indicating that the higher the campus belongingness, the smaller the negative predictive effect of mental health problems on academic procrastination; conversely, the lower the campus belongingness, the greater the negative predictive effect of mental health problems on academic procrastination. In conclusion, it indicates that campus belongingness plays a regulatory role between mental health problems and academic procrastination. Specifically, campus belongingness can weaken the negative impact of mental health problems on academic procrastination.

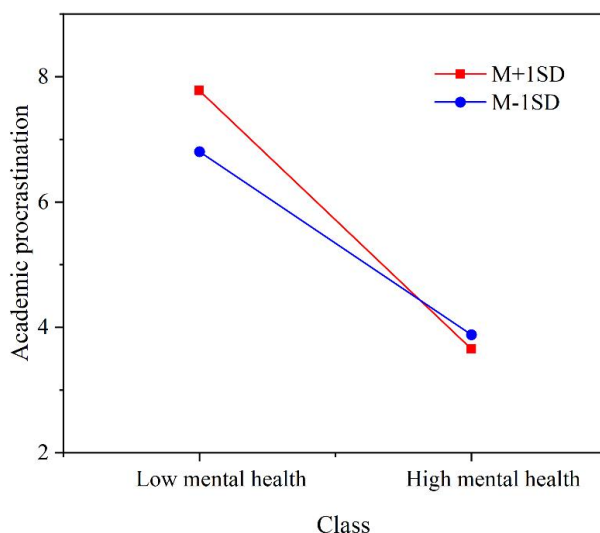


Figure 2. Simple Slope Chart

4. Discussion

(1) The Impact of Academic Stress and Mental Health Issues on Academic Procrastination among Medical Students

In this study, the results of correlation analysis and regression analysis showed that the degree of academic procrastination among medical students increased as their mental health problems worsened. Some scholars have studied the relationship between the mental health problems of Chinese medical students during the COVID-19 period and academic procrastination, and pointed out that the long-term online learning environment makes it impossible for students to compare their learning progress with others, thereby increasing their own mental health problems and leading to the emergence of academic procrastination. Additionally, various psychological counseling methods combined can enhance students' confidence and ability, promote their regulation of their learning activities, and change their mental problems and academic procrastination behaviors.

(2) The Mediating Role of Mental Health Issues

The results of this study show that mental health issues play a partial mediating role between academic stress and academic procrastination, and may play a complete mediating role between academic stress and academic procrastination, that is, academic stress can affect academic procrastination directly, and can also affect students' mental health problems through influencing their academic procrastination.

For students with strong academic stress, the learning process itself is a painful process for them. This is because their interest in learning has decreased, so students will reduce the time and energy they invest in learning. Therefore, if they can overcome their own shortcomings throughout the process of autonomous learning and make faster progress, their psychological health problems will naturally decrease, bringing them more learning pleasure and satisfaction, and resulting in a lower degree of academic procrastination.

5. Conclusion

After analyzing the data on academic pressure, academic procrastination, mental health issues, and campus belongingness among medical students and discussing their relationships, the following conclusions were drawn:

(1) The demographic difference analysis revealed that there were extremely significant differences ($p < 0.001$, $p < 0.05$) in mental health issues, academic pressure, and campus belongingness between male and female medical students. In terms of academic pressure and campus belongingness scores, girls scored higher than boys, and girls scored higher in mental health issues.

(2) The four variables of academic pressure, mental health issues, campus belongingness, and academic procrastination were significantly correlated with each other. The specific relationships are as follows: The total score of academic pressure was significantly positively correlated with mental health issues and academic procrastination, and significantly negatively correlated with campus belongingness; Mental health issues were significantly negatively correlated with campus belongingness and significantly positively correlated with academic procrastination; Campus belongingness was significantly negatively correlated with academic procrastination.

(3) Academic pressure would affect academic procrastination through the partial mediating effect of mental health issues. The higher the students' mental health issues, the more severe the academic procrastination.

(4) Campus belongingness moderated the influence of mental health issues on academic procrastination. Specifically, the higher the level of campus belongingness, the weaker the negative predictive effect of mental health issues on academic procrastination.

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