

The Relationship Between Academic Procrastination and Mobile Phone Addiction Tendency of College Students in the Context of Epidemic Period: the Mediating Effect of Anxiety-Depression-Stress

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Abstract

Objective: To explore the mediating effect of anxiety-depression-stress on academic procrastination and mobile phone addiction tendency of college students in the context of the new epidemic. **Methods:** A questionnaire survey was conducted on 509 college students using the Academic Procrastination Scale, Anxiety-Depression-Stress Scale in Simplified Chinese and Mobile Phone Addiction Tendency Scale, and AMOS22.0 was used to test the mediation effect. **Results:** Mobile phone addiction tendency was significantly positively correlated with anxiety-depression-stress ($r=0.479$, $P<0.01$) and academic procrastination ($r=0.548$, $P<0.01$), and anxiety-depression-stress was significantly positively correlated with academic procrastination ($r=0.493$, $P<0.01$); anxiety-depression-stress played a partial mediating role between college students' mobile phone addiction tendency and academic procrastination (Bootstrap value 0.16, 95% confidence interval 0.355-0.525). **Conclusion:** Under the background of the new epidemic, college students' mobile phone addiction tendency can directly affect academic procrastination, and can also indirectly affect academic procrastination by affecting anxiety-depression-stress.

Keywords

Mobile phone addiction tendency; Academic procrastination; Anxiety-depression-stress.

1. Introduction

Academic procrastination is a common phenomenon among college students. Academic procrastination refers to the behavior that students deliberately delay academic tasks in their studies. These negative effects will not only hinder individual academic development, but also lead to anxiety, depression, and stress and a series of negative emotions, even depression. Academic procrastination is affected by individual personality traits, emotions, cognition and behavior factors. Have a negative emotion, usually take some kinds of behavior to alleviate the emotional pressure, avoid realistic contradictions and conflicts, such as mobile phone addiction behavior. Studies have shown that mobile phone addiction can lead to psychological and behavioral problems such as depression, attention disorder and procrastination. It can be seen that learning procrastination is related to mobile phone addiction tendency and negative emotions. Therefore, hypothesis 1: mobile phone addiction tendency has a significant predictive effect on college students' academic procrastination behavior.

College Students' emotions are increasingly rich, but fluctuate greatly. They are a group prone to emotional and behavioral problems. Negative emotion is a negative emotional experience, including anxiety, depression, anger and panic. The generation of negative emotion is related

to the stimulation of the objective environment and the subjective feeling of individuals. Anxiety, depression and stress are the most common negative emotions among students. Anxiety is a kind of irritability caused by excessive worry about things related to yourself. Depression is a manifestation of the enhancement of negative emotions, often manifested as depression, worry, underestimation of themselves, etc. Stress is a cognitive and behavioral experience process composed of psychological stressors and psychological stress responses. It can refer to anything that poses a challenge or threat to our body. Anxiety, depression and stress are different from and related to each other, often accompanied by. There is a correlation between individual procrastination and emotion, and emotion is an important factor affecting procrastination. The tendency of mobile phone addiction is closely related to anxiety and depression, which will aggravate the emotion of teenagers. Obviously, negative emotions such as anxiety may play an important role in mobile phone addiction and academic procrastination. Therefore, hypothesis 2 is proposed: anxiety depression stress has a significant mediating effect between mobile phone addiction and academic procrastination. Through the study of the relationship between the three, this study hopes to solve college students' academic procrastination and provide corresponding reference for mobile phone addiction under the background of the epidemic situation.

2. Object and Method

2.1. Examinee

From November to December 2021, 509 college students were investigated by means of online questionnaire. 509 valid questionnaires were collected and sorted out, and the effective rate was 100%. The age of all subjects ranged from 17 to 22 years old, including 133 boys (26.1%) and 376 girls (73.9%), with an average age of (19 ± 1.79) years.

2.2. Research Tools

2.2.1. (Mpats) Mobile Phone Addiction Tendency Scale (Mpats)

By Xiong Jie, a total of 16 entries, including withdrawal symptoms, highlighting behavior, mood change and social comfort four dimensions. The scores of 1 (very inconsistent) – 5 (very consistent) were used. The higher the score was, the more obvious the tendency of individual mobile phone addiction was. The Cronbach's α coefficient of the total scale was 0.83, and the test-retest reliability was 0.91.

2.2.2. Simplified Chinese Version of Depression-anxiety-stress Scale (DASS-21)

The Simplified Chinese version of the Depression-Anxiety-Stress Scale (DASS-21) revised by Xi Xu et al. is used. The scale contains 3 subscales, each of which has 7 items and a total of 21 items to assess the individual. Negative emotional experience in the past week, the scale from "not in line" to "most (always) in line" is recorded as 0 to 3 points respectively, the higher the score, the more the emotion, which can better reflect the domestic college students. Depression, anxiety and stress levels, the Cronbach's alpha coefficient of the total scale was 0.89.

2.2.3. Academic Procrastination Scale for College Students

The "College Student Academic Procrastination Scale" compiled by Ma Hui has a total of 5 factors, which are resistance to control, task nature, fear of results, poor state, and pursuit of perfection, a total of 16 items. From "no effect at all" to "extremely affected" are recorded as 1 to 5 points, the higher the score, the greater the impact. The Cronbach's alpha coefficient for this scale in this study was 0.93.

2.3. The Data Processing

SPSS22.0 was used for descriptive statistics and correlation analysis. AMOS22.0 was used for mediating effect test. The 95 % confidence interval of the mediating effect was estimated by 1000 Bootstrap samples.

3. Result

3.1. Comparison of Depression-anxiety-stress and Academic Procrastination Among Groups with High and Low Mobile Phone Addiction Tendency

According to the total score of mobile phone addiction tendency, 27% of college students in the high group are defined as those with high mobile phone addiction tendency (total score>42), and 27 % of college students in the low group are defined as those with low mobile phone addiction tendency (total score<30). The results showed that the scores of academic procrastination and five factors, depression-anxiety-stress and three factors in high mobile phone addicts were significantly higher than those in low mobile phone addicts.

3.2. Correlation Analysis Of Mobile Phone Addiction Tendency, Depression-Anxiety-stress and Academic Procrastination

Pearson's correlation analysis was performed on each variable. The results showed that the scores of depression-anxiety- stress and 3 factors, mobile phone addiction tendency and 4 factors, academic procrastination and 5 factors were all significantly positively correlated ($P<0.01$). It can be seen that there is a close relationship between mobile phone addiction tendency, academic procrastination and depression-anxiety-stress.

3.3. The Mediating Model Test Between Mobile Phone Addiction Tendency, Academic Procrastination and Depression-anxiety-stress

Correlation analysis shows that there is a significant pairwise correlation between mobile phone addiction tendency, academic procrastination and depression-anxiety-stress, which can further explore the influence mechanism between them. Taking mobile phone addiction tendency as independent variable, academic procrastination as dependent variable, depression-anxiety-stress as intermediary variable, the model was constructed by AMOS 22. 0 maximum likelihood estimation method. The results showed that the mediating effect model fitted the data well ($\chi^2 / df = 4.78$, GFI = 0.93, CFI = 0.96, NFI = 0.95, IFI = 0.96, TLI = 0.94, RMSEA = 0.07). The nonparametric percentile Bootstrap method with deviation correction was used to sample 1000 times, and the mediating effect test and confidence interval estimation were carried out. The results show that the mediating effect and direct effect of mobile phone addiction tendency on academic procrastination are significant, and the 95 % confidence intervals are [0.533,0.661] and [0.355,0.525], respectively, without 0 in the interval. This shows that anxiety-depression-stress has a significant mediating effect between mobile phone addiction tendency and academic procrastination. Mobile phone addiction tendency can predict academic procrastination, and the influence of mobile phone addiction tendency on academic procrastination is partly realized by the mediating effect of anxiety and depression pressure, and the mediating effect accounts for 27 % of the total effect.

4. Discussion

4.1. Comparison of Depression-anxiety-stress and Academic Procrastination Among Different Mobile Phone Addiction Tendency Groups

The study found that college students have different degrees of mobile phone addiction tendency, and there are significant differences in the scores of Depression Anxiety Stress and

academic procrastination. High mobile phone addicts may be unable to cope with real roles and learning tasks because they have been addicted to mobile phones for a long time, which is more likely to cause adverse emotions such as anxiety depression stress and academic delay. Therefore, the scores of anxiety depression stress and academic delay of high mobile phone addicts are significantly higher than those of low mobile phone addicts.

4.2. Relationship Between Mobile Phone Addiction Tendency and Depression Anxiety Stress and Academic Procrastination

Correlation analysis showed that there was a significant positive correlation between mobile phone addiction and depression anxiety stress. Relevant studies have shown that addicts are addicted to mobile phone use in order to reduce negative emotions. In the context of the epidemic situation, negative emotions come from the worry about the virus on the one hand, and from the anxiety and pressure on the reality on the other hand. Individuals who have been in a state of negative emotions for a long time are more likely to seek addictive substances or addictive behaviors to reduce anxiety. Mobile phone addiction is one of them, and individuals are prone to anxiety. With the reduction of anxiety and other symptoms, they are more inclined to maintain and increase the use of mobile phones, and gradually form the tendency of mobile phone addiction. There is a significant positive correlation between mobile phone addiction tendency and academic procrastination, which shows that college students with mobile phone addiction tendency are more likely to have academic procrastination, which verifies hypothesis 1. Compared with academic problems, information and games on mobile phones are more attractive. College students are easy to avoid the important and take the easy, causing academic delays. Academic procrastination was positively correlated with depression anxiety stress. Because college students can not complete their learning tasks within the specified time, they will lead to negative emotional experiences such as anxiety, depression and pressure, and negative emotions will lead to college students' weakening learning motivation and interest, causing more academic delays. Therefore, negative emotions play an important role in mobile phone addiction and academic procrastination.

4.3. The Mediating Effect of Depression-anxiety-stress on Mobile Phone Addiction Tendency and Academic Procrastination

This study found that mobile phone addiction tendency can directly affect academic procrastination. 27% of the total effect is through anxiety depression stress, that is, depression anxiety stress has an intermediary effect between mobile phone addiction tendency and academic procrastination, which verifies hypothesis 2. On the one hand, the out of control of time and the excessive use of mobile phones will cause inner anxiety, anxiety, and depression and stress. On the other hand, the accumulation of bad emotions leads to more avoidance behavior and academic delay. However, the tendency of mobile phone addiction has become a way to alleviate bad emotions, and the out of control mobile phone use behavior has further exacerbated academic procrastination.

5. Conclusion

In short, mobile phone addiction tendency not only directly affects academic procrastination, but also indirectly affects academic procrastination through the mediating variable of anxiety-depression-stress. Therefore, in the process of improving college students' academic procrastination behavior, mobile phone addiction tendency and negative emotion management are important improvement points. Educators should combine the current epidemic background, carry out targeted mental health education, improve bad mood and behavior, and reduce academic procrastination more effectively.

Acknowledgments

This research was supported by by the College Humanities and Social Sciences Project of Jiangxi Provincial Department of Education, "Intervention and countermeasures for college students' learning procrastination under the background of epidemic" (No. SZZX21007); The 2020 Social Science Planning project in Jingdezhen, "Psychological emergency intervention and support model construction of major public health emergencies".

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