

The Impact of Self-control on Graduation Anxiety among University Students in Nanjing during the COVID-19

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Abstract. This study took 2018 full-time undergraduates in Nanjing to explore the relationship between self-control and graduation anxiety during COVID-19, which provides a basis for promoting the mental health of college graduates.

1 Introduction

In recent years, college students are experiencing a large number of stressful events related to COVID-19, such as enterprise recruitment shrinkage and school closed Surveys have shown that the incidence of anxiety among university students rose significantly to 26.6% during the COVID-19 [1], and the anxiety of college graduates had higher levels than non-graduates and general crowd [2, 3]. Under the influence of the epidemic, Individuals have less sense of control over their self and environment [4]. It may further lead to the graduation anxiety of college students, which may easily cause the mental health problems.

Baumeister et al. believe that self-control is a process in which individuals consciously change their thoughts, emotions, impulses, performance, or behavioral responses based on certain criteria [5]. Nancy et al. proposed that self-control is the ability of individuals using multiple strategies to adjust their cognition and behavior to reduce the impulse and complete the current task [6]. Zhu Zhixian proposed that self-control refers to a person's awareness of his psychological state and external behavior, and controlling himself on the basis of awareness [7]. Liu Huaqiang believes that self-control is a process in which individuals instinctively resist the immediate temptation, restrain their behavior and change their original habits when they achieve long-term goals or interests in the future [8]. In this study, self-control is the process of regulating one's behaviour and psychology in order to achieve goals.

Anxiety is a bad emotional experience, which is often caused by some things or situations that may lead to some psychological conflicts, accompanied by worry, fear and a series of reactions [9]. The root of this unpleasant and complex emotional state is the worry about a possible, imminent danger or threat [10]. Spielberger divides anxiety into trait anxiety and state anxiety. The former anxiety due to anxiety-related traits in personality traits, which has relative stability. The latter is an anxiety condition that exists in a short period

of time, usually caused by the situation, which can often be significantly reduced after the situation disappears [11]. The graduation anxiety of college students discussed in this study specifically refers to the anxiety level of college students when facing the graduation situation, which is a negative emotional experience of anxiety and fear of college students caused by facing the graduation situation.

In previous studies, researchers have explored the relationship between self-control and anxiety. King et al. showing a negative correlation between self-control and anxiety [12]. Liu Wenli et al. argued that adverse emotions such as anxiety can negatively affect an individual's self-control [13]. Fabio believes that anxiety may initiate failed cognitive patterns. It may cause individuals unable to solve the task with a stable mindset [14]. Shan et al. suggest that individuals with high anxiety characteristics will exaggerate the difficulty of tasks when faced with challenging tasks, which is easy to produce negative cognition that cannot overcome difficulties and appear tension. They cannot solve problems with rational and calm thinking, resulting to a decline in self-control [15]. Cai et al. believe that good self-control can alleviate internal reactions, such as emotional problems, and inhibit the generation of negative consequences. Individuals with low self-control may develop a variety of emotional problems because they lack sufficient resources to suppress the development of adverse reactions [16]. Zhao Jianfang et al. suggest that individuals with low self-control may exhibit relatively extreme reactions, resulting in social and health anxiety. Thus, self-control plays a protective role for individuals [17]. However, existing research studies lack attention to the college graduates. Compared with other social groups, their mental health status during the epidemic is worth exploring.

Therefore, this study is committed to understand the current situation of graduation anxiety among college students in Nanjing during the COVID-19, and analyze the impact mechanism of self-control on graduation anxiety. This research results can help to improve

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college students' self-control ability, enrich the empirical research college of students graduation anxiety status and supplement the theoretical results. It can provide reference for carrying out the current mental health education and other educational practices. This is of great value to helping college students' physical and mental development.

2 Research methodology

2.1. Subjects

A stratified sampling method was used to stratify the 2018 full-time undergraduate students of selected Nanjing universities by gender in April 2022. Each floor is divided into two categories of arts and science. A total of 120 students were selected from each of the two major categories, and the 240 students sampled were asked to fill in the online questionnaire. Among them, 117 were male and 123 were female, 114 were students in arts and 126 students in science.

2.2 Research tools

2.2.1 General information questionnaire.

Includes information on the student's gender, age, major, graduation destination (graduate school, civil servant, editorial exam, abroad, employment), frequency of epidemic concerns, and whether major life events have occurred.

2.2.2 Self rating anxiety scale

The anxiety self-rating scale developed by Zung was used to measure the subject's level of anxiety during the past recent month [18]. The scale included 20 entries, using a 5-level scoring method (1 = no or little time, 4 = most or all of the time) and multiplying the total score by 1.25. The Cronbach's alpha for this scale is 0.89. The standard score cut-off value is 50. Among them, 50 – 59 were classified mild anxiety, 60 – 69 were moderate anxiety, and scores above 69 were severe anxiety.

2.2.3 Control scale

The self-control scale developed by Tan Shuhua et al. [19]. The scale consists of 19 items divided into five dimensions: impulse regulation, healthy habits, resistance to temptation, focus on work and recreational pastimes. The scale using a 5-level scoring method (1= Fully inconsistent, 5= fully compliant), higher scores indicate a greater sense of self-control.

2.3 Implementation process

Participants fill in the questionnaire via a link to the web-based test and are informed of the basics of the study to the formal start, after which participants can choose for themselves whether or not to continue to participate in the study. After the formal start of the study, participants first answered a selection of questions that included some personal information about the subject and other control variables that we thought might affect the outcome of the experiment (e.g. gender, profession, graduation destination, etc.). Then, participants filled in the anxiety self-rating scale and college student self-control scale. Finally, we will recycle the questionnaire and analyze the data.

2.4 Statistical methods

Statistical analyses were performed using SPSS Statistics version 20.0. Independent samples t-test and one-way ANOVA were used for comparison between groups, and Levene's test was used for chi-square test. Linear correlation was used for correlation analysis. The significance level of the test was 0.05 (two-sided).

3 Results and analysis

3.1 There are differences in anxiety scores on whether university students in Nanjing have experienced major life events

The anxiety scores of college students who had experienced major life events in Nanjing were higher than those of college students who had not experienced it, and the difference was statistically significant ($p < 0.05$) (see Table 1).

Table 1. Comparison of anxiety scores of university students in Nanjing who have experienced major life events or not

Variables	Has experienced a major life event		t-value	p-value
	Yes (n=17)	No (n=223)		
Anxiety score	63.01±10.93	54.93±9.53	3.336	0.001

3.2 College students in Nanjing with different frequency of epidemic attention have differences in their anxiety scores

The anxiety scores of students were statistically different ($P < 0.05$) according to the frequency of concern about the epidemic. The anxiety scores of them who were less concerned and those who were not concerned were both lower than those who were frequently concerned. The differences were statistically significant (all $P < 0.05$).

Table 2. Comparison of anxiety scores of college students in Nanjing universities with different epidemic concern frequencies.

Variables	Frequency of epidemic attention				F-value	P-value
	Frequently Concerns (n=10)	Occasionally Concerns (n=31)	Not really Concerns (n=77)	No concerns (n=122)		
Anxiety Raing	67.25±9.29	63.79±8.92	55.06±9.36ab	2.72±8.52ab	18.889	<0.001

3.3 The relationship between sense of self-control and graduation anxiety among college students in Nanjing

Anxiety scores were negatively correlated ($p < 0.05$) with self-control scores among college students in Nanjing, and the linear correlation coefficient was -0.536 . The absolute value of the linear correlation coefficient ranged from 0.5 to 0.8 and was significant less than 0.01, indicating that the two scores were moderately correlated.

Table 3. Correlation between anxiety scores and self-control scores among university students in Nanjing (n=240)

	Anxiety score	Self-control scores
Anxiety score	1	
Self-control scores	-0.536^{**}	1

** : significantly correlated at the 0.01 level (bilateral)

4 Discussion and recommendations

4.1 Emphasis on developing students' self-control

In the current epidemic, positive psychological resources are particularly important for maintaining the mental health of individuals. As one of a positive psychological resources, good self-control can help individuals to cope with threats from the outside world, especially graduation anxiety caused by the epidemic. Therefore, on the one hand, in educational activities, teachers can promote students' psychological development in a variety of ways from a positive psychology perspective to help students learn to resist temptation and discipline their own behaviour, such as positive emotional experiences and self-awareness reinforcement. On the other hand, schools can actively explore the curriculum and offer self-control training courses tailored to epidemic and students' mental health [20], so that they can effectively cope with graduation anxiety during COVID-19.

4.2 Helping students to understand graduation anxiety properly

COVID-19 has caused various problems, which have disrupted graduates' employment plans. Those problems has greatly improved students' graduation anxiety, because they always worry about their future

development [21]. According to the ABC theory, graduation anxiety is not directly related to the employment status quo, but comes from our own beliefs. Therefore, a reasonable understanding of COVID-19 can help reduce college students' graduation anxiety. Schools can popularize knowledge about the epidemic to students and guide students to understand rationally. They can also cultivate students' good hygiene habits and healthy lifestyle. Let the students realize that they can prevent epidemic through their own efforts. This can also reduce graduation anxiety during COVID-19.

4.3 Guiding students to understand the epidemic in a rational manner

The COVID-19 pandemic has led to various employment problems, making graduates worried about their future development and causing anxiety about graduation. According to the cognitive therapy theory, the real cause of anxiety is not the real event itself, but our perception of the event. Therefore, schools should help students to change their original views on the epidemic and cultivate students' multi-angle attribution of emotional events. Thus turning the psychological energy of anxiety into the motivation for growth.

5 Conclusion

This study used a questionnaire to examine the effect of self-control on graduation anxiety among college students in Nanjing during the COVID-19, and then found a negative correlation between anxiety scores and self-control scores. This conclusion helps to provide a broader perspective for psychological problems caused by the COVID-19. The survey sample is college students in Nanjing, so it can not broaden to a wider community sample, and also can not include infected people, so its findings need to be extended to the general public with caution. At the same time, the self-assessment scale used in the study may have caused the subjects to become defensive, so it may have biased the results. In addition, this study only focuses on the effect of self-control on graduation anxiety among college students, so future research could examine the interrelationship between self-control and graduation anxiety among college students and the broader role of self-control to provide an effective way to address the phenomenon of graduation anxiety among college students.

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