



Research Paper

A Study on the Factors Influencing the Psychological Health of College Students under the Influence of the Epidemic

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ABSTRACT: This paper systematically studies the key issues such as the mental health level of Jiangsu college students under the normal epidemic prevention and control, the differentiated influence of demographic characteristics, the comparison of mental health between college students with obvious depression/anxiety symptoms and college students without obvious corresponding symptoms, the predictive factors of college students' mental health, and the construction of college student's mental health service system, to promote the construction of Jiangsu college students' mental health service system under the normal epidemic prevention and control. Based on previous studies, taking some college students in Jiangsu as the research object, taking the mental health service system of college students under the normal epidemic prevention and control as the core, and based on the application of depression and anxiety scale in the survivors of major disasters and college students, the mental health level of Jiangsu college students under the influence of epidemic situation was evaluated by depression and anxiety scale. It was found that: (1) the sports and fitness situation of college students, the annual income of their families, the number of friends, the connection with family and friends, the comprehensive performance in learning, and the time spent surfing the Internet every day were all less than 0.05, all of which had significant differences; (2) The negative influence of comprehensive performance in learning is superimposed with the influence of epidemic situation, which harms the mental health of college students; (3) Good communication with friends and family can reduce the symptoms of depression and anxiety of college students; (4) Proper fitness can relieve anxiety and depression. Conclusion: The factors that affect the level of anxiety and depression of college students are multiple. The multi-dimensional pre-treatment of family, school, community, and hospital can effectively control and alleviate the level of anxiety and depression of college students.

KEYWORDS: epidemic situation; Mental health; Depression; Anxiety; College students

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I. INTRODUCTION

Major disasters have a profound impact on people's mental health (Lui et al., 2009), and people who experience major disasters are more prone to depression, anxiety, depression, etc. (An et al., 2018; Blanc et al., 2015; Milojevic et al., 2014). Since the outbreak of COVID-19 in January 2020, the Ministry of Education has issued an initiative to "stop classes and learning" relying on online teaching platforms (Zeng Liwen, 2020). Experiencing major public health emergencies will have a far-reaching impact on the mental health of college students. Although colleges and universities in all regions of the country have resumed work and resumed classes, they have great negative emotions, such as fear, fear, anxiety, depression, etc., because they are worried about their health, pay attention to news and news related to various epidemics, and pressure from study, postgraduate entrance examination, going abroad, working, interpersonal communication, etc., and last for a long time (Wang Wei et al., 2021; Zhao Bo et al., 2020). Therefore, their mental health needs urgent attention.

How to do a good job in mental health education for college students under normal epidemic prevention and control is a hot spot of concern from all walks of life (Zhang Yifei et al., 2021). Establish different degrees of psychological support, avoid panic, and improve family support and school support. As the

main body of social support, the government and mainstream media enhance information transparency, which helps college students reduce panic and build confidence (Wang Ke et al., 2021). At present, epidemiological and clinical studies based on SARS-COV-2 are concentrated, and there are few studies on psychological state assessment and crisis intervention of college students. And pay less attention to the mental health of the survivors of major disasters without obvious symptoms such as depression or anxiety. Therefore, it is of great theoretical significance and practical value to study the influencing factors of Jiangsu college student's mental health under the normal epidemic prevention and control, explore the influencing mechanism of the COVID-19 epidemic on Jiangsu college students' mental health level and put forward solutions corresponding to the influencing factors. This paper evaluates the mental health of college students in Jiangsu under the normal epidemic prevention and control (including college students with depression/anxiety symptoms and asymptomatic college students), analyzes the differentiated influence of demographic characteristics, predicts the influencing factors of college students' mental health, and puts forward a series of methods to alleviate college students' anxiety and depression according to different influencing factors, which provides a basis for colleges and universities to deal with major public health events and is of vital significance to the mental health growth of college students in major public health events in China, as well as the future economic development and social stability.

In this study, college students in Jiangsu Province were investigated in the three months from 2022.04 to 2022.06. A total of 676 questionnaires were distributed and 676 questionnaires were recovered. This questionnaire is an anonymous survey, and the survey results are only used for this research. All the students who participated in the questionnaire understood and agree. After recovery, we excluded the questionnaires with incomplete information, outside Jiangsu Province, and the respondents were over 30 and 16 years old, and got a total of 496 valid questionnaires, with an effective rate of 73.37%.

A self-designed questionnaire was used to collect information. Include: (1) Guiding phrases that briefly explain the questionnaire, its purpose, relevant requirements, and express gratitude to the respondents; (2) There are 40 questions in the questionnaire, and the main contents mainly include five aspects. First, the basic information of the individual, the gender, age, family income, educational background, and family education of the respondents; The second is emotional well-being, which mainly examines three issues, including college students' self-happiness, interest in life, and satisfaction with life under the normal epidemic prevention and control. Each question has six options: "never", "once or twice a month", "about once a week", "2-3 times a week", "almost every day" and "every day", with corresponding scores of 1-6 The third is social happiness, which is mainly evaluated and analyzed from five aspects: college students' self-perceived important contribution to society, sense of community belonging, recognition of society, recognition of citizens, and attitude towards social operation mode under the normal epidemic prevention and control. Each question has six options: "never", "once or twice a month", "about once a week", "2-3 times a week", "almost every day" and "every day" The fourth is psychological well-being, which is mainly evaluated and analyzed from six aspects: college students' preference for their personality, management life responsibility, relationship with others, experience growth, confident thinking and expression, and life meaning under the normal epidemic prevention and control. Each question has six options, namely "never", "1 to 2 times a month", "about once a week", "2-3 times a week", "almost every day" and "every day" Fifth, family members support friends. There are seven options for each question, namely "very disagree", "relatively disagree", "disagree", "uncertain", "agree", "relatively agree" and "very agree". The corresponding score is 1-7. The lower the score, the higher the degree of depression.

This questionnaire refers to Taouk et al. [1] revised depressive anxiety and stress scale (DASS-21) to evaluate college students' anxiety, depression, and stress. The Chinese version of DASS-21 was revised by Xu et al. [2], which has good structure validity and criterion-related validity. The consistency coefficient of the total scale is 0.89. The scale contains 3 subscales, each subscale has 7 items, a total of 21 items. On this basis, our group refines the questionnaire into five aspects and calculates the answers to the questionnaire concerning this scale.

Looking for the influencing factors of stress psychology is beneficial for relevant departments to carry out targeted stress treatment and improve the effectiveness of measures. The research points out that gender, age, arts and sciences, and other factors affect the psychological status of college students during the epidemic. Wang Ya and other research results suggest that there is a significant correlation between the anxiety level of college students and gender, study level, study subject, and daily online time during the epidemic[3].

After the data are sorted out, one-way ANOVA is carried out by SPSS software. All statistical tests $P < 0.005$ indicated that the difference was statistically significant.

II. RESULTS

Name	Options	Frequency	Cumulative percentage (%)
Your gender is	woman	358	52.959
	man	318	100
Your age is	18 ~ 22 years old	520	76.923
	23 ~ 30 years old	142	97.929
	31 ~ 45 years old	13	99.852
	Over 45 years old	1	100
Your academic qualifications are:	Bachelor	487	72.041
	Master	117	89.349
	Doctor	37	94.822
	high school	34	99.852
Your family type	Junior high school	1	100
	Family of origin	603	89.201
	Single parent families	27	93.195
	Reorganize the family	25	96.893
Your annual household income	Divorced families	21	100
	50,000-100,000 yuan	226	33.432
	100,000-200,000 yuan	198	62.722
	Less than 50,000 yuan	139	83.284
Total	More than 200,000 yuan	113	100
		676	100.000

Table 1 Basic information of respondents

Among the respondents, men accounted for 47.04% and women accounted for 52.96%. From the age of the respondents, the proportion of those aged 18-22 reached 76.92% at most, followed by 23-30 years old accounting for 21.0%. Among all the respondents, there were 487 undergraduate students, accounting for 72.04%, and 117 master's degrees accounted for 17.30%. There are 603 respondents from the family of origin, accounting for 89.20%, and 52 people from single-parent families and reorganized families, accounting for 7.69%; In terms of household income, there are 226 people with an annual income of 50,000-100,000, accounting for 33.43%, and 198 people with an annual income of 100,000-200,000, accounting for 29.29%.

Using the method of single-factor analysis, this paper analyzes the factors that may affect the psychological status of college students during the epidemic period, such as gender, age, arts and sciences, study level, study subject, and daily online time.

After processing the collected data, using SPSS software for single-factor analysis, the results are as follows:

Variable name	Variable value	sample size	Average	Standard deviation	F	P
Fitness conditions	Occasionally	295	10.715	3.154	5.846	0.001***
	often	141	11.426	3.408		
	everyday	28	12.357	3.046		
	Never	25	9.12	3.951		
Annual household income	100,000-200,000 yuan	153	11.503	2.854	3.12	0.026**
	50,000-100,000 yuan	156	10.865	3.094		
	Less than 50,000 yuan	96	10.208	3.909		
	plenty	101	12.99	2.883		
Number of friends	General	326	10.69	3.064	26.14	0.000***
	Less	59	9.017	3.437		
	No	3	5.667	4.933		
Connections with family and friends	often	315	11.371	3.115	9.363	0.000***
	General	104	10.471	3.22		

	less	69	9.783	3.745		
	no	1	0.000	0.000		
	Good	256	11.148	3.09		
Comprehensive performance in learning	Excellent	75	11.827	3.363		
	Pass	37	9.622	4.336	4.899	0.001***
	Medium	116	10.422	3.013		
	poor	5	8	6.364		
	More than 6 hours	145	10.359	3.657		
Spend online time per day	2-4 hours	147	11.34	3.202	2.846	0.037**
	4-6 hours	172	10.936	3.021		
	Less than 2 hours	25	11.84	3.46		

Table 2 Comparison of the psychological influence of different factors on college students

Note: ***, ** and * represent the significance level of 1%, 5% and 10% respectively

After analysis, it is known that college students' sports and fitness, family income, number of friends, contact with family and friends, comprehensive performance in study, and daily surfing time P are all less than 0.05, all of which have significant differences, which have an important impact on college student's mental health under the COVID-19 epidemic.

Comprehensive performance in learning has an important impact on college student's mental health. Research points out that negative life events are closely related to college students' mental health [4]. The negative influence of comprehensive performance in learning is superimposed with the influence of the epidemic situation, which hurts the mental health of college students.

Good communication with friends and family can reduce the symptoms of depression and anxiety in college students. Individual adjustment methods mainly include self-regulation, finding someone to talk to, psychological counseling, and letting nature take its course. [5] More friends and good relationships with family and friends can provide college students with a way to talk with others, and the conversation produced by good relationships can have a positive impact on college students' psychology. It lies in the fact that the conversation between family and friends can relieve stress to a certain extent, while the number of friends is small, and college students with general relationships with family and friends are difficult to relieve stress by talking, resulting in anxiety, depression, and other emotions.

Compared with those who exercise for a longer time, college students who exercise for a shorter time are psychologically healthier. Students in good physical condition have the stronger coping abilities and abilities to deal with problems, so their psychological resilience level is higher [6]. Therefore, students who have accumulated exercise and fitness for a long time can internalize their negative emotions when facing negative factors such as stress, depression, and anxiety.

College students from high-income families are psychologically healthier than those from low-income families. Some research results show that there is a positive correlation between family income and mental health level [7]. College students with low family income are more scarce in psychosocial resources and have higher refusal sensitivity and social anxiety. The relative deprivation brought by social comparison will also make their psychological imbalance and seriously affect their mental health.

III. COUNTERMEASURE ANALYSIS

This study was carried out against the background that the pneumonia epidemic in COVID-19 has lasted for two years. From this survey, we can know that the psychological status of college students is generally good. The student affairs departments of colleges and universities should investigate and interview students' mental health in time and make corresponding evaluations. Based on the existing evaluation index system of mental health education in colleges and universities, they can comprehensively consider various factors to make the evaluation work more comprehensive and targeted [8]. At the same time, they can cooperate with corresponding authoritative psychological institutions and take measures to maintain college students' mental health in various ways to better prevent future college students' mental health problems. Colleges and universities can organize appropriate entertainment group-building activities, improve the enthusiasm of college students to participate, strengthen the good relationship between college students and their families and friends, and provide a positive influence on college students' psychology.

Reducing college students' study time and surfing the Internet, and more activities can distract attention and relieve anxiety. Colleges and universities improve infrastructure construction, provide gymnasiums and other places, and provide conditions for college students to exercise and keep fit. Proper extension of exercise time is conducive to adjusting and relieving stress, and helping to relieve anxiety and depression. Colleges and universities should properly adjust the performance appraisal structure, reduce the proportion of final grades, properly enrich the composition of grades, and not rely on a single final score to determine whether grades are good or bad, but give students space and opportunities to strive for development in many aspects. The positive

impact of comprehensive performance in learning will have a positive impact on the mental health of college students.

The gap between students' family conditions will have an impact on the psychology of some college students. Colleges and universities carry out scholarship assistance through multiple channels to help some college students with low family income with inferiority complex improve their current situation and alleviate their psychological imbalances such as social anxiety. Colleges and universities can carry out knowledge lectures and other activities to strengthen the popularization of knowledge related to epidemic situations so that college students can have a clearer understanding of epidemic situations, learn anti-epidemic policies and positive examples, and help reduce anxiety and depression. Colleges and universities should pay more attention to newly enrolled college students, groups with psychological trauma, less social interaction, and lack of friends of the same age.

The limitations of this study are as follows: Because of the epidemic situation, the study can only be conducted in the form of online questionnaires, but can not be conducted offline on-site investigation, and can only be conducted through online investigation of college students in some universities in Jiangsu Province, so the results are more suitable for Jiangsu universities. In the case of follow-up conditions, the scope of the questionnaire survey will be expanded, so that the research results can be applied to a wider range.

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