

Methods: The relevant data were analyzed by Excel and SPSS20.0 for calculation and statistics.

Results: It can be seen from Table 1 that the total score of life events, immature defense mechanism, age, position, negative life events, family life events and gender are the main factors affecting the score of SCL-90. Therefore, life events are one of the important factors affecting subjects' mental health, but the degree of influence of life events is not absolute. It is only an external cause, but also through internal causes. Life events mainly affect the mental health of subjects from two aspects: one is the frequency and intensity of life events borne by individuals, and the other is the individual's cognition, defense style and tolerance to life events. Therefore, unit leaders should reduce the occurrence of life events of archivists, especially avoid the occurrence of negative life events.

Table 1. Multiple linear stepwise regression results of many factors affecting mental health

Project	B	Beta	t	P
Total score of life events	0.462	0.478	12.030	0.000
Immature defense mechanism	17.000	0.493	14.818	0.000
Age	-1.013	0-.153	-4.716	0.000
Post	18.832	0.152	4.685	0.000
Negative life events	8.391	0.123	3.829	0.000
Family life events	1.281	0.155	3.949	0.000
Gender	7.524	0.067	2.041	0.000
Constant phase	44.218	-	3.581	0.000

Conclusions: In the new era, archives managers should not only have a high sense of responsibility, good professional ethics and rigorous working attitude, but also have solid theoretical knowledge and professional skills of archives management, so as to further promote the development of archives management. Units should help archivists understand their defense characteristics, master some methods to maintain psychological balance and solve practical problems, make corresponding adjustments, correct bad defense mechanisms, establish a mature defense system and better deal with life events, which will undoubtedly promote archivists' psychological maturity and improve their ability to withstand setbacks, so as to continuously improve the overall quality of archivists.

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STUDY ON THE INFLUENCE OF DIFFERENT SPORTS MANAGEMENT MODES ON COLLEGE STUDENTS' MENTAL HEALTH AND OPTIMISM

Xiangming Tang^{1*}, Xiaotong Yang² & Yi Xie³

¹Jiangxi Modern Polytechnic College, Nanchang 330095, China

²Jiangxi Normal University Science and Technology College, Jiujiang 332020, China

³Xinyu University, Xinyu 338004, China

Background: College students are the main group of students in China. Although college students are also students in school, there are obvious differences with middle school students and primary school students. When a high school student enters college life after graduation, it shows that the student has gradually mastered the basic knowledge of life and can be responsible for his own life and study. It also means that the student will be separated from the careful care of his parents and study and live alone. Most college students will have strange psychology when they first enter the university. Under the influence of strange environment, a large number of college students will have anxiety and anxiety. The generation of anxiety and anxiety is called negative psychological activities in psychology. Generally speaking, the negative psychological activities of college students are usually influenced by the environment and individuals. The environment includes campus environment and living environment. There are natural environment and learning environment in the campus environment. The learning environment is more likely to make college students have negative emotions. Personally, when facing more complex learning contents, college students will inevitably be restless, produce evasive psychology, and are unwilling to learn new

knowledge. With the expansion of achievement differences with their classmates, restless psychological activities will intensify, and finally seriously affect their physical and mental health. In the current college education, the cultivation of students' mental health mainly focuses on the ideological and political education, but the ideological and political education has some limitations, such as the influence is not comprehensive enough. Therefore, in order to alleviate students' mental health problems, colleges and universities put forward a large number of sports activities to help students cultivate good psychological quality and optimism.

In college education, the cultivation of students' mental health is an important educational content outside the teaching of professional courses. In college learning, the learning tasks faced by students are different from those in the past. Under the multiple influence of environment and learning pressure, students are prone to negative emotions such as psychological anxiety and depression. At the same time, the negative attitude brought by students' negative emotions makes it difficult for students' academic achievement to be significantly improved. The proposal of physical training provides a direction for the alleviation of students' negative emotions, but the existing sports management model knowledge of physical training is lack of standardization in daily teaching, which leads to students' inability to make full use of physical education curriculum time for self-improvement training. Some studies have put forward corresponding optimization schemes for the management mode of physical education teaching, emphasizing that the physical education management is based on the subjective thought of teachers and reflects the needs of students through teachers, so as to formulate a physical education management mode suitable for simultaneous teaching of multiple students in the classroom. However, in the teaching practice of colleges and universities, the sports management mode based on teachers is dominated by teachers, which is difficult to intervene according to the specific situation of students. Therefore, the research puts forward the college physical education management mode for the purpose of cultivating students' mental health and optimism, in order to improve the effect of physical education curriculum management and the promotion of college physical education on students' mental health and optimism.

Objective: The cultivation of college students' mental health and optimism is of great significance to the improvement of college teaching quality. This paper studies and constructs a sports management model based on students' psychological quality, and analyzes the frequency of students' participation in physical exercise and the changes of students' mental health under this sports management model.

Subjects and methods: Taking the students of a college of physical education as the research object, this paper understands the psychological quality level of the students of the college of physical education in college teaching, and obtains the influencing factors of students' mental health and optimism by using principal component analysis, so as to formulate the college physical education management model. 80 students in the Institute of physical education were randomly selected as the experimental objects, and the students were randomly divided into intervention group and control group, with 40 students in each group. The students in the intervention group used the sports management mode proposed in the study for physical education curriculum management, and the students in the control group used the conventional management mode for physical education curriculum management. Evaluate the changes of students' mental health and optimism before and after teaching.

Results: Anxiety and depression scores are used for students' mental health evaluation, and learning enthusiasm and life enthusiasm are used for students' optimism evaluation. The results are shown in Table 1.

Table 1. Changes of students' mental health and optimism before and after teaching

Content		Anxious	Depressed	Learning enthusiasm	Life enthusiasm
Before teaching	Experimental group	55.43±2.12	59.17±2.05	4.69	5.12
	Control group	56.37±2.12	58.12±2.11	4.71	5.04
After teaching	Experimental group	30.78±1.65	34.53±1.43	7.39	8.84
	Control group	49.64±1.95	48.15±1.78	5.81	6.19

Conclusions: College students' mental health is the basic guarantee for students' future development, and students' optimism is the key factor for students' long-term survival in the social environment. Therefore, cultivating students' mental health level and students' optimism is of great significance to students' life and survival. The research takes the students of physical education college as the research object, and improves the training effect of physical education on students' mental health by innovating the physical education management mode in physical education teaching. In teaching practice, it is found that

the optimized physical education management mode can significantly improve students' mental health level and optimism.

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APPLICATION OF OPTICAL FIBER SENSING TECHNOLOGY BASED ON PSYCHOLOGY IN BIOMEDICAL ENGINEERING

Lin Wang^{1*}, Guangying Wang² & Jingxu Chen²

¹Zhaoqing University, Zhaoqing 526061, China

²Jinan University, Guangzhou 510632, China

Background: Optical fiber sensing technology is a new sensing technology brought by social development. From the existing research, we can know that optical fiber sensing technology has been gradually applied to various fields in our country. Some studies have applied optical fiber sensing technology to pavement construction, and used optical fiber sensing technology to calculate and analyze the fracture behavior of pavement, in order to understand the fracture characteristics of pavement and obtain the spatial distribution form of cracks. This paper also studies the application of distributed optical fiber sensing technology to the on-line monitoring of transmission lines, and ensures the working safety of transmission lines by monitoring the working conditions such as lightning strike and icing in transmission lines. In addition, optical fiber sensing technology is also used to obtain coal mine safety early warning information in real time. With the development of society, optical fiber sensing technology began to be close to people's daily life. Some studies pointed out that optical fiber sensing technology can help clinical observation and provide technical support in the medical field. In the medical field, optical fiber sensing technology is gradually widely used in the medical Internet of things. The anti-electromagnetic interference ability of optical fiber sensing technology is used to improve the comprehensive application ability of medical equipment.

In biomedical engineering, the application of optical fiber sensing technology is also becoming more and more mature. In the early research, it is considered that optical fiber sensing technology can monitor human microcirculation in real time, provide more accurate clinical data for attending doctors in clinical diagnosis and improve the cure rate. Based on optical fiber sensing technology, a biosensor has been proposed. The emergence of biosensor has greatly improved the efficiency of medical testing. At the same time, it can measure the cells, proteins and other components in organisms quickly and at low cost. However, in biomedical engineering, although the use of optical fiber sensing technology reduces the workload of biomedical workers to a certain extent and improves their work efficiency, due to the miscellaneous professional knowledge contained in optical fiber sensing technology and biomedical engineering, it also affects their mental health level to a certain extent. From the perspective of psychology, the improvement of staff's work difficulty affects their psychological environment, resulting in negative emotions such as anxiety and inferiority complex. Therefore, in order to alleviate the negative psychology of staff in the application of optical fiber sensing technology in biomedical engineering, the research proposes to use positive psychology to analyze the causes of negative psychology of biomedical engineers, and use positive psychology to promote their mental health development, so as to provide reference for the cultivation of talents for scientific and technological development in China.

Objective: With the continuous development of high and new technology, optical fiber sensing technology has ushered in great opportunities and challenges. At the same time, in its application, the staff in biomedical engineering do not understand optical fiber sensing technology, resulting in negative psychology. Aiming at the negative psychology of staff in the application of optical fiber sensing technology in biomedical engineering, this paper analyzes the role of positive psychology in the cultivation of staff's mental health.

Subjects and methods: Taking the staff in biomedical engineering as the research object, firstly, the application status of optical fiber sensing technology in biomedical engineering is counted, and 46 staff with a certain degree of negative psychology are selected. The anxiety rating scale was used to obtain the anxiety psychology of the participants, understand the optimism, solidarity and cognitive self-confidence of all staff, and evaluate their positive psychology. Apply positive psychology to the daily training of biomedical engineering staff, intervene the staff's psychology, and evaluate the changes of staff's anxiety and positive psychology before and after the intervention. All data were collected by SPSS24.0 for statistical analysis, $P < 0.05$ indicates that the difference is statistically significant.

Results: The changes of anxiety and positive psychology of staff are shown in Table 1. Table 1 shows that