

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

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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

the staff's anxiety score gradually decreases and their positive psychological evaluation gradually increases. There is significant difference between the staff's anxiety psychology and positive psychology after the intervention ($P < 0.05$).

Conclusions: With the development of society, science and technology have a significant impact on different industry groups in society, and in the application of science and technology, workers in various industries are easy to breed different psychological problems. In order to alleviate the psychological problems of employees in social work, the research takes biomedical engineering as the research object, and analyzes the psychological status of employees in the application of optical fiber sensing technology. The results show that the staff in biomedical engineering have significant anxiety and negative psychology. After positive psychological intervention, we can know that their anxiety and positive psychology are constantly changing and developing better with the psychological intervention. Therefore, in order to promote the mental health development of social workers, we need to use positive psychology to improve the positive psychology of workers and promote social development.

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Table 1. Psychological changes of staff before and after psychological intervention

Group	0 month	2 months	4 months	6 months
Anxiety Psychology	67.31±1.96	61.26±1.87	57.43±1.78	46.17±1.59
Positive psychology				
Feeling of optimism	2.37	3.15	5.62	7.99
Solidarity psychology	1.97	3.72	5.29	8.17
Cognitive confidence	2.42	4.02	6.17	8.01

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ANALYSIS OF THE INFLUENCE OF THE INNOVATIVE DEVELOPMENT OF LIFELONG EDUCATION ON THE ANXIETY OF OPEN UNIVERSITY STUDENTS

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Background: On the basis of this, we should pay more attention to the development of national culture and promote the lifelong learning of our country. Lifelong education advocates universal learning and lifelong learning. The object of lifelong education theory is gradually expanded from college students to social members, but it can be determined that the key object of lifelong education is still college students. Since the reform and opening up, China's economy has experienced substantial growth and maintained a sustained growth trend for a long time. In the process of social and economic development, the demand for highly educated talents in all walks of life is also increasing. Therefore, the lifelong education of college students is of great significance. After the 21st century, countries around the world began to speed up the development process of high-tech innovative industries. At this time, China's economy began to realize formal transformation, the people's thoughts began to change, and higher education began to gradually shift from colleges and universities to the public. At the same time, in order to eliminate the ideological contradictions in society, lifelong education emphasizes the vigorous development of national learning, gradually reduce the cognitive differences between individuals and promote social and economic growth. In the teaching of colleges and universities, in order to meet the needs of society, we are also committed to strengthening lifelong education, advocating that college students receive lifelong education, improve their cultural level and comprehensive quality and ability, and provide power for national infrastructure construction and high-tech development.

In the education and teaching of colleges and universities, college students are prone to psychological anxiety and other problems caused by various pressures, of which the more obvious is the learning anxiety of college students. There are great differences between university environment and social environment. Facing the unknown social environment, most college students will have uneasy psychological emotions, and the long-term accumulation of uneasy emotions will lead to psychological anxiety. Psychological anxiety