



Exploration and Practice of University Students Health Education Promotion Model Under Big Data Information

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Abstract. This paper introduces the promotion mode of College Students' health education based on big data information, summarizes the methods and means of the promotion mode of health education in teaching, and puts forward that we should make full use of modern educational technology and health education resources, guide students to carry out health education, prevent and treat diseases under the new medical mode, strengthen school health education, and explore new ways of College Students' health education And practice.

Keywords: Big data information · College students' health education · Exploration · Practice

1 Introduction

The core content of health education in higher schools is to spread health knowledge, help college students show its limitations and establish modern health awareness. At present, as an independent subject with the change of medical model, some subjects related to psychological factors and social factors, health education in Colleges and universities has been attached great importance by the governments of various countries. For hundreds of years, "medical model" has been based on biomedicine for hundreds of years, such as vision decline, chronic pharyngitis, tinnitus, sudden ear. The incidence rate of deafness and malignant tumor has been on the rise. The formation of these diseases is based on biological factors to prevent and treat diseases [1]. The occurrence and development of diseases are difficult to solve under the biomedical mode. With the development of medical education and medical science, the biomedical model has become obvious. In 1984, health education for college students began to be implemented in China's colleges and universities. At the same time, the emergence of the "biological psychological social" medical model made people not satisfied with treatment, but required to focus on prevention and health care, Make your body and mind in a better state of health.

2 Proposed Work

2.1 Personalized Recommendation Information Transmission

According to the correlation features, the user's personal consumption data is extracted, and the fuzzy decision function is obtained. The nonlinear mapping $\phi : n \in R^n \rightarrow Q$ is used to represent the user's personalized grooming space. The data information is combined with the decision function, and the intelligent algorithm is used to map to the sample set of quotient recommendation. The hypothesis is that represents the model input vector as the target test value, and the number of N tables is used to calculate the personalized recommendation objective function:

$$\minimize \frac{1}{2} \|w\|^2 + \sum_{i=1}^n B (j_i + j_i^*) \quad (1)$$

$$subject, m_i - (w\phi(a_i) + b) \leq \varepsilon - j_i \quad (2)$$

$$(w\phi(a_i) + b) - m_i \leq \varepsilon - j_i \quad (3)$$

In the era of traditional economy, data is a low-energy thing, from data, information, knowledge to wisdom is more and more valuable. But in the era of big data, data has become extremely powerful. Big data not only promotes big knowledge and wisdom, but also promotes big thinking and big pattern. As a new strategic resource, big data has attracted great attention from the industry, academia and political circles. Developed countries have launched plans to develop big data. Big data is rapidly changing the society we live in and the way we think. Whether you realize or feel it or not, it has become an indisputable fact that big data has entered people's field of vision. It is influencing the existence and operation of various social systems in its own way. Similarly, big data also enters and influences college students' mental health education system in an invisible way.

2.2 Significance and Characteristics of Health Education for College Students

2.2.1 The Significance of Health Education

The Central Committee of the Communist Youth League "on Further Strengthening and improving the health education of college students" shows that the Party Central Committee and the government are concerned about the physical and mental health of college students. According to the health education data of Xi'an Jiaotong University Hospital and Shaanxi Province's brother colleges, since 2016, the number of college students with mental illness, psychosomatic disease and vision decline has increased to varying degrees. In the face of such a serious situation, according to the characteristics of college students in the late adolescence, they have greater plasticity, It is a long-term work and task for colleges and universities to carry out health education in order to help them establish modern health awareness, increase health knowledge, and improve comprehensive disease prevention ability of physical and mental health, which is related

to the future of our country. Practice has proved that college students' health education plays a positive role in overcoming diseases [2–6]. It is the need for college students to maintain a healthy state during the period of school, and it is also the need to ensure college students' physical and mental health during the period of school and become the national qualified talents. Nowadays, the extensive attention of Chinese people to health also indicates the coming of a new era of health education in Colleges and universities in China. Figure 1 shows the health education level of college students from 2014 to 2020 based on big data.

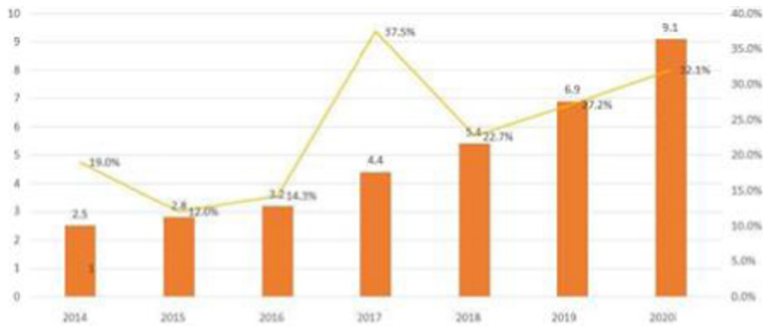


Fig. 1. The health education level of college students from 2014 to 2020 based on big data

2.2.2 Characteristics of Health Education

College Students' health education is based on health education. It can enhance college students' self-protection awareness and develop good health behaviors, so that college students are not only physically healthy, but also psychologically and morally healthy, and have good social adaptability. Early intervention should be carried out on the psychological diseases and psychosomatic diseases of college students during their study.

College Students' health education is aimed at the students at the later stage of puberty. The subject content includes not only basic medical treatment and clinical application technology, but also psychology, psychosomatic medicine and public health diagnosis and treatment skills. Therefore, in the teaching of health education for college students, more attention should be paid to guiding the students to change to the medical model of "biology psychology society" to understand and prevent diseases [7]. This will help students master the knowledge of health education, understand the ultimate goal of health education, spread the knowledge of health education to social groups, realize the right of everyone to enjoy health care, and serve the health of the whole people.

2.3 Ways to Promote Health Education

According to the characteristics of students in different areas, different environments and different living habits, we should arrange targeted teaching contents, such as teaching

freshmen about environment and adaptation, environment and health, sleep and diet hygiene and psychological development characteristics of college students, so as to make them adapt to the study and life in the new environment as soon as possible. The teaching method adopts the teaching method of focusing on key problems and case teaching method [8–10]. The common problems encountered by freshmen are discussed collectively.

2.4 Teaching

Using new teaching methods to stimulate students' interest in learning and improve teaching effect. Questioning teaching is a new teaching mode. The attending doctors take 50 health education problems encountered in real life as teaching materials, apply specific cases and adopt problem-oriented method to constantly stimulate students to think and research, so that college students can learn to analyze problems and improve their ability to solve problems. The new teaching mode has obvious advantages over the traditional teaching methods in cultivating students' scientific thinking mode, stimulating their interest in learning, improving their ability of self-study and language expression, communication and cooperation.

2.5 Lecture

Different and flexible teaching methods were used to carry out health education lectures. According to the characteristics of sophomores who have basically adapted to the study and life of the University, we give special lectures on “hygiene and protection of eyesight”, “food hygiene and nutrition”, as well as female physiological health knowledge to female students. Among them, “health and protection of vision” is the focus of health education. Poor eyesight is one of the most common diseases detected by students in our country. Most of them are myopia. Myopia limits students' attention and reduces their ability to identify distant and fine targets, which seriously affects students' learning. The purpose of the special lecture on “food hygiene and nutrition” is to enable students to master the types of nutrients, develop good eating habits and prevent food poisoning. In women's physiology and health education, according to the special structure and physiological characteristics of women's body, women are taught menstrual health and health knowledge, such as breast pain and health care, menstrual health care, women's sports health, etc. [11]. In the teaching of modern social disease prevention and control knowledge, such as AIDS prevention and control, premarital sexual behavior and morality, heuristic teaching method is used to let students choose 100 health education topics before class, and find materials, learn and think after class.

3 Opportunities and Challenges of College Students' Mental Health Education in the Era of Big Data

In the era of traditional economy, data is a low-energy thing, from data, information, knowledge to wisdom is more and more valuable. But in the era of big data, data has become extremely powerful. Big data not only promotes big knowledge and wisdom,

but also promotes big thinking and big pattern. As a new strategic resource, big data has attracted great attention from the industry, academia and political circles. Developed countries have launched plans to develop big data [12, 13]. Big data is rapidly changing the society we live in and the way we think. Whether you realize or feel it or not, it has become an indisputable fact that big data has entered people's field of vision. It is influencing the existence and operation of various social systems in its own way. Similarly, big data also enters and influences college students' mental health education system in an invisible way.

3.1 Challenges

The era of big data will bring many breakthroughs in college students' mental health education. However, just like everything else, college students' mental health education also faces many challenges in the process of using big data, such as data awareness, data collection, data storage, data talent and data privacy, which will restrict the role of big data. First, China has not yet upgraded big data to the national strategic level, and the industry generally lacks big data awareness, which is the key factor hindering the implementation of big data technology in various industries, and will also hinder people from patiently and seriously studying the origin and mechanism of big data. Second, in many colleges and universities, college students' mental health education has become a matter for a small number of mental health educators or student counselors, and other departments have become "bystanders". As data resources are scattered in different departments, there is a common phenomenon of "data island" and "fragmentation".

3.2 Four in One, Improve the Guarantee Mechanism of College Students' Mental Health Education

In order to make good use of big data in college students' mental health education and give full play to its due value, we must establish and improve the corresponding guarantee mechanism in order to meet the challenges of the era of big data [14]. First, a big data leading group should be set up. Colleges and universities should gather all departments involved in college students' mental health education and relevant personnel engaged in the development and utilization of big data to establish a strong leading group for big data application. Team members should not only have firm belief and be willing to devote themselves to the reform action, but also understand and support the application of big data, which can strengthen the integration of all kinds of information resources, provide top-level design and lay a solid foundation for the application of big data in college students' mental health education.

4 Adaptation and Innovation of College Students' Mental Health Education in the Era of Big Data

Big data is starting an important transformation of the times. It has become a strategic resource as important as natural resources and human resources. It is another disruptive technological change after cloud computing and Internet of things. Its storm is sweeping

all industries with massive data [15]. Facing the opportunities and challenges brought by big data, college students' mental health education should actively integrate into the wave of big data, use data resources to improve education effect, promote service innovation, and improve the scientific level of College Students' mental health education.

4.1 Concept First, Set Up the Data Consciousness of College Students' Mental Health Education

With the advent of the era of big data, for the first time, human beings have the opportunity and conditions to widely and deeply obtain and use complete data, explore the laws of the real world, and obtain knowledge that was impossible to obtain in the past. As the most populous country in the world, China produces a huge amount of data. However, according to Wu Hequan, an academican of the Chinese Academy of engineering, more than half of the data in China have not been properly protected. Therefore, it is imperative to first advocate and strengthen data awareness in Colleges and universities. Both college administrators, teachers and mental health educators should update their ideas, understand the relevant knowledge of big data, and fully realize that big data is a valuable resource for mental health education. Secondly, mental health educators in Colleges and universities should keep pace with the times, Finally, mental health educators in Colleges and universities should establish the consciousness of data precipitation and data application in daily practice and scientific research, Pay attention to the collection and storage of mental health education related information, lay a solid data foundation for mental health education, and truly play the value of big data in college mental health education. After the opening of the era of big data, human society is undergoing a profound change. Like the invention of the Internet, the big data wave is not only a revolution in the field of information technology, but also a sharp tool to launch transparent government, accelerate enterprise innovation and lead social change in the world. It will bring new ways of thinking and management change to all walks of life. The advent of the era of big data has also imperceptibly affected the ways and behavior habits of college teachers and students in exploring the unknown world. How to actively respond to the opportunities and challenges brought by the era of big data and promote the development of College Students' mental health education with the times is an important issue for college counselors and other mental health educators to think deeply.

4.2 Conform to the Trend and Innovate the Research Paradigm of College Students' Mental Health Education

At present, influenced by many factors, college students have different degrees of interpersonal barriers, study and work pressure, emotional love confusion, Internet Dependence and other psychological problems. In the past, the research on these psychological problems mainly adopted the way of empirical research and questionnaire sampling survey, and achieved a lot of valuable research results [16]. However, due to the limitations of sample selection and data analysis, it is often difficult to draw systematic and profound conclusions from the research results. Mental health educators increasingly feel powerless in practical work, which has a great relationship with the lack of scientific

development of mental health education. In the era of big data, everything is digitalized, and many disciplines have been deeply integrated with information technology. It is a general trend to use data to study college students' mental health education. In practice, it is urgent to promote the transformation of research paradigm of mental health education. Combining point with area to find out the way of College Students' mental health education.

At present, college students' mental health education lacks effectiveness and effectiveness. One of the important reasons is that mental health education is divorced from the changing real social life. Social existence has changed, but the ways and means of mental health education and the design of education system are still in the past, lacking the consideration and follow-up of the times. In the era of big data, everything can be quantified. Mental health educators can analyze the psychological roots of college students from their various activities and family and social relations, timely and accurately grasp their psychological status, seek the path to solve mental health education with big data, and realize the refinement of mental health education service.

5 Effect of Health Education

In order to understand the effect of health education through various ways, the hospital of Xi'an Jiaotong University issued questionnaires to 1000 college students who had participated in health education in 2012. The results show that 92% of the students who have participated in the health education knowledge study have obvious knowledge and improvement on the prevention and control of infectious diseases and AIDS, 82% of the students improved their bad living habits and behavior significantly [17]. They generally believe that behavior is closely related to health. A good behavior can promote people's mental and physical health, otherwise it will harm health. At the same time, 300 college students who did not participate in the study were given questionnaires and compared with those who had participated in health education. The results showed that the students who had participated in health education had obvious ability to prevent and control infectious diseases, modern social diseases, tuberculosis and AIDS, while those who had not participated in health education had obvious ability to prevent and control infectious diseases, tuberculosis and AIDS. The awareness of health education and the ability of disease prevention and treatment are still limited to the level of knowledge in middle school, and there are significant differences between the two groups of students.

For the health effect based on big data, we only selected the data from 1990 to 2018, which is increasing year by year from the effect point of view, such as the red line in Fig. 2, and the other two lines represent people's cognition of big data. As we can see from Fig. 2, we still have a normal attitude towards this change. So it doesn't change much.

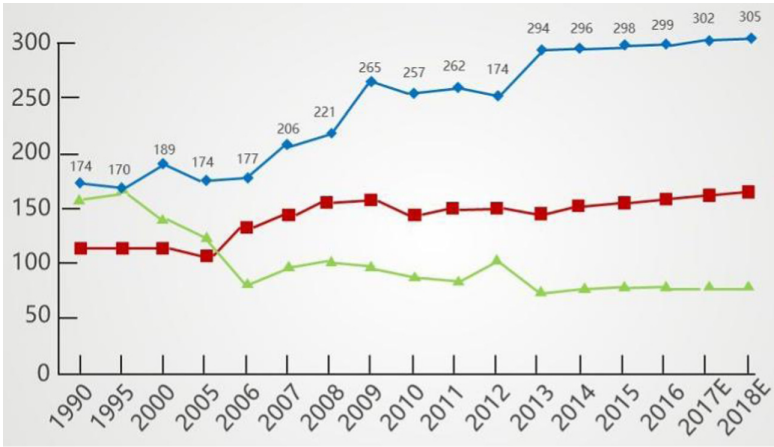


Fig. 2. The health effect based on big data

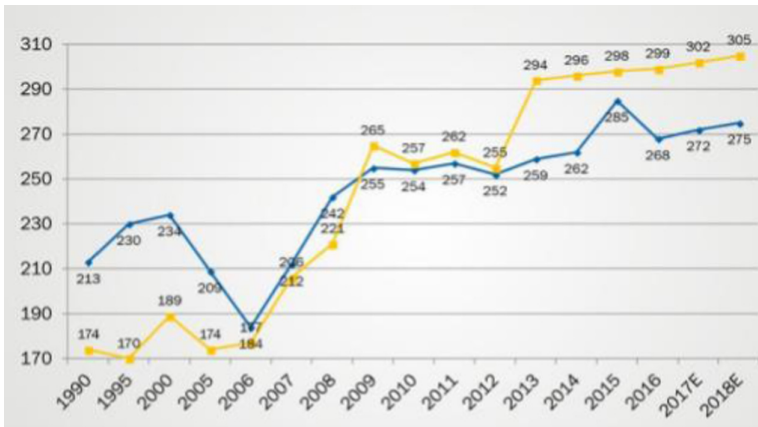


Fig. 3. Big data cognition for Health Education

We can also see from Fig. 3 that people’s health education on the use of big data is on the rise. In the past, people only mentioned big data, but now people use big data. So the effect is different.

6 Conclusion

Health education for college students has been carried out for nearly 30 years in China’s colleges and universities. Through the comprehensive application of various teaching methods and means, we have improved the teaching effect and enhanced the students’ ability of disease prevention and treatment. Although we have gained some experience in the exploration, as a new subject, there are many imperfections in the teaching, In the future, we will actively learn from the successful experience of health education for

college students at home and abroad, and constantly improve and explore the effective ways and modes to adapt to the health education and teaching of college students in China. In the era of big data, all changes are accelerating [18–23]. If we don't understand this change, we will become blind actors and can't keep up with the pace of social progress. Only by further strengthening the awareness of big data and actively tapping the inherent potential of big data application, can colleges and universities effectively promote the transformation, innovation and development of College Students' mental health education, make it quickly keep up with the changes of the times, and embark on the healthy road of self-improvement, self-improvement and self transcendence.

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