

## **Innovation Research on Psychological Health Education of Contemporary College Students under the Background of Big Data**

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**Abstract:** The arrival of the era of big data has changed people's lifestyle and thinking habits. Big data also brings about comprehensive and real opportunities and challenges for mental health education in colleges. In the era of big data, college mental health educators should seize opportunities, meet challenges, improve the teaching level of mental health education, and promote the healthy development of college students' psychology.

### **1. Introduction**

Big data refers to a group of data whose size exceeds the ability of traditional database software tools to capture, store, manage and analyze [1]. The huge amount of data is a remarkable feature of large data. 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 powerful tool to launch transparent government, accelerate enterprise innovation and lead social change around the world. It will bring new thinking and management changes to all walks of life. The advent of the era of big data also has a subtle impact on the ways and behavioral habits of college teachers and students in exploring the unknown world. Big data technology is leading people to realize the leap from virtual data to practical knowledge, and then from actual knowledge to concrete practice. The emergence of big data makes the society develop rapidly. Relevant research shows that a large amount of network data is becoming an important resource for researchers to observe the psychological and behavioral characteristics of human individuals and groups. At the same time, big data, with its characteristics of equality, openness and diversity, provides new ideas for the construction of mental health education in Colleges and universities. Through big data, the concept of digitalization and mental health education are integrated, and a digitalized information platform is constructed by using big data thinking to facilitate direct communication and dialogue between teachers and students. Teachers can also collect, classify and sort out the problems faced by students in mental health counseling, and construct a systematic mental health database, which can provide the corresponding basis for future mental health work. This improves the efficiency of mental health counseling and diagnosis. Using big data technology to pay attention to students' psychological state indicators dynamically plays an important role in the discovery of psychological crisis. Psychological educators take certain psychological intervention measures according to the results of these indicators to prevent the occurrence of students' psychological crisis [2].

### **2. Opportunities and Challenges of Psychological Health Education under the Background of Big Data**

#### **2.1 Opportunities.**

Traditional college students' mental health education mainly adopts questionnaire survey and sampling survey in practical research. This research method was carried out with the knowledge of the respondents. In the process of investigation, it will inevitably be interfered by external factors. The results of the survey reflect the overall situation of the respondents, and the lack of targeted

investigation activities will also be limited by time and place. With the help of large data, the study of mental health education has solved the shortcomings of traditional research methods to a certain extent. On the one hand, large data can process and analyze all the data of the research objects, and solve the problem of sample representation in traditional research methods. On the other hand, the big data method is carried out unconsciously by the respondents, without external interference factors. It can more objectively reflect the true situation of all the respondents, help teachers understand the psychological characteristics of each student, and give them targeted education. At the same time, big data technology can update data information in time, breaking the space-time limitations of traditional research methods, not only saving research costs, but also improving research efficiency. Colleges and universities can make full use of the unique function of big data to analyze students' mental health, and formulate timely and effective educational measures for students who may have psychological problems or already have psychological problems. For students with good mental health, we should use appropriate educational methods to stimulate their potential and cultivate personalized and creative talents. Big data technology can customize personalized psychological development programs for students to predict individual future behavior based on the established model, and even predict the occurrence of certain crisis events, and then carry out human intervention to make it develop in a normal direction. At the same time, students can build a platform to understand themselves through big data, and actively develop self-adjustment programs or accept psychological adjustment to better stimulate their potential [3].

## **2.2 Challenges.**

Big data technology will bring many breakthroughs to college students' mental health education. However, college students' mental health education also faces many challenges in the process of using big data, such as the leakage of personal privacy in big data and the security of big data itself. At the same time, effective data acquisition also poses challenges to educators. The process of extracting useful knowledge and information from massive data is quite complex, and the process of identifying the true and false data repeatedly is also complex. Generally, it needs to be processed and modeled. Assessment and testing have posed many challenges to educators. On the one hand, it challenges the ability of university educators to analyze and process large data information, especially a series of data collection and pretreatment work, such as organizing, cleaning, integrating and transforming raw data. On this basis, it is necessary to establish an analysis model, evaluate the model and check whether the results meet the set goals. Finally, the results of data processing are presented using various visualization technologies, such as reports, reports, graphics, etc. Therefore, the fragmentation and unstructured characteristics of big data information make it more difficult for educators to analyze and evaluate college students' mental health. On the other hand, to challenge the mode of mental health education for college students, the traditional way of education is mainly one-way teaching by teachers. Under the big data technology, college students can learn relevant mental health knowledge independently and master more advanced information, so the authority of educators will be challenged. In the era of big data development, educators need to establish the concept that the capable are teachers and teaching are the same, so that educators can develop equally. Big data analysis must be based on obtaining more personal information, and analysis can also make the data have a relationship, and then reveal more personal privacy [4].

## **3. Countermeasures of Psychological Health Education of Contemporary College Students under the Background of Big Data**

### **3.1 Cultivate Awareness of Big Data.**

With the continuous development of the times, people gradually realize the importance of big data. As a place for talent training, colleges and universities need to pay more attention to these big data, and fully realize the importance of big data for mental health work, advocate and strengthen the awareness of big data in schools, and popularize relevant knowledge of big data. By organizing the departments and technicians responsible for mental health work to provide corresponding human and

material resources, a good working atmosphere of big data can be formed. College mental health educators also need to develop the habit of paying attention to data investigation and forming data thinking. Through psychological counseling, psychological teaching and other forms of students, more relevant data should be collected to lay a good foundation for the next work. As the world's largest population, China produces a huge amount of data. More than half of the national data are not properly protected. Therefore, it is urgent to advocate and strengthen data awareness in Colleges and universities. Whether College administrators, teachers or mental health educators, they 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, college mental health educators should keep pace with the times, keep pace with the development of the times, establish a complete thinking of big data, actively study the changes and development brought about by big data to college students' mental health education, and think about college students' mental health education from the perspective of big data. Finally, college mental health educators should establish the consciousness of data precipitation and data application in daily practice and scientific research, pay attention to the collection and storage of information related to mental health education, lay a solid data foundation for mental health education, and really play the value of big data in college mental health education.

### **3.2 Establish Psychological Health Database.**

Under the background of big data, college psychological teachers should also improve the processing technology of various information. At the same time, a database of students' mental health files should be established based on big data to monitor and supervise students' mental health problems. When abnormal psychological data of students occur, they can give psychological counseling to students in time to help them get rid of psychological problems. Teachers can also understand students' mental health status by analyzing students' psychological data and adjust their teaching methods and contents in time. Teachers can adjust students' general psychological problems in time, guide students' individual psychological problems independently, improve students' mental health and promote the development of mental health education in Colleges and universities. The potential value of big data is not only the need of business competition, but also the need of educational innovation. Big data bring innovative opportunities for mental health education. In the era of big data, the data of colleges and universities are increasing day by day. On the basis of following the objective law of educational development, fully tapping and utilizing the potential value behind these data will greatly promote the mental health education of college students. Colleges and universities should establish and improve the mechanism of information collection and processing, classify and update the big data of students' archives. Through the correlation analysis of data and information, the relationship between variables and data can be found, which can timely grasp the learning situation, emotional changes and living conditions of each college student, and formulate targeted education programs according to the individual characteristics of students. Then, the individualized educational goal that our country's education has been advocating will be achieved.

### **3.3 Construct Psychological Health Prediction Mechanism.**

Under the background of big data, college students are more willing to record and express their true feelings by means of words, pictures, short videos and other tools. Colleges and universities can analyze the psychological characteristics of college students by analyzing the big data of college Students' network behavior characteristics. Focus on students who may have psychological problems, and keep track of their behavior data, develop timely and effective education programs to prevent them from failing. As far as colleges and universities are concerned, the best educational goal of psychological health education for college students should not be to solve the psychological problems of college students, but to prevent the emergence of psychological problems of college students. It can be seen that it is of great significance for colleges and universities to establish a predictive mechanism of college Students' mental health through data analysis supported by the big data of students' personal information. By screening and analyzing the data obtained by the platform, we can make a scientific judgment on the students' mental health status, and can send out early warning information in time when the students' psychological data are abnormal. Establish active intervention

platform through the scientific analysis of students' psychological data collected from big data, timely understand and grasp the dynamic changes of students' mental health. According to students' mental health status, in view of the common problems of students, recommend popular science mental health knowledge to students through the platform. At the same time, the platform can push more pertinent psychological knowledge and self-adjustment methods according to the mental health status of different individuals. It can actively match with psychological counselors and send out interview invitations to students.

### **3.4 Innovate Psychological Health Education Model.**

Making full use of the new technical means such as Internet and big data to build an interworking platform for college students' mental health education and internet, providing relevant psychological services for college students, relying on the big data platform and according to the results of students' mental health assessment, the course content can be personalized and customized. To achieve effective communication between teachers and students, students and students, help students understand their own psychological status, improve their mental health level. With the deepening of education reform, some teaching modes such as flipping classroom and micro-class emerge in endlessly. We can readjust the time inside and outside the classroom and teach the students the right to decide their learning. In this way, teachers can save teachers' resources. Teachers can give students the initiative of learning through various online platforms, and through the Internet to achieve interaction between teachers and students, stimulate students' desire to understand relevant mental health knowledge, and promote students' all-round development. In addition to offering compulsory courses of mental health education for college students, optional courses such as interpersonal communication, happiness psychology, emotional psychology and career planning are offered to form a curriculum group with compulsory courses as the main part and mental health as the supplement, so as to meet the needs of different student groups. Modern education pays more and more attention to humanistic care. The traditional one-way indoctrination is no longer feasible in the context of large data. Educators need to assist emotional education while imparting knowledge. Educators who really enter students' inner world should understand and pay attention to the different psychological characteristics of college students, and use appropriate methods to guide them psychologically to improve the effectiveness of mental health education.

## **4. Conclusion**

Under the background of the big data era, college psychological teachers should seize the opportunity of the development of the times and face the opportunities and challenges that the development of the times brings to college students' mental health education. Psychological teachers make rational use of the advantages and characteristics of big data to improve and innovate mental health education, improve the mental health status of college students, and promote the development of mental health education in colleges.

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