

# *Exploration of College Students' Mental Health Education Strategies in the Context of Big Data*

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**Abstract:** The arrival of the big data era has made people's lifestyles affected by big data thinking. The advantages of big data change people's lives and thinking, and its technology also brings opportunities for the innovative development of many industries. Colleges and universities can make full use of big data to meet the opportunities of college students' mental health education, adhering to the principles and concepts of innovation, using big data for innovative exploration, expanding new paths for college students' mental health education, and promoting the development of mental health education.

## 1. Introduction

Although college students are approaching maturity in mind and knowledge, they lack social experience and their inner resistance is weak. In the face of incomprehensible events, they are easily frustrated, leading to mental health problems. Facing the fast-paced society, mental health education has become the focus of colleges and universities. Colleges and universities hope to alleviate the psychological pressure of college students through professional, but the lack of resources for psychological teachers makes it difficult to meet the demand for mental health education in colleges and universities. To enhance the accuracy and effectiveness of mental health interventions among students, technological advancements play a pivotal role. Platforms and systems have been developed to precisely identify mental health issues in students, facilitating targeted problem-solving strategies. Moreover, the utilization of emerging technologies like big data has further bolstered the efficacy of mental health education interventions. This includes the collection of student information for tailored interventions, emphasizing a data-driven approach to mental health support.

## 2. Connotation and Characteristics of College Students' Mental Health Education in the Age of Big Data

### 2.1. Connotation of college students' mental health education in the era of big data

Mental health education in colleges and universities in the context of big data cannot be ignored, and is formed on the basis of offline development. With the support of advanced technologies such as the Internet of Things and meta-universe, data collection and integration of college students'

online and offline learning and life is carried out to mine valuable data and comprehensively understand students' mental health. And in combination with the key data, psychological course teaching is created and targeted courses are offered to provide counselling for students' mental health. Appropriate mental health education and publicity activities to cope with students' mental health problems. Based on the era of big data, big data technology helps college educators to obtain more authentic and comprehensive information, and through information collection and analysis, ensures a more flexible approach to education. Big data thinking and technology can manage innovative ways for educators to usher in a new situation of health education and provide new opportunities for mental health education in college activities.

## **2.2. Characteristics of mental health education work**

First of all, mental health education in the context of big data has the characteristic of comprehensiveness. The collection of personal information of college students cannot satisfy the previous data survey. In the past, data information was about basic demographics and related to students' daily campus life information. Online social networking and browsing records are based on cloud disk storage, which can integrate student information comprehensively, reflecting the advantage of the comprehensiveness of the technology. Mental health work focuses mostly on counsellors, lack of attention to other groups, the use of big data can be related to the surrounding population information data collection, to ensure the comprehensiveness of the coverage; Secondly, the system is focused on mining and processing student information data. By creating data portraits, it delves into the psychological state of students across various life stages. Through this process, key information is identified promptly, enabling the early detection of potential crises affecting students. Combined with the portrait and the requirements of psychological quality training, a more efficient mental health classroom is constructed. Relevant activities can be held to attract students' participation, and resources can be concentrated to pay attention to and provide counselling for the population, so as to prevent the occurrence of crisis events. It can also solve the confusion for college students according to the psychological portrait, and give corresponding suggestions for their real thoughts; the last point is the timeliness feature, big data can judge the psychological state of students according to the hot events, give corresponding help, and avoid the fermentation of public opinion. Its prediction technology can provide timely early warning of crises and reduce accidents according to relevant objects.

## **3. Opportunities and Principles of College Students' Mental Health Education Based on Big Data**

### **3.1. Educational Opportunities**

Currently, the mental health problems of college students are affected by multiple factors. The teaching environment, campus atmosphere, interpersonal interactions, etc., any part of the process may increase students' psychological pressure. In the long run, it has an impact on students' mental health. On the basis of a full understanding of the characteristics of college students' psychological behaviours, we can better help students solve their problems according to the data information in their different scenarios. Traditional mental health education, mostly classroom teaching, teachers have limited professionalism and cannot understand students in a targeted way, coupled with the fact that students are reluctant to talk to teachers about some of their problems, which leads to obstacles to the development of education <sup>[1]</sup>. Under the background of big data, big data technology is able to find information related to students in the massive data, breaking through the restrictions of the traditional education model. It enables teachers to better understand the mental

health of students, carry out targeted work, and improve the quality of students' psychological education. College life brings more feelings to students, so that their hearts are easily influenced by the outside world, the emergence of attitudes that are not conducive to their own growth and development. As the country strengthens the importance of psychological education in colleges and universities, the psychological education activities of colleges and universities are also actively carried out, the traditional psychological education model methods and concepts are relatively backward, can not help students to solve problems in a timely manner, but also add to the distress of the students, the education work there is passivity. Under the background of big data, the speed of data dissemination is accelerated, and the data collected by big data technology has the characteristic of timeliness. Big data technology brings opportunities for mental health in colleges and universities, but also based on the lack of effectiveness in the past, combined with the psychological problems of students, targeted to provide students with psychological guidance and assistance. By combing massive information, combined with the function of big data technology, the integration of data resources, to ensure the effective mining of student data, to explore valuable information, to provide data support for the work of mental health education in colleges and universities. Make education break through the tradition and create a good environment for students.

## **3.2. Principles**

### **3.2.1. Student-oriented**

The continuous development of technology has played a significant advantage in data collection, analysis and other aspects. At present, more technology in the application process, are adhering to the concept of people-oriented, service to people, improve people's quality of life. Big data in university mental health education, the service object is college students. It is necessary to implement the relevant work around the students, adhere to the student-oriented concept, and help students grow and develop. Do your best to serve the students, explore the information of students' mental health education, carry out education in a targeted manner, improve the students' mental health problems, and make them develop healthily.

### **3.2.2. Value leadership**

The main value of college students' mental health education is reflected in the content of mental health education. It is necessary to ensure that the content meets the learning needs of students, enriching the teaching content and promoting in-depth learning. In the era of rapid social transformation, students' thoughts and concepts have changed greatly, and education work should meet students' learning needs, combined with students' personalised performance, and play the value of mental health education. Consider the value of the main body, combined with the actual situation of students, to carry out targeted education. Although students have entered the university campus, their concepts are still immature in some areas, and there are even radical phenomena. It is necessary to use big data to promote mental health teaching, so that students can form correct values and outlook on life in the process of learning knowledge. To enhance the quality of teaching and address students' psychological issues, it is imperative to strengthen networked teaching by utilizing data mining and sharing information. This approach enables educators to gain insights into students' actual needs, effectively execute education and management tasks, boost students' psychological resilience, instill positive values in students, and ultimately improve the overall quality of education.

### **3.3.3. Infiltration of emotions**

In the development of big data technology, despite the acquisition of a large amount of data, the campus is able to use the cold data to give students warm care<sup>[2]</sup>. Psychological problems of college students can not be ignored, with a problem that can not be alleviated, colleges and universities should be added to the humanistic care in education, by giving students care to make up for the lack of emotion of some students. One-way transmission of knowledge is difficult to meet the development of modern education, and will not enhance the effectiveness of education. Under the perspective of big data, mental health education needs to be analysed in the light of this characteristic, strengthen the psychological guidance of students, and give students intimate humanistic care. Through guidance and care, it goes into the inner world of students and relieves their nervousness. You can also use big data technology to communicate with students in a networked way, give students the feeling of talking to their peers, create a good communication ecological environment, analyse the possible psychological problems of students through communication in a timely manner, and trigger the emotional resonance of students. Enhance emotional insight to improve students' comprehension of mental health issues and empower them to independently process and address their psychological concerns.

## **4. Deepening the development and application of big data technology in mental health education**

In the era of big data, its versatile applications across various sectors highlight its intrinsic value, attracting substantial attention from scholars. Capitalizing on the advantages of big data in the realm of college students' mental health education is pivotal for fostering innovative educational models and advancing students' mental well-being. Hence, universities should proactively delve into the integration of big data within mental health education, enhancing its utility, harnessing its full potential, and leveraging it as an effective tool to support students' mental health initiatives.

### **4.1. Strengthening educators' attention to the application of technology**

For colleges and universities, mental health education work requires educators to correctly view big data, cloud technology and so on. Neglecting the role of high technology will directly affect the effect of technology application. Considering the positive role of big data in mental health education, it is necessary for college educators to strengthen the importance of technology in terms of consciousness and behaviour<sup>[3]</sup>. First of all, it is necessary for college teachers to rationally and objectively analyse the advantages of technology and combine the value of technology in the mental health education of college students. Colleges and universities should actively explore technology and innovate the education mode, specifically focusing on the incorporation of big data technology in mental health education. In the past, teachers may have overlooked the benefits of technology partly due to a resistance to technical methods or a lack of familiarity with big data technology. To address this issue, institutions should emphasize the importance of big data technology in mental health education. This can be achieved by enhancing the application of big data in mental health education, engaging proficient professionals and experts, establishing a dedicated research and development team to create a mental health education platform tailored for students, utilizing the capabilities of big data, and continuously enhancing and refining the platform.

### **4.2. Integration of technology development resources**

The application of big data, artificial intelligence and other technologies in the work of college

students' mental health can innovate the content of education. But it requires the participation and guidance of professionals to ensure the continuous development of resources. Considering that the focus of university research is not in this area, it is necessary to unite other resources and enterprises, with their help, to enhance the resource development capacity of universities. In terms of resource integration, school-enterprise co-operation is implemented in accordance with university co-operation, and various technologies are applied to the mental health education curriculum through a joint approach. Based on the mental health problems of college students, special research is carried out to overcome the problems through technology and psychological expertise to make up for the shortcomings of colleges and universities in this area. Colleges and universities can also choose to cooperate with listed companies or technology companies to fully demonstrate the advantages of mental health education in colleges and universities, and create unique psychological education programmes. Taking into account the personalised characteristics of college students, while attaching importance to the development of technology in the early stage, it should also carry out regular technical maintenance of the follow-up situation of students, to ensure that the technology closely follows the activities carried out, and continuously promote the optimisation. For example, mental health models and algorithms should be designed and adjusted according to the performance of students in different periods, so as to ensure the optimal matching of data resources.

#### **4.3. Optimising the way technology is applied**

For a long time, the college student group has a high sensitivity to psychological problems. For the topics that are difficult to express in their hearts, they are unwilling to mention too much. This has led to the open approach to education, and there are certain difficulties in the actual implementation process. Relying on the advantages of the Internet, big data creates an Internet platform for students, using big data to investigate various data of students, providing support for the development of mental health education in colleges and universities, and forming a personalised platform. So that students can log on the platform at any time and place, according to the system prompts to understand the activities, eliminating the concerns of college students about mental health problems. In the process of practical application, colleges and universities can carry out mental health education platform for college students, according to the different genders and ages of students, to develop a personalised education platform. To create a good mental health ecological environment for students. Attention should also be paid to the timely processing of the results of education, personalised questionnaires issued through the system, participation in giving small gifts or points, according to the results of the student feedback, the collection of student information, so as to make corresponding adjustments in the curriculum, so that the platform is more in line with the psychological state of college students <sup>[4]</sup>.

In the context of the big data era, the use of big data application in mental health education can save teachers' resources and enrich teaching content. To enhance learning effectiveness, students are provided with various modes such as flipped classroom and distance learning through a platform created using big data analysis. This innovative network learning approach integrates the vast resources available in the digital age, expanding students' learning horizons. Furthermore, it aims to cultivate a mindset that enables students to adopt a more dialectical perspective, helping them to effectively process and evaluate information, thereby improving overall learning outcomes.

#### **5. Conclusion**

In summary, in recent years, with the intelligent development of the network, the existence of big data and other technologies, can integrate resources, through the use of mining, in-depth study of

data to obtain analysis results. In the context of applying big data in mental health education for college students, the creation of innovative platforms is crucial for enhancing educational support services. These platforms are instrumental in guaranteeing the precision of mental health education while also catering to the individual psychological requirements of students by offering tailored assistance based on their specific circumstances. By upholding a student-centered approach and embracing the appropriate big data mindset, the psychological teaching methodology can be enhanced, the mental health education content can be optimized, students' attitudes can be transformed, and a truly beneficial impact on education through big data can be realized.

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