

## Retraction

# Retracted: College Students' Mental Health Education Consulting Management System Design Based on Big Data Algorithms

### International Transactions on Electrical Energy Systems

Received 15 August 2023; Accepted 15 August 2023; Published 16 August 2023

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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

- (1) Discrepancies in scope
- (2) Discrepancies in the description of the research reported
- (3) Discrepancies between the availability of data and the research described
- (4) Inappropriate citations
- (5) Incoherent, meaningless and/or irrelevant content included in the article
- (6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

In addition, our investigation has also shown that one or more of the following human-subject reporting requirements has not been met in this article: ethical approval by an Institutional Review Board (IRB) committee or equivalent, patient/participant consent to participate, and/or agreement to publish patient/participant details (where relevant).

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

### References

- [1] X. Song, "College Students' Mental Health Education Consulting Management System Design Based on Big Data Algorithms," *International Transactions on Electrical Energy Systems*, vol. 2022, Article ID 7545726, 10 pages, 2022.

## Research Article

# College Students' Mental Health Education Consulting Management System Design Based on Big Data Algorithms

Xuezhen Song 

*Psychological Counseling Center for College Students of the Youth League Committee,  
Qingdao Vocational and Technical College of Hotel Management, Qingdao 266100, Shandong, China*

Correspondence should be addressed to Xuezhen Song; 3170400039@caa.edu.cn

Received 2 August 2022; Revised 22 August 2022; Accepted 8 September 2022; Published 28 September 2022

Academic Editor: Raghavan Dhanasekaran

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In view of the progress and development of society and the accelerated pace of life, the demand for personnel is increasing. Students' psychology is not yet fully mature, so students are often unable to withstand these pressures, resulting in many psychological discomfort or problems. The normal life, learning, and growth of students are affected. Considering the increasing number of psychological problems among students, education on students' mental health has become particularly important, which has become an important part of students' work. Looking at the actual case of higher education, the development of students' mental health education is very unbalanced, and there are vague understandings and deviations in practice. Many people believe that the main purpose of student mental health education is to focus on counseling and therapy for some students with mental health problems. These people have no concept of mental illness prevention and mental health education development. The result is that mental health education has not been well publicized and promoted, and mental health education has not done a good job. For the current situation, this paper analyzed college students' mental health education through a research experiment on big data algorithms. The experimental data showed that there were 40 students who thought that the psychological education course after the optimization of big data was very helpful in life, accounting for 40.6% of the total; there were 30 people, accounting for 30.7%, who thought that there was some help; 19 people, accounting for 18.81%, who thought that there was little help; and 10 people, accounting for 9.9%, who thought that there was no help. Compared with before optimization, the number of students who thought it was very helpful increased by 35, and the number of students who thought it was not helpful decreased by 20. From these data, it could be seen that mental health education played an important role in promoting the harmonious development of students' body and mind, improving mental health, and helping students survive in the rapidly developing social competition in the future.

## 1. Introduction

A healthy mind is a prerequisite and foundation for the all-round development of human beings. Higher education institutions urgently need to improve the psychological quality of students and improve the quality of talents in the new century. The twenty-first century is a century of ideological and cultural turmoil, with diversified values, the great influence of news and opinions, and rapid social changes. In this complex world background, future talents may eventually face a psychological crisis. In the twenty-first century, the mental skills of talent will be more severely tested. Therefore, the cultivation and

training of students' creativity, thinking ability, adaptability, willpower, tolerance, control, self-confidence, and other psychological qualities need to be continuously strengthened. What needs to be really understood is that if students want to have a future, it is impossible to be limited to morals, minds, intelligence, and physical strength. Students need to be mentally prepared to overcome all kinds of difficulties and setbacks. Students should be scientifically guided to overcome misunderstandings and update concepts. Only in this way can students mature in the struggle and participate in international talent competition to meet the challenges of the new century.

College students are a special group. Society and parents have high expectations of college students. College students also have a high degree of self-positioning and a very strong willingness to develop, but their psychological development is not yet fully mature and stable. With economic and social progress, especially various reforms related to students' personal interests, the social environment, family environment, and problems faced by students in the process of growing up have become more complex, diverse, and specific. Medical and spiritual fitness are inseparable and form the unity of body and mind. Medical and spiritual fitness is also the foundation of all endeavors, and it is also important for students who continue their studies.

This paper analyzed the health teaching research of college students through the analysis of a big data algorithm. The data showed that the effect of the health teaching process after big data optimization had been significantly improved. There were 48 students who believed that there were obvious effects, accounting for 48.51%; there were 31 people who thought there was some effect, accounting for 31.69%; 13 people who thought the effect was not obvious, accounting for 12.87%; and 7 people who thought it had no effect, accounting for 6.93%. Compared with before optimization, the number of students who believed that there was an obvious effect increased by 40, and the number of students who believed that there was no effect decreased by 28. It could be seen from these data that after analyzing the research experiment of college education on psychological well-being through big data algorithm, it was of great significance to facilitating the promotion of ongoing college social and cultural activities.

## 2. Related Work

This paper studied some techniques of college students' mental health, which could be fully applied to the research in this field. Leese et al. believed when planning mental health services, it was important to measure the impact of different types of service provision on the views of service users [1]. Harvey et al. aimed to provide the inaugural systematic review of the body of research on the importance of work in developing evidence relating to shared mental health issues, especially related to suppression, anxiety, and work-related stress. The review took into regard the likely associations among the established risk factors [2]. Askari et al. examined the effects of training in mediation and dispute management skills on couples' emotional well-being, using the PREPARE/ENRICH project [3]. Silove et al. considered refugee mobility, covering progress in studies, normative frameworks, social and behavioral measures, and strategies [4]. Keetharuth et al. believed that outcome measurement of mental health services needed to focus on service user recovery [5]. Jessiman-Perreault et al. explored whether family food security status was related to a hierarchy of risks for responding to the reporting of six negative physical health indicators [6]. These methods provided some references for the research, but these had not been recognized by the public due to the short time and small sample size of the relevant research.

Based on the big data algorithm, the following relevant materials were reviewed to optimize the mental health research of college students. Chen et al. parallel stochastic random forest method for big data on Apache Spark proposed [7]. Bigham et al. proposed a deterministic (non-approximate) algorithm that solved the problem in polynomial time [8]. Cui et al. introduced a new bat algorithm that was integrated with a hub-and-spot policy. Three alternative central point policies and six distinct types of layouts were also introduced [9]. Manogaran et al. proposed a big data handling platform for combining weather and health data and found correlations between climate parameters and dengue incidence [10]. Shuang et al. proposed an eigenfunction method to derive closed-form pricing formulas [11]. These methods provided sufficient literature basis for the study of big data algorithms to analyze the psychological healthcare of college graduates.

## 3. Overview of Big Data Algorithms and College Students' Mental Health Education

Health in the modern sense refers not only to healthy bodily but mental wellness effects too. Mental health is a necessary condition and a basic requirement for modern talents. This paper improves college student education on physical fitness to a higher level by studying big data algorithms.

*3.1. Overview of Big Data Algorithms.* As the era of big data comes to an end, the word big data is also becoming well known. However, the understanding of the concepts, characteristics, values, and challenges of big data is still vague. To study big data, it is necessary to understand these concepts first.

The size of big data is determined by a relative scale, it changes with time, type of data, and so on. For instance, as capacity grows in storage, what is regarded as big data now may not be termed big data in the coming future. In a way, the scale of big data is also dictated by the type of data [12–14]. Two data sets of the same size may require different data management techniques because of different types, such as tabular data and video data. Thus, the concept of big data varies depending on the sector. In summary, it is not viable to set a concrete boundary figure for the scale of big data [15].

Data typology means the architectural diversity of a data set. Technical progress has allowed firms to process all kinds of organized, half-structured, and highly structured data. Restricted data, meaning table data in electronic tables or religious repositories, make up only 5% of the data. Text, pictures, sound, and vision are considered highly structured data and therefore lack the necessary structural organization for analysis by machines. Half-structured data is a category of data type that lies somewhere between organized and those that are left unstructured. Scalable markup languages (a type of written language used for communicating messages on the web) are a prime instance of highly structured data. A token layer includes customized data markup that can be written and printed using machine-readable tags.

Speed means the velocity that data is produced and the velocity with an analysis and action. The proliferation of electronic instruments, such as mobile devices and wireless sensors, has enabled the generation of data at an unprecedented rate while driving the required live profiling and proof-based mapping. Even traditional highly variable numbers are being produced by retailers. For example, Walmart handles more than a billion deals per second. Data from mobile devices flow through mobile applications to generate data torrents that can be used to deliver real-time and individual offerings for daily clients. This data offers intricate knowledge of the client's location in terms of location in geographic space, as well as biometrics and past acquisition habits. This information allows real-time profiling to yield real client risk [16]. The big data research roadmap is shown in Figure 1.

With the continuous popularization and development of today's Internet and computer technology, the amount of data generated by ubiquitous information technology applications has exploded. These data are characterized by a large amount, high speed, variety, and change. Cubes with these characteristics are called big data. At the same time, how to extract the useful value contained in big data becomes more and more important. The traditional data analysis technology has been unable to meet the current needs and has fallen into an embarrassing situation of "a lot of data and poor knowledge." The development of data mining technology provides a direction to solve this problem [17, 18].

Data mining, often described as knowledge detection in data (KDD), is a term for the process of recovering hidden, formerly uncharted but possibly useful pieces of water and knowledge from huge amounts of incomplete, messy, vague, and stochastic data. Data mining, in a narrow sense, aims to solve four main types of problems: classification, clustering, association, and prediction. Data mining covers multiple disciplines, including achievements and techniques from different fields, such as artificial intelligence, statistics, information retrieval, machine learning, databases, data visualization, and so on. Data mining is a process that can be applied to a wide range of information and knowledge domains. This multidisciplinary cross has effectively promoted the development of data mining technology [19].

Cluster analysis is a very important area of data mining. As a subfield of statistics, it is used in many fields such as information retrieval, text classification, and pattern recognition. Clustering is based on the idea of "similar and different." The data set is grouped into several different classes or clusters. Objects in different clusters have a high degree of difference and a low degree of similarity, and highly similar subjects in the identical group have a low degree of difference. Clustering provides an understanding of the distribution of data and is an effective tool for exploring the intrinsic similarity of data objects. This has the potential to reveal previously unknown clusters in the dataset.

Spark was originally developed in AMP Labs. It is a distributed computing framework similar to Hadoop, which realizes distributed computing based on the idea of Hadoop

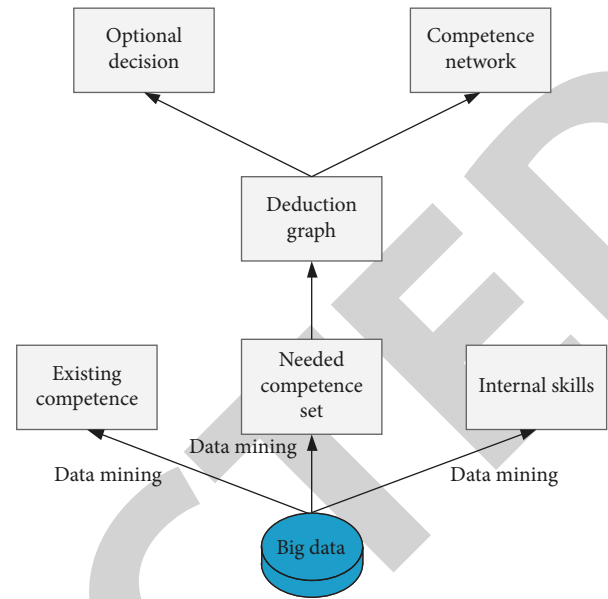


FIGURE 1: Big data research roadmap.

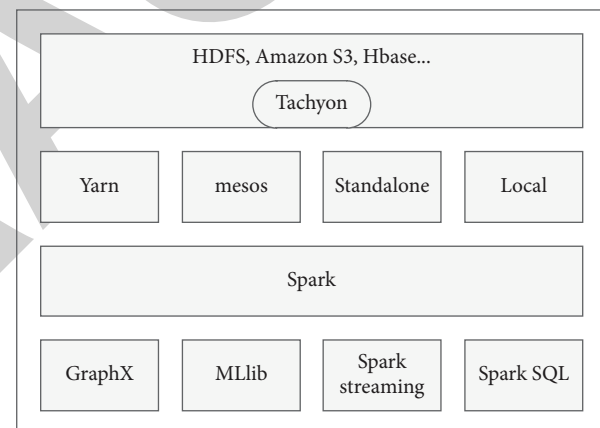


FIGURE 2: Spark architecture.

MapReduce. On the basis of retaining the original advantages of MapReduce, it provides more operators, which are no longer limited to map and reduce. Compared with MapReduce, Spark's biggest advantage is that it supports in-memory storage of intermediate data results, which avoids frequent reads and writes between multiple HDFS executions and can significantly improve program performance. The Spark architecture is shown in Figure 2.

The core part is Spark Core, which provides the most core and basic functions of Spark. The Data Manager layer and the Cluster Manager layer serve as the data management platform and resource management platform of the Spark cluster [20]. The Spark execution framework is shown in Figure 3.

Spark employs the common master-slave network model used in decentralized calculations. The master node is responsible for the scheduling management of the entire cluster. The worker node is responsible for program calculation and feedback status to the master node.

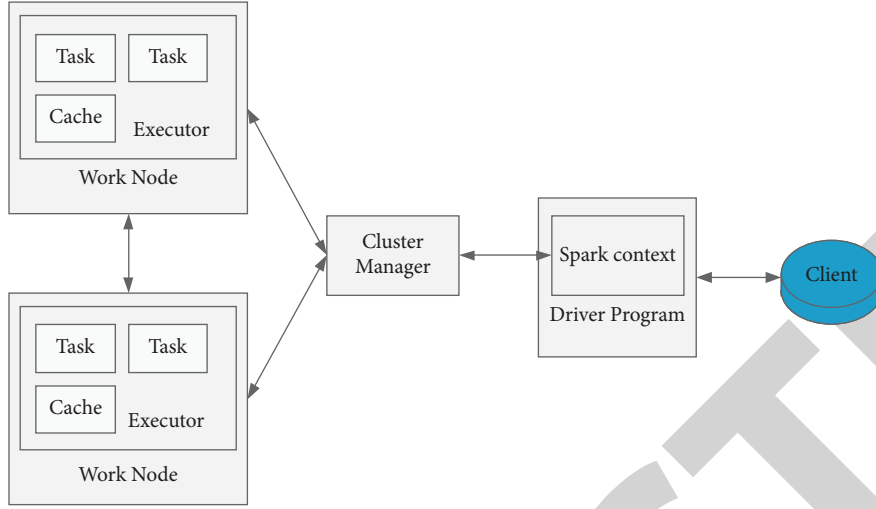


FIGURE 3: Spark execution framework.

HDFS realizes the storage of large amounts of data by dividing large files into multiple data blocks and storing the data blocks on the data nodes of the cluster. There is a unified file management mechanism responsible for file access, rewriting, client reception, and release. The divide and conquer strategy is used to deal with the problem of algorithm overload on computer memory and machines. By introducing low-cost machines, the economic costs of enterprises are reduced. Hadoop is an integration of a series of open source projects, which undertakes the processing, analysis, and storage tasks of big data [21]. The Hadoop ecosystem is shown in Figure 4.

Hadoop solves the problems of accessing, using, and analyzing big data. The most basic technologies are HDFS for database storage and MapReduce for distributed computing architecture. Other projects have been developed separately for data storage and computing convenience, which together form the basis of big data computing.

The clustering algorithm is an algorithm of data mining and an advanced method of data mining. Clustering is the process of dividing a set of data objects into groups or clusters so that the objects in each cluster are very similar but very different from the objects in other clusters. Clustering algorithms belong to the category of unsupervised learning algorithms [22].

Euclidean distance refers to the real range of distances in space in  $x$  degrees between two locations. Simply put, two-dimensional space is a straight line between two points on a plane, and three-dimensional space is also a straight line between two points. For example, the distance between two points can be expressed as follows:

$$d(m, n) = \sqrt{(m_1 - n_1)^2 + (m_2 - n_2)^2 + \dots + (m_y - n_y)^2},$$

$$d(m, n) = \sqrt{\sum_{i=1}^y (m_i - n_i)^2}.$$

(1)

The Euclidean distance between the points of two two-dimensional vectors is

$$d_{12} = \sqrt{(m_1 - n_1)^2 + (m_2 - n_2)^2}. \quad (2)$$

The Euclidean distance between the points of two three-dimensional vectors is

$$d_{12} = \sqrt{(m_1 - n_1)^2 + (m_2 - n_2)^2 + (z_1 - z_2)^2}. \quad (3)$$

The Euclidean distance between the points of two  $y$ -dimensional vectors is

$$d_{12} = \sqrt{\sum_{k=1}^y (m_{1k} - m_{2k})^2}. \quad (4)$$

Given two vectors or two points  $P$  and  $q$ , the respective coordinates are  $p_i$  and  $q_i$ . The Chebyshev distance between these two vectors or two points is defined as follows:

$$d(p, q) := \max_i (|p_i - q_i|). \quad (5)$$

This distance is also equivalent to the extreme value of the  $L_p$  metric:

$$\lim_{k \rightarrow \infty} \left( \sum_{i=1}^y |p_i - q_i|^k \right)^{1/k}. \quad (6)$$

In a two-dimensional plane, if the two left points are  $a(m_1, n_1)$  and  $b(m_2, n_2)$ , then the Chebyshev distance is expressed as follows:

$$d_{12} = \max(|m_2 - m_1|, |n_2 - n_1|). \quad (7)$$

In  $y$ -dimensional space, the Chebyshev distance is

$$d_{12} = \max_i (|m_{1i} - m_{2i}|). \quad (8)$$

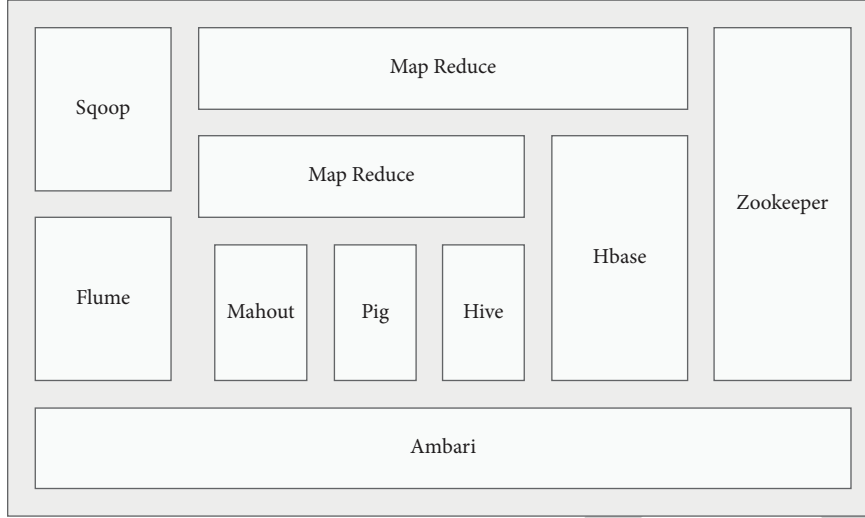


FIGURE 4: Hadoop ecosystem.

The extreme value  $Lp$  is measured according to the  $Lp$  mentioned, so another equivalent formula of this formula is

$$d_{12} = \lim_{k \rightarrow \infty} \left( \sum_{i=1}^y |p_i - q_i|^k \right)^{1/k}. \quad (9)$$

The  $K$ -means algorithm is the most popular distribution-based clustering algorithm today. "Division" is the simplest and most basic cluster analysis step. This involves dividing a collection of unknown objects into several mutually exclusive groups or groups so that objects in the same group or group have a high degree of similarity and are significantly different from objects in other groups or groups. For the judgment of the similarity and dissimilarity between an object with unknown attributes and each group or cluster, it usually involves the calculation of the distance, and then it is divided [23]. The sum of squares between the errors of the  $K$ -means algorithm is

$$E = \sum_{i=1}^k \sum_{p \in c_i} \text{dist}(p, \mu_i)^2, \quad (10)$$

where  $E$  stands for the squared error sum of all events (or points).  $P$  is a single dot in space, standing for a data subject. The main purpose of this formula is to find the sum of the squares of the distances of each object (or point) in each group (group) from the center of the group (group).

The full name of the BIRCH algorithm is: balanced iterative reduction and clustering using hierarchical methods. The BIRCH algorithm is a hierarchical clustering algorithm. Compared with the traditional clustering algorithm, it can handle larger volumes of data with the identical amount of available memory and process faster with the identical volume of data. It has a special structure that only needs to scan the data set once to analyze the data, which can minimize the processing cost of I/O and obtain higher quality cluster data.

The clustering feature CF vector of a cluster is a triple. From a given clustered data set:  $Y$   $d$ -dimensional data points, CF is defined as follows:

$$\text{CF} = y, \text{LS}, \text{SS}. \quad (11)$$

The quantified center point of the data in the cluster, that is, the average of the data sum, is expressed as follows:

$$m_0 = \frac{\sum_{i=1}^y m_i}{y}, \quad (12)$$

$$m_0 = \frac{\text{LS}}{y}.$$

The radius refers to the average distance of the data points in the cluster from the centroid:

$$R = \sqrt{\frac{\sum_{i=1}^y (m_i - m_0)^2}{y}}. \quad (13)$$

The diameter refers to the average distance between every two points in the cluster:

$$D = \sqrt{\frac{\sum_{i=1}^y \sum_{j=1}^y (m_i - m_j)^2}{y(y-1)}}, \quad (14)$$

$$D = \sqrt{\frac{2y\text{SS} - 2\text{LS}^2}{y(y-1)}}.$$

Whether it is the radius or the diameter, it can reflect the tightness of the data in the cluster. This can be used as an evaluation division of whether the clustering effect is good or bad. The optimal cluster is selected for multiple clustering results [24].

**3.2. Overview of Mental Health Education.** Mental health is an important part of human health. From a nervous system perspective, this means the expression of a mental state. In



this state, the individual adapts well and stably to objective conditions and maintains the full potential of their vitality and physical energy. Mental health has two meanings: one is a person's mental health status, which is both healthy and harmonious with society; second, there are strategies and measures to promote mental health maintenance and reduce behavioral problems and mental illnesses. In addition, a distinction is made between mental health in a narrow sense and mental health in a broad sense. Spiritual wellness in a limited way is mainly to prevent psychological or behavioral disorders; broadly speaking, psychological well-being refers to the promotion of psychological adaptation and the development of broader mental abilities. That is, people live a healthy lifestyle in their own environment and continuously improve their mental health, so as to better adapt to social life and make more effective contributions to society and humanity.

With the acceleration of the socialist modernization process and the formation and gradual improvement of the socialist market economy, social development has raised the bar even higher for the psychological education of higher education. On the one side, in latest few years, increasing notice has become available of psychological problems of college students. According to the survey, students have many psychological problems. Most of the students focus on exams, interpersonal relationships, learning methods, and fun in life. Some students suffer from neurosis or even mental disorders. At the same time, the mental health of some students is affected by the pampered education style of the family and the financial hardship of difficult colleges. On the other side, quality education requires students to have better psychological quality in order to adapt to the competition in the future society and deal with new challenges and unforeseen events in future life. This requires colleges and universities to strengthen the research on the psychological problems of college students [25].

In terms of mental health, to correctly understand the standards of students' mental health, four aspects must be considered: (1) relativity: mental health and mental disorders are not obvious contradictions but permanent states, and therefore, good mental health is closely related to serious mental illness; (2) evolution: mental health is not a static state, but a dynamic change process; (3) ideality: mental health standard is not only an ideal measure to measure a person's health status but also an ideal measure to measure a person's mental health level; and (4) overall coordination; the overall coordination and understanding of mental health norms should be based on mental health activities, and its internal and external relationships should be analyzed under the framework of overall coordination. As far as the psychological process is concerned, all psychological activities are a process of comprehensive coordination. This overall coordination ensures that the individual's presentation of the objective world has a high degree of accuracy and efficiency.

The core of modern college students' psychosocial health is taught to all pupils. Students are guided to correctly understand themselves, various learning and life challenges are actively dealt with, and students' potential is fully realized. This has become the core content of mental health higher education. Considering the psychological problems that are common among students at present, the content of students' mental health education should pay special attention to the following aspects.

Cognitive abilities include the ability to understand oneself, others, and all things. College is an important stage in a student's transition from adolescence to adulthood, during which students also develop and refine their cognitive skills. Good self-awareness and understanding of others are important prerequisites for students to evaluate correctly, learn to get along with others, and develop better.

Emotions are an important part of a healthy mind. It is a window to understand and excavate people's inner world, which marks the maturity of personality. A good mood can stimulate students' enthusiasm for study, work, and life, which makes their personality develop in a harmonious, comprehensive, and healthy direction.

Personality is a psychological characteristic formed in a person's life. The maturity of personality marks a person's psychological maturity, and the charm of personality indicates the perfection of a person's mind. The theory and characteristics of a healthy personality are understood. The composition of the learning self-personality is learned. The personality qualities that successful people should possess are known. The main factors affecting personality development are studied. College students can grasp the laws and personality characteristics of psychological activities and take the initiative to optimize and improve personality.

Learning is the main theme of university life. Learning to learn, actively seeking knowledge, and improving one's own learning ability are special abilities that college students should cultivate in their studies. But, in fact, college students have certain problems with study motivation, methods, habits, and so on. These problems are related to the study of psychology of college students. Creative thinking and innovative teaching will help students improve their motivation to learn, form a lifelong learning approach, and develop the ability to learn independently.

The confusion in interpersonal relationships among students is one of the main reasons for bad psychology. The basic theory of interpersonal communication is understood; the skills and art of interpersonal communication are mastered; the motivation for interpersonal communication is regulated; and a positive and healthy interpersonal communication attitude is cultivated. These are important ways for students to develop and maintain collaborative communication with others.

On the basis of establishing the scientific concept of health and mental health, the prevention and adjustment education of mental disorders is carried out for college students. This enables college students to understand the

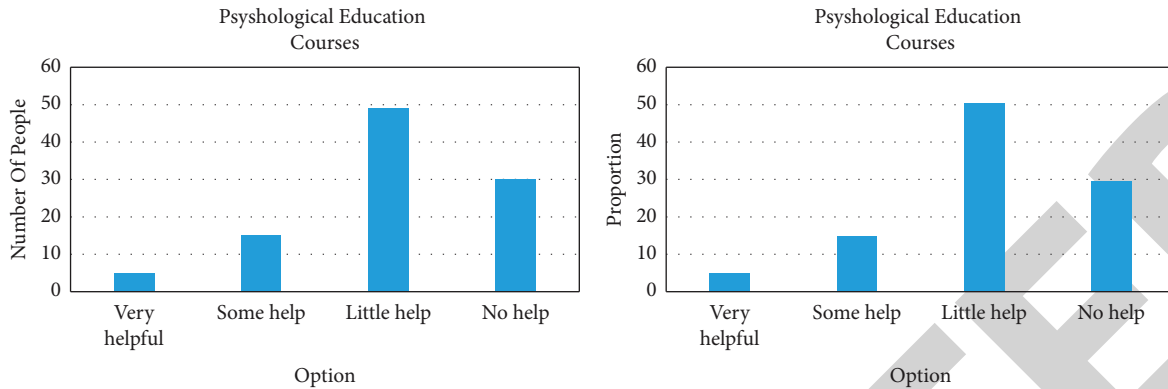


FIGURE 5: Whether psychoeducational courses are helpful in life.

types, main manifestations, and characteristics of psychological disorders, as well as common sense to identify adverse psychological conditions. The influencing factors of adverse psychological conditions are grasped so that students' awareness of the importance of maintaining mental health is improved.

In China, mental health education in higher education began in the 1980s. After Central Document No. 16 was released in 2004, it entered a stage of rapid development. Gradually, universities established their own departments, and mental health education was further standardized and improved. There are roughly three types of educational management systems and composition models. One is a problem-oriented intervention for problem students; the second is the development-oriented education model; and the third is the establishment of a comprehensive development trend model, which reflects the education system and function of mental health education, with clear goals, contents, approaches, and methods. It puts more emphasis on systemic. The integration of different levels of education management, education outcomes, education assessment, and crisis prevention is improved. The historical background of the university, the characteristics of each department, regional differences, and common factors of university culture are considered.

#### 4. Improvement of Students' Mental Health Education Phenomenon

**4.1. Basic Situation of Students' Mental Health Education.** This section uses a questionnaire survey to investigate 100 college students. A total of 99 valid questionnaires are recovered, with an effective rate of 99%. The survey objects selected by the questionnaire can basically cover and represent the basic situation of the mental health education of most college students in the college, which can also reflect the current common phenomena and problems of college students' mental health education to a certain extent. The content of this survey is based on the curriculum, content, and benefits of students' mental health education and generally reflects the differences in current education levels and the specific needs of students in mental health

education. Figure 5 shows whether setting up mental health education courses is helpful in life:

As can be seen from Figure 5, only 5 people think that psychoeducational courses are useful in lives (4.95%); 15 people think it is somewhat useful (14.85%); 49 people think it is little useful (50.5%); and 30 people think it is not useful (29.7%). This shows that the current mental health training for college students cannot meet their actual needs. This has little effect on the actual needs of college students, nor can it really solve the psychological problems of students. The survey on whether mental health education classes can help discover one's own factors is shown in Figure 6.

As can be seen from Figure 6, 6 people think that the mental health education class is very helpful in discovering their own factors, accounting for 5.94%; 10 people think it is somewhat helpful, accounting for 9.9%; 54 people think it is less helpful, accounting for 54.45%; and 29 people think it is not helpful, accounting for 29.71%. This shows that the current college students' mental health education courses do not effectively help students discover their own factors. This often leads to negative psychological emotions such as lack of self-confidence and denial of their own abilities, and the current mental health of college students cannot help them eliminate these emotions. The survey on whether learning mental health education courses is effective is shown in Figure 7.

As can be seen from Figure 7, 8 students think that the mental health education course has an obvious effect, accounting for 7.92%; 7 students think that there is little effect, accounting for 6.93%; 49 students think that the effect is not obvious, accounting for 49.51%; there are as many as 35 students; and 35.64% thought it had no effect. It can be seen from these data that the current college students' mental health education has little effect on solving the practical problems in the life of college students. The willingness to participate in school mental health education is shown in Figure 8.

It can be seen from Figure 8 that 4 students express the willingness to participate in school mental health education, 11 students express the general willingness, 48 students hold an indifferent attitude, and 36 students are unwilling. This



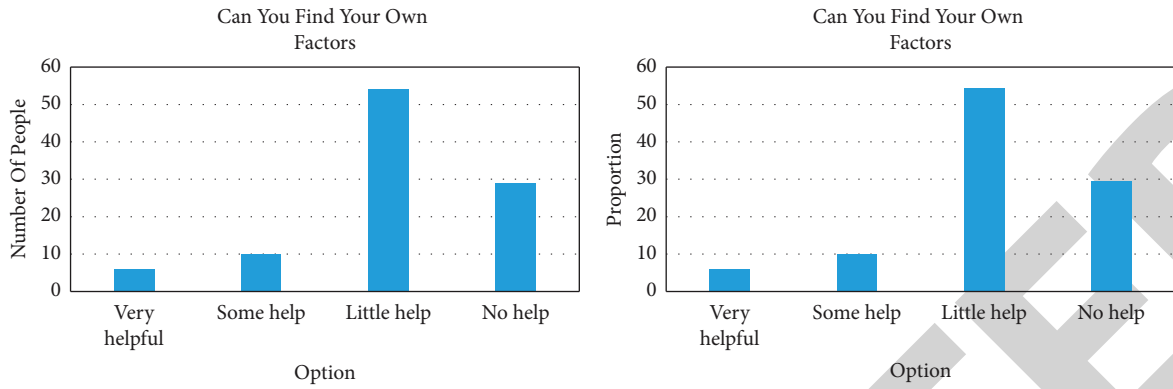


FIGURE 6: Whether the mental health education class can help discover one’s own factors.

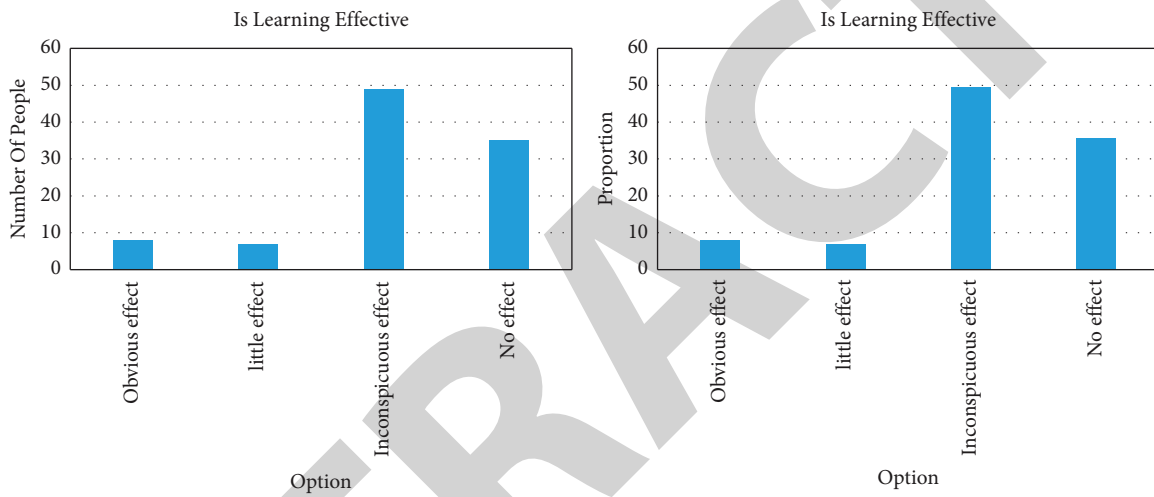


FIGURE 7: Whether learning mental health education courses is effective.

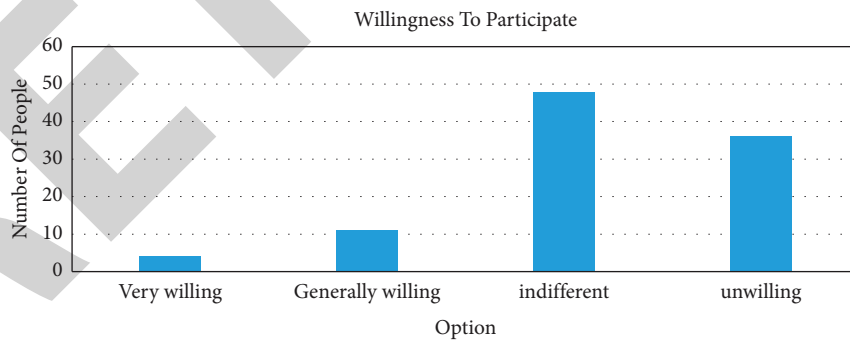


FIGURE 8: Willingness to participate in school mental health education.

shows that a considerable number of students think that mental health education cannot meet their needs, so it has little to do with themselves and even has a certain resistance to mental health education.

It can be seen that there are still many problems in the current students’ mental health education. Schools should pay attention to these problems and propose ways to improve the problems.

TABLE 1: Whether the optimized psychoeducational curriculum is helpful in life.

Option	Number of people	Proportion (%)
Very helpful	40	40.6
Some help	30	30.7
Little help	19	18.81
No help	10	9.9

TABLE 2: Whether it is effective to study mental health education courses after optimization.

Option	Number of people	Proportion (%)
Obvious effect	48	48.51
Some effects	31	31.69
Little effect	13	12.87
No effect	7	6.93

TABLE 3: Willingness to participate in school mental health education after optimization.

Option	Number of people	Proportion (%)
Very willing	52	52.48
Generally willing	29	29.71
Indifferent	14	13.85
Unwilling	4	3.96

**4.2. Mental Health Education of Students under the Improvement of Big Data.** In this section, for the problems in the previous section, big data is added to students' mental health education for improved analysis to address these issues raised in the previous section. In order to prove that the method proposed in this section is real and effective, the above-mentioned experimental method is also used, and the questionnaire survey is conducted again to compare and analyze the data in the previous part. The survey on whether the optimized psychoeducational curriculum is helpful in life is shown in Table 1.

As can be seen from Table 1, there are 40 students who think that the psychological education course after the optimization of big data is very helpful in life, accounting for 40.6% of the total; 30 students, accounting for 30.7%, who think that it has some helpful; 19 students, accounting for 18.81%, who think that it has little help; and 10 people who think it is not helpful, accounting for 9.9%. Compared with before optimization, there was a 35% rise in the amount of pupils who feel it is very helpful, and the amount of pupils who feel they have not found it useful dropped by 20. It shows that after the optimization, the mental health education of college students is closer to the actual needs of their lives, and it is helpful to the psychological problems in real life. Table 2 shows the effectiveness of learning mental health education courses after optimization:

It can be seen from Table 2 that the effect of the mental health education process optimized by big data has been significantly improved. There are 48 students who think that there is an obvious effect, accounting for 48.51%; 31 students who think that there is some effect, accounting for 31.69%; 13 students who think that there is little effect, accounting for 12.87%; and 7 people who think that there is no effect, accounting for 6.93%. Compared with before optimization, the number of students who believe that there is an obvious effect increased by 40, and the number of students who believe that there is no effect decreased by 28. From these data, it can be seen that the psychological education of college students optimized by big data has a significant effect on solving the mental health problems of students in life. The

willingness to participate in school mental health education after optimization is shown in Table 3.

It can be seen from Table 3 that after the optimization of big data, 52 students are very willing to participate in school mental health education, accounting for 52.48%; 29 students are generally willing to participate, accounting for 29.71%; 14 students are indifferent to participate, accounting for 13.85%; and 4 students are unwilling to participate, accounting for 3.96%. Compared with before the improvement, the number of students who are very willing to participate in school education has increased by 48, and the number of students who are unwilling to participate has decreased by 32.

To sum up, after big data improve students' mental health education, school students' awareness of self-mental health management has been significantly improved, which is more convenient for schools to carry out mental health education work.

## 5. Conclusions

To be successful in the twenty-first century, in addition to having good ideological, moral, scientific, and cultural qualities, one must also have an innovative spirit and self-confidence, as well as a healthy emotional and mature personality. The psychological universality of talents is becoming an important indicator of the quality of higher education in the twenty-first century and an important condition for the success of talents in the twenty-first century. Beyond opening and change, China's economy has continued to grow. Internet skills are readily accessible, and the modernization process has been rapidly advanced. With China's current development, high-skilled workers are the most needed and most in short supply. Good qualities and a healthy mindset are the foundation of success. With the fast growth of tertiary institutions in China, the new problem is how to develop more and more students in a healthy way and educate students to become true builders of socialism with a holistic approach to ethics, wisdom, sports, and beauty. The educational community agrees that it is necessary to strengthen students' mental health education, optimize students' psychological quality, and develop students' psychological potential.

## Data Availability

The data of this study can be obtained through e-mail to the author.

## Conflicts of Interest

The author declares that there are no conflicts of interest regarding the publication of this work.

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