COLLEGE STUDENTS' PSYCHOLOGICAL CRISIS SIGNAL RECOGNITION BASED ON DATA MINING

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Background: With China's attention to the development of education, the enrollment rate of college students is gradually increasing. College education has entered ordinary families, but due to the increasing pressure of study and employment, many college students have certain psychological problems. Psychological problems directly affect the mental health of college students, and the research on the identification of College Students' psychological crisis state can help college students' managers understand the psychological change trend of students, make certain intervention measures in advance, and ensure the mental health of college students. Therefore, the research on the identification of College Students' psychological crisis state has become the focus of current research. Data mining is mainly based on statistics, machine learning, artificial intelligence, pattern learning and other technologies. In the era of big data, data mining technology mainly analyzes the collected data highly automatically, and then makes inductive reasoning to mine potential patterns and knowledge. Data mining technology has its unique advantages over other technologies, that is, it can mine the information that causes students' psychological problems and is not easy to be found between statistical data. Data mining can also find the relationship between students' psychological problems and their basic information and the main factors leading to psychological problems from statistical data. Using this important knowledge to predict the mental health status of college students, provide a scientific basis for the prevention and solution of mental health problems, make the mental health education more targeted and effective, and improve the ability level of mental health education.

The purpose of this study is to study the psychological crisis signals of college students by using data mining technology. Deeply understand the mental health status of college students, build a mental crisis signal recognition system, and solve the mental health status.

Subjects and methods: Taking college students as the research object, this paper makes an in-depth analysis of College Students' psychological state by constructing college students' psychological crisis signal recognition system. The data mining technology is used to analyze and model the psychological crisis state data, and the identification model of College Students' psychological crisis state is established.

Study design: Firstly, this paper collects the psychological crisis signals of college students, and constructs the model by analyzing the attribute characteristics of each record in the database. The process of establishing the model is to randomly select the data subset used to construct the classification model from the sample set to form the training sample set, in which each data record is a training sample. Since the category number of each training sample is predefined, the process of constructing the model is a guided computer learning process.

Methods of statistical analysis: The data used in this paper comes from the relevant records in a university student psychological survey database. Analyze the collected data.

The specific process of BP neural network classification is to select the weight for each input in the graph. It is suitable for those with the following characteristics.

Question:

Step 1: input the original data of College Students' psychological crisis state signal and set it as the dependent variable.

Step 2: the factors that can cause psychological crisis to college students, such as academic pressure, interpersonal relationship and so on, are set as independent variables.

Step 3: the authenticity of the information can be identified by combining the output value of the objective function.

Step 4: confirm the accuracy of the obtained data.

Step 5: output the data of College Students' psychological crisis state, learn through the optimal parameters of BP neural network, fit the relationship between the identification characteristics and states of College Students' psychological crisis state, and establish the identification model of College Students' psychological crisis state.

Step 6: use test samples to verify the performance of College Students' psychological crisis state identification model, and output the results of College Students' psychological crisis state identification.

Results: To sum up, the steps are used for model construction and data analysis. Because the results of each training of BP neural network model are different, the test of accurate value has become the key to data analysis after a large number of experiments. After repeated accuracy test, the following data table is obtained.

Table 1. Accuracy of BP neural network.

Sample category	Normal		Abnormal	
Test result	1	0	1	0
Accuracy	0.9516	0.0124	1	0

The accuracy of BP neural network training is reflected in the above table. It can be seen that this method accurately improves the accuracy of College Students' psychological crisis identification system, improves the efficiency of College Students' psychological crisis identification, and has higher practical application value.

Conclusions: After years of development, data mining technology has achieved good results in the wide application of various fields, which is unmatched by other technologies and methods. Data mining technology is to mine the hidden laws and value content in the data to solve specific problems. Therefore, this paper proposes to introduce data mining technology into psychological crisis signal recognition, mine and analyze the causes of students' psychological crisis factors, and provide a scientific basis for early prevention and early intervention to control the emergence of campus psychological crisis. Students' psychological crisis directly affects students' mental health, and its research is of great value.

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TEACHING EFFICACY OF CHINESE AS A FOREIGN LANGUAGE TEACHER FROM THE PERSPECTIVE OF COGNITIVE PSYCHOLOGY

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Background: With the continuous vigorous development of China's economy and the continuous enhancement of its comprehensive national strength, China's position in the world is also rising steadily. Her culture and language have attracted more and more foreign students, which has promoted the promotion and popularization of Chinese teaching all over the world. As the writing symbol system of Chinese, Chinese characters occupy a special position in the promotion of Chinese as a foreign language. The beauty of the structure of Chinese characters has stimulated people's enthusiasm for learning, but at the same time, because of its complex structure, Chinese characters are difficult to remember, write and recognize, which frightens many foreign learners. Especially in today's upsurge of Chinese, Chinese character teaching has restricted the development of teaching Chinese as a foreign language. The problem of "difficulty of Chinese characters" has become an indisputable fact and a new focus in the academic circle. In recent years, the research results of Chinese character teaching as a foreign language are quite rich, but because of its short research history, most researchers study one side and lack of systematicness, so the teaching efficiency is not high and the effect is not ideal. At present, although the research on Teaching Chinese characters as a foreign language has made some progress, it has also promoted the teaching of Chinese characters as a foreign language to some extent. However, in the actual teaching of Chinese as a foreign language, the problem of difficult Chinese characters has not been fundamentally solved, and the efficiency and quality of Chinese character teaching have not been greatly improved. Based on the existing research results of cognitive language psychology theory, combined with their own practical teaching experience and the results of traditional Chinese teaching research in China, this paper analyzes the characteristics, cognitive law and learners' cognitive psychology of Chinese characters, and reexamines the sense of efficacy of Chinese character teaching as a foreign language.

Based on the main line of how Chinese characters promote "recognition" and "writing", this paper studies and discusses the relationship between "recognition" and "writing", as well as the classroom operation steps and specific methods in the theory of cognitive psychology. In order to get an effective teaching model and operable methods, and provide some theoretical reference for the compilation of Chinese character teaching materials, serve the teaching of Chinese as a foreign language, and promote the more detailed, scientific and effective development of Chinese character teaching as a foreign language.

Subjects and methods: The position and development of teaching Chinese characters as a foreign language in teaching before the 1980s, there was no independent textbook for Chinese character teaching, which has always been an auxiliary part of intensive reading course. The content of teaching Chinese