




## The Influence of Ideological and Political Education on University Students' Psychological Fitness Based on Intelligent CAD

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**Abstract:** Ideological and political education (IPE) and psychological fitness are important components of competence. Education in universities helps students develop good moral qualities and values and plays a significant role in students' comprehensive development. Strengthening the intervention and management of students' psychological crises is of positive significance in cultivating students' crisis awareness, improving their psychological quality in an all-around way, and adapting them to the changeable social environment. Based on data mining (DM), this paper constructs a pre-alarm model of students' psychological crisis to analyze the influence of IPE on students' psychological fitness and on the basis of deeply digging into the respective advantages of IPE and psychological fitness education in universities, it further exerts the effect of cooperative education between them. The results show that the accuracy of this method is obviously better than that of the comparison algorithm in psychological crisis analysis, with an accuracy of 98.86%. Therefore, it is feasible to apply the pre-alarm model of psychological crisis in this paper to the coordinated growth of IPE and students' psychological fitness. Ideology education in colleges and universities (IPECU) should conform to the growth trend of the times and make full use of the good communication carriers of the current Internet + environment to give full play to their communication value.

**Keywords:** Ideological and political education; Psychological fitness; Pre-alarm; Data mining

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### 1 INTRODUCTION

With the continuous improvement and growth of society, university students are under pressure from family, society, and school, and their psychological fitness is not optimistic, especially with the negative impact of the Internet on them. Lay emphasis on and attaching importance to students' psychological fitness has become an urgent task faced by educators [1]. With the rapid growth of modern IT, the emergence of big data, cloud computing, AI, etc., put forward new

requirements on how to innovate the carrier and mode of IPE for university students [2]. The scale, diversity, high speed, and value of Internet +'s environment have not only influenced people's business model and management model but also brought certain opportunities and impacts to IPECU [3]. The IPECU should also conform to the trend of the growth of the times, and with the help of the good communication carriers of the current Internet + environment, give full play to their communication value and create new ways and methods of IPE in the new period. University students' psychological crisis is a critical state of psychological imbalance when university students meet with learning, work, and life events that they can't solve, handle, and control [4]. Strengthening crisis intervention and management is of great significance in cultivating students' crisis awareness, preventing the occurrence of crisis events, improving students' psychological quality in an all-around way, and adapting them to the changeable social environment.

Traditional IPE often has due regard to students' political direction and moral character, emphasizes the political function of IPE, and ignores students' psychological troubles. In this way, the IPE is separated from psychological fitness education, making the psychological troubles of university students in the new situation can not be solved in time, which is not conducive to the healthy growth of students [5]. As the base for training skilled talents, the school aims to comprehensively promote competence in education. Psychological fitness education is not only the basis and premise of competence Education but also the final result of competence Education. The combination of IPE and psychological fitness education can help students establish correct values, outlook on life, and emotional outlook, help students solve various psychological troubles, achieve comprehensive education, give full play to the role of universities in educating people, and promote the reform of the educational system and the growth of education in universities [6]. The rapid growth of the current economy has led to a series of psychological troubles. The psychological troubles of university students have become an important factor threatening the healthy growth of university students. Depression and suicide incidents occur from time to time [7]. How to warn students of psychological troubles has become a research hotspot.

Realizing the organic combination of IPE and psychological fitness education is an effective way to strengthen and improve the IPE of university students under the new situation. Under the current background, competence Education in universities has entered a period of rapid growth, and IPE and psychological fitness education have received extensive attention. Many teachers are studying and exploring ways to combine education [8]. It is of great practical significance to seize the opportunity to implement the strategy of big data and the Internet, strengthen the multi-disciplinary comprehensive research on big data and IPE of university students, and explore the changing trend of university students' ideological dynamics under the background of big data [9]. In order to protect the physical and psychological fitness of university students and have due regard to the psychological crisis of university students, educators need to study the manifestations and causes of the psychological crisis of university students and establish an effective pre-alarm system for the psychological crisis of university students through various channels.

## 2 RELATED WORK

The research goal of big data in psychological crisis prevention is to improve the work efficiency of psychological crisis prevention, provide decision guidance for psychologists, or use the DM system to replace some screening work of psychologists. Sharples believes that psychological fitness refers to people's most efficient and happy adaptation to the environment and each other [10]. Kutcher believes that psychological fitness refers to a constantly changing mental state. No matter what state it is in, it can have good psychological adaptability, and at the same time, it has vitality and can exert its physical and mental potential [11-12]. Antaramian discussed the role of cluster analysis technology in preventing psychological crises [13]. Pinder-Amaker et al. put forward the prevention-oriented and campus stratification pre-alarm mechanism through counselors' data collection, heart-to-heart investigation, and other means, or set up psychological counseling

institutions to passively wait for students to expose their problems [14]. Fukita et al. proposed that big data, AI, and other technologies should be introduced into students' psychological security pre-alarm, which reflected the current development trend of students' psychological pre-alarm but did not give an actual implementation plan [15]. Combining neural networks and psychological fitness education, Nelsen proposed a psychological fitness assessment model based on the BP network algorithm and RBF network algorithm, which provided a new idea for processing nonlinear data [16]. Cuevas et al. established a psycho-diagnostic model based on the improved BP algorithm to realize simple mental classification pattern recognition [17]. Wu used the Bayesian Toolbox in MATLAB to build a Bayesian network prediction model to analyze potential connections between predicted student attributes and psychological test data [18]. Mahedy uses the artificial neural network toolbox in MATLAB to establish the network structure of the psychological fitness prediction system model based on the BP neural network algorithm so as to realize the prediction of the psychological fitness of university students [19]. Park et al. introduced the diagnostic experience of psychologists into the expert system for diagnosing mental disorders through the artificial neural network expert system so as to realize the function of comprehensively detecting and diagnosing the psychological fitness of students [20].

### 3 METHODOLOGY

#### 3.1 The Necessity of Combining IPE with Psychological Fitness Education in Universities

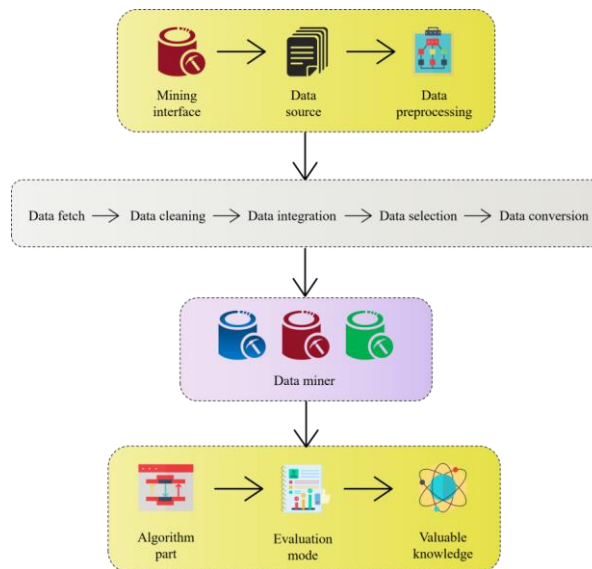
Strengthening university students' IPE and psychological fitness education is an urgent need to cultivate high-quality talents in the new era. As the main front of moral education in universities, IPE, and psychological fitness education are also related to the success or failure of talent cultivation in universities. IPE can not only help students eliminate their personal psychological barriers but also provide comprehensive education from the ideology level, help them shape a correct world outlook, outlook on life and values, and improve their adaptability and interpersonal skills so as to adapt to college life as soon as possible and improve their ideological consciousness. Nowadays, with the popularization of the Internet, university students' access to information has been enriched, and the network trend of thought has deeply influenced their personal ideological and moral qualities. Coupled with the intrusion of foreign cultures, if the IPE is not strengthened, it is easy to cause university students' ideological and cognitive mistakes and form bad ideological and moral qualities. High-quality talents should not only have scientific, cultural, and physical qualities but also have good ideological, moral, and psychological qualities [21].

University students are in a special stage of life, experiencing the role change from high school to university, and are prone to problems such as maladjustment and interpersonal imbalance [22]. As an individual student, having a healthy psychology is the basis for calmly facing and actively solving various problems in life. Under the current social background, university students not only have to face the competitive pressure of study but also have to face the competitive pressure of employment when they are about to graduate. The whole college period is relatively tense. Due to the influence of various unhealthy thoughts in society and on the Internet, university students are prone to psychological fitness problems and ideological problems [23]. If we can't give them effective education and help, it will lead them to the wrong path. Psychological fitness education is people-oriented, based on the psychological characteristics of university students, and adopts flexible and varied educational methods close to students' hearts, which is a good reference for IPE [24]. At the same time, psychological fitness education should adhere to the direction of IPE. While psychological education and guidance are carried out, the correct political direction, world outlook, outlook on life, and values are subtly integrated into it. Students with healthy psychology and sufficient positive energy can better understand and accept IPE, internalize the content of IPE into personal ideas and externalize it into practical actions, and finally, improve themselves and enhance their overall quality.

### 3.2 Psychological DM of University Students

The vast amount of information data has a wide range of sources and various types, and all kinds of information contained in it are of uneven value, while the information with high real value is scattered and uncertain. Under the traditional mode, teachers occupy the central position in the classroom and firmly grasp the right to speak in the classroom, and the authority of teachers has always been unchangeable. Students passively accept the teacher's indoctrination, lack the right to speak, and are in an unequal dialogue state.

At different times, different individuals have different states of mind. IPECU must educate and guide different individuals in a targeted way and analyze the relationship between university students' thoughts and various events at that time. Only in this way can we make better use of the data dynamically generated by students and flexibly apply it to the actual IPE. The business process of psychological DM for university students is shown in Figure 1.



**Figure 1:** Business process of students' psychological DM.

By using DM to analyze students' psychological fitness problems, the factors that are easy to show mental problems in psychological fitness data are mined and analyzed, which provides a reference for solving and preventing mental problems in time. From the psychological fitness evaluation database collected by a large number of students, valuable information can be extracted to guide and educate students on healthy psychology so that students' psychological counseling can be more effective. Let the factor set  $U$  and the judgment level set  $V$  of the object of psychological analysis:

$$U = u_1, u_2, \dots, u_m \quad (1)$$

$$V = v_1, v_2, \dots, v_m \quad (2)$$

Fuzzy judgment is performed on each factor according to the grade index in the judgment set, and the judgment matrix is obtained:

$$R = r_{ij} \quad n \times m \quad (3)$$

Among them,  $r_{ij}$  represents the affiliation degree of  $u_i$  with respect to  $v_j$ . After determining the importance index of each factor, record it as:

$$A = a_1, a_2, \dots, a_m, \quad \sum_{i=1}^n a_i = 1 \quad (4)$$

Synthesized to:

$$\bar{B} = AR = \bar{b}_1, \bar{b}_2, \dots, \bar{b}_m \quad (5)$$

After normalization, the following results are obtained:

$$B = b_1, b_2, \dots, b_m \quad (6)$$

So as to determine the grade for judging students' psychological crises. Under the organization of the school, students' psychological tests are completed through the students' psychological management model, and the data are stored in the psychological census database. Psychological work evaluates students' psychological state by analyzing and screening the data of students' psychological tests, and the original data of students' information is stored in the data. According to the classification results generated by the model combined with the evaluation results of the model, the initial output value is optimized, and the final classification results and knowledge rules are obtained, which are provided to psychological staff as decision support.

Today's IPECU is in the Internet + environment. Although "big data" provides an unprecedented amount of information and data, only by having the professional ability to interpret and analysis, and adopting a brand-new educational model to perfectly connect with it can we more actively and accurately apply this information to strengthen contemporary IPE and only in this way can we realize the innovative growth of IPECU under the environment of Internet +.

### 3.3 Pre-alarm Model of Students' Psychological Crisis

Because of the complexity of the psychological pre-alarm problem, it is necessary to accurately extract the psychological characteristic data of the pre-alarm object, reduce the interference to the pre-alarm object as much as possible, and consider the timeliness of data acquisition. For college psychological pre-alarm, the control center mainly refers to college counselors or psychological counseling institutions, which are the executors of the program and are mainly responsible for the operation and maintenance of the intelligent pre-alarm system and the processing of students' psychologically abnormal pre-alarm information. When there is an abnormal state, the alarm will be given to the control center, and then the abnormal students will be dealt with by the control center so as to realize the closed-loop pre-alarm system with university students as the pre-alarm object. This structure effectively avoids the disadvantages of the traditional system centered on counselors or related institutions and improves the initiative and timeliness of psychological pre-alarm work in universities by centering on students. The DM model of students' psychological pre-alarm is shown in Figure 2.

The design and implementation of the student's psychological fitness evaluation model are based on the data on students' psychological fitness, establishing a psychological fitness database, and collecting management data. Through the DM function, this paper classifies and analyzes the psychological data of students in school, and through the correlation analysis of some psychological behaviors, it can grasp the trend of students' psychological changes in time and help the teachers of students' psychological counseling center to prevent and guide students' psychological troubles effectively. While using data properly to discover psychological status, we should carefully analyze abnormalities.

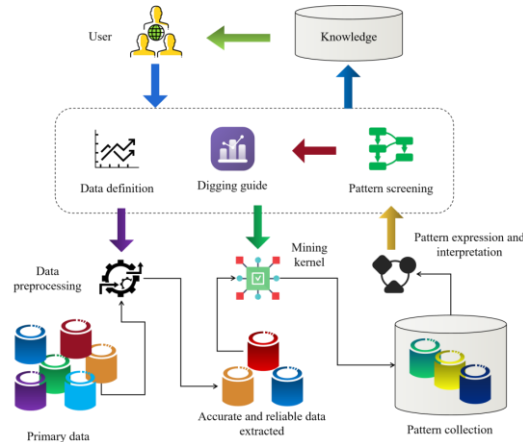


Figure 2: DM model in students' psychological pre-alarm.

The information gain rate is defined as follows:

$$U S_0 = E \left[ \sum_{t=0}^{\infty} \gamma^t R S_t \right] \tag{7}$$

The split information is used to normalize the information gain:

$$SplitInfo_A D = - \sum_{j=1}^v \frac{|D_j|}{|D|} \times \log_2 \left( \frac{|D_j|}{|D|} \right) \tag{8}$$

$SplitInfo_A D$  represents the information produced by dividing the training sample set  $D$  into  $v$  plans corresponding to the  $v$  outputs of the attribute  $A$  test. Introduce discount factor  $\gamma$  for weighted summation:

$$U S_0 = E \left[ \sum_{t=0}^{\infty} \gamma^t R S_t \right] \tag{9}$$

In the formula,  $U$  is defined as the sum of the rewards of a series of actions, and  $U$  of a state is the current action selection unchanged. Use an idea in reinforcement learning to divide long sequences of action decisions:

$$U^* S \max_a R a + U^* S' \tag{10}$$

In the formula,  $S$  is all the best paths,  $a$  is the selected action at the current moment, and  $S'$  is the remaining path. The learning rate is often chosen as a tunable parameter that changes as training progresses. The process of gradient descent is expressed as:

$$x+ = \eta \frac{dy}{dx} \tag{11}$$

According to the interception principle of the optimal path, it is only necessary to calculate:

$$U S = R X + \gamma \sum_{S'} P S \rightarrow S' U S' \tag{12}$$

Where  $R$  is the reward value of state  $S$  itself. Use this formula to find the  $U$  value of the state  $S$ , and get the relationship with the subsequent students' psychological state.

Big data and Internet technology will help to improve the information processing ability and information feedback ability of ideology educators in universities so as to predict students' ideological situation, the focus of campus public opinion, and behavior characteristics in a timely and effective manner. With the help of big data platforms, ideology educators in universities can pay attention to students' psychological evaluation data, students' daily life trajectories, and students' mental state information collected by counselors and construct a student management model with media integration.

#### 4 RESULT ANALYSIS AND DISCUSSION

The multi-dimensional interactive path big data platform of "information collaboration + precise service" can effectively integrate students' static information and dynamic information and construct the campus information resource database. In the process of scientific and legal growth of university student work, objective, multi-dimensional, and real-time student information data have laid the foundation for universities to use big data processing platforms and provide accurate services. On the basis of obtaining the original feature data, the related classifier can be used to recognize the psychological state of the pre-alarm object. In essence, the problem of mental state identification can be equated with the problem of classification. The orthogonal design method is used to make all parameters more reasonable. Compare the output data of DM with the real student data, as shown in Table 1 and Figure 3.

<i>Sample set</i>	<i>Predicted value</i>	<i>Actual value</i>
60	0.816	0.828
120	0.754	0.746
180	0.771	0.763
240	0.841	0.853
300	0.809	0.823
360	0.781	0.773
420	0.858	0.872
480	0.768	0.782
540	0.866	0.88
600	0.833	0.845
660	0.786	0.798
720	0.829	0.821
780	0.751	0.765

**Table 1:** DM learning results.

Preprocessing the unsatisfactory data sources can greatly improve the execution efficiency of DM algorithms and the process of knowledge discovery. The performance comparison results of students' psychological fitness pre-alarm models are shown in Figure 4. By applying the abnormal detection and dynamic tracking technology in the psychological fitness pre-alarm model to the research of university students' IPE and psychological fitness problems, we can find out the hidden rules from a large number of data of psychological fitness problems and find out the main factors leading to mental problems. The results of psychological evaluation and expert evaluation output

by this algorithm are shown in Table 2. It can be seen that the evaluation results of training samples are in good agreement with those of experts.

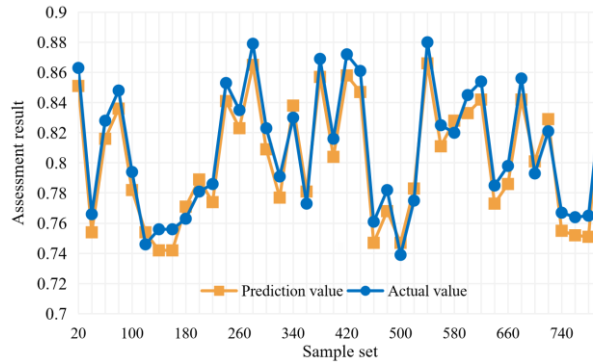


Figure 3: DM learning results.

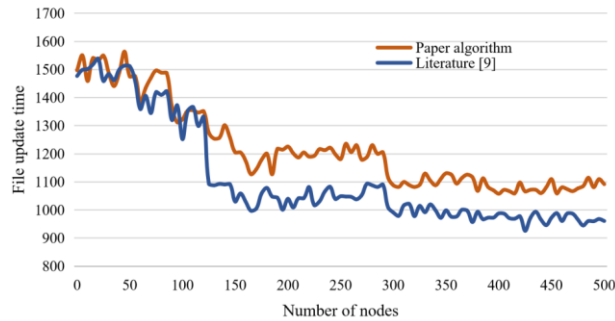


Figure 4: Algorithm performance comparison.

<i>Sample number</i>	<i>Expert appraisal</i>	<i>Algorithm output</i>
1	0.96	0.962
2	0.78	0.781
3	0.79	0.795
4	0.77	0.774
5	0.75	0.752
6	0.72	0.718
7	0.79	0.794
8	0.69	0.692
9	0.64	0.643
10	0.78	0.783

Table 2: The evaluation results of experts and the output results of the algorithm in this paper.

Five groups of test data prepared in advance are input into the trained psychological pre-alarm model, and the simulation results and expert evaluation results are shown in Table 3. It is not

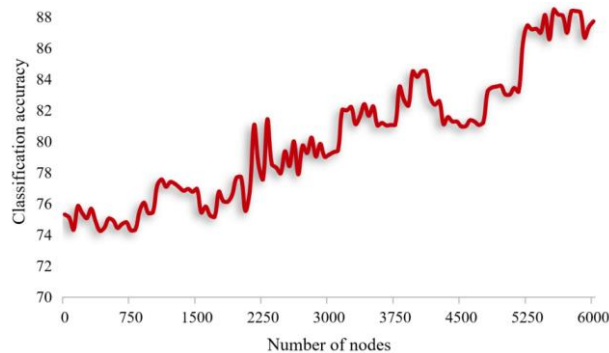


difficult to see that the simulation results are in good agreement with the evaluation results given by experts.

<i>Sample number</i>	<i>Expert appraisal</i>	<i>Algorithm output</i>
1	0.65	0.654
2	0.67	0.67
3	0.79	0.788
4	0.68	0.681
5	0.71	0.713

**Table 3:** Simulation evaluation results and expert evaluation results.

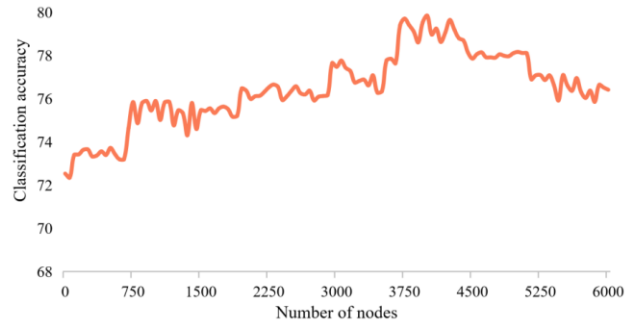
The application value of DM, such as rapidity, predictability, accuracy, and practicability, can quickly and accurately determine the state and degree of crisis so as to make crisis intervention plans and reduce or eliminate crises effectively. Under the Internet-based information education mode, the precision of different psychological crisis warning algorithms in students' psychological analysis is shown in Figures 5, 6, and 7.



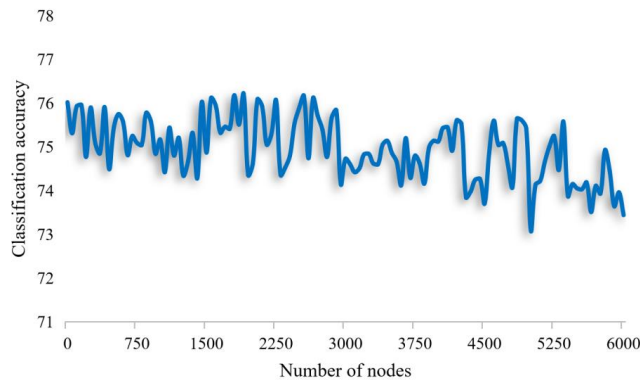
**Figure 5:** The prediction accuracy of the psychological early warning model in students' psychological analysis.

Comparing the accuracy and recall of the mental crisis recognition model in this paper with the model in literature [9], the results are shown in Figure 8 and Figure 9. As can be seen from Figure 8 and Figure 9, after many iterations, the accuracy of this method is obviously better than that of the comparison algorithm in psychological crisis analysis, with an accuracy of 98.86%, 22.45% higher than that of the comparison algorithm, and a recall rate of 97.07%, 17.68% higher than that of the comparison algorithm.

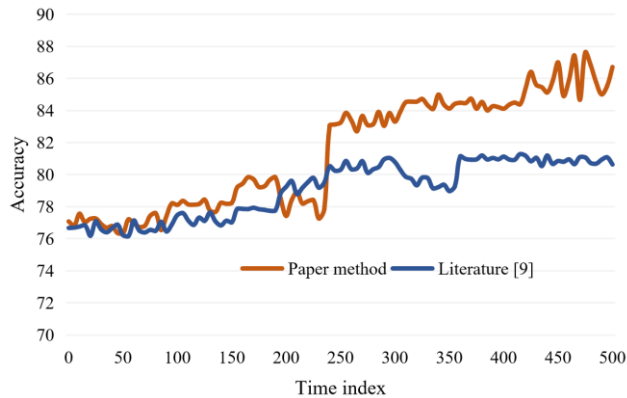
Therefore, the psychological pre-alarm model based on DM is a reasonable and feasible evaluation model, which is of great significance for the innovation of IPE classrooms in universities. In order to reduce the probability of false alarm and false alarms, it is necessary to train student information officers, improve their sensitivity to students' psychological dynamics, and collect useful and key information for reporting.



**Figure 6:** Prediction accuracy of SVM in student psychoanalysis.

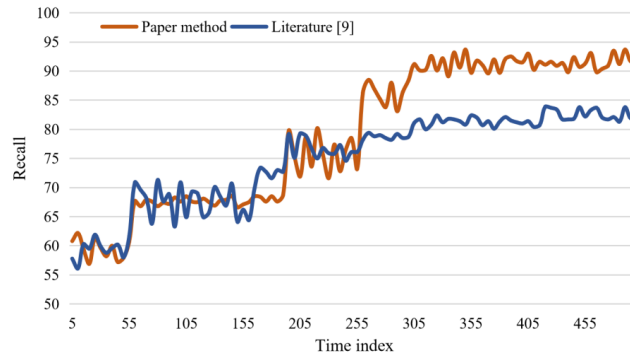


**Figure 7:** Prediction accuracy of BPNN in student psychoanalysis.



**Figure 8:** Accuracy comparison.

Individual students face psychological crisis warnings, especially the phenomenon of missing alarms, which may cause great losses. Relevant personnel should do a good job in crisis intervention and ideological work, affirm their achievements in crisis pre-alarm and matters needing attention in the future, protect their enthusiasm while protecting their own psychological fitness, and improve their professional quality as psychological information officers.



**Figure 9:** Comparison of recall rates.

Psychological fitness education is a highly professional job. At present, some universities have realized the necessity and urgency of combining IPE with psychological fitness education and strongly support and encourage ideology counselors to learn psychological fitness education knowledge, participate in the training and grading of psychological counselors, and fully combine theory with practice. The organic combination of IPE and psychological fitness education in universities can not be separated from the help of professional teachers, and the educational height and efficiency largely depend on the teaching ability and personal accomplishment of education. Therefore, in order to speed up the combined growth of IPE and psychological fitness education in universities and improve the effectiveness of education, we must fully tap and integrate teachers' resources, realize the optimal allocation of resources, give full play to the advantages of each teacher, build a professional contingent of teachers who combine IPE with psychological fitness education and improve the overall education level. Educators should fully respect students' thinking modes and personalities and fully understand and master the information about students' temperament, personality, values, etc., by using psychological tests and other methods. In addition, only by fully grasping the students' growing environment, family education, school education, and major events that have an impact on students' psychology can we find out the root causes of students' problems in school.

Under the premise of the combination of IPE and psychological fitness education, universities need to carry out special training for relevant teachers. By combining theoretical training with practical training, teachers' theoretical knowledge and practical experience can be enriched, and contemporary university students' ideological world and psychological fitness problems can be deeply and accurately understood so as to strengthen the integration of educational work and improve the effectiveness and scientificity of education. In the aspect of university students' thoughts and behaviors, DM can enable ideology educators to have a more comprehensive understanding of students' thoughts and behaviors, find problems in their thoughts and behaviors in time, and put forward targeted improvement measures according to the causes, time and place of the problems, so as to solve students' material life problems as well as their ideological problems. When promoting and developing the combination of IPE and psychological fitness education in an all-round way, college leaders and teachers need to base themselves on the educational reality, start with the characteristics and development status of IPE and psychological fitness education, make clear the common goals and combined contents of the two education, dig deeply into the existing textbooks and teaching activities, find out the educational elements contained in them, meet the learning needs of contemporary university students, and simultaneously carry out IPE and psychological fitness education. When dealing with big data, we can construct a mathematical model of students' growth through students' behaviors with strong correlation and improve the accuracy and accuracy of scientific analysis.

## 5 CONCLUSIONS

Traditional IPE often has due regard to students' political direction and moral character, emphasizes the political function of IPE, and ignores students' psychological troubles. In this way, IPE is separated from psychological fitness education, and the psychological troubles of university students cannot be solved in time under the new situation. Based on DM, this paper constructs a pre-alarm model of students' psychological crisis, collects the dynamic data of students' psychology in time, analyzes the influence of IPE on students' psychological fitness, and realizes the pre-alarm and prevention of students' psychological crisis. When dealing with big data, we can construct a mathematical model of students' growth through students' behaviors with strong correlation and improve the accuracy and accuracy of scientific analysis. In the aspect of university students' thoughts and behaviors, DM can make ideology educators understand students' thoughts and behaviors more comprehensively, find problems in their thoughts and behaviors in time, and put forward targeted improvement measures according to the causes, time, and place of the problems. In order to make IT play a better role in psychological crisis prevention, more data-cleaning strategies and methods should be tried in practical application.

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## REFERENCES

- [1] Binfet, J. T.; Passmore, H. A.; Cebry, A.: Reducing university students' stress through a drop-in canine therapy program, *Journal of Psychological Fitness*, 27(3), 2017, 1-8. <https://doi.org/10.1080/09638237.2017.1417551>
- [2] Worthy, J.; Daly-Lesch, A.; Tily, S.: A Critical Evaluation of Dyslexia Information on the Internet, *Journal of Literacy Research*, 53(1), 2021, 5-28 <https://doi.org/10.1177/1086296X20986921>
- [3] Ault, M. K.; Ness, A. M.; Taylor, W. D.: Ideological lens matters: Credibility heuristics, pre-existing attitudes, and reactions to messages on ideological websites, *Computers in Human Behavior*, 68(3), 2017, 315-325. <https://doi.org/10.1016/j.chb.2016.11.053>
- [4] Kalckreuth, S.; Trefflich, F.; Rummel-Kluge C.: Psychological fitness related Internet use among psychiatric patients: a cross-sectional analysis, *BMC Psychiatry*, 14(1), 2014, 1-11. <https://doi.org/10.1186/s12888-014-0368-7>
- [5] Callahan, S. M.: In Their Own Words: A Phenomenological Exploration of Student Psychological Fitness and Success in College, *Social work research*, 2019(3), 2019, 3.
- [6] Caspar, F.; Berger, T.; Lotz-Rambaldi, W.: Internetbasierte Psychotherapie und E-Mental-Health, *Verhaltenstherapie*, 23(3), 2013, 137-139. <https://doi.org/10.1159/000355118>
- [7] Wilks, C. R.; Auerbach, R. P.; Alonso, J.: The importance of physical and psychological fitness in explaining health-related academic role impairment among university students, *Journal of Psychiatric Research*, 123(6), 2020, 54-61. <https://doi.org/10.1016/j.jpsychires.2020.01.009>
- [8] Odewumi, M. O.; Olalere, Y. M.: Postgraduate Students Integration of Social Media to Area Of Studies and Self-Efficacy in South-West Nigeria, *Distance Education*, 1(3), 2018, 9-16.
- [9] Agh, A.; Mg, A.; Drb, A.: Sociodemographic differences in barriers to psychological fitness care among university students at elevated suicide risk - ScienceDirect, *Journal of Affective Disorders*, 271(2), 2020, 123-130. <https://doi.org/10.1016/j.jad.2020.03.115>
- [10] Sharples, N.: An exploration of deaf women's access to psychological fitness nurse education in the United Kingdom, *Nurse Education Today*, 33(9), 2013, 976-980. <https://doi.org/10.1016/j.nedt.2012.10.017>
- [11] Kutcher, S.; Wei, Y.; Morgan, C.: Psychological fitness literacy in post-secondary students, *Health Education Journal*, 75(6), 2015, 10-56. <https://doi.org/10.1177/0017896915610144>
- [12] Steven, B.; Russ, T. C.; Mika, K.: Dose-Response Association Between Psychological Distress and Risk of Completed Suicide in the General Population, *JAMA Psychiatry*, 72(12), 2015, 1254-1256. <https://doi.org/10.1001/jamapsychiatry.2015.2107>

- [13] Antaramian, S.: Assessing Psychological Symptoms and Well-Being: Application of a Dual-Factor Psychological Fitness Model to Understand University Student Performance, *Journal of Psychoeducational Assessment*, 33(5), 2015, 419-429. <https://doi.org/10.1177/0734282914557727>
- [14] Pinder-Amaker, S.: Introduction Innovative and Collaborative Approaches to University Student Psychological Fitness Challenges, *Harvard Review of Psychiatry*, 20(4), 2012, 171-173. <https://doi.org/10.3109/10673229.2012.712835>
- [15] Fukita, S.; Kawasaki, H.; Yamasaki, S.: Effects of a Stress Management Program Based on Psychological Risk Factors of Cardiovascular Disease after Retirement in an Underpopulated Area: A Pilot Study, *Health*, 10(8), 2018, 1107-1119. <https://doi.org/10.4236/health.2018.108084>
- [16] Nelsen, S. K.; Kayaalp, A.; Page, K. J.: Perfectionism, substance use, and psychological fitness in university students: A longitudinal analysis, *Journal of American College Health*, 2021(5), 2021, 1-9. <https://doi.org/10.1080/07448481.2021.1891076>
- [17] Cuevas, C. A.; Finkelhor, D.; Clifford, C.: Psychological distress as a risk factor for revictimization in children, *Child Abuse & Neglect*, 34(4), 2010, 235-243. <https://doi.org/10.1016/j.chiabu.2009.07.004>
- [18] Wu, A.; Cheung, V. I.; Ku, L.: Psychological risk factors of addiction to social networking sites among Chinese smartphone users, *Journal of Behavioral Addictions*, 2(3), 2013, 160-166. <https://doi.org/10.1556/JBA.2.2013.006>
- [19] Mahedy, Liam.; Todaro-Luck, F.; Kirby, K.: Risk factors for psychological distress in Northern Ireland, *International Journal of Social Psychiatry*, 59(7), 2013, 646-654. <https://doi.org/10.1177/0020764012450993>
- [20] Park, J. K.; Han, H. J.; Park, J. H.: Psychological antecedents and risk on attitudes toward e-customization, *Journal of Business Research*, 66(12), 2013, 2552-2559. <https://doi.org/10.1016/j.jbusres.2013.05.048>
- [21] Trujillo, K. L.; Motta, M.; Callaghan, T.: Correcting Misperceptions about the MMR Vaccine: Using Psychological Risk Factors to Inform Targeted Communication Strategies, *Political Research Quarterly*, 74(2), 2021, 464-478. <https://doi.org/10.1177/1065912920907695>
- [22] Cooper, S.; Kramers-Olen, A. L.; Visser, M.: University students' psychological fitness and emotional wellbeing during the COVID-19 pandemic and ensuing lockdown, *South African Journal of Psychology*, 51(2), 2021, 229-243. <https://doi.org/10.1177/00812463211012219>
- [23] Kahne, M. J.; Green, S. C.: Negotiating Trouble: The Social Construction and Management of Trouble in a College Psychiatric Context, *Social Problems*, 2014(5), 2014, 5.
- [24] Wattick, R. A.; Hagedorn, R. L.; Olfert, M. D.: Impact of resilience on university student psychological fitness during COVID-19, *Journal of American College Health*, 2021(6), 2021, 1-8.