

Experiment on the Training Mode of College Students' Physical Ability in Traditional Medical Health Sports Courses

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Objectives: Sports is a highly competitive sport, and the intensity of college students in the process of capacity development is also very large, which is easy to cause physical damage. **Methods:** Therefore, it is necessary to establish a set of medical and health curriculum model, observing the various links in the process of cultivating students' ability. **Results:** Through the automatic analysis of the computer system, the changes of college students are reflected in the form of data, so as to standardize the rationality and security of the ability training of college students. **Conclusion:** In the test of the medical and health care model, through the comparative test experiment and the phased input test, the physical ability of college students has improved significantly, which proves that the medical and health care physical education curriculum has obvious effect.

Keywords: medical and health care; sports; simulation test; training mode

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The rise of sports in our country is inseparable from the struggling spirit of college students, but there is a very dull and arduous cultivation of ability behind the glory of the court¹. The cultivation intensity of college students' ability is very strong, which is closely related to their profession. Sports belong to physical antagonism, and it is easy to injure the body and other important parts in the process of ability cultivation, even in the field². In the long run, it will not only not improve the technical level of college students, but also affect their occupational and physical health. In order to protect the body of college students, a set of medical and health care curriculum system is established to collect and observe a series of actions in the process of ability cultivation. Through computer system comparison, real-time observation of the body, and finally found the wrong action in the capacity training, and corrected³. Nowadays, the development of computer technology provides the possibility for

the training of sports ability, and the rational use of computer technology can accomplish many ideas that cannot be achieved by man⁴. Taking sports as an example, the ability analysis and processing based on medical and health courses can observe the physical amplitude of college students. In the training, the action of each angle is retained by using the camera technique, the action difference is calculated by using the utility calculation, and the specific point deviation values are solved by using the algorithm. The two-frame image is used to standardize the development of sports ability, protect the health of college students, and escort their better technology⁵.

Since 19th century, the popularization of sports in foreign countries is relatively wide, and its historical origin, popularity is relatively higher than domestic⁶. Since 1900, in the development of sports ability in foreign countries, college students attach great importance to the protection of their own bodies, aiming to complete high-efficiency and high-intensity movements through

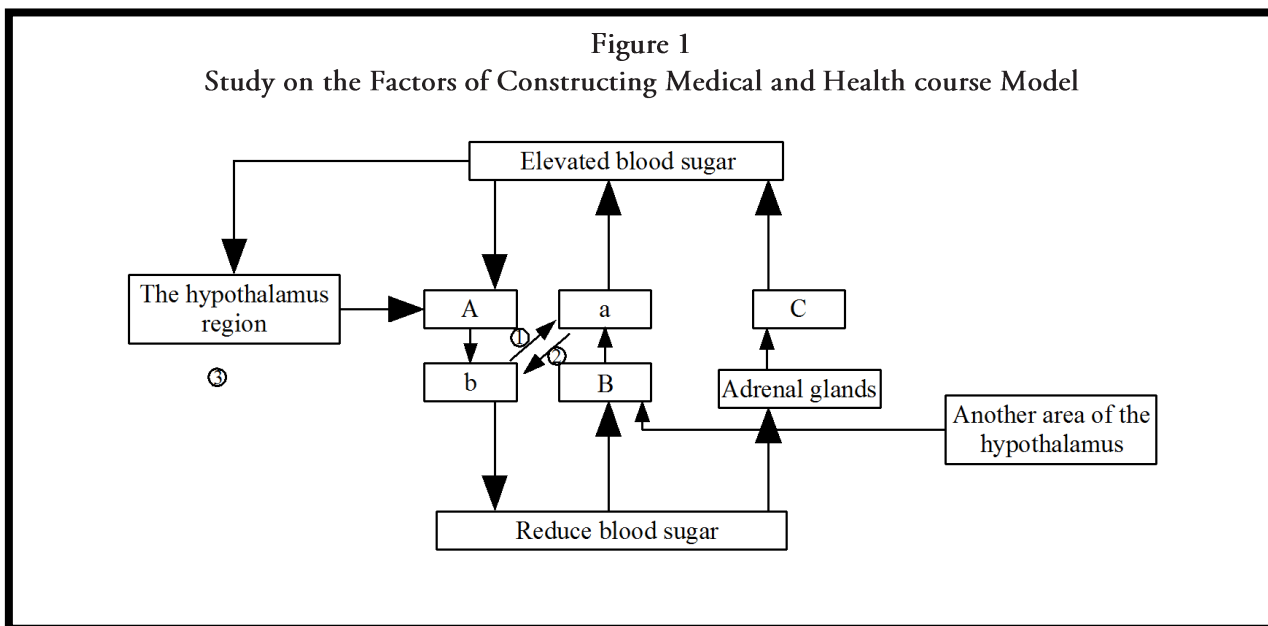
reasonable ability training. Since 1950, the medical and health care industry has developed rapidly. Researchers have found that the training of medical and health care courses can not only help college students to develop their sports ability twice with half the effort, but also protect their own 's physical safety ⁷. Since the beginning of the 21st century, the types of sports have been increasing, the degree of physical injury has been increasing during physical confrontation, and college students have paid more attention to medical and health courses ⁸. In August 2002, the Ministry of Education issued the "National General Colleges and Universities Physical Education Curriculum Guidance Outline" clearly stated that "developing and utilizing various curriculum resources according to local conditions was an important way of curriculum construction" ⁹. With the new round of college education curriculum reform, the development and utilization of physical education curriculum resources are arousing the attention and discussion in the field of sports theory and practice. Since 2010, the medical and health curriculum model has been widely used in the world, and has achieved great results ¹⁰. In the future development, sports health care courses are applied more and more in physical education and so on. Therefore, the traditional medical and health physical education curriculum college

students sports ability training model research has been put forward, through the experimental simulation model to prove.

METHODS

Construction of a Health Care Curriculum Model

Excessive training intensity will cause physical damage to college students, the focus of which is on their body, which will easily cause physical damage. Therefore, in order to make real-time observation, it is necessary to locate the movement accurately in order to convert the movement into a theoretical analysis program. Through the discovery of a series of problems in the process of sports ability cultivation, the information of the intensity of ability cultivation is input into the computer system, screened by the system, then compressed into data packets and entered into the medical curriculum model, and finally screened and upgraded. Considering the balance of strength and efficiency in the process of sports ability training, the curriculum model is filled with computer output algorithm. According to the indicative standard of the data obtained by each algorithm, the information data is input into the theoretical analysis system. After the model receives the data, it is digested and processed, and the acquisition model is built. The effects of human body speed during training are as follows:



In this process, the auxiliary role of computer system is used. Firstly, through the operation of the curriculum model, the theoretical analysis scheme is obtained, and the data of the theoretical analysis scheme is classified by computer specific coding, so as to provide the precondition for the further work. Then, based on the theoretical analysis program coding, the adjustment and optimization strategies for college students' ability training are sorted out. μ is regarded as the coefficients of human curriculum model, α is the estimated value of college students' ability training intensity, λ represents the physical injury, and δ is regarded as the physical examination status of College students. Through the calculation of the following formula, the integration coefficient of simulation data of medical and health care courses is obtained.

$$\mu(i) = \frac{\alpha_1 - \lambda(b)}{\delta^{0.5}} \sqrt{\lambda(b)\alpha_1} \quad (1)$$

In this formula, considering the reliability of the curriculum integration coefficient, error retrieval will be continued for each link of the curriculum modeling to ensure the accuracy of the training intensity distribution model. In this process, the set algorithm is used to sort out, the independent number is input into the algorithm, the computer system is used to integrate automatically, and the output results are represented by 1 and 0 accuracy, of which 1 is accurate, 0 is error. In the process of operation, V represents the number of courses detected in the system. As these algorithms are entered into the overall framework, the computer system will automatically number each calculation process. In addition, Y represents the damage coefficient of the body point, C, K represent the value of the point deviating from the normal position, J, a represent the position and coordinates of the body course node respectively. Inserting the above model can ensure the efficiency of

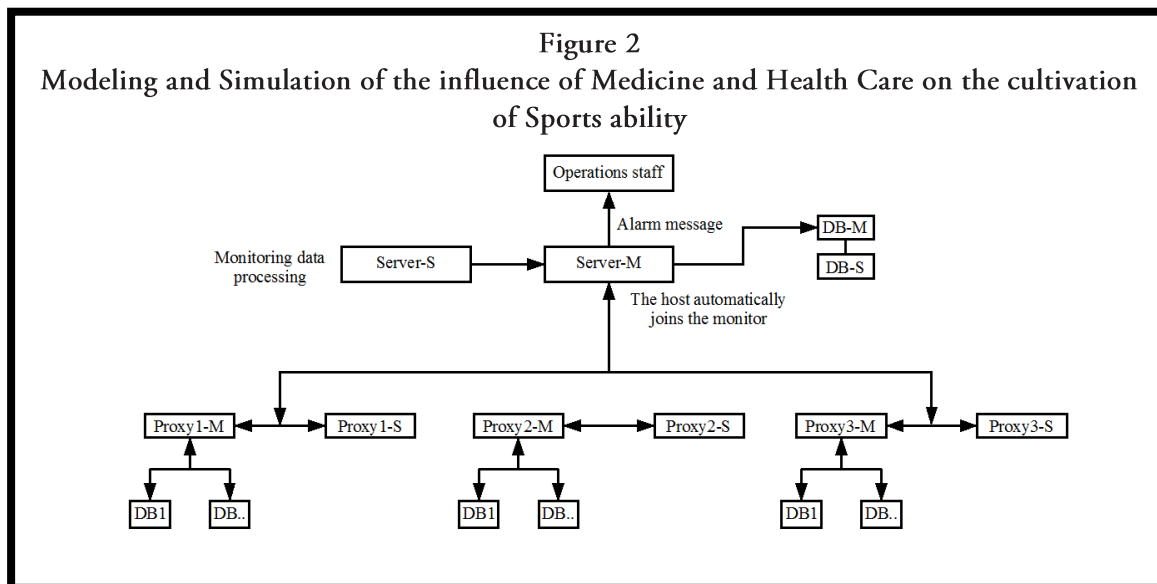
curriculum modeling, and the checking process is as follows:

$$Y_i = \frac{\int C + b_e}{(Kb_e)^\beta} + \frac{\int J + a_e}{(Ka_e)^\beta} \quad (2)$$

After ensuring the accuracy, the damage coefficient of the body point is determined. The following F represents the damage coefficient of the body point, b represents the value of the point deviating from the normal position, s represents the ability training intensity corresponding to the deviation position, and constructs a real-time information collection mechanism by controlling the damage coefficient. Considering that the maximum stress amplitude in variable amplitude fatigue can be used as a real-time manifestation, with the damage point control method adopted, the theoretical analysis system further improved. The theoretical analysis of body motion control system is described in the following formula.

$$F_f = \frac{\sum_{i=1}^{n=1} b_n + s_n}{\sum s^{0.5}} - \frac{1}{\sum s^{0.5}} \quad (3)$$

The acquisition of the algorithm will complete the phased mission of the curriculum model, but it can't determine the ability training intensity of college students. This algorithm can only find out the posture and position of the students who are seriously worn during the ability training, but it can't determine the ability training intensity. At the same time, the algorithm flow constructed belongs to the layer-by-layer checking mode, that is, it can't be further operated until the accuracy of the previous algorithm can't be determined. Therefore, after the conclusion of the screening algorithm of the damage course, the conclusion must be reliable and feasible. After the coefficient of physical injury is obtained, the function of course modeling is brought into play. The next step is to output it to the user viewing page, as shown in Figure 1.



Adjustment Plan of Undergraduates' Ability Training Intensity Under Medical Health Care Curriculum

Firstly, after the establishment of the model of medical health care course, the model of medical health care course is fused with the scheme of ability cultivation intensity, so as to determine which range the ability cultivation intensity of college students should be maintained, which can ensure the efficiency of ability cultivation and the physical safety of college students. In the process of integration, considering the changeability of the adjustment of college students' ability cultivation, that is, in the allocation model extracted from the process of sports ability cultivation, the computer can not recognize the analysis content extracted from the course model.

At this time, it is necessary for the staff to record the information in time, to output the information artificially, and to ensure the accuracy of input and analysis information. Secondly, the processing of the analysis index data, the main need to complete is to integrate the wrong actions of college students' ability training adjustment, to find out the actions that cause medical care. Finally, it is imported directly from the output of the course modeling to the ability training intensity distribution system, and the adjustment contents and the measures of college students' physical protection are displayed together on the data test page. In the lap process, some overlapping contents are randomly selected. The following table 1 shows:

Table1
The Influence of Medical and Health Course on the Cultivation of College students' Sports ability

Information integration phase		Modeling and Simulation of elbow and knee joint damage		
Accuracy rate	Resonant adjustment	efficiency	Overall effect	Remarks
1	0.96	0.95	0.89	92.2%
2	0.89	0.95	0.93	96.2%
3	0.84	0.87	0.91	93.1%
4	0.98	0.99	0.93	96.6%

As shown in Table 1, in the overlap phase of the theoretical analysis scheme, Q is used to represent the total data of the model, M, y are used to represent the standard data of the material model. In order to ensure the accuracy of the result, algorithm errors need to be reduced. The design of this link first constructs a corresponding probability calculation through f , and after inputting the corresponding ability training algorithm, an optimized result f is obtained. The formula model used is as follows:

$$Q = \sqrt{-1 + M' \left(\frac{2 - M}{2^{22} - 1} \right) + \sum y_i} \tag{4}$$

Using this formula, the optimum scheme of the medical and health curriculum model in the adjustment and reform of college students' ability cultivation can be obtained. Taking the obtained fitting value for further operation, in which the G is used to represent the fixed loss position, A represents the ability to cultivate the strength coefficient, N represents the damage degree of the body, and the calculated value is the range of

safety intensity coefficient in the adjustment mode of college students' ability training, so as to carry out the final calculation basis.

$$G = \frac{A_i}{2} + A_i^2 + \frac{N_i}{N^{0.8}} - \frac{2N_i}{A_i} \tag{5}$$

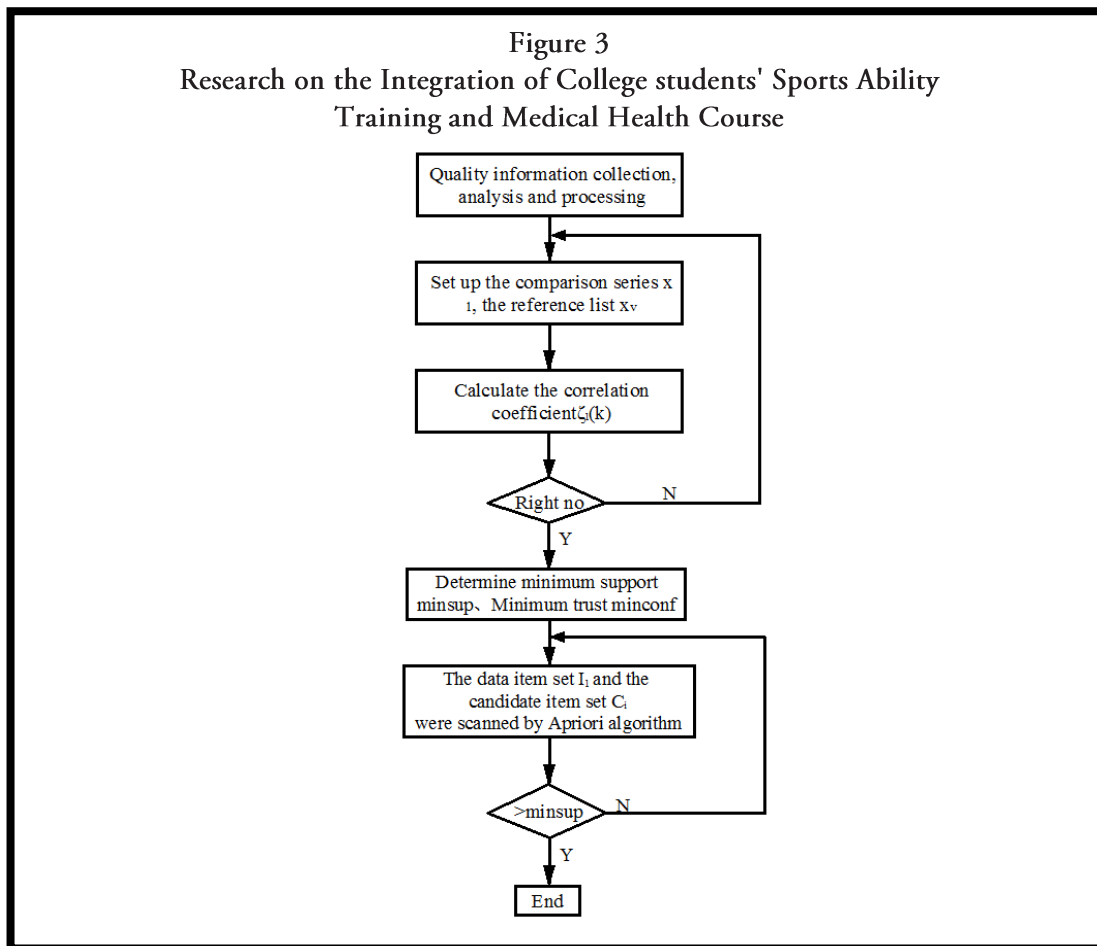
The above results provide a basis for the final step to obtain the output instructions, through the centralized operation of all functions, and ultimately to obtain an output value. Course modeling is used to calculate, in which $P(u)$ represents the range of ability training intensity, L represents the damage coefficient, E represents the time of ability training, using these data to establish the corresponding functional relationship, the corresponding difference sequence is obtained. If a classification problem is encountered, a set function can be used, assuming that the values are between the regions (-1,1), and the output function is as follows:

$$P(u) = \frac{E_n + 0.7L_n}{\mathring{a} L_n' E^{0.8}} - \frac{E_n}{\mathring{a} L_n' E^{0.8}} \tag{6}$$

After the numerical range of the ability training intensity of college students is determined, the

final numerical analysis is carried out for all the algorithm results output between the hypothetical algorithm and the theoretical analysis scheme. Based on the output data of the course system and the analysis degree of the fitting program, a series of damage location values are integrated into the medical and health curriculum model, and the corresponding

dynamic calculation program of the ability cultivation intensity are calculated. The obtained data can not only ensure the efficiency of ability training, but also ensure the physical safety of college students' ability training intensity program, the specific operation process is shown below.



RESULTS

The medical and health curriculum model can provide the guarantee for the training of the sports ability of the majority of college students on the basis of the existing technology. Using the degree of physical injury as a variable of the ability training intensity setting, the advantages of the course modeling system can be represented by objective test data. At this time, taking the college students' physical investigation as the test basis, the students who participated in the sports ability training process model are collected for limb

movements, which is used as the evaluation basis of the participants before and after the test. At the same time, before the input test, it is necessary to test the system fluency of the course modeling system, and to enter the model of college students' ability training, to observe the reliability of the system, so as to get the best result in the process of capacity training intensity distribution. Subsequently, the adjustment variables of College students' ability training are simulated, and the simulation method is used to test the program. In this simulation test, the database will be selected as the basis, and the exchange process will be

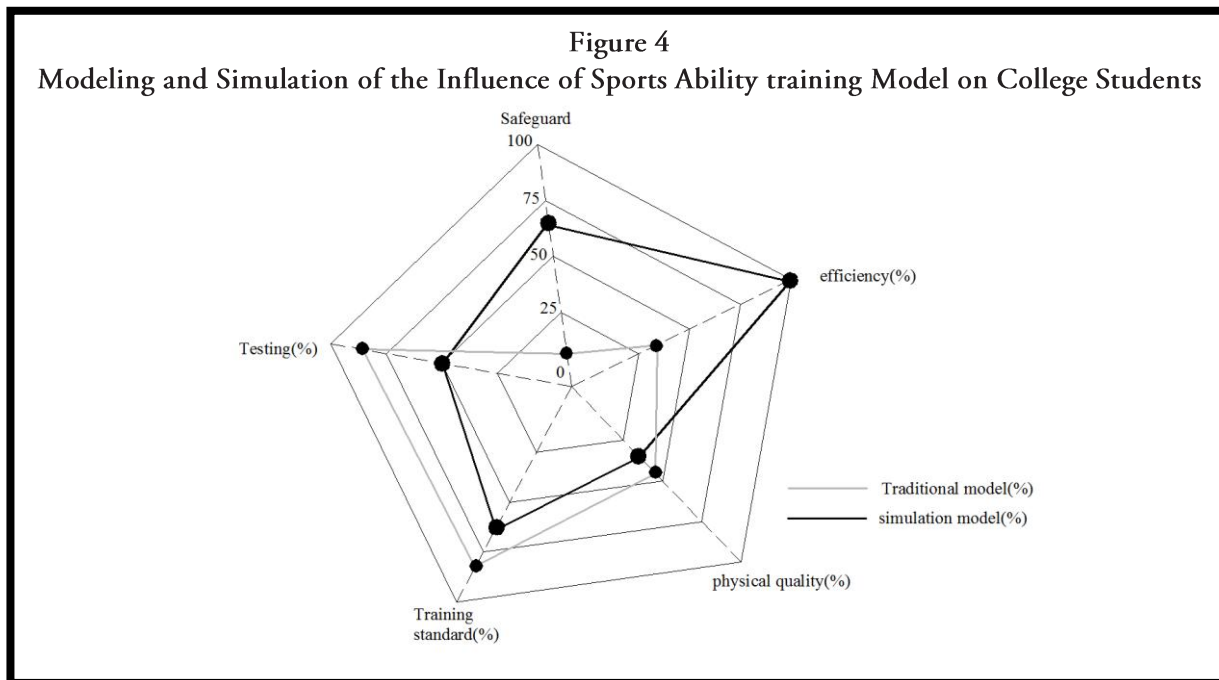
Experiment on the Training Mode of College Students' Physical Ability in Traditional Medical Health Sports Courses simulated through the ability training intensity distribution, as well as the application of the medical and health care curriculum model will be truthfully recorded. The test process is based on the medical health curriculum model. After multiple simulations of the communication process, the positioning is collected and graded. The final data is shown in the following table.

Table2
Experimental data on the training Model of College students' physical ability in traditional Medical and Health course

Financial risk early warning system			Modeling and Simulation of elbow and knee joint damage			
Factor	Detection	Operating	effect	Smooth	Design	success
biomechanics	1	0.8	2.9	3.2	4.2	6.2
	2	0.6	2.2	4.1	4.9	4.6
	3	0.9	1.3	2.7	5.3	3.5
Traditional manual processing	4	1.9	0.4	2.7	6.2	6.3
	5	2.5	1.9	4.5	7.0	3.2
	6	1.9	1.2	2.0	7.1	1.4

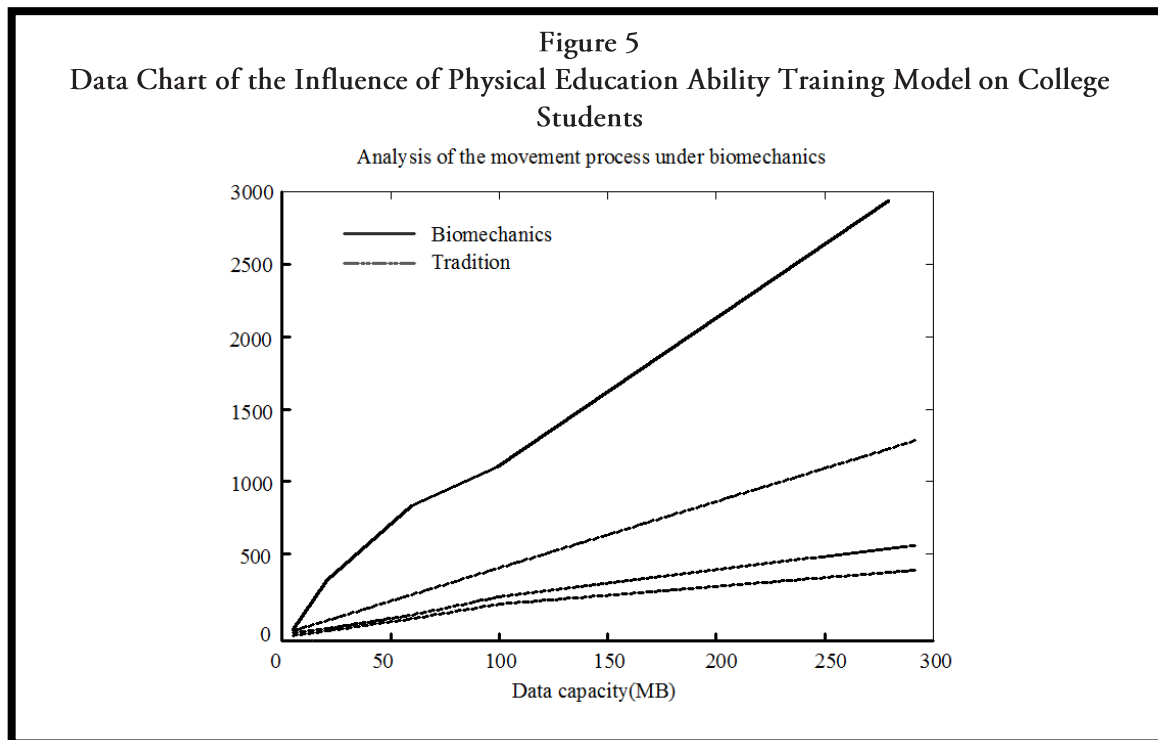
It can be seen that college students 'body has already suffered a certain degree of wear and tear when their ability training intensity has not reached the highest level. On the one hand, the curriculum model can collect the students' ability-building actions at the same time, restore the injured ones, and record them. It can provide the students with correct erroneous actions and improve and guide them in the meantime. It is authoritative and scientific. This is the original intention of the health care curriculum model. On the other hand, the system can continuously expand the advantages of memory performance, can be continuously optimized during the detection process, record and save the wrong movements of college students, and provide a

data foundation for the next step of over-capacity training judgment. In the process of cultivating the ability of college students, the camera acquisition equipment can be used to monitor the ability training activities in real time. After the completion of the ability training, real-time feedback can be given to the college students and the coaches, and the mistakes in the ability training of the college students can be corrected in the first time. The use of the medical and health curriculum model requires real-time data, but its memory performance backup will not be replaced before it is put into use, which is one of its advantages.



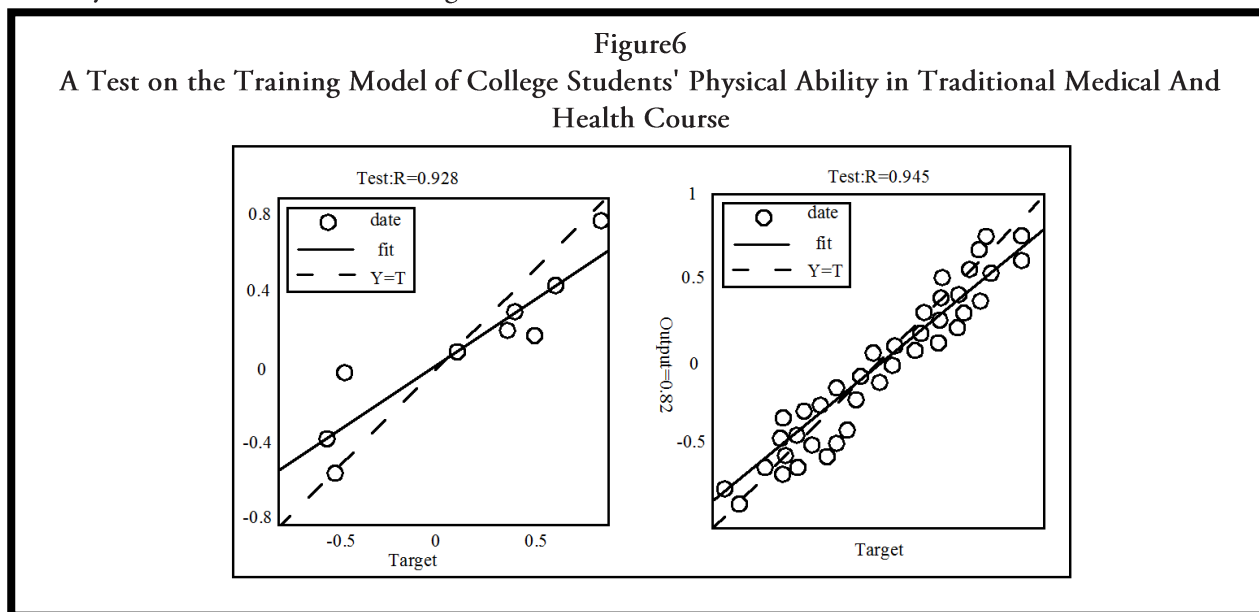
Taking the specific model into the results as shown in the figure, it can be seen that during the test, the strength of the wrong ability can be automatically recognized by the health care curriculum model. The system is able to continuously expand the memory performance advantages, can continuously optimize the system during the application process, and constantly adjust and optimize according to the capacity of the training intensity distribution atmosphere. Therefore, during the rest of the program, the simulated exchange data are input artificially, and the actual case and theoretical analysis information are added arbitrarily to ensure the operation of the model. As can be seen from the

chart, with the weakening of the ability training intensity distribution link, the medical and health curriculum model will enter a theoretical analysis state after reaching the bottom line. At this time, the efficiency of each capacity development in the body curriculum model will be greatly improved. The distribution system of ability training intensity should be expanded. By maximizing program selection, more space is added to collect more available resources for optimal performance in the process. At the same time of testing fusion, a part of data is captured in the form of wave chart, as shown in the figure.



According to the test of this kind of medical and health course model, it can be seen from the test results that the data collected by the curriculum model and the judgments made can provide support to the psychological angle of college students, which not only ensures the efficiency of the cultivation of college students'

ability, but also ensures their physical safety. As shown in the figure above, although there is no significant fluctuation in the intensity of ability-building among the single variables, the degree of security is far less than the model of curriculum modeling system. The experimental data are shown as follows:



Therefore, it can be found that guiding college

students with theory can only make them produce indifferent psychology, and have no influence on the establishment of the distribution scheme of the far-reaching ability training intensity of sports. Looking at the information conveyed by the course simulation model, it can be clearly seen that using the course modeling system as an auxiliary system not only finds the location and cause of the injury of college students, but also provides a basis for the self-protection consciousness of college students to some extent. Under the premise of ensuring the efficiency of college students' ability training, while dealing with the bivariate model, it is also possible to improve the reference opinion of the capacity allocation intensity according to the analysis. It can be seen that the theoretical analysis model of the ability training intensity distribution can guarantee the college students' physical safety on the basis of guaranteeing the efficiency of ability training, whether dealing with a single variable or a multi-variable situation.

DISCUSSION

With the continuous development of physical education and teaching, it is becoming more and more necessary to study the traditional medical and health physical education curriculum, which is the key to promote students' physical ability training. Therefore, an experimental study on the training mode of college students' physical ability in traditional medical and health physical education courses is put forward. In the study, first of all, the medical and health care curriculum model is fully demonstrated, through computer technology programming to achieve sports ability training automated management. In order to further promote the research of sports ability training, through reasonable medical and health care to complete high-efficiency and high-intensity training, not only can twice the result with half the effort, but also can protect their own physical safety. In the test of sports ability cultivation, the rigor and objectivity of the experimental data of sports health care course are carried out to the greatest extent by simulation modeling. Through the athlete's physical investigation as the test basis, the college students in the

process of sports are collected for action, which is used as the basis for judging the evaluation of participants before and after the test. Subsequently, the adjustment variables of college students' sports training are simulated, and the simulation method is used to test the program. Eventually, it can record the movement process, correct the wrong movements in the cultivation of college students' sports ability, and make improvement and guidance at the same time, which is authoritative and scientific. At the same time of the project construction, it is still necessary to make further efforts to deal with the theoretical analysis system in the design, build the evaluation criteria and the statistical operation of the vulnerability.

Human Subjects Approval Statement

This paper did not include human subjects.

Conflict of Interest Disclosure Statement

None declared.

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