

Research on the Influence of PE Teaching Reform Based on Behavioral Psychology on College Students' Mental Health

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Abstracts: Behavioral psychology is an important branch of psychological research, which mainly studies the relationship between human psychological performance and behavioral development. The main research direction of behavioral psychology is to study the relationship between human behavior development and psychology. In education, we can intervene the development of education through the study of students' behavior psychology to achieve the role of promoting students' development. At present, in modern education, we can improve Canadian education and teaching through the study of students' behavior psychology. Physical education in Colleges and universities has always been an important subject of modern quality education, which plays a role in promoting students' physical and mental health, thinking ability and innovation ability. However, in recent years, more and more college students have been affected by learning pressure, development factors and adverse interpersonal communication. Students' mental health problems have become increasingly serious, affecting the development of higher education in China. Therefore, based on the relevant theories of behavioral psychology, this paper studies the students' physical education classroom behavior, and puts forward some suggestions on reforming college physical education, so as to promote college physical education and help students shape a positive and healthy psychology. The strategies of physical education reform in Colleges and universities include innovating teaching contents, improving teaching methods, improving teachers' comprehensive quality and carrying out physical psychology teaching. The purpose is to continuously improve teaching conditions and promote students' healthy and scientific development through the research on College Students' behavioral psychology.

Keywords: Physical Education; Mental Health; Behavioristic Psychology; Reform in education.

1. PREFACE

If we observe students' classroom behavior, we can constantly improve teaching methods, teaching content, teaching design, and tap students' development motivation to promote teaching development. In the research of behavioral psychology, both students' psychology and teachers' psychology are important research contents of behavioral psychology. Usually, students' psychological changes have a direct impact on teaching, and students' psychological state will be reflected in the classroom in the form of behavior. If the students' psychological attitude is negative, anxious, uneasy, or nervous, the behavior of students in the classroom may be inattentive, wandering in the classroom, looking around, etc., which will not only affect the development of teaching, but also have an adverse impact on the students' physical and mental health. Therefore, in college physical education, some people put forward the theory of behavioral psychology to reform physical education teaching and achieve the goal of students' mental health development. Mental health belongs to a state of positive psychology. In this state, students' development goals are easy to achieve, and it is also easier to obtain psychological satisfaction. It plays a positive role in the development of students' physical and mental health and the development of teaching courses.

Objective: This paper discusses the research content and function of behavioral psychology and analyzes the current situation of College Students' healthy psychology. Thus, through the study of students' behavior psychology to reform college physical education, provide important advice for the development of modern college physical education, and promote the physical and mental health development of contemporary college students.

Subjects and Methods: taking 120 students in a university as the research object, all data were processed using PASW 18.0 software package and Excel 2007. 120 students were divided into experimental group and control group, with 60 students in each group. The experimental group implemented the reformed physical education teaching mode, while the control group adopted the traditional teaching mode. The experiment lasted for four months. The psychological evaluation scale was used to evaluate the students' psychological changes before and after the experiment. The score was 1-5. The higher the score, the better the students' mental health.

Result: As shown in Table 1, it shows the psychological changes of students in the experimental group and the control group after 4 months of teaching. It can be seen from table 1 that the experimental group taking reform measures scored higher in psychological indicators, and all indicators were very good. It shows that the reform of physical education teaching through behavioral psychology theory can improve students' mental health indicators and promote students' healthy and scientific development.

Table 1 Shows the psychological changes of students in the experimental group and the control group after four months of teaching

Project	Happiness	Enthusiasm	Healthy mentality	Self-confidence
Experience group	4	3	3	4
Control group	1	1	2	2

Conclusion: Behavioral psychology is widely used in modern education. By mining the relationship between people's behavioral characteristics and psychological activities in the educational environment, we can realize the adjustment and optimization of teaching activities and improve the teaching effect. At the same time, in the research of behavioral psychology, we pay more attention to the changes of students' mental health indicators, constantly study students' mental health indicators, and take necessary teaching improvement measures, which can not only improve the teaching quality, but also improve students' mental health indicators and realize the healthy development of education. The results show that the four month experiment, adopting the reformed physical education model, can significantly improve the mental health indicators of student ID cards and accelerate the development of modern education.

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2. INTRODUCTION

At present, with the deepening of education reform, college students are facing more and more pressure, including academic pressure, employment pressure, and more importantly, their own physiological and psychological pressure, which leads to a higher probability of psychological diseases in college students, such as anxiety, depression, learning avoidance and so on^[1]. In order to avoid and improve the mental health of college students, colleges and universities should actively carry out physical education and Reform Physical Education^[2]. The reform of physical education has an important impact on the psychological education of college students. Through the basic theoretical knowledge of behavioral psychology, the improvement of physical education teaching methods, teaching contents and teaching design is of great significance to the psychology of students and teachers^[3]. The reform of physical education aims at guaranteeing the mental health of college students and improving their development level.

2.1 Analysis of the Influence of Physical Education Reform on College Students' Mental Health from the Perspective of Behavioral Psychology

1.1 Physical Education Teaching Reform Based on Behavioral Psychology

Behavioral psychology is an important branch of psychological research, and its research direction is the relationship between people's psychological performance and behavioral development^[4-6]. In education, we can interfere with the development of education by studying the behavior and psychology of students, so as to promote the development of students. In the current education, we can improve physical education teaching by studying students' behavior psychology. Research has found that by observing students' classroom behavior, we can constantly improve teaching methods, teaching content and teaching design, tap students' development power, and promote teaching development. In the research of behavioral psychology, both student psychology and teacher psychology are important research contents of behavioral psychology. Usually, students' psychological changes will

directly affect teaching, and students' psychological state will be reflected in the form of behavior in the classroom. If students' psychological attitude is negative, anxious, uneasy or nervous, students' behavior in class may be inattentive, wandering in class, looking around, etc., which will not only affect the development of teaching quality, but also adversely affect students' physical and mental health. Therefore, in college physical education, some people have proposed behavioral psychology theory to reform physical education teaching and achieve the goal of students' mental health development^[7-9]. Based on the theoretical knowledge of behavioral psychology, this paper analyzes the positive effect of physical education reform on College Students' psychological education. See Figure 1 for details.

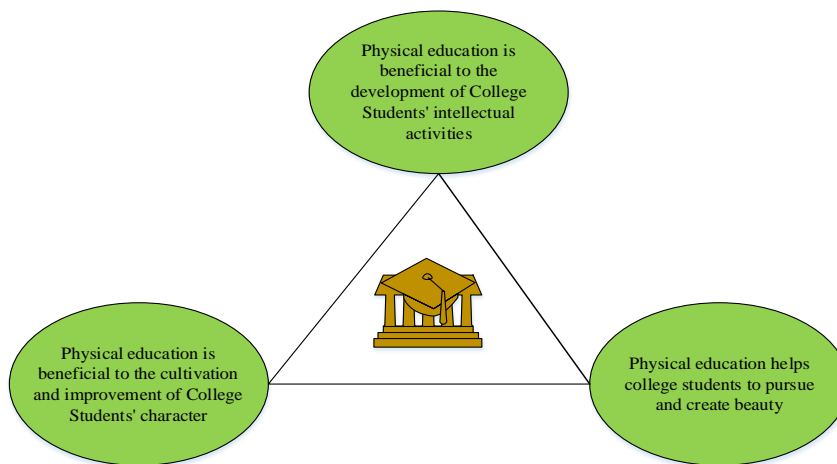


Fig.1 The shortcomings and reform measures of current physical education teaching

Mental health belongs to positive mental state. In this state, students' development goals are easier to achieve and psychological satisfaction is easier to obtain. It has played a positive role in the development of students' physical and mental health and the development of teaching courses. College physical education has always been an important subject of modern quality education, which plays an important role in promoting students' physical and mental health, thinking ability and innovation ability^[10]. However, in recent years, more and more college students are affected by learning pressure, development factors and bad interpersonal communication. The problem of students' mental health is becoming more and more serious, which affects the development of higher education in China. Therefore, based on the relevant theory of behavioral psychology, this paper studies the students' physical education classroom behavior, and puts forward some suggestions on the reform of physical education teaching in Colleges and universities, so as to promote physical education teaching in Colleges and universities and help students form a positive and healthy psychology. The strategies of physical education reform in Colleges and universities include innovating teaching contents, improving teaching methods, improving teachers' comprehensive quality, and developing physical psychology teaching. The purpose is to improve the teaching conditions and promote the healthy and scientific development of students through the study of College Students' behavior and psychology.

2.2 Experimental Design of the Influence of Education and Teaching Reform on College Students' Mental Health

This paper discusses the research contents and functions of behavioral psychology and analyzes the current situation of College Students' healthy psychology. Through the study of students' behavior psychology, we can reform college sports, provide important suggestions for the development of modern college sports, and promote the physical and mental health development of contemporary college students. In this study, 120 college students were selected from a certain university as the research objects, and their basic mental health status was investigated. Then, 120 of them participated in a four month experiment designed to study the impact of physical education teaching reform on College Students' mental health. 120 students were randomly divided into 5 groups. One group was the control group of traditional education; Experimental group a improved the site facilities and

strengthened the construction of teachers; Group B of the experiment is to explore the ideological and political elements of the Bureau and give play to the unique value of sports education; Experimental group C is to gather "teaching, practice and competition" to deepen the integration of sports and education; Experimental group D is to implement the concept of physical education in the new era and improve the physical education teaching system. All stages of the experiment were evaluated by the self-designed mental health self-assessment scale. The mental health self-assessment scale contains 20 evaluation items, and each evaluation item adopts 5-level evaluation grade. The final score is obtained by summing up the scores of each evaluation item. The total score of the scale is 100 points, and the lowest score is 20 points. According to the score, the evaluation results are divided into four grades in the experiment. 20 to 40 points indicate that the subject has a positive psychological state, 41 to 60 points indicate that the subject has a more positive psychological state, 61 to 80 points indicate that the subject has a more negative psychological state, and 81 to 100 points indicate that the subject has a negative psychological state. Before the experiment, the investigation results of the psychological status of the subjects are shown in Table 2.

Table 2 Investigation results of the psychological status of the subjects before the experiment

Essential information	Numerical value	Basic type	Numerical value
Total number	120	Average age	19.35±1.03
Male	68	Female	52
Positive psychology	0/0	More positive psychology	24/54.48±1.53
More negative psychology	73/69.01±3.47	Negative psychology	23/84.14±4.06

The study developed specific teaching methods and teaching contents, and evaluated students' psychological activities in the teaching plan. The evaluation results were statistically analyzed in combination with pasw18.0 and Excel 2007 statistical software to compare the differences of students' mental health changes. In order to make the experimental results reliable and avoid the influence of subjective factors on the experimental results, the score of the scale is expressed by the mean value and the mean square error. The mean square error formula is shown in formula (1).

$$\sigma = \sqrt{\sum_{i=1}^n (x_i - \bar{x})^2 / (n-1)} \quad (1)$$

In formula (1), σ represents the standard deviation of the sample, x_i represents the score of sample i , \bar{x} represents the average score of the sample, and n represents the number of samples.

2.3 Analysis of the Effect of Physical Education Reform on College Students' Mental Health from the Perspective of Behavioral Psychology

Table 3 shows the evaluation results of changes in mental health of the traditional physical education group and the reformed physical education teaching group. It can be seen from table 3 that the scale scores of the control group did not change significantly at all stages of the test; The scores of each group in each stage of the experiment showed a decreasing trend. The educational method of reforming physical education teaching through behavioral psychology can improve students' psychology. The score of group a decreased from 74.39 to 51.24; The score of group B decreased from 76.23 to 35.28; In Experiment C, the score changed from 79.25 to 34.39; The score of group d changed from 79.03 to 33.05. The four groups of subjects who underwent physical education reform all changed from a more negative mental state to a positive mental state.

Table 3 Evaluation results of changes in mental health of the traditional physical education group and the reformed physical education teaching group

Experimental grouping	Scale score			
	Before experiment	The first month	The second month	The third month
Control group	73.45±4.58	69.67±4.33	68.68±4.18	67.28±4.07
Experimental group A	74.39±4.83	69.38±3.93	62.39±3.44	51.24±2.66
Experimental group B	76.01±4.30	62.39±2.70	51.07±0.94	35.28±0.97
Experimental group C	79.25±4.08	70.52±2.68	51.37±0.42	34.39±0.88
Experimental group D	79.03±4.15	62.76±3.14	48.27±1.72	33.05±0.92

Fig. 2 shows the results of changes in the number of people at each evaluation level of the psychological status before and after the experiment. It can be seen from Fig. 2 that after the experiment, the number of people with positive psychology increased from 0 to 89, and the number of people with more positive psychology increased first and then decreased. Finally, the number changed from 29 to 20, the number of people with more negative psychology decreased from 81 to 7, and the number of people with negative psychology decreased from 10 to 4. It shows that the measures taken in the experiment are very effective in improving the mental health of college students after the research and design of the experiment.

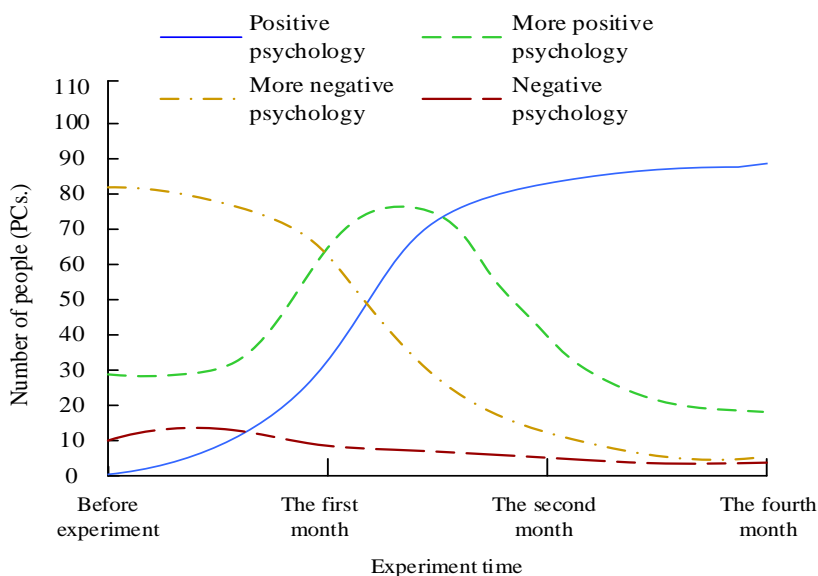


Fig.2 Results of changes in the number of people in each evaluation grade of psychological status before and after the experiment

CONCLUSION

Behavioral psychology is widely used in modern education. By mining the relationship between people's behavior characteristics and psychological activities in the educational environment, we can adjust and optimize teaching activities and improve teaching effects. At the same time, in the research of behavioral psychology, we pay more attention to the changes of students' mental health indicators, constantly study students' mental health indicators, and take necessary teaching improvement measures, which can not only improve the quality of teaching, but also improve students' mental health indicators and achieve the healthy development of education. The results show that using the reformed physical education model to carry out the experiment for four months can significantly improve the mental health indicators of students. The mental health evaluation scores of the subjects who have

been reformed by physical education have been effectively improved, and the number of positive psychology has a large upward trend. Therefore, the reform of physical education teaching based on behavioral psychology has a positive effect on College Students' mental health and is conducive to the development of students' high quality.

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