

Practical Exploration of Positive Psychology in the Reform of Physical Education in Colleges and Universities

Wen Xie¹, Jia Gao^{1,*}, Yang Dong¹

¹*Office of Student Development, Xi'an Eurasia University, Xi'an, 710065, China*

**Corresponding author: sevenwxie@163.com*

Keywords: "Positive psychology"; "Reform of physical education in colleges and universities"; "Randomized intervention experiment"

Abstract: Sports education is an important part of education in colleges and universities. Strengthening physical education in colleges and universities is the top priority of educational work. It is urgent to vigorously enhance college students' willingness to participate in sports and cultivate their habit of physical exercise. Based on survey data from 500 students in a certain university, this study conducted an intervention experiment on 248 students and found that fun sports practice under the guidance of positive psychology can significantly improve students' positive psychological level and enhance their willingness to participate in sports, thereby achieving the goal of education. This provides new thinking methods and practical evidence for enriching and optimizing the reform system of college sports education.

1. Introduction

The report of the 20th National Congress emphasizes the need to "strengthen youth sports work and accelerate the construction of a strong sports nation." As the final stage of school physical education, college physical education plays a crucial role in guiding students to develop correct awareness of physical exercise and lifelong habits of physical activity. It is necessary to innovate educational concepts and models in a timely manner, taking into account the background of the times and the growth characteristics of college students, to stimulate their interest in participating in physical exercise and enable them to actively engage in physical activity. [1] The core concept of positive psychology is "people-oriented," emphasizing the focus on enhancing students' subjective feelings during the learning process, fully developing positive education, and providing a new perspective for college physical education reform. It advocates for fully utilizing students' subjective position in physical education teaching, exploring their inherent potential in the process of physical learning, stimulating their enthusiasm for exercise, and cultivating their self-exercise ability.[2][3] The integration of positive psychology with college physical education teaching provides a new perspective and practical approach for the transformation and upgrading of traditional college physical education teaching, which is conducive to helping college physical education teaching move towards a new stage of development. [4][5]

2. Research Objects and Methods

2.1. Research Object

The experiment was divided into two stages: questionnaire survey and randomized intervention experiment. In the first stage, a questionnaire survey was conducted among 500 college students from a certain university, covering basic information, positive psychological level, and willingness to participate in sports. Based on the survey results from the first stage, the second stage employed a randomized intervention experiment method, randomly selecting 248 students and assigning them to the experimental group and the control group for a fun sports practice intervention that integrates positive psychology and physical education teaching (hereinafter referred to as "fun sports practice").

2.2. Research Tools and Methods

2.2.1. Positive Psychological Capital Scale

The "Positive Psychological Capital Questionnaire (PPQ)" developed by Zhang Kuo (2010) and others at Nankai University based on Luthans' psychological capital theory is used as the measurement tool. The number of dimensions and their meanings in this questionnaire are consistent with Luthans' psychological capital theory. The target audience is college students, and it includes four dimensions: self-efficacy, resilience, hope, and optimism, with a total of 26 questions and options. [6]

2.2.2. Questionnaire Survey Method

The questionnaire survey method is based on positivism as its methodological foundation and falls within the category of quantitative research. The specific implementation process includes: designing standardized questionnaires, selecting research subjects for distribution, systematically organizing the collected questionnaires, and applying statistical analysis methods to analyze and process the data, ultimately drawing research conclusions.

2.2.3. Randomized Intervention Experiment

The random intervention experiment method has been widely used in economic research, policy-making, and education reform in recent years. Compared to the non-experimental research methods used in traditional economics, randomized intervention experiments are widely recognized as the "gold standard" in the field of impact assessment due to their ability to accurately identify causal relationships between variables. After completing the experimental design, this method mainly includes three key implementation stages: baseline survey, random sample allocation for intervention, and evaluation survey [7].

2.3. Research Procedure and Plan

Guided by positive psychology theory, this study designed an experimental scheme, intervening from two dimensions: information and activity practice. [3] By tracking intervention effects through community check-ins, the aim is to enhance students' willingness to participate in sports. [4][5] In the first stage, we tested 500 college students from a certain university on positive psychological traits and willingness to participate in sports. In the second stage, 248 students were randomly selected and divided into a control group and an experimental group for experimentation. By

establishing a fun sports practice training camp, we fully utilized peer supervision among group members to monitor the effects. The experimental group received experimental intervention through online information on different themes every day, and was also required to complete fun sports activities as check-ins.

3. Experimental Results

After four weeks of fun sports practice intervention experiment, this study obtained raw practical data. To ensure the accuracy of the analysis results, the data was first processed, and outliers such as extreme maximum and minimum values were removed. Subsequently, the data was analyzed from multiple dimensions.

3.1. Positive Psychological Level of Students with Different Willingness to Participate in Sports

The survey results are presented in Table 1. The total scores of positive psychological traits for the 248 students ranged from 55 to 181, with an average score of 120.275. Among them, the students who ranked in the top half in terms of willingness to participate in sports had a total score of positive psychological traits that was 6.692 higher than those who ranked in the bottom half. Specifically, their scores in the dimensions of optimism, hope, self-efficacy, and resilience were 0.824, 1.178, 2.684, and 1.796 higher, respectively. Overall, students with higher levels of positive psychology exhibited stronger willingness to participate in sports. Therefore, enhancing positive psychological levels provides a new practical approach to boosting students' willingness to participate in sports.

Table 1 Positive psychological level of students with different willingness to participate in sports

variable	overall (n=248)	top 1/2 in terms of willingness to participate in sports(n=124)	bottom 1/2 in terms of willingness to participate in sports(n=124)
total score of positive psychological quality	120.275	123.621	116.929
optimistic score	30.811	31.223	30.399
hope score	29.573	30.162	28.984
self efficacy score	28.335	29.677	26.993
toughness score	31.556	32.454	30.658

Data source: Author survey

3.2. Pre- and Post-Test Results of Positive Psychological Level and Willingness to Participate in Sports among the Experimental Group

The research results indicate that students in the experimental group exhibited significant improvements in all dimensions of positive psychological traits, with a notable increase in their willingness to participate in sports compared to before the experiment. According to the data presented in Table 2, after the experimental intervention, students' scores on the optimism dimension increased from 30.58 to 31.88, on the hope dimension from 29.03 to 30.94, on the self-efficacy dimension from 28.20 to 29.10, and on the resilience dimension from 31.20 to 32.28. The students' willingness to participate in sports after the experiment showed a significant increase compared to before, indicating that enhancing positive psychological traits can effectively boost

willingness to participate in sports.

Table 2 Pre- and post-test results of positive psychological level and willingness to participate in sports [n (%)] in the experimental group

variable	before experiment	after experiment	difference between before and after the experiment
total score of positive psychological quality	119.01	124.20	5.19
optimistic score	30.58	31.88	1.30
hope score	29.03	30.94	1.91
self efficacy score	28.20	29.10	0.90
toughness score	31.20	32.28	1.08
Willingness to participate in sports (proportion of those willing to participate)	72.31%	81.16%	8.85%

Data source: Author survey

3.3. Pre- and Post-Test Results of Positive Psychological Level and Willingness to Participate in Sports for the Control Group

The research results indicate that the positive psychological qualities of the control group students showed a slight improvement trend, with little difference in their willingness to participate in sports. As shown in Table 3, during the experimental period, the scores of the control group students on the optimism dimension increased slightly from 30.88 to 30.91, and the hope dimension rose from 28.03 to 28.96. However, no changes were observed in the self-efficacy and resilience dimensions. The slight changes in each dimension may be related to the series of public welfare activities organized by the school during the experimental period, such as sports games and the Green Earth campaign. These activities alleviated students' learning pressure to some extent and promoted their mental health development. It is worth noting that compared with the experimental group, the improvement in the control group was relatively limited, and there was little change in their willingness to participate in sports.

Table 3 Pre- and post-test results of positive psychological level and willingness to participate in sports [n (%)] in the control group

variable	before experiment	after experiment	difference between before and after the experiment
total score of positive psychological quality	118.31	119.27	0.96
optimistic score	30.88	30.91	0.03
hope score	28.03	28.96	0.93
self efficacy score	28.20	28.20	0.00
toughness score	31.20	31.20	0.00
Willingness to participate in sports (proportion of those willing to participate)	71.15%	72.01%	0.86%

Data source: Author survey

4. Explanation of Experimental Results

This experiment conducted tests on the positive psychological level and current status of college students' willingness to participate in sports, and collected relevant data to prepare for later trials. Through interviews with college students, we learned that the reasons for their low positive psychological level include academic and work pressure, pessimistic development prospects, and family economic environment; the main reason for the need to enhance their willingness to participate in sports is that students are more passively accepting physical exercise requirements. Although they have strong execution ability, their proactive initiative is poor, which leads to the inability to fully exert the effect of physical exercise. In response to these issues, we have prepared an experimental intervention plan. By enhancing students' positive psychological level, we aim to improve their sense of growth pleasure and value realization, significantly enhance their enthusiasm for actively participating in physical exercise, and ultimately externalize this into behavioral changes such as actively participating in physical exercise. Therefore, positive psychology plays a positive role in the reform of college physical education and enhancing students' willingness to participate in sports, enabling a paradigm shift in college physical education.

5. Research Value and Prospects

Guided by positive psychology, this study innovates physical education teaching, providing not only a theoretical breakthrough for solving the difficulties in college physical education teaching and a new perspective for college physical education reform, but also a practical approach for the transformation and upgrading of traditional college physical education teaching. It holds significant practical significance and application value.

To further enhance the effectiveness of physical education in universities, this study will further optimize the content and form of the fun sports practice system, and explore the best intervention strategies through comparing the effects of different intervention programs, aiming to form an authoritative and effective intervention paradigm, thereby better fulfilling the requirements and tasks of physical education in universities.

Acknowledgements

Funds: This research work is a phased achievement of the planning project (youth project) of the China Association for Private Education (title: "Practice and Exploration of Positive Psychology in the Reform of Physical Education in Colleges and Universities under the Background of the National Fitness Program"; number: CANQN250095). It is also a project of the 2023 Xi'an Eurasia University School level scientific research fund project (topic: Research on the mechanism and path of practical education of college student associations from the perspective of educational ecology; No.: 2023XJYR04).

References

- [1] Ministry of Education of the People's Republic of China. *Teaching Guidance Outline for Physical Education Courses in General Colleges and Universities Nationwide* [EB]. (2002)
- [2] Seligman M E P, Randal M Ernst ,Jane Cillhame,et al. *Positive education: Positive psychology and classroom interventions* [J]. *Oxford Review of Education*,2009.
- [3] Li Xin, Qiu Fen, Wu Min, et al. *Sports Psychology* [M]. Chongqing University Press: 2018, (06): 196
- [4] Wang Guangming. *Research on Teaching Strategies for College Physical Education under the Influence of Positive Psychology* [C] // Chinese Sports Science Society. *Abstracts of the 12th National Sports Science Conference - Poster Exchange (School Sports Branch)*. Pingdingshan University: 2022: 685-686
- [5] Rose S, Burton D. *Exploring the impact of a mental skills training curriculum with elite university student-athletes:*

- A qualitative case study. Journal of Physical Education and Sport. 2024; 24(11):1564-1575.*
- [6] Zhang Kuo, Zhang Sai, Dong Yinghong. *Positive Psychological Capital: Measurement and Its Relationship with Mental Health [J]. Psychology and Behavior Research*, 2010, 8(1): 58-64
- [7] John H.Kagel,Alvin E.Roth. *The Handbook of Experimental Economics[M].Princeton University Press:2016-01-01.*