

# Research on the Deep Integration Mechanism of National Fitness Campaign and College Physical Education Teaching: Taking Guangdong University of Science and Technology as an Example

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**Abstract:** By using the methods of literature review, questionnaire survey, and expert interview, this paper discusses and analyzes the deep integration mechanism of national fitness campaign and college physical education teaching, in order to promote the development of college physical education teaching reform, expand ideas, explore new fields, and provide novel development directions. The purpose is to enhance the national physical quality, improve the public service system, enhance the health awareness of the citizens, and provide guidelines for promoting the development of sports.

**Keywords:** National fitness campaign; College physical education; Deep integration; Mechanism

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## 1. Introduction

College students are the future of the country and the hope of the nation. School physical education is the foundation of mass sports and competitive sports. For college students, sports play an irreplaceable role in enhancing the development of national fitness. In order to implement the health strategy, the State Council issued the National Fitness Program (2021–2025). The research on the deep integration mechanism of national fitness and college physical education aims to analyze the effect of physical activity on physical health, so as to provide a reference for improving the physical health of college students<sup>[1]</sup>. In this process, it is found that the influencing factors of the deep integration of national fitness and college physical education include:

- (1) The traditional exam-oriented education leads to weak sports consciousness of college students.
- (2) The lack of coordination between sports and health institutions leads to students' weak awareness of sports and health.
- (3) The efficiency of policy implementation is low, resulting in an imperfect mechanism.
- (4) The lack of professional integration talents leads to the lack of promotion of sports medicine.
- (5) The unreasonable allocation of resources leads to the incomplete development of college sports.

Based on the research status of the deep integration mechanism of national fitness and college physical education, the corresponding solutions are proposed. This paper uses the methods of literature review, questionnaire, and expert interview for research and analysis. Through the analysis of the current situation of college students' sports development in China, we hope to explore the mechanism of effectively promoting the organic integration of national fitness and college physical education <sup>[2]</sup>.

## **2. The current situation of the deep integration of national fitness campaign and college physical education**

Due to the development of society, the concept of gold medal supremacy has gradually faded, and people are increasingly advocating the sports spirit of focusing on participation. People are increasingly discovering that sports bring health benefits and value. Since then, mass sports have opened a new journey. According to statistics, China issued the “National Fitness Program Outline” in 1995, the “National Fitness Program (2011–2015)” in 2009, and the “National Fitness Regulations” in 2011. In 2014, China successively issued a number of relevant statements on accelerating the development of sports and promoting sports consumption and national fitness. In 2015, the Fifth Plenary Session of the Eighteenth Central Committee of the Communist Party of China further formally elevated the construction of “Healthy China” as a national strategy. In 2016, the Central Committee of the Communist Party of China and the State Council issued the “Healthy China 2030” Plan Outline document. The introduction of these policies provides a strong policy guarantee for the integration of national fitness and college students' sports development, which ensures the health level of the people and the development of college students' sports <sup>[3]</sup>.

The National Physical Fitness Monitoring Center issued the “2020 National Fitness Activity Survey Bulletin,” which pointed out that the proportion of residents aged 7 and above who regularly participated in physical exercise in 2020 was 37.2%, of which 40.1% were urban residents and 32.7% were rural residents. Among them, the 40–49 age group had the highest proportion of 31.7%; the proportion of the elderly who regularly participated in physical exercise was 26.1%. After the age of 80, 14.7% of the elderly still regularly participated in physical exercise. The most fundamental way to achieve national health is through national fitness. Therefore, it is necessary to encourage people to actively carry out physical exercise, continuously enhance physical fitness, strive to improve the national fitness level, and contribute to the realization of national health. “Healthy China” is the guarantee of China's social and economic development. Under the goal of building a healthy China, this paper focuses on the integrated development path of national fitness and college students' physical health, and strives to contribute theoretical strength to the full implementation of the important goal of building a healthy China <sup>[4]</sup>.

## **3. Research objects and methods**

### **3.1. Research objects**

Taking the students of Guangdong University of Science and Technology as the survey objects, this study discusses the current situation of the integration of national fitness campaign and college physical education.

### **3.2. Research methods**

#### **3.2.1. Literature method**

With “national fitness campaign,” “college physical education,” “deep integration,” etc., as keywords, the relevant literature on various data platforms and the library of Guangdong University of Science and

Technology was searched to provide relevant theoretical support for the standard research. At the same time, through the collection and analysis of relevant documents and policies of teaching reform, and integrating current politics and situation, the trend was studied to provide theoretical and practical support for the study of national fitness campaign and college physical education.

### 3.2.2. Questionnaire survey method

Through consulting the relevant literature and integrating the actual situation, a questionnaire suitable for this paper was formulated. Through the Questionnaire Star and other related tools, the sophomore, junior, and senior grades were selected to answer the questionnaire. A total of 90 questionnaires were issued, 30 in each grade. Among them, 89 questionnaires were recovered, with a recovery rate of 98%. The specific details are shown in **Table 1**.

**Table 1.** Questionnaire distribution and recovery

Grade	Number of copies issued	Number of recovered portions	Recovery rate	Number of valid copies
Sophomore year	30	30	100%	30
College junior	30	30	100%	30
Senior class	30	29	96%	29
Total	90	89	98%	89

The effective rate of questionnaire: 100%

In this paper, in order to make the design of the questionnaire achieve the desired results, expert testing was used and the corresponding recommendations were put forward. Then, according to the suggestions put forward by the experts, the questionnaire of this paper was revised and improved to form the final questionnaire. The five-level scoring method was used for evaluation, and the results are shown in **Tables 2** and **3**. In order to ensure the reliability of the questionnaire, the repeated test method was used. After 14 days of the first round of questionnaires, a total of 30 original questionnaires were distributed, including 10 sophomores, 10 juniors, and 10 seniors. A total of 30 questionnaires were collected, contributing to a 100% recovery rate. The reliability and validity of the questionnaire were tested by SPSS software, and the correlation coefficient of the two survey results was  $\alpha > 0.8$ , which indicated that the high reliability of the questionnaire met the relevant standards.

**Table 2.** The distribution and recovery of the validity test of the questionnaire

Questionnaire distribution	Questionnaire recovery	Collecting rate	Questionnaire efficiency
30	30	100%	100%

**Table 3.** Evaluation results of the validity of the questionnaire content

Evaluation content	Very valid		Valid		Somewhat valid		Invalid		Very invalid	
	Number of people	%	Number of people	%	Number of people	%	Number of people	%	Number of people	%
Content evaluation	28	80%	1	10%	1	10%	0	0%	0	0%
Outcome evaluation	26	60%	3	30%	1	10%	0	0%	0	0%
Holistic evaluation	27	70%	1	10%	2	20%	0	0%	0	0%

### 3.2.3. Interview method

The interview method is a research method to obtain the target information by directly talking, asking, and enquiring the interviewees. Firstly, this paper designed an interview outline according to the research content and interviewed seven professors and teachers such as Yongbai Chi of Guangdong University of Science and Technology according to the outline content. The problems existing in the process of the integration of national fitness and physical education were discovered and relevant suggestions were put forward. At the same time, we interviewed Feng Cai of Guangdong University of Science and Technology and Haifeng Liao of the Academic Affairs Office to understand the current situation of physical education in schools as a whole, and also provided opinions on specific issues.

## 4. Findings and analysis

As shown in **Table 4**, based on the questionnaire, most students think that there was a high correlation between the national fitness campaign and college physical education teaching, accounting for 60%; 36% of the students think there was a medium correlation; 4% of the students think there is a low correlation between the two.

**Table 4.** Students' cognition of the correlation between national fitness campaign and college physical education teaching

View	High correlation	Medium correlation	Low correlation	No correlation
Frequency	53	32	4	0
Percentage	60%	36%	4%	0%

According to **Table 5**, 44% of the students think that the integration of national fitness campaign and college physical education is very necessary; similarly, 56% of the students think that the integration between the two is necessary; those who think that it is unnecessary were 4%; students who are indifferent about it were 0%.

**Table 5.** The necessity of the integration of national fitness campaign and college physical education

View	Very necessary	Necessary	Unnecessary	Indifferent
Frequency	39	50	0	0
Percentage	44%	56%	4%	0%

In **Table 6**, most of the students think that the integration of national fitness and college physical education is good; 16% of the students think that the integration of the two is very good, and 48% of the students think that the integration of the two is good. 32% of the students think that the degree of integration between the two is general, and 4% of the students think that the degree of integration between them is poor.

**Table 6.** Students' cognition of the degree of integration of national fitness campaign and college physical education teaching

View	Very good	Good	General	Poor	Very poor
Frequency	14	43	28	4	0
Percentage	16%	48%	32%	4%	0%

## **5. The dilemma of the deep integration of national fitness campaign and college physical education teaching**

### **5.1. Traditional exam-oriented education leads to weak sports consciousness of college students**

In the traditional exam-oriented education, most schools and parents only pay attention to the development of students' theoretical knowledge, thus diluting the role of sports in students' physical and mental development. Starting from primary school, teachers occupy physical education classes; during college, students take leave from physical education class to review other subjects, imperceptibly causing students to think that sports is not important. Students' morality, intelligence, fitness, aesthetic, and labor have become the basic requirements of education in China. At the critical stage of life growth, if college students lack a strong body, how can they make contributions after completing their studies; they also face increased academic and life pressure, how can they effectively release psychological pressure without physical exercise. Nowadays, with the rapid development of China's economy, the improvement of resources and facilities, and the gradual improvement of people's material living standards, in the new era of full implementation of various life guarantees, promoting the diversified development of students has become the general trend rather than only focusing on students' theoretical knowledge.

### **5.2. The lack of coordination of physical health institutions leads to college students' weak awareness of physical health**

Sports and health institutions are the key forces for the integrated development of national fitness campaign and college students' sports mechanism. The transformation of the development institutions of the society must also need to keep up with the times. Under the influence of the traditional operating mechanism in the past, health and sports have not been integrated and applied, and exercise therapy has not been promoted and applied accordingly. The health institutions pay more attention to some traditional therapies, but not to the health services with sports science as the core. For example, drugs are inevitable in the treatment of college students' psychological problems, but combined with exercise therapy, the effect will be more obvious in the experiment. Not only that, the health system pays less attention to sports, focusing more on "medical treatment" and less on "preventive treatment." Some people lack the correct physical exercise consciousness and health concepts. It is difficult to reach a consensus with the sports system in the construction of sports medicine rights, interests, and responsibility-sharing mechanisms. Now, what has been well confirmed in competitive sports is sports rehabilitation. Sports rehabilitation enables more athletes to return to the stage of competition, but it has not been promoted and applied in college sports. The legal protection mechanism of "sports and medical care" is not perfect, and it is difficult to integrate sports and medical support services and non-medical interventions into public health and clinical medicine.

### **5.3. The low efficiency of national policy implementation leads to the imperfect mechanism**

Although the "Sports Law of the People's Republic of China" was promulgated in 1995, which also proposed the integration of sports and public health development, there is a lack of specific implementation rules. According to the survey, sports and medical-related legal construction are independent of each other, with a lack of mutual cooperation between the two, thus there is no establishment of a common effective mechanism. In order to better develop the national fitness campaign and college physical education so that sports can be used, it is necessary to introduce relevant policy documents in order to better solve the problem, so that the future development is smoother.

#### **5.4. The lack of professional integration talents leads to the lack of promotion of sports medicine**

Today, as people's pursuit of healthy life is getting higher, it is increasingly essential to cultivate disease prevention and sports fitness professionals. At present, the sports rehabilitation specialty and sports medicine specialty of physical education schools in China pay more attention to the cultivation of scientific research and teaching talents. Plus, the medical curriculum is not ideal. In the teaching process of sports and medical integration, there is a lack of compound teaching talents who understand both sports and medicine. In some colleges and universities, most students have basic sports and medical rehabilitation skills, but the cross-professional practice platform is limited, and their practical skills require improvement. Contrary to the cultivation of students in physical education schools, students trained in medical colleges usually have low professional sports literacy, weak sports foundation, and poor professional sports skills, nutrition, and health knowledge, and the school's physical education curriculum design is incomprehensive. In recent years, China has cultivated nearly 2 million social sports instructors. Although these instructors can guide residents to exercise, they lack the most basic medical knowledge and scientific understanding of obesity, chronic diseases, etc., and cannot formulate physical exercise according to the symptoms. The content can only popularize basic exercise knowledge and skills.

#### **5.5. Unreasonable allocation of resources leads to incomplete development of college sports**

At present, most of the fitness equipment, places, personnel allocation, and old-age care resources in China are concentrated in more developed areas, and there are relatively few public infrastructures in areas with slower development. Under the call of national fitness, residents in more developed areas put more emphasis to the improvement of their own health problems, and the requirements for corresponding resources and facilities are getting higher. The venues required for fitness are increasingly tense, and the distribution of venues is unbalanced and uncoordinated. In the "Sixth National Sports Site Census," it was found that the proportion of indoor sports venues in China accounted for less than 10% of the total sports venues, and most of the indoor venues in China were built for competitive sports and were not open to the outside world.

### **6. Countermeasures to promote the deep integration of national fitness and college physical education**

#### **6.1. Strengthening the implementation of key points and leading the national fitness work**

In order to lead the national fitness work, it is necessary to start from the foundation including children and youth fitness activities. Full-time teachers in schools should explain the importance of fitness and constantly carry out meaningful physical fitness activities, so as to establish students' view in sports, life, and fitness, and enhance their awareness of physical exercise. Teachers should also pay attention to the combination of work and rest, reasonably arrange students' sports time on the basis of learning cultural courses, strengthen supervision, and implement sports in practice, so as to help students relieve the learning pressure and enhance their learning motivation, in order to better ensure the harmony and stability of the campus. Initiating the implementation from children and young people is more conducive to the popularization and development of national fitness campaign. Secondly, we should make good use of the elderly group as the elderly have abundant time in retirement. In order for the elderly to have a more fulfilling life, they are encouraged to actively participate in fitness activities, which promotes physical and mental health while alleviating the pressure of leisure and emptiness after retirement. The development of national fitness activities can not only improve national fitness awareness but also mobilize the enthusiasm of national sports, so that people's material life can be improved, to achieve the purpose of economic development and spiritual civilization construction.



## **6.2. Strengthening the coordination of organizational departments for jointly building a comprehensive coordination system**

The deep integration of national fitness and college students' sports requires the assistance and cooperation of multiple departments to jointly build a comprehensive collaborative system. This requires the state to implement relevant policy documents, organize relevant departments to take the lead, combine sports, health, education, transportation, and other relevant departments to form corresponding management mechanism, collaborative management, and jointly explore effective working methods to promote the co-construction of national fitness and sharing of fitness resources. After summarizing the corresponding programs, they will be tried out in relevant departments and schools, and a strategic system for the close integration of national fitness and college students' sports health with multi-party participation will be built as soon as possible.

## **6.3. Formulating a development strategy with strong maneuverability and sustainable development**

To play the leading role of policy, it is necessary for the government to take the helm in order to establish the integration mechanism of national fitness and college students' sports. Among them, at the national level, we should strengthen the top-level design of the integrated development of national fitness and college students' sports, formulate a development strategy with strong maneuverability and sustainable development, clarify the division of labor among various functional departments, and ensure the implementation of policies <sup>[5]</sup>. Secondly, various functional departments should take the initiative to assume corresponding responsibilities and obligations, and the implementation of relevant policies must be carried out responsibly to avoid policy failure. We should also carry out corresponding sports activities in combination with the characteristics of their own regions, and focus on recommending the construction and improvement of the integration mechanism of national fitness and college students' sports health <sup>[6]</sup>.

## **6.4. Cultivating professional quality talents and promoting the integration and development of talents**

To cultivate professional quality talents, professional personnel training is an important guarantee for the healthy integration and development of national fitness campaign and college physical education. In order to carry out in-depth integration and development of national fitness campaign and college physical education, professional talent reserve is necessary. We should deeply integrate sports and medicine, determine the corresponding combination between them, and take the initiative to build national fitness and healthy China. Additionally, we need to find the focus, communicate with sports and medicine and other professional colleges and universities, jointly cultivate compound talents, and prepare the corresponding professional knowledge reserve. The state should vigorously support the establishment of medical-related majors in sports colleges and universities, and support sports rehabilitation and other corresponding majors. It should also establish sports science and other related majors in medical majors to promote the integration and development of talents and provide talent guarantee for the implementation of "Healthy China." Secondly, in other universities, we should further strengthen the exchange and communication between sports colleges and medical colleges, focus on the construction of teaching resource sharing platform, and explore the ways of cooperation between colleges and universities. Efforts should be made to promote the cooperation between TCM (traditional Chinese medicine) colleges and sports colleges and universities, and to formulate a professional curriculum system of "combination of sports and medicine" integrating medicine, rehabilitation, nutrition, and sports. It is necessary to arrange cross-professional internships in schools, so that medical students can participate in student exchange program and study in sports colleges, and that sports students can have an in-depth understanding of medical schools,

and strive to cultivate compound talents.

### **6.5. Making full use of the supply-side reform of public services to promote the rational allocation of resources**

We should make full use of the supply-side reform of public services, narrow the gap of resources, accelerate the infrastructure gap of national fitness public services in underdeveloped areas, and promote the rational allocation of resources. The basic requirements of “basic coverage, fairness, sustainable development,” etc., are implemented to meet the needs of the elderly and children and other groups for fitness equipment. The establishment of the integration mechanism of national fitness and college students’ sports is an important part of the end-of-year assessment of medical, sports, culture, education, pension, and other institutions. We will facilitate the construction of national fitness infrastructure, promote the prosperity and development of social sports organizations, standardize the activities carried out by social sports organizations, and strive to coordinate with the National Sports Association to carry out fitness training and business consulting activities in the local area and guide the standardized development of social sports organizations. From the perspective of the national level, it is essential to explore the establishment of government-led and public-participated public services implementation, evaluation, and supervision system, and constantly promote the public service needs to adapt to national development. We should strengthen the construction of indoor sports venues, and encourage the opening-up of venues that have been built to achieve efficient use of resources and strive to meet people’s needs for fitness resources under the background of national fitness <sup>[7]</sup>.

In the new era, the deep integration of national fitness and college students’ sports can continuously promote the early realization of the goal of “Healthy China.” The promotion of the integration of national fitness and college students’ sports is a problem of mutual cooperation and in-depth study between sports and medical systems in the future. There remain many problems in the process of mutual integration, such as the lack of professional talents, uneven distribution of resources, etc. It urgently needs the attention of relevant departments of the state to further enhance the top-level design, strengthen the policy guidance, constantly improve and balance the resources such as fitness venues and fitness equipment, and provide a strong policy and facility guarantee for the deep integration of national fitness and college students’ sports. In addition, the people should establish the concept of “great health,” take active actions in the strong atmosphere of “Healthy China,” effectively enhance the awareness of health, and constantly promote the construction of the integration mechanism of national fitness and national health, so as to contribute to the construction of a healthy China.

## **7. Conclusion**

This paper studied the deep integration mechanism of national fitness and college students’ sports and discovered many problems in the process. In view of the above problems, we suggested corresponding solutions: strengthening the implementation of key points and leading the national fitness work; strengthening the cooperation of organizational departments to jointly build a comprehensive cooperation system; formulating a development strategy with strong maneuverability and sustainable development; cultivating professional quality talents and promoting the integration and development of talents; making full use of the supply-side reform of public services to promote the rational allocation of resources. The actual purpose of the deep integration and development of national fitness and college physical education is to develop a healthy lifestyle and maintain a healthy development concept for the people, instead of realizing the importance of health when they are sick. To better promote the practical problem of the integration of the national fitness campaign and the healthy development of college students, the government should take national health as the development



concept, improve the national health index, increase the capital investment in the construction of college students' sports infrastructure, and accelerate the development of the deep integration mechanism of national fitness and college students' health.

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## Author contributions

J.C. and Y.Y. conceived the idea of the study. J.C. performed the experiments. J.C. and Y.Y. analyzed the data and wrote the paper.

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