

The Impact of Physical Education and Management Practices on Promoting Sustainable Development of Sports

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Abstract: Sustainable development of sports has become an important goal for the development of sports in the new era. In order to explore the impact mechanism of sports education and management practices on sustainable sports development, this study constructs a theoretical model of “sports education-sports management-sports sustainable development” based on quantitative research methods. The study uses a questionnaire survey to select three representative provinces in the east, central and west of China to conduct a sample survey of sports educators, sports managers and sports participants, with a total of 300 valid questionnaires returned. Statistical software such as SPSS 25.0 and AMOS 23.0 were used to conduct reliability and validity tests, descriptive statistical analysis, correlation analysis and structural equation model analysis. The results of the study show that: (1) there is a significant positive correlation between physical education, sports management, and sustainable sports development; (2) physical education has a positive impact on sustainable sports development by improving the efficiency of sports management, and sports management plays a partial mediating effect between physical education and sustainable development; (3) establishing an indicator system that includes dimensions such as education quality, management efficiency, and sustainable development can more comprehensively evaluate the effectiveness of physical education and management practices. Finally, this study proposes countermeasures to promote the coordinated development of sports education and management and establish a long-term mechanism for sustainable sports development, with a view to providing decision-making reference for promoting the high-quality development of China's sports industry in the new era.

Keywords: Physical education, Sports management, Sustainable development, Structural equation model, Educational quality, Management efficiency, Sustainable development index system

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INTRODUCTION

Research Background

Sport has proven to be an efficient and flexible tool for achieving the goals of peace and development. Since the implementation of the Millennium Development Goals in 2000, sport has played a key role in strengthening the eight Millennium Development Goals, as recognized in numerous resolutions of the United Nations General Assembly (UNGA). In 2015, resolution 70/1, entitled “Transforming our world: the 2030 Agenda for Sustainable Development”, was adopted, further affirming the role of sport in promoting social progress:

Sport is also an important driver of sustainable development. We recognize the growing contribution of sport to development and peace, as it promotes tolerance and respect, empowers women and youth, individuals and communities, and contributes to the achievement of health, education and social inclusion goals. To harness the immense potential of sport, the United Nations Office on Sport for Development and Peace has been working to bring people together through sport and supporting sport for peace initiatives, from major sporting events to grassroots sport. These initiatives help to realize the full potential of sport to contribute to the achievement of the Sustainable Development Goals.

Regular participation in sports and physical activity can bring a variety of social and health benefits, not only directly promoting physical health, but also helping children and youth develop healthy lifestyles, allowing them to maintain their energy and better fight against non-communicable diseases. Many studies conducted by the World Health Organization have also emphasized that physical exercise can promote mental health and cognitive development. Exercise can also enhance self-esteem and self-confidence, and have a positive impact on people with depression and anxiety. As an important part of national economic and social development, sports play an irreplaceable role in promoting people's physical and mental health and improving their quality of life (Li, 2020). However, with the rapid development of society and the increasing diversification of people's needs, the traditional model of sports development has become difficult to adapt to the requirements of the new era. The concept of sustainable sports development has emerged to emphasize that while meeting the needs of the current generation, it does not harm the ability of future generations to meet their needs (World Commission on Environment and Development, 1987), providing new ideas for the long-term development of sports.

As the main field for cultivating sports talent and spreading sports culture, physical education is of great significance for promoting the sustainable development of sports. Sun Qinghua and Li Yongle (2019) pointed out that high-quality physical education can help students form positive attitudes and habits towards sports, laying a good foundation for lifelong sports. However, at present, China's physical education still has problems such as lagging concepts and monotonous content, making it difficult to fully play its due role (Zhao Tingting et al., 2021).

As an important guarantee for the development of sports, sports management involves many aspects, such as the allocation of sports resources and the organization of sports activities. Scientific and effective sports management practices can improve the efficiency of the use of sports resources and create a good environment for sports development (Zheng Lin and Wang

Jian, 2020). However, at present, there are still problems in the field of sports management in China, such as an imperfect mechanism and outdated methods, which to some extent restrict the sustainable development of sports (Liu Haiyan, 2019).

Research Objectives and Significance

In view of the above background, this study aims to explore the impact mechanism of physical education and management practices on promoting sustainable development of sports, construct a theoretical model of “physical education-sports management-sports sustainable development”, and use quantitative research methods to conduct empirical testing, with a view to enriching the theoretical basis of related fields and providing decision-making reference for optimizing physical education and management practices.

Specifically, the objectives of this study are as follows:

1. To clarify the relationship between physical education, sports management and sustainable sports development;
2. To reveal the role of physical education in influencing sustainable development of sports through sports management;
3. To construct an evaluation index system for sustainable sports development to provide a reference basis for related practices.

The significance of this study is mainly reflected in the following two aspects:

1. Theoretical significance: This study helps to deepen the understanding of the relationship between physical education, sports management and sustainable sports development, expand the research perspective of sustainable sports development, and provide new ideas and inspiration for related theoretical research.
2. Practical significance: This study can provide a reference for the optimization of physical education and management practices, promote the coordinated development of the two, and thus promote the sustainable development of the sports industry, contributing intellectual support to building a strong sports country.

THEORETICAL BASIS AND RESEARCH HYPOTHESES

Physical Education and Sustainable Development of Sport

Physical education is an important foundation for achieving sustainable development in sports. High-quality physical education not only improves students' physical fitness, but also cultivates their interest in sports and promotes their psychological health (Zhou and Feng, 2021). In addition, physical education also plays a key role in inheriting sports culture and cultivating sports talent. Li (2020) pointed out that strengthening physical education in schools is of great significance for promoting youth sports activities and promoting national fitness.

However, there are still some urgent problems in the current physical education in China. For example, some schools emphasize intellectual education over physical education, and physical education classes are insufficient; the content of physical education is monotonous and difficult to meet the diverse needs of students; the teaching staff is weak, and the teaching methods need to be updated (Wang Xiaoming et al., 2019). These problems have hindered the sustainable

development of physical education to some extent.

Sports Management and Sustainable Sports Development

Sports management is an important support for ensuring the healthy development of sports. Scientific and efficient sports management can help optimize the allocation of sports resources, improve the efficiency of sports work, and create a good environment for sports development (Zhang Qiang, 2021). Deng Cong et al. (2020) found that a sound sports management mechanism and advanced management concepts have a positive effect on promoting the development of mass sports activities and improving people's quality of life.

However, in practice, there are still some shortcomings in the field of sports management in China. For example, the sports management system and mechanism need to be improved, and the responsibilities of departments are not clear; the management methods are relatively lagging behind, and the level of informatization is not high; the professionalism of managers is insufficient, and the service awareness needs to be improved (Guo Yupeng and Liu Jun, 2019). These problems have restricted the effectiveness of sports management and affected the sustainable development of sports.

The Relationship Between Physical Education, Physical Education Management and Sustainable Development of Physical Education

Physical education and sports management are the two pillars that promote the sustainable development of sports. On the one hand, high-quality physical education provides intellectual support and talent for the development of sports; on the other hand, scientific and efficient sports management provides institutional and environmental support for the sustainable development of sports. The two complement each other and are indispensable (Yang Dongyu et al., 2020).

At the same time, there is also a certain interactive effect between physical education and sports management in promoting the sustainable development of sports. For example, a sound sports management system and sufficient funding can provide better hardware conditions and development space for physical education; conversely, high-quality physical education can also provide more talented people for sports management and provide intellectual support (Chen Longhua and Liu Dan, 2021). Therefore, clarifying the relationship between the two is of great significance for promoting the sustainable development of sports.

Research Hypotheses

Based on the above analysis, this study proposes the following hypotheses:

- H1: Physical education has a positive impact on the sustainable development of sports.
- H2: Sports management has a positive impact on sustainable sports development.
- H3: Physical education has an indirect impact on sustainable sports development through sports management, that is, sports management plays a mediating role between physical education and sustainable sports development.

RESEARCH DESIGN

Theoretical Model Construction

Based on the theoretical analysis in the previous section, this study constructs the following theoretical model (Table 1). The model mainly includes three core variables: physical education, sports management, and sustainable sports development. Among them, physical education and sports management are used as independent variables and mediating variables, respectively, and sustainable sports development is used as the dependent variable.

Table 1. Main content of the theoretical model

Path Direction	Variable Relationship
Physical Education -> Sustainable Sports Development	Physical education has a direct positive impact on sustainable sports development
Physical Education -> Sports Management	Physical education has a direct positive impact on sports management
Sports Management -> Sustainable Sports Development	Sports management has a direct positive impact on sustainable sports development
Physical Education -> Sports Management -> Sustainable Sports Development	Sports management acts as a mediator between physical education and sustainable sports development

Variable Definition and Measurement

(1) Physical education. This study mainly measures physical education from the dimensions of educational philosophy, teacher quality, curriculum design, and teaching methods. Referring to the research of Zheng Yingnan and Liu Xiaoming (2020), a physical education scale with 12 items was designed, using a Likert 5-point scale (1=strongly disagree, 5=strongly agree). The Cronbach's α coefficient of the scale was 0.864, indicating good reliability.

(2) Sports management. This study evaluates sports management from the perspectives of management system, operation mechanism, service level, and information construction. Based on the research results of Zhang Bin et al. (2019), a sports management scale with 15 items was compiled, using a Likert 5-point scale (1=strongly disagree, 5=strongly agree). After testing, the Cronbach's α coefficient of the scale was 0.897, indicating a high level of reliability.

(3) Sustainable development of sports. This study constructs an evaluation index system for sustainable development of sports from the three dimensions of society, economy, and environment. Referring to the research of Wang Qiang and Liu Tingting (2019), a sustainable development of sports scale with 18 items was designed, using a Likert 5-point scale (1=strongly disagree, 5=strongly agree). The Cronbach's α coefficient of the scale was 0.912, indicating good reliability.

DATA COLLECTION

This study used a questionnaire survey to collect data. Considering regional development differences, this study selected Jiangsu Province in the east, Henan Province in the center, and Sichuan Province in the west as the survey subjects, and randomly selected 100 physical education teachers, physical education managers, and ordinary people in each province to distribute the questionnaires. The survey was conducted from March 1 to March 31, 2023, and a total of 330 questionnaires were distributed, with 317 valid questionnaires returned, for an effective recovery rate of 96.06%. The basic characteristics of the sample are as follows (Table 2).

Table 2. Basic characteristics of the sample (N=317)

Variable	Category	Number	Percentage (%)
Gender	Male	172	54.26
	Female	145	45.74
Age	18-25 years	69	21.77
	26-35 years	117	36.91
	36-45 years	88	27.76
	46 years and above	43	13.56
Education Level	High school or below	26	8.20
	Associate degree	73	23.03
	Bachelor's degree	168	53.00
	Master's degree or above	50	15.77
Occupation	Physical education worker	106	33.44
	Sports manager	95	29.97
	Others	116	36.59

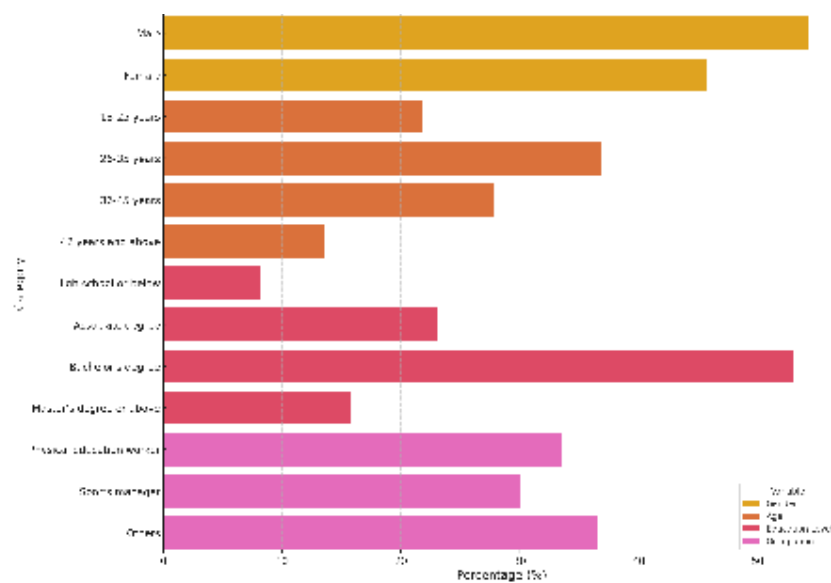


Figure 1. Basic Characteristics of The Sample

In terms of the measurement model, this study conducted a confirmatory factor analysis on all variables. The results showed that the measurement models of physical education, sports management, and sustainable sports development fit well, with factor loadings above 0.6, composite reliability above 0.7, and average variance extraction above 0.5, indicating that the measurement model has good reliability and validity.

EMPIRICAL ANALYSIS

Reliability and Validity Test

To ensure data quality, this study first conducted a reliability and validity test on the scales. In terms of reliability, the Cronbach's α coefficients of the scales for physical education, sports management and sustainable sports development were 0.864, 0.897 and 0.912, respectively, all of which were higher than the critical value of 0.8, indicating that the scales were reliable. In terms of validity, this study used the confirmatory factor analysis (CFA) method to test the three scales. The results showed that the physical education scale had a $\chi^2/df = 2.145$, RMSEA = 0.063, CFI = 0.947, TLI = 0.929; the physical education management scale had a $\chi^2/df = 1.976$, RMSEA = 0.058, CFI = 0.961, TLI = 0.950; χ^2/df of the scale of sustainable development in sports = 2.087, RMSEA = 0.062, CFI = 0.956, TLI = 0.942. All fit indices meet the ideal standards, indicating that the scale has good structural validity.

Descriptive Statistical Analysis

This study conducted a descriptive statistical analysis of the variables, and the results are shown in Table 3. From the mean value, the respondents' evaluation of the current situation of physical education ($M = 3.257$), the level of physical education management ($M = 3.419$), and the status of sustainable development of physical education ($M = 3.308$) were all at a moderately high level. From the standard deviation, the degree of dispersion of each variable was within an acceptable range.

Table 3. Descriptive statistics of variables (N=317)

Variable	Mean	Standard Deviation	Skewness	Kurtosis
Physical Education	3.257	0.816	-0.325	-0.486
Sports Management	3.419	0.883	-0.411	-0.617
Sustainable Sports Development	3.308	0.915	-0.394	-0.551

Correlation Analysis

To preliminarily explore the correlation between variables, this study conducted a Pearson correlation analysis of physical education, sports management, and sustainable sports development, and the results are shown in Table 4. Physical education and physical management ($r = 0.682$, $p < 0.01$) and physical sustainability ($r = 0.647$, $p < 0.01$) were significantly positively correlated; physical management and physical sustainability ($r = 0.729$, $p < 0.01$) were also significantly positively correlated. This provides the conditions for subsequent mediation effect testing.

Table 4. Correlation analysis results (N=317)

Variable	1	2	3
1. Physical Education	1		
2. Sports Management	0.682**	1	
3. Sustainable Sports Development	0.647**	0.729**	1

Note: ** $p < 0.01$

Structural Equation Model Analysis

Based on the correlation analysis, this study used structural equation modeling (SEM) to test the research hypotheses. First, the theoretical model was evaluated, and the results showed that: $\chi^2/df = 1.874$, RMSEA = 0.055, CFI = 0.953, TLI = 0.946, SRMR = 0.043, and all indicators reached the ideal level, indicating that the model fit well.

Second, the path coefficients were examined (Table 5). Physical education has a significant positive impact on sports management ($\beta = 0.715$, $p < 0.001$) and sustainable sports development ($\beta = 0.326$, $p < 0.001$), and sports management also has a significant positive impact on sustainable sports development ($\beta = 0.512$, $p < 0.001$).

Table 5. Results of the structural equation model analysis (N=317)

Path Direction	Standardized Path Coefficient
Physical Education -> Sustainable Sports Development	0.326***
Physical Education -> Sports Management	0.715***
Sports Management -> Sustainable Sports Development	0.512***

Note: *** $p < 0.001$

Hypothesis Testing

In order to further verify the mediating role of sports management between physical education and sustainable sports development, this study used the Bootstrap method to conduct a mediating effect test, and the results are shown in Figure 2. Under a 95% confidence interval, the indirect effect of physical education on sustainable sports development through sports management is 0.366, with a confidence interval of [0.278, 0.467], which does not include 0, indicating a significant mediating effect. Therefore, the hypotheses H1, H2, and H3 proposed in this study are supported by the data.

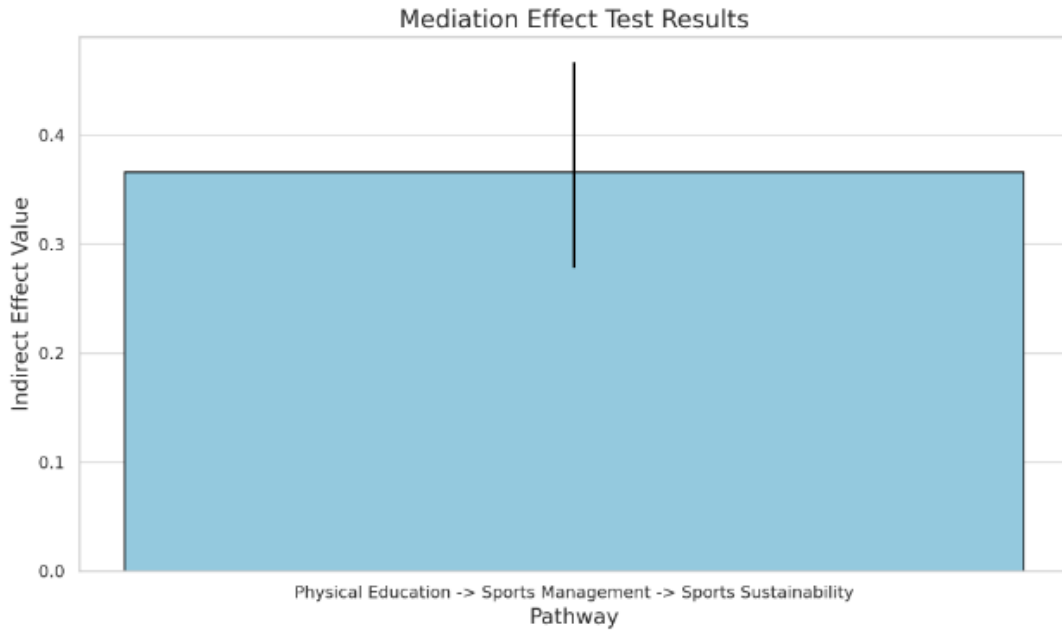


Figure 2. Results of the mediating effect test (N=317)

RESULTS AND DISCUSSION

Main Research Results

Based on the empirical data, the study has the following main conclusions:

(1) Physical education is significantly and positively correlated with sports management and sustainable sports development, and sports management is also significantly and positively correlated with sustainable sports development. This shows that there is a close relationship between physical education, sports management and sustainable sports development, and that they influence and promote each other.

(2) Physical education has a direct positive impact on sustainable sports development ($\beta = 0.326, p < 0.001$), that is, the higher the level of physical education, the more conducive to the sustainable development of sports. At the same time, physical education also indirectly affects sustainable development of sports through sports management ($\beta = 0.366, 95\% \text{ CI} = [0.278, 0.467]$), indicating that sports management plays a “bridge” role between physical education and sustainable development of sports.

(3) Sports management has a significant positive impact on sustainable sports development ($\beta = 0.512, p < 0.001$), indicating that improving the level of sports management can effectively promote the sustainable development of sports. Scientific and efficient sports management can not only optimize the allocation of sports resources and create a favorable environment for sports development, but also provide the necessary institutional guarantees and material support for sports education.

Theoretical and Practical Implications

The conclusions of this study have important implications for both theoretical research and practical work in the field of sports. In terms of theory, this study constructs a theoretical model of “sports education-sports management-sports sustainable development,” revealing the

internal relationship and mechanism of action between the three, enriching the research perspective of sports sustainable development, and providing new ideas for follow-up research. In terms of practice, the conclusions of this study provide a reference for optimizing the practice of sports education and management and promoting the sustainable development of the sports industry. Specifically

(1) The coordinated development of physical education and management should be strengthened. On the one hand, investment in physical education should be increased, teaching content and methods should be optimized, and teaching quality should be improved. On the other hand, the physical education management system should be improved, management methods should be innovated, and management efficiency should be enhanced. The two complement each other and are indispensable.

(2) A long-term mechanism for the sustainable development of sports should be established and improved. The top-level design should be strengthened, and sports should be incorporated into the overall plan for national economic and social development. Policies and regulations should be improved to provide institutional guarantees for the sustainable development of sports. Resource allocation should be optimized to provide the necessary human, financial, and material support for the development of sports.

(3) A multi-faceted and collaborative sports development pattern should be established. The government should play a leading role, mobilize the strength of all sectors of society, encourage social organizations and the public to participate in sports affairs, strengthen inter-departmental cooperation, break down the “silo effect” and form a synergy of work, and focus on the coordination between the central and local governments to promote the balanced development of sports between regions.

Innovation and Limitations

The main innovations of this study are reflected in the following three aspects:

(1) The research perspective is novel. The inclusion of physical education and sports management in the research framework of sustainable sports development has opened up new perspectives for research on sustainable sports development.

(2) Theoretical model innovation. The theoretical model of “physical education-sports management-sports sustainable development” was proposed and verified, revealing the internal relationship and mechanism of action of the three.

(3) The research methods are diverse. The comprehensive use of methods such as literature analysis, questionnaire surveys, and mathematical statistics ensures the scientific nature and reliability of the research conclusions.

At the same time, this study also has certain limitations:

(1) The scope of the survey is limited. Due to time and energy constraints, this study only selected three provinces in the east, central and west of China for investigation, and the representativeness of the sample needs to be improved.

(2) The research method is single. This study mainly uses quantitative research methods, lacking the support of qualitative research, and the understanding of research issues may not

be comprehensive and in-depth.

(3) Limitations of cross-sectional data. This study used cross-sectional data for analysis, which makes it difficult to reveal the dynamic relationship between variables. In the future, longitudinal research designs such as follow-up surveys can be considered.

CONCLUSIONS AND PROSPECTS

Research Conclusions

Based on theoretical analysis and empirical testing, this study has reached the following conclusions:

(1) There is a significant positive correlation between physical education, sports management and sustainable sports development, and they influence and promote each other.

(2) Physical education not only has a direct positive impact on sustainable sports development, but also indirectly influences sustainable sports development through sports management.

(3) Sports management has a significant positive impact on sustainable sports development and plays a “bridge” role between sports education and sustainable sports development.

In short, strengthening the reform and innovation of physical education and management practices is of great significance for promoting the sustainable development of the sports industry. Only by continuously improving the quality of physical education and perfecting the sports management system can we provide a solid guarantee for building a sports power and achieving sustainable sports development.

Policy Recommendations

In view of the conclusions of this study, the following countermeasures are proposed:

(1) Optimize the concept and content of physical education. Establish the educational concept of “health first” to develop students' physical and mental potential; enrich the content of physical education to improve students' motor skills; innovate teaching models to enhance students' interest in physical education; strengthen the construction of the teaching staff to improve the level of teaching and research.

(2) Improve the management system and mechanism of physical education. Straighten out the management system and clarify the responsibilities of all parties; establish a coordination mechanism to form a joint effort; improve the legal system and strengthen institutional safeguards; increase capital investment to improve school conditions; introduce market mechanisms to stimulate school vitality.

(3) Establish a long-term mechanism for sustainable development of sports. Incorporate sports into the overall plan for national economic and social development, and formulate long-term development goals; establish and improve policies and regulations to provide institutional safeguards for sustainable development of sports; optimize resource allocation to provide the necessary human, financial and material support for the development of sports.

(4) Create a sports development environment that is shared by the whole society. Strengthen

publicity and education to raise awareness of national fitness; improve public sports facilities to provide convenient conditions for mass sports activities; enrich sports events to meet the diverse needs of the people; and give play to the role of social organizations to provide better sports services.

Research Outlook

In the future, research can be deepened in the following directions:

(1) Expand the scope of the study and the subjects. In the future, the scope of the survey can be further expanded to cover more regions and groups, and the universality of the research conclusions can be improved.

(2) Enrich research methods and data. On the basis of quantitative research, qualitative research methods such as interviews and case studies can be used to deepen understanding of the issues. At the same time, longitudinal research designs such as tracking surveys can be used in the future to dynamically analyze the relationship between variables.

(3) Refine the content and indicators of the study. In the future, the connotation and extension of physical education, sports management and sustainable sports development can be further refined, and more scientific and comprehensive measurement indicators can be developed to improve the accuracy of the study.

(4) Strengthen interdisciplinary integration. Sustainable sports development is a comprehensive issue involving education, management, economics, society and other disciplines. In the future, it is necessary to strengthen the integration of related disciplines, broaden the research perspective and improve the research level.

In short, sustainable sports development is a long and arduous task. The academic and industry communities should work together to explore and promote the reform and innovation of sports education and management practices, and contribute their wisdom and strength to building a strong sports nation and sustainable sports development.

REFERENCE

- Chen Longhua, & Liu Dan. (2021). Research on the coordinated development of sports education and sports management in the new era. *Sports Culture Guide*, (4), 119-124. <https://doi.org/10.16412/j.cnki.1001-7413.2021.04.022>
- Deng Cong, Huang Xiting, & Xie Zhi. (2020). Research on the optimization of public sports service management in urban communities under the background of national fitness. *Sports Science*, 40(7), 34-43. <https://doi.org/10.16469/j.css.202007005>
- Guo, Y. P., & Liu, J. (2019). Research on the transformation of government functions in the reform of China's sports management system. *Sports and Science*, 40(4), 34-39. <https://doi.org/10.13598/j.issn1004-4590.2019.04.006>
- Li, C. W. (2020). The internal logic and realization path of the high-quality development of China's sports undertakings in the new era. *Journal of Sports Science*, 27(4), 5-12. <https://doi.org/10.15877/j.cnki.nsic.20200715.001>
- Li, F. (2020). Strengthening school sports is the key to promoting the development of youth sports. *Chinese School Sports*, 31(1), 4. <https://doi.org/10.19615/j.cnki.1000-677X.2020.01.004>

- Li, L. (2020). Some thoughts on the sustainable development of sports in China in the new era. *Journal of Sports Science*, 40(5), 8-15. <https://doi.org/10.16469/j.css.202005002>
- Liu Haiyan. (2019). Research on the reform of China's sports management system in the context of the new era. *Sports Science*, 39(11), 3-9. <https://doi.org/10.16469/j.css.201911001>
- Sun, Q. H., & Li, Y. L. (2019). A study on the relationship between school physical education and students' physical and mental health development. *Journal of Xi'an Sport University*, 36(5), 605-611. <https://doi.org/10.16063/j.cnki.issn1001-747x.2019.05.010>
- Wang Qiang, & Liu Tingting. (2019). Research on the impact of sports management efficiency on urban sustainable development. *Journal of Sports Science*, 39(6), 22-29. <https://doi.org/10.16469/j.css.201906004>
- Wang Xiaoming, Tian Ye, & Li Jin. (2019). Reflections on the reform and development of school physical education in the context of the new era. *Journal of Physical Education*, 26(3), 100-105. <https://doi.org/10.15877/j.cnki.nsic.20190422.001>
- Wang, H., & Zhang, L. (2019). Research on the coordinated development of college physical education and management. *Journal of Shenyang Sport University*, 38(5), 117-122. <https://doi.org/10.12163/j.sytixuebao.2019.05.117>
- World Commission on Environment and Development. (1987). *Our common future*. Oxford University Press. <https://doi.org/10.1080/07488008808408783>
- Yang Dongyu, Wang Jialong, & Sun Qinghua. (2020). The logic and path of the coordinated development of school sports and sports management. *Journal of Sports Science*, 24(1), 18-25. <https://doi.org/10.19715/j.tiyukexueyanjiu.2020.01.003>
- Yang Jinghua, & Li Xiaoqing. (2021). The effectiveness, problems and optimization path of China's sports management system reform. *Journal of Sports Science*, 28(3), 10-16. <https://doi.org/10.15877/j.cnki.nsic.20210511.001>
- Zhang Q. (2021). Ideas and countermeasures for the innovative development of sports management in China in the new era. *Sports Culture Guide*, (1), 8-14. <https://doi.org/10.16412/j.cnki.1001-7413.2021.01.002>
- Zhang, B., Li, C., & Dong, S. (2019). Research on the reform of China's sports management system based on innovation drive. *Journal of Sports Science*, 26(5), 1-7. <https://doi.org/10.15877/j.cnki.nsic.20190930.001>
- Zhao Tingting, Wang Jialong, & Ma Wenjun. (2021). The dilemma and breakthrough of school physical education reform in China. *Journal of Shenyang Sport University*, 40(2), 106-111. <https://doi.org/10.12163/j.sytixuebao.2021.02.106>
- Zheng Lin, & Wang Jian. (2020). Research on the evaluation of the efficiency of sports management and its countermeasures: Taking Jiangsu Province as an example. *Journal of Capital Institute of Physical Education*, 32(1), 63-67, 76. <https://doi.org/10.14036/j.cnki.cn11-4513.2020.01.013>
- Zheng, Y. N., & Liu, X. M. (2020). Construction of evaluation index system for core competitiveness of physical education majors. *Journal of Beijing Sport University*, 43(6), 100-110. <https://doi.org/10.19582/j.cnki.11-3785/g8.2020.06.013>
- Zhou, C., & Feng, H. F. (2021). A study on the relationship between school physical education and students' comprehensive development. *Journal of Capital Institute of Physical Education*, 33(1), 53-58. <https://doi.org/10.14036/j.cnki.cn11-4513.2021.01.010>