

Research Hotspots and Trends in China's Sports Industry from 2021 to 2025

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Abstract: This study investigates the trends and hotspots in China's sports industry from 2021 to 2025, with a focus on revealing significant aspects of this field in China and providing insights into its developmental trends within the academic realm. By utilizing VOSviewer 1.6.20(0) and Excel software, the research employs bibliometric analysis to comprehensively depict the academic landscape of recent trends and hotspots in China's sports studies. The findings underscore China's prominent role in this field, supported by 1,285 publications, and also highlight the substantial contributions of scholars such as Huang Haiyan, Shen Keyin, and Wang Jiahong.

Keywords: Sports industry; VOSviewer; research hotspot; research trend.

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Introduction

The sports industry is a complex and diverse field that involves a wide range of areas, including management, innovation, service industry development, corporate social responsibility, sustainable development, and clustering. This underscores that the high-quality development of China's sports industry hinges on reforming the system and mechanism, fostering service-industry growth, driving innovation, and promoting cross-border integration (Zhao et al., 2020).

In the post-pandemic era, the digital economy has emerged as a critical engine propelling the high-quality development of the sports industry (Ren & Huang, 2021). For instance, the deep penetration of the digital economy has significant impacted on the development of the sports industry, comprehensively promote the high-quality development of the sports industry in multiple dimensions (Ruan et al., 2022).

However, the sports tourism sector faces various challenges in its transformation and upgrading process. due to inadequate policy frameworks, regional disparities in digital economic progress, insufficient deep integration of digitization, and a shortage of versatile digital talents, the sector exhibits an irrational industrial structure, structural imbalances in both supply and demand, and a lack of momentum or industrial development. These factors significantly impact the high-quality development of the sports tourism industry (Li et al., 2022; Liao et al., 2024; Wang & Zhang, 2024).

The sports industry's digital transformation, characterized by rapid growth, strong diffusion, and significant cost-effectiveness (Ren,

2021) has garnered immense interest from both industry and academia. Numerous experts have conducted in-depth research on the digital transformation of the sports industry, covering multiple aspects such as the technology empowerment, industrial platforms construction (Wei et al., 2021), and the improvement of policy operation system (Lu, 2022). The "14th Five-Year Plan" is crucial for the sports industry to accelerate its growth into a pillar industry of the national economy and serves as an effective guarantee for achieving high-quality sustainable development (Jiang et al., 2022).

Consequently, based on the complementary characteristics of the digital economy and the sports industry, the integration has become an inevitable trend. Nevertheless, issues such as the limited application of digital technology and a shortage of digital talents within China's sports industry (Ren, 2021; Wei et al., 2022), indicate that further promotion of the digital transformation is needed.

Therefore, the concept of "Digital Sports + " has been proposed to more accurately describe the development model of the deep integration of the digital economy and the sports industry. Although the acceptance level of digital transformation in a few traditional sports fields is still relatively low, these fields still maintain close cooperation with the digital transformation process, anticipating achieving high-quality development.

Research Methods and Data Collection

Research Methods

VOSviewer as a tool for comprehensively examining clustering solutions utilizing visualization (Hassan-Montero et al., 2022; Vasudevan et al., 2016), Excel software is a powerful visualization



application that can immediately create charts from input data (Au & Rischpater, 2015). This study primarily utilizes VOSviewer 1.6.20(0) and Excel software for conducting bibliometric analysis and generating literature knowledge graphs (Ren & Abdullah, 2024)

Data Collection

This research collects data that were retrieved from the CNKI database. The selection criteria for the research data include the following: topic (sports industry), publication year (2021—2025), and keywords (sports industry; VOSviewer; research hotspot; research trend). After careful evaluation, the researchers obtained a total of 1,285 highly relevant documents. These documents were chosen specifically to conduct thorough visualization and analysis.

Table 1 displays the types of literature selected according to the criteria. The dominant type is "Peking University Core Journals," consisting of 1,258 items, or accounting for approximately 97.90% of the document count. Furthermore, there are 1,042 documents of Chinese Social Sciences Citation Index (CSSCI) classified as "priority published", accounting for about 81.90% of the overall number of documents. The "Chinese Humanities and Social Sciences Journal (AMI)" category includes 735 articles, accounting for approximately 57.20% of the total number of documents. The CNKI database index information for the 1,285 selected documents is provided in Table 1. The three CNKI database index categories with the highest number of records, ranked in descending order, were the Peking University Core Journals, Chinese Social Sciences Citation Index (CSSCI), and Chinese Humanities and Social Sciences Journal (AMI). In addition, Approximately 5.45 percent (70 documents) come from the WJCI. Moreover, about 2.18 percent (28 documents) were retrieved from the China Science Citation Database (CSCD). Additionally, approximately 0.08 percent (1 document) of the publications originate from the Engineering Index (EI).

The predominance for sports industry research in Peking University Core publications may be traced to the strong focus on social sciences in this field, which makes Peking University Core Journals the main platform for academic contributions in this field.

Table 1: CNKI Database Index Categories

CNKI Database Indexing	Record Count	% of 1,285
Peking University Core Journals	1,258	97.90
The Chinese Social Sciences Citation Index (CSSCI)	1,042	81.90
Chinese Humanities and Social Sciences Journals (AMI)	735	57.20
World Journal Clout Index in Science and Technology Journals (WJCI)	70	5.45
Chinese Science Citation Database (CSCD)	28	2.18
Engineering Index (EI)	1	0.08

Figure 1 illustrates the academic disciplines in the CNKI categories with more than 10 published documents. The field of development research boasts a substantial quantity of 299 documents, which surpasses other subject topics. This domain accounts for approximately 23.27% of all publications. Among all academic fields, the number of documents in applied research stands in second place with 267 documents, constituting roughly 20.78% of the total. The publication volume of development research-industry research ranks third, including 44 documents, which is approximately 3.40% of all. The publication volumes of applied research-industry research and development research-policy research are comparable and rank fourth, with 23 and 22 documents respectively, accounting for around 1.79% and 1.70% of the overall count.

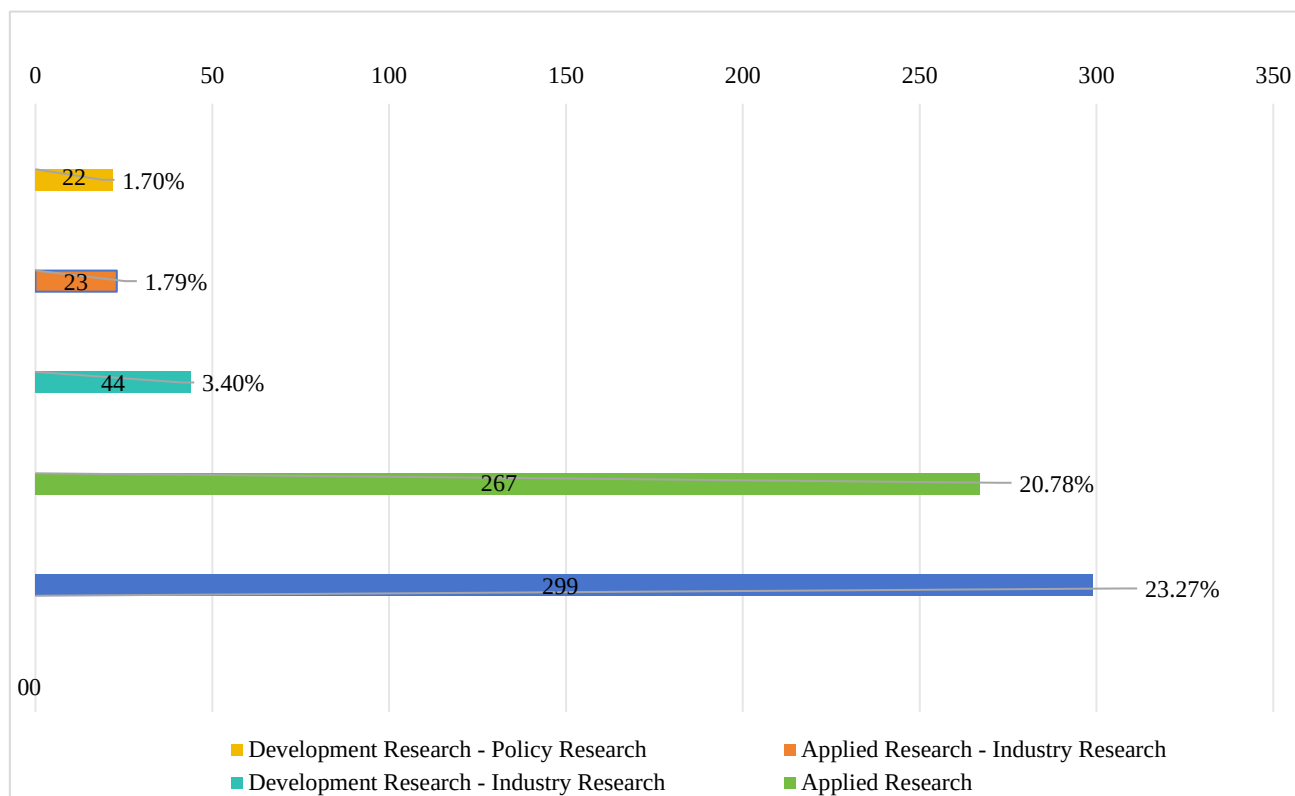


Figure 1. Document types

Results and Discussion

Analysis of Highly Contributing Universities

Figure 2 illustrates the top 10 central institutions with the most research publications, and includes clusters representing citation relationships. The size of the data points in the chart reflects the contribution to the documents, with the highest data points indicating a greater number of publications. Wuhan Sports University ranks in the top position with 120 publications, followed

by Shanghai University of Sport with 106 publications in second place, and Beijing Sport University is in third place with 90 publications. Additionally, Figure 2 depicts two distinct clusters denoted by different colors. The orange cluster highlights four institutions, namely Shandong University, Nanjing Sport Institute, Soochow University, and Central China Normal University, indicating close citation relationships among their publications. the green cluster showcases three institutions (Fujian Normal University, Tsinghua University, and Tianjin University of Sport) demonstrating strong citation connections among these publications.

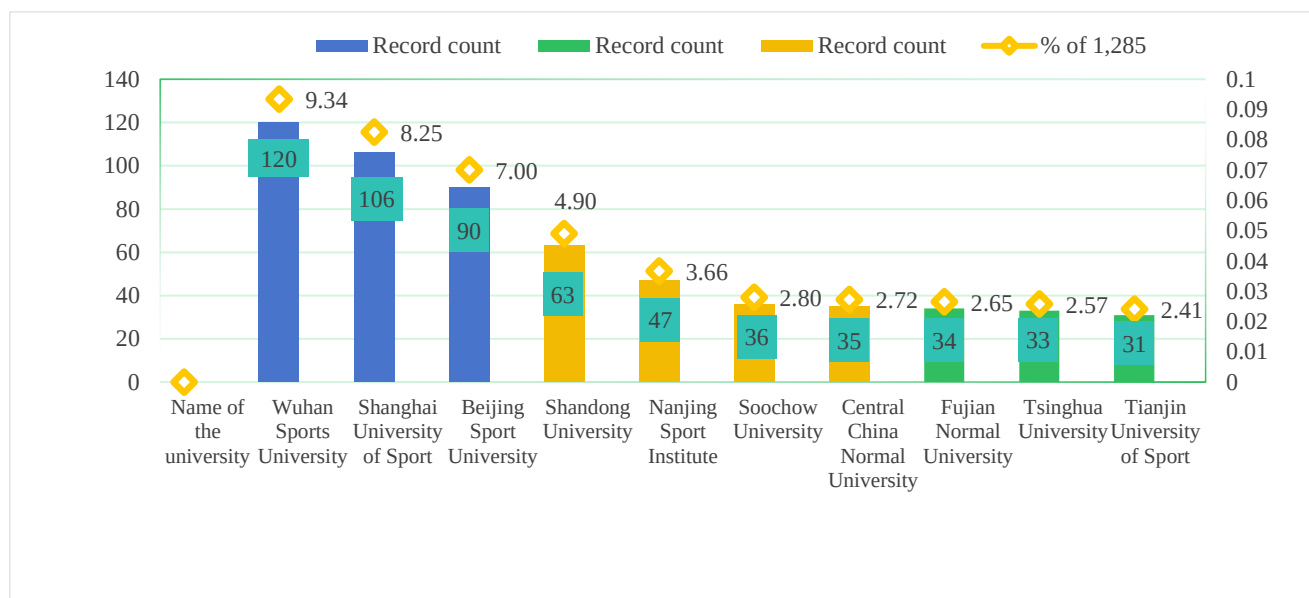


Figure 2. The top 10 Institutions with high publications volume and strong Citation relationship in Sports Industry Research

Analysis of High-Contributing Authors

Figure 3 showcases authors who have made significant contributions in the field of sports industry research, with each having published 181 or more relevant documents in this domain. Figure 4 illustrates the publication output of highly prolific author in this domain. Notably, Huang Haiyan has published 37 documents relevant to the sports industry. Shen Kevin has produced a total of 32 relevant

documents, while Wang Jiahong has contributed a total of 21 relevant papers. Ren Bo has published 19 documents, Zeng Xinfeng have published 11 documents, and Zhang Ruilin has published 15 documents. Thus, Wang Xianliang, Lv Wanggang, and Huang Xiaoling have also made notable contributions to sports industry research, indicating a strong probability that they possess expertise in this field of study.

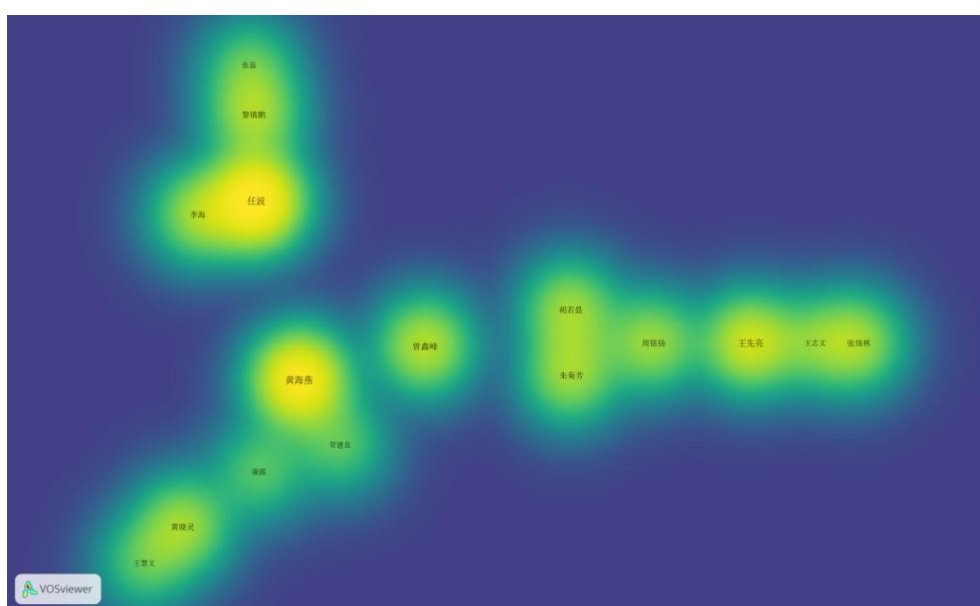


Figure 3. Authors contribution on Sports Industry Research

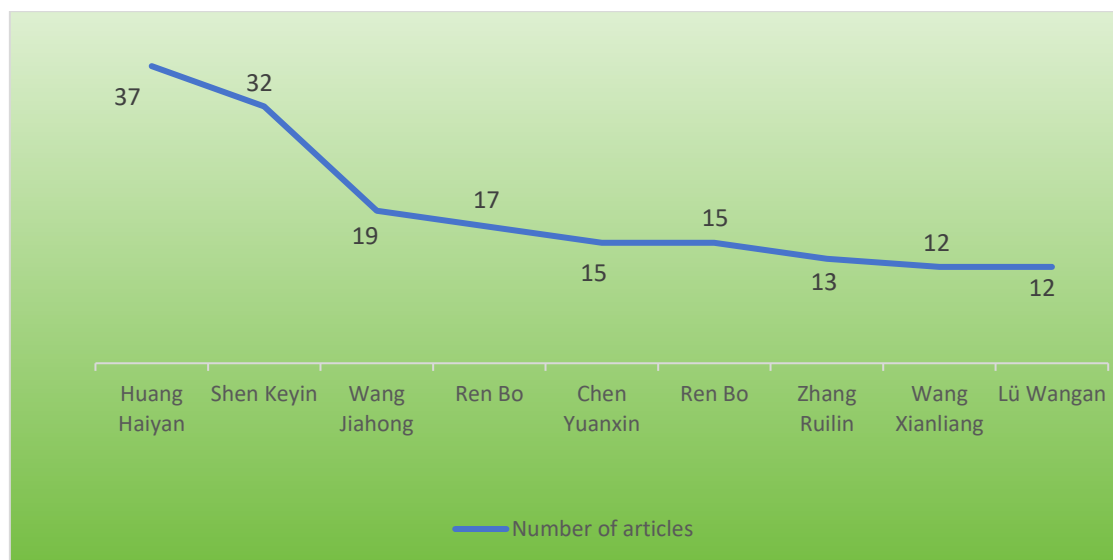


Figure 4. The most contributing authors to Sports Industry Research

Highly Cited Documents Analysis

Table 2 highlights the top 5 most cited academic articles on sports industry research within the CNKI database. The study by Ren and Huang (2021) focuses on the theoretical logic of high-quality development in the sports industry and addresses the practical dilemmas and solutions for leveraging the digital economy to drive the high-quality development of the sports industry at the macro -, meso -, and micro- levels. This article identifies existing obstacles hindering the development of the sports industry and proposes an implementation path of high-quality development driven by the digital economy.

The research article by Liu et al. (2021) delves into the role of the service industry in meeting the diverse physical education needs of Chinese adolescents in the new era. It analyzes the policy opportunities driven by economic reforms, governance objectives, life concepts, and growth philosophies. In response to the existing difficulties, they propose strategies for constructing a streamlined policy system (streamlining administrative procedures, delegating power, strengthening regulatory oversight, and improving services quality), a multi-governance system, a co-governance service system, and a digital system to facilitate the long-term development of the industry.

Huang and Kang (2022) conduct a systematic review of the research on the correlation between the theoretical logic and implementation paths of high-quality development in the new era sports industry. Their analysis reveals that the academic community highly emphasizes the dynamic evolution from sustainable "quantity" to "quality" for high-quality development of the sports industry. They also uncover a significant correlation between the overall requirements for the evolution at these three levels and theoretical and implementation paths.

However, the research by Yang (2022) centers on the opportunities and challenges of rural sports under the strategy of rural revitalization. It proposes seven strategies to promote the development of rural sports, enhance the physical fitness of farmers, and assist in rural revitalization.

Compared with other studies, the high citation rate of the paper by Ren and Huang (2021) may be attributed to several factors. Firstly, its authoritative source; secondly, continuous updates to maintain relevance; thirdly, the involvement of a distinguished panel of experts; a rigorous methodology; and finally, comprehensive coverage of various relevant topics within the scope of digital economy-driven high-quality development of the sports industry.

Table 2: Top 5 Most Cited Academic Articles on Sports Industry Research from the CNKI Database

Author (year)	Title	Documents type	Citation
Ren Bo and Huang Haiyan (2021)	Theoretical Logic, Practical Difficulties, and Implementation Paths of High-Quality Development of Sports Industry Driven by the Digital Economy	Article	187
Liu Mingyi et al. (2021)	Policy Opportunities and Governance Strategies for the Youth Sports Training Industry in China in the New Era	Article	172
Huang Haiyan and Kang Lu (2022)	Theoretical Logic and Implementation Paths for High-Quality Development of the Sports Industry in the New Era	Article	157
Shen Keyin et al. (2021)	Mechanisms, Practical Exploration, and Development Pathways of Digitalization in the Sports Industry in the Digital Economy Era	Article	141
Yang Hua (2022)	Problems, and Strategies for Rural Sports Development in Rural Revitalization	Article	140

Keyword Co-occurrence Analysis

Figure 5 showcases the co-occurrence network of keywords in sports industry research. The researchers defined the minimum number of co-occurrences for keywords as four times, which resulted in a total of seventy-three eligible keywords. Figure 5 displays nine distinct clusters, each identified by a different color.

The green-marked cluster one consists of ten keywords. Among them, the most crucial keywords are sports industry (total line strength = fifty-eight, occurrence frequency = two hundred and sixty-one), high quality (total line strength = six, occurrence frequency = six), and sports consumption (total line strength = three hundred and eighty-eight, occurrence frequency = eight hundred and sixteen).

Cluster two is represented by nine items in blue, highlights: Digital economy (total line strength = twenty-seven, occurrence frequency = eighty-one) as the most significant keyword among them. The second is digital transformation (total line strength = fifteen, occurrence frequency = forty-eight), and the third is sports goods manufacturing industry (total line strength = twelve, occurrence

frequency = nineteen). Cluster three, marked in purple, comprises eight items. The keywords include: new quality productive forces (total line strength = thirty-one, occurrence frequency = ninety-seven), high-quality development of sports industry (total line strength = six, occurrence frequency = seven), and technological innovation (total line strength = thirteen, occurrence frequency = twenty-seven). Cluster four, marked in pink, contains only one item, that is, rural sports (total line strength = five, occurrence frequency = ten).

By studying the co-occurrence of major keywords in each cluster, cluster one predominantly focuses on the relationship between the sports industry and sports consumption. Cluster two places its research emphasis on the digital economy and its impacts. Cluster three concentrates on exploring the relationship between new quality productive forces and the sustainability of technological innovation. The main research topic of cluster four likely revolves around the motivational aspects of rural sports. These research directions provide a coherent and structured framework, which facilitates an understanding of the unique contributions of each cluster within the field of sports industry research.

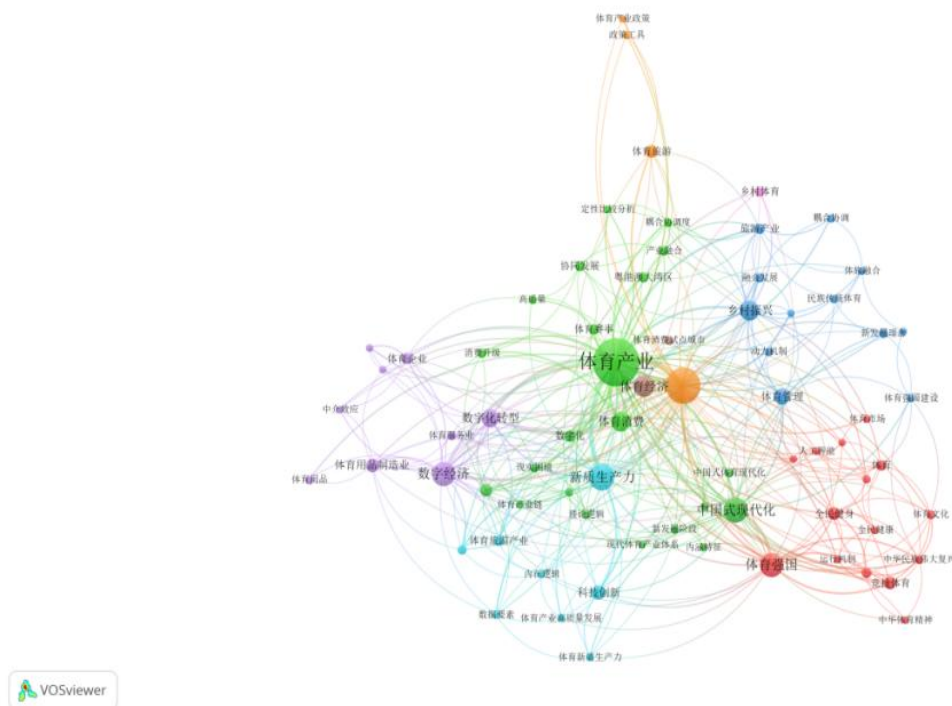


Figure 4. The keyword Co-occurrence network of the Sports Industry Research

Figure 6 illustrates the co-occurrence superimposed network of sports industry research. Through an analysis of this overlaid network, researchers have identified nine emergent terms: new quality productive forces (occurrences frequency = ninety-seven, average publication year: April, 2024). Based on the analysis of the

latest trending keywords shown in Figure 6, we can infer that current research in the sports industry is focused on areas such as the modern sports industry ecosystem, pragmatic approaches, theoretical underpinnings, and the pursuit of high-quality development within the sports sector. These research foci are poised to become prominent trends in the field in the coming years.

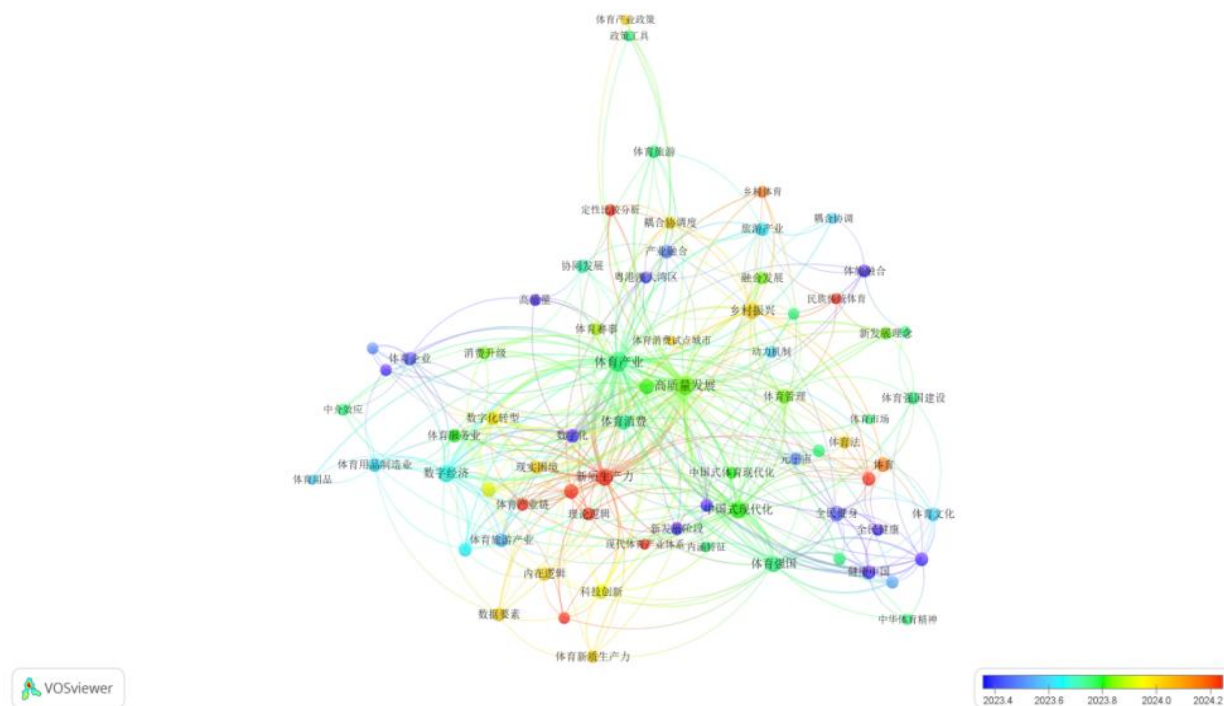


Figure 5. The keyword Co-occurrence overly Network of Sports Industry Research

Conclusion

Modernized Chinese sports industry occupies a leading position in the research of high-quality sports. Over the past few years, a total of 1,285 publications have been released, demonstrating its significant influence on high-quality sports research. The close citation relationships among specific keywords underscore the interconnectedness of sports industry research. Renowned scholars such as Huang, Shen, and Wang have all made substantial contributions. The high citation rate of the paper by Zeng et al. (2023) is attributed to its authoritative source, continuous updates, the participation of an outstanding expert group, rigorous methodology, and comprehensive coverage of various aspects of high-quality sports industry development.

In 2024, sports science scholars have shifted their focus to exploring nine main topics related to sports-industry keywords, including "practical approaches", "new quality productive forces", "qualitative comparative analysis", "common prosperity", and "theoretical logic". However, the focus of sports science researchers on "sports industry chain", "high-quality development of sports industry", and "modern sports industry system" is expected to shape future direction of the sports industry.

Although our assessment of the current research status of sports industry by sports science scholars is regarded accurate, it is important to acknowledge that relying solely on the CNKI database for data collection may have limited the scope of our study. In subsequent phases, researchers are encouraged to broaden the scope of data collection to ensure a more comprehensive analysis.

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