

# Research on Operation Risk Control and Overall Management Optimization of Campus Sports Events in Universities

Fanli Kong

*School of Sports Law, Shanghai University of Political Science and Law, Shanghai 201701, China*

**Abstract:** With the continuous implementation of the National Fitness Strategy, campus sports events serve as a core carrier for physical education teaching and campus cultural construction in universities. These events not only fulfill the educational mission of moral cultivation but also deliver certain social service values. In recent years, Chinese universities have hosted sports events with increasing frequency and expanding participation scales. Nevertheless, most higher education institutions suffer from defective operation systems, immature risk control mechanisms, and outdated overall management modes, which frequently trigger operational problems including hidden venue safety hazards, chaotic personnel allocation and inadequate logistical support. For the present research, sporting activities held by a number of comprehensive universities in China are selected as analytical samples. This paper adopts four primary research approaches including literature collation, case study, questionnaire investigation and on-site field research. It systematically classifies various hidden risks arising in the operation of campus sports competitions, explores the essential causes behind these risks, and summarizes the obvious defects in the overall event management system. Combined with the educational characteristics of different universities and the inherent operational logic of sports events, this paper constructs a standardized risk prevention framework and puts forward differentiated integrated management optimization measures. The empirical research results demonstrate that the operational risks of university sports competitions can be divided into five dimensions: safety guarantee, personnel arrangement, logistical support, capital operation and public opinion dissemination. The major risk triggering factors cover imperfect management systems, insufficient professional literacy of practitioners, defective emergency disposal plans and unreasonable resource allocation structure. Universities can effectively eliminate potential operational risks and improve overall management efficiency by revising regulatory provisions, building professional operation teams, standardizing event procedures, promoting digital technology application, and improving emergency response mechanisms. This research supplements the theoretical research system concerning the operation and management of university sports events, provides practical references for standardized event organization in institutions of higher education, and supports the high-quality and sustainable development of university sports undertakings.

**Keywords:** university campus; sports events; operational risks; risk control; overall management

## 1. Introduction

The reform of campus sports in China has been further advanced. Educational authorities require universities to hold sports events on a regular basis to enhance students' physical fitness and build a positive campus sports atmosphere. Supported by the continuous improvement of the university education system,

campus sports events have presented diversified forms. In addition to traditional track and field meets, ball game leagues, recreational sports activities and outdoor fitness challenges have witnessed a year-on-year growth in holding quantity. Such events are open to all teachers and students, and some are moderately accessible to the public with small-scale commercial operation attributes.

Distinct from professional sports events, university sports events are characterized by public welfare, mass participation and openness. Most events are organized by physical education departments and student sports associations. Restricted by limited professional resources and weak operational capacity, these events are faced with various uncertain risks. Meanwhile, high personnel mobility and frequent venue usage further increase the probability of operational hazards. In recent years, many domestic universities have encountered frequent problems during event activities, such as sports injuries, on-site disorder, insufficient logistical supplies and online public opinion disputes. These phenomena explicitly reveal the management loopholes in risk prevention and overall administration, which constitutes the core research background of this paper [1].

The research carries substantial theoretical and practical value. Within the academic research field, Chinese academic researchers have achieved abundant research outcomes concerning commercial sports competitions. Nevertheless, there remains a lack of systematic investigations targeting public welfare campus sports activities. Most previous studies are conducted from a solitary research dimension, failing to integrate risk prevention and holistic management for comprehensive analytical discussion. Guided by the theories of national fitness, event operation and risk prevention, this paper sorts out the internal operational logic of campus sports activities. It effectively compensates for existing research deficiencies and further improves the theoretical research framework of collegiate sports events.

In terms of practical application, this paper identifies common bottlenecks in event management through authentic case analysis. It develops generalized and implementable optimization plans to standardize event operational processes, mitigate potential operational hazards and elevate the overall organizational quality of sports activities. A sophisticated management framework is capable of improving the campus sports cultural atmosphere, fostering students' athletic accomplishment, and ultimately realizing the core educational objectives of university physical education courses.

Four research approaches are adopted throughout this paper. The first method is literature collation. Relevant academic publications are collected from databases such as CNKI and Wanfang Data. Official policy documents released by national sports and education administrative departments are also included, which collectively establish a reliable theoretical research basis. Secondly, the case analysis method: three public comprehensive universities and one private university in the province are selected as research samples to analyze management defects of school-level sports meetings and ball games from 2023 to 2025. Thirdly, the questionnaire survey method: a total of 600 questionnaires are distributed to event staff and participating teachers and students, with 572 valid questionnaires recovered and an effective recovery rate of 95.33%. Quantitative data is adopted to analyze existing management problems. Fourthly, the field investigation method: the researcher participates in the preparation, implementation and review of 12 campus sports events, records operational details, and obtains first-hand research data [2].

This paper has two major research innovations. From the research perspective, it breaks the limitation of traditional single-dimensional research on safety risks, classifies risks into five dimensions including safety, personnel, logistics, finance and public opinion, and conducts comprehensive analysis covering the whole event process, which conforms to the diversification trend of modern university sports events. In terms of practical achievements, differentiated hierarchical management schemes are formulated according to the schooling characteristics of public and private universities. The schemes balance universality and practicality and solve the problem of poor implementation of traditional academic research results.

## **2. Definition of Relevant Concepts and Interpretation of Basic Theories**

### *2.1. Definition of Relevant Concepts*

Campus sports events in universities refer to various sports activities organized by university administrative departments and student associations relying on on-campus sports venues and supporting facilities. Targeting

teachers and students as the main participants, these activities aim at sports competition, fitness entertainment and cultural communication, covering both formal competitive events and recreational sports activities.

Event operational risks mean the possibility of adverse incidents including personal injury, property loss, event suspension and negative public opinion diffusion. Human errors, environmental fluctuations and institutional imperfections jointly trigger these adverse accidents throughout the whole lifecycle of sports activities, covering pre-event preparation, on-site execution and post-event closure stages [3].

The integrated governance of sports events is defined as a systematic administrative practice. Administrators consolidate manpower, physical supplies, capital funds and informational resources by means of planning, organization, coordination and supervision. These regulatory measures aim to standardize operational workflows and guarantee the steady progress of sports activities. Such management mechanisms cover the full-cycle procedures including preliminary preparation, on-site implementation and post-event retrospective assessment.

## *2.2. Interpretation of Basic Theories*

The Total Risk Management Theory stresses full-cycle risk detection, evaluation and disposal. Researchers can build standardized management mechanisms to lower the occurrence possibility of potential risks and mitigate subsequent losses. In this study, the theory is adopted in every operational link of campus sports activities to construct a complete lifecycle-based risk prevention and control system.

As for Process Optimization Management Theory, it prioritizes procedure streamlining and resource consolidation to boost overall management efficiency. This theoretical method restructures and optimizes the workflows of pre-event preparation, on-site execution and post-event settlement. It removes unnecessary redundant procedures so as to improve the comprehensive management level of campus sports events [4].

Human Capital Management Theory lays stress on the standardized administration of event staff, participants and logistical workers. Clear job division and professional training programs can effectively solve the common deficiency of inadequate professional capabilities among university event practitioners. These three theoretical foundations are mutually complementary, providing solid support for the argumentation analysis and strategic formulation of this research.

## **3. Current Operation Situation and Typical Case Analysis of Campus Sports Events**

### *3.1. Basic Operation Situation of Events*

Based on the collected questionnaire statistics, the surveyed collegiate institutions stage an average of 8 to 15 diverse sports activities every year. Ball competitions and track-and-field gatherings boast the highest hosting frequency, making up 72.45% of all recorded activities. In terms of organizational operators, university physical education divisions initiate 68% of these events. Student sports associations independently undertake 22% of the activities, while the remaining projects are jointly hosted under university-enterprise collaborative partnerships.

Regarding staffing arrangements, on-site operational personnel are predominantly undergraduates. Professional sports management specialists constitute fewer than 15% of the total staff, and the majority of these professionals have not obtained standardized vocational training. In terms of resource allocation, public universities are equipped with complete sports venues and sufficient event funds, whereas private universities generally suffer from aging facilities and capital shortages. In terms of management modes, over 90% of universities still adopt traditional manual management with low utilization of digital management tools. Cumbersome procedures and experience-dependent risk detection lead to low control accuracy.

### *3.2. Analysis of Typical Event Cases*

Two typical events of a public University A and a private University B are selected for comparative analysis.

**Case 1:** The 2024 Spring Track and Field Meeting of University A involved more than 2300 teachers and students and 260 staff members. In the preparation stage, the university failed to conduct comprehensive venue safety inspection, and the damaged plastic runway was not repaired in a timely manner. During the competition, a student fell and got bruised in a sprint race. The insufficient first-aid supplies and slow response of medical staff aggravated

the on-site emergency situation. In addition, loose management of spectator areas caused random crossing of the track, resulting in temporary event delay. Post-event review confirmed multiple defects including incomplete risk inspection mechanisms, ambiguous personnel division and imperfect emergency plans [5].

**Case 2:** The 2024 Campus Basketball League of private University B was independently organized by student associations. Event funds came from association dues and small-scale merchant sponsorship. The event was plagued by chaotic financial accounts and non-standard material procurement approval. Insufficient professional proficiency among student referees once sparked confrontations between competing teams. Recorded clips of the conflict spread across short-video platforms and triggered adverse public sentiment on campus, which compelled the event to suspend for internal rectification.

These two typical cases reveal pervasive drawbacks in sports activities held by both public and private universities. The incidents distinctly expose latent loopholes in risk prevention mechanisms and systematic management defects, which provide considerable empirical reference value for relevant academic research.

### *3.3. Summary of Existing Operational Problems*

Drawing on questionnaire data and practical case analyses, this study identifies four prominent drawbacks in the current operational system of collegiate sports events. To begin with, universities have adopted defective risk supervision frameworks. The absence of standardized inspection protocols targeting safety hazards, public sentiment trends and capital risks results in poor emergency disposal capabilities. Moreover, disorganized holistic management persists throughout event workflows. Unreasonable pre-event planning commonly causes uneven distribution of manpower, supplies and time resources; on-site supervision remains lax, while a standardized post-event review mechanism has not been put in place. In addition, operational staff show obvious professional deficiencies. Without standardized vocational training, these practitioners fail to meet the competency requirements for hosting sports activities. Finally, the university suffers from inefficient resource distribution. Such deficiency is reflected in non-standardized capital supervision, delayed venue maintenance work and the underutilization of digital management technologies.

## **4. Classification and Cause Analysis of Operational Risks in Campus Sports Events**

### *4.1. Classification of Event Operational Risks*

This paper classifies potential hazards in campus sports events into five types according to their occurrence contexts and threat levels.

Safety-related hazards occur frequently and can cause severe damage. Typical examples include athletic injuries among competitors, stampedes and tumbling accidents among spectators, functional breakdowns of sports facilities, as well as sudden extreme weather conditions.

Personnel management hazards tend to disrupt on-site order. These problematic situations consist of ambiguous job allocation, erroneous referee judgments, confrontations between participants, and uncontrolled spectator movements.

Logistical guarantee hazards cover various service deficiencies, such as insufficient medical reserves, inadequate drinking water provision, unqualified catering sanitation and campus traffic congestion.

Financial operational hazards involve irregular capital management behaviors, including unbalanced budget allocation, falsified procurement documents, chaotic sponsorship fund supervision, and non-standard expense reimbursement procedures.

Online public opinion hazards deserve widespread attention. On-site clashes, controversial judgments and safety accidents are easily recorded and disseminated on digital platforms. The rapid spread of negative online comments may tarnish the public reputation of educational institutions.

### *4.2. Analysis of Risk Formation Causes*

Collegiate safety hazards stem from inadequate institutional attention to event security. Pre-event inspections for stadiums and sports equipment are often conducted superficially, while outdated facilities fail to

receive timely maintenance. In addition, tailored safety plans for different sporting competitions remain vacant, and emergency response protocols for extreme weather and sudden physical injuries are far from comprehensive. Furthermore, a majority of students lack safety consciousness and adopt non-standard warm-up routines before competitions, which greatly raises the probability of physical injuries [6].

Personnel-related hazards are mainly attributed to the operational team composition. Most on-site staff are untrained student volunteers with ambiguous work allocation and lax on-site supervision mechanisms. Flawed evaluation systems for referees result in uneven professional competency, which raises the likelihood of athletic confrontations during competitions.

Unscientific logistics planning constitutes the primary cause of logistical vulnerabilities. Relevant departments seldom calculate material consumption based on actual participant quantities. Medical teams are understaffed with scarce first-aid supplies, and unreasonable functional zoning blurs the physical boundaries among competition zones, spectator zones and rest areas.

For financial hazards, the majority of universities lack exclusive capital management regulations for sports events. This situation gives rise to simplistic budget drafting and unmonitored fund expenditure. Non-transparent accounting of university-enterprise sponsorship funds further causes capital waste and fraudulent expense claims.

The emergence of public opinion hazards is linked to defective campus information monitoring systems, as no specialized staff are assigned to manage on-site public sentiment. Delayed official feedback for emergencies accelerates the viral spread of negative information. Meanwhile, lenient regulation on students' online remarks enables unchecked dissemination of unconfirmed event footage, which further magnifies adverse public impacts.

## **5. Optimization Strategies for Overall Management of Campus Sports Events**

### *5.1. Improve Management Systems and Build Standardized Control Mechanisms*

Colleges and universities should update the internal management regulations for campus sports activities based on their institutional circumstances and event attributes. Standardized full-lifecycle management criteria ought to be formulated covering event application, preliminary preparation, on-site execution and post-event review. Such reforms aim to standardize auditing workflows, regulate capital expenditure and unify safety supervision specifications [7].

A tiered governance framework is recommended for institutional management optimization. Public universities are advised to build dedicated management teams for large-scale sports gatherings and intercollegiate tournaments. By contrast, private educational institutions can simplify auditing procedures for medium and small-scale events to achieve efficient streamlined governance. Additionally, it is essential to improve the existing supervision and evaluation mechanism. This mechanism is designed to assess the working performance of event operators, referees and logistical staff. Evaluation outcomes can be integrated into students' comprehensive competency assessment and teachers' job performance appraisal, effectively strengthening individual accountability. Detailed account records of material procurement, capital flow and personnel scheduling need to be retained to realize traceable whole-process event management.

### *5.2. Optimize Personnel Allocation and Build Professional Operation Teams*

Universities should build composite operation teams consisting of professional teachers, outstanding student volunteers and external professionals. Professional teachers from physical education departments serve as chief directors to coordinate overall work; responsible and experienced students undertake on-site executive work; professional referees and medical personnel are hired for large-scale events to improve team professionalism.

A regular pre-event training mechanism shall be launched to carry out special training on safety control, emergency response and communication coordination. Referees must pass professional assessment on competition rules and judgment standards before taking office. Clear job division should be implemented to set up special groups for overall coordination, safety management, logistics support, medical rescue and public opinion monitoring. Collaborative operation can avoid personnel redundancy and overlapping work.

### *5.3. Standardize Operational Procedures and Implement Full-Cycle Management*

Universities need to optimize pre-event preparation procedures. Event plans should be completed 30 days in advance with clear definition of event time, venues, participants and budgets. Multi-department joint risk inspections shall be conducted by security, medical and logistics departments to repair damaged facilities and reserve sufficient emergency supplies.

On-site implementation procedures require standardized management. Functional venue areas should be clearly divided with isolation barriers and warning signs, and special staff shall be arranged to maintain on-site order. Extreme weather conditions require an immediate halt to ongoing sports activities. Streamlined workflows for participant registration, on-site check-in and score recording are capable of boosting overall operational efficiency [8].

A standardized post-event summary system serves as an indispensable part of event governance. Administrative departments are suggested to organize internal evaluation meetings within three days after each activity to identify operational deficiencies and accumulate practical empirical experience. Timely completion of venue sanitation, material recovery and financial settlement is also required. All statistical records and event documents should be properly filed to provide empirical guidance for subsequent sports activities.

### *5.4. Regulate Finance and Logistics to Consolidate Event Operation Foundation*

Colleges are advised to allocate exclusive fiscal budgets for campus sports activities from a financial governance perspective. Rational budgeting procedures should be implemented to rigorously regulate spending on material purchasing, staff allowances and venue upkeep. Transparent procurement mechanisms help curb fraudulent reimbursement applications and unnecessary capital losses. All sponsorship revenues must be recorded in independent accounts with explicit usage boundaries, accepting long-term oversight from institutional financial departments.

For logistical assurance services, material consumption ought to be precisely estimated based on participant numbers. Such preparation guarantees adequate reserves of drinking water, medical supplies and protective gear. Universities can cooperate with internal medical centers to build temporary aid stations manned by professional medical personnel, alongside formulated rapid response protocols for athletic injuries. Reasonable campus traffic layout and designated parking zones can effectively relieve traffic congestion during event periods.

### *5.5. Integrate Information Technology and Upgrade Intelligent Management Modes*

In response to the evolving digital trends in modern education, higher education institutions ought to construct a digitalized governance platform for on-campus sports competitions. This multifunctional system covers participant registration statistics, staff administration, real-time scoring, data disclosure and risk pre-warning modules. It serves as an effective substitute for conventional manual statistical work and minimizes man-made data deviations.

Monitoring devices and intelligent temperature measuring instruments shall be installed in sports venues to monitor personnel flow and venue environment in real time, identifying potential hazards such as crowd aggregation and high temperature risks. An intelligent public opinion monitoring system should be established with special staff to screen negative comments on social media and short video platforms. Timely official responses are required to curb the spread of negative public opinion. Universities can release official event information through campus public accounts and short video platforms to guide positive public opinion and shape a sound campus sports culture image.

## **6. Research Conclusions and Development Prospects**

### *6.1. Research Conclusions*

Taking university campus sports events as the research object, this paper conducts risk and management research based on real cases, and draws the following conclusions. Firstly, domestic university sports events maintain a steady development trend with diversified event types and expanding participation scales. However,

prevalent problems include defective management systems, under professional teams, unreasonable resource allocation and insufficient informatization. Secondly, campus sports event risks are classified into five categories: safety, personnel, logistics, finance and public opinion. Institutional loopholes, personnel deficiencies, resource imbalance and backward management constitute the major risk inducements. Thirdly, universities need to optimize overall management from five dimensions: system construction, personnel cultivation, process supervision, logistical guarantee and technological application. A full-cycle risk prevention and control system together with standardized operational procedures can reduce event risks and improve organization quality. Scientific management schemes not only ensure smooth event holding, but also optimize campus sports atmosphere and help universities achieve the core goal of physical education.

### 6.2. Research Deficiencies and Prospects

The research samples are limited to universities within a single province, leading to regional restrictions and certain limitations of research conclusions. Future studies can expand the research scope to cover universities in different regions and at different levels to enrich research achievements. In addition, this paper lacks in-depth analysis on large-scale inter-university sports events, and follow-up research can formulate differentiated control schemes based on refined event classification standards.

In the long run, campus sports events will develop towards specialization, intellectualization and diversification. Universities should continuously improve event control systems, cultivate professional talents, promote information technology application, and build high-quality characteristic campus sports event brands. Meanwhile, closer cooperation between universities, local institutions and enterprises should be strengthened to integrate external resources. These measures can accelerate the standardized and industrialized development of campus sports events and inject youthful vitality into the National Fitness cause.

### Funding

This research received no external funding.

### Institutional Review Board Statement

Not applicable.

### Informed Consent Statement

Not applicable.

### Data Availability Statement

Not applicable.

### Conflicts of Interest

The author declares no conflict of interest.

### References

- 1 Xie J, Zhang Z. Potential Risks and Preventive Measures of University Football Events in China. *Stationery & Sports Science and Technology*, 2024; (12): 40–42.
- 2 Li M. Research on Value Logic, Practical Dilemma and Practice Path of Brand Construction of University Basketball Leagues. *Bulletin of Sport Science* 2025; (12): 164–167.
- 3 Shen H. Research on Risk Management Strategies and Effectiveness Evaluation of Campus Sports Events. *Wuhun* 2025; (3): 176–178.
- 4 *Administrative Measures for Sports Events*; General Administration of Sport of China: Beijing, China, 2022.
- 5 *Basic Standards for Physical Education in Institutions of Higher Education*; Ministry of Education of the People's Republic of China: Beijing, China, 2021.

- 6 Lin Q. Research on the Construction of University Sports Competition Management System under the Background of Digital Transformation. *Journal of Adult Education College of Hebei University* 2026; (1): 20–24.
- 7 Guo S. Dilemmas and Optimization Paths of Digital Technology in Improving the Operational Efficiency of Sports Events. *Stationery & Sports Science and Technology* 2026; (1): 16–18.
- 8 Zhang Y, He Y. Empirical Research on High-Quality Integration of Sports and Education Driven by Large-Scale Sports Events—A Case Study of the First National Youth Three Major Ball Games Sports Meeting. *Bulletin of Sport Science* 2026; (2): 115–118.

© The Author(s) 2026. Published by Global Science Publishing (GSP).



This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<https://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.