

ISSN 1005-0256

CN11-3262/G8

BULLETIN OF SPORT SCIENCE & TECHNOLOGY



# 体育科技

## 文献通报

国家体育总局主管

国家体育总局体育信息中心主办

# 6

2022年

第30卷

总355期

ISSN 1005-0256



万方数据



# 体育科技文献通报

Bulletin of Sport Science & Technology

(月刊)

主管:国家体育总局  
主办:国家体育总局体育信息中心  
编辑:国家体育总局体育信息中心  
声像和书刊资源部  
出版发行:《体育科技文献通报》编辑部

主编:李业武  
副主编:李桂华  
执行主编:王金羽  
执行副主编:解文华 朱雷  
中英文总审:朱雷  
编务:于小兰

本期责编:解文华  
电话:010-87183063

地址:北京东城区体育馆路11号  
邮政编码:100061  
电话:010-87183011  
传真:010-87183061  
官网地址:<http://www.sport.gov.cn/tykjwxtb/>  
投稿邮箱:[tiyutongbao@sina.com](mailto:tiyutongbao@sina.com)  
国外发行:中国国际图书贸易总公司  
国外发行代号:M1984  
印刷者:廊坊市洪峰印刷有限公司

国际标准连续出版物号:ISSN 1005-0256  
国内统一连续出版物号:CN 11-3262/G8  
期刊出版许可证京期出证字第8262号  
广告许可证:京东工商广字第8067号

2022年第30卷第6期(总第355期)  
2022年6月20日出版  
定价:全年180元 单册:15元

# CONTENTS

## 目 录

### 竞技体育

- 1 北京冬奥会速度滑冰成绩分析及备战米兰冬奥会发展策略研究  
..... 孙秀洁,于杰,赵鲁南,等
- 4 陕西省竞走重点青少年运动员动作技术及肌肉用力特征研究  
..... 蒋秋艳,王敏,张明军
- 7 全国残疾人运动会聋人男篮比赛特点及制胜因素分析..... 王清梅
- 13 基于Logistic 回归模型网球男子单打运动员不同盘次制胜因素  
分析..... 欧阳高煌,李品芳,陈建才
- 17 运用Omegawave 对山西省摔跤运动员进行赛前身体机能状态监控  
..... 刘珂,邵彤
- 19 2022年北京冬奥会挪威选手的竞技表现与启示..... 董晔
- 21 北京冬奥会花样滑冰女单自由滑动作编排与成绩分析  
..... 刘莉,付洪志,李兆进
- 25 北京冬季奥运会短道速滑团体混合接力赛事成绩分析..... 赵世伟
- 29 北京冬奥会视域下我国竞技冰雪运动项目发展路径研究..... 魏青哲
- 32 北京冬奥会中国队竞技成绩综合分析..... 王亚茹
- 35 北京冬奥会对我国冰雪体育文化传承与发展的影响  
..... 罗寿贵,陈冰茹,孙宇斌,等
- 38 2022年亚洲杯女足冠军中国队进球特征分析..... 庞丽婷,叶展辰
- 41 国际田径短、跨、跳项目运动员成绩增长规律及年龄特征研究  
..... 车慧惠
- 45 第50届世界体操锦标赛女子比赛简析..... 沈英历,杨扬继翔,郭晨晨
- 48 国际优秀投掷运动员成绩提升规律和发展趋势研究..... 王亚琨
- 51 国际投掷项目竞争格局发展趋势及应对策略研究..... 江梦楠
- 56 日本、卡塔尔足球运动员归化的发展历程、运作逻辑和经验启示  
..... 李煜天,车旭升,何凤娟
- 61 男子单打网球比赛中运动员体能消耗情况与比赛胜负相关指标的  
分析..... 白振涛
- 66 男子足球运动员腰腹屈伸肌群生物力学特征  
..... 李兴惠,满喜,郑松玲,等
- 68 比较优势理论下北京冬奥会中国队优势项目分析  
..... 张金菊,王铁新
- 72 创伤后心理干预方法在运动员损伤后心理健康干预中的应用  
..... 赵蕾
- 76 科技助力田径赛事智能化运营的功能设计和应用研究  
..... 周亦雷,秦国防
- 80 自由式滑雪世界竞争格局与中国竞技实力分析..... 杨明宽,史晓昀
- 84 MAS 间歇训练对国家摩托艇障碍回旋运动员专项耐力影响效果的  
研究..... 高兴鹏
- 87 中国高水平跳跃项目运动员成绩发展趋势及成长轨迹分析  
..... 彭珍珍,敬龙军
- 90 我国跆拳道优秀运动员左菊技战术应用特征分析  
..... 张子夏,邓军文,卢贵颖



### 群众体育

- 93 少数民族体育在参与民族地区文化治理中的发展路径研究 ..... 吕俊杰, 王晓晨, 马少坤, 等
- 96 公共体育投入视阈下群众体育需求的内化研究 ..... 桑云鹏
- 100 CBT 在促成大众运动行为形成中的应用 ..... 杨博, 杨龙, 刘易

### 学校体育

- 104 新时代体教融合协同发展的价值意蕴、地方实践与推进路径 ..... 徐剑, 刘芳枝, 沈友青
- 107 体教融合背景下日本足球后备人才培养模式与启示 ..... 王浩, 阿迪力江·色里木, 阿力木江·依米提·塔尔肯
- 116 21 世纪以来我国幼儿体育研究热点 ..... 赵莹莹, 高治
- 118 运动成瘾行为对大学生身体健康的利弊分析 ..... 杨佳璇, 翟连林
- 120 基于 CIPP 模式的体育教育专业课程思政评价指标体系构建 ..... 臧淑秀, 孙锋
- 125 重庆市乡村体育师资学科核心素养的构建培养体系及实施路径研究 ..... 王晓林, 隆承宏, 刘礼, 等
- 131 花样跳绳练习对 8-9 岁小学生体质健康的影响研究 ..... 袁卫华, 张娅
- 135 高校公共体育课线上教学模式的研究与实践 ..... 刘晓红, 刘威, 范开江
- 139 中华体育精神融入高校体育课程思政建设的时代意蕴及路径研究 ..... 张学军, 何亚丽
- 143 着眼竞技、着力融合、着重实践 ..... 李世明, 于文兵, 于涛, 等
- 146 基于深度学习的大学生体质监测成绩预测研究 ..... 黄彩云, 何吉福, 胡艺, 等
- 151 冲破传统: 建构主义体育教学论的时代之势 ..... 厉中山
- 156 无氧运动训练对体育专业大学生心率变异性的影响 ..... 钟玉情, 王艳杰, 吕永志, 等
- 160 篮球和有氧运动干预对改善大学生智能手机成瘾症状和心理健康状况的影响 ..... 廖子彦, 麦郑子丰, 陈正杰
- 163 高校信息化体育教学研究综述: 基于 CiteSpace 的对比 ..... 李华南
- 168 云手动作的运动学分析与体育教学启示 ..... 韦伟南, 周娟, 杨震, 等
- 172 学校体育安全保障管理评价体系构建及改进 ..... 钱洵, 孙锋, 周秋婷, 等
- 175 “双减”新政背景下学校体育课后服务的策略研究 ..... 栾楠, 陈培友
- 180 体育运动对高中生学习成绩影响综述 ..... 姜瑞婷

### 体育产业

- 187 1997-2021 年国家社科基金中体育经济学研究立项分析 ..... 宋荣荣, 李文杰, 李洁贤
- 190 基于 PLS-SEM 结构方程模型的大众滑雪消费意愿影响因素实证研究 ..... 蔺晨羿, 吴一帆, 黄平嫦, 等
- 194 政策工具视角下我国冰雪运动实施计划内容研究 ..... 吴楼, 云玲
- 198 收益法视域下体育赛事新媒体转播权价值研究 ..... 何少扬
- 202 冬奥会、城市和旅游的系统性文献综述 ..... 宋然, 郑志强

### 其他研究

- 209 HIIT 与 LIAT 两种不同训练对肥胖男性大学生减肥效果的对比研究 ..... 杨帆, 魏彦青, 向羽, 等
- 212 太空中的体医融合: 基于运动锻炼的失重防护 ..... 王子牛, 李小涛, 周敏, 等
- 216 基于知识图谱的低温运动对机体影响研究特征与热点演化 ..... 李铮, 彭丽娜, 孙莉莉
- 221 延安时期红色体育研究述评 ..... 刘玲, 吴国斌, 李智
- 226 媒体报道框架对我国马拉松参与者风险认知的影响研究 ..... 刘国庆, 郭兆霞, 谭晓英
- 230 我国运动心理学研究的可视化分析 ..... 张瑞瑞
- 233 低氧/高原训练对免疫机能和炎症反应影响的研究进展 ..... 杨健, 康伟, 周炜娟
- 237 完美主义与运动表现的关系研究及进展 ..... 车旭升, 陆姗姗
- 243 我国电子竞技尚存争议综述 ..... 周春乐, 徐迎芮
- 247 基于心率负荷模型的篮球项目量化训练监控研究: 模型、应用、局限与建议 ..... 张志勇, 张明洋, 秦子晴, 等
- 253 不同材质地面跳深运动生物力学特征对比研究 ..... 林奕贯, 潘旭, 郑哲
- 257 运动对肌少症肌卫星细胞通路的影响研究 ..... 廖锦雯, 房冬梅
- 261 不同骨骼肌肥大训练模式与增长肌肉力量的关系研究 ..... 张晋滔
- 265 原花青素对机体运动能力的影响 ..... 易颖, 唐瑶函
- 268 从身体流转到场景再构: 元宇宙能否以虚兴实赋能体育 ..... 刘文鑫, 童棵
- 272 II 型糖尿病综合干预的模型构建 ..... 高艺博, 张彦峰, 潘祥, 等
- 279 基于双重差分模型下举办体育赛事对城市经济的影响研究 ..... 王宾, 李俊明

## Contents

### Elite Sport

Research on the Performance of Speed Skating Teams in Beijing Winter Olympic Games and the Development Strategy of Preparing for Milan Winter Olympic Games .....	Sun Xiujie, Yu Jie, Zhao Lunan, Liu Li, Wang Yaru, Luo Wen(1)
Research on the Movement Techniques and Muscle Strength Characteristic of Young Elite Race Walkers in Shaanxi Province .....	Jiang Qiuyan, Wang Min, Zhang Mingjun(4)
An Analysis of the Characteristics and Winning Factors of Deaf Men's Basketball Competition in the National Disabled Games .....	Wang Qingmei(7)
An Analysis of the Winning Factors of Tennis Men's Singles Players in Different Sets based on Logistic Regression Model .....	Ouyang Gao Huang, Li Pinfang, Chen Jiancai(13)
Pre-competition Physical Function Monitoring of Wrestlers in Shanxi Province using Omegawave .....	Liu Ke, Shao Tong(17)
Competitive Performance of Norwegian Athletes in the 2022 Beijing Winter Olympics and its Enlightenment .....	Dong Ye(19)
Choreography and Performance Analysis of Women's Singles of Figure Skating in Beijing Winter Olympics .....	Liu Li, Fu Hongzhi, Li Zhaojin(21)
Performance Analysis of Short Track Speed Skating Mixed Team Relay Competitions in Beijing Winter Olympic Games .....	Zhao Shiwei(25)
Research on the Development Path of China's Competitive Ice and Snow Sports from the perspective of Beijing Winter Olympic Games .....	Wei Qingzhe(29)
A Comprehensive Analysis of the Performance Results of the Chinese Team in the Beijing Winter Olympics .....	Wang Yaru(32)
The Influence of Beijing Winter Olympic Games on the Inheritance and Development of Ice and Snow Sports Culture in China .....	Luo Shougui, Chen Yongru, Sun Yubin, Yang Dongming(35)
An Analysis of the Goaling Characteristics of 2022 Asian Cup Women's Football Champion Chinese Team .....	Pang Liting, Ye Zhanchen(38)
Research on the Performance Growth and Age Characteristics of International Athletics Athletes in Sprint, Hurdle and Jump Events .....	Che Huihui(41)
A Brief Analysis of Women's Events in the 50th World Gymnastics Championships .....	Shen Yingli, Yang Yangjixiang, Guo Chenchen(45)
Research on the Performance Improvement and Development Trend of International Elite Throwing Athletes .....	Wang Yakun(48)
Research on the Development Trend and Countermeasures of the International Competition in Throwing Events .....	Jiang Mengnan(51)
The Development Process, Operation Logic and Experience of Japanese and Qatari Football Players' Naturalization .....	Li Yutian, Che Xusheng, He Fengjuan(56)
An Analysis of the Physical Consumption of Players in Tennis Men's Singles Matches and the Indicators related to Match Outcomes .....	Bai Zhentao(61)
Biomechanical Characteristics of Lumbar and Abdominal Flexor and Extensor in Male Soccer Players .....	Li Xinghui, Man Xi, Zheng Songling, Tang Xingyu(66)
An Analysis of Chinese Team's Advantages in Beijing Winter Olympics under the Comparative Advantage Theory .....	Zhang Jinju, Wang Tiexin(68)
Application of Post-traumatic Psychological Intervention on Athletes' Mental Health after Injuries .....	Zhao Lei(72)
Research on Function Design and Application of Technology-assisted Intelligent Operation of Athletics Events .....	Zhou Yilei, Qin Guoyang(76)
An Analysis of the World Competition Pattern of Freestyle Skiing and China's Competitive Strength .....	Yang Mingkuan, Shi Xiaoyun(80)
Research on the Effect of MAS Interval Training on the Specific Endurance of Chinese Motorboat Obstacle Slalom Athletes .....	Gao Xingpeng(84)
An Analysis of the Performance Development Trend and Growth Track of Chinese Elite Jumping Athletes .....	Peng Zhenzhen, Jing Longjun(87)
An Analysis of the Application Characteristics of Techniques and Tactics of An Outstanding Chinese Taekwondo Athlete Zuo Ju .....	Zhang Zixia, Deng Junwen, Lu Guiying(90)

### Sport for All

Research on the Development Path of Ethnic Minority Sports in Participating in Cultural Governance in Minority Areas .....	Lv Junjie, Wang Xiaochen, Ma Shaokun, Yang Yu(93)
Research on the Internalization of Sport-for-all Demand from the Perspective of Public Sports Investment .....	Sang Yunpeng(96)
Application of CBT in Promoting the Formation of Mass Sports Behavior ——Based on a Cross-theoretical Model .....	Yang Bo, Yang Long, Liu Yi (100)

### Physical Education

The Value Implication, Local Practice and Promotion Path of the Integrated Development of Sports and Education in the New Era .....	Xu Jian, Liu Fangzhi, Shen Youqing(104)
Training Mode of Japanese Football Reserve Talents under the background of Sports-education Integration and its Enlightenment .....	Wang Hao, Adilijiang Serimu, Alimujiang Yimiti Tarken(107)
Research Hotspots of Early Childhood Sports in China since the 21st Century ——Research on Knowledge Mapping Based on Co-word Analysis .....	Zhao Yingying, Gao Zhi(116)
An Analysis of the Advantages and Disadvantages of Sports Addiction Behavior on College Students' Health .....	Yang Jiaxuan, Zhai Lianlin(118)
Construction of Ideological and Political Evaluation Index System for Physical Education Professional Courses Based on CIPP Model .....	Zang Shuxiu, Sun Feng(120)
Research on the Construction of the Training System and the Implementation Path of the Core Capabilities of the Rural Physical Education Teachers in Chongqing .....	Wang Xiaolin, Long Chenghong, Liu li, Zhong Meilan(125)
Research on the Effect of Rope Skipping Exercises on the Physical Health of 8-9 Years Old Primary School Students .....	Yuan Weihua, Zhang Ya(131)
Research and Practice on Online Teaching Mode of Public Physical Education Courses in Colleges and Universities .....	Liu Xiaohong, Liu Wei, Fan Kaijiang(135)

# Bulletin of Sport Science & Technology

- Research on the Implication and Pathway of Integrating Chinese Sports Spirit into the Ideological and Political Education of College Sports Curriculum ..... Zhang Xuejun, He Yali (139)
- Focusing on Competition, Fusion and Practice  
——Research on the Curriculum System and Teaching Mode of “Scientific Monitoring in Sports Training”  
..... Li Shiming, Yu Wenbing, Yu Tao, Li Shuoqi, Men Minghao (143)
- Research on the Prediction of College Students’ Physique Monitoring Performance based on Deep Learning  
..... Huang Caiyun, He Jifu, Hu Yi, Wang Nan, Chen Pei (146)
- Breaking the Tradition: The Trend of the Times of Constructivism Physical Education Theory ..... Li Zhongshan (151)
- Effect of Anaerobic Exercise Training on Heart Rate Variability of Sports Majors in Colleges and Universities  
..... Zhong Yuqing, Wang Yanjie, Lv Yongzhi, Chi Aiping (156)
- Effects of Basketball and Aerobic Exercise Intervention on Improving Smartphone Addiction and Mental Health of College Students  
..... Liao Ziyang, Mai Zhengzifeng, Chen Zhengjie (160)
- A Review of the Research on Information-based College Physical Education: A Comparison based on CiteSpace  
..... Li Huanan (163)
- Kinematics Analysis of Yunshou Movement and its Inspiration for Physical Education  
..... Wei Weinan, Zhou Juan, Yang Zhen, Cai Ju, Li Xiaopeng (168)
- Construction of the Evaluation System for School Sports Safety Guarantee Management  
..... Qian Xun, Sun Feng, Zhou Qiuting, Huang Hanli (172)
- Research on the Strategy of After-school Physical Education Service under the background of “Double Reduction” Policy  
..... Luan Nan, Chen Peiyu (175)
- An Overview of the Influence of Sports on the Academic Performance of Senior High School Students  
——Mediating Role of Mental Wandering ..... Jiang Ruijing (180)

## Sport Industry

- An Analysis of Sports Economics Research Projects approved by the National Social Science Fund from 1997 to 2021  
..... Song Rongrong, Li Wenjie, Li Jiexian (187)
- An Empirical Study on the Influencing Factors of Mass Ski Consumption Willingness based on PLS-SEM Structural Equation Model  
..... Lin Chenyi, Wu Yifan, Huang Pingchang, Dong Zhihan (190)
- Research on the implementation plan of Ice and snow Sports in China from the Perspective of Policy Tools  
..... Wu Lou, Yun Ling (194)
- Research on the Value of New Media Broadcasting Right of Sports Events from the Perspective of Income Approach  
..... He Shaoyang (198)
- A Systematic Literature Review of the Winter Olympics, Cities and Tourism ..... Song Ran, Zheng Zhiqiang (202)

## Miscellaneous Research

- A Comparative Study on the Effect of HIIT and LIAT Training on Weight Loss of Obese Male College Students  
..... Yang Fan, Wei Yanqing, Xiang Yu, Chen Yong, Qu Jingshan, Zhao Yongjun (209)
- Integration of Sports and Medicine in Space: Weightlessness Protection based on Sports  
..... Wang Ziniu, Li Xiaotao, Zhou Min, Zhang Jianfeng, Gao Yuan (212)
- Research Characteristics and Hotspot Evolution of Low Temperature Exercise on the Body based on Knowledge Graph  
..... Li Zheng, Peng Lina, Sun Lili (216)
- A Review of Red Sports Research during Yan’an Period ..... Liu ling, Wu Guobin, Li Zhi (221)
- Influence of Media Reporting Framework on Risk Perception of Marathon Participants in China  
——A Case Study on 2021 Gansu Baiyin Marathon Accident ..... Liu Guoqing, Guo Zhaoxia, Tan Xiaoying (226)
- Visualized Analysis of Sports Psychology Research in China ..... Zhang Ruihui (230)
- Research progress on the Effects of Hypoxia/Altitude Training on Immune Function and Inflammatory Response  
..... Yang Jian, Kang Wei, Zhou Weijuan (233)
- Research Progress on the Relationship between Perfectionism and Sport performance ..... Che Xusheng, Lu Shanshan (237)
- A Review of Controversies Remaining in E-sports in China ..... Zhou Chunle, Xu Yingrui (243)
- Research on Quantitative Training Monitoring of Basketball Events based on Heart Rate Load Model: Application, Limitations and Suggestions  
..... Zhang Zhiyong, Zhang Mingyang, Qin Ziqing, Sun Jian, Xie Hezhi (247)
- A Comparative Study on Biomechanical Characteristics of Deep Jumping on Grounds with Different Materials  
..... Lin Yiguan, Pan Xu, Zheng Zhe (253)
- Research on the Effect of Exercise on Muscle Satellite Cell Pathway in Sarcopenia ..... Liao Jinwen, Fang Dongmei (257)
- Research on the Correlation between Different Skeletal Muscle Hypertrophy Training Modes and Muscle Strength Increase  
——A Comparative Experiment based on Sarcomere Hypertrophy and Sarcoplasmic Hypertrophy ..... Zhang Jintao (261)
- Effects of Proanthocyanidins on the Exercise Capacity of the Body ..... Yi Ying, Tang Yaohan (265)
- From Physical transformation to Scene Reconstruction: Can the Metaverse Empower Sports with Virtual Reality?  
..... Liu Wenxin, Tong Ke (268)
- Modeling of Comprehensive Interventions for Type II Diabetes ..... Gao Yibo, Zhang Yanfeng, Pan Xiang, Jiang Lupei (272)
- Research on the Impact of Hosting Sporting Events on Urban Economy based on Double Difference Model ..... Wang Bin, Li Junming (279)

## BULLETIN OF SPORT SCIENCE & TECHNOLOGY

Vol. 30, No. 6, Jun. 2022

Administrated by General Administration of Sport of China

Sponsored by China Sport Information Center

Edited by Editorial Department of Bulletin of Sport Science & Technology

Address: 11 Tiyyuguan Road, Beijing, P. R. China

ZIP Code: 100061

Tel: 86-10-87183011/Fax: 86-10-87183061

E-mail: tiyutongbao@sina.com

- 国际体育信息联合会会员单位
- 加拿大国际体育文献数据库合作单位

- 《中国学术期刊综合评价数据库》来源刊
- 《中国期刊网》来源刊
- 《中国学术期刊（光盘版）》全文收录期刊
- 《中国期刊全文数据库》全文收录期刊
- 《中国学术期刊网络出版总库》全文收录期刊
- 《万方数据网络系统----数字化期刊群》入网期刊
- 《中文科技期刊数据库》全文收录期刊



# 体育科技文献通报（月刊）

## Bulletin of Sport Science & Technology

1993年创刊

国际标准连续出版物号 ISSN 1005-0256

国内统一连续出版物号 CN 11-3262/G8

期刊出版许可证字第8262号

广告经营许可证：京东工商广字第8067号

国内定价：每册15元 全年180元 每月20日出版 国外发行代号：M1984