前 言

本刊主要收录 Web of Science 核心合集数据库有关体育教育、奥林匹克教育、体育人工智能、体医融合、文化与新闻传播、冰雪运动等领域的最新研究成果。

Web of Science 核心合集包括 Science Citation Index Expanded (SCIE)、社会科学引文索引 (SSCI)、艺术和人文引文索引 (AHCI)、Emerging Sources Citation Index (ESCI)、Conference Proceedings Citation Index (CPCI)、Book Citation Index (BKCI) 等，是科学及学术研究的全球原创引证索引。其涵盖超过 250 个自然科学、社会科学、艺术和人文学科。

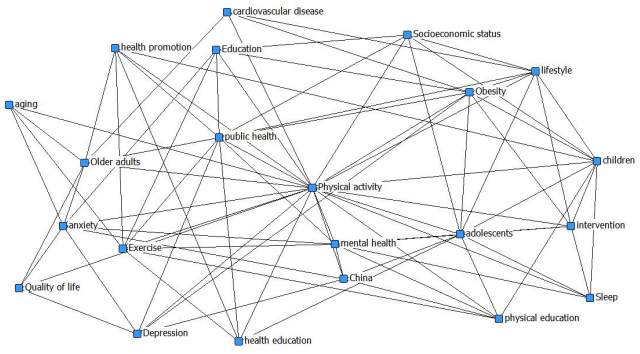
本刊旨在利用 Web of Science 核心合集平台为广大师生提供有关目前热点的最新研究内容。检索导出的数据采用书目共现分析系统（Bicomb V2021）对文献信息进行提取，包括期刊、关键词、标题、发文年份等，相同含义的字段去重且批量合并，同时去除没有实质意义的字段，对所提取的字段进行频次统计，形成高频矩阵，并使用社会网络分析软件 Ucinet 绘制成知识图谱，进行共词聚类分析。

本期选录体育教育方面的文献 11 篇，奥林匹克教育方面的文献 7 篇，体育人工智能方面的文献 14 篇，体医融合方面的文献 11 篇，文化与新闻传播的文献 10 篇，冰雪运动方面的文献 10 篇。

目　录

体育教育

本期体育教育学术研究共检索到英文相关文献 590 篇，研究热点主要集中在体育教育教学的障碍与改进方法、体育教育与体育素养和体育活动之间的关系、体育教学法与体育活动和体育课程设计的实践研究、体育课程教学创新、体育教育中的体能测试、农村学校体育教育研究等。检索结果：1）关键词共词分析。提取关键词 2989 个，经过数据清洗后关键词有 2087 个，词频为 4 及以上的关键词有 67 个，累计百分比为 21.88%，高频关键词有体育活动、教育、体育教育、久坐、练习、成年人、青少年，生成可视化知识图谱（见下图）。2）来源期刊分析。涉及期刊 308 种，其中载文 5 篇及以上的期刊有 18 种，累计百分比为 35.42%，刊载体育教育相关内容前三位的期刊分别为：BMC PUBLIC HEALTH（JCR 学科分区 Q1），FRONTIERS IN PUBLIC HEALTH（JCR 学科分区 Q1，Q1），HEALTHCARE（JCR 学科分区 Q2，Q2）。3）交叉学科分析。引用文献总计 30587 篇，最多的频次为 31 次，排名前三位的文献分别为 *World Health Organization 2020 guidelines on physical activity and sedentary behavior*、*Global trends in insufficient physical activity among adolescents: a pooled analysis of 298 population-based surveys with 1.6 million participants* 、*International physical activity questionnaire:: 12-country reliability and validity*。4）学术关注度分析。文献级别用量最多的是 77 次，排名前三位的文献分别为 *Air pollution increases the risk of frailty: China Health and Retirement Longitudinal Study (CHARLS)* 、*The Influence of Perceived Autonomy Support on Physical Activity Among High School Students: The Mediating Roles of Basic Psychological Needs*、*The impact of parental psychological control on adolescents' physical activity: the mediating role of self-control and the moderating role of psychological capital*。



Durden-Myers EJ, Evans E. Teacher Perceptions of Physical Literacy Informed Physical Education: The Barriers and Potential Solutions[J]. JOURNAL OF TEACHING IN PHYSICAL EDUCATION, APR 2025.

ABSTRACT

Purpose: Physical literacy is becoming a key framework for promoting physical activity across sectors globally, particularly in physical education. This research explores how this emerging concept can be operationalized through professional development (PD) and examines teacher perceptions of barriers and solutions to embedding physical literacy in practice. Method: A 12-week PD participatory action research intervention was conducted in three U.K. schools (one primary and two secondary) with primary generalist teachers (n = 3) and secondary physical education specialists (n = 11). Semistructured interviews captured teacher perceptions before, after, and 3 months postintervention. Thematic analysis organized data on barriers and solutions. Results: Teachers identified barriers in four areas: leadership and governance, management and institutional, individual, and philosophy and values. Solutions focused on raising physical education's status and improving PD opportunities. Discussion/Conclusion: The research highlights the influence of school cultures in developing physical literacy. Effective PD must consider these as well as real-life challenges to achieve lasting impact.

ZhangXX, Yun JK. The Relationship Between High-Quality Physical Education, Physical Literacy, and Physical Activity Participation: A Retrospective Study From US College Students[J]. RESEARCH QUARTERLY FOR EXERCISE AND SPORT, APR 2025.

ABSTRACT

Physical education (PE) participation at school age is suggested to increase physical activity levels in adulthood. However, there is a limited understanding of the underlying mechanism in this relationship between PE and physical activity (PA).

This study aimed to examine how the quality of PE in high school is associated with future physical activity engagement in young adulthood and whether physical literacy is a mediator in this relationship. A group of 280 college students (62.1% women; Mage = 20.09, SD = 2.04) were recruited from 11 universities in the United States. The students filled out an online survey measuring the quality of PE in high school, leisure-time physical activity, and physical literacy. A path analysis revealed a good fit of the mediation model with sex as a covariate (chi 2/df = 1.73, p = .02; CFI = 0.99; IFI = 0.99; TLI = 0.98; RMSEA = 0.05, 90% CI [0.02, 0.08]). Quality of PE has a significant direct association (beta = 0.12) with physical activity and an indirect association with physical activity through physical literacy (beta = 0.05). The findings illustrate that high-quality high school PE is associated with physical activity directly and indirectly through physical literacy. It is critical to provide high-quality high school PE by addressing the environment, curriculum, instruction, and assessment to develop physical literacy and physical activity participation. Improving physical literacy through high-quality PE and other settings (e.g., school sports and community clubs) is a viable way to promote PA participation.

Wälti M, Schole L, Gerlach E, et al. Basic Motor Competencies and the Amount of Physical Education in European Primary School Children[J]. JOURNAL OF SPORTS SCIENCES, JUN 2025.

ABSTRACT

Children show large differences in their basic motor competencies (BMC), which are key learning objectives of physical education (PE) and serve as a foundation for participating in school-based and extracurricular sports. While individual determinants, including age, sex, and extracurricular physical activity, are known to consistently predict BMC, studies investigating the role of structural aspects of PE on children's BMC levels are lacking. This study examined whether weekly PE time is associated with differences in BMC levels in children across Europe, beyond

individual factors. Endogenous (age, sex, body-mass-index), exogenous (participation in ball or individual sports) and structural factors (amount of weekly PE) along with BMC values (object movement and self-movement, tested with the MOBAK-1-2 and MOBAK-3-4) were assessed in 4291 6- to 10-year-old children (50 % girls) in twelve European countries. Hierarchical regression models revealed that individual factors were consistent predictors of BMC, but no associations were found between the amount of PE and BMC. These results indicate that other PE aspects may be more indicative of differences in BMC than the amount of PE. The significant role of extracurricular sports underscores the importance of analysing and promoting the availability of such activities.

Lin WC, Chen CF, Liu CC. Towards Inclusive Pedagogies in Bilingual Health and Physical Education: Taiwanese Teachers' Practices and Students' Experiences[J]. SPORT EDUCATION AND SOCIETY, MAY 2025.

ABSTRACT

To enhance Taiwan's economic competitiveness, a national bilingual education policy was implemented in primary and secondary schools in 2018. In secondary schools, Health and Physical Education (HPE) courses has been considered well-suited for incorporating the Content and Language Integrated Learning (CLIL) approach, as physical activity enables the integration of English through movement-based interactions. However, exploration of the feasibility of bilingual HPE has been limited. Arguably, integrating the bilingual policy within HPE courses may accelerate both subject and English learning or, conversely, exacerbate subject learning and inequalities in learning English. Drawing on Vygotsky's sociocultural approach to learning [Vygotsky, L. S. (1978). Mind in society. Harvard University Press. https://doi.org/10.2307/j.ctvjf9vz4], this study explores the consequences of implementing bilingual education in the context of secondary school HPE. It examines students' situated learning experiences and teachers' practices in

implementing the newly designed bilingual Sports and Health materials in a Taiwanese senior high school PE classroom. Two PE teachers, one Taiwanese and one American, along with a class of 27 students, participated in this seven week study. Data were collected through questionnaires, observations of classroom teaching and learning and interviews. The data were analysed to explore teachers' instructional practices and students' engagement with the materials. The study's findings revealed that the use of culturally responsive pedagogies (CRP), including translanguaging strategies that acknowledge students' linguistic and cultural resources, facilitated meaningful HPE learning. However, issues of inequality in the implementation of the bilingual policy were also identified and require further attention. This study generated findings that have pedagogical and methodological implications for future practice and research in HPE, particularly in bilingual settings.

Rodrigues AIC, Marttinen R, Banville D, et al. A Game-Based Approach to Teaching Combative Activities for Children in Pedagogical Context[J]. PHYSICAL EDUCATION AND SPORT PEDAGOGY, MAY 2025.

ABSTRACT

Background Combative activities have the potential to provide multiple positive benefits to youth and engage practitioners in lifelong physical activity. Additionally, game-based approaches (GBA) promote more enjoyable, meaningful, and challenging experiences for youth compared to approaches traditionally used for teaching games but have not yet been empirically tested with combative activities.Purpose The objective of this study is to present combative activities as games in pedagogical contexts.Process Using social learning spaces (Wenger, Etienne, and Beverly Wenger-Trayner. [2020. Learning to Make a Difference: Value Creation in Social Learning Spaces. Cambridge University Press.]), five martial arts instructors from a large national-level social services organization in Brazil and the

first author co-developed a Tactical Games approach to teaching combative activities to 7-10-year-old children. We propose combative activities as games and as an additional game classification. The proposal highlights the tactical dimensions based on the document co-developed with expert martial arts instructors who taught 10 lesson plans (40 total) for: judo, Brazilian jiu-jitsu, karate, and taekwondo. Furthermore, the authors met to discuss and refine the proposed combative activity classification and subclassifications. Observation of lesson plans was used for the fidelity test.Results We define the game principle, or main objective, of combative activities as the act of subjugating the opponent to end the combat. We explain the key elements that should be part of an activity to be considered as a combative activity and present subclassifications of combative activities as follows: (a) actions without implements that can be grappling (throws and groundwork) or striking activities, (b) forms, and (c) actions with implements. Tactical problems and questions are highlighted to support coaches and teachers in lesson planning to improve students' tactical understanding and skills regarding combative activities.Conclusion The current proposal has strength in the collaborative approach among experts used to test, reflect, and refine a GBA expanding the game classification with combative activities. The resources provided can support educators in developing their curriculum to teach this lifelong PA through a pedagogical approach that has the potential to be more enjoyable and meaningful to youth.

Velickovic S, Kolar E, Paunovic M, et al. The Impact of An Acrobatics-Based Curriculum on Motor Fitness in Adolescents[J]. LIFE-BASEL, MAY 13 2025, vol.15, issue 5.

ABSTRACT

(1) Background: This study aimed to examine whether an experimental acrobatics curriculum, conducted three times a week, could lead to greater improvements in

specific components of motor fitness-coordination, balance, agility, and speed-compared to the standard physical education program; (2) Methods: The research was conducted over a 16-week period and included 50 seventh-grade students, divided into an experimental group (EG, n = 25) and a control group (CG, n = 25). The experimental group participated in a program of acrobatics and skipping twice a week, while the control group followed the standard physical education curriculum. Motor skills tests were administered before and after the intervention using standardized methods; (3) Results: Results from the ANCOVA analysis showed significant improvements in flexibility, coordination, balance, and agility in the experimental group, with large effect sizes, confirming the effectiveness of the acrobatics and skipping program. However, the impact on speed was variable, indicating the need for specific exercises to improve this ability; (4) Conclusions: The findings are consistent with previous research, highlighting the superiority of specialized acrobatic exercises in enhancing overall motor performance in adolescents. Further research is needed to optimize acrobatics and skipping programs for maximum benefits in the development of motor skills and physical education.

Jarno ML. A Didactic Approach to the Adjustments Involved in Physical and Sports Education. Comparison of Examples on the Use of Forms-Representations in the Teaching of Throws in Athletics[J]. PHYSICAL EDUCATION AND SPORT PEDAGOGY, APR 2025.

ABSTRACT

PurposeThis study explores didactic interactions between a teacher and students during physical and sports education (PSE) lessons, focusing on real-time adjustments within joint action. Anchored in the Joint Action Theory in Didactics (JATD), it examines how forms-representations mediate the teacher's pedagogical intentions and students' actions in the teaching of shot put and discus. Using a

comparative analysis, the research investigates how teachers and students dynamically co-construct knowledge by adapting to the specific contingencies of the situations.Methods The research adopts a case-study approach, analyzing teacher-student interactions and the evolution of students' throwing motion. Data collection includes classroom observations, video recordings of teaching sequences, and interviews with the teacher and students. The analysis focuses on didactic and technical adjustments, examining the forms-representations employed and the transactional dynamics that emerge in the teaching-learning process.Findings The study reveals critical insights into joint action dynamics. A central finding is the teacher's ability to direct students' attention and bodily engagement through real-time adjustments. These adjustments often involve adapting speech and gestures to connect abstract principles, such as body alignment or acceleration transfer, to the specific demands of the tasks. Immediate feedback from students enables the teacher to refine his approach, ensuring alignment with students' comprehension capacities and motor engagement.Another significant finding is the evolution of forms-representations. Iterative cycles of instruction, practice, and feedback refine these metaphorical representations, which play a key role in aligning students' actions with the teacher's pedagogical goals. This alignment enhances skill acquisition and shapes students' learning practices.The type of athletic activity (here shot put or discus), also significantly influences teacher-student interactions. Each activity's unique physical and cognitive demands compel the teacher to adopt flexible strategies, tailoring interventions to the specific challenges posed by each context. This adaptability underscores the importance of context-sensitive teaching approaches to foster effective learning outcomes.Findings The study reveals critical insights into joint action dynamics. A central finding is the teacher's ability to direct students' attention and bodily engagement through real-time adjustments. These adjustments often involve adapting speech and gestures to connect abstract principles, such as body alignment or acceleration transfer, to the specific demands

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effective learning outcomes.Discussion This research emphasizes the effectiveness of collaborative learning, adaptive teaching, and didactic metaphors in teaching throwing techniques in PSE. Interactions foster knowledge and skill acquisition, aligning with Bakhtin's (1984) perspective on learning as a dialogical process. Digital tools, like video analysis, provide immediate feedback, promoting learner autonomy and deeper movement understanding (Jastrow et al. 2022). Adaptive teaching, rooted in differentiated instruction (Tomlinson 2014), addresses diverse student needs, creating supportive learning environments. Didactic metaphors help students internalize complex concepts by linking technical actions to familiar imagery (Lakoff and Johnson 1980). Together, these strategies enhance cognitive and practical learning, highlighting the value of co-constructed knowledge. This study reinforces the importance of personalized pedagogy and didactic interaction in improving teaching-learning processes, suggesting further exploration of these methods in diverse PSE contexts.Conclusion This research advances understanding of joint action in PSE, highlighting the critical role of real-time didactic adjustments and forms-representations in co-regulating learning. By illustrating the interplay between the teacher's strategies and students' responses, it refines the application of the JATD framework and offers practical insights to improve teaching practices in PSE. The findings underscore the importance of flexible, context-sensitive teaching approaches that support both conceptual understanding and skills development.

van Hyfte E, Coppens E, Sasanguie D, et al. Obstacle Course-Based Versus Traditional Physical Education: Which Promotes More Physical Activity and Less Sedentary Behaviour[J]. EUROPEAN PHYSICAL EDUCATION REVIEW, APR 2025.

ABSTRACT

Physical education (PE) offers an optimal setting for promoting higher moderate-to-vigorous physical activity (MVPA) and reducing sedentary behaviour

(SB). This study examines the MVPA and SB among elementary schoolchildren during an obstacle course-based PE lesson and compares it to a traditional PE lesson, with the same students participating in both conditions. Moreover, it explores how gender, age and intrinsic motivation for PE relate to time spent in MVPA and SB during PE. A sample of 251 children within 24 classes in grades 1, 3 and 5 participated in this study. ActiGraph GT3x accelerometers monitored their PA during PE, while the Behavioral Regulations in Physical Education Questionnaire assessed their motivation for PE. Multi-level regression analyses indicated that MVPA was significantly higher ($p < 0.001$) and SB was significantly lower ($p < 0.001$) during an obstacle course-based PE lesson compared to the traditional PE lesson. Boys exhibited higher MVPA ($p < 0.001$) and lower SB ($p < 0.001$) than girls, with no notable grade differences. Intrinsic motivation was positively associated with MVPA ($p = 0.04$). These findings suggest that children displayed higher MVPA and lower SB during the obstacle course-based PE lesson when compared to their traditional PE lesson. It could be a practical and effective strategy for improving PA behaviours, though future interventions should explore long-term impact, sustainability, and how class factors such as classroom management and teacher behaviours relate to MVPA and SB.

Madsen KL, Svendsen AM, Volshoj ES, et al. Six Teaching Strategies to Support Meaningful PE Experiences in Early Primary Schools - Results from An Action Research Project[J]. PHYSICAL EDUCATION AND SPORT PEDAGOGY, APR 2025.

ABSTRACT

BackgroundIn recent years, there has been a growing interest in research on meaningful physical education (PE) that aims to establish pedagogical principles to foster pupils' meaningful experiences in PE. However, few studies have explored meaningful PE among early primary school pupils. The present study seeks to

provide insights into how meaningful PE can be implemented in this age group. Against that background, it explores what supports meaningful experiences for pupils in early primary schools in Denmark.Method The study draws on a theoretical framework of enactive cognition that revolves around embodiment, intersubjectivity, intentionality and affectivity. It applies action research involving practitioners' experiences and visions to develop new teaching strategies for meaningful PE and change practices in early primary schools. The empirical basis consists of field notes from workshops and observations of PE classes where teaching strategies were tried out by teachers. In total, the study comprises 21 summaries from workshops and 70 field notes from teaching observations. The data analysis of the ethnographic field notes adopts a thematic approach. The study is a collaborative effort between the Danish School Sports Association, VIA University College, University of Southern Denmark and four Danish public schools.Results The findings comprise six teaching strategies: (i) broadening the curriculum, (ii) the body as a teaching resource, (iii) narratives, (iv) experimental approaches, (v) framing the PE class and (vi) 'just-right' challenges. They grow out of PE practices and are thus based on the everyday work of teachers in schools, which will help make future implementation more likely.Conclusion The teaching strategies for meaningful PE in early primary school presented in this paper represent a shift towards more inductive teaching principles that support freedom, curiosity, creativity and a desire to experiment that can support meaningfulness in early primary school pupils. The findings contribute to existing principles and features of meaningful PE with an attentiveness to how bodily involvement plays a significant role in experiences of meaningfulness in early primary school and pupils' subjectification in PE.

Osterlie O, Killian CM. Flipped Learning in Physical Education: Evolutions Over A Decade and Future Horizons[J]. PHYSICAL EDUCATION AND SPORT PEDAGOGY, APR 2025.

ABSTRACT

Background Over the last decade, flipped learning (FL) has gained traction as a pedagogical approach in physical education (PE), driven by an increasing integration of digital technology across academic subjects. FL has been shown to promote positive student outcomes in PE across the cognitive, psychomotor and affective domains and has the potential to transform traditional instructional models. Although significant progress has been made, further exploration is needed regarding how specific elements of FL, such as its theoretical foundations and methodological considerations, affect key outcomes like student and teacher perceptions, student motivation, and engagement, particularly within the PE context.Purpose and methods Therefore, this paper theoretically explores the evolution of FL in PE. We trace its progression from an initial focus on digital content delivery to a more holistic approach that supports active, student-centered learning within and beyond PE settings. Early conceptions of FL often viewed it as a supplementary method for enhancing classroom engagement, but ongoing research and practical applications have refined its role as a comprehensive framework uniquely suited to the dynamic PE environment and aligned with whole-of-school physical activity promotion initiatives. We identify and discuss three primary shifts in how FL was and is conceptualized within PE.Results and discussion First, we note a transition from a reliance on generic definitions rooted in the cognitive learning domain toward a more field-specific operationalization that prioritizes the psychomotor learning central to PE. This shift underscores the importance of adapting FL to the unique demands of PE, where skill development and physical activity are paramount. The new definition also recognizes the importance of the cognitive and affective domains and acknowledges FL can promote meaningful

learning in PE through the promotion of cooperative learning, critical thinking, self-regulation, and the development of positive attitudes toward lifelong physical activity. Next, we discuss the evolution from viewing FL as a standalone tool or instructional strategy toward recognizing it as an entangled pedagogical framework in which technology and pedagogy are deeply intertwined. This shift acknowledges FL is not simply a digital tool for delivering content outside the classroom but a dynamic framework where digital technologies and teaching practices co-evolve, shaping and being shaped by one another. Finally, we overview how FL has progressed from having an exclusive focus within PE classes toward recognizing its alignment with whole-of-school frameworks, emphasizing the role of FL in supporting comprehensive approaches to school physical activity promotion. This evolution reflects the potential of FL to expand learning across school, home, and community environments and support meaningful, sustained physical activity engagement.Conclusion We conclude by offering practical guidance for physical educators interested in implementing FL and by highlighting future research directions. As FL in PE continues to evolve and be refined over the next decade and beyond, its potential to support meaningful learning and lifelong physical activity habits in students will depend on ongoing collaboration among researchers, educators, and communities. Ultimately, these advancements will contribute to a more nuanced, context-sensitive, and impactful approach to the designs and implementations FL in PE.

Hudson C, Lindsay R, Goncalves L, et al. Physical Education in Rural Schools: A Scoping Review[J]. EUROPEAN PHYSICAL EDUCATION REVIEW, APR 2025.

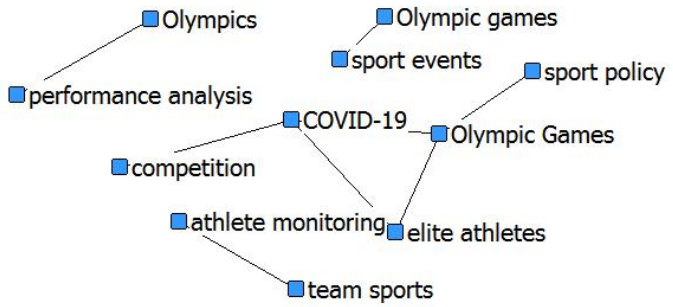
ABSTRACT

While research on rural education has increased over the last decade, the focus on physical education (PE) in this body of knowledge is limited. The purpose of this

scoping review was twofold: (1) to offer an overview of the international research on PE in rural schools, and (2) to discuss and analyse the existing body of literature on rural PE. Specifically, we explored the question: what do we know about PE in rural schools? The present review was conducted according to PRISMA-ScR guidelines. A total of 281 articles were screened against inclusion and exclusion criteria in three stages: (1) title screen, (2) abstract screen, and (3) full-text screen. A total of 24 studies underwent two stages of analysis. First, the matrix was analysed inductively to identify characteristics of the publications. Second, the authors developed a 'living codebook' to track, refine, debate, and agree on the final analytical codes. Three themes were developed in the analysis: (1) a deficit narrative of rural PE, (2) rural schools as sites of PE intervention, and (3) rural schools leverage partnerships to enhance their capacity to deliver PE. These findings were mainly constrained to the dominant perspectives emanating from Australia and the United States. We conclude the review by suggesting that to further advance knowledge of rural PE, there need to be more strengths-based investigations of how PE is positively enacted in more and different rural schools, especially across broader international contexts.

奥林匹克教育

本期奥林匹克教育学术研究共检索到英文相关文献 86 篇，研究热点主要集中在奥运会、精英运动员、表现分析、运动项目等方面。检索结果如下：1）关键词共词分析。提取关键词 256 个，经过数据清洗后关键词有 234 个，词频为 3 及以上的关键词有 3 个，累计百分比为 4.7%，高频关键词有运动员监测、表现分析、体育政策等，生成可视化知识图谱（见下图）。2）来源期刊分析。涉及期刊 39 种，其中载文 2 篇及以上的期刊有 9 种，累计百分比为 40%，刊载奥林匹克教育相关内容前三位的期刊分别为：COMMUICATION& SPORT (JCR 学科分区 Q1、Q2）、INTERNATIONAL JOURNAL OFL THE HISTORY OF SPORT (JCR 学科分区 Q1、Q1、Q4）、INTERNATIONAL JOURNAL OF SPORTS PHYSIOLOGY AND PERFORMANCE (JCR 学科分区 Q1）。3）交叉学科分析。引用文献总计 2698 篇，最多的频次为 4 次，频次排名前三的文献分别为 *An evaluation of the sustainability of the Olympic Games*、*What makes an event a mega-event? Definitions and sizes*、*Physical demands during 3? 3 international male and female basketball games are partially impacted by competition phase but not game outcome* 4）学术关注度分析。文献级别用量最多的是 18 次，排名前三位的文献分别 *Perspectives of resilience in mega-event studies in the context of urban development: A systematic literature review, When ecosystem design shapes strategizing: exploring public value creation in Milano Cortina 2026 Olympic and Paralympic Winter Games, Challenges and successes in promoting gender equality through physical education and sports: a systematic review*。



Herold DM, ColvilleS, Ostern NK, et al. Legitimation and Trust Strategies for Sustainability in and for Global Sport Events: The Case of the 'Climate Positive' Brisbane 2032 Olympics [J].BUSINESS ETHICS THE ENVIRONMENT & RESPONSIBILITY, May29 2025.

ABSTRACT

International sport governing bodies are increasingly under scrutiny due to their questionable environmental sustainability records of global sport events, thereby facing a potential legitimacy gap and loss of trust that the proclaimed sustainability goals can be achieved. However, despite the critical importance of legitimacy and trust for sustainability in and for sport events management, sport academics have not only stayed relatively silent on this important relationship and the distinction between those two concepts, but also on the strategies that can be implemented to increase legitimacy and trust. As a response, we use the case of the upcoming Brisbane 2032 Olympic Games-the first to be contractually obliged to be delivered as 'climate positive'-to examine the role of legitimacy and trust for sustainability in global sport events. Based on secondary data, we (a) provide a taxonomy distinguishing legitimacy and trust aspects, (b) present a framework explicating the relationships between legitimacy and trust aspects for the Brisbane 2032 Olympic Games, and (c) suggest concrete strategies to increase legitimacy and trust for the climate positive Brisbane 2032 Olympic Games. These findings will support local authorities, sport event managers, and policymakers in their decision making leading up to the Brisbane 2032 Olympic Games.

Calmat A, Lecoq J, Courtet MC. Legacy of the "Paris 2024" Olympic and Paralympic Games for the General Population Health[J]. BULLETIN DE L ACADEMIE NATIONALE DE MEDECINE, Apr27 2025.

ABSTRACT

The Olympic and Paralympic Games in Paris in 2024 are described as "a concrete opportunity for the promotion of physical and sport activity for everyone". This promotion is essential because the cost, for 2022, of physical inactivity, has been estimated by France Strat & eacute;gie at 140 billion euros. Moreover, the rate of change for the consumption of medical care and goods at current prices has risen by almost 28 %, reaching 236 million euros in 2022. The legacy may be defined as the impact of Olympic and Paralympic Games on the general population, particularly on health. The Olympic and Paralympic Games Organizing Committee (COJOP) or "Paris 2024"sets itself the ambition of introducing 10 million French people to sport by launching an awareness program for the practice of sport to fight against a sedentary lifestyle and to promote physical activity as a lever for improving health. Thus, in a non-exhaustive manner, several actions are presented in this text: sport and physical activity have been declared a "Grande Cause Nationale 2024"; the 5000 "sports equipment plan - generation 2024"around three axes: local equipment, school grounds and structuring facilities; the creation of a network of 506 sport-health centers to welcome the healthy or sick public wishing to undertake physical activity; the thirty-minute daily physical activity program in elementary school and the 2 hours weekly sport class in high school, in addition to PE and voluntary sport in school clubs; raising awareness of intellectual of physical disability: creation of para-sport sections and training for athletes, managers, coaches, and officials. Sports federations such as the French National Sport Federation, Union nationale du sport scolaire, have developed such sports programs; French federations and clubs offer sport-health activities that contribute to the health and well-being of the participant. The French National Olympic Committee (CNOSF) organizes the Sentez-Vous Sport operation every year, which attracts several million French people every year. The CNOSF's Medical Commission, in conjunction with the federations, has published the MedicoSport Sant & eacute; dictionary, which proposes adapted PSA protocols for most chronic illnesses and

health conditions, complementing the recent recommendations of the French National Authority for Health (Haute Autorit & eacute; de sant & eacute;); the CNOSF has developed a training program for sports instructors in sport-health activities and for doctors in prescribing physical activity. (c) 2025 Published by Elsevier Masson SAS on behalf of l'Academie nationale de medecine.

Aase E, Abrahamsen FE, Gustafsson H. From Pandemic to Podium? Norwegian Olympic Handball Players' Journey to Tokyo 2020[J]. FRONTIERS IN PSYCHOLOGY, Jun 5 2025.

ABSTRACT

Introduction Mental preparation ahead of the Olympic Games (OGs) has been an area of interest for sports psychology researchers over several decades. However, there are few studies based on athlete perspectives of their experiences coping with pressure at this competition level. The COVID-19 pandemic also placed athletes in a demanding situation as they had to deal with the suspension of sport activity, isolation, and general uncertainty-culminating in the first postponement of the OGs in peacetime. Athletes had to balance coping with everyday life in a pandemic with navigating training in ever-changing conditions, indicating it was particularly valuable to investigate mental preparations ahead of the Tokyo OGs.Objective The current study aimed to explore how Norwegian handball players of various experience levels mentally prepared for the Tokyo OGs and how they experienced their preparations during the COVID-19 pandemic.Methods Retrospective semi-structured interviews were conducted with seven handball players (four women, three men) who participated in the Tokyo OGs. A reflexive thematic analysis was completed to examine the findings.Results The findings are described in two overarching themes: (1) failing to plan is planning to fail, and (2) balancing life and sports in a pandemic. Extensive preparations were done on an individual and team level. These incorporated mental, tactical, physical, and practical elements.

Individual efforts varied and there were indications of certain team differences. The pandemic made the players' everyday lives unpredictable, which was mentally exhausting for some. They coped with the uncertainties in different ways, though this often entailed focusing on the positive aspects. Overall, the players' respective contexts affected their perceptions of the pandemic and the postponement of the OGs, and their appraisals of various stressors and subsequent coping strategies.Conclusion The indications of team differences and variations in individual preparations imply that there was no "correct" way to prepare-all roads led to Tokyo. Experience was beneficial in several ways, including coping with the Olympic environment. Some found coping with the effects of the pandemic mentally exhausting, thus potentially affecting preparations. Still, the players got to practice dealing with unexpected events, which could aid future coping efforts.

Mazurkiewicz M . The Heroism of the Long-Distance Runner: Janusz Kusociń ski and His Times as Portrayed in Light of His Memoirs From Palant to the Olympics[J]. INTERNATIONAL JOURNAL OF THE HISTORY OF SPORT, Jun 2025.

ABSTRACT

Janusz Kusoci & nacute;ski was one of the most distinguished Polish athletes of the interwar period. His sporting career commenced at an early age and exhibited an ambitious trajectory that elevated him from humble origins. He went down in the annals of world sports history for his triumph at the 1932 Los Angeles Olympics, being the first Polish winner of the men's Olympic gold medal (10 km run). Kusoci & nacute;ski broke the dominance of the Finnish runners, including Paavo Nurmi, and thus became renowned globally in the realm of international sport. He attained the status of a sporting icon, leaving a significant legacy. In September 1939, he defended Warsaw, subsequently engaging in clandestine activities against the Germans. In 1940, the occupiers murdered him after a brutal investigation. In

addition to his athletic pursuits, Kusoci & nacute;ski was also a writer and journalist. His memoirs, From Palant to the Olympics, are an example of sport literature and serve as a primary source here and broader for sport historians.

Kovács K, Pignitzky D, Bartha C, et al. Philippou C.From the European Youth Olympics Festival to Professional Sport. The Level of Athlete Dropout-a longitudinal Cohort Study[J]. FRONTIERS IN PSYCHOLOGY, May 2 2025.

ABSTRACT

Background Globally, the dropout rate among young athletes, which is influenced by a range of complex and interconnected factors, tends to rise significantly when adolescence starts.Objective The present retrospective cohort study aimed to explore the characteristics and extent of dropout in youth sports in Hungary.Methods We analysed the status of 409 athletes who participated in the summer editions of the European Youth Olympic Festival (EYOF) between 2009 and 2019, assessing their athletic status 5 years later. Specifically, we examined the associations between dropout rates and factors such as gender, types of sport and relative age quartiles.Results Our findings reveal that dropout rates were higher in individual sports compared to team sports. Additionally, within individual sports, athletes born in the second age quartile had a slightly higher dropout rate, while those born in the third quartile experienced a slightly lower rate compared to the other quartiles.Conclusion These insights contribute to a deeper understanding of the factors influencing dropout in youth sports.

Ollila BR, Haegele JA. Special Olympics' Unified Sports and Physical Education Programming: A Systematic Review[J]. QUEST, Jun 2025.

ABSTRACT

Over the last few decades, Special Olympics have broadened their programming to support disabled and nondisabled individuals to play sports alongside one another.

This systematic review aimed to examine published empirical studies that explored the social, intellectual, and physical outcomes associated with Unified Sports and Physical Education, and perceptions across stakeholders (i.e. disabled and nondisabled participants, parents/guardians, coaches, and community members). This review identified 20 peer-reviewed empirical studies that met all inclusion criteria, and relevant data regarding participants, measures, and target variables were extracted. Major findings indicate that while Unified Sports may have positive impacts on some health-related fitness outcomes, and that stakeholders may report positive experiences, there is a disconnect between program intentions and how it is being received and/or perceived. Highlighting this, unequal status is evident between disabled and nondisabled participants, and zero empirical studies were identified focused on Unified Physical Education, which limits support for its implementation.

Orionzi B. Organized Sports for Children and Teenagers[J]. PEDIATRIC ANNALS, Apr 2025.

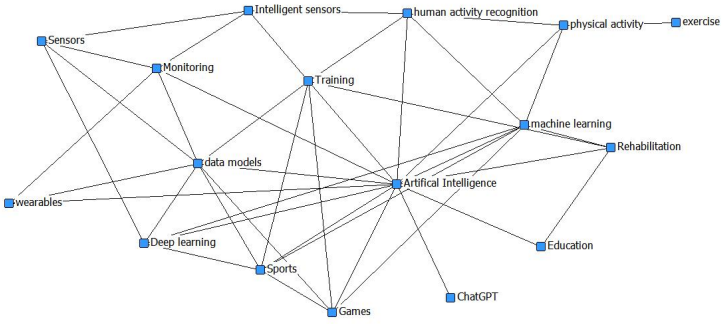
ABSTRACT

Organized sports participation for youth has been growing across the nation. Much of this is fueled by the excitement surrounding collegiate, professional, and Olympic sports competitions, as women and athletes of color are specifically being recognized. There is also increased motivation due to the potential for financial success if elite skill levels can be achieved early on. Primary care clinicians play a major role in children and teenager participation in organized sports by carrying out the sports physical visit and by being a source of support in times of injury. With this responsibility, clinicians need to be aware of the risks for overuse injuries and burnout and the disparities that exist for youth athletes from racial and ethnic minority communities. Sports specialization, parental involvement, and inequities in access are all factors affecting youth organized sports participation. Clinicians can educate and maintain awareness of these elements as a part of their preventative

medicine practice.

体育人工智能

本期体育人工智能学术研究共检索到英文相关文献 300 篇，研究热点主要集中在人工智能在体育教学、体育统计、体育产业、体育训练中的应用、人工智能神经网络对运动员成绩影响的研究、实时人工智能方法在体育运动中的应用、人工智能驱动的体育教育转型等。检索结果：1）关键词共词分析。提取关键词 1738 个，经过数据清洗后关键词有 1440 个，词频为 3 及以上的关键词有 41 个，累计百分比为 15.48%，高频关键词有人工智能、机器学习、体育活动、深度学习、运动、传感器、锻炼、训练等，生成可视化知识图谱（见下图）。2）来源期刊分析。涉及期刊 205 种，其中载文 4 篇及以上的期刊有 11 种，所载文献累计百分比为 23.67%，刊载体育人工智能前三位的期刊分别为：SCIENTIFIC REPORTS（JCR 学科分区 Q1），FRONTIERS IN PSYCHOLOGY （JCR 学科分区 Q2），FRONTIERS IN PUBLIC HEALTH（JCR 学科分区 Q1、Q1）。3）学科交叉分析。引用文献总计 18333 篇，最多的频次为 8 次，排名前三位的分别为 *Deep Residual Learning for Image Recognition* 、*World Health Organization 2020 guidelines on physical activity and sedentary behaviour*、*Attention Is All You Need*。4）学术关注度分析。文献级别用量最高的是 71 次，排名前三位的分别为 *Bioinspired bicontinuous adhesive hydrogel for wearable strain sensor with high sensitivity and a wide working range* 、 *Hybrid Additive Manufacturing of Shear-Stiffening Elastomer Composites for Enhanced Mechanical Properties and Intelligent Wearable Applications*、*The 2025 motile active matter roadmap*。



Ji XY, Samsudin SB, Hassan MZB, et al. The Application of Suitable Sports Games for Junior High School Students Based on Deep Learning and Artificial Intelligence[J]. SCIENTIFIC REPORTS, MAY 16 2025, vol.15, issue 1.

ABSTRACT

In the contemporary educational environment, junior high school students' physical education is facing the challenge of improving teaching quality, strengthening students' physique, and cultivating lifelong physical habits. Traditional physical education teaching methods are limited by resources, feedback efficiency and other factors, and it is difficult to meet students' personalized learning needs. With the rapid development of artificial intelligence and deep learning technology, a new opportunity is provided for physical education innovation. This study intends to develop a Spatial Temporal-Graph Convolutional Network (ST-GCN) action detection algorithm based on the MediaPipe framework. This is achieved by integrating deep learning and artificial intelligence technologies. The algorithm aims to accurately identify the performance of junior high school students in sports activities, particularly in exercises such as sit-ups. By doing so, the study seeks to enhance the adaptability and teaching quality of physical education. Finally, this approach promotes the individualized development of students. By constructing the spatio-temporal graph model of human skeletal point sequence, accurate recognition of sit-ups can be achieved. Firstly, the algorithm obtains the data of human skeleton points through attitude estimation technology. Then it constructs a spatio-temporal graph model, which represents human skeleton points as nodes in the graph and the connectivity between nodes as edges. In HMDB51 dataset, the proposed average detection accuracy of ST-GCN action recognition algorithm based on MediaPipe framework reaches 88.3%. The proposed method has advantages in long-term prediction (> 500ms), especially at 1000ms, the values of Mean Absolute Error and Mean Per Joint Position Error are 71.1 and 1.04 respectively. They are obviously lower than those of other algorithms. ST-GCN action detection algorithm based on

deep learning and artificial intelligence technology can significantly improve the accuracy of action recognition in junior middle school students' sports activities, and provide an immediate and accurate feedback mechanism for physical education teaching. This approach helps students correct their movements and enhance their sports skills. Additionally, it enables teachers to gain a deeper understanding of students' physical performance. These benefits provide strong support for the implementation of differentiated teaching.

Gao Y. The Role of Artificial Intelligence in Enhancing Sports Education and Public Health in Higher Education: Innovations in Teaching Models, Evaluation Systems, and Personalized Training[J]. FRONTIERS IN PUBLIC HEALTH, APR 30 2025, vol.13.

ABSTRACT

With the rapid development of artificial intelligence (AI) technology, particularly in the field of physical education in higher education institutions, the application of AI has shown significant potential. AI not only offers innovative teaching models and evaluation systems for physical education, but also enhances teaching efficiency, enables personalized instruction, and improves students' athletic performance. In the context of public health, AI's role becomes even more crucial, as it assists in developing scientific exercise plans through precise motion data analysis, thereby promoting both physical and mental health. Furthermore, AI technology can drive innovation in the content and methods of public physical education teaching, providing robust support for high-quality sports education. Studies indicate that AI has optimized the physical education process, spurred the innovation of curriculum content, and facilitated the transformation of teaching models, injecting new momentum into the sustainable development of physical education in universities and the achievement of public health goals.

Li XY. Deep Learning to Promote Health Through Sports and Physical Training[J]. FRONTIERS IN PUBLIC HEALTH, MAY 27 2025, vol.13.

ABSTRACT

Background Physical activity plays a crucial role in maintaining health and preventing chronic diseases. However, accurately assessing the impact of sports and physical training on health improvement remains a challenge. Recent advancements in deep learning and time-series analysis offer an opportunity to develop more personalized and accurate predictive models for assessing health improvement trends.Methods This study proposes a Health Improvement Score (HIS) prediction model based on a sequence-to-sequence deep learning architecture with Long Short-Term Memory (LSTM) networks and an attention mechanism. The model integrates heterogeneous time-series data, including physiological parameters (heart rate, blood oxygen levels, respiration rate), activity metrics (steps, distance, calories burned), sleep patterns, and body measurements. A dataset comprising 384 participants over a 32-day period was used to train and evaluate the model.Results The experimental results demonstrate that the proposed HIS prediction model outperforms traditional and machine learning-based models. It achieves 22.8% lower Mean Absolute Error (MAE), 19.3% lower Root Mean Squared Error (RMSE), 6.5% higher R2, and 7.9% higher Explained Variance Score (EVS) compared to competitive models.Conclusion The proposed HIS prediction model effectively captures complex temporal dependencies and improves the accuracy of health improvement predictions.

He ZL, Yang ZY, Xu JR, et al. Real-Time Accurate Determination of Table Tennis Ball and Evaluation of Player Stroke Effectiveness with Computer Vision-Based Deep Learning[J]. APPLIED SCIENCES-BASEL, MAY 12 2025, vol.15, issue 10.

ABSTRACT

The adoption of artificial intelligence (AI) in sports training has the potential to revolutionize skill development, yet cost-effective solutions remain scarce, particularly in table tennis. To bridge this gap, we present an intelligent training system leveraging computer vision and machine learning for real-time performance analysis. The system integrates YOLOv5 for high-precision ball detection (98% accuracy) and MediaPipe for athlete posture evaluation. A dynamic time-wrapping algorithm further assesses stroke effectiveness, demonstrating statistically significant discrimination between beginner and intermediate players ($p = 0.004$ and Cohen's $d = 0.86$) in a cohort of 50 participants. By automating feedback and reducing reliance on expert observation, this system offers a scalable tool for coaching, self-training, and sports analysis. Its modular design also allows adaptation to other racket sports, highlighting broader utility in athletic training and entertainment applications.

Wu JH. Design and Development of Artificial Intelligence Dynamic Physical Education Teaching Resources in Human-Computer Interaction Mode[J]. JOURNAL OF EDUCATIONAL COMPUTING RESEARCH, MAY 2025.

ABSTRACT

The objective of this research is to investigate how AI-improved dynamic physical education materials impact middle school education in physical settings. Utilizing a randomized controlled crossover approach, a 16-week study involved 120 students aged 12 to 18 to evaluate the impact of AI-enhanced physical education courses against traditional instructional techniques. Findings indicated a notable improvement in the AI group compared to traditional instruction in terms of physical fitness (23% enhancement), motor skill proficiency (31% improvement), and knowledge retention (27% enhancement) ($p < .01$). Evaluations of system usability reveal that users have an excellent experience (SUS score 84.3), with a 4.7/5 satisfaction score. Qualitative feedback underscores the importance of personalized

coaching and real-time feedback. Notably, the AI system shows exceptional effectiveness for students with lower initial levels of physical fitness. An analysis after three months revealed a 19% success in comprehensive performance metrics ($p < .01$). This evidence points to the AI-aided physical education resources improving learning and user satisfaction, and opens new pathways for physical education innovation. Further investigation into long-term effects and widespread application across various educational contexts is needed.

Li ZH, Samsudin SB, Farizan NH, et al. The Intelligent Development and Preservation of Folk Sports Culture Under Artificial Intelligence[J]. APR 23 2025, vol.15, issue 1.

ABSTRACT

To promote the intelligent development and preservation of folk sports culture, this work proposes a model grounded in the Cycle-Consistent Generative Adversarial Network (CycleGAN) to produce high-quality human images that recreate traditional sports movements. In order to improve the performance of the model, a discriminative mechanism for pose consistency and identity consistency is innovatively designed, and an appearance consistency loss function is introduced. Finally, the effectiveness of the model in image generation is verified. Experiments conducted on the Deep Fashion and Market-1501 datasets suggest that compared to other models, the proposed model achieves superior visual quality and realism in the generated images. In ablation experiments, the model incorporating the appearance consistency loss achieves improvements of 1.49%, 1.76%, and 2.2% in image inception score, structural similarity index, and diversity score, respectively, compared to the best-performing comparative models. This demonstrates the effectiveness of this loss function in improving image quality. Moreover, the proposed model excels across multiple evaluation metrics when compared to other models. In authenticity discrimination experiments, the generated images have a

58.25% probability of being judged as real, significantly surpassing other models. In addition, the results on the folk sports culture action dataset also show that the model proposed performs excellently in multiple indicators, and it particularly has an advantage in the balance between image diversity and quality. These results indicate that the CycleGAN model better reproduces the details and realism of folk sports movements. This finding provides strong technical support for the digital preservation and development of traditional sports culture.

Zhou XH, Zhu Y. Application of the Intelligent Back Propagation Neural Network in the Optimization of Sports Industry Structure[J]. SCIENTIFIC REPORTS, APR 8 2025, vol.15, issue 1.

ABSTRACT

To explore the application potential of the intelligent Back Propagation Neural Network (BPNN) in the optimization of sports industry structure, a new intelligent BPNN model is constructed in this study. Firstly, the development status of the sports industry is introduced. Secondly, the principle and structure of intelligent BPNN are analyzed in detail. Finally, the BPNN model's architecture is optimized, and experiments verify the optimized model's effectiveness. The experimental dataset selected is the Kaggle-Sports Category dataset. The experimental results show that the proposed optimized model achieves a high score of 0.90 in user satisfaction. Meanwhile, it significantly outperforms the compared model in economic benefits, with a gain rate of 0.95 in box office revenue. In addition, although the proposed optimized model has slightly higher operating costs than other models, its excellent performance in resource utilization and economic benefits is sufficient to fill this gap. These experimental results prove the optimized model's application value in optimizing sports industry structure. This study provides valuable references for using intelligent technology, especially intelligent BPNN, to maximize the sports industry structure.

Lozzi D, Di Pompeo I, Marcaccio M, et al. AI-Powered Analysis of Eye Tracker Data in Basketball Game[J]. SENSORS, JUN 5 2025, vol.25, issue 11.

ABSTRACT

This paper outlines a new system for processing of eye-tracking data in basketball live games with two pre-trained Artificial Intelligence (AI) models. blueThe system is designed to process and extract features from data of basketball coaches and referees, recorded with the Pupil Labs Neon Eye Tracker, a device that is specifically optimized for video analysis. The research aims to present a tool useful for understanding their visual attention patterns during the game, what they are attending to, for how long, and their physiological responses, blueas is evidenced through pupil size changes. AI models are used to monitor events and actions within the game and correlate these with eye-tracking data to provide understanding into referees' and coaches' cognitive processes and decision-making. This research contributes to the knowledge of sport psychology and performance analysis by introducing the potential of Artificial Intelligence (AI)-based eye-tracking analysis in sport with wearable technology and light neural networks that are capable of running in real time.

Mu K,Wang ZL,Tang JZ, et al. The Satisfaction of Ecological Environment in Sports Public Services by Artificial Intelligence and Big Data[J]. SCIENTIFIC REPORTS, APR 13 2025, vol.15, issue 1.

ABSTRACT

In order to gain a more accurate understanding and enhance the relationship between the fitness ecological environment and artificial intelligence (AI)-driven sports public services, this study combines a Convolutional Neural Network (CNN) approach based on residual modules and attention mechanisms with the SERVQUAL evaluation model. The method employed involves the analysis of big data collected from questionnaire surveys, literature reviews, and interviews. This

study critically examines the impact of advanced AI technologies on residents' satisfaction with the fitness ecological environment in sports public services and conducts theoretical analysis of the obtained data. The results show that the quality of sports public services empowered by AI significantly influences residents' satisfaction with the fitness ecological environment, such as running, swimming, ball games and other sports with high requirements for sports service quality and ecological environment. Only the good public sports service quality matching with them can meet the needs of the ecological environment for fitness, and stimulate the enthusiasm of the people for fitness. The study also shows that swimming, running and all kinds of ball games account for the largest proportion of all sports. To sum up, the satisfaction of residents' fitness ecological environment is greatly affected by the quality of public sports services, which is mainly reflected in the good and perfect sports environment and facilities that can provide residents with a wealth of fitness options, greatly improving the sports ecological environment. This study is helpful to realize the relationship between sports public service and sports ecological environment. It contributes to understanding the role of AI and deep learning in enhancing the correlation between sports public service and the ecological environment of sports.

Zhou DW, Keogh JWL,Ma YL, et al. Artificial Intelligence in Sport: A Narrative Review of Applications, Challenges and Future Trends[J]. JOURNAL OF SPORTS SCIENCES , JUN 2025.

ABSTRACT

This narrative review explores the transformative impact of artificial intelligence (AI) in sport, covering its applications, challenges and future directions across key areas such as biomechanics, performance enhancement, sports medicine, health monitoring, coaching and talent identification. AI can potentially empower athletes to optimise movement, personalise training, improve diagnostics and accelerate

rehabilitation. However, integrating AI into sport presents challenges, particularly around data privacy, ethical concerns and adoption within sport organisations. This review also addresses these issues, highlighting strategies for responsible data governance and transparency. Furthermore, the review explores the promising future trends for AI in sport, which suggest a profound impact how sport is practiced and managed globally, pointing towards an era of enhanced performance, health and inclusivity.

Zhao TT, Cabral J,Zhu GY. A Novel Explainable Artificial Intelligence Framework Using Knockoffs Techniques with Applications to Sports Analytics[J]. ANNALS OF OPERATIONS RESEARCH, APR 2025.

ABSTRACT

The rapid integration of black-box Machine Learning (ML) models into critical decision-making scenarios has triggered an urgent call for transparency from stakeholders in Artificial Intelligence (AI). This call stems from growing concerns about the deployment of models whose decisions lack justification, legitimacy, and detailed explanations of their behavior. To address these concerns, Explainable Artificial Intelligence (XAI) has emerged as a crucial field, focusing on methods and processes that enable the comprehension of how AI systems make decisions, generate predictions, and execute their functions. The importance of XAI lies in its ability to provide explanations that justify a model's outputs, thereby ensuring trust and accountability in AI systems. In this work, we propose a novel XAI framework that leverages state-of-the-art statistical knockoff techniques to identify the most informative predictors while maintaining a controlled False Discovery Rate (FDR). This framework enhances informed decision-making by ensuring robust and interpretable insights. We validate our approach through synthetic data experiments, demonstrating that it can effectively identify important features with high power while providing finite-sample FDR control across various scenarios. We demonstrate

the efficacy of our approach by applying it to predict the outcomes of National Football League (NFL) playoffs, a domain of significant importance in sports analytics. Our method provides invaluable insights that support strategic decision-making in the highly competitive field of professional football.

Han R, Yi MN, Feng W, et al. Enhancing Accuracy in Dynamic Pose Estimation for Sports Competitions Using HRPose: A Hybrid Approach Integrating SinglePose AI[J]. ALEXANDRIA ENGINEERING JOURNAL, MAY 2025, vol.127, pp.200-213.

ABSTRACT

Human pose estimation plays a critical role in various applications, such as sports performance evaluation, rehabilitation, and human-computer interaction. Recent advancements in deep learning have significantly improved the accuracy and robustness of human pose estimation models. However, challenges remain in dynamic environments, especially in sports competitions, where high-speed movements, occlusions, and complex backgrounds often hinder accurate estimation. This paper proposes HRPose, a novel approach that combines HRNet for feature extraction and SinglePose AI for precise keypoint localization. It maintains high-resolution feature maps throughout the feature extraction process, enabling the model to capture fine-grained spatial details. SinglePose AI uses these features to generate and refine keypoint heatmaps, achieving accurate pose estimation even in challenging conditions. We evaluate HRPose on benchmark datasets, including the MPII Human Pose and PoseTrack datasets, and compare it with several models. Our results demonstrate that HRPose achieves superior performance in terms of mAP, precision, and robustness. Additionally, we discuss the real-time performance of HRPose and its potential applications in various domains, such as sports, healthcare, and rehabilitation. Future work will focus on improving the model's robustness to extreme conditions, such as low lighting and motion blur, and exploring its

integration with multimodal data for more comprehensive analysis.

Wang KG, Wang L, Sun JD. The Data Analysis of Sports Training by ID3 Decision Tree Algorithm and Deep Learning[J]. SCIENTIFIC REPORTS, APR 29 2025, vol.15, issue 1.

ABSTRACT

In order to improve the accuracy and efficiency of sports training data analysis, this paper proposes an optimized analysis model by combining Iterative Dichotomiser 3 (ID3) decision tree algorithm and deep learning model. As an important scientific tool, sports training data analysis aims to provide decision support for athletes and coaches, optimize training programs and improve sports performance through accurate data mining and model prediction. Traditional analysis methods have shortcomings in dealing with complex and multidimensional data, while analysis methods based on artificial intelligence can significantly improve the ability of feature extraction and prediction. Based on this background, this paper comprehensively evaluates the performance of each model in different dimensions by comparing six key indicators: mean square error (MSE), mean absolute error (MAE), information gain, feature importance, sports performance improvement rate and training target achievement rate. The experimental results show that the optimized model has the best MSE, and its MSE is only 1.05 under the information gain. It is significantly better than Extreme Gradient Boosting (XGBoost) of 1.48 and Capsule Networks (CapsNets) of 1.25. In terms of MAE, the minimum error of the optimized model is 0.65, while the maximum error of XGBoost is 1.11. In terms of information gain and feature importance, the optimization model is also outstanding, with the highest information gain of 1.02 and the feature importance maintained at a high level of 0.94 in many dimensions. Meanwhile, the optimized model is superior to other models in sports performance improvement rate (up to 6.71) and training target achievement rate (up to 78.32%). Therefore, this paper has

certain reference significance to the field of sports training data analysis.

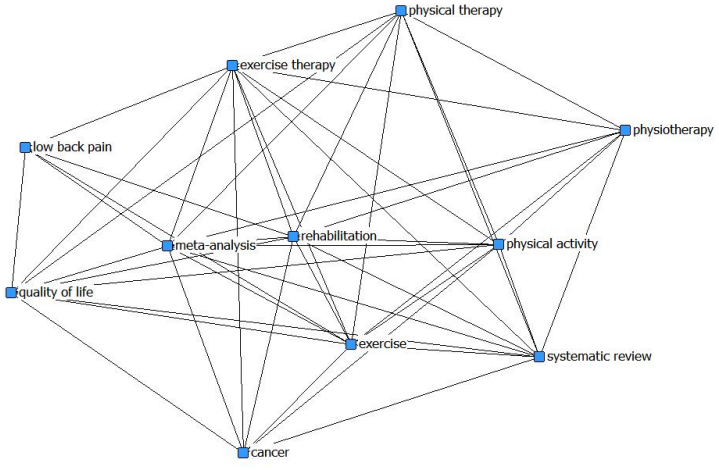
Noorbhai H, Moon S, Fukushima T. A Conceptual Framework and Review of Multi-Method Approaches for 3D Markerless Motion Capture in Sports and Exercise[J]. OURNAL OF SPORTS SCIENCES, JUN 18 2025, vol.43, issue 12, pp.1167-1174.

ABSTRACT

The increasing diversity in motion capture technologies necessitates a structured approach to review and compare different systems. This paper presents a conceptual framework based on a review of existing motion capture methodologies, ranging from single-camera configurations to multi-camera systems enhanced with depth sensing and computer vision technology. The framework encompasses three distinct approaches: 1) single-camera with depth estimation, 2) single-camera with depth sensors, and 3) multiple cameras. Each method is detailed in terms of setup procedures, calibration techniques, advantages and disadvantages, as well as data processing workflows. The paper provides a framework and guide that can be adapted to different research and application contexts for sports and exercise, ensuring accurate and reliable 3D markerless motion capture. This framework aims to assist researchers, analysts and scientists in choosing the most suitable configuration based on their sport, specific requirements and/or constraints. By outlining the processes and considerations for each setup, this paper serves as a methodological guide, facilitating broader adoption and standardisation of advanced 3D motion capture technologies for sports and exercise. Although empirical data is not included in this paper, the focus on procedural guidelines demonstrates methodological rigour and practical implementation for 3D markerless motion capture research in sports and exercise.

体医融合

本期体医融合学术研究共检索到英文相关文献 914 篇，研究热点主要集中为运动疗法对改善自闭症儿童和青少年执行功能的效果、八段锦对肺癌患者术后活动的影响、运动在帕金森病中的治疗机制等方面。检索结果如下：1）关键词共词分析。提取关键词 4536 个，经过数据清洗后关键词有 3067 个，词频为 4 及以上的关键词有 108 个，累计百分比为 24.94%，高频关键词有锻炼、康复、运动疗法、物理治疗、生活质量等，生成可视化知识图谱（见下图）。2）来源期刊分析。涉及期刊 498 种，其中载文 5 篇及以上的期刊有 30 种，所载文献累计百分比为 27.51%，刊载体医融合前三位的期刊分别为：JOURNAL OF CLINICAL MEDICINE（JCR 学科分区 Q1、Q1），SCIENTIFIC REPORTS（JCR 学科分区 Q1、Q1），BMJ OPEN（JCR 学科分区 Q1、Q2）。3）学科交叉分析。引用文献总计 51481 篇，最多的频次为 30 次，其次是 25 次，这两篇文献分别为 *Exercise Guidelines for Cancer Survivors: Consensus Statement from International Multidisciplinary Roundtable*、*RoB 2: a Revised Tool for Assessing Risk of Bias in Randomised Trials*。4）学术关注度分析。文献级别用量最多的是 63 次，排名前三位的文献分别为 *Exosomes: the Next-generation Therapeutic Platform for Ischemic Stroke*、*Impacts of Nutlin-3a and Exercise on Murine Double Minute 2-enriched Glioma Treatment*、*Non-hand-worn, Load-free VR Hand Rehabilitation System Assisted by Deep Learning Based on Ionic Hydrogel*。



Masuda T, Akita K, Sato R, et al. The Efficacy and Safety of Outpatient Exercise Training for Patients with Chronic Thromboembolic Pulmonary Hypertension After Balloon Pulmonary Angioplasty[J]. JOURNAL OF CARDIOVASCULAR DEVELOPMENT AND DISEASE, Jun 2025, vol.12, issue 6.

ABSTRACT

Background: To evaluate the efficacy and safety of outpatient exercise training in clinically stabilized patients with chronic thromboembolic pulmonary hypertension (CTEPH) after balloon pulmonary angioplasty (BPA). Methods: Twenty-four patients with CTEPH after BPA were enrolled in this prospective single-center study. Patients were assigned to the exercise and control groups. The exercise group comprised 12 patients who received 15 weeks of exercise training, with usual care. The control group received only the usual care, without exercise training. The exercise program included aerobic exercise thrice weekly and resistance exercise once or twice weekly. The assessments employed included a 6-min walk test, cardiopulmonary exercise testing, and an emPHasis-10 questionnaire. Results: In the exercise group, the 6-min walk distance was significantly longer (510.0 [467.5, 595.0] m vs. 425.0 [395.0, 465.0] m, p = 0.020), the time taken to walk 10 m was shorter (6.4 [5.9, 7.5] s vs. 8.9 [8.1, 9.1] s, p = 0.020), and the walking speed was faster (1.6 [1.3, 1.7] m/s vs. 1.1 [1.1, 1.2] m/s, p = 0.020) at 15 weeks compared with the results for the control group. The quality of life tended to improve at 15 weeks compared with that before the exercise training. However, hemodynamics did not change significantly before and after the exercise training, and no fatal arrhythmias or syncope were observed. Conclusions: Exercise training improved gait performance, without any adverse events, in patients with CTEPH after BPA. Therefore, exercise training as an adjunct to medical therapy may be a safe potential therapy for patients with CTEPH after BPA.

Mikayama S, Tomonaga R, Jiang Y, et al. Effects of Social Networking Service-Based Exercise Therapy on Reducing Non-Specific Low Back Pain and Improving Productivity in Workers: a Randomized Controlled Trial[J]. JOURNAL OF OCCUPATIONAL AND ENVIRONMENTAL MEDICINE, Jun 2025, vol.67, issue 6,pp.e365-e371.

ABSTRACT

Objective: This study aimed to evaluate the efficacy of exercise therapy using social networking services (SNSs) to reduce nonspecific low back pain (NLBP) among healthcare and transportation workers. Methods: A total of 40 participants, 20 in the control group and 20 in the intervention group, were enrolled in the study. The intervention group received exercise therapy after answering questions regarding NLBP and classifying it into seven categories. The intervention group was asked to perform therapeutic 15-minute exercises suitable for each type of NLBP, as demonstrated by a physical therapist, the first author of this article, through YouTube, three times a week for 8 weeks. Results: The results revealed that the SNS-based exercise therapy was significantly effective in reducing NLBP ($P < 0.05$). Conclusions: Exercise therapy utilizing SNS effectively improved NLBP among healthcare and transportation workers.

Wu D, Li J, Dong H, et al. Effect of Baduanjin on Postoperative Activity Tolerance, Lung Function and Negative Emotions in Patients with Lung Cancer: a Protocol for Systematic Review and Meta-analysis[J]. BMJ OPEN, May 2025, vol.15, issue 5.

ABSTRACT

Introduction Patients who have undergone lung cancer surgery often experience reduced exercise tolerance, impaired lung function and increased negative emotions such as anxiety and depression. Baduanjin, a traditional Chinese mind-body exercise, has shown benefits in improving exercise tolerance and lung function in populations

with chronic diseases. However, evidence on the effectiveness of Baduanjin for post-lung cancer surgery patients remains limited. This study aims to systematically assess the impact of Baduanjin on exercise tolerance, lung function and emotional well-being in these patients.Methods and analysis We will conduct a comprehensive search of PubMed, the Cochrane Library, China National Knowledge Infrastructure, Chinese Biomedical Literatures database, Wanfang database and China Science and Technology Journal Database (VIP) to identify randomised controlled trials (RCTs) assessing Baduanjin in postoperative lung cancer patients. The primary outcome measure will be the 6-minute walk test distance. We will assess the risk of bias in included RCTs using the bias risk assessment form from the Cochrane Collaboration Handbook. This protocol follows the Preferred Reporting Items for Systematic Reviews and Meta-analyses Protocols 2015 guidelines.Ethics and dissemination Ethical approval is not required as no primary data are collected. The results will be presented at scientific conferences or submitted to a peer-reviewed scientific journal.PROSPERO registration number CRD42024570196.

Rantaniemi L, Jussila I, Siltari A, et al. Is Exercise During Androgen Deprivation Therapy Effective and Safe? A Randomized Controlled Trial[J]. SCANDINAVIAN JOURNAL OF MEDICINE & SCIENCE IN SPORTS, Jun 2025, vol.35, issue 6.

ABSTRACT

To explore the benefits and safety of supervised and unsupervised exercise among localized and metastatic prostate cancer patients (PCa) during long-term androgen deprivation therapy (ADT). A total of 44 PCa patients were enrolled in this randomized controlled trial (RCT). Participants were randomized in a 1:1 ratio into the supervised exercise sessions group or the unsupervised home-based exercise group for three months. The primary outcomes assessed included quality of life (QoL), body composition, and metabolic markers, which were measured at baseline,

after 3 months, and at 6 months. Muscle strength was evaluated exclusively in the supervised exercise group. The main statistical models used were the Mann-Whitney U-test for between-group comparisons and the Wilcoxon rank-sum test for within-group changes. No adverse events were reported during the exercise period. There were no significant differences in QoL, body composition, or metabolic profiles between the intervention and control groups. The supervised exercise group demonstrated significant improvement in emotional functioning ($Z = -2.102$, $p = 0.036$) and all exercise performance metrics ($p < 0.001$), with the most pronounced gains observed in the leg press ($Z = -4.17$, $p < 0.001$). Furthermore, a significant association was identified between strength improvements and enhanced self-evaluated physical function ($p < 0.001$). Supervised exercise is safe for patients with localized and metastatic PCa undergoing ADT and leads to significant improvements in emotional well-being and muscle strength, which translate to better self-reported physical function. Findings underscore the need for RCTs with longer intervention and follow-up periods on supervised exercise, especially in metastatic PCa patients. Trial Registration: identifier: #NCT04050397

Wiskemann, J, Koeppel, M. Prehabilitation and Sport in Oncology[J]. CHIRURGIE,Jun 2025, vol.96, issue 6, pp.454-458.

ABSTRACT

Numerous randomized controlled trials confirm the clinical importance of exercise therapy in the management of side effects of cancer treatment. Physically active cancer patients also have a better prognosis. Since it has been known that the physical performance level before surgery is a strong prognostic factor for the occurrence of perioperative complications, the focus of interest has also been on exercise therapy-based prehabilitation. Studies in this field show that even very short interventions (2-4 weeks) can achieve lower perioperative complication rates, particularly for pulmonary complications. Even if the evidence is still limited, it can

be concluded that every patient should be offered exercise therapy prehabilitation in preparation for major pulmonary or gastrointestinal surgical interventions. However, there are so far hardly any treatment structures that make this currently possible.

Wilson A C, Pountney D L, Khoo T K. Therapeutic Mechanisms of Exercise in Parkinson's Disease[J]. INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES, May 2025, vol.26, issue 10.

ABSTRACT

Despite being the second-most common neurodegenerative disease, the etiology of Parkinson's disease (PD) remains uncertain with current knowledge suggestive of multiple risk factors. Furthermore, curative treatment does not yet exist, and treatment is primarily symptomatic in nature. For this reason, supportive therapies such as exercise are a crucial tool in PD management. It is useful to better understand how exercise affects the brain and body in the context of PD to guide clinical decision-making and determine the optimal exercise intensity and modality for PD patients. This review outlines the various mechanisms by which exercise can be beneficial as a therapeutic option in PD.

Long J, You JK, Yang YN. Effect of Digital Exercise Therapy on the Pain and Physical Function of Patients With Osteoarthritis: Systematic Review and Meta-Analysis[J]. JOURNAL OF MEDICAL INTERNET RESEARCH, Apr 2025, vol. 27.

ABSTRACT

Background: Osteoarthritis (OA) is a chronic degenerative bone and joint disease that significantly impacts patients' quality of life and mental health, while also imposing a substantial economic burden on society. However, access to rehabilitation for patients with OA is challenging upon hospital discharge. Digital exercise therapy represents a promising telemedicine strategy for enhancing the

management of OA, but its effect on OA is not yet clear. Objective: This study aimed to systematically evaluate the therapeutic effects of digital exercise therapy on pain and physical function in patients with OA. Methods: Databases including PubMed, Embase, Cochrane Library, Web of Science, and SPORTDiscus were searched for randomized controlled trials on using digital exercise therapy for OA until October 25, 2023. The primary outcomes included the measures of pain scores or physical function scores immediately after the intervention and at full follow-up. The risk of bias was evaluated using the Physiotherapy Evidence Database scale. Relevant data were extracted, and a meta-analysis was performed using RevMan5.3 software (Cochrane Collaboration). Results: A total of 9 studies with 1604 patients were included in the final meta-analysis. Compared with the conventional treatment group, digital exercise therapy significantly reduced numerical rating scale pain scores(mean difference [MD]=-1.07, 95% CI-1.35 to-0.78; P<.001) and Western Ontario and McMaster Universities Osteoarthritis Index physical function scores (MD=-2.39, 95% CI-3.68 to-1.10; P<.001) in patients with OA immediately after the intervention. However, follow-up results revealed no statistically significant difference in numerical rating scale pain scores (MD=-0.20, 95% CI-0.59 to 0.20; P=.34), while Western Ontario and McMaster Universities Osteoarthritis Index physical function scores showed a significant improvement in the digital exercise therapy group compared with the control group (MD=-1.89, 95%CI-3.52to-0.26; P=.02). These findings suggest that digital exercise therapy provides immediate benefits for both pain and physical function in patients with OA, with sustained improvements in physical function observed during follow-up, though pain relief may not persist long term. Conclusions: Digital exercise therapy can alleviate the pain and improve the physical function in patients with OA and can be used as an auxiliary means in the rehabilitation treatment of OA. It provides great convenience for patients with OA who need long-term treatment, allowing them to exercise at home for rehabilitation training.

Iatridou G, Stergiou AN, Varvarousis DN, et al. Comparative Study between Aquatic Therapy and Land-based Exercises in Hemiplegic Patients after Stroke: a Randomized Controlled Trial[J].AMERICAN JOURNAL OF PHYSICAL MEDICINE & REHABILITATION, Apr 2025,vol.104, issue 4,pp.305-311.

ABSTRACT

Objective This study aimed to assess the effects of aquatic therapy in individuals with hemiplegia compared with those of a conventional land-based exercise program. Design This was a blinded, randomized controlled study of chronic stroke patients with hemiplegia. The participants were randomized in to aquatic therapy (experimental) or conventional therapy (control) groups. The aquatic therapy group conducted the exercise program in a swimming pool, and the conventional therapy group performed to an exercise on the land environment three times per week for 6 weeks. Both interventions focused on posture, balance, and weight-bearing exercises. Outcomes included the Berg Balance Scale, Brunnstrom Scale, Motricity Index, muscle strength tests, Modified Ashworth Scale, Postural Assessment Scale for Stroke, Trunk Control Test, and Functional Independence Measure. In addition, postural sway was evaluated by using the variables of center of pressure displacements in the mediolateral and anteroposterior directions. Results The findings of the present study show that the experimental group (26 patients) exhibited significant improvements in spasticity compared with the control group (25 patients) ($P = 0.01$). The conventional therapy group also achieved significant improvements ($P < 0.05$) in anteroposterior deviation, mediolateral velocity, and total velocity of center of pressure in a sitting position with eyes closed. Conclusions Land-based exercises were more beneficial in the spasticity of chronic stroke patients.

Wang H, Cheng G, Li MM. The Effectiveness and Sustained Effects of Exercise Therapy to Improve Executive Function in Children and Adolescents with Autism: a Systematic Review and Meta-analysis[J]. EUROPEAN JOURNAL OF PEDIATRICS, Apr 2025, vol.184, issue 5.

ABSTRACT

This study rigorously examines the efficacy and sustained impact of exercise therapy on enhancing executive function among children and adolescents diagnosed with autism spectrum disorder (ASD). Furthermore, it conducts a comprehensive analysis of five distinct subgroups, categorized by variations in school age, exercise cycles, exercise characteristics, dimensions of executive function, and the administration of medication. A systematic search was conducted across the PubMed, EmBase, Cochrane Library, Web of Science, and SPORTDiscus databases to identify randomized controlled trials published from the inception of the library until October 20, 2024, focusing on the effects of exercise therapy on the enhancement of executive function in children and adolescents with ASD. Sixteen studies were systematically evaluated and included in the meta-analysis, revealing that exercise therapy led to a significant improvement in executive function among children and adolescents with ASD (SMD = 0.41, 95% CI [0.30, 0.52], P = 0.00), along with some evidence of sustained improvement (SMD = 0.74, 95% CI [0.29, 1.20], P = 0.00). Subgroup analyses indicated that exercise did not significantly enhance executive functioning in preschool-aged patients with ASD, and working memory did not exhibit a significant improvement across various dimensions of executive functioning. Furthermore, no differences were observed in analyses of different exercise cycles, exercise characteristics, or the use of medication among subjects. Conclusion: Exercise interventions improve executive function in children and adolescents with ASD, with sustained post-intervention effects. Limited impact on working memory and observed heterogeneity highlights the need for more precise intervention designs and rigorous research. What is Known:center dot

Exercise therapy is widely considered a promising non-pharmacological intervention for improving cognitive functions in children and adolescents with autism spectrum disorder (ASD).center dot Prior studies suggest exercise benefits executive function in ASD, but evidence on sustained effects and subgroup differences remains limited.What is New:center dot This meta-analysis confirms that exercise therapy significantly and sustainably improves executive function in children and adolescents with ASD, with greater benefits observed in school-aged participants.center dot For the first time, subgroup analyses reveal age-dependent effects and confirm that working memory shows limited responsiveness to exercise, regardless of medication use or exercise characteristics.

Aygul G, Tuncer A, Ozaltin GE, et al. Long-term Impact of Self-mobilization via Telerehabilitation vs. Manual Therapy and Home Exercise on Pain and Function in Cervical Degenerative Disease[J]. DISABILITY AND REHABILITATION, Apr 2025.

ABSTRACT

Purpose: Cervical Degenerative Disease (CDD) commonly leads to neck pain, functional impairment, and reduced quality of life. This study aimed to compare the long-term effects of home exercise, manual therapy, and telerehabilitation-assisted treatment on pain, functionality, and patient satisfaction in individuals with CDD. Patients and methods: Sixty-six patients diagnosed with CDD were randomly assigned to three groups: home exercise (n = 23), manual therapy (n = 22), and telerehabilitation (n = 21). All groups participated in an 8-week exercise program, with the manual therapy and telerehabilitation groups receiving additional sessions twice a week. Pain was measured using the Visual Analogue Scale (VAS), pain threshold with an algometer, neck function with the Neck Disability Index and range of motion (ROM), and patient satisfaction with the Patient Satisfaction Questionnaire-18. Results: All groups significantly improved pain, function, and

ROM over time ($p < 0.05$). But there were no significant differences between groups at the 6-month follow-up. Manual therapy and telerehabilitation significantly enhanced patient satisfaction, particularly in communication and technical quality ($p < 0.05$). Conclusion: Home exercise, manual therapy, and telerehabilitation improve long-term outcomes in CDD. Manual therapy and telerehabilitation provide greater patient satisfaction, making them viable options for long-term management. Telerehabilitation can be used as an alternative when necessary.

Karagiannopoulou V, Meirezonne H, De Greef I, et al. The Effects of Exercise Therapy on Lumbar Muscle Structure in Low Back Pain: a Systematic Review and Meta-analysis[J]. ANNALS OF PHYSICAL AND REHABILITATION MEDICINE, Jun 2025, vol.68, issue 5.

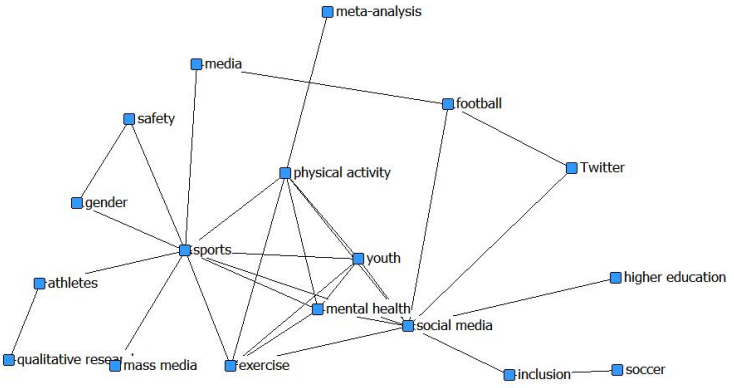
ABSTRACT

Background: Changes in muscle structure are observed in people with low back pain (LBP). Although exercise therapy is arguably one of the most commonly used methods to treat LBP, evidence regarding its effects on muscle structure is still lacking. Objectives: To answer the following questions: (1) What are the effects of exercise therapy on lumbar muscle structure in people with LBP and (2) which type of exercise intervention has the greatest effects? Methods: Six electronic databases were systematically searched. The RoB 2 tool and the ROBINS-I tool were used to blindly assess the Risk of bias (RoB), and the RevMan 5 tool was used for the meta-analysis. Due to heterogeneity, the various exercise interventions were classified into 4 groups. Interventions that could not be classified into 1 of these 4 groups were not included in the meta-analyses and were qualitatively analyzed. Results: In total, 984 records were retrieved, of which 34 articles were included. The meta-analyses showed that when considering the overall effect size per muscle structural outcome in chronic LBP (cLBP), exercise therapy showed significant positive effects on Lumbar Multifidus (LM) muscle thickness (MT) and LM

crosssectional area (CSA), but not on Lumbar Erector Spinae (LES) CSA and Quadratus Lumborum CSA. Considering the different intervention groups, significant positive effects were observed for: (1) "Motor control + stabilization" with small effect on LM MT, (2) "Stabilization" with medium effect on LM MT, and large effect on LM CSA, and (3) "Motor control + Stabilization + Lumbar strengthening" with large effect on LM MT and LES CSA. There were no significant effects observed for "Lumbar strengthening". Conclusions: Overall, exercise therapy has a positive effect on lumbar muscle structural properties in a cLBP population, with a combination of Motor control + Stabilization + Lumbar strengthening giving the best results. Database registration: This systematic review was registered on PROSPERO (CRD42021232583).

文化与新闻传播

本期文化与新闻传播学术研究共检索到英文相关文献 189 篇，研究热点主要集中在探索澳大利亚社区体育中女性的体育经历与身份认同、乒乓球文化价值观的比较分析、体育迷的社交媒体参与度与团队认同感等方面。检索结果如下：1）关键词共词分析。提取关键词 1024 个，经过数据清洗后关键词有 923 个，词频为 3 及以上的关键词有 19 个，累计百分比为 9.86%，高频关键词有体育、社交媒体、体力活动、足球、运动员等，生成可视化知识图谱（见下图）。2）来源期刊分析。涉及期刊 123 种，其中载文 3 篇及以上的期刊有 16 种，累计百分比为 40.2%，刊载文化与新闻传播前三位的期刊分别为：COMMUNICATION & SPORT（JCR 学科分区 Q1、Q2），INTERNATIONAL REVIEW FOR THE SOCIOLOGY OF SPORT（JCR 学科分区 Q2、Q1），INTERNATIONAL JOURNAL OF THE HISTORY OF SPORT（JCR 学科分区 Q1、Q1）。3）交叉学科分析。引用文献总计 11780 篇，最多的频次为 9 次，其次是 7 次，这两篇文献分别是：*Reflecting on Reflexive Thematic Analysis*、*A Systematic Review of the Psychological and Social Benefits of Participation in Sport for Children and Adolescents: Informing Development of a Conceptual Model of Health through Sport*。4）学术关注度分析。文献级别用量最多的是 15 次，排名前三位的文献分别为 *Routine Exploitation or Dramatic Portrayals? How Violence Against Nonhuman Animals Gains Institutional Recognition*、*Perception and Drivers of Cultural Ecosystem Services in Waterfront Green Spaces: Insights from Social Media Text Analysis*、*Engaging Head and Heart: Effect of Marketer-generated Content on Social Media Engagement*。



Zhang ZZ, He K, Fang XD. Carrying Two Flags? How Social Media Users Perceive the Identity Negotiation Process of Third Culture Athletes[J]. COMMUNICATION & SPORT, Apr 2025.

ABSTRACT

This study introduces the concept of "Third Culture Athletes" (TCAs) and explores how their identity negotiation processes are perceived on Chinese social media, focusing on how social media users shape perceptions of these athletes' identities. Through critical discourse analysis of 3327 comments about Eileen Gu and 1181 comments about Tomokazu Harimoto on Zhihu, the research identifies four stages of perceived identity negotiation: anchoring, catalysis, renegotiation, and dynamic equilibrium. The findings indicate that while social media platforms carry the discourse of globalism, they also amplify the polarization of nationalist opinions. This research offers new insights into cross-cultural identity negotiation theory and provides practical implications for athletes, sports organizations, and social media platforms in managing multicultural identities.

Luo Y, France TJ, Moosbrugger M, et al. Comparative Analysis of Cultural Values on Table Tennis: A Qualitative Study Among Chinese and American Graduate Students[J]. PERCEPTUAL AND MOTOR SKILLS, May 2025.

ABSTRACT

The purpose of this study was to examine the cultural values attached to table tennis by American and Chinese graduate students. Through semi-structured interviews, students' experiences and attitudes on table tennis were explored (N=6). The results showed that Chinese students associated table tennis with entertainment, accessibility, socialization, popularity, national pride, and satisfaction. American students expressed feelings of inclination, entertainment, competitiveness, marginalization, and dissatisfaction toward the sport. These values were shaped by both physical and virtual experiences, with media acting as a bridge to distant

narratives of the sport. The findings of this study aid in fostering a mutual comprehension of the cultural values associated with table tennis, as perceived by college graduate students from both nations.

Timperley ZL, Phillips MJ. Beyond the Game: Exploring Women's Sporting Experiences and Identities within Australian Community Sports[J]. SPORT IN SOCIETY, Apr 2025.

ABSTRACT

Women are underrepresented in community-based sports and experience gender-based challenges to their sport participation, experiences, and identities. This qualitative study explores how women's experiences inform the construction of their sporting identities and how gender shapes their sporting experiences. Thirteen Australian women aged 22 to 75 from diverse community-based sports participated in semi-structured interviews. Utilizing a social constructionist and critical feminist framework, our engagement in reflexive thematic analysis constructed three interrelated themes. The findings showcase the embeddedness of hegemonic gender norms, attitudes, and inequities within women's community-based sports and how these can challenge women's engagement, advancement, and identities as sportswomen. The importance of community-based sports as a site for women's empowerment, gender norm negotiation and identity transformation are also highlighted. To promote women's inclusion in community-based sports, organizational practices, policies, and structures must be developed to carefully consider and support women players' distinct needs, experiences, and identities and promote gender-inclusive and welcoming sports cultures.

Wakefield L, Bennett G, McClung S. Are Sport Team Brands Unique? The Effect of Product Category and Marketing Orientation on Engagement Intentions among Cultural Brands[J]. MARKETING INTELLIGENCE & PLANNING, Apr 2025.

ABSTRACT

Purpose - Sport team brands seem to be a unique, yet marketing research co mparing differences between sport team brands and other cultural brands is n on-existent. Applying relationship marketing theory, this research aims to dem onstrate how relational and transactional marketing influence engagement inten tions with sport teams differently than other cultural brands. Design/methodolo gy/approach - Experimental design was used to test the hypotheses. Study 1 was a lab study and Study 2 was a field study. The lab study employed a 4 (category of brand: sports teams/restaurants/clothing/musicians) x 2 marketing orientation (relational/transactional) between-subjects design to test differences in engagement intentions. The field study compared engagement intentions fo r an e-newsletter between a sports team brand a nearby retailer. Findings - A cross two experiments, six product categories and hundreds of brands, results indicate sport team brands effectively execute a balanced marketing orientation, finding similar (high) engagement intentions when presented with a relational or transactional offer. On the other hand, consumers have an imbalanced ma rketing orientation with other cultural brands, intending to engage significantly more or less with brands in other product categories (restaurant, clothing, m usic and specialty food) depending on whether the offer was relational (e.g. media content) or transactional (e.g. coupons). Originality/value - To the best of the authors' knowledge, this is the first study to test differences between s port and other product categories of cultural brands in experiments. It also pr ovides empirical evidence for Christy et al. (1996) conceptualization of a bala nced marketing orientation.

Choi SM, Brown-Devlin N, Jin, EJ. Connecting Through Fear of Missing Out (FoMO): Social Media Involvement and Team Identification Among Sports Fans[J]. COMMUNICATION & SPORT,May 2025.

ABSTRACT

This study explores how FoMO fosters sports fan attachment and enhances team identification in the context of online sports fandom. Grounded in social capital theory and social identity theory, this paper investigates how sports fans' experiences with FoMO activate socially driven behaviors, particularly social media involvement, which build attachment to sports and deepen team identification. An online survey of 451 U.S. based participants revealed that FoMO strongly correlates to social media involvement, which in turn enhances sports attachment and team identification; additionally, a moderating effect was observed among sports fans with moderate to high levels of bridging social capital, suggesting that fans with broader weak-tie networks gain more from FoMO-driven engagement. These findings reframe FoMO as a prosocial motivator within digital fan communities. The research also provides theoretical insights into FoMO's role in identity-building and recommends practical approaches for sports organizations to boost long-term fan engagement.

Meier HE, Tickell S, Krüssmann D. From Marriage in Heaven to Lock-In? Examining Mediatization of Winter Sports by Public Service Broadcasters[J]. COMMUNICATION & SPORT, Apr 2025.

ABSTRACT

Digital disruption heavily impacts production, distribution and consumption of sport entertainment. The once symbiotic relationship between sport and linear TV faces far-reaching challenges. This applies also to the specific cooperation between niche sports and public service broadcasters (PSBs), which has evolved in Europe. In exchange for far-reaching mediatization efforts, winter sports gained considerable

exposure and audience reach. The current contribution aims to provide evidence for the claim that digital disruption can put the future of winter sport as media sport at risk since the PSBs fail to attract younger audiences. In result, winter sports seem to be subject to a lock-in effect as the cooperation with the PSBs still provides several benefits while no definitive new media model for niche sports has emerged.

Ferrucci P, Figueroa E. 'At This Point, I Have No Idea': Determining a Sports Journalist in the 2020s[J]. JOURNALISM, Apr 2025.

ABSTRACT

This study utilizes interviews with 37 full-time, professional sports journalists to understand how they construct their identity. With social identity theory as a framework, the study found that access, organizational backing, and role conception represent characteristics essential to being a sports journalist (the in-group). While the journalists also identified what they considered business reporters, social media personalities, and non-objective analysts as characteristics that, in some cases, exclude persons from calling themselves sports journalists (the out-group). These results are then interpreted through the framework of social identity theory, boundary work and professional identity.

Lim HE. Commodification of US Youth Sport: a Critical Analysis through Adorno's Culture Industry Concept[J]. SPORT EDUCATION AND SOCIETY, Apr 2025.

ABSTRACT

Youth sport in the United States has transformed from a developmental educational activity into a profit-driven enterprise because of its commercialization and commodification. This study examines these changes through Theodor Adorno's concept of the culture industry, which critiques the commodification and standardization of cultural activities. Using this lens, the paper conceptually reviews

how the prioritization of early specialization, performance metrics and profit motives has marginalized intrinsic enjoyment, creativity and holistic development in youth sport. Furthermore, it introduces the concept of sustainable sport as a viable alternative, emphasizing inclusivity, ethical engagement and long-term athlete well-being. The findings highlight the tension between market-driven and community-oriented models and propose actionable strategies for stakeholders to resist commodification while fostering meaningful developmental experiences.

Weston PW, Clark L. Media Portrayal of Sports Betting in Canada before and after Federal Bill C-218[J]. INTERNATIONAL GAMBLING STUDIES, Jun 2025.

ABSTRACT

In 2021, Federal Bill C-218 allowed the legalization of single-event sports betting in Canada. The rationale and repercussions of Bill C-218 received substantial media coverage. We sought to characterize the themes and voices that were present in Canadian newspaper coverage of sports betting, using the Canadian News-stream database to identify print articles published in two time periods, before (Jan 2020-June 2021) and after (July 2021-Dec 2022) the bill was passed. We coded articles for seven main themes, associated sub-themes, and voices. In 146 articles, dominant themes were Legality (85.6%) and Industry Change (83.6%). Although Technology (52.7%) was well represented, discussion of In-Play Betting as a sub-theme was coded in only 21.9% of articles. Gambling Harm and Reform were less represented, in less than a quarter of articles. In terms of voices, Industry representatives (70.5%) were most frequent. Few articles featured voices of Academics, Treatment Providers/NGOs, and people with Lived Experience of gambling harms. We argue that the Canadian media coverage of the legalization of sports betting has emphasized the corporate and economic impacts, with less attention to the risks of harm associated with the expansion of sports betting, and

changes to the underlying gambling product.

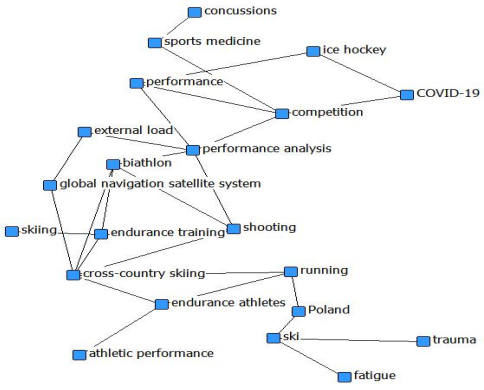
Clayton B, Dunn G, Harris J. 21 Years Later: Reflecting on Femininity, Masculinity, Physicality and the English Tabloid Press[J]. INTERNATIONAL REVIEW FOR THE SOCIOLOGY OF SPORT , Jun 2025.

ABSTRACT

During the summer of 2000, Harris and Clayton examined how the English tabloid print sports media created and represented femininity, masculinity and physicality over the course of the men's European Football Championship and the Wimbledon tennis tournament. The predominantly qualitative content analysis described seven dominant themes, including the relative invisibility of women athletes, the emphasis of traditional masculine traits of men athletes, the contradictory reporting of pain and sacrifice of men and women athletes, the creation of (male) heroes and national identities, the coverage of 'appropriate' women's sporting roles, non-task relevant commentary for women athletes and the eroticising of women's bodies. The present research reconsiders the efficacy of these themes 21 years later during the confluence of the Euro 2020 and Wimbledon 2021 tournaments, following a deductive analysis of 2081 sports-related articles over 30 consecutive days of coverage in the Sun and the Mirror newspapers (11 June-11 July 2021). Findings suggest that while the relative invisibility of women athletes remains a significant issue, there is more limited evidence to support the existence of the other gendered themes.

冰雪运动

本期冰雪运动学术研究共检索到英文相关文献 227 篇，研究热点主要集中在运动表现、动力机能、身体功能等方面。就检索导出的数据采用书目共现分析系统（Bicomb V2021）对文献信息进行提取，包括期刊、关键词、标题、发文年份等，相同含义的字段去重且批量合并，同时去除没有实质意义的字段，对所提取的字段进行频次统计，形成高频矩阵，并使用社会网络分析软件 Ucinet 绘制成知识图谱，进行共词聚类分析。检索结果如下：1）关键词共词分析。提取关键词 1076 个，经过数据清洗后关键词有 1014 个，词频为 3 及以上的关键词有 13 个，累计百分比为 4.00%，高频关键词有运动表现、越野滑雪、预防损伤等，生成可视化知识图谱（见下图）。2）来源期刊分析。涉及期刊 163 种，其中载文 3 篇及以上的期刊有 15 种，累计百分比为 25.55%，刊载冰雪运动前三位的期刊分别为：SCIENTIFIC REPORTS (JCR 学科分区 Q1）、WILDERNESS&ENVIRONMENTAL MEDICINE（JCR 学科分区 Q4）、EUROPEAN JOURNAL OF SPORT SCIENCE（JCR 学科分区 Q1）。3）交叉学科分析。引用文献总计 10599 篇，最多的频次为 9 次，频次排名前三的文献分别为 *Defining Training and Performance Caliber: A Participant Classification Framework*、*Progressive Statistics for Studies in Sports Medicine and Exercise Science (From: MEDLINE®)*、*Climate change exacerbates snow-water-energy challenges for European ski tourism*。4）学术关注度分析。文献级别用量最多的是 18 次，排名前三位的文献分别 *The benefits of guided imagery on athletic performance: a mixed-methods approach, Ski tourism and destination attractiveness: Two separate importance-performance analyses before and after the pandemic in Korean and Chinese markets, When ecosystem design shapes strategizing: exploring public value creation in Milano Cortina 2026 Olympic and Paralympic Winter Games*。



Silvestri MA, Cleather DJ, Callaghan S, et al. Examining the Determinants of Skating Speed in Ice Hockey Athletes: A Systematic Review[J]. JOURNAL OF STRENGTH AND CONDITIONING RESEARCH, Apr 2025.

ABSTRACT

Examining the determinants of skating speed in ice hockey athletes: a systematic review. J Strength Cond Res 39(4): 507-514, 2025-Ice hockey is a physically demanding sport that requires athletes to maintain high skating speed for optimal performance. This systematic review examines existing research on testing ice hockey athletes in relation to skating speed and identifies key metrics to inform future decisions on the most suitable testing regimes. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines were followed for the literature search. After the literature search and application of inclusion and exclusion criteria, 19 studies were deemed eligible. The identified measures that showed a significant correlation with ice skating performance were on-land sprinting, jumping, body composition, and anaerobic power. These findings highlight the multifactorial nature of skating performance and suggest that a range of tests may be necessary to identify critical factors to overall skating performance; however, further research is needed to confirm this hypothesis.

Delhaye C, Cross MR, BowenM, et al. Kinetic keys to alpine skiing performance: A 3-D analysis of ground reaction forces and torques[J]. JOURNAL OF SPORTS SCIENCES, Jun 2025.

ABSTRACT

Alpine skiing performance hinges on the dynamic interaction between the skier and the ski-snow interface. Ground reaction forces are fundamental in controlling these interactions, yet surprisingly little research exists characterising 3-D turn kinetics. This study aimed to profile the evolution of ground reaction forces and torques signatures applied by skiers during turning and explore their link with giant slalom

performance. Seventeen male alpine skiers with varying skill levels, equipped with ski-mounted force plates, executed multiple trials on a giant slalom ski course. A statistical parametric mapping approach was used to explore relationships between normal force and anteroposterior torque signatures with race times. Faster race times were correlated with greater normal force during the plateau phase of the turn crux ($p < 0.001$) and lower during turn switch ($p = 0.006$). Better times were also associated with higher positive ($p = 0.004$) and negative ($p < 0.001$) rates of force development. The best skiers appeared to apply an elevated positive M-y plateau ($p < 0.001$) with a steeper slope ($p = 0.029$) on the inside ski at turn initiation. Our findings indicate generating large forces and rapidly modulating their application to the skis is a crucial aspect of skiing performance.

Jaeger E, Maurer DJ, Wallimann A, et al .Immunity, Inflammation and Airway Dysfunction in Elite Cross-Country Skiers and Ice Hockey Players: A Systematic Review[J]. SCANDINAVIAN JOURNAL OF MEDICINE & SCIENCE IN SPORTS, Apr 2025.

ABSTRACT

Strenuous exercise in elite sports impacts the immune system, leading to high rates of upper respiratory tract infections and airway dysfunction, such as asthma and exercise-induced bronchoconstriction (EIB). Cross-country (XC) skiers and ice hockey (IH) players are particularly affected due to their training environments and sports disciplines. This systematic review (SR) evaluates immune and inflammatory responses and the risk of developing airway dysfunction in these athletes. Original articles focusing on immune response, systemic inflammation, and airway dysfunction in competitive XC skiers and IH players were retrieved from MEDLINE/Ovid, EMBASE, and the Cochrane Library. Risk of bias was assessed using the Cochrane Risk of Bias Tool. Of 3582 studies screened, 50 met the inclusion criteria. Both elite XC skiers and IH players exhibit increased cortisol

levels and altered systemic immune cell compositions in response to training and competition. Both groups show neutrophilic or mixed neutrophilic/eosinophilic airway inflammation, in contrast to the primarily eosinophilic inflammation associated with allergic asthma. Both XC skiers (27%) and IH players (14%) had a high prevalence of physician-diagnosed asthma. This SR highlights the notable burden of airway dysfunction in elite winter athletes, with elevated rates of asthma and EIB. The observed inflammatory patterns support the concept of a "sport asthma" endotype, which may be a result of chronic exposure to cold, dry air. Effective management may benefit from refined diagnostic criteria, the identification of specific biomarkers, and tailored prevention and treatment strategies for asthma and EIB.

Mcphail J, Cross MR, Spörri J, et al. Physiological Characteristics of Freestyle Snowboard and Freeski Athletes[J]. INTERNATIONAL JOURNAL OF SPORTS PHYSIOLOGY AND PERFORMANCE, Dec 2024.

ABSTRACT

Purpose The study's purpose is to investigate the constraints and facilitators influencing skiing participation in Beijing. This research includes three segments based on the frequency of skiing participation (i.e. non-, low-frequency-, and high-frequency skiers). By doing so, the study offers an enhanced understanding of the Chinese skiing market and unveils insights assisting industry professionals to effectively address their customers' diverse needs and expectations. Design/methodology/approach an online survey was developed based on prior research and consisted of four sections: (1) skiing participation; (2) constraints; (3) facilitators; (4) demographics. Items in the constraint and facilitator scale were measured using a 7-point Likert scale. A total of 409 participants completed the survey. The participants included 137 non-skiers, 134 low-frequency skiers, and 138 high-frequency skiers. Findings Through an exploratory factor analysis, three

constructs emerged: general constraints, facilitators and learning constraints. As expected, facilitators were a positive predictor of skiing participation. Importantly, the emergent construct of learning constraints was a negative predictor of skiing and yet, the construct of general constraints was insignificant. Furthermore, the three segments differ significantly in household status, income, and education level. Originality/value These results support previous research noting the relevance in skiing participation of the dimensions: facilitators and learning constraints. The findings point to the need for ski resorts in Beijing to offer instructional sessions for beginners so they may become familiar with skiing fundamentals and enhance their confidence, particularly among nonskiers and low-frequency skiers.

Riscart-López J, Jiménez-Herranz E, Mendoza-Puente I, et al. Effects of Acute Fatigue on Balance Control of Alpine Skiing Athlete [J]. LIFE-BASEL, APR 22 2025.

ABSTRACT

Background: Great physical requirements are necessary to maintain the entire body in a streamlined and aerodynamic position during downhill skiing. Balance control has an important role in alpine skiing and depends on muscle endurance and strength. The central processing of proprioception and the force capacity of muscle are altered by fatigue. The objective of this study was to assess the effects of fatigue and visual input on balance control in alpine skiing. Methods: Eleven male professional skiers participated in the study. Balance control with eyes open and eyes closed was assessed before and after performing a maximal effort specific alpine ski test. Variables: the total travel distance (TTD) (mm), radial area (RA) (mm2), ratio between TTD and RA (TTD/RA) (1/mm), mean center of pressure (COP) velocity (total length of the COP path per unit time) (mm/s), the mean mediolateral (ML) COP oscillation velocity (Lat_Vel) (mm/s), the mean anteroposterior (AP) COP oscillation velocity (AP_Vel) (mm/s), mean ML (MLD) (mm) and mean AP (APD)

(mm) displacements of the COP and the distance from the ordinate origin (mean X and mean Y) (theoretical point where the COP should be) to the point at which the COP is located, and heart rate were measured. Results: The results showed differences in the variables related to postural control and balance before and after the stress test (p = 0.002-0.037). However, no differences were found when the results obtained with open and closed eyes were compared. Conclusions: The results showed that performance in alpine skiing could be negatively affected by fatigue. However, the dynamic parameters are not decreased by visual input during muscle fatigue.

Isotalo K, Nevala A, Itkonen H, et al. An exceptional country and city? Football-ice hockey rivalry in modernizing Finland and Helsinki[J]. SPORT IN SOCIETY, Apr 3 2025.

ABSTRACT

Finland is an exception in the European sports landscape in the rivalry between ice hockey and football. We examine the struggle between football and ice hockey after WWII. As a case study, we explore Helsinki, Finland's most successful sports city. The popularity of football and ice hockey was on par until the 1960s. Later, ice hockey developed infrastructure, culture, coaching, and social relations, and became a professional and new national sport with international success. Football's rise and international success did not take place until the 2000s. Helsinki has played a dominant role in Finnish sports. In football, Helsinki has been a pioneer for most of the period, but in ice hockey, Helsinki was first overshadowed by Tampere. However, the capital city played a crucial role in the marketization of ice hockey. On the other hand, Helsinki was also the first to experience the limits of ice hockey's growth.

Docter H, Scheiberlich P, Danielsen J, et al.Decline in Efficiency and Changes in Technique Following a Simulated Cross-Country Skiing Race[J]. INTERNATIONAL JOURNAL OF SPORTS PHYSIOLOGY AND PERFORMANCE, JUN 2025.

ABSTRACT

Purpose: To compare gross efficiency (GE) before versus after a simulated cross-country skate-skiing race and investigate the association between changes in GE and in kinematic variables. Methods: GE and kinematic variables were measured during submaximal roller ski skating at a standardized speed-incline combination directly before and after a simulated race (similar to 39 min). GE was calculated from power output and respiratory data, while kinematic variables were obtained using 3D kinematics. The roller-ski-skating race simulation consisted of 3 virtual laps, with each lap (virtual distance: 3.4 km) including flat (2%), uphill (5%, 7%, and 12%), and simulated downhill sections. The race concluded with a final section of 1000 m on a 7% incline. Results: GE declined by 0.6% points throughout the race (before: 15.6% [1.0%]; after: 15.0% [1.0%]; P<.001). The drop in GE coincided with an increase in cycle rate, larger ski edging and orientation angles, and a decline in push-off velocity and ski and pole ground-contact times (P < .05). None of the changes in kinematic variables were associated with the change in GE (P> .05). Conclusions: GE in skating cross-country skiing deteriorates following a simulated roller-ski-skating race on undulating terrain. Although kinematic variables changed, no significant association with the change in GE was found.

Friedrich MF. Immersive training in ice hockey: Evaluating the impact of virtual reality on engagement, enjoyment, and motivation[J]. INTERNATIONAL JOURNAL OF SPORTS SCIENCE & COACHING, May 2025.

ABSTRACT

Virtual reality (VR) is emerging as a transformative tool in sports training, offering immersive environments to enhance athlete development. This study examines the potential of VR as a supplementary off-ice training method for ice hockey players, focusing on engagement, enjoyment, usability, motivation, and perceived competence. Ice hockey's fast-paced and skill-intensive nature makes innovative tools like VR valuable for addressing logistical challenges while enriching training experiences. Using a cross-over design, 33 ice hockey players participated in both VR and traditional off-ice drills, with their experiences assessed through questionnaires and statistical analysis. Results showed that VR significantly enhances engagement compared to traditional methods. However, traditional drills outperformed VR in usability and perceived competence. No significant differences were observed in enjoyment and motivation between the two modalities. These findings highlight VR's potential as a complementary training tool, particularly for boosting focus and involvement, while underscoring the need for improved usability and alignment with athletes' skill levels. By bridging psychological insights with practical applications, this study contributes to the understanding of VR in sports training and calls for longitudinal research to explore its impact on performance and skill transfer. This research addresses gaps in the application of VR in team sports, providing a foundation for advancing innovative, adaptable, and engaging training methods in ice hockey and other sports.

Kurpiers N, Gersmann L, Reinhart K, et al. The Influence of Two Teaching Approaches on Foot Loading in Skiing Beginners-A Comparative Study[J]. SENSORS, Dec 2024.

ABSTRACT

(1) Background: Alpine skiing, with its long history, has experienced numerous innovations and developments on all levels ranging from technology to fashion over the past 120 years. However, teaching approaches for beginners remained quite

consistent for many decades and are mainly grounded in experience. The One-Ski-Method (OSM) is an alternative approach to the predominant snowplow (SP) method with the strategy to initially experience and acquire the elementary positions and actions on one ski in order to subsequently transfer these to two skis. The aim of the study was to compare the effects of the SP and the OSM by assessing the position of the ski via load distribution sensors. (2) Methods: A total of 33 participants were groupwise randomly assigned to the two methods and tested via load insoles on the first and the fifth day on a moderate slope for six turns. Between the two measurements, the groups were instructed according to the SP or the OSM methods, respectively. The data were analyzed via Matlab and SPSS. (3) Results: The OSM group showed a significantly greater forefoot load than the SP group ($p = 0.029$). The SP group developed a greater rearfoot loading from pre- to post testing. (4) Conclusions: The findings make it perceivable that OSM learners acquire a beneficial specific position on the ski due to the exercises of the OSM.

Visser H, van Prooije H, de Vries H, et al . The Likelihood of Holding Outdoor Skating Marathons: the Past, Present and Future of a Climate-change Indicator, and a Way to Adapt[J].CLIMATIC CHANGE, Apr 2025 .

ABSTRACT"Global warming is taking a heavier toll than previously thought on a grueling 200-km speedskating marathon over frozen rivers and canals linking 11 towns in northern Holland." This and many other headlines appeared in the national and international media in response to an article that we (Visser and Petersen) published in 2009 in Climatic Change. Here, we provide an update and extension of the 2009 publication. We calculate the likelihood of holding an eleven-cities skating marathon - or "Elfstedentocht" in Dutch - for the period 1901-2023 and provide an outlook for the years 2050 and 2100, based on climate scenarios recently published by Royal Netherlands Meteorological Institute (KNMI). It shows - not unexpectedly - that prospects for the Elfstedentocht get unfavorable under high emission scenarios

(SSP5-8.5). On the other hand, if countries succeed in keeping global temperatures within the Paris Agreement range of [1.5-2.0] degrees C, marathons are still within reach (SSP1-2.6). Furthermore, we extend the climate change adaptation literature through a discussion of actions that could be taken to continue outdoor skating marathons during an era of climatic change. In the village of Winterswijk an experimental ice rink has been constructed where marathon competitions can be organized with a minimum of two consecutive ice days (combined with clear-sky conditions). If the number of participants would be limited, even a single frost day suffices. This study sheds new light on the depth and breadth of climate impacts on sport people, facilities and culture, but also on the potential for adaptation.