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MEETING ABSTRACTS

Abstracts from the 3rd Annual Scientific Conference of Physical Activity and Sports Tech for Healthy Lifestyles "Sport, Science, and Technology for the Future of the Olympic Movement": Bar, Montenegro. 23-26 April 2026

Edited by Selcuk Akpinar[1], Stevo Popovic[2], Radenko M. Matic[3], Miodrag Zarubica[4]

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Invited speakers

S1

A LEVEL-SPECIFIC, DOSE-CONTROLLED MOTOR–COGNITIVE DUAL-TASK INTEGRATION MODEL BUILT UPON THE VIVIFRAIL MULTICOMPONENT EXERCISE PROGRAM STUDY PROTOCOL – SINGLE-ARM PILOT FEASIBILITY STUDY

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Age-related declines in physical and cognitive function substantially increase the risk of falls and loss of independence among older adults. Multicomponent exercise interventions have been shown to improve functional capacity and reduce frailty-related outcomes. The Vivifrail program is a well-established multicomponent exercise model designed to enhance functional performance across different frailty levels. However, although dual-task performance has been identified as an important predictor of mobility decline and fall risk, the systematic integration of motor–cognitive dual-task training within multicomponent frailty programs remains limited. This study aims to evaluate the feasibility, safety, and preliminary efficacy of SmartVivifrail, a structured intervention model that integrates level-specific motor–cognitive dual-task training into the Vivifrail exercise framework. This protocol describes a single-arm pilot feasibility study involving community-dwelling adults aged ≥70 years classified according to Vivifrail functional levels (A–D). Participants would complete baseline assessments during Week 1, followed by a 12-week SmartVivifrail intervention conducted three times per week (Weeks 2–13). Post-intervention assessments would be performed in Week 14. The intervention combines resistance, balance, gait, and flexibility training with progressively structured cognitive tasks tailored to functional level. Primary outcomes include the Short Physical Performance Battery (SPPB) and Dual-Task Gait Cost (%). Secondary measures include 6-m walking speed, Timed Up and Go (TUG), and self-reported fall history. The SmartVivifrail model is expected to demonstrate feasibility and safety while indicating potential improvements in functional capacity and motor–cognitive performance. Findings from this pilot protocol may inform the development of scalable motor–cognitive training strategies and support the design of future randomized controlled trials targeting functional decline and fall-related risk in older adults.

S2

FROM SCREEN TIME TO GREEN TIME: SUSTAINABLE SPORT TOURISM PRACTICES FOR ENHANCING PHYSICAL ACTIVITY AND HEALTHY LIFESTYLES

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The aim of this paper is to analyze specific sustainable sports tourism good practices identified in Serbia. A sample of good practices included Camp Vidre and Kula Regatta, which have proven effective in applying the concept of sustainability, delivering tangible and measurable results, and offering potential for transfer to other European regions. Camp Vidre has visible attendance results of about 20,000

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children per year with a high retention rate. It makes a huge contributions to local tourism and the economy through the demand for supporting services. In addition to economic activities, this camp offers a variety of activities to cultivate skills, habits and environmental awareness among children and young people. The Kula Regatta includes over 200 participants and over 2000 participants annually in the accompanying kayaking and boating events. This initiative represents a well-coordinated cooperation of all important stakeholders, from municipal to higher education institutions. Both good sports practices promote developmental education, environmental awareness, and attract young people to nature-based sports activities. Their underlying concept can be transferred to other European regions with underutilized natural resources. This study is part of the Interreg Europe DEPART project - Support the Development of a Sustainable Sports Tourism in Europe (Reg. no. 02C0622).

S3

EARLY CHOICES – LONG-TERM CONSEQUENCES: DIETARY HABITS OF PRIMARY SCHOOL CHILDREN AS A PUBLIC HEALTH CHALLENGE

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Dietary habits established in early childhood represent one of the most significant predictors of future population health status. The period of early primary school age constitutes a particularly sensitive developmental stage during which behavioral patterns are formed that frequently remain stable throughout adolescence and adulthood. In contemporary societies, characterized by accelerated lifestyles and the widespread availability of industrially processed foods, an increasing number of children develop dietary patterns that deviate from recommended nutritional guidelines, thereby representing a substantial public health concern. This presentation reports the findings of a study on dietary habits among primary school children conducted in the Tuzla Canton. The research included a representative sample of 2,224 pupils aged 7 to 10 years, making it one of the more comprehensive studies of this type within the regional context. Data were collected using a standardized anonymous questionnaire designed to assess consumption patterns of major food groups, meal frequency, and the structure of daily dietary intake. The results indicate a pronounced predominance of dietary patterns characterized by high consumption of foods with an elevated glycaemic index. Daily consumption of white bread was reported by 71.1% of the children, while nearly one-third of respondents (30%) consumed sweets on a daily basis. Of particular concern is the finding that 24.4% of children reported never eating breakfast, indicating substantial deficiencies in daily meal structure and potentially adverse consequences for growth and development. At the same time, the findings also reveal the presence of certain positive behavioral patterns. The majority of children (75.9%) reported water as their primary beverage of choice, representing a significant protective factor in the context of contemporary dietary trends characterized by increased consumption of sugar-sweetened beverages. The obtained results confirm that children's dietary habits are strongly influenced by the family environment and lifestyle factors, while simultaneously highlighting the considerable potential of the school system as a setting for the implementation of structured preventive interventions. The early school period appears to be a critical developmental stage during which the formation of healthy lifestyle habits can be effectively supported. The findings suggest that improving children's dietary habits requires a systemic approach involving cooperation among the educational system, parents, and healthcare institutions. Particular emphasis is placed on the need to develop long-term preventive programmes aimed at promoting healthy lifestyles. The primary objective of this paper is to stimulate discussion on contemporary challenges in child nutrition and to emphasize the need for a strategic approach to improving children's health through early prevention. The presented results may serve as a basis for the development of institutional policies and practical intervention models aimed at improving the health of primary school children.

S4

PARENTAL MISPERCEPTION OF CHILD WEIGHT STATUS IN SERBIA

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To examine the accuracy of parental perceptions of children's weight status in Serbia by comparing reported perceptions with objectively measured BMI categories. Data were derived from the 2018–2019 WHO European Childhood Obesity Surveillance Initiative (COSI). The nationally representative sample included 2,700 children aged 6.00–9.99 years. Standardized anthropometric measurements were conducted, and BMI-for-age Z-scores were calculated according to the 2007 WHO growth reference. Parents completed questionnaires assessing their perception of their child's weight status. Agreement between measured and perceived categories was analyzed. Based on measured BMI, 2% of children were thin, 62.7% normal weight, 20.6% overweight, and 14.7% obese. While 83.2% of parents correctly identified normal weight, only 27.7% accurately recognized overweight and 8.8% identified obesity. Most parents underestimated excess weight, with slightly higher underestimation observed among boys. A marked discrepancy exists between parental perception and objectively measured weight status among Serbian children. Targeted educational and school-based interventions are needed to improve parental awareness and support early prevention of childhood obesity.

S5

BUILDING THE FOUNDATIONS FOR LIFELONG PHYSICAL ACTIVITY: THE ROLE OF PHYSICAL LITERACY IN CROATIA

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Physical literacy (PL) is increasingly recognized as a critical determinant of lifelong physical activity, health, and overall well-being. Over the past decade, Croatia has established a national research framework dedicated to examining physical literacy across the lifespan, from early childhood to adulthood, and translating scientific evidence into sustainable educational practices and public health strategies. Recent studies indicate that physical fitness improves with age among preschool children, while PL levels remain relatively stable, highlighting the importance of early, developmentally appropriate movement experiences. In school-aged children and adolescents, PL shows consistent associations with

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physical fitness and participation in organized sport, suggesting that motivational and cognitive components may play a crucial role in fostering active lifestyles. Intervention-based research further demonstrates that targeted educational approaches to PL can positively influence health-related outcomes, including cardiorespiratory fitness. Beyond youth populations, emerging evidence in adults confirms the relationship between PL and long-term engagement in structured physical activity, reinforcing the concept of PL as a lifelong resource rather than a childhood-only construct. Building on these scientific insights, Croatia is currently implementing a nationwide digital monitoring system for physical fitness within the school framework. This initiative represents an important step toward integrating PL-informed indicators into educational and health policy, enabling data-driven decision-making while supporting individualized student development. The long-term vision is to create an ecosystem that connects research, education, and public health in order to support physically literate generations. This lecture will present Croatia's research trajectory, key empirical findings, and future strategic directions, positioning physical literacy as a foundational pillar for lifelong health.

S6
DEVELOPMENTAL CHANGES IN SPRINT PERFORMANCE AND RUNNING DYNAMICS IN CHILDREN

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Sprinting is the fastest form of human locomotion and depends on acceleration, reaching and maintaining maximum speed for as long as possible, and resisting fatigue in the last phase of the run. The aim of this study was to determine the effects of age and gender on 50 m sprint running dynamics in children aged 3 to 9, with emphasis on the latent reaction time, segmental running times, and running speed across sprint phases. The cross-sectional design included 237 children divided into seven age groups. An electronic timing system measured the latent reaction time and split times at 5 m intervals on a 50-metre section. The latent reaction time and total 50 m running time decreased progressively with age in both genders. Boys generally achieved shorter reaction times and faster sprint times than girls. The maximum running speed increased from about 3.7 m/s in the youngest children to over 6.0 m/s in nine-year-old boys. Four sprint phases were identified: acceleration (0-10 m), optimal running speed (15-30 m), achieving (10-15 m) and maintaining (30-40 m) submaximal running speed, and deceleration (40-50 m). Significant gender differences were mainly observed at ages 4, 6, and 7. Age strongly influences sprint running dynamics during childhood. These findings contribute to understanding developmental changes in sprint performance and may support age-appropriate training and assessment in early childhood.

S7
DEVELOPMENT OF MANIPULATIVE AND LOCOMOTOR SKILLS IN CORRELATION WITH MOTOR ABILITIES IN PRESCHOOL CHILDREN: EFFECTS OF SPECIFIC PROGRAMS OF PHYSICAL (KINESIOLOGICAL) ACTIVITIES. THEORETICAL-EXPERIMENTAL SYNTHESIS

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Purpose of this paper is to analyze the effects of three dominant institutional models: in-state kindergartens, Sports schools, and Developmental Gymnastics (Sokol Association) on the development of basic motor competencies in preschool children. The paper is conceived as a theoretical-experimental synthesis, which includes a systematic review of contemporary literature in the MDPI, PubMed, and KOBSON databases over the last 15 years. The experimental part of the paper is based on the author's ten-year longitudinal dissertation on the transformation of motor skills and a comparative analysis of the quality of motor performance using the TGMD-3 and KTK instruments in different generations of children aged 4-6 years. Confirm that structured kinesiology programs (developmental gymnastics and multisport) lead to statistically significantly greater progress compared to regular kindergarten activities. The results indicate a significant transformation of basic abilities, which directly correlates with superior achievements in manipulative and locomotor skills in the experimental groups. Evidence suggests that a high level of motor coordination and strength provides the necessary platform for the precise acquisition of complex manipulative patterns. In order to achieve full motor competence, expertly guided treatment is necessary, which simultaneously develops motor abilities and skill performance techniques, overcoming the limitations of free play in the preschool system.

S8
MAKING WEIGHT IN COMBAT SPORTS. INSIGHTS FROM QUALITATIVE EVIDENCE

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Weight management is an essential component of combat sports (CS) as athletes are matched for competitions based on their weight. While research on the physiological and psychological consequences of weight cutting in CS is abundant, personal experience of weight loss (WL) in CS is understudied. We aimed to review the qualitative research on CS athletes' experiences of WL. PubMed, Web of Science, SPORTDiscuss, and PSYCinfo were searched for relevant literature. Included studies had to be published in English and qualitatively elaborate on the personal WL experiences of CS athletes. Analyzed data were divided according to the most important themes by following three phases: "line-by-line' coding of text; the development of 'descriptive themes'; and the generation of 'analytical themes'. Five studies (n = 37) were included in the narrative synthesis after applying the eligibility criteria. The terms "hell", "horrendous", "horrible" used to describe WL across different CS in multiple studies testify that WL was almost unanimously perceived as a negative experience. Perceived benefits and motivations, cultural and social identity, inner conflict and health awareness, comparison and social evaluation, social and daily life challenges were the most important themes identified. Having a competitive edge was the main rationale why athletes engaged in WL. Athletes reported that WL is deeply engrained in the culture of the sport and were willing to take a risk to

make weight, despite potential health hazards. Athletes commonly compared themselves with athletes from other weight categories and between genders. They also emphasized that WL does not occur in a social vacuum and that completing daily duties during WL was challenging. CS athletes often experienced WL as a negative and stressful process. Nevertheless, despite this inner conflict, evidence suggests that they are willing to endure these challenges to gain a perceived competitive advantage over lighter opponents. The practice of weight cutting is deeply ingrained in the culture of combat sports and has become an integral part of many CS athletes' identities.

S9

THE ROLE OF PERSONALIZED NUTRITION IN ELITE FOOTBALL: A QUALITATIVE STUDY OF PERFORMANCE, RECOVERY, AND INJURY REHABILITATION

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This study explores the role of personalized nutrition in optimizing performance, maintaining match readiness, and supporting recovery and injury rehabilitation in elite football players. A qualitative research design was applied using semi-structured, in-depth interviews with twenty nutritionists and dietitians employed by elite European football clubs. Data were collected across multiple sessions during the 2022–2023 period and analyzed to identify recurring themes and applied practices. Findings indicate that nutrition plays a critical role in enhancing performance, preventing injuries, improving sleep quality, and supporting tissue repair. While energy requirements vary depending on body composition and physical demands, macronutrient distribution remains consistent across age groups. Effective nutritional strategies are sport-specific and must consider cultural and individual dietary preferences. Elite clubs operate within structured frameworks emphasizing food quality, sourcing, and logistical management. Monitoring for relative energy deficiency is essential to prevent declines in health and performance. Personalized nutrition is a fundamental component of elite football performance and recovery systems. Tailored dietary strategies, combined with professional monitoring, contribute significantly to injury prevention, rehabilitation, and sustained athletic performance.

S10

BRIDGING THE PHYSICAL-DIGITAL DIVIDE: INTEGRATING ESPORTS AND EXERGAMING FOR SKILL DEVELOPMENT AND HEALTH IN K12 EDUCATION

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In contemporary education, esports and exergaming are often viewed with apprehension. However, this perspective overlooks that video games, regarding both content and social interaction, act as powerful learning machines. This research investigates a pedagogical framework for integrating esports and exergaming within K12 education. Supported by vzw EPOS (Erasmus+) and the Belgian Esports Federation, the study evaluates how scholastic esports, aligned with NASEF standards, can merge digital engagement with physical activity and cognitive development. A curriculum was developed and implemented within a K12 school environment, functioning as a laboratory for scholastic esports. The methodology focused on four pillars: digital/technical proficiency, soft skill development, exergaming and an ethical charter based on Olympic values. Initial outcomes demonstrate that integrating exergaming effectively transforms sedentary screen time into active movement. Furthermore, the esports environment facilitated the development of digital literacy and executive functions. The project identified specific vocational skill sets required for the emerging tech-driven labor market. Integrating esports and exergaming into K12 education offers a contemporary approach to youth engagement. By anchoring technological innovation in physical health and social excellence, the curriculum prepares students for the future of sport and work. This framework ensures that the digital evolution of the Olympic Movement remains grounded in pedagogical integrity and physical well-being.

S11

TWO SIDES, ONE GAME: HOW DOMINANT LIMBS SHAPE DECISIONS AND DEVELOPMENT IN SOCCER

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Motor lateralization reflects functional differences between the left and right limbs that emerge from hemispheric specialization in motor control. These asymmetries influence movement execution, decision-making, and skill development in both laboratory tasks and sport performance contexts. In team sports such as soccer, limb dominance may shape how players select effectors during dynamic, time-constrained situations, potentially influencing performance outcomes, training strategies, and injury risk. This study aims to examine how motor lateralization influences effector selection and decision-making in sport contexts, with particular emphasis on lower-limb dominance in youth soccer players and its implications for player development and training optimization. Evidence from laboratory-based reaching experiments and sport-specific field observations was synthesized within the dynamic dominance framework. Upper-limb studies investigated hand selection and performance asymmetries under varying task constraints, including manipulation of visual feedback and reaction-time pressure. In addition, a preliminary field study involving U-15 soccer players employed wearable sensors to quantify limb usage during both closed-skill drills (e.g., juggling and slalom dribbling) and open-skill game situations such as small-sided games. Laboratory findings demonstrate that sensorimotor performance asymmetries strongly predict hand selection and are influenced by task constraints and reaction-time demands. Under time pressure, participants show a pronounced tendency to select the dominant limb, indicating that lateralized bias primarily affects effector selection processes. Preliminary observations in youth soccer players reveal similar patterns in lower-limb use: while non-dominant foot proficiency improves with team level during closed-skill drills, players continue to display a strong dominant-foot preference during open-skill game scenarios. Motor lateralization appears to influence not only movement execution but also decision-making processes in sport environments. These findings suggest that closed-skill drills and open-skill game-based training serve complementary roles in developing bilateral competence in soccer players. Furthermore, monitoring limb usage through wearable sensor technology may provide valuable insights for optimizing bilateral training loads, supporting injury-prevention strategies, and informing return-to-play decisions following unilateral injuries.

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Oral presentations

O1
IMPACT OF DIGITAL READINESS ON LIFELONG ENGAGEMENT: THE MEDIATING ROLE OF HEALTH AND WELLBEING

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Digitalization and health of older individuals represent challenges in the context of job control and sustained participation in meaningful work or active ageing initiatives. This study aims to explore how digital readiness impacts the health and well-being of older workers and how these improvements mediate their sustained engagement in work and later life. The study included a sample of online questionnaire respondents aged 50 and above who are users of sport or health technologies in Serbia (N=300). The conceptual model is based on three independent dimensions: digital literacy, perceived usefulness of sport/health technologies, and organizational support for technology adoption; health and well-being (physical and mental) as mediator; and the dimension of lifelong engagement as a dependent variable. Each of the dimensions was evaluated based on Likert-scale items (1 = strongly disagree to 5 = strongly agree). The Structural Equation Modelling is realized using SmartPLS. The measurement and structural models are supported by fit indices criteria. They revealed that all digital readiness dimensions have a significant positive effect on health and well-being. Further, improved health and well-being dimensions strongly predict lifelong engagement. In addition, health and well-being was a partial mediator, which means that digital readiness factors enhance lifelong engagement. A tech-enabled environment can contribute to leading to enhanced motivation to remain more active and engaged in later life. This research has been done in line with the DIGI-net COST Action's objectives (CA21107), which address inequalities in later-life work and digitalization.

O2
ONE HEALTH IN PHYSICAL EDUCATION: A PROPOSED FRAMEWORK FOR MONTENEGRO

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The One Health concept is based on understanding the interconnections between human health, animal health, and the environment, and emphasizes the need for interdisciplinary approaches to addressing contemporary health and environmental challenges. Although One Health has been recognized and developed within public health and veterinary medicine, its systematic application in education, particularly within physical education, remains limited. Physical education, however, represents a natural and accessible educational setting for introducing One Health principles, given its focus on health, movement, and interaction with natural and built environments, particularly in contexts such as Montenegro, which places a strong emphasis on environmental protection and sustainability. The aim of this work is to present a conceptual framework for integrating One Health principles into physical education as part of a broader health-oriented educational approach in Montenegro. The work is based on a narrative review of relevant scientific and professional literature, as well as an analysis of existing educational and health frameworks addressing the One Health approach and the role of physical activity in education in European and other international contexts. Based on this analysis, key elements for integrating One Health into physical education were identified, including linking physical activity with health literacy, environmental awareness, and community well-being. The proposed framework emphasizes interdisciplinarity, inclusiveness, and adaptability to different educational contexts. Integrating One Health principles into physical education may contribute to a holistic understanding of health and provide a foundation for further curriculum development, teacher training, and the advancement of sustainable educational practices. Acknowledgment: This presentation was carried out within the framework of COST Action CA24106, Building Education and One Health with Adaptive Convergence and Open Networks (BEACON).

O3
THE EFFECT OF A ONE-WEEK INTENSE TRAINING CAMP ON THE ANTHROPOMETRIC AND MOTOR CHARACTERISTICS OF YOUNG VOLLEYBALL PLAYERS

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The aim of this study was to examine the short-term effects of a one-week intensive training camp on the anthropometric and motor characteristics of young volleyball players. The study included 13 right-handed male volleyball players aged 17.98 ± 0.51 years. Changes in anthropometric characteristics were assessed using bioelectrical impedance analysis. Motor characteristics were evaluated using a reaction time test, a handgrip strength test, a 5 × 20 s interval test on a rowing ergometer, and vertical jump, approach jump, and standing long jump tests. Significant decreases were observed in body fat mass, percentage of body fat, and waist-to-hip ratio. Significant increases were noted in total body water, protein mass, mineral mass, fat-free mass, and skeletal muscle mass. Among the assessed motor abilities, a significant improvement was observed only in left-hand grip strength. A one-week training camp can lead to significant changes in body composition in young volleyball players; however, it does not result in substantial improvements in motor performance.

O4
TRANSFER LEARNING BETWEEN CLINICAL AND WEARABLE ECG DATA: A FEASIBILITY STUDY

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Clinically annotated electrocardiogram (ECG) datasets enable training of deep learning models on multi-lead recordings, while wearable ECG devices provide single-lead data under different acquisition conditions. This study examines the feasibility of transferring models trained on clinical ECG data to wearable ECG recordings.

Models pretrained on the PTB-XL database of 12-lead ECG recordings were adapted to data acquired using the Polar H10 chest strap. Several transfer strategies were explored, including channel reduction, feature reuse, and selective fine-tuning. The analysis focused on scenarios without labeled wearable ECG data, evaluating model behavior across different adaptation configurations. Transfer of representations from multi-lead clinical ECG data to single-lead wearable ECG data was technically feasible, with variable outcomes across adaptation strategies. Differences were observed in training stability and model behavior depending on how lead dimensionality differences were addressed. No single strategy showed consistent behavior across all configurations. The findings indicate that cross-domain transfer between clinical and wearable ECG data is sensitive to methodological choices and signal characteristics. Careful evaluation is required when applying pretrained clinical ECG models to wearable data, and further investigation is needed to better understand transfer learning across heterogeneous ECG domains.

O5
A MENTAL BATTLE ZONE: THE PSYCHOLOGICAL EXPERIENCE OF ATHLETES RECOVERING FROM RELATIVE ENERGY DEFICIENCY (RED-S) IN SPORT

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The aim of this study was to examine the role of nutrition in improving performance, maintaining fitness, and supporting injury rehabilitation in professional football players. A qualitative research design was applied using in depth interviews with 20 nutritionists and dietitians working with top European football clubs. Data were collected during 2022 and 2023 across several European countries. The interviews explored individualized nutrition strategies, performance support, and rehabilitation practices in elite football environments. Findings indicate that there is no universal nutrition strategy suitable for all football players throughout the competitive season due to substantial individual differences in physiological demands, dietary habits, and cultural backgrounds. Proper nutritional planning enhances adaptation to intensive training and supports high performance during matches. Additionally, targeted nutritional interventions contribute to tissue repair during injury recovery and may improve sleep quality and quantity, which are critical factors for overall performance and regeneration. Individualized nutrition strategies represent a key component of performance optimization and injury management in professional football. Integrating tailored dietary planning within sports management frameworks can enhance athlete availability, reduce injury related downtime, and support sustainable high level performance throughout the season.

O6
EFFECTS OF 8-WEEK STRENGTH TRAINING COMBINED WITH NJF OR PNF ON UPPER CROSSED SYNDROME IN SEDENTARY COLLEGE STUDENTS

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This study aimed to investigate the effects of 8-week strength training combined with neuromuscular joint facilitation (NJF) or proprioceptive neuromuscular facilitation (PNF). Forty-eight sedentary college students with UCS (24 males, 23.3 ± 0.5 years) were randomized into three groups: control, SN (strength training + NJF), and SP (strength training + PNF). SN and SP interventions lasted for 8 weeks, with 45 minutes per session and twice a week. Pain, alignment, neck function, and muscle activation were measured at baseline, week 8, and week 12 (follow-up). ANCOVA was used to analyze data adjusting for baseline values. Significant group effects were found for alignment (F Group = 26.22-226.69, η^2 = 0.29-0.78), neck function (F Group = 4.93-38.95, η^2 = 0.07-0.37), pain (F Group = 10.31, η^2 = 0.14), and muscle activation (F Group = 9.25-11.50, η^2 = 0.19-0.22). At week 8, SN achieved superior improvements over SP in rounded shoulder angle (−21.8° vs. −15.2°) and cervical deep flexor endurance (+20.9s vs. +8.5s). At week 8 and follow-up, both SN and SP showed greater improvements compared to control in rounded shoulder angle, cervical deep flexor endurance, and cervical range of motion. Eight-week strength training combined with NJF is more effective than the PNF in improving UCS outcomes, particularly in alignment and neck function.

O7
DATA ANALYTICS AND SYSTEMS THINKING FOR DIAGNOSTICS IN REHABILITATION

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Rehabilitation involves complex interactions between patient characteristics, clinical interventions, and organizational processes. This study applies data analytics and systems thinking to develop a diagnostics and decision support framework aimed at optimizing rehabilitation pathways and improving patient outcomes, aligned with Professor Wang's expertise in advanced analytics and systems modelling. The project used anonymized data from 50 patients across three urban rehabilitation clinics in the United Kingdom, Norway and China. Multi-source assessment records, treatment variables, and outcome measures were integrated. Predictive analytics and decision support algorithms were applied to evaluate patient progress and identify patterns of intervention effectiveness. A systems thinking approach mapped feedback loops between patient profiles, therapy sequencing, and organizational workflows. The framework identified key predictors of rehabilitation outcomes, including treatment intensity, adherence patterns, and patient demographics. Decision support analytics highlighted systemic bottlenecks where progress was delayed despite intervention adjustments. Systems-level analysis revealed interdependencies between assessment measures and clinical pathways, demonstrating how changes in one component influenced outcomes across the rehabilitation system. Incorporating data-driven systems thinking enhances diagnostic precision and supports evidence-based decision-making in rehabilitation. The approach demonstrates how predictive analytics and system-level modeling can optimize clinical assessment strategies, improve patient outcomes, and provide a scalable framework for data-informed rehabilitation practice.

O8
PHYSICAL ACTIVITY OF PEOPLE OVER 65 YEARS OF AGE IN BULGARIA – ANALYSIS OF THE TREND FOR THE PERIOD 2000-2020

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Insufficient physical activity is one of the main risk factors for the occurrence of chronic non-communicable diseases. The aim of

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present study is to analyze the available data for physical activity of people over 65 years of age in Bulgaria and to determine the trends for the period 2000-2020. Statistical methods for time series analysis were applied using SPSS v.23 statistical software. The official statistical data of Eurobarometer (Sport and Physical Activity) was used. According to data for 2022, 45% of Bulgarians say they never do sports. Data on the physical activity of people over 65 years of age in Bulgaria show a steady trend towards lower levels of movement compared to younger age groups and average levels for the European Union. According to Eurobarometer data, Bulgaria is among the countries with the highest share of physically inactive older people. Only about 12.8% of the surveyed population practices physical exercise daily or 4-6 times a week, with this indicator dropping sharply after the age of 54. All this requires the development and implementation of national policy in this area with the participation of all public structures involved in this problem (healthcare, education, transport, environment, urban planning, business structures, sports and tourism, etc.).

O9

EFFECTS OF MENTHOL ON METABOLIC, CARDIOVASCULAR, THERMAL AND APPETITE VARIABLES IN HUMANS - ANALYSIS BY BODY MASS INDEX, GENDER AND DOSE

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Menthol stimulates cold-sensitive TRPM8 receptors, leading to increased thermogenesis. The purpose of this study was to investigate the effects of menthol on resting energy expenditure (REE), thermal perception, appetite, blood pressure, and the mediating effects of BMI, gender, and dose. Ten normal-weight individuals (5 women) and ten individuals with obesity (5 women) participated in the study, which consisted of four treatment sessions on four consecutive days. On each day, subjects' skin was first smeared with a control solution (water) and, after 20 minutes, with a menthol solution (2.3%), with data sampled for an additional 40 minutes. On the third and fourth experimental days, half of the participants received a double menthol dose (4.6 g) to investigate a possible dose-response effect. Menthol increased REE, perceived coolness, and, to a smaller extent, appetite and blood pressure (all $p < 0.001$). Compared with normal-weight individuals, participants with obesity presented decreased metabolic responses, while appetite increased only in males, and females demonstrated significantly higher coolness sensations. A dose-response effect was observed for metabolic variables and coolness sensation ($p < 0.001$). Overall, menthol significantly increased REE and coolness perception, and to a lesser extent appetite and blood pressure, while BMI, sex, and dose differentiated some of the responses.

O10

APPLICATION OF PREDICTIVE ANALYTICS IN WEARABLE TECHNOLOGIES FOR THE ASSESSMENT OF FATIGUE AND INJURY RISK IN RUNNERS: A REVIEW OF CONTEMPORARY EVIDENCE

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Wearable technologies enable continuous quantification of autonomic regulation and mechanical load in endurance running; however, translating these signals into valid predictions of central and systemic fatigue and overuse injury risk remains constrained by heterogeneity in modeling approaches and persistent reliance on population-derived thresholds. This review synthesizes contemporary evidence (2016–2025) on the integration of heart rate variability (HRV), workload indices, and GPS-derived biomechanical metrics within predictive analytic frameworks for fatigue monitoring and injury risk estimation in recreational and elite runners. A structured search of PubMed, Scopus, and Web of Science identified studies involving endurance athletes monitored via wearable devices that reported (a) HRV metrics—primarily RMSSD as an index of vagal modulation; (b) workload quantification using models such as TRIMP and the Acute: Chronic Workload Ratio (ACWR); and (c) statistical or machine learning–based predictive modeling approaches. Studies comparing wearable-derived HRV with electrocardiography and workload responses with metabolic cart assessments were prioritized, while non-endurance populations and laboratory-only protocols without wearable integration were excluded. Across studies, RMSSD demonstrates moderate-to-strong associations with training load and fatigue status ($r \approx 0.40–0.65$), with greater signal stability observed in elite runners, whereas recreational runners show higher day-to-day variability and slightly weaker correlations ($r \approx 0.30–0.50$). ACWR values exceeding ~1.5 are consistently associated with elevated overuse injury risk (risk ratios ≈ 1.5–2.0), particularly when accompanied by abrupt GPS-derived increases in weekly distance (>10–15%) or marked pace variability. Models integrating internal (RMSSD) and external (ACWR, GPS-derived load) variables outperform single-metric approaches. Supervised machine learning algorithms—most frequently Random Forest, gradient boosting, and logistic regression—report classification accuracies between 70% and 85% for injury prediction, while longitudinal mixed-effects and anomaly-detection models enhance individualized risk identification. Wearable-derived resting RMSSD demonstrates high agreement with electrocardiography under controlled conditions (ICC > 0.85), although validity decreases during dynamic recording. Collectively, the evidence supports multidimensional integration of autonomic and biomechanical metrics within predictive frameworks and underscores the need to transition toward individualized, longitudinal Bayesian or probabilistic models capable of informing automated load-management systems and reducing the incidence of overuse injuries through data-driven training adjustments.

O11

THE MEDIATING ROLE OF LONELINESS IN THE RELATIONSHIP BETWEEN PHYSICAL ACTIVITY ENVIRONMENT AND MENTAL WELLBEING IN ATHLETES

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This study examines the mediating role of loneliness in the relationship between physical activity enjoyment and mental well-being among athletes. The study used a correlational survey design, a quantitative research method. The study sample consisted of 350 athletes selected via criterion sampling. Of the athletes, 178 were female (mean age = 20.58 ± 1.99) and 172 were male (mean age = 21.91 ± 4.88). The Physical Activity Enjoyment Scale, the UCLA Loneliness Scale, and the Warwick-Edinburgh Mental Well-being Scale were used as data collection tools in the study. It was confirmed that the data followed a normal distribution, and relationships between variables were examined using Pearson correlation analysis. Mediation analysis was performed using SPSS PROCESS Model 4, and confidence intervals for indirect effects were calculated using 5000 bootstrap samples. A significant posi-

tive association was found between enjoyment of physical activity and mental well-being; a negative association was found between enjoyment of physical activity and loneliness; and a negative association was also observed between loneliness and mental well-being. Mediation analysis indicates that the direct effect of physical activity on mental well-being is significant ($\beta = 0.5509$, $p < .001$), that physical activity hurts loneliness ($\beta = -0.1966$, $p < .001$), and that loneliness negatively affects mental well-being ($\beta = -0.4474$, $p < .001$). Furthermore, the indirect effect of physical activity on mental well-being via loneliness was significant (indirect effect: $\beta = 0.0880$, BootLLCI = 0.0420, BootULCI = 0.1471), indicating that loneliness acts as a mediating variable in this relationship. The study demonstrates that the enjoyment athletes derive from physical activity plays a significant role in enhancing mental well-being and that loneliness acts as a mediating variable in this relationship. It is emphasized that sports environments can support psychological well-being by increasing social interaction.

O12
THE EFFECT OF POSITIVE FUTURE EXPECTATIONS ON ANGER AND AGGRESSION IN ATHLETES

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This study examines the effect of positive future expectations on anger and aggression among athletes. The study used a correlational survey design, a quantitative research method. The sample consisted of 312 athletes selected via criterion sampling. Of the athletes, 171 were female (mean age = 20.60 ± 1.978) and 141 were male (mean age = 21.84 ± 4.045). The Positive Future Expectations Scale and the Anger and Aggression in Sports Scale were used as data collection tools in the study. The data were confirmed to follow a normal distribution and were analyzed using SPSS 25.0. An independent-samples t-test was used for independent-group comparisons. Pearson correlation was used to determine the relationship between variables, and simple linear regression was used to examine the effect of positive future expectations on anger and aggression. A two-sample t-test revealed that male athletes had higher anger and aggression scores than female athletes ($p < .01$). A correlation analysis revealed a negative, significant relationship between positive future expectations and anger and aggression ($r = -0.315$, $p < .001$). A weak negative relationship was observed between age and anger and aggression, while no significant relationship was found between age and positive future expectations. According to simple linear regression analysis, positive future expectations significantly predict anger and aggression ($\beta = -0.315$, $t = -5.848$, $p < .001$; $R^2 = 0.099$). Positive future expectations significantly reduce levels of anger and aggression in athletes; male athletes have higher levels of anger and aggression compared to females, and a weak negative relationship was observed between age and these behaviors.

O13
AN INVESTIGATION OF HEART RATE KINETICS DURING TWO DIFFERENT ANAEROBIC TESTS

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The inflection point is defined as a critical transition during exercise at which heart rate deviates from its linear response to workload and exhibits a new slope. This point indicates the onset of significant changes in physiological responses. Therefore, the aim of this study was to compare heart rate kinetics responses between two different anaerobic tests Nine active athletes voluntarily participated in this study. To determine anaerobic power and capacity, the Wingate Anaerobic Test (WAnT) was performed in a laboratory setting, and the Running-based Anaerobic Sprint Test (RAST) was conducted in a field setting. Heart rate was recorded beat-to-beat (Polar RS800CX) and analyzed via R-R intervals. Heart rate (HR) kinetics were analyzed using a program based on segmented regression analysis. The Wilcoxon Signed-Rank Test was used to determine differences between tests. Statistical significance was set at $p<0.05$. Range values in WAnT (48.44±11.65) were significantly higher than in RAST (32.67±8.0)($p<0.05$). No statistically significant difference was found between WAnT (2.94±0.54) and RAST (2.61±0.85) in slope parameters. Similarly, no significant difference was observed in time parameters between WAnT (17.77±4.82) and RAST (14.01±4.96)($p>0.05$). However, mean values for both parameters were higher in WAnT. It is suggested that WAnT, due to its continuous loading protocol compared to RAST, imposes a greater load on the cardiovascular system, leading to more pronounced changes in heart rate kinetics.

O14
EXPLOSIVE-REACTIVE STRENGTH PROFILE OF ELITE YOUTH FOOTBALL PLAYERS: INSIGHTS FROM CMJ-SJ RELATIONSHIP AND DROP JUMP REACTIVE STRENGTH INDEX

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Explosive and reactive lower-limb qualities underpin actions like sprinting and rapid direction changes, while efficient stretch-shortening cycle (SSC) mechanics conserve elastic energy and enhance propulsive forces. Reactive strength index (RSI) quantifies how quickly an athlete transitions from eccentric to concentric contraction and increases with age. The aim of this study was to examine the explosive-reactive strength profile of elite youth football players across two age categories. The sample consisted of 40 football players from FC Sutjeska (cadets n = 20; juniors n = 20). Body height, body weight, countermovement jump (CMJ), squat jump (SJ) and drop jump RSI (DJ40) were assessed. Body height was measured using an anthropometer, body mass with a calibrated digital scale, and CMJ, SJ and RSI were measured using the Optojump photoelectric system. Each participant performed three trials with hands fixed on hips. We analyzed the best jump height and RSI, calculated the eccentric utilization ratio (EUR) as CMJ / SJ, and used independent samples t-test to compare groups ($\alpha = 0.05$). Cadets achieved CMJ 33.2 ± 4.0 cm, SJ 29.7 ± 3.5 cm, DJ40 32.1 ± 4.7 cm and RSI 1.17 ± 0.10; juniors achieved CMJ 34.2 ± 3.7 cm, SJ 32.0 ± 2.7 cm, DJ40 32.4 ± 3.2 cm, and RSI 1.16 ± 0.11. None of the differences reached significance ($p > 0.05$), and eccentric utilization ratio (EUR) was slightly higher in cadets (1.12) than in juniors (1.07). Cadets and juniors show comparable explosive-reactive profiles. Both age groups fall near the lower bound of CMJ/SJ norms, and their RSI values remain below ~ 1.30. These results suggest substantial capacity for neuromuscular development. Coaches should implement plyometric drills that emphasize rapid SSC action and minimal ground contact time. Routine monitoring of CMJ/SJ and RSI can guide individualized training, track neuromuscular fatigue and support talent development strategies. Data driven tracking frameworks may help elite academies optimize athlete progression.

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Poster presentations

P1
PHYSICAL ACTIVITY VOLUME OF SIXTH-GRADE PRIMARY SCHOOL STUDENTS IN RELATION TO ACADEMIC ACHIEVEMENT

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Although physical activity is widely recognized for its health benefits, its relationship with academic achievement in school-aged children remains unclear. The aim of this study was to examine differences in physical activity volume among sixth-grade primary school students in relation to their academic achievement. The study was conducted in 2025 on a sample of 100 primary school students from the territory of the Municipality of Podgorica. Physical activity volume was assessed using the COSI parent questionnaire, which provides information on the frequency and type of children's physical activity, as well as sedentary behavior. Academic achievement was determined based on students' grade point averages in mathematics, Montenegrin language and literature, and physical education. Descriptive statistics were used to calculate central and dispersion parameters, while one-way analysis of variance (ANOVA) was applied to examine differences in physical activity volume between groups with different levels of academic achievement. The results showed that there were no statistically significant differences in physical activity volume between students with lower and higher academic achievement ($p > 0.05$). Students with higher academic performance did not demonstrate consistently higher levels of physical activity compared to their peers with lower academic achievement. The findings demonstrate that physical activity level was not a significant predictor of academic achievement in the examined sample, suggesting a multifactorial relationship between physical activity and academic success during adolescence.

P2
ECCENTRIC UTILIZATION RATIO AND ITS RELATIONSHIP WITH THE FORCE–VELOCITY PROFILE IN ELITE FEMALE VOLLEYBALL PLAYERS

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The eccentric utilization ratio (EUR) is a relevant biomechanical indicator of reactive strength in sports in which vertical jump performance is essential. The purpose of this study was to examine the influence of EUR on the force–velocity (FV) profile in elite female volleyball players and determine whether efficiency in the eccentric–concentric transition affects force, velocity and power parameters. The sample consisted of 12 elite female volleyball players from the Montenegro U19 national team. To assess EUR, the FV profile and vertical jump performance, squat jump (SJ), countermovement jump (CMJ) and drop jump (DJ) tests were performed using the Optojump system. Basic FV parameters (Fo, Vo, Pmax, Sfv, Sfvopt, FVimb) were calculated, and EUR was determined by comparing jump performance with and without the eccentric phase. The results showed that EUR did not exert a statistically significant influence on FV parameters during eccentric–concentric muscle contraction. Furthermore, a more pronounced velocity deficit and higher FVimb were observed in CMJ compared to SJ, indicating an insufficiently developed amortization phase among the examined athletes. Based on these findings, although EUR does not directly influence FV variables, it retains diagnostic value for monitoring training adaptation and may serve as a useful tool for the individualization of strength and conditioning programs in sports involving explosive lower-limb actions such as volleyball.

P3
ACTIVE MOBILITY IN LATER LIFE: VALUES, PERCEPTIONS, AND INEQUALITIES IN AGE-FRIENDLY COMMUNITIES

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Active mobility, including walking and cycling, represents an important form of daily physical activity and a key determinant of health, functional independence, and well-being in later life. Maintaining mobility and health in older age is closely linked to opportunities for continued participation in work and society, particularly in the context of ongoing digitalization and social change. Within age-friendly communities, active mobility therefore reflects not only health-related behavior but also broader social values such as autonomy, safety, dignity, and social participation. This paper examines active mobility in later life from a health-oriented and value-based perspective, focusing on how older adults perceive and value opportunities for active transportation in age-friendly environments. A conceptual approach based on a narrative review of literature from sport and health sciences, social gerontology, and policy frameworks is applied. The analysis highlights key value dimensions relevant to active mobility in older age, including independence, perceived safety, accessibility, trust in the built environment, and social connectedness. It also addresses how social and spatial inequalities, such as socio-economic differences, urban–rural disparities, and infrastructure quality, shape mobility practices and opportunities for participation in later life. Promoting active mobility among older adults requires integrated approaches that address not only physical and environmental conditions but also values, perceptions, and inequalities influencing everyday mobility choices. This perspective contributes to ongoing discussions on healthy ageing, inclusive environments, and extended participation in work and society. Acknowledgment: This presentation is developed in connection with COST Action CA21107 (DIGI-net): Work inequalities in later life redefined by digitalization.

P4
EXAMINING THE ASSOCIATION BETWEEN REACTIONS TO SPORTING OUTCOMES AND CAREER SATISFACTION ACROSS ATHLETES WITH DIFFERENTIAL MEDIA VISIBILITY

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Prior research indicates that the modes of presenting sporting achievements differ in relation to athletes' professional status and the broader social context of their engagement. The present study aimed to investigate whether statistically significant differences exist among athletes with varying levels of media coverage with respect to their reactions to sporting outcomes and their satisfaction with their sporting careers. A multivariate analysis of variance (MANOVA) was conducted. The dependent variables included negative reactions to sporting outcomes, positive reac-

tions to sporting outcomes, uncontrollable reactions to sporting outcomes, and satisfaction with sporting careers, while the independent variable was athletes' media coverage, operationalized across multiple categories. The MANOVA results revealed a statistically significant multivariate effect of athletes' media coverage on the set of dependent variables. This finding indicates that athletes with differing levels of media coverage differ significantly in the overall pattern of reactions to sporting outcomes and in satisfaction with their sporting careers, encompassing both positive and negative reactions. Differences in reactions to sporting outcomes were found to be consistent between groups with higher levels of media coverage and the group with the lowest level of media presence, whereas groups with comparable levels of media exposure did not differ significantly from one another. The study demonstrates that the presentation of sporting results on Instagram is contingent upon athletes' sporting status and their social roles.

P5
THE ROLE OF SOCIOECONOMIC STATUS IN DETERMINING NUTRITIONAL STATUS AMONG MONTENEGRIN ADOLESCENTS

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Obesity is increasingly recognized as an epidemic in many countries worldwide. It is associated with a higher risk of developing non-communicable diseases, and socio-economic status (SES) may play a role in its occurrence. This study aimed to determine the nutritional status of male adolescents in Montenegro, to identify possible differences, and to examine the relationship of SES and obesity. The sample consisted of 484 male adolescents age of 15.7 ± 0.6 years. Nutritional status was assessed using BMI percentile values and Waist-to-height ratio (WHtR), while SES was evaluated using a standardized COSI questionnaire. No statistically significant differences in nutritional status were observed among male adolescents, nor was a statistically significant relationship of SES and obesity detected, even some trends, particularly regarding maternal education, showed unexpected directions. Maternal education may play an important role in promoting healthy nutritional status in children, as mothers often manage household food choices and meal preparation. Higher maternal education may also facilitate access to reliable information through social media, thereby reinforcing healthy lifestyle practices in children, including the use of quality food in appropriate quantities. Future research is needed to confirm these findings, taking into account the limitations of the present study.

P6
NUTRITIONAL STATUS OF FIRST GRADE PRIMARY SCHOOL CHILDREN IN URBAN AND RURAL AREAS OF THE CENTRAL REGION OF MONTENEGRO

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Modern lifestyle, changes in dietary habits, and reduced physical activity increasingly affect the nutritional status of school-aged children. This study aimed to examine whether the environment in which children grow up is associated with changes in nutritional status by comparing first grade children from urban and rural areas of the central region of Montenegro. The sample included male and female children from urban and rural areas in the central region of Montenegro. Nutritional status was assessed using body mass index (BMI) percentiles and waist-to-height ratio (WHtR). Basic descriptive statistics were computed for all variables. Differences between groups were analyzed using independent samples t-tests. No statistically significant differences were found in nutritional status between boys and girls for BMI percentiles (boys p=0.869; girls p=0.828) or WHtR (boys p=0.629; girls p=0.466), indicating that first grade children's nutritional status remains relatively consistent at this age. These findings suggest that, despite potential environmental variations, basic anthropometric indicators are largely similar. Urban or rural environment in the central region of Montenegro does not significantly affect the basic anthropometric measures of first grade children. Nevertheless, considering the global increase in nutritional disorders among children, continuous monitoring and implementation of preventive programs promoting healthy eating and physical activity in schools and families are recommended.

P7
THE LIFESTYLE OF FITNESS INSTRUCTORS

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Fitness instructors are professionals who support people in improving their physical condition and promotes a healthy lifestyle. They should be role models for their clients. The aim of study was therefore to analyse the lifestyles of fitness instructors. Data were collected using a structured interview questionnaire. The questions concerned socio-economic status and selected lifestyle elements. A significance test ($p \leq 0.05$) was used to determine the differences between the two subpopulations. A total of 118 fitness instructors (60.2% female) participated in the study. Men were significantly more likely than women to believe that they lead a healthy lifestyle (86.1% vs. 70.4%, $p = 0.048$) and to rate their diet as healthy or very healthy (86.1% vs. 70.4%, $p = 0.023$). However, men consumed energy drinks significantly more often than women (17.1% vs. 5.6%, $p = 0.045$). Most respondents (82.2%) had never smoked, 21.2% were teetotal and 85.6% did not eat fast food. No statistically significant differences were found between the sexes in terms of alcohol consumption, smoking or fast food consumption. The surveyed fitness instructors lead healthy lifestyles, making them credible role models for their clients. It should be emphasised that female fitness instructors tend to be more cautious when evaluating the health benefits of their actions.

P8
MORPHOLOGICAL CHARACTERISTICS AND BODY COMPOSITION OF 13- AND 14-YEAR-OLD GIRLS

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The aim of this study was to examine morphological characteristics and body composition of 13- and 14-year-old girls and to determine whether the observed values correspond to normal developmental patterns during early adolescence. The sample

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consisted of 10 girls aged 13 and 14 years, students of the 9th grade of Primary School „Braca Ribar" in Niksic. Anthropometric measurements were conducted according to the International Biological Program standards. The assessed variables included body height, body weight, body mass index (BMI), and percentage of body fat. BMI was calculated as kg per m2, while body fat percentage was estimated using three skinfold measurements based on the Jackson-Pollock method. The findings indicate that the average BMI values were within the normal weight range. Body height and body weight corresponded to expected growth patterns for this age group. The percentage of body fat was within physiologically acceptable limits for adolescent girls and reflected typical pubertal changes. The results confirm that girls aged 13 to 14 demonstrate morphological characteristics consistent with normal growth and biological maturation. Continuous monitoring of body composition during adolescence is important for promoting healthy development and early identification of potential health risks.

P9
PHYSICAL ACTIVITY LEVELS AND URBAN - RURAL DIFFERENCES AMONG ADOLESCENTS IN HERCEG NOVI

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Hypokinesia is a major public health concern, with adolescents among the most vulnerable groups. Previous research suggests that physical activity levels may differ between urban and rural areas. Therefore, this study aimed to assess physical activity levels and related differences among adolescents in Herceg Novi according to place of residence. The study included 38 adolescents (15 ± 0.7 years) attending the first and second grades of high school. Physical activity was assessed using the standardized PAQ-C questionnaire, measuring self-reported activity across different parts of the day. Descriptive statistics determined overall activity levels, and differences between urban and rural areas were analyzed using an independent samples t-test ($p \leq 0.05$). Statistical analysis was performed using SPSS 17.0. The mean physical activity score was 3.23 for adolescents from urban areas and 3.32 for those from rural areas. Although adolescents from rural areas showed numeral slightly higher values, the difference was not statistically significant ($p = 0.82$). No significant differences were found for specific parts of the day. The findings indicate no significant differences in physical activity levels among adolescents in Herceg Novi according to place of residence. However, overall activity levels suggest room for improvement. Therefore, promoting physical activity should be a priority in both urban and rural areas.

P10
PREDICTIVE VALUE OF STANDING LONG JUMP PERFORMANCE ON 5- AND 10-METER SPRINT TIME IN FIVE-YEAR-OLD CHILDREN

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The purpose of this study was to examine the impact relationship between lower-limb explosive strength, assessed by the standing long jump test, and sprint performance over 5 and 10 meters in five-year-old children. The sample consisted of 147 participants (79 boys (BH 114.82±6.38cm and BM 21.79±3.66kg) and 68 girls BH 112.51±8.30cm and BM 21.56±3.68kg)). Running times over 5 and 10 meters were assessed via photocell timing gates. Linear regression analysis revealed that standing long jump performance was a statistically significant predictor of 5-meter sprint time in boys (β=-0.297, p=.008; R^2=.088), as well as 10-meter sprint time (β=-0.309, p=.006; R^2=.096). The negative regression coefficients indicate that greater jump distance was associated with shorter sprint time, reflecting better sprint performance. And it was evident that these models explain nearly 9% of variance of short distance running speed. In girls, no statistically significant effect of standing long jump on 5 and 10m runs was observed. These findings suggest that the relationship between long jump and sprint performance is more pronounced in five-year-old boys compared to girls. The results indicate that at this age, the standing long jump test cannot be considered a reliable predictor of short-distance sprint performance, as also some authors suggest that standing long jump in young children is more coordination test then explosive strength test.

P11
PHYSICAL ACTIVITY AND SUBCLINICAL EMOTIONAL SYMPTOMS IN ADOLESCENTS: THE MEDIATING ROLES OF SELF-EFFICACY AND EMOTIONAL REGULATION

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Adolescence is marked by heightened vulnerability to subclinical emotional symptoms, which, although below diagnostic thresholds, are associated with functional impairment and increased risk for later psychopathology. Identifying protective factors during this developmental period is therefore critical. Although physical activity has been linked to improved emotional well-being, the psychological mechanisms underlying this association remain insufficiently understood. This study examined the relationship between physical activity and subclinical emotional symptoms in adolescents, as well as the mediating roles of self-efficacy and emotional regulation. A total of 924 adolescents completed validated measures of physical activity, self-efficacy, emotional regulation, and subclinical emotional symptoms. Structural equation modelling indicated that physical activity was negatively associated with subclinical emotional symptoms. In addition, physical activity demonstrated an indirect negative association with emotional symptoms through self-efficacy and emotional regulation, supporting a sequential mediation pathway. These findings clarify the cognitive and emotional mechanisms linking physical activity to early emotional difficulties and highlight the potential value of interventions that promote physical activity while strengthening adolescents' self-efficacy and emotional regulation capacities.

P12
THE SENSOR'S TYPES AND PLACEMENT LOCATIONS FOR DEVELOPING THE BASEBALL BAT SWEET SPOT DETECTOR

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Batting is a primary offensive skill in baseball and plays an essential role in determining the outcome of a baseball game. When a baseball makes contact with the bat's sweet spot, vibration is reduced, energy loss is minimized, and exit velocity is maxi-

mized. There is no simple and effective device for determining the sweet spot of a baseball bat. The sensor-based detector needs to be developed for precision and efficiency. Therefore, the study aimed to compare two sensor types and placement positions for developing the baseball bat sweet spot detector. A custom-designed ball-bat collision tester was utilized; a wooden baseball bat was fixed to a frame using a clamp positioned 6 inches from the knob. A spherical impactor was dropped from a fixed height to impact the bat from the bat tip of 1 cm to 30 cm. A PVDF piezoelectric sensor and a triaxial accelerometer were placed on the end of the tip and 18 inches from the end of the knob, respectively. Both sensors detected vibration responses caused by the spherical impactor. The PVDF sensor at the tip and the accelerometer positioned 18 inches from the knob met the variation pattern of Peak-to-Peak amplitude, along with impacted spots from 1 cm to 30 cm. In advance, the variation pattern of the accelerometer at 18 inches from the knob was superior to that of the PVDF sensor at the tip. The findings suggest that using a triaxial accelerometer and placing it at 18 inches from the end of the knob is appropriate for the sensor type and placement location in the baseball bat sweet spot detector. This study, NSTC 115-2425-H-007-003, was granted by the National Science and Technology Council in Taiwan.

P13
DIFFERENCE OF PITCHING LOCATION JUDGMENT BETWEEN FASTBALL AND SLIDER WHILE WEARING STROBOSCOPIC GLASSES

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Pitching location judgment is one of the substantial factors in excellent hitting performance. Hitters would face various pitching types, including fastballs (FB) and sliders (SL), in a baseball game. Stroboscopic glasses are a technological device that utilizes intermittent occlusion of visual input to train visual abilities. To compare the pitching location judgment between observing fastballs and sliders while wearing stroboscopic glasses. 10 college baseball players wore stroboscopic glasses (Senaptec, Beaverton, OR, USA) at Level-1 (6 Hz, Opaque = 0.067 s) to judge the pitching location of 10 fastballs and 10 sliders randomly. One certified baseball umpire synchronously judged the pitching location as the standard values. The horizontal, vertical, and direct distances between subjects and the certified baseball umpire were calculated. The shorter distance between the subjects' and the umpire's judgment meant better pitching location judgment. The paired t-test was conducted for statistical analysis using SPSS 26.0. The significance level was set at $\alpha = .05$. All horizontal (SL=17.07 ± 10.36 cm, FB= 13.04 ± 7.75 cm), vertical (SL=20.54 ± 19.46 cm, FB= 3.40 ± 3.67 cm), and direct (SL=29.38 ± 18.89 cm, FB= 14.49 ± 8.12 cm) distances in sliders were significantly larger than those of fastballs ($p<.05$). The results revealed that the pitching location judgment had significantly worse in observing sliders than fastballs when the college baseball players wore stroboscopic glasses. It suggests that both the frequency and the opaque time of the stroboscopic glasses need to be set differently for visual training in fastballs and in sliders. (This study, NSTC 113-2410-H-216-003-MY2, was granted by the National Science and Technology Council in Taiwan)

P14
COMPARATIVE ANALYSIS OF PRESEASON ANTHROPOMETRIC CHARACTERISTICS IN TWO YOUTH FOOTBALL AGE GROUPS

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This study aimed to examine and compare preseason anthropometric profiles of younger and older youth football players from Football Club Sutjeska (Montenegro) ahead of the competitive season. Participants were divided into two age based groups. Body height, body mass, body fat percentage, and body mass index were assessed using bioelectrical impedance and standard anthropometric procedures. The younger players showed lower average values across all variables, while the older group demonstrated higher levels of height, weight, BMI, and body fat. These findings reflect typical developmental differences, as older adolescents are generally more advanced in physical maturation. Statistical testing indicated significant differences between the groups for all observed measures. Both groups exhibited preseason characteristics consistent with their developmental stage and training demands. A slightly higher level of body fat was noted in the older players, likely related to the off season period, suggesting the need for targeted conditioning during preparation. Regular monitoring throughout the season is recommended to support performance, ensure safe progression, and maintain healthy physical development.

P15
GENETIC PREDICTORS OF UPPER LIMB STRENGTH AND MUSCLE ADAPTATIONS FOLLOWING RESISTANCE TRAINING

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Substantial inter-individual variability exists in strength and hypertrophy responses to resistance training (RT), even under standardized training load and volume. Genetic factors may contribute to these differences and inform individualized training strategies. To identify genetic variants associated with upper limb strength and muscle adaptations following bench press-based RT and to evaluate the predictive value of polygenic scores (PGS). 214 sedentary young adults completed a 12-week supervised RT program centered on bench press training. Primary outcomes included changes in bench press one-repetition maximum (1RM), upper limb lean mass, trunk lean mass, and pectoralis major muscle thickness. Genome-wide association study (GWAS) was conducted, and significant single-nucleotide polymorphisms (SNPs) were used to construct PGS. Regression and receiver operating characteristic analyses were performed to assess predictive performance. Significant improvements were observed in all phenotypes($P<0.01$). Marked inter-individual variability was evident across all outcomes. SNPs were significantly associated with strength and hypertrophy responses. The PGS showed positive correlations with improvements in strength and muscle mass (R^2=0.24–0.67). Genetic variation contributes to individual differences in adaptations to bench press-based RT. PGS demonstrates moderate predictive utility and may support individualized upper body training prescription in sport and fitness contexts.

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P16
SCHOOL STAFF KNOWLEDGE OF SPORTS-RELATED DENTAL INJURIES

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Sports-related dental injuries represent a significant health concern in children. To assess primary school staff in Podgorica regarding their knowledge of dental injuries and readiness to provide appropriate first aid. A cross-sectional study was conducted using an anonymous 12-item questionnaire. General questions collected demographic data (gender, age, education), while specific questions focused on first aid procedures for dental trauma. A total of 63 respondents participated. Data were analyzed descriptively (frequencies, percentages). Individual scores were summed and presented per item. Most respondents were female, held a university degree, and were aged 35–45 years. Only 12 respondents (19%) had formal first aid training. The majority recognized dental injuries as emergencies: 44 respondents (70%) were aware of the urgency, and 45 (71.4%) understood the importance of time for prognosis. Participants could generally distinguish between fractured and avulsed teeth. In crown fractures, 50 respondents (79%) would preserve the fragment. In tooth avulsion, 52 respondents (82.5%) would first control bleeding, while only 3 (5%) would search, rinse, and attempt immediate replantation. The avulsed tooth was transported in tissue or sterile gauze by 61 respondents (97%), and only 2 (3%) used milk. All believed replantation should be performed by a dentist, and 57 (90.4%) rated their knowledge as insufficient. Primary school staff showed limited knowledge and low confidence in providing first aid for dental injuries.

P17
GAME TEMPO AND GOAL DISTRIBUTION BY QUARTERS AT THE 2026 EUROPEAN WATER POLO CHAMPIONSHIP

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Given the increasing pace and tactical evolution of elite water polo, understanding tempo-related determinants of scoring efficiency has become increasingly relevant. The aim of this study was to examine game tempo indicators and the distribution of goals by quarters at the 2026 European Water Polo Championship held in Belgrade (January 10–25). The sample comprised all matches played during the tournament (N = 56). Data were obtained from official match statistics. The analyzed variables included goals scored per quarter (Q1–Q4), total goals per match, shot rate (shots per minute), exclusion rate (total exclusions per match expressed per minute of play), and goal rate (goals per minute). Descriptive statistics and the Shapiro-Wilk test were used to assess data distribution. Repeated measures analysis of variance tested differences in goals across quarters. Pearson correlation and multiple linear regression were applied to examine associations between tempo indicators and total goals. The mean number of total goals per match was 26.59. Goals were evenly distributed across quarters (range: 6.46–6.75), with no significant differences detected ($F(3,165) = 0.201$, $p = 0.896$). Shot rate showed a significant positive correlation with total goals ($r = 0.481$, $p < 0.001$), whereas exclusion rate was not significantly associated ($p = 0.196$). Regression analysis indicated that tempo indicators significantly predicted total goals ($F(2,53) = 10.596$, $p < 0.001$), explaining 28.6% of the variance, with shot rate emerging as the primary positive predictor. Offensive tempo, operationalized through shot frequency, represents a key determinant of scoring output in elite water polo, while overall exclusion frequency does not independently contribute to increased goal production.

P18
ASSOCIATION BETWEEN PHYSICAL ACTIVITY AND QUALITY OF LIFE IN OLDER ADULTS

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The aim of this study was to examine the relationship between physical activity levels and quality of life among older adults. The study included 200 participants aged over 65 years (62.8 ± 4.3) from the municipality of Nikšić, comprising 88 men (44%) and 112 women (56%). Physical activity was assessed using the International Physical Activity Questionnaire (IPAQ), while quality of life was evaluated using a self-rated health and life satisfaction scale. Statistical analysis included descriptive statistics, an independent samples t-test, and Pearson's correlation ($p < 0.05$). Only 29% of participants met the recommended level of physical activity. Physically active participants had significantly higher quality of life scores compared to those with low activity levels ($t = 3.51$; $p < 0.001$). A positive correlation was found between total physical activity and quality of life ($r = 0.36$; $p < 0.001$). Women demonstrated slightly lower levels of physical activity compared to men; however, no significant differences were observed in overall quality of life. Physical activity represents a significant determinant of quality of life in older adults, and its effect does not appear to be significantly influenced by gender. The findings confirm the importance of promoting an active lifestyle in the older population.

P19
GENDER DIFFERENCES AND DEVELOPMENTAL TRENDS OF SOME MOTOR ACHIEVEMENTS

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The purpose of the study was to assess the trend of average results of some motor achievements of preschool children over a ten-year period, and to assess whether the results differed with respect to gender and during the years of measurement. The study included 1456 preschool children (6-7 years) who participated from 2010 to 2019 in individual athletic disciplines of the Olympic Festival of Kindergartens of Zadar County, Croatia. The Standing Broad Jump (SBJ), 50m run test (RUN50), and Throwing a Ball With One Hand (THROW) were measured. Descriptive parameters were calculated separately by gender and by year of measurement. T-test was used to assess differences by gender, and one-way ANOVA to assess differences across years. The average results of the SBJ and RUN50 vary over the years in both genders; in THROW the results in girls stagnate and in boys decrease. Boys are significantly better in THROW and in SBJ while no significant differences in RUN50. Analysis of variance showed no significant differences in results over the years of measurement. Boys achieve better results in all variables (significantly in THROW and SBJ). There are no significant dif-

ferences over the years of measurement, but the results indicate a decreasing trend, especially in the variable that assesses ball manipulation.

P20
BENEFITS OF ORGANIZED EXERCISE ON POSITIVE HEALTH BEHAVIOUR IN OLDER WOMEN IN MONTENEGRO: A QUASI-EXPERIMENTAL STUDY

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Ageing involves biological, psychological and social changes, and active ageing emphasizes maintaining health and quality of life through regular physical activity. To examine whether an 8-week organized exercise program improves positive health behaviour in older women in Montenegro. A quasi-experimental pretest–posttest design with parallel groups was applied. Women aged 55–70 years were assigned to an experimental group (EG) or a control group (KG) without randomization. The EG participated in a structured program for 8 weeks (2 sessions/week, 45 min/session), while the KG continued usual daily activities. Outcomes were assessed at baseline (February 2022) and post-intervention (April 2022) using the Positive Health Behaviour Scale covering nutrition quality, physical health, mental health, safety, and physical activity. Descriptive statistics and reliability (Cronbach's α) were computed. Within-group changes were tested with paired-samples t-tests and between-group differences with independent-samples t-tests (Levene's test), with effect sizes (Cohen's dz; Hedges g) and FDR (Benjamini–Hochberg) correction. Most behaviours remained stable across domains. In the EG, improvements were observed primarily in physical-activity-related items (participation in organized exercise and regular training), remaining significant after FDR correction, while no significant pre–post changes were found in the KG. An 8-week organized exercise program was associated with measurable improvements mainly in physical-activity-related health behaviour, supporting structured exercise as a practical component of active ageing interventions.

P21
EVOLUTION OF OLYMPIC SUMMER GAMES MEDAL DESIGN AS A STRATEGIC INSTRUMENT OF SPORTS MANAGEMENT

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The aim of this study was to analyses the evolution of Olympic Summer Games medal design from Athens 1896 to Paris 2024 and to examine its role as a strategic instrument within sports management, particularly in branding, cultural positioning and organizational governance. A qualitative historical and comparative analysis was conducted using official documentation of Olympic Summer Games medals from 1896 to 2024. The study examined visual identity elements, material composition, production standards and organizational influence of the International Olympic Committee and Organizing Committees across different editions of the Games. The findings indicate three major developmental phases. The first phase reflects symbolic and experimental diversity between 1896 and 1928. The second phase demonstrates strong standardization beginning in Amsterdam 1928, where a unified iconographic model dominated medal design for decades. The third phase, particularly after Athens 2004, shows strategic diversification combining Olympic heritage with host city identity. Recent editions such as Beijing 2008, Rio 2016, Tokyo 2020 and Paris 2024 highlight sustainability, cultural branding and innovation in materials, positioning medals as instruments of global image management rather than mere awards. Olympic medals have evolved from symbolic prizes into strategic assets within sports management. Their design reflects governance structures, branding strategies and sustainability policies of the Olympic Movement, demonstrating how material culture contributes to global sports identity and long term event legacy.

P22
INTEGRATION OF ARTIFICIAL INTELLIGENCE IN OLYMPIC GAMES JUDGING: CHALLENGES AND PERSPECTIVES

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The main objective of this study was to examine whether the integration of artificial intelligence (AI) into the Olympic Games judging process enhances decision making, increases fairness, and strengthens stakeholder trust, while also assessing its implications for sports management and organizational governance. A qualitative analysis of official documentation published by the International Olympic Committee regarding AI implementation in sport was conducted. The focus was placed on AI applications in sports requiring subjective performance evaluation, stakeholder perceptions (athletes, judges, coaches, sports organizations, and the public), and operational challenges related to implementation, including costs, judge training, technical infrastructure, algorithmic bias, and regulatory and ethical considerations. AI systems aim to improve judging accuracy by reducing errors derived from subjective human assessment and enabling precise measurement of technical elements such as rotations and movement dynamics. These capabilities contribute to greater consistency and objectivity in technical evaluation. However, the analysis identified significant challenges, including potential algorithmic bias, excessive technical precision, and limitations in evaluating artistic expression, which remains essential in several Olympic disciplines. The integration of AI into Olympic judging represents a major shift in contemporary sports management. While it enhances objectivity in certain aspects of evaluation, cautious implementation is necessary to preserve fundamental sporting values and competitive legitimacy. Maintaining a balance between technological precision and core sport principles will remain a central challenge for future Olympic cycles.

P23
POLICY PATHWAYS FOR PROMOTING ADOLESCENT HEALTH THROUGH SCHOOL PHYSICAL EDUCATION: INSIGHTS FROM CHINA

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School physical education (PE) serves not only as an essential setting for promoting adolescent physical and mental health but also as foundational for cultivating lifelong exercise awareness and acquiring motor skills. This study systematically re-

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views China's policy initiatives aimed at promoting adolescent health through school PE, analyzes key features of the current institutional design, and identifies structural challenges in policy implementation. Based on an analysis of national policy documents, China's primary strategies in this domain include: (1) strengthening resource guarantees by increasing fiscal investment and ensuring adequate PE staffing; (2) specifying PE class hours and curricular content requirements to secure fundamental implementation conditions; (3) establishing monitoring and accountability mechanisms to enforce curricular standards; and (4) advancing curriculum reforms that emphasize student-centered approaches and foster interest in physical activity. Concurrently, several issues persist: the relatively low status of PE within the broader education system; an examination-oriented tendency in instructional practices; insufficient student intrinsic motivation for participation; and underdeveloped family–school–community synergy mechanisms. Through sustained and robust policy interventions, China has significantly enhanced the quality of school PE, providing substantial support for adolescent physical and mental health. Nevertheless, outdated pedagogical philosophies, a lack of innovation in teaching methods, and inadequate integration of diverse resources continue to constrain the full realization of educational outcomes.

P24
FOODCHAIN: BLOCKCHAIN TECHNOLOGY FOR SELECTED TRADITIONAL FOOD PRODUCTS

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This study presents the FoodChain software solution (https://foodchain.foodhub.udg.edu.me/), a blockchain-based platform designed to enhance traceability, authenticity, and quality assurance in traditional food supply chains to strengthen consumer trust and supporting digital transformation in agri-food systems. The system enables multiple stakeholders to participate through role-based authorization and batch-oriented production tracking. Each processing step is recorded on a blockchain to ensure transparency, integrity, and protection against data manipulation. Every batch is assigned a unique QR code which can be printed on product labels, allowing users to access verified information on origin, raw materials, processing stages, and laboratory analyses. Certified test results are cryptographically linked to blockchain entries, providing scientifically validated confirmation of product quality and authenticity. The platform was tested on Njeguški cheese and Sudzuk sausages, demonstrating successful application across different traditional products without technical constraints. Stakeholders recorded production events, created traceable batches, and shared trusted information with consumers via QR scanning. The system established a transparent digital link among producers, laboratories, and consumers, ensuring complete traceability and reliable verification of product claims. FoodChain shows that integrating blockchain with QR-based access effectively connects traditional production with digital technologies, improving transparency, food safety assurance, product identity protection, and competitiveness of heritage foods while supporting innovation objectives.

P25
WHAT PREVENTS RESIDENTS OF VOJVODINA FROM BEING MORE PHYSICALLY ACTIVE?

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Regular physical activity (PA) significantly improves both physical and mental health; however, perceived barriers may prevent individuals from gaining PA-related benefits. The aim of this study was to examine sex-specific differences in perceived barriers to engaging in PA among residents of the Vojvodina region, Serbia. A cross-sectional survey was conducted in 2023 with 945 participants (439 men and 506 women) aged 15–94 years from all seven districts of Vojvodina. The Special Eurobarometer methodology was used to identify the most important barriers to PA and sport participation. Descriptive statistics, chi-square tests with Holm's correction, and Cramér's V to assess effect sizes were used for data analysis. Lack of time (42.4%), lack of motivation (25.5%), and cost (17.4%) were the most commonly reported barriers to regular physical activity, while other reasons accounted for 1–9% of responses. Additionally, 16% of respondents reported already being regularly physically active, 9.1% indicated having a disability or illness, 8.2% cited a lack of suitable or accessible infrastructure or companions, and 7.3% expressed fear of injury. The main sex difference was observed for already being active ($p = 0.009$), whereas the prevalence of other barriers was similar between sexes. Since a significant proportion of residents of Vojvodina do not meet PA recommendations, addressing key barriers could contribute regional PA promotion.

P26
AGE RELATED DIFFERENCES IN PHYSICAL ACTIVITY PATTERNS AMONG WOMEN IN THE MUNICIPALITY OF NIKSIC

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Insufficient physical activity and sedentary behavior are major public health concerns, and examining activity patterns among women of different age groups can support targeted health promotion strategies. The aim of this study was to examine the level and structure of physical activity among women in the municipality of Niksic (Montenegro) and to determine differences between two age groups (20-39 and 40-59 years). The research was conducted as a cross-sectional study. The sample included 120 female participants from the municipality of Niksic, divided into two groups: 60 women aged 20-39 and 60 women aged 40-59. Data were collected using the International Physical Activity Questionnaire (IPAQ), long version with 27 items. Descriptive statistics were used to summarize the data, while differences between age groups were tested using the independent samples t-test and chi square test. Statistically significant differences between age groups were identified ($p < 0.05$). Women aged 40-59 demonstrated higher levels of physical activity in work related tasks, household activities, walking, and leisure time recreation. Younger women reported greater use of motorized transport and more time spent in sedentary behavior. Women aged 40-59 were generally more physically active than younger women. These findings indicate the need for targeted interventions aimed at increasing physical activity among younger women and reducing sedentary behavior.

P27
ANALYSIS OF TREND LEVELS OF PHYSICAL ACTIVITY AND NUTRITION STATE OF STUDENTS OF THE SECOND AND THIRD CYCLE OF PRIMARY SCHOOL

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Physical activity is extremely important at every stage of life, especially during childhood, as this is the period when lifelong habits and the need for regular exercise are most effectively developed. The aim of this study was to assess the level of physical activity among students in the second and third cycles of the elementary school "Braća Ribar," as well as their nutritional status. The study included a sample of 396 participants, with physical activity levels measured using the standardized Fels Physical Activity Questionnaire for Children, while nutritional status was assessed using the Body Mass Index (BMI). The results were compared with those from a 2018 study involving 383 participants who underwent the same tests under identical conditions. BMI was calculated separately for boys and girls across all grades, and the findings indicate that results from 2024 show a higher BMI and slight overweight in the 5th, 6th, and 7th grades compared to 2018. Segment analysis revealed statistically significant differences in certain grades and between genders, particularly in BMI, where boys in the 6th and 7th grades and girls in the 7th grade in 2024 were more overweight than their counterparts in 2018. The results also indicate slightly improved physical activity levels among children in 2024, alongside a mild increase in BMI. This research may contribute to improved monitoring, planning, and programming of physical education classes.

P28
DIFFERENCES IN ANTHROPOMETRIC MEASURES, BODY COMPOSITION MEASURES, AND MOTOR TESTS BETWEEN 6-YEAR-OLD BOYS AND GIRLS

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The aim of this study was to determine gender differences in anthropometric measures, body composition, and motor abilities in 6-year-old children. A cross-sectional observational study was conducted in primary schools in the Skopje region on a sample of 200 participants (100 boys and 100 girls). Anthropometric variables included body height, body weight, waist circumference, and body mass index. Body composition was assessed using bioelectrical impedance analysis. Motor abilities were evaluated using standardized tests for flexibility, handgrip strength, explosive strength, muscular endurance, agility, and cardiorespiratory endurance. Data were analyzed using descriptive statistics and independent samples t-test. No statistically significant differences were found between boys and girls in anthropometric measures and body composition. However, significant differences were observed in motor abilities, with boys achieving better results in strength, explosiveness, endurance, agility, and aerobic capacity, while girls performed better in flexibility. The results indicate that gender differences in motor performance are present at the age of 6, despite similar anthropometric and body composition characteristics. These findings highlight the importance of gender-sensitive physical education programs and early monitoring of physical fitness in children.

P29
IMPACT OF BODY HEIGHT ON RUNNING SPEED IN FOUR-YEAR-OLD BOYS AND GIRLS 2024/25 SEASON

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The objective of this study is to examine the relationship between body height and running speed in four-year-old boys and girls in order to achieve a more precise understanding of the morphological determinants of motor development. On a sample of 198 four-year-old children (107 boys and 91 girls), body height was measured using standardized anthropometric procedures, while running speed was electronically timed over 5 and 10 meters using photocells. The testing procedure was carried out at the Children's Fitness Center "Smart Gym." Data were analyzed using descriptive statistics and simple linear regression analysis. Boys with an average height of 111.50 ± 6.48 cm and girls with an average height of 110.85 ± 6.89 cm achieved shorter running times, and body height statistically significantly predicted performance. In boys, height explained 4.6% of the variance in 5 m performance ($R^2 = 0.046$; $p = 0.027$) and 5.4% of the variance in 10 m performance ($R^2 = 0.054$; $p = 0.016$). In girls, a stronger association was observed, with height explaining 11.6% of the variance in 5 m results ($R^2 = 0.116$; $p = 0.001$) and 14.4% in 10 m results ($R^2 = 0.144$; $p < 0.001$). Body height significantly predicts running speed, but is not the dominant factor, highlighting the need for an integrated approach in the assessment of motor development during early childhood.

Workshops presentations

W1
MOBILITY-FRIENDLY COMMUNITIES: THE POWER OF ACTIVE MOBILITY AND AGE-FRIENDLINESS ENVIRONMENT FOR OLDER ADULTS

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This workshop is part of the Interdisciplinary Physical Activity and Sports Tech for Healthy Lifestyles (PASTECHL) Bar 2026 Scientific Conference. It aims to highlight the importance of active and healthy ageing through active mobility and age-friendliness for older adults. The target audience includes scientists, students, and stakeholders from multidisciplinary backgrounds. Recent European trends indicate that quality of life has become a primary concern. Older residents often face obstacles to active mobility, such as walking or cycling, in cities dominated by motor vehicles and characterized by insufficient infrastructure. In addition, their access to essential services (e.g., medical care or markets) is frequently limited, which can result in reduced independence and social isolation in daily life. Therefore, active mobility, which prioritizes physical activity over vehicle use, can play a key role in improving quality of life, promoting healthy ageing, and enhancing social inclusion for older adults. According to the literature, a combination of educational, institutional, and infrastructural measures is necessary to achieve meaningful improvements. The concept of an age-friendly environment encompasses

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community support and services, social inclusion, outdoor spaces and buildings, and transportation that supports active mobility within the community. A coordinated approach integrating public health, social policy, and urban planning is essential for progress. The main goal of the workshop is to promote the importance of active and healthy ageing as well as quality of life for older adults, viewed through the lens of active mobility and age-friendly environments, by bridging scientific knowledge with practical applications. Specific goals: 1) Increase awareness of the importance of active mobility; 2) Promoting the development of age-friendly environments; 3) Review of the geographic information system (GIS) mapping methodology; 4) Connect scientific knowledge with research based on field monitoring and observation conducted in Podgorica, Montenegro; 5) Discuss inclusive and sustainable mobility frameworks for the ageing population.

Publisher's Note:

PROJECT PRESENTATIONS

Intelligent Digital Services for Supporting the European Fitness Monitoring System (i4EUFITMOS)

Overview:
i4EUFITMOS is an innovative Erasmus+ Sport project (Project No. 101185245), co-funded by the European Commission through the European Education and Culture Executive Agency (EACEA). The project's full title is "Intelligent Digital Services for Supporting the European Fitness Monitoring System." It is part of the ERASMUS-SPORT-2024 action under the topic "Encouraging healthy lifestyles for all."

Building on the legacy of the earlier EUFITMOS initiative, the i4EUFITMOS project aims to broaden the scope and scale of the European Fitness Monitoring System. It is deeply rooted in promoting health- enhancing physical activity (HEPA), especially among young people, and aligns with both the EU Physical Activity Guidelines and the Council Recommendation on HEPA.

Key Objectives:
- To achieve wide-scale, standardized implementation of the EUFITMOS fitness battery across Europe.
- To collect and disseminate comparable, valid, and reliable physical fitness data as an indicator of physical activity levels.
- To enhance the EUFITMOS online platform by integrating intelligent digital services that support data collection, analysis, dissemination, and policy development.
- To encourage innovation and digital transformation in the sport and fitness monitoring sectors.

Main Activities:
One of the central pillars of the i4EUFITMOS project is digitalization. The project will expand the EUFITMOS platform through:
- A new data upload interface for PE teachers.
- Real-time infographic generation for stakeholders.
- An intuitive chat-based interface to engage the general public.
- A module for exporting open fitness datasets to researchers.

These improvements are aimed at transforming the platform into a cutting-edge, user-friendly hub for fitness data and policy analysis.

Target Groups:
i4EUFITMOS focuses on the following primary audiences:
- Children and youth, who will be the main subjects of physical fitness monitoring.
- Physical Education (PE) teachers, who are essential for implementing and collecting data.
- Researchers and young scientists, who will benefit from open access to structured data.

Secondary target groups include policymakers and the general public, who can use fitness insights for policy planning and public awareness.

Partnership & Coordination:
The project involves a strong consortium of seven partners from across Europe:
- Aristotle University of Thessaloniki (Greece) – coordinator
- University of Lisbon (Portugal)
- Sports Union of Slovenia (Slovenia)
- German Association of Sports Teachers (Germany)
- Northern Greece Physical Education Teachers Association (Greece)
- University of Montenegro (Montenegro)
- Albanian of Sports Sciences Association (Albania)

Project Duration and Budget:
Start Date: 1 December 2024
Duration: 36 months
Funding Programme: Erasmus+ Sport
Funding Agency: European Education and Culture Executive Agency (EACEA)
Total Grant: €400,000 (lump sum)

Relevance and Impact:
i4EUFITMOS directly supports EU-wide goals of improving public health through sport and physical activity. By digitizing fitness data collection and providing advanced analytical tools, it empowers stakeholders with actionable insights. This project stands as a model for how technology can reinforce public policy and community wellness through strategic data use and collaboration.

Keywords:
Health-enhancing physical activity, Fitness data, Digital innovation, Analytics, Mobile applications, Intelligent services, PE monitoring, HEPA.

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Bojan Masanovic is a teacher and research at the University of Montenegro, currently hold Associate Professor position and serves as Vice-Dean for International Relations at Faculty for Sport and Physical Education. Various mobility grants enabled him to gain huge experience as a guest lecturer in Spain, Croatia, Turkey, the Czech Republic, Hungary and France. He has more than 10 years of experience in scientific research, with a particular focus on the planning, implementation and evaluation of studies dealing with health and exercise, which also includes clinical trials. As a scientist in the field of sports science, he uses knowledge to improve the sports industry at large. To date, he is the author and co-author of more than 100 peer-reviewed articles in multidisciplinary journals, including those with a high Impact Factor. Editor-in-chief, review editor, guest editor and Ad-Hoc reviewer roles performed in more than 20 international peer-reviewed journals indexed in Web of Science core collection. He has a strong background in project activities, because he coordinated or participated in several national and European projects and represented Montenegro in five COST actions. The University of Montenegro honored him with the Award for achieved results and contribution to the development of scientific research, artistic and professional work at the Faculty of Sports and Physical Education for 2019. Also, the Albanian Association of Sports Sciences (ASSA) honored him with the Award for outstanding contribution to the development of education and sports sciences in Albania through scientific research for the year 2022. In June 2022, he was promoted as the head of the CEEPUS network named "Education, training and research in the multidisciplinary field of sports sciences" in which 13 European universities participate.

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PROJECT PRESENTATIONS

Empowering Older Adults for Collective Engagement (AGEFORCE)

Overview:
AGEFORCE is an Erasmus+ Sport project (Project No. 101243822) funded under the call ERASMUS-SPORT-2025-SCP (ERASMUS-LS) and managed by the European Education and Culture Executive Agency (EACEA).

The project introduces a bottom-up citizen engagement and collective intelligence framework that enables older adults to actively participate in shaping initiatives that improve their physical activity levels. AGEFORCE builds on participatory citizen science and aims to lay the groundwork for a Pan-European Citizen Science Hub on Active Ageing through the creation of Communities of Interest.

AGEFORCE focuses on both offline practices (training programs, counselling services, organized excursions, specialized gyms) and digital interventions (platforms, online booking systems, tele-coaching, and virtual communities), creating an integrated environment that supports active and healthy ageing across Europe.

Key Objectives:
AGEFORCE's overall aim is to increase the physical activity levels of older adults, using the principle "for the people, by the people, and with the people."

Its specific objectives are grouped into four thematic areas:

- Explore older adults' visions regarding the future of physical activity provision.
- Diagnose behaviors and current practices, including value mapping and empathy analysis of personas.
- Design and evaluate the most appropriate interventions, including crowdsourcing, piloting, and producing a toolkit and blueprint.
- Enable Communities of Interest, supported by manuals, engagement processes, and a virtual interaction space.

Main Activities:
AGEFORCE delivers a practical citizen-science pathway that transforms older adults' voices into real-world physical activity solutions. The project's main activities include:

- Identifying and documenting good practices in active ageing and physical activity schemes, and translating them into a shared evidence base.
- Capturing older adults' visions for what motivates them to stay active, and validating these visions through structured citizen engagement.
- Diagnosing behavioral barriers and trigger points using participatory tools such as value mapping and persona-based empathy analysis.
- Co-designing and piloting interventions combining offline activities and digital tools, supported by a dedicated crowdsourcing platform.
- Producing the "Active Older Adults Blueprint", a concise policy and practice output supporting replication across Europe.
- Publishing a citizen panel manual, engagement plan, and web tools enabling other communities and organizations to reuse the methodology.

Target Groups:
AGEFORCE primarily targets:

- Older adults, who will participate in citizen panels, co-creation processes, and pilot interventions.
- Secondary target groups include:
- Families and mediators (friends and relatives), supporting participation and motivation.
- Local stakeholders and social organizations, supporting inclusion of vulnerable groups.
- Policymakers and regional actors, who will benefit from the Blueprint and evidence-based recommendations.

Partnership & Coordination:
The consortium brings together six European partners:

- Tero P.C. (Greece) – coordinator
- CHESS – Center for Health, Exercise and Sport Sciences (Serbia)
- Municipality of Fyli (Greece)
- Poltava Polytechnic University (Ukraine)
- Egas Moniz (Portugal)
- ECSA – European Citizen Science Association (Germany)

Project Duration and Budget:
Start Date: 1 January 2026

Duration: 24 months

Funding Programme: Erasmus+ Sport

Funding Agency: European Education and Culture Executive Agency (EACEA)

Budget: €250,000.00

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Relevance and Impact:
AGEFORCE contributes to key European priorities by promoting healthy ageing, increasing physical activity levels among older adults, and strengthening inclusive and participatory approaches in sport and health promotion. The project supports social inclusion and equal opportunities by ensuring participation across socio-economic, geographical, and gender groups. It also promotes environmental sustainability through the integration of active mobility as a practical and preferred form of physical activity for older adults. Through digitalization and collective intelligence tools such as crowdsourcing platforms and virtual Communities of Interest, AGEFORCE fosters innovation in citizen engagement and policy development. The project's long-term legacy includes the creation of the Active Older Adults Blueprint and the foundations for a Pan-European Citizen Science Hub on Active Ageing, strengthening evidence-based sport policy and citizen-driven innovation across Europe.

Keywords:
Active ageing; physical activity; citizen science; collective intelligence; co-creation; communities of interest; crowdsourcing; social inclusion; behavioral change; digital tools; sustainability; active mobility.

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Eleni Anoyrkati is an experienced sustainability and policy expert working at Tero P.C., with over 20 years of professional experience in Coventry University, UK as an Operations and Development Manager, leading the delivery and growth of large European research and innovation portfolios. She has coordinated and supported numerous EU-funded projects across Horizon Europe, Horizon 2020, and INTERREG, focusing on sustainability transitions, citizen engagement, and evidence-based policy development. She holds a PhD in sustainable development policy development, with research exploring long-term societal trends and how they can inform strategic decision-making and more resilient public policies. Her work strongly connects sustainability with real-world community action, including participatory methods aligned with citizen science, behavioral change, and active mobility as a pathway to healthier lifestyles and more inclusive communities. She has published widely on sustainability, behavioral change, and active living approaches linked to sports and wellbeing.

PROJECT PRESENTATIONS

Enhancing Active Ageing through Theatre and Movement (Creative Motion)

Overview:
Creative Motion is an Erasmus+ Sport project (Project No. 101243742) funded under the call ERASMUS-SPORT-2025-SSCP (ERASMUS-LS) and managed by the European Education and Culture Executive Agency (EACEA).

The project is designed to promote active and healthy ageing by integrating theatre, expressive movement, and physical activity into an innovative, inclusive methodology for older adults. Running for 18 months (1 January 2026 – 30 June 2027), the project responds to the growing need for engaging, low impact physical activity solutions that are accessible to seniors who often face mobility challenges, social isolation, and limited opportunities to participate in traditional sports programmes.

By merging physical theatre, storytelling, and adapted movement practices, Creative Motion offers a holistic model that enhances physical mobility, cognitive stimulation, social connection, and emotional wellbeing.

Key Objectives:
The project's overall aim is to merge theatre, expressive movement, and physical activity to promote active ageing.

Its specific objectives are grouped into three thematic areas:

- Increase physical activity among older adults through accessible theatre based movement sessions that improve mobility, coordination, cognitive recall, and emotional resilience.
- Build community capacity by training sports facilitators, senior care professionals, and community leaders in Greece, Bulgaria, and Cyprus, supported by a comprehensive Creative Movement Guide and Train the Trainer Workshops.
- Ensure long term sustainability and scalability by producing an Expressive Theatre & Movement Toolkit, organizing public performances, and engaging policymakers and institutions to foster wider adoption across Europe.

Main Activities:
- Development of a structured methodological framework integrating best practices from physical theatre, expressive movement, and adapted physical activity methodologies.
- Creation of an adaptable and inclusive programme through engagement with facilitators, theatre practitioners, and older adult participants.
- Establishment of the foundation for a replicable, scalable, and sustainable movement programme that ensures accessibility for diverse participant needs.
- Successful implementation of structured, inclusive movement sessions across three countries involved in the project, ensuring accessibility for older adults with diverse mobility levels, facilitating participant engagement in exercises designed to improve flexibility, coordination, cognitive recall, and emotional resilience.
- Provision of real-time mentorship and support to facilitators, enabling them to adapt movement exercises to meet individual participant needs.
- Ensuring program's effectiveness through a structured evaluation of participant experiences, attendance trends, and physical, cognitive, and emotional progress to assess the long-term benefits.

Target Groups:
The project primarily targets:

- Older adults (60+), especially those with limited mobility or reduced access to exercise opportunities.
- Secondary target groups include:
- Sports trainers, community facilitators, senior care professionals
- Stakeholders such as policymakers, cultural institutions, and health organizations.
- Community organisations and sports clubs also benefit by receiving adaptable methodologies they can continue implementing after the project.

Partnership & Coordination:
The consortium brings together four European partners:

- Tero P.C. (Greece) – coordinator
- NAMASTE (Greece)
- MCP Management & Consulting (Cyprus)
- SHC Active (Bulgaria)

Project Duration and Budget:
Start Date: 1 January 2026

Duration: 18 months

Funding Programme: Erasmus+ Sport

Funding Agency: European Education and Culture Executive Agency (EACEA)

Budget: €60,000.00

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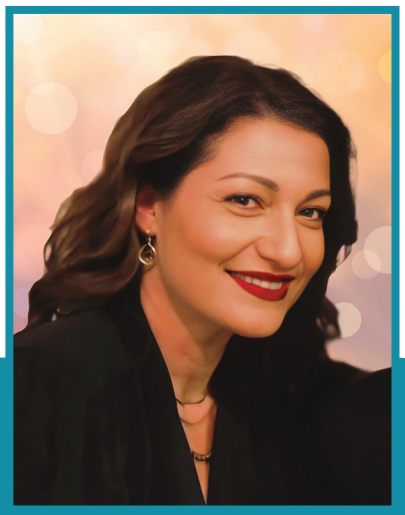
Relevance and Impact:
Creative Motion addresses EU priorities for active ageing, social inclusion, health enhancing physical activity (HEPA), and innovative sport methodologies. It offers a scalable model that:

- enhances physical, cognitive, and emotional wellbeing.
- reduces loneliness through creative group engagement.
- builds long term community capacity.
- supports local and EU level policy alignment.
- provides open access resources for replication across Europe.

Its expected medium- and long-term impact includes the integration of theatre-based movement into community programmes, broader adoption by at least 15 organizations, and potential replication in additional EU countries.

Keywords:
Active ageing, theatre based movement, expressive arts, physical activity, social inclusion, health enhancing physical activity (HEPA), community capacity building, non formal learning, wellbeing, senior engagement, behavioral change.



Mary Charalambous Papamiltiades
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Mary Charalambous Papamiltiades is an experienced academic and sports management professional with more than two decades of leadership across sport governance, sport management, national and international sport policy. She is an Assistant Professor at European University Cyprus and founder and director of MCP Management & Consulting Ltd. She holds a PhD in Sport Marketing from Loughborough University, an MBA in Sports Management, and an MSc in Sport & Exercise Science. From 2018 to 2024, she served as Director General of the Cyprus Sports Organization, spearheading national sport policy reform, strategic planning, and international cooperation initiatives. Earlier, she spent over a decade as faculty at European University Cyprus, specializing in sport governance, sponsorship, and strategic sport management. She is also the Director of MCP Management & Consulting Ltd, a research and development organization based in Cyprus. Through MCP, she delivers comprehensive consultation and guidance services to organizations, businesses, and governmental entities seeking to advance their strategic objectives in sport, policy development, event organization, and research and project implementation. Her work includes numerous academic publications, participation in major European sport management conferences, and service on boards such as the European Association for Sport Management and the Commonwealth Advisory Body of Sport. She has received several professional distinctions, including the Manager of the Year Award. She is actively engaged as a speaker, mentor, and contributor in international sport governance forums and EU level sport policy initiatives.

PROJECT PRESENTATIONS

Universal Sports for Social Impact (USSI)

Overview:
USSI is a pioneering transnational initiative under the Erasmus+ Sport 2024 – Capacity Building action (Project No. 101183224), co-funded by the European Education and Culture Executive Agency (EACEA).

With a strong emphasis on values-based education through sport, USSI utilizes the methodologies and philosophy of martial arts to promote social inclusion, personal development, peace, and international cooperation in grassroots sports.

Focusing primarily on the Western Balkans—Albania, Kosovo, and Montenegro—the project aims to transfer and adapt the proven "Sport Academy Methodology", enhancing local capacity, empowering coaches and educators, and engaging marginalized communities through non-formal learning in sport.

Key Objectives:
- To build the institutional and practical capacities of grassroots sport organizations in non-EU partner countries.
- To adapt and transfer the "Sport Academy Methodology", a best practice combining martial arts education with personal and social skills development.
- To equip coaches and educators with tools and training for integrating values such as respect, focus, discipline, and tolerance into sports instruction.
- To promote peace, inclusion, and cooperation in diverse communities through sport-based education.
- To foster international collaboration and shared learning among sports institutions and stakeholders across the participating regions.

Main Activities:
- Adaptation of best practices into local contexts, supported by a TOOL-KIT for integration.
- Localization of learning modules and development of "Train-the-Trainer" content to ensure scalable delivery.
- Capacity-building workshops and mentorship for 40+ coaches and educators.
- Community Events and Demo Days applying martial arts values, targeting inclusive public engagement.
- Dissemination of results through digital and public outreach, including media and networking platforms.

Target Groups:
- Grassroots sport organizations and staff (coaches, educators)
- Youth and marginalized groups, especially in Albania, Kosovo, and Montenegro
- Policy stakeholders involved in sport, education, and youth development
- International sport organizations promoting intercultural dialogue and inclusion

Partnership & Coordination:
The project involves a strong consortium of nine partners from across Europe:
- Ujbuda Judo Sports Association (Hungary) – coordinator
- University Sports Center of Palermo (Italy)
- Polytechnic Institute of Santarém (Portugal)
- PJA Sports Consultancy and Projects (Portugal)
- Albanian Sports Sciences Association (Albania)
- People in Focus (Albania)
- Center for Research and Studies in Physical Education, Sport and Health (Kosovo)
- Physical Activity and Sports Tech for Healthy Lifestyles (Montenegro)
- University of Montenegro (Montenegro) – associated partner

Project Duration and Budget:
Start Date: 1 April 2025

Duration: 24 months

Funding Programme: Erasmus+ Sport

Funding Agency: European Education and Culture Executive Agency (EACEA)

Grant Amount: €193,331.88

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Relevance and Impact:
USSI promotes social inclusion, positive values, and youth development through martial arts-based education. It strengthens grassroots sport in the Western Balkans, empowers coaches, engages marginalized youth, and fosters regional cooperation, aligning with EU priorities on inclusion, health, and cross-border collaboration through sport.

Keywords:
Martial arts, social inclusion, grassroots sport, values education, youth empowerment, capacity building, regional cooperation, Sport Academy, peacebuilding

Miodrag Zarubica
Physical Activity and Sports Tech for Healthy Lifestyles
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Miodrag Zarubica is an IT specialist and researcher at the University of Montenegro, currently employed at the Faculty of Electrical Engineering, where he supports the development of digital infrastructure and the technological transformation of academic processes. His long-standing work at the University includes technical, administrative, and leadership roles, notably as Director of the Center for Information System (CIS) of the University of Montenegro. He has extensive experience in network technologies, information systems, cybersecurity, and higher-education digitalization. He has strengthened his professional profile through numerous Erasmus+ trainings, mobility programs, and collaborations with European institutions in Poland, Slovakia, Romania, Spain, Greece, Germany, and Serbia. His scientific work focuses on artificial intelligence, predictive modelling of electrical energy consumption, and advanced multivariate time-series analysis. He has authored and co-authored scientific papers in information systems, e-learning platforms, and IPv6 implementation. Miodrag is also the Executive Director of the NGO "Technology in Sport and Physical Activity for Healthy Lifestyles" (PASTECHL), coordinating international cooperation, strategic initiatives, and the organization of the PASTECHL International Conference. He holds a Master's degree from the Faculty of Electrical Engineering of the University of Montenegro and is currently pursuing PhD studies in electronics, telecommunications, and computing. He is recognized for his technical expertise, organizational skills, and contributions to the digital development of Montenegro's academic community.

PROJECT PRESENTATIONS

Transforming Stadiums into Educational Hubs for Youth Empowerment and Social Inclusion (LearningArena)

Overview:
LearningArena is an Erasmus+ Sport 2025 Capacity Building initiative (Project No. 101245305), implemented under the ERASMUS-SPORT-2025-CB call and co-funded by the European Union. The project focuses on transforming sports stadiums into innovative non-formal learning environments that promote youth engagement, social inclusion, and civic responsibility in the Western Balkans, specifically in Albania, Kosovo, and Montenegro.

By recognizing stadiums as powerful social and cultural spaces, LearningArena introduces a structured educational model that integrates sport, identity, inclusion, and digital literacy. The project addresses a significant gap in non-formal education within sports organizations in the region, where structured educational activities remain limited. Through experiential learning and interactive workshops delivered in stadium settings, the project empowers young people to develop essential life skills and strengthens the educational role of grassroots sport.

Key Objectives:
- Increase the capacity of youth and sport organizations in Albania, Kosovo, and Montenegro to deliver non-formal education through sport.
- Transform stadiums into accessible learning spaces that foster inclusion, civic participation, and social cohesion.
- Develop and implement three structured educational packages addressing identity, fair play, inclusion, and digital literacy.
- Equip youth coaches and educators with competencies to deliver engaging, values-based learning activities.
- Promote youth empowerment and active participation through sports-based educational models aligned with European values.

Main Activities:
Development of three educational packages:
- "Sport in My Region, My Country, My Europe"
- "Fair Play – Inclusion and Equal Opportunities"
- "PressRoom – Dealing with Social Media"
- Training of 12 youth coaches to deliver non-formal education in stadium environments.
- Implementation of 36 interactive workshops across partner countries.
- Engagement of at least 540 young participants in stadium-based educational activities.
- Monitoring and evaluation through pre- and post-assessment tools.
- Dissemination of results and educational resources at local, regional, and European levels.

Target Groups:
- Young people aged 14–20, particularly those facing social or economic barriers.
- Youth coaches and educators working within sports organizations.
- Grassroots sport clubs and youth organizations.
- Local communities and stakeholders supporting youth development and inclusion.

Partnership & Coordination:
The project is implemented by a consortium of five organizations from EU and Western Balkan countries:
- Towarzystwo Sportowe Iron Man (Poland) – coordinator
- Shoqata Shqiptare e Shkencave Sportive – ASSA (Albania)
- L'Orma SSD ARL (Italy)
- Physical Activity and Sports Tech for Healthy Lifestyles – PASTECHL (Montenegro)
- Center for Research and Studies in Physical Education, Sport and Health (Kosovo)

Project Duration and Budget:
Start Date: 1 April 2026

Duration: 24 months

Funding Programme: Erasmus+ Sport

Funding Agency: European Education and Culture Executive Agency (EACEA)

Grant Amount: €171,542.00

Relevance and Impact:
LearningArena contributes to social inclusion, youth empowerment, and the development of non-formal education through sport in the Western Balkans. By embedding educational activ-

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ities within stadium environments, the project enhances access to learning opportunities, promotes European values such as fair play and equality, and strengthens the role of sport as a tool for civic engagement. The project supports long-term capacity building of sports organizations and provides a scalable model for integrating education into sports infrastructure across Europe.

Keywords:
Sports-based education; social inclusion; youth empowerment; non-formal learning; stadium-based learning; fair play; digital literacy; civic engagement; grassroots sport

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Novica Gardasevic is a Doctor of Physical Education and Sports Sciences from Montenegro, currently employed as a physical education teacher with more than 14 years of experience in primary and secondary education. His professional career is marked by a strong commitment to teaching, continuous professional development, and the promotion of healthy lifestyles among children and youth. He completed his undergraduate studies at the Faculty of Philosophy in Niksic in 2008, followed by a Master's degree in Physical Culture in 2010 at the Faculty for Sport and Physical Education, and later obtained his PhD from the Faculty of Physical Education and Sport at the University of East Sarajevo, demonstrating outstanding academic performance. Alongside his teaching career, he has gained experience in educational management and is actively engaged in sports as the founder and coach of the Sports and Recreational Society "TALENAT", a universal school of sport focused on the development of children's motor skills. He has been actively involved in national educational initiatives through participation in expert teams of the Institute for Education of Montenegro, contributing to curriculum development, teacher training, and evaluation processes, and is the author and co-author of accredited professional seminars implemented across Montenegro. Furthermore, he has participated in and implemented several national projects in the field of education and is currently engaged in an international Erasmus+ project focused on leadership and capacity building in sport, contributing to both project implementation and dissemination activities. His scientific work includes numerous publications in the fields of physical education, sports science, health, and nutrition, and he regularly participates in international scientific conferences in the areas of education, sport, and physical activity. In addition, he serves as a reviewer for several international scientific journals indexed in Web of Science and Scopus databases, including BMC Medicine, BMC Public Health, BMC Sports Science, Medicine and Rehabilitation, Journal of Health, Population and Nutrition, PLOS ONE, PeerJ, Humanities and Social Sciences Communications, BMC Global and Public Health, and the British Journal of Sports Medicine (BJSM). Committed to lifelong learning, he has completed more than 40 accredited professional training programs, accumulating over 650 hours of professional development, and holds the title of Senior Teacher Advisor in recognition of his pedagogical excellence.

PROJECT PRESENTATIONS

Resolving Football-Related Violence among Fans for Unity and Diversity (RESOLVE)

Overview:
RESOLVE is a transnational cooperation partnership implemented under the Erasmus+ Sport 2024 – Cooperation Partnerships (ERASMUS-SPORT-2024-SCP) programme, co-funded by the European Education and Culture Executive Agency (EACEA).

The project addresses football-related violence, discrimination, and racism by shifting the focus from punitive control measures to education, conflict resolution, community engagement, and digital innovation. RESOLVE promotes peace, equality, and European values in football by empowering fans, football clubs, professionals, and communities to actively co-create safer and more inclusive football environments.

Implemented across Cyprus, Greece, Italy, and Serbia, RESOLVE introduces a three-tier framework combining conflict resolution education, participatory community action, and digital tools to tackle the root causes of violence and antisocial behavior in football.

Key Objectives:
RESOLVE aims to:

- Prevent football-related violence, discrimination, and racism through inclusive, educational, and community-driven approaches.
- Develop and implement the RESOLVE Inclusive Conflict Resolution Programme and Protocol, tailored to football environments.
- Empower football fans, club members, and professionals with practical skills in conflict resolution, peacebuilding, and inclusive behavior.
- Leverage digital innovation through the RESOLVE Platform, Digital Stories, and documentary media to promote positive fan culture.
- Foster participatory co-creation by actively involving fans, former hooligans, football professionals, psychologists, and conflict resolution experts.
- Strengthen cross-sector cooperation between sport, health, education, law enforcement, and civil society actors at European level.

Main Activities:

- Development of the RESOLVE Conflict Resolution Programme and Protocol, including training modules, guidelines, and best practices.
- Establishment of the RESOLVE Panel, engaging football fans, experts, and stakeholders in participatory action research.
- Creation of the RESOLVE digital platform, hosting training resources, a best-practice database, streaming content, and interactive tools.
- Production of 20 RESOLVE Digital Stories and a documentary highlighting real-life experiences and positive transformation.
- Train-the-Trainer programmes and national implementations led by trained RESOLVE Ambassadors.
- Community-based conflict resolution events and peace-building football activities.
- Local Awareness Actions and a Transnational Final Conference.
- Strategic dissemination through social media campaigns, digital storytelling, and policy-oriented outreach.

Target Groups:
Direct target groups:

- Football fans (including former hooligans)
- Football club members (board members, coaches, players)
- Conflict resolution experts and sport psychologists
- Football community stakeholders (volunteers, educators, referees, journalists)
- Indirect target groups:
- Football federations and governing bodies
- Policymakers and public authorities
- NGOs and CSOs working on inclusion, peacebuilding, and anti-discrimination
- Media organisations and the general public

Partnership & Coordination:
RESOLVE is implemented by a strong multidisciplinary consortium combining expertise in sport science, public health, conflict resolution, digital education, social inclusion, and dissemination:

- Centre for Health, Exercise and Sport Sciences – CHESS (Serbia) – Coordinator
- University of Cassino and Lazio Meridionale – UNICAS (Italy)

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- RESET (Cyprus)
- Association Sport for All Vojvodina – ASFAV (Serbia)
- IPESKA – GRIIIS (Greece)
- Apollon Ladies FC (Cyprus)

The consortium is supported by associate partners including football associations, public authorities, universities, and civil society organizations, ensuring strong institutional backing and real-world impact.

Project Duration and Budget:

Start Date: 1 November 2025

Duration: 24 months

Funding Programme: Erasmus+ Sport

Funding Agency: European Education and Culture Executive Agency (EACEA)

Budget: €250,000.00

Relevance and Impact:

RESOLVE contributes directly to EU priorities on peace, equality, diversity, and European values in and through sport. By combining participatory education, digital innovation, and community-based action, the project: reduces tolerance for violence and discrimination in football, strengthens social cohesion and intercultural dialogue, promotes safer, more inclusive sporting environments, and creates scalable, multilingual tools for long-term European impact. It beyond enforcement-based responses, positioning football as a space for learning, dialogue, and positive social transformation.

Keywords:

Football violence prevention; conflict resolution; inclusion and diversity; peacebuilding; participatory action research; digital education; fan engagement; European values; sport for social impact.

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RESET
Cyprus

Panayiotis Loizou is an experienced research and development professional working at RESET, where he also leads the RESET Sports and Public Health Department. He has extensive experience in managing, coordinating, and delivering European-funded projects as well as in proposal writing and quality assurance. He has successfully contributed to and coordinated a number of EU-funded projects, several of which have been recognized as best practice at European level. Notably, the EU Erasmus+ HER SPORT project, which he had the honor of coordinating, was awarded a Best Practice Award with a score of 96%, and was shared as an example of excellence at European level. He holds an MSc with distinction in Public Health from the University of Bristol, where he is also the first author of a peer-reviewed publication in the Journal of Public Health Nutrition. He also holds a BSc in Sports, Exercise and Nutrition from Northumbria University and a BSc in Physical Education from the European University of Cyprus, providing a strong interdisciplinary foundation across public health, sport sciences, and education. His work focuses on public health promotion, healthy ageing, health literacy, inclusion, gender equality, and the use of participatory and co-creation approaches to empower communities through sport, physical activity, and digital innovation. He is also a hackathon winner in the Stronger Together – Artificial Intelligence for the Common Good Hackathon, hosted by Microsoft, CYENS Centre of Excellence, and the British Council, for a team project focused on minimizing healthcare waste through artificial intelligence in alignment with SDG 3 (Good Health and Well-being). Alongside his research and policy work, Panayiotis is the leader of Mountain Expeditions Cyprus Group, an initiative dedicated to reconnecting people with nature, promoting active lifestyles, and improving quality of life through outdoor experiences. As a climbing instructor and hiking leader, he actively integrates outdoor education, physical activity, and wellbeing, translating research and policy into practice and fostering healthier, more resilient, and inclusive communities.

PROJECT PRESENTATIONS

Leading the Game – Developing Pathways for Gender-Balanced Youth Leaders in Sports Governance (YOULEAD)

Overview:
YOULEAD is an Erasmus+ Sport 2025 initiative (Project No. 101243387), co-funded by the European Education and Culture Executive Agency (EACEA).

The project addresses the underrepresentation of youth in sports governance by creating more inclusive, democratic, and gender-balanced leadership structures in sports organizations. It aims to remove systemic barriers preventing young people—especially young women—from actively contributing to decision-making processes in sport.

YOULEAD will establish an Inclusive Governance Certification Process and a digital self-evaluation tool enabling sports organizations to assess and improve their governance models. Through training programs, mentorship, and pilot actions, the initiative provides youth participants with governance and leadership skills while strengthening the competencies of board members to integrate young voices effectively.

The project advances EU priorities related to gender equality, education, sustainable sports governance, and active civic engagement through sport.

Key Objectives:
- Empower young people with the necessary knowledge and leadership skills to participate in sports governance.
- Support sport organizations in creating gender-balanced, youth-inclusive decision-making structures.
- Develop and pilot an Inclusive Governance Certification Process and a sports governance self-evaluation tool.
- Enhance cooperation between youth groups, educational bodies, and sports institutions to support leadership pathways.
- Promote lifelong engagement, democratic participation, and awareness of social inclusion in sport.

Main Activities:
- Dual-purpose training program for youth and board members to improve governance skills and readiness.
- Establishment of the Leaders Circle mentorship structure pairing young leaders with experienced board members.
- Implementation and evaluation of pilot governance improvements in selected sports organizations.
- Development and deployment of an online governance self-assessment tool.
- Awareness-raising campaigns supporting gender equality, youth participation, and inclusive governance.
- Dissemination activities across Europe to support transferability and scalability.

Target Groups:
- Young individuals aspiring to contribute to sports governance.
- Sports organizations and their board leadership.
- Policymakers and stakeholders involved in governance reforms in sport.
- Educational and youth development actors supporting leadership education.

Partnership & Coordination:
The consortium includes eight beneficiaries and one associated partner from the EU and Western Balkans:
- Panathlon International (Italy) – coordinator
- University of Montenegro (Montenegro)
- Sports Embassy (Portugal)
- European Multisport Club Association – EMCA (Belgium)
- ENGSO – European Non-Governmental Sports Organisation (Sweden)
- Asociacion Tarjeta Verde – FMASEPANA (Spain)
- Instituto Andaluz de la Juventud – IJA (Spain)
- International Centre for Sport Security Europe Association – ICSS (Portugal)
- International Sport and Culture Association – ISCA (Denmark) – associated partner

Project Duration and Budget:
Start Date: 1 December 2025

Duration: 30 months

Funding Programme: Erasmus+ Sport

Funding Agency: European Education and Culture Executive Agency (EACEA)

Grant Amount: €400,000.00

DOI 10.56886/itspa.260401

Relevance and Impact:
YOULEAD strengthens gender equality and youth participation in sports governance at local, national, and European levels. By equipping young people with leadership skills and transforming organizational structures to welcome youth voices, the project ensures more inclusive, modern, and democratic decision-making in sport. The initiative contributes to wider EU social goals, supports SDGs on leadership and equality, and enhances institutional sustainability within grassroots and national sports systems. Expected long-term impact includes improved representation of young women and men in governance roles and the wider adoption of inclusive sport governance standards across Europe.

Keywords:
Good governance in sport, youth leadership, capacity-building in sport, gender equality, inclusion, sports governance reform, active participation, decision-making skills, European sport model

Stevo Popovic
University of Montenegro
Montenegro

Stevo Popović has over 15 years of experience, with a particular focus on planning, conducting, and evaluating research studies in the fields of health and exercise, including clinical trials. As a sports and exercise scientist, he applies his knowledge of human physiology to help individuals improve their health and overall athletic performance. In addition to his primary field, he possesses extensive expertise in physical anthropology, with a strong understanding of how physical activity affects the human body and its composition. He also has a solid background in social anthropology, which enables him to explore and interpret the social dimensions of health and physical activity. He holds a Ph.D. from the University of Novi Sad and completed his postdoctoral studies at the University of Ljubljana. Currently, he is engaged as a teacher and researcher at the University of Montenegro. Throughout his career, he has developed key competencies in teaching and course design, project and data management, research study design, as well as excellent written and oral communication and dissemination skills. He currently holds leading roles in several national and international projects and is actively involved in the governance of professional and scientific organizations. Colleagues describe him as tenacious, detail-oriented, and highly motivated. He approaches his work with dedication while maintaining a balanced and collaborative attitude. An optimist with a realistic outlook, he performs well under pressure and demonstrates strong problem-solving abilities. Above all, he is recognized as an honest, positive, and enthusiastic individual who embraces challenges.

PROJECT PRESENTATIONS

Virtues and Leadership Unlocked through Engaging Sport (VALUES)

Overview:
VALUES is a transnational initiative under the Erasmus+ Sport 2025 action (Project No. 101245989), co-funded by the European Education and Culture Executive Agency (EACEA).

Recognizing sport as a powerful catalyst for character development, gender equality, and social inclusion, VALUES focuses on empowering adolescent female athletes by integrating essential personal and social values into grassroots sport practice. The project will establish and implement the "Sport for Values" Quality Mark, a certification framework used to recognize and guide sports organizations in delivering inclusive, ethical, and values-driven coaching methodologies.

Aligned with Erasmus+ priorities on inclusion, education through sport, and the promotion of European values, VALUES will strengthen organizational capacities, support coach development, and contribute to a more supportive and responsible sporting environment for young women across Europe. The project aims to build a replicable and scalable model adaptable to diverse sports and community contexts.

Key Objectives:
- Establish the "Sport for Values" Quality Mark to identify and promote organizations fostering values-based learning and inclusion.
- Develop and deliver coach education resources that integrate leadership development, character-building, and positive values into daily coaching practice.
- Strengthen the capacity and sustainability of grassroots sport clubs to create athlete-centered environments that promote long-term engagement and well-being.
- Promote the dissemination and exchange of best practices across partner countries to contribute to the wider development of European grassroots sport.
- Empower female athletes to develop confidence, leadership skills, and ethical behavior through structured sports participation.

Main Activities:
- Development of the Sport for Values Quality Mark certification framework and implementation guidelines.
- Coach development activities including training modules, workshops, and mentoring sessions.
- Piloting and validation of values-based coaching practices within grassroots sport clubs.
- Evaluation and recognition of clubs progressing toward Quality Mark certification status.
- Dissemination of project results through media, events, and knowledge-sharing processes at local and European levels.

Target Groups:
Grassroots sport organizations and coaching staff.

Adolescent female athletes engaged in local sports programs.

Stakeholders and practitioners involved in sport, youth development, and inclusion.

Wider community actors supporting youth participation and well-being.

Partnership & Coordination:
The project involves a committed consortium of four partners:
- SK VOLLEY (Serbia) – coordinator
- INSTITUT IMPACT (Slovenia)
- Sirvintu sporto klubas (Lithuania)
- Physical Activity and Sports Tech for Healthy Lifestyles – PASTECHL (Montenegro)

Project Duration and Budget:
Start Date: 1 November 2025

Duration: 24 months

Funding Programme: Erasmus+ Sport

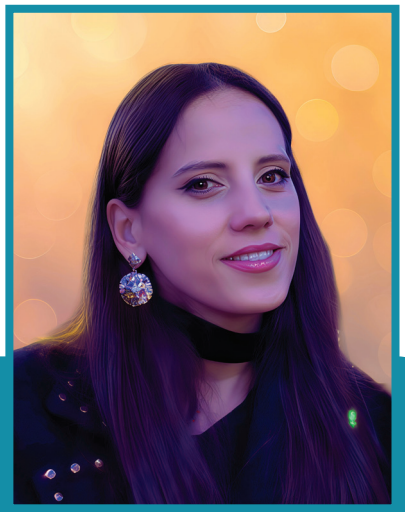
Funding Agency: European Education and Culture Executive Agency (EACEA)

Grant Amount: €120,000.00

Relevance and Impact:
VALUES advances the role of sport in promoting inclusion, positive personal development, and gender equality. The project strengthens the educational and community function of grassroots sport while providing a sustainable model for empowering young female athletes. Through recognition mechanisms, improved coaching practices, and cross-border collaboration, VALUES contributes to long-term athlete engagement, ethical sport environments, and alignment with European values and priorities in sport.

Keywords:
Values-based sport, grassroots sport, coach education, gender equality, youth leadership, inclusion, certification system, European values, athlete development, sport integrity

DOI 10.56886/itspa.260401



Tatjana Popović
Physical Activity and Sports Tech for Healthy Lifestyles
Montenegro

Tatjana Popovic is a Montenegrin professional with extensive experience in sport management, project coordination, and innovation-driven initiatives. She currently serves as a Consultant at the Western Balkan Sport Innovation Lab, where she contributes strategic, operational, and technical expertise to international projects. Since 2020, she has held the position of Chief Executive Officer at the Montenegrin Society for Sport Management, overseeing organizational strategy, stakeholder communication, and executive decision-making. Tatjana's professional background spans leadership roles, project management, and education, including previous work as a Business Studies and Economics teacher. She has led numerous national and international initiatives, with contributions to COST Actions DE-PASS and SHIINE, the Global Matrix 4.0, and Western Balkan Fund projects focused on sport participation, social innovation, and women's leadership in sport. Her work has been showcased through conference participation, most notably the 19th IUAES-WAU World Anthropology Congress, and she has received recognition such as the SHIINE Education Hackathon Winner Award for innovative solutions in higher education. Tatjana holds a degree in Economics from Megatrend University and brings strong multilingual, digital, and creative skills to her professional engagements. Alongside her expertise in sport management, she is also an accomplished ethno music performer with a longstanding presence in Montenegrin cultural events.

DOI 10.56886/itspa.260401

PROJECT PRESENTATIONS

Fighting Abuse & Inequality through Resources Platform of Learning and Actions for Youth in Sports (FAIR PLAYS)

Overview:
FAIR PLAYS is an Erasmus+ Sport 2025 initiative (Project No. 101245598), co-funded by the European Education and Culture Executive Agency (EACEA).

The project addresses the critical challenge of sexual and gender-based violence (SGBV) in the sports sector. Despite increasing policy attention, SGBV prevention remains insufficiently embedded in the professional training of future sports educators and coaches. FAIR PLAYS aims to change this by producing and implementing innovative educational resources and integrating SGBV awareness and prevention in the education of sports professionals.

The project follows a structured approach combining needs assessment, co-creation of interactive training materials, testing in real environments, and large-scale dissemination through a multilingual digital learning platform. FAIR PLAYS strengthens the educational responsibility of the sports sector while fostering a safer, more inclusive environment for young people across Europe.

Key Objectives:
- Develop and integrate educational content focused on SGBV prevention into sport education and coach training programs.
- Improve the skills and awareness of current and future sports professionals regarding violence prevention and inclusive behavior.
- Conduct needs assessment with teachers, trainers, and students to ensure user-driven development of resources.
- Promote a culture of respect, equality, and integrity throughout sports structures.
- Enhance transnational cooperation to increase the capacity of sports education institutions in addressing SGBV.

Main Activities:
- Needs assessment and stakeholder consultation in sports education environments.
- Development of innovative educational resources, including case studies, prevention tools, and digital interactive modules.
- Testing, review, and refinement of materials based on user feedback.
- Deployment of a multilingual digital platform ensuring broad European accessibility.
- Dissemination of results through targeted communication actions, professional networks, and sector-wide outreach.

Target Groups:
- Teachers and trainers in sports education institutions.
- Students preparing for careers in physical education and coaching.
- Sport organizations responsible for athlete safety and inclusion.
- Young athletes and community sport stakeholders indirectly benefiting from improved training standards.

Partnership & Coordination:
The consortium brings together five European partners specializing in sport education and training:
- C3D STAPS (France) - coordinator
- IDEF Training (Greece)
- M.C.P. Management & Consulting Ltd (Cyprus)
- Western Balkan Sport Innovation Lab (Montenegro)
- ANESTAPS (France)

Project Duration and Budget:
Start Date: 1 December 2025

Duration: 30 months

Funding Programme: Erasmus+ Sport

Funding Agency: European Education and Culture Executive Agency (EACEA)

Maximum Grant Amount: €400,000.00

Relevance and Impact:
FAIR PLAYS contributes to safer sports environments by combating sexual and gender-based violence through education, awareness, and improved professional practices. The project strengthens prevention mechanisms, empowers educators and future coaches, and aligns with EU priorities in gender equality, integrity in sport, and skills development. FAIR PLAYS is expected to improve long-term safeguarding standards in sport and foster inclusive values across European sports education systems.

Keywords:
Gender equality in sport; discrimination in sport; education and skills development; capacity building; violence prevention; integrity and values in sport

DOI 10.56886/itspa.260401

Radenko Matic
Western Balkan Sport Innovation Lab
Montenegro

Radenko Matic is an associate professor of Sports Management at the Faculty of Sport and Physical Education (FSPE), University of Novi Sad, Serbia, where he also works as the Head of the Department of Applied Sports Sciences. From 2016 to 2024, he was the Manager of a Sports Center with outdoor and indoor facilities, an organizational part of the FSPE. Further, he is a senior researcher at the three research groups: Sport Management and Sociology Lab (SMS lab, Serbia), Western Balkan Sport Innovation Lab (WBSI lab, Montenegro) and Research Group Sports Management and Entrepreneurship at Sports University in Kaunas (Lithuania). He has authored or co-authored more than 100 peer-reviewed articles and conference papers at prestigious scientific conferences such as the European Association of Sport Management (EASM) conference, four book chapters, three keynote speeches, and authored one book. His current research includes two main themes: 1) service quality and behavioral intentions in sports, leisure, and tourism management and marketing, and 2) approaches for effective physical activity promotion. He has a leading position in provincial, national, and international (ERASMUS and INTERREG Europe projects), as well as leading roles and memberships in the governing bodies of professional and scientific organizations.

DOI 10.56886/itspa.260401

PROJECT PRESENTATIONS

Women Leadership in Sport: Promoting the Capacity of Sport Clubs to Increase Female Participation as Leaders (WELEAD)

Overview:
WELEAD is a capacity-building project under the Erasmus+ Sport 2025 action (Project No. 101243483), co-funded by the European Education and Culture Executive Agency (EACEA). It is implemented by a consortium from two EU Member States and two Western Balkan countries, coordinated by Associazione Italiana Cultura Sport (AICS) in Italy.

The project aims to enhance the role of women in society by strengthening their leadership skills through sport. It focuses particularly on unemployed and inactive women, empowering them to participate actively in grassroots sport structures and assume leadership responsibilities. Through a blended WELEAD Academy model, the initiative will equip women with skills in management, organization, and values-based leadership, while simultaneously engaging them in community sport activation.

Through coordinated training, capacity strengthening of local clubs, and high-visibility dissemination activities, WELEAD supports gender equality and social involvement by promoting female leadership pathways in grassroots sport across Europe.

Key Objectives:
- Increase the leadership capacity of women in sport, with a specific focus on unemployed and inactive women.
- Strengthen the institutional ability of grassroots sports clubs to support and integrate women in decision-making roles.
- Develop and pilot a blended non-formal WELEAD Academy training format combining online learning and practical engagement through internships.
- Organize sport events and local outreach initiatives led by trainees to promote inclusion and gender equality within the community.
- Foster regional cooperation and knowledge exchange between EU and Western Balkan organizations in the field of women's empowerment through sport.

Main Activities:
- Training of five coaches in each pilot country to enable the delivery of inclusive leadership education in sports clubs.
- Implementation of the WELEAD Academy for 120 women (online modules hosted on OC BiH Moodle Platform and supervised internships).
- Organization of eight community sport events led by participants to strengthen real-world leadership practice.
- Awareness campaign and development of an advocacy toolkit addressing the gender gap in sport leadership.
- Dissemination of results through national and international events, a project website, multilingual publications, and a final conference.
- Translation of all major outputs into local languages of the pilot regions to support sustainability and usability.

Target Groups:
- Unemployed and inactive women aspiring to take leadership roles in sport.
- Grassroots sport clubs and their coaching workforce.
- Stakeholders and policymakers promoting gender equality in sport.
- Families and community members participating in inclusive sport events.

Partnership & Coordination:
The project involves a committed consortium of six partners:
- Associazione Italiana Cultura Sport – AICS (Italy) – coordinator
- CSIT – International Workers and Amateurs in Sports Confederation (Austria)
- Sarajevo Susret Kultura – SMOC (Bosnia and Herzegovina)
- Olympic Committee of Bosnia and Herzegovina – NOC BIH (Bosnia and Herzegovina)
- Western Balkan sport Innovation Lab (Montenegro)
- University of Montenegro – UOM (Montenegro)

Project Duration and Budget:
Start Date: 1 January 2026

Duration: 24 months

Funding Programme: Erasmus+ Sport

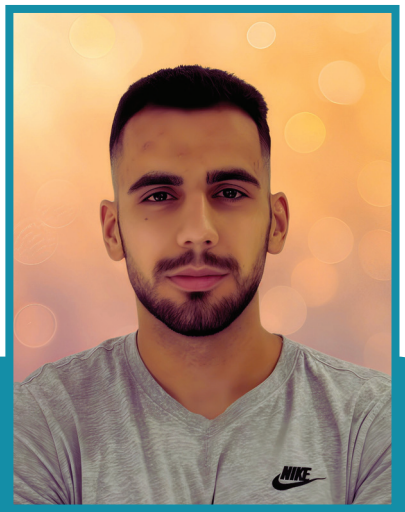
Funding Agency: European Education and Culture Executive Agency (EACEA)

Grant Amount: €200,000.00

DOI 10.56886/itspa.260401

Relevance and Impact:
WELEAD promotes gender equality and the empowerment of women through sport by strengthening leadership pathways and creating equal opportunities at the grassroots level. The project emphasizes inclusion, skill development, and international cooperation—responding to Erasmus+ priorities on capacity building, active participation, and social engagement of women. By equipping community sports actors with practical expertise and generating visible local impact, WELEAD contributes to long-term change in cultural attitudes and institutional structures, advancing female representation in sport leadership roles across Europe.

Keywords:
Women in sport, sport leadership, empowerment, gender equality, grassroots sport, capacity building, non-formal learning, community activation, female participation



Milovan Bulajic
Western Balkan Sport Innovation Lab
Montenegro

Milovan Bulajic is a young and accomplished athlete whose interests and professional success lie in bodybuilding, fitness coaching, and promoting physical activity as a foundation for health. After excelling academically in his early education, he pursued studies at the University of Montenegro, first in Sports Journalism and Coaching, and now in the Sport, Fitness and Tourism Master's program. He has built an impressive competitive career, becoming the national champion in Classic Bodybuilding (2024), a gold medalist at the Intercontinental Cup in the Junior Classic Bodybuilding category, and ranking among the Top 10 athletes in the world according to the IFBB. Alongside his athletic achievements, he works as a personal trainer and has developed a strong digital presence as a fitness influencer, promoting healthy lifestyles among young people. He has also engaged in scientific and educational activities, including speaking at a charity seminar on physical activity and mental health and participating in an international conference on physical education development in Jinan, China. Milovan is highly motivated to expand his scientific competencies and contribute to innovation and collaboration within the European sport community.

Guidelines for Authors

May 2022

*** Please use the bookmark function to navigate within the guidelines. ***

When preparing the final version of the manuscripts, either NEW or REVISED authors should strictly follow the guidelines. Manuscripts departing substantially from the guidelines will be returned to the authors for revision or, rejected.

1. UNIFORM REQUIREMENTS

1.1. Overview

The *Innovative Technologies in Sport and Physical Activity* (IT-SPA) applies the Creative Commons Attribution (CC BY) license to articles and other works it publishes.

There is no charge for submissions and no page charge for accepted manuscripts. However, if the manuscript contains graphics in color, note that printing in color is charged.

IT-SPA adopts a double-blind approach for peer reviewing in which the reviewer's name is always concealed from the submitting authors as well as the author(s)'s name from the selected reviewers.

IT-SPA honors a six-weeks for an initial decision of manuscript submission. Authors should submit the manuscripts as one Microsoft Word (.doc) file.
Manuscripts must be provided either in standard UK or US English. English standard should be consistent throughout the manuscripts.

Format the manuscript in A4 paper size; margins are 1 inch or 2.5 cm all around. Type the whole manuscript double-spaced, justified alignment.

Use Times New Roman font, size eleven (11) point.

Number (Arabic numerals) the pages consecutively (centering at the bottom of each page), beginning with the title page as page 1 and ending with the Figure legend page.

Include line numbers (continuous) for the convenience of the reviewers.

Apart from chapter headings and sub-headings avoid any kind of formatting in the main text of the manuscripts.

1.2. Type & Length

IT-SPA publishes following types of papers

Original scientific papers are the results of empirically- or theoretically-based scientific research, which employ scientific methods, and which report experimental or observational aspects of sports science and medicine, such as all clinical aspects of exercise, health, and sport; exercise physiology and biophysical investigation of sports performance; sport biomechanics; sports nutrition; rehabilitation, physiotherapy; sports psychology; sport pedagogy, sport history, sport philosophy, sport sociology, sport management; and all aspects of scientific support of the sports coaches from the natural, social and humanistic side. Descriptive analyses or data inferences should include rigorous methodological structure as well as sound theory. Your manuscript should include the following sections: Introduction, Methods, Results, and Discussion.

☑Open Submissions ☑Indexed ☑Peer Reviewed

Original scientific papers should be:

- Up to 3000 words (excluding title, abstract, tables/figures, figure legends, Acknowledgements, Conflict of Interest, and References);
- A structured abstract of less than 250 words;

- Maximum number of references is 30;
- Maximum combined total of 6 Tables/Figures.

Review papers should provide concise in-depth reviews of both established and new areas, based on a critical examination of the literature, analyzing the various approaches to a specific topic in all aspects of sports science and medicine, such as all clinical aspects of exercise, health, and sport; exercise physiology and biophysical investigation of sports performance; sport biomechanics; sports nutrition; rehabilitation, physiotherapy; sports psychology; sport pedagogy, sport history, sport philosophy, sport sociology, sport management; and all aspects of scientific support of the sports coaches from the natural, social and humanistic side.

☑Open Submissions ☑Indexed ☑Peer Reviewed

Review papers should be:

- Up to 6000 words (excluding title, abstract, tables/figures, figure legends, Acknowledgements, Conflict of Interest, and References);
- A structured abstract of less than 250 words;
- Maximum number of references is 100.

Editorials are written or commissioned by the editors, but suggestions for possible topics and authors are welcome. It could be peer reviewed by two reviewers who may be external or by the Editorial Board.

☐Open Submissions ☑Indexed ☑Peer Reviewed

Editorials should be:

- Up to 1000 words (excluding title, abstract, tables/figures, figure legends, Acknowledgements, Conflict of Interest, and References);
- A structured abstract of less than 250 words;
- Maximum number of references is 10.

Short reports of experimental work, new methods, or a preliminary report can be accepted as two page papers. Your manuscript should include the following sections: Introduction, Methods, Results, and Discussion.

☑Open Submissions ☑Indexed ☑Peer Reviewed

Short reports should be:

- Up to 1500 words (excluding title, abstract, tables/figures, figure legends, Acknowledgements, Conflict of Interest, and References);
- A structured abstract of less than 250 words;
- Maximum number of references is 15.

Peer review - fair review provides authors who feel their paper has been unfairly rejected (at any journal) the opportunity to share reviewer comments, explain their concerns, and have their paper reviewed for possible publication in IT-SPA.

☑Open Submissions ☑Indexed ☐Peer Reviewed

Peer review - fair review should be:

- Up to 1500 words (excluding title, abstract, tables/figures, figure legends, Acknowledgements, Conflict of Interest, and References);
- A structured abstract of less than 250 words;
- Maximum number of references is 15.

Invited papers and award papers include invited papers from authors with outstanding scientific credentials. Nomination of invited authors is at the discretion of the IT-SPA editorial board. IT-SPA also publishes award papers selected by the scientific committee of the annual conference.

☐Open Submissions ☑Indexed ☐Peer Reviewed

Invited papers and award papers should be:

- Up to 3000 words (excluding title, abstract, tables/figures, figure legends, Acknowledgements, Conflict of Interest, and References);
- A structured abstract of less than 250 words;

- Maximum number of references is 30;
- Maximum combined total of 6 Tables/Figures.

Meeting Abstracts contain conference abstracts of the sports science papers presented at the annual conference and sponsored meetings. This publication offers a first look into the current research in the field of Sports Science.

☐Open Submissions ☑Indexed ☐Peer Reviewed

Meeting Abstracts should be:

- Restricted to 250 words (including title, authors and institutions) and must include the following separate sections: [1] purpose; [2] methods; [3] results; [4] conclusion;
- Without references;
- Without Tables/Figures.

1.3. Submission

IT-SPA only accepts electronic submission to the e-mail of the Journal Office: **journal@pastechl.me.**.

Submitted material includes:

- A manuscript prepared according to the Guidelines for the Authors;
- A signed form that states the study was not previously published, nor has been submitted simultaneously for consideration of publication elsewhere, that states that all of the authors are in agreement with submission of the manuscript to IT-SPA, and that, for studies that use animal or human individuals, authors must include information regarding their institution's ethics committee, and which identifies the official approval number;
- A signed form that there is no conflict of interest.

Name the files according to the family name of the first author. Authors submitting revised versions of the manuscript can use the identification number of their manuscript as provided by the Journal Office. *See* example:

- ✓ FAMILY NAME-manuscript.doc – (main manuscript file)
- ✓ FAMILY NAME-statement.PDF – (authorship statement)
- ✓ FAMILY NAME-declaration.PDF – (declaration of potential conflict of interest)
- ✓ FAMILY NAME-fig1.tiff – (Figure 1)

1.4. Peer Review Process

An original manuscript submitted for publication will be submitted to the review process as long as it fits the following criteria:

- The study was not previously published, nor has been submitted simultaneously for consideration of publication elsewhere;
- All persons listed as authors approved its submission to IT-SPA;
- Any person cited as a source of personal communication has approved the quote;
- The opinions expressed by the authors are their exclusive responsibility;
- The author signs a formal statement that the submitted manuscript complies with the directions and guidelines of IT-SPA.

The editors-in-chief, executive editor and associate editors will make a preliminary analysis regarding the appropriateness, quality, originality and written style/grammar of the submitted manuscript. The editors reserve the right to request additional information, corrections, and guideline compliance before they submit the manuscript to the ad-hoc review process.

IT-SPA uses ad-hoc reviewers, who volunteer to analyze the merit of the study. Typically, one or two expert reviewers are consulted in a double-blind process. Authors are notified by e-mail when their submission has been accepted (or rejected). Minor changes in the text may be made at the discretion of the editors-in-chief, executive editor and/or associate editors. Changes can include spelling and grammar in the chosen language, written style, journal citations, and reference guidelines. The author is notified of changes via email. The final version is available to the author for his or her approval before it is published.

1.5. Open Access License and Publisher Copyright Policies

reuse their article in whole or part for any purpose, for free, even for commercial purposes. Anyone may copy, distribute, or reuse the content as long as the author(s) and original source are properly cited. This facilitates freedom in re-use and also ensures that IT-SPA content can be mined without barriers for the needs of research. On the other hand, the author(s) may use content owned by someone else in their article if they have written permission to do so. If the manuscript contains content such as photos, images, figures, tables, audio files, videos, et cetera, that the author(s) do not own, IT-SPA will require them to provide it with proof that the owner of that content has given them written permission to use it, and has approved of the CC BY license being applied to their content. Otherwise, IT-SPA will ask the author(s) to remove that content and/or replace it with other content that you own or have such permission to use. IT-SPA provides a form the author(s) can use to ask for and obtain permission from the owner.

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The editors of IT-SPA consider plagiarism to be a serious breach of academic ethics. Any author who practices plagiarism (in part or totality) will be suspended for six years from submitting new submissions to IT-SPA. If such a manuscript is approved and published, public exposure of the article with a printed mark ("plagiarized" or "retracted") on each page of the published file, as well as suspension for future publication for at least six years, or a period determined by the editorial board. Third party plagiarized authors or institutions will be notified, informing them about the faulty authors. Plagiarism will result in immediate rejection of the manuscript.

IT-SPA only publishes studies that have been approved by an institutional ethics committee (when a study involves humans or animals). Fail to provide such information prevent its publication. To ensure these requirements, it is essential that submission documentation is complete. If you have not completed this step yet, go to IT-SPA website and fill out the two required documents: Declaration of Potential Conflict of Interest and Authorship Statement. Whether or not your study uses humans or animals, these documents must be completed and signed by all authors and attached as supplementary files in the originally submitted manuscript.

1.6. After Acceptance

After the manuscript has been accepted, authors will receive a PDF version of the manuscripts for authorization, as it should look in printed version of IT-SPA. Authors should carefully check for omissions. Reporting errors after this point will not be possible and the Editorial Board will not be eligible for them.

Should there be any errors, authors should report them to the Office e-mail address journal@pastechl.me. If there are not any errors authors should also write a short e-mail stating that they agree with the received version.

1.7. Code of Conduct Ethics Committee of Publications

IT-SPA is hosting the Code of Conduct Ethics Committee of Publications of the COPE (the Committee on Publication Ethics), which provides a forum for publishers and Editors of scientific journals to discuss issues relating to the integrity of the work submitted to or published in their journals.

2. MANUSCRIPT STRUCTURE

2.1. Title Page

The first page of the manuscripts should be the title page, containing: title, type of publication, running head, authors, affiliations, corresponding author, and manuscript information. *See* example:

Transfer of Learning on a Spatial Memory Task between the Blind and Sighted People Spatial Memory among Blind and Sighted

Original Scientific Paper

Transfer of learning on a spatial memory task

Selcuk Akpinar[1], Stevo Popović[1,2], Sadettin Kirazci[1]

[1]Middle East Technical University, Physical Education and Sports Department, Ankara, Turkey
[2]University of Montenegro, Faculty for Sport and Physical Education, Niksic, Montenegro

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S. Popovic
University of Montenegro
Faculty for Sport and Physical Education
Narodne omladine bb, 84000 Niksic, Montenegro
E-mail: stevop@ac.me

Word count: 2,980

Abstract word count: 236

Number of Tables: 3

Number of Figures: 3

2.1.1. Title

Title should be short and informative and the recommended length is no more than 20 words. The title should be in Title Case, written in uppercase and lowercase letters (initial uppercase for all words except articles, conjunctions, short prepositions no longer than four letters etc.) so that first letters of the words in the title are capitalized. Exceptions are words like: "and", "or", "between" etc. The word following a colon (:) or a hyphen (-) in the title is always capitalized.

2.1.2. Type of publication

Authors should suggest the type of their submission.

2.1.3. Running head

Short running title should not exceed 50 characters including spaces.

2.1.4. Authors

The form of an author's name is first name, middle initial(s), and last name. In one line list all authors with full names separated by a comma (and space). Avoid any abbreviations of academic or professional titles. If authors belong to different institutions, following a family name of the author there should be a number in superscript designating affiliation.

2.1.5. Affiliations

Affiliation consists of the name of an institution, department, city, country/territory(in this order) to which the author(s) belong and to which the presented / submitted work should be attributed. List all affiliations (each in a separate line) in the order corresponding

to the list of authors. Affiliations must be written in English, so carefully check the official English translation of the names of institutions and departments.

Only if there is more than one affiliation, should a number be given to each affiliation in order of appearance. This number should be written in superscript at the beginning of the line, separated from corresponding affiliation with a space. This number should also be put after corresponding name of the author, in superscript with no space in between.

If an author belongs to more than one institution, all corresponding superscript digits, separated with a comma with no space in between, should be present behind the family name of this author.

In case all authors belong to the same institution affiliation numbering is not needed. Whenever possible expand your authors' affiliations with departments, or some other, specific and lower levels of organization.

2.1.6. Corresponding author

Corresponding author's name with full postal address in English and e-mail address should appear, after the affiliations. It is preferred that submitted address is institutional and not private. Corresponding author's name should include only initials of the first and middle names separated by a full stop (and a space) and the last name. Postal address should be written in the following line in sentence case. Parts of the address should be separated by a comma instead of a line break. E-mail (if possible) should be placed in the line following the postal address. Author should clearly state whether or not the e- mail should be published.

2.1.7. Manuscript information

All authors are required to provide word count (excluding title page, abstract, tables/figures, figure legends, Acknowledgements, Conflict of Interest, and References), the Abstract word count, the number of Tables, and the number of Figures.

2.2. Abstract

The second page of the manuscripts should be the abstract and key words. It should be placed on second page of the manuscripts after the standard title written in upper and lower case letters, bold.

Since abstract is independent part of your paper, all abbreviations used in the abstract should also be explained in it. If an abbreviation is used, the term should always be first written in full with the abbreviation in parentheses immediately after it. Abstract should not have any special headings (e.g., Aim, Results…).

Authors should provide up to six key words that capture the main topics of the article. Terms from the Medical Subject Headings (MeSH) list of Index Medicus are recommended to be used.

Key words should be placed on the second page of the manuscript right below the abstract, written in italic. Separate each key word by a comma (and a space). Do not put a full stop after the last key word. *See example:*

Abstract

Results of the analysis of…
Key words: spatial memory, blind, transfer of learning, feedback

2.3. Main Chapters

Starting from the third page of the manuscripts, it should be the main chapters. Depending on the type of publication main manuscript chapters may vary. The general outline is: Introduction, Methods, Results, Discussion, Acknowledgements (optional), Conflict of Interest (optional), and Title and Abstract in Montenegrin (only for the authors from former Yugoslavia, excluding Macedonians and Slovenes). However, this scheme may not be suitable for reviews or publications from some areas and authors should then adjust their chapters accordingly but use the general outline as much as possible.

2.3.1. Headings

Main chapter headings: written in bold and in Title Case. *See* example:

- ✓ **Methods**

Sub-headings: written in italic and in normal sentence case. Do not put a full stop or any other sign at the end of the title. Do not create more than one level of sub-heading. *See* example:

- ✓ *Table position of the research football team*

2.3.2 Ethics

When reporting experiments on human subjects, there must be a declaration of Ethics compliance. Inclusion of a statement such as follow in Methods section will be understood by the Editor as authors' affirmation of compliance: "This study was approved in advance by [name of committee and/or its institutional sponsor]. Each participant voluntarily provided written informed consent before participating." Authors that fail to submit an Ethics statement will be asked to resubmit the manuscripts, which may delay publication.

2.3.3 Statistics reporting

MJSSM encourages authors to report precise p-values. When possible, quantify findings and present them with appropriate indicators of measurement error or uncertainty (such as confidence intervals). Use normal text (i.e., non-capitalized, non-italic) for statistical term "p".

2.3.4. 'Acknowledgements' and 'Conflict of Interest' (optional)

All contributors who do not meet the criteria for authorship should be listed in the 'Acknowledgements' section. If applicable, in 'Conflict of Interest' section, authors must clearly disclose any grants, financial or material supports, or any sort of technical assistances from an institution, organization, group or an individual that might be perceived as leading to a conflict of interest.

2.4. References

References should be placed on a new page after the standard title written in upper and lower case letters, bold.

All information needed for each type of must be present as specified in guidelines. Authors are solely responsible for accuracy of each reference. Use authoritative source for information such as Web of Science, Medline, or PubMed to check the validity of citations.

2.4.1. References style

IT-SPA adheres to the American Psychological Association 7th Edition reference style. Check the Publication Manual of the American Psychological Association (2019), Seventh Edition that is the official source for APA Style, to ensure the manuscripts conform to this reference style. Authors using EndNote® to organize the references must convert the citations and bibliography to plain text before submission.

2.4.2. Examples for Reference citations

One work by one author

- ✓ In one study (Reilly, 1997), soccer players…
- ✓ In the study by Reilly (1997), soccer players…
- ✓ In 1997, Reilly's study of soccer players…

Works by two authors

- ✓ Duffield and Marino (2007) studied…
- ✓ In one study (Duffield & Marino, 2007), soccer players…
- ✓ In 2007, Duffield and Marino's study of soccer players…

Works by three or more authors: cite only the name of the first author followed by et al. and the year

- ✓ Bangsbo et al. (2008) stated that…
- ✓ In one study (Bangsbo et al., 2008), soccer players…

Works by organization as an author: cite the source, just as you would an individual person

- ✓ According to the American Psychological Association (2000)…
- ✓ In the APA Manual (American Psychological Association, 2003), it is explained…

Two or more works in the same parenthetical citation: citation of two or more works in the same parentheses should be listed in the order they appear in the reference list (i.e., alphabetically); separated by a semi-colon

- ✓ Several studies (Bangsbo et al., 2008; Duffield & Marino, 2007; Reilly, 1997) suggest that…

2.4.3. Examples for Reference list

Works by one author
Borg, G. (1998). *Borg's perceived exertion and pain scales*: Human Kinetics.

Works by two authors
Duffield, R., & Marino, F. E. (2007). *Effects of pre-cooling procedures on intermittent-sprint exercise performance in warm conditions. European Journal of Applied Physiology, 100*(6), 727–735. https://doi.org/10.1007/s00421-007-0468-x

Works by three to twenty authors
Nepocatych, S., Balilionis, G., & O'Neal, E. K. (2017). Analysis of dietary intake and body composition of female athletes over a competitive season. *Montenegrin Journal of Sports Science and Medicine, 6*(2), 57–65. https://doi.org/10.26773/mjssm.2017.09.008

Works by more than twenty authors
Krustrup, P., Mohr, M., Amstrup, T., Rysgaard, T., Johansen, J., Steensberg, A.,… Bangsbo, J. (2003). The yo-yo intermittent recovery test: physiological response, reliability, and validity. *Medicine & Science in Sports & Exercise, 35*(4), 697–705. https://doi.org/10.1249/01.mss.0000058441.94520.32

Works by group of authors
NCD-RisC. (2017). Worldwide trends in body-mass index, underweight, overweight, and obesity from 1975 to 2016: a pooled analysis of 2416 population-based measurement studies in 128.9 million children, adolescents, and adults. *Lancet*, 390(10113), 2627-2642. https://doi.org/10.1016/s0140-6736(17)32129-3

Works by unknown authors
Merriam-Webster's collegiate dictionary (11th ed.). (2003). Merriam-Webster.

Journal article (print)
Scruton, R. (1996). The eclipse of listening. *The New Criterion, 15*(3), 5–13.

Journal article (electronic)
Aarnivala, H., Pokka, T., Soininen, R., Mottonen, M., Harila-Saari, A., & Niinimaki, R. (2020). Trends in age- and sex-adjusted body mass index and the prevalence of malnutrition in children with cancer over 42 months after diagnosis: a single-center cohort study. *European Journal of Pediatrics,* 179(1), 91-98. https://doi.org/10.1007/s00431-019-03482-w

Thesis and dissertation
Pyun, D. Y. (2006). *The proposed model of attitude toward advertising through sport*. [Unpublished Doctoral Dissertation]. The Florida State University.

Book
Borg, G. (1998). *Borg's perceived exertion and pain scales*: Human Kinetics.

Chapter of a book
Armstrong, D. (2019). Malory and character. In M. G. Leitch & C. J. Rushton (Eds.), *A new companion to Malory* (pp. 144-163). D. S. Brewer.

Reference to a Facebook profile
Little River Canyon National Preserve (n.d.). *Home* [Facebook page]. Facebook. Retrieved January 12, 2020 from https://www.facebook.com/lirinps/

2.5. Tables

All tables should be included in the main manuscript file, each on a separate page right after the Reference section.

Tables should be presented as standard MS Word tables.

Number (Arabic) tables consecutively in the order of their first citation in the text.

Tables and table headings should be completely intelligible without reference to the text. Give each column a short or abbreviated

heading. Authors should place explanatory matter in footnotes, not in the heading. All abbreviations appearing in a table and not considered standard must be explained in a footnote of that table. Avoid any shading or coloring in your tables and be sure that each table is cited in the text.

If you use data from another published or unpublished source, it is the authors' responsibility to obtain permission and acknowledge them fully.

2.5.1. Table heading

Table heading should be written above the table, in Title Case, and without a full stop at the end of the heading. Do not use suffix letters (e.g., Table 1a, 1b, 1c); instead, combine the related tables. *See* example:

- ✓ **Table 1.** Repeated Sprint Time Following Ingestion of Carbohydrate-Electrolyte Beverage

2.5.2. Table sub-heading

All text appearing in tables should be written beginning only with first letter of the first word in all capitals, i.e., all words for variable names, column headings etc. in tables should start with the first letter in all capitals. Avoid any formatting (e.g., bold, italic, underline) in tables.

2.5.3. Table footnotes

Table footnotes should be written below the table.

General notes explain, qualify or provide information about the table as a whole. Put explanations of abbreviations, symbols, etc. here. General notes are designated by the word Note (italicized) followed by a period.

- ✓ *Note.* CI: confidence interval; Con: control group; CE: carbohydrate-electrolyte group.

Specific notes explain, qualify or provide information about a particular column, row, or individual entry. To indicate specific notes, use superscript lowercase letters (e.g. [a, b, c]), and order the superscripts from left to right, top to bottom. Each table's first footnote must be the superscript [a].

- ✓ [a]One participant was diagnosed with heat illness and n = 19.[b]n =20.

Probability notes provide the reader with the results of the texts for statistical significance. Probability notes must be indicated with consecutive use of the following symbols: * † ‡ § ¶ || etc.

- ✓ *P<0.05,†p<0.01.

2.5.4. Table citation

In the text, tables should be cited as full words. *See* example:

- ✓ Table 1 (first letter in all capitals and no full stop)
- ✓ ...as shown in Tables 1 and 3. (citing more tables at once)
- ✓ ...result has shown (Tables 1-3) that... (citing more tables at once)
- ✓ ....in our results (Tables 1, 2 and 5)... (citing more tables at once)

2.6. Figures

On the last separate page of the main manuscript file, authors should place the legends of all the figures submitted separately.

All graphic materials should be of sufficient quality for print with a minimum resolution of 600 dpi. IT-SPA prefers TIFF, EPS and PNG formats.

If a figure has been published previously, acknowledge the original source and submit a written permission from the copyright holder to reproduce the material. Permission is required irrespective of authorship or publisher except for documents in the public domain. If photographs of people are used, either the subjects must not be identifiable or their pictures must be accompanied by written permission to use the photograph whenever possible permission for publication should be obtained.

Figures and figure legends should be completely intelligible without reference to the text. The price of printing in color is 50 EUR per page as printed in an issue of IT-SPA.

2.6.1. Figure legends

Figures should not contain footnotes. All information, including explanations of abbreviations must be present in figure legends. Figure legends should be written bellow the figure, in sentence case. *See* example:

- ✓ **Figure 1.** Changes in accuracy of instep football kick measured before and after fatigued. SR – resting state, SF – state of fatigue, *p>0.01, †p>0.05.

2.6.2. Figure citation

All graphic materials should be referred to as Figures in the text. Figures are cited in the text as full words. *See* example:

- ✓ Figure 1
- × figure 1
- × Figure 1.
- ✓ ….exhibit greater variance than the year before (Figure 2). Therefore…
- ✓ ….as shown in Figures 1 and 3. (citing more figures at once)
- ✓ ….result has shown (Figures 1-3) that... (citing more figures at once)
- ✓ ….in our results (Figures 1, 2 and 5)... (citing more figures at once)

2.6.3. Sub-figures

If there is a figure divided in several sub-figures, each sub-figure should be marked with a small letter, starting with a, b, c etc. The letter should be marked for each subfigure in a logical and consistent way. *See* example:

- ✓ Figure 1a
- ✓ …in Figures 1a and b we can…
- ✓ …data represent (Figures 1a-d)…

2.7. Scientific Terminology

All units of measures should conform to the International System of Units (SI).

Measurements of length, height, weight, and volume should be reported in metric units (meter, kilogram, or liter) or their decimal multiples.

Decimal places in English language are separated with a full stop and not with a comma. Thousands are separated with a comma.

Percentage	Degrees	All other units of measure	Ratios	Decimal numbers
✓ 10%	✓ 10°	✓ 10 kg	✓ 12:2	✓ 0.056
× 10 %	× 10 °	× 10kg	× 12 : 2	× .056

Signs should be placed immediately preceding the relevant number.		
✓ 45±3.4	✓ p<0.01	✓ males >30 years of age
× 45 ± 3.4	× p < 0.01	× males > 30 years of age

2.8. Latin Names

Latin names of species, families etc. should be written in italics (even in titles). If you mention Latin names in your abstract they should be written in non-italic since the rest of the text in abstract is in italic. The first time the name of a species appears in the text both genus and species must be present; later on in the text it is possible to use genus abbreviations. *See* example:

- ✓ First time appearing: *musculus biceps brachii*
- ✓ Abbreviated: *m. biceps brachii*

PASTECHL Bar 2026

Partners

Ministarstvo prosvjete, nauke i inovacija

Medicinski fakultet Podgorica – Univerzitet Crne Gore

Fakultet za sport i fizičko vaspitanje – Univerzitet Crne Gore

ASSA

Universitas Studiorum Tuzlaensis – Fakultet za tjelesni odgoj i sport Tuzla

DAMAR – puls svake teme

WB siLab

European College of Sport Science – ECSS

epcg

SESCG – Savez elektronskih sportova Crne Gore

BISI – Balkan Institute of Science and Innovation

METROPOLIS

ETFUCG

ACT EDU

WPC – World Phygital Community

Vlad Marinescu
President,
International Esports Federation (IESF)

- **Under your leadership, the International Esports Federation has continued to expand globally — what do you see as the most important milestone in this journey so far?**

For me, the most important milestone is not a single event or headline — it is the fact that esports has continued to mature as a truly global, member-driven movement - now we are 152 National Federations, we were 54 when our team started. IESF brings together federations from across the world and provides a structure where nations, athletes, and communities can participate with dignity, rules, and a shared sense of purpose. That matters more than noise, branding, or short-term commercial wins. IESF's own public materials emphasize its global federation model and the World Esports Championship as the flagship place where nations compete under one structure.

The real milestone is that the people who have been building this ecosystem for years — athletes, national federations, organizers, educators, and community leaders — are no longer operating in isolation. We now have a platform that can protect continuity, create standards, and give esports a long-term institutional future.

In my view, that is the true achievement: turning passion into structure, and turning structure into global legitimacy and interconnectivity.

- **Esports is at a pivotal stage of development — how important is global governance and unified structures for the long-term sustainability of the industry?**

It is absolutely essential.

Esports cannot build a serious long-term future if it remains permanently fragmented, reactive, and driven only by short-term pr and commercial interests. Governance is not bureaucracy for the sake of bureaucracy. Governance is what protects athletes, gives federations stability, creates trust for governments and partners, and ensures that the people who built this space are not simply displaced when the market becomes attractive.

Without global unified governance, you get confusion. You get overlapping claims, weak standards, inconsistent integrity frameworks, and communities being used instead of developed. That is not sustainable.

A unified structure does not mean uniformity. It means clear roles, fair rules, democratic representation, and respect for the ecosystem as a whole. Esports is no longer a hobby happening in the margins. It is a global cultural, sporting, and technological movement. If we want it to endure, we must treat it with the seriousness it deserves, by esports community, for esports community.

- **Coming from a strong background in traditional sports, how do you see the relationship between traditional sport institutions and the esports ecosystem evolving?**

I see the relationship becoming deeper, more natural, and more constructive over time.

Traditional sport has built decades of experience in governance, athlete welfare, integrity, education, event delivery, and international recognition. Esports does not need to copy traditional sport blindly, but it would be foolish to ignore that institutional knowledge. At the same time, esports brings something that traditional sport urgently needs to understand better: digital-native culture, new communities, new forms of participation, and new models of engagement for younger generations.

So the future is not one replacing the other. The future is mutual respect and collaboration.

Traditional sport institutions are increasingly realizing that esports is not simply a commercial trend. It is part of how a generation lives, competes, and connects. And esports must also understand that real growth comes from discipline, standards, and responsibility, not from chaos.

The healthiest future is one where traditional sport and esports work together — not to dilute either side, but to strengthen both.

- **You have been a returning guest at the Montenegro Future Festival — what makes this platform relevant in the broader international dialogue on esports, technology, and innovation?**

What makes Montenegro Future Festival relevant is that it understands something many platforms still miss: esports does not exist in isolation. It sits at the intersection of gaming, technology, digital economy, education, innovation, youth culture, and now increasingly AI. The city of Bar is a great venue for these discussion and interactions to take place.

The festival has positioned itself as a regional platform with genuine international ambition. I can see that the 2026 edition is going to the next level! More than 100 speakers from over 60 countries, more than 500 international guests, and a program spanning esports, gaming, AI, blockchain, education, and technology. That scale and interdisciplinary ambition are precisely why it matters. I can feel like the team is lead with passion and hard work!

I return because this is our family. I remember the first steps of the esports recognition in Montenegro with great joy, and the development from those first meetings, to what Filip Soc and the SESCG have become is evidence of hard work and passion.

- **Looking ahead, what is your vision for the future of esports as a global movement, not only as an industry but as a force that connects people and cultures?**

My vision is clear: esports is one of the great connecting movements of our time. Through esports, millions of young people are not just playing—they are connecting. Across borders, across cultures, across differences.

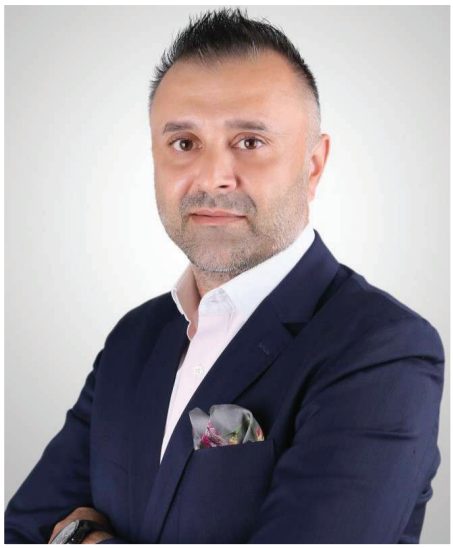
Yes, it is an industry. Yes, it is growing commercially. Yes, AI, platforms, publishers, and technology leaders will continue to shape how the space develops. But if esports becomes only a market, it will become shallow. If it remains also a movement — rooted in community, participation, national pride, unity, youth opportunity, and human connection — then it can become something much bigger.

I believe esports is a important bridge, between countries, between generations, between physical and digital culture, between talent and opportunity, between local communities and global platforms.

That is why I care about supporting the people who have invested their time, energy, and belief in this ecosystem long before it became fashionable. The future of esports will not be dictated by newcomers who arrive when the name becomes attractive. It must honor and protect the communities that carried it here, the esports family.

We must work! And if we build this properly, esports will not only produce champions. It will produce stronger communities, more connected societies, and new ways for young people around the world to find identity, discipline, and purpose, where we see friendships formed without language, respect built without borders, and dreams shared in a digital arena that belongs to everyone.

In a world that often divides us, esports brings us closer.



Dipesh Makwana
Head of Business Development META - Media & Entertainment / Team Lead AI Strategy Alibaba Cloud services

- **How do you see the role of large digital ecosystems in shaping the future of the esports economny?**

Large digital ecosystems provide the essential cloud, AI, and data infrastructure that enables esports to scale globally, competitive integrity, and low-latency gameplay & streaming. By integrating commerce, content, and community, these ecosystems transform passive viewership into active economic participation—unlocking dynamic monetization, personalized fan engagement, and seamless cross-border transactions. Ultimately, the future of the esports economy will be shaped by open, interoperable platforms that empower sustainable growth, local relevance, and inclusive innovation across the entire value chain.

- **Esports is rapidly evolving into a global business — what are the most sustainable revenue models driving the industry today?**

Most sustainable esports revenue models today prioritize diversification and recurring value— moving beyond one-off sponsorships to performance-based brand partnerships, fan subscriptions, and publisher revenue-sharing on digital goods that scale globally. Media rights and interactive content monetization are accelerating, powered by cloud and AI infrastructure that enables personalized, multi-language broadcasts and dynamic ad insertion to maximize yield across audiences.

- **From your perspective, what are the key factors required to scale esports from a regional phenomenon into a truly global market?**

Is it not yet truly global? Scaling esports into a truly global market requires robust digital infrastructure—including low-latency cloud platforms, cross-border payment systems, and localized content delivery networks—that can seamlessly connect fans, players, and commercial partners across diverse regions while respecting local preferences and regulatory environments. Sustainable growth also demands the development of interconnected ecosystems where publishers, teams, sponsors, and technology providers collaborate to create standardized governance frameworks.

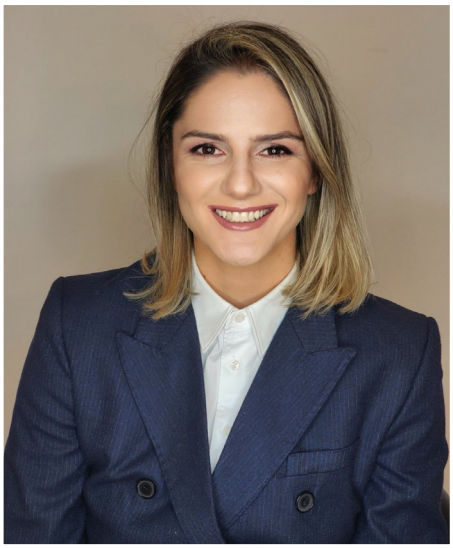
Finally, success hinges on balancing global brand consistency with hyper-local relevance— leveraging data-driven insights to adapt content, commerce, and community engagement strategies to regional cultures while maintaining the competitive integrity and production quality that define world-class esports experiences.

- **How can technology platforms and data-driven strategies enhance audience engagement and long- term monetization in esports?**

Technology platforms like Alibaba Cloud enable immersive, low-latency viewing experiences— such as interactive broadcasts, real-time stats, and AI-personalized content— that deepen fan engagement by transforming passive watching into active participation. Data-driven strategies unlock long-term monetization by analyzing behavioral insights to optimize dynamic sponsorships, personalize merchandise recommendations, and power frictionless transactions across integrated commerce and payment ecosystems. At Alibaba, we believe the convergence of scalable infrastructure, intelligent analytics, and ecosystem interoperability turns every fan interaction into a sustainable revenue opportunity while building lasting loyalty across global markets.

- **As a panelist at the Montenegro Future Festival, what key insights will you share on the topic "The Business of Esport: Revenue, Scale and Strategy"?**

Im my opnion I would emphasize that sustainable esports revenue depends on moving beyond one-off sponsorships to integrated, data-driven monetization—where commerce, content, and community converge to turn fan engagement into recurring, measurable value. Scaling globally requires interoperable digital infrastructure—cloud, AI, and cross-border payment systems— that delivers low-latency experiences. Strategically, the winners will be those who treat esports not as entertainment alone, but as a resilient digital economy: investing in grassroots talent, open ecosystems, to ensure long-term growth, competitive integrity, and inclusive participation worldwide.



Jelena Dubljević
WNBA Championship Ring Holder

- **Kako je izgledao Vaš put od Nikšića do svjetskih liga? Vaša karijera vodila Vas je od male Crne Gore do nekih od najjačih liga svijeta – Španije, Turske, Rusije, Kine i SAD-a. Koja lekcija sa tog međunarodnog puta Vam je najviše pomogla, ne samo kao sportisti nego i kao osobi?**

Mislim da, kada stavite tačku na karijeru, koja je u mom slučaju trajala skoro 25 godina, shvatite da sve te države, klubovi i sve te neke velike lekcije koje prolazimo i testove koje imamo apsolutno svaki dan, od nas prave prije svega jednu odgovornu osobu, sa ciljem i osobu koja zna šta želi. U suštini, upravo neki loši momentu u životu i karijeri uče te da neke stvari cijeniš više, da zapneš više i da neke stvari ne prepuštaš slučaju, da uvijek budeš odovoran za svoja djela. To je neka lekcija koju sam ja naučila, da sam uvijek ja ta koja može da promijeni situaciju i da apsolutno sve od mene zavisi. To je neki momenat u sportu koji je, da kažemo, normalniji nego u životu. Jer u sportu opet zavisiš sam od sebe, tvoj performans zavisi od tebe. U suštini ako radiš dobro, vratiće ti se. Mislim da to u životu, posle sporta, nije baš tako, nažalost.

- **Vaša priča o dolasku u NBA ligu vjerujem da i danas privlači veliku pažnju. Možete li podijeliti sa nama kako ste došli do Lejkersa i da nam ispričate kako je došlo do osvajanja WNBA "prstena"?**

Priča o NBA-u je u suštini jako jednostavna. Ja sam dugo godina odbijala poziv i nekako sam fokus imala na svoju reprezentativnu karijeru, koja se u tom momentu odvijala isključivo preko ljeta. To je bio neki stari kalendar FIBA-e i reprezentativne akcije su bile preko ljeta. Meni je, naravno, kao velikom patrioti uvijek bio cilj da igram za reprezentaciju i nikako nijesam htjela da dovedem to u pitanje. Prvi put kad je ljeto postalo slobodno, kada se promijenio kalendar, to je bilo 2015. godine, tada sam već potpisala ugovor. U međuvremenu sam na Evropskom prvenstvu slomila nogu i mislila sam to je to – probala sam, vjerovatno mi nije suđeno. Ali demantovali su me iz WNBA-a i Lejkersa i već u oktobru-novembru poslali drugi ugovor i samo su promijenili datume i rekli očekujemo te sledećeg ljeta. Tako da sami odlazak u Ameriku i u LA Sparks bio je "dream come true". Od prvog do poslednjeg dana to je bio moj američki san u svakom smislu te riječi - od ekipe, do stafa, trenera. Činjenica da ti je Medžik Džonskon jedan od najtrofejnijih igrača NBA-a a kasnije i šou biznisa i biznisa, predsjednik kluba i da imaš priliku da razgovaraš sa njim, budeš okružena takvom ličnošću 6 mjeseci, dovoljno govori.

Na kraju, samo osvajanje prstena je kruna, ne samo moje karijere, već i karijere dosta igračica sa nevjerovatnim CV-jem u tom momentu, koje su bile 20 godina u WNBA-u i njima je to bio prvi prsten. Ja sam u tom momentu imala 30 i nešto godina i nisam preveliku pažnju pridavala tome, jer je moj fokus bio na Evropi. Ali nakon 10 godina shvatam da je to zaista ogromno, prije svega doći tamo i biti u situaciji da to osvojiš, nije više pitanje toga da li si dobar igrač jer je potrebna i sreća i neke stvari da se poklope, tako da mi se negdje kroz taj prsten vratilo dosta stvari za koje u karijeri nijesam imala sreću.

- **Kao neko ko je ostvario veliki uspjeh u međunarodnoj karijeri, kako vidite razvoj i vidljivost ženskog sporta danas, posebno u manjim državama poput Crne Gore?**

Kao što ste i rekli, veliko iskustvo sam stekla, ali i saznanje kako se radi u drugim državama i kako se ophode, prije svega prema ženama i koje poštovanje imaju prema ženskom sportu svuda u Evropi. Mi u Crnoj Gori, ne mogu da kažem da zaostajemo i da nismo na tom nivou kao u Evropi, ja i dalje tvrdim da ne posvećujemo dovoljno pažnje ženskom sportu generalno, ja ću oće pričati o košarci, ali mislim da svih ovih godina počevši od 2008.-2009. godine od kada smo prvi put stupili u B divizuju, pa sve do današnjeg dana mislim da smo ostvarili nevjerovatne rezultate sa bazom od svega 15-20 registrovanih profesionalnih igračica. Maksimum je bio 19-20, pričam za seniorke. Naravno, postoje klubovi u Crnoj Gori koji dobro rade i zahvaljujući njima imamo tu neku bazu i dan danas, ali opet mislim da to nije dovoljno jer je iskustvo pokazalo da sa jako malo ulaganja može se doći do velikog rezultata u Crnoj Gori.

I ja stojim iza toga da su žene mnogo odgovornije od muška-

raca, što pokazuje i istorija i nekako ti bude krivo jer se uvijek vodiš pitanjem "šta da smo mi imale neke uslove, toliko novca" i bude ti krivo jer nikada nećemo doći do određenih odgovora. Ali to je tako kako je. Naravno, kao neko ko je gradio karijeru vani, nije mi baš jednostavno da neke stvari gledam i voljela bih da sam ja imala šansu da u Crnoj Gori gradim svoju karijeru i da iz neke velike baze u Crnoj Gori odem u Evropu, jer ipak mislim da je igrati kući za neke velike lige najveća čast.

- **Šta Vam je bilo najteže, kada se osvrnete sa sve godine profesionalnog bavljenja košarkom?**

Imati taj paralelni život sport i odrastanje, na kraju te oblikuje kao osobu, jer nije lako provesti 20 i nešto godina u inostranstvu. Ljudi uvijek gledaju tu neku ljepšu stranu, taj sjajniji dio medalje, ali niko ne gleda onu drugu - hrapavu, a ta hrapava nosi mnogo ožiljaka i odricanja.

- **Profesionalni sport i esport često dijele sličan mentalitet – disciplinu, strategiju i timski rad. Da li prepoznajete sličnosti između vrhunskog sporta i profesionalnog gejminga?**

Onoliko koliko ja znam o ovoj drugoj strani, o gejmingu, itekako prepoznajem sličnosti i mislim da u svemu u životu što radite, ako želite da budete uspješni morate biti spremni na rad, red, disciplinu i ogromna odricanja.

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