

FEFSTIM 2023

The 9th International Conference of Universitaria Consortium
„Physical Education, Sports and Kinesiotherapy
Active People for a Healthy Future”



CONFERENCE BOOKLET



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**The 9th International Conference of
Universitaria Consortium
„FEFSTIM: Physical Education, Sports and
Kinesiotherapy – Active People for a Healthy
Future”**

19-21th of October 2023

Timișoara, Romania

Conference Program



**FEFSTIM
2023**



WELCOME

It is a great honor to invite you to attend the FEFSTIM International Conference on “Active People for a Healthy Future” which will take place from 19 to 21 October 2023 in Timisoara, Romania.

The Faculty of Physical Education and Sport of the West University of Timisoara organizes this conference in partnership with the faculties of Physical Education and Sport of the Babeş-Bolyai University of Cluj-Napoca and Alexandru Ioan Cuza University of Iaşi. This international scientific event is part of the numerous actions that have been organized by our faculties, members of the Universitaria Consortium.

In parallel with the congress, the Forum of Deans of Faculties of Physical Education and Sport in Romania will also take place.

We hope that this scientific event will provide the opportunity for participants to meet national and international experts and to share knowledge and experience through presentations of scientific papers, seminars and workshops.

Assoc. Prof. Adrian Nagel, PhD
Dean,
Physical Education and Sport Faculty
West University of Timișoara



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**Thursday 19th of October
2023 Welcoming the
Participants**

Friday 20th of October 2023

08.00 - 13.00 REGISTRATION West University Hall – Aula Magna
10.00 - 10.30 OPENING CEREMONY West University of Timișoara - Aula Magna
10.00 Welcome speech Prof. dr. Marilen Pirtea, Rector of WUT
10.10 The word of Prof. dr. habil Beatrice Abălașei, Dean of PES Faculty, Alexandru Ioan Cuza University, Iasi
10.15 The word of Prof. dr. Leon Gomboș, Dean of PES Faculty, Babes Bolyai University, Cluj Napoca
10.20 The word of Prof. dr. Alina Moanță, President of PES Deansè Forum, NUPES, Bucharest
10.25 The word of Assoc. Prof. dr. Adrian Nagel Dean of PES Faculty, WUT, Timisoara
10.30- 12.15 KEYNOTE LECTURES, West University of Timișoara - Aula Magna
10.30-11.15 <i>Prof. dr. Alessandro Urbani, Honolulu University – European Department (USA), Universita Catolica, Roma (Italy)</i>
11.15-11.30 Coffee break - West University Hall – Aula Magna
11.30- 12.15 <i>Prof. dr. Kelly de Lemos Serrano O’Hara, Universidade de Beira Interior, Covilha (Portugal)</i>
12.20-13.30 Poster Session 1- West University Hall – Aula Magna <i>Chairmans: Conf. univ dr. Baciú Marius Alin, Conf. univ. dr. Popescu Lucian, Conf. Univ. Dr. Bota Eugen</i>
P1. Acatrinei Mihaela The role of Monitoring the Efforts Parameters in Sports Training
P2. Chirazi Marin, Constantin Iuliana Luminița Study on the Opinions of Specialists Regarding the Impact of Children with Special Educational Requirements (CES) in Physical Education Lessons
P3. Pătrașcu Adrian, Vădan Anca, Gherman Alexandru Andrei, Gomboș Leon Assessing Athletic Performance of Youth Female Basketball Teams in Cluj County and the Pursuit of the 'Average' Player: A Comparative Analysis
P4. Pop Sergiu, Gherman Alexandru Andrei, Pop Ioan - Nelu Study on the Development of Motor Skills, Through Logic Games
P5. Macra-Oșorhean Maria Daniela, Radu Paul Ovidiu, Ciocoi-Pop Rareș, Muntean Raul-Ioan The Importance Of Goalkeeper’s Placement On The Decision-Making To Pass Or Throw The Ball At Goal In Shoot Outs In Beach Handball
P6. Ungurean Bogdan-Constantin, Abalașei Beatrice-Aurelia, Popescu Lucian, Puni Alexandru-Rareș, Cojocariu Adrian The Relationship Between Body Composition Parameters In Female Teenagers With And Without Intellectual Disability
P7. Albină Andreea-Mihaela, Cosma Germina Alina, Buga Andreea-Aurora-Maria Identification of the Use of Isoinertial Training in the Training of Athletes from Romania
P8. Popescu Silvia, Grădinaru Csilla, Lupu Sorina Alina, Hrițcu Bogdan, Petrescu Magda, Nagel Adrian Cohesion in Professional Sports Teams. A Sociological Analysis



<p>P9. <i>Pantea Corina, Iovanoviciu Marco, Vutan Ana Maria, Tabără-Amânar Simona, Gligor Șerban</i> Review Regarding Kinetic Methods Used in the Recovery of Idiopathic Scoliosis</p>	
<p>P10. <i>Fornari Simone, Rusu Ligia</i> Effective Strategies and Behaviours in Professional Football Coaching</p>	
<p>P11. <i>Mărtinaș Florentina-Petruța, Cojocariu Adrian, Surmei Balan Mihaela-Gabriela</i> Assessment of Agility Among Rugby Players</p>	
<p>P12. <i>Trifa Ioan-Pavel, Trifa Claudia Gabriela</i> School Bullying: Bullying Behavior and Method of Response Among High School</p>	
<p>P13. <i>Buda Ionuț-Alexandru, Petracovschi Simona, Brîndescu Sorin</i> Study on Correcting the Technical and Tactical Mistakes of a Defensive Central Midfielder from a Romanian Football Team</p>	
<p>P14. <i>Alistarh Adrian, Ene-Voiculescu Virgil, Ene-Voiculescu Carmen, Abramiuc Alexandru</i> Biomechanical Analysis of Technical Exercises for Right Kicking for U12 Children Using ANSYS Software</p>	
<p>P15. <i>Carapcea Cristian Ștefan, Ene-Voiculescu Virgil, Melenco Ionel, Croitoru Horia</i> Study on the Use of Anaerobic Exercises in Increase of Utility Swimming Test-Specific Performance</p>	
<p>P16. <i>Constantinescu (Ocheșel) Liliana, Ene-Voiculescu Virgil, Ene-Voiculescu Carmen, Abramiuc Alexandru</i> Statistical Study on the Somato-functional and Motric Profile with Implication in the Individualization of Tennis Training at U14</p>	
<p>P17. <i>Rădulescu (Martinescu) Magdalena, Ene-Voiculescu Virgil</i> Study on the Factors that Condition the Achievement of Performance in Rumba Dance Sport at National and International Level</p>	
<p>P18. <i>Stanciu Cristina, Ene-Voiculescu Virgil</i> Study on the Use of CrossFit in the Physical Training of Judo Athletes</p>	
<p>P19. <i>Popa Corina, Ene-Voiculescu Virgil</i> Analysis of the Theoretical and Methodological Bases of the Research Regarding the Modeling of Physical Condition through Dynamic Games at the Level of Primary School Students</p>	
<p>P20. <i>Popescu Veronica, Radu Liliana-Elisabeta, Moraru Cristina-Elena, Popovici Ileana-Monia</i> Interdisciplinary Approaches in the Physical Education Lesson to Optimize the Physical Condition of Students</p>	
<p>P21. <i>Arnautu Gabriel, Domokos Martin, Bota Eugen, Negrea Cristian, Domokos Cerasela</i> Body Composition Changes of Students from Physical Education and Sport Faculty Timisoara During Christmas Holiday</p>	
<p>15.30- 16.30 ORAL PRESENTATIONS SCIENCE OF SPORTS AND PHYSICAL EDUCATION SECTION - - Room 028 Chairmen: Prof. Univ. Dr. Cojocariu Adrian , Conf. univ. dr Pop Horațiu, Prof. Univ. Dr. Petracovschi Simona</p>	<p>15.30- 16.30 ORAL PRESENTATIONS Kinotherapy SECTION-- Room 327 Chairmen: Prof. Univ. Dr. Ciocoi-Pop Rareș, Conf. univ. dr Neculăeș Marius, Prof. Univ. Dr. Oravițan Mihaela</p>
<p>15.30-15.45 <i>Grosu Vlad, Popovici Cornelia, Negru Ioan-Niculaie, Zadic Alexandru, Rozsnyai Radu, Pop Rareș Mihai</i> Objectifying Mental Training In Skiers Through The Use Of Pulse Oximeter</p>	<p>15.30-15.45 <i>Micuta Cristian Alin, Oh Jinhyuk, Amaricai Elena, Onofrei Roxana Ramona</i> No Short-term Effects of Carrying a Shoulder Bag on Dynamic Plantar Pressure in Young Adults</p>
<p>15.45-16.00 <i>Jurcau Ramona-Niculina , Jurcau Ioana-Marieta , Popovici Cornelia Rusu Lucian-Daniel, Kwak Dong Hun, Glavan Aurelia</i> Impact of QiGong training on psychological and oxidative stress, a short review</p>	<p>15.45-16.00 <i>Oltean Anca Maria , Borze Theodora, Serseniu Urzica Titus Adrian , Ciobanu Doriana Ioana</i> The Effect of Craniosacral thereapy in Pain and Stress Reduction and Quality of Life Improvement in Patients with Cervical Pain-a comparative study</p>
<p>16.00-16.15</p>	<p>16.00-16.15</p>



<p><i>Sponsor moment K-invent- Digital healthcare in Sport physical therapy</i></p>	<p><i>Mihai Tatiana Andreea</i> The Study of the Relationship Between Inflammatory Process Markers and Physical Exercise in Colorectal Cancer</p>
<p>16.15-16.30 <i>Jurcau Ramona-Niculina, Jurcau Ioana-Marieta, Popovici Cornelia, Colceriu Nicolae-Alexandru, Glavan Aurelia</i> Adult-teenagers Opinion Regarding Adaptogens Role in Sports, Before/After Attending a School Course on this Topic</p>	<p>16.15-16.30 <i>Sîrbu Elena, Paşcalău Nicoleta, Pantea Corina, Jurjiu Nicoleta, Totorean Alina</i> Body mass index, body composition and physical activity as predictors of bone density in postmenopausal women</p>
<p>16.30-16.45 Coffee break - West University Hall - Ground floor</p>	
<p>16.45- 18.00 ORAL PRESENTATIONS -Room 028 SCIENCE OF SPORTS AND PHYSICAL EDUCATION SECTION <i>Chairmen: Prof. Univ. Dr. Grosu Emilia Florina, Conf. Univ. Dr Ungurean Bogdan Constantin , Conf. Univ. Dr. Domokos Martin</i></p>	<p>16.45- 17.45 ORAL PRESENTATIONS - Room 327 Kinetotherapy SECTION <i>Chairmen: Conf. Univ. dr Pop Ioan Nelu, Conf. univ. dr Neculăeş Marius, Conf. univ.dr. Elelna Sîrbu</i></p>
<p>16.45-17.00 <i>Zrnić Radomir, Lončar Stjepanović Suzana, Arnautu Gabriel, Domokos Cerasela, Jovanović Saša</i> Functional connection of sports recreation and tourism the example of the Eco Center Ljekarice</p>	<p>16.45-17.00 <i>Lucaci Paul, Cîtea Mihai Alexandru, Neculăeş Marius</i> Functional Recovery After Distal Femur Epiphyses Fracture</p>
<p>17.00-17.15 <i>Hriţcu Bogdan , Lupu Sorina-Alina, Popescu Silvia, Mirica Silvia-Nicoleta, Nagel Adrian</i> The Impact of Heat Training in Endurance Running - Case Study</p>	<p>17.00-17.15 <i>Neculăeş Marius, Lucaci Paul</i> Physiotherapy in the Recovery after Fractures of the Upper Limb</p>
<p>17.15-17.30 <i>Trofin Florin Petruţ, Coteaţă Maria Andreea, Sandu Martina, Avârvarei Natalia, Duană-Prodan Adriano, Vizitiu Miruna, Calara Iustina, Popovici Sorin , Honceriu Cezar</i> Comparison of handgrip strength measured with two different dynamometers in young people</p>	<p>17.15-17.30 <i>Sponsor moment K-invent- Revolutionize Physiotherapy with Cutting-Edge Technology</i></p>
<p>17.30-17.45 <i>Şanta-Moldovan Cristian, Bartha Velu-Sebastian</i> Study on the Level of Anxiety Present in Volleyball Players, Within the National Volleyball Championship Juniors-Men 2022-2023</p>	<p>17.30-17.45 <i>Glazer Ciprian, Mirica Silvia Nicoleta, Vuinov Oana, Jurjiu Nicolae Adrian, Mihajlov Marjan, Avram Claudiu</i> From Traditional Casts to Innovation: Comparing Plaster Cast Methodologies in 3 Leading Romanian Hospitals and a Novel Approach</p>
<p>15.30-18.30 THE PHYSICAL EDUCATION AND SPORTS' FACULTIES DEANS' FORUM Room 029</p>	
<p>15.30 – 16.30 WORKSHOP 1 West University Amphitheater A32 New approach for neurological disorders- D.O Federic Guez</p>	
<p>17.00-18.30 POSTER SESSION II- West University Hall - Ground floor <i>Chairman : Conf. Univ. dr. Macra Osorhean Maria, Conf. Univ. Dr Honceriu Cezar, Conf. Univ. Dr. Negrea Cristian</i></p>	
<p>P21. Puta Carla Silvia, Puta Tiberiu Silviu, Bota Eugen, Petracovchi Simona Rationalisation of Means in Order to Educate Dynamic Balance in the Instructional Process in 6-7 Year Old Pupils</p>	

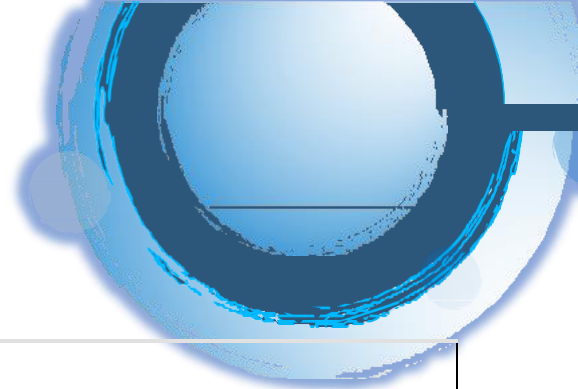


<p>P22. <i>Tanasă Anca-Raluca, Abalășei Beatrice-Aurelia, Dumitru Iulian-Marius</i> Comparative Analysis Of Body Mass Index Among Urban And Rural School Children In Moldova: An Anthropometric Study</p>
<p>P23. <i>Rohozeanu Dan Mihai</i> The Importance of Practicing Regular Physical Activity, Between Theory and Practice</p>
<p>P24. <i>Șerban Radu-Tiberiu, Baciū Marius Alin, Brisc Andrei-Cătălin, Baciū Codruța Roxana</i> The Relationship Between the Self-Perceived Psychological State of Tennis Linemen and the Accuracy of Their Calls</p>
<p>P25. <i>Honceriu Cezar, Popescu Lucian, Tanasa Viciu, Petru Trofin Florin, Berteau Armand, Abalășei Beatrice Aurelia</i> Assesment of VO₂MAX, T_{LIM}VO₂MAX and correlation of physiological indicators among soccer players</p>
<p>P26. <i>Tomozei Răzvan-Andrei, Tanasă Anca-Raluca, Cojoc Florin-Marius</i> Reaction Speed in Sprint Events at the European Athletics Games in Poland 2023</p>
<p>P27. <i>Trofin Florin-Petruț, Popescu Lucian, Coteață Maria-Andreea, Curtianu Ștefan, Donea Octavian-Alexandru, Frunză Andrei-Alexandru, Popa Silviu-Gabriel, Iacob Dănuț-George, Puni Rareș-Alexandru</i> Study on Correlations Between Strength, Speed and Agility in Adolescents</p>
<p>P28. <i>Farzat Sara, Mirica Nicoleta, Nagel Adrian, Avram Claudiu</i> Assesing Muscle Fatigue: A Review of Training Protocols in Murine Models</p>
<p>P29. <i>Cîtea Mihai Alexandru, Lucaci Paul, Neculăeș Marius</i> Effects of Manual Therapy in Weight Distribution at Plantar Level in Female Adolescents</p>
<p>P30. <i>Bichescu Andrade-Ionuț, Cărăbaș Ionică, Dacica Liliana, Gușe Veronica-Mihaela</i> The Physical Exercises Role in Increasing the Life Quality of the Elderly People</p>
<p>P31. <i>Petrea Renato Gabriel, Rusu Oana Mihaela, Popovici Ileana Monica, Moraru Cristina Elena</i> Differences in the Manifestation of Psychomotricity, Determined by Age, in Children who Practice Swimming</p>
<p>P32. <i>Onose Ionuț, Onose Raluca-Mihaela, Abalășei Beatrice-Aurelia</i> The Relationship Between Printed Media And The Promotion Of Dual Career Among Young People</p>
<p>P33. <i>Varga Mihaela-Giorgiana, Gui-Bachner Gabriela, Chirilă Daniel-Nicolae, Molcuț Alin, Ionescu Zenobiu-Dan, Ciorsac Alecu, Alexandru Mihai</i> The Influence of Pilates Exercises in Improving Spine Mobility</p>
<p>P34. <i>Dumbravu Ioana-Adnan,</i> Innovative Methods of Optimizing Sports Behaviour in Taekwando</p>
<p>P35. <i>Pîrjol Ionuț, Bălănean Denisa, Reitmayer Eric, Arseni Nada</i> Swimming Speed Dynamics in Athletes Participating in the 24h "AquaChallenge" Marathon</p>
<p>P36. <i>Arseni Nada, Bălănean Denisa, Răsădean Marcel</i> Opinions of Physical Education Teachers on the Concepts of Punishment, Sanction, and Additional Tasks applied during physical education lessons</p>
<p>P37. <i>Andrei Bitang, Vlad Teodor Grosu, Emilia Florina Grosu, Rodica Lucian, Pop Rareș Mihai, Zadic Alexandru, Rozsnyai Radu Adrian, Viorel Bitang</i> The importance of joint mobility in learning to swim in 8-10 year olds</p>
<p>P38. <i>Avram Cristiana Adina, Almăjan-Guță Bogdan, Stănilă Alexandra Mihaela</i> The Role Of Different Exercise Training Programs In The Fight Against Obstructive Sleep Apnea: A Narrative Review</p>
<p>P39. <i>Chelaru Erzsebet-Hajnal, Bulduș Codruța Florina, Monea Dan</i> Prevention of Postural Deficits Induced by Desk Work Through Alternating the Support Surfaces</p>
<p>P40. <i>Adrian Miroslav Merka</i> A Comparative Analysis of Sports Management in Romania and Other EU Countries</p>

P41 *Galan P. Doru, Galan D.Doru*

The Psychological Profile Of Ju-Jitsu-Ka Which Addresses The Ijff Competitive System

19.30 Gala Dinner – Restaurant Vineri 15



Saturday 21th of October 2023

Registration 8.00-10.30 - West University Hall - Ground floor

8.30-10.00 WORKSHOP 2- Room - 029

Recovery methods in sports

Assoc. Prof. dr. Bogdan Almajan -Guță (WTU)

8.30-10.00 WORKSHOP 3

West University Amphitheater A32

Examination and strategy of postural analysis

Prof. dr. Alseandro Urbani (Italy)

10.10.15- Coffee break - West University Hall - Ground floor

10.15-11.45 WORKSHOP 4 – Room 029

One machine countless possibilities

Alberto Corso, Export Manager -Advanced kinetic user interaction systems - AKUIS SRL (Italy)

Ec. Bianca Ola Mihail- manager – MST solutions Timișoara (Romania)

10.15-11.45 WORKSHOP 5

West University Amphitheater A32

Applied kinesiology and the use of proprioceptive activators

Dr Gorio Mandozzi (Italy)

11.45-12.00 BREAK

12.00-12.30 CLOSING CEREMONY

ABSTRACTS ORAL PRESENTATIONS - SPORTS AND PHYSICAL EDUCATION SECTION

FEFSTIM2023_EFS1

Objectifying Mental Training In Skiers Through The Use Of Pulse Oximeter

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Abstract

Introduction. Mental training is a crucial aspect of overall well-being and performance enhancement in various aspects of life. Through mental training individuals can enhance their focus, reduce stress, increase mental clarity and physical performance.

Aim. Based on our initial hypothesis, we initiated this study with the belief that mental training plays a significant role in enhancing attention, refining training techniques, and ultimately improving performance in the sport of alpine skiing. By using the pulse oximeter, we can identify physiological changes that occur during effort and mental training in skiers. Materials and methods:

Material and methods. The study subjects consisted of seven skiers from CSS Gheorgheni and seven skiers from CSS Baia Sprie, children and juniors. We have used a pulse oximeter, especially the CMS 50F device, on skiers, with accent on the following parameters: the heart rate (PR) and the level of oxygen absorbed in the blood (SpO2). For the statistical analysis, we have used the SPSS 15.0 software, ANOVA measures to investigate whether there were any differences in the indices of interest among the testing: initial, intermediate, and final.

Results: The findings indicate an inverse proportional relationship between heart rate and the level of oxygen absorbed in the blood. The observed differences in the results can be attributed to our intervention, which involved the implementation of mental imagery specifically focused on the key technical elements within alpine skiing.

Conclusions: By implementing a properly conducted mental training program significant changes in physiological indicators can be observed. Combined with a pulse oximeter it offers a new approach towards achieving optimal mental and physical health, also an enhanced performance.

Key words: *mental training, pulse oximeter, alpine skiing, physical effort.*

FEFSTIM2023_EFS2

Impact of QiGong training on psychological and oxidative stress, a short review

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Abstract

Introduction. Through Qigong (QG) a harmonious flow of vital energy is achieved, Qi and the functional activities of the body are regulated by breathing, conscious concentration and gentle movements.

Aims. The objective of this review is to highlight the impact of QG training on psychological and oxidative stress.

Methods. The main review source used is PubMed.

Results. QG consists of exercises of holistic consciousness that improve the symptoms of chronic physical states and emotional disorders. Regular practice, focusing on the mind and breath leads to a balanced and improved state of mind. Practicing QG exercises has a significant effect on the hypothalamic-pituitary-adrenal axis: plasma concentrations of ACTH, aldosterone and cortisol decrease and anxiety is improved. QG decreases urinary noradrenaline excretion, heart rate and temperature by reducing sympathetic nervous system activity. QG also has an important antioxidant effect, a fact proven by the reduction of oxidative stress markers in those who practice QG.

Conclusions. QG causes stress reduction through the nervous, endocrine and immune systems and also has antioxidant actions, so QG can significantly improve the quality of life and has beneficial effects on stress.

Key words: *QiGong, psychological stress, oxidative stress, stress modulation*

FEFSTIM2023_EFS3

Adult-teenagers Opinion Regarding Adaptogens Role in Sports, Before/After Attending a School Course on this Topic

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Abstract

Introduction. Adaptogens (ADP) are known to be useful in stress modulation, including sports modulation.

Aims. The objective was to evaluate adult-teenagers (A-TNG) opinion before/after a school course (SC) regarding the adaptogens role in sports (ADP-S).

Materials and methods. A number of 103 A-TNG voluntarily attend the one day CS, carried out in the "the week otherwise" of the school program. A-TNG answered a detailed questionnaire before/after the SC, which included items related to: stress; sports and types of sports; the connection between sports and stress; ADP - what they are, types, the role for health; the connection between ADP and stress; the connection between ADP and sports.

Results. For all evaluated A-TNG, it was the first time they attended a CS on the topic of ADG and their role in sports. Most of them have indicative information regarding stress and practice a form of sport, but they did not have any information regarding what ADP represents and their role in stress and sports. The post-course A-TNG answers proved that they accumulated a lot of information presented during the CS, about the role of ADP in sports. Most of the A-TNG participants were enthusiastic about the CS topic and found it useful for their education.

Conclusions. To our knowledge, this is the first course addressed to A-TNG that refers to ADP and their role in sports. The active participation of A-TNG in CS, as well as the accumulated information during the CS, prove the usefulness of the proposed theme in A-TNG education. We suggest that topics from the field of ADP, stress and sports to be more frequently addressed in the future school information of A-TNG.

Keywords: adult-teenagers, adaptogens, stress, sport

FEFSTIM2023_EFS4

Functional connection of sports recreation and tourism the example of the Eco Center Ljekarice

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Abstract

Introduction. Eko-centar Ljekarice is nestled in the serene landscapes between Banja Luka and Prijedor, to the south of Omarska. Its mission encompasses promoting health, environmental reservation, diverse tourism experiences, and community engagement in the heart of natural surroundings. Recreational activities associated with sports tourism stimulate local economies through the provision of services and facilities such as sports equipment rental, guided tours, and ellness services.

Aim. This research delves into the preferences, attitudes, and interests of visitors at the Ljekarice Eco Center concerning sports and recreational facilities. It evaluates their opinions on various aspects of the center's sports and tourism offerings. This research aimed to check whether the general hypotheses presented are valid at the local level, specifically through the example of Eco Center Ljekarice.

Materials and methods. The study, conducted between July 1 and July 3, 2019, included 97 participants, ensuring gender balance (55 female and 42 male) and spanning ages from 18 to 65. A structured questionnaire anonymously gathered demographic information and explored sports and recreational knowledge, habits, motivations, and satisfaction with the center's services.

Results. The data were processed using standard statistical procedures, revealing key trends. Most visitors hail from nearby demographic centers, with the majority aged 18-35 and secondary or university-educated. Despite recognizing the benefits of active rest, many Ljekarice Eco Center visitors do not engage regularly in sports and recreational activities, potentially due to a lack of habits and perceived benefits. Participation motives vary, with 65% seeking to utilize free time productively and 28.9% valuing the development of a competitive spirit.

Conclusions. Personal recommendations significantly influence tourists' choices, with approximately 50.5% believing that sports and recreational facilities are unnecessary at the center. Visitors predominantly select sports and entertainment games, expressing desires for additional activities like tennis and aqua aerobics. Limited facilities and infrastructure hinder participation in desired activities during vacations.

Keywords: tourism, recreation, animation, attitudes

FEFSTIM2023_EFS5

Body Composition Changes of Students from Physical Education and Sport Faculty Timisoara During Christmas Holiday

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Abstract

Introduction. The recent World Health Organization (WHO) agreement on the standardized classification of overweight and obese, based on body mass index (BMI), allows a comparable analysis of prevalence rates worldwide for the first time. (James, 2001).

Aim. The aim of the study consisted of the evaluation of body composition changes after Christmas Holiday.



Materials and methods. The study was conducted on 73 students of Physical Education and Sport Faculty from Timisoara. To identify the change in body composition parameters, 2 measurements were performed from 12th December 2022 until 13th January 2023. The parameters determination of student body composition was performed using InBody 770 body composition analyzer, following a standard protocol. Results. Data analysis revealed significant differences in the parameters: weight, BFM, BMI, PBF, FMRA, FMLA, FMT, were it was able to see an increase in body fat, a loss in muscle mass, and a decline in the fitness score after the Christmas Holiday both boys and girls.

Conclusions In conclusion, it was able to see an increase in body fat, a loss in muscle mass, and a decline in the fitness score over the Christmas holidays. In terms of the analysis of the data by gender, male participants showed a significantly higher quantity of adipose tissue ($p > 0.05$) than female subjects. Further research it is necessary to further study the trend of students in terms of body composition during holidays, by trying to conduct a longitudinal study over the 3 years of college in the 2 longest holidays of the year: Christmas and Summer Holidays.

Key words: *body composition changes, college students, Christmas Holiday*

FEFSTIM2023_EFS6

The Impact of Heat Training in Endurance Running - Case Study

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†The authors contributed equally to the article

Abstract.

Introduction. In endurance sports, environmental factors have a significant impact on body performance. Heat training is increasingly popular among athletes, and their trapped exposure to high temperatures will trigger the physiological process of acclimatization.

Aim. The objective of the study is to identify differences in athlete parameters following heat training versus training at optimal temperature.

Materials and Method. A 27-year-old subject underwent 4 weeks of standardized training, 2 weeks of which in high-temperature conditions (31°-36°C) and another 2 weeks of standardized training in low-temperature conditions (16°-19°C). The following parameters were monitored: heart rate, running power, body temperature, and running speed. The data was collected using Garmin devices and the Core sensor.

Results. The results reveal that exposure to high temperature during training brings significant improvements in somatic-functional and physiological parameters, showing an optimization of heart rate in relation to running speed, running power in relation to heart rate and body temperature during running.

Conclusions. In conclusion, training at elevated temperatures can bring significant improvements in athletic performance, reflecting increases in endurance and muscle power, both at elevated and optimal temperatures.

Keywords: *heat training, Core, temperature*

FEFSTIM2023_EFS7

Comparison of Handgrip Strength Measured with Two Different Dynamometers in Young People

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Abstract

Introduction. Strength can be used as a reliable indicator of the general capacity for mechanical work that the human body can produce. Numerous studies demonstrate links between handgrip strength and human health. Measurement of this parameter is relevant in the detection of pathological conditions in the medical field. The area of physical education and sport uses handgrip strength to determine the level of muscle tone, an important factor in sustained physical effort. Successive measurements of physical capabilities may have different results, one of the causes being the technical characteristics of the equipment used.

Aim. The present research aims to analyse the differences that may exist between two electronic dynamometers of the same manufacturer (Constant) with different measuring mechanisms: traction and pressure.

Materials and methods. The subjects of the study were 19 girls (19.32±1.29 years, 166.9±7.28 cm, 60.95±9.18 kg) and 82 boys (19.60±1.22 years, 177.4±6.13 cm, 76.08±13.31 kg) who took turns squeezing the two models, with both hands, simultaneously, from a standing position. The dynamometers were used by each subject at 5-minute intervals, changing the level of handle adjustment from one measurement to the next. Each subject obtained 7 results.

Results. T Student and one-way Anova tests revealed significant differences between girls and boys and between the two models used. The tensile dynamometer showed significantly lower results for level 5 compared to 3 and 4.

Conclusions. The measurement of handgrip strength with the two dynamometers under study gives different results. The setting levels of the dynamometers have an insignificant effect on the measured strength, except for the values obtained for level 5 of the tension dynamometer. Monitoring of the handgrip strength can be performed with the same dynamometer model.

Key words: *handgrip, dynamometer, Constant, strength, monitoring*

FEFSTIM2023_EFS8



Study on the Level of Anxiety Present in Volleyball Players, Within the National Volleyball Championship Juniors-Men 2022-2023.

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Abstract

Introduction. Anxiety is a topic included in the psychosocial dimension of sport and is sometimes directly and sometimes indirectly related to performance. As high pre-competition anxiety is a major factor preventing athletes from achieving high performances, athletes' anxiety levels should be taken into account when analysing performance and studies should be planned according to these values. Mistakes must be kept to a minimum, as every unsuccessful action during the match, especially at the end of a set, can result in the loss of a set.

Aim. The scientific aim of the present research is showing the results of the Competitive State Anxiety Inventory (CSAI-2) on the Juniors-Men volleyball team from CSŞ Viitorul Cluj-Napoca players.

Materials and methods. In this research we compared the answers to the CSAI-2 (Competitive State Anxiety Inventory) and SCAT (Sport Competitive Anxiety Test) on the CSŞ Viitorul Cluj Napoca male volleyball team's Junior group. This group consisted of 13 male players within age of 15-18 years. The survey was applied twice, firstly it was applied after the first match of the championship to find out the starting scores of anxiety level. Secondly they completed the survey after 5 months of trainings and after they reached the final tour of the championship.

Results. In all cases, SCAT index and CSAI-2 index has increased by 0.8 and 0.11, except the level of self confidence which decreased with 0.7 point at the first filling, and with 0.8 after the third examination. With this results we can say that anxiety level is present in elite volleyball players at a junior level too, and it needs to be well interpreted and resolved by the team coach.

Conclusions: Our study showed that cognitive anxiety and somatic anxiety increased prior to competition, while self-confidence decrease. In addition to the physical and technical characteristics of athletes, it is essential to know and assess their psychological characteristics in order to develop appropriate training and competition strategies.

Keywords: *Volleyball, competitive anxiety, cognitive anxiety, junior level.*

ABSTRACTS ORAL PRESENTATIONS – KINETOTHERAPY SECTION

FEFSTIM2023_KIN 1

No Short-term Effects of Carrying a Shoulder Bag on Dynamic Plantar Pressure in Young Adults

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Abstract

Introduction. An asymmetrical load distribution due to carrying a shoulder bag may affect posture and balance, as well as plantar pressure distribution.

Aim. The aim of the study was to assess the short-term effects of carrying a shoulder bag on dynamic plantar pressure in healthy young adults.

Material and method. Dynamic plantar pressure measurement was performed with the P-walk platform (BTS Bioengineering, Italy). Maximum plantar pressure, peak plantar pressure, as well as forefoot, middle foot and rearfoot pressure distribution were calculated for each leg while walking with and without a shoulder bag (10% of the body weight for each subject).

Results. Ten healthy young adults (mean age 22.7 ± 1.63 years; 5 males; weight 67.27 ± 12.06 kg; height 174.1 ± 9.24 cm) were included in the study. No significant differences were found on plantar pressure parameters when walking carrying a shoulder bag compared to walking without a bag.

Conclusions. Carrying a shoulder-bag with a load of 10% of subject's weight had no significant short-term effects on dynamic plantar pressure in healthy young adults. Further studies are needed to investigate the long-term effects, as well as the effects of different bag loads.

Keywords: *plantar pressure, gait, shoulder bag*

FEFSTIM2023_KIN2

The Effect of Craniosacral thereapy in Pain and Stress Reduction and Quality of Life Improvement in Patients with Cervical Pain-a comparative study

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Abstract

Introduction. CranioSacral Therapy is a method of manual, non-invasive, very gentle therapy, used to evaluate and treat the CranioSacral system, a system that consists of membranes and cerebrospinal fluid that surrounds and protects the brain and spinal cord. The therapist uses a light touch generally of five grams, with which he releases the restrictions in the CranioSacral system to improve the functioning of the central nervous system, causing relaxation at both the somatic and mental levels.

Aim. The purpose for which this study was conducted lies in the desire to establish whether the effects obtained by the therapeutic program consisting of CranioSacral Therapy is more effective in reducing pain and stress level and in increasing the quality of life than that consisting by kinesiotherapy applied to the subjects taken in this study.

Material and method. From a group of 30 patients with neck pain, 15 patients were randomly chosen to receive a CranioSacral therapy intervention (experimental group) and 15 patients a physiotherapy (control group) intervention for a period of 2 weeks. We have used evaluation methods based on which we can determine the effectiveness of our programs for pain the VAS scale and the survey method by applying the stress level and Quality of Life Assessment questionnaire.

Results. Statistical analyzes have shown that there are significant differences between pre- and post-test evaluation between the experimental and control groups.

Conclusions. In our study, CranioSacral therapy had better results than physiotherapy in reducing the pain and stress level and in increasing the quality of life in patients with neck pain. These results need to be considered by therapists to better understand and involve this concept for beneficial effects in treating patients with cervical pain arising from various causes.

Key words: *craniosacral therapy, pain, stress, quality of life, cervical pain*

FEFSTIM2023_KIN3

The Study of the Relationship Between Inflammatory Process Markers and Physical Exercise in Colorectal Cancer

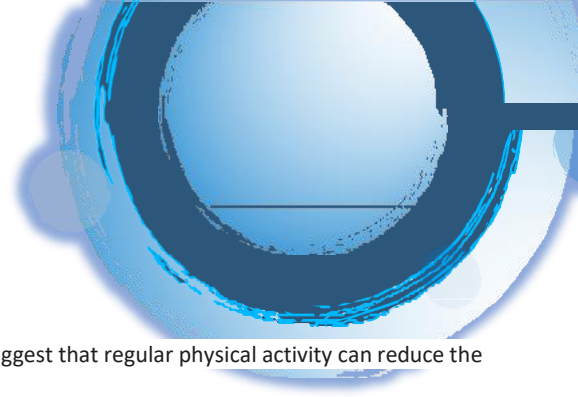
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Abstract

Introduction. IL-6 is an inflammatory cytokine that plays a key role in the immune system and inflammation. Elevated levels of IL-6 have been associated with colorectal cancer, as this cytokine can support the growth and spread of cancer cells through various mechanisms. Additionally, IL-6



may be involved in angiogenesis promoting cellular invasion into nearby healthy tissues. Studies suggest that regular physical activity can reduce the risk of developing colorectal cancer.

Aim. Purpose of the paper is to conduct a review regarding the relationship between IL-6, colorectal cancer, and the implementation of physical exercise programs.

Materials and Methods. In our study, we analyzed approximately 85 specialized studies that refer to the connection between colorectal cancer, physical exercise, and IL-6. For this research, we accessed databases such as PubMed, Google Scholar, and ResearchGate. The study selection was carried out using keywords: colorectal cancer, inflammatory process, IL-6, physical exercise, by consulting international databases and selecting articles to form a group of articles following the PRISMA method.

Results. Following the analysis of the selected studies, we found that the majority of authors discuss the beneficial effects of physical exercise, including the reduction of chronic inflammation in the body, which involves lowering levels of proinflammatory cytokines such as IL-6.

Conclusions. In the context of physical exercise, the anti-inflammatory effects through the reduction of IL-6 levels and the improvement of insulin sensitivity thus decrease the risk factors for the development of colorectal cancer and other associated conditions.

Keywords: *IL-6, proinflammatory cytokine, inflammation, immune system, physical exercise, colorectal cancer.*

FEFSTIM2023_KIN4

Body mass index, body composition and physical activity as predictors of bone density in postmenopausal women

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Abstract

Introduction Osteoporosis (OP) is a condition characterized by a decreased bone mass and deterioration of bone tissue microarchitecture, leading to bone fragility and increased fracture risk. The study's aim was to assess body mass index (BMI), body composition and physical activity in the prediction of bone mineral density (BMD) in postmenopausal women

Material and methods 30 postmenopausal osteoporotic women aged between 46-82 years were included in this study. Participants' demographic data were collected: age, height, weight, body mass index (BMI) and comorbidities. Body composition (total body fat percentage, skeletal muscle mass, visceral fat, basal metabolic rate) using a bioelectrical impedance analyzer) and calcaneal heel ultrasound parameters using an Sonost-3000 (Osteosys) bone densitometer were assessed.

Results Visceral fat and physical activity level have a negative association (correlation coefficient: (-0,31 and - 0.30) with T-score.

Conclusions Body composition analysis can predict early bone loss in postmenopausal women, allowing early intervention on decreased BMD and thereby the risk of osteoporotic fractures.

Keywords: *visceral fat, skeletal muscle mass, physical activity, osteoporosis*

FEFSTIM2023_KINS

Functional Recovery After Distal Femur Epiphyses Fracture

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Abstract

Introduction. Distal femur epiphysis fractures represent a common traumatic condition, with an increasing incidence among the young and active population. In recent decades, advancements in medical technology and treatment methods brought significant changes in the approach of knee fractures, with focus on minimizing the impact on functionality and improving the quality of life for patients.

Aim. The study aims to identify the most effective physiotherapy tools and methods required for functional recovery following a distal femur epiphysis fracture.

Materials and method. The present research represents a case study conducted on a patient with osteochondral fracture of the external femoral condyle of the left knee, accompanied by an intra-articular loose body and patellar dislocation. The study was carried out over a period of 4 months, during which various physiotherapy methods were employed, including joint manipulations, neuroproprioceptive facilitation techniques, mechanotherapy, and exercises aimed at restoring joint mobility, muscle strength, joint stability, and gait re-education.

Results. Following the implementation of physiotherapy programs, a flexion mobility of 135 degrees was achieved, and the extension deficit was reduced to 0 degrees. Gait parameters, including step length, cadence, and walking speed, were improved. Furthermore, in terms of muscle strength, values comparable to the unaffected lower limb were attained.

Conclusions. Early physiotherapy intervention, tailored to the morphophysiological characteristics and surgical techniques employed, can restore knee functionality following distal femur epiphyses fracture.

Keywords: *rehabilitation, trauma, functionality.*



FEFSTIM2023_KIN6

Physiotherapy in the Recovery after Fractures of the Upper Limb

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Abstract

Introduction. Injuries to the phalanges of the upper limb are a common issue encountered in traumatology, often having a significant impact on the disruption of hand and finger functionality. They can be found across various age groups and are caused by domestic, occupational, and sports-related accidents. Even though the dimensions of the involved bones are small, appropriate surgical intervention and the implementation of an early physiotherapy program are essential to ensure complete recovery and prevent potential long-term complications, such as hand and finger dysfunction.

Aim. The purpose of this study is to identify and select the tools and techniques necessary for regaining hand functionality by preventing the onset of musculotendinous sequelae following immobilization.

Material and Methods. The present research represents a case study conducted on a 10-year-old patient who suffered a polytrauma, including a closed comminuted fracture of the second and third phalanges of the third finger and the third phalanx of the fourth finger on the right hand due to crushing injury. Among the physiotherapeutic methods used, neuroproprioceptive facilitation techniques for recovering musculotendinous retractions, joint manipulations, and the utilization of a mobilizing orthosis for the fourth finger were particularly prominent.

Results. Following the applied physiotherapy programs, an improvement in the strength of the affected hand and fingers was observed, along with complete recovery of the mobility deficit at the interphalangeal joints.

Conclusions. The present study highlights the importance of physiotherapy treatment in cases of fractures of the phalanges of the upper limb, which represent a significant clinical and functional issue, with a notable impact on hand and finger functionality.

Keywords: bone injuries, functional rehabilitation, tendon.

FEFSTIM2023_KIN7

From Traditional Casts to Innovation: Comparing Plaster Cast Methodologies in 3 Leading Romanian Hospitals and a Novel Approach

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Abstract

Introduction. Three-dimensional (3D) scanning and printing have emerged as transformative tools, offering new opportunities for customization and precision in various medical applications, particularly in the field of orthotics and prosthetics. The advent of non-invasive 3D scanning techniques offers a promising alternative, allowing clinicians and researchers to capture complex details of hand geometry, and thus, an increase in the use of 3D body scanners in anthropometric studies has emerged. However, it has been found that data on the dimensions of the human body obtained by scanning are not always comparable to those obtained by traditional methods.

Aim. The aim of the study is to build a step-by-step scanning methodology, a simplified training based on this methodology and to evaluate the scanning results obtained by participants at the present study.

Materials and methods. This study included 50 students from the Physical Education and Sports Faculty of Timisoara, who attended both the simplified training, and the evaluation of the 3D models. 50 scanned models were analysed through ImageJ program that provides tools for measuring and quantifying various features within images, such as length, area, intensity, density etc.

Results. By analysing the 3D models obtained by the 50 participants, we reached numerical evidence that proves good quality measurements in the scanning process.

Conclusions Through this study we reached the conclusion that with the proposed step-by-step methodology and the simplified training, non-specialists in the field of technology can provide good quality 3D scanned models of the hand.

Keywords: 3D modelling, 3D scans, hand, orthoses

ABSTRACTS POSTERS - SPORTS AND PHYSICAL EDUCATION SECTION Poster Session 1

FEFSTIM2023_EFS
P1

The Role of Monitoring the Efforts Parameters in Sports Training

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Abstract

Introduction. The training has, now, a great development based on health status, motric potential and also psychological profile.

Aim. The aim of our literature analysis is to develop a research about the main important training parameters in athletic training in term of duration, intensity, speed.

Material and methods. We make the analysis of 95 papers, for research database based on keywords: training intensity, duration, training, physical parameters. For included the studies we used Downs and Black checklist.

Results. We find that training intensity is one of the most important parameters that is based on heart rate, blood pressure, biochemistry changes. In specific athletic race walk heart rate (HR) allows to estimate the heart activity and report to sport performance.

We find that intensity has a linear evolution because the average of HR is $185 \pm 14,9$ b/min, average report HRmedium/HRmax is 0,96, but for 91,8% from whole distance, HR is $\geq 90\%$ din FCmax. This means that for 1000m is the higher speed, slowly for the next 3000m, and again increase for the last 1000m.

Conclusions. The conclusion of our review is that monitoring the HR during hole distance help the athlet to develop the optimal training.

Keywords: *intensity, heart rate, race walk*

FEFSTIM2023_EFSP2

Study on the Opinions of Specialists Regarding the Impact of Children with Special Educational Requirements (CES) in Physical Education Lessons

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Abstract

Introduction. The recent legislative changes regarding the access of students with CES to the school system have caused some reactions of concern on the part of the teaching staff, especially on the part of physical education and sports teachers.

Materials and methods. The research represents a statistical analysis of the opinions of 71 respondents from the city of Iași who teach physical education at the primary level. The research was conducted in the 2022-2023 school year, and the respondents were co-opted through the Google Forms program.

Aim. The study aims to identify the number of students with integrated CES (those who have supporting documents as well as those who do not have medical certificates but create similar difficulties during physical education classes); inventory the categories of behaviors recorded during the lessons; identify the most appropriate means of action in working with these students to improve the behavior of children with CES (mild forms, which do not require a companion in class); and implicitly, their social integration.

Results. Following the analysis of these recorded responses, a number of 89 students with supporting documents were identified, 73 students with the same type of behavior found in students with special educational needs. Also, the main manifestations observed were: aggressive verbal behavior, aggressive physical behavior, agitation, late reaction to teachers' demands, attention deficit, concentration disorders and self-doubt.

Conclusions. The investigation revealed that there are two categories of pupils with CES, those with documents and those without documents but who have the same behaviour. The presence of these pupils in physical education lessons leads to changes and adaptations in the way they are taught in order to ensure the safety of the group.

Keywords: *pupils, CES, survey, problematic*

FEFSTIM2023_EFSP3

Assessing Athletic Performance of Youth Female Basketball Teams in Cluj County and the Pursuit of the 'Average' Player: A Comparative Analysis

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Abstract

Introduction. This research explores the physical performance of youth female basketball teams in Cluj County, Romania, aiming to identify the "average" player and discern potential differences between teams.

Aim. We hypothesized that while physical attributes like height, arm span, and weight would exhibit minimal variation, significant differences would emerge in cardiovascular endurance, agility, and sprint speed among the teams.

Subjects. The study comprised 52 female participants aged 13 to 15, representing four distinct basketball teams in Cluj County: Universitatea Cluj, Smart Cluj-Napoca 1, Smart Cluj-Napoca 2, and LAPI Dej.

Methods. Data on height, arm span, weight, Beep Test, Shuttle Run, Speed Over 20 Meters, and T-Test scores were collected and analyzed. Statistical tools, including ANOVA and Bonferroni post hoc tests, were employed to compare and interpret the results.

Results. While physical attributes showed minimal variation, significant differences were observed in cardiovascular endurance, agility, and sprint speed among the teams. These findings underscore the importance of tailored training and development strategies.

Conclusion. This research highlights the significance of customizing training regimens and player development plans to leverage team strengths and address specific areas for improvement. It contributes to the ongoing dialogue on optimizing youth female basketball performance in Cluj County.

Keywords: Youth Female Basketball, Physical Performance, Team Differences, Cardiovascular Endurance, Agility

FEFSTIM2023_EFSP4

Study on the Development of Motor Skills, Through Logic Games

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Abstract

Introduction. Researchers are trying to find new ways to improve the motor qualities of athletes and not only. One of these methods that is discussed and results are sought among performance sports but also in leisure sport is the use of logic games before training and competitions.

Methodology. The research was based on applying crosswords and Sudoku games about 45 minutes before the start of workouts. Subjects A number of 30 performance athletes from the rugby team and a number of 20 students who do not practice performance sports participated in this research. **Results.** From the results obtained we noticed that a number of 20 athletes and 13 students achieved improvements in skill.

Conclusions. We can say that logic games improve skill and create a state of calm among performance athletes and provide better concentration to people who practice leisure sports. **Keywords:** games of logic, motor qualities, skill, development.

Keywords: games of logic, motor qualities, skill, development.

FEFSTIM2023_EFSP5

The Importance Of Goalkeeper's Placement On The Decision-Making To Pass Or Throw The Ball At Goal In Shoot Outs In Beach Handball

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Abstract

Introduction. The goalkeeper, in sports games, must have a good physical condition, and their participation in the offensive part must be an active one.

Aim. We wanted to investigate to what extent the placement of the goalkeeper can influence their decisions when they have to throw or pass the ball in the shoot out phase.

Methods and means. The study was carried out by viewing the beach handball games from the 2022 and 2023 "Beach Handbal Zalau" Cup competitions and recording on observation sheets. The statistical analysis program SPSS Statistics 17 was used to interpret the obtained data. Calculations were performed for independent sample t-test, mean, standard deviation.

Results. An independent-samples t-test was conducted to compare all passes and throws on goal values from Z3 for CJ. There was a significant difference in the scores for CJ (M=2.50, SD=0.58) and BM (M=0.0, SD=0.0) conditions; $t= 8.66, p= 0.00$; CJ (M=2.50, SD=0.58) and AR (M=2.50, SD=0.58) conditions; $t= 8.66, p= 0.00$.

Conclusions. In conclusion, we can say that changing the technical-tactical approach to shoot out throws by placing the goalkeepers in zone 3 of their own area, brings a significant increase in their decision-making when they have to pass the ball to their own players or throw directly at the opponent's goal.

Keywords: beach handball, decision-making, shoot out, goalkeeper

FEFSTIM2023_EFSP6

The Relationship Between Body Composition Parameters In Female Teenagers With And Without Intellectual Disability

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Abstract

Introduction In general, adolescents with intellectual disabilities have a different body composition than adolescents without intellectual disabilities. The results of some studies have shown that adolescents with intellectual disability had a higher percentage of body fat and less muscle mass than adolescents without intellectual disability, suggesting that they may be more at risk of obesity.

Aim This study aims to assess several morphofunctional parameters in female teenagers with and without intellectual disability.

Materials and methods To evaluate the morphofunctional parameters, we used a professional Tanita MC 580 device relying on bioelectrical impedance analysis technology (BIA), most commonly used in studies concerning body composition because it is non-invasive, quick, with high data fidelity; it can be easily moved to various locations and applied straightforwardly among populations with diverse types of intellectual disability.

Results The data obtained upon using statistical and mathematical indicators can be analysed in relation to the literature. This study included 88 subjects (females) divided into three groups. Our findings show significant positive or negative correlations between body mass and muscle mass (kg) $r=0.914$ ($p<0.001$) and between body mass and body fat (kg) for $r=0.857$ ($p<0.001$), as well as between other parameters of body composition by the type of intellectual disability.

Conclusions Our study focused on examining the relationship between body mass and muscle mass in adolescent girls with and without intellectual disabilities, and the results provide valuable information on factors that may influence body composition in this population.

Keywords: *body composition, intellectual disability*

FEFSTIM2023_EFSP7

Identification of the Use of Isoinertial Training in the Training of Athletes from Romania

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Abstract

Introduction. After in-depth research we noticed that isoinertial training is still a relatively new phenomenon in our country in terms of its use in the training of athletes.

Aim. This confirmatory study aimed to obtain information from coaches regarding their knowledge of isoinertial training, if they introduce it in the training of the athletes they train and which devices are used by them.

Materials and methods. In the elaboration of this study we used the questionnaire method, made with Google Forms, thus facilitating the distribution of the form but also the interpretation of the answers obtained. The questionnaire consisted of 15 questions that were answered under conditions of anonymity. The questions were aimed at obtaining some socio-demographic data, about the respondents' professional experience, but also how familiar they are with this type of training and if they use it.

Results. 54 respondents participated in the study, all of them being coaches in different athletic events. 66.7% (36) of them stated that they have heard of isoinertial training, only 16% of them (9) use specific devices for this type of training.

Conclusions. Their answers materialized the idea that isoinertial training can be successfully introduced in the training of athletes, but needing greater popularization and finding solutions for the purchase of such devices used in the training of athletes.

Keywords: *isoinertial training, athletes, evidence-based research, performance*

FEFSTIM2023_EFSP8

Cohesion in Professional Sports Teams. A Sociological Analysis

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Abstract

Introduction. The team in non-individual professional sport represents a self-same social microsystem for achieving specific performances. Beyond the individual physical training and tactical skills of the coach, a sports team that does not function as a fully formed group cannot exploit the resources involved to the full.

Aim. This paper is a sociological analysis of social distance in sports teams, correlated with sense of belonging and individual performance.

Materials and methods. An online questionnaire was administered to an availability sample of 130 professional athletes from basketball, volleyball, handball and rugby teams. In this questionnaire, we also included an adapted form of the social distance scale (Bogardus).

Results. In general there is a high degree of acceptance for people of other ethnicity, religion, from another part of the country or from another country, but significantly lower for other sexual orientations. Although all these factors do not directly condition individual performance within the team, the activation of stereotypes (prejudices) can lead to a degradation of the working climate and therefore the commitment and involvement of each individual player.

Conclusions. Although sports performance is primarily conditioned by the physical and tactical preparation of each team member, the climate of the small group is also a factor that can contribute more or less to its achievement. Involving coaches in strengthening group cohesion and facilitating communication between players (not just during matches) can increase cohesion, which is an important resource for professional sports teams.

Keywords: *team cohesion, social distance, the performance of sport team*



FEFSTIM2023_KINP9

Review Regarding Kinetic Methods Used in the Recovery of Idiopathic Scoliosis

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Abstract

Introduction. Idiopathic scoliosis is defined as a three-dimensional deformation of the spine, of unknown cause, which is subclassified according to age. The diagnosis is made when an angle greater than 10° is observed on the radiograph, associated with rotation of the vertebral body. To assess scoliosis, specialists use tests, X-rays, measurements or questionnaires. Treatment includes a wide range of therapies, with effects that are continually being studied.

Aim. To analyse the results presented in different articles, which take into account methods and techniques used in the recovery of patients diagnosed with idiopathic scoliosis.

Material and method. A number of 1769 articles published between 2015 and 2023 were found in 3 databases: Google Scholar, PubMed and SpringerLink.

Results. Twenty studies that met the inclusion criteria were selected for analysis and discussion. These articles discuss Schroth exercises (n=16), Pilates exercises (n=4), core stabilization exercises (n=2), specific recovery exercises for scoliosis (n=2), Kinesio Tape (n=1), Proprioceptive Neuromuscular Facilitation Techniques (n=1) or others (n=7), as well as other kinetic methods in the treatment of idiopathic scoliosis.

Conclusions. Following the study, it can be stated that Schroth therapy is effective in the case of scoliosis both when it is performed independently, but also when it is combined with wearing a brace or breathing exercises. However, we consider this conclusion to be influenced by the research method. We believe that analysis on a much larger number of articles is still needed.

Keywords: Idiopathic scoliosis, Therapy, Exercise, Schroth, Effects, Quality of life

FEFSTIM2023_EFSP10

Effective Strategies and Behaviours in Professional Football Coaching

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Abstract

Introduction. Professional coaches' perception of effective coaching may be different from evaluating the coaches' own competencies or effectiveness. "What" does a coach do to be considered effective? "Why" are these factors considered effective? "How" are these factors considered effective? These questions were the starting point for understanding what professional coaches do, how they behave and perceive the effectiveness of certain strategies.

Aim. The aim of this research is to create a questionnaire that allows to investigate the behaviours that coaches have with the environment in which they operate in order to identify the perceptions and strategies of effective coaching training in the context of professional sport.

Materials and methods. We used an observation grid in real contexts by exploiting twenty years of experience in direct contact and interacting with the category under investigation, discussing their interpretations from their point of view. Using a qualitative "direct observation" approach, 16 coaches were observed in the places of interaction normally experienced by the staff of a football team.

Results. The results indicate that an effective coach possesses specific personal attributes as well as an overall philosophy or direction for the team. Extrapolating the behaviours and interactions they have with the environment in which they operate has allowed us to formulate a questionnaire to investigate them.

Conclusions. The effective coach uses their unique leadership, player management, communication and planning skills to create and maintain the right team environment to ensure that everyone involved in the team is "working in the same direction". Furthermore, the effective coach uses these skills to ensure a personal balance that allows him to amplify relationships with others. The interaction of all these features leads to the main goal of player development, improvement of player performance and winning matches.

Keywords: coach, effective coaching, professional football.

FEFSTIM2023_EFSP11

Assessment of Agility Among Rugby Players

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Abstract

Introduction. Agility and changes of direction are considered decisive elements in the game of rugby, due to the fact that the rapid change of the direction of travel can lead to a positive finality, which will influence the outcome of the match.

Aim. The aim of this paper is to assess agility among rugby players according to the position in which they are specialized and to make a correlation between the results obtained in the agility test 505 and the test of change of direction at one stimulus.

Materials and methods. The subjects of this research are 26 National League rugby players (16 forwards and 10 defenders), with an average age of 26.4 years, height of 181.53 ± 4.46 cm, weight of 101.01 ± 13.32 kg, muscle mass of 70.93 ± 9.26 kg and fat mass 23.95 ± 8.49 kg. Agility was assessed by the 505 agility test (505) and the change of direction test at one (COD-1S) and two stimulus (COD-2S), measured with the Witty Sem-Microgate automatic timing system.

Results. The results obtained after the statistical analysis highlighted the fact that between forwards and defenders there are statistically significant differences in terms of agility ($p < 0.05$). Also, the Pearson correlation pointed out a good association ($r = 0.458$) between the results obtained in the 505 and COD-1S.

Conclusions. The level of agility development is different among rugby players, depending on the position in which they play, defenders obtaining better results than forwards. The good association between 505 and COD-1S can lead us to the conclusion that, in the game of rugby, to evaluate agility and also the speed of reacting to a certain stimulus, the COD-1S can be used, being a specific test that can reproduce a real situation during the game.

Keywords: rugby, change of direction, agility.

FEFSTIM2023_EFSP12

School Bullying: Bullying Behavior and Method of Response Among High School

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Abstract

Introduction. Bullying is not a new phenomenon, being quite common in school communities all over the world. However, the current period in which students return to school after a spell of social isolation seems to have accentuated this kind of manifestations. We aim to investigate the presence of bullying behavior, the forms of manifestation and the weights of these manifestations in middle school students, the places where bullying behavior occurs and how to solve these problems. Within the reality of a social environment loaded with aggressive or violent manifestations, institutions and organizations had to look for solutions to reduce these manifestations. Numerous states have allocated important resources to conducting research that would bring a deeper understanding of social phenomena.

Aim. The aim of the study is to analyze the need to implement a prevention and intervention program in schools concerning bullying behavior.

Material and Method. The research was carried out by means of a survey using a questionnaire. The questionnaire was applied in classrooms under the direct guidance and supervision of the principals and the school counselor.

Results. The answers to the questions are entered into a database and processed graphically. The resulting data show that school children face difficulties in differentiating between aggressive and bullying behaviors. However, bullying behavior is reported by an alarming number of young people.

Conclusions. Based on the results, it can be stated that the phenomenon of bullying is present in school in different forms and that these manifestations tend to find new spaces or forms of manifestation.

Key words: school bullying; incidence; bullying manifestations;

FEFSTIM2023_EFSP13

Study on Correcting the Technical and Tactical Mistakes of a Defensive Central Midfielder from a Romanian Football Team

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Abstract

Introduction. In modern football, defensive central midfielders are no longer just there to recover balls and stop opposition's attacks. Most teams now use a player in front of the defence who can contribute in the build-up phase and even appear to finish when needed in the offensive phase.

Aim. The aim of this study is to observe whether the training sessions we propose to correct the technical and tactical mistakes made by the central defensive midfielder of Politehnica Timisoara are effective.

Materials and methods. A 21-year-old defensive central midfielder who plays for Politehnica Timisoara, a third league team, participated in the study. For the game analysis we used the Nac Sport Basic video analysis system and the matches were filmed with a Veo camera.

Results. After the intervention, we filmed a match in which Poli's (Politehnica Timisoara football team) defensive central midfielder played and we could see that his technical and tactical mistakes (receiving the ball with his back to the opponent's goal, making wrong first touches, failing to block passing lanes, completing too few recoveries, passing directly to the opponent or passing backwards) were corrected and his stats in this match were much better.

Conclusions. The central defensive midfielder will always be an important player in both the offensive and defensive phases. In the construction phase he has the role of receiving the ball from the defenders and taking it to the attackers, and in the defensive phase he has to stop the attacks of the opposing team. The game systems in which a defensive central midfielder can play are both with 3 defenders and with 4.

Key words: football, defensive midfielder, video-analysis



FEFSTIM2023_EFSP14

Biomechanical Analysis of Technical Exercises for Right Kicking for U12 Children Using ANSYS Software

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Abstract

Introduction. In the organization and conduct of an experimental approach to elucidate the issue related to the value and technical particularities of the right hand shot in children aged between 10-12 years in the game of tennis, a very important part is owned by the evaluation of the tools and methods of investigation, as well as experimenting with their use in the process of acquisition, processing and interpretation of data from the investigated sample (Segărceanu A., 2006).

Aim. In the preliminary study, we propose an analysis of the biomechanical chain involved in making the right shot in the game of tennis, in order to objectify the hitting technique.

Materials and methods. The main methods used to fulfill the tasks proposed for the research are the following: Studying specialized literature; Remark; Test method; The experimental method; The statistical-mathematical method of data processing and interpretation; Graphical and tabular method.

Results. The kinematic data, which characterize the execution of the right shot in the game of tennis, contribute to the establishment of the biomechanical parameters involved in the technical execution.

Conclusions. We believe that all the tools we used provided us with objective data regarding the biomechanical analysis of the technical exercises for the forehand stroke of the U12 tennis players, by using ANSYS software, in order to customize the biomechanical chain of the hitting technique in tennis.

Keywords: *Evidence on court, Off court trials, free jump, Hexagon Test*

FEFSTIM2023_EFSP15

Study on the Use of Anaerobic Exercises in Increase of Utility Swimming Test-Specific Performance

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Abstract

Introduction. The study of the involvement of anaerobic effort in the utility swimming event started from the ascertainment analysis of the performance results in the naval pentathlon, aeronautical pentathlon and military pentathlon events held during the World Military Games, Wuhan, China, October 2019, the last of which were held under aegis CISM.

Aim. In large-scale competitions, physical preparation for the naval pentathlon events, in our case for the utility swimming event, can make the difference in achieving important and significant results.

Materials and methods. In the present study we used different methods, which had the role of highlighting, on the one hand, the evolution of performances in the naval pentathlon and, on the other hand, the relationship between some components of the performance capacity and competitive results. In this sense, in addition to the known methods for investigating somatic, physiological, and motor parameters, we used new and adapted methods, which targeted the specific physical training, as well as the specific psychological profile of the naval pentathlon athlete.

Results. The exercises and the training plan chosen for the development of the anaerobic capacity of the athletes participating in the utility swimming test within the naval pentathlon proved to be useful.

Conclusions. Anaerobic effort is particularly important in the naval pentathlon - for the utility swimming event.

Keywords: *anaerobic effort, physical preparation, naval pentathlon, utility swimming*

FEFSTIM2023_EFSP16

Statistical Study on the Somato-functional and Motric Profile with Implication in the Individualization of Tennis Training at U14

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Abstract

Introduction. Studying the evolution trends of the game, the specialists of the Romanian Tennis Federation appreciate that, in the future, the value bar of worldwide performances will rise to new heights, to great technical-tactical virtuosity, obviously in the context of perfect physical training. Taking into account the trends of tennis worldwide, it is necessary to update and improve the Romanian concept of competition and training not only at the level of the high performance echelon, but especially at the level of training for children and juniors.

Aim. This paper deals with a current issue, according to which the concept of training for children's competition, valid in performance tennis for this age category, is justified considering the level of consolidation of technical-tactical procedures.

Materials and methods. The main methods used to fulfill the tasks proposed for the research are the following: Studying specialized literature; Remark; Test method; The experimental method; The statistical-mathematical method of data processing and interpretation; Graphical and tabular method.

Results. The data recorded for each parameter of the specific physical training contribute to the efficiency of the technical-tactical procedures in the execution of attack shots in the game of tennis in the age category 12-14 years.

Conclusions: We believe that all the tools we used provided us with objective data regarding the individual level of motor behavior of U14 tennis players.

Keywords: *Specific physical training, Competition, Technical-tactical procedures, Attack shots.*

FEFSTIM2023_EFSP17

Study on the Factors that Condition the Achievement of Performance in Rumba Dance Sport at National and International Level

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Abstract

Introduction. Dance sport is a constantly changing and evolving sport, which means that the evaluation system is also constantly adapting to the requirements. With the development of dance styles, their form and variety have changed. The most important criterion, which has remained unchanged to date, is that the ranking is carried out on the basis of direct comparison of pairs (direct and comparative analysis of sporting and artistic performance).

Aim. At this stage of the preliminary study, we aimed to identify coaches' opinions on the applicability of specific artistic training methods for developing lower limb strength in youth dancers.

Materials and methods. The main methods used to fulfill the tasks proposed for the research are the following: Studying specialized literature; Remark; The questionnaire survey; The statistical-mathematical method of data processing and interpretation; Graphical and tabular method.

Results. Applying a questionnaire to coaches in the field of dance sport is an effective way to capitalize on the existing body of knowledge in our country on the use of specific means of artistic training for the development of lower limb strength.

Conclusions. Through the questionnaire applied to coaches and instructors in the field of dance sport we obtained valuable information about the methods and techniques used in training for the development of lower limb strength. This information can serve as a basis for improving training programs and developing new and innovative methods.

Keywords: *Rumba, dance sport, lower limb strength, artistic training, achievement of performance*

FEFSTIM2023_EFSP18

Study on the Use of CrossFit in the Physical Training of Judo Athletes

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Abstract

Introduction. The physical preparation of the athletes is the basis of the development of the motor capacity, without which they cannot carry out their activity in good conditions.

Aim. The paper aims to review the specialized literature to identify the CrossFit tools used in the training of judo athletes.

Materials and methods. A search was carried out with the term "CrossFit" in the Web of Science database applying the following filters: period 2020 - September 2023; the Web of Science Sport Sciences or Hospitality and Leisure Sport Tourism categories; articles or review papers, fitting into sustainable development objectives and the English language. The obtained results were analyzed, systematized and interpreted bibliometrically with the help of the Vosviewer program.

Results. From the total of 565 results obtained, after applying the filters specified above, 205 articles or review papers were retained for analysis. Of these, only 5 present results regarding the use of CrossFit elements in the physical training of judoka, hence the need for research in this direction. Identified: the most influential authors who presented the use of CrossFit (number of articles and citations), the countries and organizations from which they come, the results obtained by them.

Conclusions. The use of CrossFit elements in the training activities of athletes of various types of combat, allows to achieve a significant increase in the level of special fitness. The design of the training programs will bring a plus in capitalizing on the most effective exercises and their use in the development of the motor capacity of the athletes. The use of CrossFit elements in judo aims to improve general physical qualities: strength, power, endurance, flexibility, speed, precision, balance, coordination, agility and cardiovascular endurance.

Keywords: *CrossFit, physical preparation, judo*



FEFSTIM2023_EFSP19

Analysis of the Theoretical and Methodological Bases of the Research Regarding the Modeling of Physical Condition through Dynamic Games at the Level of Primary School Students

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Abstract

Introduction. Physical education and school sports are carried out through the lesson, each of them adopting specific organizational methods and contents. For these reasons, the lesson is considered the basic form of physical education and school sports. (J.L. Bank, at all, 2008). In the activity of physical education and sports, performance can be seen on the one hand as a result, record success, etc., and on the other hand, aspects such as cognitive performance, motor performance, sports performance, etc. can be encountered (Ene-Voiculescu, 2023)

Aim. Regarding the contribution of physical education to the development of skills, two directions can be distinguished: one refers to the consolidation of general skills, such as: speed of thought, the power of concentration, the spirit of observation, etc., and the other consists in the training of said of some psychomotor attributes, such as: physical strength, speed of movements, static balance, dynamic balance, coordination of movements, mobility, skill, all of which are closely related to the attributes and components of human personality.

Materials and methods. In the context in which, in order to achieve the objectives established in the activity of physical education and sports regarding the modeling of the physical condition of primary school students, new game programs, current training methods regarding the development of motor skills must be developed, all of which have an important role in the development of creativity children and paying special attention to games.

Conclusions. In conclusion, the sports competitions within physical education classes contribute to the formation of the spirit of equity, respect towards the partner, the feeling of friendship, the spirit of cooperation and last but not least the development of the spirit of fair play.

Keywords: motor skills, physical condition, movement games, primary education students.

FEFSTIM2023_EFSP20

Interdisciplinary Approaches in the Physical Education Lesson to Optimize the Physical Condition of Students POPESCU Veronica¹, RADU Liliana-Elisabeta¹, MORARU Cristina – Elena¹, POPOVICI Ileana

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Abstract

Introduction. The field of physical education and sports is complex and has as its main objective the maintenance of health as well as the training of students' skills to support their own health in relation to age. School physical education has a specific implementation methodology and interacts with other disciplines with which it is interconnected.

Aim. The purpose of the study is to identify the methods of interdisciplinary approach and the implementation of specific means in the physical education lesson.

Materials and methods. The study was carried out at the level of the school population and involves the application of a program that contains specific methods and means aimed at an interdisciplinary approach.

The interactive method is used as a support method and has the role of involving students in their own training, calling on previous knowledge but also having the opportunity to make associations with related disciplines.

Results. Following the analysis, it was found that the students from the groups in which the training process was based on awareness and connections with other disciplines, obtained superior results compared to the students who did not follow the same experimental route. Reflecting on the skills acquired in physical education lessons in real life resulted in a deeper involvement in their own training process. The results obtained in the motor measurements and tests as well as the level of knowledge internalization in the medium and long term confirmed the importance of the interdisciplinary approach.

Conclusions. We conclude that the training process must be active, flexible, and adapted to the conditions, age level, and perception of the students. Maintaining health is an aspect that constantly concerns specialists in the field and that requires new approaches to improve the quality of life.

Keywords: Interdisciplinarity, physical education, physical condition, quality of life.

Poster Session 2

FEFSTIM2023_EFSP21

Rationalisation of Means in Order to Educate Dynamic Balance in the Instructional Process in 6-7 Year Old Pupils

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Abstract

Introduction. In the instructional process of primary school pupils, the psychophysical characteristics of each age group must be taken into account so that they can benefit from a maximum level of age-specific motor learning ability. The development of postural control in children, in terms of lower limb balance, requires a transitional phase around the age of 6-7 years.

Aim. The aim of this study is to analyze the improvement of dynamic balance by applying a specific intervention program on students aged 6-7 years.

Material and method. The study group was composed of 25 pupils composing the experimental sample (EG), 13 boys (52%) and 12 girls (48%), pupils in the first grade (6-7 years old) and in parallel in the experiment tests were applied on a control sample (CG) which was composed of 25 pupils, 13 boys (52%) and 12 girls (48%). Both the age of the children and the results of anthropometric measurements were recorded: body weight, height, body mass index - (BMI). For the measurement of balance, the "Y-Balance Test" (YBT) was used, which is a valid and reliable instrument to measure dynamic balance and neuromuscular ability to maintain balance and body coordination. It measures anterior/posterior (AP), posteromedial (PM) and postero-lateral (PL) direction.

Results. It was identified that there is a correlation between age, gender and anthropometric data (body mass, height and lower limb length) in terms of dynamic balance in children aged 6-7 years, which will optimise and improve the reliability of postural control. The results of the forward balance test showed a significant difference on the right leg in the experimental group ($P=0.002$) and on the left leg ($P<0.0001$).

Conclusions. There is a significant relationship between fundamental movement skills (FMS), balance, bilateral coordination activities and activities based on spatial awareness of students aged 6-7 years.

Keywords: dynamic balance, children, static balance, balance test, psychomotor skills.

FEFSTIM2023_EFSP22

Comparative Analysis Of Body Mass Index Among Urban And Rural School Children In Moldova: An Anthropometric Study

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Abstract

Introduction. Obesity and overweight have become significant health problems in Romania. The aim of this study was both to examine the growth trends of female and male secondary school children and to compare the differences that develop among them according to their background and gender using the body mass index and comparing the BMI of the sample with WHO (World Health Organization) norms.

Material and methods. The study focused on aspects related to anthropometric measurements: height (cm) and weight (kg) and included 154 students aged 12 - 14 years, who were divided into 4 groups according to their background and gender as follows: 0.50% (77 students) from urban areas (0.57% female and 0.42% male) and 0.50% (77 students) from rural areas (0.33% female and 0.66% male). Prevalence of overweight and obesity were assessed according to WHO 2023 standards (Overweight: $>+1SD$; Obesity: $>+2SD$; Thinness: $<-2SD$) Results were analyzed using the Independent - Sample T Test.

Results. The mean for BMI values of urban girls ($M = 2.04$, $SD = 3.25$) is significantly higher ($t = 1.23$, $DF = 68$, two-tailed $p = 0.221$) than rural girls ($M = 1.25$, $SD = 0.23$). And for BMI values of urban boys, the mean ($M=1.40$, $SD = 0.23$) is significantly higher ($t=1.53$, $DF = 82$, two-tailed $p = 0.129$) than rural boys ($M=1.32$, $SD = 0.23$).

Conclusions. It was found that there was a significant correspondence between BMI and background and gender of the subjects. The BMI of the sample included in the research is close to WHO standards. Thus, it was found that urban boys and girls show higher values of BMI, therefore, tend to be overweight, while rural girls and boys show lower values and closer to WHO standards. Thus BMI has proven to be a good predictor of the well-being and nutritional status of secondary school students.

Keywords: Body Weight, Obesity, Urban Environment, Rural Environment, Secondary School

FEFSTIM2023_EFSP23

The Importance of Practicing Regular Physical Activity, Between Theory and Practice

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Introduction. In the world report concerning the physical activity (2022) it is shown that 81% of adolescents and 27,5% of adults have a physical activity level inferior to that recommended by OMS (WHO), which has negative consequences both for them and for their families, for the health services and for the society altogether. Although from a theoretical point of view people, regardless of their age, know the benefits of practising physical activity and are aware of the importance of doing it, very few of them are involved in physical activities and even less are those who practice them regularly.

Aim. Our article proposes as aim to highlight the level of the students' physical activity in the UC of UBB Reșița related to the awareness level of its achievement importance and the benefits of individual involvement in this type of activity.

Material and methods. The information was analysed based on the answers received to the questions in the International Questionnaire of physical activity from 368 students. All of them agreed that their personal data they provided should be used only in scientific purpose, according to the Law 679/2016. We took into account the following aspects: a. vigorous physical activity, b. moderate physical activity, c. walking and d. time spent sitting.



Objectives. The objectives of the research aim at: O1. The differential identification of the activity achievement according to the studies, gender and environment the student comes from and O2: proposals supporting the involvement of as many young people (from the pre-university and university system) in physical activities.

Results. The results indicate a major discrepancy between the awareness level of the importance to practice physical activity and that of the students' involvement in this type of activities.

Conclusion. We must put a lot of effort for the people's involvement, regardless of age, in achieving physical activities.

Keywords: *physical activity, involvement, awareness*

FEFSTIM2023_EFSP24

The Relationship Between the Self-Perceived Psychological State of Tennis Linemen and the Accuracy of Their Calls

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Abstract

Introduction. The technological progresses of tennis officiating represent an important part of this sport, especially through the electronic line calling (ELC) system.

Aim. The purpose of this study is to measure the relationship between the self-perceived psychological state of tennis linemen and the accuracy of their calls

Materials and method. The research took place during the ATP 250 Sofia 2022, where 15 line umpires have been tested by the ELC. Before every shift of 60 minutes, they have filled in a questionnaire regarding their concentration and stress level on a scale of 1 to 5. The correlation between the data regarding the mental state of the line umpires and the accuracy of their calls during the match was then studied. The numbers were analyzed by using the Pearson correlation.

Results. The Pearson coefficient have showed a level of correlation of .533, which is considered medium. There are many aspects to take in consideration, like the small number of subjects, the length of the study or the fact that only the decision tested by ELC have been counted.

Conclusions. A correlation between concentration and stress level in relation with the decisions of officials has been found. This can be just the beginning of a new research regarding line umpires and the ELC system.

Keywords: *tennis, line umpire, accuracy, ELC*

FEFSTIM2023_EFSP25

Assesment of VO_2MAX , $T_{LIM}VO_2MAX$ and correlation of physiological indicators among soccer players

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Abstract

Introduction. The investigation of acute or tardive physiological modifications induced by physical effort has interested the scientific world of soccer, especially given the need to provide coaches with answers to questions or solutions to the problems and challenges specific to the field. Developing the soccer players' body capability to make increasingly complex efforts while maintaining competitive intensity and volume represents an acute requirement in performance soccer.

Aim. This study comparatively investigates VO_2max and $T_{lim}VO_2max$ among soccer players using field and laboratory testing. The aim is to determine potential differences or correlations between specific physiological indicators.

Materials and methods. This study included 19 young soccer players ($M=19\pm 0.7$ years old) who underwent tests to evaluate VO_2max and $T_{lim}VO_2max$ via a field trial and ergospirometry. Heart rate was also monitored during every trial.

Results. Upon calculating Pearson's correlation, we found a significantly positive correlation ($r = 0.958$ and $p < 0.001$) between VO_2max_{field} and VO_2max_{lab} . Our study indicates a statistically significant difference ($t=9.100$, $p<0.001$) between the value of VO_2max recorded via field trial (58.756 $ml^{-1}kg^{-1}$; $SD = 2.803$) versus the value of VO_2max recorded via lab test (56.962 $ml^{-1}kg^{-1}$; $SD = 2.648$). In addition, data analysis shows a statistically significant difference ($t=3.807$, $p=0.001$) between the value of $T_{lim}VO_2max$ recorded via field trial (219.22 s; $SD = 47.65$) versus the value of $T_{lim}VO_2max$ recorded via lab test (201.94 s; $SD = 36.14$). Concerning data analysis for Hr_{max} , we found a significant difference, too ($t=3.361$, $p=0.003$) between Hr_{max_MAS} (201.73 b/min; $SD = 16.78$) and Hr_{max_lab} (187.27 b/min; $SD = 3.75$).

Conclusions. Pearson's correlation index shows a strong positive correlation between VO_2max_{field} and VO_2max_{lab} . Data analysis indicates a statistically significant difference between VO_2max and $T_{lim}VO_2max$ recorded via the field trial versus the value recorded via the laboratory test.

Keywords: *VO_2max , $T_{LIM}VO_2max$, soccer.*

FEFSTIM2023_EFSP26

Reaction Speed in Sprint Events at the European Athletics Games in Poland 2023

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Abstract

Introduction. The speed of reaction immediately after the auditory signal given by the referee's gun, in an athletics speed race involving the starting from the blockstart. In athletics, the ideal reaction speed is located at the level of 0.100s, and the values that fall below this value specify a break of the laws and implicitly elimination from the race.

Aim. The objective of this study was to identify whether there are significant differences in start reaction speed between sprint events at the European Athletics Games in Krakow, Poland.

Materials and methods. The subjects of this research are the female and male athletes from European countries who participated in the 100 flat, 200 flat, 110m, 100m, 400 flat, 400 hurdles and the 4x100 and 4x400 relays of the U23 European Athletics Games. A database was created with the reaction times of each individual athlete who participated in the mentioned above tests, and a comparative analysis of the averages between the tests was carried out, with the help of the SPSS statistical and mathematical platform. This comparative analysis was carried out separately by gender (male and female), but also at the group level, including both gender within the same athletic tests.

Results. The results recorded following the comparative analysis highlighted the fact that there are significant differences between the 100 and the 110 male and women's 100 meters hurdles ($p < 0.05$). Another comparison of means demonstrates that there are no significant correlations between the 4x100m and 4x400m relay events.

Conclusions. In conclusion, we mention that reaction speed is an important aspect in an athletic speed test and that the objective proposed above has been achieved, namely the fact that there are differences in reaction speed between athletic tests.

Keywords: *athletics, reaction speed, European games, race*

FEFSTIM2023_EFSP27

Study on Correlations Between Strength, Speed and Agility in Adolescents

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Abstract

Introduction. Knowing the motor performance of high school students should be a benchmark for any physical education teacher or coach. The tendency of physical effort in youth sports is towards anaerobic effort, with muscular strength being a predominant factor in achieving competitive success. Speed, explosive power and agility have serious implications for the sports selection process.

Aim. Our attention is directed towards the analysis of the links that can be established between explosive strength, speed and agility in a group of high school students, given the biological support for the manifestation of these qualities.

Materials and methods. A group of 49 students (30 girls - 16.64 ± 1.03 years and 19 boys - 16.21 ± 0.98 years) underwent physical tests to determine explosive force (SJ, CMJ and FJ), speed (reaction and running for 5, 10, 15 and 20 m) and agility (505 and Illionois). Desmotec V12 and Trac Tronix were used or measurements.

Results. Processing of results using Spearman's test revealed significant correlations between all parameters assessed in girls, except reaction speed which was isolated. The same statistical behaviour showed reaction speed in the boys group, where the links between the data series were limited to connections between some parameters of strength, speed and agility.

Conclusions. Anaerobic exercise parameters are interrelated during adolescence, a period of life marked by multiple physiological changes. Indicators of anaerobic physical maintenance show more links in girls group.

Keywords: *speed, strength, agility, adolescents, school*

FEFSTIM2023_EFSP28

Assessing Muscle Fatigue: A Review of Training Protocols in Murine Models

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Abstract

Introduction. The training protocol used in murine model studies provides a valuable starting point for developing an adapted training model for athletes to prevent and manage muscle fatigue.

Aim. The objective of this review study is to analyze current research in this field to determine the type of training regimen in murine models that contributes to the prevention of muscle fatigue and to design a new training protocol for use in a subsequent study.

Materials and methods. Using the following databases: PubMed, ResearchGate and Google Scholar and the following keywords: murine models, muscle fatigue, training protocols; we identify articles relevant to our study. To ensure the quality and relevance of the selected articles, we applied the following inclusion criteria: articles published in English, available in full text, and a main focus on muscle fatigue resulting from physical activity



in murine models. In addition, we excluded articles that did not describe the training protocols used, articles that presented only abstracts or that lacked explicit details of the training protocol. This systematic approach resulted in the identification of 40 articles that met our inclusion criteria.

Results. We selected 20 articles meeting both inclusion and exclusion criteria. The findings reveal that laboratory animals subjected to a training protocol exhibit initial signs of fatigue at a later stage compared to the control group. Furthermore, as a result of this comprehensive review study, we formulated an alternative training protocol to be implemented in future research.

Conclusions. Effective training protocols delay fatigue, especially in the murine model. This study highlights the importance of personalized training in enhancing performance.

Keywords: *murine models, muscle fatigue, training protocol.*

FEFSTIM2023_KINP29

Effects of Manual Therapy in Weight Distribution at Plantar Level in Female Adolescents

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Abstract

Introduction. The proper biomechanical execution of the movements is also essential for maintaining good posture. Since the sacroiliac joint directs the descending body weight of the axial structure, head, and upper extremities downward through the pelvis, across its neighboring soft tissues, and ultimately down the legs, it can be referenced as a highly significant region regarding force distribution to the lower extremities.

Aim. The purpose of this study is to investigate the effects of a 3 months program of manual therapy (soft tissue techniques and “muscle energy techniques”), on weight distribution on plantar level.

Materials and methods. The participants were 8 female high school students aged between 14 years old and 16 years old. To evaluate the weight distribution, BTS P-Walk platform (BTS, Italy) was used. The participants went through a program based on osteopathic manual techniques for 10 sessions lasting 60 minutes over a period of 3 months. The initial and final results were compared and interpreted statistically using the Paired Samples T Test and multiple statistical indicators.

Results. For the statistical analysis we focused on two pairs of parameters: Left foot load - Right foot load, Forefeet load - Rear feet load., The results showed changes in the weight distribution with bigger movement in antero-posterior plane (8.65%) compared to latero-lateral plane (1.19%). In the same time the changes for the forefeet – rear feet load are statistically significant ($P = 0.004$).

Conclusions. The study found that the way the weight is distributed at plantar level is changed after the intervention, with a big improvement in the center of gravity shifting anteriorly, all of this showing that the manual therapy can be used as an efficient form of therapy to improve weight distribution at plantar level.

Keywords: *posture, manual therapy, weight distribution*

FEFSTIM2023_EFSP30

The Physical Exercises Role in Increasing the Life Quality of the Elderly People

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Abstract

Introduction. In the context of the 3,8 million elderly people in Romania, meaning 20% of the population, the improvement of their life quality must represent a permanent preoccupation of all the factors in charge. One of the factors which can contribute to the efficient solving of this problem is represented by sport activities.

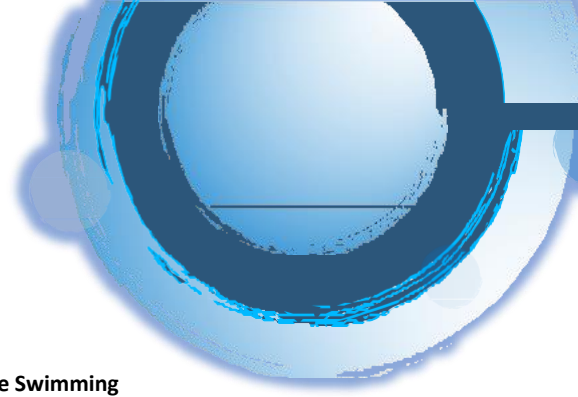
Aim. The research had as aim the identification of the profile of elderly people which benefit of different services in The Centre for elderly in The Town of Reșița, as well as their level of involvement in the programs of the organised sport activities.

Materials and methods. The 74 participating people are elderly people involved in sport activities, from a total of 317 beneficiaries of Social services in the mentioned Centre. A sociologic inquiry was achieved in which the questionnaire technique was used, by means of which we pursued the identification of the elderly people interest for sport activities, if they have practised this type of activity, and the motivation for practising these activities at present.

Results. According to the study, we can observe that less than 25% of the total number of social services beneficiaries in the research participate in sport activities.

Conclusions. The study proves that although the contribution of sport activities on the individual's health and wellbeing is well-known, when aging, the number of people involved in this kind of activities decreases as a result of the elderly uninvolved in this type of activities. The elderly's uninvolved in the program of sport activities can be the result of the lack of Project implemented at community level by means of which to pursue the formation of a habit for adult people to regularly practice sport activities, thus, shaping for them an active lifestyle.

Keywords: *Elderly, life quality, sport activities*



FEFSTIM2023_EFSP31

Differences in the Manifestation of Psychomotricity, Determined by Age, in Children who Practice Swimming

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Abstract

Introduction. The psychomotor area is vast, if we start from the idea that every movement requires motivation, mental support and feelings. Psychomotricity follows motor acquisitions coordinated through mental activity and the progress of the human being in the first years of life and childhood, acquisitions that must lead to the creative, affective and social development of the individual depending on himself and the social environment in which he lives.

Aim. The aim of the study was to highlight the differences in the manifestation of psychomotor behaviors - according to age - in children who practice sports swimming.

Materials and method. The research subjects (N=82 distributed in two subgroups: 42 aged between 6.0-7.11 years; respectively, 40 aged between 8.0-9.11 years) are male (n=41) and female (n=41) children who practices sports swimming in one of the swimming pools of a city in Romania. They were tested, using specific instruments, to evaluate six components from the psychomotricity sphere: 1. manual dexterity; 2. body diagram; 3. body balance; 4. body balance on water/buoyancy; 5. spatial orientation; 6. general coordination.

Results. For five of the research variables (manual dexterity, body schema, body balance, spatial orientation and general coordination) statistically significant differences were found, while for only one variable (body balance on water) no statistically significant differences were recorded. The results indicate differences between the two age groups, the subgroup of older children (8.0-9.11 years) who practice swimming having more developed psychomotor skills compared to the younger ones (6.0-7.11 years).

Conclusions. Psychomotor skills are interrelated with the age factor for children who practice swimming. Increasing age determines better psychomotor manifestations.

Keywords: *swimming, children, psychomotor behaviors, age.*

FEFSTIM2023_EFSP32

The Relationship Between Printed Media And The Promotion Of Dual Career Among Young People

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Abstract

Introduction. The press contributes in a perfect way to the dissemination of information about sports and the sports field, through its main action: transmission from a transmitter to several receivers. The expansion of information presentation is a certainty, and in modern society, users can create, listen, learn and share certain experiences.

Aim. In the present research, we aim to analyze the relationship between the printed media and the promotion of the notion of "dual career" among young people.

Material and methods. The survey method (questionnaire) was used, and the statistical analysis was carried out using the Chi-square Test of Independence.

Results: The results of the study are clear: the subjects do not consider the printed media an effective channel for promoting dual career among young athletes.

Conclusion. The conclusion of the study can provide a future direction of action for decision-makers regarding the education of young people about dual career, using mass media for this purpose.

Keywords: *mass media, printed media, dual career, young people.*

FEFSTIM2023_EFSP33

The Influence of Pilates Exercises in Improving Spine Mobility

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Abstract

Introduction. This article aims to provide information on the influence of Pilates exercises in improving spine mobility among 18-22 year olds. Involvement in this research can contribute to the development of new knowledge, in the prevention of possible back pain, as well as for the well-being that everyone possesses after performing Pilates exercises.

Materials and methods. To gather important data, each subject had their spinal mobility measured before and after completing the Pilates exercises. 100 young women between the ages of 18-22 participated in the study. Subjects were in a group that followed a Pilates exercise program for 7 weeks, one hour/week. The evaluation consisted of the method of measuring the distance of the index to the ground.

Results. After 7 weeks of physical activity, the Pilates method, the parameters measured, between T1 (initial testing) and T2 (final testing), with the help of the "t" (paired) statistical test, which shows us a significant difference between the two tests.

Conclusions. The results obtained show a positive effect even after the first Pilates session, a fact that encourages us in promoting this method, in which the body is subjected to a pleasant, relaxing and at the same time effective effort.

Keywords: *Pilates, mobility, exercises*

FEFSTIM2023_EFSP34

Innovative Methods of Optimizing Sports Behaviour in Taekwondo

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dumbravuadnana97@gmail.com **Abstract**

Introduction. Athletes are prone to worry and increased stress, especially at the competitive level, and taekwondo, being a contact sport, intensifies these feelings and experiences, limiting practitioners from reaching their full potential.

Aim. The current study sought to identify a psychological training strategy that could assist taekwondo practitioners in overcoming these difficulties and achieving the greatest results. The goal was to lower taekwondo athletes' stress and anxiety in order to improve their performance.

Materials and method. This study proposed and tested mindfulness and the Jacobson progressive muscular relaxation technique on different groups of athletes for three months. This problem is not adequately covered in the specialized literature, and taekwondo research is extremely restricted. Mindfulness is a stress-reduction approach that involves self-regulating excitement in response to stressful situations or symptoms, increasing individuals' attention to breathing and physical sensations, and allowing awareness of internal and external stimuli. By progressively inhibiting muscle tension, the progressive muscle relaxation method suggests a method to minimize mental stress and associated processes. Salivary cortisol, heart rate, and the STAI anxiety scale were utilized to quantify stress and anxiety.

Results. Both strategies improved the individuals' condition as compared to the control group, although the mindfulness technique demonstrated the highest improvement in the observed parameters by decreasing the parameters.

Conclusions. The present study did not have statistically significant results; however, it was observed that both methods brought positive changes to the athletes. I believe that these results can be a starting point for future research in the field, as the mindfulness technique can be implemented on a large scale among taekwondo athletes.

Keywords: *stress, anxiety, taekwondo, performance*

FEFSTIM2023_EFSP35

Swimming Speed Dynamics in Athletes Participating in the 24h "AquaChallenge" Marathon

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Abstract

Introduction. Knowing the oscillations in the speed of the athletes that swim different distances during training or competition is one of the most important directions for predicting performing times over different distances.

Aim. The aim of the present study was to analyse the speed fluctuations in swimming, from round one to the next. We also aimed to determine the rounds with the best and the worst performance, precisely in order to optimize the athletes' physical training.

Material and methods. During the 9th edition of the 24h AquaChallenge swimming marathon, the speed fluctuation was analysed on 34 swimmers, 10 of them were female and 24 male, aged between 16 and 74. Each swam 6 laps of 30 minutes. The Timisoara Masters Swimming Club, in collaboration with the Timis County Directorate for Sport and Youth and the Faculty of Physical Education and Sport, processed the demographic data of the participants and timed them during each round.

Results. The results showed that the best performance was recorded in the first round (34.2%), with swimming speed decreasing during each round. In round 5 (61.8%) the lowest performance was determined. As time went by in the competition, the fatigue increased and the athletes could no longer maintain the same speed they started with.

Conclusions. In conclusion, the functional capacity and the maintaining of the same level of speed can be negatively influenced by an increased level of fatigue.

Keywords: *speed, fatigue, swimming, athletes*

FEFSTIM2023_EFSP36

Opinions of Physical Education Teachers on the Concepts of Punishment, Sanction, and Additional Tasks applied during physical education lessons

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Abstract

Introduction. Punishment in schools, particularly in physical education and sport lessons, is, according to studies, a form of institutionalised violence against children that is widespread throughout the world.

Aim. The aim of this study is to identify the opinion of PE and sport teachers regarding the application of punishments, sanctions or additional tasks, and their perception on the differences between the three concepts.

Material and method. This study involved six teachers from Timis County who work in six pre-university educational institutions. Data was collected through a semi-structured interview. The teachers were asked different questions, and their answers led to the identification of the current use of the concepts in discussion.

Results. Following the interview and the analysis of the answers, we found that corporal punishment is not a means that PE and sport teachers use in their lessons. Instead, to draw pupils' attention who do not follow the rules, they use various additional tasks, which are often represented by physical actions, such as squatting or jumping.

Conclusions. In conclusion, the concepts of punishment, sanctions, additional tasks exist and are still used in PE and sport lessons, but they are presented in a different form, which allows teachers to use them precisely in order to maintain control of the lesson.

Keywords: *punishment, sanction, additional tasks, teachers, physical education and sport, semi-structured interview,*

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The importance of joint mobility in learning to swim in 8-10 year olds

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Abstract

Introduction. The methodology of motor skills development is a central concern of teachers and coaches in different branches of sport. Mobility is the ability of the human body to perform movements with different amplitudes of movement. These movements are expressed in degrees, since movements of the locomotor system are at different angles to each other. Mobility is also associated with sports performance, using coordinated movements associated with a well-developed locomotor apparatus.

Aim. The complexity of swimming training, starting from the nature of the swim and ending with the values of the effort indicators, provides hypothetical variations of work. The rhythmic use of specific mobility development exercises in swimmers' training can lead to real improvements in joint mobility as well as improved sports performance.

Materials and methods. The present work has its scientific basis in personal concerns materialized in the study of a rich bibliography, but especially in the exploitation and interpretation of the results obtained from the study and scientific research of the topic.

Results. The rhythmic use of specific mobility development exercises in swimmers' training has led to real improvements in joint mobility as well as improved sports performance.

Conclusions: An increased mobility of the main joints (scapulo-humeral, spine, coxo-femoral, talo-crural) widens their range of movements, making them easier to execute, so that a correct learning of technical procedures will be achieved and thus superior sports performances will be obtained.

Keywords: *swimming, mobility, methods, sports performance*

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THE Role OF Different Exercise Training Programs in the Fight Against Obstructive Sleep Apnea: A narrative review

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Abstract

Introduction. Obstructive sleep apnea (OSA) is a sleep disorder with increasing prevalence worldwide, characterized by repeated apneas, hypopneas, and respiratory effort-related arousals generated by collapse and obstruction of the upper airways during sleep. Physical exercise is considered a helpful intervention in OSA management due to its favorable impact on weight, genioglossus muscle dysfunction, nocturnal rostral fluid shift, daytime symptoms, and quality of life parameters. Different types of exercise training (ET) programs have been studied alone or on top of standard treatment, but no clear recommendations have been formulated.

Aim. The main objective of this narrative review was to assess the effectiveness of different ET programs in OSA management. Furthermore, we aim to offer a comprehensive overview of the specific approaches, including their strengths and limitations.

Materials and methods. We conducted this narrative overview by searching our articles via the Google Academic search engine PubMed database and ERIC online library. Using as keywords Obstructive sleep apnea and exercise, we found over 2000 articles published in the last five years. After the list of initially selected studies was verified by all the authors, only 20 studies meeting the inclusion criteria were selected.

We excluded the secondary research, grey literature, books, and articles that were not available in full or written in English.

Most studies showed that different ET programs are efficient in reducing OSA severity in terms of the apnea-hypopnea index, index of desaturation, and daytime symptoms, mainly in mild and/or moderate OSA.

Conclusions. Sustained physical activity appears to be efficient in reducing OSA severity. Different ET programs could represent an efficient treatment option for those intolerant or non-compliant with standard treatments, especially in mild and moderate OSA. Further studies are needed to establish the phenotype of OSA patients, more likely to respond to ET and to identify the optimal physical exercise program for each OSA patient.

Keywords: *obstructive sleep apnea, training, exercise, rehabilitation*

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Prevention of Postural Deficits Induced by Desk Work Through Alternating the Support Surfaces

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Abstract

Aim. The aim of this study is to prove the importance and benefits of a physical therapy program for prevention and treatment of degenerative diseases of the spine. The study focused on adults involved in work activities that require maintaining a sitting position at the office. This study included 13 subjects with the age between 26 to 48 years old.

Materials and methods. To prevent musculoskeletal disorders that occur during office work, our research team proposes the alternation of the support surface. This technique is based on alternating anatomical topographic regions of support on the chair during office working hours and requires the use of a specially designed chair to support the body on other than the usual support surfaces. The methods used for evaluation were joint and muscle balance as well as the visual analogue scale of pain, and the evaluation data provided by the GPS 600 system.

Results. At the end of the 30 days of intervention, all subjects had relief of symptoms and the alignment of the spine was significantly corrected.

Conclusions. The treatment using the Global Postural System GPS 600 combined with physical therapy is important to prevent degenerative diseases of the cervical spine both for the effect on the joints and for the general effect on postural balance.

Keywords: *support surface, work posture, prevention*

FEFSTIM2023_EFSP40

A Comparative Analysis of Sports Management in Romania and Other EU Countries

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Abstract

Introduction. In the conducted study, leadership roles within major European sports clubs were examined, emphasizing the candidates' robust portfolios, primarily stemming from substantial experience within the private sector. Additionally, they have received professional training at globally renowned institutions, underscoring the unique character of the sports industry as both a distinct field and a lucrative revenue source.

Aim. The study aimed to undertake a comparative analysis of sports management in Romania in relation to other European Union countries. Globally, sports constitute approximately 3% of the World GDP, with major sporting events serving as significant catalysts for tourism development. Regrettably, in Romania, this potential remains largely untapped, despite Bucharest's designation as a host city for the 2020 UEFA European Championship, which should have provided a positive impetus.

Materials and Methods. The chosen methodology for this study was statistical. The analysis focused on sports clubs in Spain, the Czech Republic, Hungary, and Romania, examining two key aspects: sports legislation with financial support and sports as a consumer product, alongside the domains of management and marketing. The analysis included an examination of organizational forms, revealing substantial disparities in terms of importance, income, and prestige.

Results. The analysis encompassed football clubs from Spain, the Czech Republic, Hungary, and Romania, with a particular focus on those occupying the first positions in the 2021-2022 championships.

Keywords: *sports, management, statistical study*

FEFSTIM2023_EFSP41

The Psychological Profile Of Ju-Jitsu-Ka Which Addresses The Ijif Competitive System

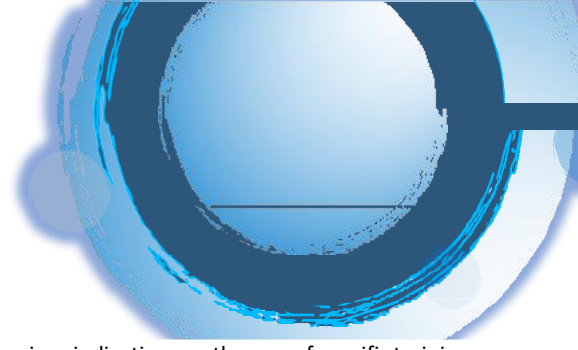
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Abstract

The competition system agreed and promoted by IJF (International Ju-jitsu Federation) is a very complex, semi-contact system, which includes 4 competition sections: Fighting, Classic Duo-Demonstrative, Duo-Demonstrative Show, Ne-waza. The very strict regulatory provisions require exceptional psycho-motor qualities from Ju-jitsu practitioners who tackle any of the mentioned sections. We believe that the “shaping”



of a certain psychological profile of ju-jitsu-ka that approaches this competitive system, can provide serious indications on the way of specific training, with the idea of obtaining the highest possible sports performances.

Keywords: *Ju-jitsu, IJF, competitive system, psycho-physical profile*

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Functional Mobility, Quality of Life, and Fall Risk in Parkinson's Patients: A Longitudinal Study of the LSVT Big Program through Continuous Monitoring

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Abstract

Introduction: Parkinson's disease poses unique challenges for individuals, including mobility issues and a decreased quality of life. This study investigates the long-term impact of the LSVT Big Program and ongoing support on functional mobility and quality of life in Parkinson's patients, particularly during the COVID-19 pandemic. **Aim:** The primary objective was to investigate how ongoing monitoring and support, particularly during the COVID-19 pandemic, influenced functional mobility, fall risk, and quality of life in these patients. **Materials and Methods:** The study design incorporated the PDQ-39 questionnaire to measure the quality-of-life perception across various subdomains. Fall risk assessment was performed using the G-Walk inertial sensor, providing objective data on functional mobility and fall risk. Regular phone monitoring was introduced during the pandemic to provide continuous support. **Results:** significant improvements in functional mobility and fall risk, with a statistically significant decrease in the total iTUG time ($W = 26.00, p = .047, r = 0.85$), between the initial ($Mdn = 13.52, SD = 5.89$) and final evaluation ($Mdn = 10.64, SD = 1.55$), after the 12-month telephone monitoring period. Moreover, participants reported significant enhancements in quality of life across various PDQ-39 subdomains: initial "Mobility" ($M = 41.07, SD = 18.92$) compared with final assessment ($M = 20.35, SD = 6.68$), ($t(6) = 3.65, p = .011, d = 1.38$), "Activities of Daily Living" at the final evaluation ($M = 26.78, SD = 16.81$) in contrast to the initial assessment ($M = 41.07, SD = 25.95$), ($t(6) = 3.71, p = .010, d = 1.40$). **Conclusions:** These findings suggest that the LSVT Big program, together with long-term monitoring, may represent an effective approach to improving functional mobility and decreasing the risk of falls in Parkinson's patients. The study highlights the potential benefits of monitoring for maintaining and enhancing program improvements, even in the face of challenges such as the COVID-19 pandemic, emphasizing the importance of personalizing treatment for optimal results.

Keywords: *Parkinson's Disease, fall risk, inertial sensor, monitoring.*