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MEETING ABSTRACTS Open Access

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Invited speakers

S1

Model of children's comprehensive movement education in a family as a fundament of healthy, physically active, successful and long life

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BMC Sports Science, Medicine and Rehabilitation 2019, **11(Suppl 1):**S1

The number of people who practices regular physical exercises in relatively low. **PURPOSE:** Building a new model for children movement education in a family. The proposed model is open and universal, can be modified by the parents in connection to financial possibilities and interest of a child. **METHODS:** Material collected on 2500 subjects of different age and with various methods: test global-movement coordination, the study of development movement abilities in ontogenesis, analysis contents of 29 sports as an element of a model for children movements development. **RESULTS:** The base the model are so willingly practiced by girls and boys of different countries. Suggested model was verified during 6 years on 2000 children. Part of the model was applied in ex-USSR, Sweden, Germany, Italy, Brazil and Uruguay. **CONCLUSIONS:** The suggested model is to be used not only in a family but also in the kindergarten, school, sports classes, and club, or any other institution connected with physical education. Realization of the model allows developing successfully movement coordination in a child during the most suitable age and with a wide range of means. It helps to develop versatile physical and movement abilities in a child that prepares it to active life, improves health, and physical fitness. It is a good base for top-level sport, sport for all or recreation.

S2

Field-based tests for the assessment of physical fitness in youth practicing sports: a systematic review within the ESA program

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BMC Sports Science, Medicine and Rehabilitation 2019, **11(Suppl 1):**S2

PURPOSE: To systematically review the field-based tests used in the literature to assess Physical Fitness (PF) in children and adolescents practicing sport within the European context. **METHODS:** PubMed and Scopus databases were adopted. **RESULTS:** A total of 123 articles were included in the final review. The adopted batteries were EUROFIT, KTK, National Federations' batteries, HIRTZ, ALPHA, and BOT2. The others were generic batteries. Muscular strength/power was assessed through a variety of tests in 52 studies (67.5%). Among these, lower body strength was assessed through vertical jumps by 72.3% of them while the upper body strength was assessed through dynamometry in 14.5% of the studies and through medicine ball throw in 20.5% of the papers. A total of 55.3% of the studies assessed speed, through sprint of 5-40 or 60m; 4x10m sprint. 50% of studies assessing coordination used the KTK, and the other half used obstacle-run, walk-backward, plate-tapping, eye-hand-foot coordination. **CONCLUSION:** The present study provides a framework of the field-based tests used to assess PF in children and adolescents practicing sport across European countries. High heterogeneity was evidenced among the used tests for health- and skill-related fitness assessment. Ultimately, the review aims to suggest a new fitness test battery that will fit the needs of the consortium.

S3

Exercise and quality of life in the elderly

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PURPOSE: This presentation summarizes the literature on exercise and quality of life (QoL) in the elderly. Aging is associated with a decline in volume and intensity of physical activity, resulting in a decrease in muscle size, strength, power, and aerobic performance. These factors contribute to a reduction in mobility, self-confidence, independence, and QoL. Regular participation in exercise can delay or prevent many of the declines associated with aging and has a positive effect on many factors associated with a reduced QoL. Active people also perceive that their QoL is higher than do sedentary people. **CONCLUSIONS**: Regular exercise improves psychological health and wellbeing. Examples of improvements include increased self-concept and self-esteem, reduced risk for clinical depression and anxiety, dementia and cognitive decline, and fear of falling. While exercise has been consistently shown to be beneficial, the effects are often moderate and variable. As a result, the optimal programs to improve QoL are not known. There are suggestions that group-based programs are better than home-based programs and that this is related to the social aspects of exercising in a group. Several studies suggest that moderate-intensity exercise is better than low- or high-intensity exercise. Nevertheless, many different types of exercise have been shown to be beneficial, including aerobic training, resistance or strength training, walking, hopping, swimming, aquatic exercise, as well as exercises to improve flexibility and balance.

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P72

Examination of work-related stress and coping strategies among ground- and air-ambulance workers

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PURPOSE: Based on the scientific literature, a high level of stress is present among Hungarian health sector workers, which can affect the individuals' life. This study aims to discover major risk factors and its extent of work-related stress among ground- and air ambulance personnel and to identify their positive and negative coping strategies. **METHODS**: a national survey was conducted among Hungarian rescue workers between June and October 2015. Data were collected with a self-designed questionnaire using Holmes and Rahe (2000) Stress and coping validated short questionnaire online form. A total of 141 people took part in the survey. Data were analyzed with MS Office Excel, SPSS 20.0 programs, descriptive statistical analysis, Chi-square test, two-sample T-test. **RESULTS:** Among the ground rescue workers increased work-related stress effects are detectable ($p < 0.01$), and they are exposed to a much greater variety of physical and psychological symptoms ($p < 0.05$). Based on Global Stress and Coping Index more effective coping mechanisms can be observed among air rescue workers ($p < 0.01$). **CONCLUSION:** It is important to provide regular professional theoretical and practical training for strengthening coping strategies among ambulance workers. Occupational stress reduction needs to be an essential part of the job of human resource management.

P73

Energy demands of top-level Croatian aesthetic sports athletes: a case study

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Being an athlete in aesthetic sport does not just mean the beauty of movement, technical perfection, and choreographic routine, but also great energy consumption and thus the development of all energy capacities. **PURPOSE:** In order to adequately develop the aesthetic athletes' energy capacities, it is necessary to set the criteria for the evaluation of the parameters themselves. **METHODS:** The subject sample consisted of two best Croatian male aesthetic sports athletes (dancesport and artistic gymnastics) with recognized results in European and World Championships in the last five years of competing. They performed an incremental treadmill test for estimating aerobic capacity. Variables that are measured was peak velocity attained in test (F1vmax), the velocity at anaerobic threshold (F1vVT), maximum heart rate attained (F1HRmax), heart rate at anaerobic threshold (F1HRVT) and maximum oxygen uptake (F1VO2; F1RVO2). **RESULTS:** Dancesport athlete (F1vmax 17.5 km/h; F1vVT 14.5 km/h; F1HRmax 183 bmp/min; F1HRVT 168 bmp/min; F1VO2 4.27 lO_2/min; F1RVO2 54.78 mlO_2/kg/min); Artistic gymnastics athlete (F1vmax 17 km/h; F1vVT 12.5 km/h; F1HRmax 187 bmp/min; F1HRVT 169 bmp/min; F1VO2 4.57 lO_2/min; F1RVO2 56.9 mlO_2/kg/min) **CONCLUSION:** Top-level dancers and artistic gymnasts differ from average population according to the best technical performance, which can be shown exclusively if the energy capacities are on a top level. These two subjects can be models in the development of new dancers and gymnasts in Croatia.

P74

Use of technology in physical education classes - a perspective of PE teachers

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Technology implemented in PE teaching process can increase the level of PA, motivates children to move and could facilitate the process of teaching and learning. **PURPOSE:** To determine the attitudes of PE teachers regarding the implementation of technology in PE teaching process as well as to explore different approaches in its application. **METHODS**: A total of 40 PE specialist teachers from 15 different schools in Macedonia were interviewed using a specially designed questionnaire. **RESULTS:** PE teachers share the opinion that technology in general decreases the level of PA (64%), children are not interested to use it at PE classes (52%) but it is well implemented in PE classes, it could motivate children to be more active (39%). PE teachers mainly use technology as personal support in preparation for classes (60%) and during the classes when demonstrating new skills. Youtube videos and different mobile applications are the most applied forms. **CONCLUSION:** Technology-supported teaching and learning could be very effective and motivating for students. Balanced and well-planned use of technology at PE classes could increase children interest in participation.

P75

Academic motivation of students in physical education and sport at Sofia University "St. Kliment Ohridski"

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The quality teaching process depends not only on the teacher but also on the academic motivation of students participating as equal partners in the educational process. The **PURPOSE** of this article is to represent the results from a study aimed at establishing the degree of academic motivation of students. Totally 45 participants, students at the second and third year of bachelor study in specialty Physical Education and Sport at Sofia University participated in the study. **METHODS:** Angel Velichkov's questionnaire was used to evaluate the level of academic motivation in which are set the factors that favor or impede the formation of high academic motivation and allows to trace its development. **RESULTS:** Results are aimed to prove the assumptions that students in Physical Education and Sports specialty should have: 1) active attitude towards the learning process; 2) internal self-discipline and 3) striving to complement and extend the knowledge obtained. The analysis will be comparative, based on the gender and year of study which will allow us to determine whether these two criteria also influence the degree of academic motivation. **CONCLUSION:** The establishment of differences in the levels of these