

MEETING ABSTRACTS

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# Abstracts from the 5th International Scientific Conference on Exercise and Quality of Life

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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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The number of people who practices regular physical exercises is 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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**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.



activities for students in Serbia and Hungary. **CASE PRESENTATION:** Smartphones incorporate many different sensors, which can be used to measure and boost regular physical activity (GPS sensors, vision sensors, audio sensors, light sensors, temperature sensors, direction sensors, and acceleration sensors). Moreover, there are specific additional services, such as social and online experience (competitions within the online community and competing with one's own results), notifications and gamification. **CONCLUSION:** Based on the literature review, categorization and reviewing mobile applications and a pilot survey among the students, it can be concluded that there is a wide range of opportunities to increase physical activities using smartphones and their Android applications.

## 07

### The development of stress relief and problem resolution strategies among pre-service teachers via biological-cultural programs along the River Tisza

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The profession of teaching proves to be one of the most stressful occupations. The continuous effects of stress among pre-service teachers have a negative influence on their physical and mental health. **PURPOSE:** The present research aims to introduce a preventive program that offers participation in free-time, sports and cultural activities performed in nature. The program which aims to impact the participants' complex, physical and mental health is based on pedagogical, methodological and health-developmental principles. **METHODS:** The Rahe-type Brief Stress and Coping Questionnaire were conducted among the students of the Hungarian Language Teacher Training Faculty, University of Novi Sad. **RESULTS:** According to the results, symptoms of severe depression and anxiety were detected. However, assistance in coping with stress in various life aspects is highly required. **CONCLUSION:** The psychological well-being of pre-service teachers and pre-school teachers are fundamentally influenced by stress and its coping mechanisms. Familiarization with the biological-cultural values along the river Tisza offers preventive, complex programs to establish direct contact with the natural and social environment as well as to ensure its sustainability. Meanwhile, it also enables pre-service teachers to acquire various stress-relief techniques and develop their stress coping mechanisms.

## 08

### Variations in adiposity, body fat percentage, and muscular strength, according to physical activity level in young adults

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**PURPOSE:** The aims of this study were to examine the discrepancies between moderately physically active (MPA) and highly physically active (HPA) male (n=96, age=22.5±1.7 years) and female (n=85, age=21.3±1.6 years) young adults regarding various anthropometric adiposity indices (AIs), body fat percentage (BF%), and muscular strength, and to determine the associations between physical activity level (PAL) and the aforementioned variables. **METHODS:** Participants' height, body mass, BF%, waist and hip circumferences, and maximal isometric grip strength was measured. They were dichotomized according to their PAL, estimated by the short version of the International Physical Activity Questionnaire (IPAQ), as MPA (≥600-3000 MET-min/week) and HPA (≥3000 MET-min/week). **RESULTS:**

Participants in the HPA groups had significantly lower BF% (ES 0.67 ♂; 0.72 ♀), body mass (ES 0.46 ♂; 0.58 ♀), waist circumference (ES 0.55 ♂; 0.48 ♀), hip circumference (ES 0.46 ♂; 0.49 ♀), and BMI (ES 0.46 ♂; 0.59 ♀) than the participants in the MPA groups in both genders. Grip strength performances were comparable between groups. The PAL, regardless of gender, was found to be significantly and negatively correlated with all AIs and BF%. **CONCLUSION:** These findings suggest that high habitual physical activity level mediates body size and composition among young adults.

## 09

### Agreement in estimates of body fat percentage between BIA and BMI-based body fat equations in female young adults

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**PURPOSE:** The purpose of this study was to compare the body fat percentage (BF%) values estimated with various body mass index (BMI)-based BF% equations and bioelectrical impedance (BIA). **METHODS:** One hundred and eighty-three female young adults (age=20.5±1.8 years, BMI=21.5±3.1kg/m<sup>2</sup>) participated in the study. Height and body mass were measured to calculate BMI. BF% was determined by BIA and predicted using BMI-based equations (BMIDE; BMUJA; BMIWO; BMIGA). **RESULTS:** Dependent t-test results revealed that there was no significant difference (P>0.05) in BF% between BIA and BMUJA. However, significant differences (P<0.01) were found between BIA and all other equations in BF%. The magnitude of difference, when compared to BIA, was trivial for BMUJA (ES 0.10), and small for BMIDE, BMIWO, and BMIGA (ES 0.24, 0.47 and 0.24, respectively). The standard error of estimate ranged from 3.85 (BMUJA) to 3.91% (BMIGA). Bland-Altman analysis indicated that the 95% limits of agreement were narrowest for BMUJA (±7.62%) and widest for BMIDE (±8.47%). **CONCLUSION:** These results highlight the practical usefulness of BMUJA equation in predicting BF% among female young adults when BIA, one of the most ubiquitous field techniques, is not available.

## 010

### The pedagogical potential of a user-friendly specialized dictionary in function of adopting a healthy lifestyle

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Even though specialized dictionaries provide abundant information, research findings indicate that their role in the teaching process has been neglected. Within the context of the current global domination of English and an increased need for linguistic standardization, special emphasis is placed on the use of specialized dictionaries in teaching vocabulary. **PURPOSE:** To analyze the pedagogical potential of a user-friendly specialized dictionary in function of adopting a healthy lifestyle. **METHOD:** A questionnaire-based research into dictionary use in ESP acquisition is conducted with 705 students of non-linguistic faculties of the University of Novi Sad. **RESULTS:** Quantitative research indicates students' insufficient knowledge not only of lexicographic conventions but also the criteria for dictionary quality assessment, whereas the qualitative analysis reveals a preference for online dictionaries and other user-friendly applications. **CONCLUSION:** Building on the hypothesis that well-conceived dictionaries can contribute to teaching an active lifestyle in non-English speaking regions, this research suggests the importance of quality terminological products and systematic training in dictionary use.