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Stressors and burnout in the diagnostic medical departments

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MEETING ABSTRACTS

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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 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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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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Effect of physical activity to economic activity

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More studies and research activities have analyzed the relationships between physical activity and economy activity in the past decades. Vitality is a basic prerequisite for labor market success. **PURPOSE:** The research action and study aimed to present the member of society sport and recreational activity effect on the situation of the labor market. In addition, look for the significant relationship between physical activity and economic activity. **METHODS:** On-line questionnaire was completed (n=651) on a regionally representative sample in South-Danubian Region. After processing the database, the hypotheses were verified by independent t-tests, correlation and Cramer's analysis ($p < 0.05$). **RESULTS:** More studies have revealed a relationship between physical activity and labor market activity. I based my research on this fact in the South-Transdanubian region. Confirmed that the long-term preservation of workers' health becomes an increasingly important priority. Physically active workers have shown better social and economic indicators than inactive staff. The effect of physical activity also increases in income levels. **CONCLUSION:** There appears to be, therefore, a link between physical activity and the structure of the labor market connected to initial access to employment and then higher income opportunities with aging that are associated with a career ladder.

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P65

Stressors and burnout in the diagnostic medical departments

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Burnout is common among health care professionals. It may have a negative impact on the personal, professional life also on the effectiveness of the healthcare system. **PURPOSE:** Our aim was to measure occupational burnout levels among radiology department workers in Hungary. **METHODS:** The Maslach Burnout Inventory (MBI) was used to measure burnout levels alongside our self-made questionnaire. All data were analyzed using SPSS V 24.0. Descriptive statistics, independent samples t-test and one-way ANOVA with Kruskal-Wallis analysis were performed to examine the relationship between given demographic characteristics and the three dimensions of burnout ($p < 0.05$). **RESULTS:** 404 (n=404) radiology department workers participated in the survey. The sample had a high mean burnout score for emotional exhaustion (34.28; SD12.98) depersonalization (12.81; SD6.62) and personal achievement (41.03; SD8.70) compared to MBI norms. Age, modalities and years spent in the health care system had significant influence for all three dimensions of burnout ($p < 0.05$). Educational level affected personal achievement significantly ($p = 0.001$). **CONCLUSION:** According to our results a high number of radiology department workers are experiencing occupational burnout at emotional exhaustion and depersonalization dimension of burnout.

P66

Circulating adrenal steroid levels in response to extreme physical stress in male athletes

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Adrenal steroid molecules play a significant role in the regulation of cardiovascular, metabolic and other functions in response to acute stress. **PURPOSE:** To prove that as a result of stress the concentration of steroid hormones in the adrenal cortex increases in blood, probably in this way they help the body adapt. **METHODS:** We investigated the plasma levels of 14 different steroid molecules in a model of extreme acute physical and mental stress in male athletes. Steroid levels were measured with a combination of liquid chromatography-tandem mass spectrometry technique. All values were measured at baseline, at maximum stress situation and thirty minutes later. We used a paired t-test and descriptive statistic. **RESULTS:** Steroid metabolites were elevated only in the physical stress model. Nine steroid molecules were elevated in the restitution phase, and we recorded the changes of some steroid for the first time in this model. **CONCLUSION:** Steroid metabolites of the adrenal cortex clearly respond to stress. Mental stress did not have a significant effect on steroid levels. Clarification of the physiological roles of the changes in steroid levels needs further investigations.

P67

Survey of trait aggression among athletes and non-athletes

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PURPOSE: The aim of the study is to investigate the trait aggression of athletes (a) and non-athletes (na) with a questionnaire. **METHODS:** 14-18 years old respondents (N=280) filled the standardized Buss-Perry Aggression Questionnaire completed with other (demographic, sports habits) questions. Athlete group (n=140) participated regularly in training for at least 3 years. Athletes (n=140) were divided into subgroups: non-contact (aerobic n=20), sport games (handball n=20, basketball n=20), combat sport (wrestling n=20, judo n=20, karate n=20) and cyclic sport (n=20). **RESULTS:** Significant difference was found between athletes and non-athletes in anger (a:14.91±3.68, n.a.: 18.75±10.45); hostility (a:18.76±4.7, n.a.:22.36±12.89) physical aggression (a:18.08±5.39, n.a.:25.03±5.9, and trait aggression (a:65.75±12.88, n.a.:80.57±27.1). The non-athlete group had significantly ($p < 0.05$) higher trait aggression score (80.57±27.09) than the athletes divided into further subgroups according to the tactical division of sport (non-contact: 62.77±11.34; cyclic sport: 64.1±13.18; sports games: 63.42±14.78; combat sports: 68.13±12.46). If the sports examined separately, we found significant ($p < 0.05$) differences in the total score of trait-aggression between the non-athletes (80.57±27.09) paired with aerobics (62.77±11.34), basketball (61.46±10.41), judo (66.43±12.1) and swimming (64.1±13.18). **CONCLUSION:** Based on our results the positive effect of sport on trait aggression is visible.

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