

Young people's lifestyles: sport orientations in connection with alcohol consumption and the social representations of the health

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Abstract

Background. Today, when our everyday lives are invaded by the recommendations relative to health behaviours which offer a "healthy lifestyle" (high-quality diet, moderate physical activity, non-smoking, low-moderate alcohol consumption, 7-8 hours of sleep a night) it seemed important to question the interrelation in these lifestyles between the systems of individual and collective values as well as socioeconomic and cultural resources variables.

Aims. To identify from which point of view sport practice behaviours and alcohol consumption coexist within the life style of young people by studying them in their complexity compared to contextual and structural dimensions.

Methods. A study by questionnaire was conducted in the area of Haute-Normandie, France, on a population of 2677 young people (boys, n = 1550; girls, n = 1127). A factorial analysis of the replies (AFC) allowed us to answer the following hypothesis: alcohol consumption varies according to the logics of implication in sport practice; alcohol consumption is related to the logics of sport practice differentiated according to the gender.

Results. The factorial analysis highlights four profiles differentiated according to the gender and structured according to the different dynamics of lifestyles joining together finalities, types of sport practices, alcohol consumption behaviours and health perceptions.

Conclusion. Sport practice seems to play a significant role in the differentiated expression of alcohol behaviours of young people. The various profiles relativize the impact of the frequency of sport practice on other health related behaviours highlighted by various epidemiologic studies.

Keywords: young people, sport, alcohol, health, perceptions, lifestyle.

The relationship between the morbidity and teaching spaces for sport in schools

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Abstract

Background. The survey was based on the data provided by the Centre of Calculation and Statistics of the Ministry of Public Health and the National Sports Medicine Institute of Bucharest. According to this information, the health status of the school population is alarming, which requires the careful monitoring of the health of students in schools.

Aims. To conduct a study on morbidity in the pre-university education system, for students aged between 12-18 years. The maintenance of a small number of physical education classes in pre-university education, as provided by the 2010 Education Law Project, may have a negative impact on the health of students.

Methods. The study was based on the information from the annual medical examination of the students performed by school doctors.

Results. The prevalence of the physical deficiencies found were the following: *pubertal* (6th grade): boys-14.6%; girls-12.1%; mean=13.35%; *post-pubertal* (9th grade): boys-17.5%; girls-15.45%; mean=16.47%; *post-pubertal* (11th grade): boys-27.5%; girls-20.5%; mean=24.0%.

Conclusions. The dominant diagnosed diseases were pubertal and post-pubertal spinal deformations (kyphosis, lordosis and scoliosis) in both boys and girls. The frequency of spinal diseases was higher in post-pubertal boys. A percent decrease in the number of subjects without any diagnosed disease was found, from 35.7% to 22.9% in girls and from 35 to 28.4% in boys, along with an increase in comorbidity, from 32.4% to 48.3% in boys and from 32.9% to 44.8% in girls. The presence of a relationship between the level of morbidity and the teaching spaces existing in schools was found.

Keywords: health status, morbidity, students, diagnosed diseases.

The effect of carnitine administration on the aerobic physical exercise capacity in rats

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Abstract

Background. The controversies regarding the effects of carnitine administration on the exercise capacity in sportsmen determined us to perform experimental studies.

Aims. The purpose of this research was to study the effect of carnitine supplementation and exercise on oxidative damage and antioxidant status in rat blood.

Methods. Research was made on 2 groups of rats, containing 10 animals each: group I – control and group II – supplemented with carnitine, administered daily, post-exercise, for 30 days. The indices of the oxidants/antioxidants balance have been measured in venous blood in days 14 and 30.

Results. The chronic 30 days administered supplements positively influenced the aerobic exercise capacity. The ergotrope effects appeared after 14 days and lasted during all the period of administration and influenced the oxidants/antioxidants balance in trained animals with significant increases of the oxidative stress indicators (lipid peroxides) and with significant decreases of the antioxidant defence indicators (hydrogen donor capacity).

Conclusions. Carnitine supplementation has antitrophotrope and proergotrope effects in trained animals. As a whole, the results of our experimental researches plead for a complex action of carnitine on different physiologic and biochemical parameters, with both favourable and adverse effects. Thus, the prudence to recommend carnitine administration in human subjects is justified.

Keywords: carnitine, exercise, aerobic capacity, oxidants/antioxidants balance.

The biochemical oxidative stress changes in athletes

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Abstract

Background. It is necessary to maintain the physical condition through exercise, which develop mechanisms of adaptation to current and future stress, mechanisms that are favourable for the mental condition, as well as specific mechanisms for increasing the physical condition.

Aims. Biochemical causes of oxidative stress were studied pre- and post training on urinary and salivary indicators in athletes.

Methods. Research was conducted on one batch of players with a mean average age of 19.44 ± 0.38 years and weight 67.70 ± 4.64 kg, during the competition. Biochemical oxidative stress was studied on balance indicators of the oxidant / antioxidant in salivate and urine, pre- and post training.

Results. In 21 pre-training (T1 initial) versus pre-training values from day 1 (T0 initial), significant decreases in MDA and a significant decreases in HD were found in urine; significant increases in MDA and a significant decreases in HD were found in saliva. On day 21 post-training (T1 final) versus post-training values from day 1 (T0 final), significant decreases in MDA and a significant decreases of HD were found in urine; significant increases of MDA and significant decreases in HD were found in saliva. A weak correlation between indicators of oxidants/antioxidants balance within the times T0 and T1 was generally evidenced.

Conclusions. Pre-training day 21 shows a significant decrease in urinary MDA and a significant increase in saliva, while a significant decrease in urinary and salivary HD were compared to pre-training values from day 1. Physical training is a physical neuromuscular and oxidative urinary eustress factor and salivary oxidative biochemical distress factor. Changes in oxidative stress, studied non-invasively in the urine and saliva in athletes, recommends these fluids for exploring the biochemistry of stress in training and monitoring effort.

Keywords: oxidative stress, athletes, oxidants/antioxidants balance.

The development of the coordinative capacity in 14-15 years old sport dancers through balance improvement

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Abstract

Background and aims. The scientific argument of this paper is represented by the elaboration of a concept regarding the development of the balance of 14-15 year old sport dancers. The complexity of these balance mechanisms should contribute to the increase of the general coordination indicators, qualities necessary to improve specific dance technique.

This study aims at using the method of developing the balance capacity of 14-15 years old sport dancers on the basis of the main parameters and factors of both motor activities and individual activity structure; thus the level of the specific coordination and sport mastership indicators will increase.

Methods. Research was conducted within the Sports Club QUASAR Oradea, during a 16 month period (from July 2005 to October 2006) with experimental and control groups comprising 24 subjects (12 girls and 12 boys), selected from the entire training group. We applied the test method to evaluate the balance and general coordination.

Results. Following up the research, a training model was developed, including in its contents the means to the development of static and dynamic balance. The results showed that the action of the psycho-motor skills development and of the specific skills and abilities improvement exerts a significant influence on the coordination and on the increase of the balance level.

Conclusions. Using the methodology of a specific training capacity to form the balance of the dancers aged 14-15 years, we increased the specific indicators and coordination of sport mastery.

Keywords: coordination, dance sport, balance, tests, performance.

Effects of adapted physical activity on functional parameters for the elderly people

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Abstract

Background. The research proved the importance of physical activity for the prevention of premature aging, in the maintenance of functional independence and in the improvement of quality of life.

Aims. The purpose of the study was to assess the level of elderly people quality of life and to analyze the impact of an adapted physical activity programme on the functional parameters with effect on the quality of life.

Methods. The study was conducted over a period of 6 months comprising 58 subjects from Oradea, 27 women and 31 men aged between 60 and 88 years. Subjects participated in various physical activity programmes for 50 minutes twice a week, adapted to individual characteristics. Evaluation included anthropometric data, functional parameters, the Romberg test, functional tests for movements and gait assessment for daily living.

Results. After 6 months of the adapted physical activity programme, the results demonstrated an improvement in the tested parameters. The chest elasticity increased significantly at the end of the study ($p \leq 0.05$) in the group of men. Vital capacity increased significantly ($p < 0.05$) in the group of women. The effects of the physical activities programme were highly visible in the balance tests, functional tests for normal movements and gait assessment.

Conclusions. This study highlights the fact that the elderly people have parameters that indicate an increased risk for cardiovascular diseases, pulmonary diseases, joints diseases, some cancers and diabetes. A constant adapted physical activity programme induced positive effects on the functional parameters and improvement of independence in their active daily living.

Keywords: adapted physical activity, aging, functional movements, quality of life.

Methodological and theoretical aspects of the educational curriculum of physical education in current medical education

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Abstract

Background. The starting point is the idea of providing professionally and physically well trained medical staff, capable of providing high quality health care, effective services at high professional standards, while respecting the principles of medical ethics and deontology.

Aims. The aim of this paper was to present methodical-theoretical aspects of the physical education curriculum in academic medical education in the Republic of Moldova today.

Methods. This paper analyzed 5 curricula used over the past 20 years in the universities of Moldova. The investigation was performed on a representative sample of students (years I-IV) and residents (3rd year) of the “Nicolae Testemițanu” SPhU, as well as family doctors of primary health care. The subjects were divided into 2 groups: group I (experimental group), including 50 students (years I-IV) and residents who attended physical education classes, and group II (control group), including 50 students (years I-IV) and residents who did not attend physical education classes. Both groups were submitted to an interview and a proxy interview, and for data collection, the *Questionnaire for students* and the *Questionnaire for family doctors* were used.

Results. Only 53.3% of the respondents feel that the academic discipline of physical education plays an important role in professional training, of which 66.6% recognize its direct contribution. According to family doctors, the priority task of physical education in higher medical-pharmaceutical education is the sanogenic one (80.0%). The current curriculum is assessed as inadequate by 46.7%, as formal by 20.0%, and as perfect by 33.3% of the respondents. At the same time, the reality of the practice of the content of the curriculum fully coincides with the respondents' opinion in 33.3% of the cases. The majority of the respondents focus on the prevalence of theoretical lessons (26.7%) and methods (33.3%), versus practical activities (40.0%).

The essence and the content of the professional-applicative physical training of the medical specialist is acknowledged by 80% of the respondents, of which 91.7% believe that it contributes to overall physical training.

It should be noted that 80% of the respondents are of the opinion that gymnastics is the pedagogical system of physical culture with a major potential educational influence on social-professional skills. The majority of the respondents (46.7%) believe that the University treats the discipline of physical education at an equal level with other disciplines, while 33.3% think that it receives increased attention.

Conclusions. The situation created requires the finding of solutions for the implementation of programs, which should meet at least one basic ethical principle. This principle would require physical education activities under the guidance of a teacher, depending on the initial level of health and fitness of the individual identified following the evaluation of specific indicators, taking into account the students' options.

Keywords: physical education, curriculum of higher medical education, health care, student, sports, education reform.

Study on three-point shots scored by teams ranked in the 1st-4th places in the Women Olympic Basketball Tournament, Beijing, 2008

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Abstract

Background. By carrying out such a research a database can be formed, that will lead, after processing and analysis, to a better knowledge of the game, its various specific aspects and trends in modern basketball.

Aims. The author aimed to analyse the long distance shots realized by the players of the first 4 teams at the Women Olympic Basketball Tournament, Beijing, 2008.

Methods. We analysed the three-point shots (180 attempts) of the team-members (48 players) of the first 4 ranked teams (USA, Australia, Russia and China) in the quarter-finals, semi-finals, bronze-medal game and in the final. The study of the specialized literature related to this theme provided information about the concerns, the novelties and the results related to long-distance shots.

Results. We presented and analysed the total number of three-point attempts, the success ratio, the contribution of the long-distance shots to the total team result, the distribution of the three-point shots over the stages of the competition, the general achievements of the teams and the individual achievements of the players.

Conclusions. The success percentage is low, although the teams have concentrated on three-point shots as a method of gaining an advantage over the opposing defence. The success ratio is especially low in the high stakes games: 7.1% Russia, 22.72% Australia in the semifinals and 25.00% USA in the final. In each of the teams there was at least one player with a high number of three-point shots and also a better success percentage. But still we cannot conclude that there is a tendency to specialize several players in these kind of shots.

Keywords: basketball, women, three points shot, Olympics.

Postural control disturbances in dysfunctions of the neuro-sensorial and myoartrokinetic system

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Abstract

Postural control is not a simple summation of static reflexes, but, rather, a complex skill based on the interaction of dynamic sensory-motor processes. The postural behaviour has two functional goals: postural orientation and postural balance. Postural control comprises automatic postural responses, anticipatory postural responses and volitional postural movements.

Postural control affects the primary sources of peripheral inputs - the peripheral somato-sensitive system, visual and vestibular receptors. In proprioceptive loss, the automatic postural responses are diminished in amplitude and delayed in time; stretch reflexes in soleus and medial gastrocnemius are severely diminished; balance-correcting responses in tibialis anterior are diminished and delayed; backward motion of the trunk is reduced; movement strategies and synergies are disturbed.

In peripheral vestibular loss, there are increased trunk responses to disruptive stimuli, with hypermetric trunk muscle responses and hypometric knee responses, but unchanged synergies; pathological changes to the modulation depth are produced; the amplitude of balance correcting responses in ankle muscles is severely reduced.

Visual input serves to decrease the stiffness of the musculoskeletal system; it can be accomplished by decreasing the level of muscular activity across the joints of the lower limbs (in eyes-open subjects) or by reducing the gains of the other postural feedback mechanisms, the proprioceptive or vestibular systems (in eyes-closed subjects).

Keywords: postural control, proprioceptive insufficiency, vestibular loss.

The influence of physical exercise on arterial stiffness

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Abstract

The artery structure modifies with aging involving internal and external factors.

The term “arterial stiffness” has been defined as a resistance to dilatation (diameter variation) caused by a force (contraction of the heart) exerted on an elastic body (arterial vascular wall).

Vascular stiffness appears as atherosclerosis and its occurrence may be regarded as one of the major cardiovascular risk factors; arterial stiffness is characterized by the augmentation index (Aix), pulse wave velocity in the aorta (PWVao), central aortic systolic pressure from emerging (SBPao). Each of these parameters represents independent predictors of cardiovascular morbidity and mortality.

Currently, many methods are being used to measure arterial stiffness.

TensioMed™ arteriography enables determining such indices of cardiovascular prognosis, a new non-invasive method oscillometric.

Functional hemodynamic parameters listed above can thus be evaluated and followed over time on the arteriograma of patients with major cardiovascular events (stroke, MI) hospitalized in clinical recovery units and subject to complex specific treatment, adapted to their pathology.

Physical exercise favourably modulates several expressions of arterial stiffening, thus preserving vascular function and possibly reducing the risk of cardiovascular disease.

Keywords: arterial stiffness, arteriograph, cardiovascular risk, physical exercise.

A project for promoting cycling and cycling tours through the development and the exploitation of the abandoned railway track and facilities found in the Arieşului Valley

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Abstract

Due to the increase in traffic, the safe geographical space offered for cycling has now decreased, and also the interest for cycling diminished as well. In the Eastern countries cycling has been sustained and promoted and the infrastructure has been improved to support it. In Romania the facilities are underdeveloped.

The study area is located in the Apuseni Mountains, the Occidental Carpathians, in the counties of Cluj and Alba, on the side of the Aries River. The Aries River Valley is a crossroads of the national road DN75, the Aries River and the small railway between Turda and Abrud. The increase of traffic has led to a decrease in railway profits and finally to railway closure.

This study is trying to promote cycling and cycle tours in Arieşului Valley, by constructing a cycle route on the abandoned railway track between Turda and Abrud.

The conversion of the railway to a cycling route used for cycling and cycle tourism is facilitated by: the certainty that the land is owned by the state, the route is consolidated and lies above inundation limits and the slope is light.

Besides the big impact that this cycle route will have on the health of people of all ages that will use it, it will also attract new investments, create new work places, and develop tourism even further in this beautiful tourist area.

To support cycling tourism, we can use as arguments: the mountain roads that facilitate bike access to tourist attractions in the Apuseni Mountains, the varied and rich natural resources, and the relief that imposes itself through the beauty of its scenery.

The paper concludes that developing the *Aries Valley cycling tourism system* is opportune and that the model, once implemented, could be extended in other mountain areas in Romania, areas that have similar infrastructures which could become a bicycle route heaven.

Keywords: cycling tours, strategy, health, sight-seeing, cycle route.