SOCIAL SCIENCE SECTION

Bachelor – Master

Comparison of Cypriot and Hungarian elite and retired gymnasts starting their sporting career

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The author of this paper has personal experiences in gymnastics. The purpose of his presentation is to discover some characteristics of the present and former elite gymnasts from Cyprus and Hungary starting their sporting career. In the introduction information is given about the Cypriot Gymnastics Federation (CGF) and the Hungarian Gymnastics Federation (HGF). A brief history about the organization of the two federations is also introduced. Then the author talks about the significance of his research. In the first part of the paper, through a survey method using questionnaires, the author analyzes the age of the elite and retired gymnasts from Cyprus and Hungary. He compares the gymnasts' first sports in which they were involved and their age of specialization in gymnastics. In the second part the parents' level of education is discussed. In conclusion the author emphasizes the similarities and the differences between Cypriot and Hungarian gymnasts.

City image and sport: The potential role of sport events in becoming a winner global city

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Now, at the early years of 21st century, we live in the time of competition of metropolises, which global cities are the junctions of money world, information and innovation networks. They benefit from their increased sovereignty in the local-global economy, they give place to the headquarters of the biggest firms and organizations. In the mentioned global rivalry not only traditional resources such as industry, services or other functions are the deciding factors.

Cognitive concepts such as stereotypes, identity, security, and emotions become more and more important in urban studies. As we live in a symbolic world, everybody has its own reality, and an own impression or even image of geographical subjects. Consequently it has to be revealed, that city image play a remarkable role in the differentiation of the biggest cities in the developed world. Geographical images are actually mental visions from cities, regions or countries, and are formed throughout a difficult mental progress (perception, distinction and effect of stereotypes).

Appropriate city marketing can increase the attracting power of the cities, which is valid not only for inhabitants or tourists but also for capital, investments or innovations. Cities or states around the world are seeking to host major sports events in order to help them to achieve marketing goals. The most considerable events (cultural and sport arrangements, but also scientific conferences or political meetings) can raise the settlements' national

and international authority and may have a positive influence on the city image of the own inhabitants and that in other peoples' minds.
We could bear witness of several significant examples how for instance the Olympic Games vitalized a city's economy and gave impulse its business-, commercial-, cultural-, or touristical life (Tokyo, Seoul, Barcelona, Sydney, Athens etc.).
Hosting an Olympic Game or a football European Championship would mean an ideal opportunity also for Hungary and Budapest to realise their socio-economical objectives brought in harmony with EU-directives and global expectations.

Le tour de france: A sport touristic product

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Le Tour de France enjoys is the most popular and the most visited sporting event in France. Every year almost 2 billion people watch the event on different television channels and 15 million spectators personally visit the races. Out of all visitors, 30% come from other countries, which mobilizes all the tourist services. Nowadays we can find different offers from tourist agencies to visit the events, but also to experience the same tracks as the racers use.
In my research program I tried to answer the following questions:

- Why is this event so popular? Because of the country, the number of participants, spectators, or natural beauties?
- Why the tracks are so interesting for visitors?
- How does LTF prepare to host and serve so many guests? What is the touristic infrastructure behind this event?
- What is the financial background of this event? Organizing the race and hosting the guests? What is the outcome and the income of the budget?
- The number of spectators has already reached a high level. Is there any chance to host more tourists?

During my study I used an environmental and statistical analysis. The results have shown, that a popular sporting event like this can build a special touristic product, which causes a lot of profit for the local and national tourism development, but also for the sport itself.

Algarve and Sport Tourism

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Algarve is located in the south of Portugal. It is the most popular and visited touristic area in the whole country.

This region depends a lot on tourism in order to survive and each summer more than 2 million people visit it. Unfortunately, with each year that passes the number of people that visit Algarve is decreasing. This situation is very alarming to the region.
With this work we tried to understand why the tourism is decreasing and we tried to show how sport can attract more tourists and help to develop the region.
Algarve has great natural resources to the practice of all sports. The landscape of Algarve is full of beaches, rivers, mountains, open spaces and the green colour is all over this region. In fact, the natural resources of Algarve are so amazing that there are still a lot of great places to practice sports that have still not been explored or developed.
Because of all this, we think that it is unbelievable that the travel agencies don't offer more sport programs to attract more tourists. The natural resources, the weather, everything is there waiting to be used and explored.
The Sport Tourism is a reality and its importance is increasing.
Sport Tourism is very important nowadays and the travel agencies must see this and use it to attract more people.

Evolution of Sport in World Politics

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Introduction: Sport is applicable to many fields of human society. The area of international relations is not an exception. For years sport has been used as an instrument of foreign policy. It took part in shaping and implementing foreign policy objectives of different states.
The aim: The purpose of the study is to see the role of sport in modern international relations, the role which has evolved significantly during the XX century.
Methods of the study include vast literature analysis mostly of European and American origin. The foreign policy background is based on Hans Morgentau concept of realism.
Discussion: The IOC had always supported the idea that sport is above or outside of politics. It can be seen as a part of idealistic ideas proposed by sport, or the inability of sport leaders to play serious role in world politics at early stages of sport development. Whichever was the case, it was at first a great strength in preserving the IOC's independence, but as the decade went on and pressures increased, it became difficult to maintain this liability of political neutrality.
The first explicit political event in the Olympic Games occurred in 1908, when the Finnish team refused to march under the Russian flag. (At the time Finland was a part of the Russian Empire.)
Sport has begun to play more and more significant role in international politics right after World War I. The fact that out of an *elite leisure activity* sport has become *mass and popular* can explain the determination of country leaders to use sport for country promotion on the global arena. The glaring example is the Berlin Olympics (1936), organized solely for the global advertising and legitimization of the Nazi regime. Sport was used for the first major political manifestation.
The Cold War era was the next stage of the role of sport in international relations. The period between 1945 and 1989 was characterized by the division of the world into bipolar, ideologically-opposed, nuclear-armed power blocs with a large number of non-aligned states among which the two blocs competed for legitimacy and influence. From the 1940s on, Soviet Union and Western States intensified the tendency to use sport as an

international political instrument, and from the early 1950s, sport became an accepted and much-used tool in the diplomatic arsenal of the Cold War.
Being bounded by nuclear arsenals from military actions both confronting systems utilized all measures of non-military policy. In terms of building political legitimacy, sport with its broad mass appeal was natural for the task. The ideology constantly needed to be proved by simple concrete examples and shown to the rest of the world. Sport was ideal means of pursuing this goal. By using sport each side tried to overpower the image of the opposite bloc.
The western countries continued to overlook sport in their foreign relations until around the early 1970s, although for some ten or fifteen years already, sport had begun playing a serious role in Soviet-bloc foreign aid programs. The USA did begin to use sport in foreign aid in the 1950s, but at a low and sporadic level.
The mutual boycott of the Olympics which occurred in the 80s signified the crucial point of the sport cold war.
The Soviet and Soviet-model states used sport to promote their international objectives. The habit became so ingrained that after the end of the Cold War, most of the newly independent successor states to the USSR made recognition by the International Olympic Committee and the right to send teams to the Games became almost a priority over admission to the United Nations – in fact, it might even be perceived as a legitimizing prerequisite to a UN seat. Notably, the IOC recognized the Olympic Committees of Latvia, Lithuania and Estonia before the Soviet Union came to its end.
At this point we can make the general observation that when sport raises its head in international politics, it tends to do so either as a secondary tool in the diplomatic arsenal when more traditional tools are deemed inappropriate, or as a tool employed by countries or groups that feel themselves disempowered within the system.
Sport in the Olympic and non-Olympic contexts has continued to be involved in international politics and diplomacy throughout the 1990's – the lifting of sanctions against South Africa, the enabling of athletes from the former Yugoslavia to participate at the Games of the mid-1990s in the face of UN sanctions, the admission of East Timor to the Sydney 2000 Games, serve to illustrate that sport remains involved with the diplomatic process, merely at a lower-profile and more routine level than the great eruptions of the Cold War period. There have already been evidences of using sport in the war on terror. During Athens 2004 Games first women athletes from Afghanistan took part in them, it was a clear message to fundamentalist community.
Results and conclusions: Today the role of sport changes as the main objectives of world politics have transformed. After Cold War confrontation based on the balance of hard power, new world order is based on so called "soft power" which includes economy, media, and culture. Thus, sport as a means of soft power will undoubtedly play increasingly important role in international relations.

The stolen gold medals: Olympics in the „Small Cold War"

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Moscow and Los Angeles are not only registered in history by their statistical data, but by the political opinion-making of the two big cold-war-powers: they have reciprocally boycotted the Olympic Games. Did Washington and Moscow really think that they could have achieved anything by poisoning the Olympic truce with politics?
Did Jimmy Carter really think that if the olimpic team of the United States didn't travel to Moscew, the Soviet Union would withdraw its troops from Afganistan? Was there anybody in the Soviet Union or in the socialist block, who really beleived that the safety of the soviet sportsmen was seriously threatened in the Los Angeles Games? Could the two political steps be avoided? Were the boycotts worth from any point of view?
The aim of my presentation is to find answers to these questions by examining the political, diplomatical, ideological and economical backgrounds of the two Olympic Games, and draw some consequences of the boycotts.
I use different Hungarian, English and Spanish documents, websides and statistics in my research.

Positive image creation for the sports organization by mass media communications

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Introduction: Problem of positive image creation has got the special meaning for the organization. Positive image helps to improve reputation and trust, partners and business attitudes. Trusting relationships between the organization and different target audience are the primary purpose of PR-activity and democratic relationships climax in society. The internal PR-structures support relationships with clients (customers), partners (sponsors, patrons), state power structure, firms staff and the mass media for meting different organizations interests in the field of politics, economy, sport.
The mass media is the important public opinion moderator. Many specialists studied the press role. For example, in the middle of XX century English sociologist Raymond Williams wrote the scientific report "Communications" about journalist job for the different mass media. In the plan of communication process by another English scientist Harold Lasswell: "Communicator-Message-Channels-Target Audience-Effect" mass media is the main channel for information travel (6, p. 193). Positive organization image in public opinion is a result of the right strategy in the relationships with the mass media. Image is emotional comprehension, which was built in the mass consciousness. Image has stereotype character (7, p. 233). The main image elements:
- metaphor – expressive image, good for memory (5 Olympic circles as a 5 continents symbol);
- hero – symbol of reality, time and idea (Gag Rouge as fighter against the sports drugs);
- sign – typical symbol in appearance and behavior (Vladimir Putin visits some sports events).

Methods: With objective to translate image elements PR-structures gather the mass media base, including complex information about the mass media (name, profile, format, heads, permanent columns, journalists, contact information). For proper formation of sports organization image PR-writers don't communicate just with special sports mass media, great competitors – newspapers "Sport-express" and "Sovetskiy sport", TV-channels "Sport" and "7 TV". They work also with the central social mass media with high intelligent target audience ("Russian Newspaper"), press, mass customer oriented ("Moskovskiy komsomolets") and regional press. Organization activity enlightening in

different kinds lets to format the strong stereotype in comprehension of the organization as an active social element.
Mass media communications based on juridical agreement for informational sponsoring and organization of different events for the press, which have some advantages and disadvantages (3, p. 64-80; 5, p. 284-294):

Special mass media events	Common mass media events
ress conference, briefing, press tour, banquet, personal interview	Seminar, exhibition, presentation

Discussion: Social and noncommercial organization dominates in the field of sports management. That is why they can not afford big advertising campaigns and usually organize less expensive events for the press (briefing, personal interview).Such events as press conference, press tour they use very seldom in Russia.
Results: PR-departments in sports organizations very often communicate with the state mass media (information agency ITAR-TASS, radio "Mayak", TV "Sport"). This mass media usually become informational sponsors for sports events. It stimulates to format the positive image of sports organization. But it depends on political situation. However commercial press sports organization chairmen uses as the object for "black" - negative articles. Businessmen-competitors usually pay for it.
Conclusion: The balance between positive enlightening in the state mass media and negative in the commercial press is possible in case of financial supporting from sports organizations partners and careful attitude to all journalists and their interests and needs. Only total and regular enlightening of organization activity in the mass media stimulates positive image development.
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Contribution of bodybuilding to healthy lifestyle

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Many people nowadays do not choose traditional sports and do not intend to compete at a high level; rather, they prefer new types of physical activity on a recreational level. More

and more people are interested in bodybuilding believing that it could help them in being healthier and looking more attractive. Bodybuilding has been in researchers' center of interest especially from the aspect of training method; but it has been hardly approached from a sociological perspective. The aim of this paper is to investigate how does bodybuilding contributes to healthy lifestyle by comparing Cypriot and Hungarian bodybuilders in different aspects. Furthermore, the purpose of the study is to identify under which conditions bodybuilding contributes to a healthy lifestyle with adult people. It was intended to discover the main reasons why bodybuilders chose this sport, what expectations they had and to which degree these expectations were satisfied. This paper is based on a survey. The sample of the study was selected randomly among Cypriot (n=25) and Hungarian (n=25) bodybuilders. The sample includes male bodybuilders between 18-30 years of age attending eight different fitness clubs, four in Cyprus and four in Hungary. The data were collected by the means of questionnaires. The results were discussed according to the following subtopics: (1) Bodybuilders' social status; (2) Opinions about the significance of bodybuilding; (3) Opinions about health-related issues concerning nutrition supplements. Conclusions are drawn based on the results of the survey, regarding the contribution of bodybuilding to healthy lifestyle.

European football: Ten years after the Bosman decision

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More than ten years ago, on 15 December 1995, the European Court of Justice (ECJ) passed a ruling that presaged a revolution in European football. The desire of an relatively unremarkable Belgian player, Jean-Marc Bosman to move from Club de Liège to Dunkerque inadvertently triggered a change in the law that altered the face of football forever. This decision of the ECJ ruled that players should be free to move when their contracts had expired and also ruled that clubs in the member states of the European Union could hire any number of EU players.

In this presentation I would like to outline the most important economic effects of the so-called 'Bosman decision' on European football. This ruling has liberalized the labour market and economically we can observe three main tendencies during the last decade in the football industry of the Top Five countries (England, France, Germany, Italy, Spain):

1. Growth of the incomes of the clubs (TV rights, sponsoring),
2. Explosion of the wage costs of the clubs of the Top Five countries,
3. Financial crisis of football clubs throughout Europe.

In view of these developments, I would like to give a brief guide to the case-law of the European Court of Justice concerning sport after the Bosman decision (Balog case, Kolpak case, Simutenkov case) and also to analyse the economic impact of these decisions on the football industry in Europe.

Finally a few other questions remain to be considered: What are the consequences of these trends on the sport-professional side of the game? How can these changes influence the future of our beloved sport? Clubs or national teams? Business or sport?

The impact of the European Union on sport in Limassol

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Cyprus was one of the countries to be part of the largest enlargement of the European Union. This is a significant transition for Cyprus and evidently impacting all social institutions (economy, politics, culture, etc), including sport. The aim of this paper is to discover the knowledge of Limassolians concerning the European Union and their expectations regarding sport. The paper intends to reveal the following issues: To which degree sport professionals are familiar with the structure of sport and the sport policy of the E.U.? To which degree sport professionals and students are satisfied with the sporting facilities and opportunities in Limassol? What changes do they expect in the sport life of Limassol as a consequence of the integration? The information are collected through survey method, two sub-samples involved in the survey were selected randomly (N=84). The author presents the findings according to the following three issues: firstly, the sport professionals' knowledge, secondly, the sport professionals and students' satisfaction with sporting opportunities, and thirdly, their expectations concerning the results from the integration of Cyprus in the European Union. At the end conclusions are drawn concerning the present and the future of sporting life in Limassol.

The current status of squash in Budapest

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Introduction: Squash is one of the most rapidly developing sports worldwide. Today, over 150 million people play squash in 122 countries worldwide. You can learn to play squash in an afternoon if your instructor is enough good. Squash is a sport which requires both thought and motion so you will be tired both physically and mentally at the end of the game.
Aim: Our research examines the current position of squash in Hungary, and in particular within Budapest, which has 1/3 of the squash centers and a majority of the squash courts. We also examined whether Budapest plays a dominate role in training coaches and youths and whether sufficient professionals are being trained.
Method: We asked the managers of all the Budapest squash centers to respond to a questionnaire and we interviewed 8 trainers to assess their professional level and specialized knowledge of squash. We visited all 21 squash centers in Budapest and for each facility we collected data on date of construction, number of courts and court utilization at different times of the day on weekdays and on weekends.
Result: In Hungary, only 46 coaches are registered and qualified by the Hungarian Squash Federation, of which only 16 received their licenses in 2005. Our research indicates that the professional knowledge and experience of some of these is deficient. The 21 squash centers have a total of 75 courts which are 70 % utilized on weekdays and 50% utilized on weekends.

Summary: Based on the number and quality of coaches registered by the Hungarian Squash Federation, we came to the conclusion that professional development has not kept pace with the development of squash in Hungary. The question arises how the federation of a sport which is on the doorstep of the Olympic Games can allow the sport to develop without structured training and youth programs. Why do they not strive to make sure that an increasing number of qualified coaches are awaiting the enquiring masses at the various squash facilities in Hungary?

Actual problems of the administration leadership in the fitness-clubs in Ukraine

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Summary: to reveal peculiarities of the management and also actual problems of this process in the fitness-club in the modern social-economical conditions of physical movement progress in Ukraine.
The aim of the investigations: to study the peculiarities of the management in the fitness-club and to cause insolations, which have negative influence to this process.

Methods of testing:

1. Analysis of literary sources
2. Sociological questioning (questionnaire design, conference)
3. Socially-pedagogical observation
4. Mathematical statistics methods

International market insight confirms that recreational direction clubs are the main organizational form of sport management. However, analysis of the literary sources reveal, that one of the limiting reason of the fitness-industry's development is dysample elaboration these administrational aspects, against a background market services rash development in Ukraine. Unquestionable leaders of the market services are: Kiev, Donetsk. Dnipropetrovs'k, Odessa and Kharkov. Well-handled analysis of the fitness-club's management problems locked absence in the most part of the specialists about joint conceptualizes "fitness-club" and about existent tendency to the management of this field.

Our theoretical justification of cumulative experience of the fitness-club's management permit to choose the next models: american, germane and scandinavian. However, in course of the realization own sociological investigations installed that managers in the native fitness-industry are dysample informed about their existence nowadays and they are not always can to determine to which of these models belong their system of the management. Also the results of the own sociological investigations about management process construction in the fitness-club permited to install, that to the effectiveness of this process the negative influence render the absence of the professional people in the area of sport management (85%), the imperfection of the tax structure (75%), the imperfection of the normative-lawful providing (65%), the imperfection of the fitness-club's administration organizational structure (45%), the absence of the considered politics from the direction of the state structure and public agency of the leadership, and officials disinterested in the elaboration and introduction of the modern technologies in the administration (40%). For decreasing negative influence of the all aforesaid elements in the modern fitness-club and also for forming an adequate model of the management, experts consider an expedient action to take such reasonable steps as: to create a flexible

tax structure and to elaborate guidance recommendations for realization such process as management in the fitness-industry (80%), to create a system of the continued education for he specialists in the area of market services (75%), and also to perfect the normative-lawful providing (55%) and to install social and legal assistance for the work force in the area of the fitness-industry (50%).
An introduction all of these organizational arrangements will permit to optimize an activity of the native fitness-clubs, taking into account modern peculiarities of physical movement's development, that will be make for an extension the quantities people who go in for sport for the masses and for the improvement activities of the all levels of commonwealth's health.

Service quality assessment in Kaunas sports and fitness centers

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Over the past few decades the role of a service industry within the Lithuanian economy has increased. Quality has become a cornerstone of service providing companies. Today the quality is important for its capacity to determine organization's success, attract consumers and maintain them, and provide a competitive advantage.
Upon deciding which sports and fitness center to attend, customers take into account such factors as service variety, personnel, location, innovations, and price. Ultimately this leads to the assessment of a service quality.
The research assessing the quality of sports and fitness centers can benefit customers who seek to learn the standards of sports and fitness centers' quality as well as the actual results of a present service quality. Also, the managers whose primary responsibility is a continual monitoring and improvement of a service quality could gain meaningful information from this research.
The aim of the research was to examine a service quality in Kaunas sports and fitness centers.
The research methods: the analysis of a scholarly literature and a standardized questionnaire. The data collection took place from December, 2005 to February, 2006. Two sets of questionnaires were prepared – one for the customers and one for the managers. 74 customers and 7 managers/owners were randomly selected to answer the questionnaire questions.
Theoretical background: In order to evaluate the service quality an interaction between a supplier's and a customer's perceived quality is necessary. Quality integrates production and marketing parts, technology and a satisfaction of customer needs (Gronroos, 2000).
Service quality is hard to measure. One of the most prominent service quality assessment methods is SERVQUAL introduced by Parasuraman, Zeithaml and Berry (1988; 1991). However, this research method often provides the results that are too general and emissive of a industry specific information. Thus, we used SQAS – Service Quality Assessment Scale – that has been developed completely for the study of sports and fitness sector. Under the SQAS, six perceived service quality dimensions – Staff, Program, Child Care, Locker Room, Physical Facility, Workout Facility – that were further grouped under three major constructs: Personnel, Program, and Facility were studied.
The result: The research findings revealed the differences in the customer evaluations from those of the management. All four (Personnel, Program, Facility, and Price) categories received higher marks from the managers than from the customers. However, the succession and, thus, the priority of all four categories was the same among the

managers and the customers. Both, the management and the customers rated the personnel with the highest marks, the facility following next and the program ranked the lowest. The biggest disparity was indicated in the price evaluation. According to the customers, the price only partially satisfied their expectations. Managers/owners, on the other hand, claimed that the price corresponded to the services provided.
Conclusions: The research has shown that the service quality assessment is important and yet non-existent aspect of the management in Kaunas sports and fitness centers. Differences between the management and the customer quality perceptions suggest that the customer care is not adequate in Kaunas sports and fitness centers. Also, a further research exploring the quality management in the sports and fitness industry in greater detail is needed.

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KYNESIOLGY & SPORTS MEDICINE SECTION

Bachelor - Master

Differences in blood pressure of static and dynamic power sportsmen

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As professional, as hobby sport the power sports are very popular and their popularity is growing now days. It is known that sedent blood pressure of weightlifters is relative high. The aim of my research was to find out how much is the blood pressure in other power sports.
In the examination I have compared the blood pressure of the dynamic (judo, karate), static (weightlifting, bodybuilding) power sportsmen and untrained man in the age of 18 to 35. They were from the Department of Sport Medicine of Faculty of Physical Education and Sport Sciences of Semmelweis University. From the two basic determinative factors of blood pressure, I appreciated the minute volume from echocardiographic data and I scaled it to the 3/2nd power of body surface. I calculated the relative total peripheral resistance (TPR) from the minute volume and the blood pressure. I made the comparison with **ANOVA** (ANalysis Of VAriance) and post hoc Tukey-probe.
The systolic blood pressure of static power sportsmen was significantly higher than the dynamic power sportsmen. I did not find significant difference in TPR, the static power sportsmen minute volume was significantly higher. From the two factor of the minute volume, the bit rate was also lower in the dynamic power sportsmen.
According to the data the dynamic sports are more appropriate to prevent hypertonie and more suggested for hypertonic patient.

Echocardiographic parameters as a function of physical fitness level

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Cardiovascular diseases (CDs) are leading causes of morbidity and mortality in the developed countries. By exerting positive morphological, functional and regulatory changes on the heart, regular physical activity is very important in the prevention of CDs. In order to measure quantitatively the influence of physical activity, we compared the echocardiographic parameters of male and female athletes at various levels of competitive performance with that of the leisure time athletes and sedentary men and women. Data of altogether 1184 subjects were analysed as a function of increasing training intensity using the following parameters: pulse rate (PR), velocity of circumferential shortening fraction (VCF), relative left ventricular wall thickness (LVWT), relative left ventricular end diastolic diameter (LVEDD) and relative left ventricular muscle mass (LVMM). Differences were analysed by the one-way (independent) ANOVA statistical program. While no significant difference between the national and first class athletes was demonstrated, the parameters of the lower class and

leisure time athletes differed significantly. The largest difference was, however, found between the leisure time athletes and sedentary persons, implying that a mild but regular physical activity may improve the cardiac activity. The public health significance of this finding is discussed.

Evaluation of anaerobic performance and special physical fitness in individuals with quadriplegia

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Background: Upper – limb muscular power in persons with quadriplegia provide an objective indication of their ability to generate the forces necessary for the performance of daily activities.
Purpose: The purpose of this study was to compare the anaerobic performance and special physical fitness in persons with spinal cord injury at the level of cervical segments.
Participants: A group of 7 individuals with quadriplegia took part in this study. All participants recruited for this study were males with traumatic spinal cord injury (injury lesion level from C5 to C7). They were a minimum of two years from the date of accident and used a manual wheelchair. Four of the participants took part in regular wheelchair rugby training and were involved in their sport at least once a week – each session 3h.
Methods: To determine anaerobic performance, the Wingate Anaerobic Test (WAnT) procedure (also called anaerobic 30-second arm-all-out test) was used with an arm crank ergometer. The resistance loading was 1-2% of body mass. To determine special physical fitness the Beck Battery of Quadrugby Skill Tests was used.
Results: The relationship findings of this study clearly demonstrate relationship between results in WAnT and selected tests from the Beck Battery of Quadrugby Skill Tests. These high correlation coefficient indicate that laboratory test (WAnT) could be replaced by field test, which is much easier to contact and does not need any special equipment.

Cardiac fitness parameters of mountain-bikers

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Mountain-bike is a young branch of sports, it has been performed in different competitions since the mid 70's. From its 5 main disciplines, in the present study competitors of Olympic Cross (XCO) have been examined. One race lasts about 2 hours, bikers have to ride 40-50 Km with 1500-2000 m height difference.
Cardiac morphological and functional parameters of 29 top-level (age:15-38) mountain-bikers were compared with data of road cycle racers, long-distance runners and non-trained control subjects. Cardiac data were obtained by 2D directed M-mode and Doppler echocardiography, statistical analysis was made by one way ANOVA method.
The left vetricular muscle mass of mountain-bikers was the biggest, their resting heart rate was higher than that of runners, but lower than that of road cycle racers and of non-

athletes. The blood pressure of road cycle racers was the highest from all of the teams. Mountain-bikers' blood pressure was not increased.
There were no substantial difference in the diastolic function indicated by the E/A quotient. In the mountain-bikers it was a little lower than in runners, but it was higher than in non-athletes and in road cycle racers.
Results show that the complex performance (aerobic, anaerobic and intensive uphill components) of mountain-biking, induces a marked left ventricular hypertrophy, but it does not lead to impaired myocardial function.

Neuronal regeneration following end-to-side suturing of crushed facial nerve branches in adult rats

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The whisker-pad, including vibrissae, is innervated by the sensory infraorbital nerve (n. V/2.) and motor nerve fibres of the facial nerve branches ramus buccolabialis superior and inferior.
From the ramus buccolabialis superior and inferior, the retrograde fluorescent labelling of True Blue in control rats resulted in on average of 2345 and 2428 labelled motoneurones in the facial nucleus, and of 1909 and 70 labelled sensory neurones in the mandibular part of the trigeminal ganglion, respectively.
After regeneration for 100 days following nerve transection and end-to-side suturing of the distal stump of ramus buccolabialis inferior to the intact ramus buccolabialis superior, the retrograde fluorescent labelling from ramus buccolabialis inferior as far as 5 mm from the nerve-suture resulted in on average of 164 labelled motoneurones and 414 sensory neurones. Compared to this, the level of invasion of motor axonal sprouts of ramus buccolabialis superior into the distal stump of ramus buccolabialis inferior reduced significantly, if a crush was delivered to the ramus buccolabialis inferior two days before transection and suturing (34 ± 20; $p<0,05$). Nevertheless, the invasion of sensory axonal sprouts was unaffected (491 ± 187; $p>0,05$). The level of invasion of motor axonal sprouts of ramus buccolabialis superior into the distal stump of ramus buccolabialis inferior increased significantly, if crushing the ramus buccolabialis superior two days before the transection and suturing of the ramus buccolabialis inferior (397 ± 120; $p<0,05$), while that of sensory axonal sprouts was also unaffected (404 ± 183; $p>0,05$).
Our results demonstrated that (I) sensory axonal sprouts can grow into myelin sheaths of former motor nerve fibres; (II) the invasion of motor axonal sprouts into a crushed nerve is attenuated, while crushed motor nerve fibres send forth more axonal sprouts into non-crushed nerve stumps after end-to-side suture; (III) however, the crush on neither donor, nor acceptor nerves affects the sprouting and invasion of sensory nerve fibres.

Peculiarities of developing and correcting the defects of motility of deeply mentally retarded children

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Introduction: Ultimate purpose of teaching and educating the deeply mentally retarded children (DMR) is their social-labour adaptation. That's why first and foremost we undertake the task for the correcting the defects of motility preventing from the formation of social-every day, schooling and labour skills (Sermeyev, 2001).
So our work was aimed at (1) studying the peculiarities of motor development of DMR children (imbeciles) and (2) elaborating the methodics of correcting the defects of motility by means of adaptative physical education.
Methods: With 29 DMR children under 8-11 and 36 healthy ones we studied basic anthropometric indices, indices of the functional state of a. Apparatus of external respiration, b. Cardiovascular system, c. CNS, d. Neuromuscular system, parameters of developing the motility (motor skills) and pedagogical status of DMR children.
Results of research established considerable quantitative and qualitative differences between DMR children and healthy ones according to studied indices. On the base of these results and the absence of preliminary motor experience with DMR children we elaborated experimental complex programme (ECP) in developing the motility by means of adaptative physical culture. This programme included exercises in developing a sense of balance /equilibrium, special breathing exercises, remedial gymnastics, fun indoor and outdoor games, special digital exercises with apparatus, constructive activity, exercises in water (aquatic ones). The experimental group (EG) included 20 DMR children and it used the elaborated programme for two years. The control group (CG) consisted of 9 DMR children and applied traditional programme (TP) for specialized schools. This programme included exercises in balance /equilibrium, remedial gymnastics, exercises with apparatus. The ECP differed significantly from the TP on (1) number sessions per a week (4 hours per a week for EG and 2 ones - CG), (2) presence of special leading-up exercises, (3) character of the subject activity (usage of the equipment invented specially), (4) inclusion of aquatic exercises in the programme that gives the opportunity for forming the motor skill and coordination/timing of movements in unusual medium with subsequent transference of this skill, (5) holding one session per a week on developing the manual motility in combination with constructive activity, (6) application of fun indoor and outdoor games, (7) selection of the breathing exercises contributing to overcoming the stereotype of «holding breathing» observed with DMR children during the performance of complicated coordinated movements, (8) game character of each exercise correspondingly to intellectual specificity of the contingent.
Results: Results of the certifying experiment showed the presence of considerable differences between healthy children and DMR ones. According to physical development only 41% of DMR children were appropriate to an age standard. 59% out of them were of disharmonious development. The organism's functional indices were lower than age standard with DMR children. The level of functional state of the motor analyser is identical one with DMR children under 8-11 and healthy children of underschool age (4-6 years). With DMR children we observe a lower level of the motor development as with healthy children as with morons - $p<0.05$ (Samylichev, 1976).
Applying complex programme of developing the motility with an increase in total time of motor activity up to 4 hours per a week exerts positive influence on physical development of imbeciles and enhances organism's functional abilities with DMR children significantly at $p<0.05$.

With the examinees of EG indices of functional state of the motor nalyser were significantly improved at $p<0.05$. A duration of simple and complex motor reaction decreased. A maximal frequency of movements increased. The indices of static and dynamic tremor lowered. The ones of kinematometry differ widely - examiners made attempts to use previous experience. The indices of sensomotor coordination was changed significantly.

With the examiners of CG, applying the generally accepted programme, we also observed functional changes in the state of motor analyser, but significant differences at $p<0.05$ were established only for the index of static tremor of left hand.

Discussion: Investigation has established that DMR children are needed for special methods of teaching, special preparation and goal-directed getting of them into conditions of mastering a new motor skill. This conclusion is of particular importance of adaptative physical education.

Character of changes observed in EG underlines stronger compensatory possibilities in the development of imbeciles on the background of special developing influence. With the examiners we observe (1) change in the motor profile and its approximation to the motor one of healthy children although at younger age of 4-6 years, (2) a decrease in syncineses, commen surability of muscular efforts is manifested, (3) performance of simultaneous actions improves. On influencing the proposed methodics formation of adequate motor basis with DMR children has already occured and is occuring in minor classes of special school. This raises good possibilities of all-round, harmonious development and finds an ideal solution of the tasks in social and professional rehabilitation of DMR children.

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Effect of spondylarthrosis ankylopoetica (SPA) on gait kinematics

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SPA is a chronic disorder which results inflammation in different areas of spine and sacroilical joint and ligament system. Frequently we can identify resulted problems in the hip and knee joints which are previous phases to development of spine deformities. Under advancement of inflammation process in joint and ligament system ossification can be decected.

The patholgical process of changing in posture is resulted from diseased changing of movement structure. The sacroilical joint can become unstable. The pelvis in constrained vertical position causes is fixed and the sacrum inserted in the position between the hip bones. The result is decreasing of unstability of body. Lordosis is decreases, kyphosis is increases, the neck will be fixed in extension (sometimes flexion) posture.

The condition of equilibrium in muscle groups around the joints breaks down because of the changing in pelvis posture and modified curvature of spine. The vertical spine position causes increased strain in tractus iliotibialis and results the work of tensor faciae

latae. The result is increased role of hip outrotation under gait. Because of tilting back of pelvis the start point and final point of musculus gluteus maximum come nearer each other. Tension of muscle is decreased and possibility for hip flexion contracture will be higher. The performance of abdominal muscles and shoulder blade closer muscles is decreased. The result of this effect the modified humeroscapular rhythm. Inflammation and stiffness of sternocostal joints result decreasing effectiveness of breathing and vital capacity. Load of CG on the foot slips to the forefoot and results changes in statical and dynamical load of the sole. This may be the reason of a later deformity at the foot.

Results of hip arthrosys are cotracture and shortening at the lower extremity. The effects of this problem are alterations on areas of sagittal and lumbar areas of spine. We investigated the gait parameters before and after of TEP operation. We hypothesed that the development will be minimal after the first three months of rehabilitation in the flexion/extension angles movement size of hips and the rotational angles movement size of shoulder/hip axes.

Our goal was to analysing the differences between the gait structure on the basis of processed data data before and after the TEP operation. We investigated the differences of cases of injury to physiological gait also.

The biomechanical gait analysis vas made by APAS. Sampling frequency was 60 Hz, shutter speed was 1 ms. Number of patients were 12 persons. Everybody had problems at both size of pelvis. First video capturing was made befor three days of operation. The second capturing was made after three months of operation.

The results of measurement are idedentify differences between flexion/extension angles of hips, rotational angles of shoulder axes and hip axes and accelerations in different directions of CG. We used physiological gait analysis results as for reference. Results are prove that SPA modifies the gait structure but after operation patients can develop a more efficient coordination and a more efficient joint synergy which similar to a phisiological pattern. As for rehabilitation we have to know, that three month time not enough for total recovery.

Physical therapy treatment for the severely disabled child

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Everything what life can offer to a disabled child can be recognized, if we are aware of the fact that ability and not the disability is all what makes the difference.
The main idea in this study is, that the efforts to improve a disabled child's life requires the attention of many professionals.
Physical therapy and physical exercises are indispensable in these children's life, improving the physical wellness and the quality of life.
The hypothesis of this research is that the rational use of the techniques and rehabilitation methods supervised by the specialist, leads to the improvement of the disability.
The purpose of this study is:
- Selection of the subjects.
- Amelioration of the deficiency using the methods and techniques proposed by us.
- Evaluation of the results, following the methodology that we've proposed.

For this research, 5 children with age between 8-12 year, presenting severe neuro-motoric disabilities were selected.
We made anthropometric measurements – weight (kg), waist (cm), thoracic circumference – in repose, inhale and exhale, and testing of the muscle strength of the elbow, knee and leg – flexion and extension. In this purpose we have used the Likert-scale (0-5).
For the subject C.M. , presenting spasticity in the upper and lower limbs, at the initial testing muscle strength is 1 on the Likert-scale. At the final testing he achieves a major progress; muscle strength reaches the values of 2 and 3.
The rehabilitation techniques were used with the purpose to end the abnormal motor activities and to facilitate active and passive muscular reeducation.
The study has proved the benefits of rehabilitation programs: improved abnormal posture and the strengthening of those muscle groups which were presenting deficits.

Special characterization of linear change of place

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Human walking and gait is connected to vertical body position. In case of physiological walking the advancement is resulted from coordinated movement of two lower extremity. This type of movement can be two support gait because it resulted from two mechanical apparatus. But in real world as for result of investigations the foot provides three point support itself.
After an injury the joint/muscle coordination structure is damaged. The affected person has to use medical support equipment. Our previous analyses were made in four manner: without medical support equipment, with supporting stick, with elbow crutch and with walking frame. Results of using medical aids inthese types of movement could be

descripted with multi point support. As for conclusion the elbow crutch is the best supporting equipment.
Our previous studies investigated gait of different persons under in cases of using different medical aids with fixed and free lower extremities. This study deals with linear movement phases of different living systems: healthy human movement, human movement with medical aid equipment, horse movement and insect movement. Our investigations tried to compare the similarities and differences between movement types.
The main indication of application a medical aim is assuring the most stable three point support. Using of out body equipment can be modified the dynamical stability and can make sure the three point support. After injury the main purpose of the rehabilitation programme is stabilization of the gait mechanism, obtain the maximal safety and best similarity to physiological gait.
Our goal was analysing the effect of different medical aim equipment on the structure of gait. We wanted to compose some basic principle for helping the rehabilitation. It seems to be important, because of sometimes the injuried persons are not informed properly on using the medical aid equipment. In effectiveness of medical processes is very important. The perfect explaining, interpretetion and control of practice increases the possibility of success.
For computerised analysis we used the APAS video analysis system. The sampling frequency was 60 Hz. We used three cameras (two JVC GR-DVL 9800 ntsc and a PANASONIC M10 pal). Shutter speed was 1/100 sec.
The result of this investigation series points out the effects of medical aids onto the physiological gait. The movement structure is differ from structure of free movement. Analyses of movements demonstrated that generally the three point support assures appropriate stability. In some cases more point support required. As for conclusion, it is possible to define the best medical aid equipment for the rehabilitation process and therapeutist can teach the patient to optimal movement with the medical aid equipment.

The mechanical and biochemical markers of six day long eccentric exercise

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Introduction: When an active muscle is stretched it can generate significantly greater tension than under isometric contraction. Carrying out unaccustomed eccentric exercise, muscles display DOMS (delayed onset of muscle soreness), which demonstrates several symptoms.
Numerous researchers claimed that the DOMS is a damage of the muscles, which develops 48-72 hour after the eccentric exercise, and muscle force is significantly depressed. In the DOMS symptom the creatin kinase (CK) activity significantly increases in the blood. Recent studies demonstrated that the insulin like growth factor (IGF-1) increased in an hour after the training, and the reconstruction of the muscle damage started in one hour. The question arose whether the DOMS and the markers of muscle damage increases and the muscle regeneration is delayed when eccentric exercise carried out several subsequent days.

Therefore the aim of our study was to investigate the effect of six consecutive day eccentric exercise on the muscle soreness, the CK and LDH activity, IGH-1 concentration in the blood and the torque production of the quadriceps muscle.

Methods: Ten students participated in the study, 5 men and 5 women. Five subjects trained regularly. For the eccentric exercise and the muscle mechanical test we used the computer aided Multicont II dynamometer system.

The subjects warmed up by cycling 5 minutes on a bicycle ergometer and thereafter five minute stretching drills then they were exposed to six times 15 repetition eccentric contraction each day. After that, they were positioned on the Multi-cont system in supine position attaching the shank of the non-dominant leg to the lever arm of the electrical servo motor. They were instructed to generate force against the lever arm as forcefully as possible under static position. When they reached 20% of their maximal isometric force, the machine started bending the knee. The subjects were encouraged to resist against the rotating lever arm.

The knee flexion started at 10° and finishes in 130°, the constant regular velocity was 120°/s. During each contraction we recorded the torque, angular displacement and velocity in the function of the time. The sampling frequency was 0.5kH. Before and after the first training, after 72 and 144 hours we tested the knee extensors under isometric and eccentric contraction in sitting position.

100ml of venous blood was collected before and after the first, third training, and the the day after the last training. CK, LDH and the IGF-1 activity was determined from the serum. We calculated mean and standard deviation values for each variables. Repeated measures of ANOVA was applied to compare means for significant differences.

Results: The CK level in the blood increased ten times during the 48th hour after the first exercise, and it showed a further increase later, and after the 6th training it became 14 times more than the baseline value. The LDH activity after decreased then thereafter increased and after the last training showed significantly elevated value. The IGF-1 didn't change during the trainings. We found increase in one half of the studied people and decrease in the other half. The average torque and mechanic work measured during the eccentric trainings decreased significantly during the first training, then increased significantly and at the sixth training the averages were almost the same as in the first training.

The isometric force of the knee extensors were significantly lower at the second test comparing to the first test values. The isometric torque production was found almost the ame as before training. The maximal torque during the eccentric exercise was significantly lower after the third exercise, and after this, it showed a continuous increasing, and after the sixth exercise wasn't significantly difference between the force of the first and sixth training's.

Conclusion: The results of this study indicate, that every day eccentric exercise keeps CK and LDH activity elevated in the blood. However, the muscle soreness disappeared for the end of the training period indicating that the muscle was not damaged further. It seems the training applied does not stimulate IGF-1 which is believed as a key factor of muscle regeneration. Also, our results suggest that the every day eccentric exercise does not depress the average torque during eccentric contraction after the third training day which may allow us to conclude that new moor units might be recruited replacing the damaged muscle fibers and allowing them to recover.

Gene expression alterations due to eccentric exercise induced muscle damage

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Introduction: Previous studies showed that the eccentric training modell is the most suitable to observe the biomechanical, genetic and physiological changes due to the muscle damage, the following regeneration, and the adaptation. This kind of muscle work results in a distruction at the level of the Z-discs. We can examine the direct markers of muscle damage with immunohystochemistry and electronmicroscopy. With the staining of several proteins like desmin and fibronektin we can analyse the structural changes also. From the examination of the indirect markers like DOMS, force deficit and the efflux of Creatine Kinase (CK), and Lactate Dehidrogenase (LDH) we can conclude the tendencies and the background of the changes. The aim of this study was to investigate the effect of the eccentric exercise carried out in six consecutive days on the expression of skeletal muscle regulatory genes.

Methods: Ten subjects (5 men, 5 women) participated in our study performing six-day eccentric training program in an isokinetic dynamometer (Multicont II). Having had ten minutes warming up the subjects were exposed to a six times 15 repetitions eccentric exercises during six consecutive days. During this period muscle biopsy samples were taken from the vastus lateralis muscles to investigate the stimulating and inhibiting genes of the muscle proliferation. We also collected blood samples to determine the CK-serum concentration. We have measured the DOMS, and the maximal isometric, concentric, eccentric and stretch-shortening cycle torque of quadriceps femoris with different angular velocities. We made this measurements by previously fixed timetable.

Results: Our results show that the eccentric exercise performed every day decrease the torque production during the first two-three days similarly to one day eccentric exercise. However, thereafter DOMS indirect marker and mechanical characteristics of the muscle returned to the baseline level and despite elevated CK level, which was 4 times greater at the last training compared to baseline. Myostatin mRMS deacreased, myogenic factor (Myf5), myogenin, MyOD, MH3 gene expression encreased two-three folds at the end of the training period. Protein proliferation inhibitor p21 gene expression first increased then returned to the baselene level.

Conclusion: The force deficit is not contraction type, but angular velocity dependent. High CK level does not influence significantly the recovery of the muscle. The changes of the expression of the regulator genes indicate that six day consecutive eccentric training does not damage further the muscle, which can be attributed to the protective effect of the eccentric exercise. It seems that the muscle regeneration starts after the first training.

Effect of whole body vibration on mechanical characteristics of knee extensors

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Introduction: Johnstone at al (1970) demonstrated that high frequency and the low amplitude vibration induces tonic vibration reflex, which results in increase of muscle tension acutelly. It has been shown that during the vibration the electrical activity of the muscles increased applying 20-30 Hz vibration frequency. Numerous authors reported that after 6-10 one minute vibration the static and dynamic muscle strength elevated, the standing stability increased, However, there are reports stating that whole body vibration did not elicited increase of muscle strength after vibration. There are several factors which may explain the reasons of these contraversial results. Supposedly these are the training status of the athletes condition, the actual physical condition, the indexes of the vibration (frequency, time-limit, serial number, body position) influence the residual effect of the vibration. In most of the studies the effect of vibration exposure was estimated at the end of the training session. Thus, we do not know dynamics of strength alteration due to vibration.

Therefore the aim of our study was to measure torque variables and electrical activity of knee extensors under isometric and eccentric contraction after each vibration.

Materials and methods: Fourteen well-trained PE students volunteered to our study. Eight of them were enrolled in the experimental group, six subjects belonged to the control group. The control group carried out two isometric (IC) and two stretch – shortening constractions (SSC) six times separated with 2 minutes rest in Multicont II. Tihanyi System. The experimental group was exposed to six times 1 minute whole body vibration (WBV). During vibration subjects stood in a vibration platform (NEMES Bosco-System) with flexed knee (140 degrees of knee angle). The vibration frequency was 30 Hz. After each vibration session the subjects were seated in the dynamometer and performed similar isometric and SSC contraction as control group did. Maximum isometric torque was measured at a joint angle of 50 degrees. At SSC the muscle stretch started 50 degrees, the stretching energy was 120 degr/s. The subjects were instructed to stop the rotationg lever arm at which the leg was attached above the ankle, within the shortest time and rotate the lever int he oposite direction as fast as possible. During contractions the electrical activity of vastus lateralis and biceps femoris was recorded by using Noraxon EMG device. We calculated the means and standard deviation for all variables. Repeated measures of ANOVA was applied to reveal significant difference between variables in control and experimental group at different time scale, and to compare the two groups. Significant difference was set at $p < 0,05$.

Results. The maximum isometric and eccentric torque, the mechanical work done during eccentric and concentric contraction decreased gradually in the function of the sessions. After the fourth session the means showed significantly lower level than prior to vibration in the experimental group. The means of the variables for control group did not changed significantly.

Conclusion: The results of our study support those findings which demonstrated no change or decrease of strength of knee extensor after vibration. The decrease in torque variables cannot be attributed to the fatigue of testing procedure because the control group did not showed significant alterations. It seems that vibration may disturbe neuromechanical function of the muscle. However, we speculate that vibration may

influence the strength exertion capacity of one muscle group, but increase the intra-muscular coordination of the muscle when performing vertical jump for example.

PhD

Russia in the Olympic movement in the beginning of 20th century

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Russia was one of the countries which were the pioneers of the Olympic movement. It participated in four out of six Olympic congresses that were held before 1914 (1894, 1897, 1905, 1914).

The reforms of Emperor Alexander II in the social, economic and political spheres made possible the rapid development of sports in Russia and by the end of 19th century a lot of sports societies had been set up. However there were some difficulties preventing wide spread of sports in Russia. Among them should be mentioned the indifference of most people as to the sport and to the sport instruction at schools as well as the unfavourable attitude of Russian bureaucracy which hindered the attempts of sport activists to advocate sports in Russia.

Some attempts to set up Russian Olympic Committee were undertaken by A. Butovsky and A. Lebedev but their efforts didn't have any effect at that time.

The Russian athletes were among those who took part in the Olympic Games just after they were revived in 1896. Alexei Butovsky officially represented Russia in Athens in 1896 as an IOC member. None of the Russian athletes took part in the Games of 1896. A young man from Kiyev Nicholas Richter announced his participation in wrestling but never did it.

In the Games of 1900 in Paris some attempts of Russian athletes to take part were fixed by IOC official papers. They say that three Russian athletes, a rifleman and two equestrians came to Paris to take part in the Games but no evidence of that fact in Russian sources remained.

In the Games of 1904 at St. Louis Russian athletes didn't take part.

In the Games of 1908 in London Russia first sent a small group of athletes who represented the following sports: wrestling, marathon, pole-vaulting, figure skating. Russian wrestlers doctor Petrov, Zamotin, Orlov and student Dyomin showed good results. Orlov was the second in lightweight, Petrov was the second in heavyweight. The first Russian gold medal in the history of Olympic Games was won by Nicholas Panin-Kolomenkin. The official records of the Games his performance was highly evaluated by the following words: "Panin was quite far advance of his rivals in both difficulty of the figures he performed and in the beauty and ease of his skill. He carved on ice a series of the most perfect drawings with the precision next to the mathematical one".

The first attempts to create Russian Olympic Committee could be traced as early as 1894-1896. But they all failed. The second attempt refers as to 1897. But this one didn't succeed either. There didn't exist the objective conditions to set up the Russian Olympic Committee. The geography of Russian sport was quite narrow at that time, the development of sport wasn't at a big scale and the international links of the Russian athletes were just at their initial level.

The establishing of National Olympic Committees in other countries faced a lot of difficulties as well. Thus National Olympic Committee of England was created in 1905, Sweden – 1913, Italy – 1915.

Russian Olympic Committee was established in 1911 when its Regulations were approved. The Committee undertook the work to prepare the Russian team for the participation in the Games of 1912 in Stockholm where Russia first took place officially. More than 200 athletes were sent to Stockholm representing various kinds of sport – wrestling, shooting, sailing, equestrian sport, tennis, track and field athletics. Although the results happened to be more than modest (Russia got 6 points, to compare USA – 129, Sweden – 123) the Russian athletes started to acquire the experience nessessary for the participation in such prestigious international events.
Different levels of Russian society started to show much more interest to the sports and some changes in the system of physical education became more visible. On the eve of World War I the favourable conditions for further development of sport and implication into going in for sports of more and more Russians started to come into being.

Sport and Cyprus' accession in the European Union: Expectations, feelings and knowledge of Cypriot sport actors

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The fact that there is no legal basis for sport in Europe, while at the same time sport is subject of indirect policies of the EU, mainly as employer and economy factor, constitutes several challenges in the area of sport in the member-states. For the recently integrated countries these challenges are even bigger, since their sport structures are subject to change because of the ongoing processes of adaptation of sport in the general set-up of EU laws and market economy. The recent integration of Cyprus in the European Union was welcomed with mixed feelings and several expectations by the Cypriot public. Arguably, expectations and feelings concerning the EU accession are present also in the areas of sport, since it is a part of society with a variety of people involved in it. Yet, realistic expectations and feelings highly depend on accurate and sufficient knowledge of the European sport policy. In the light of the recent integration of Cyprus in the EU and the feelings and expectations which had been caused, this study is intending to discover the knowledge, expectations and feelings of various sport actors, namely, athletes, Physical Education teachers and students majoring in different fields of sport. As a secondary aim, it is intended to find out the similarities and differences between the different sport actors, in terms of their knowledge about European sport issues, their expectations and their feelings. This study is based on a survey carried out with Cypriot sport actors, specifically, Cypriot soccer players, Cypriot Physical Education teachers and Cypriot students majoring in fields relevant with sport, namely Physical Education, Sport Management and Elementary Education. The sample (n=450) was selected randomly among the previously mentioned sport actors. The data was collected by the means of questionnaire which had a specific focus on the functioning of EU, the European sport policy with questions concerning the sport actors' expectations, opinions and feelings about the EU accession of Cyprus and the future of sport in Cyprus in the light of the accession. The collected data are interpreted in two distinct dimensions: firstly, the Cypriot sport actors' awareness and knowledge and secondly, the expectations they have towards the European Union in the field of sport as well as their personal expectations as European citizens. Following the interpretation of the data, conclusions are drawn

concerning the actual knowledge of the Cypriot sport actors about the European sport policy and the correlation between their knowledge and their expectations and feelings. Conclusions are also drawn with regard to the similarities and differences between the various groups in terms of knowledge about sport in Europe and in terms of expectations and feelings that are related to their respective area of Cypriot sport.

Regional differences in practicing sport in Cyprus

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Generally speaking, sport is considered to be an important issue in Cyprus. Sport policy of the Cyprus Sports Organization (C.S.O.) embraces the whole island. Nevertheless, people living in different parts of the country have different opportunities for practicing sport. The major aim of this paper is to study the supply in sport by various sport federations in the different main regions. Analysis of documents is the basic method to collect information, besides in-depth interviews were made. The results are analyzed and discussed according to the following issues: Are there regional differences in various sporting facilities? What is the level of popularity in the individual sports in the urban areas, in the mountains and at the seaside? Is sport involvement in different sports promoted in the same way in the different regions? Finally the author draws the conclusion that it seems to be significant regional differences in all three areas, that is in sporting facilities, sporting opportunities and in the popularity of various sports in Cyprus. However, further investigations are needed to clarify the exact size and nature of these differences.

Social status of Hungarian sportswomen before and after the 1989-1990 political system change

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Since the 1989-1990 political system change many different articles have been written about the situation of Hungarian women, but we couldn't find studies focusing on the social status of sportswomen. The major aim of this paper is to fill up this gap and to study the Hungarian sportswomen's social position before and after the political system change. During state socialism, in spite of politics of „state feminism", equal opportunities were not established for women and men; its only result was that more and more women were employed. In this era sport was one of the most successful institutions, female top athletes had higher standard of living than common persons. In the first part of this paper the author analyses the social status of selected sportswomen in comparison with non-sportswomen and sportsmen before the political system change. After 1990 the privileged status of sports was discontinued, which changed the sporstwomen's situation basicly. Today they usually face similar social problems - housing shortage, job, etc. -

which hit hard other social groups of society as well. In the second part of this paper the author makes an attempt to explore the present situation of sportswomen from the same point of view as mentioned before. Data were collected by structured interviews made by retired and active female athletes. The results are analysed according the following dimensions: income, possibiliAties for studying, preparation for civil life, social capital and opportunities to translate social capital to economic one.In conclusion the author states that female elite athletes are among the losers of sport after the political system change.

Recovery - time constant and amplitude characteristics to short-term breath-holding during dynamic leg-exercise

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The purpose of the present study was to investigate breath by breath respiratory responses in the recovery of short-term breath-holding during dynamic leg-exercise in moderate-exercise intensity domain (2W-102W). The subjects of our observations were the end-tidal carbon dioxide concentration ($ETCO_2$), the end-tidal oxygen concentration (ETO_2), the expiratory tidal volume (TVe) and the respiratory rate (RR). Single exponential curves were fitted to $ETCO_2$, ETO_2 and TVe. Bigger time constant (τ) and smaller amplitude (A) were found at lower intensity and smaller τ and bigger A at higher intensity. τ-TVe was definitely bigger than τ-ETO_2, furthermore the latter was bigger than τ-$ETCO_2$ at all intensity. A-ETO_2 was found to be bigger than A-$ETCO_2$. RR seems to have bigger τ. Both A and τ changed with load intensity, showing non-linear behavior of the system. We conclude that τ and A have intensity dependency, and that $ETCO_2$ and ETO_2 showed a somewhat different time course of recovery.

The impact of heart rate upon the E/A quotient in athletic and non-athletic males

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Supervisor: Dr. Gábor Pavlik

Purpose: To clarify whether an enhanced E/A of male athletes was independent of athletic bradycardia and thus an alteration in intrinsic relaxation properties of the left ventricle.

Methods: Echocardiograms were performed in 1238 males (940 athletic). Peak early (**E**) and atrial (late) blood flow velocities (**A**) were assessed by Doppler echocardiography at rest. Linear regression analysis determined the relationships between E/A and resting

heart rate (HR), regression equations of athletes and non-athletes of different ages were compared.
Results: The E/A decreased with aging, decrease was less marked in the athletic subjects. Except the children, it was significantly higher in the athletes than in the non-athletes. Children (age<14 yr.): athletes 2.05 ± 0.45, non-athletes 2.03 ± 0.51, adolescent-young subjects (14-20): 2.13 ± 0.51 vs. 1.87 ± 0.46, young adults (21-30): 1.97 ± 0.44 vs. 1.80 ± 0.51, adults (31-44): 1.73 ± 0.42 vs. 1.38 ± 0.38, older males (age>44 yr.) 1.39 ± 0.42 vs. 1.11 ± 0.34. In the children, adolescent-young and young adult subjects E/A against HR equations of the athletic and non-athletic groups were similar, differences between the means were only due to the differences in the HR. In the 31-44 yr. old males, the athletes' regression curve showed a parallel upward shift. The oldest (>44 yr.) active subjects showed a significant regression while sedentary males did not.
Conclusions: Results indicate that a HR-independent beneficial effect of regular physical training on the diastolic function manifests itself only at an older age. The impact of resting HR should always be taken into consideration when assessing intergroup differences in the E/A ratio, especially when studying the effect of exercise training upon cardiac function.

Expiratory gas kinetics during constant-load exercise in moderate intensity domain

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The purpose of this study was to examine the expiratory gas kinetics during constant-load exercise. In moderate intensity domain, during constant-load exercise VO2 and VCO2 kinetics have been already extensively investigated, and it is known that expiratory gas kinetics have linear characteristics within this domain. We have set a trapezoid exercise protocol using bicycle ergometer and constant-load exercise (2W, 22W, 42W, 62W, 82W and 102W), was placed between the increment and decrement phases. 3 trials of every load-intensity were performed by 2 female and 5 male subjects. Breath-by-breath based expiratory gas parameters (VO2, VCO2, VE, RR, TVe) were continuously measured during the exercise. Our results showed that expiratory gas kinetics kept its linearity, and no gender difference was observed in this system. These results are consistent with previous studies.

The influence of the foot stabilization on the gait in patients with lumbar discopathy

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Supervisor: Dr. Janusz Domaniecki

Introduction: Lumbar discopathy is the basic reason of low back pain. The problem in lumbar discopathy is not only the low back pain but also decrease of movement function.

Problems with movement function are caused by pain and also by the weakness of the muscles. In last case of taping foot can be helpful. The stabilization has been used in sport medicine for a long time, especially in sports injures treatment and prevention. The aim of the present study was to determine the relationship between foot stabilization and gait in patients with lumbar discopathy.

Methods: The study was conducted on 22 male and female patients with lumbar discopathy. They age mean was 55 (range: 41-69 years), and weight body mass mean - 70 (range: 58-82 kg). Patients have been suffering from low back pain on average for 13 years (range: 2-24). CDG (Computer Dyno Graphy) method was used. The subject was asked to walk 20 m with natural walking pattern, first without modification and the with foot stabilization. The study compared the values of ground reaction force (vertical component) before and after foot stabilization. Three points of force-time curve have been taken into consideration (F1-first maximum, F2- minimum, F2-second maximum of force value).The data were analysed by using the STATISTICA^{TM} package. The level of $P < 0.05$ was considered significant.

Results: Mean values of ground reaction force (vertical component), related to body weight [%BW], with and without foot stabilization are presented in Table 1. Values of parameter F2 were considerably lower with than without foot stabilization).

Table 1. Mean values (±SD) of ground reaction force (vertical component: F1-first maximum, F2- minimum, F2-second maximum) with and without foot stabilization for patients with lumbar discopathy

F [% BW]											
Without stabilization						With stabilization					
Sound lower limb			Painful lower limb			Sound lower limb			Painful lower limb		
F1	F2	F3	F1	F2	F3	F1	F2	F3	F1	F2	F3
102,8±8,9	92,6±9,6	108±5,3	101±8,9	92±8,6	106±6	102,4±9,3	**89±9,8**	109±5	102,8±7,9	**89±10,4**	109,4±4,8

Bold=significant differences with respect to F2 without foot stabilization

Discussion: The present study shows that foot stabilization can produce changes in ground reaction force. The most interesting finding was that most patients perceived significant improvement, which was described by them as better walking.

The evaluation of selected motor ability tests in patients with chronic renal failure treated with haemodialysis

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Introduction: Patients with end-stage renal disease (ESRD), treated with dialysis, are characterised by sever functional limitations, which lead to reduced physical activity and sedentary lifestyle preferences. Further, they suffer from functional disturbances of the moving system. Owing to hypokinesis, they lose their physical fitness, which in turn results in loss of self-sufficiency and self-reliance. According to a literature, an acceptable choice of regular exercise activity, together with another treatment methods is the best way of non-pharmacological character, that offers to the patient an opportunity to achieve an optimal functioning and psychosocial level for each one almost equal to pre-

morbid state. An essential part of an each exercise program is an acceptable fitness test battery, which should target such components of motor performance, whose certain rate is necessary for self-sufficiency keeping and for independent daily living.

Methods: We observed the group of 23 patients (15 males and 8 females; mean age = 60,9 ± 14,7 years). For evaluation of the functional condition we used the „Senior Fitness Test Manual“ (RIKLI-JONES, 2001). The input results of the Senior Fitness Tests (SFT) we compared with the population standard specification.

Results: The SFT results showed that ESRD patients in comparison with the population standard specification have reached subnormal and risk performances, especially in tests that requiring for its implementation muscular strength of lower extremities and physical efficiency. Normal and above normal performances we noted in patients that were physical active before and as well during regular dialysis treatment and in tests that requiring for its implementation muscular strength of upper extremities and sufficient hip and shoulder joint mobility. We noted that the joint moving limitation of the upper and lower body was not such wide, how we could suppose in chronic ill patients. After evaluation of the feasible negative influence of own disease and its affiliated complications on the exercise condition, we noted that the total amount of exercise activity turned down. The point of exercise activity limitation is going continuously with the disease progression and the total duration of the regular dialysis treatment.

Discussion and conclusion: In summary, with the results of individual performances in SFT that requiring for its implementation muscular strength of lower extremities, we can confirm that decreased muscular strength and quickly impending muscular fatigue in physical activity in patients with ESRD is mostly concentrated into the lower extremities area, where can be noted 50-70% decrease of the muscular mass. Here is the muscular fatigue noted as first of all. The fitness tests battery SFT is focused on evaluation of those components of the motor performance, whose keeping is necessary for self -sufficiency and for practise the routine activities of daily living. The independence from the help of the others is eligible in all individuals, particularly in older adults, which are prevailing in dialysis centres of the Czech Republic. Following the result valuation, we consider select fitness tests battery SFT (RIKLI-JONES, 2001) as an acceptable choice for motor skills testing in renal dialysed patients.

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PhD

Self-concept analysis

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My study originates from the research carried out by the McGuires about the shaping of spontaneous self-concept. The hypothesis and results of their examination state that in a spontaneous self-characterisation people tend to emphasize those features in which they differ from the members of the group surrounding them.
Reading the article a question arose in me: does our self-concept really always differ from the given context, so from people surrounding us in a given situation? If this is so, our concept about ourselves differs within different situations and groups.
Hypothesis: I examined spontaneous self-concept in class partnership and in sportsgroup partnership. I assumed that children define themselves differently in the two partnerships, that they emphasize different features. Sportsman identity presumably appears when I ask the question „who are you?" in the class. This is so, because in this situation this characteristic feature differentiates the asked party from the others. Similarly, this feature is not so relevant in the sportsman partnership, because it characterises everyone in that group.
Material: 113 children, 47 primary-school students, 66 secondary-school pupils.
Method: I asked for a written self-characterisation, where characteristic features are not shaped by concrete questions. Pupils had to answer the question „who are you?". I collected personal data as well (age, gender, kind of sport, how long have they participated in the given sport).
Data-processing method: SPSS application package.
Discussion, conclusions: Seeing the results one can conclude that people perceive themselves differently in different collectivities, they get to know different characteristic features of their personalities. Thus, the more situations and groups people get into, the more schematized dimensions their selves get, and this knowledge gives them more rigidity. Being aware of this, it might be useful if P.E. teachers gave more possibilities to pupils for mapping all features of their personalities and thus, having a several-aspect concept of themselves, be more successful in life.

The role of prototypes in sporting behavior

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It is well known that most health risk behaviors have clear and widely accepted social images associated with them. It is even more important that these images are reliable factors of interest in these health risk behaviors. Previous researches have pointed out that negative images decline while positive images increase the probability of participating in unhealthy behaviors.
This study has been carried out among 14-21-year-old students at the Southern Plain Region of Hungary (n=548). Self-administered questionnaires were used to obtain information about students' health behaviors, social images, anxiety and some attitudes.

The study tested whether sporting behavior are characterized by well-known social images like the health risk behaviors. Besides, another goal was to detect the structure of and connections among these images. Most of the respondents have thought that sportmen are physically fitt, healthy, sporty, muscular and motivated. Using factor analyses, three social image factors have been isolated: a factor of ”positive, personality-associated image”, a ”positive, health and sports-related image”, and a ”negative image” factor. Using t-test and ANOVA we have found that these images, that is, prototypes are in significant connection with sex, socioeconomic status, and health behaviors.
Our findings suggest that the prototypes of sporting behavior also has very clear social images and these images could be important factors in terms of health promotion.

Sporting habits of Budapest primary and secondary school students and their relation to drugs causing dependency

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Introduction: Even in Hungary just like in the develpoed western Countries it is a very serious problem the growing use of drugs, and the inconveniant lifestyles of the young generation.
The research aimed to present the knowledge of Budapest primary and secondary school children about harmful effects of drugs causing dependency and to give basic datas about their attitudes to smoking, drinking and using drugs.
Methods: Voluntari children studying in Class 7., 8. and Class 9., 10. of Budapest primary and secondary schools participated in the research. Most of the pupils of the sample were from the practicing school of Semmelweis University, Faculty of Physical Education and Sport Sciences. The survey was based on a self-filling questionnaire, the most of the questions were closed questions. The questions investigated in the pupils' psychosomatic status, based on their own opinion, their smoking and drinking habits and their knowledge about the harmful effects of drugs causing dependency, and we also would like to know about their sporting habits, and the status of sports in their life.
Results: The relations of the tested variables were searched with SPSS statistic programme.
The r**esults** hinted to the fact that knowledge of primary and secondary school children about the harmful effects of drugs causing dependency is not sufficient, if it is taken into consideration that year after year the number of the drog-users is growing. Thatswhy is important the raw and the responsibility of school in the drogprevention. We think one of the cause of the problem is that there is no independent subject which is concentrating on this theme, and in other subjects there is not enough time for the prevention. In the basis of the result of the survey we draw the attention to the fact that drogpervention should be emphesized better in the Hungarian public education.

Drugs or sport? Sensation-seeking in drug-takers and sportsmen

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Introduction: I chose sensation-seeking as a topic because I find it an interesting personality trait that has its effect on several spheres of our lives. For example it affects what activities we prefer, and whether we choose sports or take drugs or alcohol.
Theoretical background: Sensation-seeker people need more stimuli to feel good and perform optimally in a performance situation. These people generally like challenges and adventures in every sphere of their lives. Adventure seekers constantly search for new, complex, diverse, exciting, arousal-raising experiences. Generally they drive faster, prefer exciting and risky sports, are inclined to choose risky occupations and are more likely to take drugs and alcohol.
Sensation-seeking is connected to Marvin Zuckerman, he created the Sensation Seeking Scale, or SSS.
Hypothesis: I assume that those choosing a risky sport as a freetime activity (e.g. parachuting, climbing) are more sensation-seekers than those participating in lower risk sports (basketball, handball). I believe that ballgamers and extreme sportsmen not only score differently in Thrill and Adventure Seeking, but also in the other subscales of SSS, so in Experience Seeking, Disinhibition and Boredom Susceptibility. I expect that extreme sportsmen will score higher in all the subscales.
Further, I suppose that drug-addicts will score more similar to extreme sportsmen than to ballgamers.
Material: Nearly 100 people participated in my experiment, all men between the ages 20-45. Participants of the 1st group pursue low-risk sports as a hobby, members of the 2nd group participate in high-risk sports, while the 3rd group consists of drug-takers.
Method: Questionnaire, Zuckerman SS Scale form IV.
Data-processing method: After all three groups had filled in the questionnaire, I counted up the scores of each answering sheet for each subscale. Having done that, I searched for significant differences among the three groups on the five subscales, applying a One-Way ANOVA.

The microenvironment's impact on sport-branch selection of youth male basketball players

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The microenvironment has the greatest impact on sport-branch selection of the youth. As we aim our scientific research at the selection process of basketball players, it's needed to explore, who has a great influence, and who supports the youth basketball players the most.
We suppose that it is the parent's role that is important. Thus our aim partly is to examine the effect of the parent's qualifications, professions, sporting habits, further more the family, friends and school environments.
Our present research is part of a longitudinal study, the first part of which was carried out in the autumn of 2004. We examined the eleven best basketball team of boys, born in 1990-91.

Our research method include anthropometrical measurements, motor tests, pshycological and sociological questionnaires.
Analysing the sociological background, we take an attempt to find the answer, that who are those people who influence the sport-branch selection of youth male basketball players.
At this stage of our investigation we conclude, that the educational background of the adults mainly influence, that the children chose basketball. The members of the family are the ones, that's support them most to choose basketball. Further we conclude, if the children met this sport early, got a lot of early experience on basketball, it will have a great impact on sport-branch selection.

Bachelor – Master

The analysis of self-picture and self-esteem in case of primary school pupils

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Supervisor: Zoltán Szatmári

Getting closer to our future profession we are more and more interested in children's world (there life, thinking and behaviour). During our studies, on the field of this inexhaustible topic, we were mostly gripped by pupil's self-picture, that is the attitude towards themselves which is also emotionally coloured. Our purpose was to establish the correlation between the real and ideal self-esteem of boys and girls in the examined populations, of pupils studying in Szeged and those studying in smaller towns, and of pupils pursueing sports competitively and those not doing that competitively. On the one hand, we supposed that the indexes of self-esteem would be higher in case of pupils from schools of Szeged, boys and those pursuing sport competitively. (Of course the indexes of self-esteem in case pf pupils from smaller towns, girls and those not doing sports competitively would be smaller.) On the other hand, we were interested in the reason of the mentioned supposition. In our opinion the background of differences would be the enviromental effects which bear on them. We carried out our analysis by using one sort of the questionary method, by semantical differencial. We were at the primary schools to make the pupils fill out the tests in June, 2004. The pupils were 13-14 years old. We got our results by making statistical calculation, employing all the usable tests (195). Our hipotethesis has collapsed in two points. The results of boys and girls were nearly the same, the reason of which, in our opinion is the equalized relations of the two sexes. The average output of schools of Szeged was lower, which is presumably the results of the close and intimate atmosphere of schools with a smaller community. The results of pupils pursuing sports competitively worked as we has supposed because they live also in different and larger co-partnerships by wich they can acquire a lot of positive moral and volitional features. We see the significance of our work in that it calls the attantion to the importance of doing sport. Hencefort, we must underline the determinative existance of school of smaller towns and villages in terms of shaping personality and prompting self-knowledge

Emotional intelligence, temperament and self-efficiency of footballers

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Introduction: Football is the most popular game in the world. Especially in Europe where every country has its own professional football league. A lot of young kids play in local clubs. They spend sometimes all days in the pitches. Thay train for years. Some of them become a professional footballers, but most of them take another jobs. My question is, is it good for them to train so many years? Everybody knows that that make their bodies healthier and stronger but what about the influence on their psyche? I would like to know that, that's way I decided to compare footballers to men who have nothing to do with sport. I compared the following features: a self-efficiency, emotional intelligence and temperament. I have never met such researches. There are a lot of scientific compositions which compare athletes representing different sports, but it's very difficult to find comparison with people who do not do any sports.

Methods

Paricipants: The sample consist of two groups: a group of 25 footballers aged 16 to 36 who play in 4th league in Poland (average of training is 9,12 yaers) and a group of 20 men aged 16 to 34 who don't do any sports.

Measures: Self-efficiency was measured by means of 10-item Polish version of Self-Efficiency Scale (e.g., "I can always manage to solve difficult problems if I try enough"): alpha = 76.

Emotional intelligence was assessed by means of Polish version of The INTE Questionnaire (e.g., "I like to share my feelings with others people") (Jaworska, Matczak 2001).

Temperament was measured by The Temperament Questionnaire (e.g. When I am in high spirit I easily slove problems") (Zawadzki, Strelau 1997)

Procedure: Participants from the first group were contacted directly through coaches by the author.

Participants from the second group were contacted directly with the author as well. All of them were informed that the package of three questionnaires would provide them with confidential information on their psyches (self efficiency, emotional intelligence and temperament). The subjects were assessed in January 2006.

Results and discussion

Table 1. Temperament, emotional intelligance and self efficiency among examined people.

FEATURES	R1 n=25	R2 n=20	U	*z*	P
Briskness	611,5	423,5	213,5	0,8442	0,3986
Perseveravity	563	472	238	-0,2758	0,7827
Sensual sensitive	530,5	504,5	205,5	-1,0242	0,3058
Reactivity	561,5	473,5	236,5	-0,3099	0,7566
Resistance	619	416	206	1,0086	0,3132
Activity	**673,5**	**361,5**	151,5	2,2625	**0,0237**
Emotional intelligence	578	457	247	0,0686	0,9453
Self efficency	534,5	500,5	209,5	-0,9297	0,3525

Symbols: **R1** – sum of rank in group of 25 footballers, **R2** – sum of rank in group of 20 men, **U** – results of The U Man-Whitney Test, *z* – standardization of results, **p** – level of relevance

There is very interesting difference between those two groups. Results show that footballers are much more active in their lifes then the men who don't do any sports. I wanted to confirm that footballers are also more resistant, that thay do things till the end. Results shows that their resistance is higher but unfortunatelly it turned out to be not important statistically.

Another interesting issue is connected with emotional intelligence and self efficiency. Sum of ranks of footballers is higher which can mean that footballers are more convinced that they can do things efficiently (results not important statistically). It seems that the correlation between activity and self efficiency can be positive so it is worth to check it out. Such correlation among students (secondary school) were researched by Cypryańska (2000) and Piekarska. (2002).

Table 2. Temperament, emotional intelligence and self efficiency among footballers.

FEATURES	R1 n=14	R2 N=11	U	Z	P
Briskness	153	172	48	-1,6181	0,1057
Perseveravity	169,5	155,5	64,5	-0,6895	0,4905
Sensual sensitive	**147**	**178**	42	-1,9455	**0,0517**
Reactivity	201	124	58	1,0478	0,2947
Resistance	167	158	62	-0,8245	0,4097
Activity	192,5	132,5	66,5	0,5776	0,5635
Emotional intelligence	197,5	127,5	61,5	0,8494	0,3957
Self efficency	184,5	140,5	74,5	0,1381	0,8901

Symbols: **R1** – sum of rank in group of 14 footballers who has trained less then 10 years, **R2** – sum of rank in group of 11 footballers who has trained more than 10 years, **U** – results of The U Man-Whitney Test, *z* – standardization of results, **p** – level of relevance

I also devided the group of footballers into another two groups: footballers who has trained less then 10 years and footballers who has trained more than 10 years. It turned out that the "older" footballers are more sensual sensitive. It may be very important on the pitch and probably it is connected with their technical skills. Footballers who train longer are better in that. In Poland we say that they "feel the ball".

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Psychological selection criteria in track and field, as applied to running events

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The article is about the connection between athletic achievement and certain psychological traits which are believed to be important to runners of various distances. The purpose of the research was to confirm or disprove the empirically formed points of view as to the importance of these traits by gathering and analyzing statistical data. Athletes participating in the research ranged from Adult Second Grade to Sports Master Grade in achievement, and from 17 to 23 years of age.
Methods: bibliographical analysis, psychological testing, math-statistical methods.
Results: What follows are the more significant correlations between performance level and psychological traits. Correlation of achievement and extroversion for average- and long-distance runners was indeed high (r=0.37 and r=0.53 respectively); however, it was also found that typically average - and long-distance runners were less extroverted than sprinters. Another trait, the locus-control vector, which, it is believed, optimally should be directed slightly internally, indeed had strong correlation with performance results (r=0.52) for sprinters, and still significant for average-distance runners (r=0.35). However, it appears that better long-distance runners have an *inverse* correlation with the characteristic (r=-0.67, i.e. the more *external*, the better). Finally, it was interesting to find that a high level of neuroticism, while negatively affecting sprinters (r=-0.49), was slightly more likely to be found among high-grade long-distance runners (r=0.2), and was very typical for successful average-distance runners (r=0.67).

Eating disorders and bodyweight problems among Hungarian competitive skaters

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Supervisor: Dr. Ágota Lénárt

The prevalence of eating disorders among young ladies is about 1-4%, which is affirmed by national and international data as well. While anorexia nervosa usually developes between the age of 12-18, bulimia nervosa evolves later. The prevalence of these eating disorders is more frequent among sportsmen of certain sports and members of particular professions. Figure skaters create the above mentioned increased risk group. Exploring the Hungarian situation in this field I surveyed the whole Hungarian competitive skater population, including ladies and men figure skaters, ice dancers and synchronized skaters (there is no pair skating in Hungary). My main purpose was to disclose the eating habits of the skaters and the complacency with their physique and bodyweight.
I brought in those members of the Hungarian competitive skater population who were born in 1991 or earlier (N=136). The research was carried out by self-administered questionnaires between January and March in 2005 and the response rate was 43,4% (N=59). First I asked some demographic questions and then I put questions to skaters about their relations to their sport, coach, eating habits, physique and bodyweight. Then they were asked to fill in some tests such as CSAI-2, EAT-26, ANIS, BCDS and the Goodenough's test drawing of a man.
More than half of the Hungarian skaters have regular problems with their bodyweight and 65% of them (of the total) are on a diet with different frequency. Most of the ladies would

like to be much slimmer than they are in the reality. According to the BMI- index, there is a significant difference between the actual and the desirable bodyweight ($p<0,05$). Six ladies had earlier eating disorders. They did not get any help neither from a doctor nor from a psychologist during their illnesses. This lack of help is very typical of Hungarian skating sport. According to the results of the research 12-24% of the Hungarian skaters have pathological nutritional attitudes and they show susceptibility to anorexia or bulimia nervosa. This rate is in line with results of researches in other sport groups (e.g.: gymnast, eurhythmics). The examination of the projective drawings seems to back up the same diagnosis as the paper-pencil tests.
In this presentation I would like to bring out the present state of the Hungarian skating sport especially emphasizing the eating disorders, the nutritional and the bodyweight problems.

Qualitative features of children's nutrition

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Supervisors: Dr. Júlia Bősze, Dr. Júlia Pápai

In our study we were examining the different elements of children's nutrition.
The main purposes of our study were the following:

The observation of the changes of some qualitative features with the advance of age

The comparison of the boys'and girls' data in the different age groups

The examination of differences between children doing and not doing sports.

The subjects of the study were 71 girls and 78 boys between the age of 6-15. The data originates from a a regional study carried out in Jászság in 2003-2004.
Data processing was carried out with a programme named Nutricomp. We also accepted the help of a dietician.
During the statistical analysis means and SDs were calculated. T-test was used to compare the subsamples according to the different aspects.
We found that the protein consumption is in accordance with the standard. The rate of the carbohydrate-fat consumption does not follows the recquired percentage numbers. The fat data are beyond the favorable figures (30%). The added sugar is also a great problem of the youngsters which is accompanied with a significant lack of nutritional fibres.
As far as the minerals are concerned, Na-consumption is extremely high in both genders, but the extent is declining with the advance of age. This is the natural consequence of the high salt-content of food available in the supermarkets
The iron comsumption of adolescent girls is far below the recommended level. Among all the children we can notice quite a significant lack of Ca in each age group, especially among the older generations and among those doing sports. The Na-K consumption is quite unbalanced which means a great risk of heart diseases.
Our results make it clear that there is an urgent need to reveal the children's recent health state to give them the opportunity of becoming healthy adults.

The female athlete triad: An educational program for university athletes

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The Female Athlete Triad is a syndrome of interrelated medical conditions that include disordered eating, amenorrhea and osteoporosis. The Triad is of particular concern with female university athletes, and can have detrimental effects on exercise performance, but of greater concern, on health. This syndrome is largely due to an eating related energy deficit that causes metabolic hormonal changes, reproductive suppression, and bone loss that has been demonstrated to be irreversible. More recently observations that the Triad is more and more frequently observed outside the athletic arena in recreationally physically active women demonstrates a need to broaden surveillance, increase awareness and develop prevention strategies. Many female athletes are unaware of this syndrome and as a result steps must be taken to promote awareness of the Triad in an attempt to decrease its prevalence. Mandatory information sessions, and distribution of posters and pamphlets are proposed as a method of education and prevention. These methods will be introduced at the University of Toronto and subsequently measured through a pre and post intervention questionnaire to test their effectiveness.

Application of nutrition supplements in elite and recreational sports

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Supervisor: Dr. Gábor Pavlik

The ideal way of increasing sport performance, increasing training efficiency according to health care and doping regulations.

Aim: data aquisition of nutrition supplements application (as a legal way of increasing performance) and their specific characteristics in elite and recreational sports (hobby sport) emphasising hungarian relations during years 2004-2005.

Method: my researcs was divided into two parts:

First stage involved volunteering interviewees to fill a questionnaire in person which contained 12 points in Hungarian or in English. Age or gender restrictions were not applied. In some cases the gained data were completed with personal interviews.

271 individuals took part in the first stage: 210 Hungarians and 61 foreigners. The Hungarians of the studied frontline sportsmen represented 10 various sports, while the foreign sportsmen were all of athletics. Those of the studied Hungarian recreational sportsmen were either runners, body-builders or represented various different sports at the same time. The foreign recreational sportsmen were runners or practicing running and some other sports at the same time.

Second stage of the research examined the background of starting the application of nutrition supplements and their dosage and analyzed the factors prior to nutrition supplement applications.

The former 12 and 7 new qestions had to be answered during the process. Only those of the Hungarian elite and recreational sportsmen (25-25) were tested who claimed taking at least two different supplements.

Results: In the bunch of sportsmen there is a huge need for putative or real performance enhancement methods.

Regular consumption of nutrition supplements has an outstanding role in this range. The asked sportsmen admit that 86% of the Hungarian professional athletes, and 41,81% of the Hungarian non-professional athletes, 39,21% of foreign hobby athletes belong to this group.
The variation and numbers of used supplements are not satisfactory, it doesn't take the health into consideration in case of Hungarian sample. 59% of people report the use of 3-8 nutrition supplements at the same time. This values are 21,7% of the Hungarian hobby athletes and 9,8% of the foreign hobby athletes. 111 Hungarian elite athletes named 124 supplements, 71 Hungarian hobby athletes named 80 supplements, 9 foreign athletes named 19 supplements, 20 foreign hobby athletes named 24 supplements, what they are using.
In certain cases the relationship is not obvious between the use of nutrition supplements and performance enhancement. Even the professional athlete's cultivation is not as proportional as demand level. 60% of professionals, and the 21,7% of non-professionals reported, that there is no relationship between the choice of nutrition supplements and the actual training period. Sport professional consultation and medical checks are also missing from the preparation of the athletes about the use of nutrition supplements.
Conclusions: We think it is very important to improve constantly the knowledge of sport professionals and athletes on how to use the nutrition supplements. According to athletes' own admissions, they decide to start using different supplements and they also have influence on dosage.
It is really necessary to build a systematic prevention, and to establish health perception to avoid the obliged use of supplements caused by advertisements and other psychological reasons. We have to obtain at least in the elite sport that professional athletes use medically checked, physiologically requested and really needed nutrition supplements.

Combating childhood and adolescent obesity: Comparing fitness levels and body composition of Hungarian children to American children

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University of West Hungary, Győr, Hungary

Supervisors: Dr. Ferenc Ihász, Hungary and Dr. Kevin Finn, USA

The 1996 Surgeon General's report, *Physical Activity and Health,* provided a comprehensive synthesis of research findings that conclusively demonstrated the health benefits of participation in regular physical activity. It is estimated that as many as 300,000 premature deaths per year in America can be attributed to lack of regular physical activity. Only tobacco use has a more prominent role in preventable deaths in the United States. Recognizing the important contribution that physical activity provides to the overall public health of the nation, physical activity has been identified as one of the nation's ten leading health indicators in *Healthy People* 2010, the national health objectives. Yet, despite the overwhelming evidence documenting the benefits of regular physical activity for both adults and children, a substantial number of children and adolescents are not regularly active and fail to meet recommended levels of physical activity participation. Moreover, overweight and obesity has become a major health problem throughout the world, reaching epidemic proportions in some countries. In the

United States, the incidence of childhood obesity [defined as BMI ≥ 95th percentile of the CDC age and gender specific BMI charts] has more than doubled for preschool children aged 2 to 5 years and adolescents aged 12 to 19 years, and it has more than tripled for children aged 6 to 11. It is estimated that approximately 9 million children are obese.
Efforts to decrease the prevalence of obesity in children and youth requires strategies that promote energy balance at a healthy weight while protecting overall health, growth and development, and nutritional status. While numerous strategies have been proposed that offer promise for arresting this serious public health problem, there is limited high-quality evidence to confirm the efficacy of the many programs currently available. Five obesity prevention and healthy living programs for children and adolescents have been developed and implemented by the *Youth Fitness & Obesity Institute* of the University of Northern Iowa – USA. More than 5,000 Iowa children have participated in one or more of the programs to date. Although definitive conclusions are not possible at this point, preliminary data suggests that each of the programs shows great potential in the fight against obesity.
In order to make any more strides in preventing and decreasing the childhood obesity epidemic occurring in America today we must understand why it is happening at such overwhelming levels in the United States and not in other countries. In countries like Hungary, obesity is on the rise therefore, it is also pertinent to determine the reasons for the rise in childhood obesity as soon as possible so that we can help countries like Hungary to implement our prevention programs and subsequently stop an epidemic from happening before it starts.
A research study has been set up to compare fitness levels and body composition of 400 boys and girls ages 14-16 in Hungary from February to April 2006. The same tests will be conducted in Iowa from April to June 2006. In July comparisons and conclusions will be made. The study includes the use of the Fitnessgram produced by the Cooper Institute. Following the Fitnessgram program the students will perform the pacer test (a cardiovascular endurance assessment). Along with the fitness testing the students will undergo a body composition analysis. This will include a seven site skin fold measurement to determine body fat percentage.

Differences in motivation among athlets in recreation

Gabriella Koppány, Katalin Vermes
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In this paper, we are coping with recreational sports, health keeping, and motivation. Our objectives are the joung adults, and the adult generations.
We processed the data of a questionnaire, made by us, and we are tending to draw conclusions from the results of this questionnaire.
In our research we examined two categories. The first category is constituted by the recreational athletes who, although do not practice on a regular basis, participate in road running events. The members of the second category do sport in recreational sports clubs, and they are supervised by professional coaches. They are preparing by systematic and organized practices to miscellaneous road running events.
Our hypotheses are that the two categories mentioned above have different motivations for participating in races and for doing practices. They are controlled and motivated by different ideas during the race, as well.

Thus, in our empirical research, on the one hand, we are analyzing how varied habits the recreational athletes have. On the other hand we want to point out what kind of impact these habits on motivation and health keeping have.

PHYSICAL EDUCATION SECTION

PhD

The research of the correlation between the balancing and attention ability of nursery school children aged from 5 years to 6 years 4 months

Katalin Rácz, Betty Barthel, Rita Földi
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Nowadays, the generative and therapeutic treatements state as a leading principle, that the sensations connected to motions take an essential part in the early organization of the nervous system. According to the word of Mr. Katona (1986), the state of the balancing system indicates the maturity of the Central Nervous System. The importance of this system has been confirmed by Földi (2004). She studied hyperactiv children and came to the conclusion, that positive correlation can be shown between balancing and attention ability.
We started our researches along these conceptions and results and tested the capacity of balancing system of 30 nursery school children aged from 5 years to 6 years 4 months. We composed our hypothesis in the following way: 1. We suppose, that there is not any connection between children's balancing capacity and their attentiojn. 2. According to our supposition, the results of boys and girls do not differ significantly. We solved the surveying of the static balancing with Oseretzky's test. The children had to executed these tasks with open and closed eyes. The study of dinamic balancing system happened with catching the ball after 180 and 360 degree turn. We scored the succesful executions, the points were added. We examined the children's attention from two respects: 1. We showed 8 pictures to the people who took part in the research. They had to determine exactly the missing details. 2. During the survey, we marked the attention on Connor' s scale from 0 to 3.
We carried out the analysis of the correlation matrix with the help of the program StatSoft statistica. We used T-test for independent samples to show the difference between the ability of the sexes.

Bachelor – Master

Similarities and differences between Hungarian and Irish models of physical education in general teacher education

Zsóka Halasi
Teacher Training College of Kecskemét, Hungary

Supervisor: Tamás Ulrik

I'am interested in the differences between the Hungarian and Irish teacher training methods.
This is the reason why I had looked at the similerities and differences between in the P.E subject management.

The object of my project is the comparison of the 2 educational systems from the point of view of the offectiveness and success of PE in primary school.
In my project I will compare these two education methods.
In the interview I was interested in:

- number of lessons
- education targets and matter(theory and practise)
- requirements:exams,presentations,reports
- practise(in elementary schools)

If I have enaugh time I would like to speak about:

- coliseums
- sport equipment
- number of classes
- free-time activities
- optional courses

Employed methods:

- analysis of the documents (curricula, course-description, syllabus)
- observation in Ireland: I observed 14 PE lessons, in Hungary 12 PE lessons.
- interview with 4 PE teachers, 3 classroom teachers and 8 students in Ireland. 5 PE teachers, 3 classroom teachers and 10 students in Kecskemét.

At Kecskemét College PE teaching practice is the dominant including technical and conditional requiremens. It comes from the tradition, contents and requirements of the Hungarian PE teaching.
In Ireland a more independent education can be observed, also the priority of theoratical basis and a playful teaching. In Ireland there is a special emphasis on calling the students intrest to the traditional sports and PA.

Adult health consciousness and behavior or the effects of physical education on adulthood life style in Hungary and Finland

Anikó Huszár
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Budapest, Hungary

Supervisor: Dr. József Bognár

Statistics concerning health data we often show outstanding results of Finland, including birth accepted rate and high level of health conscious physical activity. Unfortunately, it is not a typical characteristic of Hungary. In my presentation I wish compare some health and physical activity related features of the two countries, including health conscious behavior, physical education classes and extracurricular sport activities, and adult sport. 120 questionnaires were filled out by Finnish and Hungarian adult people to map their everyday activities, the number of working hours, and the time spent to sports. Likewise, we examined how adults considered general and specific health issues and specifically what they did to fully enjoy their lives. From a pedagogical viewpoint, we viewed personal reflections of physical education classes, PE teachers' roles in the process, and affects of physical educations to their present life as the most important the points. It seems clear that money is not of absolute importance in determining someone's life style, but certain societal and family values might contribute to it a lot more. Our aim is more

than merely praising Finnish life, but rather searching for better ways and methods to promote healthy active life in Hungary as well.

Training and sporting habits of 11 and 18-year-old girls attending state and religious schools (A comparative analysis)

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Supervisor: Dr. Pál Hamar

Physical activity, training and sporting habits of primary and secondary school students are often examined nowadays. The most dominant activities of spending free time are the basic body culture habits, the sports, the free exercises, and physical training. It was examined by many of the specialists. The works of Bakonyi (1986), Takács (1989) Edit Nagy-Biró (1994, 2004) and Hamar (1997, 2004) can be mentioned without the claim of fullness. One reason of the increased interest is that the schoolchildren's state of health and level of fitness show a decreasing tendency.

The originality of our comparative investigation lies in the fact that the comparison was carried out in schools, where the pedagogical principles and the teaching methods were totally different. The question was: Is there a difference between the training and sporting habits of 11 and 18 year old girls, depending whether they attend a state or a religious school.

The number of tested students (n=480) studied at the primary and secondary schools of nunneries belonging to the 'Miasszonyunkról elnevezett Szegény Iskolanővérek' order from Budapest and from the countryside. To investigate the physical activities and sporting habits the time balance was selected from the pedagogical methods. During the data processing the students' „active" time was calculated for a week and a day. We did it in terms of percentage.

Development but which way? Forwards or backwards?

Dóra Gergelics, Viktória Zámbó
Eötvös Loránd University, Budapest, Hungary

In our paper we tested the physical ability of the age groups of 14 – 15 years old children in a country town, Bonyhad.

We were wondered if loads of physical educations produces on effect on the development in what direction.

We made examinations in three different dates (May 2004, September 2004 and May 2005).

According to our supposition the biological maturing (the hormonal changing) and the systematic load on the physical education class or the lack of this, have an influence on the development.

The only question is in which direction?

Teaching swimming in eyes of children

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Budapest, Hungary

Supervisor: Dr. Ákos Tóth

Talking to children participating swimming lessons have arisen the interest towards the problem: how 5 and 7-year-old children experience the 'first phases' of teaching. The swimming teacher is aware of the special material to be taught, the methodology of teaching, the importance of getting the children accustomed to water, and the principles of learning the movements and techniques of different swimming styles. The answer is looked for the question how this process is accepted from the children's aspect. Consequences are drawn from the answers given for 10 different questions, as e.g. why is it important to learn swimming, what is the duty of the teacher in the swimming pool, is there anybody who is afraid of water, etc?
After summarizing and evaluating the answers, some new viewpoints are explored, which might help the better understanding of the relation existing between the child and the teacher.

Teaching progression of the hurdle running (From beginner up to the top level)

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Supervisor: Dr. László Sztipits

In our working we want to demonstrate the conditional and technical excercises for preparing the real hurdle running.
We want to accentuate that at different age group it is important to keep the good balance between the conditional and the technical excercises.
At the early age (10-12 years) we focus for bravery and the good rhytm of the running.
After that have to improve the conditional abilities (dynamic strength, speed).
Paralell with these tasks it is also important increase the level of flexibility.

Models for teaching physical education to institutionalised children

Constanta Urzeala, **Monica Stanescu, Adina Geambasu**
National Academy of Physical Education and Sport, Bucharest, Romania

The problem of the institutionalised child represents a continuously preoccupation for the specialists because of the social institutions effects on the biological, motor and psychological development of the individual.
This research tries to identify some psychological, social and behavioural characteristics of this child and to find out how these modifications influence the participation to the physical education classes.
The sample was formed by 15 children aged between 7 and 8 years, placed in the „Saint Ecaterina" Social Services Center, Bucharest.

The basic idea for our research was that different playing forms for practicing physical exercises may lead to the improvement of the lives quality of the institutionalised children through the increasing of their health and effort capacity, creating the necessary conditions for living outside the institution and socializing with other people.
There were used, as research methods, the experiment, the observation, the social investigation, the Progressive Raven Colour Test.
The research purpose was to offer some teaching education models to be applied in institutionalised children's physical education classes in order to explore the physical exercises social influences.
The steps of our research were:

The primary evaluation of the children psychological, motor and social development level (February-March 2004)

The sustained experiment (March - July 2004)

The final evaluation (October 2004)

The results of this research lead to the conclusion that in the institutionalised child physical education classes should be used methods for positive discipline, to be established and followed cognitive and affective objectives and the child should be more involved in the lesson.

Games contribution to the moral development of institutionalized children

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Physical educations and sports have many traits that recommend them as important tools in moral education of children. These traits result from the content and from the social relationships that appears during the physical activity, and especially, during the games.
In this research we verify if the positive managerial approach of children behavior during the physical education activities contribute to the development of moral aspects of children personality.
The sample of our research includes 15 children, aged between 7 and 10 years, that lived in the Social Centre "Saint Ecaterina", in Bucharest.
As research methods we used observation, inquiry and formative experiment and as teaching methods we established a strategy based on different motor games. The games were selected by different criteria: the objects presence (possession or obtaining), the adversity relations through the players and through the teams.
The conclusions confirm some aspects already known in the speciality literature, but in the same time put in evidence some methodical indications for the teaching strategies used for increase the moral behavior of the children. Those teaching strategies based on positive management approach present some advantages: reducing the misbehavior, creating a positive learning environment and increasing the teaching time.

ADAPTATION TO EXERCISE SECTION

Bachelor – Master

Giving Up Promising Sport Career in Puberty: The case of gymnastics

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Supervisor: Dr. József Bognár

It is well known that artistic gymnastics has a high rate of leaving the sport during puberty years (12-16). If one wants to find out the reasons for not continuing the sport at this age, it is important to examine the physical, psychological, intellectual, emotional, and social factors. Rapid physical changes in growth and the translocation of the gravity centre make it harder to maintain balance, to learn new elements, and to perform the previously known skills. The intellectual-emotional-social factors also seem complex, the teenager revolts against the rules and coaches have difficult times handling these issues. Obviously, these problems could have variations in certain phases of the puberty, and tend to be different between the two genders. Hence, the purpose of this presentation is to propose solutions for coaches in keeping talented gymnasts in the sport in and after puberty years. We would like to emphasize coaches' experience and knowledge in the broad areas of sport pedagogy and psychology. In our qualitative study, we systematically interviewed four successful gymnastic coaches. In addition, we interviewed four gymnasts, who gave up promising gymnastic carrier during puberty years. Our results show that coaches lack of appropriate personal and professional attitude, which is crucial these years and demonstrate misunderstanding about this cohort group's psychological and pedagogical parameters. Besides the significance of psycho-somatic changes in teenage years, gymnasts seem to leave the sport mostly due to burnout and starting off new sports. We can conclude that it is important to understand and utilize pedagogical and psychological knowledge in puberty, to have empathy, and the all around pedagogical influence of the coach.

The level of jumping and speed abilities in girls doing figure skating

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Supervisor: Dr Tatyana Polishchuk

Figure skating is one of the most difficult and most spectacular sport disciplines. It supports proper motoric and somatic development of girls. It shapes speed, agility, flexibility, physical endurance, jumping ability and harmoniously develops all muscle groups.
Figure skating is an early-age specialization discipline in which comprehensive training period is very short. Practicing this elegant sport usually begins at the age of five or six, although we may nowadays observe continued decline of selection age for competitive figure skating, even between third and fifth year of age. It means that a very young child

is immediately involved in a highly profiled sports training. This early specialization requires four or five hours of daily training, from four to six times a week.
The most important features that decide about sport result in figure skating are the jumping ability and speed.
The aim of the study was the analysis of speed level and jumping ability level including jumping stamina of girls who practiced figure skating.
The sample consisted of 24 girls in two age groups: 8-12 (Group I) and 13-16 (Group II). The sample included Polish youngsters and junior champions and vice champions and a present senior Polish champion.
Jumping ability level was assessed with a use of a tenzodynamography method applied to evaluate strength and speed parameters of human movement system through the analysis of a vertical jump on a dynamometric platform. The test included five tasks. The general aim of each task was executing maximal height of vertical jump and maintaining the height in all subsequent jumps.
The first task: a single high- reach stand jump with complete hands' swing. The second task: a single jump high- reach stand jump without hands' swing., the third task :a single high- reach stand jump with single rotation and with complete hands' swing. the forth task: a single high- reach stand jump with double rotation and with complete hands' swing. the fifth task: a set of jumps without hands swing (hands on hips) with 3 sec. intermissions between jumps.
The course of vertical strength of platform reaction served for calculating: the height move a body mass center (jump height) [m], maximal strength [N], maximal speed [m/s], mean and maximal power [W], swing depth (knee bend) [m], strength acceleration [N*s] and executed work [J]. These values were compared for two age groups and for the mode of jump execution.
RT reaction test from Viennese Tests System, allows evaluating two speed components: mean value of reaction time and mean value of simple move time. With test reaction there was used a simple yellow light stimulus on a display activated in irregular time intervals.
Analysis of a value of high-reach swing jump in both groups revealed that group II reached higher mean values of all investigated parameters. Only maximal speed was higher in girls from group I. Jumping stamina is on a good level but mean and maximal power should be upgraded.
Analysis of a speed components ontogenetical development on investigated female figure skaters revealed that this feature development follows the natural patterns of physical fitness developments.

The development of men's swimming in the last 17 years

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Supervisors: Dr. Csaba Sós, László Csaba

Swimming is one of the most successful sport vin Hungary. By the time the athletes get to a world championship, they have worked a great deal and devoted many hours to training. It is good for them to know, what result they can expect depending on their performance.

Our aim is to predict the time that is needed to get into the final and to win in the next Olympic Games in different events by the method of regression analysis. We also examine the fulfillment of the times in Seoul (1988), which were predicted by dr. Miklós Zsidegh.
The method I used is called multiple regression analysis. It means that I collected the time results of the winner and the qualification times for the finals in the events from the record books of the international championships since 1988, and I predicted the returned times of the Olympics in Beijing.
According to the results the times predicted for 1988 fluctuate in a broad scale. Based on the results of the regression analysis, in not every event one needs better time to win.
My conclusion is the following: the fluctation is still present in the predicted times.

Preparation of the aerobic capacity in second division soccer team (MTE)

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University of West Hungary, Győr, Hungary

Supervisor: Dr. Ferenc Ihász

The purpose of the present work was to analyse how a specific and individualized training program could improve the aerobic capacity in soccer players. We want the verify the impact of the training program in the performance of the players of a Second division soccer team (MTE).
To judge the physical condition we made two body weight measurements (one at the beginning and another at the end) and we used 20-meter-shutle-run test from the original technique by Léger and Lambert (1990).
Significant improvements of the cardio respiratory endurance in the majority of the athletes were observed. The study showed progressive improvement in the performance of the players. In general we also verified that the average body weight of the team decreased.
When dealing with aerobic capacity and body compsition we concluded that a well planed, specific, and individualized training program can bring several benefits to the players.

Reliability and efficiency of service in competitive activity of elite tennis-players of the world

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Introduction: Tennis belongs to the most dynamic kinds of sports. It changes as a result of improvement of equipment, physical and technical-tactic readiness of the players and shows higher requirements to all components of the game. One of the basic features of modern tennis is the growing speed of game, which is caused by a number of factors and, primarily, by increased speed of a start of a ball, especially at performance of service, the most difficult technical element in the coordination plan. Success of use of services depends not only on structure of movements, but also on the fast or slow covering of tennis-court during competitions.

Therefore the **purpose** of the given work is the study of reliability and efficiency of service in competitive activity of the world elite players on courts with different coverings. It has both theoretical, and the practical importance.

Methods: The following techniques of research were used in the study: the analysis of the references, pedagogical supervision with use of special shorthand record (Jykov G.K., 1983) technical-tactic records during competitive activity, videotape recording of the elite players matches and its processing, by methods of mathematical statistics.

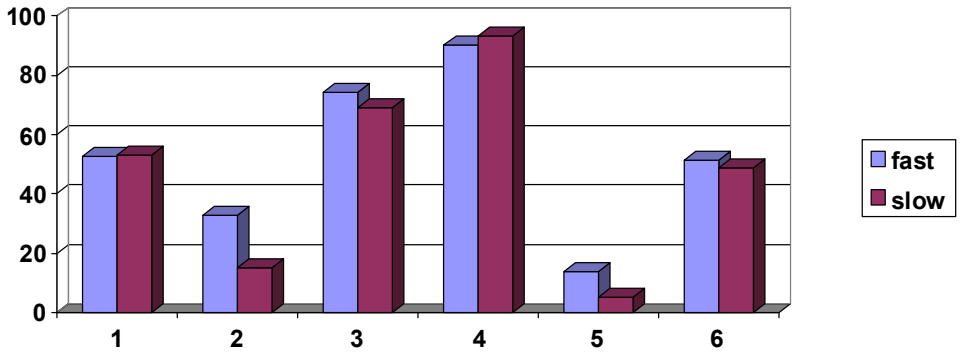
Results: The service in modern tennis has turned into a powerful means of attack and taking of the initiative. Many players even from the second hundred give speed more than 200 kms / hours to a ball. These are average speeds for the players of the first ten. Record speed of a start of a ball at service (245 kms / hours) was shown by American tennis-player A. Roddick (second racket of the world) in 2004. Such gun service leaves few chances to the opponent for successful answering stroke. At the same time the loss of even one game at service can result in a loss of the whole set.

The carried out processing and the analysis of special videotape recordings of competitive activity allows to define a level of technical-tactic readiness of top tennis-players of the world.Thus, the quantity of services of elite tennis-players on a fast covering comes to 28% (from total of technical-tactic actions) and on a slow covering to 22,1%.

Reliability of the first services on different coverings does not practically differ. Efficiency of these services is more than twice higher on fast courts.

Is is revealed, that reliability of the second service, both on fast, and on slow courts (93,2%) essentially grows in comparison with the first service (52%). The efficiency of the second service is almost 3 times less in comparison with the efficiency of the first one. Besides, efficiency of the second service on fast courts (13,9%) is almost 3 times higher than efficiency of the second service on slow courts (5,4).

The diagram of reliability and efficiency of services (in %) of elite tennis-players: 1 - reliability of 1st service, 2 - efficiency of 1st service, 3 - % of balls won at 1st service, 4 - reliability of 2nd service, 5-efficiency of 2nd service, 6 - % of balls won at 2nd service.



Three basic styles of game are revealed among the investigated tennis-players: attacking, counter-attacking and universal. It is visible from the obtained results, that **universal style is** prefered by not less than three players among the players of the first ten. They perform one fifth of all strokes by volley on a fast covering (20%) and 50% of groundstrokes. On a slow covering these players prefer more flexible tennis, more groundstrokes 57% and carefully prepare an approach to net. The quantity of volley strokes decreases to 14%.

The players of **attacking style**, use an approach to net after service on a fast covering twice less often - 10%, they spend more time on a base line (54,7%). Their groundstrokes on a slow covering make already 61% and 3% of volleys from all strokes.
Tennis-players, using positional game with long plays of points and unexpected round strokes from a base line, with rare (often compelled) approachs to net are the players of a **counter-attacking style**. So on fast courts, they perform 60,5 % groundstrokes during a match, they perform more on a slow covering -67 % and only 4-5 % of volley strokes.
The reliability of the first and second service does not practically depend on a type of covering and does not certainty differ at the players of various styles of game.
The highest efficiency of the first service is marked at the players of universal style on fast courts (50%). It is more than twice less on slow courts (22%). The efficiency of the first service on fast courts at the players of counter-attacking and attacking style is twice less (28,3% and 23,5%) accordingly. Lower meanings of efficiency are observed at their performance of the first service on slow courts (13% and 11,5%) accordingly.
The efficiency of the second service is twice less, than first at all tennis-players on fast courts and 3-4 times less on slow courts. The best efficiency of the second service is marked at the players of universal style on fast courts (23%). These indices are more than twice less on slow courts (10%). The efficiency of the second service on fast courts is much less at the players of counter-attacking and attacking style (10,7% and 9,5%). The efficiency of the second service on slow courts is minimal and equals 3,3 %.
It is possible to make the following **conclusions** and to determine directions of perfection of elite tennis-players preparation as a result of the carried out research.
1. Reliability of the first service on different coverings does not practically differ. Efficiency of these services more than twice higher on fast courts. Is is revealed, that reliability of the second service, both on fast, and on slow courts (93,2%) essentially grows in comparison with the first service (52%). The efficiency of the second service almost 3 times less in comparison with efficiency of the first one. Besides, the efficiency of the second service on fast courts (13,9 %) is almost 3 times higher than efficiency of the second service on slow courts (5,4 %).
2. Increase of efficiency of a fast attack and especially increase of activity and efficiency of the first service at the players of attacking and counter-attacking styles and efficiency of the second service on courts with different coverings should be the basic directions of perfection of elite tennis-players preparation.
3. The increase of efficiency of an attack is possible due to activization of services; increase of speed of a start of a ball; use of various variants of spinning; accuracy and stability of the hit.
4. The methods of registration and estimation of competitive activity of tennis-players, used in the present study, as one of the forms of the objective pedagogical control, allows to reveal lacks of technical-tactic preparation of tennis-players, gives coaches material, providing the directed development and increase of a level of competitive activity, and also makes necessary corrections during the activity itself.

Survey of technique of Olympic and few Hungarian top paddlers

Balázs Barina
University of Pécs, Hungary

Supervisor: Dr. Miklós Bánhidi

I am studying physical education and racing at a canoeing club in a little town called Tolna (in Southern Hungary). In this club the most successful members are professionals, participating in different international competitions. The main goal of my study is to try to find a way to increase physical abilities and to reach better results at the competitions.
To find some ideas we started a research program. Goals of the survey were:

- to analyse the olympic finals,
- to measure the most successful members of our team,
- to compare data with the world best racers.

After few measurements we found the following results: the times and stroke scores of our team are high enough to reach good results. We need to improve our strength to get better flatwater results. To win a medal on the Olympic Games in K-1 1000 m you need to do the 250 m under 51 s with 93-100 strokes, in K-1 500 m you need to do the 250 m 48 s with 98-103 strokes.

Evolution of decathlon with focus on world competitions

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Decathlon is one of the most colourful, the most famous, and at the same time, the hardest / the most difficult events in track and field.
The 9000 point dream limit has been broken, and the elites have lined up with the world record holder. Competitions have become more exciting, competitors are tying for the first place, and it is often made clear only after the last event.
Answer has been searched for the question: how the most prominent decathletes orientate themselves in each event of the world competitions, and how these events are related to each other.

- The following questions were raised:
- how did the results of the first top decathletes of the world change and what are their orientations
- how did the importance of each event change
- what correlations can be found among the events
- what conclusions can be drawn from the results of the investigation

The hypotheses were as follows:
A development in the throwing events are expected, with a special focus on javelin throw
Relations resulting from the speed of motions there might be correlation between long jump and shot put, hurdles and javelin throw, and discus throw and shot put.

Former track and field experiences influence beginners' pole vault learning

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Introduction: One of the key points beginner pole vaulters must deal with is whether their dominant hand is in consonance with their opposite-side takeoff foot. This cross-dominance (**CD**) is an integral part of the vaulting technique. However, if an athlete is same-side dominant (**SD**), e.g., a right-handed athlete uses the right foot for takeoff in long/high jump, he has to either use the non-dominant hand for upper (dominant) grip on the pole, or execute the takeoff from the non-dominant leg. The objectives of this study were to gain information of the participants' subjective feelings about the effect of their former track and field experiences on the learning process, to investigate the learners' decisions on the bilateral hand/foot issue, and to highlight the chosen approach length of the run-up.

Methods: Ninety-one well-trained physical education university students (47 women and 44 men) participated in an eight-week/eight-lesson unit on pole vaulting. None of the subjects had previous experience in this event, but all of them were proficient in relevant track and field and gymnastic skills. During the lessons they participated in traditional learning drills, followed by commonly accepted short-approach (4-6-8-10 running strides) vault attempts, and finally, a short-approach pole vault competition (8-10 running strides).

Besides registering their vaulting results, a questionnaire was administered in order to find out the subjects' opinion about the relationships between their learning progression and initial motor skills in track and field and gymnastics, their decision on the dominancy of hand/foot, and their preferred approach length.

Results: By the end of the eight weeks the women averaged 2.10+-0.17 m, whereas the men's average result was 236+-0.20 m. Fifty percent of the subjects indicated that their former high jump experience had the greatest positive intertask transfer on their learning progression.

The long jump was named as the most important even by 38.9% of subjects. In addition, 83.3% of the subjects appointed jumping ability to be more important than gymnastic abilities. Twenty-three participants were SD, but only 4 reported difficulties choosing the takeoff foot-upper hand combination. Eighteen (78.3%) of SD decided to change their hand position and to do the takeoff from their long/high jump takeoff foot in order to obtain the proper technique, while 5 (21.7%) performed the takeoff from their non-takeoff foot. The majority of the subjects (61.5%) felt the 8 strides as the most effective length for their approach, while others (20.9% and 15.4%) preferred 6 and 10 strides, respectively.

Development of sport results based on 100m dash for disabled athletes in Paralympic Games 1976-2004

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In the last few years we observe significant development in sport for disabled athletes. Individuals with disabilities achieve higher and higher level of professionalism and therefore their results systematically improve. Like able-bodied athletes disable persons have to qualify if they want to take part in paralympics.
Athletics for individuals with disabilities is the one of the paralympics discipline that brings the biggest number of medals. It is driven not only by the large number of sportsmen but also by complicated system of disability classes that divides each disciplines into many events. Therefore that paralympic games become less attractive. That is why some people bring ideas to modify system of classification to decrease number of classes. However, all these modifications must not break the basic and not to discriminate any player by the kind of his disability. In other words the place taken in the competition, have to reflect only skills and sport level without being influenced by the differences of disability of the athlete.
The same trends can be seen in one of the paralympic events which is 100 meters dash. Complicated system of classes result in the situation in which we have 20 sub-classes for 100 meters dash. To make competition more interesting for the spectators and easier for organizer to support it is crucial to simplify the classification system.
The main purpose of this research was to analyze and summarize the results of 100 meters competitors in different disability classes. In further steps was use that information to evaluate current classification system criteria. The question is it is possible to decrease number of disability classes.
We will base our research on the results achieved by the best disable athletes in the years 1976 – 2004 (Paralympic Games).
The present study proved that results of 100 meters dash systematically improve and that there is no significant difference between some disability classes. That will let make conclusions concerning justification for such high number of classes that take place today.

The impact of the disability movement of the 1970s on the transformation of physical activity in North America

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Among the various social movements of the 1960s and the 1970s, the disability rights movement is often overlooked. This paper considers the effects of that movement on sport, physical recreation, and physical education in North America. With regard to competitive sport, the paper focuses on changes made at the government level including specific funding for disability sport, and the growing community awareness of disability sport. In addition, the international spread of the disability rights movement is evidenced by the growth of participation in, and the number of countries represented at the Summer and Winter Paralympics and Special Olympics. The growth of physical recreation

opportunities is documented through the design and development of adapted equipment and facilities, and the removal of many barriers to participation by persons with a disability. There was also growing recognition of, provision of opportunities for, and the 'mainstreaming' of persons with a disability in education and physical education. The paper concludes by examining how the disability rights movement has caused us to critically examine the problems with the socially constructed nature of physical activity and sport, and to recognize the ways in which society has continually used and supported "able-bodied paradigms" in our definitions of healthy bodies and effective physical activity.

the level of physical efficiency of individuals with disabilities in Polish wheelchair basketball league

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Background: Wheelchair basketball is claimed to be the most popular paralympic team discipline. Nowadays, there are over thirty national teams competing for the champion's title of Europe. The sport level in this discipline is still increasing, and a sport success can be achieved only with the perfect training of participants.
Training staffs are still searching for the best practice methods, which will make possible to achieve a victory in sport competitions. The very important aspect of training is to create the proper system of its control. One of the methods of checking the competitors during training cycle is estimation of their physical efficiency.
Purpose: The purpose of this research was to estimate physical efficiency of wheelchair basketball players. The another goal was also to compare the physical efficiency of players with refer to the classification system to the start classes (the functional abilities) and a kind of disease.
Participants: There were estimated twenty competitors participating in games of the Polish League of Basketball on Wheelchairs in season 2005/2006. All players were classified in range from 1 point (the competitors with the smallest functional abilities) up to 4,5 (the competitors with minimum disabilities). Additionally, competitors were divided into two groups. To the first group included competitors from category A (classes: 1-2.5 points) which was characterized, among other things, by a weaker stabilization during ride on a wheelchair. Into category B (classes: 3-4.5 points) there were put competitors without problems of trunk stabilization during basketball game on wheelchairs.
Methods: To estimate physical efficiency there were used following tests of general and special-technical physical efficiency: a ride on a wheelchair on the distance of 20 meters, a ride on a wheelchair in the period of twelve minutes (modification of the Cooper test)**,** a passing the basketball with both hands from the chest, a slalom on a wheelchair with and without a ball, a shots accuracy and the force of a hand grip**.**
Results: The results of these tests show the differences between players from A and B category. The tests that were done corroborate that there is a difference between some groups of diseases. But the results do not show any significant statistical differences between some functional classes of basketball players on wheelchairs.