

**SEMMELWEIS UNIVERSITY
FACULTY OF PHYSICAL EDUCATION AND SPORT SCIENCES**

BUDAPEST, HUNGARY



THE 16TH INTERNATIONAL CONGRESS
ON SPORT SCIENCES FOR STUDENTS

BUDAPEST, APRIL 23-24, 2004.

NOTE: THE TEXTS OF RESUMES ARE PRESENTED IN THE SAME FORM THEY WERE SUBMITTED.

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STUDENT UNION, SEMMELWEIS UNIVERSITY (TF)

RESTAURANT ZSOLTUDVAR

COCA – COLA BEVERAGES

Do you want to be a great researcher?

Here is one recipe, which created maybe the biggest genius ever, Leonardo da Vinci. You just have to keep to life according to the following principles.

Curiosita: An insatiably curious approach to life and an unrelenting quest for continuous learning.

Dimostrazione: A commitment to test knowledge through experience, persistence, and a willingness to learn from mistakes.

Sensazione: the continual refinement of the senses, especially sight, as the means to enliven experience.

Sfumato: A willingness to embrace ambiguity, paradox, and uncertainty.

Arte: The development of balance between science and art logic and imagination. Whole-brain thinking.

Corporalita: The cultivation of grace, ambidexterity, fitness and poise.

Connessione: A recognition of and appreciation for the interconnectedness of all things and phenomena. System thinking.

Dear students, welcome in Budapest at the meeting which influence the fate of sport science in the region. Think as Leonardo!

Prof. Zsolt RADÁK
Vice-dean

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PROGRAM

April 22, 2004 (Thursday)

Arrival to the Student Hotel at the Faculty of Physical Education and Sport Sciences (TF) of the Semmelweis University at Budapest
Address: Budapest XII. District, Alkotás út 44.

19:00 Dinner at the Student Hotel

April 23, 2004 (Friday)

8:00 Registration (Main Building, room 39)

8:30 Breakfast at the Student Hotel

10:00 Opening ceremony in the Auditorium

Greeting by **Dr. Mihály Nyerges**, dean of Semmelweis University, Faculty of Physical Education and Sport Sciences)

Presentations:

Prof. Zsolt Radák: What made Leonardo a genius?

Prof. Kong Zhao-wei: 21 days of improved exercise performance in Chinese National Runners after altitude training.

László Szalma: Biomechanical analysis of Track and Field Jumpings

12:00 Round-Table Discussion for Professors, Main Building, Council room

13:15 Lunch at the Student Hotel

14:00 Sections

- Sport Psychology (Main Building, room 43)
 - Exercise Physiology & Nutrition (Main Building, room 62)
 - Ph.D. / Social Science (Main Building, Assembly Hall)
- Coffee-breaks are in the Main Building, room 39*

19:00 Dinner at the Restaurant Zsoltudvar.

Address: Budapest XII. District, Str. Zsolt 8./b

Menu: Green Salad

Turkey with Budapest Style

Dessert

1 glass wine or beer or soft drink

Note: A separate vegetarian menu will be available.

Additional food and/or drinks will be at your own cost.

April 24, 2004 (Saturday)

8:00 Breakfast at the Student Hotel

9:00 Sections

- Sport & Quality of Life (Main Building, room 62)
 - Adaptation to Exercise (Main Building, room 43)
 - Kinesiology & Sport Medicine (Main Building, Assembly Hall)
 - Ph.D. / Life Science (Main Building, Assembly Hall)
- Coffee-breaks are in the Main Building, room 39*

14:00 Closing ceremony (Main Building, Assembly Hall)

Banquet (Main Building, room 43)

16:00 Sightseeing

19:00 Dinner at the Student Hotel

Sport Psychology Section

Friday, 2:00 p.m.

Room: 43

Dr. Katalin Keresztesi (Chair)

Dr. Júlia Pápai, Dr. József Bognár, Dr. Kong Zhao-wei

Key lecture:

1. **Andrius Mikalauskas:** THE PECULIARITIES OF INTERCOURSE BETWEEN ATHLETES AND COACH
2. **Nóra Simóka:** THE CONNECTION BETWEEN FIGHTING ABILITY AND COMPETITION ACHIEVEMENT AT QUALITATIVE FENCERS (ANALYZING THE RESULTS AND THE ASSERTIVENESS)
3. **Jennifer Geddes:** TECHNIQUES OF DEVELOPING SELF-ESTEEM IN PHYSICAL EDUCATION CLASSES
4. **Tibor Noseda, Bálint Komondi:** DOES ACTION-EFFICACY GO TOGETHER WITH SELF-EFFICACY AT COMPETITIONS?
5. **Toader Alina Maria:** CORPOREAL SCHEME'S DEVELOPEMENT OF 7-11 YEARS OLD CHILDREN WITH "AMBLIOPIA"
6. **Bence Takács:** BRANCH OF SPORT PREFERENCE EXAMINATION IN THREE AGE GROUPS OF KINDERGARTEN CHILDREN
7. **Fiona Moola:** "FIGHTING THE DRAGON": THE ROLE OF PHYSICAL ACTIVITY IN THE TREATMENT OF DEPRESSION IN THE ELDERLY
8. **Ákos Gerencsér, Zoltán Vass:** RELATIONSHIP BETWEEN SPORTS AND OPTIMISTIC, PESSIMISTIC ATTITUDE TO LIFE AMONG SPORTING AND NON-SPORTING YOUNG PEOPLE
9. **Dora Gergelics, Viktoria Zámbo:** I COULD IF I WOULD. THE TWENTY BEST EXCUSES OF THE LAZY PEOPLE

Exercise Physiology & Nutrition Section

Friday, 2:00 p.m.

Room: 62

Dr. Éva Martos (Chair)

Dr. Anna Farkas, Dr. József Pucsok, Dr. Carol Rodgers

1. **Zsófia Müller:** DIETARY HABITS OF PREADOLESCENT CHILDREN
2. **Sofronis Savva, Onisiforos Hadjionisiforou, Andreas Photiou:** PHYSIQUE BODY FAT CONTENT AND MOTOR PERFORMANCE IN TWINS
3. **Eszter Völgyi, Lea Kalla:** RUNNING PERFORMANCE IN LEAN AND OBESE BOYS
4. **Trevor Hanel:** ETHNIC DIFFERENCES IN PHYSIQUE AND RUNNING PERFORMANCE
5. **Hermenegildo Ricardo Lino de Sousa, Moreira Paulino Guerreiro Belchior:** ENVIRONMENTAL INFLUENCE ON OUTDOOR ACTIVITIES
6. **Károly Ozsváth:** CHARACTERISTICS OF SEX AND AGE IN EUROFIT TEST BATTERY
7. **Andrea Demeter:** EUROFIT IN HIGHER EDUCATION

Ph.D. / Social Science Section
Friday, 2:00 p.m.
Room: Díszterem (Assembly Hall)

Dr. János Farkas (Chair)
Dr.Pál Hamar, Dr. Katarina Herodek, Dr. Tímea Tibori

1. **Zoltán Vass:** DYNAMIC PATTERNS: THE SELF-ORGANIZATION OF BRAIN AND BEHAVIOR
2. **Ágnes Huszár, Pál Hamar:** COMPARISON ANALYSIS OF THE HUNGARIAN AND AMERICAN PHYSICAL EDUCATION SYLLABUSES
3. **Éva Leibinger:** OPINIONS ABOUT THE ACTUAL QUESTIONS OF CONTENTS AND METHODS OF PHYSICAL EDUCATION
4. **Eszter Baumgartner:** VIEWPOINT AND CONCEPTS OF PHYSICAL EDUCATION TEACHERS AND PHYSICAL EDUCATION STUDENTS: TALENT IDENTIFICATION AND MANAGEMENT
5. **Péter Berkes, Mihály Nyerges:** FACTORS AFFECTING DECISION-MAKING IN HUNGARIAN PROFESSIONAL SPORT SPONSORSHIPS RELATED TO FOOTBALL
6. **Tamás Sterbenz:** TRAPS IN DECISION-MAKING OF SPORT MANAGERS PRACTICES
7. **Gábor Bácsalmási:** THE YOUTH BASKETBALL NATIONAL TEAM'S SELECTION PROCESS
8. **Tamás Sterbenz:** DECISION MAKING PROCESS IMPROVEMENT IN BASKETBALL
9. **László Balogh, Eszter Udvardy:** CONFLICT SITUATIONS IN HANDBALL
10. **Csaba Ökrös:** AN EXAMINATION OF DEVELOPED SITUATIONS FOLLOWED BY UNSUCCESSFUL GOAL-SHOOTING ATTEMPTS IN TEAM-HANDBALL
11. **István Kun :**THEORETICAL APPROACH FOR THE 9-14 OLD SOCCER PLAYER TRAINING METHODS
12. **Gyöngyvér Lacza, Júlia Bősze:** HOW FAR SCHOOLS ARE READY TO EMPLOY LEISURE ORGANISERS
13. **Adrienn Szabó Birher:** ROLE OF BODY CULTURE AND DANCE IN BOOKS OF BIBLE
14. **Antonis Alexopoulos:** SPORT AND THE EUROPEAN UNION: THE CYPRIOT CASE

Sport & Quality of Life Section

Saturday, 9:00 a.m.

Room: 62

Dr. Gyöngyi Szabó Földesi (Chair)

Dr. Katalin Keresztesi, Dr. Mihály Nyerges, Dr. Ruzena M. Popovic

1. **Katalin Rácz, Henrietta Andrejszki** : COMPARATIVE ANALYSIS OF SCHOOL RESULTS OF ACTIVE AND INACTIVE STUDENTS AGED 10-14
2. **Anna Kreisz, Bálint Komondi**: STUDIES AMONG SECONDARY SCHOOL STUDENTS IN BUDAPEST
3. **Eleonóra Murányi**: AFFECTIVITY OF PRIMARY AND SECONDARY SCHOOL STUDENTS TOWARDS SCHOOL PHYSICAL EDUCATION
4. **Noémi Keresztes, Zsuzsanna Pluhar, Bettina Pikó**: MIDDLE SCHOOL AGED CHILDREN'S RELATIONSHIP TO SPORTS ACTIVITY -MOTIVATIONS, PRACTICES AND POSSIBILITIES
5. **Andrea Demeter**: INTERNATIONAL COMPARATIVE STUDY ON LIFE-STYLE
6. **Efstathios Christodoulides**: LEISURE SPORTS OPPORTUNITIES IN CYPRUS
7. **Beatrix Ölschléger, Eszter Baumgartner**: LIFE-STYLE EXAMINATIONS AMONG THE PLAYERS OF THE LEADING NATIONAL MALE HANDBALL TEAMS
8. **Szabolcs Gúth**: NEW CENTURY, NEW GENERATION, NEW EDUCATION
9. **József Nagyréti**: SPORT POLITICS IN THE EU- WHAT CAN BE EXPECTED AFTER THE JOINING

Adaptation to Exercise Section

Saturday, 9:00 a.m.

Room: 43

Dr. Zsolt Radák (Chair)

Dr. Anikó Barabás, Dr. Miklós Bánhidi, Dr. Tarek Farouk Abd al-Samed Mahmud

1. **A.I. Mironenko**: THE BIOMECHANICAL ANALYSIS OF LANDING POSITION IN HORIZONTAL ATHLETICS JUMPS
2. **Éva Fekete**: SOME EXPERIENCE HOW TO INSTRUCT NOVICE POLE VAULTERS
3. **Tziortzis Charalambos**: EXPLOSIVE STRENGTH TRAINING VERTICAL JUMP COMPARISON OF MALE AND FEMALE VOLLEYBALL PLAYERS BETWEEN 18-22 YEARS OF AGE
4. **E.L. Platonova, A.P. Nazarov, Yu.V. Skorin, A.V. Zubkova and M.P. Shestakov**: THE USE OF SIMULATION MODELING FOR ASSESSMENT OF COMPETITIVE ACTIVITY IN TRACK&FIELD JUMPS
5. **Demetris Demetriou, Szilvia Gita**: DETERMINATION OF INTENSITY ZONES AND LACTIC ACID TOLERANCE IN YOUNG (16-18 YEAR OLD) HUNGARIAN SOCCER PLAYERS
6. **André Mateus**: CARTOGRAPHY OF THE SOCCER EUROPEAN CHAMPIONSHIP 2004
7. **Borbála Balla, Orsolya Rácz**: SOMATIC ADVANCEMENT AND MOTOR COORDINATION OF 5-10-YEAR-OLD NURSERY AND LOWER PRIMARY CHILDREN

Kinesiology & Sport Medicine Section

Saturday, 9:00 a.m.

Room: Díszterem (Assembly Hall)

Dr. János Mészáros (Chair)

Dr. Péter Apor, Dr. Judit Faludi, Dr. Dobrica Živković

1. **Polona Palma, Andreja Šteiner, Darja Rugelj**: THE INFLUENCE OF REGULAR PHYSICAL TRAINING ON BALANCE PERFORMANCE AFTER A SPRAINED ANKLE

2. **Éva Zakar:** TOP RESULTS IN ATHLETICS THROUGH TOP REHABILITATION
3. **Ildikó Kanyó:**GAIT ANALYSIS OF PATIENTS WITH HIP ARTHROSIS, BEFORE AND AFTER TOTAL ENDOPROTHESIS (TEP) OPERATION
4. **Zsuzsanna Pluhár, Noémi Keresztes, Bettina Pikó:** RELATIONSHIP BETWEEN PSYCHOSOMATIC SYMPTOMS AND PHYSICAL ACTIVITY IN 11-14-YEAR-OLD CHILDREN
5. **Eszter Sarlós, Éva Bulcsu, Apolka Szentirmay:** THE INFLUENCE OF PHYSICAL ACTIVITY ON OSTEOPOROSIS IN FEMALE UNIVERSITY STUDENTS
6. **Zsófia Onyestyák, Anna Iljicsov:** LACTIC ACIDOSIS, LACTACIDURIA AND CHANGES IN ANION-GAP DURING EXERCISE
7. **J. Witt, E. O'Donnell, S. Thomas, C.D. Rodgers, M. J. De Souza:** DEPRESSED SYMPATHETIC STIMULATION IN AMENORRHEIC FEMALES COMPARED TO EUMENORRHEIC FEMALES AS MEASURED BY HEART RATE VARIABILITY

Ph.D. / Life Science Section
Saturday, at 10:00
Room: Díszterem (Assembly Hall)

Dr. János Mészáros (Chair)
 Dr. Péter Apor, Dr. Judit Faludi, Dr. Dragana Jovanovic

1. **Éva Zakariás:** REFLEX LOCOMOTION – A TREATMENT POSSIBILITY IN POSTURAL DISORDERS
2. **Anna Toldy, Krisztián Stadler, Mária Sasvári, Judit Jakus, Hae Y. Chung, Kyung J. Jung, Csaba Nyakas, Zsolt Radák:** SWIMMING TRAINING AND NETTLE (URTICA DIOICA) RICH-DIET INTERACT WITH NEURODEGENERATION INDUCED OXIDATIVE STRESS
3. **Róbert Szabó, Anna Toldy, Klára Felszeghy, Csaba Nyakas:** EFFECTS OF SWIMMING TRAINING ON BRAIN INJURY-INDUCED BEHAVIOURAL AND LEARNING ABNORMALITIES IN RATS
4. **Izabella Jónás, Judit Simon, Szabolcs Zsigri, Mária Sasvári, Csaba Nyakas:** EFFECTS OF EXERCISE AND FISH-OIL RICH DIET ON CARBOHYDRATE AND LIPID METABOLISM IN AGED RATS
5. **Bálint Komondi:** MOTIVATIONAL BACKGROUND OF THE LONG TIME FLOW-ACTIVITY IN SPORT
6. **Levente Balassa, Katalin Kudar:** RELATIONSHIP BETWEEN STPI-Y SCALES AND LIFE-STYLE DEFENSE MECHANISM INVENTORY MEASURES AT MALE AND FEMALE PE STUDENTS

NOTE: THE TEXT OF RESUMES ARE PRESENTED IN THE SAME FORM THEY WERE SUBMITTED.

Sport Psychology

Andrius Mikalauskas

Lithuanian Academy of Physical Education

THE PECULIARITIES OF INTERCOURSE BETWEEN ATHLETES AND COACH

The Scientific adviser: Assoc. Prof., Dr. Romualdas Malinauskas

Problem. There is known, that to educate an athlete means to educate personality, which seeks for the maximum results in his sports activities for the benefit of society. However not only the results in any activity are important, but also the whole process of seeking. The intercourse of the coach with athletes is one of the main conditioning methods that have a very great importance for education of athletes in sports activities.

The objective of the research – to analyse the main peculiarities of the intercourse between coach and athletes.

The tasks of the research: 1. To explore the up-to-date literature. 2. To identify the main peculiarities of the intercourse between coach and his sportsmen.

The methods of the research: 1. The analysis of the literature sources 2. The questionnaires (the questionnaire about peculiarities of the intercourse between coach and athletes). 3. Descriptive statistics.

Planning of the research: the research was done in the year 2002 and 603 teenagers (from 12 to 14 years) who were members of these sports: boxing, fencing, judo, wrestling, participated in it.

Results of the research. There was found out that 30,7 % as the peculiarities of intercourse between coach and athletes dominates sport themes: conversations about sports news, competitions and etc. According to the results of research the coach plays an important role in the educational process. The behaviour of the couch must be perfect, ethical, because it determines the behaviour of athletes. The knowledge of coach's intercourse had been estimated on the results of questionnaire and is given in the table.

The repatriation of athletes according to their knowledge (in numbers and percentage).

Knowledge	Required	Middling required	Not required
To be sensitive	240 39,8	341 56,6	22 3,6
To be self-critical	221 37,6	348 57,5	33 5,1
To be responsible	216 35,9	350 58	37 6,1
To be in team	222 36,8	346 57,3	35 5,8
To be impartial	198 33,9	370 61,3	35 5,8

Conclusions. 1. The factor of great importance in the process of sports education is intercourse between coach and athletes. 2. The behavior of coach is related with the knowledge based on sensitivity and self-criticism.

Nóra Simóka

Semmelweis University TF, Budapest, Hungary

THE CONNECTION BETWEEN FIGHTING ABILITY AND COMPETITION ACHIEVEMENT AT QUALITATIVE FENCERS (ANALYZING THE RESULTS AND THE ASSERTIVENESS)

Supervisor: Gábor Bognár Semmelweis University TF, Budapest, Hungary

According to our knowledge is the fighting ability absolutely necessary for the good achievement. In absence of this ability, the fencers can not mobilize their knowledge succesfully. We know well the fencers behaviour whithout ambition and its consequences.

The level of the fighting ability is measurable nowadays, and we can find the results in many studies and dissertations. In my study we repeated the measure with 15 men and 15 women the day before the competition and we kept the scores. We pointed it out that the winning place of the fencer counts as a high, medium or low result. We compared the fencing achievement with the mesaured level of assertiveness, too.

I am going to declcare some conclusions.

Jennifer Geddes

Faculty of Physical Education and Health, University of Toronto, Canada

TECHNIQUES OF DEVELOPING SELF-ESTEEM IN PHYSICAL EDUCATION CLASSES

Physical educators have a significant influence on their students' development of self-esteem. Teachers of physical education foster the growth of self-esteem by providing a safe, positive and challenging learning environment while recognizing each student as an individual and maintaining a non-competitive physical education class. The physical educator needs to acknowledge each student's personal needs by designing individualized goals specific to each child's fitness level and ability. Focusing on students' improvement and effort rather than peer comparisons and standards allows for individual differences in skill level and physical ability. This can be done through the use of cooperative games. Setting realistic goals, using positive feedback and remedial help enhance a child's self-esteem and encourage those students who are less skilled. I find this topic interesting because my experience as a competitive figure skater had a significant influence on my self-esteem. Now, as a professional coach, I want all of my students to enjoy skating, feel good about themselves and reach their full athletic potential in a positive manner.

Tibor Noseda, Bálint Komondi

Semmelweis University TF, Budapest, Hungary

DOES ACTION-EFFICACY GO TOGETHER WITH SELF-EFFICACY AT COMPETITIONS?

Supervisor: László Szepesi, Semmelweis University TF, Budapest, Hungary

Question: How do action-efficacy and self-efficacy exist together at 10-14 year old young fencers?

Methods: Action-Efficacy Index (Nagykáldi, 2002) and Self-Efficacy Scales (Schwarzer, 1992).

Sample: N=15 members of a fencing club of a small county town. They do fencing beside increased study standards and do their own competition day by day.

Results: Inside the action-efficacy, there ere unequal parts between the offensive and defensive values in low level performance fencers. This ratio was more equal in high level

performance fencers. There is low correlation between action-efficacy and self-efficacy in this sample.

Toader Alina - Maria

National Academy of Physical Education and Sport, Bucharest, Romania

CORPOREAL SCHEME`S DEVELOPEMENT OF 7-11 YEARS OLD CHILDREN WITH "AMBLIOPIA".

Introduction:

The developement of corporal scheme is due to various factors, such as: kinesthetic sensibility, visual and hearing abilities, intelligence, deftness, emotional experience and the social-cultural environment. One of these factors, visual sensitivity, has a tremendous importance because it daily provides 70% of the stimulations arrived in the brain. A low visual landscape, produces a damaging in the formation of the body's scheme. Our goal is to evidence the possibility of organizing a special intervention in the spear time of ambliop children, for sustaining the process of their education.

Hypothesis:

If they'll apply constantly and gradually, some education stimulus under psychomotor programmes, then, they'll contribute to the developement of corporal scheme.

Subjects:

We studied a group of 20 children aged 7-11, with ambliopia, capable of physical effort.

Research methods:

We used as ways of researching: pedagogic observation and experiment, psychomotor and psychological tests.

Conclusions:

The application of physical exercises organized in programmes, improved the knowledge of the body's segments and the children's abilities to recognize them. We also concluded that, the practice of these exercises had a positive influence on their graphic skills and capacity of space management.

Suggestions:

We recommend adapted physical activities to their needs and, at the same time, trying to include them among normal children.

Bence Takács

Semmelweis University TF, Budapest, Hungary

BRANCH OF SPORT PREFERENCE EXAMINATION IN THREE AGE GROUPS OF KINDERGARTEN CHILDREN

The Branch of Sport Preference Test (BSPT) of Stuller (1978) makes it possible to qualify the hierarchy of the attitude towards different branches of sport by selection of colored pictures from 4 years of age. While motor development of pre-school children is closely determined by the everyday exercise both in the kindergarten and in the family, the children's preference in different sport events (sport games, combat sports, gymnastics, swimming, etc.) may help the appropriate selection of sport in early childhood.

BSPT was applied by post-graduate students of the College for Kindergarten Teachers in Szarvas, in 37 nurseries in Budapest, and in other cities, towns, and villages (N=538)

The family background of the subjects was characterized by the years of education of the mothers and fathers. The parents' sedentary or active lifestyle, and their earlier sport results were also registered.

The sample was divided into three age groups (group 1: 4,75-5,99 year, group 2: 6,0-5,75 year, group 3 : 6,76-7,5 year). Boys' and girls' BSPT results were compared by independent T-test. ANOVA was used for characterizing the age differences in the branch of sport preferences.

Boys prefer motor sports. The girls' most preferred sports are the doubles events and the immanent sports (gymnastics, rhythmic gymnastics, figure skating, etc.).

The age-gender characteristics in different sport preference revealed some surprising results.

Team sports in group 1 were more preferred by girls than boys. In all age groups the immanent sports were also more preferred by girls. Gender differences in other age groups followed the general tendencies.

Fiona Moola

Faculty of Physical Education and Health, University of Toront, Canada

“FIGHTING THE DRAGON”: THE ROLE OF PHYSICAL ACTIVITY IN THE TREATMENT OF DEPRESSION IN THE ELDERLY

This paper synthesizes a large body of current research evidence as well as personal insights and perspectives, to critically examine the role of physical activity in the treatment of depression in the elderly. In the first section, definitions, causes, signs and symptoms, treatment options, and impact of depression in the general population is discussed and critiqued. The next section addresses the unique way in which the disorder presents in elderly citizens, as well as some of the specific issues, such as co-morbidity with other medical conditions and social isolation, that elderly people with depression struggle with. In the third section, the efficacy of physical activity as a viable treatment option for depression in the elderly is critically examined; the biochemical and psychological mechanisms through which physical activity acts to decrease symptoms of depression, as well as the ideal exercise prescription for depressed older adults, is discussed. Lastly, a combined treatment program, in which physical activity is used in conjunction with medication and psychotherapy, is proposed as the most effective way in which to treat this condition in the elderly. Recommendations for health care professionals, especially those who work directly with elderly citizens are proposed, and a greater degree of cultural sensitivity regarding this current issue in society is suggested.

Ákos Gerencsér, Zoltán Vass

Semmelweis University Faculty TF, Budapest, Hungary

RELATIONSHIP BETWEEN SPORTS AND OPTIMISTIC, PESSIMISTIC ATTITUDE TO LIFE AMONG SPORTING AND NON-SPORTING YOUNG PEOPLE

In our presentation we will discuss our experiences based on the questionnaires that were made by the TF young research (MSTT). In September 2003 a deep interview was made by Szonda Ipsos Media-, Opinion-, and Market Research Institute with the title “Young people today”, that contained two questions related to sports. We analyzed these questions and the given answers and compared them to the attitude to life of a person.

The research was made on a 50 people model. The model can be defined on three dimensions (age, place, labor market status). From the 50 people who gave voluntary answers 13 were from Budapest, 11 from the Transdanubian region, 13 from the Southern Great plane and 13 from Northern Hungary. The method of data collection was deep interview, that was recorded in their homes. Among the 20 questions there were two related strongly to sports: “How often do you do sports, what does it mean to you?” and “What would you do, what kind of

arrangements would you make if you were the Minister of Youth Affairs. During the research we divided the participants into three: age of 15-19, 20-24, 25-29.

The aim the research was to find an answer for the question: is there any relationship between sports and attitude to life? First of all we wanted to know that what is the percentage of optimistic and pessimistic people in our model. The second step was to find out how many of them are sporting or non sporting.

At the end we compared the data and on these basis we analyzed the relationship between attitude to life and sport, so we could build up four categories.

1. sporting optimistic, 2. Nonsporting optimistic, 3. Sporting pessimistic, 4. Non sporting pessimistic. The result of our research was that there is no big difference between the young sporting people with optimistic or pessimistic attitude to life, but there is a huge difference between the non sporting optimistic and pessimistic.

Besides these features we analyzed the answers and we found a contradiction: while as age grows and work comes to the front sport becomes less important (it almost disappear from the everyday life), contrary to this the answers to the second question shows that the possibility of sporting should be assured for young people on governmental level.

The conclusion is that young people need sport as a leisure activity but in their opinion its institutional facilities are not appropriate. We are entitled to ask how could we persuade Hungarian young people to develop an active, sporty lifestyle within today's circumstances. This will determine the direction of our research in the future.

Dora Gergelics, Viktoria Zámbo

Eötvös Loránd University Faculty of Pedagogy and Psychology, Budapest, Hungary

I COULD IF I WOULD. THE TWENTY BEST EXCUSES OF THE LAZY PEOPLE.

Why did we choose this subject?

Actually the basic idea came from another paper, entitled: „I will certainly complete my planned training, even if...” This survey was made by R. Fuchs, M. Wagner, R. Schwarzer and K. Sípos.

What we wanted to know was not exactly how busy people are, but rather the contrary. Why aren't we active, even if we have time for it.

It is a fact that nowadays most of the people are comfort-loving; growing lazy, and typically inactive in Hungary. Many of them choose the less demanding pastime in place of activity. In their freetime they prefer to watch TV, going to the movies or just speaking with friends and family. They reserve their freetime for being together with their friends and family.

With this survey we want to find out, what the main reasons are for choosing inactivity instead of activity. We were curious about the possible motives with which those who choose not to be active can easily satisfy themselves. We supposed that the university students represent a class, who get away from home and high-school rules and can use their freetime whatever they want to. In this age they more likely choose parties, pals and places of amusement rather than sports.

While those working are already thinking more responsibly, they set a higher value on the importance of activity. If he or she can take time for sports, then he or she will do so.

In our previous survey the adults chose the activity at a larger percent than students, however the difference was not as big as we expected.

In our paper we'd like to study this theme within different ages and professions, verifying which group of people choose the activity when they have time for it.

And what are the results? Well....

Zsófia Müller

Eötvös Loránd University Faculty of Pedagogy and Psychology, Budapest, Hungary

DIETARY HABITS OF PREADOLESCENT CHILDREN

In this paper we studied the dietary habits of 7–11-year-old town-children. The data were acquired through a survey carried out among 250 girls and 231 boys in Jászberény in 2003. To collect the information a questionnaire was applied. The elaboration was based on the calculation of absolute and relative frequencies. To compare the distributions χ^2 -test was used. The main points were: 1. the daily routine of nutrition; 2. children's opinion concerning healthy eating; 3. qualitative features of nutrition.

1. The daily routine of the children we found quite satisfactory – almost 100% had five meals. However, among 10–11-year-olds there was a decrease in the number of those having breakfast and tea. The vast majority of children have breakfast between 6.30-7.30 and have dinner between 18-19.30.

2. The children's information about healthy eating showed great division; however, fruits and vegetables were mentioned by one fifth of the examined. Other features of healthy eating mentioned by them were regular, frequent, varied / diverse eating. The most well known features of unhealthy eating among these children were the lack of fruits and vegetables, high fat-content of food and all kinds of sweeties.

3. We found the nutrition of children unbalanced; they were far below the optimum in consuming fruits, milk and dairy products.

Sofronis Savva, Onisiforos Hadjionisiforou, Andreas Photiou

Semmelweis University TF, Budapest, Hungary

PHYSIQUE BODY FAT CONTENT AND MOTOR PERFORMANCE IN TWINS

Tutor: Dr. János Mészáros, Semmelweis University TF, Budapest, Hungary

The inheritance of various anthropometric characteristics is different, it depends for instance on the investigated sample size and age range, however, the available evidence indicate that a significant proportion of the within-pair variation in size and physique is genetically determined (Bouchard et al. 1997). Since the absolute or relative body fat content is the linear function of energy intake and energy expenditure, no clear agreement exists among the investigators regarding the importance of genetic factors for body fat content.

The aim of the investigation was to assess the heritability of morphological growth type, relative body fat content and selected motor performance scores in prepubertal twins.

A total of 50 non-athletic twins (25 pairs were investigated in Limassol, and 25 in Hungary) were recruited into the comparison. Their calendar age ranged between 7 and 12 years. The sample contains both girl and boy pairs. The growth type was described by the metric and plastic indices. The relative body fat content was calculated by the suggestions of Parižková (1961). Physical performance was estimated by the results in 400m run, standing long jump, fist-ball throw and 30m dash. The level of inheritance was calculated by two different equations:

$$\text{equation 1. } h^2_1 = 2 \times (r_{MZ} - r_{DZ})$$

$$\text{equation 2. } h^2_2 = (r_{MZ} - r_{DZ}) \times (1 - r_{DZ})^{-1}$$

Linear correlation coefficients were compared by t-test following Z-transformation.

According to the published data in the international literature all the correlations were significantly stronger in the group of identical twins in spite of the limited number of subjects. The genetic influence on metric index (describing the morphological physique) was as strong as in case of highly determined stature. Nevertheless, the roles of genetic and non-genetic factors in the development of metric index need further investigation with larger samples, wider age range, and preferably with longitudinal data collection. Moderate inheritance was observed in relative body fat content, and medium in case of motor performances. The more or less similar motor performances contain also the effects of non-genetic factors. Among these the most important ones are the sedentary lifestyle, and the hypoactivity.

The estimation of inheritance by the used two various techniques yielded different results. By using the equation 1 the observed range was wider, consequently this procedure can be evaluated as more sensitive.

Eszter Völgyi, Lea Kalla

Semmelweis University TF, Budapest, Hungary

RUNNING PERFORMANCE IN LEAN AND OBESE BOYS

Tutor: Dr. Miklós Zsidegh, Semmelweis University TF, Budapest, Hungary

The relative frequency of fatness and obesity in childhood, adolescence and young adulthood is about 30% (Mészáros et al. 2001). This ratio is more un-favourable in the middle aged population (Zajkás and Bíró 1998). Among the possible reasons and explanations is first the markedly changed lifestyle and the generally characteristic hypoactivity. The number of publications dealing with fatness and obesity has been multiplied during the past 10 years both in Hungary and international literature. It is proven by the results of numerous investigations, that long-lasting fatness or especially obesity are risk factors or they are responsible directly for a large number of illnesses. In spite of these relationships there is no clear agreement in respect of quantification of fatness and obesity.

The aim of this cross-sectional comparison was to analyse the age dependent changes of body dimensions, and motor performances in lean, normal body fat content and fat and obese children.

Anthropometric data collection was carried out in volunteer, 9 to 12-year-old boys. A total of 2,500 subjects were tested. Body dimensions were taken by the technical suggestions of the International Biological Program (Weiner and Lourie 1969). Relative body fat content was estimated by the calliper-metric method of Parízková (1961). Following the suggestions of Lohman (1992) the subjects with body fat content over 25% were qualified as fat and obese. Body fat content between 16-18% was called as normal, and the with less than 12% was categorised as lean. Physical fitness was assessed by the results of 30 m dash and 400 m run. Differences between the means of three samples within one age group were analysed by F-test following one way ANOVA.

The fat and obese children were significantly taller than their non fat and obese counterparts in every age groups. For the fatness and obesity refers significantly lower physical capability, however, no differences were observed between the scores of normal and lean boys.

By the developmental and health-related approach we have some difficulty in the interpretation of consistently and significantly taller height of fat and obese children and adolescents. Nevertheless, Frenkl and associates (1988), Malina and Bouchard (1991) further Bouchard (2000) have stressed the significant and most obvious role of advanced biological maturation in the appearance of phenomenon. Statistically the same motor performance scores

of lean and normal body fat content subjects indicate, that the observed leanness cannot be attributed to mal-nutrition.

Trevor Hanel

University of PE & Leisure Service, Northern Iowa, Cedarfalls

ETHNIC DIFFERENCES IN PHYSIQUE AND RUNNING PERFORMANCE

The anthropologically undetermined Roma population lives almost in all the European countries, and the Roma ethnicity represents the greatest minority within the population in Hungary. Their ratio has doubled during the past 30 years. Although more and more Roma families have moved into the centre of greater settlements, the Roma population in general lives separately, and represents the low or lower socio-economic classes. However, because of their "special life style" basically they could not adapt themselves to the new surroundings.

The aim of the comparison was to analyse the anthropometric characteristics and physical performances at the ethnically two different samples.

A total of 365 volunteer, 7 to 9-year-old, non athletic boys were tested (Roma =152, Hungarian = 212). Height and body mass were measured, the growth type indices and the relative body fat content were calculated by using anthropometric measurements. Running speed and endurance were estimated by the results in 30m dash, 400 and 1200m run. Differences between the means were tested by t-tests for independent samples.

The Hungarian boys were consistently taller and heavier than their Roma counterparts, and the linearity component of the growth type was smaller in the Hungarian sample (consequently they were more leptomorphic). Nevertheless no significant differences were observed between the respective plastic index means. The Roma children had significantly greater mean body fat content. The running performances were markedly higher in the Hungarian sample.

The differences in height and metric index can be attributed to the ethnic variability, however, the greater body fat content and lower motor performances are the consequences of lifestyle and alimentary habits.

Hermenegildo Ricardo Lino de Sousa, Moreira Paulino Guerreiro Belchior

INUAF Portugal/University of West Hungary, Győr

ENVIRONMENTAL INFLUENCE ON OUTDOOR ACTIVITIES

In Portugal, where we come from, we do not have enough information about where we can do outdoor activities. We have practiced and competed for 10 years in road biking and rollerblading. It has always been a big task to deal with environmental issues, like the wind, temperature, humidity, terrain characteristics, traffic, etc. To find out about these relationships, we had started a research project at the University of West Hungary in Győr. We have done some environmental analysis which areas and circumstances can be optimal for practicing these sports. Afterwards we had selected some areas to test. During the test, we had used polar watches that had given us information on heart rate, time, cadence, caloric expenditure and power. In addition, we had done control measurements in the exercise physiology lab. All data was analyzed using statistical methods. The results have shown us the optimal way of using those tracks for training and recreation. Through this experience, we have learned some skills utilizing proper measurements which we would like to extend into our country as well.

Károly Ozsváth

Semmelweis University TF, Budapest, Hungary

CHARACTERISTICS OF SEX AND AGE IN EUROFIT TEST BATTERY

In my presentation I demonstrate the practical application of Eurofit test battery with using of the measurements of a Hungarian country elementary school. This assessment was done in the autumn of 2001 using all of the classes of the school (N = 160 boys, N = 135 girls). The material conditions of the school did not enable to be done all of the Eurofit test items. Thus I show the results of the seven measured motor tests. I compare these outcomes with the national references. Furthermore in connection of the given school I mention the characteristics of sex and age that I demonstrate with standardized Z-scores. The results of both genders and all age groups illustrate values near to the national standard by the following test items: height, weight, bent arm hang, and shuttle run (10×5 meters). The values are definitely better than the national average by the sit and reach, standing broad jump, and sit up tests. On the basis of these data the fitness level of the pupils compared to the national average can be qualified as fine. While we can see no expressed lag by none of the test items. At the same time the values include the possibility to contrast the data of boys and girls and different age-groups. However this is a horizontal research the standardized (Z-score) values that were done with the mean and standard deviation of the whole sample (N=295) present the motor differences between age-groups well. In addition to the evident differences in ages and physical advantages of boys that become dominant after the 5th class, the stagnation or a little deterioration of the performance of girls after the 6th class is striking. Unfortunately this tendency is probably not the only one because the results of girls are in line with the values of the national reference.

Andrea Demeter

Institute of PE and Sport Science, University of Pécs, Hungary

EUROFIT IN HIGHER EDUCATION

Mentor: Márta Wilhelm, Institute of PE and Sport Science, University of Pécs, Hungary

Introduction

More than 2 decades have passed since the recognition of the need for testing physical fitness and establishing reference data for European schoolchildren at the meetings of the Directors of Sports Research Institutes (the body which preceded the Committee of Experts on Sports Research) in 1977; or the evaluation of the experimental test and elaboration of the final one in 1986. As a new generation grew up since the initiation of the project it is high time to do a monitoring on the changes in the physical fitness of Hungarian youths and some other European Countries.

Aim of the study

Gathering information about PE students to establish a data source providing feedback on the then and the current attitude toward sports and physical activities.

Drawing a chart on physical fitness from earlier and recent data

Methods

The study focuses on the 2nd year PE students at UP as the EUROFIT probe elements are in their curriculum of Exercise Physiology. The number of 2nd year students enrolled in 2002 was xx, and xx in 2003. Our study focuses on the motor fitness tests and the anthropometric measurements.

Results

Due to the preliminary results it can be said that the results of the probes represent a wide range among the PE students of UP. The average achievements coincide with the average levels of other Hungarian studies, but the lower limits are far below or the upper limits are far above that. In my study I will also compare our data with some openly published European data bases.

Zoltán Vass

Semmelweis University, TF, Budapest, Hungary

DYNAMIC PATTERNS: THE SELF-ORGANIZATION OF BRAIN AND BEHAVIOR

Many studies of learning, indeed, most traditional approaches, select arbitrary responses for people to learn. Even then, concerns are usually raised about how instinctive patterns (the built-in repertoire presumably possessed by the organism) interfere with the learning of such arbitrary behaviors. Everyone knows the individual isn't tabula rasa, but it is difficult –usually impossible- to characterize the initial global state of the learner. So what do we do? The usual solution is to equate for different initial states (individual differences) by having subjects learn as novel a skill as possible. Then we feel comfortable about averaging their performance over learning attempts or trials and generating the familiar learning curve. In such approaches, the individual is just a statistic. Everybody is treated the same. Any differences due to experience, maturation, ancestry or what the subject had for breakfast are canceled out. The organism, to put it bluntly, is treated like a machine whose task is to associate inputs and outputs. Any autonomously active, intrinsic organization within the organism or between organisms and their environment, although present, is swept under the rug. So the point is. Instead of ignoring the fact that individuals bring different background and capacities into the learning environment, we argue that these should be carefully evaluated before exposure to a new task. New things to be learned must be linked with intrinsic tendencies or constraints already present in the learner at the time new material is introduced. Learning in this view, occurs as a specific modification of already existing behavioral patterns in the direction of the task to be learned. In general, this means that the individual must be treated as the significant unit of analysis, because each person brings a personal history of experiences into the learning environment.

Ágnes Huszár, Pál Hamar

Semmelweis University, TF, Budapest, Hungary

COMPARISON ANALYSIS OF THE HUNGARIAN AND AMERICAN PHYSICAL EDUCATION SYLLABUSES

Alteration of the curriculums affected the physical education field. The syllabus writers have been still following the Anglo-Saxon model in this area. There are a lot of theory works published in this topic by Endre Ballér, Zoltán Báthory, Edit Biróné Nagy and Arieh Lewy. Besides that our question is if this way is suitable for the Hungarian expectations and traditions. We are searching for the answer through the Hungarian National Foundational Curriculum (NFC) and different American P.E. documents.

The topic of our presentation is a comparison between the physical education field of the NFC (issued in Oct. 1995) and curriculum guides in some states of the United States. The method of our pedagogical research is the document analysis. We hope that our results will be successful in the aspects of the syllabuses' improvement.

Our research led to the fact that we cannot leave the primary P.E. and the Hungarian traditions without consideration and just follow the American model. In this aspect Hungary is not

similar to the USA where the result of the teaching-learning process mainly depending on the teachers' own work.

Éva Leibinger

Semmelweis University TF, Budapest, Hungary

OPINIONS ABOUT THE ACTUAL QUESTIONS OF CONTENTS AND METHODS OF PHYSICAL EDUCATION

The last ten years of Hungarian public education was the decade of frame curriculum regulation.

Native documents had and still have a characteristic of wider explanation in content of education.

Specialists totally agree on the necessity of content-expansion for receiving the euroconform-knowledge by the National Core Curriculum and the frame-curriculum.

On the other hand we can't leave it out of our sight that this direction causes more works for the society of educators.

The question is: how can all these changes influence day-to-day practise of school physical education?

We restricted our survey to a layer of educators, namely to the circle of physical education teachers.

In a cross-sectional survey we collected the opinion of P.E. teachers about aims, contents and methods in school P.E.

Our questionnaire gave the possibility of nameless answers.

In the first part – during the case-history – we asked the sex, age, qualification and living place of answerers.

Questionnaire, contained 18 items, was filled out by more than 100 P.E. teachers.

Statistical working-up and evaluations were made by using Likert-scale.

Eszter Baumgartner

Semmelweis University TF, Budapest, Hungary

VIEWPOINT AND CONCEPTS OF PHYSICAL EDUCATION TEACHERS AND PHYSICAL EDUCATION STUDENTS: TALENT IDENTIFICATION AND MANAGEMENT

A lot of issues and concepts considering kinesthetic talent seem to be critical in the area of sports (Nádori, 1985; Harold, 1968). There are a lot of sport scientists all over the world who have examined various aspects of kinesthetic talent, skills, and gifted (Ko, 2003; Harsányi, 2000). The topic has been written about quite widely in the field of coaching and training theory, however, the area of sport talent still has many unexplored areas and so remains an important question to pursue. There are a few definitions in use of kinesthetic talent, or gifted and ability, - our terminology uses them interchangeably.

According to one definition, a talented individual is capable of performing at a higher level than an average person in relation to certain skills or activities, considering not only the physical and mental capabilities but also the talent's personality and physical attributes (Báthory, Falus, 1997). Based on empirical evidence, a talented athlete is all around healthier, more prepared psychologically, physiologically, antropometrically, motorically to everyday challenges, and fit in the social life more advanced than their mates (Baumgartner, Bognár, Horváth, 2003).

Our main purpose with this presentation is to explore how Physical Education teachers and Physical Education Teacher Education (PETE) students define talent in consideration to their individual sport history, their specific individual or team sport, gender, educational and sport experience, and future plans as career. We also search for answers relation to selection, abilities, and talent management. We are in the process of gathering our 300 open-ended questionnaires from practicing PE teacher and PETE students from SE, Faculty of Physical Education and Sport Sciences, Budapest. For ordinal and nominal levels of data we use non-parametric statistics and look for both statistically and theoretically significant results. Our preliminary results support the statement that talent selection is foremost a pedagogical question. Physical Education teachers and PETE students seem to have a different concept and values on talent, abilities, and skills. Both groups consider inherited abilities as an important component in systematic selection of athletes. Physical Education teachers have wide identification about talent they prefer those pupils who perform at a higher level in more sport events. Most Physical Education Teacher Education students limit the terms to their own specific sports and gender. Also, most think that the genetically determined factors are more dominant than the nongenetic ones in the issue; although there is no theoretical and practical support given in their responses. Our earlier research prove that most of young talented athletes have been lost to the sport for social problems or in absence of motivations, supports and evaluations were made by using Likert-scale., coaches (Baumgartner, 2003). Hollings (2002) state that the reasons they have been lost to the sport may include socio-economic factors, conflicting educational interest, illness and injury. Our results support that selection for sport talent should also be examined from a wide range of areas.

Péter Berkes, Mihály Nyerges

Semmelweis University TF, Budapest, Hungary

FACTORS AFFECTING DECISION-MAKING IN HUNGARIAN SPORT SPONSORSHIPS RELATED TO FOOTBALL

Introduction

Corporate sponsorship has become an increasingly popular and effective form of marketing communication technique as shown by the global expenditure on corporate sponsorship was reported as being \$US 17.2 billion in 2001 (IEG, 2001). Sport sponsorship plays a main role in the revenue of the sport clubs, because sport possesses certain attributes that are attractive to corporate sponsors. The purpose of this empirical exploratory study is to reveal, understand and critically analyse the importance of factors: objectives and evaluation process that affects the decision-making in Hungarian football sponsorship and gain a deeper understanding of the Hungarian corporate sport sponsorship strategy. The importance of sponsoring companies' objectives and evaluation methods repeatedly brought up by researchers (Geng et. al., 2002; Lough et. al., 2001; Mccarthy & Irwin, 2000; Pope, 1998; McCook et. al., 1997; Copeland et. al., 1996; Weber et. al, 1991).

Method

A derivative questionnaire was applied in this study in order to establish the reliability and external validity as quality standards of the survey instrument used by Irwin, Assimakopoulous, Sutton (1994), Pope (1998), and Van Heerden, Hendrik (2001).

For conceptualisation purposes, questionnaires were sent to the all Hungarian professional football club sponsor companies (N=42). The name of specific sponsors was displayed on the football clubs home sites. The questionnaire was subsequently divided into four categories: sponsorship management, sponsorship objectives, sponsorship evaluation methods, and demographical information. Descriptive and correlation statistical analysis of questionnaire

responses were executed between existant sport sponsorship objectives and sport sponsorship evaluation methods.

Results

This study examines the research problem on "macro-level" aspects. Our findings were similar to other sport marketing researchers. The major results set a wide range of objectives and regard a wide range of measurement tools by sport sponsors. We believe that through the research results a model of sport sponsorship decision-making can be further identified. The revealed results could be compared with other sport sponsorship research statements.

Discussion \ Conclusion

Sport sponsorship has received little academic attention and it has not been opened to academic scrutiny. The most often cited sponsor objectives by previous researches were: media coverage, increase sales and market share, brand, product, and company awareness and image building (Geng et. al., 2002; Lough et. al., 2001). The secondary object of this study was to develop the theoretical framework that can be used as a benchmark for further research. More research is needed to examine and understand this phenomenon deeper.

Tamás Sterbenz

University of West Hungary Faculty of Economics, Sopron, Hungary

TRAPS IN DECISION-MAKING OF SPORT MANAGERS

Sport managers make decisions similarly to managers from different industries, so in professional athletics sport managers problem solving action can be described by bounded rationality. According to Herbert Simon's theory they use heuristic methods to judge situations. These "rules of thumb" simplify the complex environment, however managers face traps in decision-making. This study introduces bad decision-making in typical professional sport situations (for example hiring players and coaches), that could be explained by sunk cost, representativeness, availability, hindsight and the course of knowledge. Awareness of traps in decision making helps sport managers to better solve dilemmas.

Gábor Bácsalmási

Semmelweis University TF, Budapest, Hungary

THE YOUTH BASKETBALL NATIONAL TEAM'S SELECTION PROCESS

In this presentation I will talk about a recent problem in the development of basketball players, which is the selection of players into the national team. Before the real selection we did experiments to make the tests and measurements that lead to selection more accurate. In the first phase we looked at 30 boys from Budapest all born in 1990-91. We did physical, psychiatric, anthropometrical, sociological tests. We looked at which tests were sufficient and we found that the tests specialized for the typical motor skills in basketball are appropriate, and the more general tests need further adjustment. Our goals in the experiment by using mathematical- statistical analysis to test a wide variety of basketball players of the same ages abtitude of their motor skills.

Tamás Sterbenz

University of West Hungary Faculty of Economics, Sopron, Hungary

DECISION-MAKING PROCESS IMPROVEMENT IN BASKETBALL PRACTICES

Basketball is a game of decisions. At games players use their previous experience and relevant information to make correct judgments. Typical basketball problems can be described by their boundaries (space, time, results...), and the more aware are players of them, the better they perform. Coaches should teach real game situations and rules to develop the player's decision-making process and execution ability. This study focuses on rather problem solving than traditional basketball practice drills. By changing boundaries of decision-making it shows the difficulty of correct judgments and introduces how to train. Coaches can significantly improve their player's performance level by teaching them "snapshots" from game situations.

László Balogh, Eszter Udvardy

ELTE Centre for Sport and Physical Education, Budapest, Hungary

CONFLICT SITUATIONS IN HANDBALL

The success or failure of a team often depends on trifles nowadays. This is particularly true in the case of handball where the ability to cooperate plays an extremely important role in affecting achievement. In spite of the perfect technical, tactical preparedness, physical fitness

of the players and the top-level vocational knowledge of the coach, the expected result fails to show. What can be in the background? Is it something that nobody is willing to speak about openly?

In this paper we make an attempt to present conflict situations that occur during practicing handball (training sessions, matches, other social activities). The utilization of our questionnaire may cast light upon these problems – in the hope of a more successful cooperation.

Csaba Ökrös

Semmelweis University, TF, Budapest, Hungary

AN EXAMINATION OF DEVELOPED SITUATIONS FOLLOWED BY UNSUCCESSFUL GOAL-SHOOTING ATTEMPTS IN TEAM-HANDBALL

It's a well-known and observable fact, that the best handball teams equally lay stress on tactics of defence and attack all over the world. Attack starts for a team, when the opponent loses the ball by shooting or making error. After a try for a goal, both teams want to obtain the ball. The success of regaining possession of the ball mainly depends on the expected place of the rebounding ball.

The theme chosen by me analyses that case when players finish their goal-shot with unsatisfactory result, so the ball remains in play and bounces back into the court. It can be the result of goal-saving or if it hits the goalpost. The question is given, how can the prospected place of the rebound determined, when the shooter's position and the impact surface should be taken into consideration.

The study is based on observations of the Champions League male handball matches in the season of 2003/04. It takes 12 matches mainly involved Hungarian teams because the broadcasts on the national channels that made possible. The matches brought 1566 actions of attacks and the success result from these: 682 goals, which means the rest finishes were, missed the goal. From the number of defect attempts about half of these (352) went back into the court and kept the play on. The rebounds were obtaining usually by defenders (69%) and in my presentation I will give an answer to inquirers for the reasons.

István Kun

Semmelweis University, TF, Budapest, Hungary

THEORETICAL APPROACH FOR THE 9-14 OLD SOCCER PLAYER TRAINING METHODS

Considering the past years, the game of soccer has accelerated. On the soccer world cup, which was organised together by Korea-Japan it was visible, that is it not enough to prepare the players to be physically perfect, but players must be technically perfect, whose has wide tactical stock of play, and whose have creative thinking. Therefore systematically, and well planned training in the early childhood is needed. One of the worst errors made by those working in soccer in the past was to consider the young player as an adult in miniature. Consequently, standard training programs and methods typically suggested to adult athletes were erroneously reduced at a quantitative level to be directly applied to youth players. This serious mistake originated from a deep-rooted underlying misconception. Actually, the great difference between the child and the adult player from the qualitative point of view was too often completely neglected. The work in clubs would be easier, if the physical education teachers have used the same or similar system on the afternoon sport activities as in the clubs. The only different would be the higher level of training in clubs because of the children

selected by a certain aim orientation. This system takes rules of the development of psychology, and physiology into consideration. This system requires only teaching the techniques and tactics which are parallel to the development of the children.

In this lecture we systematize the soccer techniques and tactics in reflection of the age of life characteristic.

¹Gyöngyvér Lacza, ²Júlia Bősze

¹Semmelweis University, TF ²Eötvös Loránd University Faculty of Pedagogy and Psychology, Budapest, Hungary

HOW FAR SCHOOLS ARE READY TO EMPLOY LEISURE ORGANISERS

Supervisors: Dr. László Jakabházy, Semmelweis University, TF, Tamás Kovács, Eötvös Loránd University Faculty of Pedagogy and Psychology, Budapest, Hungary

In modern school systems of 21st century children's lifestyle is a central question. According to a recent study (Mihály, 2003) in most European Union countries schools are not only knowledge centres but also important parts of social network. Schools are teaching students how to spend their free time through a wide range of organised leisure opportunities such as sports and cultural programs, excursions or school camps. In Hungarian school system leisure education did not get specific attention until recently. In 1999 new bill was passed through to assess all schools teaching more than 300 pupils to employ professional leisure organisers. The law is going to be enactment from 2004. However the bill did not determine what kind of education is needed to become a leisure organiser only describes tasks and responsibilities.

The purpose of this study was to investigate how far schools are ready for the law introducing leisure organiser status in schools. What is their concept on the responsibilities of a leisure organiser? Do they know anything about recreation studies?

Our target group were primary schools from Budapest. As a method we choose questionnaire survey through Internet. We used the database from <http://www.kfki.hu/edu/iskola.alt.html> and sent the survey to all schools on the list. Limitations of the study were that we only could approach schools using Internet, checking and responding their mails regularly.

Our results showed that schools are lack of information about scope of activities of future leisure organisers. It is not completely clear whether this person is going to promote mostly cultural either sport programs or both. Respondents were well informed that they need to apply someone with bachelor degree but had quite ambiguous idea about what field this person should have come from. Students with recreation degrees are very little known as possible employee. In conclusion we can state that the law should be more definite about the position itself and should regulate who can fill these positions. Schools need more information on the competences of leisure organisers. Recreation studies should be better promoted.

Adrienn Szabó Birher

Semmelweis University TF, Budapest, Hungary

ROLE OF BODY CULTURE AND DANCE IN BOOKS OF BIBLE

The aim of the research: to show that in the sacral documents the writers not only insist on the importance and occurrence of the spirit, but they lay great stress on the body, as well. That's why the Bible makes reference to movement and dance in several parts as expressing human integrity. I would like to present these parts and explain the meanings in my presentation. I

have chosen some places in the Bible where the movement and dance has of special importance, for example in the Old Testament, the Second Book of Moses, the First and the Second Books of Samuel, the First Book of the Kings and the Books of Psalms, and in the New Testament in the Books of the Evangelists.

In my presentation I would like to highlight the fact that body and spirit were explained only in unity both on the level of everyday and transcendence for the ancient man. The actuality of my work is that sport has become business nowadays where it is important to reflect the traditional human in unit and it could lead us to human integrity and to have better sport's results.

Antonis Alexopoulos

Semmelweis University TF, Budapest, Hungary

SPORT AND THE EUROPEAN UNION: THE CYPRIOT CASE

From April 16th 2003, after signing the Treaty on the integration, Cyprus together with 10 other countries are the subjects of the new enlargement of the European Union. Cyprus is a step away from its full membership in the European Union, which is going to be in May 1st 2004. The oncoming integration is expected to have a huge impact on the social as well as the cultural life of the new member-states, and Cyprus is not an exception. Sport as a part of both the social and cultural life is going to be influenced and reformed in some degree, due to the integration, even though sport is independent from European policies. The aim of this paper is to study: (1) the present situation in Cypriot sport prior to join in the European Union; (2) the degree Cypriot sport is prepared for the E.U. integration; (3) what sport policy has been introduced to facilitate the integration; (4) what is the level of knowledge of Cypriot sport actors as far as it concerns the European sport policies. In order to give answers to the previously posed questions, the author carried out a pilot study based on document analysis and in depth interviews with Cypriot sports actors or workers in the field of sport. Documents concerning the European Union's sport policy were analyzed, namely, the Council of Europe documents in relation to sport and the European Parliament work paper of 2000. Moreover, the structure of Cypriot sport and the reports for harmonization by the Cyprus Sport Organization (C.S.O) were also analyzed. As a first attempt, Cypriot students majoring in Physical Education were questioned about their knowledge concerning European sport policies and the changes done by the Cyprus Sport Organization. The results show that, although in the European Union sport is considered as a national problem and therefore there are no official expectations from the part of the member countries, the Cypriot sport policy is been changed recently to meet the guidelines of the Council of Europe and the European Parliament. Since 1998, efforts have been made by the only responsible organization at Cyprus which is the Cyprus Sport Organization to transform the structure and functioning of Cypriot sport according to the policies enacted by the most developed European Union member states. It is concluded, on the other hand, that knowledge about the European sport policies in Cyprus and Cypriot sport actors is poor. The most important actors in sport, including P.E. teachers and students, coaches and even sport managers are not well familiar with what is preached by E.U. about sport and about the changes that happened both in Europe and Cyprus concerning sport. The author intends to continue his work in more depth way in this area of sport, due to the fact that several problems are brought to the surface with the coming integration and the multidimensional changes which would come.

Katalin RÁCZ, Henrietta Andrejszki

Semmelweis University TF, Budapest, Hungary

COMPARATIVE ANALYSIS OF SCHOOL RESULTS OF ACTIVE AND INACTIVE STUDENTS
AGED 10-14

Supervisor: Dr. Pál Hamar, Dr. Béla Derzsy, Semmelweis University TF, Budapest, Hungary

There is a returning question in the academic and in everyday life concerning what the relation or connection is between the academic achievements of active students and inactive students. Do those students - who train regularly more hours a week and have less time to learn - reach lower level in their studies than their inactive class mates? Maybe their skills of intellect is on a lower level?

We looked for the answer to these questions with the help of questionnaire method. We have constructed a personal data sheet and we asked the students about their marks in 5 subjects in the first and second terms. The subjects – we have chosen – were: Hungarian grammar, Hungarian literature, Mathematics, History, the first foreign language and the Physical Education. There were 500 students who took part in our research and they were between 10 and 14 years of age. We grouped the active students according to the type of their sport. We made our survey in the first and second term of 2002/2003 academic year in Budapest and countryside.

Anna Kreisz, Bálint Komondi

Semmelweis University TF, Budapest, Hungary

STUDIES AMONG SECONDARY SCHOOL STUDENTS IN BUDAPEST

Supervisor: Dr. Katalin Keresztesi, Semmelweis University TF, Budapest, Hungary

Aim: to reveal the data of a study of lifestyle of secondary school students in Budapest in order to get information about their health consciousness.

80 questions were asked in a questionnaire. The sample was 145 students from 6 classes, from all year.

We wanted to investigate their psychosomatic condition according to their opinion, their habit of smoking and alcohol consumption and opinion about the drugs and AIDS. Data was gathered about their sexual habit and their knowledge about sexually transmitted diseases.

We think that the sporting habit is very close to their life style, and the lecture shows it with the other factors that influences their life style.

Eleonóra Murányi

Semmelweis University TF, Budapest, Hungary

AFFECTIVITY OF PRIMARY AND SECONDARY SCHOOL STUDENTS TOWARDS SCHOOL PHYSICAL
EDUCATION

Consultant: Dr. Pál Hamar, *Semmelweis University TF, Budapest, Hungary*

Tutor: Dr. Béla Derzsy, *Semmelweis University TF, Budapest, Hungary*

Psychomotor examination of the teaching material of PE is often the subject of researches. A research from another aspect could be also important beside the motor aspect, namely: what is the affectivity of the students towards the domain of PE and sport.

The affectivity of primary and secondary students was examined with a cross-sectional method. The aim of the research was to map the attitude of the students of different ages during the physical education lessons.

The answer for our questions was searched for with the help of a questionnaire. The so called „target” model was applied instead of the traditional one. The target was divided into 8 sectors. One picture belonged to each of them. Statements were attached to the pictures, which could be ranked on a 5 degree Likert scale by the students. The using of symbols served the more effective understanding of students’ feelings.

The survey was carried out in 10 schools of Budapest and the countryside in the 2003-2004 academic years. The number of the tested persons was (n=) 300.

Noémi Keresztes, Zsuzsanna Pluhar, Bettina Pikó

University of Szeged, Faculty of General Medicine, Department of Psychiatry, Group of Behavioral Science, Szeged, Hungary

MIDDLE SCHOOL AGED CHILDREN’S RELATIONSHIP TO SPORTS
ACTIVITY -MOTIVATIONS, PRACTICES AND POSSIBILITIES

Behavioral science approach to studies of physical activity recently gets more and more attention. In the field of research on physical activity behavior, a special attention is directed to sports activity among youth and adolescence. This is the population group among which the primary prevention can achieve results on the long term. On the other hand, harmful health behaviors also start to increase in this life period, so this is the suitable time to change them for beneficial ones. Consequently, it is very important that regular exercise should become an organic part of students’ leisure time activity.

The main goal of the present study has been to detect sports practices, motivations, and possibilities of sporting behaviors among middle school aged students. The study has been carried out among 10-15 years old children in Szeged (n=550). This presentation is part of a research project of youth’ health (supported by OTKA T042490 and ETT T08/005 grants). Self administered questionnaire has been used as a method of data collection which included items on sociodemographics, students’ health, health behaviors, sports practices, motivations and some other questions on sport.

We have not found notable differences in students’ sports practices according to sex and social class. More than 60% of them take physical activity weekly outside school. Most of the respondents like P.E. at school and follow the latest sport events. It is also important that good marks and sports frequency are related in a significant way. Thus, the idea of the “good pupil and good sportsman” has a reality. Using factor analysis, four motivation factors have been isolated: “contest oriented” motivation factor, “balanced extrinsic and intrinsic” motivation factor, “external correspondence” motivation factor, and “social effect and health” motivation factor. Therefore, we can conclude that in this period of life, sport is very important part of students’ lives.

Andrea Demeter

Institute of PE and Sport Science, University of Pécs, Hungary
INTERNATIONAL COMPARATIVE STUDY ON LIFE-STYLE

Mentor: Dr. Erzsébet Rétsági, Institute of PE and Sport Science, University of Pécs, Hungary

I had a personal drive for choosing this theme as my project. I had the privilege to spend a semester in Coimbra as an ERASMUS student. In those four months I lived the life of the Portuguese PE students. Later when I went back as a visitor I decided to carry out my ongoing project on my Portuguese colleagues as well to see deep inside what I had seen on the surface. The aims of my study were (i) to obtain a deep picture on the lifestyle of the Portuguese PE students, (ii) compare the characteristics of Hungarian and Portuguese students. The Hungarian study included 238 questionnaires of 1st year students from years 2001-2003, the Portuguese part includes 75 questionnaires, also of 1st year students, in 2002. A questionnaire includes the following main questions: (i) how long time do you spend learning, doing sports, enjoying leisure time and amusement, (ii) what dominant leisure-time activities do you have, (iii) what sporting habits have you acquired, (iv) what harmful addiction(s) do you have, (v) what diet do you have, (vi) what schedule have you set up consciously to maintain your physical fitness, (vii) what is your opinion about the interrelationship of regular physical activities and healthy lifestyle. The results show that there are many similarities, probably related to age, among Portuguese and Hungarian students in their lifestyle. For the majority sport plays a significant role, but there are students on either side who do nothing more than is required. The major difference between the Portuguese and Hungarian students is their relationship towards physical activity, its mental representation. Their attitude coincided with what has been detected among Hungarian students, that the more the competitive level sportsmen, the more who considers physical activities as “burden”.

Efstathios Christodoulides

Semmelweis University TF, Budapest, Hungary

LEISURE SPORTS OPPORTUNITIES IN CYPRUS

It is a well-known fact that the social significance of sport in leisure has increased enormously over the last decades. In the first part of the paper the author gives an overview on recent publications about leisure sports, published both in Cyprus and internationally. The aim of the paper is to discuss the situation concerning leisure sports in Cyprus. The author collected information with the method of documentary analysis. In the second part of the paper the results are shown. It is discussed that Sport For All has been institutionalized in Cyprus in the last decade. The state takes responsibility for the promotion of leisure sports. The civil factor in sports has also been developed significantly. The business factor is also present, especially related to tourist industry. In conclusion it is stated that although in the European Union there are no requirements concerning sport, leisure sports in Cyprus have reached the standards, which can be observed in the most developed countries in the European Union.

Beatrix Ölschléger, Eszter Baumgartner

Semmelweis University TF, Budapest, Hungary

LIFE-STYLE EXAMINATIONS AMONG THE PLAYERS OF THE LEADING NATIONAL MALE HANDBALL TEAMS

Tutor: Ildikó Nagy-Kovács, Semmelweis University TF

I have chosen this theme because of my personal experiences and the previous examinations and researches. I have set myself to overlook the healthy life style of the Hungarian male handball players in Hungary (smoking, alcohol consumption, meal, sporting and leisure habit)

and I would like to clear up if it influences their achievements and their results in the championship or not. I have found the answers with the help of some pedagogical tests.

The close forms were filled in namelessly by the sportsmen.

The players of the national leading meal handball teams have taken part in the examination which was done in the season of 2003/2004.

The healthy or unhealthy life style of the pro-players can serve as an example for the young sportsmen or especially for the youth of handball players

Szabolcs Gúth

Institute of PE and Sport Science, University of Pécs, Hungary

NEW CENTURY, NEW GENERATION, NEW EDUCATION

Mentor: Dr. Erzsébet Rétsági, Institute of PE and Sport Science, University of Pécs, Hungary

This study investigated how globalisation affected pupils and education in Hungary, also it tried to map what physical education meant for pupils in the primary and secondary school's area. The aims were to (i) discover the pupils' opinion and thoughts which can help teachers make Physical Education more enjoyable thus more effective, and (2) create a positive value system towards physical activities for their lifetime. The investigation was carried out by a questionnaire containing 30 questions, which rested on the next few topics: (i) options for change in Physical Education's curriculum, (ii) appreciation of PE among pupils, (iii) possibilities in extra curricular sports out of school, (iv) mapping the pupils' demands towards Physical Education. Expectedly the pupils' answers will point out the shortcomings of education and can give useful hint to PE teacher how to make Physical Education more "pupil-friendly". Due to the processed data it can be said that the curriculum needs renewal in content. Many said that they would include new branches of sport, or more lessons in number, others would develop the extracurricular sport activities.

József Nagyréti

Semmelweis University TF, Hungary

SPORT POLITICS IN THE EU- WHAT CAN BE EXPECTED AFTER THE JOINING

Joining the EU will be the most important happening in Hungary this year. For us with sport in connection standing citizens it is important to know, how is the regularization of sport in the EU and what kind of changes can be expected in the sport life in Hungary.

In the states of the EU the proportion of the regulary sport doing population is extremely high, it is about 50%. In Hungary this proportion is much less. The advancement of sport life is advantageous for health, therewith it helps the integration in the society, produces jobs, therefore sport has an accentuated cultural relevance over there. While his developement the EU had made a separation in the appearing forms of sport: there is a so-called buisness-sport and the sport itself as a sotial phenomenon. This separation stands not without consequences: the subvention of buisness-sport is unpermitted, while non-buisness-sport counts as an important sotial value, so the EU is minded to subsidize it directly.

The join will have a direct or indirect (long-run sensible) effect on every stages of the society in the countries of Middle-East-Europe. Effects can be expected like raising of standard of living and having more spare time. After the joining a developpe of recreation culture and a raising of the standar of sport to an European standard in every generation and sotial class is expectable.

Adaptation to Exercise

A. I. Mironenko

The Russian State University of Physical Culture Sports and Tourism, Moscow, Russia

THE BIOMECHANICAL ANALYSIS OF LANDING POSITION IN HORIZONTAL ATHLETICS JUMPS

Urgency: research of the most important competitions of 2001 has shown, that in 22,5 %, in distribution of prize-winning places the difference of results from 0 up to 3 cm made almost a quarter of cases. It specifies that in final distribution of places efficiency on landing plays the important role. The loss of precious centimeters can result in loss of prize-winning places or a medal.

Hypothesis of research: it is supposed, that each kind of track and field horizontal jumps has own features in performance of technique of impellent actions at the moment of landing, which presume to develop criteria of their estimation and to develop a technique of perfection of landing.

Research problems: 1. To determine teoretical criteria of efficiency of technique of landing in horizontal athletics jumps. 2. To reveal, whether there are distinctions in technique of performance of landing for athletes of various qualification, sex and jumping events. 3. To develop standards estimating efficiency of technique of landing; 4. To create computer model of landing and model various variants of landing. 5. To develop a technique of perfection of landing in athletics jumps.

The purpose of work: was to research technique of athletes landing of various qualification, sex and jumping events.

Technique of research: in research was covered: 53 elite jumpers. Including: 20 – triple jump (man), 16 – long jump (man), 17 - long jump (woman). 9 finalists the World Championship of 1997 in Athenes in long jump (women). 4 athletes in long jumps KMC (man) and 3 woman of the second category. In total, 69 sportsmen was covered in research. Official reports 10 of the main competitions of a season of 2001 were analyzed. The biomechanical analysis is carried out by a method of cinema and the videoanalysis. Results were processed by the standard statistical methods.

The importance of research is determined by development of criteria of the analysis of engineering of landing in long and triple jumps.

Éva Fekete

Semmelweis University TF, Budapest, Hungary

SOME EXPERIENCE HOW TO INSTRUCT NOVICE POLE VAULTERS

In every day people generally think that pole vaulting is a dangerous activity.

It is a pity, but sometimes the physical education teachers are thinking the same way.

Certainly the aim is not to teach a correct competitive technique on PE lessons, but what is very exciting for the student is the swinging down from a higher place to the soft sand and reach more and more distance with pole.

I can say if we use safe circumstances and apply good methods, pole vault is not more dangerous than the other jumping activities.

This is the reason why we chose the biomechanical analysis of novice pole vaulters to detect correlations and connections during their first steps focusing on motor skills and physical abilities.

We measured the university students aged 19-21 /n=105/ during the pole vault lessons in the University Track Hall. We investigated the dominant hand and leg problems in the first choice to decide how to grip the pole and jump with it.

Tziortzis Charalambos

Semmelweis University TF, Budapest, Hungary

EXPLOSIVE STRENGTH TRAINING VERTICAL JUMP COMPARISON OF MALE AND FEMALE VOLLEYBALL PLAYERS BETWEEN 18-22 YEARS OF AGE

The purpose of this study was to examine whether there are indeed biomechanical differences of male and female volleyball players, between 18-22 years of age, as far as vertical jump is concerned. Six male and six female volleyball players from University teams were measured in squat jump, spike jump with one step approach and side block jump. A force platform connected to a computer for data collection was used to measure the flight time, the force applied on the ground during the jump and the contact time. The players were measured during competitive season and were asked to perform three trials in each kind of jump of which the best result was selected for analysis.

E.L. Platonova, A.P. Nazarov, Yu.V. Skorin, A.V. Zubkova and M.P. Shestakov

Russian State University of Physical Education, Moscow, Russia

THE USE OF SIMULATION MODELING FOR ASSESSMENT OF COMPETITIVE ACTIVITY IN TRACK&FIELD JUMPS

Introduction. The problem of reliability of competitive activity of an athlete includes several aspects, in particular the state of readiness and the realization of technical abilities in extreme competitive conditions, the interrelation between those aspects being very complex.

Methods involving mathematical modeling are often used in scientific researches in the sphere of physical education and sport. Simulation modeling is considered one of the most efficient among them. It allows to simulate different phenomena as components of a real process, preserving their logic structure and time sequence. It gives the opportunity to determine the status of the process at particular moments and to estimate the current characteristics of the system (Ladenko, 1987).

We have examined the process related to the execution of voluntary movements in accordance with the goals and the rules of competitions. To assess technical preparedness, we had to examine the changes and the stability of motor programs execution. A new scientific trend called biocyberology may be used for solving this task (Shestakov, 2003; Seluyanov, 2003).

Within the frame of our research we have developed the system of models including the model of the locomotor apparatus for the execution of a concrete movement and the model of the controlling system, in our case the central nervous system. To design the models we have used the concept of "biomechanism" (Seluyanov et al., 1995) and the theory of neural networks in sport (Shestakov M.P., 1998).

There is a supposition that the goal of a movement done due to a certain biomechanism is perceived by consciousness, so the person who performs the movement can control and change it.

Thus, if we consider biomechanisms and the neural network as ideal images, we can assess the technical mastery of an athlete.

Methods. Simulation modeling is done on the computer complex designed in the scientific laboratory of RGAFK under the leadership of professor V. N. Seluyanov. It consists of several modules: calculation of mass-inertial parameters of the athletes; calculation of kinematical and energetic characteristics of movements of separate body links and the whole body based on videotape processing (it allows to determine linear and angular indices of body links' kinematics; potential, kinetic and total energy of each link). The unique feature of this module is the ability to determine changes in the linear length and the speed of contraction of 9 major muscles of lower extremities. This module allows to determine key peculiarities of the athlete's technique and to simulate conditions, under which top results could be achieved. It is the preliminary stage of simulation modeling aimed at the elaboration of different versions of training plans. To predict the results achieved with the help of this or that training plan, we have used the system of artificial intelligence.

Results. At present, this approach to the estimation of technical mastery is used by the complex scientific group working with the Russian national team in athletic jumps. The competitive activity of jumpers was estimated during several national and international competitions. The complex has proved its validity, being continuously used in the training process of 50 top class athletes during a year long cycle. Some individual peculiarities of the athletes' technique had been revealed that helped the coaches to correct the corresponding training plans.

Conclusion. The new information technologies allow to create the systems for simulation modeling of the technique of concrete movements at the level being necessary and sufficient for the estimation of the competitive activity of an athlete taking into account his (her) individual peculiarities.

Demetris Demetriou, Szilvia Gita

Semmelweis University TF, Budapest, Hungary

DETERMINATION OF INTENSITY ZONES AND LACTIC ACID TOLERANCE IN YOUNG (16-18 YEAR OLD) HUNGARIAN SOCCER PLAYERS

Tutor: Dr. Miklós Metzinger, associate professor, Semmelweis University, TF, Budapest, Hungary

Aerobic and endurance of soccer players is a very important question both for coaches and players. There are different methods for practicing and developing the performance but without scientific measurements we can't be totally sure about the efficiency of the applied training load. There might be under or over estimations if we only believe what we see, it is too subjective.

In our investigation we were trying to find out a method based on science to decide the aerobic and anaerobic zones and the threshold. We collected data on a soccer team aged 16-18. We used the Conconi test to decide their speed and also the deflection point of their heart rate during the exercise. We also took blood sample from the players to decide the lactic acid concentration. We used the gained data to determine the aerob and anerob zone work's upper and lower level by polar watch.

We believe that our presentation is interesting for coaches and teachers to get the idea how to measure the athletes' performance in a noninvasive way and also to realize that the possibility of a mistake can be excluded with our method.

André Mateus

University of Coimbra Portugal/University of West Hungary, Győr, Hungary

CARTOGRAPHY OF THE SOCCER EUROPEAN CHAMPIONSHIP 2004

Portugal is preparing with a lot of power for one of the biggest international sport event, the Soccer European Championship, which takes place in June 2004 in Portugal.. The Portuguese government has made several political and economical decisions to make the event successful. Seven new stadiums were built as well as roads for better access to cities and stadiums. There are now better accomodations and conditions at the airports.

But there are also natural environmental issues, which can influence the success of the soccer games. In June, the temperature in Portugal can be very hot, which can make it more difficult for players coming from colder countries.

For my study, I have been using different methods of cartography and developing thematic maps on the main environmental aspects: the climate, economy, and infrastructure, etc.

Borbála Balla, Orsolya RÁCZ

Tessedik Samuel College Szarvas, Hungary

SOMATIC ADVANCEMENT AND MOTOR COORDINATION OF 5-10-YEAR-OLD NURSERY AND LOWER PRIMARY CHILDREN

The authors studied 1843 children – 940 boys and 903 girls – from the above mentioned age group in the south and southeast region of Hungary from point of view of somatic advancement and motor coordination. For the characterization of somatic advancement the height and body mass were measured, and the average data of the different age groups were compared to the available national references. As a result of these studies it can be stated that the averages of the different age groups were higher by 50 % and in some cases by 75 % than the national reference. The motor tests were used to study some conditional and co-ordinational abilities as well. The agility performance was tested by a 20 m long sprint, the force was measured by standing broad-jump and medicine ball throw forward (2 kg), the stamina by a 6 minutes long run, the balancing ability by Oseretzky's standing on one foot, the rhythmic ability by rhythm exchange running and the sense of locality by application of the so-called boomerang running and accomplishment of an obstacle course. The comparisons of averages of the sequent ages showed that the most considerable differences had been between the 7 and 8 years age. As the difference between the body mass and height values is the highest in this age, the somatic and motor changes are in connection with each other. A characteristic change was found in the children of 5-6 years age according to the obstacle course test that demanded complete motor ability from the children.

Polona Palma, +Andreja Šteiner, Darja Rugelj

*University of Ljubljana, University College of Health Studies, Department of Physiotherapy
+ Celje General Hospital, Slovenia*

THE INFLUENCE OF REGULAR PHYSICAL TRAINING ON BALANCE PERFORMANCE AFTER A
SPRAINED ANKLE

Introduction: Ankle injury presents 25% of all injuries in competitive and recreational sports. In most cases – 85% of sprains – we deal with injuries of three lateral ligaments: anterior, posterior talofibular and calcaneofibular ligament¹. Not only the ligaments but also joint capsule, peroneal muscles tendons and other soft tissues are injured². That is how the proprioceptors which are in muscles, ligaments and joint capsule are injured as well. Proprioception provides a feedback system by which the body attains a neuromuscular awareness of posture, movement and equilibrium changes as well as knowledge of position, weight and resistance to objects in relation to the body³. Ankle sprain is believed to result in proprioceptive deficit that leads to balance deficit on involved limb. An important relationship exists between functional ankle stability and the ability to maintain balance⁴. Being a joint of the lower extremity in close proximity to the body's base of support, the ankle plays an integral role in maintaining balance. Thus, the stability of the ankle joint is paramount when considering regulation of balance⁵. A correlation was made between the severity of ankle injury and the inability to accurately reproduce joint positions⁶. Proprioceptive deficit has a big role in case of chronic injuries and re-injuries⁷. Because of that the rehabilitation program should include the following goals: facilitation of healing with protection of injured ligament to provide dynamic stabilisation of injured joint, restoration of proprioceptive system, acceleration of rehabilitation time and at athletes return to sport training and prevention of functional instability that results in re-injury⁸. A good rehabilitation program that strengthens muscles, ankle stabilisers is important because it restores the function of proprioceptors, and is efficient at improving balance and joint stability⁹. The aim of this research was to investigate whether frequent physical training has an influence on better static balance performance and proprioceptive deficit at 1 to 6 months after ankle sprain.

Methods: Participants. There were 30 volunteers participating in our research, 15 were athletes and 15 were non-athletes, average age 23.7 ± 2.7 years. Unilateral ankle sprain was common to both groups. On average, that sprain was already a second one, so we tested a repeated ankle sprain. The athletes were tested approximately two months and the non-athletes four months after ankle sprain. Procedures. We measured pain in case of a painful ankle with visual analogue scale. Next we measured the muscular strength of dorsal flexors with break test and finally we tested balance with five tests in following order: one leg stance on the floor with open and closed eyes, one leg stance on the balance board with open eyes, and one leg stance on the foam surface with open and closed eyes. Data analysis. To establish the difference in maintaining balance on non-injured – injured limb between the groups of athletes – non-athletes, the Student's t-test was used.

Results: The results indicate that one leg stance test with open eyes is an easy test for both groups and not enough selective to compare the two groups, or the injured and non-injured limb. One leg stance on the foam surface with eyes closed test and one leg stance on balance board test proved very difficult for the non-athletes because both results, for injured and non-injured leg, were not definitive, because participants hardly maintained balance for five

seconds on the non-injured limb, while on the injured one they couldn't maintain it even for five seconds. First, we analysed common findings at both groups (non-athletes, athletes). The time achieved on the non-injured limb is much better than the time achieved on the injured one. So, there is a difference between the injured and the non-injured limb in maintaining balance. The same goes for the muscular strength.

Table 1. Comparison of injured and non-injured ankle: statistical significance of results for testing balance and muscular strength for the group of athletes and non-athletes

Balance tests	Athlete			Non-athlete		
	injured ankle	non-injured ankle	stat. sig. (p)	injured ankle	non-injured ankle	stat. sig. (p)
one leg stance (s)	90	90	-----	85.2	90	0.1808
one leg stance, closed eyes (s)	83.9	87.9	0.0308*	41.9	68.2	0.0000*
one leg stance on the balance board (s)	34.5	41.8	0.0259*	8.3	14.60	0.0006*
one leg stance on the foam surface (s)	89.9	90	0.3343	63.5	89.2	0.0003*
one leg stance on the foam surface, closed eyes (s)	29	38.2	0.0004*	9.5	16.7	0.0003*
measuring muscular strength (kg)	23.1	24.7	0.0207*	16.5	20.8	0.0001*

* $p \leq 0,05$

We compared the results of the group of athletes with the group of non-athletes. We established that there are differences between the groups in maintaining balance on the injured and non-injured leg. The athletes had better results on both limb than the non-athletes. So we calculated difference between achieved time on injured and non-injured limb for each group and compared the average difference of the athlete with the non-athlete group. We found out that the athlete group has smaller differences in the results of balance tests between the injured and the non-injured limb than the non-athlete group. We achieved similar results in measuring muscular strength. The group of non-athletes has greater difference in the muscular strength of injured ankle than the athletes. The results of pain measurement didn't indicate the difference, neither of the groups felt greater pain.

Table 2. Comparison of athlete with non-athlete group: statistical significance of differences between injured and non-injured ankle for testing balance and muscular strength

Balance tests	difference between injured and non-injured ankle		stat. sig. of differences (p)
	athlete	non-athlete	
one leg stance (s)	0	4.8	0.1808
one leg stance, closed eyes (s)	4	26.3	0.0001*
one leg stance on the balance board (s)	7.3	6.3	0.5662
one leg stance on the foam surface (s)	0.1	25.8	0.0003*
one leg stance on the foam surface, closed eyes (s)	9.1	7.1	0.4302
measuring muscular strength (kg)	1.7	4.3	0.0359*

* $p \leq 0,05$

DISCUSSION: With measuring balance we found out, that there is still a lack of balance on the injured limb at young athlete and non-athlete participants in the period of 1 to 6 months after the injury, especially at the tests that exclude visual information and give more influence on joint position sense – proprioception. Proprioceptive deficit is bigger in the group of non-athletes, while in the group of athletes the deficit is still present but much smaller than in the non-athlete group. The athletes also gain faster the strength of dorsal flexors on sprained ankle. Therefore, frequent physical training has an influence on improving the stability of balance and increasing the muscular strength after ankle sprain. We propose weekly estimating the influence of functional rehabilitation with elements of proprioceptive training on balance performance after ankle sprain.

Éva Zakar

TOP RESULTS IN ATHLETICS THROUGH TOP REHABILITATION

In our lecture we introduce Edith Ercsenyi who had a total - endoprothesis operation 14 years ago /at the age of 39/, and she is very active in sport, and sport competitions. We made the biomechanic analysis of Edith's running at the laboratory of the Semmelweis University with the help of Kistler force plate, and Fooscan. Our aim is to get a total view about her movement, and to give help to her coach to improve her achievement.

Ildikó Kanyó

Semmelweis University, College of Health Care, Budapest, Hungary

GAIT ANALYSIS OF PATIENTS WITH HIP ARTHROSIS, BEFORE AND AFTER TOTAL ENDOPROTHESYS (TEP) OPERATION

Supervisor: Tibor Szilágyi, Semmelweis University, TF, Budapest, Hungary

Expert: Zsuzsa Kamuti, National Medical and Rehabilitational Institute, Budapest, Hungary

At advanced stage the hip arthrosis evolves high degree of changes in the hip joint and the connected parts of body. As a result, the movement structure of the hip is changing, the posture and load relationships are moving to pathological direction. For minimizing the degree of changes, complex rehabilitation procedure is needed. One of the most important part of this procedure is biomechanics. Kinematical movement analysis of arthrosys resultes problems can help to develop effective training programs in rehabilitation. Results of these (sometimes person specific) procedures are measurable with gait analysis after operation. The scale of progress in gait parameters can descript the effectiveness of rehabilitation.

Zsuzsanna Pluhár, Noémi Keresztes, Bettina Pikó

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RELATIONSHIP BETWEEN PSYCHOSOMATIC SYMPTOMS AND PHYSICAL ACTIVITY IN 11-14-YEAR-OLD CHILDREN

The long term beneficial effects of regular physical activity have been documented for a long time. It is well known that regular physical activity decreases the development of cardiovascular disease. Several studies have proved that sport is very important in childhood as it is necessary for children's healthy somatic and psychosocial development. The frequency of some common psychosomatic symptoms has been found to be a suitable indicator of

adolescent health. We hypothesize that regular exercising may have a beneficial effect on adolescents' psychosomatic health status.

This study has been carried out among 11-14-year-old children (the average age was 12,1 years; N= 550). This presentation is part of a research project of youth' health (supported by OTKA T042490 and ETT T08/005 grants). Self-administered questionnaire was used as a method of data collection that included items on sociodemographics and sports activity as well as the most frequent psychosomatic symptoms and characteristic features of sport.

We have found that children who are engaged in regular physical activity have estimated their self-perceived fitness and self-perceived health higher than those who do not take part in sport regularly. Better self-perceived fitness and self-perceived health may decrease development of psychosomatic symptoms like headache, backache, heartburn or sleeping disorders. These symptoms are more frequent among girls and independent of social class. It is very interesting that these symptoms often covary.

Unfortunately, we can conclude that regular physical activity does not protect against the development of psychosomatic symptoms. However, those who pursue sport competitively have lower score on the psychosomatic symptom scale than those who practice physical activity just as a hobby.

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THE INFLUENCE OF PHYSICAL ACTIVITY ON OSTEOPOROSIS IN FEMALE UNIVERSITY STUDENTS

Consultant: Dr. Gábor Szóts, Semmelweis University TF, Budapest, Hungary

The authors examined the connection between physical activity and osteoporosis. Altogether 15 female university students were examined, aged between 18-24 years. Their average BMI was 21,45; and their mean height was 169 cm. Non of them used contraceptives and they were non-smokers.

Exercise physiological parameters were examined such as: relative max. VO₂, running time at vita maxima, lactic acid, BMI and bone mineral density (BMD).

The aim of the study was to find connection between the level of fitness and bone mineral density. The fitness level was determined by exercise load test on treadmill (Vita Maxima).

The results are presented by correlation co-efficient and correlation line. The girls can be divided in two groups by their physical activity level. The physically active group consisted of 9 and the physical inactive consisted of 6 female students. The relative aerobic capacity of the active group was by 40% higher than that of the non-active females, and they can run about two times more than the inactive age-peers.

The bone mineral density of the active group was higher in each area studied.

The correlation between VO₂ max and bone mineral density of the forearm was also examined in the whole sample.

As a result we found that physical activity is one of the most important factor to slow down osteoporosis in elderly people.

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LACTIC ACIDOSIS, LACTACIDURIA AND CHANGES IN ANION-GAP DURING EXERCISE

Tutor: Dr. István Györe, National Institute for Sport Medicine, Budapest, Hungary

Question: Are there any differences between successful and less successful athletes blood and urine pH and lactic acid levels, blood acid-base parameters, ion concentrations and in anion gap during acute physical exercise.

Method: 29 elite rowers (man) were observed during exercise with increasing intensity on rowing ergometer (Concept 2). Capillary blood was taken from the athletes before and after the exercise, and in the 5. minute of the recovery. We examined the blood samples with pHoxplusL apparatus. The pH, lactic acid and creatinine concentration of the urine were also analysed before and after the exercise. The athletes were divided into two groups on the basis of their results in world competitions.

Results: The more successful athletes (group I.) maximal performance was significantly higher. During the exercise lactate, Na⁺, and Cl⁻ concentration of the blood in the first group was significantly lower. On the other hand the lactate concentration and the changes of pH of their urine was significantly higher. We observed a positive correlation between the changes of the blood lactate concentration and the anion gap, which were identical in the two groups.

Conclusion: The reason of the difference between the ion concentration of the blood is the lower blood lactate level of group I. It can be explained with the fact that due to the long-term adaptation to the physical exercise their muscle fibers produce less lactic acid at the same intensity of exercise, or the elimination of H⁺ and lactate of the kidney is increasing, or the reuse of lactic acid of other organs grow thanks to the MCT transporters.

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DEPRESSED SYMPATHETIC STIMULATION IN AMENORRHEIC FEMALES COMPARED TO EUMENORRHEIC FEMALES AS MEASURED BY HEART RATE VARIABILITY

Decreased estrogen levels are associated with an increased risk of cardiovascular disease in post-menopausal women. However, little is known about the impact of low levels of estrogen on cardiovascular status in younger women with amenorrhea. The purpose of this study was to assess autonomic stimulation and cardiovascular function via heart rate variability (HRV) measures in moderately active amenorrheic females (AMEN: n=7) and to compare these data with those from similarly active eumenorrheic females (EUMEN: n=10). Subjects were part of a larger ongoing study on women with amenorrhea being conducted in the lab by Dr. Mary Jane DeSouza. Age (mean of two groups), age at menarche (mean of two groups), BMI (mean of two groups), height (mean of two groups) and weight (mean of two groups) did not differ significantly ($p > 0.05$) between the groups. Resting supine heart rate variability measures were taken with a Polar Electro Heart Rate Monitor system (S-810, Kempele, Finland). A two-tailed independent sample t-test revealed a significantly reduced low frequency (LF) component of HRV in the AMEN group compared to the EUMEN group (1692.7 ± 316.5 vs. $3743.5 \pm 701.6 \text{ms}^2$, $p < 0.05$). No other significant differences in HRV measures (total HRV, High Frequency (HF), LF/HF ratio) were found between the AMEN and EUMEN groups ($p < 0.05$). These findings suggest that AMEN women have a depressed sympathetic drive compared to their EUMEN counterparts and highlight the importance of further exploring the potential impact of a chronic hypoestrogenic environment on cardiovascular function in moderately active AMEN women.

Ph.D. / Life Science

Éva Zakariás

The Reflex Locomotion is a precious clinic tool for the evaluation of the neuromotor development, it is a reliable element of diagnosis. For the physiotherapist it is an efficient global therapy, which can be used from the first day of life, in a preventive or curative intention. Reflex Locomotion modify the reflex activity, in order to orient the neuromotor development in a more physiological direction.

The Reflex Locomotion is a treatment possibility in many pathological situation of the young child because it can be used to activate a weak musculature, in order to obtain the postural correction. It can support the integration of a new postural design and can improve the automatic postural activity. It helps the neuromotor development by improving the coordination of the movements, balance.

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SWIMMING TRAINING AND NETTLE (URTICA DIOICA) RICH-DIET INTERACT WITH NEURODEGENERATION INDUCED OXIDATIVE STRESS

Both, regular exercise and phytotherapeutic supplementation are assumed to alleviate severity of neurodegeneration leading to dementia through their antioxidant properties. The effect of chronic swimming training and that of enriched lab chow containing 1% (w/w) dried nettle (*Urtica dioica*) leaf were investigated on the prevention of severity of brain injury caused by N-methyl-D-aspartate (NMDA) lesion in Wistar rats.

The rats were divided into groups subjected to swimming training (6-weeks) or to nettle supplementation (8-weeks) or to the combination of these two treatments. NMDA lesion was applied after the termination of treatments. The effects of lesion on the production of reactive oxygen species (ROS) were tested by electron spin resonance (ESR) in frontal lobe and cerebellum, and by behavioural tests including learning paradigms (open-field activity, passive avoidance and Morris maze spatial learning tests). NFκB was assayed by EMSA in several brain regions and liver.

Open-field activity and passive avoidance learning tests showed significant improvements in trained and/or nettle fed groups after NMDA lesion. The ESR measurements demonstrated that NMDA lesion induced an increment in oxygen free radical accumulation, which was reduced by nettle diet in both brain regions and by training in the frontal lobe.

In conclusion, the results demonstrate that nettle diet and exercise can improve the redox state of several brain regions of brain injured rats in a selective way. According to learning and behavioural tests both treatments seem to alleviate brain injury-caused behavioural and learning disabilities. Both treatments were considered as antioxidant interventions.

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EFFECTS OF SWIMMING TRAINING ON BRAIN INJURY-INDUCED BEHAVIOURAL AND LEARNING ABNORMALITIES IN RATS

Physical exercise has beneficial effects on health and is assumed to reduce brain injury-induced behavioural dysfunctions including learning and memory deficits. The effect of chronic swimming training was investigated in the prevention of functional severity of cholinergic brain injury caused by N-methyl-D-aspartate (NMDA) lesion in rats. Male Wistar rats were divided into 4 groups subjected to (1) sham training and sham brain injury, (2) swimming training and sham brain injury (3) sham training and NMDA lesion, and (4) swimming training and NMDA lesion. The NMDA excitotoxic lesion placed into the cholinergic nucleus basalis magnocellularis region was applied after the termination of a 6-weeks long swimming training. Behavioural tests served to test general functional consequences including novelty-induced arousal in open-field and learning in the passive avoidance test. The results showed that open-field activity and passive avoidance learning were reduced by brain lesion and the exercise beneficially interfered with the dysfunctions. The chronic swimming exercise in addition also improved the performance of non-lesioned control rats. The results demonstrate that chronic exercise can improve adaptive behaviour including learning and is able to prevent significantly the brain lesion-induced behavioural dysfunctions.

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EFFECTS OF EXERCISE AND FISH-OIL RICH DIET ON CARBOHYDRATE AND LIPID METABOLISM IN AGED RATS

The metabolic status of aged rats exposed to moderate chronic swimming exercise for 10 weeks with or without perinatal pretreatment with fish oil rich diet were investigated. It was predicted that both the chronic exercise and the ω -3 fatty acids are potentially beneficial for the health during aging. The interaction between these two factors was further examined. The following physiological parameters were measured in the course of exercise: serum glucose, cholesterol and triglycerid levels, body weight and the weights of different organs including fat depots. The insulin sensitivity was tested 15, 30 and 60 min after 0.5 IU/kg i.p. at the end of swimming exercise. It was found that swimming exercise did not change the values of basal carbohydrate and lipid variables in the blood but increased insulin sensitivity. Developmental ω -3 fatty acid treatment resulted in a decreased basal glucose level and decreased triglycerid level by the end of exercise. The results showed that both the developmental fish oil exposure and the chronic exercise exerted beneficial effects on the carbohydrate and lipid metabolism during aging. These factors may be considered as potentially health supporting agents during aging.

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MOTIVATIONAL BACKGROUND OF THE LONG TIME FLOW-ACTIVITY IN SPORT

Supervisor: Dr. Csaba Nagykovács, Semmelweis University TF, Budapest, Hungary

Flow became known worldwide by works of Mihály Csíkszentmihályi. The characteristics of flow were written in *The Flow* (1997). Great number of the examples were a kind of sport

activity. His third book, written with Susan A. Jackson, published in Hungary in 2001 was titled "Sport and flow". In my doctoral study, I began to deal with this activity that happens very often in sport.

There are two important questions: what kind of motivational background it has and how it starts to happen at sportsmen.

The method is named Motivational Anamnesis Questionnaire (MAK) which was filled in by professional sportsmen. We found a group of motivation of past, a motivational constellation at present and motivation facing the future.

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RELATIONSHIP BETWEEN STPI-Y SCALES AND LIFE-STYLE DEFENSE MECHANISM
INVENTORY MEASURES AT MALE AND FEMALE PE STUDENTS

Introduction:

This study reports on examination results on two recently standardized test; State-Trait Personality Inventory-Y (STPI-Y) and Lifestyle Defense Mechanism Inventory (LDM), aiming to get information about some characteristic features of different level of high school athletes. In the earlier study we compared STPI (Spielberger, at al.,1980, Hungarian version Oláh, 1987) results of male (N=59) and female (N=48) PE students. The gender difference in STPI was found in State Anger, and Trait Anxiety: males had higher Anger ($p<.02$) and lower Anxiety level ($p<.05$) than females (Kudar, 2003).

Subjects:

182 PE students (average age: 20,66 years; SD 1,80; sport history: 9,63 years; SD 3,7) 65 males and 55 females second year, and 62 third year; 15 male and 47 female are active in different sports. The Hungarian version of STPI-Y and LDM scales were administered in classroom situation. We have compared the groups of top level and leisure-time athletes and have accounted relationship between the STPI-Y and LDM scales. For the statistical analysis of data SPSS program was applied.

Method

State-Trait Personality Inventory-Y (Spielberger, 1995, Hungarian version Sipos et al., 2004). STPI-Y contains: State/Trait Anxiety, -Curiosity, -Anger, and -Depression scales. The Lifestyle Defense Mechanism Inventory (Spielberger, 1987) has two scales: Rationality-Emotional Defensiveness (R/ED) and Need for Harmony (N/H) scales.

Results

The results show gender differences for state/trait anxiety, state curiosity and trait depression in the second year male and female PE group. The male PE students are less anxious, and cowries, and their trait depression is lower then in the same results of the female PE group. We have found only one difference between the third year male and female groups: the females were more anxious than males.

Concurrent validity: STPI-Y Trait variables correlate significantly with R/ED scale results of LDM inventory for the total sample. Trait curiosity correlates positively with both LDM scales for females. The other STPI-Y Trait scales (anxiety, anger and depression) have inverse correlation with R/ED scores in the male group and in the total sample. Correlation of STPI-Y State anger scale scores and the LDM scales results reveals the sensitivity of the LDM scales. High State anger and high R/ED scores go parallel, State anger and N/H values have inverse correlation for males.

Furthermore, first class athlete female PE students get significantly more points in the state and trait anxiety scales than the third class female athlete PE students do. Neither the male-nor the total sample show such a statistically significant difference in this aspect.

Conclusion:

The fact the females are more anxious than males is well-known. In the whole PE student sample higher anxiety (A-State/A-Trait) goes parallel with lower RE/D scores. This connection is observable for the male PE students as well. At the same time, more a man is angry less he tries to solve his problems in a harmonious way and more he tries to solve his problems in a rationality – emotional defensiveness way. In the female sample the high trait anxiety predicts the use of the rationality–emotional defensiveness coping strategy and the need for harmony. Male PE students with high trait anger use less both of the LDM strategies. In comparison of top level and leisure time athlete groups, the top level female athletes show significantly higher state- and trait anxiety. According to the sport achievement, neither the male- nor the total sample show statistically significant difference in any STPI-Y scales.