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OPINIONS OF 6TH GRADE STUDENTS ON KINETIC GAMES REALIZED DURING PHYSICAL AND SPORTS EDUCATION

ADAMČÁK ŠTEFAN – KOZAŇÁKOVÁ ANNA

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SUMMARY

The aim of this work was to determine the views of pupils 6th year to file motion games made for hours of physical education and sports during the research period of 6 months. The results of our work clearly showed that playful activities are for elementary school students increasingly popular activity carried out on hours of physical education and sport. Based on the results we can also conclude that pupils motion games attracts most physical activity and games are the most popular in the preparation and the main part of an hour.

KEY WORDS: motion games, sports and physical education, administration, educational resource.

INTRODUCTION

Game in the development of children means improvement of child's physical, motor and cognitive functions. It is a mean of knowing the world, of emotional and social development. In a game, taken as a basic activity the child recognizes function and correlation of the world that surrounds him, as well as function of human relationships in his social universe (Oravcová, 2004). As in childhood, adolescence and even in the older age, game belongs to a category where we do not change only ourselves, but also our surroundings in a much more significant way than we often realize. Through game we resolve conflicts; socialization takes place at a level of a strong live through atmosphere and is changing personality of the individual in an unconscious but simultaneously in a sound and consistent way, we do not often even realize "(Mazal, 1991).

School's physical and sports education is dominated by playful activities in form of kinetic and sport games. The benefit of kinetic games is visible in enriching the lives of students with new activities, acquiring new skills, knowledge, and finally creating new or

strengthening already acquired contacts with classmates, as well as teachers. In all its forms and variations, kinetic games for the most part provide the joy of movement, emotional feeling of action in game, diverting attention from the problems of everyday life and distraction. They promote a sense for team and friendship; have high communication and socialization effect. With proper selection and reasonable course of action, movement games help to win for greater kinetic activity even those students, who for the considerable part of their life did not engage in sports (Argaj, 2011). Players with their movement and thinking activity take an instant opinion on any situation being addressed in the game. These situations are dealt either with special moves, which are pre-established, exercised or also movements which players select or execute based on their own sole discretion and immediate understanding of the situation in the game (Adamčák-Nemec, 2010). Also for these reasons, kinetic games are becoming an excellent teaching tool.

AIM

The aim of our study was to assess the views of primary school students on a file of kinetic games regularly conducted during physical and sports education.

METHODOLOGY

The sample was 6 grade primary school students from the Orava region. Supporting method for obtaining factual material was a survey, which we used as a mean of obtaining feedback from the students on the realized classes during the research. Experimental factor was a set of kinetic games that were regularly applied during physical and sports education. Research sample consisted of 135 respondents. Their closer characteristics are presented in Table 1. Statistical significance was investigated from the perspective of intersexual differences.

Table 1 Research sample of students - characteristics

<i>School</i>	<i>boys</i>	<i>girls</i>
ZŠ MUTNÉ	32	25
ZŠ TVRDOŠÍN	42	36
together	74	61

RESEARCH RESULTS

The first question of our survey was to find out whether the school physical and sports education is the most popular subject between the surveyed respondents (Figure 1). Evaluating the survey results, we found out that school physical and sports education is among the favourite subjects by half of the surveyed female respondents and by 80.65% of male respondents. From the point of intersexual differences, statistical differences in the responses were significant at the level of $p < 0,01$. The figure also shows that for 24% of students (boys and girls) the subject of physical and sports education is not among the favourite subjects and thus their relationship to movement as such will be lower. Innovative curricula provide sufficient space for teachers' application of even less used physical activities. It depends primarily on the professional preparedness of teachers and their willingness to implement the less known and unconventional means of physical and sports education in the teaching process (Krška, 2007, Kazimírová, 2008, Baránek-Hrnčiar, 2009).

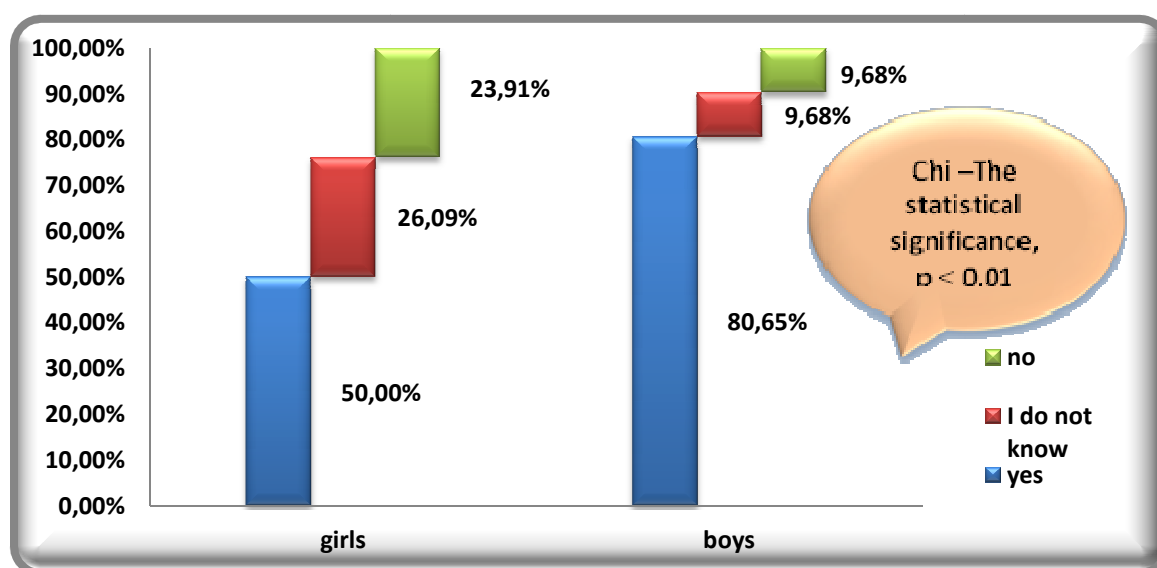


Figure 1 Popularity of the physical and sports education subject

In the next question of our survey, we tried to find out why the students like kinetic games (Figure 2). As we expected, students (69,35% boys and 69,57% girls) like kinetic games primarily because they are associated with the movement. The remaining percentage of girls (30,43%) replied that kinetic games bring new experience. In boys' responses (30,65%) dominated the response "to compete", in the second place. Also according to Zapletal et al. (1990) games and playful activities help children to satisfy their desire for human society, draw them from loneliness and allow them to communicate with others. Students find in the games new friends but also foes that they may work with or also compete. Games provide

them with exciting and joyful experience; they experience tension of a fight but also blissful moments of victory.

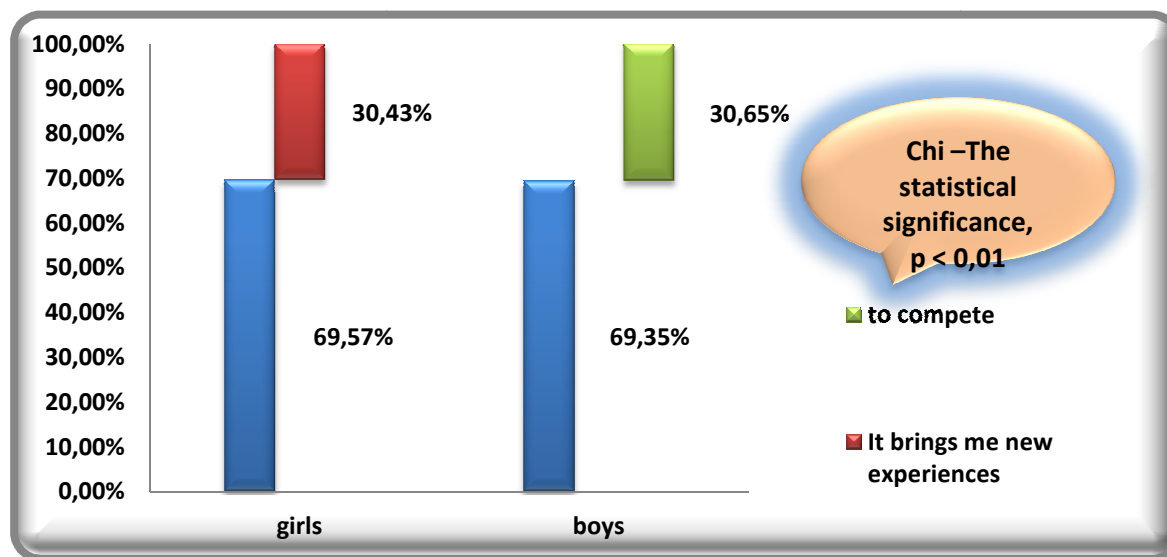


Figure 2 Popularity reasons for kinetic games among respondents

From figure 3 we can conclude that the popularity of kinetic games among surveyed respondents varies through different parts of lessons. Comparing the results, we found out that 60,87% of girls liked kinetic games in the preparation part of lesson, while boys (69,35%) enjoyed the realization of kinetic games through the main part of the lesson. From the acquired results, it is further evident that kinetic games were least popular games in the final stage of the lesson. Evaluating this issue, we gained statistically significant differences in the responses of boys and girls at the level of $p < 0.01$.

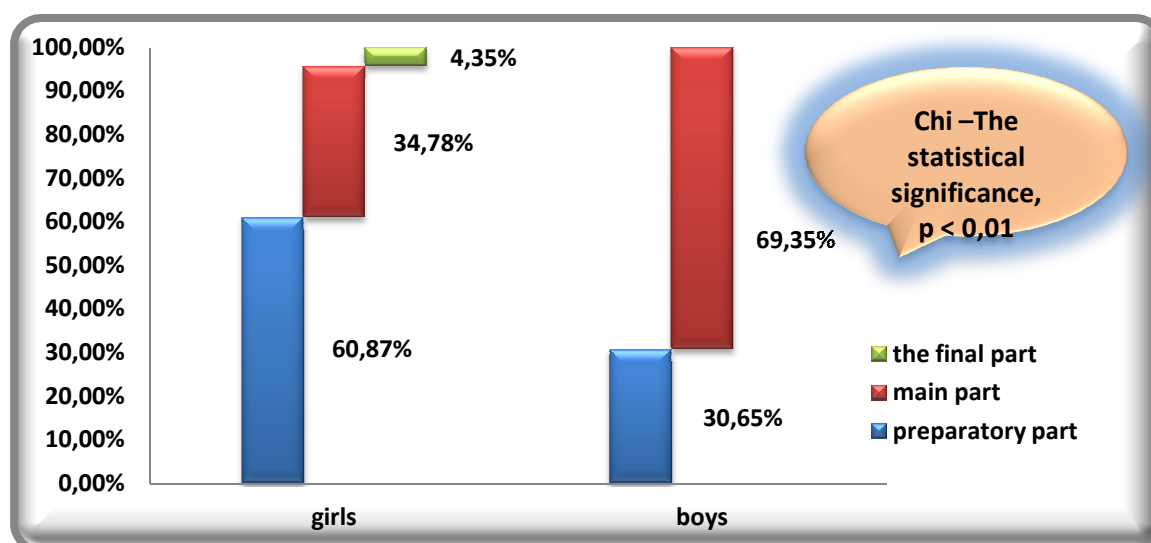


Figure 3 Popularity of kinetic games implemented in different parts of the lesson

We agree with the opinion of Novotny-Blahutková-Ottmárová (2007) according to which, physical game where students use a variety of tools positively motivates students to new activities. Therefore, we investigated the following question: which kinetic games in connection with the use - not use of exercise equipment or tools were the most popular among respondents. A clear majority of respondents (boys – 95,16% and 84,78% girls) reported that among the most popular games realized during the research were clearly kinetic games with equipment like balls, skipping ropes, etc... (see Figure 4). This certainly is also connected with sport games realized through the surveyed hours of physical and sports education.

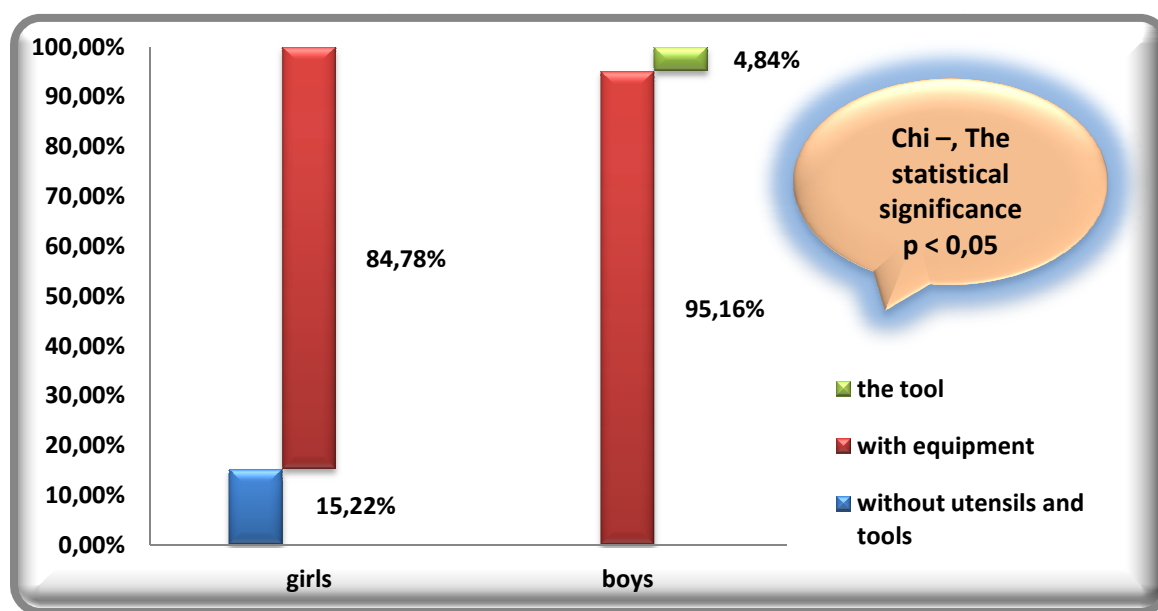


Figure 4 Popularity of kinetic games which use - do not use tools and equipment

Many researchers (Novotna-Adamčák, 2002 Peráčková, 2008, Frömel - Bauman, 2006; Adamčák 2009; Kružliak, 2011; Kozančáková, 2011) examining the impact of physical games on the learner believe that through physical game students quickly liaise with classmates. This fact should be preferably used during puberty, because according to Vágnerová (2005), in this period the most important group for teenagers is becoming their peer group, which generates the necessary emotional and social support, forms friendships, and first loves. In the group appears hierarchy, which has its leader. During our research, we have pursued not only physical but also individual, pair and group games, even games of big teams. Because of this issue, the fifth question of our survey we investigated was which physical game realized during our research was the most popular from the perspective of our respondents. Evaluating the results, majority of our respondents (67,39% girls and 74,19% boys) claimed group games

were among the most popular, what we assumed as well. From the perspective of boys and girls, the answers to this question were not statistically significant (Figure 5).

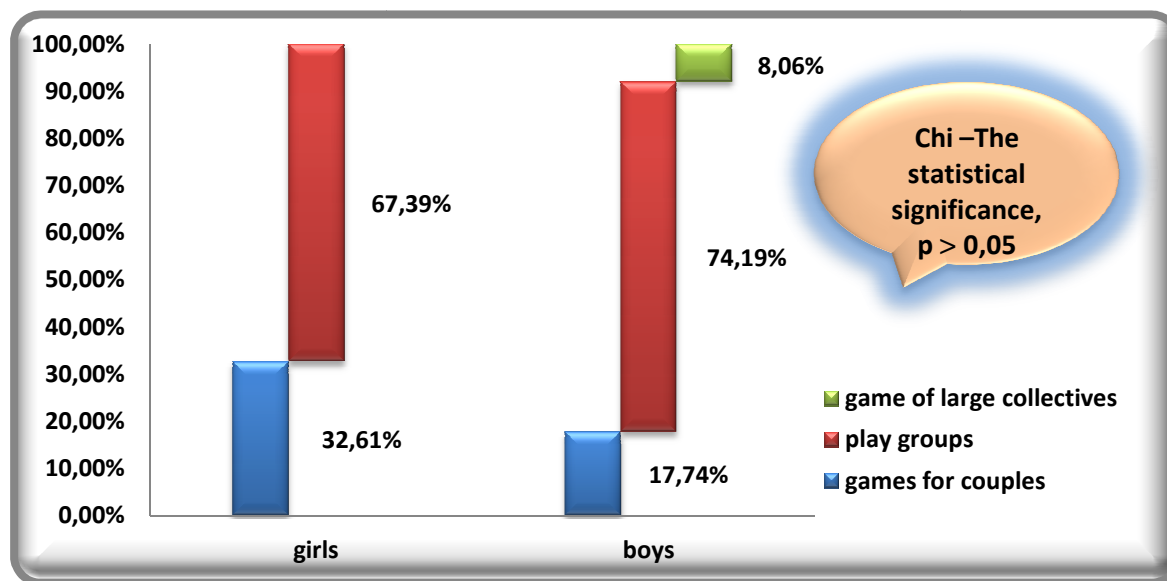


Figure 5 Popularity of kinetic games from the aspect of quantitative representation in the game

We were creating a package of physical games, and that in a way it included kinetic games of different nature . In the sixth question of our survey, we asked the respondents which kinetic games were during the hours of physical and sports education their most favourite. As you can see in Figure 6, among girls (63,04%) chasing and jumping were the most popular. The most popular in the group of boys were hitting and passing (51,61%). From the perspective of intersexual differences, there were statistically significant responses at the level of $p < 0.05$.

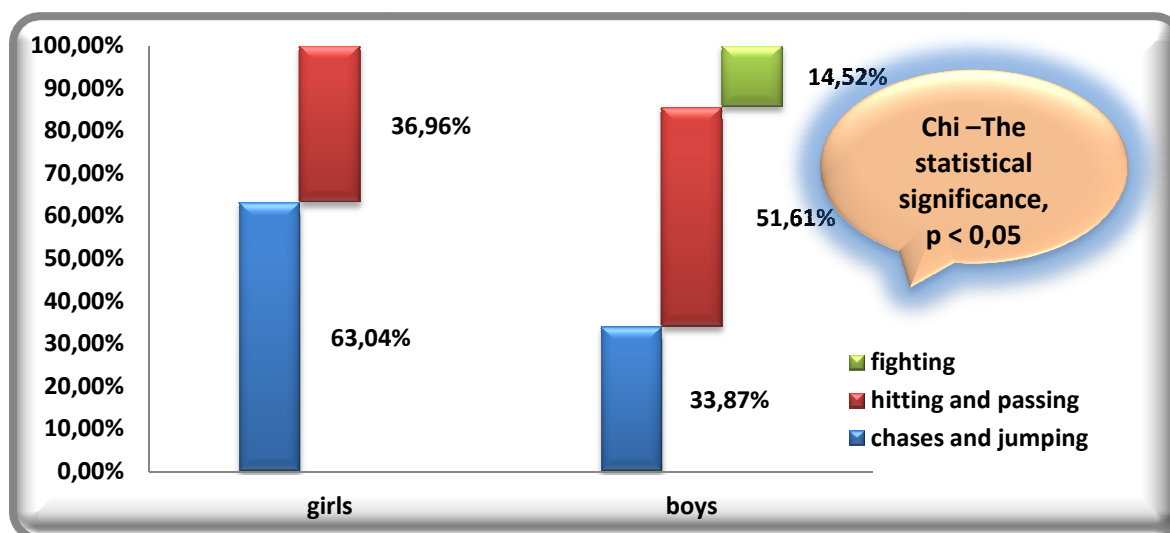


Figure 6 Popularity of kinetic games from the aspect of activity focus in the game

Every teacher knows that the basis for a successful implementation of a kinetic game is based on its thorough and clear explanation, so that each and every student understands not only the rules but also what will be required from him in the game. It is therefore important that every teacher knows his students and adapts the game of choice to age specifics (Mazal, 2000 Argaj, 2001). In our experiment, we tried to apply not only simple kinetic games but also games with more demanding rules. Therefore, other investigated issue was which game among the respondents were the most popular. From the above, it is clear that our respondents were more interested (87,10% boys and 78,26% girls) in kinetic games with more complex rules. Games with simpler rules were interesting only for a small percentage of respondents (Figure 7). Statistically significant differences in the responses of boys and girls were not recorded. Our recorded facts only confirm the allegations of Argaja (2004) that students at the second level of grammar school gradually begin to be interested in more complex and challenging games, as many of them have the opportunity to play them in their free time.

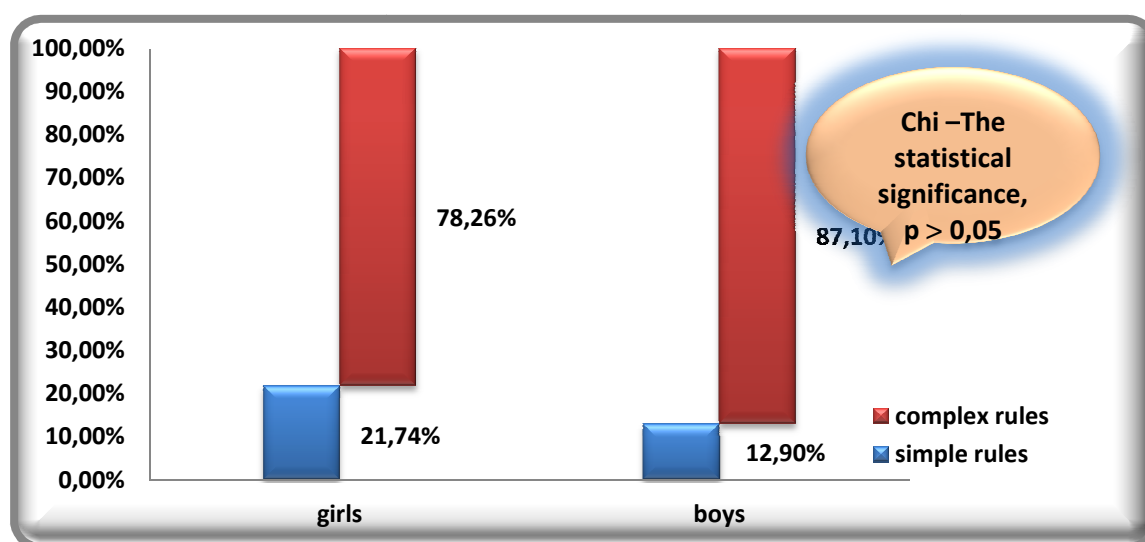


Figure 7 Popularity of kinetic gaming from the aspect of game difficulty

In the penultimate issue the respondents surveyed answered the question if the games implemented during our research were known to them, less known or they have played them for the first time. Comparing the results of boys and girls, we found out that boys more often encounter with kinetic games as we had a rather positive outcome in this response (See Figure 8). We believe that this is also influenced by the fact that most of the boys are attending sport interest groups. While determining statistical significance from the aspect of gender, we recorded statistically significant differences at the level of $p < 0.05$.

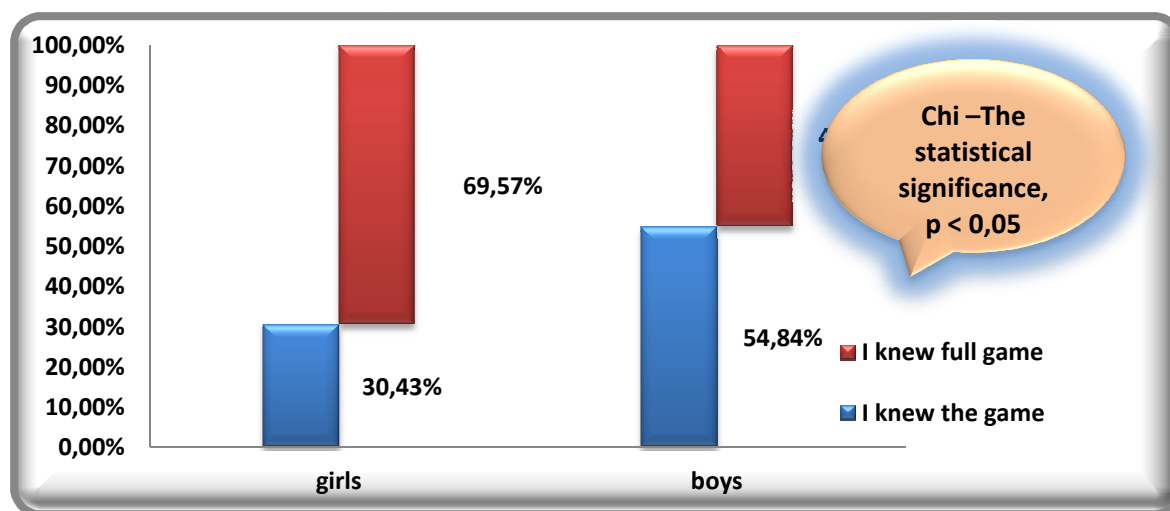


Figure 8 Knowledge level of kinetic games realized during the research

At the end of our survey, we tried to determine whether students have an interest in the application of regular kinetic games during hours of physical and sports education - for each hour in the preparation, main and final part of the lesson. We have highly appreciated the results we have achieved, since all respondents (as well in the group of boys and group of girls) we recorded a 100% interest in the application of regular kinetic games (Figure 9). This is a positive finding, as it is a task of each and every teacher of physical and sports education to acquaint students with a wide range of kinetic activities and use them not only as a positive action for motivation but also as a positive mean of achieving the lessons objectives. A remarkable idea was expressed by the author Němec (2002) which states: "People always like to play, voluntarily and gladly and it is highly irresponsible of teachers that activities which students adore are just rarely included in the teaching process."

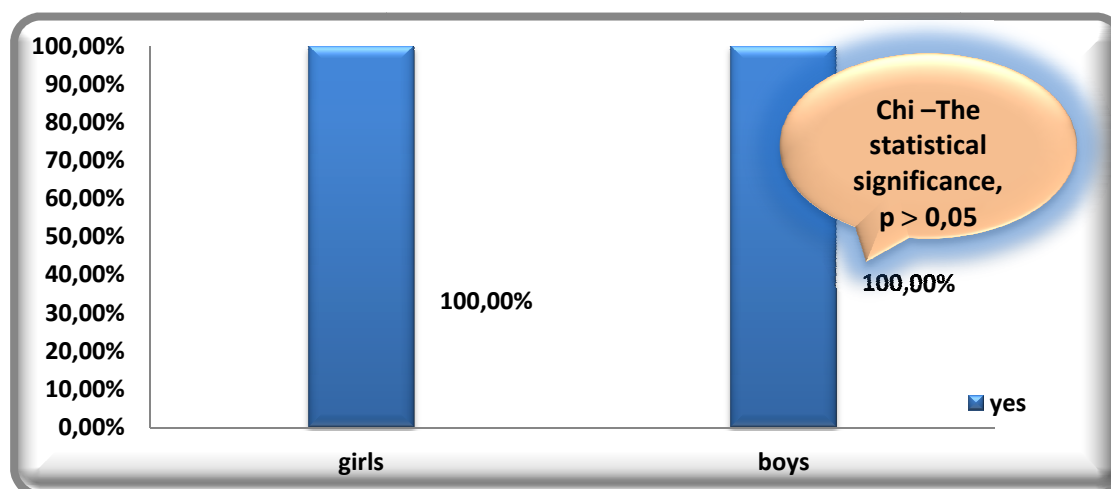


Figure 9 Interest in regular application of kinetic games during hours of physical and sports education

CONCLUSION

The results of our work clearly showed that playful activities for elementary school students are an increasingly popular activity performed during physical and sports education. Physical and sports education teacher should be a key factor in motivating students from primary schools to carry out regular kinetic activity and help to increase the popularity of this subject physical; and as the J.A. Comenius said: "Teachers should not be like a pillars next to the road that shows where to go but do not move on their own." Jan Amos Comenius already involved games into education and upbringing process as an energizing mean of understanding and managing work activities. Game was taken as a mean through which a child acquires knowledge in a not boring way. In this sense, game becomes one of the most important methods of education (Adamčák, 2009).

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NÁZORY ŽIAKOV ŠIESTYCH TRIED NA POHYBOVÉ HRY REALIZOVANÉ POČAS TELESNEJ A ŠPORTOVEJ VÝCHOVY

SÚHRN

Cieľom našej práce bolo zistiť názory žiakov základných škôl na súbor pohybových hier pravidelne realizovaných na hodinách telesnej a športovej výchovy. Výsledky našej práce jasne ukázal, že hravé aktivity sú pre žiakov základných škôl stále populárnou činnosťou vykonávanou na hodinách telesnej a športovej výchovy. Na základe výsledkov môžeme konštatovať, že žiaci majú neustále záujem o pohybové hry a sú najobľúbenejšie v príprave a hlavnú časť vyučovacej hodiny.

KLÚČOVÉ SLOVÁ: pohybové hry, telesná a športová výchova, vzdelávacie prostriedky.

THE ATTITUDE OF 9TH CLASS STUDENTS OF PRIMARY SCHOOL FOR DISABLED CHILDREN TO SPORT, FAIR PLAY, VALUES AND SYMBOLS OF OLYMPISM

AUXT MARTIN

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SUMMARY

The thesis deals with the attitude of pupils with mental disorder to physical education process and sport. The thesis concerns the research of the attitudes of pupils with mental disorder to sport and sport activities during physical education lessons and also out of school environment. The thesis is also about knowledge of disabled children at primary school about Olympic values, fair play and Olympic Games. Through the research we would like to help gathering new information for this area.

KEY WORDS: school physical education, mental disorder, olympism.

INTRODUCTION

At present sport belongs to everyday lifestyle of people. Mainly for young people sport is very important for healthy body development. Therefore is needed mainly in current pc's time to motivate youth to physical activity, whether by parents or pedagogues. Olympism, as well as its ideals is one of many possible motivation factors which can influence present youth. For youth it is necessary to know what the concept of olympism includes. It mainly depends on pedagogues who include olympism in teaching process as often as possible and not only in physical education but also in other school subjects as history, geography and Slovak language, etc.

Definition of olympism

At the beginning it is necessary to define the meaning of olympism. As Hrcka defines (2001), olympism is a life philosophy and linking characteristics of body, mind to a balanced whole as kalokagathia, whose objective is to effort physical and mental perfection. Olympism

is also mental flow focused on versatile perfection; people are being developed by them. It requires moral behaviour and actions of all those involved in the practice of sport, sports organizations, sports and politics. Grexa (2006) considered Olympism for the privilege of spiritual aristocracy and elite. According to Chmelar (2010) Olympism also emphasizes the development of the human person to versatility, and stimulates the ideal unity of physical, psychological, social and moral. Olympism seeks to combine sport and education to create a lifestyle based on the enjoyment of effort, the educational value of the positive example and respect for universal fundamental ethical principles such as: tolerance, generosity, friendship, non-discrimination, justice and democracy. (Hrčka, 2001)

Main target of olympism according to Grexa (2006) is that sport has to be included in harmonic service of development of human with hope, to build a peace company, seeking for protection of human dignity. It is also necessary to avoid the risk factors of sport, which belong to olympism for example doping, violence, not fair play and commerciality. That is reason why sport is a medium to express the olympism, also sport is the best way to develop balance among body, mind and spirit (Hrčka, 2001). Ideas of olympism gave to sports more humane and cultural-teaching sense, sport activities are done according to the rules, which lead their actors to moral and ethnic behaviour, to develop strong will, to overcome difficulties, systematic preparation and tolerant behaviour towards others (Görner, 2000; Grexa, 2006). Ideas of olympism contributed to:

- democratization of the world,
- development and propagation of sport on the each level,
- improve the training methods,
- enforcement ideas of peace during „cold war“

But current technical period brings hindrances and risk of olympism. It influences many young people, and their way of life is changing from active sport to passive sitting in front of computer. As Grexa (2006) considered, to risk factors of sport and olympism belong:

- one-sided and consume style of life,
- resistance to professional and active sport,
- doping, violence, not fair play,
- instrumental attitude to body and threats of health,
- abuse of Olympic Games by commercialism and use profit from Olympic Games out of sport,

- predominance of "the seriousness over playfulness", a reflection of the crisis of values in sport, increasing bellicosity,
- negative educational model of elite sportsmen who ignore and violate the principles of fair play.

Fair play is also related to olympism. According Grexa (1998) we can understand fair play as fair and honest competition, in which results of referee are accepted, it refuses to achieve victory illegally and it tolerates sport spirit also in case if others do not play fair. We can define fair play as respect for opponent, team mates and referee. Important is modesty in case of victory, dignity in case of loss and broadmindedness which makes good relationships. Necessary condition of each game is fair play.

Physical education and sports for children with mental disabilities

The main target of physical education is to positively influence physical development, good posture, increase the level of fundamental motor skills and physical fitness, to improve the basic locomotors movement skills. It is also important to stimulate and strengthen interest, emotional attachment to physical education to its values. Education is important for humanism, tolerance, aesthetic sense, fair play, responsibility for behaviour in relation to classmates, teachers, parents, the elderly, but also in relation to the environment and the nature (Čepčiansky, 1997).

In physical education process of mentally disabled people we work with the objectives, tasks, content, methods, principles, forms, tools and rules of sport and physical education of intact population, which are significantly modified and reduced. In the classes there are fewer students which allow individual treatment (Čepčiansky, 2005).

According to Trunečková (2002) sport is some kind of dispersal of youth, including all forms of movement activities, which can increase physical fitness, physical peace of people, forming social relationship by irregular or regular activities.

Movement can be developed as free time activity, but it is also important to include it to the teaching process, where students consider the movement as free lesson. In school environment physical education is one of the basic things to develop the personality of youth. The main target of physical activity is physical and intellectual health, optimal physical and movement development, forming of psychical, intellectual and moral properties in interaction between teaching part of teacher and studying part of student. (Antala, 2001).

AIM AND HYPOTHESIS

The aim of this thesis is to find out if the pupils in 9th class of primary school for disabled children know the Olympic values and if they can use these values in everyday life and sport competitions.

We assume that the attitude of disabled children to physical education is positive. Then we suggest, that pupil don't understand the Olympic values and fair play.

METHODOLOGY

Our research was conducted at 4 different schools for disabled children in Brezno region. The main method we used was a questionnaire. 36 pupils (20 boys and 16 girls) responded to the questionnaire. Through the questionnaire we wanted to determine the attitude of pupils to sport. The questionnaire was also about pupils knowledge about olympic values, olympism and fair play.

RESEARCH RESULTS

The first question of our survey was to find out whether the school physical and sports education is the most popular subject between the surveyed respondents (Figure 1). Evaluating the survey In the first question we asked the respondents (pupils of primary school for disabled children) if they like doing sport. 80% of boys and 62,5% of girls answered yes, 20% of boys and 31,25% of girls answered usually. Only 6,25% of girls answered no. Straight in this first question in general we can see that the pupils at primary schools for disabled children like doing sport.

In the second question we tried to find the students' attitude to physical and sport education. Boys expressed only positive attitude - 90% answered yes and 10% answered more yes than no. Girls expressed different attitude – 43,75% of girls answered yes, 31,25% answered more yes than no, 25% of girls answered no. Here we can see that in general students like the lessons of physical and sport education. That's why it is very important to develop their attitude to sport.

At school there are 2 or 3 lessons of Physical and sport education during a school week. We asked the students if the number of these lessons should be increased – 65% of boys and 68,75% of girls answered yes, 25% of boys and 6,25% of girls answered more yes than no, 5% of boys and 18,75% of girls answered more no than yes. Only 5% of boys and 6,25% of girls answered no. It means that the majority of students would like to have more lessons of

Physical and sport education. During these lessons students have the opportunity to employ their physical power on contrary to other lessons/school subjects.

In the fourth question we tried to find out if students like doing sport during Physical and sport education. 85% of boys and 50% of girls answered yes. 10% of boys and 12,5% of girls chose option more yes than no. 5% of boys chose option more no than yes. 37,5% of girls chose option no. Here we can observe that boys really like these lessons and also they like doing sport. Among girls sport is not so popular. So it is important to encourage girls to develop their attitude towards lessons of Physical and sport education.

Through the fifth question we found out how often students spend their time doing sport activities out of school during the school week (in the afternoon). 50% of boys and 31,25% of girls spend their time doing sport and physical activities every day. 15% of boys do sport out of school 4 times a school week, 35% of boys and 37,5% of girls do sport activities 2 -3 times a school week. 6,25% of boys do sport once a school week and 25% of girls do not spend their time doing any sport activities out of school during the school week. We can say that boys are more interested in sport than girls.

In the next question we discovered if students do sport also during weekends and holidays. 75% of boys and only 6,25% of girls answered yes. 15% of boys and 31,25% of girls answered more yes than no. 5% of boys and 50% of girls answered more no than yes. 5% of boys and 12,5% of girls do not do sport activities during weekend and holidays at all. We can see that the majority of boys spend their free time during weekends and holiday doing sport and physical activities. That is because boys are more interested in sport activities than girls.

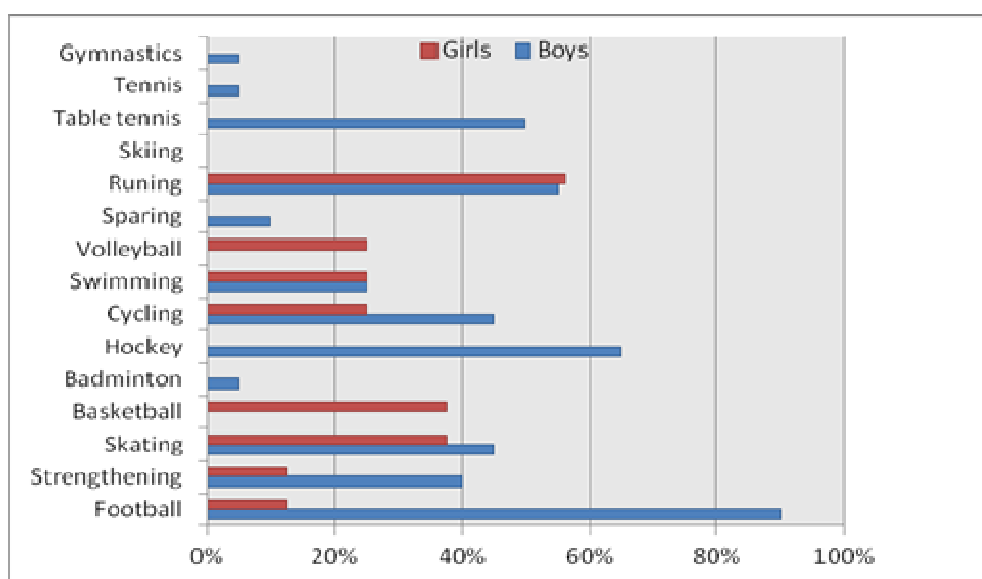


Figure 1 Sport and physical activities boys do out of school

In question number seven we tried to find out what sport and physical activities do they do out of school.

Number one for boys was football; following sports were hockey, running, table tennis, cycling, skating and strengthening. Sports which they do not do very often were swimming, sparring, gymnastics, tennis, badminton. Physical activities they do not do were skiing, volleyball and basketball. Skiing is connected with high expenses so that is the reason why it is not so popular. Out of school physical and sport activities popular with girls were running, skating, basketball, volleyball, cycling, swimming, strengthening and football. Activities they do not do out of school were gymnastics, tennis, table tennis, skiing, sparring, hockey, badminton. So it would be applicable to concentrate more to those chosen activities to develop better attitudes towards them.

In question number 8 we tried to find out if the students like winning in sport. 75% of boys answered *yes* and 25% answered *more yes than no*. So we can say that winning is very important factor in doing sport. 68,75% of girls answered *yes* and 18,75% of girls answered *more yes than no*. But there were also girls who answered *no* – 12,5%.

In the next question we tried to find out if students gibe at challenger when he loses. 25% of boys answered *yes*, 10% answered *more no than yes* and the majority 65% answered *no*. 43,75% of girls answered *yes*, 18,75% answered *more no than yes* and 37,5% answered *no*. In question number 10 we asked students if they respect the decisions of referees during the sport competitions. 70% of boys answered *yes*, 20% answered *more yes than no* and 10% answered *no*. 43,75% of girls answered *yes*, 37,5% answered *more yes than no* and 18,75% answered *no*.

Next question was related to the previous one. We tried to find out if students follow the rules even if the challenger doesn't follow them. 65% of boys answered *yes*, 25% answered *more yes than no* and only 10% answered *no*. 50% of girls answered *yes*, 12,5% of girls answered *more yes than no*, 25% answered *more no than yes* and 12,5% answered *no*. It can be caused by their not so positive attitude to sport in general.

In this question we tried to find out if students respect the challenger during the competition. 65% of boys answered *yes*, 25% answered *more yes than no* and 10% answered *no*. 56,25% of girls answered *yes*, 25% answered *more yes than no* and 18,75% answered *no*. In question number 13 we tried to find out who is the idol for the students. 50% of boys mentioned sportsman as their idol. Next option was that they do not have any idol. Other students chose their teacher, their friend, parent and actor. 37,5% of girls chose sportsman as their idol, 25% chose their friend, others chose teacher, singer and actor (Figure 2).

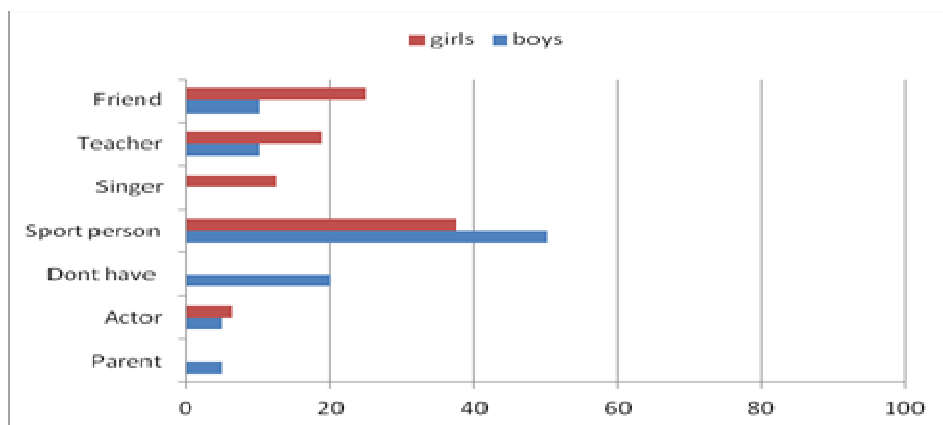


Figure 2 Which personality is the idol for boys and girls?

Question number 14 was connected to the previous one. Those students who wrote that their idol is a sportsman had to write his/her name. The most common were names as Messi and Demitra. These sportsmen are their idols not only for the sport achievements but first of all thanks to their positive personal qualities in their everyday life.

In question number 15 we asked children what is bad in sport. Students should choose these options: drugs, alcohol, cheating, laziness, insults, money, doping, violence, cigarettes and dishonesty. Some of the boys signed also words like competition and friendship, also girls circled option friendship. So it is necessary to explain these and describe the meaning of the words (Figure 3).

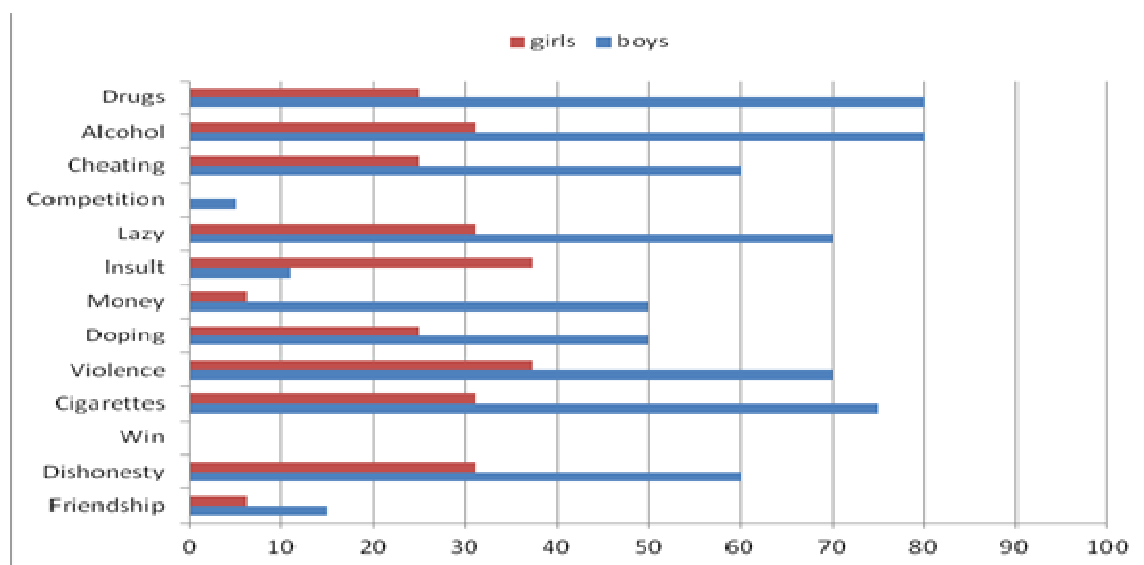


Figure 3 What is bad in sport?

In the next questions number 16, 17, 18 students could choose pictures expressing Olympism and fair play. They could circle random number of pictures according to what they consider as right. In question number 16 there were 2 correct pictures which represented fair

pay. Question number 17 described Olympic Games with 3 correct pictures. The last question had 2 correct pictures representing Paralympic Games.

In question number 16 50% of boys and 25% of girls answers were correct. Only one correct picture was circled by 25% of boys and 43,75% of girls. Incorrect answers were circled by 10% of boys and 12,5% of girls (Figure 4).

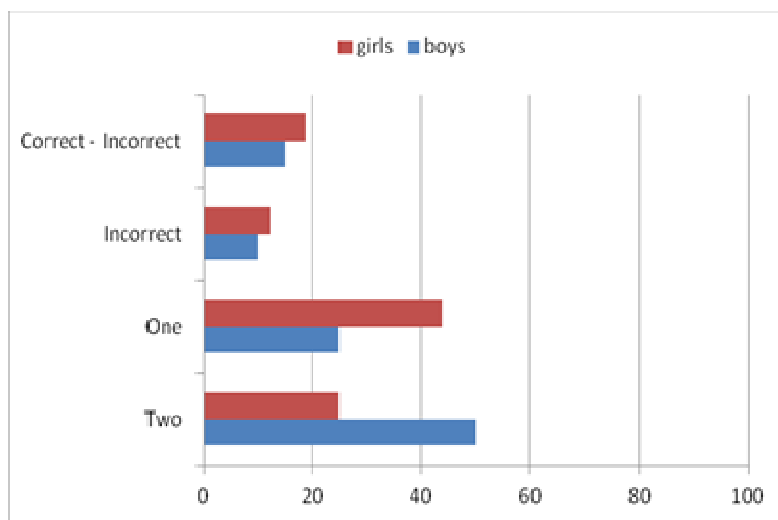


Figure 4 Question number 16

In question number 17 only 35% of boys circled 3 correct answers, 20% of boys and 25% of girls circled 2 correct answers. Only 1 correct picture was circled by 45% of boys and 75% of girls (Figure 5).

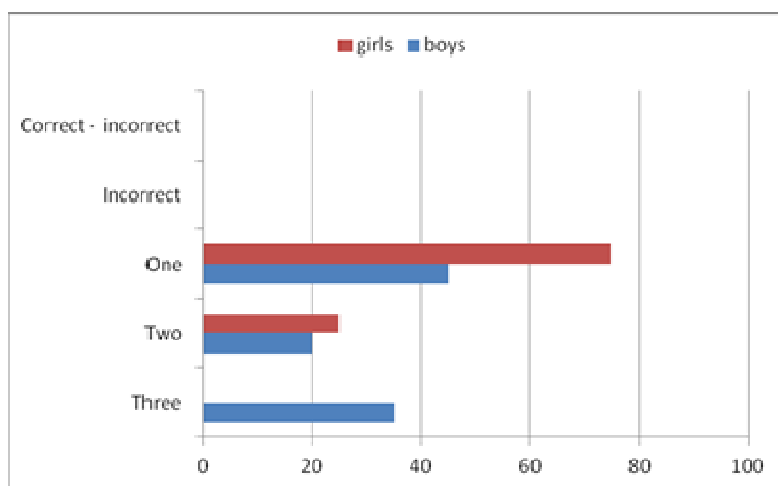


Figure 5 Question number 17

The pictures of the last question represented Paralympic games. 2 correct pictures were circled by 35% of boys, 1 correct picture was circled by 40% of boys and 62,5% of girls.

12,5% of girls circled bad answers, 25% of boys and also girls circled correct and incorrect answers, too (Figure 6).

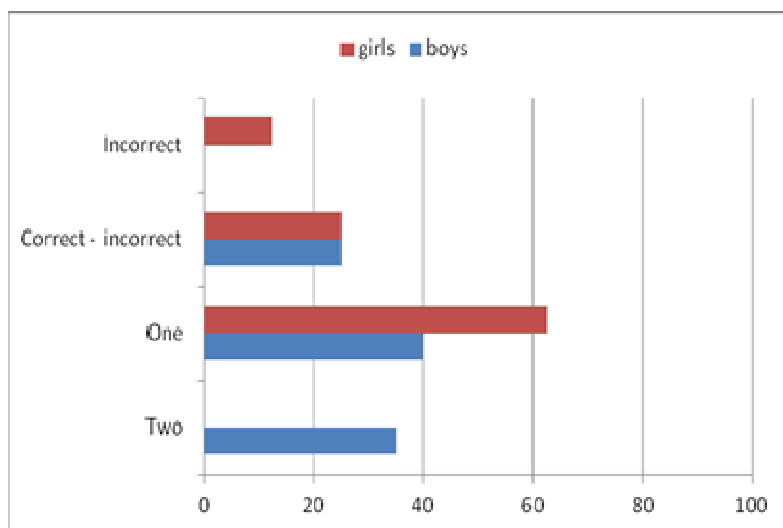


Figure 6 Question number 18

CONCLUSION

According to results of the research we can say that students of primary schools for disabled children have more positive attitude to sport, physical activities and P.E. lessons, and also these children like doing sport. They also expressed positive attitude to P.E. lessons. It is caused by their lower mental level so their body needs and prefers physical activity to sitting in a school desk. That's why it is very important to develop their attitude to physical activities and to motivate them in further action. They would also love to have more lessons of P.E. during a school week. But according to the sex it is boys who are more interested in P.E. than girls and they would also like to have more lessons. We also found out that boys like doing physical exercise during P.E. more than girls. So it is necessary to arouse more positive attitude to P.E. with girls. This could be done for example by offering different physical activities which are popular these days – zumba, pilates, aerobic. As far as out of school sport activities, students prefer those sports which are not very expensive to do because they mostly come from lower social class. And concerning competition boys are more interested in winning than girls.

In questions about fair play we found out that the majority of boys do not gibe at challenger when he loses the game. In this case girls are less respectable towards the challengers. Boys also respect the referees during sport events more than girls. Boys are also more responsible for rules following than girls because girls sometimes do not follow the

rules. Also respecting the challenger is better for boys. So it is very important to lead girls to follow the rules of fair play.

In question number 15 about what is bad in sport we found out those students chose also correct answers – competition and friendship. Students were able to define fair play, Olympic and Paralympic games according to given pictures. But it is still necessary to introduce and describe these concepts to students because they are a part of sport and Olympism.

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POSTOJ ŽIAKOV 9. TRIEDY ZÁKLADNEJ ŠKOLY PRE DETI SO ZDRAVOTNÝM POSTIHNUTÍM KU ŠPORTU, FÉROVEJ HRE, HODNOTÁM A SYMBOLOM OLYMPIZMU

SÚHRN

Práca sa zaoberá postojom žiakov s mentálnym postihnutím k telovýchovnému procesu a športu. Zaoberá sa výskumom postojov žiakov s mentálnym postihnutím ku športu a športovým aktivitám počas hodín telesnej výchovy a mimo školského prostredia. Práca sa zaoberá tiež vedomosťami detí s mentálnym postihnutím na základných školách ohľadom

Olympijských hodnôt, férovej hry a Olympijských hier. Výskumom by sme chceli zhromaždiť nové informácie vrámci tejto lokality.

KLÚČOVÉ SLOVÁ : školská telesná výchova, mentálne postihnutie, olympizmus.

INTERESTS OF THE STUDENTS OF TECHNICAL UNIVERSITY IN ZVOLEN IN TERMS OF MOVEMENT AND SPORTS AND RECREATIONAL ACTIVITIES

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SUMMARY

The author deals with the role of movement, sports and recreational activities in the hierarchy of students values in their leisure time and also the reasons why they do not sport. He determines the relationship to movement activities in spare time but also within selected subject - Physical Education. He is interested in the issues concerning the preference of certain sports and weekly frequency of sporting.

KEY WORDS: sport, hierarchy of values, movement activities, sports and recreational activities, Physical Education (PE), free time activities.

INTRODUCTION

Physical activity is important part of life for each individual. Its importance is characterized by multidimensional scope. It increases immunity, improves strength and condition, reduces stress and brings joy, fun and energy. So it generally helps to support health and quality of life of an individual. Regular exercise is important in each age group.

Valjent (2004) in his research notes that there are two basic understanding sports in the world. The first of them prefer play, competition and performance with all its attributes, such as training, performance, competition and so on. The second approach is considerably wider because in addition to competitive sports it highlights the original meaning of the word sport which is in Latin origin (desportare) and it means to entertain and have fun.

Sporting of university students in their free time should be about fun, rest, relax and compensation of mental workt. We are talking of course about those students who are dedicated to sports recreationally. Previous research in our country, but also in the Czech Republic (Valjent, 2010), shows that university students do not include movement into their

daily routine mainly because of lack of free time, despite the fact that health is most important for them.

OBJECTIVE

Through the questionnaire method we wanted to determine the relationship of female students of the Technical University in Zvolen to the sports-recreational activities as well as their attitude to the issue of school Physical Education.

METHODOLOGY

During Physical Education classes in fall semester of academic year 2012/2013 we realised research to determine the relationship and interest of female students of Technical University in Zvolen to the sport and recreational activities, their attitude and interest in the elective subject Physical Education and motional and recreational activities in their free time.

We used questionnaire method, students of 1 and 2 year answered 14 questions. In total, 700 questionnaires were distributed. 654 of them returned back to us, which is 93,43 %. Completed questionnaires were independently evaluated from the perspective of gender - men – women. Our research concerns the category of female students - women, whom we sent out 245 questionnaires. We could include 229 of them for processing, it is up 93,47 %.

RESEARCH RESULTS

The sample of women from TU in Zvolen was in the period of research - in 2012 represented mainly by students of the Faculty of Ecology and Environmental Sciences and Faculty of Wood Sciences and Technology. When compared with previous research, we found that leadership in 2011 was clearly in favour of girls from Whole University Study Programme. The main reason is that women from Whole University Study Programme used up the possibility of credited PE in their bachelor study (students may choose PE twice during their study, they get two credits for every PE subject) and women from other faculties had chosen it the next semester.

Table 1 Hierarchy of values

The priority list of values					
1.	Health	4.	Money	7.	Sport and movement
2.	Family	5.	Friendship	8.	Recognition
3.	Education	6.	Happiness		

Female respondents with an average age of 21,7 years were slightly older than men. As well as the representation of female students of the faculties so their attitude was changed. Prioritizing family, health and friendship was adjusted in current research, follows Table 1.

Women consider health and family the first and most important. It just swapped the order, but the value of friendship fell to fifth place. More important is education before happiness and money. Men prefer friendship, family and health before education. The value of health is therefore generally highest in the ranking values for all respondents. Awareness of the its need and irreplaceability is the first step towards recognizing the need to maintain and take care of your daily health and insert regularly movement and sport activities into the daily routine.

Movement, sport and recreational activities are part of life in 71,96 % of female students (Figure 1). Compared with men it is less, but compared with the research from 2011 attitude of female students on active movement has changed and increased from 40 % to 71,96 %. The explanation of the situation is the fact that girls are aware of the need for health and healthy lifestyle which must be part of a young person's life both for maintaining condition and health in fight against fatigue and stress, as well as prevention of civilization diseases. The second reason is that 51,12 % of respondents were once actively dedicated to sports in which they continue even today or sport recreationally. 23,11 % of respondents sport occasionally. Less pleasing is that nearly 5 % classify physical activities to the category of unnecessary.

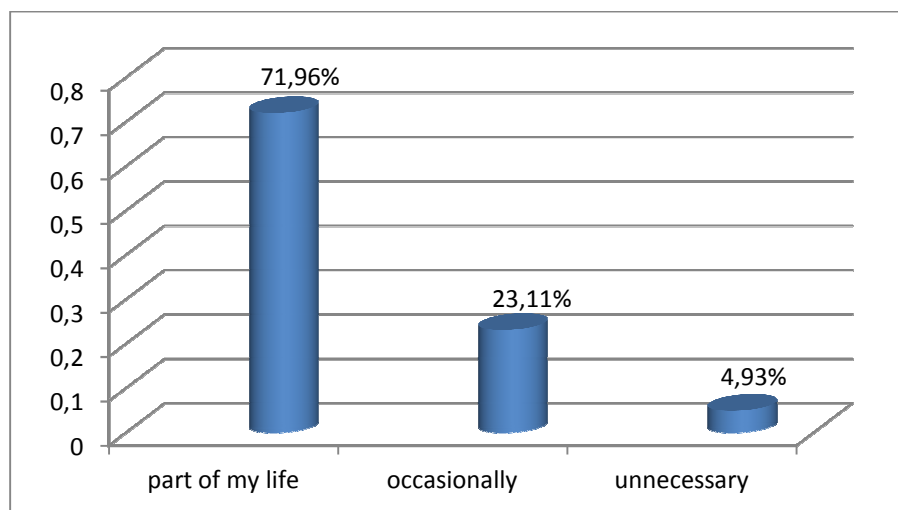


Figure 1 The importance of sports and recreational activities for student at TU

Figure 2 and 3 document reasons why female students do not sport and activities they prefer before physical activity. The situation, we have this year, repeats with few exceptions.

The most common reason is lack of free time in more than half of respondents – 51,13 %. Students devote to other activities, but in most cases this is mainly learning and earning at temporary job that occupy a substantial part of their day. They do not have a partner for this activity and therefore they prefer learning at TU - up 53,56 %, work on the PC or cultural and social events and activities. Neither student mentions that sport and movement is superfluous and unnecessary.

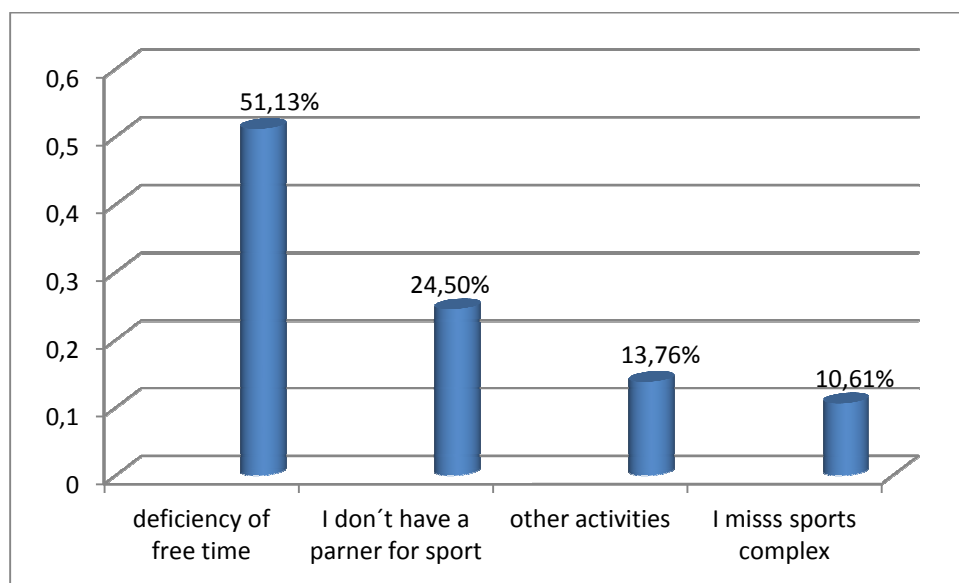


Figure 2 Main reasons to do not sport

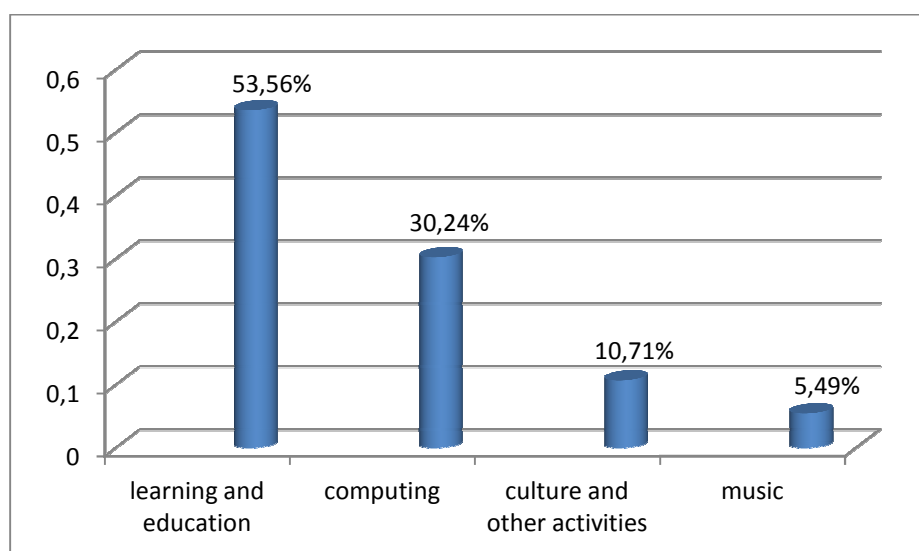


Figure 3 Activities preferred to movement activity

Observed data are very similar to the results of much more detailed research carried out in the Czech Republic on the more numerous research sample. Its author Valjent (2010)

found, in responds of Czech as well as our students, that the highest percentage has lack of free time and they do not have partner to sport and also do not feel the need for physical activity. So this is probably a general trend currently belonging to student life despite the fact that 50 % of respondents in the research do sports regularly.

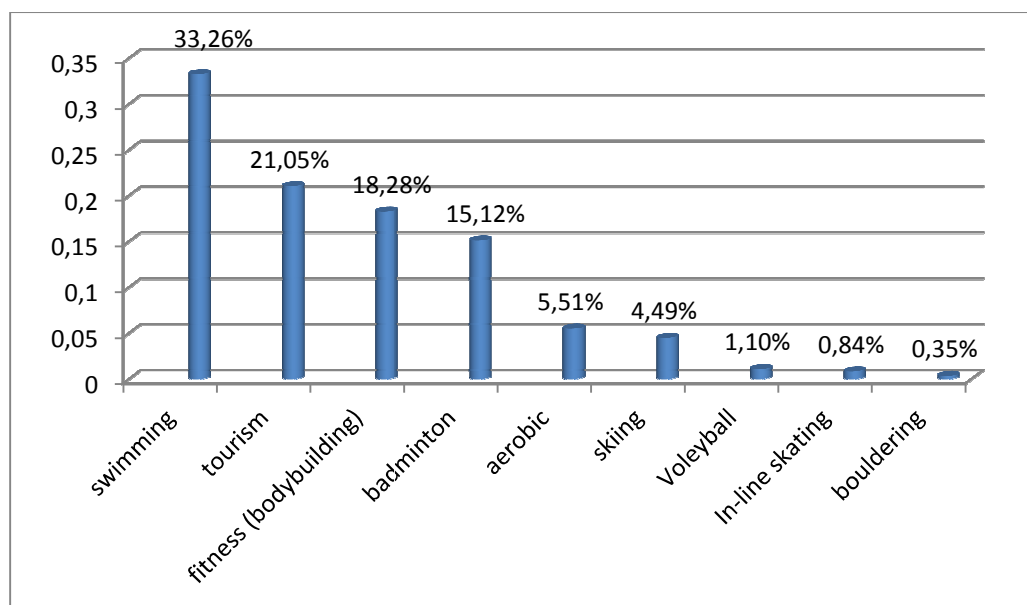


Figure 4 Sports activities preferred in leisure time

Our research sample prefers especially swimming, hiking and fitness from sports activities (Figure 4). When compared with a set of men we find that they clearly leads high percentages represented strengthening - bodybuilding that enjoys their interest for several years. Interest of women increased in fitness evidenced by the results of current research. We found that in the previous year this kind of sport did not exist in the leisure time activities of women, although it was partly covered under aerobic that defended his fifth place among most commonly used sports in this research. Fitness took third position. We believe that a significant impact on this fact has the inclusion and implementation of fitness for girls as Physical Education classes to sports offer on IPES at TU. (Research completed the women who attended or are still attending optional PE classes). Many of the girls are familiar with different kinds of fitness exercises, where it is not necessary to stay right in the gym, it mostly discouraged them from exercising. Heavy weights and low capacity of the rooms also have played a role in women's lack of interest in strengthening and fitness. Today situation at TU is completely different, the proportion of men in the gym and women at fitness is slowly leveling, what pleases us. Many of the girls use different fitness exercise in their free time.

Based on further results we can confirm steady decline in interest of students in team sports which we have seen also in the previous year. This year representation has just volleyball and basketball. Floorball, hockey and football do not figure at all as chosen sport for leisure by girls, although there were at least low percentage of female representation in previous research.

Regularity and frequency of movement, sports and recreational activities during the week is lower in women compared to men. Only 11,53 % of them do sports 3 or more times per week, 29,35 % of respondents sport twice a week. Compared to last year's results the percentage increased in the category of women sporting only once a week from 37,25 % to 44,12 %, which is obviously positive. Negative growth has been noticed in girls who are not committed to any sporting activity, from 7.84 % to almost double value of 15 %. One of the reasons is busyness with other activities and also disinterest in any sporting activity.

A partial answer can be found in the answers to the following question: why the respondents chose Physical Education as elective subject. More than 18 % of them consider this choice to obtain credit (in 2011 only 13,73 %) and more than 30 % choose this subject only to fill gap in the study schedule. Promoting health and fitness plays a role in 31,12 % of respondents. The movement is a part of life for 8,45 % women what in general is very low, also compared with the results for men - almost 50 %. It does not correspond at all with the answer to the question about the importance of physical activity in the lives of respondents. Matter of fact, more than 71 % of them said the sport is part of their life.

Table 2 Interest of female students in the sport within offer of PE at TU

Interest in sports offered by IPES at TU					
1.	Bodybuilding, fitness	54.24 %	5.	Table tennis	3.95 %
2.	Badminton	18.53 %	6.	Swimming	2.25 %
3.	Aerobic	13.41 %	7.	Volleyball	1.45 %
4.	Bouldering	5.11 %	8.	Basketball	1.06 %

Considering the wide range of sports at IPES female as well as man students mostly chose strengthening and fitness. Content of woman training is based on strengthening exercises that help shape, model and solidify figure and problem parts of the body, either using its own weight or using equipment - fit ball, overball, expanders, small dumbbells, jumping ropes, etc.. However, the condition is regular exercise, preferably three or more times

a week. Since almost 40 % of respondents sports only once week, results this activity will not produce the desired results, what we emphasize at the beginning of the first exercise. Girls can also use a form of aerobic exercise such as aerobic, zumba, but also special programs based on an aerobic workout. The second most popular sport is badminton for more than 18 % of women and aerobic – 13,41 %. The following is bouldering, table tennis, swimming, and the end of the table 2 is represented by volleyball and basketball, which only confirms the steady decline in student's interest in collective games. In this category, of course, automatically women's interest falls out in football and hockey, although in exceptional cases we meet female students - players that complement the men's team.

It is therefore necessary to continually improve quality and attractiveness of sport offer according to student's requirements, new trends in sport and also possibilities of IPES at TU, and thus attract students to regular physical activity as a lifelong activity.

Most female students don not miss any kind of sport in offer. Some of them would welcome the inclusion of dance, shooting, yoga and more hours of swimming in the selection menu within our PE. It is noteworthy that also men sample required dance sports and swimming. Therefore it would be appropriate to consider the future inclusion of these sports into offer for students at least in club form. Although in the case of swimming it is more difficult since our university does not have its own pool.

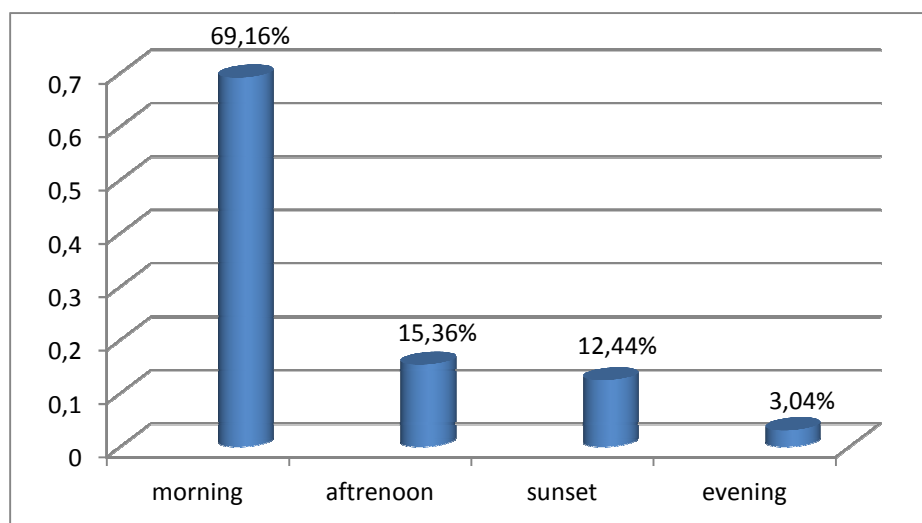


Figure 5 The best time for sports (from the perspective of students)

The inclusion of Physical Education into daily routine for female students is dependent primarily on their own schedule at school and of course from their personal activities outside of school. We saw almost the same result in both samples last year. Morning exercise suits to over 69 % of respondents, which is for men the lowest numerically represented possibility.

Afternoon activity it the best for 15,36 % and 12,44 % of women would like to train in the early evening (Figure 5). In opposite, this time most suits to men. In this case, it is very difficult to synchronize the lessons and meet all. Therefore, Physical Education lessons are concentrated mainly in the morning and early afternoon or evening hours.

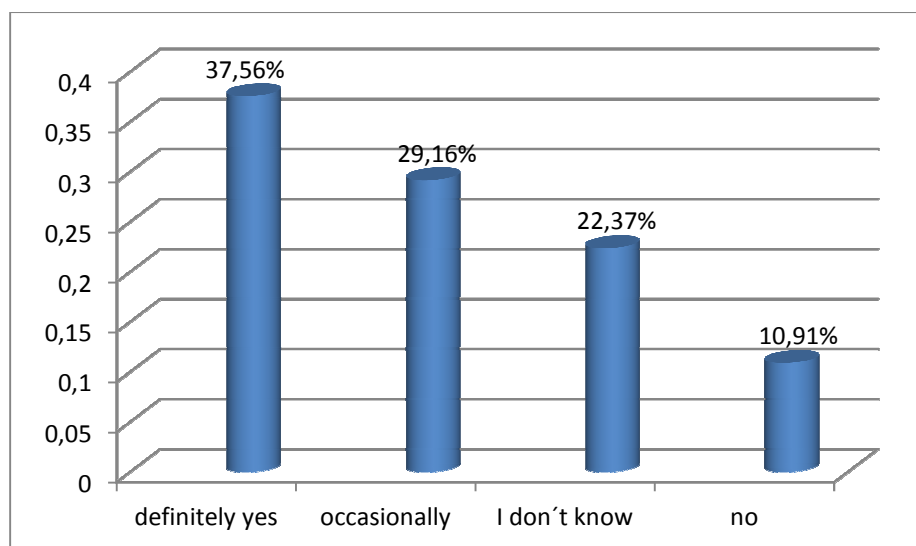


Figure 6 Interest in the sport more times a week

We wondered also whether the female students are interested in attending hours of Physical Education more times a week. Nearly 40 % of respondents answered positively, compared with previous research, this number increased. This is also confirmed by attendance records of larger number of girls in various sports, where their participation during the week rose to 2 - 3 times. It is mainly at fitness classes, aerobics, badminton and bouldering. Occasionally almost 30 % of them would come to exercise more often. 22,37 % could not answer the question of this the issue. Therefore, first priority is to maintain those students who visit us more often and to convince and attract others to the regular sport at least twice a week (Figure 6).

63.17 % of women do sports as a part of their leisure time and outside the PE lessons, what is 6.31 % more than last year. Similarly, we have recorded an increase of respondents who do not sport - 5.19 % (in 2011 it was only 1.96 %). 37.64 % performs physical activity occasionally which is pretty high number (Figure 7).

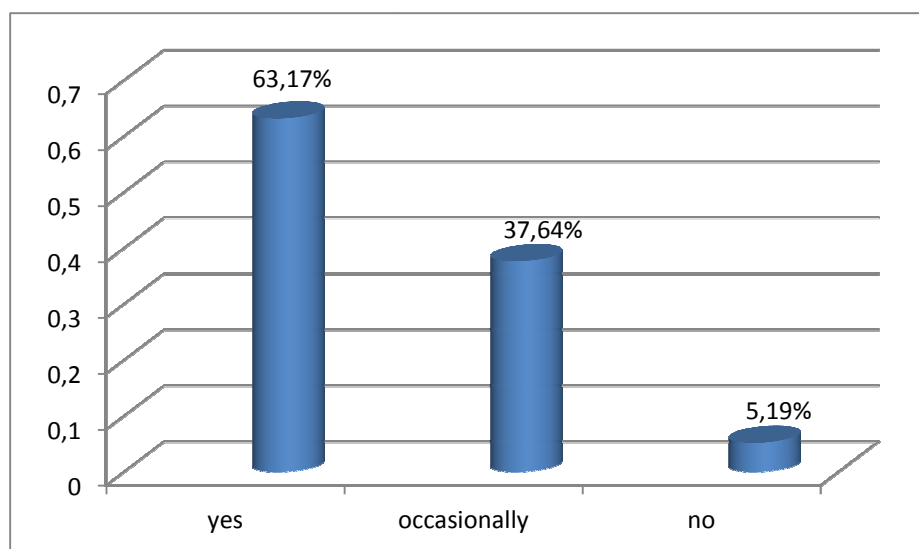


Figure 7 Sport and physical activity during leisure time

Finally, we were interested in the impact and motivation importance of Physical Education hours in sporting of female students in their free time. Results of research showed almost 5 % increase of female students sporting regularly regardless the physical activity at IPES. The positive for us is finding that 30,24 % of women were motivated by PE classes to regular physical activity (increase by almost 5 % compared to 2011). The basic task for us remains to create a space and suitable offer of interesting and desired sports for students with an effort to increase the percentage of regularly sporting students at TU in Zvolen.

CONCLUSION

In conclusion, we acknowledge the interest of female students in physical activity in leisure time, despite the fact that most of the time they devote to education or temporary job. We are pleased with the fact that the percentage of sporting women compared with last year's research increased. However, it is not a significant increase, but this result is positive feedback for us regarding the selection subject Physical Education. Many girls start exercise regularly after completion of subject and they regularly return to us within hours of Physical Education, but also in their free time. Our job is to constantly offer interesting physical activities and attract the highest number of students for whom the physical activity will become an essential part of daily or weekly routine.

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ZÁUJMY ŽIAKOV TECHNICKEJ UNIVERZITY VO ZVOLENE Z POHLADU POHYBU A ŠPORTOVO REKREAČNÝCH AKTIVÍT

SÚHRN

Autor sa zaoberá postavením pohybových a športovo rekreačných aktivít v hierarchii hodnôt študentov v ich voľnom čase, ale aj dôvodmi, pre ktoré nešportujú. Ďalej zisťuje vzťah študentov k pohybovým aktivitám vo voľnom čase ale aj v rámci výberového predmetu telesná a športová výchova. Zaujíma sa aj o otázky týkajúce sa preferovania určitých druhov športu, intenzity športovania za týždeň.

KLÚČOVÉ SLOVÁ: šport, hierarchia hodnôt, pohybové, športové a rekreačné aktivity, telesná výchova, aktivity vo voľnom čase.

RELATIONSHIP OF THE SECONDARY GRAMMAR SCHOOL PUPILS IN MARTIN TO WINTER SPORTS, AND ITS IMPLEMENTATION

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SUMMARY

Author of this submission presents the relationship of secondary grammar school students in Martin to winter sports and their implementation. The research method which was used was a questionnaire consisted of 20 questions. The research sample consisted of 535 pupils (261 boys and 274 girls) 10-secondary grammar schools in Martin. From the results, the author presents the images with other skills, which show a positive correlation of secondary grammar schools in Martin in winter sports. The most preferred winter performed physical activity for those students is downhill skiing so it 's before snowboarding, although in terms of attractiveness for the students seem more attractive than snowboarding.

KEY WORDS: students of the secondary grammar schools, spare time, winter sports.

INTRODUCTION

Based on the evaluation in terms of aspects of health, educational and motor sports including skiing, snowboarding along with swimming and tourism belong into the sports groups which correspond physiological factors recommended physical activity and effective impact on the health and fitness of young people (Michal, 2006).

Similarly, Nemec (2004) has this suggestion too, who states the skiing, but also other winter activities put increasing demands on all the functions and systems of the body.

Authors named Veisová (2004) and Král (2011) are talking about irreplaceable skiing and other winter seasonal activities during the movement and functional improving of man from the earliest ages.

Skiing for many decades, is one of the most popular and most common physical activities for all ages in a winter environment. The growing trend of interest in this healthy

physical activity is caused by a wide enough selection of ski equipment, new ski equipment not only in the Alps but also in Slovakia (Zidek - Petrovich, 2009).

In addition to skiing has its increasingly stronger position snowboarding, too, which still enjoys greater popularity.

Paugšchová - Lužová - Luza (2004) are talking about snowboarding as a sport so attractive, playful and even crazy that happened in the course of a few winters almost a symbol of all free-thinking young people yearning for sport and adventure.

Binter et al. (2012) notes that over time the mass of snowboarding became widespread and recognized professional sport. It has a lot of fans, which nowadays binds not only to snowboarding, but also to many other outdoor sports realized in nature.

To expand the popularity of snowboarding among youth also contributed the education reform in 2008, after which it is possible to teach snowboarding at primary and secondary grammar schools as elective subject for teaching physical education and sports. We consider this decision like Melkus (2009) and Michal (2009a) as very positive and beneficial.

AIM

The aim of this submission is to present the relationship of secondary grammar school students in Martin in winter sports and their implementation.

METHODOLOGY

As the main method of our research, we used the questionnaire method, since the advantage of the questionnaire is that it can reach a large number of respondents and we can get a large amount of information required.

The questionnaire was designed for secondary grammar school students in Martin and it was anonymous. His focus was on gathering the views and interests of pupils in winter sports, teaching and implementation of the course of physical activities in nature, focusing in winter sports. It contained 20 questions, of which 3 were focused on the characteristics of the research sample. It related to sex, grade in school, and the school that students attend. The remaining 17 questions were answered with a choice, for most of these questions, respondents could add another answer. Individual responses of students were divided in terms of intersex relations (between boys and girls). We publishing the most fundamental questions of students in the results.

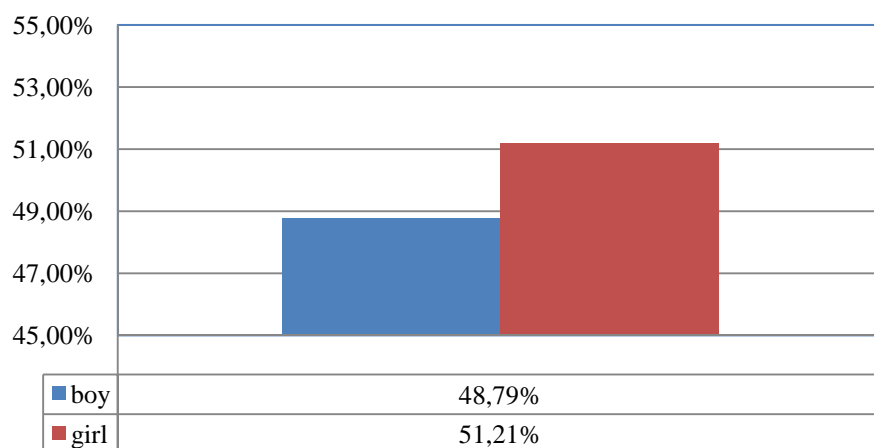


Figure 1 Ratio of boys and girls in the research group of students

Research was conducted in June 2012 to all secondary grammar schools in Martin. Total number of schools involved in the research were 10. The research sample consisted of 535 pupils (261 boys, 274 girls). The percentage of boys and girls are presented in Figure 1.

RESULTS AND DISCUSSION

In the research we wanted to find out how is the relationship of the secondary grammar school students in winter sports. Very positive attitude expressed by 30,27% boys and 27,74% girls, rather positive than negative 31,03% boys and 23,36% girls (Figure 2). The largest number of girls, to 33,58% has a neutral relationship to winter sports. We evaluate very positively that rather negative or very negative attitude to winter sports is only 14,56% boys and 15,32% girls, making a total of 80 students. Based on the results we can conclude that winter sports among the youth enjoyed great popularity.

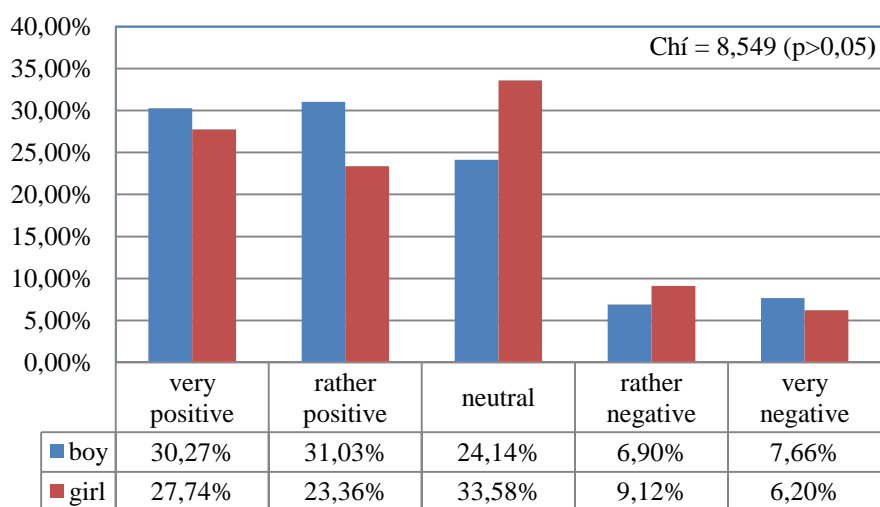


Figure 2 Relationship of pupils to winter sports

Furthermore, we were interested in the winter physical activity or activities most like to perform. Students have the choice of 7 possible answers, and in response, other to indicate the winter physical activity you most like to perform and was not in that list. In this issue was possible to select two answers.

The Figure 3 shows that the most performed physical activity in their free time is for both sexes downhill skiing. This noticed almost half of the boys and almost one-third of girls. Similar results also notes Chovanová (2011) and Michal (2011). The second most preferred winter physical activity in boys group is snowboarding, which like performed about 29,50%. Implementation of snowboarding at leisure with 39% of boys notes Michal (2010a), who conducted research in elementary schools in Žilina.

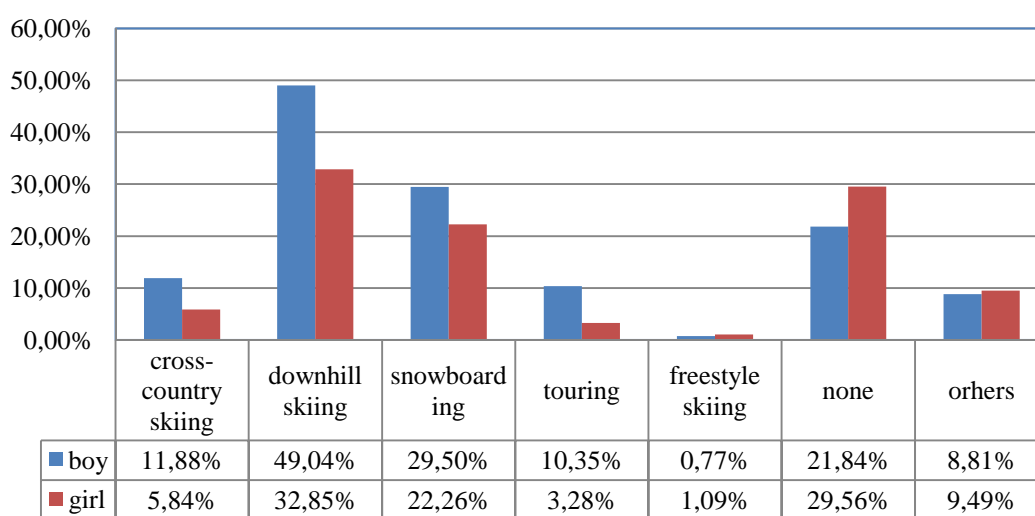


Figure 3 Kinds of winter physical activities that students prefer for performing at leisure

Surprising consider that up to 29,56% girls and 21,84% boys are not addressed in their leisure time physical activity of any winter. We believe that the causes of this condition may be lack or absence of any physical activity in leisure time students, further inappropriate lifestyle, or too much technique in our times (TV, games, etc.).

Particularly noteworthy are the activities that pupils reported in the questionnaire which where possible „other “. Activities that were mentioned most often of boys were ice hockey, skating and cruising to cruising with sledding and reported the girls.

Furthermore, we wonder which of the winter sports such as : cross-country skiing, downhill skiing, snowboarding or others, are for secondary grammar school pupils the most attractive.

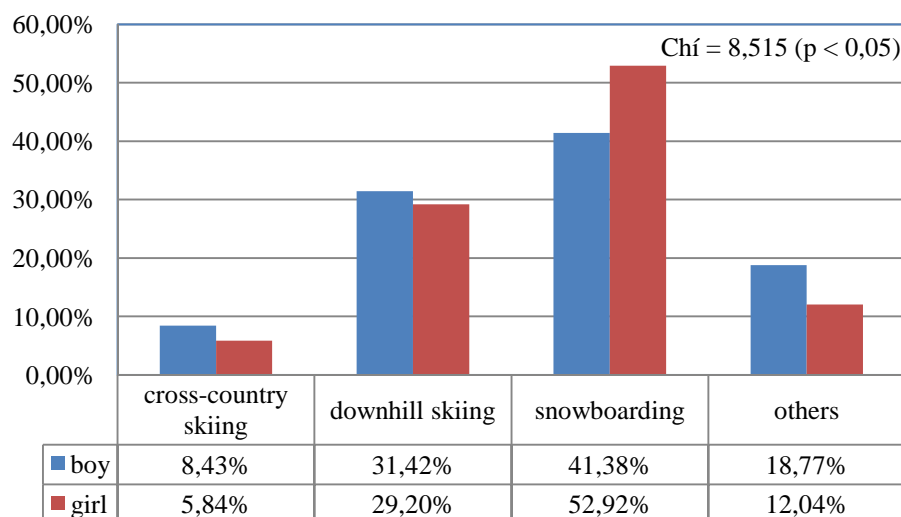


Figure 4 The attractiveness of winter sports for students

Based on the results we conclude that snowboarding is more attractive for both sexes as downhill skiing (Figure 4). In calculating the chi-square was recorded statistically significant differences in the responses of boys and girls at a significance level of $p < 0.05$. The surprising finding is that snowboarding is more attractive for a larger percentage of girls (52,92%) than boys (41,38%).

The results confirm the great attractiveness of snowboarding, about what is talking about Modrák - Nemčík (2006). Based on this result, we conclude, as Melkus (2009) and Michael (2009b), allowing realizing that snowboard course in physical activities in nature, focusing on winter sports, did the Ministry of Education reform curriculum of physical and sport education in primary and secondary grammar schools, important step to increase the attractiveness of physical and sport education for the current generation of young people. Michal (2010a) mentioned greater attractiveness of snowboarding before the downhill skiing among boys in primary schools.

The results further show, "other "winter sports (hockey, skating and alpine skiing) are for secondary school students in Martin more attractive than cross country skiing. The condition may be related to the fact that cross-country skiing is one of the power-endurance physical activity cyclical in nature, which may reduce its attractiveness for students.

Interesting is the finding that in leisure time students prefer downhill skiing (Figure 3), but the more attractive sport for them is snowboarding (Figure 4). On the basis, we can assume that students who prefer skiing they try snowboarding, and perhaps they change the orientation of sports from skiing to snowboarding. A similar view is shared by Michal (2010b).

CONCLUSION

The resort of Turčianska kotlina provides for enthusiasts of winter sports many opportunities for sports and recreation in the winter. We can see many skiers, snowboarders and winter enthusiasts of many other physical activities in the winter resorts of this region. The results in this submission presented the relationship of secondary grammar school students in Martin in winter sports and their implementation.

Use the questions in the questionnaire, we found a positive relationship 56% of secondary grammar schools in Martin in winter sports. The most preferred winter performed physical activity is downhill skiing and snowboarding is following. Based on our results we agree with the suggestion of Modrak - Nemčík (2006), who talk about snowboarding as a sport that is rapidly growing and very popular youth by combining two dynamic factors (the principle of freedom and autonomy) and speed for a given dose of adrenaline .

This was confirmed by the fact that in terms of attractiveness chosen by secondary grammar school students in Martin was snowboarding the most attractive.

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VZŤAH ŽIAKOV STREDNÝCH ŠKÔL V MARTINE K ZIMNÝM ŠPORTOM A ICH VYKONÁVANIU

SÚHRN

Autor v príspevku prezentuje vzťah žiakov stredných škôl v Martine k zimným športom a ich vykonávaniu. Použitou výskumnou metódou bol dotazník, ktorý pozostával z 20-tich otázok. Výskumnú vzorku tvorilo 535 žiakov (261 chlapcov a 274 dievčat) 10-tich stredných škôl v okrese Martin. Z výsledkov, ktoré autor prezentuje v obrázkoch s následnou diskusiou, vyplýva pozitívny vzťah žiakov stredných škôl v okrese Martin k zimným športom. Najradšej vykonávanou zimnou pohybovou aktivitou pre daných žiakov je zjazdové lyžovanie pred

snowboardingom, aj keď z pohľadu atraktivity sa pre žiakov ako atraktívnejší javí snowboarding.

KLÚČOVÉ SLOVÁ: žiaci stredných škôl, voľný čas, zimné športy.

THE DEVELOPMENT AND PROGNOSIS OF THE WORLD'S BEST PERFORMANCES IN THE WOMEN ATHLETIC THROWING DISCIPLINES UNTIL 2016

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SUMMARY

The aim of the work is to show the boundaries of the world's best performances in throwing events of women in the years 2013 – 2016 in athletics. There has been established a question: "What performances can we expect in the 4-year Brazil Olympic macrocycle in the athletic throwing events?" By working with the data and prognosing the values were used the methods of modeling the trend and extrapolation. The performances are prognosed with 90% probability. The overcome of the world's best records of women in the years 2013 - 2016 are prognosed with 90% probability in all athletic throwing events. The choice of the regressive functions was based on the parameters of index determination, the significance of the slope of the regression line, the real value of the confidence interval, the statistical significance of the slope, the regression function, intuitive opinions of experts and specialists from athletic practice in Slovakia. We do not expect breaking the women best world records in shot put and in javelin, discus and hammer throw.

The contribution is part of the grant of Ministry of Education VEGA1/0248/11: Brodání, J. et al.: Prognosis of the best world records in men and women athletic disciplines until the Olympic Games 2012 in London. Department of Physical Education and Sport, Faculty of Education in Nitra, Slovakia, Solved 2011-2013.

KEY WORDS: athletics, shot and throws, performance, women, trend, prognosis

INTRODUCTION

The development of the world's best performance in the throwing disciplines during the 19th and 20 century was influenced by many factors. The most significant changes in throwing performance involved the modification tackles and throwing sectors, improving of the technology, changing the angle of the impact area (slices), verification of gear,

computerization measurements, improving the equipment of the thrower, progressive training methods of power development capabilities and especially intensify anti-doping controls World Anti-Doping Agency (WADA).

Discus throw was also in the program of the first modern Olympic Games in Athens, Greece in 1896. Historically, one of the oldest disciplines. Women competed for the first time in this discipline on the Games in 1928, Olympic Games in Amsterdam. The throw with a turn appeared in 1900 in the Olympic Games. The best female performance keeps Gabriele Reinsch from GDR which was 76.80 m in 1988. Javelin throw entered in the modern history on the Olympic Games, which were so called, jubilee games in Athens in 1906. Women competed for the first time in javelin throw on the Olympics in 1932 in Los Angeles. The weight of javeline for women was fixed and the weight was 600 g, set up in 1926. The new model with a displaced center of gravity was being used for the first time in 1999. The best world performance achieved Špotáková Barbora (CZE) 72.28 m in 2008. The first women hammer throw appeared at Athletics World Championships in Seville, Spain in 1999 and a year later at the Sydney Olympics. The best performance in the world today holds Betty Heidler (GER) 79.42 m in 2011. Like the hammer throw and shot put has evolved from medieval contests (throw the dice and stone cannon balls). Shot put throwing takes place in the ring, which was in 1908, square. The women shot put competition first appeared in 1948 in London, England. The weight of the female ball decreased after 1924, from the original 5 kg to 4 kg. Since 1974, we recognise two types of shot put, the back and rotating technique. Natalya Lisovskaya RUS achieved world's best female performance which was 22.63 m long in 1987, with the the backbone technique.

PROBLEM

Nowadays we can write in the throwing disciplines some kind of stabilization, let us say slowing down of the athletic performance trend. According to some opinions of scientists this state is related with the gradual achievement of the physiological limits of human ability and higher quality of anti-doping control. By mathematic and statistics methods were calculated trends and prognosis in the women throwing disciplines (Benczenleitner et all. 2012; Dapena et all. 2003; Dickwach - Scheibe, 1993; Hammond - Bishop, 2008; Lippi et all., 2008; Gembris et all. , 2007; Noubar, 2006; Tilinger - Smith, 1988; Terpstra - Schaefer, 2007). E.g. Einmahl and Magnus (2008) indicate the final performance limits of women's shot put 23.70 meters, in the javelin 72.50 meters and in the discus throw 85.00 meters. The final limit in the hammer throw was not published yet. From the mentioned knowledges follows the research

question: What are the most predictable performances in the women throwing disciplines, that we can expect in a 4-year "Brazilian Olympic macrocycle" and if do they get closer to the reported ultimate limits.

AIM

The main purpose of the work is to determine the most possible prognosis of the world's best performances in women athletic throwing disciplines in the years 2013 – 2016.

METHODOLOGY

In the work was used the available time line of the world's best performances mentioned by IAAF to October 2012 in women disciplines hammer throw, discus throw, javelin throw and in shot put. By modifying the data and determining the projected values, we used the method of modeling and extrapolation of the trend (regression functions such as linear, logarithmic, inverse, quadratic, cubic, composed, force, S - function, growth, exponential, logistic, ARIMA models). We forecast the performance with 90% probability. We introduce the prognosis for the years 2013-2016 for each regression equation, the upper and the lower limit of the reliability for the middle value of the regression function, regression equation, the index of determination R^2 and the statistical significance of the slope of the regression function (F, p-value). By the final selection of the regression function, which concretized the trend and prognosed performance level, was taken into account the world record (WR) level until the end of 2012, the development level in the last Olympic macrocycles, intra-individual performance of the world's athletes, the calculated value of the index of determination R^2 of the approximate functions. The choice of the function also took into account the opinions of experts and specialists from the athletic experience. We used for the estimation and calculation of the prognosed values graphical and numerical method which was implemented in MS Excel and SPSS.

RESULTS AND DISCUSSION

Table 1 The prognosis in the women athletic throwing disciplines for the period 2013-2016, with the parametres of regression functions, actual world record and boundaring limits of the throwing performance

	Year	Prognosis	The confidence intervals 90%		The parameters of the regression function					
			upper	lower	The function name	Formula R^2	F	p-value	WR	Limit
Discus Throw	2013	69,78	66,90	72,66	Qadratic	$y = 0,025x^2 - 0,868x + 74,96$ 0,6675	22,086	5,48E-06	76,80	85,00
	2014	70,28	67,25	73,31						
	2015	70,82	67,61	74,04						
	2016	71,42	68,00	74,85						
Javelin Throw	2013	69,95	66,26	73,65	Inverze	$y = 73,646^{-1}(-1,762x^1)$ 0,0154	0,265	6,13E-01	72,28	72,50
	2014	69,96	66,26	73,66						
	2015	69,97	66,26	73,67						
	2016	69,97	66,27	73,68						
Hammer Throw	2013	78,26	75,65	80,87	Qadratic	$y = -0,035x^2 + 1,719x + 57,54$ 0,961	275,15	2,71E-16	79,42	*
	2014	78,10	75,35	80,84						
	2015	77,86	74,96	80,77						
	2016	77,56	74,46	80,66						
Shot Put	2013	21,63	21,09	22,18	Qadratic	$y = 0,011x^2 - 0,091x + 20,83$ 0,653	8,495	8,46E-03	22,63	23,70
	2014	21,86	21,21	22,51						
	2015	22,11	21,32	22,90						
	2016	22,38	21,43	23,33						

*limit has not been published

In the result part we concern on the prognosis of the world's best performances in the women throwing disciplines for the period of 4 years, outgoing of the real development of the world athletic performance, own prognostic researches (Broďáni, 2011, 2012; Srnc - Broďáni, 2010) and higher mentioned Works from the area of mathematical-statistic prognosis in athletics. We use a combination of intuitive method, methods of modeling trends and classic methods. the reliability interval (90%) for the middle value was chosen because of the reliability reduction around the regression function, thereby we increased the exactness variability of the prognosed values. The choice of function approximation of narrow the three most appropriate (Table 1). Qadratic, cubic and inverse function mostly corresponded with the intuitive prognosis of athletic specialists, while the calculated upper and lower limits of the confidence intervals were in the range of real achievement of the athletic performance.

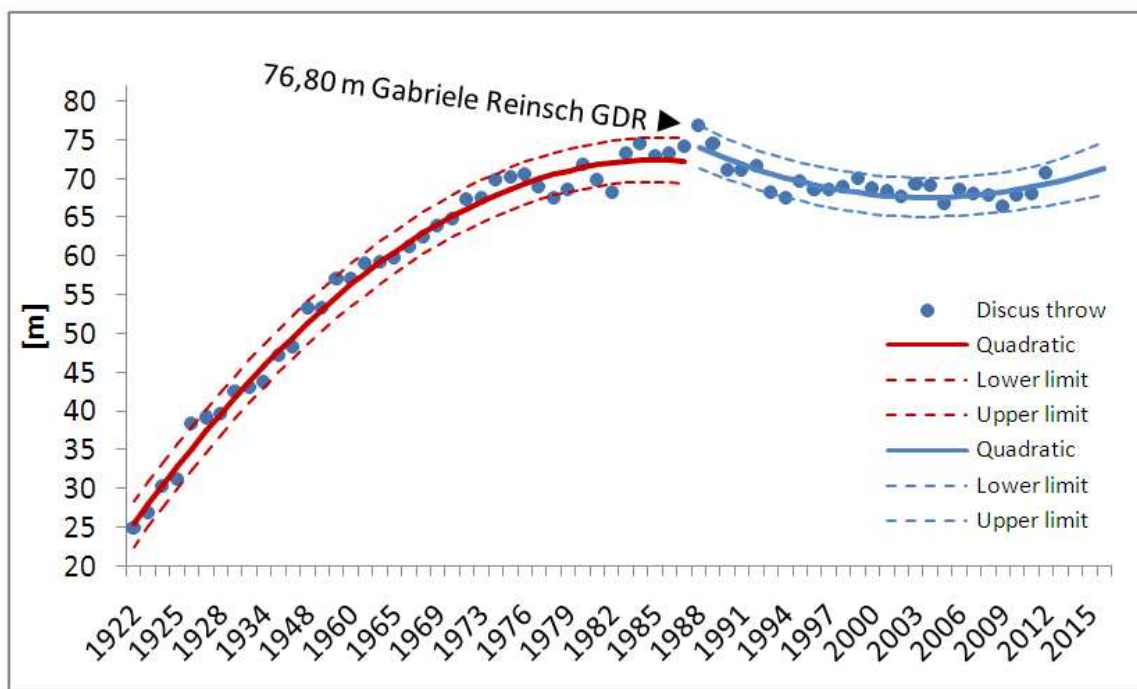


Figure 1 The development of trend and prognosis of world's best records in the discus throw

The development of the world's best records in the **discus throw** has from the year 1988 progressive trend (Figure 1). The process of the performance describes best the quadratic function ($R^2 = 0,989$; $F = 1622,113$; $p = 5,34E-36$). After 1988 came into broad recession in the women discus throw performance. The performance does not even after the year 1992 lap over 70 m distance. We have recorded rare performances over 70 m in 1999 and 2012. The dynamics of performance best describes the quadratic function ($R^2 = 0.6675$, $F = 22.06$, $p = 5.48 E-06$). By this trend we can expect in the forecasted period of 4 years sequential progress of performance (Table 1, Figure 1). Performance is expected at the level of 69.78 m to 71.42 m. With 90% probability, we can expect performance variability from 66.90 m to 74.85 m. Overcoming of the world record is not expected. Among the candidates for achieving the above mentioned performances belong in recent years discus throwers Darya Pishchalnikova (RUS), Sandra Perkovic (CRO) and Nadine Muller (GER). Reaching the limit of women discus throwing performance which is 85.00 meters, according to Einmahl and Magnus (2008), is improbable.

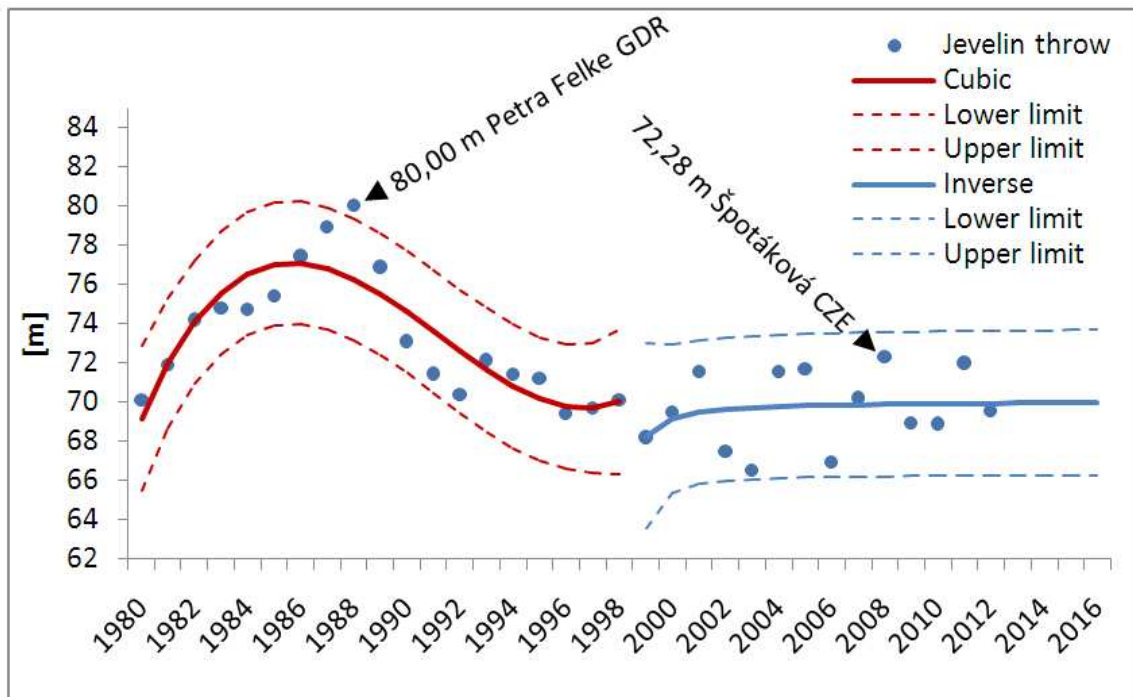


Figure 2 The development of trend and prognosis of the world's best records in women javelin throw

Women's **javelin throw** recorded in 1999 the introduction of the new model of javelin, which markedly took part on the decrease of the world performance. Until 1998 was the variability of the performance very high. The culmination of the best world records is registered in 1988 on the level of 80,0 m, while after this year the trend of the best records decreases on the level of the last 10 years. The development of the performance trend in the women javelin throw has from 1999 globally more lenient progressive trend (Figure 2). The prognosis are in the real interval of the athletic performance in the last years (Table 1). The process of the performance in 1998, best describes the cubic function ($R^2 = 0.7798$, $F = 17.707$, $p = 3.43 \text{ E-}05$), and after 1999 the inverse function ($R^2 = 0.053$, $F = 0.677$, $p = 0.426$). In the following period 2013-2016 we expect women performances on the level of 69.95 m - 69.97 m. With 90% probability, we can expect the variability of performance from 66.26 m to 73.68 m, which implies breaking the world record of 72.28 meters. Among the candidates for achieving the above mentioned performances in recent years belong javelin throwers Barbora Spotakova (CZE), Sunette Viljoen (RSE) Maria Abakumova (RUS) and Christina Obergföll (GER). Reaching the limit of the women javelin throw performance of 72.50 meters, according to Einmahl and Magnus (2008), can be expected with a 90% probability by the proclaimed inverse extrapolation in the next four years.

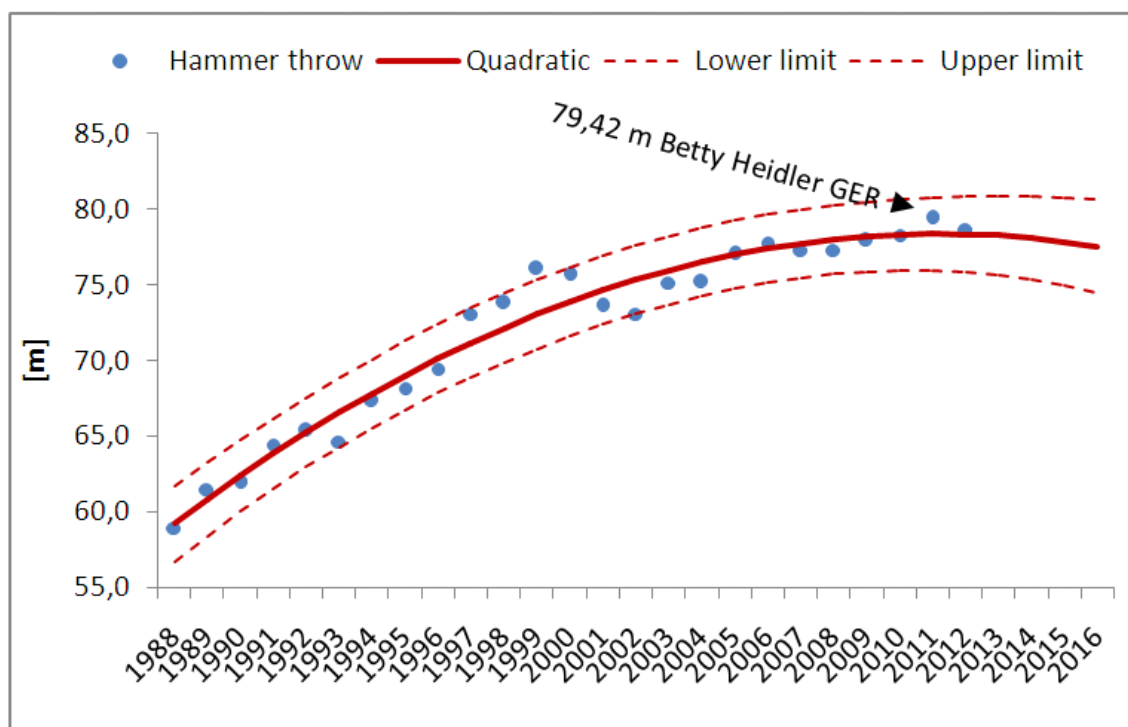


Figure 3 The development of trend and prognosis of the world's best records in women hammer throw

The women hammer throw records a huge performance progress from 1988 (Table 1, Figure 3). It reaches the pot in 2011, when Betty Heidler (GER) reaches world record 79,42 m. The process of the performance best describes the quadratic function. The model achieves high level of extermination and it is statistically significant ($R^2 = 0.961$, $F = 275.15$, $p = 2.71 \text{ E-}16$). We notice with this trend in recent years the decrease of the performance, let us say its decrease in the prognosed period.

In the period of 2013-2016 we expect the men performances on the level at 78.26 m - 77.56 m. With regard to the upper limit of the reliability interval, we might expect the overcoming of the world record. We can expect with 90% probability the performance variability from 74.46 m to 80.87 m.

Among the candidates for achieving the above mentioned performances belong in the recent years hammer throwers Betty Heidler (GER), Aksana Miankova (BLR) and Tatyana Lysenko (RUS). Border limit in women's hammer throw was not published.

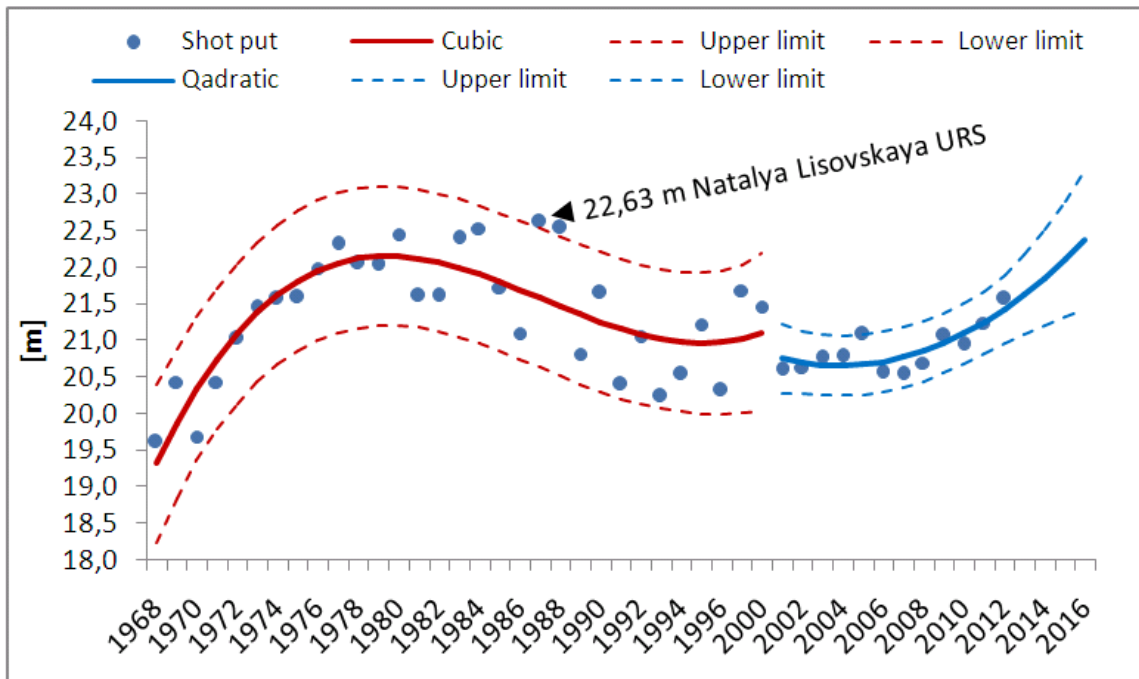


Figure 4 The development of trend and prognosis of the world's best records in women shot put

The development of trend in the world's best records in the women **shot put** reaches its maximum in the 80ties (Figure 4). After achieving the best world records in the years 1987 (22,63 m) and 1988 (22,55 m) by Nataliou Lisovskayou (URS) we notice the level decrease of the best world records. The dynamics of the performance until the year 2000 best describes the cubic function ($R^2 = 0,643$).

At the beginning of the 21st century comes into the recession of the best world records. The records move around the level to 21 m. After 2009 the performance in the women shot put started to increase again. The process of performance from 2001 best describes the quadratic function ($R^2 = 0,653$; $F = 8,495$; $p = 8,46E-03$).

We expect during the following years 2013-2016 women performances on the level from 21,63 m to 22,38 m. We can expect with 90% probability the performance variability from 21,09 m do 23,33 m. With regard to the upper limit of the reliability interval, we can expect during the four years breaking of the world record. Among the candidates to achieving the above mentioned performances in recent years belong Nadzeya Ostapchuk (BLR) and Valerie Adams (NZL). Reaching the women performance limit in discus throw 85.00 meters, presented by Einmahl and Magnus (2008), by used quadratic extrapolation is improbable.

CONCLUSION

The analysis of the trend development of best world records in the women throwing disciplines, shows the recession in the performance in the discus throw, javelin throw and in shot put, let us say slowing down of the progress in performance in the hammer throw.

We expect the progress of the actual performance in the discus throw and in shot put. We also expect slowing down of the trend in the performance, let us say deterioration in javeline throw and hammer throw.

We assigned according to the methods of trend modeling and extrapolation the most probable prognosis and extreme limits for the best world records in the throwing disciplines in 2013-2016. Breaking the world records by the regressive functions we used is not expected in the women throwing disciplines. We might expect reaching the world records only by 90 % probability, with regard on the upper limit of the reliability level in javelin throw, hammer throw and in shot put. Reaching the extreme limit in the women performance, presented by foreign predictors from 2008, is real only in javelin throw.

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VÝVOJ A PROGNÓZA NAJLEPŠÍCH SVETOVÝCH VÝKONOV V ŽENSKÝCH ATLETICKÝCH VRHAČSKÝCH DISCIPLÍNACH DO ROKU 2016

SÚHRN

Cieľom práce je poukázať na hranice najlepších svetových výkonov vo vrhačských disciplínach žien v rokoch 2013 - 2016. Stanovená bola výskumná otázka: „Aké výkony môžeme očakávať v 4-ročnom „brazílskom olympijskom makrocykle“ v behu, v hode kladivom, diskom, oštepom a vo vrhu guľou?“ Pri vyhladzovaní údajov a stanovení prognózovaných hodnôt boli použité metódy modelovania trendu a extrapolácie. Výkony sú prognózované s 90% pravdepodobnosťou. Prekonanie najlepších svetových výkonov mužov

a žien v rokoch 2013 – 2016 prognózujeme s 90 % pravdepodobnosťou vo všetkých prekážkových disciplínach. Výber regresných funkcií bol založený na základe parametrov indexu determinácie, významnosti sklonu regresnej priamky, reálnosti hodnôt intervalu spoľahlivosti, štatistickej významnosti sklonu regresnej funkcie, intuitívnych názoroch odborníkov a špecialistov z atletickej praxe v SR. Prekonanie najlepších svetových výkonov žien vo vrhu guľou a hodom oštepom, diskom a kladivom neočakávame.

Príspevok je súčasťou grantu MŠ SR VEGA1/0248/11: Broďáni, J. a kol.: Prognóza svetových výkonov v mužských a ženských atletických disciplínach do OH 2012 v Londýne. KTVŠ PF UKF Nitra, Riešené 2011-2013.

KLÚČOVÉ SLOVÁ: atletika, vrh a hody, výkonnosť, ženy, trend, prognóza.

THE ANALYSIS OF THE SOLUTION OF MATCH SITUATION 1 V 1 WITHIN THE ATTACKING PHASE IN SOCCER

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SUMMARY

In our study we tried to watch a solution of match situation 1-1 in offensive phase of the game. Four soccer players participated in this study (all of them were offensive central midfielders), who were watched during particular matches from EURO 2004 in Portugal. The aim of the study was watching them in followed matches and wrote down all kinds of their solution of match situation 1-1 in offensive part of game. After the research it is reasonable to conclude, that offensive midfielders from EURO 2004 mostly preferred a „the kick trick feint“ and „the dummy step feint“. As the least common used feint was „the nutmeg move feint“. The feint realized with the most success was „the foot on the ball trick“ and „the dummy step feint“. So it is presumable that within the match microsituation 1 v 1 in the offensive part of the game realized by offensive midfielders „the kick trick feint“ will be the most preferred. It is happening because of the narrow size of the playing area mostly preferred nowadays by teams within a defensive part of game.

KEY WORDS: soccer player, individual match output, solution of match situation 1 v 1, feint, percentual efficiency.

INTRODUCTION

The soccer is a team game, in which two teams try to defeat each other regarding respecting particular rules. Physical, technical and tactical abilities, that are utilized with creative means by respective players, are considered to be main approach of the match (Nemec, 2002).

The soccer still further develops, what was considered progressive, early becomes old and changeable. Nowadays, the progress of dynamics of the game, its faster movement within player's movement and also faster solution during match situations is noticable. There is an often saying about an activity of three the most relevant factors - the inteizification, the complexity and the intellectualization (Kacani et al., 1987).

Such a comprehension of the game puts a great effort on the player, thus on his individual output. It has been proven, that in contemporary soccer, an effective team output depends on the individual.

PROBLEM

In contemporary soccer, the middle part of the pitch is decisive and for the successful ofenзивe of the team the individual midfielder's skills are crucial. In almost all national teams ofenзивe midfielders are the basic part of the team and are very important part of transition from defenzive to offensive. They also particate to create maximum amount of passes and are needed for successful realization of the attacking as well. They often offer some final, decisive passes and various surprising moments (Borbély, 2001).

The impact of effective 1 v 1 solution for team output and its success was followed by Bisanz, Buzek at World Cup 1990 in ITALY, Loy at EURO 1992 in SWEDEN, at World Cup 1994 in USA and also at EURO 1996 in ENGLAND, Brugenmann – Pál at World Cup 1998 in FRANCE and also in qualification for EURO 2000. They conluded, that team, which wins more 1 v 1 situations, has more opportunities for attacking and thus win a game.

Buzek et al. (1990) tried to follow 36 matches at World cup 1990 in order to put down all solutions of situations 1 v 1 relating attacking. Each team struggled to beat the opponent with using 1 v 1 situation with different types of feints 34 times at the average for one game. From all these attempts 75% were successful. They used different types of feints to the varied directions, using one or both feet with alternating mutual position of the players.

When comparing results from World cup 1990 and from 1994, the remarkable progress of game situation 1 v 1 is noticable. The total amount of these situations increased from 193,2 to 200,5 averagly for one match.

At the world cup 1994 in USA, Sweden showed the best ability to win game situations 1 v 1 within the offensive phase of the game (successful in 44,2% cases). It is also very reasonable to mention, that Sweden scored to most goals (15) from all 24 teams ivolved in the tournament. Another mentionable aspect is that 37 from 52 matches (71,1%) won that team,

which won also the attacking match situation 1v 1 (In 1990 it was 34 from 52 matches (65,4%)).

Among the reasons of increasing number of game situations 1 v 1 belong:

- continued better physical ability followed with increased anaerobic capacity allows to tackle players with the ball more often.
- players defend more and more better the midfield (pressing)

As Brugenmann mentioned within his evaluation EURO 1996, the space around the ball is getting narrower quickly and also the deep of the play shortens. Overnumbering near the ball becomes decisive. The player with the ball is constantly under the pressure a must solve the situation 1 v 1.

When evaluating game systems it is reasonable to add if one player is unsuccessful to get rid of the defender in game situation 1 v 1 within attacking, each attack ends very quickly (Nemec, 2003).

Pál (2000) in his research followed the particular types of feints of Zidane, Davids and Rivaldo in particular matches at World cup 1998 in France and also the feints used by Slovak international Peter Dubovský during qualification for EURO 2000. When evaluating followed players in respective matches, they globally tried to pass the opponent 140 times, averegely 11,6 per a game. From all these attempts, 109 were successful (78%) (Table 1).

Table 1 The kinds of solution of attacking game situation 1 v 1 in particular matches at World cup 1998 and during the qualification for EURO 2000

Kinds of feints	Number	Successful	Successful	Unsuccessful	Unsuccessful	% from all kind of feints
		number	%	number	%	
1.The kick feint	51	38	75%	13	25%	36%
2.The dummy step	22	20	91%	2	9%	16%
3.The nutmeg move	14	11	79%	3	21%	10%
4.The foot on the ball trick	5	3	60%	2	40%	4%
5.other kinds of feints	48	37	77%	11	23%	34%
TOGETHER	140	109	78%	31	22%	100%

The most common types of feint used in matches was „the kick trick feint“ and the highest efficiency of solving the microsituation 1 v 1 within attacking players reached by using „dummy step feint“.

The function of central midfielder became decisive for every team during the EURO 2000. All of them attempted to be fast enough (with or without the ball, the quickness of thinking and practising), to be effective in running to complete repetitive transitions from defensive to offensive and back to defensive successfully and mainly win the game situations 1 v 1 (Holienka, 2005).

AIM

The aim of our research was to find out the most common types of feints while solving situation 1 v 1 within attacking phase of the game by the top european central midfielders (Zidane, Davids, Nedvěd, Rosický) during EURO 2004 in Portugal. We also tried to detect the efficiency of respective feints chosen by these players. We also would like to point out the most effective kind of feint practised by central midfielders.

METHODOLOGY

Our subject was four players from three national teams: Zinedine Zidane, Pavol Nedvěd, Edgar Davids a Tomáš Rosický participated in this study. Subject were selected based on player`s function on the grid (central midfielder). We can consider this study partly heterogeneous because of the age of the players (23-34 years old).

The research began on 13th of June 2004 and was finished on 1st of July 2004. Within this period we followed 17 matches.

To collect needed informations we decided to utilize an observation method. We noted every kind of feint, its localization and the efficiency of feints while solving attacking microsituation 1 v 1.

Finally we evaluated and mutually compared gained informations. The proccess comprised computing the efficiency within every used feint, from which resulted efficiency in particular match and finally whole efficieny from 4 or 5 matches. To detect the success of respective feints we used percentage. Also the average was needed to compute the number of feints per one match.

RESULTS

When having a look at the gained informations, it is reasonable to conclude, that selected players during 17 particular matches tried to dribble past the opponent 73 times (averagely 4,3 times per one match) and also that the number of Rosický`s attempts were equally same as the average was. Nedvěd comitted less number of feints (3,3) than the average, but on the other hand players Davids (4,4) and Zidane (5,3) were overaveraged (Table 2).

Table 2 The kinds of solution of attacking game situation 1 v 1 in particular matches during EURO 2004 in Portugal

Kinds of feints	Number	Successful number	Successful %	Unsuccessful number	Unsuccessful %	% from all kinds of feints
1.The kick feint trick	36	27	75%	9	25%	49%
2.The dummy step trick	22	19	86%	3	14%	30%
3.The nutmeg move trick	4	1	25%	3	75%	6%
4. The foot on the ball trick feint	6	6	100%	-	-	8%
5. other kinds of feints	5	4	80%	1	20%	7%
TOGETHER	73	57	78%	16	22%	100%

From all 73 attempts, the players were successful 57 times (78,1%). So the efficiency of pasting the opponent by Zidane (71%) and Nedvěd (69%) was below the average and players Rosický (82%) and Davids (86%) was above the average.

The attacking microsituation 1 v 1 was solved by followed players with variety of feints. The most common feint used during matches was „the kick trick feint“ (36 times – 49,3% from entire number). It was mostly prefered by Zidane (15 times). Reversely, Rosický utilized this feint to past the opponent the least (3 times). „The kick trick feint“ was indeed the most prefered type of feint, but regarding the efficiency it is added to just fourth place, because from 36 attempts the players was successful 27 times (75%).

The second most common used type of feint was „the dummy step feint“. Players decided to use it in 22 cases (30,1% from entire number). Rosický was the player, who

realized the most attacking situation 1 v 1 with this feint (12 times). On the other side, Zidane used this feint the least (just once). The remarkable is efficiency of this feint – from 25 cases even 22 successfully done (86,4%) so it is evaluated as the second best feint what effectivity relates to.

The feint „The foot on the ball trick“ was used rarely, only 6 times (8%) and the most common utilized by Zidane (4 times). Nedvěd was only the player, who did not try for pasting the opponent with using this feint. It is noticable, that the efficiency of this feint was the highest. (6/6 100%).

The players tried a for a pasting an opponent by using the other kind of variety array of feints very rarely (5 times). Zidane was only the player who did not decide to use this feint. What the efficiency regarding, it is the third best feint ($5/4 = 80\%$).

The least common types of feint was „the nutmeg move“, used only in 4 cases (4,9% from all types of feints). Nedvěd was the player who tried this feint to win the attacking game situation 1 v 1 the most (3 times). Reversely, Davids and Rosický did not even decided for this feint. It is also reasonable to conlude that also effectivity of this movement was the worst ($4/1 = 25\%$) (Figure 1).

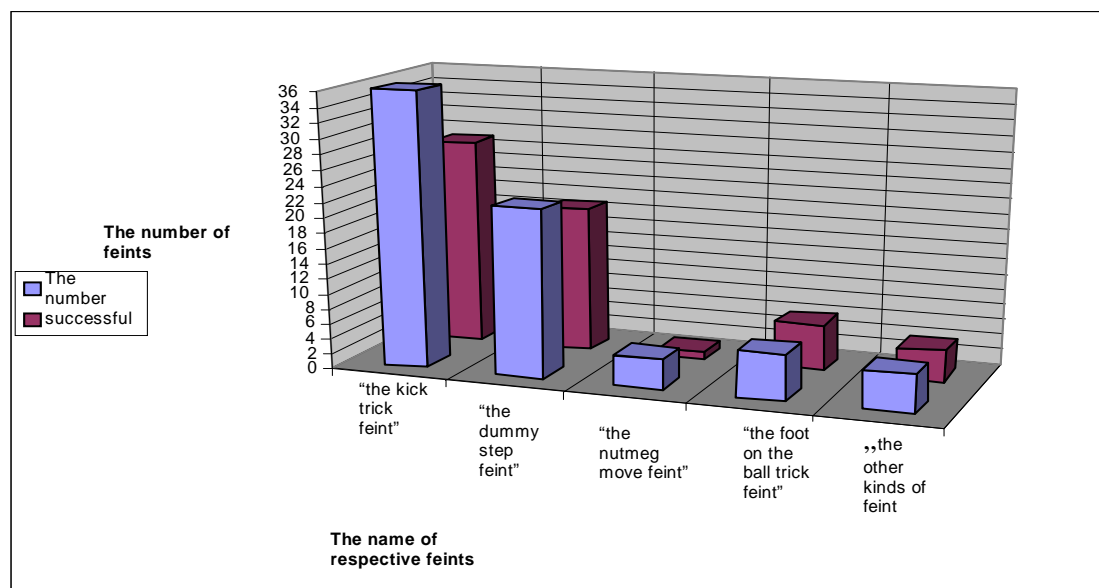


Figure 1 The efficiency of the players within attacking game situation 1 v 1 in EURO 2004 in Portugal

CONCLUSION

When watching the solution of attacking game situation 1 v 1 by followed players in particular matches during EURO 2004 in Portugal it is reasonable to conclude that top

European central midfielders rely mainly on „the kick trick feint“ and also on „the dummy step feint“, that were used within 80% of all the attempts of pasting the opponent.

On the other side, the least common used kind of feints was „the nutmeg move feint“. The best efficiency was reached while using „the foot on the ball trick“ and „the dummy step feint“. Players usually used „the dummy step feint“ while opening the space on the pitch, but when crowding of the space they decided to rather use „the kick trick feint“ and also „the foot on the ball trick“.

When comparing gained informations with the data interpreted by various authors, it is noticable that while solving the attacking game situation 1 v 1, players utilized the same feints as previously choosing again „the kick trick feint“. Another remarkable aspect is to decrease the number of „the other kind of feints“ and also „the nutmeg move feint“.

While comparing efficiency of winning the attacking game situations 1 v 1 during EURO 2004 in Portugal we can conclude that was very similar to the World Cup in 1990 (75%) and also to World cup in 1998 (78%).

The result we gained should not be taken absolutely. The chosen problem has not been solved in whole range while within our conditions. Instead we assume that all informations we gained can be applied further to the next development of theoretical and practical solution of attacking game situation 1 v 1.

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ANALÝZA RIEŠENIA HERNEJ SITUÁCIE 1-1 Z POHLAD ÚTOČNEJ FÁZY HRY VO FUTBALE

SÚHRN

V našom výskume sme sa pokúšali o sledovanie riešenia hernej situácie 1 – 1 z pohľadu útoku. Za týmto účelom sme vybrali štyroch hráčov (všetko ofenzívnych stredných stredových hráčov), ktorých sme sledovali počas majstrovstiev Európy 2004 v Portugalsku. Naším zámerom bolo sledovať a zaznamenávať ich všetky riešenia situácie 1 – 1 z pohľadu útoku. Po skončení výskumu sme dospeli k nasledovným tvrdeniam. Môžeme skonštatovať, že ofenzívni strednopolari na majstrovstvách Európy preferovali hlavne krátku kľučku s náznakom strely a následným zaseknutím a dlhú kľučku po klamlivom pohybe. Najmenej používanou kľučkou bola kľučka s obhodením hráč. S najlepšou úspešnosťou bola realizovaná kľučka tzv. sťahovačka a opäť dlhá kľučka po klamlivom pohybe. Je teda predpoklad, že ofenzívni strední stredoví hráči budú i naďalej najčastejšie využívať v súbojoch 1-1 krátku kľučku s náznakom strely. Môžeme skonštatovať, že táto kľučka je preferovaná i kvôli zužujúcim sa priestorom v strednej vertikále v dnešnej dobe tímami v rámci defenzívnej fázy hry.

KLÚČOVÉ SLOVÁ: hráč, individuálny herný výkon, riešenie hernej situácie 1-1, obchádzanie súpera, percentuálna úspešnosť.

MOTIVATION OF UNIVERSITY STUDENTS THROUGH SCHOOL PHYSICAL EDUCATION TO LIFELONG SPORTS

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SUMMARY

Author presents knowledge about relationship of Technical university students to sports and recreational activities as well as their relationship to school Physical Education at TU. At the same time he compares results with former research from 2011.

KEY WORDS: physical Education, sports and recreational activities, motivation for lifelong sports.

INTRODUCTION

The importance of sport and Physical Education in university life encourages us to understand the need to implement the physical activities, the need for understanding motivations and reasons to avoid sports. The studies of authors, dealing with issues of young people sporting, find that youth have simple reasons to sport: gain new skills and improvement in them, social status, competition, discharging excess energy, fun, fitness, friendship or effort to integrate into the collective. When analysing the motives attention must be paid to the motivation based on medical grounds, or an effort to improve physical appearance, stress relief, relaxation and social contact.

These general statements are shared by the research of authors Lenková, Dračková and Rubická (2009), who monitored motivating factors for exercise in their research at University of Prešov. In their research they found that in the age group under 20 years is the main motive to sport body shaping. With increasing age the frequency decreases. In contrast, the motive for strengthening health has exactly the opposite frequency. With increasing age the motivation percentage increases. With increasing age generally weight also increases which is reflected in the motive of losing weight among older respondents. Motive of mental release and relaxation has settled in their research trend.

By Hogenová (2007) human flesh must be interpreted from the very existence of man. To know the phenomenon of sport and sporting we must build on the very existence. It is how a person identifies with his movement figures, what inspires him, what does he tends to. It is important what bases of physical education knowledge build his athletic presence. Philosophically, it is telos (end), archá (top), (implementation-realization), energieia and dynamis (option). In an understandable terminology it is the motive to begin sport, its aim and outcome in relation to physical capabilities and skills of implementation.

According to research Izáková-Hrušovská (2009), the young generation is reflected elements of novice, immediate results in action and is often referred to as a generation of instant satisfaction. We can not exclude these social trends. They must be accepted in relation to modern society. According to these findings it is necessary to include new sports into sport and movement activities that are attractive and modern. Appropriate activities are those which by their nature do not require long preparation or demanding equipment, but on the other hand, leads students to regular sports activity.

Valjent (2012) in his research notes that there are two basic understanding sports in the world. The first of them prefer play, competition and performance with all its attributes, such as training, performance, competition and so on. The second approach is considerably wider because in addition to competitive sports it highlights the original meaning of the word sport which is in Latin origin (desportare) and it means to entertain and have fun.

In the European Sports Charter the term sport means all forms of physical activity which aims to acquire or improve physical and mental condition, the development of social relationships or obtaining results in competition at all levels.

OBJECTIVE

Through the questionnaire we wanted to determine the relationship of students of the Technical University in Zvolen to the sports-recreational activities, their attitude to the issue of school Physical Education and compare their attitudes with the results of former research.

PROBLEMS AND RESULTS

Students of full time study at the Technical University in Zvolen can choose from the offer of subjects with a focus on sports: basketball, volleyball, football, canoeing, swimming, strengthening, aerobics, exercise on fit ball, bouldering, tennis, badminton, table tennis,

floorball, cros fit. All sports are included in the separate subjects of the Institute of Physical Education and Sports at Technical University in Zvolen.

- Physical education and sport.
- Selective sport and health.

Students can get 1 credit for active participation on lessons of Physical Education. One and half hour lessons are held once a week.

IPES offers courses (without credits): skiing courses focused on cross-country and downhill skiing, course of outdoor physical activities, hiking, mountain biking course and movement in nature, course of canoeing and rafting on river Hron.

During PE lessons in fall semester of the academic year 2012/2013 we realized research aimed at finding students interest in motional - recreational activities offered by IPES. In the next section we investigated their interest in the motional - recreational activities in their spare time.

We used anonymous questionnaire method. Students answered 14 questions that revealed view of the interest in sports and recreational activities to project research investigators.

In total, 700 questionnaires were distributed. 654 of them returned back to us, which is 93.43%. 455 questionnaires were distributed among men, while 425 has returned, which is 93.41%. 245 questionnaires were distributed among women, 229 returned, representing 93.47%.

Students were chosen from all faculties at TU in Zvolen: Faculty of Forestry, Wood Technology, Faculty of Ecology and Environmental Sciences, Faculty of Environmental and Manufacturing Technology, Whole University Study Programmes.

Completed questionnaires were individually evaluated in terms of sex (men – women), researched students attended 1. and 2. school year.

The results interpreted in this report are from male respondents.

Female responds are processed in the report of Mgr. Baisová Karin, PhD.

In determining the order of importance the respondents signed health on the first place. We confirmed the importance of health also compared with research (Kružliak, 2011), the importance of family defended its second place. Next values unlike the aforementioned research were placed in the following order: friendship, money, education and sport, movement and recognition (Table 1).

Table 1 The priority list of values

The priority list of values					
1.	Health	4.	Education	7.	Sport
2.	Family	5.	Happiness	8.	Movement
3.	Friendship	6.	Money	9.	Recognition

Importance of placement of sports and recreational activities into daily life again corresponds with mentioned research. The order was maintained with approximately the same percentage. Sports and recreational activities as part of life identified 80,01 % respondents, 19,29 % indicated it as occasional activity and three respondents indicated it as unnecessary, which is only 0,7 % (Table 2, Figure 1).

Table 2 Sport and recreational activities

Sport and recreational activities		
1.	Part of my life	80,01 %
2.	Occasional activity	19,29 %
3.	Not necessary	0,7 %

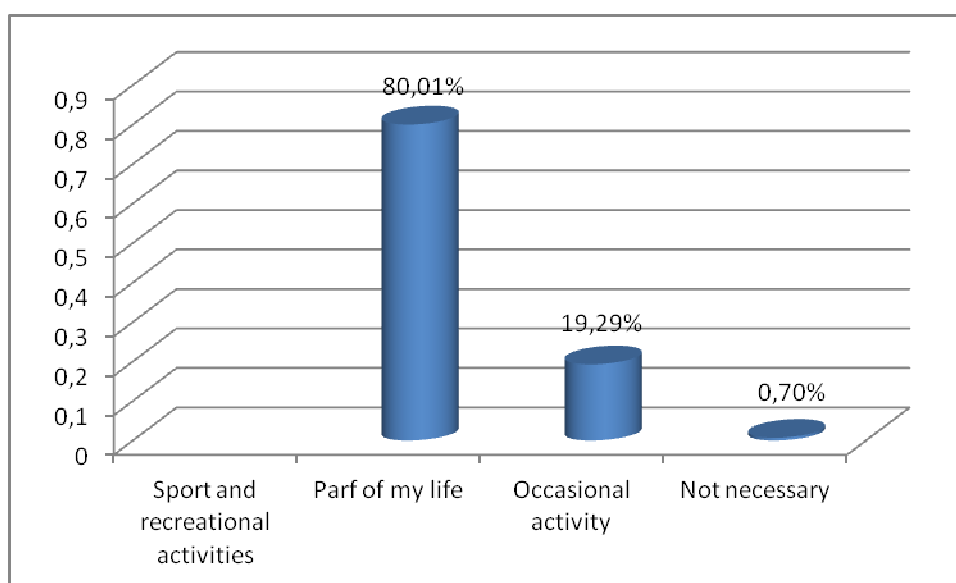


Figure 1 Sport and recreational activities

In the next question we investigated the relation of the respondents who sport actively – 54,25 %, compared to 45,75 % who do not sport actively. This percentage appears to be quite alarming, but at the same time indicating the current status of the young population to the issue of creating lifelong sport and a healthy lifestyle. With opportunity to express their

opinion to which sports activities are respondents devoted now, most mentioned were team sports, hiking, strengthening and in-line skating (Table 3, Figure 2).

Table 3 Relation to active sport

Relation to active sport		
1.	Sports actively	54,25 %
2.	Not do sports	47,75 %

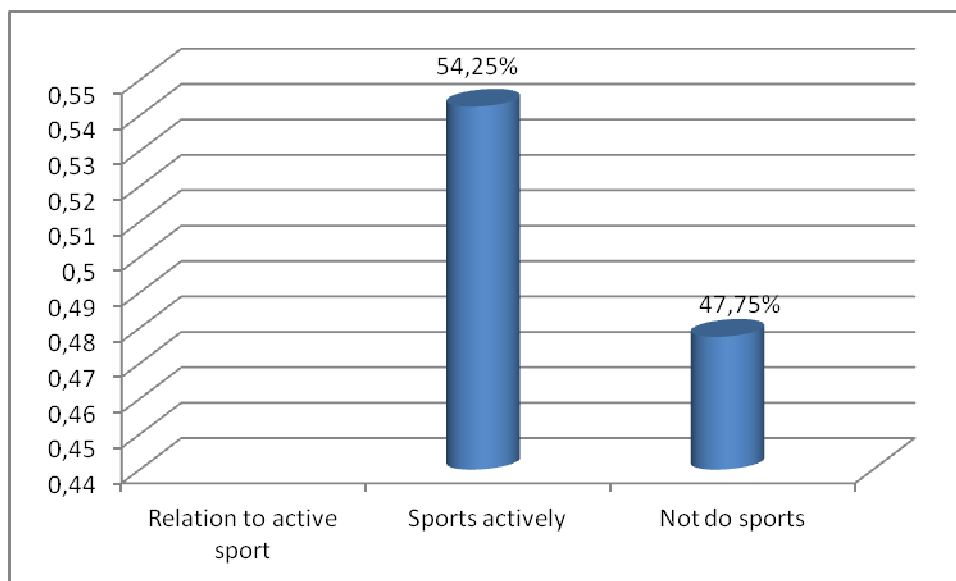


Figure 2 Relation to active sport

The main reasons why respondents still do not actively sport reported that 47,15 %, of them are interested in other activities, 34,73 % lack of free time, 9,42 % financial problems, 4,03% do not have a suitable partner for sports, 3,12 % nobody motivates me to sports and 1,66% do not need to sport (Table 4, Figure 3). This position until the last three reasons again preserve the ordering of research (Kružliak, 2011), the only reason, lack of free time, substantially reduce the percentage of respondents by 7%.

Table 4 Reasons to disregard the regular sports

Reasons to disregard the regular sports		
1.	Interest in other activities	47,15 %
2.	Lack of free time	34,73 %
3.	Financial problems	9,42 %
4.	I do not have a suitable partner for sports	4,03 %
5.	Nobody motivates me to sports	3,12 %
6.	I do not need to sport	1,66 %

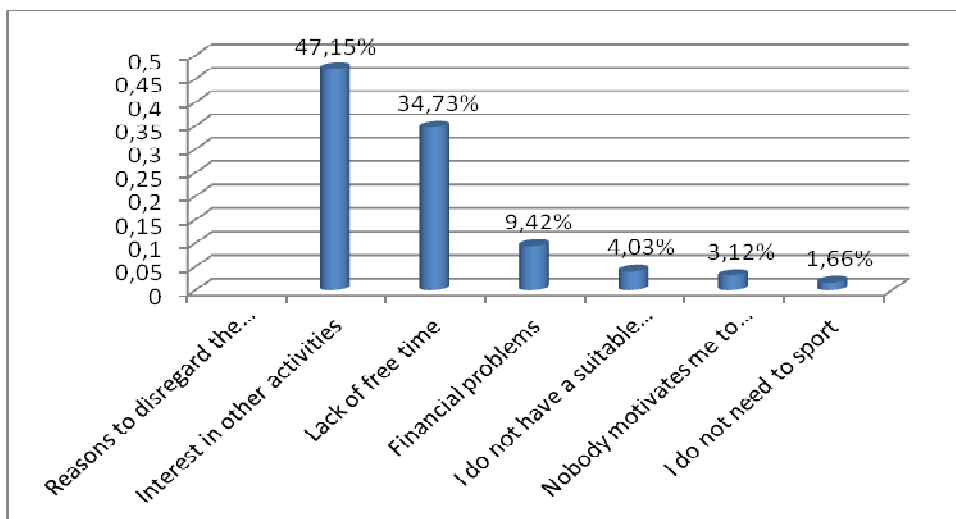


Figure 3 Reasons to disregard the regular sports

Respondents prefer study in their leisure time than sports, education 44,16 %, work with PC 35,17 % what corresponds to the former research (Kružíak, 2011). On the next place is reading, cultural events and other activities with 14,14 %, passive recreation with 3,51 % and activities in another field with 3,02 % (Table 5, Figure 4).

Table 5 I prefer to sports

I prefer to sports		
1.	Study and education	44,16 %
2.	Work with PC	35,17 %
3.	Reading, culture and other activities	14,14 %
4.	Passive recreation	3,51 %
5.	Activities in another field	3,02 %

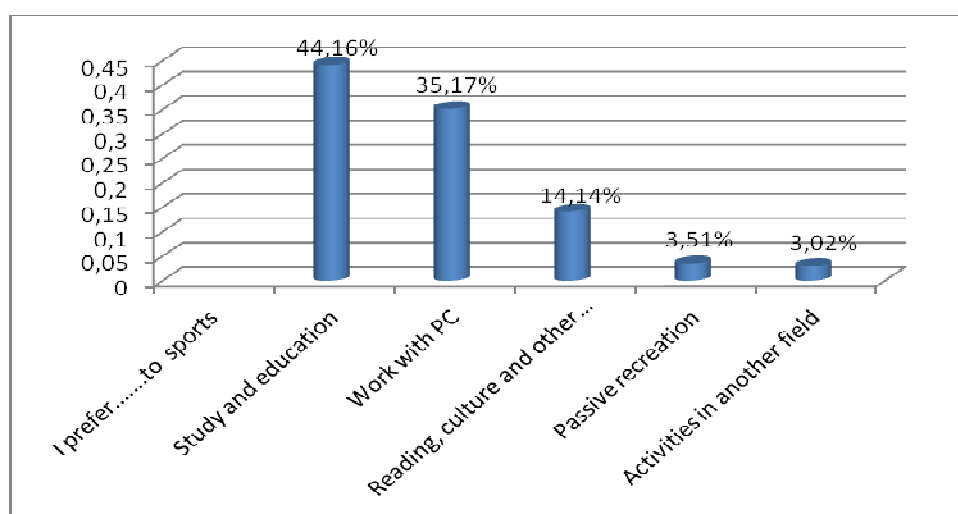


Figure 4 I prefer to sports

Sports activities which are most preferred by respondents are offered by IPES and therefore they are comparable with research (Kružliak, 2011), while there are also activities performed not only within TU. We noticed the huge percentage difference in swimming which was up to 29,18 % fall in interest. The negative fall is explained by the drastic reduction of possibility to swim in the Physical Education classes. Currently it is 1 hour per week but only in the fall semester for non-swimmers. Most preferred sports are traditionally strengthening and fitness 26,04 %, ball games 21,05 %, hockey (ice hockey, hockeyball) 14,86 %, batsman sports 14,21 % (Table 6, Figure 5).

Table 6 Interest in sport activities in leisure time

Interest in sport activities in leisure time		
1.	Fitness and strengthening	26,04 %
2.	Loptové hry	21,05 %
3.	Floorball (hockey, hockeyball)	14,86 %
4.	Batsman sports	14,21 %
5.	Swimming	11,15 %
6.	Dance sports	4,63 %
7.	Skiing	4,15 %
8.	Running – jogging	3,91 %

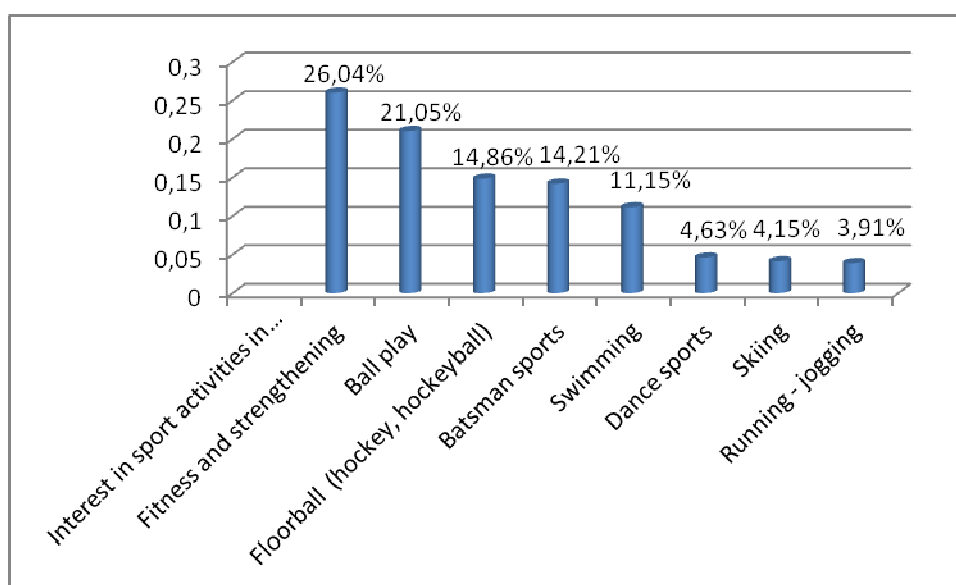


Figure 5 Interest in sport activities in leisure time

Frequency of sporting in comparison with research (Kružliak, 2011) has changed and the respondents indicated different order. 37,14 % of respondents do sports 2 times a week, 31,39 % sports more times a week, 24,32 % once a week, and 7,15 % does not sport. This

change is based on reality which is based on introduction of university leagues in volleyball, basketball, floorball, chess, badminton to PE offer of sports activities for university students, as well as the inclusion of more frequent one-off sporting events and tournaments (Table 7, Figure 6).

Table 7 Frequency of sporting during week

Frequency of sporting during week		
1.	2 times a week	37,14 %
2.	more times a week	31,39 %
3.	once a week	24,32 %
4.	I do not sport	7,15 %

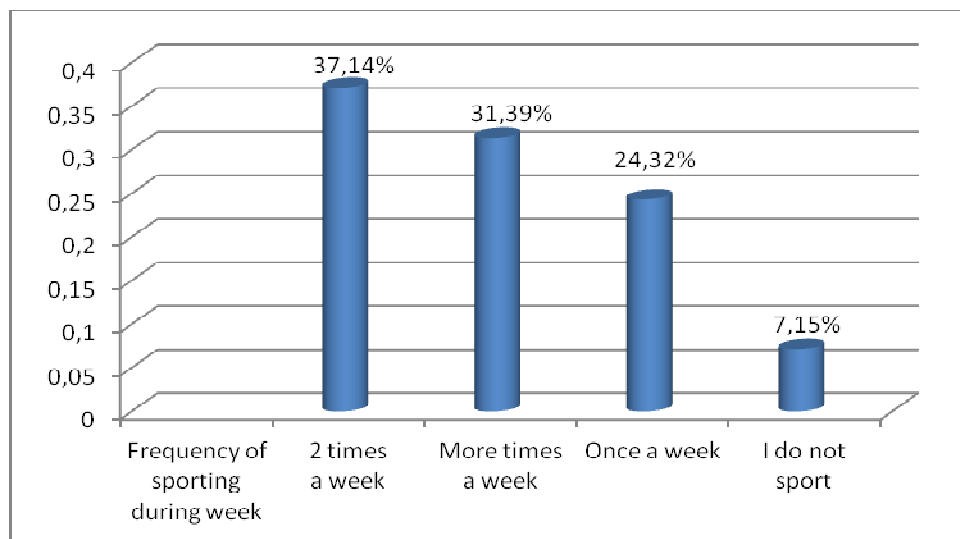


Figure 6 Frequency of sporting during week

Elective subject PE (in its two forms at TU in Zvolen) was chosen by most respondents because of sports as part of life 49,14 %, as a form of health promotion 27,18 %, 16,25 % shaping, only in order to obtain credit for completion of a subject 5,11 %, fill in the time between study blocks – 2,32 % (Table 8, Figure 7).

Table 8 Reasons for choosing the PE

Reasons for choosing the PE		
1.	Part of my life	49,14 %
2.	Health promotion	27,18 %
3.	Body shaping	16,25 %
4.	Obtain the credit	5,11 %
5.	Fill the time	2,32 %

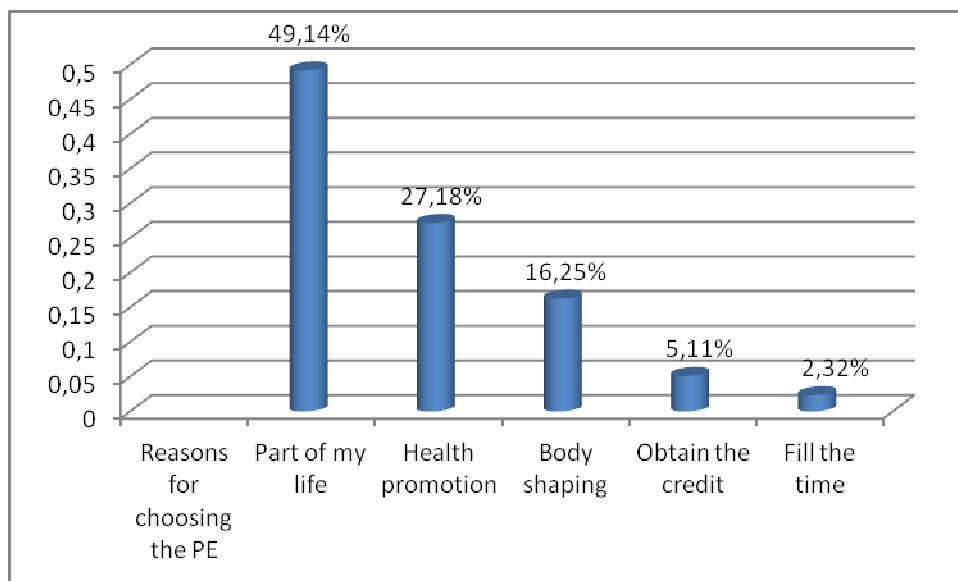


Figure 7 Reasons for choosing the PE

Within PE classes students of TU can choose from a wide range of sports. In our research they could select more sports and their interest in them gave us a popularity ranking. Strengthening and fitness 92,11 %, badminton 87,14 %, football 47,17 %, hockey 47,14 %, volleyball 35,33 %, table tennis 31,18 %, swimming 24,17 %, basketball 18,33 %, floorball 17,14 %, bouldering 11,25%, tennis 9,17 % (Table 9, Figure 8).

Table 9 Interest in sports offered by IPES at TU Zvolen

Interest in sports offered by IPES at TU Zvolen		
1.	Strengthening and a fitness	92,11 %
2.	Badminton	87,14 %
3.	Football	47,17 %
4.	Volleyball	35,33 %
5.	Table tennis	31,18 %
6.	Swimming	24,17 %
7.	Basketball	18,33 %
8.	Floorball	17,14 %
9.	Bouldering	11,25 %
10.	Tennis	9,17 %
11.	Canoeing	5,25 %

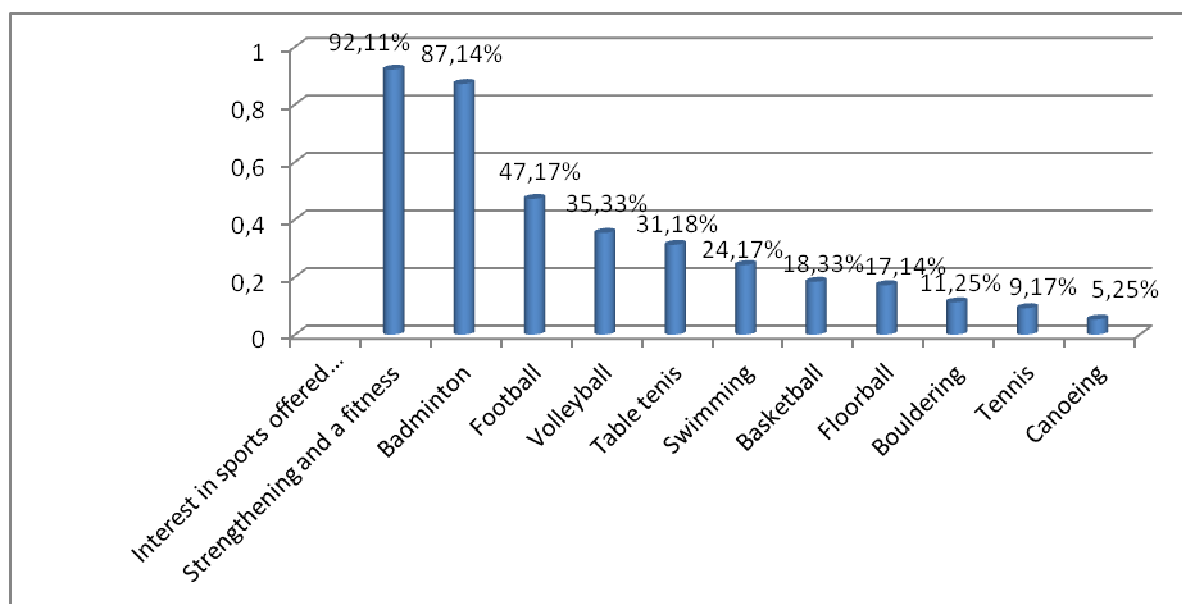


Figure 8 Interest in sports offered by IPES at TU Zvolen

Students would welcome wider sports offer at TU: dance sports, hiking, swimming, cycling, extreme sports (survival under natural conditions, overcoming difficult obstacle courses), skating, hockey. Not all these sports correspond to the interests of the majority of respondents. They were chosen to illustrate the overall interest in sports of our respondents. Compared with previous research (Kružliak, 2011), sports like hiking, skating, hockey and cycling appeared in the answers of respondents (Table 10).

Table 10 What sports do you miss in the offer of IPES at TU?

What sports do you miss in the offer of IPES at TU?	
1.	Dance sports
2.	Hiking
3.	Swimming
4.	Cycling
5.	Extreme sports
6.	Skating
7.	Hockey

Interest in the implementation of sports exercises on Physical Education classes tells us that the biggest concern traditionally have early evening hours – 47,92 %, evening hours 36,14 %, afternoon hours 11,12 %, and mid-morning hours 4,82 %, which again corresponds the interest of research (Kružliak, 2011). This state is the base of fact where students spend

time during the day at school and only a small percentage of them use their free time sporting between school blocks (Table 11, Figure 9).

Table 11 Interest in sports from time view

Interest in sports from time view		
1.	Early evening hours	47,32 %
2.	Evening hours	36,14 %
3.	Afternoon hours	11,12 %
4.	Mid-morning hours	4,82 %

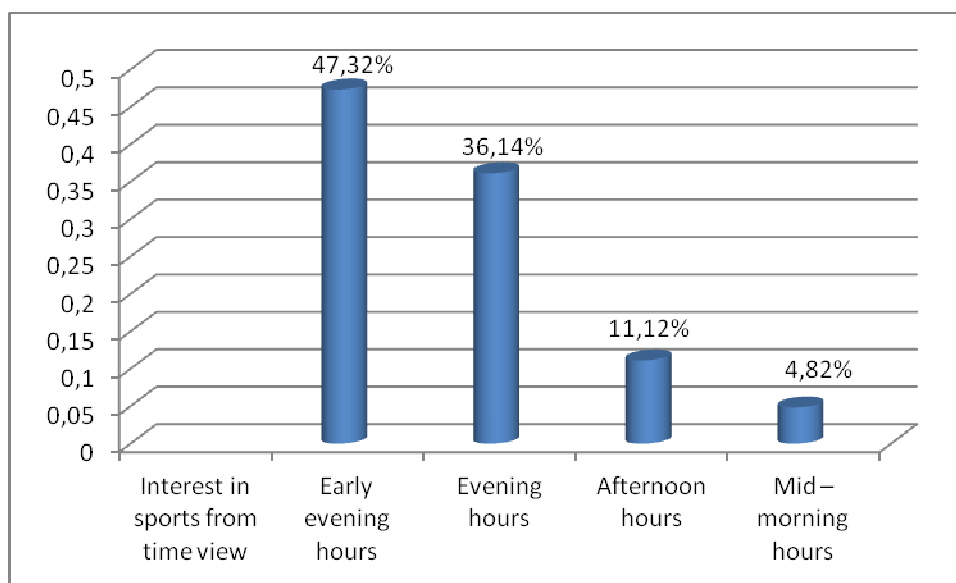


Figure 9 Interest in sports from time view

Table 12 Frequency of attendance at Physical Education classes at TU

Frequency of attendance at Physical Education classes at TU		
1.	More times a week	61,84 %
2.	Occasionally	16,14 %
3.	Once a week	9,79 %
4.	Lack of interest in frequent classes	7,12 %
5.	Undecided	5,11 %

Frequency of attendance at Physical Education classes at TU in Zvolen more times a week would suit to 61,84 % of surveyed respondents, occasionally 16,14 %, one hour per week 9,79 %, lack of interest in frequent exercise during PE classes was presented by 7,12 % and 5,11% were undecided respondents. The good news is the percentage of respondents who would suit more frequent attendance at Physical Education classes because it gave more

options for organizing sports competitions, tournaments and mini leagues. It could attract to regular sport those students who are still hesitant to start regular sport (Table 12, Figure 10).

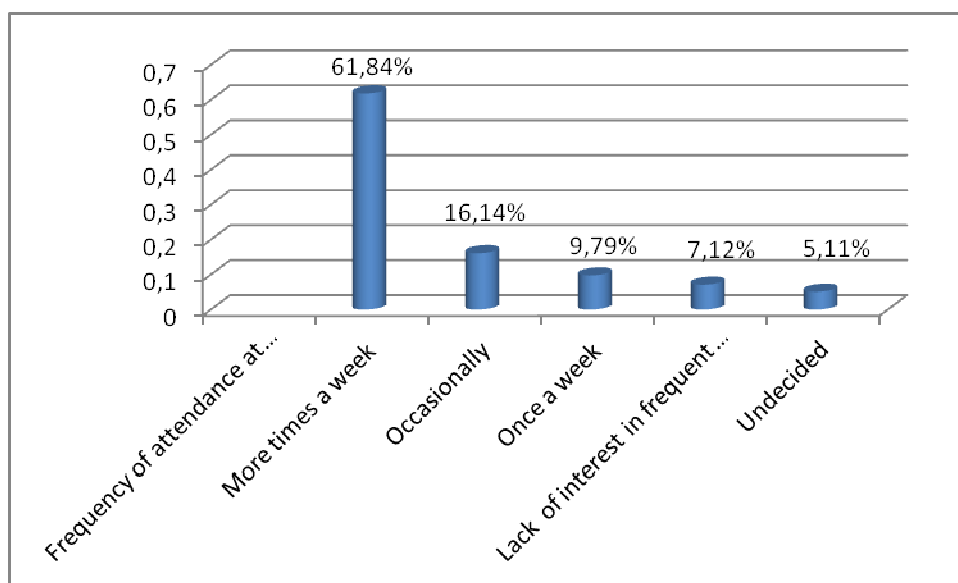


Figure 10 Frequency of attendance at Physical Education classes at TU

We observed regular sport of students outside of Physical Education classes in 63,14 %, occasionally 28,18 %, do not sport 8,68 % of interviewed. It practically replicates the response of research (Kružliak, 2011) (Figure 11, Table 13). Proportion of respondents who regularly sport and do not sport is relatively large 54,64, what gives the impression of satisfaction. But we must not succumb to this fact because competition from other leisure-time activities is enormous and the effort of our staff is expanding army of sporting public.

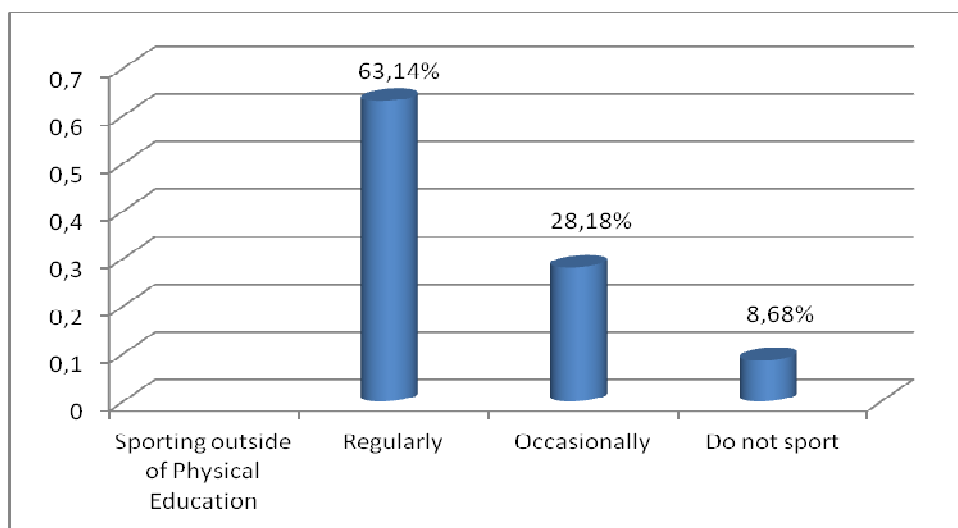


Figure 11 Sporting outside of Physical Education

Table 13 Sporting outside of Physical Education

Sporting outside of Physical Education		
1.	Regularly	63,14 %
2.	Occasionally	28,18 %
3.	Do not sport	8,68 %

A wide sport offer of Institute of Physical Education and Sports at TU for teaching Physical Education according to the responses motivates further regular sporting 13,16 %, unable to express 68,16 %, regularly sported before entering university 15,25 % and Physical Education is not a motivation to sport for 3,43 % of respondents. Also answers to these questions relatively replicate research results (Kružliak, 2011), which shows us that we have deficiencies in sports offer and sports and recreational activities at TU in Zvolen (Table 14, Figure 12).

Table 14 Sport offer at IPES TU to further sporting

Sport offer at IPES TU to further sporting		
1.	Unable to express	68,16 %
2.	Regularly sported before entering university	15,25 %
3.	Motivates further regular sporting	13,16 %
4.	PE is not a motivation to sport	3,43 %

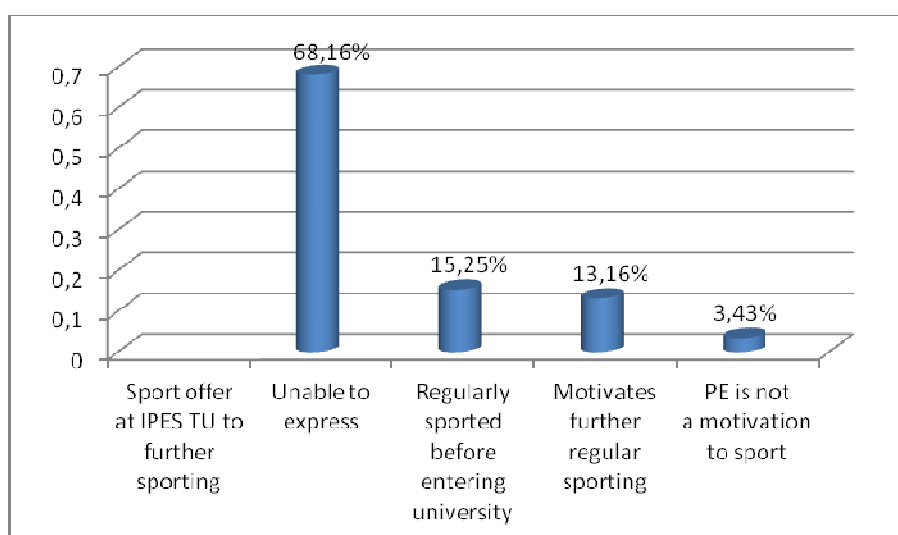


Figure 12 Sport offer at IPES TU to further sporting

CONCLUSION

After analysing the results of our research we can conclude that from the statements of the respondents it is clear that young people - students in Zvolen have a positive attitude towards regular sports and creating the need for lifelong sport. They realize fully that sports should be inseparable reality of student life in meeting his objectives in the study. Sport is a way to break down the accumulated negative energy, it is the way to psychological recovery and increasing physical condition. They understand the variety of sports in offer of Institute of Physical Education and Sport as an opportunity to acquire basic gaming activities, the chance to try them, learn the rules and get an overview of the basic methodology for the development of the selected sport. Results on the other hand, uncover us respondents view on the issues that affect their interest in regular sports. Competition of other leisure-time activities, work with PC, financial reasons or total disinterest are very serious rivals which still not win over the interest in physical activities but this situation may not last long. It is necessary to create such conditions at schools of various types that the way from not sporting to sport could constantly shorten and we do not find still increasing barriers. The work of sports educators who through Physical Education classes have the possibility of reaching a wide school population is in the process of creating lifelong sport needs very important, if not decisive. If we paraphrase known "fortune favors only the prepared", we come to the conclusion that the right way is through school Physical Education, well prepared Physical Education teachers with sufficient quality conditions for their work.

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MOTIVÁCIA ŠTUDENTOV VYSOKÝCH ŠKÔL K CELOŽIVOTNÉMU ŠPORTOVANIU PROSTREDNÍCTVOM ŠKOLSKÉJ TELESNEJ VÝCHOVY

SÚHRN

Autor príspevku prezentuje poznatky o vzťahu vysokoškolákov na Technickej univerzite vo Zvolene k športovo- rekreačným aktivitám, ako aj ich vzťahu k školskej telesnej výchove na TU. Súčasne porovnáva výsledky s predchádzajúcim výskumom z roku 2011.

KLÚČOVÉ SLOVÁ: telesná výchova, športové a rekreačné aktivity, celoživotné športovanie.

AGGRESSIVENESS IN SPORT – MEASUREMENT METHOD

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SUMMARY

Aggression is a process, and aggressiveness is a feature of character. This article contains comprehensive data about Aggressiveness in Sport Questionnaire, that comprises three scales: 1) „Go-ahead” i.e. persistently pursue a goal regardless of appearing obstacles 2) „Tripping someone up” – person characterized by this kind of aggressiveness has no scruples, is interested only in his or her own business and considers as normal trampling over people to achieve his or her goals, 3) “Assertiveness” – person characterized by this kind of aggressiveness is courageous in his or her actions and expression of opinions in spite of potential negative consequences he or she incurred. The research group consisted of sportsmen practicing 1) individual non contact sports, 2) combat sports and, 3) team sports. In this article the Aggressiveness in Sport Questionnaire content, application and method of computing scores are presented.

KEY WORDS: sport, risk, assertiveness, go-ahead, aggression, aggressiveness.

INTRODUCTION

Aggression and aggressiveness – these terms sound similarly, however their significance is not the same. Aggression is most frequently defined as a process, i.e. the course of successive linkages, cause-specific changes, constituting subsequent stages, phases of an individual's actions. Whereas aggression is understood as a personality trait that manifests itself in the tendency to express frequent aggressive reactions.

Aggression is a notorious phenomenon, but it is not unequivocally defined in the psychology science (Aronson 1999; Aronson, Wilson, Akert 2012; Bandura 1983; Buss 1961; Deffenbacher 2008; Krahe 2001; Loeber, Hay 1997, Nelson 2005; Niehoff 1999; Robertson, Daffern, Bucks 2012).

Biological ways of explaining aggression include among others: 1) Ethological point of view: aggression as an internal energy (Lorenz, 1974), 2) Socio-biological point of view: aggression as a product of evolution (Archer 1995; Buss and Shakelford, 1997; Daly and Wilson, 1994). Psychological ways of explaining aggression take into account among others: 1) Psychoanalytical explications: aggression as a destructive instinct (Freud 1920), 2) the Frustration-Aggression hypothesis: aggression as an impulse directed at achieving some goal (Dollard et al., 1939), 3) Cognitive neoassociationist theory: the role of negative affect (Berkowitz, 1997), 4) Excitation-transfer theory: anger and the attribution of excitement (Zillmann, 1979), 5) Social-cognitive approach: aggressive scripts and social information processing (Huesmann, 1988), 6) Aggression learning theory: the role of reinforcement and imitation (Bandura, 1983), 7) Social interactionism model: aggression as coercive social influence (Tedeschi, Felson, 1994).

The most frequently accepted aggression definition considers this phenomenon as a behaviour aimed at inflicting pain to another human being who wants avoid this pain. "I would define an aggression act as behaviour intended to inflict damage or pain" (Aronson 1999, p. 303). A. H. Buss (1961) introduced the notion of aggression as a personality variable (trait and state) shaped by habits. He defines aggressiveness as the habit of attacking others, as a relatively stable individual's characteristic consisting in frequent and inadequate to the stimulus highly intensive reactions.

With reference to sport, B. F. Husman and J .M. Silva (1984) regard aggressiveness as bold and energetic pursuit of a goal. These Authors distinguish three types of aggression (aggressiveness) in sport: 1) proactive assertiveness, 2) instrumental aggression, 3) reactive aggression. In turn, J. Thirer (1993) believes that aggression in sport appears as:

- 1) non-destructive aggression, identified with assertiveness. This aggression type is characterized by self-defence and attitude toward goal attainment,
- 2) angry aggression associated with destructiveness, anger, harming, hate, revenge and rage.

It is assumed that aggression level is determined by four factors (Makarowski, Peplińska, Nowopolski, 2010; Maxwell, Visek, Moores 2009; Russell 2008; Rowe 1998):

- 1) the incidence of antecedent factors triggering and preceding aggression (attack, frustration, unpleasant and annoying stimuli),
- 2) rewarding of aggressive reactions, this prize may also consist in the decrease of emotional tension after an act of aggression or in the elimination of a frustration source,

- 3) social reinforcements (for example approval of a group, frequent provocations to aggression),
- 4) innate biological predispositions , especially temperament.

J.Archer (1988) proposed a classification based on functions of different types of behaviour:

Utilitarian aggression (its goal is the problem resolution):

- 1) Defensive aggression – the problem to solve is the threat of physical attack,
- 2) Parental aggression – the problem to solve is the threat to offspring,
- 3) Rivalry aggression – the problem to solve is the appropriate resources distribution.

Defensive aggression serves the purpose of fighting off the threats. For example death or pain can constitute these threats. Parental aggression is in a way a form of defensive aggression because it is aimed at averting the threat that endangers offspring. Rivalry aggression is aimed at fighting off the threats which could diminish one's resources, e.g. food, good mood, social position.

Similarly, it may be supposed that dynamic, active and “go-ahead” people achieve success in sport (Moesch, 2010). These people are characterized by expansiveness, i.e. the desire to catch up with the best and the strongest ones, as well as by setting themselves ambitious goals to achieve greater advantages, greater resources. “Go-ahead” is linked not only to aggression but also to the risk (Brewer, Howarth, 2012; Castanier, Le Scanff, 2010). The opposite of a “go-ahead” person is a passive one. From this perspective the group of sportsmen may be divided into: submissive, aggressive and assertive ones. Submission means to respect other people's rights and to disregard one's own rights. Assertiveness means to respect both other people's and one's own rights. Aggressiveness means to respect one's own rights and to disregard other people's rights.

Assertiveness, just like aggressiveness, is regarded as a personality trait and is to a large extent genetically conditioned, and thus it is linked to the temperament (Feshbach, Zagrodzka 1998; Rich, Schroedre 1976).

There are numerous classifications of assertiveness, including: positive assertiveness (laudatory), negative assertiveness (hostile) (Wolpe, 1969). A.Arrdinell et al. (1988) distinguish four types of assertiveness: 1) negative feelings expression, 2) acceptance and way of treatment of personal limitations, 3) initiated assertiveness, 4) praising others and the ability to accept compliments. High assertiveness is linked with louder speech, an open view,

quicker reactions, longer pronouncements, more direct expression of feelings, lesser compliance, demand of greater changes in other people's comportment. The lack of assertive skills and what follows negative self-evaluation may be the beginning of the hostile aggression and personality disorders development.

B.F. Husman and J.M.Silva (1984) show the necessity to distinguish aggression from assertiveness in sport at the same time drawing attention to the field common for these two notions.

In the opinion of a Polish researcher, T. Rychta (2004, p. 196) in sport we also encounter such an understanding of aggression according to which aggression can express normal and positive adaptive behaviour, close to non-destructive aggression or assertiveness. Many coaches and sports journalists believe that aggression in sport is a positive behaviour, an expected way to achieve success (Donahue, Rip, Vallerand 2009; Jarvis 2006).

On the basis of the literature review we assumed that aggressiveness in sport may be described by means of three factors: 1) "Go-ahead", 2) "Tripping someone up", 3) "Assertiveness". The closest to the classical aggressiveness definition is "Tripping someone up", i.e. the actions aimed at making it impossible for the opponent (rival) to reach his goal and by the same to increase the probability of reaching one's own goal. The interdependence of these factors is presented in Figure 1.

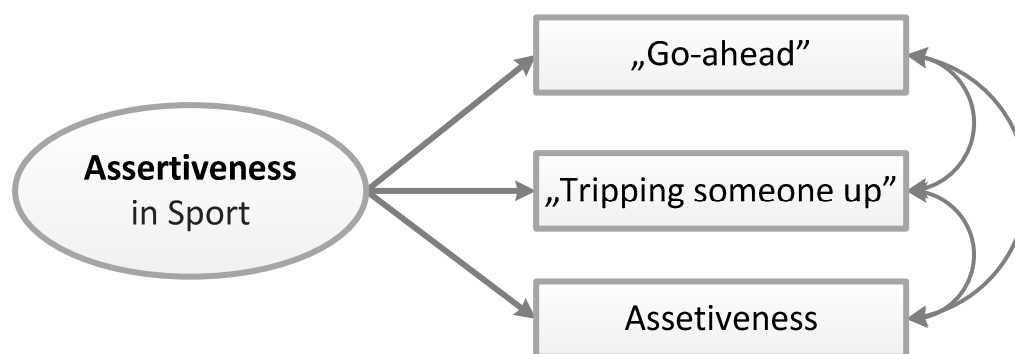


Figure 1

From the perspective of sport psychology, it may be said that the aggressiveness specificity depends on the group of individuals it concerns. Aggression manifestation in sport may be more humane than typical aggression as it is commonly understood, i.e. aggression as a synonymous of evil (in the moral sense) and as a sin (in the religious sense) (Anderson, Bushman 2002). The aggression manifestation must not always take the form of inflicting pain or suffering, or of demeaning other people.

On the basis of the theories presented above and the analysis of the studies conducted so far, it may be supposed that sportsmen behaviour is determined by different factors, including the presented level of aggressiveness. It may be also supposed that different sport disciplines may trigger different aggressiveness levels (Hagger, 2006). Thus it is reasonable to build a tool that will make it possible to measure aggressiveness level (“go-ahead”, “tripping someone up” and assertiveness) of people who practice different sport disciplines.

Referring to the theoretical descriptions of the respective types of aggressiveness we prepared two independent versions of items, describing the characteristics of “go-ahead”, “tripping someone up” and assertiveness. As a result of the similarities and differences analysis one common version was created, which included 15 items for each type of aggressiveness. This list was then passed to twelve competent experts (four- and five-year students of psychology) whose task was to assign respective items to three main categories. Items with inter-rater reliability higher than 70% were included into primary questionnaire version. Thus a list of 15 items was created (5 items per each type of aggressiveness).

Description of each dimension:

„Go-ahead” – means persistent pursuit of a goal, regardless of emerging obstacles. „Go-ahead” also means truculence and aggressive entrepreneurship. In other words „Go-ahead” means the expansion aimed at attaining new material and immaterial resources, for example prestige. This kind of aggressiveness characterizes an individual that breaks obstacles, attacks, is inflexible, courageous and fearless. “Go-ahead” also describes a person who breaks common, usual standards.

Items:

1	In order to achieve anything you need to keep pushing forward and not look to others
4	I usually achieve success through relentless striving to the goal.
7	I use every opportunity to win.
10	There is not such an argument that could deter me from the set goal..
13	„To press ahead” is the purpose in my life.

“Tripping someone up” - an individual characterized by this kind of aggressiveness has no scruples, is interested only in his own business, and considers it normal when sometimes he must trample over people to achieve the goal. This individual uses lies, intrigues and lays the blame on others if he considers this necessary to achieve his goal. He has no remorse when he resorts to bribery. In his opinion happiness is worth the “victims”. He does not attach great

importance to truthfulness / honesty. He creates / engages himself in situations of morbid rivalry, frequently feigning friendship.

Items:

2	Victory is all that matters, no matter the means used to achieve it.
5	In order to win, I would have no scruples to discredit my rival.
8	To get promoted, I would have no scruples to destroy my rival.
11	In my opinion it is no holds barred when one strives for the victory.
14	I feel satisfied if I succeed in doing harm to my rival.

“Assertiveness”: an individual characterized by this kind of aggressiveness acts and expresses his/her opinion in a courageous way despite impending potential negative consequences. An assertive individual will not be pushed around, which means that he/she does not allow others to impose an opinion on him/her and he/she knows how to defend his/her interests and just because of that he/she does not let others to exploit or cheat him/her.

Items:

3	When I think that my coach or boss is wrong, I say it to him.
6	I am not afraid to reprimand my boss if I know that he is wrong.
9	I argue with referees and my coach (or with my manager at work) when I am convinced that they are wrong.
12	I am not afraid to defend my point, even before the persons at higher positions
15	For a good cause I am ready to express criticism of my boss.

Then, we conducted first psychometric analyses designed to determine the discriminatory power of each item. We conducted the factor analysis in a mixed group of 686 men and women. At this stage we assumed that the basis of any decision should be the theoretical consistency, especially in terms of aggressiveness rating. This is why we conducted only the factor analysis restricted to three types of studied aggression without any additional exploratory analyses. The criterion of item inclusion in a given factor was the factor weight higher than 0.70 in a given category. Second comes the detailed psychometric analysis that was conducted on two independent groups.

The first group numbered 686 individuals (522 women and 164 men; M=31,10; SD=10,54; age minimum = 19, age maximum = 82).

The second group numbered 2499 individuals (1335 women and 862 men; M=24,39; SD=9,16; age minimum = 19, age maximum = 82).

The study participants were University of Gdansk and Gdansk Technical University full-time and evening study students from different study fields.

METHODOLOGY

Reliability and discriminatory power

In the Table 1 we present the reliability rates of three scales (dimensions) and discriminatory power of each item based on data from a study on 686 adult Polish men and women. The analysis results indicate that the reliability of distinguished scales is highly satisfying for both sexes. It may be noticed that the reliability of the scales of female and male attitudes is similar, so it is possible to say that the Aggressiveness in Sport Questionnaire is an equally reliable tool for measuring aggressiveness both in women and in men.

Table 1 Properties of individual questionnaire items and scales reliability

Variable	Number of items	Research group (N=686)		Women (N=522)		Men (N=164)	
		Cronbach's		Cronbach's		Cronbach's	
		Alpha	Average r	Alpha	Average r	Alpha	Average r
„Go-ahead”	5	0,83	0,51	0,83	0,49	0,85	0,53
„Tripping someone up”	5	0,86	0,57	0,84	0,53	0,89	0,64
„Assertiveness”	5	0,89	0,61	0,88	0,61	0,88	0,58

The point-biserial correlation coefficient (r_{pbi}) was used as the measure of discriminatory power of questionnaire items. The value of this coefficient varies in the range of $<-1, +1>$. The advantage of this coefficient is the possibility to use it even when the results distributions differ from the normal one. It is necessary to mention that data skew and kurtosis in all groups studied was less than 0.5 which means that we are dealing with the normal data distribution. The results are presented in Table 2.

Table 2 Summary of the internal consistency analysis

Scale	Item number	Discriminatory Power r_{pbi}	Cronbach's Alpha if item deleted
„Go-ahead”	1	0,64	0,80
	4	0,6	0,81
	7	0,61	0,81
	10	0,65	0,8
	13	0,68	0,79
	Alpha = 0,83 ; average r = 0,51		
“Tripping someone up”	2	0,64	0,83
	5	0,76	0,8
	8	0,76	0,8
	11	0,65	0,83
	14	0,56	0,86
	Alpha = 0,85 ; average r = 0,57		
„Assertiveness”	3	0,76	0,86
	6	0,74	0,86
	9	0,74	0,86
	12	0,71	0,87
	15	0,68	0,87
	Alpha = 0,89 ; average r = 0,61		

Factor validity

For the factor validity analysis we used the technique of confirmatory factor analysis that permits to verify the hypothesis that the theoretically assumed 3-factor aggressiveness types structure fits well to the data observed in empirical studies. We used the confirmatory factor analysis using the maximum likelihood method for the structural model.

Statistics of the assessment of fit

The indices of model fit in the first group (N=686) are: RMSEA=0,057; PCLOSE=0,058; Chi-sq=267,83; $p < 0,001$, GFI=0,943, ECFI=0,529, for the second group (N=2499) these indices are: RMSEA=0,055; PCLOSE=0,020; Chi-sq=732,58, $p < 0,001$, GFI=0,961, AGFI=0,320. We can say with high probability that the factor structure is the same in both groups. We can state that the model's goodness of fit tests in two studied groups

respond positively to the question whether the hypothetically assumed model may be verified by means of the distribution of scores originating from the matrix data.

In order to further verify the validity, we tested the hypothesis that the three-factor model will have exactly the same factor loadings and correlation strength for both factors in the population of men and in the population of women. As it is shown in Table 3, there exist statistically significant differences between women and men concerning the level of “Tripping someone up” and “Assertiveness”. Higher mean level of these factors was found in men. The “Go-ahead” factor does not differentiate these two groups.

Table 3 Differences in assertiveness degree in women and in men

Variable	Women			Men			t	p	Cohen's d
	N	M	SD	N	M	SD			
„Go-ahead”	686	14,8	4,01	180	15,37	4,22	-1,66	>0,001	0,14
„Tripping someone up”	686	8,76	3,60	180	10,18	4,74	-4,41	>0,001	0,34
„Assertiveness”	686	17,6	3,79	180	19,36	3,67	-5,45	>0,001	0,47

As it can be seen in the Figure 2 in the group of women the correlation between „Go-ahead” and „Tripping someone up” amounted to 0,74 and in the group of men to 0,84 (very strong correlation). The correlation between “Tripping someone up” and “Assertiveness” in women amounted to 0,19 and in men to 0,05 (weak correlation). Whereas the correlation between “Go-ahead” and “Assertiveness” in women amounted to 0,31 and in men to 0,34 (moderate correlation). Thus we can state that in the studied population the correlation between factors was similar, which allows us to ascertain with high probability that the factor structure is the same in men and in women.

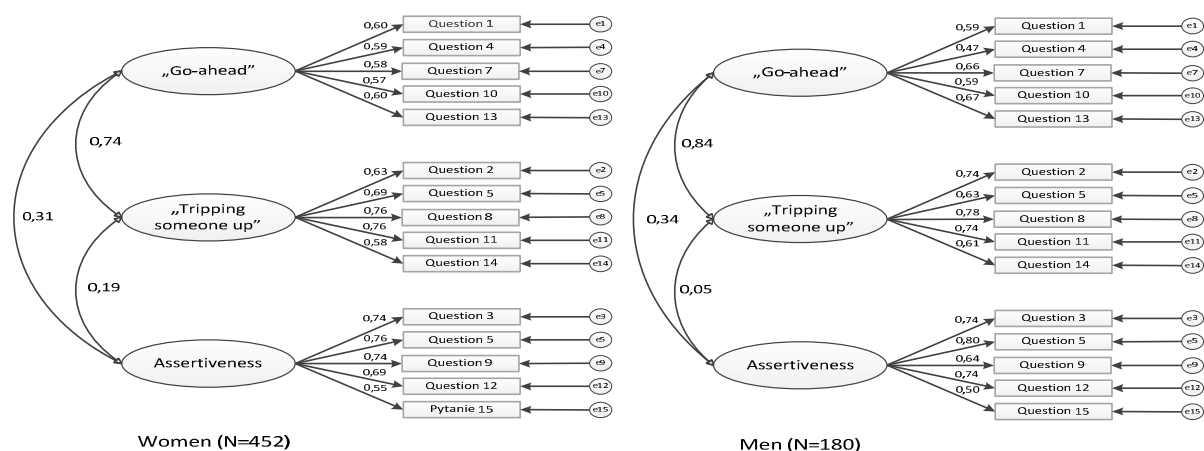


Figure 2 The outcome diagram of the questionnaire structure in the group of women (N=452) and in the group of men (N=180)

The model indices of fit for women (N=452) are: RMSEA=0,056; PCLOSE=0,013; Chi-sq=212,03; $p < 0,001$, GFI=0,937; AGFI=0,915, for men (N=180): RMSEA=0,063; PCLOSE=0,0111; Chi-sq=148,43; $p < 0,001$, GFI=0,889; AGFI=0,848. We can state with high probability that the factor structure in both groups is the same.

Participants

In the study participated 463 sportsmen, divided into three groups. In the first group there were sportsmen practicing non contact sports: athletes, cyclists, swimmers, those doing climbing (84 women, 159 men, *Mage* = 28.0 years, age range: 15–63 years). Second group consisted of football, volleyball and ice hockey players (34 women, 67 men, *Mage* = 28.5 years, age range: 19–58 years). In the third group there were sportsmen practicing combat sports: boxing, judo, kick-boxing, Muay Thai, MMA, climbing (28 women, 91 men, *Mage* = 23.9 years, age range: 15–48 years). The models verification in the three studied groups was carried out by means of path model with latent variables. In the analyses we used statistical software Amos 19 and Statistica 9.0 PL. The Method of Generalized Least Squares was used for the purpose of the analysis. This is the second-popular method and it requires assumption of multidimensional normal distribution.

Statistical analysis

Obtained means and standard deviations of the studied variables are presented in Table 4, which also presents the results of unifactorial variance analysis using Sheffe's method.

Table 4 Variance analysis of the „Go-ahead”, „Tripping someone up” and „Assertiveness” variables

Variable		Individual non contact sports	Combat sports	Team sports	F	p	□
„Go-ahead” (N=248)	M	16,86	18,52	19,85	16,655	$p < 0,001$	0,54
	SD	4,03	3,70	3,22			
„Tripping someone up” (N=101)	M	8,95	11,03	12,92	23,916	$p < 0,001$	0,58
	SD	3,76	4,50	4,22			
„Assertiveness” (N=119)	M	19,08	18,69	18,86	0,445	$p = 0,41$	0,04
	SD	3,69	3,31	3,18			

From the data presented in Table 4 it results that the highest “Go-ahead” level was found in people practicing team sports. Statistically significant differences did not exist only between people practicing team sports and people practicing combat sports. The lowest “Tripping someone up” level was found in people practicing individual non contact sports. Statistically significant differences were found between all studied groups. The “Assertiveness” level did not differentiate between the studied groups.

Fit indices of the three-factor model of aggression in four studied groups are presented in Table 5.

Table 5 Fit indices of the three-factor model of aggression in four studied groups

Model fit indices	chi-square	chi-square/df	p	RMSEA	LO	HI	PCLOSE	GFI	ECVI
Sportsmen	900,75	2,58	<0,001	0,039	0,036	0,042	0,922	0,898	1,129
Non contact sports	131,67	1,51	0,001	0,048	0,030	0,64	0,567	0,922	0,882
Team sports	112,93	1,3	0,032	0,055	0,017	0,081	0,381	0,849	1,790
Combat sports	125,9	1,45	0,004	0,065	0,038	0,089	0,687	0,842	1,810

As it can be seen, all indices show that all four models fit well the data. The RMSEA test for all models did not exceed the critical value of 0,08. It is assumed that if it does not exceed the 0,08 value, it is still admissible. The obtained value of the PCLOSE test, which is called the assessment test of the empirical proximity of the scores matrix to the theoretical model, is higher than 0,05 for all the models. It also proves the models fit well to the data. Next criterion of the model acceptance is the value of chi-square divided by the number of degrees of freedom and it should be less than 2,5, and such a score was obtained in all models. To sum up, it may be concluded that presented goodness of fit tests in all presented models answer positively to the question whether the hypothetically created model may be verified by means of the distributions of scores originated from data matrix.

CONCLUSION

Aggression manifestation in different situations demanding competitive activities, strategies, is a more and more frequently occurring phenomenon. One aggression type will be found in people taking part in warfare, another aggression type will be found while riding a motorcycle at high speeds, and yet another one in sport or in business. Therefore, the structure of a research tool measuring the level of aggressiveness in sportsmen seems to be a reasonable project. The baseline adopted by the Authors of the questionnaire was A.H. Buss's (1961)

aggression understanding as a relatively stable individual's feature. On the basis of the available literature and our own experiences, we assumed that aggressiveness in sport may be defined by three factors: "Go-ahead", "Tripping someone up" and "Assertiveness". The closest to the classical aggression definition is "Tripping someone up", i.e. actions aimed at making it impossible for the rival to reach his or her goal, and by the same to increase the probability of reaching one's own goal. Performed statistical analyses showed that the presented tool is highly promising in studying people engaged in sport activities. Presented here results of own research demonstrated that different sportsmen groups manifest different intensity of aggression operationalized in the form of three factors. Thus, it is possible to recommend the use of this tool in scientific research in sport psychology. It has a certain application value, hence it may also be useful in a broadly understood diagnosing and training of people practicing or intending to practice different sport disciplines.

The Questionnaire may be used in individual and group testing. Individual answers are rated as follows: Absolutely NOT = 1; Rather NOT = 2; Hard to say = 3; Rather YES = 4; Absolutely YES = 5.

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AGRESIVITA PRI ŠPORTE – METÓDA MERANIA

SÚHRN

Agresia je proces a agresivita je znak charakteru. Tento článok zahŕňa komplexné údaje o agresivite v športovom dotazníku, ktorý obsahuje tri stupnice : 1) “napredovať “ teda dlhodobo sledovať cieľ bez ohľadu na to objaviť prekážky 2) “vykopnúť niekoho” – osoba charakterizovaná týmto typom agresivity nemá zábrany, zaujíma sa len o svoj vlastný biznis a považuje za normálne pošliapávať ľuďmi pri dosahovaní ich cieľov, 3) “asertivita” – osoba charakterizovaná týmto typom agresivity je význačná odvážnosťou pri činoch a a prejavovaní názorov napriek vzniknutým potenciálnych negatívnych dôsledkov. Výskumný súbor pozostával zo športovcov praktizujúcich 1) individuálne bezkontaktné športy, 2) bojové športy, 3) kolektívne športy. V tomto článku je prezentovaný obsah agresivity v športovom dotazníku, aplikácia a spôsob výpočtu skóre.

KLÚČOVÉ SLOVÁ: šport, risk, asertivita, napredovať, agresia, agresivita.

IMPACT OF LOAD INTENSITY ON PERFORMANCE OF SLOVAKIA NATIONAL CROSS-COUNTRY SKI TEAM MEMBER

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SUMMARY

In our work we used testing method during the training preparation of Cross-Country skiing athlete, and we obtained back the results, which extended not only our theoretical overview, but also a practical basis of the issue of fitness in Cross-Country skiing elite athletes and national team members. After summing up all collected data from the tests executed after completion of four-weeks long training mesocycles using "controlled" philosophy of training, for each tested discipline we have determined the time value which was expressed in %, or in positive or negative numbers. The same evaluation was executed during data summary for "uncontrolled" training philosophy. Then we compared the obtained data of both, "controlled" and "uncontrolled" training philosophy. By this data comparison, we found out that for studied athlete we can consider a positive response to the training load when using the methodology - philosophy of "controlled" training. Based on our findings, we can recommend to the studied athlete to implement a training process in accordance with the "controlled" philosophy of training for the growth of his performance.

KEY WORDS: cross-country skiing, training process, mesocycle, load intensity, exercise, workout philosophy.

INTRODUCTION

Cross-Country skiing can be considered power-endurance discipline if its own specialization targets mostly shorter distances, sprints and relays. In the Cross-Country skiing, as we focus on the long distances (Skiathlon, 50 km ...) we mostly talk about a power-endurance discipline. For Cross-Country skiing is typical, that from all of the endurance sportsmen, these athletes for extended period of time show most impressive results in testing

proficiency. Of course, there is no doubt that the ability of all elite endurance athletes is excellent, but Cross-Country skiers are reign over them. For very long time the Cross-country skiing had been at the forefront of training methodology, and the Cross-Country skiers naturally use the heart rate monitor (Besson, Connolly, 2011). Under current conditions, where there is scant base of young athletes, no professional sport can afford to use inappropriate ways or methods. Scientific progress comes to the forefront, as it is used in connection with latest technological advances. Of course we can't forget to focus on athlete's inner feelings, where the particular individual approach is preferred. Basic assumption for the achievement of the personal goals is the proper training load (Neumann, Pfützner, Hottenrott, 2005).

After the development of instruments for measuring heart rate in Scandinavia, Cross-Country skiers started to use this method during each training session. To the forefront came such a training philosophy, where the athlete watches his heart rate with the goal not to exceed the specified intensity zone. Is this rising trend helping hand to any athlete, or is a return to the past with the focus on one's own feelings without the intervention of modern technology still the key to the success? By focusing on the impact of training load intensity in six mesocycles of sports preparation by Slovakia Cross-Country skiing national team member, we would like to uncover the facts affecting his/her actual performance. Thereby we would help the athlete, experts, trainers but also the general public to better navigate in this area of training process.

PROBLEM

Nowadays it is necessary to look for such training techniques and methods that can positively affect growth and level of athlete's performance. In the elite category it is primarily about small details and changes, which play an increasingly important role. The factors which substantially affect the performance in cross-country skiing include physiological functions of the body. By the influence of intensity and endurance training load with the increase in the performance level, the functions of individual body organs are economized, what brings positive changes to the body cells. Not only in Cross-Country skiing we can, nowadays, talk about quantities of training theories. Their advocates present different approaches of handling load intensity and volume of training. We will focus on two conflicting training philosophies, or approaches. The first approach is called philosophy of "control" training, which is used in common practice for the training of Norwegian skiers, and weekly training cycle comprises of two units of heavy interval training and the remainder of the volume endurance training is

performed at low intensity. Volume can be quite high, depending on athlete training level (Seiler, 2002). The main focus is on controlling the intensity of the implementation of training, using heart rate monitor to measure and record heart rate. During the training workouts focused on volume, the athlete watches their effort and hinders the intensity. His efforts should be aimed at not entering the intensity zone R2 (75% - 85% of SF max.) and keeping underneath it. If an athlete enters the R2 zone during the training session, than he has to reduce the intensity and tempo, in order to remain below 75% of his maximum heart rate. Such training theory is supported by Divald (2009), who recommends to skip mentioned range of 75% - 85% of maximum heart rate during the practice, and only pass through it to the higher intensities. Benson and Connolly (2011) consider precise monitoring of the heart rate is one of the most comfortable and most effective approaches of training. Malák, Nemec (2012) concluded that the load intensity zone R2 in the range 75% - 85% of maximum heart rate, used during the training load, most likely affects the performance of an athlete - a cross country skier. Our second approach is a philosophy of "uncontrolled" training, which was used in general practice before launching the heart rate monitoring method, and still is used nowadays. The goal of this philosophy is a weekly training cycle, which consists of two units of heavy interval training, and the remainder of the endurance training volume is conducted at the level of intensity that the athlete does not control. The volume can also be quite high. With volume training, the athlete doesn't have to watch his actual effort, and does not hold back. Upon entering the load intensity zone R2 during the training, athlete doesn't decrease his intensity and tempo. Soumar (2001) is inclined to believe that from functionality stand point of view this intensity zone has a significant effect. Also for development, Hottenrott (2007) recommends the training focused just on the intensity zone R2. With an increase of athletic performance in cross-country skiing, depending on the training equipment, dealt Honzlová (2007). Based on intra-individual monitoring of two selected national team members, she compared actual training load with planned one and the effect of use of training equipment on achieved results. She states that in the cycle from 1988/89 to 1992 Winter Olympics in Albertville there was a year-round collective training of entire national team, which, in a healthy rivalry between members of the team, caused intensification of training process leading to better results. As we already mentioned, several authors Besson (2011), Divald (2009), Seiller (2002), Honzlová (2007), Soumar (2001), have different opinion about intensification of the training. We believe that if we want to have more effective individual approach to athletes in Slovak Cross-Country national team and qualitatively progress forth, for each athlete it is necessary to look for such training philosophy which would best suit

his/her needs, and significantly could point out at the positive and effective influence of sports performance via innovative approaches.

AIM

In this paper we focus on finding the impact of load intensity during the six mesocycles of training on performance of Slovakia Cross-Country skiing national team member. The source data are mainly obtained from heart rate monitor Polar S610 and Polar Precision Performance program, which we will use for monitoring of the intensity zone R2 in the range of 75% to 85% of maximum heart rate. Using a special testing battery for Cross-Country skiing, after each mesocycle we will evaluate the results from the test battery, and compare them to each other. Then we will try to find the correlation between the results obtained using the "controlled" training philosophy versus "uncontrolled" training philosophy. Based on this research, we will try to point out, which training philosophy and practice positively or negatively affects the performance of an researched athlete. We will use these results and findings in the planning and implementation in future training cycles and yearly training plan of this athlete.

TASKS

Find out the effects of load intensity on performance after completing mesocycle using "controlled" philosophy of training of Slovakia national team member in cross country skiing.
Find out the effects of load intensity on performance after completing mesocycle using "uncontrolled" philosophy of training of Slovakia national team member in cross country skiing.

Comparison of the results obtained from the testing battery and implementation of the training philosophy.

Draw the logical conclusions and findings from the comparison of the results from the various tests.

METHODOLOGY

The object of our investigation was the Slovakia Cross-Country skiing national team member, name M. K., age 21. Due to his performance he was included in the Slovakia National Team U23 in the season 2012/2013. On the international level he attended FIS Continental Cup, World Championships, Junior World Championships Under 23 and World Championships. Testing method will be used as a basic method of data collection. To the

standardized tests for Cross-Country skiing, which are: uphill running and double pooling on roller skis for freestyle, we added the sprint on roller skis using freestyle technique, which is a perfect indicator of a special performance in cross country skiing.

Table 1 Scheme of a sequence and alternating of each training philosophy

<i>Name</i>	<i>Test 1.</i>	<i>Test 2.</i>	<i>Test 3.</i>	<i>Test 4.</i>	<i>Test 5.</i>	<i>Test 6.</i>
M.K.	<i>Input</i>	CONTROL	NO CONTROL	CONTROL	NO CONTROL	CONTROL

We have obtained data of the training load intensity from measuring of the heart rate using Polar S610 device with accessories. During the evaluation process of collected data, we have used Polar Infrared Interface machine, Windows 7 computer and software Polar Precision Performance to evaluate the load intensity indicators. Then we proceeded using statistical methods, qualitative logic methods (analysis, synthesis, induction, deduction) and comparative methods. Subsequently we recorded achieved times in testing batteries and then evaluated them. We executed the testing as follows:

10.06.2012, input testing, where our observed athlete used common training preparation, 08.07.2013, where he passed training preparation in "controlled" philosophy of training, 05.08.2012, where he passed training preparation in "uncontrolled" philosophy of training, 09.02.2013, where he passed training preparation in "controlled" philosophy of training, 30.09.2013, where he passed training preparation in "uncontrolled" philosophy of training, 25.10.2013, where he passed training preparation in "controlled" philosophy of training.

In conclusion we have used mathematical and statistical methods focused mainly on the comparison and evaluation of the results summary obtained from testing using "controlled" philosophy and from testing using "uncontrolled" training philosophy. After that we compared the findings and drew the logical conclusions.

RESULTS

Using recording of the results and achieved times from the testing batteries we then obtain summary times, which reflect either the performance improvement in the positive numbers, or degradation of performance in the negative numbers. We checked the required intensification of training philosophy. The training was evaluated on heart rate monitor Polar S610 and by using a computer program Polar Precision Performance.

The first input testing was executed already during sports training at yearly training center (Table 2). After four weeks of training focused on "controlled" philosophy of training, output testing was performed. After output testing the athlete focused on "uncontrolled" philosophy training for the next four weeks, followed by re-testing. We continued this process until six tests were performed (Table 1). Objectivity and validity of our testing was secured thanks to unchanging program in the last week before testing, what warranted that the test results were not affected by overload from the previous training session. Using statistical methods, we obtained data from the testing battery in % showing improvement or deterioration in time results.

Table 2 Results times after each testing period

Discipline	Rollerski sprint F		Double pooling		Uphill running	
Date	10.6.2012	8.7.2012	5.8.2012	2.9.2012	30.9.2012	25.10.2012
	input	output	input	output	input	output
Control	3,27	3,16	4,40	4,29	18,34	19,00
NO control	3,16	3,26	4,29	4,21	19,00	19,10
Control	3,26	3,22	4,21	4,19	19,10	18,40
NO control	3,22	3,25	4,19	4,37	18,40	19,38
Control	3,25	3,19	4,37	4,33	19,38	19,00

*The times are shown in minutes and seconds.

Total %:	Total time:	
10,182587	21	control
-6,587189	-13	no control

Figure 1 TEST: Roller ski sprint Freestyle technique:

When we examine the results obtained using the mathematical statistical methods in the roller skiing sprint freestyle technique test, then in the summarization of "controlled" training philosophy versus "uncontrolled", we can claim that during the "controlled" training plan the overall time was improved by 21 seconds, what represents a 10,18% performance improvement. With an "uncontrolled" plan and "uncontrolled" philosophy of training we recorded 13 seconds deterioration, what represents performance degradation of 6,58% (Figure 1).

Total %:	Total time:	
6,1388983	17	control
-3,9758293	-10	no control

Figure 2 TEST: Double pooling (freestyle technique equipment):

When we examine the results obtained using the mathematical statistical methods in the double pooling on roller skis freestyle technique test, then in the summarization of "controlled" training philosophy versus "uncontrolled", we can claim that during the "controlled" training plan the overall time was improved by 17 seconds, what represents a 6,13% improvement in performance. With an "uncontrolled" plan and "uncontrolled" philosophy of training we've recorded 10 seconds deterioration, what represents a performance degradation of 3,97% (Figure 2).

Total %:	Total time:	
3,5005703	42	control
-6,0557644	-68	no control

Figure 3 TEST: Athletic running uphill

When we examine the results obtained using the mathematical statistical methods in the athletic running uphill test, so then in the summarization of "controlled" training philosophy versus "uncontrolled", we can claim that during the "controlled" training plan, the overall time was improved by 42 seconds, what represents a 3,50% performance improvement. With an "uncontrolled" plan and "uncontrolled" philosophy of training we've recorded 1 minute and eight seconds deterioration, what represents a performance degradation of 6,05% (Figure 3).

CONCLUSION

In our work we focus on the detection and monitoring of the impact of the load intensity on performance of Slovakia Cross-Country national team member. Evaluation and subsequent analysis of load intensity was executed during the preparation period of six mesocycles. Then we've turned our attention to verification process of the impact of two different training philosophies on researched athlete's performance, and tried to figure out which training philosophy will bring him better results in the testing batteries, what can have a positive feedback at the increase of his athletic performance. Based on our findings now we can claim that our results support training theory of "controlled" philosophy of training, what approved

the findings and opinions of such authors as Benson (2011), Connolly (2011), Seiler (2002) and Divald (2009). We also confirmed the findings claimed by Malák, Nemec (2012), that with the time increase percentage of the load time spent in R2 zone, also number of FIS points increased, what represented a decrease in an athlete's performance.

As the most significant finding we consider the fact that in the evaluation of the data obtained from the test and ratio of the load intensity test during studied mesocycles of the athletic training, significant positive changes were recorded in all disciplines due to the implementation of "controlled" training philosophy. This finding clearly determined the correct training orientation of our Slovakia Cross-Country national team member. On the other hand, due to our examination we found out certain negative correlation while applying "uncontrolled" training philosophy. Based on our findings, we can afford to claim that we were able to prove the direct impact of intensity on the actual performance of Slovakia Cross-Country skiing national team member. We recommend to use our findings in the subsequent preparation and implementation of training process and planning cycles and yearly training plan for a Slovakia Cross-Country skiing national team member, and to try to incorporate them into the training process of other elite athletes. At the same time we want to draw attention to the fact that our findings are not fully objective, as it would be necessary to perform a number of other analyses and studies, and because the tests have been conducted on one athlete only, they might be marked with certain subjectivism and individual response of the organism to the training load.

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VPLYV INTENZITY ZAŤAŽENIA NA VÝKONNOSŤ U REPREZENTANTA SLOVENSKA V BEHU NA LYŽIACH

SÚHRN

V našom príspevku sme sa metódou testovania v prípravnom období lyžiara bežca dopracovali k výsledkom, ktoré nám rozšírili nielen teoretický nadhľad, ale aj praktický základ v problematike trénovanosti v behu na lyžiach u vrcholového športovca a reprezentanta SR v behu na lyžiach. Pri sumarizácii všetkých zaznamenaných údajov počas testovaní realizovaných po absolvovaní štvortýždňových tréningových mezocyklov s „kontrolovanou“ filozofiou tréningu sme pri každej testovanej disciplíne určili časovú hodnotu vyjadrenú v % alebo v kladných, prípadne záporných číslach. Tieto isté vyhodnotenia sme realizovali aj pri sumarizácii údajov pri „nekontrolovanej“ filozofii tréningu. Následne sme komparovali získané údaje medzi „kontrolovanou“ a „nekontrolovanou“ filozofiou tréningu. Touto komparáciou sme zistili, že u sledovaného reprezentanta môžeme uvažovať o pozitívnom vzťahu odozvy tréningového zaťaženia pri využívaní metodiky – filozofie „kontrolovaného“ tréningu. Na základe našich zistení môžeme konštatovať, že pre sledovaného probanda odporúčame viesť a realizovať tréningový proces v súlade s „kontrolovanou“ filozofiou tréningu pre rast jeho výkonnosti.

KLÚČOVÉ SLOVÁ: beh na lyžiach, tréningový proces, mezocyklus, intenzita zaťaženia, výkon, filozofia tréningu.

TEACHER OF PHYSICAL AND SPORT EDUCATION AS AN ELEMENT OF USE OF SNOWBOARDING IN TEACHING AT SCHOOL

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SUMMARY

This theme deals with snowboarding as such, its usage at secondary schools and with attitudes of physical education and sport's teachers. The aim of the study was to find out the conditions of snowboarding teaching at secondary schools, attitudes and interest of teachers in this winter sport. The study was realized at secondary schools in Lučenec, Poltár and Veľký Krtíš Districts. The research sample was made by teachers of physical and sport education. 32 teachers participated in the study. We chose an anonymous questionnaire as the main research method. There were open questions and multiple choices in questionnaire.

KEY WORDS: teacher, snowboarding, school.

INTRODUCTION

Physical education is highly visible part of pedagogy and education. Curriculum approved by Ministry of education of the Slovak republic on 3rd April 1997 by decision number 1640/1997 – 151 effective from 1. September 1997, characterizes the physical education as compulsory subject, which is focused on physical, functional and movement improvement of children and youth. New law ISCED 2008 allows teaching of snowboarding within ski courses.

It contributes to better health; it increases physical stamina, fitness and movement efficiency. It offers basic theoretical and practical sporting education in physical education and sport. It also helps to eliminate defects of students, who are physically enfeebled. It fulfils the compensating and motivational function and forms positive and active attitude to movement activity, physical education and sport. It contributes to intellectual, mental, social and moral development of student's personality (Sailerová, 1996).

Beťák (2012) and Michal (2010) say that snowboarding is part of physical education within ski courses. It positively influences fitness, strengthening of muscles and development of condition. It fulfils the same aims as physical education and tries to achieve regular development of individual, who has to react quickly and correctly. That is how he joins the process from the physical and mental point of view. Here comes the parallel connection of snowboarding and physical education's aims.

AIM

Snowboarding became popular among winter sports few years ago. It all started abroad and the Slovak republic was not the exception. The attractive and stylish sport has many supporters of all age groups. The snowboarding course is applied into ski courses at our schools, because many young people want to improve themselves in what they like and in what they are interested in, whether it is ski or snowboard.

The aim of the study was to find out the conditions of snowboarding teaching at secondary schools, attitudes and interest of teachers in this winter sport.

METHODOLOGY

The study was realized at secondary schools in Lučenec, Poltár and Veľký Krtíš Districts. The research sample was made by teachers of physical and sport education. 32 teachers participated in the study; they were divided into groups according to gender. The whole consisted of 43,75% of women and 56,25% of men respondents.

We chose an anonymous questionnaire as the main research method. There were open questions and multiple choices in questionnaire. The questionnaire was composed of 20 questions.

RESULTS

We reached interesting information after evaluation. 43,75% of respondents have very good attitude to snowboarding; 18,75% has only good attitude to snowboarding and 37,5% of respondents prefer skiing (Table 1). These answers showed that although the snowboarding is very popular, there are more younger people than older ones who do this sport. The fact, that the age of respondents was between 24 – 50 years, claims this situation. However, we can notice that teachers have positive attitude to this sport and they do it in their free time.

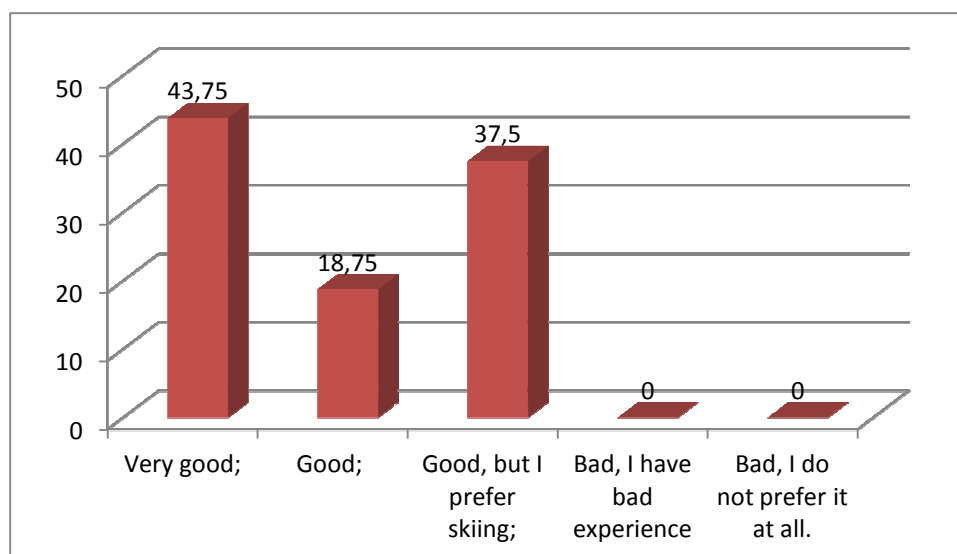


Table 1 What is your attitude to snowboarding?

In the next phase we wanted to find out, where the teachers learned to snowboard. It resulted from our study that 31,25% of respondents have the qualification of snowboarding instructor, 21,88% learned to snowboard at universities and the same number refers to teachers taught by friends right on the slope and 25% learned to snowboard by themselves (Table 2). This study showed that respondents prefer private instructor, which is obvious, because every instructor gives you individual attention longer, he helps and controls you. It is more effective than learning by yourself, when nobody advises you and you do not know what mistakes you do and so your progress is not so fast.

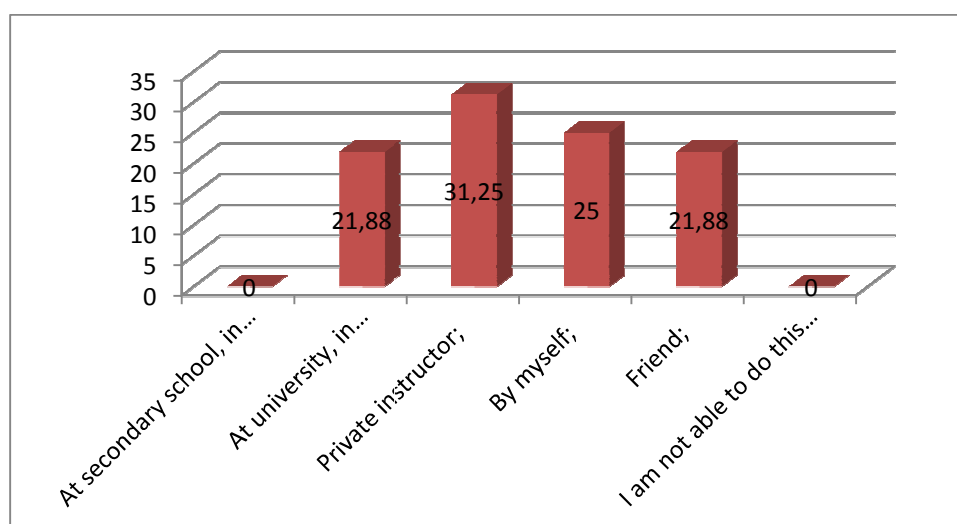


Table 2 Where did you learn to snowboard?

The next part is composed of those who learned to snowboard at universities which has its pros and cons. Students are able to help themselves but there is small number of teachers

and individual work with students can take so long time as with private instructor. Certain part is made by teachers who were taught by friends. It can have a positive impact on the whole education but only in the case if they are experienced and mainly patient.

In the next question we asked how often the respondents take part winter ski and snowboard courses. The answers showed it is 3 times in a season which is 65,62%. 34,38% of respondents take part in the course twice in a season (Table 3).

We found out that most of respondents take part the course 3 times in season in a school year. Students are divided into three groups, so they had enough time to practice. Some schools prefer the courses twice a year and it indicates the number of students at schools.

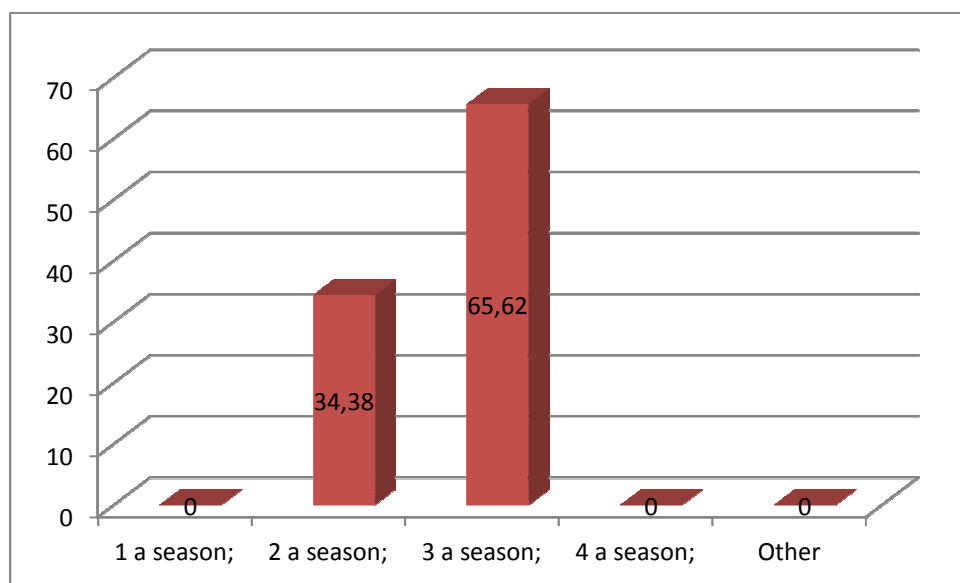


Table 3 How often do you take part in winter ski and snowboard courses?

When we asked what form of the course do teacher prefer, we found out that 71,88% of teacher prefer long stay form, but there are also teachers who prefer commuting and that is 15,63%. 12,5% prefer long-lasting stay form which is more convenient than commuting (Table 4). The stays regularly takes 4-5 days, in most cases they stay in hotel or pension that is close to the slope. It happens in many cases, that hotels or pensions have different special offers on ski passes in convenient prices. In some cases long-lasting stays are preferred, which are financially demanding. Not all schools can afford it but they are more effective because practice takes longer time and students can learn more.

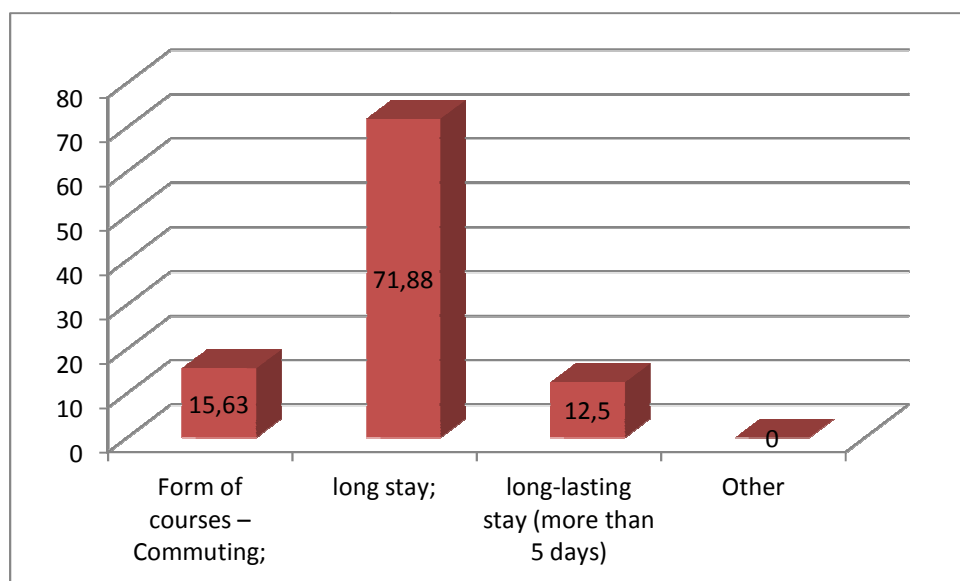


Table 4 What form of courses do you prefer?

In the study we found out, what time we need to master the snowboarding. According to 46,88% of respondent teachers think that one week is enough. 34,38% of teachers believe that at least one month is needed. 18,75% of teachers suggest to train the whole season (Table 5). In the study we found out that most of respondents believe that one week is enough to master the snowboarding skills. One week is enough only if you devote yourself just to this sport and you spent at least three hours at the slope. It happens in some cases that students need the whole season to master these skills. It depends on an individual, if he is patient and if he has possibilities to do this sport more often.

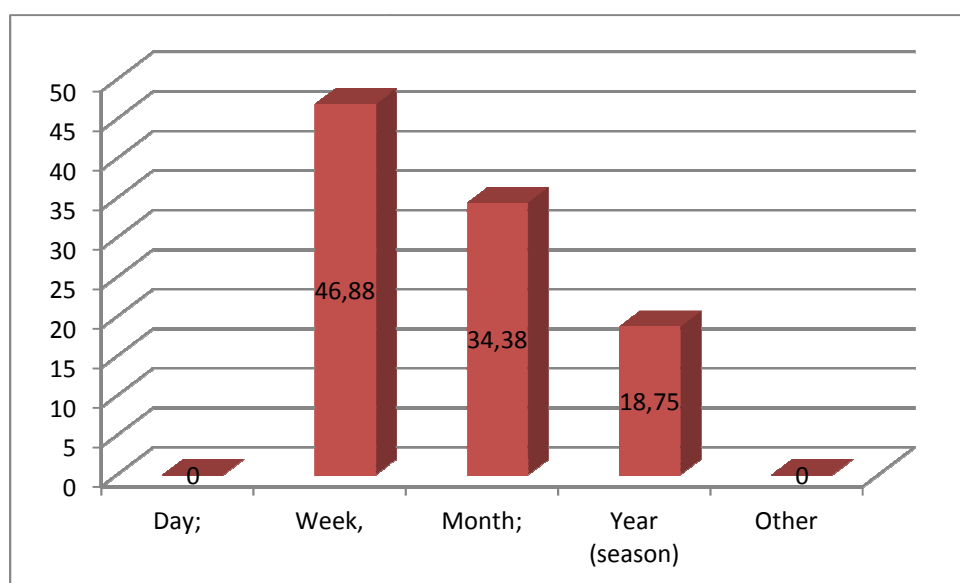


Table 5 What time do we need to master the snowboarding skills?

CONCLUSION

The aim of the study was to find out, if this sport had positive response and interest of students and teachers after introducing the snowboarding into ISCED 2008 in curriculum of ski education courses. The aim was to find out, how it developed further, how much time teachers devote to this sport and what attitudes they have after years of finished courses.

However, not all schools allow courses to teachers of physical education and sport in which they can improve their technique, master the latest news and to broaden the range of their knowledge in this sport. These courses help the teacher to motivate their students and to give them their knowledge and spread interesting things and beauties of this sport.

Snowboarding became very popular not only in abroad in the last few years but also in our slopes. Many young people prefer snowboarding to skiing because it is faster, more comfortable and also for its style. Snowboarding is not just about the jump at the board, it is also about clothes or fashion. In some centres there are actions that present different brands of boards, binding and clothes. Mainly young people are attracted by many extreme competitions. All these aspects predetermine bigger interest than by now and we believe that in following years it will lead to improvement and snowboarding will become domain of others who have not tried it by now.

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UČITEĽ TELESNEJ A ŠPORTOVEJ VÝCHOVY AKO ČINITEL APLIKÁCIE SNOWBOARDINGU DO VYUČOVANIA NA ŠKOLÁCH

SÚHRN

Táto téma sa zaoberá snowboardingom ako takým, jeho využitím na stredných školách a postojmi učiteľov telesnej výchovy a športu. Cieľom výskumu bolo zistiť stav vyučovania snowboardingu na stredných školách, postoje a záujem učiteľov k tomuto zimnému športu.

Výskum sa uskutočnil na stredných školách v okresoch Lučenec, Poltár a Veľký Krtíš. Výskumnú vzorku tvorili učitelia telesnej a športovej výchovy. Na tomto výskume sa podieľalo 32 učiteľov telesnej výchovy a športu. Hlavnou výskumnou metódou sme zvolili anonymný dotazník. Dotazník obsahoval otvorené a uzavreté otázky

KLÚČOVÉ SLOVÁ: učiteľ, snowbording, škola.

CORRUPTION IN FOOTBALL

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SUMMARY

In this paper, the author deals with the theoretical basis of corruption in football. Characterizes the basic types and points to the public Reports relating to corruption in football. Presents more information about the respondents' opinions and involved in the negative area. The results point to the fact that there is corruption in football, whereas only 80% of 228 respondents said that corruption exists in the contest and for the most outstanding "implementers" (80%) identified referees. Measures to change this situation, in particular, can and should be implemented through a management body that is through the Slovak Football Association

KEY WORDS: football, corruption, reports, people's opinions, actions.

INTRODUCTION

From time to time the media in Slovakia, Czech Republic or elsewhere in the world inform us about smaller or bigger cases of corruption and bribery in sports. This topic is often quite taboo but many people believe that corruption has already become a natural part of sports events. It can be considered according to the terms of criminal law, i.e. providing evidence, detecting and documenting the crimes of corruption, as well as according to the impact of corruption on the performance of players, coaches, referees which subsequently reflects the entire cycle of sports events.

ISSUES

Our society is getting used to the fact that giving bribes is considered a routine, something common. In fact, we have turned the corruption into a kind of national tradition. What is the corruption and what are the forms of it? The best known forms of corruption are bribes, facilitation payments, bonuses, cronyism (favouritism shown to friends), nepotism

(favouritism shown to family members), petty corruption, kickbacks, illegal lobbying, tunnelling (financial frauds), “envelope” and gifts.

There are many definitions of corruption, the simplest of which implies that it is an abuse of power over someone else’s property, trusts, or rights in order to obtain personal, private advantages not only for oneself but also for relatives and friends (<http://sk.wikipedia.org/wiki/Korupcia>). Since corruption is illegal, the sentence follows if it is proven in court. The lower level of corruption is a bribe. Gifts vs. bribe: bribe is an undue advantage usually quantifiable in money. Although even small amount of money can be considered a bribe, there is no need to worry that small gifts would cause any problem. It is not difficult to distinguish a bribe from an altruistic gift for relatives and friends. The distinction of the boundaries between a gift and a bribe “outside the realm” of gift-giving among loved ones is much harder (<http://www.uvzsr.sk/docs/info/korupcia/Korupcia.pdf>).

Corruption is a wider concept than bribery. It involves the crimes of receiving a bribe, bribing, indirect bribery and also the abuse of authority and functions. It can also comprise any behaviour of individuals and towards the individuals who are entrusted with powers in the public or private sector, which contradicts the obligations arising from their status and heads towards obtaining an undue advantage. The result of such behaviour is the “satisfaction” with providing an undue advantage on one hand and the abuse of public interests and the public itself, i.e. “dissatisfaction” of others, on the other. Somewhere in the middle there is an envelope with the appropriate sum of money, vacation, car or any other advantage. Behaviour of the supply side (the one that gives a bribe) as well as the demand side (the one that receives a bribe) is illegal and therefore is punishable by criminal law. Under the criminal law (www.zbierka.sk/sk/predpisy/300-2005-z-z.p-8708.pdf), an individual accused of crime of receiving a bribe and undue advantage may be sentenced to 2 – 12 years (sections 328 to 332 of the Penal Code). This also applies to the crime of bribery (sections 332 to 335 of the Penal Code) which involves any action that implies that the offender wants to give or has already given a bribe. One must not forget that not only giving but also offering a bribe as well as using an intermediary to give a bribe are illegal. We would also like to mention the crime of indirect bribery (section 336 of the Penal Code), according to which an individual who offers a bribe by abusing his/her power over a competent person or receives and asks for a bribe is held criminally liable. Within the meaning of the applicable legislation, an individual is held criminally liable if s/he learns from credible sources about committing any of the crimes of corruption and does not inform the law enforcement authorities (section 340 of the Penal Code) or does not take measures to thwart this crime (section 341 of the Penal Code).

Why football? The most famous game in the world has gone through many changes over the past twenty years. Today it represents a world with billions of euro revolving around. The interest of fans often narrows down to the best players, which encourages the youth around the world to follow the biggest football stars. Football = commercialization = business = betting = corruption and match fixing. It is not only the number of goals but also the money that matters in professional football. According to several players, coaches, owners of clubs and football associations, the power of money and the lack of clear rules threaten the future of football in Europe. Huge amounts of money revolve around betting in which corruption is becoming more and more common.

AIM AND METHODOLOGY

In this paper we will analyze the issue of corruption in football by focusing on the case analysis of available information about this topic. The main aim is to summarize available information about corruption in Slovak football based on the study of literary sources and the logical methods leading to conclusions.

RESULTS

In the following section, there is a list of the “best known” cases of corruption in Czech and Slovak football which are interconnected mostly by the final verdict.

10 June 2004 – The Police of the Czech Republic confirmed the investigation of a corruption scandal involving three matches of Gambrinus liga (Czech professional football league) played by 1. FC Synot Staré Město. Eavesdropping on telephone conversations showed that numerous matches in the 2003/2004 season were fixed. Gradually, 14 referees, 5 football clubs and 8 managers were found to be involved in the case. **26 January 2006** – all the referees and officials accused in the corruption scandal of the former Synot club were penalized by the Kroměřížský Court from 50,000 CZK (1,947 EUR) up to 300,000 CZK (11,680 EUR). Igor Štefanko (Slovak) and three other referees, namely Josef Dvořáček, Petr Řehoř and Eduard Cichý (Slovak) were all suspended for three years.

22 October 2006 – Board of appeal at the Regional Court in Ostrava found Ľubomír Puček, the manager of SK Slávia Praha, guilty of corruption from the time he had been engaged as a football referee which was three years before the Dukla Banská Bystrica – FK Matador Púchov match. According to the evidence, Puček offered another referee, Vodička, 70 litres (15 gallons) of fine Czech wine before the match.

6 March 2007 – a senior officer of Slovak Football Association, Vladimir Wänke, was detained in Bratislava by The Anti-Corruption Office of the Police Force right after receiving a bribe. The detainee committed a crime by receiving a bribe of 10,000 CZK (389 EUR) for arranging the registration of a foreign player. At that time, Wänke occupied the posts of the president of the League Commission, sporting director and general secretary of the Slovak Football Association. On **7 April 2009** the Special Court in Pezinok sentenced him for three years and four months in prison and he was imposed a financial penalty of 2,000 EUR. On **28 March 2013** he was conditionally released on two-year probation by the District Court in Trnava.

5 March 2008 – Three football club officials gave a referee 50,000 SK (1,666 EUR) in cash for fixing the second-class matches (adults) during the championship in Dunajská Streda district. The Anti-Corruption Office investigator accused Ján K., Atila S. and József K. of the crime of bribery and another person of the crime of receiving a bribe. **14 May 2010** – József Kvard, the former member of the Parliament for the Party of Hungarian Coalition and the mayor of a small town Čenkovce as well as other defendants were acquitted by Special Court in Pezinok.

In an interview with Tiborom Gašpar, the current President of the Police Force (http://www.pluska.sk/sport/futbal/sef-policie-temu-korupcia-vo-futbale-problemom-je-neochota-verejnosti-spolupracovat.html?forward=sk_mobil_clanok.jsp) he answered to the following questions:

How many cases of corruption in sports have the police investigated over the last 10 years? 26 corruption cases in sports have been investigated in the given period. *And how many people have been indicted?* 18 people have been indicted in the cases mentioned before. *What is the hardest part of proving and revealing the corruption in sports?* The biggest problem with the documentation of corrupt activities still appears to be the unwillingness of public to cooperate with the police and judicial authorities. From the police's point of view, the hardest part of proving the corruption is providing such evidence that it could be used in the criminal procedure.

In a survey carried out by the magazine Plus JEDEN DEŇ, 7 representatives of the football clubs of highest divisions provided answers to the question “Have you ever come across the corruption in football?” (http://www.pluska.sk/sport/futbal/korupcia.html?forward=sk_mobilclanok.jsp 1689). 5 of them answered NO and 2 of them answered YES, but not personally.

A survey carried out in March 2008 (number of respondents = 1,010) by TNS SK agency (http://www.tns-global.sk/docs/TS0717_futbal.pdf) showed that 75.1% of the respondents heard about the corruption scandals. Only 1/5 of the Slovak population was not aware of any corruption scandals (20.8%) and 4.1% of the respondents could not comment this question. Corruption in football was recorded particularly by men, university graduates and respondents aged 40 up to 49 years. The results further indicate that the greatest proportion of the Slovak population believes that corruption generally takes place in football. 82.0% of the respondents are of that opinion. Less than 4/5 of the Slovaks believe that corruption in football has an impact on the performance of referees as well as on the activities of officials. People also think that corruption affects the performance of players and the activities of coaches.

The following answers include the opinions of the respondents (%) on the corruption in football:

- 17.5%** it is rather unique
- 41.0%** it takes place in our village or town
- 62.5%** it relates to the activities of coaches
- 64.9%** it affects the performance of players
- 77.1%** it relates to the activities of officers
- 78.9%** it affects the performance of referees
- 82.0%** it generally takes place

The public opinion of the vast majority of people about corruption in football is negative. People also think that it adversely affects the performance of referees and the activities of officials. Approximately, only 1/3 of Slovaks goes to football matches and 94% of them are aware of the corruption scandals. 2/5 of the respondents think that corruption in football also takes place in their village or town, which we find very disturbing. In a public survey carried out by INEKO.SK (http://www.ineko.sk/files/projekt_futbal_grafy_d.pdf), 228 Slovak football representatives were asked whether they think that corruption takes place in the major competition. Only 6% of the provided answers were “no”, 43% of the respondents think that corruption takes place only “once in a while” and 37% of them answered “on regular basis”. Remaining 14% chose the answer “do not know”. The second question was “If corruption does take place in the major competition, who is mostly involved?” From the same number of respondents, 82% answered “referees”, 10% of the respondents think “players” are

corrupt and only 5% of them chose the option “officials”. The answers to the question “Have you personally come across any kind of corruption?” were found the most significant since up to 46% of the respondents said “yes”, 35% stated that they have heard of it and only 19% of the respondents answered “no”.

Corruption in sports, especially in football, is not a distinctive feature of Slovaks only. Corruption scandals were recorded in Italian, Czech, German, Brazilian, Chinese, Belgian, Portuguese, Bulgarian, Greek, Polish, Finnish, Danish, Kenyan, South African and Israeli football. It is obvious that corruption takes place in various forms basically in all the countries where football is played. An increasing number of corruption cases in football in several countries also concerns the International Federation of Association Football (FIFA) which included the fight against corruption among its main priorities. According to FIFA, the main reasons for bribery, match fixing and other forms of corruption are the multiple club ownership by a single person, political interference in football, disrespecting of the existing hierarchy and expansion of sports betting. The organization Play the Game and Transparency International (<http://www.playthegame.org/news/detailed/new-report-from-transparency-international-calls-for-innovative-reforms-in-fifa-5213.html>) came up with 9 possible anti-corruption measures in football. The stakeholders should:

1. demonstrate a strong commitment to the fight against corruption within the organization, improve the standards of integrity and transparency,
2. promote zero tolerance of any form of corruption,
3. publicly speak out against corruption,
4. hold liable those who abuse their power (not just in a criminal way) for a private benefit,
5. ensure that the corrupt practices will not develop in relation to the sponsors,
6. increase awareness of corruption and its effects among officials, members of the sports clubs, coaches, players and sponsors through publication and trainings,
7. adopt and comply with appropriate codes of ethics which include a strict anti-corruption policy (e.g. support for whistleblowers, independent inspection body, independent monitoring system),
8. cooperate with government authorities to support national and international efforts to reduce corruption,
9. develop a better system of monitoring the officials and delegates of football associations.

CONCLUSION

The current state of Slovak football cannot be ignored. Football is played for the viewers. However, they do not show any interest in it. Officials, club representatives, players and other stakeholders all agree on the negative aspects which discourage the viewers – poor state of stadiums, under-financed clubs, lack of media coverage and others. The debate still does not go beyond what should be done and what others should do about the current state. The corruption scandals mentioned above as well as the answers provided by the respondents point out to the fact that the situation has not changed yet. The scandals represent a negative experience for the society. Nevertheless, what is worse is that if corruption takes place, citizens are not willing to make a difference. Who can change this situation? The answer is the main representatives of the Slovak Football Association. According to the previous experience, however, when making the cardinal decisions they still need to feel pressure from the media, viewers and sponsors. In this sense, something has to be done.

Our findings are both striking and alarming since in a survey carried out by TNS SK, the corruption was listed as the fourth most common problem in football, the other ones concerning officers, referees, players, transportation, discipline and coaches. Even though the corruption is highly latent, it is an issue almost as serious as the problems of coaches and training processes. Therefore, we can say that these problems have almost the same negative impact on the quality and success of football clubs as the corruption itself.

We believe that if there is a strong determination by the Slovak Football Association, its officials would find the means to fight corruption in football. The media, viewers and sponsors can help to gain this determination. We assume that the issue of corruption have to be dealt with comprehensively at society-wide level. It is impossible to prefer the repressive measures before preventive ones, or vice versa, since both represent the effective ways to fight corruption. It is also impossible to focus only on certain areas of social life since there is no way to measure the occurrence of corruption. We can only estimate it. In addition to the indispensable and efficient repression, the coordinated prevention at national level is also an integral part of the fight against corruption.

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KORUPCIA VO FUTBALE

SÚHRN

V príspevku, sa autor zaoberá teoretickými východiskami korupcie vo futbale. Charakterizuje základné druhy a poukazuje na verejné kauzy spojené s korupciou vo futbale. Prezentuje viaceré údaje o názoroch respondentov a zainteresovaných na túto negatívnu oblasť. Výsledky poukazujú na skutočnosť, že korupcia vo futbale existuje, keďže až 80% respondentov z 228 uviedlo, že korupcia v ich súťaži existuje a za jej najvýraznejších „realizátorov“ (80%) označili rozhodcov. Opatrenia ako tento stav zmeniť sú najmä možné a potrebné realizovať cez riadiaci orgán čiže cez Slovenský futbalový zväz.

KLÚČOVÉ SLOVÁ: futbal, korupcia, kauzy, názory ľudí, opatrenia.

POWERSKATING AS AN IMPACT ON THE DEVELOPMENT OF CHOSEN GAME ACTIVITY OF INDIVIDUAL IN ICE HOCKEY IN OLDER STUDENTS' TEAM HC' 05 BANSKÁ BYSTRICA

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SUMMARY

The aim of the study was to determine how powerskating influences the game of an individual player – ice skating in the category of older students in the Ice Hockey team HC 05 Banská Bystrica. We have included powerskating exercises into training process of experimental group HC' 05 Banksá Bystrica. These exercises were not made in control group. We performed skating test of Slovak Ice Hockey Federation in both groups and we compared the obtained results between the experimental and the control group. The results have shown, that powerskating which was implemented into the training process of experimental group, was important for improving the level of chosen game activity of an individual – ice skating. Our assumptions of positive influence of powerskating on skating of players were confirmed. We hope that positive results of our research will contribute to the improvement of training and development of the game activity of an individual in the area of ice skating.

KEY WORDS: ice skating, ice hockey, powerskating, older students.

INTRODUCION

We think there is not enough attention paid to Powerskating. There is more attention paid to this activity in other countries and it is shown that it markedly influences ice hockey and players' skating alone. Ice hockey is making progress, players are stronger, more skilful and their shots are harder. The quicker the game, the less time and space the players have to shot a goal. That is the reason why I consider it very important for players to constantly better their skating. Powerskating means “force skating” but does not describe the meaning of what

the powerskating exercises and practice should really teach these players. Powerskating is practising of the right skating technique, usually after handling the foundations. There are many factors and exercises that teach the player the right position, handling of weight, stability, reflex and it is important to use the edges.

The skating training is becoming more highly-developed, more perfect, more important and it is known under the term powerskating. We know it as training of skating alphabet. Young trainers who have adequate pedagogic and vocational methodical approach in practice can easily handle with the didactics of skating's education. These are the right skating professionals for our young junior team and mite team who respect only one aim in the given age group and that is to teach the ward to skate technically and tactically right. Recently, skating professionals and experts on figure skating – Tóth and his team – have outstanding representation in powerskating.

Whereas in other collective sports the movement activity is bound above all to locomotion, run, jumps, shots etc., skating is the most important activity in ice hockey (Andrejkovič, 2011). Skating in ice hockey is very specific skill. It depends on many factors (motion's technique, condition aspect, quality of ice). Improvement alone is long lasting matter. Trainers pay attention to it only in the phase of practice (hockey young junior team and mite team), although the practice shows that not only increasing of the level from the condition aspect point of view is important (take-off strength of lower limbs, strength of the body core etc) but also improvement of the right technique is important up to grown up group. In time of growing up when the player grows 10 cm, puts on 5 kilos or changes the skate size from 8 to 10 can influence the technique which is consequently seen in the quality of skating (<http://www.hockeyslovakia.sk/sk/clanok/vzdelavanie-hracov>).

Powerskating teaches the skater how to skate technically right. In their beginnings many players get to the play with puck and hockey stick before they learn to skate correctly. In result, powerskating considers the skating technique as the whole, it deals with the development of uncertain player's skating technique, it helps to develop techniques in which the player is good and eliminates bad habits from the past. A person does not become a good skater after one practice. If he wants to become one, he needs to train dutifully and equally long time. Anyone who has tried powerskating only gained something through it. Worldwide popularity of powerskating and gained results are worth mentioning. (<http://www.powerskating.sk/powerskating.html>).

Powerskating is technique in which the individual learns to move on the ice as effective as possible with the least effort. It comes out of figure skating practice that has been adapted for needs of hockey players. It enables the players to learn and master skating techniques right. They are important for their play. Powerskating is important for professionals as well as for young players and it helps them to better their skating skills or eliminate the habits (<http://playhockeyineurope.com/sk/co-je-powerskating>).

AIM

Skating is one of the most important game activities of individual in ice hockey and therefore the aim of our study was to determine how powerskating influences the game of an individual player – ice skating in the category of older students in the Ice Hockey team HC 05 Banská Bystrica.

METHODOLOGY

We included 2 groups into the study – experimental and control group. The control group was made by 20 players of HC 05 Banská Bystrica. It was group of older students (8, 9 year-class) in the season 2010/2011. The average decimal age was 14,75 years. Their average height was 174,8 cm. The average weight of players was 64,75 kg. Mgr. O.B. was coach of the team; he was the owner of coaching licence A (IV, class)

The entrance and final tests were made in both teams. We were using powerskating exercises in the practice of experimental group HC 05 Banská Bystrica., but in control group there were no such exercises. The first data gained from the entrance and final tests are from season 2010/2011. In this season there was no powerskating in the training process. The second data gained from the entrance and final tests are from the season 2011/2012 when there already was powerskating.

RESULTS

Results gained from entrance and final tests in both groups were processes and compared among each other.

We can see the least possible improvement, even worsening in the control group (Table 1). When we compare it with experimental group we can see definite improvements and only the least possible worsening in one test (Table 3).

Table 1 Improvement and worsening in each test. Control group

Name	36m Forwards	36m Backwards	6x9 m	6x54 m
A. F	0,05	0,04	0,29	0,07
A. M	0,01	-0,05	-0,01	0
B. P	-0,13	0,56	-0,1	0,48
B. E	0,14	0,02	0,2	0,01
B. P	0,92	-0,25	0,09	0,14
D. M	0,13	-0,24	0,2	0,33
G. J	0,2	0,1	-0,11	-1,39
H. I	-0,06	0,21	0,15	-0,1
I. S	0,04	0,05	0,06	-1,26
K. P	-0,07	-0,01	0,07	0,46
K. E	0,04	0,53	0,11	1,19
K. J	0	0,02	0,2	0,05
L. J	0,09	0,24	0,19	0,03
M. P	0,07	0,08	0,04	0,09
M. B	0	-0,06	-0,07	0,09
N. M	0,05	0,11	0,06	0,54
N. J	-0,04	0,84	0,72	0,12
P. D	0,1	-0,14	0,25	0,07
P. A	0,01	0,66	0,27	-1,18
P. M	-0,01	-0,04	-0,07	-0,05

Explanations – red numbers – worsening, green numbers – improvement

Average improvement of control group (Table 2). 0,077, 0,1335, 0,127 are considerably lower when comparing with experimental group. In the discipline 6x54m it came even to the worsening in the average of -0,0155.

Table 2 Control group. Average improvement

	Age	Height	Weight	36m Forwards	36m Backwards	6x9m	6x54m
Average	14,75	174,8	64,75	0,077	0,1335	0,127	-0,0155
Median	15	175	63	0,04	0,045	0,1	0,07
Maximum	16	187	85	0,92	0,84	0,72	1,19
Minimum	14	164	52	-0,13	-0,25	-0,11	-1,39
Standard deviation	0,638666	6,228965	9,335135	0,2131	0,295747	0,186353	0,617375

All 20 players in experimental group improved in final tests by 15 to 86 points. Results of that season show that powerskating considerably helped to improve the level of players' skating. In our study we wanted improvement of game activity (skating) of individual in experimental group which was successful. The team improved in average by 36,05 points.

Table 3 Improvement and worsening in each individual test. Experimental grou

Name	36m Forwards	36m Backwards	6x9 m	6x54 m
M. B.	0,32	0,37	1,11	5,78
E. K.	0,43	0,9	0,36	3,5
J. G.	0,32	0,49	0,13	0,2
N. G.	0,29	0,84	0,37	5,85
R. G.	0,03	0,06	0,04	2,59
T. I.	0,2	0,31	0,31	3,84
M. K.	0,33	0,29	0,48	3,33
I. K.	0,13	0,28	0,49	2,9
V. M.	0,16	0,2	0,97	6,41
J. M.	0,19	0,42	1,16	3,83
M.M.	0,35	0,17	0,63	2,89
F. V.	0,3	0,48	1,19	6,14
J. V.	0,13	0,49	0,64	4,22
M. D.	0,28	0,4	1,04	3,32
A. F.	0,14	0,18	0,49	2,32
J. Č.	-0,04	0,38	0,29	2,26
J. H.	0,48	1,04	1,73	7,82
M. K.	0,06	0,54	1,86	5,2
M. S.	0,12	0,19	0,4	0,28
P. Č.	0,73	0,94	1,71	8,25

In Table 4 we consider the most important fact that all average improvements are positive and rather high, 0,2475, 0,4485, 0,77, 4,0465. We evaluate this positively.

Table 4 Experimental group. Average improvements.

	Age	Height	Weight	36m Forwards	36m Backwards	6x9m	6x54m
Average	14,8	175,3	65,35	0,2475	0,4485	0,77	4,0465
Median	15	174,5	66	0,24	0,39	0,56	3,665
Maximum	16	189	80	0,73	1,04	1,86	8,25
Minimum	14	165	52	-0,04	0,06	0,04	0,2
Standard deviation	0,695852	5,704107	7,442941	0,175825	0,278837	0,546626	2,186719

(Statistical significance is important from 0,40).

We consider more important the value in control group (Chapter 5) in disciplines 36m forwards and 36m backwards. We can see that the value is higher than -0,42 though it is in the negative. There is some inverse proportion in improvements of these two disciplines. As a result, improvement in the discipline 36m forwards can denote worsening in the discipline 36m backwards (and vice versa).

For the next important value we consider value 0,404784, age – a 6x54m. It is correlation coefficient between age and the discipline 6x54m. Higher value (higher than 0,4) shows dependency of improvement in this disciplined regarding the age. It means that older students improved themselves more (Table 5).

Table 5 Paersons correlation coefficient. Control group.

	Age	Height	Weight	36m Forwards	36m Backwards	6x 9m	6x54m
Age	1	0,092609	0,183177	0,11408	0,185996	0,011055	0,404784
Height	0,092609	1	0,81371	0,070498	-0,008742	0,029563	-0,151533
Weight	0,183177	0,81371	1	0,01389	-0,092506	0,155054	-0,121618
36m v Forwards	0,11408	0,070498	0,01389	1	-0,427484	0,050336	-0,056819
36m Backwards	0,185996	-0,008742	-0,092506	-0,427484	1	0,425927	-0,004126
6x9m	0,011055	-0,029563	-0,155054	-0,050336	0,425927	1	0,069476
6x54m	0,404784	-0,151533	-0,121618	-0,056819	-0,004126	0,069476	1

We also can see positive dependency between disciplines 6x9m and 36m backwards, when the correlation coefficient is higher than 0,4 (0,425927).

Other values in the table do not show another important dependencies.

Correlation coefficient is positive and higher than 0,4 in all disciplines of experimental group (Table 6) (for the given discipline's pair). It suggests important positive linear dependencies (in other words, direct proportion).

Considerable improvement was shown in all disciplines of experimental group.

Those who improved more in all disciplines improved themselves more and vice versa those who improved themselves less, improved less in all disciplines.

Table 6 Paersons correlate coefficient. Experimental group

	Age	Height	Weight	36m Forwards	36m Backwards	6x 9m	6x54m
Age	1	0,161771	0,319091	-0,331237	-0,351547	-0,012453	-0,206634
Height	0,161771	1	0,809396	-0,204402	0,037029	-0,217412	-0,143882
Weight	0,319091	0,809396	1	-0,062841	0,111344	-0,049158	-0,10172
36m Forwards	-0,331237	-0,204402	-0,062841	1	0,669051	0,413723	0,526702
36m Backwards	-0,351547	0,037029	0,111344	0,669051	1	0,466751	0,593636
6x9m	-0,012453	-0,217412	-0,049158	0,413723	0,466751	1	0,749297
6x54m	-0,206634	-0,143882	-0,10172	0,526702	0,593636	0,749297	1

(Statistical significance is important from 0,40)

Results of this testing have shown, that powerskating which was implemented into the training process of experimental group was important factor for improving the level of chosen game activity of individual – skating. This is proven by results from skating tests of 36m forwards, 36m backwards, 6x9m and 6x54m. Experimental group has improved considerably in comparison with control group. That was confirmed by mathematical-statistics methods and by scoarboards (SZLH). Our assumptions that powerskating will influence player's skating were confirmed. With the help of these positive results of this study we want to contribute to the improvement of training and to advancement of game activity of individual – to skating.

CONCLUSION

On the basis of gained results we came to the following conclusions. Training process of the older students category should be extended by several specific exercises so that boys can gain many movement skills. We cannot forget universal exercises. The aim of the study was to determine how powerskating influences the change of the level of an individual player's game – ice skating in the category of older students in the Ice Hockey team HC 05 Banská Bystrica. We realized 4 skating tests by Slovak Ice Hockey Federation. The data gained from four realized skating tests were compared between both teams in the category of older students. Entrance and final tests were made in both teams. We were using powerskating exercises in the practice of experimental group HC'05 Banská Bystrica., but in control group there were no such exercises. The first data gained from the entrance and final tests are from season 2010/2011. In this season there was no powerskating in the training process. The second data gained from the entrance and final tests are from the season 2011/2012 when there already was powerskating. Results of this testing have shown, that powerskating which was implemented into the training process of experimental group was important factor for improving the level of chosen game activity of individual – skating. This is proven by results from skating tests of 36m forwards, 36m backwards, 6x9m and 6x54m. This has confirmed our hypothesis. Experimental group has improved considerably in comparison with control group. That was confirmed by mathematical-statistics methods and by scoreboards (SZLH). Our assumptions that powerskating will influence player's skating were confirmed. With the help of these positive results of this study we want to contribute to the improvement of training and to advancement of game activity of individual – to skating.

Players were interested by powerskating and they found out that skating skills can be constantly improved. We recommend that powerskating is part of training process in every category. We agree with Andrejkovič (2011) who says that skating needs to be improved up to the category of grown ups. Andrejkovič was recently taken by surprise by one of coach's question from Canadian junior team of QMJHL if the skating exercises are used in the Slovak republic. (<http://www.hockeyslovakia.sk/userfiles/file/Ako-sa-stat-lepsim-korculiarom.pdf>).

There is only little attention paid to these exercises in the Slovak republic. It can be seen at international events where we fall behind in skating. It results from the current study that powerskating influences skating positively and it is needed to start to use this in the category of older students by means of adequate exercises to the given age and abilities of players. Last of all it is important to remind that the correct skating is one of the most important factors of actual ice hockey.

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POWERSKATING AKO PROSTRIEDOK ROZVOJA VYBRANEJ HERNEJ ČINNOSTI JEDNOTLIVCA V ĽADOVOM HOKEJI V DRUŽSTVE STARŠÍCH ŽIAKOV HC ' 05 BANSKÁ BYSTRICA

SÚHRN

Cieľom našej práce bolo zistiť význam a vplyv powerskatingu na zmenu úrovne hernej činnosti jednotlivca - korčuľovanie v kategórii starší žiaci (8, 9. ročník), v družstve HC ' 05 Banská Bystrica. Do tréningového procesu experimentálneho súboru HC ' 05 Banská Bystrica, sme zaradili powerskatingové cvičenia. V oboch súboroch sme realizovali korčuľarské testy zo Slovenského zväzu ľadového hokeja a porovnali získané výsledky medzi experimentálnym a kontrolným súborom. Výsledky testovania nám ukázali, že powerskating, vložený do tréningového procesu experimentálneho súboru, bol významným faktorom na zlepšenie úrovne vybranej hernej činnosti jednotlivca – korčuľovanie. Naše predpoklady, že powerskating pozitívne ovplyvní korčuľovanie hráčov sa potvrdili. Pozitívnymi výsledkami nášho výskumu chceme prispieť ku skvalitneniu pri nácviku a zdokonaľovaní hernej činnosti jednotlivca – korčuľovanie.

KLÚČOVÉ SLOVÁ: korčuľovanie, ľadový hokej, powerskating, starší žiaci.

SECONDARY SCHOOL STUDENTS' INTEREST IN MOVEMENT ACTIVITIES

STRAŇAVSKÁ STANISLAVA

SUMMARY

The main aim of this work is the relationship of selected secondary school students to movement activities and their attitude towards Physical education at secondary schools. The object of the research in our work was to find out what the relationship of girls and boys to physical activity in Žilina and its surroundings is, while we focused on their interest, attitude towards movement activities.

KEY WORDS: physical education, school, students, interest.

INTRODUCTION

Regular movement activity of people is an indispensable medicine and a means of maintaining their own existence. It's a means for a good movement level of the cardiovascular and respiratory systems fitness, a supporting skeletal system or metabolism.

The entire educational process, including school Physical education, must lead to students' preference of some movement activities which they would like to use outside the school in their free time, whether as a performance activity or recreation. Formation of a regular lifetime activity is seen as a major and long-term aim of school Physical education. To achieve that, it is important to offer a varied and diverse selection of sports segments within Physical education and beyond.

We relate negative effects in physical and movement development to the weight increase, which is in most cases related to not rational nutrition and gradual decrease in movement activity. Decreasing number of compulsory lessons of Physical education also has a bad effect on youth movement activity. (Kučera et al., 1998).

Child and youth age is considered to be an optimal time to create a lasting attitude towards performed sports and movement activities. Physical education plays a vital role within the whole education. Within Physical education we can systematically influence the development of motor skills of children and youth, particularly in the development period, which is most sensitive to the effects of movement stimuli (Macková, 2003).

Movement activity by Sýkora (1995); Šimonek (2006), Michal (2002, 2010) is a multilateral movement activity of a person, which is performed by their musculoskeletal organs. It is characterized by typical human features such as determinedness, social determinism, the continuity with the process of communication between people. It is used to refer to a particular type of locomotor behaviour, as well as to refer to the complex of the whole locomotor behaviour of an individual or a group.

Movement activity in children and youth is a means how to ensure normal physical development. Stimulation through appropriate movement activity is necessary for optimal growth and development of the nervous system. It positively supports the development of musculoskeletal system mainly through its effect on muscle mass increase and its performance, strengthens the skeleton and tendons and prevents from poor posture. It affects the proper development of the blood circulation and is an important regulator of obesity. The importance of a movement activity at compensating damages arising from sedentary lifestyle is still topical.

Obesity problem, which is usually caused by bad eating habits, is no exception for secondary school students. These habits are primarily conditioned by environment in which children live and grow up. In this case, family plays an important role and therefore, if necessary, a parent-teacher interview is on the topic. Obesity can be in general characterized as excessive accumulation of reserve body fat, which has in addition to excessive weight also other effects on the overall health status of people. Obesity originates at impaired balance between energy intake and expenditure. We can speak about obesity when the ideal weight is exceeded by 10 to 20% (Bartík, 2005).

AIM

The aim of the carried research in our work is to find out the current attitude of boys and girls at secondary schools towards movement and sports activities in Žilina and its surrounding area from the point of view of educational standard of Physical education.

METHODOLOGY

We delivered the questionnaire designed for students to three secondary schools in Žilina. The participants of a research were 188 secondary school students, 17-19 years old. There were 90 boys and 98 girls out of 188 students. By means of a questionnaire, we wanted to obtain information about interests and attitudes of today's secondary school students to movement activities.

RESULTS

In this study section we discussed the relationship and attitude of girls and boys towards movement activity at particular secondary schools, the reasons for performing movement and sports activities, what they consider to be the best relaxation after school.

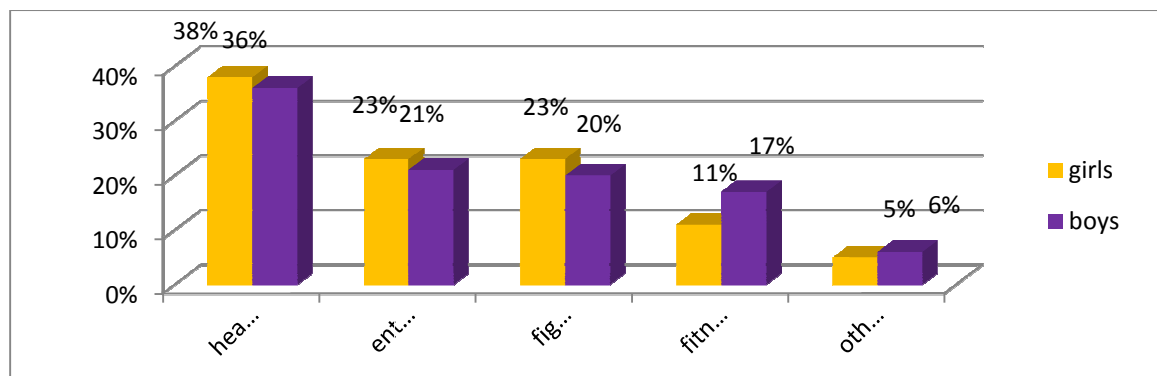


Figure 1 Why do you perform movement activity?

For further research, we wanted to know why boys and girls perform a movement activity. In Figure 1, we see that the reasons for performing movement activity were similar for girls and boys. We can see that 38% of girls and 36% of boys considered movement activity to be positive for maintaining good health, 23% of girls and 21% of boys perform movement activity for entertainment and relaxation, 23% of girls and 20% of boys use sport and movement activity to improve their figure, for 17% of boys and 11% of girls a movement activity is the best way how to improve their physical condition. The remaining 5% of girls and 6% of boys perform movement activity for other reasons (e.g. for achieving best performances ...). According to these data we can see that girls and boys are aware of the importance and usefulness of carried movement activities to promote their health. They are also aware of its aesthetic side.

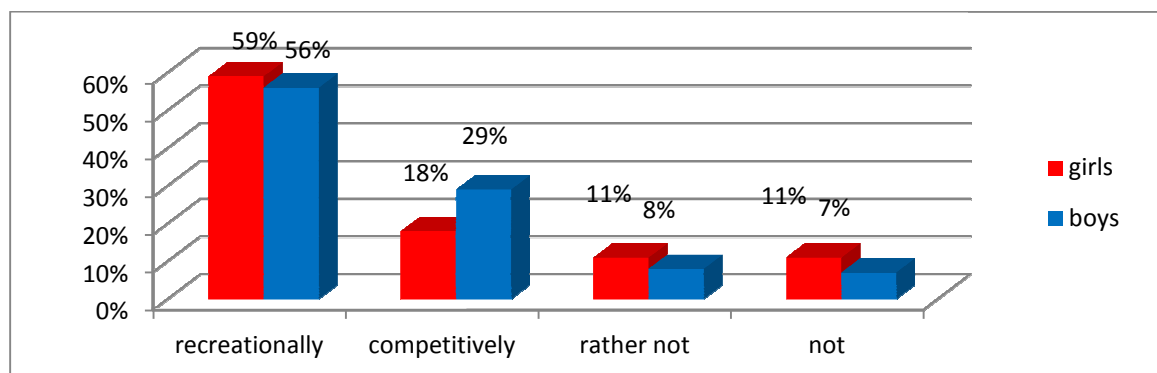


Figure 2 Do you carry out any sports activities outside the school?

We wanted to know whether girls and boys carry out sports activities outside the school (Figure 2). We found out that 59% of girls perform sports activities recreationally, 18% of girls perform competitively (showdance, fitness, volleyball, tennis), only occasionally or rather not 11% of girls and the same number of 11% of girls do not perform any sports activities outside the school. The findings in boys were similar in recreation activities 56%, 29% of boys perform sports competitively (football players, hockey players, 3 skiers, floorball players and dancers) and rather not and not 15% of boys. We didn't find a significant difference between recreationally active boys and girls there. In the case of boys, more boys were active in competitive sports than girls. There were slightly more girls inactive outside the school than boys.

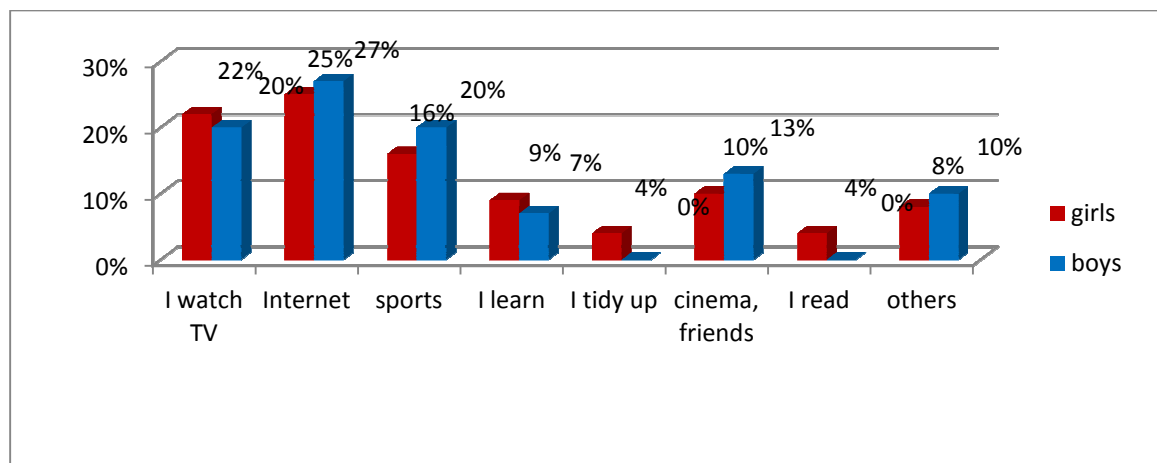


Figure 3 What is the most frequent activity in your free time?

As the results show (Figure 3), the most frequent way how to spend free time is the Internet - 25% of girls and 27% of boys. 22% of girls and 20% of boys watch television. 16% of girls and 20% of boys devote time to a sports and movement activity, 9% of girls and 7% of boys to further education. Meeting friends and going to the cinema are preferred by 10% of girls and 13% of boys. Among others, girls also mentioned reading books and tidying up, which is 8%. 8% of girls and 10% of boys spend their free time in other ways. For boys it was fishing, chess, breeding and for girls part-time jobs after school, painting pictures and so on.

CONCLUSION

For girls, the main focus of movement activities is concentrated on in-line skating, aerobic exercises like dance aerobics, zumba, step aerobics, cycling. For boys it's football, floorball, in-line skating, cycling. In this case, we should mention one of the possible reasons

- the fact that the activities in boys can be prevailingly carried out on football pitches, whether at school or in the country, which is completely free. In the case of girls, their activity is focused on aerobic activity, which is unfortunately in the town as well as in the countryside charged a fee.

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KLÚČOVÉ SLOVÁ: telesná výchova, škola, študent, záujem.

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The ACTA UNIVERSITATIS MATTHIAE BELII PHYSICAL EDUCATION AND SPORT is a peer-reviewed scientific journal. The content of the magazine is focused on presentation of research notifications and theoretical studies connected with the problems of science of sport. The Editorial Board is looking forward to all manuscripts written on the above subject.

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Deadline for submissions for each issue of the journal is

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The text of the contribution is in English. The contribution is not to exceed a maximum limit of 15 pages (including tables, pictures, summaries and appendices). A summary will be in the Slovak language, and by rule 1 page at the most. The text is to be presented in MS Word editor.

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Interface of the contribution

Title of the contribution, name(s) of its author(s), workplace, summary of the text in English, key words.

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Names of individual chapters are to be written in capital letter from the left margin. References to quoted authors see a brief from the publication.

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We look forward to our further cooperation.

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