# Original Article

# Socio-cultural characteristics of sport activity among students in Central and Eastern Europe: Comparative empirical analysis

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#### **Abstract:**

In our study we analysed the factors that influence and determine sport activity of students studying in higher education institutions in the North-Eastern Plains Region of Hungary and the adjacent cross-border regions. In the research we included students studying in three Hungarian, five Romanian, two Slovakian, three Ukrainian and one Serbian Higher Education institutions (N=2017). Our findings indicate that students in Hungary, as well as ethnic Hungarian students in Romania, Serbia and Slovakia, do little sport, in the entire region students do some sport once a week only. An analysis of the social and individual factors influencing sports activities in a single model shows powerful differences in terms of gender and financial background in Hungary, Ukraine and Romania (the differences are the biggest in the latter). If we include attitudes based on subjective choice and way of life in our model, the gender differences vanish.

Key words: sport, students, socio-cultural background, Central-Eastern Europe.

#### Introduction

The aim of our research is to reveal the role and significance of sport in the institutions of higher education, in the community life of ethnic Hungarian students in the border regions of Hungary, Slovakia, Ukraine, Serbia and Romania. In our comparative analysis we sought answers as to what forms and characteristics sports activities have in these institutions, what similarities and differences are detectable in the social and individual factors that determine sports activities in the colleges and universities in the regions concerned

College and university students constitute a large and important group of young adult society. They are going to become the intellectuals of the future, political decision makers, teachers, doctors, etc. They will play an important role in social changes, therefore their state of health, behaviour, attitudes are going to be examples to be followed for the other segments of society (Steptoe & Wardle 2001; Steptoe et al. 2002). Hunt and Eisenberg (2010) assert that an analysis of the students' health behaviour offers a unique possibility to devise targeted intervention schemes to the major health problems of adolescents and young adults. That is why we ascribe great importance to surveying the extent and forms of sport activity as a preventive health behaviour and the individual as well as social factors influencing it.

The altered economic, social and political circumstances did not leave the subsystem of sport unaffected after the change of the political system in the former Communist states of Central and Eastern Europe. In Hungary, sport was characterized by re-centralization, paternalism and a powerful political control in the period following the change of the system. The powerful political control is well illustrated by the fact that at the turn of the millennium, and even in our days, state subsidies are high, higher than ever before, even during and after the Communist regime. The distribution of the subsidies among the various branches of sport is based exclusively upon political decisions. Re-centralization is shown by the fact that although semi-civilian and semi-state sports organizations had their right to make their voice heard, the opinion of civilian organizations was disregarded when it came to their own operation, the organization, running and managing sports activities. Due to a paternalistic attitude on the side of the governments, neither civilian society (and within that, voluntary organizations), nor the business sector (sponsorship) has been able to become major supporters of sports clubs from daily sports life to elite unions. So the survival, operation and success of these sports associations depend on political power, parties and leading politicians. Political power must make sure that sports clubs work, sportspeople achieve success (Földesi, 1989; 1992; 2009). Sports life has not been able to cope with the difficulties caused by the change of the system in Slovakia either. No flexible system of institutions, meeting the new challenges, emerged to combine and coordinate the associations of sectoral sports clubs, integrating them into the network of other state organizations (Leska, 2001; Bendíková, 2011). In the lack of government

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subsidies, the sports clubs are not interested in attracting children and young people, and when they still do, it is

the parents who cover the expenses (Antala, 2011).

After the change of the political system, differences between social groups and layers became more prominent, and certain social groups found themselves outside sports (as well) (Földesi, 2009). Exclusion in all segments of society, including sports, is linked to a lower social-economic status, poverty, unemployment, low education. In this way, people living in an underprivileged status tend to have less physical exercise, and this situation appears to be a long lasting phenomenon. In addition to social exclusion caused by deprivation, it is necessary to pay attention to differences according to gender, age, place of living and even disabilities, and survey how and why people are excluded from the possibilities of doing physical exercises regularly (Földesi Szabó, 2010).

A number of survey conducted in the countries concerned pointed out the inactive life of young people and, among them, students, and the problems caused by inactive lifestyle. More than one third of the students of the University of Resita in Romania does not do any sport, which is closely linked to the fact that more than half of the students are overweight (Bichescu, 2013). 65,5% of the students of Educons University in Serbia are inactive, though they consider physical exercises as important in health preservation when asked about it. In accordance with the findings of the survey, the situation is the worst in the age group of 21-25 years (Nesic & Kovasevic, 2011). An examination carried out among the students of the University of Szeged in Hungary also shows the spread of inactive lifestyle, since only 36% of them do some sport at least three times a week (Keresztes, 2015), and the results found among students in Budapest are not much better (37%). The 2010 figures are, however, somewhat better than those of 2004 and 2006 (Kozma et al., 2015). A four-country comparative survey of young people between 12 and 18 years of age showed that 40% of the Romanian students, 34% of the Slovakian students and a mere 20% of the Hungarian students did the desirable 60 minutes of physical exercise a day (Soós et al., 2014).

The majority of the respondents identified the lack of time as a reason for not doing any sport, but Romanian and Hungarian students also mentioned the shortage of financial resources (Kovács, 2015b; Bichescu, 2013). A considerable difference between the genders is observable in the frequency of sports activities, since boys/men tend to do a lot more physical activity than girls/women. It applies to competitive sports primarily. Certain leisure time activities, such as the frequency of watching TV, may also contribute to reduced physical activities, so an analysis of the patterns of free-time activities is also relevant to our research (Kozma et al., 2015; Soós et al., 2014). It is also to be noted, however, that among students in Hungary and Romania sports activities are determined by social, environmental and individual features of the way of life, and these factors are able to overwrite differences in social background (Kovács, 2015b; Keresztes, 2015).

# Material & methods

**Participants** 

In the course of our research we intended to survey the differences in the sports activities of students in the different countries. We wanted to find out about the attitudes of students to sports, the frequency of their sports activities, and the reasons when they did not do any sport, and what sports they preferred. For our analysis, we used a data base created by the Center for Higher Education Research and Development, Hungary (CHERD-H) from a research project involving the students of five neighbouring countries (IESA – TESSCEE II, N=2017).

The sampling was determined in accordance to the data supply of the institutions. The number of participants chosen from each faculty and institution was done in proportion to the number of their students. The number of students from Hungary is therefore much higher than the number of ethnic Hungarian students from the neighbouring countries, the data received are to be treated with the necessary care. The data are not to be generalized for the student population of the entire countries, only for the specific institutions, and within those, the ethnic Hungarian student community. We planned to set up the sample group in the following way: 20% from the 2nd year undergraduate and teacher course, 50% from the 1st year of the postgraduate course and the 4th year of the teacher courses. Care was taken to select the respondents randomly from the groups mentioned above. The sample is representative for faculties (Pusztai & Ceglédi, 2015).

The researched institutions included the University of Debrecen (n=1061), the Debrecen Protestant Theological University (n=22), the College of Nyíregyháza (n=134) (Hungary, n=1223); the State University of Mukachevo (n=54), "Ferenc Rákóczi II" Transcarpathian Hungarian Teachers Training Institute [Berehove] (n=72), the University of Uzhorod (n=101) (Ukraine, n=212); the Sapientia Hungarian University in Transylvania [Turgu Mures] (n=126), the University of Oradea (n=15), the Babeş-Bolyai University [Cluj] (n=138), Partium Christian University [Oradea] (n=40) (Romania, n=284); "János Selye" University, [Komarno], (n=102), Constantine the Philosopher University [Nitra] (n=56) (Slovakia, n=158) and the University of Novi Sad (Serbia, n=66).

Measures

Our comparative analyses were based upon the variables of the frequency of doing sport (How often they practiced intense sport activity at least 45 minutes in the last months (outside the compulsory sport classes

*in university?* Answers: 0 never, 20 annually, 40 monthly, 60 several times a month, 80 weekly, 100 three times or more a week), the attitudes to sport, the reasons preventing them from doing any sport (answers: yes-no), spending their free time in a sporty-active way and membership in sports clubs (answers: yes-no). The attitudes

to sports was surveyed by the question why sport was important to the respondent (answers: yes or no). By factor analysis we identified two factors (maximum likelihood method, direct oblimin rotation, total variance explained: 48,9%, KMO: .770. Variables of health preventing attitude: because of being fit and healthy, having a good outlook, stress reduction, it causes happiness. Variables of competitive sport attitude: because of taking

part in competitions, because of winning, because of the sport mates or community.

For the examination of the leisure time activities of the sample, we used frequency of doing 19 activities (answers: never; once-twice annually; monthly; several times in a month; weekly; almost daily; several hours a day) and with the help of the factor analysis, we identified four preferred ways of spending their free time: high culture consumption social life and parties, sports and recreational activities (maximum likelihood method, direct oblimin rotation, total variance explained: 37%, KMO: .845. Out of these preferences, the sporty, playful ways of spending one's free time is important. These activities include attending sports events, doing sports and games (basketball, volleyball, football, etc.), going on trips, trekking, extreme sports, playing card games, jogging and reading. The values of factor scores were recoded into 0-100 points scales, where 0 means that a sport attitude or leisure preference is not typical, whereas 100 means it is very typical.

The explanatory variables included the most important social and demographic factors: gender, education level of parents, type of resident settlement, subjective and objective financial background. In order to provide a measurable view into their objective financial situation, students were requested to indicate the assets that their families possessed on the following list: a flat of their own, a detached house, a weekend cottage, hobby garden, plasma- or LCD TV, desktop- or laptop computer with Internet access at home, tablet, e-book reader, mobile Internet (on phone or tablet), dishwasher, air conditioning, smart phone and automobile. An index was created for the variables of the objective financial situation, and the values were recoded into a 0-100 scale. For the two-variable analyses a two-value system was introduced (above average and below average). So as to map the respondents' subjective material situation, we requested them to describe their families' financial situation, and offered the following answers to choose from: 1. We have everything we need, we are able to meet major expenses (e. g. going on holiday), and we are also able to save; 2. We have everything, though we cannot afford larger expenses; 3. Sometimes we are not able to meet our daily expenses; 4. We are often unable to make ends meet (the answer alternatives were recoded into a 0-100 scale).

### Statistical Analysis

The analyses were carried out with the help of the SPSS 23 statistical software package. The differences between the students in the various countries were tested with ANOVA and Chi-square. Then linear regression was used to see which social-demographic background variables influenced students in their sports activities in the countries separately. Regression was used to survey the effects of all the explanatory variables (socio-demographic factors, attitudes attached to the importance of doing sports, and preferences in spending leisure time) in the case of students from Hungary, the Highlands (Slovakia), and Partium-Transylvania (Romania). Due to the small sample from Serbia, it was not possible to carry out the analysis on the sample from Vojvodina.

### Results

22.3% of the students practically never do any sport, highest is the proportion of those who do some sport once or twice a month (24.2%), only 22% of them do some sport on a weekly basis, and a mere 18% of them do exercises to a degree sufficient from the aspect of preserving their health, that, is three times a week. The most common sports that they do are the classic ones in these countries: jogging/running, football, cycling, workout and swimming. Our students attribute importance to sports primarily from the aspects of preserving their health and a mental refreshment (80.4 and 75.3% said yes to these questions. Competition, victory and community are apparently less important for them (12.6, 13.1 and 32% said yes to these questions). It means that competitive sports have lost a lot of their importance for students, and sport has become a largely individualistic activity for them. Students explained insufficient sport primarily with the lack of time (41.7%), but financial reasons were also powerfully present (22% do not have enough money to do sport), and 17.8% of them appear to be dissatisfied by the sports facilities offered by their host institution. A look at the institutional side of sports life will show that 19.7% of students are members of sports clubs and associations, and 11% belong to fan clubs. Jogging, walking and cycling play an important role in students' free time, since 53% go jogging or walking at least once a week, and one fifth of the students go on trips or go trekking at least once a month.

In the following part of our study we summarize a most important differences between the countries concerned. Students in Slovakia and the Ukraine do most sport ( $M_{UA}$ =58.2, SD=33.2, n=160 and  $M_{SK}$ =57 points, SD=31.7, n=232), and they are characterized by sporty ways of spending their free time ( $M_{UA}$ =30.2, SD=13.8, n=162 and  $M_{SK}$ =32.6, SD=14.9, n=236). On the other hand, students in Romania tend to do the least of sports ( $M_{RO}$ =47.3, SD=30.9, n=314). The proportion of students doing sports at least three times a week is the highest in Hungary (20.3%), iii Slovakia (20%) and Ukraine (16.8%), and the lowest in Romania (11.5%) and Serbia (11.1%) ( $\chi^2$ =54.714, p=.000).

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Competition and victory as motivating factors are the most characteristic among the students in the Ukraine ( $M_{UA}$ =26.6, SD=33.9, n=239), which corresponds to the fact the highest number of sports clubs and associations are found at the Ukrainian institutions (34.5%,  $\chi^2$ =37.557, p=.000), which in itself suggests the powerful presence of competitive sports. Doing sports for health preservation is, on the other hand, the least characteristic of the students in the Ukraine ( $M_{UA}$ =69.1, SD=31.2, n=239), whereas for the students of Serbia ( $M_{SB}$ =81.9, SD=27, n=63) and Slovakia ( $M_{SK}$ =77.5, SD=25.9, n=162), the health-preserving function of sport is of primary importance. As for the reasons of not doing enough sport, we find three considerable differences among the students. A lot of the students in Romania (27.6%) and Slovakia (26.5%) are dissatisfied with the sports facilities of their respective institutions, while only 14.3% of those in Serbia reported a similar situation ( $\chi^2$ =56.428, p=.000). The students in the Ukraine tend to be dissatisfied by the sports facilities of their towns (19.7%,  $\chi^2$ =21.376, p=.000). An outstandingly high number – almost every fifth – students in the Ukraine (17.2%,  $\chi^2$ =25.012, p=.000) reported that their health state does not enable them to do sports on a regular basis, which is really considerable in that age group (Table 1).

Table 1. A Comparative Analysis of Variables Related to Sports Showing Significant Differences in a Breakdown by Countries (points, percentages). Source: IESA-TESSCEE 2015.\*

	Hungary	n	Romania	n	Ukraine	n	Serbia	n	Slovakia	n N	Test	p
Frequency of sport activity (0- 100)	56.7	1109	47.3	319	57.6	232	51.1	63	58.2	1601878	3F=6.016	.000
Competitive sport attitude (0-100)	18.9	1229	14.6	323	25.6	239	23.6	63	15.8	1622013	3F=6.006	.000
Health preventive sport attitude (0-100)	70.2	1229	70.6	323	69.1	239	81.9	63	77.5	1622013	3F=3.953	.003
Sports and games leisure activities (0-100)	28	1200	28.7	321	32.6	236	19.1	63	30.2	1621982	2F=13.048	.000
Member of sport club	17.6%	1104	16.2%	309	34.5%	229	22.2%	63	19.1%	1521857	$7\chi^2 = 37.554$	.000
No appropriate sporting opportunity at the university	13.1%	1226	27.6%	323	<u>24.7%</u>	239	14.3%	63	<u>26.5%</u>	1622013	$3\chi^2 = 56.428$	.000
No appropriate sporting opportunity in the city	10.3%	1226	9.6%	323	<u>19.7%</u>	239	15.9%	63	15.4%	1622013	$3\chi^2 = 21.376$	.000
Health status of student does not let to do sport	9.2%	1226	6,5%	323	<u>17.2%</u>	239	1.6%	63	8%	1622013	$3\chi^2 = 25.012$	.000

<sup>\*</sup> The underlined figures indicate values higher than those would be in the case of a random distribution.

The Role of Social Background in the Frequency of Doing Sports

In the following part of the research we intended to survey how social-demographic background variables influenced the frequency of students' doing sports in the countries concerned. For constraints of space, here we examine only the frequency of doing sport. No considerable interrelations were detected in the Serbian and Slovakian sub-samples, which is explained by the too low number of elements. The only variable we found significant differences in every one of the countries examined was gender. In compliance with our earlier

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research findings, men ( $M_{HU}$ =59.5, SD=35.9, n=324;  $M_{RO}$ =56.8, SD=34.4 n=51;  $M_{UA}$ = 67.4, SD=32.8, n=67) do more sport than women ( $M_{HU}$ =55.1, SD=32.4, n=753;  $M_{RO}$ =44.9; SD=29.7, n=259;  $M_{UA}$ =54.1; SD=30.3, n=161) (Lageart & Roose, 2016; Ross, 2008). The financial situation of the respondents was also found to be a powerful influencing factor among the students in Hungary and Romania: the students in an objectively better than average financial situation, subjectively in the best situation do more sport than the average. The subjective

powerful influencing factor among the students in Hungary and Romania: the students in an objectively better than average financial situation, subjectively in the best situation do more sport than the average. The subjective financial welfare is particularly important among the students in Romania. The differences among the various groups among them are bigger, and in terms of the frequency of sports, they scored ten points lower than the students in the same category in Hungary. The relatively high number of points scored by the students who classified themselves in the lowest financial situation in the Hungarian sample is explained by the distorting effect of the low number of respondents ( $M_{HU}$ =60, SD=33.9, n=17). In the other categories the general trends are observed.

Table 4. Significant Differences in the Frequency of Doing Sports caused by Socio-Cultural Background in the Institutions of Hungary, Romania and Ukraine Source: IESA-TESSCEE 2015

		Hungary	Test	Romania	Test	Ukraine	Test
Gender	Female Male Below mean Over mean We have everything We can not afford the major expenses Financial problems occur	55.1 59.5	F(1,1075=3.913)*	44.9 56.8	F(1,308)=6.485*	54.1 67.4	F(1,226)=8.647**
Objective material status  Subjective material status		53	F(1,1107)=8.642**	42.7	F(1,312)=4.982*	56	F(1,230)=.736
		59.1		50.6		59.6	
		61.9		50.3		59.2	
		55.4	F(3,1099)=4.589**	46.1		55.8	F(3,215)=.694
		49.5		45.7	F(3,300)=.472	57.3	
	We have often financial problems	60		40		80	

<sup>\*</sup>p\le 0.05, \*\*p\le 0.01.

The effect of higher education institutions in levelling cultural differences is aptly illustrated by the fact that neither the qualifications of the parents as a cultural capital, nor the type of the resident settlement plays an important role in how often do students sports.

Linear regression was used to determine in single analytical model how the specific social background variables, and the subjective explanatory factors such as attitudes to sports and sporty ways of spending free time influence the frequency of students' doing sports in the countries concerned. In this case, we did not carry out the analysis of the Serbian sample, due to the small number of elements.

The results indicate that when subjective factors are included in the analysis, these are capable of overwriting the effects of social background variables: gender and objective financial situation do not influence the frequency of students' doing sports in any of the countries involved in the survey. Subjective financial situation appears to be important in Ukraine only ( $\beta_{UA}$ =.147, p≤.005). The students' desire to preserve their health is always a positive motivation for them to do sport regularly, regardless of the country they live in. The more aware they become of the importance of sport in preserving their health, the more motivated they will be to do physical exercises on a regular basis ( $\beta_{HU}$ =.381, p≤.001; ( $\beta_{RO}$ =.342, p≤.001;  $\beta_{UA}$ =.506, p≤.001;  $\beta_{SK}$ =.337, p≤.05). A competitive attitude also has a positive effect on regular sports activities, but only in the case of the students in Hungary ( $\beta_{HU}$ =.130, p≤.001). Competition and victory are primarily important for professional athletes or for those who want to test their abilities by entering into races or competitions, and regular training is indispensable for achieving a good result.

The preference of spending free time in a sporty way also positively contributes to doing sports on a regular basis in Hungary ( $\beta_{HU}$ =.195, p≤.001) and Romania ( $\beta_{RO}$ =.272, p≤.001), and to doing recreational activities such as jogging in the case of the students in Hungary ( $\beta_{HU}$ =.103, p≤.001). It is to be noted, at the same time, however, that although students in Hungary are not characterized by an intensive consumption of high

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culture, in the case of those who are attracted to high culture, that preference reduces the frequency of doing sports ( $\beta_{HU}$ =-.093, p≤.01). For the results of the regressional analyses see Table 5.

Table 5. The Effects of Social Background Variables, Attitudes to Sport, and the Preferences of Spending Free Time in a Sporty-Playful Way on the Frequency of Doing Sport in the Countries Concerned (Beta-regressional coefficients). Source: IESA-TESSCEE 2015.

	Hungary	Romania	Ukraine	Slovakia
Gender (0 female, 1 male)	,021	,087	,042	,144
Objective material status (0-100 points)	,025	-,013	-,007	,212
Subjective material status (0-100 points)	,005	-,031	,147*	-,141
Type of settlement (0 rural, 1 city)	,045	,008	-,022	,115
Parents' educational level in classes	,032	,008	-,011	,131
Consumption of high culture (0-100)	-,093**	-,116	-,137	-,179
Societal activities and partying (0-100)	-,007	-,018	,009	-,040
Sports and games (0-100)	,195***	,272***	,109	,163
Solitary and recreational leisure activities	,103***	,042	-,014	,153
Competitive sport attitude (0-100)	,130***	,100	-,009	,123
Health preventive sport attitude (0-100)	,381***	,342***	,506***	,337*
$\mathbb{R}^2$	.304	.298	.308	.384

<sup>\*</sup> $p \le 0.05$ , \*\* $p \le 0.01$ , \*\*\* $p \le 0.001$ .

#### **Discussion and conclusions**

With our research we intended to identify the most important factors influencing the sports activities of students in Hungary's North-Plains Region and the adjacent territories across the borders. Three higher education institutions from Hungary, three from Transylvania (Romania), two from the Partium (Romania), two from the Highlands (Slovakia), three from Subcarpathia (Ukraine), and one from Vojvodina (Serbia) were involved in the survey, and the respondents as samples (N=2017) were selected in proportion to the total number of students in each institution. A characteristic feature of the region concerned is that the number of students coming to college or university from underprivileged backgrounds is very high. Also, the number of ethnic Hungarian students in the adjacent regions of the neighbouring countries is also very high, due to the common historic and cultural heritage. These institutions are exceptionally important strongholds of the survival ethnic Hungarians in the area, through bringing up new generations of professionals.

The findings suggest that although there are differences between the students in terms of the frequency of doing sports, these differences are not outstanding; students both in Hungary and in the cross-border areas tend to do little sport, usually less frequently than once a week. That is far from being sufficient for preserving their health. That, in turn, predicts serious problems for the future, since it is well-known from international statistics that as people become older and graduate from college and university, they tend to do even less sport (Green, 2014). Colleges and universities have a great responsibility in addressing the problem because, as our results suggest, the sports facilities, training courses and programmes offered by the higher education institutions are able to iron out the individual inequalities of students caused by different cultural backgrounds and different settlement types. In the case of the cultural differences, the formal and informal ways of relaying information and knowledge of the institutions play an important role. Inequalities caused by the different settlement types are smoothed out by the infrastructural possibilities and features of the university towns and cities. The colleges and universities shall only be able to play that balancing role only if the students are satisfied with the sports facilities of their respective institutions. In that respect, according to the responses of the students, the colleges and universities in Slovakia, Romania and Ukraine leave a lot to be desired. The number of students struggling with health problems that prevent them from doing sports is exceptionally high in the institutions of the Ukraine. It would therefore be desirable to pay attention to finding therapeutic exercises for them.

An examination of the social and individual factors influencing sports activities will reveal conspicuous differences between the two genders and in the financial situation of the individuals in Hungary, Romania (where the differences are the biggest) and also in the Ukraine. It seems that sport is still a masculine activity (Theune, 2016; Beissel, Giardina & Newman, 2016), and women find it somewhat less attractive. This finding contradicts the fact that health consciousness is more characteristic of women, and they attribute more importance to the role of sport in preserving human health than man do (Bollók et al., 2011). In spite of that fact, and despite innumerable (social) media campaigns about the necessity of regular physical exercise, the differences between the sexes, though change somewhat, still exist.

Male dominance in sports, and the powerful dependence of sports on the financial situation of the individuals is primarily characteristic of the institutions in Hungary, Romania and Ukraine. When elements connected to subjective choices and attitudes, way of life are also included in the explanatory model, the influence of the gender vanishes.

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We can see in our results that lack of spare time is the most important reason of inactive lifestyle according to answers of respondents. Effect of cultural capital (parents' educational level) and objective capital is not confirmed on our research, however, the subjective financial and social situation only remain an important factor in the case of the Ukrainian institutions. It may be caused by conflicts in Eastern Ukraine that have resulted in an economic crisis in the country, and the national currency – Hrivnya – has lost a lot of its value. The situation considerably damaged the living standards of the population, the subjective welfare, and made the differences between the poor and the wealthy even more spectacular, and increased the frustration of the small middle class and the populous lower class. Under these circumstances, a lot of students who come from underprivileged families are unable to meet the costs of doing some sport. It suggests that social background is exceptionally important in the sports activities of Subcarpathian students, and the institutions themselves are not able to compensate for the disadvantages.

The most important motivating factors are the attitudes attached to the health preservation role of sport and, in the case of the Hungarian sample, the competition and victory: the more important these are for the individual, the more motivated they are to do regular physical exercise. Consequently, the more successfully we are able to convince students about the importance of sport in preserving their health, the more students we will be able to involve in sports, regardless of their social background. A similarly positive result can be achieved if we introduce students into sporty, playful ways of spending their free time. These activities may afford experience that encourages students to incorporate sport into their daily life, or at least sport becomes a regular part of their life. For students who prefer to spend their free time in a physically active way (jogging, trekking, team- or individual games), thus training their bodies, will be fond of doing regular physical exercises. It is also possible to reverse the relationship: those, who do regular sports, will like to spend their free time with recreational physical activities and games.

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<sup>&</sup>lt;sup>i</sup>Institutional effects on Students' Academic Achievement (IESA) and Teacher Education Students Survey in Central and Eastern Europe (TESSCEE) researches were carried out within the SZAKTÁRNET project (TÁMOP- 4.1.2.B.2-13/1-2013-0009) coordinated by CHERD-Hungary (Center for Higher Education Research and Development) at the University of Debrecen.

ii For the characteristics of each factor see Author's (2015a) study.

The contradiction in case of Hungarian students between the frequency of sport and the rate of members pursuing sport at least once a week is that although the rate of students pursuing sport three times a week is the highest among them but the rate of inactive students is bigger, too, in comparison to the students from other institutes. Thus regarding the sport frequency of every Hungarian student, a rarer sport frequency can be detected.