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**MEFS**

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## **UNIVERSITY SPORTS IN THE SERVICE OF HEALTH EDUCATION: SPORTS HABITS AND MOTIVATIONS OF STUDENTS AT THE UNIVERSITY OF SZEGED**

### **EGYETEMI SPORT AZ EGÉSZSÉGNEVELÉS SZOLGÁLATÁBAN: A HALLGATÓK SPORTOLÁSI SZOKÁSAI ÉS SPORTMOTIVÁCIÓI A SZEGEDI TUDOMÁNYEGYETEMEN**

#### **ABSTRACT**

**Objective:** In our research we sought to answer the question of whether the participation of Szeged students in health-promoting recreational sports has changed in the last decade. We were also curious about the level at which the students of the University of Szeged (SZTE) are involved in sports activities, what sports, venues, services, organization they prefer, and whether gender differences can be detected in connection with all this.

**Hypotheses:** We assumed that the proportion of those who did sports at least 2-3 times a week was to increase. The primary aims of the students were to include relaxation and the preservation of health, thus, various fitness types would represent the most popular forms of physical activity. The majority of students was to be involved in sports activities outside

the university's framework, respecting affordability as the most important factor. It was supposed that men do sports and participate in competitions more frequently than women.

**Materials and methods:** Our primary research was conducted with the survey method, we targeted voluntary students using the e-study system of the university. The questionnaire were filled in by 2711 students (17% of whole population), out of which, following data cleaning, a total of n=2,621 remained in the sample. Data were then analyzed using the methods of descriptive statistics. Pearson's Chi square ( $\chi^2$ ) test was used in order to explore the relation between categorical variables.

**Results:** The proportion of students who do regular physical activity has been doubled. According to frequency of rec-

reational physical activity women were significantly more physically active than men. Those types of physical activity in which the cost implications were lower proved to be the most popular. Women were less open to competitive sports than men. The aims of the majority included stress relief and the preservation of health. Three fourths of students organized their physical activity on their own, but while men prefer sports in groups and sports communities, women preferred to exercise at home. When choosing a sports provider it was affordability and accessibility of the sports venue that played the most significant role.

**Conclusions:** Our hypotheses, except for one, have all been justified by research. Contrary to the expectations, the frequency of doing sports were significantly higher by women than men.

**Keywords:** university sports, physical activity, sports motivation, sports consumption, University of Szeged

### ABSZTRAKT

**Célkitűzés:** Kutatásunk során arra kerestük a választ, hogy változott-e a szegedi egyetemisták részvétele az egészségfejlesztő rekreációs sportban az utóbbi évtizedben. Kíváncsiak voltunk arra is, hogy a Szegedi Tudományegyetem (SZTE) hallgatói milyen szinten sportolnak, mi-féle sportágakat, helyszíneket, szolgáltatásokat, szervezetséget preferálnak, illetve kimutathatók-e nemenkénti eltérések mindezekkel kapcsolatban.

**Hipotézisek:** Feltételeztük, hogy a legalább heti 2-3 alkalommal sportolóik aránya növekedett az utolsó felmérés

óta; a sportoló egyetemisták célja a kapcsolódás és az egészségmegőrzés; a legnépszerűbb mozgásformák közé a fitneszirányzatok tartoznak; a legtöbben nem választanak szervezett kereteket a testmozgáshoz; a sportágválasztás legfontosabb szempontja a megfizethetőség. Valószínűsítettük továbbá, hogy a férfiak gyakrabban sportolnak és versenyeznek, mint a nők.

**Anyag és módszer:** Adataink lekérdezése az egyetemi elektronikus tanulmányi rendszeren keresztül, önkitöltős kérdőív segítségével valósult meg. A kérdőívet, 2711-en töltötték ki (a teljes populáció 17%-a), amiből adattisztítást követően  $n=2621$  állt rendelkezésünkre. A leíró statisztika módszerei mellett a kategóriális változók közötti kapcsolat feltárására a Pearson-féle Khi négyzet ( $\chi^2$ ) próbát használtunk.

**Eredmények:** Az előző felmérés óta a legalább egészségfejlesztő szintű testmozgást végző hallgatók aránya megduplázódott. A nők rekreációs sportolási gyakorisága szignifikánsan felülmúlta a férfiakét. A fitneszirányzatok és a kisebb költségvonzatú sportágak bizonyultak a legnépszerűbbnek. A legtöbben a feszültségoldás és az egészségmegőrzés céljából mozognak és a nők kevésbé nyitottak a versenyzésre, mint a férfiak. A hallgatók háromnegyed része maga szervezi testmozgását, de a férfiak gyakrabban sportolnak közösségben, míg a nők szívesebben mozognak otthon. A sport-szolgáltatás kiválasztásában a megfizethetőség és a megközelíthetőség a legfontosabb szempont.

**Következtetések:** Hipotéziseink egy kivételével beigazolódtak. A várt eredménnyel szemben ugyanis a nők a rekreációs sportolási gyakorisága felülmúlta a férfiakét.

**Kulcsszavak:** egyetemi sport, fizikai aktivitás, sportmotiváció, sportfogyasztás, Szegedi Tudományegyetem

### Introduction

It is the task and the responsibility of each institution of higher education to contribute actively to the development of health behavior of its students by offering them appropriate supportive environment. Higher education is almost the last opportunity for young adults to do sports free of charge and consciously develop a positive attitude to physical exercise (Pfau, 2017). Regular physical activity and former sports activities are factors that can later lead to an individual's increased sports consumption, as well as to spending more money on it (Paár et al., 2021). In addition, engagement in physical activities can mediate a pattern toward the individual's narrower and wider environment, thus it can contribute to greater health benefit in the entire society (Kraiciné, 2016). Increased physical activity also improves labor market opportunities for the workforce (Filo and Nagy, 2019). This is how sports transforms the seemingly intangible values, inherent in sportsmen, into the main tool of value creation (Stocker, 2013). It may mark the beginning of a hopeful tendency, that, in Hungary the GDP-proportionate state burdens of diseases caused by physical inactivity, have shown a diminishing ten-

dency in the past few decades (Ács et al., 2020a; Ács et al. 2020b).

The aim of sports in higher education is the popularization of physical activity in the widest possible circles of university students, with the aim of health improvement. Regular physical activity is almost the only possibility for university students to maintain and improve their physical and mental health and to eliminate the negative consequences of too much learning and sitting which are parts of their lifestyle. Another goal of university sports is to "entice" the university staff into the sports field, so that physical education could be a part of the university lifestyle as widely as possible (Bartha and Bartha, 2018). Both leisure time sports and competitive sports, when pursued at universities, require special institutional infrastructure, organization and organizational structure, and, with their specific norms, value system and rules they all contribute to the effectiveness of physical activities (Balogh, 2015; Györi, 2019).

Sports is one of the main components of university life; in addition to enriching someone's personality, it is also an important factor in community development: students who do sports can more easily form social relationships, and, they are not characterized by social exclusion either (Page et al., 2007; Földesi, 2010; Keresztes et al., 2014). On the other hand, it needs to be added, that physical activity, as well as related social activities - similarly to other social activities - are influenced by social and territorial factors: students, who repre-



sent higher social status and, also those, who come from more populous towns do sports more actively (Kovács, 2011).

The research results of Kovács (2017) support the idea that competitive sports done in secondary schools may contribute to an active sports life carried out by the individual later on at the university. In general, the transition of students between secondary school and higher education is not smooth at all; it means that both the frequency and the intensity of physical activity will decline. The young adult, who used to do sports regularly, on 2-3 occasions a week during his secondary school studies, finds himself at the crossroads at the university: continuing the sports career, or, preparing for civilian life instead (Neulinger, 2007; Bács, 2011). When compared with the earlier generations, the young people of our time give up regular exercises relatively young and they explain it with the lack of time (Laki and Nyerges, 2001; Bauer et al., 2013). But, according to Pfau (2017), the abandonment of regular physical activities cannot be explained with the lack of time; the reason why the young ones tend to discontinue their earlier active life is rather their lack of interest, or the appearance of new, more dominant pastimes. Irregularness, typical of student life, the abundance of other duties and the lack of a true community are also among the causes why students give up on sports at the beginning of their university studies (Palusek and Székely, 2020). Currently, higher education in Hungary makes it possible for 280,000 students to study at a variety of institutions and

become part of the intelligentsia later. 200,000 of them do their studies as full-time students (Central Statistical Office, 2018). Survey results of the Education Office show (n=16,758), that the frequency of sports activities done by Hungarian higher education students is below the desired minimum level: 28.8% of them is engaged in physical activities less frequently than weekly, 42.2% does sport once a week, and only 23.0% is engaged in some kind of sports activity at least 2-3 times per week, occasionally for a minimum of 30-40 minutes (Székely, 2015). This representative survey was repeated in 2019 (n=6,558) and the results have not shown any significant change concerning the sports frequency of university students; the slightly higher figures practically mean improvement to a negligent extent and were all within the margin of error (Palusek and Székely, 2020).

Higher education sports services and the environment they operate in, are significantly different from institution to institution. Sports service means using the available resources with the aim of creating 'added value' in the physical condition of the sports consumer (Demeter and Gelei, 2002). The environment includes those resources which are helpful in creating the 'added value'. When adapting the system Stocker and his colleagues (2015) brought about, several groups of resources are to be identified. These are as follow: tangible resources (e.g. the characteristics of sports in a given settlement including sports facilities, sports equipment, financial instruments),

human capital resources (e.g. the socio-demographic composition, motivation, cooperative and communication skills of students and teaching staff), social capital resources (e.g. the professional relationships within the university, sports clubs, sports associations, strategic partners, sponsors, brand image and reputation), and organizational capital resources (e.g. hierarchic relationships, formal and informal systems of planning and sharing tasks, tacit knowledge and organizational culture). The role of any university's sports strategy is to coordinate all these factors within the given legal and regulatory framework.

The University of Szeged (SZTE) is the knowledge centre of Hungary's Southern Great Plain region; it has 12 faculties, and it is considered a large university at national level, too. The fourth largest university of Hungary has approximately 8,000 employees and can be characterized by an institutional infrastructure of an area of 400,000 m<sup>2</sup>, which can accommodate 23,000 persons. It is important to note that the SZTE is an active participant in the processes of internationalization: due to the expanding variety of training programs on offer and the university's efficiency in the recruiting process, the international students of the university are increasing in number and currently they represent many faraway regions of the world as well (Györi, 2018). In 2010 at the SZTE there were students from 39 countries, while in 2013 the number of countries was 83; in 2016 as many as 105 countries sent a total of 3,208 students to the university of Szeged, a town on the

banks of the Tisza River. On the basis of these figures, it can be assumed that those students who come mostly from Western Europe, from countries representing more developed leisure time sports culture, will generate a higher demand for sports at the university in the future.

In addition, in 2016 there was a national survey initiated by the National Union of Students, and its results (MEFS, 2016) pointed out that only 18.7% of the students of the SZTE do sports at least 2-3 times a week, a frequency, that would make it possible for them to preserve their good health. This figure is below the national university average (23.0%). Considering this indicator, the SZTE is the 27th in the list of the surveyed 41 universities, meaning, that it has a place at the beginning of the last third of the rankings. The figures given by Keresztes and his colleagues (2014) are somewhat different. According to their investigations it was 38.6% of SZTE students who did sports three times a week, a recommended frequency. This figure is not too high, either.

Although the University of Szeged offers sports services to its students, but those definitely need to be further developed. The sports and recreational services of the SZTE include various levels of students' sports activities, ranging from compulsory Physical Education (henceforth: PE) classes (2 semesters) to recreational and elite sports. The compulsory PE classes are taught by teachers of the SZTE Sports Centre: they teach approximately 6,000 students per semester, who can choose from 300 courses represent-

ing more than 30 types of sports. Additional tasks of the Sports Centre include to prepare their students for competitions and have them compete in university sports events. In addition, the Centre is in charge of organizing a variety of recreational events, including for example skating, swimming and water sports programs, ski camps. Considering the human resources of the university's sports services, it includes sports professionals and service staff, while the objectified resources contain items of the necessary infrastructure, for example, sports grounds, sports equipment, sports lab.

Offering students sports services is much more, than the mere provision of sports; there are related investigations as well, including fitness, sports diagnostic and sports health surveys, all of which serve the bases for thorough sports science research. The research into these related areas can be done through the cooperation of several university departments and institutes: the university's Institute of Physical Education and Sports Science, responsible for coaching and PE teacher training, is at the forefront of these activities. Within the framework of the Széchenyi 2020 program, the institute coordinated a 4-year project, which, in general, was aimed to improve quality in higher education (EFOP-3.4.3-16). The Institute's Health Education subproject took place within this major project and it was primarily aimed at promoting university sports and popularizing physical activities among students in order to improve their health.

Preceding this project work the Hungari-

an University Sports Federation (MEFS) had prepared its professional program plan concerning recreational and competitive sports in Hungary's institutions of higher education (2013), and had put it into social debate. The Alfréd Hajós Plan was then submitted to the minister in charge of sports politics by the Hungarian Olympic Committee. In this document – in accordance with the main ideas to be found in the mission statement of the International University Sports Federation (FISU) – recommendations and precise instructions were given in connection with the support of university sports, physical education, leisure time sports and the development of sports infrastructure in higher education. The program offered outstanding support for those types of sports, which, in general, are able to attract masses of students (MEFS, 2013). Within the framework of the Alfréd Hajós Plan, the SZTE and the MEFS signed an agreement for cooperation, and as part of it, the SZTE undertook the development of sports services for its students together with the elaboration of a more efficient communication strategy. In addition, a sports developmental program was elaborated, which was aligned with the university's Plan for Institutional Development. Within the framework of the Health Education subproject, the areas focusing on students' health education and the institution's sports services were added to the institution's professional profile: new sports and health programs and services were elaborated and the existing ones were improved. With the implementation of creative online ideas

– taking the advantage of the advent of information technology and digital connections in sports (Bartha et al. 2021) –, the sub-project even performed excellently when the coercive measures caused by COVID-19 led to a significant decline in physical activity across the country according to the surveys (Morvay-Sey et al., 2020).

In addition, the best athletes of the university got additional support through a system of special scholarships and career models, and, as a result, the university was able to acquire the right to use its name in several famous sports teams, including the Naturtex SZTE-SZEDEÁK men's basketball team and the Szeged SZTE women's water polo team.

### **Objective**

Our research is aimed to explore the sports motivation and sports consumption of the students of the University of Szeged, using the results of a questionnaire-based survey. We want to find answers to the question about the changes of sports activities done by the students in the past decade. In our research it is the recreational sports that are primarily considered, and, in connection with them we want to find out details concerning the sporting level of students, the types of sports, the venues, the services and the organizational background they prefer. Also, we are eager to investigate and quantify gender-related differences in our group of respondents.

### **Hypotheses**

Based on our research into specialist lit-

erature our hypotheses are as follow:

First, it is assumed (H1) that the proportion of those students who do sports at least 2-3 times a week - a frequency, essential for the preservation of good health – is to increase in the last decade; (H2) men tend to do sports more frequently, then women; (H3) it is the various fitness activities which are the most popular with students; (H4) men participate in competitions more frequently than women; (H5) the most significant motivational factors of student sports are recreation and the preservation of good health; (H6) the proportion of those who do sports in an organized form is low; (H7) the most significant aspect of choosing a sports provider is affordability. Other research questions include gender-related differences. We also want to find out if it is men or women who prefer community sports, and, also if there are any differences between the two groups concerning their choice of sports venues.

### **Materials and methods**

Data collection took place from September 17, 2020 to October 2, 2020, following the first wave of COVID-19 infections; it was the period, when the epidemic restrictions were lifted and the students were allowed to return to their classes and participate in their regular social activities. In the survey anonymous online questionnaires were used and they were published in COOSPACE, the digital study system of the SZTE. The questionnaires were sent out to a total of 16,393 students and 2,711 (17%) of them filled them in. After data cleaning, 2,621 ques-



tionnaires were eventually analyzed; in the group of respondents there were 928 men (35.4%) and 1,693 women (64.6%). The questionnaires, compiled by staff from the Institute of Physical Education and Sports Science, as well as from the Directorate for Quality Management and Strategy, had 23 closed and 7 open questions. The questionnaire focused on basic sociodemographic data (gender, age, education, place of residence), anthropometric details (height, weight), as well as on leisure time and sports consumption habits of respondents. Data analysis was performed using the methods of descriptive statistics. In order to explore the relationship between categorical variables Pearson's chi square test ( $\chi^2$ ) was used. Within the framework of this paper the authors aimed to investigate those issues, which are related to students' sports habits and motivations.

### Results

37.4% of respondents is engaged in some kind of sports activity at least twice a week, occasionally they do sports on 4 or 5 occasions, or, some, on a daily basis. 18.4 % of the students of the SZTE answered that they do sports twice or three times a week. The majority of students (38,0%) does sports only once a week, and, approximately 1 out of 5 students is involved in some kind of physical activity once or twice a month. 6.7% of the respondents does not do sports. Although, concerning the frequency of doing some kind of sports activity, similar tendencies can be seen in the group of men and women, the statistical test has

proven some difference between the two groups (Table 1). It is only the group of those, who do sports once a week, that shows no significant difference between men and women (37.5% and 38.2%). In the group of those who do sports on a daily basis, men are overrepresented (8.6% and 6.7%), while in the group of recreational minimalism, i.e. those, who do physical activity at least twice a week, the group of women feature a significantly higher indicator. Approximately 4 women out of ten and only 3 men out of ten do physical activities at least on two occasions per week. It can be concluded from the above that concerning the group of those who do physical exercises only once a month, or, who show total physical inactivity, men perform much worse than women. In conclusion it can be stated that 1-3 occasions per month, which are insufficient from the point of view of health protection, or, concerning total inactivity, men perform much worse than women; although, when examining the results of both men and women, men feature the lowest number of those, too, who do not do sports (7.6 and 6.3%).

*Table 2* illustrates those types of sports which are the most popular with university students. Considering the whole sample, they are given in descending order; the results of men and women are provided separately. It is obvious that in this case a significant difference has been found between the preferences of men and women. Every fourth respondent (25.1%) marked fitness as the most favourite physical activity (conditioning,

Table 1. Frequency of doing sports among the students of the SZTE  
1. táblázat: Az SZTE hallgatóinak sportolási gyakorisága

	<b>Total (n=2,621)</b>	<b>Men (n=928)</b>	<b>Women (n=1,693)</b>	$\chi^2$
<b>Frequency of doing sport</b>				40.3%***
Daily	194 (7.4%)	80 (8.6%)	114 (6.7%)	
4-5 occasions per week	303 (11.6%)	91 (9.8%)	212 (12.5%)	
2-3 occasions per week	481 (18.4%)	129 (13.9%)	352 (20.8%)	
Once a week	995 (38.0%)	348 (37.5%)	647 (38.2%)	
1-2 occasions per month	471 (18.0%)	209 (22.5%)	262 (15.5%)	
Never	176 (6.7%)	70 (7.6%)	106 (6.3%)	
<i>Did not respond</i>	1 (0.0%)	1 (0.0%)	-	

Source: Authors' edition

Forrás: saját szerkesztés

activities done with music and dancing). When evaluating the list as a whole, running (9.7%) and cycling (8.4%) were the second and the third, but when the types of sports were separated by gender, in the group of men it was football that was the second (12.6%), cycling the third (11.2%) and running only the fourth. Women marked running (11.9%) after fitness as their second favourite type of physical activities, yoga was the third (11.4%) and cycling was only the fourth. Typically, women were more interested in horseback riding, as well as in yoga. Eight times more women than men chose yoga as their favourite physical activity. When considering endurance sports, swimming has proven the most

popular: in the group of men it was the fifth most popular, while in the group of women it took the seventh place. Martial arts were chosen by twice as many men than women. The table clearly illustrates that, when considering ballgames, men choose basketball, while women opt for volleyball. The popularity of handball is roughly the same in both groups. When considering racket sports (tennis, table tennis, squash) no significant difference was found between the two groups (Table 2).

The questionnaire included a question asking about students' preference of doing sports on their own or, as part of a team. The number of respondents who would do sports on their own slightly

Table 2. The most popular types of sports pursued by the students of the SZTE  
 2. táblázat: Az SZTE hallgatóinak legnépszerűbb sportágai

	<b>Total (n=2,621)</b>	<b>Men (n=928)</b>	<b>Women (n=1,693)</b>	$\chi^2$
<b>Most popular types of sport</b>				47.0***
Fitness	659 (25.1%)	215 (26.6%)	444 (29.5%)	
Running	255 (9.7%)	76 (9.4%)	179 (11.9%)	
Cycling	219 (8.4%)	90 (11.2%)	129 (8.6%)	
Other	203 (7.7%)	96 (11.9%)	107 (7.1%)	
Yoga	183 (7.0%)	11 (1.4%)	172 (11.4%)	
Swimming	138 (5.3%)	53 (6.6%)	85 (5.7%)	
Horseback riding	135 (5.2%)	8 (1.0%)	127 (8.4%)	
Volleyball	124 (4.7%)	23 (2.9%)	101 (6.7%)	
Football	113 (4.3%)	102 (12.6%)	11 (0.7%)	
Martial arts	90 (3.4%)	48 (5.9%)	42 (2.8%)	
Basketball	67 (2.6%)	40 (5.0%)	27 (1.8%)	
Tennis	47 (1.8%)	13 (1.7%)	33 (2.2%)	
Tabletennis	37 (1.4%)	11 (1.4%)	13 (0.9%)	
Squash	14 (0.5%)	7 (0.9%)	7 (0.5%)	
Did not respond	311 (11.9%)	122 (13.0%)	190 (11.2%)	

Source: Authors' edition

Forrás: saját szerkesztés

exceeded the number of those who preferred doing sports in a group. This latter option was more typical of men, while half of the women marked the first option, and the other half marked the sec-

ond alternative (Table 3). In this respect a significant difference was found between the groups of men and women.

The qualitative and quantitative characteristic features of doing sports can best

Table 3. The individual or community face of doing sports among the students of the SZTE  
3. táblázat: A sportolás egyéni, vagy közösségi jellege az SZTE hallgatóinak körében

	Total (n=2,621)	Men (n=928)	Women (n=1,693)	$\chi^2$
<b>Doing sports on one's own/ in group</b>				
On one's own	1,154 (44.0%)	360 (38.8%)	794 (46.9%)	13.8***
In a group	1,260 (48.1%)	484 (52.2%)	776 (45.8%)	
<i>Did not respond</i>	207 (7.9%)	84 (9.1%)	123 (7.3%)	

Source: Authors' edition  
Forrás: saját szerkesztés

be defined by the level of competitions, a sportsperson is preparing for. The highest level of competitions the students of the SZTE participate in demonstrates a statistically proven difference between men and women (Table 4). According to aggregate results, about half of respondents participates in events and competitions of mass and hobby sports. In this respect there is only a slight difference between the groups of men and women (51.2% and 56.9%). At the same time, at international level, or, at the level of sports associations or regional events (upper three categories), men are represented in higher proportions than women. In international sports events, national championships and county-level or city-level championships the proportion of men's participation was by 8.2 % higher than that of women; this result was due to their more active participation in lower-level (county-level, or city-level) events. The

number and proportion of those who participated in highest-level (international) sports events was low in both groups (20 men, 22 women). In this respect it needs to be added, too, that proportionately fewer women than men can boast with past sports careers and only some of the women plan to participate in competitive sports in the future.  
*Table 5* shows the main components of students' motivation. Respondents were able to choose from several categories. Having overviewed the answers to the question 'Who motivated you to start doing sports?', significant statistical differences were found between men and women regarding their answers. In the group of men 76.0% answered that it was their own decision, while in the group of women 77.7% gave the same answer. The second most frequent answer in both groups was the motivation of friends (28.3% and 25.4%), and, the third one

Table 4. The students's attitude to competition at the SZTE  
 4. táblázat: A Szegedi Tudományegyetem hallgatóinak versenyzési szintje

	<b>Total (n=2,621)</b>	<b>Men (n=928)</b>	<b>Women (n=1,693)</b>	<b><math>\chi^2</math></b>
<b>Level of competitions</b>				<b>51.7***</b>
International competitions	42 (1.6 %)	20 (2.4%)	22 (1.4%)	
National competitions, Hungarian University Sports Federation	137 (5.3%)	57 (6.8%)	80 (5.1%)	
County-level and city-level competitions	152 (5.8%)	84 (9.9%)	68 (4.4%)	
Mass and hobby sports	1,321 (50.4%)	433 (51.2%)	888 (56.9%)	
Did not participate in competitions but will likely do it	58 (2.2%)	28 (3.3%)	30 (1.8%)	
Did not participate in competitions and does not plan to do it	697 (26.6%)	223 (26.4%)	474 (30.3%)	
Did not respond	214 (8.2%)	83 (8.9%)	131 (7.7%)	

Source: Authors' edition

Forrás: saját szerkesztés

was the influence of parents (18.7% and 20.1%). Social environment was marked by the students as the fourth most important factor. In case of men the fifth motivation was that of a famous sportsman (7.8%), while women's answers marked the influence of their sibling(s) instead as an important one (3.2%). In the group of men siblings played a less important role and they marked them only as the 6th most important influence (5.3%). In the group of women it was their PE teacher who played the 6th most important role. In the 7th place men marked their

relatives, while their PE teachers got the fewest votes and came as the 8th, the last one on the list (4.3%). In the group of women the last two places went to the categories of 'Famous sportsperson' and 'Relatives'.

Considering the aim of students, on the basis of our questionnaire-based survey, there was no significant difference between the groups of men and women (Regarding the answers to the question 'What was your main aim with doing sports?', the statistical test did not show any significant difference by gender. Out



Table 5. The students' sports motivation at the SZTE  
 5. táblázat: Az SZTE hallgatóinak sportmotivációi

	Men (n=928)	Women (n=1,693)	$\chi^2$
<b>Motivating person(s)*</b>			51.7***
Oneself	20 (2.4%)	22 (1.4%)	
Parent	57 (6.8%)	80 (5.1%)	
<i>Sibling</i>	84 (9.9%)	68 (4.4%)	
<i>Relative</i>	433 (51.2%)	888 (56.9%)	
<i>PE teacher</i>	28 (3.3%)	30 (1.8%)	
<i>Friend</i>	223 (26.4%)	474 (30.3%)	
Social environment	124 (13.4%)	215 (12.9%)	
Famous sportsperson	73 (7.8%)	55 (3.2%)	
Did not respond	85 (9.1%)	140 (8.3%)	
<b>Motivation*</b>			
More beautiful appearance			
(body shaping)	537 (57.8%)	984 (58.1%)	
Achievements	87 (9.4%)	137 (8.0%)	
Preservation of health	609 (65.6%)	1,131 (66.8%)	
Stress relief, recreation	590 (63.5%)	1,138 (67.2%)	
Company	154 (16.5%)	310 (18.3%)	
Other	15 (1.6%)	34 (2.0%)	
<i>Did not respond</i>	91 (9.8%)	148 (8.7%)	

\*Note: respondents could mark several categories.

Source: Authors' edition

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Table 6. Venues and the organization of sports done by the students of the SZTE

6. táblázat: Az SZTE hallgatóinak sportolási helyszínei és szervezeti keretei

	Men (n=928)	Women (n=1,693)	$\chi^2$
<b>Where do you do sports? *</b>			51.7***
In specialized areas	410 (44.1%)	697 (41.1%)	
Parks, public areas	376 (40.5%)	615 (36.3%)	
<i>Dormitory</i>	72 (7.5%)	110 (6.5%)	
<i>At home</i>	289 (31.1%)	776 (45.8%)	
<i>University sports facility</i>	109 (11.7%)	207 (12.2%)	
<i>Association sports grounds</i>	135 (14.5%)	129 (7.6%)	
Did not respond	85 (9.1%)	124 (7.3%)	
<b>Who organizes your sports activities?*</b>			49.7***
SZTE	50 (5.3%)	116 (6.8%)	
EHÖK SE (Students' Government Sports Assoc.)	4 (0.4%)	1 (0.1%)	
Szeged Recreational Sports Club	4 ( 0.4%)	6 (0.3%)	
Sports Club outside the university	204 (21.9%)	306 (18.0%)	
With friends	354 (38.1%)	493 (29.1%)	
On one's own	616 (66.3%)	1,230 (72.6%)	
<i>Did not respond</i>	87 (9.3%)	140 (8.2%)	

\*Note: respondents could mark several categories.

Source: Authors' edition

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of 10 respondents 6-7 men and women answered that they do sports to preserve their health. The same result applies to those respondents, who, by doing sports, intend to relieve their stress and anxiety levels. 6 respondents selected body shaping as their main goal. Only 2 people out of ten do sports with the aim of 'enjoying' the company of other people, and only 1 person in each group was interested in sports performance, i.e. in being successful (Table 5).

Answering the question referring to the place where students prefer to do sports, there was a statistically verifiable difference regarding the answers of men and women (Table 6). Approximately half of the men (44.1%) answered that they do sports in special sports rooms (gym, fitness room). Many of them (40.5%) use outdoor areas in parks or other public areas for sports recreational purposes (running tracks, outdoor fitness tools), while approximately one third of respondents (31.1%) does physical activities in their homes. Respondents marked other places, such as sports associations and university facilities, or dormitories to a much lesser extent.

Many women (45.8%), when doing physical activities, prefer their homes to public places. 41.1% of them frequent the sports facilities of service providers, while about two fifths of them (36.3%) like public areas and parks as well. The university and sports association facilities, as well as the dormitories are among the least frequented places.

When considering the organizational forms of sport, proportionately some dif-

ferences can be identified between men and women. 73.2% of men and 79.2% of women prefer to organize their own sports activities. Men tend to organize their own activities together with friends in a higher proportion than women (66.3% and 72.6%). The differences are less significant, but men tend to participate in association sports in higher numbers, than women (21.9% vs 18.0%). It is only a small proportion of students who do sports activities organized by the university's Sports Centre or the Institute of Physical Education and Sports Science (Men: 5.3%, women: 6.8%). The university-related organization, the Szeged Recreational Sports Club and the Sports Association of the Student Government (EHÖK SE) offer sports possibilities for only a very small number of students.

The results in the category of sports provision were not significantly different between men and women. This is why the points are given without dividing the category by gender (Table 7). The first question intended to enquire about students' preferences concerning service providers in sports (several answers could be marked). Respondents thought that the most important point is the affordable price (69.7%). Then, easy accessibility followed (44.4%) and the long opening hours (34.9%). These aspects are followed by the opportunity of doing quality sports in the given sports type, high quality facilities, well-prepared experts and the possibility to choose from a broad range of sports. It was only a few respondents who underlined the importance of factors such as the circle of

guests and visitors, the external physical circumstances and the availability of supplementary services.

When being asked about the use of fee-paying services, 41,0% of the respondents answered with 'yes' and a little more than half of them said that they do not use fee-paying services (50.6%).

In the group of those who pay for the chosen service students pay a monthly 6,000-10,000 HUF (28.2%), or, 4,000-6,000 HUF (26.1%). One third of the students pays less than 4,000 HUF per month and about 13.5% pay more than 10,000 HUF.

### **Discussion and conclusions**

In specialist literature in Hungary most experts agree that at Hungarian universities the proportion of students who do sports at Hungarian universities is at least 60% of the entire student population (Kosztin and Balatoni, 2021). In our research we have come to the conclusion that the portion of students at the University of Szeged who do sports at least once a week is 75.4%, which is a very favourable ratio. After the analysis of the data of our large immersion sample it can be stated that the proportion of students who do sports on two or three occasions a week, a frequency, necessary for good health, has doubled (18.7% vs. 37.4%) since the last surveys conducted in 2011 (n=1,333) and 2016 (MEFS). This figure is in accordance with the one, calculated by the Office of Education in 2019 during a research into the way of life of university students in Hungary. At the University of Szeged the representative sample was

431 (n=431) and the percentage reached 37.3%.

The proportion of those students who regularly do sports (1x per week) was found significantly higher (17.2% vs 38.0%) and those who do sports only rarely or do not do sports at all was found lower (45.5% vs 24.7%) by our current research. Our indicators concerning students' physical activities are more favourable than the results of Fábri's survey (Fábri, 2002), who concluded that one third of the students was active in sports. In addition, our figures are higher than those of Kovács (2011), who measured students' physical activity at the University of Debrecen. The good results achieved at the University of Szeged are definitely due to the high quality professional work of our experts, as well as the extra finances, provided by the health education subproject of the EFOP-3.4.3-16 project in the period from 2017 to 2021. On the other hand, our investigations do not support those widespread statements common in specialist literature (Kosztin and Balatoni, 2021), according to which men tend to do sports in larger numbers than women. In our sample, in relation to the two-occasion-weekly recreational minimum, women have achieved significantly better results than men. It was only the category of daily sports activities where men surpassed women.

Concerning the choice of a certain type of sports, our results are in accordance with the general tendencies of student sports. Former surveys have already made it clear that it is the categories of accessibility, as well as moderate financ-

Table 7. The importance of issues for students of the SZTE when choosing a sports service provider

7. táblázat: A sportszolgáltatás kiválasztásának szempontjai az SZTE hallgatóinak körében

		Total sample n=2,621 (%)
<b>Issues in the area of recreational services*</b>		
	Affordable price	1,829 (69.7%)
	Easy accessibility	1,165 (44.4%)
	<i>Long opening hours</i>	917 (34.9%)
	<i>Opportunity to do quality sports</i>	909 (34.6%)
	<i>Quality condition</i>	710 (27.0%)
	<i>Well-prepared experts</i>	628 (23.9%)
	Opportunity to choose from a range of sports	511 (19.5%)
	Guest- and visitor circle	155 (5.9%)
	External physical circumstances	51 (1.9%)
	Supplementary services	40 (1.5%)
	Did not respond	224 (8.5%)
<b>Use of fee-paying services</b>		
	Yes	1,074 (41.0%)
	<i>No</i>	1,327 (50.6%)
	Did not respond	220 (8.4%)
<b>Monthly expenditure on the chosen sports service (n=1,293)</b>		
	Less than 2,000 HUF	176 (13.6%)
	2,000-4,000 HUF	241 (18.6%)
	4,000-6,000 HUF	337 (26.1%)
	6,000-10,000 HUF	365 (28.2%)
	more than 10,000 HUF	174 (13.5%)
	Did not respond	1,328 (50.0%)

\*Note: Respondents could mark several categories.

Source: Authors' edition

Forrás: saját szerkesztés



es (no fees) are the most important factors for students when choosing a type of recreational activities or sports (Pfau, 2017). Various fitness trends are the most popular at the University of Szeged. Fitness is followed by types of sports with less cost implications, for example, running and cycling. As we have seen, men's choice of types of sports significantly differs from the preferences of women. In the group of men it is football, basketball and martial arts, which are among the most popular sports, while women are more interested in yoga, horseback riding and volleyball. A larger proportion of students at the University of Szeged, primarily men, prefer doing sports with friends than doing physical activities on their own.

The results seem to be more favourable concerning the category of competitive sports, than those published in specialist literature. Kovács (2017) estimated that the proportion of students who do sports for recreational purposes is about 10-20%, and, in his view, the percentage of those, who do competitive sports is only between 3-6%. According to Pfau's research (2014) in Debrecen, the competitors' proportion was 6.5%. By comparison, half of the students who were asked at the University of Szeged answered, that they do participate in hobby sports and mass sports competitions; also, it was 12.7% of the students who take part in sports competitions at international, national, sports association, county- or local levels. At the same time there is a statistically proven difference between men and women concerning

their participation in sports competitions: it is the group of men who participate in larger proportion in international, national, county-level and local sports events, while women in general do competitive sports in smaller numbers and they do not plan future sports careers either.

Our research included the topic of sports motivation as well. According to specialist literature the preservation of health, recreation and the enjoyment of physical activities represent the main factors in student motivation (Neulinger, 2007; Szabó, 2013; Kovács, 2011). This statement is supported by our own research, too, since approximately three fourths of our respondents made similar statements. The surveys done in Győr and Veszprém emphasized the significance of attractive appearance as one of the main factors of motivation in case of women (Pfau, 2014). Székely and Palusek (2021) also pointed out that appearance is getting more and more attention. Our survey supports the very same idea: what is more, it was not only the group of women, but two thirds of men's answers marked that achieving a more attractive appearance was among their priorities. The majority of respondents (men 76,0%, women 77,7%) started to do sports on their own decision. In case of men it was the social environment, the persuasion of friends that also played a significant role in decision making, while women tended to be initially influenced by parents, family members and their PE teachers.

In one part of our research there were questions concerning the sports venues the students of the University of Szeged

attended, as well as the organizational background to their activities. Three fourths of both men and women organize their sports activities themselves, but, apart from this similarity, there are some differences between the two groups. It is a larger proportion of men than women who prefer to do sports or to go to training sessions together with their friends. Relatively few students do sports within the framework of university organizations (men 5.3%, women 6.8%), while about one fourth of men and one fifth of women are engaged in sports activities in a variety of sports clubs and sports associations. These figures to a large extent reflect the attitude of the entire adult Hungarian population as measured by the Eurobarometer 472 (2018). This collection of surveys in relation to EU countries informs readers about sports habits within the EU as well. There were 472 (2018) representative ( $N^{EU}=128,031$ ,  $N^{HU}=1,038$ ) surveys conducted and according to the latest data of 2017, it was only 4 % of the adult Hungarian sports-people, who were members of sports associations. This figure is only about one third of the EU average. Unfortunately, at the University of Szeged, in comparison with total student numbers, currently the sports-related NGO-s (sports clubs) are only minimally able to meet students' need in the area of sports and recreational activities.

There were statistically verifiable differences between the preferences of men and women regarding sports venues. Both men and women like to use the facilities of sports providers, but men

tend to use the recreational possibilities offered by public areas and the facilities belonging to a variety of sports associations in larger proportions. On the other hand, women tend to do physical activities in their homes. It was only 1 student out of 8 respondents who uses the sports facilities of the University of Szeged.

On the basis of our survey it can be concluded, that, the basic aspects of choosing sports providers do not have significant differences between the groups of men and women. Similarly to Szabó's research (2013) conducted in Debrecen, the majority of respondents considered the payable fees as the main factor influencing their choice. The accessibility of the sports venue was the second most important issue for them. In addition, according to the marked answers, the long opening hours, the possibilities to be engaged in quality sports, and the high quality of sports facilities also play a role for them.

Although, according to Szabó (2013), the fee-paying sports services offered at the University of Szeged are more varied and more colourful than those of other universities, as the results of our own research show, it is only two fifths of the students who are willing to pay for sports services; at the time of the survey this sum was from 4,000 to 10,000 HUF per person per month.

This paper investigated the sports habits and motivations of students at the University of Szeged; the data were obtained with the help of an online questionnaire. The research used large sample, and it was able to reach 17.0% of the univer-

sity's student population. The issues the questionnaire focused on included students' sports frequency, motivation, the distribution by types of sports, levels of competitions, as well as the choice of sports venues, organizations, and students' preferences when choosing sports providers. Our analysis was carried out using the methods of descriptive statistics.

Our hypotheses, except for one, have all been justified by research. (H1): On the basis of this analysis it can be stated, that the proportion of those students who regularly do sports, at least on 2 or 3 occasions weekly (a frequency, that can be called a minimum from the point of view of health preservation), has actually doubled in the last decade. (H2): Contrary to the expectations, the frequency of doing sports in the group of women surpassed the frequency of men. Women achieved significantly better results in the area of regular recreational sports activities than men, who, on the other hand, surpassed the group of women in the categories of daily, and at the other end of the scale, in random sports activities, as well as in inactivity. (H3): The students' choice of type of sports reflects the general tendencies of university sports: various fitness trends as well as low-cost sports activities are among the most popular ones, but, there is a difference concerning the preferences of men and women. Student athletes go to various competitions; those students who do recreational sports are ready to attend hobby sports and mass sports events. (H4): It is the men who outnumber women in their readiness to

participate in sports competitions at international, sports association and other levels. Women are less open to compete. (H5): When evaluating the motivations of the students of the University of Szeged, it can be seen that stress relief, recreation, health preservation and body shaping are the factors that primarily motivate them. While men are influenced by their social environment and friends when starting to do sports, women are rather encouraged by parents, family members and their PE teachers. (H6): Three fourths of the respondents organize their sports activities on their own, but men more frequently do sports activities together with friends, or, within the framework of a sports association than women. Consequently, men use sports association facilities, sports grounds, or, outdoor recreational facilities in larger proportions, than women. When doing sports or recreational activities, women prefer their own homes. The sports facilities of the University of Szeged are used by a relatively small number of students. (H7): When choosing a sports provider, low costs, long opening hours and easy accessibility are the most important factors for students. Less than half of the students use fee-paying sports services.

Eventually, the limitations of our research also need to be mentioned. When interpreting the data received, it needs to be considered that the survey was done using a questionnaire, which was compiled with the purpose of enquiring about sports habits. This fact may mean that the questionnaire was primarily filled in by proportionately more students who are

active in sports, and those, who are not interested in physical activities, did not participate in the survey. This characteristic feature occasionally may have led researchers to the overestimation of sports frequency. Further, it needs to be considered, too, that more women ( $n=1,693$ ) than men ( $n=928$ ) participated in our survey. It is not surprising, since, when surveys are conducted on a voluntary basis, in general women are more willing to fill in questionnaires, than men. In summary, it is thought, that our research can provide valuable data for the further development of university sports in Hungary in general, meanwhile, it may promote the health education of the current and future generations of students. Considering the practical implications of the research, it offers several strong points for the University of Szeged, too, namely, it hints at how to prepare and improve its sports services and infrastructure. At the same time, sports professionals, experts and managers can also find useful information in our survey results.

Eventually, we would like to express our gratitude to the staff of the University's Directorate for Quality Management and Strategy, to the members of the Institute of Physical Education and Sports Science, as well as to the teachers of the SZTE Sports Centre for their enthusiasm and perseverance in carrying out this research.

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