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Sporting habits of university students in Hungary

Authors' Contribution:
A Study Design
B Data Collection
C Statistical Analysis
D Data Interpretation
E Manuscript Preparation
F Literature Search
G Funds Collection

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abstract

Background: As physical activity, health, and the quality of life are strongly related. Leisure habits of students of the University of Debrecen, Hungary, were assessed in a recent survey. The survey used both online and offline (written) questionnaires. In the survey sport was defined as a physical activity outside of compulsory Physical Education (PE) classes that lasts for at least half an hour. In the questionnaire the background characteristics were profession, age, body weight, height, gender, and whether the student has compulsory PE classes.

Material and methods: Altogether 857 students from all faculties of the University completed the survey. 60.4% of the respondents were females and 39.6% males; their average age was 21.5±2.7 (mean ± SD) years. Thirty-seven percent of them participate in PE classes.

Results: Respondents reported 4.6±1.9 and 6.5±2.2 hours of free-time during the weekdays and weekends on average, respectively. During weekdays, students spend 1.7±1.2 hours watching TV and 4.6±2.0 hours on the internet, while 3.9±1.9 hours are dedicated for studying. On weekends, these activities take up approximately a half an hour more. Only 67.9% of the respondents participate regularly in sports activities.

Conclusions: It is regrettable that 37% of the interviewed students do not engage in physical activity outside the compulsory PE classes at all, while they spend more than 6 hours watching TV or surfing the Internet. Feeling responsible for the quality of life of future generations we must encourage activities that change unhealthy life-styles while promoting sports activities.

Key words: university students, free-time, physical activity, motivation.

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INTRODUCTION

Through motorization and the achievements of civilization, the 21st century has provided us with comfort and envied living conditions. But with this comfort a physically inactive, sedentary lifestyle [1, 2] also came along, which has spread throughout the world over the last decades, becoming a major contributor to the development of many illnesses, and imposing enormous burdens on the healthcare system. According to Ding et al. [3], the economic burden imposed on societies in terms of physical inactivity can be measured in billions of dollars, which is not negligible in domestic terms either [4].

Physical inactivity plays a role in the development of diseases, such as the CAD disease [5–7], stroke [8], type 2 diabetes [9], obesity [10–12], colon cancer [13, 14], and osteoporosis [15, 16]. It has also been justified that the proper level of physical activity and sports has a (strong) reverse correlation with cardiovascular diseases [17, 18]. Physical activity and sports can reduce the risk of death from cardiovascular disease by as much as 30–40% ([19, 20]. Active, sporty lifestyle provides additional health benefits, such as the support of bone health [21], prevention of various diseases [22, 23]; furthermore, it positively correlates with psychological well-being [24], quality of life [25] and life expectancy [26, 27].

The prevalence of obesity is becoming an increasingly worrying issue not only in Hungary but also in global terms. According to the latest data, Hungary holds the 4th place in the world rankings right after the US, Mexico and New Zealand [28]. As per a recent domestic large-sample (n = 43,287) research, Rurik et al. [29] reported data of a less positive nature than the 2014 survey. It was found that the ratio of overweight and obese men is 40% and 32%, respectively, while the ratio in the case of women in both categories is almost the same, equaling 32%. Among the younger population, that is in the group of people between 18 and 34 years of age, already 32.7% of men are overweight and 18.2% obese [29].

The importance of regular physical and sports activity – which can be an excellent and cost-effective tool for prevention – is indisputable, regardless of age. According to the Eurobarometer 2014 survey [30], 8% of the EU's population spent 5 or more times a week playing sports in 2013, a drop of 1% compared to the 2009 Eurobarometer survey; the proportion of those who practice sports on a regular basis comprises 33% of the EU's population, an increase of 2% compared to the previous survey. The 2017 Eurobarometer report shows [31] that 7% of the population of the EU regularly plays sports, a decrease of 1% compared to the previous survey, while the proportion of those playing sports 1–4 times a week (33%) was the same in 2017, as in the previous survey of 2013; however, the proportion of inactive EU citizens (who never play sports) increased from 42% to 46%.

Sedentary lifestyle and passive leisure activities, unfortunately, characterize the student population as well. Murányi [32] conducted an online, questionnaire-based survey among full-time university students (N = 1570) on their leisure activities and sporting habits. He stated that students mostly prefer individual and passive activities in their free time, such as surfing the Internet, listening to music, watching TV or videos (DVDs). Every student uses the Internet and listens to music on a daily basis, while watching TV or videos/DVD movies is just an interest of a minority. Activities that are worth mentioning and take place nearly every day include reading (non-textbooks), sports and hobby activities. Similar

results were obtained by Szabó [33] and Müller et al. [34], according to whom listening to music, reading newspapers and watching TV are the most frequent free time activities. Free time preference system of men encompass computer use, playing sports and participating in sports events as the most dominant, while women tend to prefer cultural programs, such as classical concerts, cinema and theater visits more.

MATERIAL AND METHOD

The survey was carried out in Debrecen, among the students of the University of Debrecen, in spring 2018. Students from all 14 faculties of the university were involved. Since Physical Education (PE) is compulsory in 4 semesters at the university, we treated those who were participants of PE classes at the time of the survey as a separate group. The questionnaires were filled in with the help of interviewers and based on self-declaration. The completed questionnaires were processed using the EvaSys software (http://www.vsl.hu).

In addition to the socio-demographic data, our questions covered the leisure and sporting habits of the specific individual. During the survey, practicing a sport was defined as a physical activity exercised for a minimum of half an hour outside school physical education. In the case of students not playing sports, we only asked about the lack of motivation, while in the case of those playing sports we were interested in both the motivating factors and the lack of motivation (if any). Regarding the latter group we were also interested in what and how much they play and how satisfied they are with local sports facilities. As for time scheduling, we examined weekday and weekend activities separately.

To determine the statistical differences in the case of concordant deviations, Student's t-test, otherwise Welch's t-test was used. A difference was considered significant if $p < 0.05$.

RESULTS

The questionnaire was completed by 857 people, with a mean age of 21.5 ±2.7 years (mean ±SD); the age distribution of the respondents is shown in Fig. 1.

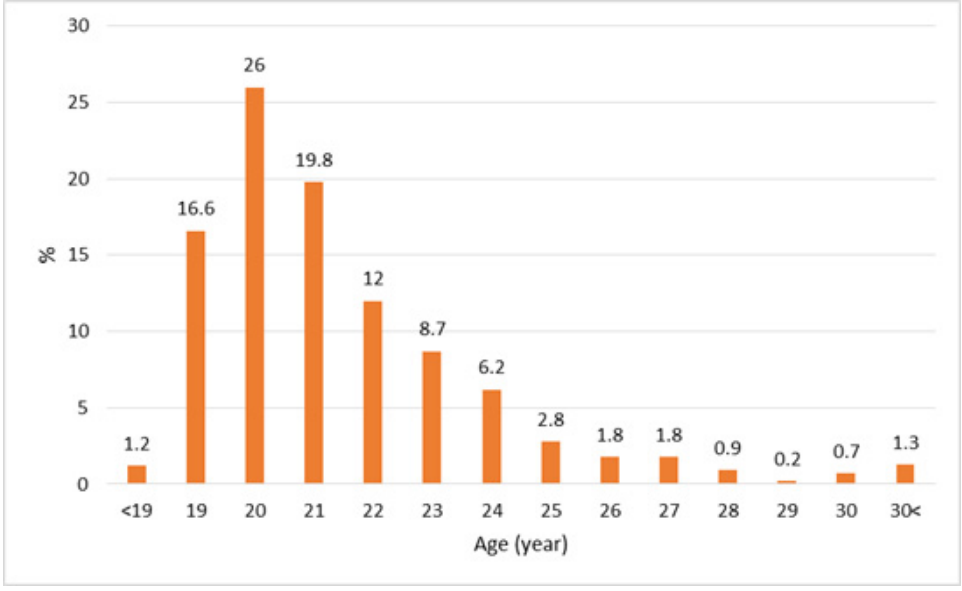

Fig. 1. Distribution of the respondents's age

60.4% of the respondents were women, 39.6% were men, their average age equals the cumulated average. Only 37% of respondents participate in physical education classes, which ratio is similar for both women and men (Fig. 2).

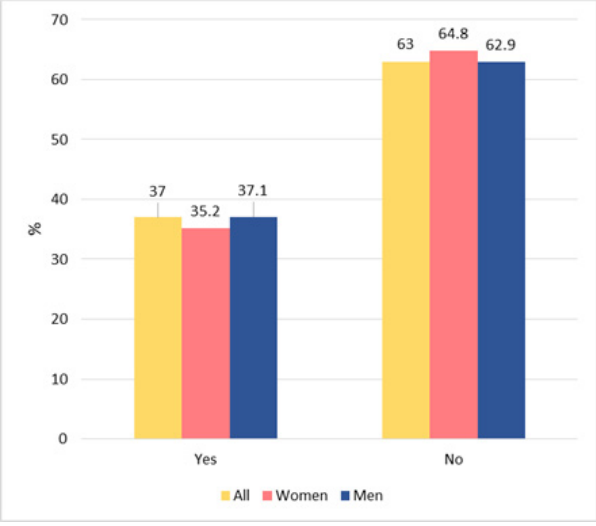

Fig. 2. Those currently participating in physical education classes at university

Examining free time, it can be stated that respondents have an average of 4.6 ±1.9 hours of free time on weekdays, whereas this value is 6.5 ±2.2 hours on weekends. Considering gender-based differences, it can be observed that women have less free time than men on weekdays (i.e. 4.5 ±1.7 and 4.8 ±2.1 hours, respectively), while at weekends, although the same tendency can be observed (6.4 ±2.1 and 6.7 ±2.2 h, respectively), the difference is not significant (Fig. 3).

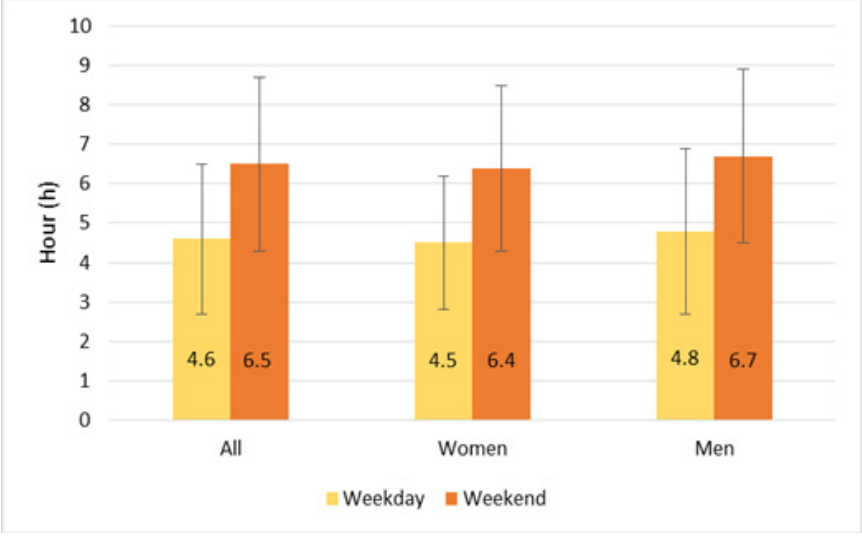

Fig. 3. Average free time/self-estimate

Analyzing daily activities pursued on weekdays (Fig. 4) and weekends (Fig. 5), there is a lot of time spent on surfing the internet and studying. The time spent on university lectures on weekends decreased significantly, which can be explained by the structure of full-time university programs.

In the case of everyday activities, gender-based differences with respect to working (in a workplace) ($p < 0.001$) and studying ($p < 0.005$) are significant.

Men spend less time working and learning on weekdays than women. On average, a man works 2.8 hours a day on weekdays, while in the case of women this value is 3 hours. Women spend an average of around 4 hours per day on weekdays studying outside of class, whereas for men this value is only 3.5 hours.

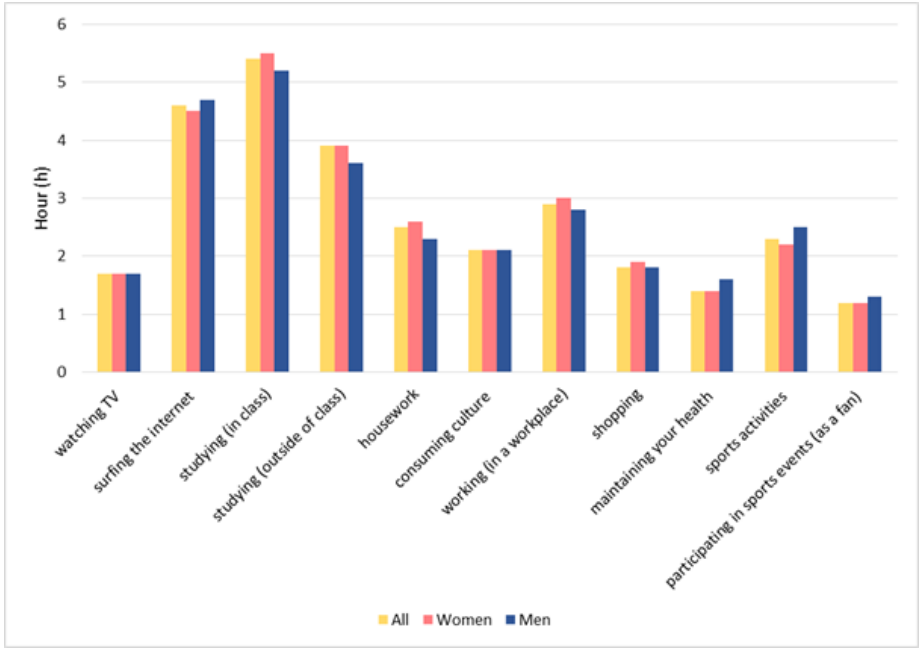

Fig. 4. Daily activities at weekdays

In the case of weekends shopping, doing housework ($p < 0.001$), studying ($p < 0.005$), playing sports and maintaining one's health ($p < 0.002$) differed significantly when making a comparison on a gender specific basis. Men spend less time shopping, doing housework, and studying, but significantly more time playing sports and maintaining their health on weekends than women. On average, a man spends 2.8 hours a day playing sports on weekends, while in the case of women only 2.3 hours are allocated to this activity.

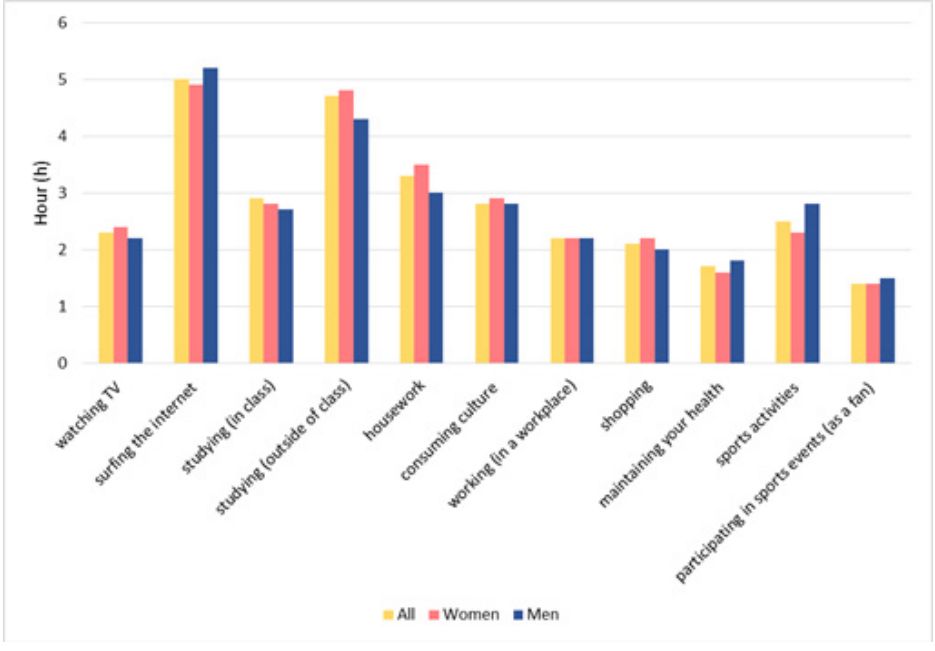

Fig. 5. Daily activities on weekends

When asked if they play sports, 67.9% of the respondents answered yes. There was a noticeable ($p < 0.05$) difference between women (63.5%) and men (72.8%) (Fig. 6).

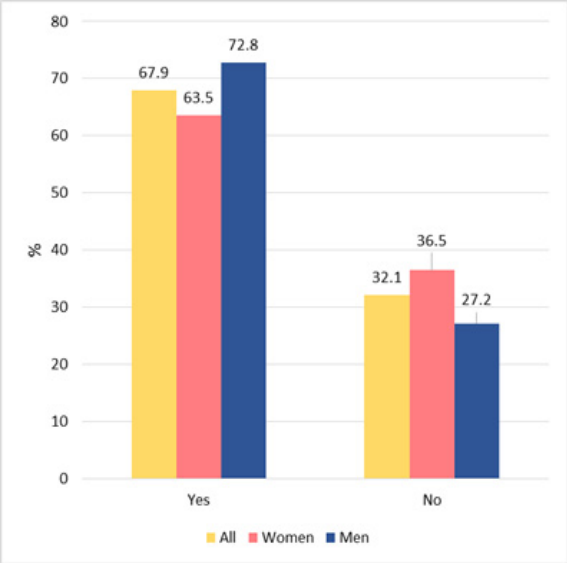

Fig. 6. Participation in sports

When examining the free time of those "doing sports" and "not doing sports" (Fig. 7), it can be determined that people "doing sports" have 4.6 ±1.8 hours of free time on weekdays while those "not doing sports" have 4.5 ±2.1 hours. It is interesting to note that those "doing sports" report more free time on weekends (6.6 ±2.0 hours) than those "not doing sports" (6.3 ±2.4 hours).

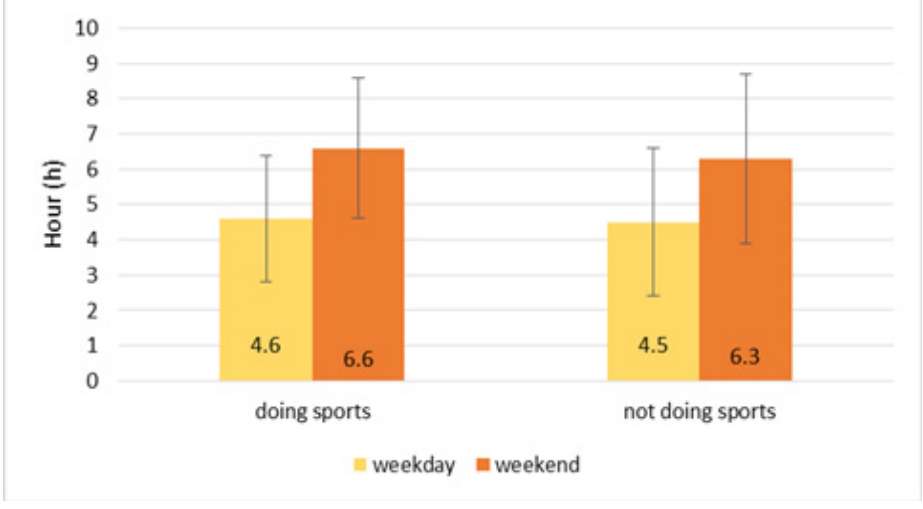

Fig. 7. Free time of those who do and do not do sports

Analyzing the activities, those "doing sports" spend less time shopping and doing housework on weekends, but significantly more time playing sports and maintaining their health than those "not doing sports". Those "doing sports" spend less time ($p < 0.001$) studying on weekdays (3.8 hours) than those" not doing sports" (4.0 hours), however they have relatively more time for sports, health maintenance and culture.

Having analyzed if there is any difference in the frequency of doing sports between students attending and not attending physical education classes, it

can be seen (Fig. 8) that 72.7% of those attending physical education classes do sports outside the classroom, whereas this value is only 65.9% in the case of those not attending PE classes. Although there was a difference between the two groups, this did not prove to be significant ($p > 0.2$).

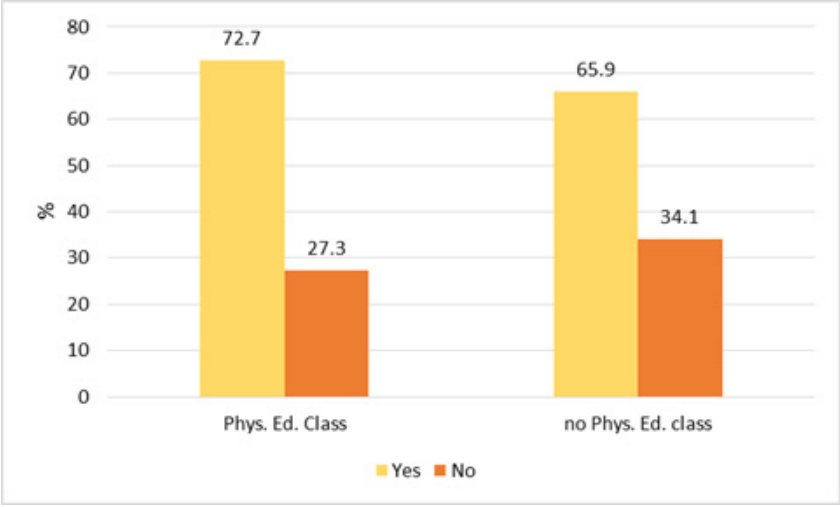

Fig. 8. Sports habits of those attending and not attending PE classes

As a reason for not doing sports, respondents primarily indicated lack of time, study workload and fatigue. On a seven-grade scale, the relevant values were 5.0, 4.9, 4.6, respectively (Fig. 9). On the other hand, family circumstances, the unimportance of playing sports and general health condition were considered the least decisive factors. Lack of time may also mean that the student is more engaged in his/her university studies, a characteristic that is more common among women than men ($p < 0.05$).

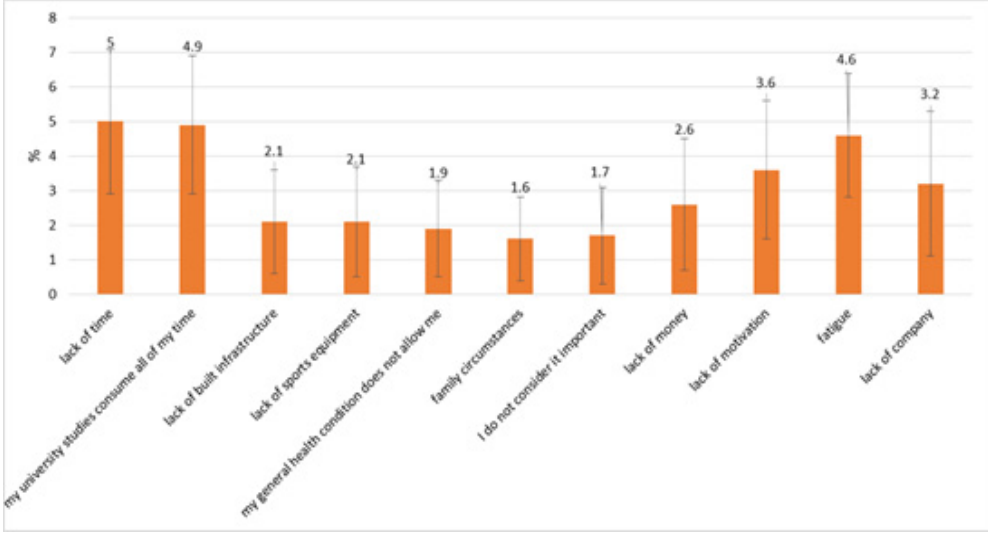

Fig. 9. Reasons behind not doing any sports

As for the place where sports are played outdoor gyms (34.1%) rank in the first place, and at home comes second (31.3%) (Fig. 10). The gender-based difference is evident.

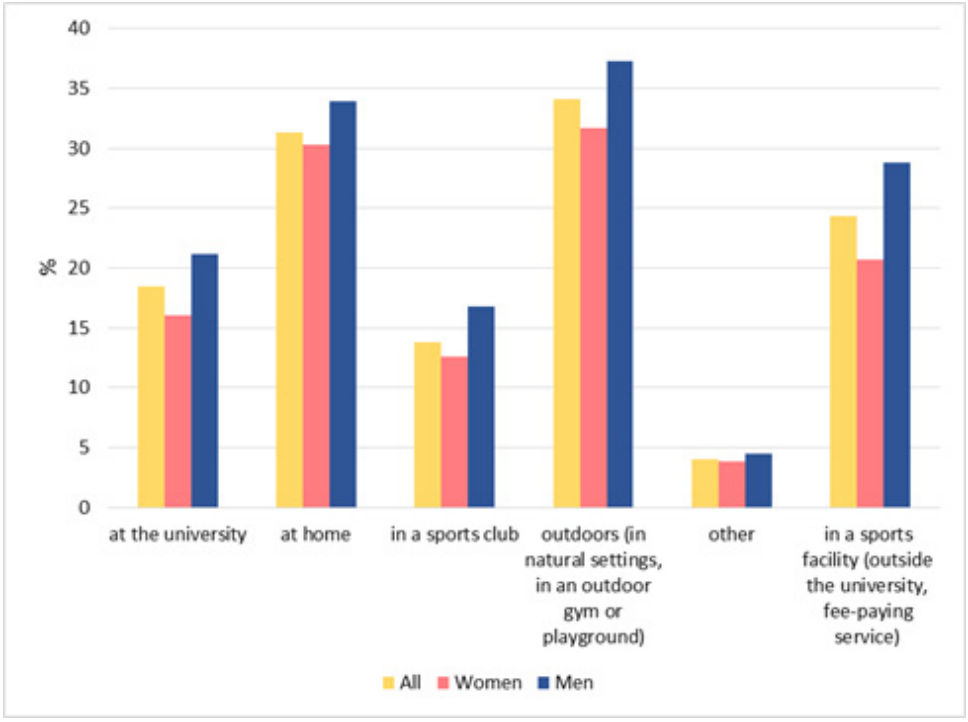

Fig. 10. Where sports are played

Respondents tend to train alone (38.2%) or with friends (37.7%) (Fig. 11). It can be observed, however, that while women prefer to play sports alone (42.9%), men prefer to play with friends (41.2%).

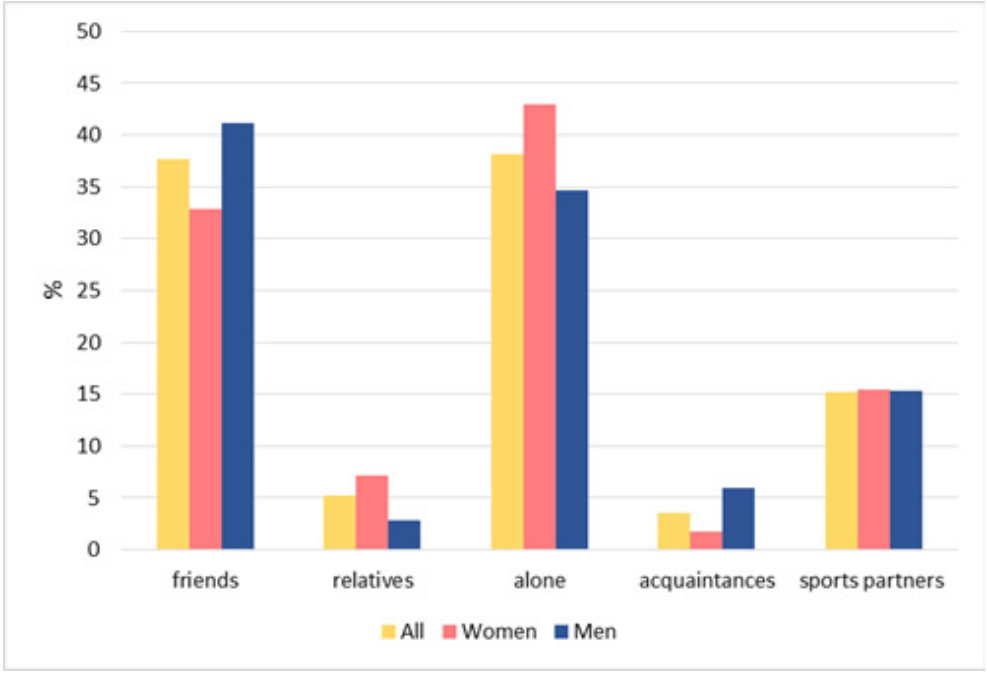

Fig. 11. With whom sports are done

Respondents could evaluate the extent to which certain factors motivate them to play sports on a scale of 1 to 7. The most important factors were the maintenance of health and wellbeing (6.1 ±1.2), happiness during exercise (5.9 ±1.3), and improvement of existing skills (5.9 ±1.4) (Fig. 12). However,

the expectation of friends in this matter is not a decisive factor. It is important to note that there are significant differences in motivation between the two genders. Physical appearance ($p < 0.01$) and strength ($p < 0.005$) are factors that motivate women more than men.

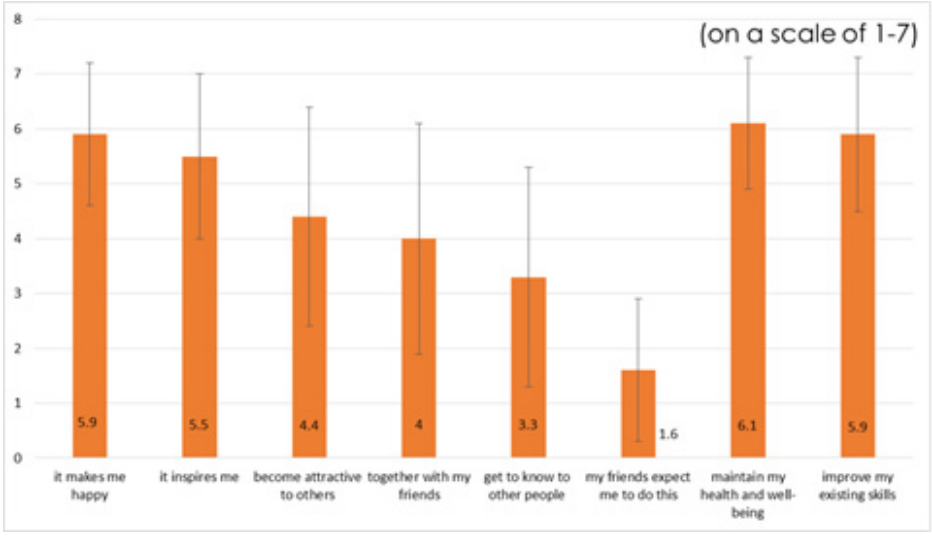

Fig. 12. Motivation for doing sports

DISCUSSION

With more than 30% of the world's population not meeting the minimum recommendations on physical activity, it has been considered to be among the leading causes of death [35]. The first step to initiate the engagement in physical activity, one must be aware of the factors that influence an individual in this direction [36]. Earlier works pointed out that sporting habits are determined by what people experience during their youth, whether or not they participate in regular sports activity in their school-years [37, 38] and, furthermore, that physical inactivity is higher in women than in men [39].

During a person's life the University years are the last when they have the possibility to engage in physical activity in an organized manner together with their friends. In the years to follow these possibilities narrow due to the demands of the workplace and/or to the establishing a family life. For this reason it is imperative to understand the expectations of the adolescents, more specifically the university students, regarding physical activity and for the Universities to consciously develop and implement programs which help the introduction and the incorporation of physical activity into the everyday life as this will inevitably influence adult lifestyle as well.

While physical activity outside the classroom is common among primary and secondary school students of Hungary and of Debrecen more specifically, and 90% of the pupils participate 3-5 times a week in sports activities [40], when it comes to university students the situation is not nearly as positive.

Previous studies [32, 41] also pointed out that a significant part of students were not engaged in any sort of physical exercise at the time of that survey outside the compulsory physical education classes. In our recent survey, therefore, we were interested in whether the extent of sports activity among students of Debrecen has increased and which factors interfere with being

physically active outside PE classes. We believe that a university may only develop and implement a successful "policy" in this matter if it is aware of the factors that determine students' positive and negative attitudes towards sports.

CONCLUSIONS

Our studies have shown that only 32% of the 900 students surveyed do engage in regular physical activity. This is primarily due to lack of time and fatigue. At the same time, students spend an average of 4–6 hours a day surfing the internet and watching television. Physical inactivity cannot be justified by the lack of infrastructure. These results suggest that providing education to people concerning a proper way of life can significantly improve the attitude of younger generations to participate in sports activities.

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