Physical activity and eating habits of students of the University of Belgrade: An epidemiological study

Fizička aktivnost i navike u ishrani studenata Univerziteta u Beogradu: epidemiološka studija

Miloš Obradović*, Goran Nešić*, Aleksandra Popović*, Predrag Božić†,
Zoran Savić‡, Filip Kojić§, Saša Djurić‖

University of Belgrade, *Faculty of Sport and Physical Education, †Serbian Institute of
Sport and Sports Medicine, §Teacher Education Faculty, Belgrade, Serbia; ‡University
of Pristina, Faculty of Sport and Physical Education, Leposavic, Serbia; ‖University of
Ljubljana, Faculty of Sport, Institute of Kinesiology, Ljubljana, Slovenia

Abstract

Background/Aim. Numerous studies have indicated that university students exhibit a variety of risky health behaviors, such as the lack of regular physical activity and unhealthy eating habits. Due to lack of information about students' lifestyles in Serbia, we designed a study with the following aims: 1) to investigate physical activity and eating habits variations of students according to gender, year of study and attended faculty; 2) to estimate the relationship between their physical activity and eating habits. **Methods.** The survey method was used. Data were collected in the 2016/2017 school year during the spring semester. The sample was randomly stratified (4,019 students of the University of Belgrade – 2,284 males), which corresponded to about 5% of the whole student population of the University of Belgrade. For data collection, two standardized questionnaires were used: International Physical Activity Questionnaire (IPAQ) and Youth/Adolescent Food Questionnaire (YAQ). **Results.** Male students were significantly more highly and moderately active than female students [3.15 vs. 2.80 days, respectively; p = 0.003, effect size (ES) = 0.651].

Correspondingly, female students were less active during the day (326 vs. 305 min; p = 0.044, ES = 0.232). Interaction between factors revealed that the most active on a weakly basis were fourth-year male students of the natural sciences (4.20 days), while on a daily basis, the most active were first-year female students (161 min). The most sedentary ones were third-year female students of medical sciences (475 min of sitting per day). Significant correlations were found between the duration of intense physical activity and consuming water, vegetables, citrus fruits, integral bread, and cereals. **Conclusion.** Female students were more prone to sedentary behavior, while older students were more active and aware of the importance of physical activity. Furthermore, the nature of studies can influence the lifestyle. Female and older students were more concerned about diets. Additionally, students who were more physically active had healthier eating habits.

Apstrakt

Uvod/Cilj. Brojne studije su pokazale da studenti pokazuju niz rizičnih zdravstvenih ponašanja, kao što su nedostatak redovne fizičke aktivnosti i nezdrave navike u ishrani. Zbog nedostatka informacija o životnom stilu studenata u Srbiji, dizajnirali smo studiju sa sedećim ciljevima: 1) ispitati fizičku aktivnost i varijacije u ishrani studenata u zavisnosti od pola, godine studija i upisanog fakulteta; 2) proceniti odnos između njihove fizičke aktivnosti i navika u ishrani. **Metode.** Korišćen je metod anketiranja. Podaci su prikupljeni u školskoj 2016/2017. godini tokom letnjeg semestra. Uzorak je nasumično stratifikovan (4 019 stu-

denata Univerziteta u Beogradu – 2 284 muškarca), što je odgovaralo približno 5% od ukupne studentske populacije Univerziteta u Beogradu. Za prikupljanje podataka korišćeni su upitnici Međunarodni upitnik fizičke aktivnosti (IPAQ) i Upitnik za hranu za mlade/adolescente (YAQ). **Rezultati.** Studenti muškog pola su bili statistički značajno više umereno i intenzivno aktivniji od studentkinja [3,15 vs. 2,80 dana, p = 0,003; *effect size* (ES) = 0,651]. U skladu s tim, studentkinje su bile manje aktivne tokom dana (326 vs. 305 min; p = 0,044; ES = 0,232). Najaktivniji na sedmičnom nivou bili su studenti četvrte godine prirodno-matematičkih nauka (4,20 dana), dok su na dnevnom nivou to bili studenti prve godine (161 min).

Correspondence to: Saša Djurić, University of Ljubljana, Faculty of Sport, Institute of Kinesiology, Gortanova ulica 22, 1000 Ljubljana, Slovenia. E-mail: sasa.djuric@fsp.uni-lj.si

Studentkinje treće godine medicinskih nauka provodile su najviše vremena sedeći (475 min dnevno). Značajne korelacije su utvrđene između intenzivne fizičke aktivnosti i konzumacije vode, povrća, citrusnog voća, integralnog hleba i žitarica. **Zaključak.** Studentkinje su bile sklonije sedentarnom načinu ponašanja, a stariji studenti su bili aktivniji i svesniji važnosti fizičke aktivnosti. Takođe, priroda studija može imati uticaja na životni stil. Studentkinje i stariji studenti su se više brinuli o načinu ishrane. Studenti koji su bili fizički aktivniji imali su zdravije navike u ishrani.

Introduction

Physical activity and diet are very important aspects of lifestyle that influence the risk of serious diseases, such as cancer [1] and coronary heart disease [2]. The World Health Organization (WHO) recommends a minimum of 150 min of aerobic physical activity of moderate-intensity or at least 75 min of the activity of vigorous-intensity throughout the week, for adults aged 18–64 years [3]. Numerous significant positive correlations have been found between low levels of physical activity and various health outcomes, such as cardiovascular diseases [4], obesity and diabetes [5], and even impaired cognitive performance [6]. Although it has been shown that children and youth are usually most active [7], there is evidence that the decelerating trend is present in the population that is physically active with advancing age [8]. The major decline of this trend occurs during young adulthood [9, 10]. Additionally, the dietary habits of young adults are affected by the fast-food market and, consequently, obesity and overweight are increased among them [11].

The population that is especially important for this concern are students, since the youth transiting from school to university has many health implications [12]. Numerous studies have indicated that university students exhibit a variety of risky health behaviors, such as the lack of regular physical activity [13–16], along with unhealthy eating habits [12, 17, 18]. Different results have been obtained regarding the students of different ages [17, 19, 20], gender [17, 21] and those that attended faculty [21–23]. Furthermore, previous studies have revealed different physical activity patterns and eating habits between students from different geographical areas, such as Europe [12], the USA [17, 24], Africa [18, 25], Japan and Korea [26], etc. Moreover, the differences were revealed among the different parts of Europe, such as the Mediterranean [22, 23, 27, 28], Central [29, 30] and Scandinavian part [31]. Nevertheless, there are only a few studies on physical activity and eating habits of students from the Balkan countries [20, 21, 28, 32]. The authors of one cross-sectional study, tried to investigate the relationship between the body mass index (BMI) and eating habits of 1,624 students of the University of Belgrade. Their results revealed that every fourth male student was overweight, and that students' BMI did not correlate with the frequency of taking breakfast [32].

Due to the lack of information on students' lifestyles in Serbia, we designed a study with the purpose of investigating their physical activity and eating habits. Therefore, the aim of the present study was to evaluate physical activity and eating habits of students from the University of Belgrade.

Moreover, the specific aims were to describe and examine physical activity and eating habits variations according to gender, year of study and attended faculty, as well as to investigate the relationship between physical activity patterns and eating habits.

Methods

The present study had a cross-sectional design; the survey research method was used.

Participants

Students from all scientific groups from the University of Belgrade were included in the study. The University of Belgrade was selected, because it is the oldest and the largest educational institution in Serbia. At the beginning of the research process, we recruited 4,200 undergraduate students. Nevertheless, 4,019 students regularly filled out questionnaires, and, therefore their answers were further analyzed. The sample of the present study symbolized a representative sample, because it corresponded to about 5% of the whole student population of the University of Belgrade. Moreover, the same percentage of students (5%) from each faculty participated in the research. Therefore, the present study had a randomly stratified sample.

Out of all the students who had participated in the research, 42.4% (n = 1,703) were studying socio-humanistic sciences (S-HS), 33.4% (n = 1,344) technical-technological sciences (T-TS), 14.1% (n = 566) medical sciences (MS), and 10.1% (n = 406) natural-mathematical sciences (N-MS). Moreover, 21.7% (n = 874) were students of the first year, 29.8% (n = 1,197) of the second year, 25.3% (n = 1,016) of the third year, and 23.2% (n = 932) students of the fourth (ie. last) year of the studies.

Note that physical education students were excluded from the study. The reason was the nature of the classes and the students who enroll in them. Namely, monitoring the level of physical activity and eating habits of 'regular' students would be somewhat confounded by monitoring physical education students, who are supposed to be more aware of the importance of physical activity and healthy eating habits. The criteria for selecting the participants were as follows: students of undergraduate/integrated academic studies, attending faculties from certain educational and scientific fields in each year of study, voluntariness and successful completion of the questionnaires. The study was conducted in accordance with the Declaration of Helsinki

and all participants signed an informed consent approved by the Institutional Review Board (No. 02-766/19-1).

Instruments

Two standardized questionnaires were used in the present study: the International Physical Activity Questionnaire (IPAQ) [33] and Youth/Adolescent Food Questionnaire (YAQ) [34]. The IPAQ involved a total of 7 questions and assessed the overall level of physical activity by collecting information on the number of days and duration of low, moderate and high-intensity physical activity, as well as the duration of sedentary behavior during the working days in the last 7 days. On the other hand, the YAQ included a total of 28 questions related to eating habits (in terms of the type and frequency of consumed food) of young people and adolescents in the previous 6 months.

Procedure

The data were collected in the 2016/2017 school year, during the spring semester (from April to June 2017). Data collection was conducted at each faculty individually during regular classes. Researchers handed out the questionnaires and explained the procedure to all participants. Additionally, students were informed that their participation was voluntary and that their responses would be held in strict confidence. They filled out the questionnaires and returned them straight away. The questionnaires were completed in half an hour, on average.

Statistical analyses

In order to analyze the assessed data, we used Statistical Package for the Social Sciences (SPSS) for Windows, version 25 (IMB Corporation, Chicago, IL, USA). Descriptive statistics of the prevalence of certain students' life habits, such as frequency and level of physical activities along with the use of certain diets, were presented as percentage values, as well as, means and standard deviations. The significance of the differences between the groups of physical activity variables was tested by multiple analysis of variance (ANOVA) with Bonferroni post-hoc comparison in order to analyze differences in physical activity indicators by gender, year of study and attended faculty. Cohen's *d* was also calculated with ANOVA, where the effect sizes (ES) 0.2, 0.5, and above 0.8 were considered as small, medium and large, respectively [35]. In order to interpret eating habits by the YAQ, we applied Cronbach's alpha (α), which has shown high internal consistency of the Likert scale ($\alpha >$ 0.75). Subsequently, comparisons between the different genders were tested by the Mann-Whitney *U* test, while factors like the year of study and attended faculty were tested by independent samples of the Kruskal-Wallis test. In order to assess the relationship between two variable groups (ie. physical activity and eating habits), we initially created two groups regarding WHO physical activity recommendations (the group that meets and that does not meet the

recommendations; see the Introduction part). In addition, we applied the χ^2 test on two categorical variables (nutrition question and physical activity group). Furthermore, we used the Spearman correlation analyses. The level of significance was set *a priori* at $p < 0.05$.

Results

Physical activity

Multivariate ANOVA revealed the gender, year of study and attended faculty as significant factors. Moreover, the interaction between the factors like the year of study and the faculty was also significant ($p < 0.05$). Additional application of the Bonferroni post-hoc test revealed the direction of the assessed differences. Table 1 shows the differences in physical activity patterns between male and female students.

Table 1

Physical activity and sedentary behavior variables labeled as average values (IPAQ questionnaire)

Variables	Mean ± SD	*p*-value	ES
High physical activity (days)			
male	3.15 ± 0.58	0.003	0.651
female	2.80 ± 0.49		
High physical activity per day (min)			
male	111 ± 68	0.267	0.099
female	105 ± 52		
Moderate physical activity (days)			
male	3.56 ± 0.96	0.010	0.280
female	3.31 ± 0.82		
Moderate physical activity per day (min)			
male	86 ± 23	0.788	0.100
female	84 ± 16		
Low physical activity (days)			
male	4.89 ± 1.65	0.919	0.011
female	4.87 ± 1.89		
Low physical activity per day (min)			
male	159 ± 54	0.054	0.335
female	144 ± 33		
Sedentary behavior per day (min)			
male	305 ± 88	0.044	0.232
female	326 ± 93		

IPAQ – International Physical Activity Questionnaire; SD – standard deviation; ES – effect sizes.

The results revealed that students of the fourth year were on average more highly active than students of the first and second year, during the day (124 min, 100 min, 103 min, respectively; $p = 0.028$, ES = 1.205 and $p = 0.049$, ES = 1.227, rspectively). Moreover, the oldest students were more moderately active during the day than the

students of the second and third year (103 min, 69 min, 73 min, respectively; $p = 0.001$, ES = 1.446 and $p = 0.005$, ES = 1.116, respectively). Similarly, the first-year students were more moderately active in comparison with the students of the second and third year throughout the day (99 min, 69 min, 73 min, respectively; $p = 0.004$, ES = 2.208 and $p = 0.022$, ES = 1.518, respectively), while there was no significant difference between first- and fourth-year students. Regarding low physical activity on a weekly basis, first-year students were more active than third-year students (5.23 days vs. 4.49 days, respectively; $p = 0.003$, ES = 1.048). Conversely, students of the third year were less active throughout the day than first-year students, as well as the second-year students (174 min, 144 min, 139 min , respectively; $p = 0.034$, ES = 0.524 and $p = 0.004$, ES = 1.227, respectively). Lastly, second-year students spent significantly more time during the day in sedentary behavior, in comparison to fourth-year students (334 min vs. 291 min, respectively; $p = 0.012$, ES = 0.501).

Regarding the attended faculty, the results revealed that S-HS students were weekly less highly active than N-MS, MS and T-TS students (2.43 days, 3.34 days, 2.92 days, 3.56 days, respectively; $p = 0.000$, ES = 4.775; $p = 0.038$, ES = 2.419 and $p = 0.000$, ES = 5.777, respectively). Moreover, they were daily less highly active than MS and T-TS students (94 min, 117 min, 120 min, respectively; $p = 0.046$, ES = 1.835 and $p = 0.000$, ES = 3.571, respectively). Similarly, S-HS students were less moderately active on a weekly basis than N-MS and T-TS students (3.20 days, 3.77 days, 3.64 days, respectively; $p = 0.010$, ES = 0.669 and $p = 0.001$, ES = 0.516, respectively). Surprisingly, S-HS students were the most moderately active on a daily basis and significantly more active than T-TS students (98 min vs. 69 min; $p = 0.001$, ES = 1.636). Although there were no significant differences among groups, S-HS students were the most active on a weekly basis (5.01 days), while N-MS students were the most active on a daily basis (175 min). T-TS students spent the most time during the day in sedentary behavior, even significantly more than S-HS (331 min vs. 294 min, respectively; $p = 0.007$, ES = 0.564).

The interaction between factors revealed that the most highly active on a weekly basis were fourth-year male students of N-MS (4.20 days), while the most active on a daily basis were first-year female N-MS students (161 min). The most sedentary ones were third-year female students of MS (475 min of sitting per day).

Eating habits

Students reported eating 3.03 (± 1.38) times a day on average. Regarding consumption of vegetables, most students (35.4%) reported eating them once a weak; there were no differences between male and female students. Note that around 30% of them consumed vegetables 2–4 times a week, while only 0.6% of students were eating vegetables on a daily basis. Nevertheless, female students reported more frequent consumption of citrus fruits than

male students did ($p = 0.003$). They consumed it between one (38.7%) and 2–4 times a week (21.6%). Furthermore, the Mann-Whitney *U* test revealed that male students consumed lamb or pork meat more often (26.5% of them consuming 2–4 times a week) than female students did (31.6% less than once per week; $p = 0.002$).

Second-year students reported a significantly more frequent intake of vegetables than third-year students ($p = 0.043$), while it was the other way around when it comes to citrus ($p = 0.039$) and other fruits ($p = 0.004$). Correspondingly, second-year students were drinking fruit juices (28% of students less than once per week) less frequently than the students of the first, third and fourth year of studies ($p = 0.041$; $p = 0.028$; $p = 0.001$, respectively). The youngest students were drinking water more often than third and fourth year students did ($p = 0.001$; $p = 0.014$, respectively). On the other hand, they reported a more regular intake of full-fat dairy products than third-year students did ($p = 0.032$). Over 11% of first-year students eat these products more than 2 times a day. Furthermore, the oldest students reported the most frequent consumption of fish and seafood (25.9% of third-year and 24.3% of fourth-year students eat fish and seafood 2–4 times a week), significantly more than second-year students did ($p = 0.015$; $p < 0.01$, respectively). Attention-grabbing fact is that first- year students reported the most frequent consumption of candies (significantly more than second-year students, $p = 0.031$) and fried food (more than second-year, $p = 0.010$ and third-year students, $p = 0.039$). Consequently, they wanted to change their eating habits the most, while that trend was descending with the older students.

MS students drank water more often than S-HS and N-MS students ($p = 0.004$; $p = 0.038$, respectively). Surprisingly, MS students reported more frequent consumption of full-fat dairy products, putting salt in food, and consequently, they wanted to change their eating habits more than the rest of the students.

Correlation between physical activity and eating habits of examined students is presented in Table 2.

The Spearman correlation analysis revealed a significant correlation between the time that the students were highly active during the week and their consumption of vegetables ($r = 0.112$, $p < 0.01$). Moreover, these students reported frequently eating citrus fruits ($r = 0.069$, $p < 0.01$), integral bread and cereals ($r = 0.108$, $p < 0.01$), surprisingly candies ($r = 0.113$, $p < 0.01$) and drinking water ($r = 0.098$, $p < 0.01$). Consequently, they did not want to change their eating behavior ($r = -0.069$, $p < 0.01$). Contrariwise, students with sedentary behavior more frequently put salt in their food ($r = 0.043$, $p < 0.01$), consumed potatoes ($r = 0.046$, $p < 0.01$), margarine ($r = 0.085$, $p < 0.01$), white flour products ($r = 0.032$, $p = 0.04$) and commercial beverages ($r = 0.064$, $p < 0.01$). These students also reported eating less integral bread and cereals ($r = -0.058$, $p < 0.01$), drinking less water ($r = -0.035$, $p = 0.029$) and wanting to change their eating habits ($r = -0.041$, $p < 0.01$).

Table 2

Relationship between students' nutrition choice (YAQ questionnaire) and daily physical activity level (regarding WHO recommendations)

Food choice	χ^2 value	df	*p*-value
Green leafy vegetables	18.293	4	0.001
Broccoli, cauliflower, cabbage	8.708	4	0.069
Carrot	27.483	5	0.000
Potatoes (not chips, French fries)	17.772	4	0.001
Other vegetables (not including those mentioned above)	3.024	5	0.696
Beans, green beans, lentils	9.296	5	0.098
Citrus fruits (not counting 100% juices)	4.999	4	0.287
Other fruits (not including citrus fruits)	23.800	4	0.000
100% fruit juices	9.667	5	0.085
Plain water (not including other beverages)	23.813	5	0.000
Full fat dairy products (milk, hard cheese, butter, ice cream)	29.421	5	0.000
Low fat dairy products (e.g. skimmed milk, yogurt, young cheese)	32.000	5	0.000
Eggs	3.439	4	0.487
Lamb, pork or mutton	30.254	4	0.000
Meat products (e.g. sausages, salami, hot dogs, bacon)	30.436	4	0.000
Chicken or turkey	19.396	4	0.001
Fish and seafood (not fried but boiled, baked or preserved)	6.231	4	0.183
Margarine	16.792	4	0.002
White flour products (eg. white bread, white rice)	11.224	4	0.024
Integral bread and cereals (oats, brown rice, groats, barley)	2.428	4	0.658
Sweets (muffins, donuts, cakes, pastries)	15.805	4	0.003
Commercial beverages (eg. cola beverages, sweetened teas, soda beverages; not counting dietary unsweetened beverages)	24.246	5	0.000
Fried foods	52.092	4	0.000
Frequency of salting food	7.212	5	0.205
Frequency of breakfast	8.130	4	0.087
Frequency of daily meals	19.855	5	0.001
Desire to change diet	23.203	4	0.000
Ability to change diet	35.561	5	0.000

YAQ – Youth/Adolescent Food Questionnaire; WHO – World Health Organization.

Discussion

Regarding physical activity, students were, on average, highly active for three days a week. Moreover, male students were significantly more highly and moderately active than female students. This is in line with the Croatian students, where males exercised more than females (4.4 h/week vs. 1.6 h/week) [28]. Correspondingly, female students spent significantly more time in sedentary behavior during the day. These findings are in accordance with the results of a few studies [36, 37], but not with the study, in which male students, despite being more active, reported spending more time in sedentary behavior [24]. Furthermore, the results revealed that fourth-year students were the most highly and moderately active during the day, while third-year students were mostly involved in low daily physical activities. The most sedentary ones were second-year students. Similar results were found at the University of Novi Sad, where, in addition to the higher activity of older students, 56.4% of students were physically active, while 52.1% of students spent 2 h and more in front of the TV and computer [20]. These results suggest that students' awareness of the importance of physical activity is perhaps changing over time. Thus, the results are very encouraging, especially because they are not in line with the decelerating trend with advancing age, which is present in the population regarding physical activity [8–10]. Additionally, the results showed that students of S-HS were

the least highly active throughout the week and during the day. Likewise, they were least moderately active during the week, but surprisingly, the most moderately active on a daily basis. We are sure, that the results would be somewhat different, if the physical education students were included in this group. In order to assess objective information about the students' level of physical activity, we excluded the mentioned students. Nevertheless, the most highly and moderately active were the students of N-MS. Students of T-TS mostly showed sedentary behavior. We can only speculate that the main reason for these findings was the nature of the studies (ie. a lot of drawing and table paperwork that requires sitting).

Students reported eating 3.03 times per day, which is comparable with the study of Colić Barić et al. [28] who showed that Croatian students had 2.4 meals and 1.3 snacks per day. That fact points out a slightly "healthier" lifestyle.

The results of interaction between factors also confirmed the previous results. Namely, the most highly active on a weakly basis were fourth-year male students of N-MS (4.20 days a week on average), while the most active on a daily basis were first-year female students of N-MS (161 min per day). The most sedentary ones were third-year female students of MS (475 min of sitting per day). This can be explained by the fact that MS are considered as the "hardest" studies at the university, and consequently, they

require a lot of learning time. Therefore, it could affect the physical activity patterns and lifestyle of an individual.

Unlike for physical activity, female students were more focused on eating habits than male students. Specifically, they reported frequent consumption of citrus fruits, while male students ate lamb or pork meat more often. Similar results were found in population of medical students of the University of Bialystok [29] and also in Greek students, where males were more physically active, while females had healthier eating habits [21]. Moreover, in the study of Lowry et al. [17], female students were more likely to use diet, than physical activity for weight control.

In accordance with the physical activity lifestyle patterns, first-year students reported the most frequent consumption of candies, fried food and full-fat dairy products. Accordingly, they had the greatest desire to change their eating habits, while that trend was descending with age. This is understandable, given the fact that the oldest students ate fish and seafood significantly more than the other students did.

At first glance, MS students showed more responsibility regarding eating habits, since the results revealed that they drank water more often than the rest of the students. Suprisingly, however, they reported more frequent eating of full-fat dairy products, putting salt in food, and, consequently, they had the greatest desire to change their eating habits than the rest of the students. Similar findings were made in Greece with medical students whose regular diet contained excessive quantities of saturated fat, cholesterol and sodium [22]. Conversely, medical students from the Beijing University reported exceptionally healthy eating habits [26]. It seems that cultural and traditional environment has a greater impact than the attending faculty regarding eating habits.

In order to investigate the relationship between physical activity patterns and eating habits, we used the χ^2 test and additionally the Spearman correlation analysis. The χ^2 test revealed that the group that meets WHO recommendations for daily level of physical activity consumed more green vegetables, carrots, potatoes, fruits, drank plain water, full and low dairy products, meat products, margarine and surprisingly white flour products, commercial beverages and fried foods. In addition, they had a higher frequency of daily meals, but also wanted to change their diet. The Spearman correlation analysis revealed significant correlations between the time being highly active and consuming water, vegetables, citrus fruits, integral bread, and cereals. Surprisingly, highly active students reported frequent candy consummation. Expectedly, a significant negative correlation existed with the attitude to change their eating behavior. Conversely, significant positive correlations were obtained between the sedentary time and eating salty food, consuming potatoes, margarine, white flour products and commercial beverages. Moreover, negative correlations were revealed regarding drinking water, eating integral bread, cereals, and the attitude to change eating habits. Note that, regardless of the relatively small correlation coefficients, the observed relationships between physical activity and eating habits were significant, which means that the probability of obtaining such a correlation by chance is minor. On the other hand, note that the nature of compared variables (ordinal vs. categorical) contributed to the obtained results. Thus, it must be taken into account, at least as a qualitative parameter of the analysis.

Limitations

The main drawback of the present study was the fact that only questionnaires were used to assess the level of physical activity and eating habits of the students. There are objective methods for assessing the level of physical activity, such as accelerometry [38], pedometry [39] and double-labeled water [40]. Hence, a directive for future research could be perhaps, using one of the objective methods in order to assess the more precise level of physical activity of the student population.

Besides, it should be noted that the Spearman correlation coefficients provided us with more qualitative than quantitative information, because of the nature of the compared variables (ordinal scale vs. categorical scale). Thus, the results should be interpreted bearing this in mind.

Conclusion

The results of the present comprehensive epidemiologic study on a large representative sample, revealed very important information on the physical activity and eating habits of the academic elite in Serbia. The main results regarding physical activity showed that female students were more likely to incline sedentary behavior, older students were more aware of the importance of physical activity, and that the nature of studies can be connected to students' lifestyles. Regarding eating habits, female students were more concerned about diets. Moreover, older students showed more responsibility regarding this issue. Additionally, correlation analyses showed that students, who were more physically active, had healthier eating habits.

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