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Investigation of the lifestyle of medical students based on gender characteristics

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Abstract

Relevance. The issue of a healthy lifestyle of medical university students is relevant throughout the educational process, since the well-being and objective state of health (both mental and physical) has a direct impact on the academic performance and professional development of young specialists in the field of healthcare.

Purpose. The purpose of this study is to investigate the main factors of students' lifestyle and highlight gender characteristics.

Methodology. A survey of 400 students of West Kazakhstan Marat Ospanov Medical University was conducted on several key issues related to nutrition, sleep, rest, physical activity, morbidity, and financial needs.

Results. The majority of the 5th year students rate their health as "good" (on average 54.9%), and the 1st year students (58.5%) consider their health to be "satisfactory". Almost all students were satisfied with their living conditions, but at the same time up to 40% of the survey participants felt a lack of finances for food and clothing, and 38% of the 5th year boys noted a lack of money for entertainment. Most students consider their level of physical activity insufficient, while boys are engaged with more intensity than girls, but also spend less time outdoors. The issue of lack of sleep and proper nutrition is also acute and requires further research.

Conclusions. This study showed that the majority of medical students try to lead a healthy lifestyle, and this health-promoting behaviour differed depending on gender, especially with regard to physical activity and diet. The results of the survey are valuable material for the development of principles for the prevention of acute and chronic diseases, and the introduction of strategies for maintaining the health of students from higher educational institutions.

Keywords: prevention; gender differences; rational nutrition; physical activity; educational institutions.

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Introduction

An analysis of the scientific literature on student health shows that it has become very topical in recent years. The number of studies note that the number of students of medical specialities (both applicants for higher and secondary special education) has increased from 10 to 20-25%, and in some universities reaches 40%; according to forecasts, in the future, it may amount to 50% of the total number of students [1]. This encourages many countries (for example, Great Britain, Denmark, Norway) to increase funding for medical higher education institutions (universities) with an increase in the number of training places [2]. Great attention is paid to migrant students in this matter, since many of them remain to live and work in another country, which can be noted as an additional stress factor [3]. During their studies at the university, the well-being of most students does not improve, a number of researchers note its deterioration [4].

For example, the prevalence of weight disorders based on body mass index (BMI) indicators (underweight, overweight, and obesity) was observed among a third of the 2nd year medical students at the Medical University in Cameroon [5]. It was found that irregular eating, skipping meals, low consumption of fruits, vegetables, and milk, and a large amount of sweets, fried food, and alcohol are incorrect eating habits and frequent among students. Lifestyle disorders provoke the development of a sense of burnout, and are associated with an increased level of stress, feelings of emotional exhaustion, cynicism, and a decrease in productivity and professional efficiency. Gender, age group, and nationality have a direct relationship with the prevalence of emotional burnout and levels of physical activity [6]. Higher levels of physical activity are associated with higher professional performance, but this relationship requires further investigation.

The first thing to do is to recognise what factors are causing or are likely to cause future health problems in the student population. The logical step would be to minimise the influence of these factors, and ideally exclude them from students' life altogether. A preliminary conclusion can be made that one of the priority areas of primary prevention of diseases is the study of lifestyle and the influence of factors that have a negative impact on the health of young people [7]. It is necessary to consider the main components that contribute to a healthy lifestyle,

namely: properly organised work, optimal motor regime, physical culture and cold training, compliance with the principles of rational nutrition, rejection of bad habits, leisure activities – and such a multicomponent must be taken into account, since, for example, the presence of exclusively physical activity has little effect on health [8-10]. Notably, the development of students' health in the learning process is influenced by many factors, both objective, related to the educational process, employment, living conditions, and subjective, which depend on the personal characteristics of each individual [11]. Self-assessment of health can serve as an important indicator of the state and dynamics of students' health in addition to objective medical research. On the other hand, self-assessment of health reflects subjective characteristics of a person, their satisfaction with living conditions [12].

Based on the above, it seems promising to investigate the lifestyle of students of West Kazakhstan Marat Ospanov Medical University, including the study of gender characteristics to form an idea of the health risk factors that accompany the university students, followed by extrapolation of the data obtained to the contingent of students and other medical higher educational institutions in order to be able to form the principles of primary prevention, which can be useful in creating algorithms and recommendations for administrative centres of the healthcare system, since improving the quality of life of students correlates with the quality of education and the professionalism of future specialists.

Materials and Methods

The conducted research is non-experimental according to the methodology, descriptive and analytical according to the nature of the information received, and transverse (synchronous) according to the ratio of the study time. The total number of students who took part in the survey was 400 people (98 boys and 102 girls of the 1st year, 85 boys and 115 girls of the 5th year) studying West Kazakhstan Marat Ospanov Medical University, aged 17-26 years. They were selected by stratified sampling and divided into 4 groups: 2 – 98 1st year boys, 2 – 102 1st year girls, 3 – 85 5th year boys, 4 – 115 5th year girls. Data collection was carried out using a questionnaire (Table 1).

Table 1. Questionnaire among students regarding their health

No	Question	Response options
1.	Self-assessment of health	“good”; “satisfactory”; “bad”.
2.	Presence of chronic diseases	“yes”; “no”; “hard to answer”.
3.	Incidence of acute respiratory diseases (ARD) / Acute respiratory viral infections (ARVI)	“Once a year”; “2-3 times a year”; “3-4 times a year”; “more than 4 times a year”.
4.	Therapeutic tactics in cases of ARD/ARVI	“I’m going to see a doctor immediately”; “only when the condition worsens”;

		“self-medication”; “no treatment”.
5.	Reason for the lack of requests for medical help	“fear of missing classes and making up missed time”; “unwillingness to communicate with a doctor”; “there is no possibility to get free medical care”; “I don’t see the need”.
6.	Housing conditions	“I live with my parents”; “I rent an apartment”; “I live in a dormitory”.
7.	Satisfaction with housing conditions	“definitely yes”; “more likely yes than no”; “more likely no than yes”; “definitely no”.
8.	Financial support	“funds from parents”; “scholarship”; “extracurricular work”.
9.	Lack of finances to meet the needs	“food”; “clothes”; “entertainment”; “enough funds”.
10.	Sleep duration	“less than 7 hours”; “7-8 hours”; “more than 9 hours”; “with an indication of the reason in case of lack of sleep”.
11.	Presence of healthy lifestyle factors	“rational nutrition”; “healthy sleep”; “absence of bad habits”; “physical activity”; “mental peace of mind”; “full rest”; “restriction of work with gadgets”.
12.	Frequency of meals	“1 time a day”; “2-3 times a day”; “4 times a day”; “more than 4 times a day”.
13.	Source of food	“parents cooking”; “food from public catering places”; “self-cooking”.
14.	Level of physical activity	“high”; “average”; “low”.
15.	Sufficiency of physical activity	“yes”; “no”; “hard to answer”.
16.	Preferences in the nature of recreation	“passive (e.g., reading)”; “active (e.g., sports)”; “working at the computer, watching TV”; “work”.
17.	Duration of stay in the fresh air	“less than 2 hours”; “2-4 hours”; “more than 4 hours”.

The registered data was compiled and entered into a spreadsheet (Microsoft Excel), and then exported to the data editor, and all calculations were performed in Statistica.10 (Dell Technologies, Round Rock, Texas, USA) and in the SPSS v.25 software suites. To check the parameters for a normal distribution, the Shapiro-Wilk test was used. Nonparametric methods were used to compare groups and analyse the relationships between parameters. The nonparametric criterion was used for two independent Mann-Whitney samples. Median (Me), lower (Q1), and upper (Q3) quartiles were indicated in the distribution of

values in a series other than normal. The value $p < 0.05$ is taken as the critical level of significance of the differences.

Results

The analysis of the survey results showed that the majority of the 5th year students rate their health as “good” – on average 54.9% (57% of boys and 52.9% of girls), and the 1st year students – on average 58.5% (63.3% of boys and 59.8% of girls) consider their health “satisfactory”. Self-

assessment of health did not reveal statistically significant gender differences (Figure 1).

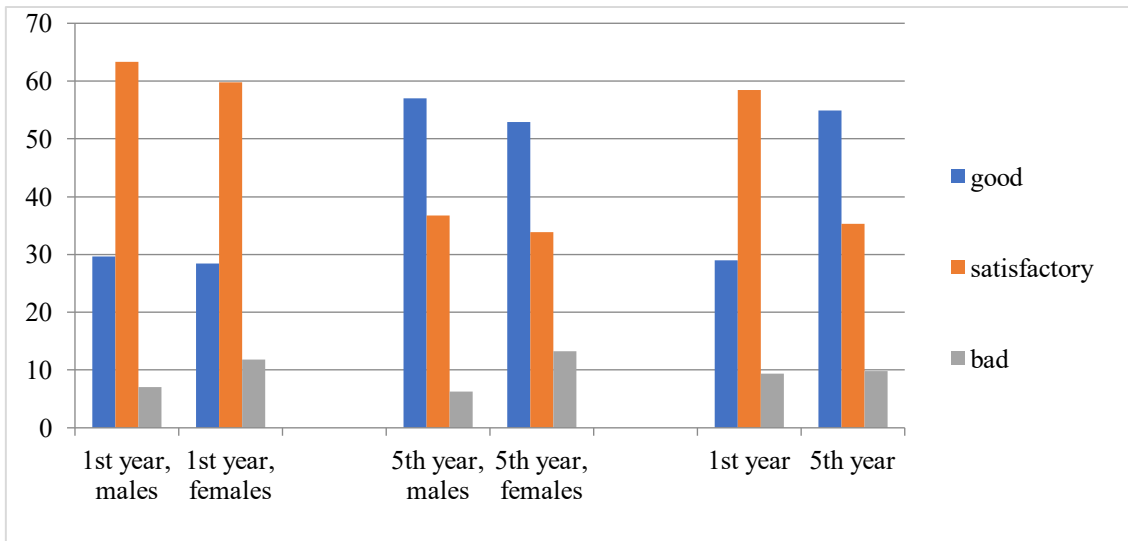


Figure 1. Self-assessment of health

Hypothetically, it is possible to associate a lower level of self-assessment of health among the 1st year students with an unfavourable period of adaptation to new educational and social conditions in association with various lifestyle factors. One of the most important indicators of attitude to own health is morbidity, namely, issues related to the frequency of diseases (ARD, ARVI

and the presence of chronic diseases. The study found that 30.8% of the 1st year students and 37.3% of the 5th year students have chronic diseases, and, remarkably, among the 5th year male students there are 10% more individuals with chronic diseases than among girls of this age (Figure 2).

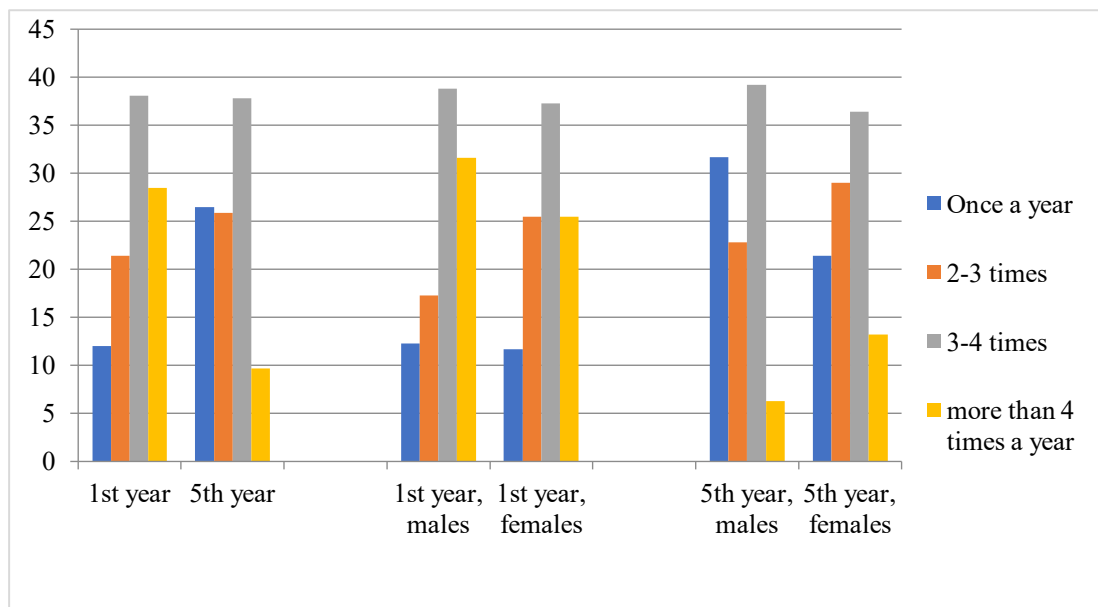


Figure 2. Presence of chronic diseases

This question requires further more detailed investigation, since the onset of the disease is important, and whether it has a connection with the educational process. Most students get sick 1-2 times a year and are most often treated at home (1st year – 46.5%, 5th year – 48.4%); 20% of respondents turn to the doctor – the 1st

year and 16.7% – the 5th year; a significant part of students (1st year – 46.5% and 5th year – 48.4%) self-medicate; no significant gender differences were found in this issue (Figures 3, 4).

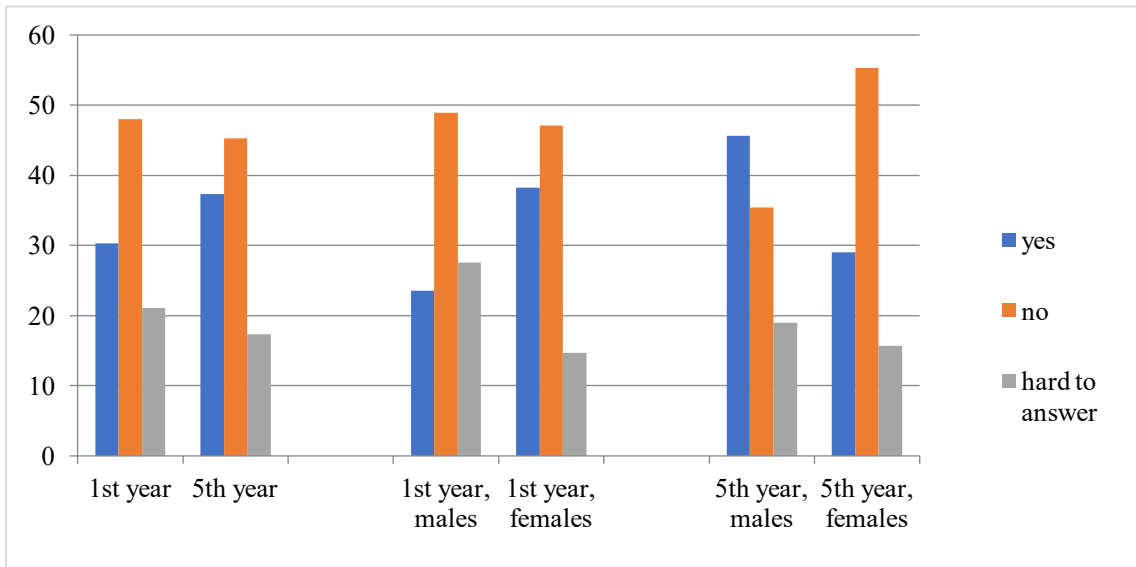


Figure 3. Incidence of ARD/ARVI

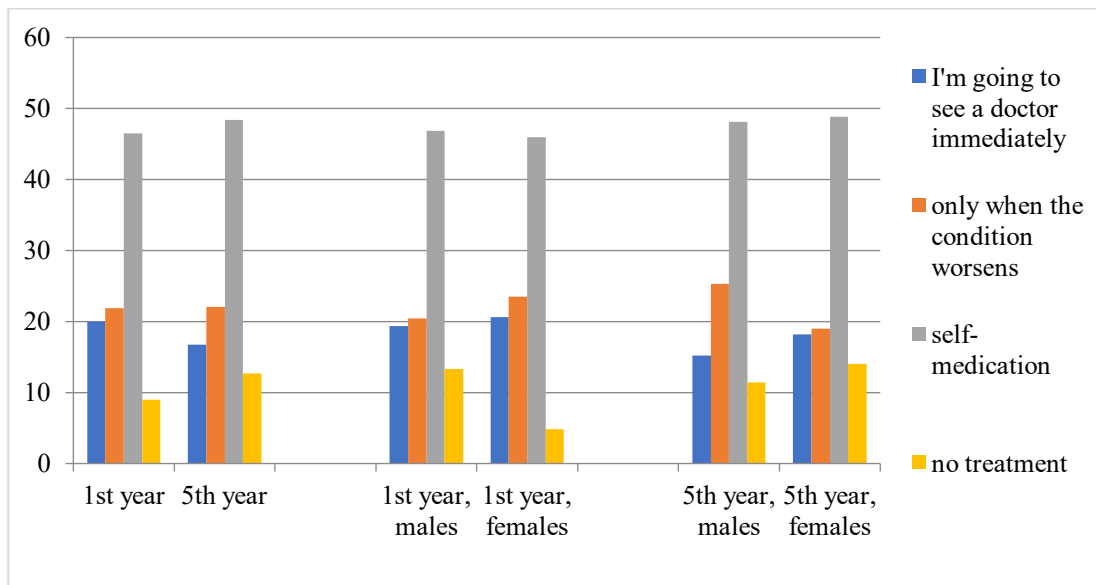


Figure 4. Therapeutic tactics in cases of ARD/ARVI

As can be seen from Figure 5, among the main reasons why students do not seek medical help in case of illness, it is possible to distinguish: difficulties arising when skipping classes (fear of making up and skipping educational material) – 48.9% in the 1st year and 36.1% in the 5th year students. It can be noted that among girls, both in the 1st year and in the 5th, this indicator is approximately 12% higher than among boys, which may indicate a higher level of responsibility and anxiety.

Notably, due to the progressive development of the students' body during the university period, it is more susceptible to various adverse effects. This leads to disruption of the adaptation process and the development of a number of diseases. The increase in the incidence of students reduces the effectiveness of the educational process, which only limits their educational activities (Figure 5).

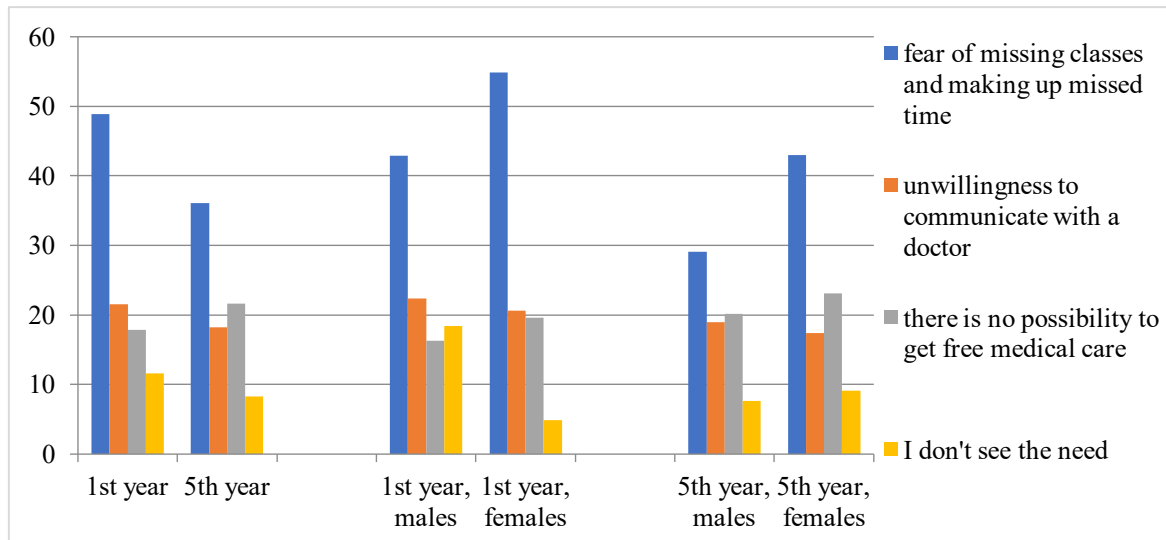


Figure 5. Reason for the lack of requests for medical help

Many respondents have established the impact on the health of the material wealth of the family, housing conditions, conditions of education and upbringing. According to the results of the survey, 85.6% of students (87.8% of boys and 83.3% of girls) in the 1st year of study are not from an urban area (Aktobe city, where West Kazakhstan Marat Ospanov Medical University is located). Male visitors (87.8%) live in dormitories (40.8%) and in rented apartments (47%), among girls the same distribution is 33.3% and 50%, respectively. During the period of the 1st to the 5th year of study, the number of

students living in a dormitory decrease (from 37.1% to 17.5%), and those living in rented apartments of the 1st and 5th years of study increases within 48.5% (Figure 6). Moreover, the number of male students, that living with their parents, increases in the 5th year of study, which is 25.3% higher than that of female students, while in the 1st year, such a difference was not observed. Satisfaction with housing conditions was noted by 100% of respondents, “rather yes than no” – 100% in all courses, which in general is a beneficial indicator of students’ living conditions (Figure 6).

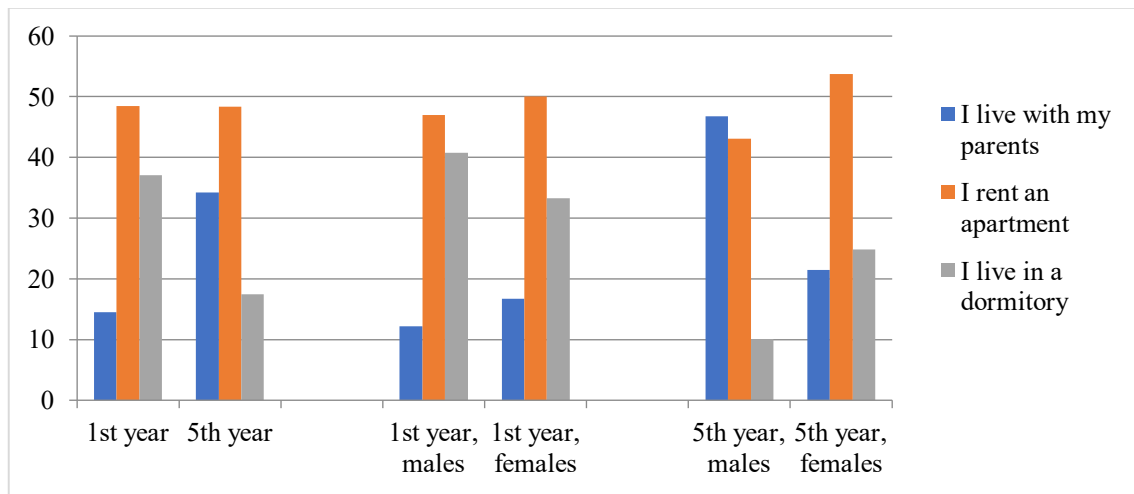


Figure 6. Housing conditions

As the main source of income, 62.1% of the 1st year students named their parents’ funds, with one in three of them citing it as their only source. Among the respondents, 21.4% indicated that they live on a scholarship, and about 5% of students noted that they worked for an additional source of income. The modern socio-cultural standard of living of students is increasingly forcing them to combine work with education. Therefore, the share of working students increases from junior to senior courses. In the 5th

year of study, the number of working students increases to 26.9%, respectively, and receiving funds from parents is 50.2% lower compared to first-year students. This question should be investigated further, since it is important to consider whether working outside of school is an independent decision of the student, or a forced response to restrictions on the part of parents, or other reasons (Figure 7).

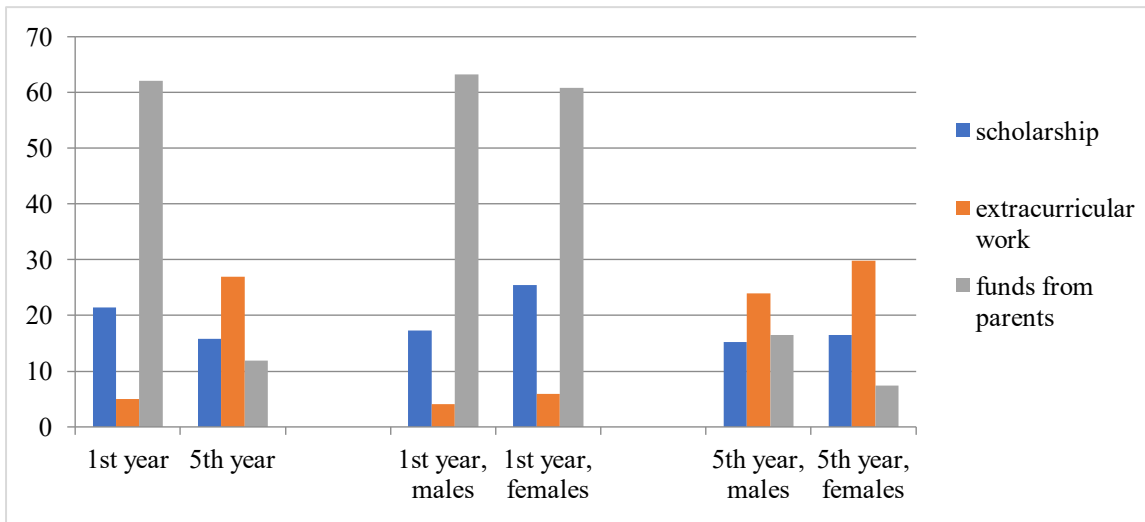


Figure 7. Financial support

According to the survey results, 41% of students in the 1st year and 30.6% of students in the 5th year of study noted that the main waste and lack of money goes to food. Only about 6% of all respondents answered that they have enough funds to meet their needs, and this indicator practically does not differ between courses. It is interesting to note that girls in the 1st and 5th courses feel a lack of

money for clothes (25.5 and 33.1%, respectively), and boys – more for entertainment (24.5 and 38%, respectively), which may indicate a greater need for girls to meet visual social standards, and boys are more inclined to satisfy their hedonistic needs (Figure 8).

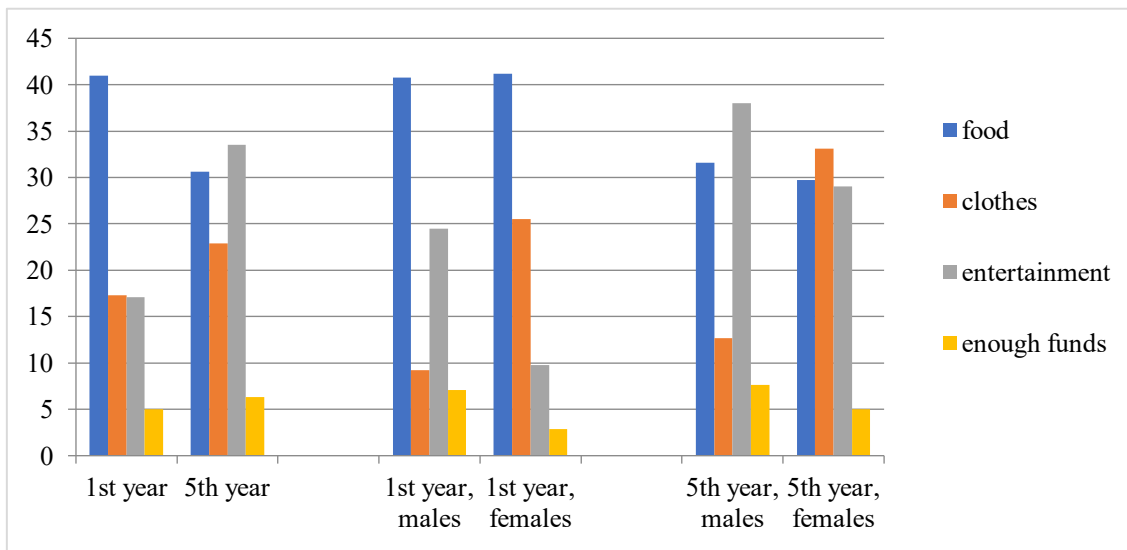


Figure 8. Lack of finances to meet the needs

To restore mental performance at a sufficiently high level and maintain health, it is necessary to hygienically correctly alternate classes with rest. Quality rest is sleep at night for at least 7-8 hours. The sleep time of students of different courses is different. Thus, 25.4% of the 1st year students (19.4% of boys and 31.4% of girls) and 31.4% of the 5th year students (33% of boys and 29.8% of girls) noted that they sleep an average of 7-9 hours. However,

15.4% of the 1st year students (13.3% of boys and 17.6% of girls) and 22.9% of the 5th year students (17.7% of boys and 28.1% of girls) sleep less than 7 hours. At the same time, the indicators of excess sleep (over 9 hours) falls from 28.5% in the 1st year to 16.3% – in the 5th year of study. Data on the duration of sleep are shown in Figure 9.

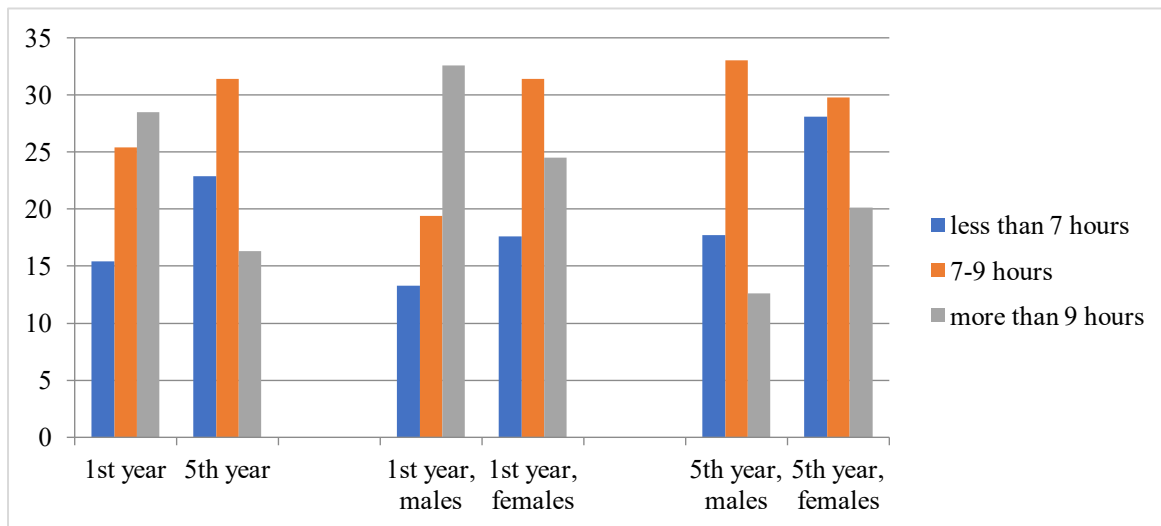


Figure 9. Sleep duration

In the column indicating the reason for the lack of sleep – the desire to combine work and education, or various nervous disorders that lead to insomnia. This leads to the problem of the development of emotional burnout,

depression and anxiety disorders, which requires a separate investigation (Figure 10).

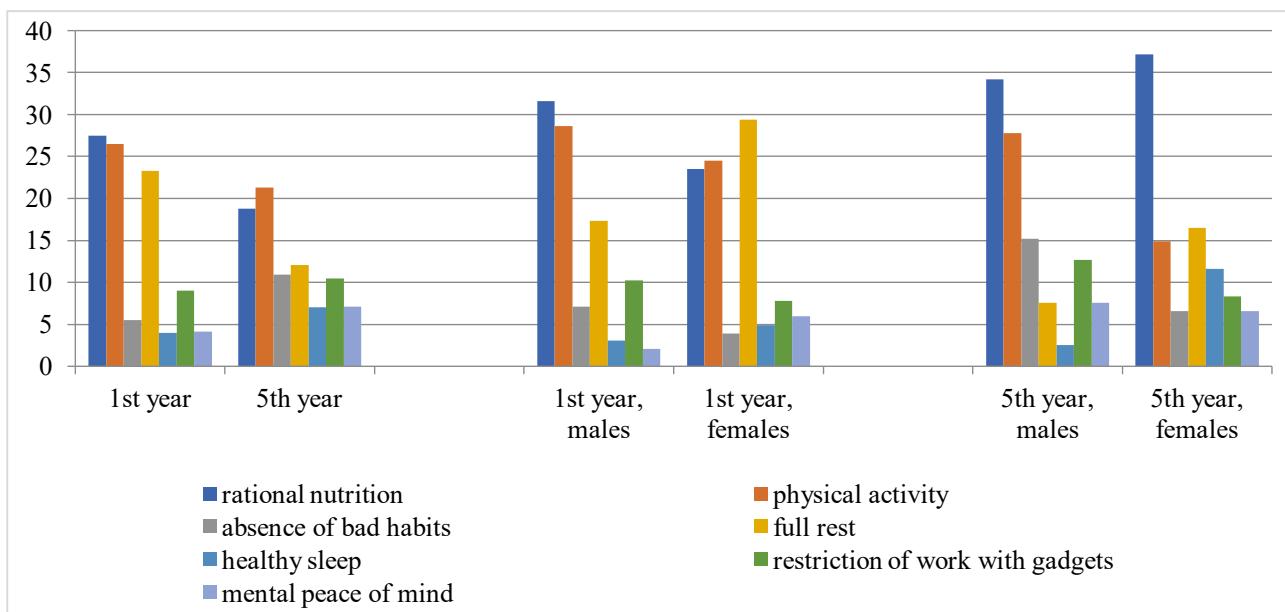


Figure 10. Presence of healthy lifestyle factors

Medical university students should be well aware of the components of a healthy lifestyle, as evidenced by the distribution, in their opinion, of the main factors that favourably affect human health. According to the results of the survey, it was revealed that the first place is full and rational nutrition among girls in the 5th year of study – 37.2% and among boys – 34.2%. This indicator for the 1st year students was: girls – 23.5% and boys – 31.6%. The second place is occupied by physical activity, in all courses within 24-28%, and among girls in the 1st year, full rest and healthy sleep accounted for 29.4%.

Nutrition is an important factor in the students' health and a characteristic of their lifestyle. The nature of nutrition depends not only on objective conditions: the

organisation of the educational process, the place of residence, the material wealth of the family, the organisation of public catering at the university. It is also largely determined by the students themselves and may be a reflection of their social attitudes. The nutrition of students is not particularly rational and balanced. When studying the diet of students, it was found that among the respondents, 16.1% of the 5th year (19% of boys and 13.2% of girls) and 26.9% of the 1st year (50% of boys and 3.9% of girls) eat 2-3 times during the day, and girls of the 1st and 5th year eat more often (4 times per day) and fractional (54.9% and 47.1%, respectively) than boys. It is worth noting that a third of the 5th year students (32.9% of boys and 31.4% of girls) and the 1st year students (36.6%

of boys and 31.4% of girls) consume food only once a day (Figure 11).

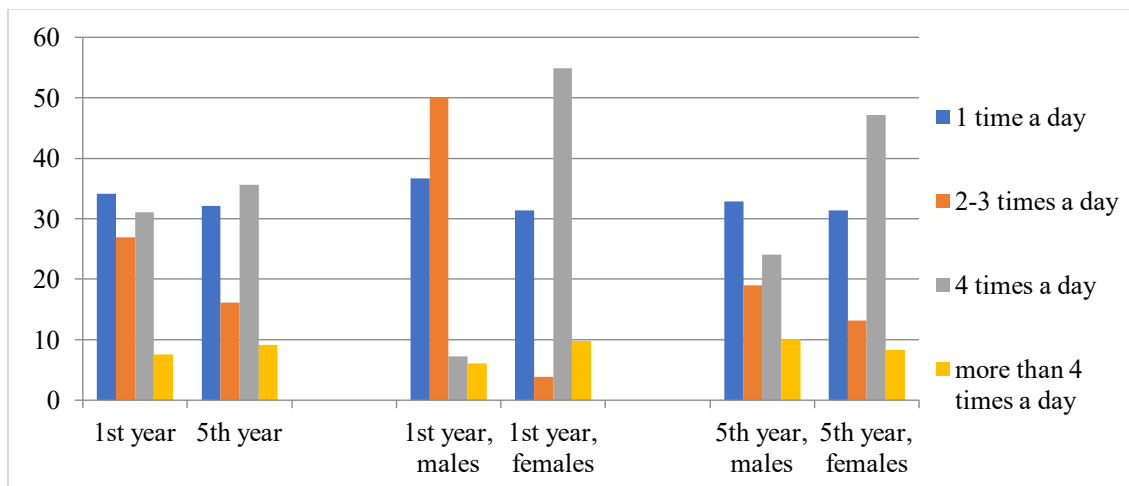


Figure 11. Frequency of meals

In general, the 1st and 5th year students are more likely to cook on their own (52.5% and 50.8%, respectively). Notably, boys in the 1st year of study are 41.5% more likely to eat in public catering places than girls, while girls

are more likely to cook their own food (72.5% compared to 32.6% for boys) (Figure 12).

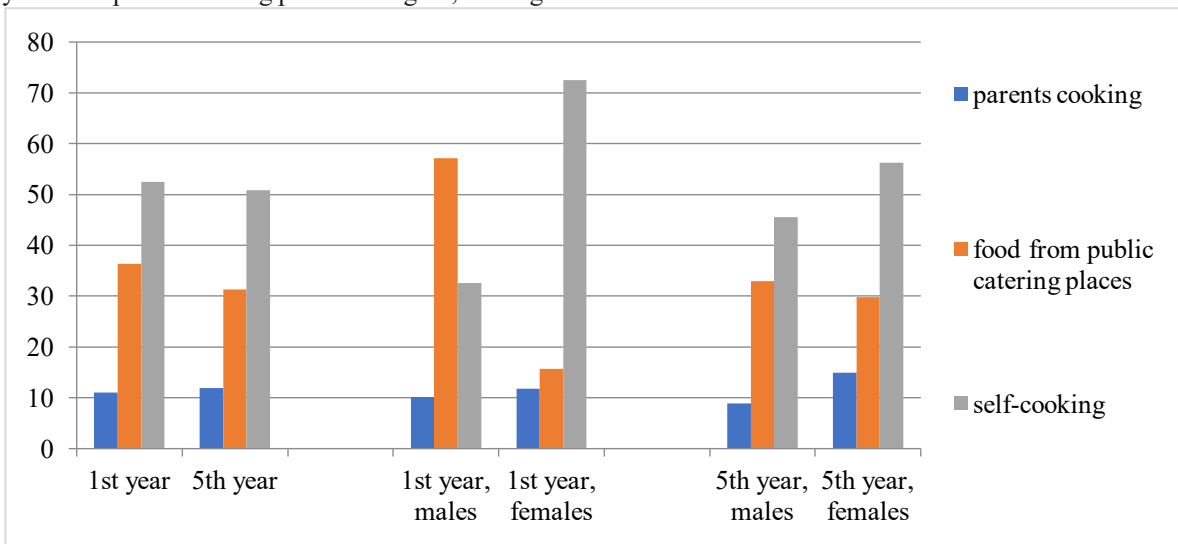


Figure 12. Source of food

One of the main elements of a healthy lifestyle is physical activity. Physical education classes at West Kazakhstan Marat Ospanov Medical University are held from the 1st to 3rd courses 2 times a week. The majority of the 5th year students – 43.4% (57% of boys and 29.8% of girls) and the 1st year students – 25.6% (32.7% of boys and 25.6% of girls) consider their motor activity to be high, average motor activity is observed in 43.6% of respondents in the 5th year (27.8% of boys and 59.5% of girls) and 48.4% in the 1st year (46.9% of boys and 50% of girls).

Among the respondents, 12.9% had low motor activity in the 5th year (15.2% of boys and 10.7% of girls) and 25.9% in the 1st year (20.4% of boys and 31.4% of girls). However, despite the understanding that adequate motor activity contributes to an increase in the adaptive reserves of the body and the impact of adverse environmental factors, students do not consider physical activity to be the basis of a healthy lifestyle (Figure 13).

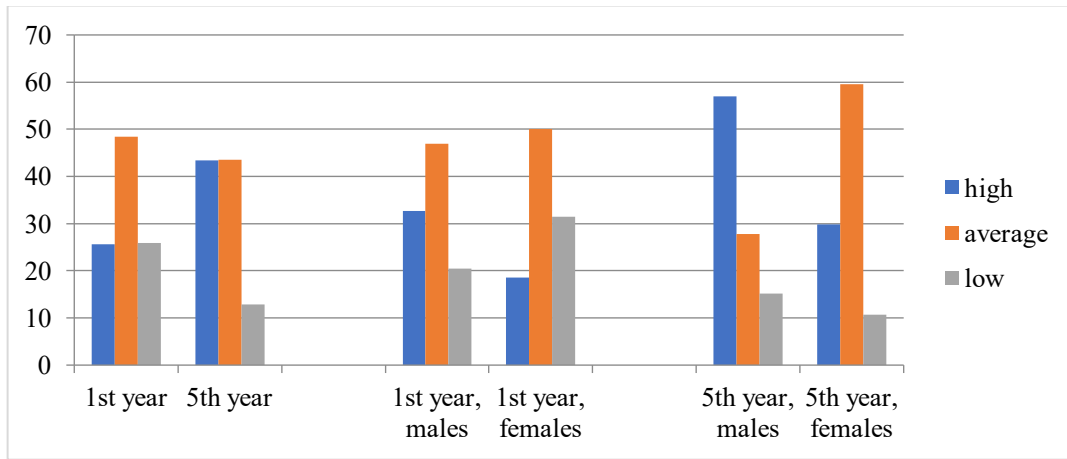


Figure 13. Level of physical activity

The analysis of the survey shows that some students consider their motor activity sufficient, of which 62.9% of the 5th year (72.2% of boys and 53.7% of girls) and 37.1% of the 1st year (39.8% and 34.3%, respectively); followed by insufficient motor activity: 37.1% in the 5th year

(27.8% of boys and 46.3% of girls) and 45.1% in the 1st year (24.5% and 65.7%, respectively). Moreover, dissatisfaction with physical activity is approximately 15-20% higher in girls than in boys (Figure 14).

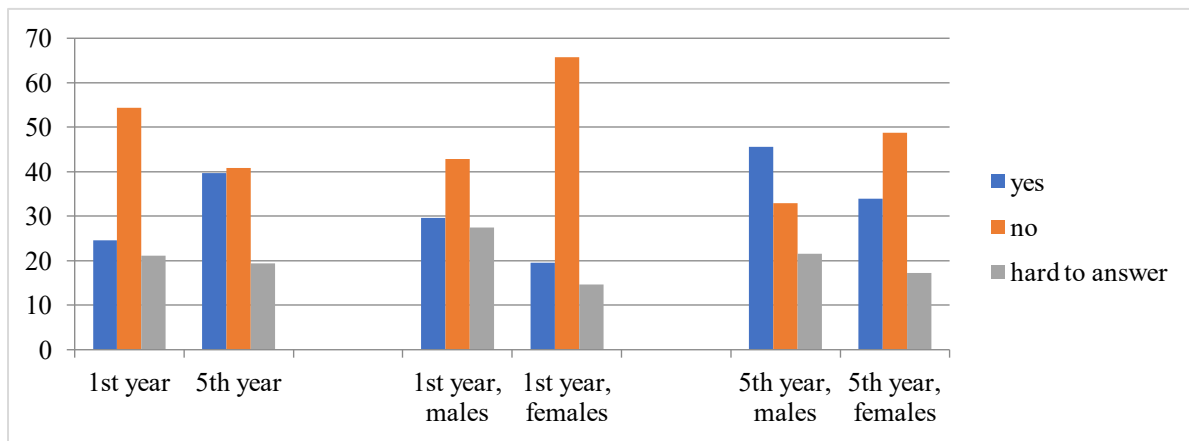


Figure 14. Sufficiency of physical activity

This indicates that a decrease in motor activity, as one of the leading risk factors for health, leads to a decrease in the body's defences, negatively affects physical health indicators, and leads to an increase in overall morbidity. According to the results of the survey, it was revealed that both the 1st and the 5th year students prefer active rest,

while the 5th year students are 16.2% less inclined to passive rest, which is a positive trend, since the change of activity and the introduction of physical movement improves the quality of rest. There are no significant gender differences in this issue (Figure 15).

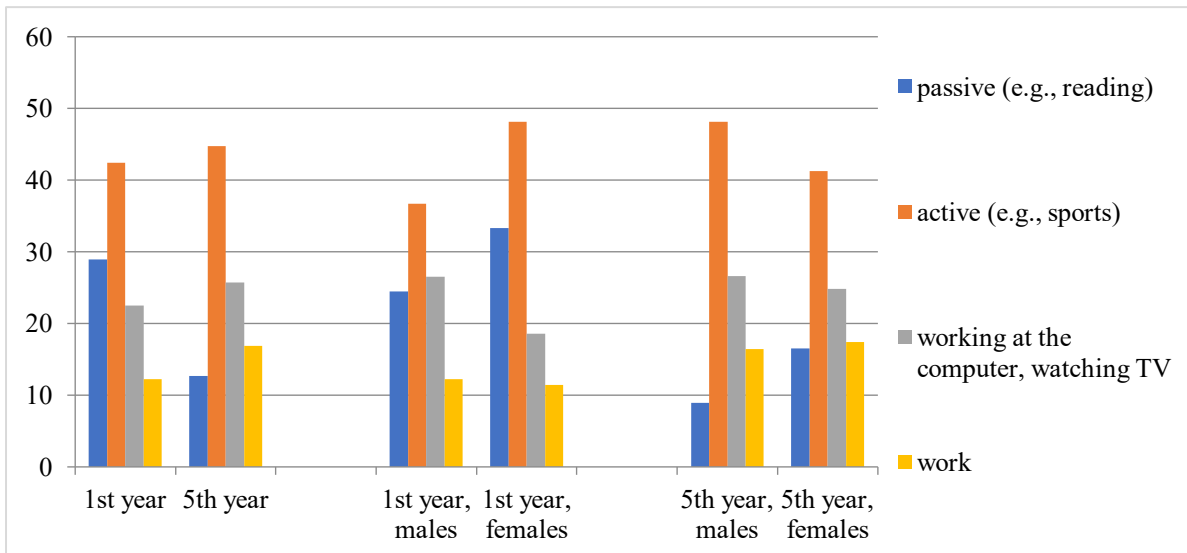


Figure 15. Preferences in the nature of recreation

The results of the study showed that such types of recreation as outdoor walks for more than 4 hours a day are significantly more common among the 5th year students: boys – 38.8% and girls – 30.4% (Figure 16).

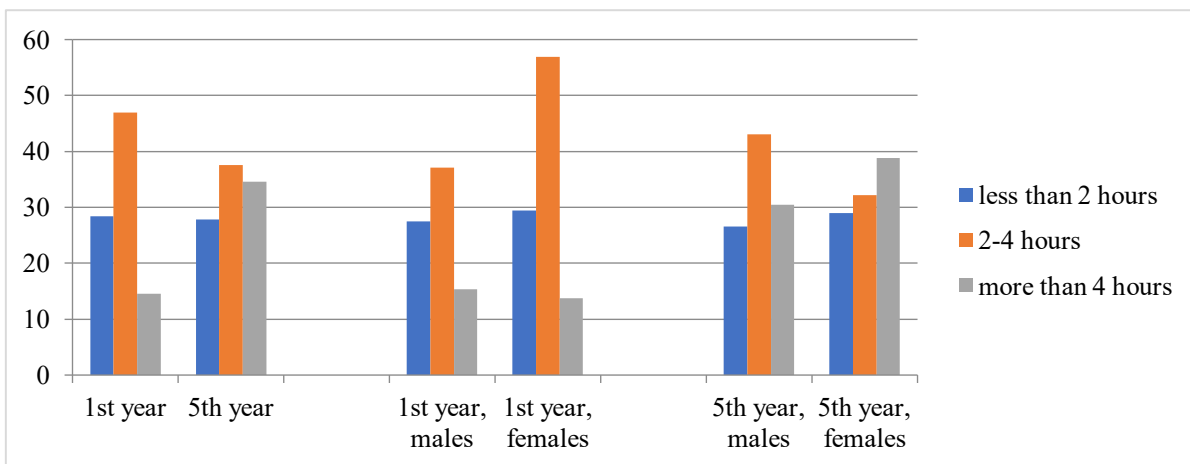


Figure 16. Duration of stay in the fresh air

A preliminary conclusion based on the data obtained suggests that junior students experience frequent discomfort and stress associated with studying more often than in senior courses. Their lifestyle indicates that they are still unable to fully organise their life and daily routine that meet sanitary and hygienic standards. Regular lack of sleep (51.7%), poor nutrition (34.1%), low motor activity (25.9%) indicate a chaotic and disorganised lifestyle of medical students. Senior students are becoming more organised, but at the same time, an additional level of workload is associated with employment during extracurricular time. And despite the high assessment of their own health, students still have serious health problems.

Discussion

It is no secret that in modern society there is fierce competition between young professionals. To achieve a certain success in this, it is not enough to be an expert in a certain field – it is also necessary to have good health, self-

organisation, and not have bad habits. All this makes young people, while still students, think about developing habits for a healthy lifestyle, which is the result of a complex interaction of various factors. In confirmation of this fact, a group of researchers from Australia in 2021 evaluated such an integral indicator as HRQoL (Health-Related Quality of Life) [13]. Their survey assessed the HRQoL of 475 students studying nursing in Queensland and the relationship between lifestyle, including smoking, nutrition, alcohol consumption, and physical activity. The results were evaluated in 2 categories – assessment of physical and mental health. Accordingly, nursing students (94.5% of whom were girls) had lower HRQoL scores compared to the Australian population as a whole, which confirms the hypothesis that medical students are exposed to higher levels of stress and have a lower quality of life. Students with higher income, with higher intake of vitamin A, calcium and iodine; and with higher physical activity had higher scores in assessing mental health; while students who had health problems and more often

consumed meat, fats, simple carbohydrates, and sugar, received lower scores in the assessment of physical health. Skipping breakfast, lack of physical activity, and alcohol had an inversely proportional relationship with HRQoL. This study is more focused on the components of nutrition and bad habits, which is a potential field of action for new research, since it will allow developing detailed dietary recommendations for medical students.

Researchers from Saudi Arabia in 2018 at King Saud University conducted a survey of 1,656 students of medical and non-medical fields of study [14]. The majority of participants were women (70.4%) aged 20 years and younger (57.4%). According to BMI indicators, 50% of students were of normal weight, 20.8% were overweight, and 11.3% were obese, which is also important to assess when assessing their health status. The majority of the participants (94.9%) lived with their families, and only 2.4% lived in university dormitories, which significantly differs from the indicators of students of WKSMU (85.6% live separately from their parents). Only a small part of students (11.5%) turn to a doctor about any unusual signs or symptoms, which is slightly lower than the obtained indicators (16.7% and 20%) in this study. About 37.8% of medical college students indicated that they vigorously exercise for 20 minutes or more and at least three times a week, which is more than among students of WKSMU (24-28%). About 90% of students eat 2-3 meals a day, while in this study it was shown that a third eat only 1 meal a day, although there is a tendency to increase the frequency of meals to 4 or more in senior courses (35.6%). Gender differences lie in the fact that girls treat their health more carefully, especially with regard to food and physical activity, which was confirmed in this study.

M.F.I.L.B. Abdullah et al. [15] published data that indicators of psychological and social quality of life were lower than the pre-pandemic norms for the population in general. At the same time, more hours of online lessons and greater social support from family, friends, and other significant individuals were significantly associated with a higher quality of life among the participants. Living in areas with a high prevalence of COVID-19 cases and more pronounced symptoms of depression and stress were largely associated with a lower quality of life. A study was conducted on the lifestyle during distance learning in Thailand in 2022 [16]. The results showed that the increase in the duration of online learning is largely associated with skipping breakfast and the frequency of consumption of sugary drinks, and the increased use of computers, tablets, and smartphones for online learning correlated with shorter sleep duration and poor quality of life in terms of mental health. A study by Polish researchers in 2022 showed that 77.8% of students engaged in various forms of physical activity before the COVID-19 pandemic [17]. Unfortunately, the dangers and limitations associated with the coronavirus, and the decrease in motivation caused by this situation, forced almost half of the students who took part in the survey to change the types of physical activity. As a result, it can be assumed that quarantine restrictions had a significant impact on the lifestyle of all students, and especially medical specialties.

C.C. Carpenter et al. [18] from the University of South Carolina, USA (2021) conducted a survey of 272 students, mostly white women (79%) with normal weight (71%), reporting a high level of physical activity, moderate

susceptibility to stress, and poor sleep quality. The sedentary lifestyle was evaluated: in comparison of the time spent on the educational process and the time spent resting at the screen, girls reported a significantly longer duration of the rest phase (3.2 ± 2.2 hours per day) than boys (2.3 ± 1.5 hours per day). Among the students who reported a lower level of education of their parents, the total time of sedentary lifestyle was significantly longer than that of students with a higher level of education of their parents. The researchers concluded that students of both sexes spend more than 12 hours in a sitting position every day, which brings back the question of the low level of physical activity of students.

The study conducted at the JC School of Public Health and Primary Care (The Chinese University of Hong Kong, 2020) was based on a survey of 731 students, among whom the prevalence of emotional burnout was 27.9% [19]. Of the entire sample, only 3 students smoked (which is a fairly low indicator from the general population); and 6.6% of students consumed alcohol weekly. Burnout is largely related to sleep quality and exercise. The study also showed that the lifestyle of medical students from Hong Kong is very different from the lifestyle of students from other countries, which is a very important remark, since socio-cultural traditions have a significant impact on the development of healthy lifestyle habits. A survey of 3389 students of various academic degrees (from bachelors to PhD candidates) conducted at the University of Munster by researchers from Germany and Qatar showed that <10% of students met the recommendations for the consumption of fruits and vegetables, >40% of students experienced sleep disorders, >30% consumed alcohol, and less than 30% they met the recommendations for physical activity [19]. The identified risk groups included men (lower consumption of fruits and vegetables), women (eat more during stress), and bachelor's degree students (poorer nutrition, sleep quality, more frequent use of alcohol and narcotic substances). The researchers focused on the link between health and academic achievement, and, as a conclusion, behavioural interventions and environmentally friendly policies towards students are necessary to raise awareness and promote student health.

The study conducted among 675 medical students from six medical colleges in Saudi Arabia between September and December 2019, was published in 2021 (that is, there is no correction for the COVID-19 pandemic) [20]. The majority of students (87.6%) slept from 4 to 8 hours a day, and more than 44% were dissatisfied with their sleep, which is significantly higher than the data obtained in this survey (28.5%). Only 28.1% ate three meals a day; about 40% of them usually or always skipped breakfast. Male students consumed significantly more fast food than girls, which confirms gender differences in the quality and self-catering. Only 4.3% trained for 30 minutes or more daily. Much attention was paid to the social factors of students' lives: 65% were introverts, but nevertheless, 81% were satisfied with their social life. Male students were significantly more satisfied with their social life than females. The five main leisure activities of medical students included browsing social networks, watching movies, chatting with friends, spending time with family, and working on the Internet. Female medical students were significantly more likely to view social networks than male medical students, and watching movies was preferable for

women compared to men, which indicates the priority of passive recreation over active.

Ukrainian researchers conducted a survey of 647 students of the Zhytomyr Ivan Franko State University in 2020, where similar results were obtained: 56.3% of males and 49.9% of females indicated that motor activity is of great importance for their health [21]. The students attributed drug use, radioactive pollution, smoking, alcohol abuse, stress, to the most dangerous factors for health [22]. It was found that the largest percentage of students had satisfactory and poor self-assessment of health – 54.9% and 29.5%, respectively, while only 9.8% of students of West Kazakhstan Marat Ospanov Medical University assessed their health as poor.

Conclusions

Medical university students are a sensitive category of students, since their well-being and lifestyle have a direct impact on academic performance and professional development in the field of healthcare. The components of a healthy lifestyle include: rational nutrition, regular physical activity, full sleep and rest, being in the fresh air, psychological satisfaction, absence of bad habits (smoking, alcohol, narcotic substances). In conditions of constant stress associated with education, it is quite difficult for students to adhere to all these principles, especially for the 1st year students. At the same time, an additional burden arises among senior students, since the desire for financial isolation and a high need for money encourages young people to get a job during the extracurricular time.

References

- [1] Medical Schools Council. The expansion of medical student numbers in the United Kingdom. London: MSC; 2021.
- [2] ACMMP. Recommendations 2021-2024, Advisory Council on Medical Manpower Planning. Utrecht: Capaciteits Orgaan; 2019.
- [3] Grimstad Commission. Studieplasser I Medisin I Norge: Behov, modeller og muligheter; 2019. https://www.regjeringen.no/contentassets/9b5b81d102384507b85150f2e0f1b089/11745900_rapport_utredning_fra_grimstadutvalget.pdf.
- [4] Nosi C, D'Agostino A, Pratesi CA, Barbarossa C. Evaluating a social marketing campaign on healthy nutrition and lifestyle among primary-school children: A mixed-method research design. *Eval Progr Plann.* 2021;89:101965.
- [5] Bede F, Cumber SN, Nkfusai CN, Venyuy MA, Ijang YP, Wepngong EN, Nguti Kien AT. Dietary habits and nutritional status of medical school students: The case of three state universities in Cameroon. *Pan Afric Med J.* 2020;35(15):35-55.
- [6] Macilwraith P, Bennett D. Burnout and physical activity in medical students. *Irish Medi J.* 2018;111(3):707.
- [7] Kristen L, Ivarsson A, Parker JM, Ziegert K. Future challenges for intervention research in health and lifestyle research – A systematic meta-literature review. *Int J Qualit Stud Health Well-being.* 2015;10:27326.
- [8] Gavala-Gonzalez J, Torres-Perez A, Galvez-Fernandez I, Fernandez-Garcia JC. Lifestyle and self-perceived quality of life in sports students: A case study. *Int J Env Res Publ Health.* 2022;19(3):1598.
- [9] Bandeira ADS, Beets MW, da Silveira PM, Lopes MVV, Barbosa Filho VC, da Costa BGG, Silva KS.. Efforts on changing lifestyle behaviors may not be enough to improve health-related quality of life among adolescents: A cluster-randomized controlled trial. *Front Psychol.* 2021;12:614628.
- [10] Kotarska K, Paczynska-Jedrycka M, Sygit K, Kmiec K, Czerw A, Nowak MA. Physical activity and the quality of life of female students of universities in Poland. *Int J Env Res Publ Health.* 2021;18(10):5194.
- [11] Kobbaz TM, Bittencourt LA, Pedrosa BV, Fernandes BDM, Marcelino LD, Freitas BP, Maciel N, Rothfuchs AP, Magalhaes EDS, Saud NS, Vidigal AS, Miura BYG, Cunha Rodrigues JF, Muller UM, de Almeida Silva L, Arnoldi Cobas R, Nishijuka FA, Barbato KBG. The lifestyle of Brazilian medical students: What changed and how it protected their emotional wellbeing during the COVID-19 pandemic. *Austr J Gener Pract.* 2021;50(9):668-672.
- [12] McKerrow I, Carney PA, Caretta-Weyer H, Furnari M, Miller Juve A. Trends in medical students' stress, physical, and emotional health throughout training. *Med Educ Onl.* 2020;25(1):1709278.

This study showed that the majority of medical students at West Kazakhstan Marat Ospanov Medical University try to lead a healthy lifestyle, and this health-promoting behaviour differed depending on gender, especially with regard to physical activity and diet. Young students are engaged in physical exercises of a higher intensity than girls, but at the same time, they eat less often, and prefer food from public catering places (for example, fast food). The difference was also noticed in age differences – junior students sleep less than 7 hours a day and are more likely to suffer from ARD/ARVI than senior students. In all categories of respondents, there is a tendency to self-medication tactics in cases of illness, since most students are afraid of making up classes.

The results of this study provide important information for future actions on the part of the administration of educational institutions, which should be aimed at effectively reducing the morbidity of students, promoting a healthy lifestyle, preventing the development of emotional burnout of students, as well as depression and anxiety disorders, since young professionals require favourable conditions for their subsequent professional development.

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Conflict of Interest

None.

- [13] Heidke P, Vandelanotte C, Irwin C, Williams S, Saluja S, Khalesi S. Associations between health-related quality of life and health behaviors in Australian nursing students. *Nurs Health Sci.* 2021;23(2):477-489.
- [14] Almutairi KM, Alonazi WB, Vinluan JM, Almigbal TH, Batais MA, Alodhayani AA, Alsadhan N, Tumala RB, Moussa M, Aboshaiqah AE, Alhoqail RI. 2018. Health promoting lifestyle of university students in Saudi Arabia: A cross-sectional assessment. *BMC Publ Health.* 2021;18:1093.
- [15] Abdullah MFILB, Mansor NS, Mohamad MA, Teoh SH. Quality of life and associated factors among university students during the COVID-19 pandemic: A cross-sectional study. *BMJ Open.* 2021;11(10):e048446.
- [16] Chusak C, Tangmongkhonsuk M, Sudjapokinon J, Adisakwattana S. The association between online learning and food consumption and lifestyle behaviors and quality of life in terms of mental health of undergraduate students during COVID-19 restrictions. *Nutrients.* 2022;14(4):890.
- [17] Kopanska M, Ochojska D, Pietluch K, Poltorak S, Banas-Zabczyk A. Assessment of physical activity and quality of life of students in the day of COVID-19 pandemic. *Przegląd Epidemiol.* 2022;76(1):67-78.
- [18] Carpenter C, Byun SE, Turner-McGrievy G, West D. An exploration of domain-specific sedentary behaviors in college students by lifestyle factors and sociodemographics. *Int J Env Res Publ Health.* 2021;18(18):9930.
- [19] Lee KP, Yeung N, Wong C, Yip B, Luk LHF, Wong S. Prevalence of medical students' burnout and its associated demographics and lifestyle factors in Hong Kong. *PLoS One.* 2020;15(7):e0235154.
- [20] Muller C, El-Ansari K, El Ansari W. Health-promoting behavior and lifestyle characteristics of students as a function of sex and academic level. *Int J Env Res Publ Health.* 2022;19(12):7539.
- [21] Bin Abdulrahman KA, Khalaf AM, Bin Abbas FB, Alanezi OT. The lifestyle of Saudi medical students. *Int J Env Res Publ Health.* 2021;18(15):7869.
- [22] Griban GP, Lyakhova NA, Harlinska AM, Yavorska TY, Kolesnyk NY, Hryshchuk SM, Obodzinska OV. Students' health level as a result of their lifestyle. *Wiadom Lekar.* 2021;74(4):874-879.

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Анотація

Актуальність. Питання здорового способу життя студентів медичного університету є актуальним протягом усього навчального процесу, оскільки самопочуття та об'єктивний стан здоров'я (як психічного, так і фізичного) безпосередньо впливає на успішність та професійний розвиток молодих спеціалістів галузі охорони здоров'я.

Мета. Мета дослідження – дослідити основні чинники способу життя студентів та виділити гендерні особливості.

Методологія. Було проведено опитування 400 студентів Західно-Казахстанського медичного університету імені Марата Оспанова з кількох ключових питань щодо харчування, сну, відпочинку, фізичної активності, захворюваності та фінансових потреб.

Результати. Більшість студентів 5 курсу оцінюють своє здоров'я на «добре» (в середньому 54,9 %), а студенти 1 курсу (58,5 %) вважають своє здоров'я «задовільним». Майже всі студенти були задоволені умовами проживання, але при цьому до 40% учасників опитування відчували брак коштів на харчування та одяг, а 38% хлопців 5 курсу відзначили брак грошей на розваги. Більшість учнів вважають свій рівень фізичної активності недостатнім, при цьому хлопці займаються з більшою інтенсивністю, ніж дівчата, але й менше часу проводять на свіжому повітрі. Питання недосипання та правильного харчування також є гострим і потребує подальших досліджень.

Висновки. Це дослідження показало, що більшість студентів-медиків намагаються вести здоровий спосіб життя, і ця поведінка, що сприяє здоров'ю, відрізняється залежно від статі, особливо щодо фізичної активності та дієти. Результати опитування є цінним матеріалом для розробки засад профілактики гострих і хронічних захворювань, впровадження стратегії збереження здоров'я студентів вищих навчальних закладів.

Ключові слова: профілактика; гендерні відмінності; раціональне харчування; фізична активність; навчальні заклади.