

MEDICAL SCIENCES

ASSESSMENT OF RELATIONSHIPS BETWEEN YOUNG PEOPLE'S ACTUAL NUTRITION AND SOME HEALTH INDICATORS

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Abstract

230 students studying III-IV courses at Azerbaijan Medical University were involved in the study. The main place among them is occupied by girls (86.09%). 26.1% of young people practice sports regularly or sporadically.

Assessment of physical development, nutrition, and health indicators of the respondents was carried out by active questionnaire survey method. Physical development indicators of students (height, weight, height-weight index) and micro symptoms of vitamin deficiency were determined objectively, and materials related to pathologies of various organs and systems were determined subjectively. It was found that the average height of the respondents is 167 cm, their weight is 57 kg, and the height-weight index is within the normal limits (20.4).

Although the diet of the majority of students (81.9%) is considered efficient (3-4 meals a day), 90% of them only eat fast food, and more than 2/3 (71.3%) eat solid food. It is also unfortunate that they use it sporadically.

Although the daily energy loss of young people is adequate with the calories of their daily food rations, the picture of the product set on the daily menus is noticeably sad. The place of "empty calorie" products in their rations is quite high. However, the amount of biologically valuable nutrients (complete proteins, vitamins, minerals) is unfortunately very low. As a result, among the respondents, complaints about pathologies of the digestive system and micro symptoms of vitamin deficiency (especially groups C and B) occurred more often (63.91% and 81.74%, respectively). It is worth noting that the satisfaction of these indicators was more pronounced in those who practice sports (10.43% and 19.14%, respectively).

Keywords: lifestyle, hypodynamia, metabolism, biologically active substances, health indicators, micro symptoms of vitamin deficiency

Our modern life is affected by natural disasters, ecological instability, war and conflicts, ever-increasing anthropogenic influences, the rapid development of science and technology, stress factors we have been exposed to since ancient times, etc. which cannot affect people's health.

On the other hand, the wide application of automation and mechanization in all industrial fields and households, the wide application of informatics and innovation technologies in educational institutions and all spheres of life harms the lifestyle of students and young people as well as in all labor groups. The share of sportsmen among students is regrettable, the place of hypodynamia and hypokinesia among them is constantly increasing.

It has been determined that hypodynamia and a passive lifestyle cause the premature death of more than 5 million people worldwide every year. Physical activity can restore all functional disorders occurring in

the human body [1, 2]. From this point of view, physical activity is considered the most convenient and natural way to improve human vegetative functions and metabolism in the body [1].

Physical and mental activities are the main requirements of a person's life, which one prevails mainly depending on his profession. At present, the energy consumed by the body of people who are part of the mental work group, including students, has significantly decreased [3]. An active lifestyle is the verification of the biological integrity of the cells, tissues, organs, and systems of the human body. Hypodynamia causes sharp changes in the morphofunctional state of the body and atrophy of muscles and bones. A passive lifestyle causes serious changes in the activity of the nervous and endocrine systems, and exchange processes [1, 2].

An inactive lifestyle leads to a decrease in the quantitative demand for students' food and a significant

increase in their body's demand for biologically active food components [4]. Unfortunately, our research shows that despite receiving medical education, the nutrition of students is not at all satisfactory, it is remarkably monotonous [5].

Numerous scientific studies of the World Health Organization (WHO) show that the food factor plays the main role in the etiology of more than 2/3 of the diseases suffered by the world's population, and in the rest, it is an indirect-iciting factor.

What was shown prompted us to carry out this study.

Aim. The purpose of the research is to study the lifestyle, energy loss of the body, actual nutrition, and nutritional status of young university students who work in a state of hypodynamia, are constantly under the influence of high psycho-emotional stress and belong to the groups of light physical labor (corresponding to the I and partially II physical activity groups). There was an assessment of dependencies between some related health indicators.

Materials and methods. 230 students studying III-IV courses at Azerbaijan Medical University were involved in the study. 32 of them were boys (13.91%) and 198 were girls (86.09%). Their physical development indicators and lifestyles were evaluated, energy spent by active questionnaire method, materials reflecting their actual nutrition, and some health indicators were collected, statistically processed, and analyzed.

To determine the energy spent by the students, they were distributed 4 days of the week (one day of rest) and more than 80 types of activities that can be encountered in the student's daily life were reflected in the chronometer. The students recorded the time they spent on the activities they were engaged in during the day in the table, and if there was an activity that was not listed in the table, they added this activity and the time they spent on it in their questionnaire. Then, the average daily energy loss of a respondent's body was calculated by performing mathematical calculations.

During the evaluation of their actual nutrition, we were satisfied with the 2-day menu table. To evaluate the quantitative indicators of the actual nutrition of the research participants, the students were taught the ability to prepare a daily menu by conducting appropriate explanatory training, and they prepared a 2-day menu table.

Through the direct intervention of our employees, the 2-day menus of each of them were checked, the number of dishes and products included in the menu tables was specified, and the average daily amount of products per person was determined mathematically. By using materials reflecting the chemical composition and caloric content of food products [6] and making appropriate calculations, the quantity and quality indicators of their actual nutrition, the average consumption level of different product groups, and the mode of their nutrition were determined.

Since those involved in the study include young people aged 18-21 (mainly 19-20) who belong to the development period of the body, and due to the high intensity of their metabolism, the inadequacies that may

exist in the actual nutrition of young students cannot remain unaffected by their physical development and health indicators.

The physical development indicators of the students (height, weight) were collected objectively, and the data reflecting the state of health were collected in specially designed questionnaires, based on their subjective complaints about various organs and systems of the body, and the deficiencies of several vitamins found in their bodies by employees examining the students. obtained based on reflective signs.

The collection of all the materials was carried out by the teacher teaching in the training group directly clarifying the answers with each student individually. The collected materials were statistically processed and analyzed.

Results of the study. Quantitative adequacy of the energy value of food rations with the daily energy consumption of the body of the young people involved in the study (with a 5-8% advantage of the latter) was determined.

This is reflected in their average physical development indicators. The height of the respondents varies between 190-150 cm and the average height is 167 cm, and as for body weight, the average body weight is 57 kg, the maximum weight is 92 kg, the minimum is 42 kg, and the height-weight index (HWI) is 20, 4 was found to be. Thus, although the physical development indicators of young people are found to be within the normal limits when approached according to the HWI, the significant difference in the fluctuation limits of the quantities indicates the statistical dishonesty of the obtained results.

When we analyzed the above results by gender, we witnessed that the slippage of the quantities among girls is more noticeable. So, the average length of boys was 177 cm (max 190 cm, min 167 cm), and this indicator was 164 cm (max 190 cm, min 150 cm) in girls. In girls, the difference was quite noticeable, and we witnessed a higher incidence of short stature among them.

Accordingly, during the analysis of the body weight indicator, it was determined that the average body weight of boys is 68 kg (max 84 kg, min 55 kg), and this indicator is 55 kg (max 95 kg, min 40 kg) in girls. Thus, the detected differences in physical development indicators indicate that their actual nutrition is not at all rational.

Based on the fact that physical activity and sports have a separate effect on both physical development and health indicators, we also performed a separate analysis of these indicators among the respondents who practice sports. It turned out that 26.1% of the students, i.e. approximately one out of every four students, regularly or sporadically do sports.

Compliance with the general law showed a slight increase in the indicators of physical development in those who were engaged in sports. Taking into account the small number of sports participants among the respondents involved in the study, we did not need to analyze their physical development indicators (height, weight) by gender.

During the analysis of the actual nutrition of the students, it was determined that the diet of most of them

- 81.9% - can be considered effective (3-4 meals a day). Unfortunately, 90% of young people gave a positive answer to the question "do you have days where you eat only fast food?" It is also regrettable that 71.3% of the respondents used hot meals only once a day.

The picture of the product set of the daily menu of the rations of young people once again confirms the unsatisfactory with their actual nutrition (Table 1). This does not affect their health indicators and the provision of the body with biologically active substances and vitamins [4, 7, 8].

Table 1.

The name of the product	Amount (in grams and ml)
Bakery products (mainly excellent and type I)	220-240
Macaroni-vermicelli products	35-40
Various kinds of cereal	30-35
Legumes	10-15
Sugar powder-sugar	50-60
Jams, chocolate, caramel, etc.	20-25
Confectionery (cake, biscuit, roulette, cake, etc.)	40-45
Dairy products (milk, yogurt, buttermilk, etc.)	50-60
Various kinds of cheese, cottage cheese, curds, etc.	15-20
Butter	15-16
Vegetable oil	10-12
Melted butter, margarine, and fats	5-6
Meats (mainly beef)	40-45
Sausage products	7-8
Poultry meat	25-30
Fish products	10-15
Egg	15-18
Potato	90-100
Other vegetables	100-110
Fruits	170-180
Fruit juices	35-40

As can be seen from the table, the place of products with high "empty calories" in the daily consumption of students is characterized by a significant presence. However, the amount of products that provide the body of the developing young generation with important biologically active components (irreplaceable amino acids, vitamins, mineral substances, etc.), unfortunately, differs sharply from the level of physiological norms required for this group of people.

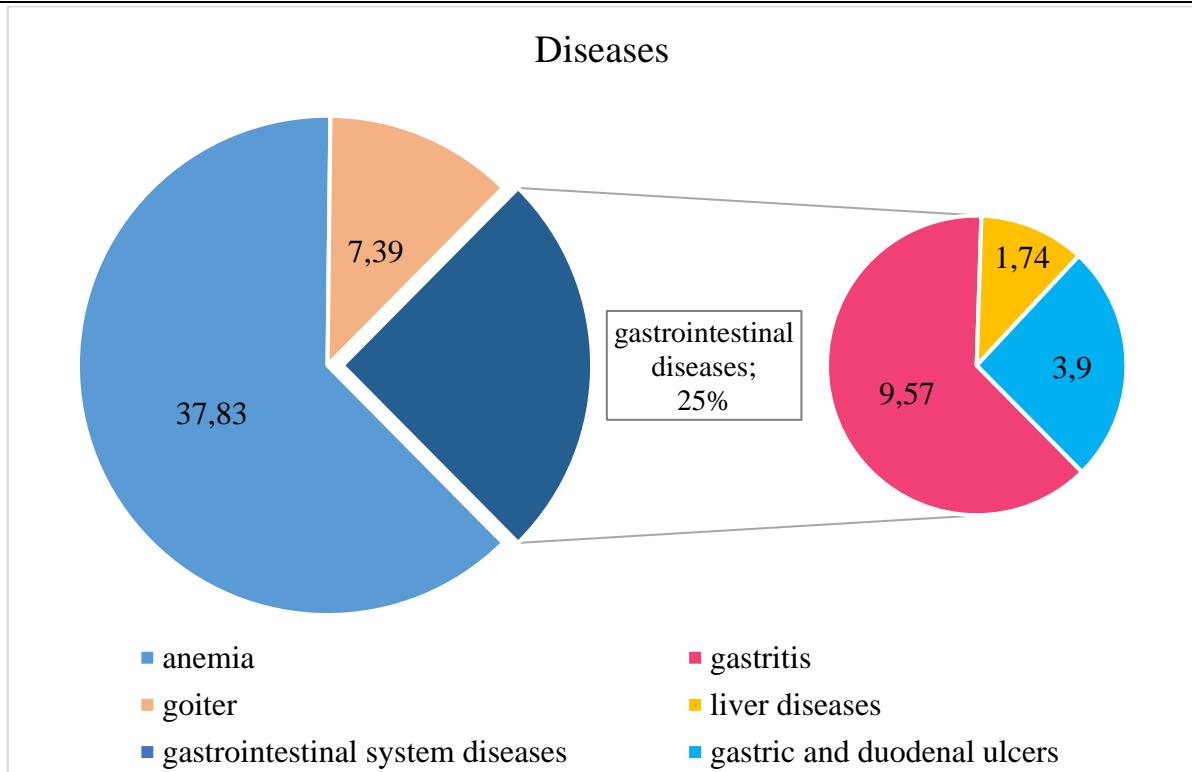
Thus, the consumption level of milk and dairy products, fish products, which are considered a source of full-value easily exchangeable proteins, and irreplaceable amino acids (especially lipotropic properties), in the ration of fish products, is quite pitiful, and the amount consumed during the week is characterized by the fact that it corresponds to the norm of 1 day's demand. In the questionnaires prepared by the students, even though egg dishes are often found in the morning meals, when we approach the quantity, it

is found that the amount of egg consumption is 1 egg every 3 days, which cannot be considered sufficient.

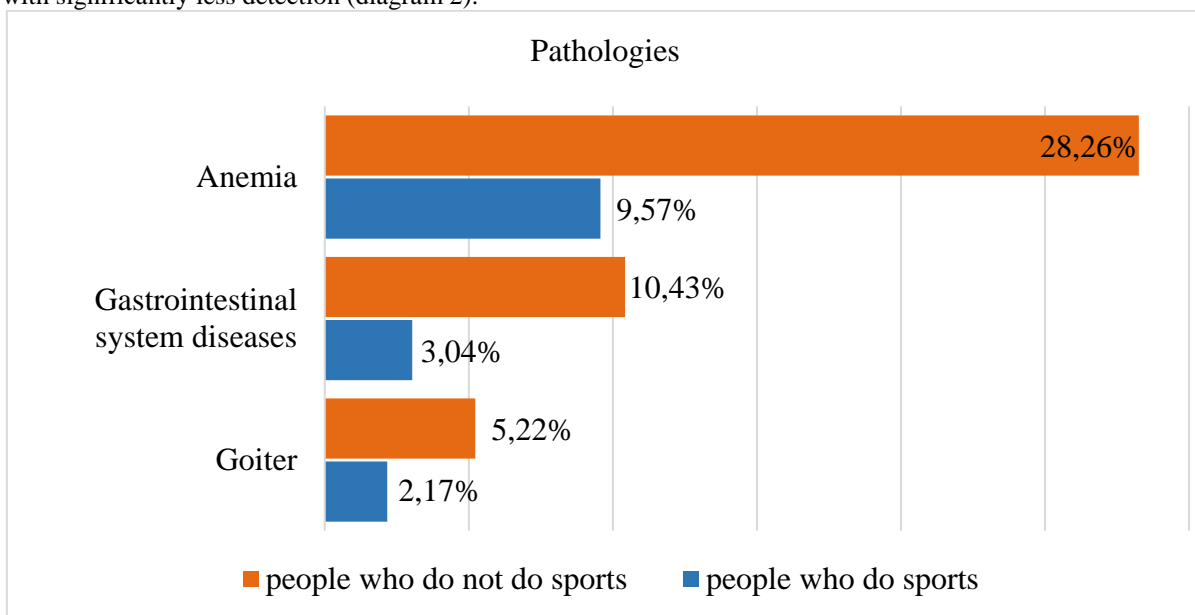
Most vitamins, minerals, dietary fibers, organic acids, etc. The amount of potato and vegetable products, fruit and berry juices in the ration of young people, which are considered to be the source, is also regrettable and it seems that they are provided in the form of 3-4 times less than the daily requirements.

Thus, the unsatisfactoriness of the product set of the students' food rations indicates the qualitative inefficiency of their actual nutrition, and the students' complaints about the pathologies of various organs and systems and vitamin deficiencies were reflected in the results of micro symptoms.

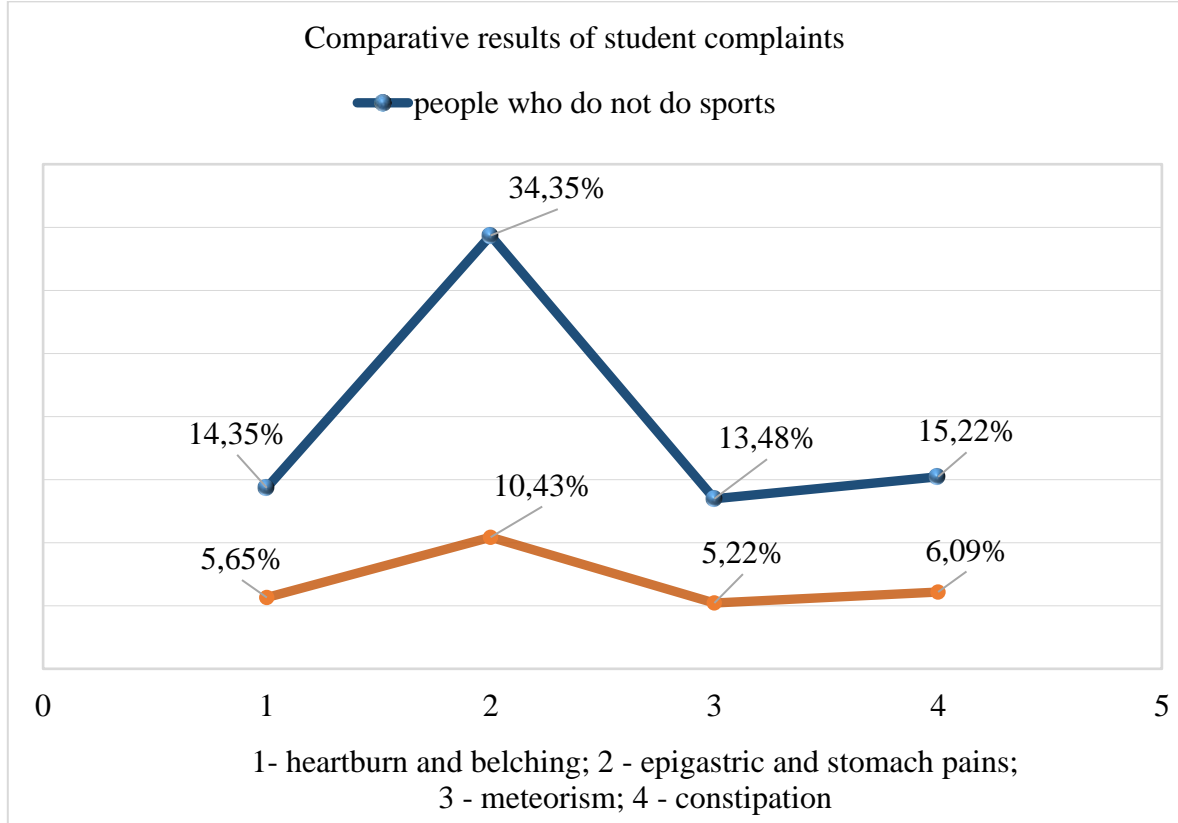
It can be seen from diagram No. 1 that somewhere more than 1/3 of the students suffer from anemia, 1/4 from gastrointestinal diseases, and 7.4% from hyperplasia of the thyroid gland (goiter). Among gastrointestinal diseases, gastritis occupies the highest place.



Among young people who lead an active lifestyle - engaged in sports, the indicated pathologies were observed with significantly less detection (diagram 2).



To find out the impact of physical activity (sports) on students' body resistance and immune system, we considered it purposeful to give students' complaints in a comparative manner (diagram 3).



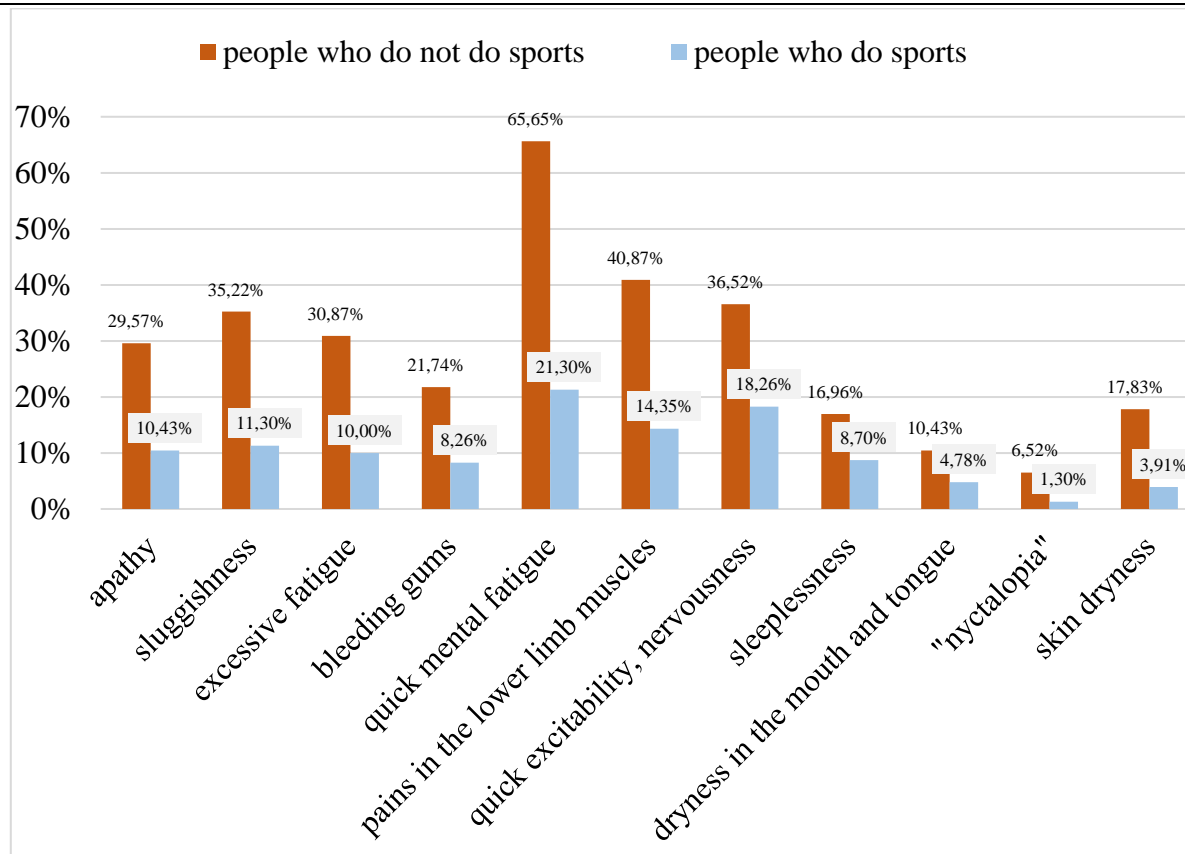
It can be seen from the diagram that the level of complaints among students who play sports is significantly lower [9].



The unsatisfactoriness of the students' nutrition was more prominently reflected in the indicators of the level of occurrence of vitamin deficiency micro symptoms found in them (diagram 4).

As can be seen from the diagram, among the students mainly lethargy, depression, excessive fatigue, bleeding gums (vitamin C deficiency); quick mental and physical fatigue, pains in lower limb muscles, photophobia (group B vitamins); symptoms of irritability, irritability, insomnia, dry mouth, and tongue (vitamin PP) and deterioration of vision in the evenings, dry skin (vitamin A) are quite high.

In the case of students who play sports, these indicators are quite pleasant [10]. The picture in diagram No. 5 is a vivid embodiment of the positive effect of physical activity and sports on the health indicators of young people (especially the vitamin supply of the body).



Considering that the results of the study include the positive effect of healthy nutrition and physical activity on health, it indicates the importance of including materials on a healthy lifestyle in high school curricula and the implementation of targeted educational activities among the population.

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