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# ASSESSING THE NUTRITIONAL STATUS OF MEDICAL STUDENTS 

I.O. Otajonov ${ }^{1}$

S.A. Tolibjonova ${ }^{2}$

## Tashkent Medical Academy

## KEYWORDS

Nutritional status, Medical students, Academic performance, Healthy diet, Student health, Learning effectiveness, Concentration difficulties, Behavioral issues


#### Abstract

The nutritional status of medical students is a critical factor in their academic performance and overall health. This study aims to assess and analyze the quality of nutrition among students at the Tashkent Medical Academy. Research by scientists at the University of Michigan has demonstrated that a healthy diet significantly impacts students' learning effectiveness and health. Students who consume high-quality breakfasts rich in fruits, vegetables, and dairy products exhibit better learning rates. Conversely, prolonged hunger or consumption of poor-quality foods leads to difficulties in learning, concentration, and behavioral issues. Our study seeks to explore these findings within the context of the Tashkent Medical Academy, providing insights into the current state of student nutrition and its effects on their academic and health outcomes.


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[^0]According to the research of scientists of the University of Michigan, organizing a healthy diet for students during the study process in universities, institutes and similar educational institutions is one of the important indicators of maintaining their health and increasing the effectiveness of education. According to the results of the research, it was found that students who regularly eat breakfast with high nutritional quality and highquality food products (fruits, vegetables, dairy products) have a higher learning rate. When students are hungry for a long time or eat poor-quality food products, there are some difficulties in their learning and concentration indicators, and if this happens continuously, there may be problems in their behavioral system.

The purpose of the study. It consists of studying and analyzing the quality of nutrition of students studying at the Tashkent Medical Academy.

Research materials and methods. For this, a survey was conducted using a Google Forms questionnaire to study the nutritional status of a total of 316 (182 female and 134 male) students. The questionnaire consists of 23 questions, which are as follows:

1. Your gender:
2. Your age:
3. Your body weight/height ( $\mathrm{kg} / \mathrm{cm}$ ):
4. Your form of study:
5. What do you mean by "healthy eating"?
6. Do you think your diet is based on the principles of healthy eating?
7. What can influence the change of a poor quality daily diet to a healthy diet?
8. How many times a day do you eat?
9. What kind of food do you usually eat for breakfast?
10. What kind of food do you usually eat for lunch?
11. What kind of food do you usually eat for dinner?
12. In addition to food, do you also consume vitamins and dietary supplements?
13. How often do you eat fast food?
14. How many spoons of sugar do you use for tea/coffee?
15. How often do you eat confectionery (buns, cookies, chocolate)?
16. What kind of drinks do you consume?
17. What types of quick-to-prepare side dishes do you have in your diet?
18. How often do you eat meat products?
19. How often do you consume milk and milk products?
20. How often do you eat fresh fruits and vegetables?
21. When you buy food at the store, how much do you pay attention to the ingredients?
22. Do you buy ready-made meals outside of class or do you prepare them yourself?
23. On average, how much money do you spend on buying food while studying?

Analysis of the obtained results. According to the results of the study, 58.4\% of them were 18-20 years old, $35.9 \%$ were $20-24$ years old, and $5.7 \%$ were 25 and older. Due
to the large number of students, some universities now organize students' studies in two stages. 296 of the students who participated in the survey we conducted said that they study in the first half of the day (from 8.00 to 12.20), and the remaining 30 students in the second half of the day (from 12.20 to 17.10). In the questionnaire "Do you think that your diet is based on the principles of healthy eating?" based on the survey, we found out that $69 \%$ of students partially follow the principles of healthy eating, the remaining $16 \%$ of students eat completely, and $15 \%$ do not follow the principles of healthy eating.
$52.3 \%$ of the students answered the question about how much they pay attention to the composition of the product when buying food, and the other half rarely ( $37.7 \%$ ) and do not pay attention at all ( $10 \%$ ) has left information.

275 of them emphasized the need to enrich the diet with fruits, vegetables and milk and dairy products when it comes to "healthy eating", 20 of them understood the consumption of low-calorie boiled foods, 11 of them understood the consumption of fried, spicy and salty foods and we can see that 9 of them think that it is advisable to give up confectionery products. $50.3 \%$ of the students concluded that the live example of such people around them, $31.6 \%$ of them promoted the principles of healthy eating in the mass media and other media, and $18.1 \%$ of the students gave a conclusion that the advice given to their close people to care for their health is important for changing their poor daily diet to a healthy diet. According to the question in the survey conducted to determine the number of meals students eat during the day, the number of students who eat 1-2 times during the day ( $24.5 \%$ ), those who eat 2-3 times during the day ( $49.4 \%$ ), and the number of students who eat 3-4 times during the day and we can see that it is (26.1\%) through the questionnaire. It was found that there are students in medical universities who consume vitamins and biologically active supplements in addition to food products.

Among them, we can see that there is a group of students who rarely consume this type of products ( $45.2 \%$ ), students who regularly consume them (18.4\%) and students who do not consume them at all (36.5\%).

Regular consumption of fast food increases cholesterol, causes diseases of the gastrointestinal tract and cardiovascular system. Fast foods contain a lot of fats and preservatives, and vitamins and minerals are almost absent in such foods. When studying the consumption of fast food, the majority of the students participating in the survey eat 13 times a week (44\%), 1-2 times a month (42.4\%) and daily consumption those who do (6.1\%) and those who do not consume at all (7.4\%) were identified.

The higher the level of sugar in the blood, the lower the immunity, the consumption of products with a high content of sugar or sugar causes varicose veins, reduces eyesight, in the spleen stone formation, as well as having a negative effect on the endocrine, nervous, kidney, digestive, bone and joint organs, causes many diseases. The survey shows that $36 \%$ of students who consume two spoonfuls of sugar in tea and coffee, $21.5 \%$ who consume three spoonfuls and $21.5 \%$ of students who consume one spoonful, and also we found that $25.7 \%$ of students who do not consume sugar products. We also got enough information
about how often they eat confectionery products (buns, cookies, chocolate). The conclusion is that students who eat 1-3 times a week (44\%), students who eat daily (30.4\%) and those who eat 1-2 times a month (21\%) and those were allocated to the group of students who do not consume such products (4.5\%). 25.2\% of students drink carbonated drinks, 31\% of boiled drinks, $21.9 \%$ of tea and coffee drinks, and $21.9 \%$ of fruit drinks. In the daily diet of students, additional dishes that can be prepared quickly, that is, most of them are dishes made from potatoes (57\%), vegetable and fruit salads (17.9\%), pasta products (18.2\%) and cereal products ( $6.8 \%$ ) consisted of such an assortment. It was found that $55.7 \%$ of students eat meat products every day, $31.5 \% 1-3$ times a week, 1-2 times a month $11.1 \%$, and $1.6 \%$ eat meat products in general.

We also paid special attention to what products students eat for breakfast, lunch and dinner. According to this questionnaire, 116 students, that is, almost $1 / 3$ of those who participated in the survey, said that they do not eat any food for breakfast. In a study conducted by Harvard scientists, they determined that people who do not eat breakfast regularly have a higher risk of cardiovascular diseases, that breakfast is a daily source of energy, metabolism and brain activity, and that not having breakfast does not affect not only health, but also mental state. 76 of the students eat simple tea, bread and similar low-calorie foods, 37 of them eat boiled and fried eggs, 32 of them eat milk and dairy products (brynza, cheese, sour cream) and easily digestible cereal products. 16 people wrote down that they ate meat products (sausage, banger, smoked meat), 33 people ate sweets, and 16 people ate food left over from the day before. For lunch, 94 of them said that they eat liquid, 63 of them thick, 30 of them fast food, 74 of them salad and 66 of them said that they eat any kind of food. For dinner, 80 students wrote that they eat liquid food, 47 students eat thick food, 61 students eat only fried food, 74 students eat different types of salads, and 65 students write that they do not eat dinner. From this we can conclude that most of the surveyed students like liquid food for lunch and dinner.

Milk and dairy products contain many useful substances such as potassium, calcium, iron, phosphorus, magnesium, iron, vitamins A, B, C, D, as well as protein and easily digestible fats. It was observed that $48.5 \%$ of students consume milk and dairy products 13 times a week, 26.7\% 1-2 times a month, 18.6\% during the day, and $6.2 \%$ do not consume it at all. $47.1 \%$ of students ate fresh fruits and vegetables 1-3 times a week, $35.1 \%$ of students ate this types of products every day, $15.6 \%$ of students ate them 1-2 times a month and $2.3 \%$ of students did not consume these types of products.

Although the main time of the students is spent in the university, most of the students prefer to eat in additional canteens located outside the university. From the analysis, we can say that $35.6 \%$ of the students prepared their own food in the dormitory or rented house during lunch, $14.6 \%$ of the students bought ready-made food, and $49.8 \%$ of the students emphasized that they eat food depending on the situation. When we studied how much money students spend to buy food during the day, $17.2 \%$ of students spend from 10,000 to 20,000 soums, $41.9 \%$ of them spend from $20,000-30,000$ soums, $30.2 \%$ of students spend
from $40000-50,000$ soums, and $10.7 \%$ of students said that they spend around $50,000-$ 60,000 soums.

Summary. Medical university students do not have complete information on proper nutrition. Protection of students' health should be considered as a part of the general system of teaching-educational work carried out by scientific departments, deaneries and departments of higher educational universities. Another way to optimize student nutrition should be to reorganize the work of canteens in higher education universities. It is necessary to carry out sanitary educational work in order to improve students' lifestyle and increase their knowledge of hygienic skills.

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[^0]:    ${ }^{1}$ Tashkent Medical Academy, Tashkent, Uzbekistan
    ${ }^{2}$ Tashkent Medical Academy, Tashkent, Uzbekistan

