ASSESSMENT OF EATING HABITS OF HIGH SCHOOL STUDENTS AND MEDICAL STUDENTS

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Abstract

Objectives. The transition from high school student to university student can lead to the modification of eating habits learned in the family. Sometimes the changes are not adapted to the body's needs, an aspect that must be closely followed.
Material and methods. The study was carried out on a group of 162 young people from a high school and the faculty of medicine in Iasi. A weekly food consumption frequency questionnaire was applied.
Results. The dominant intake of milk was once or 2-3 times a week (29.01%), with insignificant differences by collectivities. For meat products, there were 26.54% "no consumption" responses, but the calculated differences are statistically significant ($p < 0.05$) and point to a decrease in consumption among university students. Eggs were present in the menus mostly 2-3 times (41.97%) per week, with significant differences by collectivities ($p < 0.05$). Bread was present daily on the menus of half of the surveyed young people, with insignificant differences by collectivities. The dominant intake of potatoes was 2-3 times a week (47.53%), with statistically significant differences by collectivities ($p < 0.01$), and for fruits, the dominant intake was daily in 29.01% of cases. The calculated differences are still statistically significant ($p < 0.01$) and highlight the reduction in consumption among university students.
Conclusions. There is a change in the students' diet, but it is not one that contributes to maintaining good health.

Keywords: eating habits, adolescent, high school students, university students.

Introduction

Food is an external factor that makes a major contribution to maintaining the health of the population. Particular attention should be paid to the diet of adolescents and young adults, as weight control is now essential for them. Identifying with the current ideal of beauty raises many problems. Young people may have an adequate body weight, but not corresponding to the desired ideal. In this context, problems can arise related to the perception of body appearance and satisfaction with one's

own body, a situation in which the orientation towards exaggerated slimming treatments is manifested, which can represent a major health risk (Zarychta, Chan, Kruk, & Luszczynska, 2018).

When the mother of the family has significant body image concerns, the situation may become much more challenging. Teens, particularly girls, will take up this subject as well. Young women will resort to sometimes uncontrolled dieting that can affect their growth/development (Garcia Meraz, Guzmán Saldaña, López-Rodriguez, & Galván, 2019).

Studies conducted on adolescents must be focused on aspects related to maintaining health, such as global energy intake, body perception, body mass index, and physical activity. Unfortunately, there are many problems related to global energy intake because young people want to correspond to the current ideal of beauty, which represents a great challenge (Dewi & Wirjatmandi, 2019).

In Romania and especially in the Moldova area, there is a strong anchoring in traditions, so eating habits change very little, especially among high school students. The studies carried out in different counties of Moldova have highlighted statistically insignificant differences by communities and classes, an aspect that must be known and carefully studied (Albu, Petrariu, & Onose, 2020; Albu, Ghica, Foia, & Indrei, 2019).

Leaving the family nest during the university student stage can lead to a change in nutrition, an element that must be taken into account. Even well-informed medical students might be tempted to indulge in fast food that can be quickly consumed during the short break between two educational activities. This shift in dietary habits is significant and concerning, as it may not be healthy or advisable.

The study aims to achieve the following objectives: to gain knowledge about the diet of young people; to evaluate the eating habits of students and their adherence to the norms of rational nutrition; to assess the changes in nutrition that are typical during the transition from adolescence to young adulthood.

Material and methods

The study group consisted of 162 young people from C. Negruzzi High School in Iași (79 students, 48.76%) and from the Faculty of Medicine in Iași (83 students, 51.23%). The students from C. Negruzzi High School are between 15 and 18 years old and are in the 10th and 11th grades. The students from the Faculty of Medicine in Iasi are in their fourth year of studies and are between 22 and 25 years old. A weekly frequency of food consumption questionnaire was applied to the young people in the study group. The intake of animal and vegetable products was evaluated. The category of products of animal origin included milk, meat products, and eggs, while the category of vegetable products included bread, potatoes, and fresh fruits. The answer options provided were "no consumption", "once a week", "2-3 times a week", "4-6 times a week", and "daily". The rules of the rational diet state that milk should be consumed daily or 4-6 times a week, while eggs, bread, and fresh fruit should be consumed daily. However, potatoes should only be consumed 2-3 times a week, as other types of vegetables are also recommended. The results were analyzed using Pearson's chi-squared test.

Results

The dominant consumption of milk is 2-3 times or once a week (29.01%). The calculated differences are statistically insignificant ($p > 0.05$) and point to the existence of similar eating habits in the young people surveyed (Table 1).

Table 1
Frequency of milk intake of the study group

Collectivity	Intake frequency					Total
	no consumption	once a week	2-3 times a week	4-6 times a week	daily	
High school	14	26	20	12	7	79
Faculty	11	21	27	9	15	83
Total	25	47	47	21	22	162
%	15.43	29.01	29.01	12.96	13.58	

Meat products were consumed mostly once (21.60%) or 2-3 times (29.62%) a week. Interestingly, 26.54% of young people opt for "no consumption" of meat. The study also found that there is a statistically significant difference ($p < 0.05$) in the consumption of meat among different groups. University students, in particular, have been observed to consume meat less frequently on a daily basis (Table 2).

Table 2
Consumption of meat products

Collectivity	Intake frequency					Total
	no consumption	once a week	2-3 times a week	4-6 times a week	daily	
High school	19	13	21	18	8	79
Faculty	24	22	27	9	1	83
Total	43	35	48	27	9	162
%	26.54	21.60	29.62	16.66	5.55	

Eggs were present on menus mostly 2-3 times (41.97%) or 1 time (27.77%) per week. It's worth noting that high school students had a significant number (11.72%) of negative responses. These differences were statistically significant ($p<0.05$), as shown in Table 3.

Table 3
The frequency of eggs intake of the study group

Collectivity	Intake frequency					Total
	no consumption	once a week	2-3 times a week	4-6 times a week	daily	
High school	15	26	27	10	1	79
Faculty	4	19	41	15	4	83
Total	19	45	68	25	5	162
%	11.72	27.77	41.97	15.43	3.08	

Half of the young people surveyed (49.38%) acknowledged consuming bread on a daily basis. The calculated differences were found to be statistically insignificant ($p > 0.05$). However, it was observed that 8.02% of young people marked the "no consumption" option and 7.40% chose the option "once a week". These results are not ideal for maintaining good health, as per Table 4.

Table 4
The presence of bread in the menus of young people

Collectivity	Intake frequency					Total
	no consumption	once a week	2-3 times a week	4-6 times a week	daily	
High school	6	8	13	8	44	79
Faculty	7	4	22	14	36	83
Total	13	12	35	22	80	162
%	8.02	7.40	21.60	13.58	49.38	

Potatoes were consumed mostly 2-3 times (47.53%) or 1 time (27.77%) per week, with statistically significant differences among communities ($p < 0.01$). Consumption 4-6 times a week or daily was very rare among university students (Table 5).

Table 5
Weekly consumption of potatoes

Collectivity	Intake frequency					Total
	no consumption	once a week	2-3 times a week	4-6 times a week	daily	
High school	7	20	29	16	7	79
Faculty	5	25	48	5	0	83
Total	12	45	77	21	7	162
%	7.40	27.77	47.53	12.96	4.32	

According to the data, 29.01% of the participants reported consuming fresh fruits on a daily basis, and an additional 22.22% of young people said they consume fruits 4-6 times a week. A small percentage of 3.08% reported not consuming any fruit at all, while 17.28% marked the option of consuming fruits once a week. The differences between these groups are statistically significant ($p < 0.01$), indicating a decrease in the frequency of daily fruit consumption among university students as shown in Table 6.

Table 6
The frequency of fruits intake of the study group

Collectivity	Intake frequency					Total
	no consumption	once a week	2-3 times a week	4-6 times a week	daily	
High school	1	7	20	18	33	79
Faculty	4	21	26	18	14	83
Total	5	28	46	36	47	162
%	3.08	17.28	28.39	22.22	29.01	

Discussions

The assessment of the students' diet was carried out with the help of a weekly food intake frequency questionnaire. They are questionnaires that allow the assessment of eating habits and not the strict evaluation of consumption over a certain period of time (Choudhury et al., 2018). The

evaluation of eating habits is essential not only for healthy people but also for children and young people (periods of growth and development). Thus, it will be possible to assess the diet and identify the nutritional mistakes that occur. Starting from this aspect, the correct orientation of nutritional educational programs can be ensured (Wadolowska et al., 2018). Leaving the family nest sometimes leads to the appearance of major changes in eating habits, which can even persist throughout life.

In the study group, the dominant intake of milk is once or 2-3 times a week, which does not correspond to the nutritional recommendations specific to the age group (daily intake or 4-6 times a week). The differences calculated on the collectivities are statistically insignificant, so there is no change in the preference for milk when the diet changes. According to various studies, the consumption of milk among students in different countries varies significantly. In a study carried out on a group of students from the technical college in Bacău, a dominant intake of once (32.07%) or 2-3 times (28.80%) per week was observed (Albu et al., 2019). Only 27.8% of German students reported a major intake of milk (Manz et al., 2019). In Austria, teenagers admit to consuming milk an average of 2.2 (2.1-2.4) times per week (Drenowatz, Greier, & Klein, 2018). Meanwhile, in Sudan, 37.1% of students consume milk daily, but 20.5% of them do not include it in their diet (Missa, Simya, & Siham, 2018). It is worth noting that there are many concerns related to milk consumption that require attention from nutrition experts.

Meat products are less consumed by university students, although they do not require special preparation. However, giving up their frequent consumption is an element that draws attention to the possibility of changing the food habits of the population.

Eggs are present on menus mostly 2-3 times a week and are preferred for their ease of cooking. In Bacău, high school students typically consume eggs 2-3 times per week (Albu et al., 2019). Medical students in Karachi, on the other hand, tend to consume eggs 1-2 times or 3-4 times per week (Fatima, Akhtar, Khan, & Fatima, 2019), which is a similar consumption pattern to that of medical students in Romania. According to Missa et al. (2018), adolescents from Sudan report eating eggs twice a week (37.1%), while those from Rawalpindi, Pakistan, report eating eggs every day (35.1%) (Naser et al., 2018). These studies highlight how eating habits vary across different regions of the world.

Special attention should be paid to the consumption of bread. It is rich in carbohydrates, offering more than 250 kcal per 100 g of product. It is also rich in protein, so its removal from menus is not a positive element (Martin, & Tarcea, 2015). The daily intake is recognized by half of the young people surveyed, with the same answers for high school students and university students. In a study carried out in Romania on students from three high schools in the city of Botoșani, the daily consumption of bread is present in 63.55% of young people, a result that is encouraging (Albu et al., 2020). Unfortunately, giving up eating bread is quite common. Thus, 44.9% of the adolescent students in Rawalpindi, Pakistan, do not consume bread (Naser et al., 2018), while for those from Austria, the average consumption of bread is 3.2 (3.0-3.3), which is totally insufficient (Drenowatz et al., 2018). Medical students in Karachi consume bread mostly 6-7 times a week (46.9%), which is in line with reasonable dietary guidelines (Fatima et al., 2019). There is the same wide variation of results from one geographical area to another, which is good to consider.

Potatoes and fruits are popular choices for those looking to control their body weight due to their low-calorie content. The consumption of vegetables and fruits at the population level is influenced by several factors, including their availability within the household, which is often dependent on the family's socioeconomic status. (Luszczki et al., 2019). In this study group, there is a reduction in consumption among university students, which is not advisable because they are rich in minerals and vitamins.

In this context, it is important to monitor the supply issues of certain products, taking into account their social, economic, and cultural aspects (Begley, Paynter, Butcher, & Dhaliwal, 2019). Although medical students are taught about nutrition in their study program, problems related to nutrition still arise. To address the nutrition of a healthy person, a comprehensive approach must be taken, considering multiple factors (Soriano-Ayala, Amutio, Franco, & Mañas, 2020).

Conclusions

Assessment of students' diets is easily done with the help of weekly food frequency questionnaires. Milk intake is problematic for both high school and university students. Eggs are often not provided in the necessary quantities, an aspect also found in meat dishes. The consumption of bread does not raise problems, which is an encouraging result because often the tendency is to give up and not to reduce the intake. Potatoes and fruits are consumed in moderate amounts, which is not a beneficial aspect. There are numerous problems related to the nutrition of young people that must be known and carefully monitored. Medical students, even if they have the necessary information, do not adapt their diets to the rules of rational nutrition.

Conflict of interests

The authors declare no conflict of interest.

Ethical approval

Not the case.

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