

Evaluation of Eating Behavior Study of a Representative Sample of Students

A.V. Timofeeva, M.V. Krivoschapkina, R.N. Zakharova, A.E. Mikhailova,
S.S. Sosina

ABSTRACT

The paper presents the results of studying the organization of diet, eating habits, food quality in a representative sample of the 1st year students of all North Eastern Federal University named after M.K. Ammosov faculties and institutes. Studying of existing nutrition disorders allowed investigating the initial state of health of students and identifying individual risk factors of diseases of the gastrointestinal tract.

Keywords: students, diet, eating habits, eating behavior, nutrition, eating disorders, risk factors, morbidity structure, digestive diseases, healthy lifestyle.

INTRODUCTION

The usefulness of the diet determines the health of the population affecting the growth and physical development, efficiency, adaptive capabilities, morbidity and life expectancy.

Malnutrition problems of young people are alarming not only health professionals but the Russian government. Thus, the Russian Consumer's Inspection together with the Institute of Nutrition has prepared a bill "Policy Framework of the Russian Federation in the field of healthy nutrition of the Russian Population for the period up to 2025."

In this document the special attention is focused not only on technical regulations preparation to ensure the quality and safety of food products and the system of educational programs in the field of healthy lifestyle and nutrition [6].

Diseases of the digestive system are on the one of the leading places in the morbidity structure of NEFU students. Modern nutriciology attaches a great importance to nourishing factors in digestive diseases development.

Both quantitative and qualitative nutritional disorders strongly change the digestive system job, being one of the risk factors of chronic diseases of the digestive system.

Therefore, our studies on the profiling of dietary regime disorders among 1st year students of the NEFU will become the basis for curative measures, a healthy diet and lifestyle propagation.

The aim of the investigation was to study the eating pattern, dietary habits of students, and prevalence of the digestive system diseases.

MATERIALS AND METHODS

The work was performed in the Institute of Health NEFU named after M. K. Ammosov. Clinical and functional studies were carried out in the Institute of Health of NEFU at the Department of Therapy with endocrinology in cooperation with Department of therapeutic physical training of NEFU. The study was approved by a local ethics Committee of Yakut Scientific Centre of Complex Medical Problems of Siberian Department of Russian Academy of Medical Sciences.

The Work was performed within the framework of the basic part of the state assignment of the Ministry of education and science of the Russian Federation on the topic «Adaptive capacity and health of the indigenous population of Yakutia in conditions of modernization of the socio-economic system». The informed consent was obtained prior to study at the students, the questionnaire was conducted anonymous.

A representative sample of 800 people from a representative group of 1st year students of all faculties and institutes of the NEFU (3400 pers.) was created by random numbers method in Excel program. 649 people of the representative sample took part in investigation that represents 81,1%. There were 292 Male (45%) aged 15 to 26 years ($18,8 \pm 1,5$), Female – 357 (55%) aged 16 to 30 years ($18,8 \pm 1,5$) of 649 participants. The ratio of male and female was equal which corresponds with the general population of 1st year students of all faculties and institutes of the NEFU.

Digestive system questionnaire contained 26 questions to implement the diet, presence of complaints and risk factors for diseases of the digestive system.

RESULTS AND DISCUSSION

The results of the studies are evidenced of sufficiently high prevalence of such chronic diseases of the gastrointestinal tract as chronic gastritis, cholecystitis, colitis between students. The morbidity of the irritable bowel syndrome, biliary dyskinesia, intestinal dysbiosis, chronic viral hepatitis is reasonably high.

Diseases of the digestive system ranked the 2nd place in the structure of the total incidence (143,3 per 1,000 students).

Chronic gastritis, irritable bowel syndrome, biliary dyskinesia and intestinal dysbiosis provided substantive input into the structure of digestive diseases (tabl. 1).

Results of the survey revealed gross violations of the diet. Breakfasts and meals was absent to 36,4% and 2,5% of the students, hot meals – to 64,4% and 44,2% of the students noted the presence of the late dinner in the mode of the day.

Table 1

Class XI Diseases of the digestive system to 1000 students

Name of nosological form	Index
Chronic gastritis	61,6
Functional disorders of the stomach	1,5
Gastric ulcer	1,5
Esophagitis	1,5
Biliary dyskinesia	16,9
Chronic cholecystitis	7,7
Intestinal disbiosis	16,9
Irritable bowel syndrome	20
Chronic colitis	7,7
Chronic enteritis	1,5
Chronic pancreatitis	1,5
Chronic viral hepatitis	3,1
Total	143,3

Carbohydrates were dominated in the students' diet that represents 69,4%, proteins – 50,5%, fats – 29,9%.

Results of investigation of preferred students dishes are shown in figure 1.

The young people mostly preferred the fried foods: cakes, chips, grilled meat and fish. Steamed water food (soups, cereals), was only 32,4%.

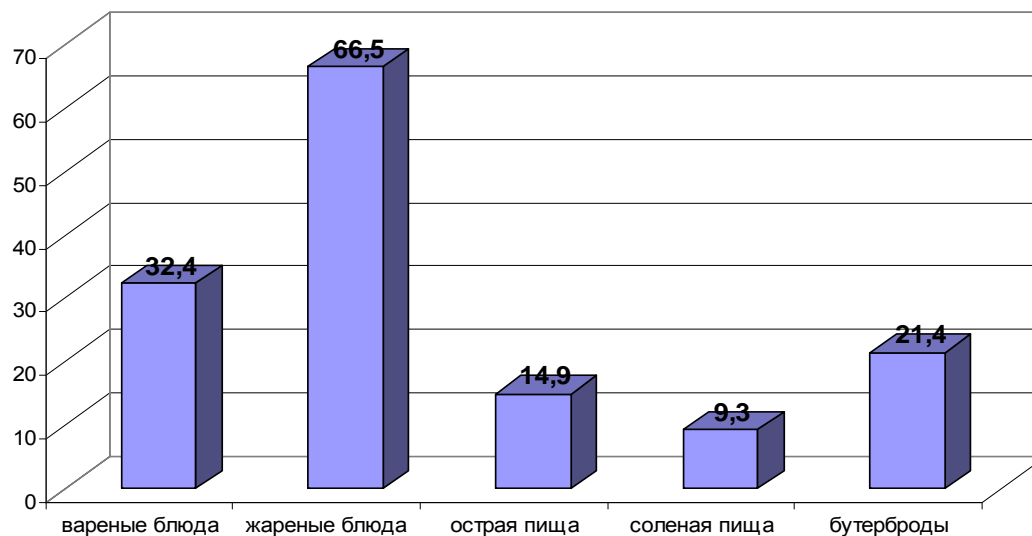


Figure 1 Food Quality.

The maintenance of the water regime is reflected in figure 4. The water and carbonated beverages was consumed by 70,5%, 70,2%.

Study of the complaints and objective examination of the students revealed the presence of dyspeptic disorders and pain in the epigastric area, in the right upper quadrant and along the large intestine. 27,9% of respondents complained of the presence of epigastric pain, the right and left upper quadrant and umbilical area – 19,1%, the right iliac area – 11,8%, the left iliac area – 0,3%. Pains were mainly nagging (42,7 %), sometimes stabbing (30%) and obtuse (27,3%).

There were the following dyspeptic disorders: problems of gulping (3,8%), vomiting (13%), regurgitation (13,6%), salivation (16,6 %), nausea (26,9%), epigastric burning (38,1%) burping (42,6%), hoove (57%), obstruction (18,4%), diarrhea (20,2%).

12,4% of respondents noted a weight loss, 37,2% – generalized weakness among the students presented problems of dyspepsia in the epigastric area.

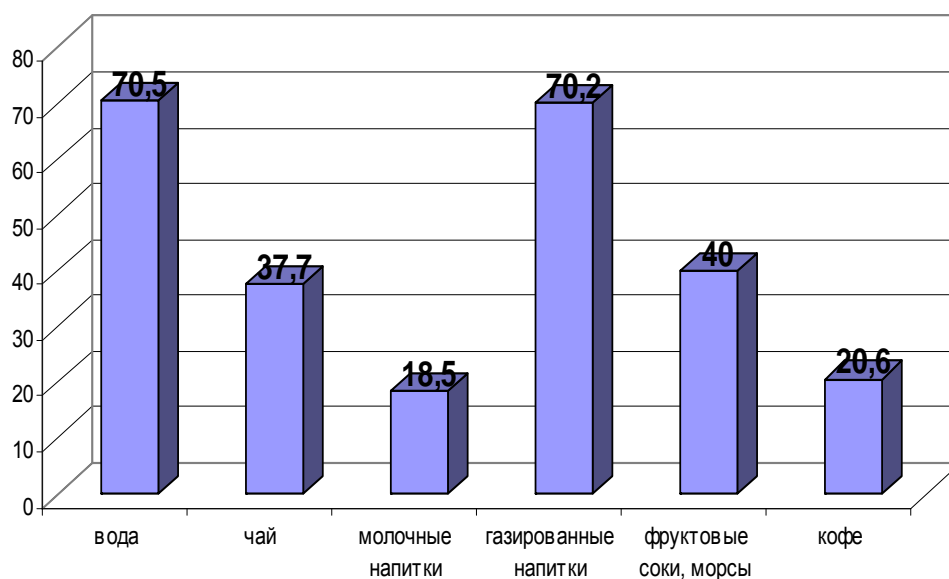


Figure 2 The maintenance of the water regime

Analysis of the pain factors showed the pain syndrome was associated with consuming of fat (33,1%), indigestible (20,7%), dairy (7,6%), sweets (6,2%), fancy bread (4,8%), spicy (14,5%) and fried food (13,1%).

The results analysis indicated the diseases of the digestive system in 1st year students of the NEFU took the 2nd place in general structure of morbidity and amounted to 143,3 per 1,000 students.

High incidence of diseases of the digestive system identified in 1st year students of the NEFU agrees with those of other authors who conducted a similar study among university students [1, 2, 4, 6].

It should be noted that adolescents and young people tend to irregular food intake for various reasons. They are characterized by large breaks between food intake, dry diet, monotonous nutrition, etc. Thus, our analysis of the data showed that the main disorders were associated with irregular food intake, violations of repetition factors and diversity of food. The bulk of the students preferred to "bite" sandwiches, desserts (cakes, candy, chocolate, etc.) that is causing functional disorders and the development of digestive diseases. There were serious abnormalities in adherence to diet (no breakfast, hot lunch and, conversely, the presence of a late dinner) [8].

O.S. Sushko analyzed catering among university students in Tomsk, which confirms that the nutrition of young people is characterized as irrational, i.e. unbalanced and with disturbed dietary regime.

It is known that a change of the quality of food has the negative impact on the health of the students. So modern young man consumes a lot of refined and easily digestible protein and carbohydrates, canned foods, which leads to disruption of meals balance for basic food ingredients. It is noted that the students eat randomly with long breaks during the day, and a percentage of people eating in the evening mostly at bedtime with plenty of food high. Most students said that they have no desire to cook, preferring fast foods, chips, juice packs, fizzy drinks. A lack of fresh fruits and vegetables riched in vitamins, macro-structural (calcium, phosphorus, magnesium), essential trace elements (zinc, copper, selenium) and fiber is observed in eating habits of the students. This fact is consistent with a number of other modern scientific data [2, 3, 5, 10, 11] examined in other regions of the Russian Federation regarding malnutrition, lack of vitamins and essential elements in the diet.

Anamnesis study and clinical examination suggests that an abnormality and violation of food quality in 1st year students involves a violation of the functional state of the digestive system, and then to the occurrence of chronic diseases, which is confirmed by similar studies devoted to the relationship of diet and gastroenteric symptomatology [7, 9, 12, 13, 14].

CONCLUSION

Preliminary study of the diet and dietary habits of the 1st year students of the NEFU showed the presence of gross violations in their dietary habits and food intake. Irregular eating, big breaks between meals, dry diet, monotonous diet, eating primarily of carbohydrate products, carbonated drinks are typical for young people, improper cooking of food is widespread.

The highest rate of nutrition-related morbidity of the digestive, endocrine, sexual and other system diseases is observed as a result of an unbalanced diet that requires in-depth study of actual nutrition and introduction of wellness activities.

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**The authors:**

Health Research Institute of the NEFU, Sergelyakhskoye Highway 4, Yakutsk, Russia:

Timofeeva Alexandra V. - Ph.D., senior researcher of medical and social research quality of life, e-mail: tav_76@inbox.ru

Krivoshapkina Marina V. - head of the department of physical therapy and exercise therapy

Zakharova Raisa N. - Ph.D., head of the laboratory of medical and social research quality of life, e-mail: prn.inst@mail.ru

Mikhailova Anna E. - Ph.D., senior researcher of medical and social research the quality of life of the population of the North, e-mail: nsvnsr.66@mail.ru;

Sosina Svetlana S. - MD, assistant professor MI NEFU, e-mail: sosinasveta@gmail.com