

## ACTUAL NUTRITION AND PHYSICAL DEVELOPMENT OF HIGH SCHOOL STUDENTS (In the Case of Karshi and Kitab Cities)

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### Abstract:

The paper presents the results of an assessment of the social nutrition practices of high school students. The study involved 256 girls and boys aged 15–17 years – students of general education institutions in the city of Karshi and Kitab. The study included: studying the state of the body's supply of nutrients and energy (nutritional status); assessing the risk of developing eating disorders and types of eating disorders; determination of actual food consumption. The data obtained indicate a high prevalence of eating disorders among schoolchildren of the overeating type. It was found that 40,2 % of schoolchildren of both sexes have risky eating behavior. It is shown that the externalized type of eating behavior is more common among high school students, and the restrictive and emotiogenic types are less common. Violations of food consumption by schoolchildren have been revealed, which manifest themselves in non-compliance wi

**Keywords:** schoolchildren, Karshi and Kitab city, social nutrition practices, nutritional status, eating behavior, actual consumption of food and food substances.

### Introduction

The main directions of the implementation of the state policy of the Republic of Uzbekistan in the field of healthy lifestyle and prevention of non-communicable diseases are "development and implementation of measures aimed at developing a healthy lifestyle in children and young people", as well as "development of programs to popularize rational nutrition". In modern society, a rational attitude to nutrition (healthy, correct, balanced) prevails, which "creates the basis for the normal physical and mental development of children and adolescents, has a significant impact on the ability to withstand the effects of unfavorable environmental factors, contributes to the prevention of diseases, increasing the duration and improving the quality of life." In turn, irrational nutrition can lead to structural and functional changes in the body and, as a consequence, to poor health. The need for food is the basic need of the body and is coordinated by eating behavior, which is a complex biopsychosocial phenomenon, not only associated with the satisfaction of a person's vital need for food products and nutrients, but also performing a number of functions that are social in nature. Regulation of eating behavior is determined by both biological factors (genetic predisposition to the consumption of certain food



components (proteins, lipids, starch, etc.) and food products (cereals, fruits, mushrooms, etc.)) and social factors (the influence of the immediate social environment, religious beliefs, life experience, standard dietary norms for food consumption, etc.).

Other dietary norms of food consumption, etc.). The formation of human eating behavior begins at birth and continues throughout life. The model of eating behavior is created in childhood through interaction with others - primarily with the family. At this time, stable taste preferences for the procedure of eating are laid. In adolescence, the importance of social environment factors increases and nutrition begins to perform the functions of "communication, knowledge, forms rituals and habits; acts as a means of communication, psycho-emotional release, self-affirmation, maintaining certain rituals and habits, satisfying aesthetic needs, compensating for unmet needs." Thus, given the low commitment to rational nutrition among schoolchildren, the study of this issue is of great scientific and practical importance and is relevant and timely

Research area - sociology of nutrition. Subject - nutrition of such a social group as schoolchildren. The aim of the work is to study the social practices of nutrition of high school students.

The study was conducted in the period 2022-2023. It involved 256 schoolchildren aged 15 to 17 years (including 122 males and 134 females) - senior school students of general educational institutions in the cities of Karshi and Kitab.

The research program consisted of three stages. The first stage studied the state of the body's supply with nutrients and energy in accordance with the body's needs during a given period, manifested in objective body parameters (nutritional status). The second stage assessed the risk of developing eating disorders and types of eating disorders. The third stage included determining the actual consumption of food products

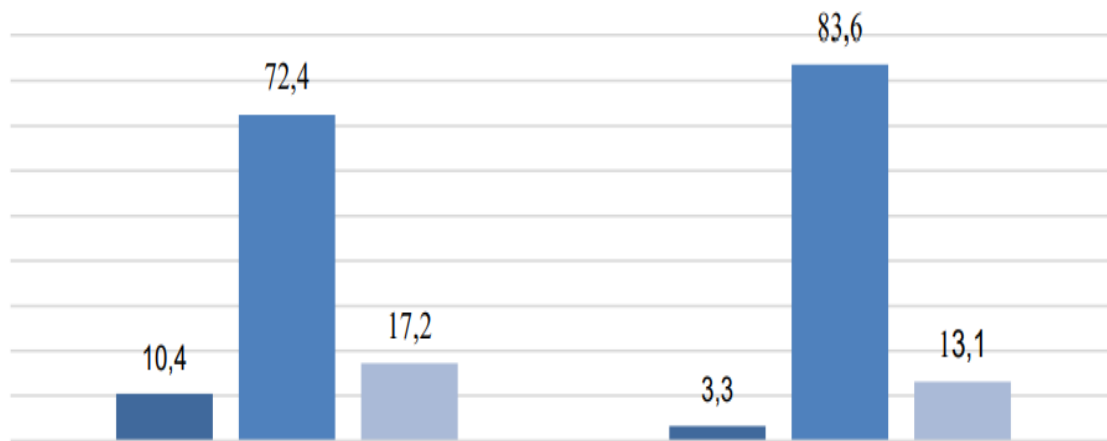
Nutritional status was determined based on the calculation of the body mass index - an integral indicator of the correspondence of the energy value of the diet to energy expenditure. The assessment was carried out using the centile method in accordance with the recommendations of the World Health Organization (BMI-for-age 5-19 years). It is customary to distinguish between normal, excessive and insufficient nutritional statuses.

The types of eating disorders were determined based on the Dutch Eating Behavior Questionnaire (DEBQ), the multidimensional scales of which characterize three different motives for eating - restrictive (the desire to strictly limit and control food consumption), emotive (psychogenic overeating) and external (increased sensitivity not to internal stimuli (hunger), but to external stimuli (meal time, food advertising, etc.)).

The actual consumption of food products was determined by means of a survey (questionnaire), which included the following sets of questions: the quantity, quality and characteristics of actually consumed food products and dishes; preferences for food characteristics; individual attitude to rational nutrition. The results of our study are consistent with the position on the age shift in problems related to nutrition: problems traditionally considered "adult" turn out to be relevant already at school age. A study of the state of the body's provision with nutrients and energy in accordance with the body's needs showed that 77.7% of high school students have a



normal nutritional status. Excessive status was recorded in 15.2% of cases, insufficient - in 7.0%. Its violation is more common in females (Figure 1).



**Figure 1 – State of Nutrients and Energy Supply in Accordance with the Body Needs of High School Students, %**

Thus, among girls, excessive nutritional status was detected in 17.2% of cases, insufficient - in 10.4%. Whereas among boys - in 13.1 and 3.3%, respectively. These facts do not contradict the studies of other authors. Similar values of prevalence of nutritional status disorders are described in the works of Ya. V. Girsh et al. (2013); V. V. Smirnov, A. A. Nakuly (2015) and others.

The actual provision of the body with nutrients and energy is determined by eating behavior. Accordingly, its violation can directly affect the nutritional status of schoolchildren. In this regard, it is of interest to assess the risk of developing eating disorders in high school students. It was found that 40.2% of respondents have risky eating behavior. It is significant that among girls it occurs 2 times more often than among boys: 53.7 and 25.4%, respectively. The analysis of these types of eating behavior disorders showed that more than half of high school students have an external type of eating behavior (56.5%), characterized by an increased reaction to external stimuli (type of food, advertising of food products, type of person eating). Almost 2 times less common is the restrictive type of eating behavior (26.8%), manifested in excessive food self-restraint and adherence to strict diets, which are replaced by periods of overeating. Even less common is the emotiogenic type (16.7%), determined by a hyperphagic response to stress reactions, i.e. the stimulus for eating is emotional discomfort, and not hunger. At the same time, both girls and boys are more likely to have an external type of eating behavior (51.3 and 63.3%, respectively). The restrictive and emotiogenic types are less common. Among girls, the restrictive type of eating behavior was detected in 29.5% of cases, the emotiogenic - in 19.2; among young men – 23.3 and 13.3%, respectively.

It is known that eating disorders are characterized by excessive or, conversely, insufficient amounts of food and products consumed, violation of the regimen and frequency of meals, excessive consumption of sugar, fatty foods, etc. Our results indicate a violation of food



consumption by high school students, which is manifested in a violation of the meal regimen, monotony of food, as well as consumption of unhealthy foods (excessive consumption of sugar, confectionery, fatty foods, fast food).

It was found that only a third of the respondents - 38.8% of girls and 42.6% of boys - follow the diet. At the same time, more than half of the students (56.0% of girls and 58.2% of boys) have little change in their diet during the week. In addition, 92.6% of respondents (95.5% of girls and 89.3% of boys) note daily consumption of hot dishes.

An assessment of the diet showed that 57.5% of girls and 73.0% of boys eat meat and fish dishes every day; practically do not consume or consume several times a week – 42.5 and 27.0%, respectively (Figure 3). Dairy products are consumed every day by 73.1% of girls and 62.3% of boys; practically do not consume or consume several times a week – 26.9 and 37.7%, respectively. Only 37.1% of schoolchildren (47.0% of girls and 35.2% of boys) have porridge, vegetables and fruits in their daily menu; more than half of the study participants (53.0% of girls and 64.8% of boys) consume these products 2-3 times a week or less.

The level of daily consumption of confectionery products is higher among girls (65.7%) compared to boys (44.3%). While young men are more likely to indulge in sugar than girls (59.8 and 48.5%, respectively). More than half of schoolchildren (61.7%) do not limit themselves in the consumption of table salt. In addition, 35.9% of respondents consume fast food 2-3 times a week, including 29.9% of girls and 42.6% of boys. Only 32.2% of respondents (22.1% of boys and 43.3% of girls) try to limit themselves in the consumption of fatty foods. It is significant that a significant proportion of high school students (72.3% of girls and 66.4% of boys) have a positive attitude towards rational nutrition, are aware of its impact on health and are ready to change their eating behavior if this will have a positive effect on their health in the future. It can be assumed that a high level of awareness of schoolchildren about rational nutrition does not guarantee healthy eating. This circumstance can be caused by many factors - lack of motivation and interest in proper eating behavior, family nutritional traditions, lack of familiar food products, etc. Thus, an assessment of the state of real provision of the body with nutrients and energy in accordance with the needs of the body of high school students indicates that about a third of girls and boys aged 15-17 years have nutritional status disorders. In addition, it was found that 40.2% of high school students of both sexes have risky eating behavior. At the same time, the actual consumption of food products is characterized by non-compliance with the diet, its monotony, as well as excessive consumption of sugar, confectionery, fatty foods, fast food. The results of this study can be used to improve preventive measures in the field of health and nutrition of schoolchildren, the main impact of which should be aimed at changing eating behavior and motivated propaganda of the principles of rational nutrition.



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**REFERENCES:**

1. Alimentary-dependent diseases and their prevention: website of the Federal Budgetary Institution of Health "Center for Hygiene and Epidemiology in Moscow".
2. Baturin A.K. Results of the study of calcium consumption with food by children / A.K. Baturin, N.A. Ogloblin, L.Yu. Volkova // Issues of children's dietetics, 2006. - Vol. 4. No. 5. - P. 12-16.
3. Kuchma V.R., Sukhareva L.M., Rapoport I.K. et al. Health status of senior adolescent students // Materials of the IX Congress of Pediatricians of Russia "Current Problems of Pediatrics". - M., 2004. - P. 244.
4. Dolich, V.N., Komleva, N.E., Zaikina, I.V. Mazilov, S.I., Raikova, S.V., Ivanov, D.E. & Kolokolov, G.R. (2022) Analysis of factors influencing the eating behavior of young people. Sanitary Doctor. (1), 53–64. Available from: doi:10.33920/med-08-2201- 06. (In Russian).
5. Students' physical activities and eating habits. Students' physical activities and eating habits. PISA 2015 RESULTS (VOLUME III): STUDENTS' WELL-BEING © OECD 2017.
6. Shahraki-Sanavi, F., Rakhshani, F., Ansari-Moghaddam, A., & Mohammadi, M. (2017). Associations of physical activity and sedentary behaviors with dietary behaviors among mid-adolescent female students in the southeast of Iran. Bioscience biotechnology Research Communication, Medical Communication, 10(4), 739-745.
7. Omera Naseer, F. M., Fazil, M., Bilal, S., Kulsoom, A., Naseer, S. H. O., Mahmood, F., ... & Hamid, S. (2018). Eating habits of adolescent students. Journal of Rawalpindi Medical College.
8. The 20 Amino Acids and What They Do! Human Physiology/Nutrition.

