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ANALYSIS AND ASSESSMENT OF THE QUALITY OF NUTRITION OF CHILDREN IN PRESCHOOL EDUCATIONAL INSTITUTIONS

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A B S T R A C T

An analysis of the actual nutrition of preschoolers shows that the diet does not meet the physiological norm, and in the daily diet the amount of meat and meat, milk and dairy products is below the norm. It should be noted that fish and fish products are absent in the diet of children. Analysis of the nutritional value of the diet shows that children receive proteins, fats, vitamin A, calcium, phosphorus, iron and iodine below the recommended norms.

K E Y W O R D S

preschoolers, nutrition, nutrients, daily ration, proteins, fats and carbohydrates.

Introduction

The urgency of the problem. Healthy nutrition of preschool children is not only of medical importance as a factor in maintaining the health and development of the child. But also as a factor determining the health of the future generation [1-3]. The body of a child differs from an adult in rapid growth and development, the formation of organs and systems, an increase in muscle mass, which determines a high need for nutrients and energy. For the nutrition of children and adolescents, it is important as the problem of its insufficiency, primarily general malnutrition or micronutrient deficiency [4]. Target. Analysis and assessment of the actual nutrition of children in the Andijan region aged 3 to 7 years and the identification of violations of the daily diet of preschool educational institutions.

Materials and Methods

The work used materials from a sample survey of the diet of children in preschool educational institutions of the Andijan region No. 3 and 65 in the period 2018-2019. In this regard, the primary nutritional materials for children received in accordance with the indicators indicated in SanPiN 0348-2017 "Hygienic requirements for the organization of full and safe nutrition in preschool educational institutions of the Republic of Uzbekistan" were studied. SanPiN 0348-2017. The studies were carried out 2 times a year (in the winter-spring and summer-autumn periods), for 7 days. The average daily

indicators of the amount of food consumed by children were calculated. In the daily diet, the amount of basic nutrients and the energy value of the diets are calculated according to the tables of the chemical composition of food products,

For statistical processing of the survey results, a standard package of Excel applications was used.

Results and Discussion

An analysis of the actual nutrition of children living in the Andijan region and the city of Andijan shows that in organized preschool educational institutions the daily ration does not correspond to the physiological norm of nutrition, most of the products consumed by children are below the recommended nutritional norms by 55.5-87%, depending on season of the year. The exception is the consumption of bakery products. Cereals and potatoes, the amount of which in the diet of children was 53.5 / 62.8 lower than the physiological norm for the corresponding sex and age groups.

When assessing the quality of nutrition of preschoolers, there were no significant differences in the average statistical indicators of food consumption by children in different preschool educational institutions, therefore, we considered the data for 2018-2019 as a whole for all the studied preschool educational institutions in the Andijan region.

Table 1 Average values of actual consumption of products by preschool children from 3 to 7 years old in Andijan region and Andijan city (winter-spring)

Products	Physiological norms	Used products winter-spring, (g)	% to normal
Milk and dairy products	548,0	338,0±20,55	66,6/ 61,1
		335,0±14.53	
Fruits	168,0	90,8±4,58	61,1/ 60,2
		90,0±4.71	
Vegetables	200,0	130,0±6,77	54,0/ 65,8
		125,0±6.52	
Bread and flour products	183,0	135,0±5,99	53,5/ 62,8
		128,0±6.76	
Potato	150,0	70,0±3,45	65/ 70
		85,0±3.89	
Meat products	100,0	67,0±3,38	62,5/ 67,5
		65,0±3.18	
Sugar	50,0	33,0±1,72	73,7/ 74,8
		32,0±2.04	
Fish	25,0	0	0
		0	
Vegetable oil	8,0	8,0±0,37	46,6/ 60,0
		7,0±0.43	
Animal fat	20,0	15,7±0,70	56,6/ 64
		14,7±0.81	
Egg (pcs)	0,5	0,1±0,01	67/ 63,6
		1,0±0.05	

It follows that the deficit in food consumption by children does not depend on gender or on the season of the year. And although in the summer-autumn season of the year the consumption of such products as potatoes, vegetables and melons, fruits and berries increases significantly, the absolute amount of products other than bread products and potatoes does not reach the physiological norm.
Calculations of children's diets showed that the deficit in the consumption of meat and meat products in the winter-spring period is up to 37.5 / 32.5%, and in the summer-autumn there is a deficit of 33.3% of milk and dairy products.

Table 2 Average values of actual consumption of products by preschool children from 3 to 7 years old in Andijan region and Andijan city (summer-autumn)

Products	Физиологические нормы	Используемые продуктылето-осень, (г)	% к норме
Milk and dairy products	548,0	335,2±12,13	66,6/ 61,1
		330,0±17.95	
Fruits	168,0	110,6±4,07	61,1/ 60,2
		105,6±5.74	
Vegetables	200,0	140,0±7,27	54,0/ 65,8
		135,0±6.29	
Bread and flour products	183,0	137,0±7,59	53,5/ 62,8
		130,0±6.26	
Potato	150,0	90,0±4,72	65/70
		96,0±4.76	
Meat products	100,0	63,6±2,90	62,5/ 67,5
		66,6±2.77	
Sugar	50,0	31,7±1,59	73,7/ 74,8
		8,0±0.50	
Fish	25,0	0	0
		0	
Vegetable oil	8,0	8,0±0,41	46,6/ 60,0
		8,0±0.50	
Animal fat	20,0	13,4±0,74	56,6/ 64
		15,4±0.67	
Egg (pcs)	0,5	0,1±0,004	67/ 63,6
		1,0±0.034	

It should be pointed out that in the diet of pre-school educational institutions of the Andijan region, there are actually no fish and fish products. Fish is of particular importance for ensuring the growth and development of children, as well as the intake of Omega 3-Omega 6, vitamins A, D and group B, iodine and selenium.
With a deficiency of basic nutrients in the daily diet relative to physiological norms, the daily energy value is replenished by increased consumption of bread and bakery products - by 43.3%.

Calculation of indicators of nutritional value of diets for preschool children in Andijan region and Andijan city is presented in table No. 2. The analysis of the daily ration shows that, although there is a shortage of the main products of the daily ration such as meat, milk, fish, but with a large amount of bakery products, the average daily energy value of the rations was 1881 kcal.

It was found that the insufficient content of total protein in the daily diet of children is 33.8-34.5%, and in the summer-autumn period - 24-33%.

The use of vegetable oils in the winter-spring period - up to 87.5%, summer-autumn - up to 100%.

The excess of carbohydrates is 270-336g, 200-220g. So, in winter-spring and summer-autumn, carbohydrates were consumed by more than 56.6% of the norm.

The lack of minerals in the summer-autumn period: calcium 30.5%, magnesium 22.5%, phosphorus 20.6% and iron 46.7%. The amount of trace element iodine is also in an insufficient amount of the norm.

A-48.3%, B1 - 26.0%, B2 - 34.7%, PP - 30.9% and C - 20.0%; The lack of minerals in the winter-spring period includes: calcium 24.7%, magnesium 25.4%, phosphorus 15.9% and iron 43.7%. Vitamin deficiency in the winter-spring period is as follows: A - 52.2%, B1 - 35.0%, B2 - 34.3%, PP - 48.5% and C - 21.5%.

Thus, the analyzes of the quality of nutrition of preschoolers in the Andijan region prove that the daily diet does not correspond to the physiological norm of nutrition, due to this, alimentary-dependent diseases increase in preschoolers, such as endemic goiter, iron deficiency anemia, obesity and impaired height-weight index of body mass and .etc.

Conclusions:

1. The actual nutrition of all the studied groups of preschool children is not adequate in terms of physiological needs.

- 20-30% reduced protein content;
- low nutritional fat content by 40-50 grams below the norm;
- imbalance of the main nutrients (1: 0.4: 6.5-1: 0.4: 6.5 instead of 1: 1: 4
-deficiency of vitamin A (53%) and vitamin C;
- insufficient content of calcium and phosphorus in the diet (1.4-1.8 times lower than normal).

2. The indicated deficiency of nutrients is due to the low level of consumption of such product groups as fish and fish products (deficit - up to 76%), meat and meat products (deficit - up to 62%), milk and dairy products (deficit - up to 58%).

3. After making a correction in the composition and quantity of products used in the nutrition of preschool children, the indicators of nutritional quality improved, but in most cases did not reach the requirements of the physiological norm. To the greatest extent, this refers to the low content of fat, vitamin A, calcium and phosphorus in the diet of children. Very low iron and iodine content.

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