

FACTORS, FACILITATING FORMATION OF EATING BEHAVIOR IN CHILDREN AND ADOLESCENTS OF SAKHA (YAKUTIA) REPUBLIC

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Abstract

Results of epidemiological research of actual nutrition and eating habits of children and adolescents of Sakha (Yakutia) Republic with the use of standardized methods, allowed us to reveal complete characterization concerning awareness of children and adolescents of Sakha (Yakutia) Republic about essentials of healthy eating and compliance of that awareness with actual nutritional habits.

Keywords: children and adolescents, parents, factors, awareness, actual nutrition, eating behavior.

Introduction

Nowadays, despite the state policy on healthy eating, we think, that there is a lack of information concerning nutritional behavior as an important factor of health development of children and adolescents.

Nutritional behavior is a set of eating habits (taste preferences, overeating, malnutrition), consisting of adequate response of a child to eating (devotion to healthy eating, awareness of healthy eating, eating schedule) and conditions of food consumption (hygienic skills, culture of eating, favorable environment). Model of eating behavior is formed in early childhood and develops under the influence of certain factors and conditions. [3]

According to researchers in field of dietology, one of the important conditions for the formation of healthy eating behavior is the family, which is thought to be a defining factor of healthy eating awareness. This became a main purpose of our research.

Purpose of the study

To study eating habits of children and adolescents of Sakha (Yakutia) Republic depending on the education and place of residence of their parents.

Materials and methods

The total of 1569 children and adolescents (mean age 13.6 ± 2.1) of indigenous and non-indigenous population of Sakha (Yakutia) Republic were enrolled in our research. Of these, 958 children were urban inhabitants, and 611 children lived in rural areas.

We used standardized questionnaire, which was developed by Institute of Nutrition RAMN GNITS PM MZ RF (Moscow). Some adaptations to that questionnaire were made by Centre of Therapeutic and Preventive Eating (Institute of Health, North-East Federal University named after M.K. Ammosov (Yakutsk)) in order to meet local features of eating.

Statistical processing was made by SPSS 12.0

Results and discussion

We found, that the majority of mothers had higher education, comprising 61.1% of all mothers enrolled in our research, 27.9% had secondary special education, 8.4% had incomplete higher education, and 2.6% had secondary education. Of all fathers in our study, 52.2% had higher education, 33.4% had secondary special education, 9.1% - incomplete higher education, and 5.3% - secondary education.

Comparative analysis of the kind of education of mothers showed that mothers with higher education resided more in the city than in rural areas, respectively, 76.6% and 36.4 %. Secondary special education had 14.4 % of mothers residing in the city and 49.4 % - in rural areas. 67.1% of the city fathers had higher education, whereas in rural areas - 28.5%. Secondary special education had 21.6 % of fathers residing in the city and 52.2% - in rural areas. It should be noted that 18.4% of the surveyed children were raised by a single parent - mother , 0.8 % - by father or did not had mother (Table 1).

Table 1. Education of parents of surveyed children and adolescents, n=1569

Education	City				Rural				Total			
	Mothers (n=958)		Fathers (n=786)		Mothers (n=599)		Fathers (n=494)		Mothers (n=1557)		Fathers (n=1280)	
	N	%	N	%	N	%	N	%	N	%	N	%
Secondary	7	0.7	22	2.8	33	5.5	46	9.3	40	2.6	68	5.3
Secondary special	138	14.4	170	21.6	296	49.4	258	52.2	434	27.9	428	33.4
Incomplete higher	79	8.3	67	8.5	52	8.7	49	9.9	131	8.4	116	9.1

Higher	734	76.6	527	67.1	218	36.4	141	28.5	952	61.1	668	52.2
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It is well known that the eating behavior is formed during upbringing by parents. Parents' eating behavior directly affects formation of food habits in children and adolescents, as many habits begin to form in early childhood, largely by imitation.

Habit is a well assimilated action in fulfillment of which a person experiences a constant need. This action always takes place under certain conditions. Habit occurs after many repetitions of the same action when it ceases to require cognitive and volitional efforts [2].

Thus, we studied the nutritional habits in the consumption of certain foods - fat milk and the use of salt.

We found that the overwhelming majority of children and adolescents (75.3%) reported that their families are preparing food in vegetable oil. Families use butter for cooking comprised 10.1%, margarine and other types of fat - 9.5%, do not use any kind of oil - 5.1% (Table 2).

Table 2. Use of fats for cooking, n=1569

Oil	City (n=958)		Rural (n=611)		Total (n=1569)	
	n	%	n	%	n	%
Do not use	52	5.4	28	4.6	80	5.1
Cooking oil	730	76.2	452	73.9	1182	75.3
Margarine	41	4.3	23	3.8	64	4.1
Butter	92	9.6	66	10.8	158	10.1
All kinds of oil	43	4.5	42	6.9	85	5.4

Butter for sandwiches used 66.0% of surveyees, margarine - 7.1%. 26.9% of children and adolescents surveyed did not use butter or margarine for sandwiches (Table 3).

Table 3. Use of fats for sandwiches, n=1569

Fats	City (n=958)		Rural (n=611)		Total (n=1569)	
	n	%	n	%	n	%
Do not use	285	29.7	138	22.6	423	26.9
Margarine	51	5.3	61	10.0	112	7.1
Butter	622	65.0	412	67.4	1034	66.0

46.5% of the surveyed children and adolescents mostly responded that they prefer to use milk with a fat content of 3.2%, low-fat or skim (fat content of 0.5-2.5%) - 35.0%, did not use this type of product - 17.4% (Table 4).

Table 4. Consumption of milk of various fat contents, n=1569

Consumption of milk	City (n=958)		Rural (n=611)		Total (n=1596)	
	n	%	n	%	n	%
Do not consume	147	15.3	126	20.6	273	17.4
Low fat or skim (fat content 0.5-2.5%)	322	33.6	228	37.3	550	35.0
Fat content of about 3.2%	478	50.0	251	41.1	729	46.5
High fat content (6% and higher)	11	1.1	6	1.0	17	1.1

The study of availability of dairy products in stores with various fat contents revealed following data: "always have products" answered 52.8% of the respondents, "sometimes" 38.5%, and reported 8.7% "rarely or never".

Of the total respondents, 67.5% of urban children said that the choice of milk with different fat were "always" available in stores, whereas in rural areas only 29.8% gave the same answer (Table 5).

Table 5. Information on availability of dairy products with various fat contents in stores, n=1569

Availability of dairy products with various fat contents	City (n=958)		Rural (n=611)		Total (n=1596)	
	n	%	n	%	n	%
Rarely or never	40	4.2	96	15.7	136	8.7
Sometimes	271	28.3	333	54.5	611	38.5
Always available	647	67.5	182	29.8	829	52.8

Survey about salting while eating revealed that 30.5% of children said they "never" add salt, 64.1% said they add salt if they feel, that there is not enough salt and 5.4% always salt without even trying the food first (Table 6).

Table 6. Data on salting while eating, n=1596

Salting food while eating	City (n=958)		Rural (n=611)		Total (n=1596)	
	n	%	n	%	n	%
Never	259	27.0	220	36.0	479	30.5
Salting, if it feels not salted enough	637	66.5	369	60.4	1006	64.1
Always salting, without even trying food first	62	6.5	22	3.6	84	5.4

The present study also examined the sources of information about nutrition. It was revealed that 38.7% of the children receive information from relatives and friends, 32.6% from the media, 16.3% from books and pamphlets, 12.4% from health care workers .

Conclusion

Thus, the greatest amount of information about healthy eating, children and adolescents receive from relatives, friends and from the media, and smallest from books, pamphlets and health care workers. Results of our research aim at the fact that the awareness of healthy eating habits and instillation of proper eating behavior is formed in families by parents and relatives, and does not depend on the type of parental education and area of residence. These data should be reflected in the development of information and educational programs. Regular informational and educational activities in the field of promoting healthy eating will endorse the formation of correct eating behavior in children and adolescents.

On the basis of new knowledge and to endorse implementation of ideas, with the scientific-methodical counseling from Health Research Institute (North-East Federal University named after M.K. Ammosov) under the Agreement on Cooperation between the Republican Centre of Recreation and Health of Children "Sosnoviy Bor" (Ministry of Education of the Republic of Sakha (Yakutia)), platform for the revival and promotion of a healthy diet was established, as well as development of agricultural schools and educational-methodical complexes.

In 2012, Joint scientific publication "Nutrition of children and adolescents in educational institutions of the Republic of Sakha (Yakutia) " received the diploma of the All-Russia Exhibition "Gold fund of domestic science" in the category "Best Textbook in the industry".

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