

IMPROVEMENT OF THE METHODOLOGY OF HYGIENIC ASSESSMENT OF THE CONDITIONS OF ORPHANAGES «MEHRIBONLIK»

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ABSTRACT--This article is written about the problem of hygienic assessment of educational and educational conditions, as well as the development of measures to improve the health status of pupils of the Mehribonlik houses. The following research tasks were identified and solved: Hygienic assessment of the placement, construction and equipment of orphanages "Mehribonlik"; living conditions of children living in the Mehribonlik houses; assessment of the microclimate and lighting conditions of the Mehribonlik houses; assessment of the health status of pupils living in the houses of "Mehribonlik"; price of the regime and nutritional conditions of pupils living in the Mehribonlik houses; Hygienic recommendations have been developed aimed at improving the living conditions of pupils living in the Mehribonlik houses.

Keywords--Mehribonlik houses, orphanages, hygienic assessment, health status of pupils.

I. INTRODUCTION

Childhood resembles the happiest and most joyful life of people, but not all people can boast of their pleasant memories, the reasons for which may be the conditions of orphanages and boarding schools, problems of orphans and cases of adoption of children by foreigners. In many countries of the world, much attention is paid to the growth and development of children, which are key indicators of their health status. The state of health reflects the combined effect of socio-economic and environmental factors on the body of children. "... Birth defects of varying degrees, failures in a number of areas of the social environment, the psychological environment in the family are the basis for raising children in orphanages and boarding schools, which are indicated in a number of works ..." According to the WHO "of those who are brought up in orphanages, 40% drink alcohol, 40% of criminals, 10% of suicides, 10% of those without homes and jobs." All this leads to an increase in the number of orphans every day in all countries of the world, in the east and in our country. Solving the problem of creating favorable conditions for upbringing and education, improving the living conditions of orphans in orphanages is one of the most important tasks.

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To achieve the effectiveness of the methodology for hygienic assessment of the conditions of orphanages around the world, a number of research projects are being conducted. Development of hygienic recommendations aimed at addressing the placement, construction and equipment of Mehribonlik houses, improving the living conditions of pupils, the state of health and physical development, the dietary conditions and conditions of pupils in these houses, creating optimal microclimate parameters and the level of illumination that affect health children in the houses of "Mehribonlik" is an important aspect. At the same time, the creation of a system for improving the conditions for the education and upbringing of children at "Mehribonlik" houses is of particular importance.

II. METHODOLOGY

Currently, a great deal of work has been done in our Republic on a radical reform of the education system. Along with updating the conditions for the upbringing and transformation of the education system in the Mehribonlik homes, one of the important tasks is to develop measures for the early detection and prevention of various diseases among the children of these institutions. In this regard, the Strategy for Action on Five Priority Directions of the Development of the Republic of Uzbekistan in 2017-2021 outlines further "... improving the availability and quality of medical services in Mehribonlik homes, strengthening the material and technical base, protecting families, mothers and children". In this regard, the implementation of comprehensive measures aimed at strengthening and restoring the health of children in the houses of "Mehribonlik" is important.

This dissertation research to some extent serves the solution of the tasks provided for by the Laws of the Republic of Uzbekistan "On guarantees of the rights of the child" (2008), "On the sanitary and epidemiological well-being of the population" (2015), and by Decree of the President of the Republic of Uzbekistan dated February 7, 2017 PP-4947 "On the Strategy for Action on the Five Priority Directions of the Development of the Republic of Uzbekistan in 2017-2021" and on April 5, 2018 PP-3651 "On Measures to Further Stimulate and Develop the Preschool Education System", as well as other legal acts adopted in this area.

The dissertation study was carried out in accordance with the research plan of the Tashkent Medical Academy on the problem: "A comprehensive study of the health indicators of various population groups of the Republic of Uzbekistan, taking into account the influence of biomedical, socio-hygienic, environmental and other environmental factors, the development of measures to improve public health indicators (2013-2016).

Purpose of work: a hygienic assessment of educational and educational conditions, as well as the development of measures to improve the health status of pupils of the Mehribonlik houses.

- Research Objectives: Hygienic assessment of the placement, construction and equipment of orphanages "Mehribonlik";
- Hygienic assessment of the living conditions of children living in the houses of "Mehribonlik";
- Hygienic assessment of the microclimate and lighting of houses "Mehribonlik";
- Hygienic assessment of the health status of pupils living in the houses of "Mehribonlik";
- Hygienic assessment of the regime and nutritional conditions of pupils living in the houses of "Mehribonlik";
- Development of hygienic recommendations aimed at improving the living conditions of pupils living in the Mehribonlik houses.

The object of research was the house "Mehribonlik" in Tashkent and Namangan, Andijan and Ferghana regions and 492 (294 boys and 198 girls) pupils aged 7 to 17 years.

Subject of research. The study of living conditions, microclimate parameters, materials of the state of health, physical development, nutritional conditions of pupils of Mehribonlik houses.

Research Methods. To achieve the goals and solve the tasks, a survey was carried out, sanitary-hygienic, analytical, somatometric and statistical research methods were used.

The scientific novelty of the study is to obtain the following results:

Hygienic rules and norms for construction, equipment, conditions for training and education of houses "Mehribonlik";

A hygienic assessment of physical development was carried out taking into account the gender and age of pupils of the Mehribonlik houses;

Hygienic rules and norms of the regime and nutritional conditions, physiological needs of adolescents of the Mehribonlik houses have been developed;

The complex of systems of health measures to improve the health status of pupils of the Mehribonlik houses has been improved.

The practical results of the study are as follows:

Sanitary rules and norms for the design and construction of institutions were approved to optimize the conditions for the upbringing and education of pupils of Mehribonlik houses;

Hygienic recommendations have been developed to reduce risk factors controlled by the medical staff of the Mehribonlik houses;

A set of sports and recreational measures have been developed to reduce the incidence rate and increase physical fitness indicators of children in the Mehribonlik houses.

The reliability of the research results is confirmed by the application of a rational theoretical approach and methods, the correspondence of the methodological aspects of the research, the use of a sufficiently examined number of children, the use of complementary modern hygienic, analytical and statistical methods, as well as the procedure for conducting research to improve the methodology and hygienic assessment of the conditions of Mehribonlik children's homes confirmed by a comparative analysis of scientific papers on domestic and foreign authors, confirmation of the conclusion, the results obtained by the authorized structures.

Scientific and practical significance of the research results.

The theoretical significance of the research results consists of a hygienic assessment of the growth and development of children and adolescents living in Mehribonlik houses of different regions of the republic, as well as a study of their relationship between environmental factors, the creation of a theoretical basis for hygienic requirements for the design and construction of Mehribonlik houses, development recreational activities to improve the conditions for the institution of pupils.

The practical significance of the results of the study is determined by the fact that normative and methodological documents have been developed in the form of 2 sanitary rules and norms for observing the requirements for the construction and maintenance of Mehribonlik houses, creating optimal microclimate and lighting parameters, increasing the efficiency of medical examinations, these indicators have contributed to

strengthening the children's health and adolescents, as well as a reduced risk of morbidity. The developed regulatory documents made it possible to train qualified specialists in the hygiene of children and adolescents.

III. LITERATURE REVIEW

In foreign countries, research has been and is ongoing on issues that are partially related to this problem. Scientific studies of foreign scientists are devoted to growth and development, the incidence rate of children (Hager RL [3]; Jonathan CK Wells et al. [20, 21]) Various foreign scientists from abroad (Jakimaviciene E.M, Tutkuviene J. [5]), research was conducted to study the relationship of geographical, environmental indicators, sanitary and hygienic parameters, social conditions with social status and parental education, daily routines and motor activity of children. Scientific studies of scientists from the CIS countries (V. Masyuk, I.M. Shabalina, [17]; V.N. Lucianinova et al., [14]; K.P. Luzhetsky et al., [15,16]; Stepanova M.I. et al., [18]; Ustinova O.Yu. et al., [19]) are devoted to studying the influence of living conditions and family lifestyle, socio-hygienic, biomedical, economic and environmental factors on the state health and development of physical abilities of children.

In Uzbekistan, hygienists studied aspects of organizing the daily routine and lifestyle of children (Azizova F.L. [2]; Haitmetov S.B, Mukhamedova N.S., [4]. Shaikhova G.I., 2015, Ermatov N.Zh., [6], Kamilova R.T. and others, [10, 11, 12, 13]). The data on the low quality of physical education were studied and the rational organization of physical fitness of children was hygienically substantiated (Kamilova RT and others, [8, 9], Ermatov N.Zh., [6]). In recent years, research studies on the impact of educational and educational conditions on the physical development of pupils of the Mehribonlik houses have not been studied.

IV. THEORY AND DISCUSSION

Over the years of independence in the Republic, orphanages have been renamed Mehribonlik houses. In these organized institutions, physical development, health status and nutritional conditions have not been studied; questions of the daily routine of the pupils; no scientific studies have been carried out regarding the complex effect of the conditions of education and upbringing of children on health indicators, their relationship with the living conditions of pupils of the Mehribonlik houses. The conditions of education and upbringing in the houses of Mehribonlik do not have the opportunity to improve indicators of physical development and improve the health status of students, to provide comprehensive measures for their recovery.

The introduction justifies the relevance and relevance of the topic of the dissertation, formulates goals and objectives, objects and scope of research, indicates the relevance of research to the priority areas of development of science and technology of the republic, sets out scientific novelty, theoretical and practical significance of the work, substantiates the reliability of the research results, provides information on the implementation of the results research into practice, published scientific papers and dissertation structure.

The first chapter of the dissertation, "Improving the methodology for hygienic assessment of the conditions of Mehribonlik houses", presents data from scientific papers on the relationship between the conditions of maintenance and improvement of houses "Mehribonlik" with education, lifestyle, functional state and physical development, the state of health of the child's body, and also presents materials on the role of recreational activities in the houses of "Mehribonlik". They also analyzed the advantages and disadvantages of systems aimed at

improving the health of pupils of Mehribonlik houses, as well as identified unsolved or requiring clarification aspects of this problem.

The second chapter of the dissertation, "Materials and research methods to improve the methodology for hygienic assessment of the conditions of Mehribonlik houses", presents objects, scope and methods of research, including questionnaires, hygienic requirements for the design and construction of research objects, studying the level and structure of morbidity, indicators of health status, indicators of physical development, as well as methods for assessing the effectiveness of recreational activities. Scientific research was carried out in the Mehribonlik houses located in Tashkent and the Namangan, Andijan and Ferghana regions of the Republic of Uzbekistan (No. 22 in Tashkent, No. 26 in Namangan, No. 1 in Andijan, and No. 1 in Margilan) . As a study material, we studied the placement of Mehribonlik orphanages in a residential area and its compliance with the requirements of SNiP, the compliance of SanPiN of the land plot, buildings and structures of four selected objects, materials on the state of health and morbidity, on nutrition of children and adolescents, anthropometric indicators, indicators physical development, promotion of a healthy lifestyle.

Studies were conducted in 2014-2017. As an object of study, 492 pupils (294 boys and 198 girls) aged 7 to 17 years were selected.

The assessment and analysis of the land plot and buildings of Mehribonlik houses in accordance with SNiP 2.08.02-96 "Public Buildings and Structures", main and auxiliary premises, as well as the orientation of buildings in accordance with SNiP 2.07.01-94 "Design and Construction of Towns and Villages", illumination in accordance with SNiP 2.01.05-98 "Natural and artificial lighting", sanitary equipment in accordance with SNiP 2.04.01-97 "Internal water supply and sewerage of buildings", drinking water in accordance with GOST 950-2000 "Drinking water. Hygienic requirements for quality ", equipment in accordance with GOST 26682" Furniture for preschool institutions. Functional dimensions. "

To assess the physical development of children, a comparative assessment was carried out: taking into account the group of pupils of the Mehribonlik houses, the main anthropometric indicators were measured using a regression scale. Age and gender were divided into 10 age groups, height, weight and circumference of the chest were measured and indicators of the physical development of each pupil were determined.

The incidence rates of children were studied by referral and the results of an in-depth medical examination. Data on the overall incidence of pupils was carried out in all selected representative groups according to account form No. 026, filled out in departments of medical institutions and the results were grouped and analyzed in accordance with the classification of international diseases ICD-10.

To assess the nutritional status of children and adolescents, the documentation of the power supply unit of each Mehribonlik house was studied according to a random sample and 10 layout menus were selected in warm and cold periods of the year. The norm of need of each product for one child was determined according to SanPiN No. 0219-07 "Average daily rational food consumption standards and hygienic requirements for catering in orphanages and auxiliary boarding schools" and an assessment was made on the quantitative and qualitative usefulness of food. To calculate the amount of nutrients in the diet, the amount of proteins, fats, carbohydrates, as well as important vitamins and minerals, taking into account age, an analysis was carried out according to I. Skurikhina's manual "Chemical composition of food products" and the biological value of nutrition of children and adolescents was evaluated.

The research results were statistically processed using a Pentium-4 personal computer. Statistical studies used device features. Parametric and nonparametric variational methods used in statistics were used. For this, we used variational-static methods for calculating the arithmetic mean (M), arithmetic mean error ($\pm m$), standard deviation (σ), and relative value.

The paper presents materials on the hygienic assessment of the living conditions of children living in Mehribonlik houses located in the cities of Tashkent, Namangan, Andijan, Margilan. A study of the location of all Mehribonlik houses in the city plan showed that hygiene requirements for the location of all houses from the red line (norm 25 m) were not met. Also, the allocation of the constituent parts of the land plot of the Mehribonlik houses does not meet hygienic requirements. The study revealed that in the Mehribonlik houses the percentage of the building area was 35% (hygiene norm 15%), the landscaping area was 30-35% (normal at least 50%), the area for physical education and sports was 30-35% (normal 35-40%), the economic zone 3-4%, the sleeping area was 1-2%. The sports ground in the "Mehribonlik" house of the city of Tashkent was fully consistent with sanitary and hygienic rules and standards, but the sports ground in the "Mehribonlik" houses of Namangan, Andijan and Margilan does not meet hygiene requirements at all. According to the results of the study, it was revealed that the football ground is not covered with lawn, is irrigated once a week, the external water supply system does not work, there is no water for cleaning shoes, the sewage system and sewage treatment plants do not work, there are no drinking water installations for pupils.

The building of houses "Mehribonlik" consists of one or two floors and one is not connected to the other by a warm corridor. The internal sanitary structures of the buildings of the Mehribonlik houses in the Namangan, Andijan and Ferghana regions do not work. On the ground floor of the building there is an administration, a kitchen, a gym, a medical center. There are no separate rooms for personal hygiene for girls. The general sanitary network for girls and boys is separate, designed for 30 girls - 1 and for 40 boys - 1 toilet bowl (normal 1/20, 1/30). The heating in buildings is centralized, the water temperature is 50° C (if necessary 70° C). The temperature of the premises in the winter season in the city of Tashkent was 17° C, in Namangan, Andijan and Fergana 10-15° C (normal 17-21° C). In the gym, the air temperature was 8-12° C (normal 14-15° C). The ventilation in the rooms is natural, for this transoms and windows are used. Relative humidity of the atmospheric air was 25-40% (normal up to 25-60%), air velocity 0.25 m/s (normal 0.25 m/s). A mechanical ventilation system was installed in the kitchen and toilets; during the study, it was not in working condition. The amount of dust in the air was 0.25-0.45 mg / m³ (normal 0.15 mg/m³). The structure of the construction part of the area, the orientation of the longitudinal axis of the building and the location of its facade relative to the cardinal points were studied (table I).

Table 1: Hygienic assessment of the orientation of the main premises of the houses of "Meribonlik" of the city of Tashkent and the Ferghana Valley.

The rooms	Optimal	Tashkent	Namangan	Andijan	Margilan
Training	YU; SE	90%	60%	70%	65%

Bedroom	FROM; NE	90%	65%	70%	67%
Sports	YU; SE	90%	75%	75%	75%
Canteen	FROM; Sz	85%	75%	75%	65%

The orientation of the main premises of the Mehribonlik houses in educational rooms in 15-35% of cases, in the bedroom in 10-33% of cases, in the sports hall in 25%, and in the dining room in 15-35% of cases does not meet sanitary and hygienic requirements. According to the results, the orientation of the main premises complies with applicable standards only in the city of Tashkent.

Materials were obtained on the study of the illumination of the main premises of the Mehribonlik houses of the city of Tashkent and the Ferghana Valley (table II).

Table 2: The degree of illumination of the main premises of the Mehribonlik houses of the city of Tashkent and the Ferghana Valley

Name of premises	Tashkent	Namangan	Andijan	Margilan	Recommended norm (lx)
Group	300±6,1	240±35	220±16,1	250±16	300
Bedroom	75±1,6	60±1,8	65±2,6	70±3,5	75
Training	300±6,1	250±35	255±16,1	260±16	300
For circles	260±16,1	250±35	255±16,1	255±16	300
Canteen	260±6,6	230±6,2	235±6,5	235±7,3	300
Library	270±16,4	255±5,4	250±4,4	250±8,2	300
Medical Center	280±8,0	250±7,0	260±6,5	250±5,5	300

The degree of illumination of the main premises of the Mehribonlik houses in the Namangan, Andijan and Ferghana regions does not comply with current hygiene standards. The analysis of the data on the degree of illumination of rooms for pupils showed that in group rooms the illumination is at 50-80 lux, in the bedrooms at 5-15, in classrooms at 40-50 lux, in rooms for a mug at 45-50 lux, in the dining room at 55 -70 lux, in the library at 45-50 lux, in a medical center at 20-50 lux below normal.

When organizing general lighting, ceiling or pendant lights were used, which include first-class bulbs scattered or having a high level of direct lighting, the light emitting light from them splits up to 60-80% of the light in the upper half. During the study, the simultaneous use of fluorescent and incandescent lamps in one room was discovered.

Thus, a study of the planning of the territory of Mehribonlik houses, that is, the location of buildings relative to the wind rose, landscaping area, building orientation, microclimate indicators, construction area, ventilation, water supply and sewage systems, showed that none of the above parameters meets sanitary requirements Hygienic rules and regulations. This indicates compliance with the principles of the rules and standards for the organization

of educational and educational activities in the house "Mehribonlik", in accordance with applicable sanitary rules and norms.

The chapter "Assessment and analysis of the incidence rate of children brought up in Mehribonlik homes" presents the results of a study of the incidence rates of pupils of the Mehribonlik orphanages in Tashkent, Namangan, Andijan, Margilan based on 3-year visits.

It is known that the incidence is one of the indicators of the level of health of the population. In the development and study of the influence of environmental factors, working and living conditions on the state of health in individual regions, these are the main sources of certain measures aimed at improving the health status of the population of these regions.

The incidence rate of pupils of the Mehribonlik houses of the city of Margilan per 1000 children was 2801.6 ‰; Tashkent - 2506.4 ‰; Andijan - 2436.6 ‰ and Namangan - 1834.1 ‰. High morbidity among pupils of the city of Margilan can be explained by the inconsistency of the conditions of education and upbringing with the current sanitary rules and norms.

The incidence rate of inmates of orphanages in their level and structure, having some differences in different regions, inmates often suffer from respiratory diseases (540.1 ‰ per 1000 children in Margilan, 490.4 ‰ in Andijan, 442.1 ‰ in Tashkent city, 370.5 ‰ in Namangan city). Respiratory diseases in all age groups had a high proportion due to acute respiratory infections and flu. In the respiratory system, the proportion of acute respiratory viral infections was 82.5%, and pneumonia - 32%. The incidence of pneumonia in children is associated with a decrease in immunity, with an increase in age, an increase in chronic diseases was observed.

Diseases of the endocrine system associated with malnutrition and metabolism of pupils of Mehribonlik homes for 1000 children amounted to 425.6 ‰ in Margilan, 350.8 ‰ in Namangan, 312.5 ‰ in Andijan and Tashkent 256.4 ‰. Among these classes of diseases, thyroid diseases associated with iodine deficiency prevailed (24.1%). Due to the widespread use of preventive measures in the republic (iodization of salt and flour fortification), the frequency of severe cases of iodine deficiency among children has been sharply reduced.

Among infectious and parasitic diseases (per 1000 children, it was 467.4 ‰ in Andijan, 385.5 ‰ in Namangan, 375.7 ‰ in Margilan, and 340.5 ‰ cases in Tashkent), chickenpox, mumps, infectious diarrhea, parasitic diseases (helminthiasis).

In the structure of morbidity indicators for pupils of Mehribonlik houses, 80% of all diseases were respiratory diseases, infectious and parasitic diseases, diseases of the endocrine system, diseases associated with disorders of nutrition and metabolism, diseases of the gastrointestinal tract, blood and blood-forming organs.

During the study, pupils of the Mehribonlik houses were analyzed by health groups, pupils of the 1st group in Tashkent made up 30%, and in Namangan 18.5%, in Andijan 19%, Margilan 19.5%, II the group is similar to 60%; 41%; 42% 42.5%, group III 10%; 40.5%; 39% 38% (picture 1).

A high incidence rate among pupils belonging to the third group of health is associated with chronic diseases, including, according to a comprehensive medical examination, a high level of chronic diseases among children 7-17 years old was revealed.

The frequency of diseases and the distribution of children by health groups showed that in Mehribonlik homes in the cities of Namangan, Andijan, Margilan, the incidence is twice as high as in Tashkent. Physical development

is a key indicator of children's health. A study of the average growth indicators of pupils of the Mehribonlik houses showed that a high level of variation was observed among girls of 8-12 years old and among boys of 13 years old.

The analysis of weight indicators confirms that in many age groups the results lag behind standard indicators. In boys aged 10–13 years, confidence related weight loss was noted ($P < 0.01$), at 14 years of age ($P < 0.05$), and in girls 14 years of age ($P < 0.05$). Noticeable weight loss in boys of 7.8.9 years ($P < 0.01$) and 10 years ($P < 0.05$), and in girls at 7 ($p < 0.01$) years.

The third important component of physical development is considered to be the circumference of the chest (OGC), this indicator of physical development differs from the norms and a shift of indicators was revealed in the direction of increase in girls 12, 13.14 years old, significantly high ($P < 0.01$), but in boys 10 and 15 years there has been a significant decrease in OGK indicators.

Thus, an analysis of the physical development of pupils of the “Mehribonlik” houses showed that among the contingent of children of both groups, the main parameters of physical development in boys and girls show a marked decrease in height and body weight. In addition, the boundaries of signal deviations are determined that vary within low and below average indicators.

V. EXPERIMENTAL WORK

In carrying out the study, we were guided by the “Hygienic analysis of the actual nutrition of pupils living in orphanages” “Mehribonlik” assesses the normalized diet of pupils according to hygiene requirements. Given this, this chapter assesses the nutritional status of children and adolescents in the institutions studied. The studies were carried out in two seasons of the year: winter-spring and summer-autumn. When assessing the diet in the houses of “Meribonlik” in Tashkent, Namangan, Andijan and Margilan, it was found that the diet is five meals a day and consists of breakfast, lunch, lunch, afternoon snack and dinner.

An analysis of the level of consumption of basic daily food products showed that for both control groups of pupils in four objects, the level of consumption of bread and bakery products in winter-spring season for pupils of 7-13 years old is lower by 25% and in summer-autumn season by 31%, at the age of 14-17, it is similarly lower by 8-13%.

Analysis of the level of consumption of meat products showed that consumption is below the norm by 10-12% in Tashkent, by 33-44% in Namangan, by 33-49% in Andijan, by 40-50% in Margilan. The analysis revealed that the level of consumption of milk and dairy products in two seasons of the year in all studied objects is below the norm, including by 14-16%, in Namangan, by 19-22% in Andijan, by 17-31 % in the city of Margilan (table III).

Table 3: Actual consumption of meat and dairy products by the pupils of the houses of "Mehribonlik"

№	The objects	Physiological norm, g / day	Actual use, 7-13 years old		Physiological norm, g / day	Actual use, 14-17 years old	
			Winter-Spring	Summer-Autumn		Winter-Spring	Summer-Autumn
Meat							
1	Tashkent	150	135±1,1	130±0,8	175	160±1,3	150±1,2
2	Namangan		100±0,9	90±0,8		100±1,2	90±0,8

3	Andijan		100±1,2	90±1,0		100±1,1	90±0,9
4	Margilan		90±0,9	80±0,9		80±0,9	70±0,8
Milk and Dairy Products							
1	Tashkent	500	500±2,5	460±3,3	500	480±3,1	460±2,8
2	Namangan		420±3,2	430±3,4		430±2,9	420±2,4
3	Andijan		405±2,8	395±1,9		400±2,8	390±1,8
4	Margilan		415±3,3	390±1,8		345±2,5	385±1,7

It is known that growth and development, energy consumption, the body's resistance to harmful environmental factors of each person depends on the daily diet, nutritional and biological values of the diet.

The study of the level of consumption of basic nutrients in the daily diet of pupils of 7-13 years old at Mehribonlik houses in Namangan revealed that the level of protein intake in the winter-spring season is 26-31%, in the summer-autumn season is 26-32%, the amount of fat 23-42%, carbohydrates 16-26% below normal. It was revealed that the energy value of products in children aged 7-13 years in the winter-spring season is 877 kcal, the summer-autumn season is 1190 kcal, 14-17 years old from 884.1 to 1225.6 kcal below normal.

The study of the level of consumption of the main nutrients of the daily diet of pupils up to 7-13 years old at the Mehribonlik houses in Margilan revealed that the level of consumption of the main nutrients of the daily diet in the seasons is below normal: proteins by 25-32%, the amount of fat by 32-40 %, carbohydrates 15-26% below normal.

It was revealed that the energy value of products in children under the age of 7-13 years in the winter-spring season is 1388 kcal, the summer-autumn season is 1415 kcal lower; among pupils up to 14-17 years old, similarly from 1212 to 1315 kcal is below the norm.

Thus, the inconsistency of the daily diet, nutritional and biological value of food products with the established dietary standards of pupils of Mehribonlik houses contributed to the development of somatic diseases associated with malnutrition and metabolism.

VI. CONCLUSION

Based on the research on the dissertation on "Improving the methodology for hygienic assessment of the conditions of orphanages" Mehribonlik "the following conclusions are presented:

1. In all Mehribonlik homes in Namangan, Andijan and Margilan, with the exception of the Tashkent children's home, the conditions do not comply with applicable sanitary rules and standards. The "Mehribonlik" house of the city of Tashkent was comprehensively reconstructed, but the structure of the land plot, size, location and orientation of the main and auxiliary rooms of the "Mehribonlik" houses in Namangan, Andijan and Ferghana regions do not comply with sanitary rules and standards.

2. An increase in the temperature of the main premises of the "Mehribonlik" houses were revealed in the winter-spring season by 4-6 degrees, in the summer-autumn season by 4-8 degrees, the lighting level does not comply with current hygiene standards. The analysis of the data on the degree of illumination of rooms for pupils showed that in group rooms the illumination is at 50-80 lux, in the bedrooms at 5-15, in classrooms at 40-50 lux, in rooms

for a mug at 45-50 lux, in the dining room at 55 -70 lux, in the library at 45-50 lux, in a medical center at 20-50 lux below normal.

3. The incidence rate of pupils of orphanages of the “Meribonlik” city of Margilan per 1000 children amounted to 2801.6 ‰; Tashkent - 2506.4 ‰; Andijan - 2436.6 ‰ and Namangan - 1834.1 ‰. High morbidity among pupils of the city of Margilan can be explained by the inconsistency of the conditions of education and upbringing with the current sanitary rules and norms.

4. The incidence rate of children in orphanages in their level and structure, having some differences in different regions, respiratory diseases per 1000 children amounted to 540.1 ‰ in the city of Margilan, 490.4 ‰ in the city of Andijan, 442 in Tashkent. 1 ‰, in the city of Namangan 370.5 ‰. Respiratory diseases in all age groups had a high proportion due to acute respiratory infections and flu. In the respiratory system, the proportion of acute respiratory viral infections was 82.5%, and pneumonia - 32%. The incidence of pneumonia in children is associated with a decrease in immunity, with an increase in age, an increase in chronic diseases was observed.

5. Diseases of the endocrine system associated with malnutrition and metabolism of pupils of Mehribonlik homes for 1000 children amounted to 425.6 ‰ in Margilan, 350.8 ‰ in Namangan, 312.5 ‰ in Andijan and Tashkent city 256.4 ‰. Among these classes of diseases, thyroid diseases associated with iodine deficiency prevailed (24.1%).

6. According to the results of the analysis of pupils of Mehribonlik houses by health groups, pupils of group I in Tashkent made up 30%, and in Namangan 18.5%, in Andijan 19%, Margilan 19.5%, Group II, similarly 60%; 41%; 42% 42.5%, group III 10%; 40.5%; 39% 38%

7. Analysis of the level of consumption of meat products showed that consumption is below the norm by 10-12% in Tashkent, by 33-44% in Namangan, by 33-49% in Andijan, by 40-50% in g Margilan. The analysis revealed that the level of consumption of milk and dairy products in two seasons of the year in all studied objects is below the norm, including by 14-16%, in Namangan, by 19-22% in Andijan, by 17-31 % in the city of Margilan. It is known that growth and development, energy consumption, the body's resistance to harmful environmental factors of each person depends on the daily diet, nutritional and biological values of the diet.

8. The level of consumption of proteins, fats and carbohydrates among pupils of 7-13 years of houses of "Mehribonlik" in Tashkent cities is 24%, Namangan 26%, Andijan 29%, Margilan 31%, the summer-autumn season is similar to 32, 31, 32, 37%, the amount of fat in the winter-spring season 24, 23, 32, 34%; the summer-fall season is 35, 31, 38, 42%, the intake of carbohydrates in various seasons of the year is also below the norm by 18-34%.

9. The introduction of comprehensive measures to improve the sanitary rules for the arrangement and maintenance, living conditions and the organization of rational nutrition made it possible to improve the living conditions of pupils of the Mehribonlik houses.

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