

Sociology of Education: Prerequisites for Modernizing the Food Management System at Schools

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Abstract: The school nutrition system is part of the organization of healthy nutrition in the Russian Federation, which has been declared the conceptual Basis of the state policy of the Russian Federation in the field of healthy nutrition of the population. The formation of a system motivating the citizens to a healthy lifestyle, including a healthy diet and the rejection of bad habits, is called a strategy among the priorities. Formation and development of the need to lead a healthy lifestyle is laid in the family and at school, of course. In general education organizations, such work is carried out traditionally. However, at present, an urgent need has arisen in the modernization of school nutrition in the context of a system for the formation of a healthy lifestyle, the development of a food culture and the application of health-saving technologies. The prerequisites for such modernization, from the point of view of medico-social, epidemiological and sociological approaches, are considered in the article.

1. Introduction

In the broad understanding of this term, nutrition can be viewed from the point of view of fundamentally different approaches: physiological, medical, economic, ethnographic, sociological, and others. From the point of view of sociology, nutrition is not just a process of food consumption, but a complexly organized social phenomenon, including the totality of social relations connected with the production, distribution, and consumption of food. At the same time, nutrition as a social phenomenon can also manifest social differentiation on various grounds: cultural, economic, religious, national. Accordingly, it can be a subject of sociological research. It is also necessary to pay attention to the fact that the catering organization has rather deep historical roots: initially connected with the social division of labor and the processes of industrialization, “public catering” itself has the character of a separate industry today and performs very important functions, both economic and social [1]. Providing children studying in educational institutions with a complete and balanced diet is an important part of the catering system. It should be noted that the organization of school meals in Russia began to take shape at the beginning of the 20th century, as a necessary measure of demographic policy aimed at maintaining the health of children, and then it gradually transformed into a modern school feeding system. As part of this transformation, regulatory documents in the field of school nutrition organization emerged, the material basis for various forms of school nutrition organization was created, nutritional and medical approaches to school nutrition organization were developed, which was reflected in the practice of food technology for school meals [2].

At the same time, the modern development stage in the organization of school meals in Russia is fraught with the urgent need for another round of modernization, which we would like to illustrate below with several examples.

2. Materials and Methods

Analysis of sociological and epidemiological studies on the eating behavior of children and adolescents is provided in the paper. A sociological questionnaire survey of students in the 7th, 9th, and 11th grades of secondary schools in the city of Krasnoyarsk was conducted in the 2012/13 school year (the total sample size

was 1,540 respondents). Sociological survey of students' parents was also conducted to identify their level of satisfaction with the conditions in an educational institution. The total size of the sample (built on a cluster-stratification principle while taking into account the proportions of students in primary and high school, as well as the ratio of urban and rural population in one of the regions of the Russian Federation) was 16,274 respondents mainly from the parents of primary and high school students. A survey of parents was conducted in the 2018/19 school year; the method of electronic online survey was used.

3. Results

An analysis of epidemiological studies shows that according to the World Health Organization (WHO) European Bureau, the proportion of people suffering from obesity on a global scale has increased 2 times from 1980 to 2008. At the same time, statistics regarding the WHO European Region, which includes the Russian Federation in particular, indicate that more than half of men and women are overweight and every fifth is obese (23% among the female population, 20% among male). The available data also make it possible to record the tendency, which is expressed in the constant and consistent increase in the proportion of children who are overweight from 1990 to 2008. Along with this, data from WHO epidemiological studies also suggest that more than 60% of overweight children in the pre-pubertal period continue to experience problems with overweight and in adulthood. At the same time, childhood obesity is directly related to the development of non-communicable nutrition-dependent (nutrition-related) diseases [3].

Epidemiological studies focusing on childhood and adolescent obesity strongly suggest the serious consequences of overweight. For example, obesity is directly related to increased risks of hypertension and cardiovascular diseases, as well as the risk of developing type 2 diabetes, hypertension and cardiovascular diseases [4].

Data from the corresponding World Health Organization Sociological Research (Health Behavior in School-Aged Children) indicates that girls are less active than boys, regardless of country or age group. These studies have been conducted for more than 30 years. And with age, these gender differences appear more clearly. Thus, the results of this study indicate that in the group of 11-year-old children, recommendations for maintaining physical activity are carried out by 23% of children; and already in the group of 15-year-olds, this indicator is reduced to 15% [5].

However, the effects of obesity are not only expressed in medical problems, a number of studies clearly show that obesity can cause various psychological, emotional, and behavioral problems [6]. This is especially true of adolescent self-esteem and their satisfaction with their body. In this case, girls are more prone to self-criticism about the figure. Lack of satisfaction in assessing your own body naturally leads to weight management practices, but the measures taken (diet, control of calorie intake, skipping meals, etc.) are not always reasonable from a health point of view, and they are extremely dangerous in some cases, especially for the growing body of a teenager.

It should be noted that an increase in fat mass is a characteristic and natural manifestation of puberty in girls. At the same time, modern social stereotypes about the beauty of the female body and the ideal figure, as well as the peculiarities of the socio-psychological relationship with peers during puberty girls, come into conflict with the regular change in body fat mass, which can result in a negative self-esteem.

The data presented clearly indicate that overweight is significantly more common among boys, but girls are much more prone to negative self-esteem of their body, and they also follow the diet much more often than boys. Moreover, with age, this tendency associated with gender differences increases.

In contrast, puberty in boys is associated with an increase in muscle tissue. This process corresponds to social stereotypes about male beauty and ideas about the standard male figure. In this regard, it can be assumed that the absence of such a conflict in self-perception and self-esteem forms a more positive attitude of young men towards their own body.

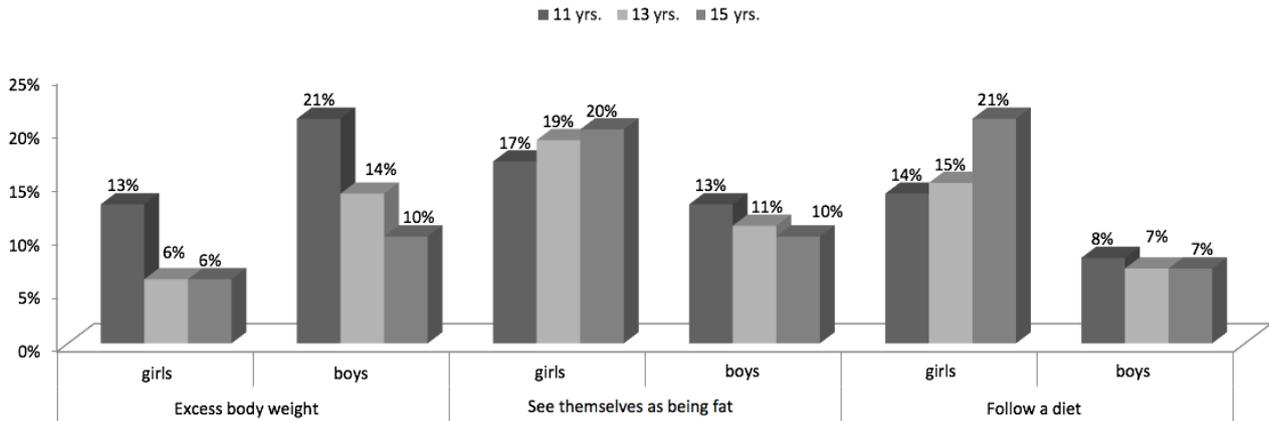


Fig. 1. HBSC data of 2009/10 for the Russian Federation on boys and girls aged 11-15 years suffering from overweight, with negative self-esteem and dieting (%).

If we turn to the socio-economic side of the problem of eating behavior in adolescence, then one should pay attention to the dependence of overweight on the material status of the parental family: children from less well-off families are overweight; and obesity is statistically more common in children from less weak social strata. At the same time, daily breakfast and fruit consumption at least once a day are the most significant indicators of the presence in children of a healthy food culture. The presence of these indicators is also more often recorded in children from families with higher material status [7].

Russian studies on the behavior of schoolchildren related to nutrition also show an increase in the popularity of fast food. For example, 36% of Moscow schoolchildren in 2006 ate fast food more than once a month [8]. And that trend is preserved because of the intensity in the socio-economic development in the regions in Russia. More than that, the proportion of adolescents with a tendency toward eating behavior not related to nutrition has increased significantly.

According to a sociological study of students of the Krasnoyarsk primary and high school conducted by the Institute of Sociology of Education of the Russian Academy of Education in the 2012/13 academic year, the nutritional status of schoolchildren is significantly differentiated relative to social stratification and demographic factors [9]. The study was dedicated to a healthy lifestyle and included nutrition issues.

Data on the nature of food suggests that, on average, 32.1% of schoolchildren have full meals 1-2 times a day, 45.7% of schoolchildren have “three full meals” per day; 22.2% of students are with “four or more.” Thus, a full three meals a day is the norm for about half of adolescents, every fifth of the respondents eats excessively, and almost a third of adolescents do not eat enough or replace full meals with snacks, which are usually associated with eating foods that do not meet the principles of healthy eating. At the same time, pronounced gender differences are manifested in the nature of the nutrition of schoolchildren (see Figure 2).

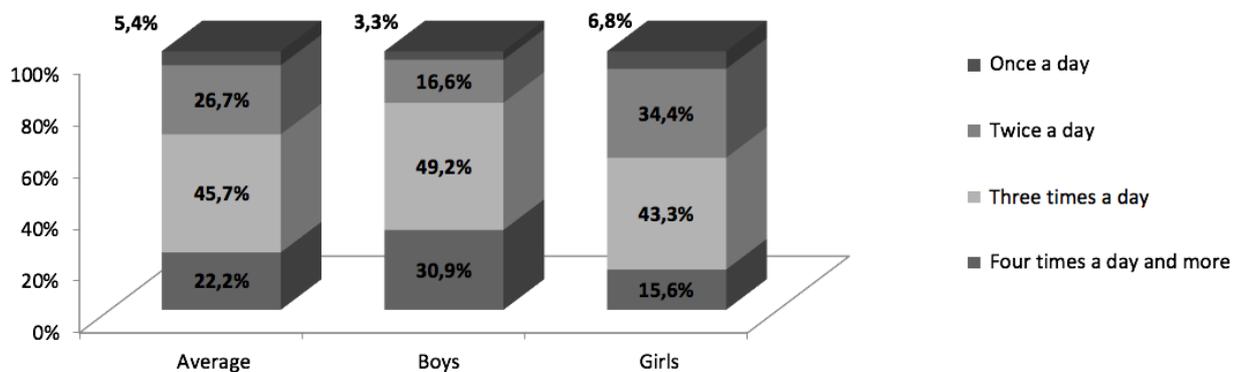


Fig. 2. The number of daily full (excluding light snacks) meals (%).

The data presented in the figure indicate that girls limit themselves to full meals much more often than boys: 19.9% of boys and 41.2% of girls ($p = .0001$) eat fully 1-2 times a day. At the same time, among boys, the share of those who record that they eat “four or more times a day” are almost twice as high, respectively: 30.9% among boys; 15.6% among girls ($p=.0001$). In general, these data correspond to the results of international studies that record the change in eating behavior of girls at the beginning of puberty, since a significant reduction (restriction) of full meals among girls occurs just at the turn of the 7th and 9th classes (see Figure 3).

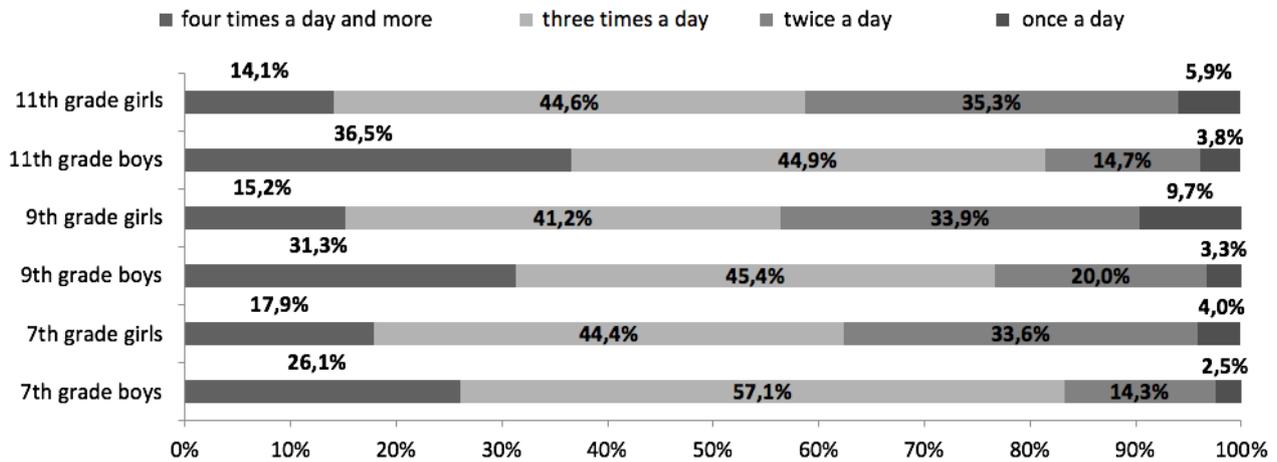


Fig. 3. The age dynamics of the number of full meals taking into account the gender characteristics of eating behavior (%).

As V. R. Kuchma and J. Yu. Gorelova [10] indicate, the children perceive the process of nutrition not only from the point of view of satisfying the physiological need for food, but also from the point of view of the possibility of obtaining psychological relaxation, changing activities, i.e. in the general context of health-saving technologies [11]. Various studies show that the organizational aspects of nutrition are also important because they affect the child’s mind. The materials of the study of schoolchildren with all evidence also indicate the influence of the marital status of the parental family on the diet of adolescents (see Fig. 4). It should be emphasized that regular joint family meals are one of the indicators in the formation of healthy eating habits among adolescents and are included in international studies of adolescent healthy lifestyles as indicators.

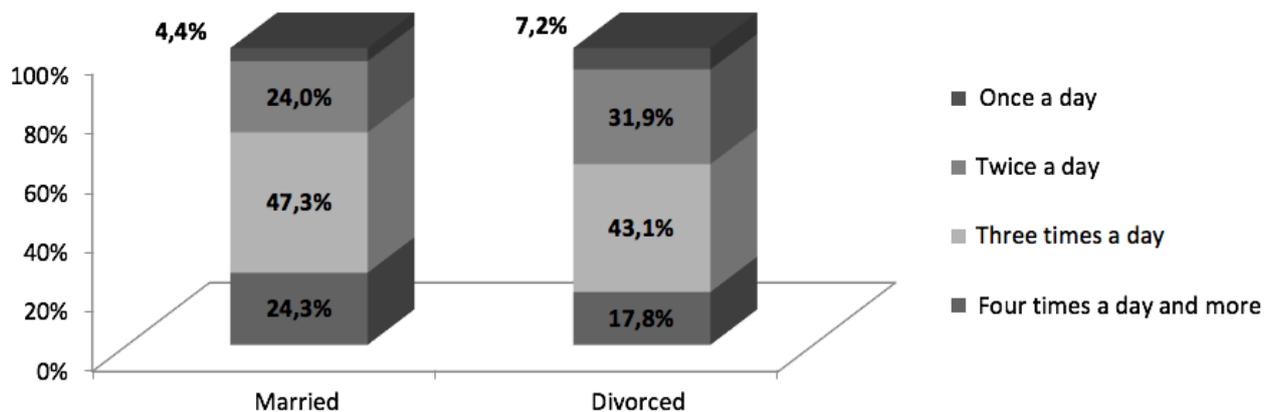


Fig. 4. Influence of family characteristics on adolescent eating behavior (%).

The data presented in the diagram suggest that the factor of family completeness/incompleteness has a significant impact on the number of meals taken by adolescents. So, 28.4% of schoolchildren if in full families are fully fed 1-2 times a day, then among adolescents from families in which parents are divorced, the proportion of such answers reaches 39.1% ($p=.01$). In this regard, it is possible to express the assumption that the social climate in the parental family has a direct influence on the formation of “healthy eating” habits

among adolescents, because it is through joint family meals that, as a rule, the transmission of food culture occurs from the older generation to the younger.

Another important question reflecting the attitudes of adolescents regarding healthy nutrition is whether they think about the quality and usefulness of their food. The results of the answers of adolescents to this question show that only 18.4% of schoolchildren “pay much attention to this”. 48.7% of students note the answer “I’m trying to make my food of full value if possible.” Finally, in fact, a third of adolescents (32.9%) state that they “do not pay special attention to this.” At the same time, the level of their academic performance has a significant impact on adolescents’ answers about attention to their own diet (see Figure 5).

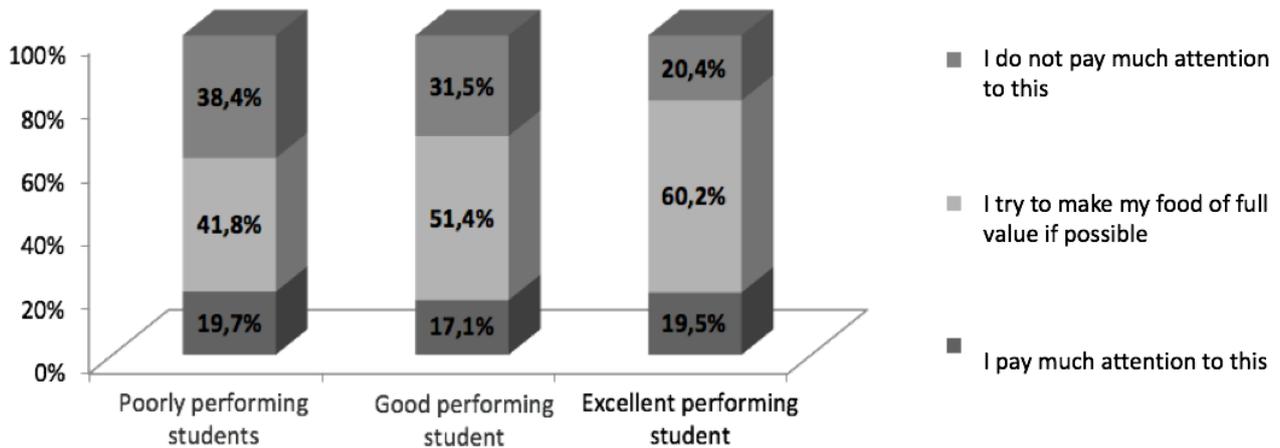


Fig. 5. The impact of academic performance on attention to nutritional quality (%).

During the analysis of the study materials, adolescents were divided into three groups by academic achievement based on the average score in the main subjects of the school curriculum: poorly performing students (those who have GPA is below 3.5); good performing students (those whose average score in main subjects is in the range from 3.6 to 4.5); excellent performing students (those whose GPA is above 4.5).

The results of the study, reflected in the diagram, clearly indicate the presence of a direct relationship between the academic performance of adolescents and their attitude to nutrition. In other words, the higher the average score of a teenager in the main subjects of the school curriculum, the more carefully he treats his diet.

The results of a sociological survey of parents conducted by the Center for Sociology of Education in the 20018/19 school year show that of the 20 conditions assessed by parents, the “quality of food at school” is one of the lowest rated conditions for organizing the educational process at school (see Figure 6).

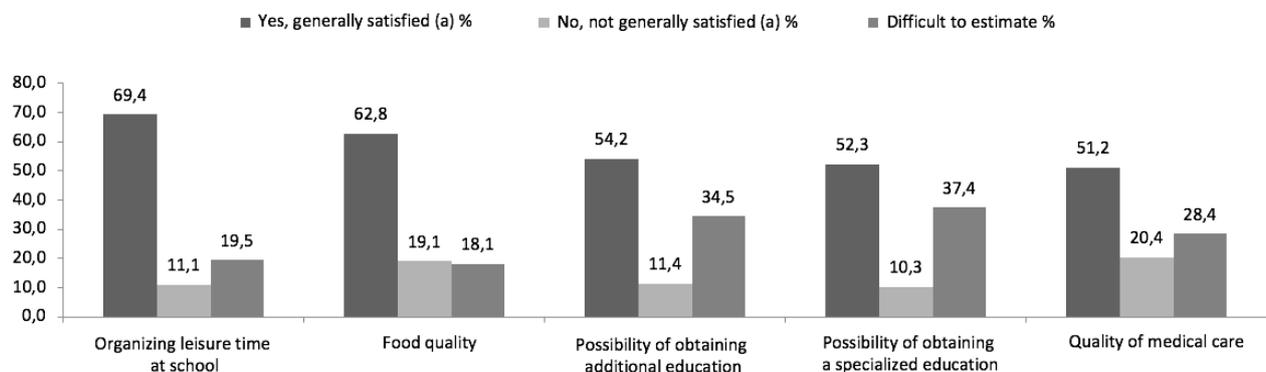


Fig. 6. Conditions of the organization of the educational process in school, with which the parents are least satisfied (%).

It should be noted, not only a high proportion of parents dissatisfied with the quality of food (19.1%), but also actually an equal proportion of parents (18.1%), who “found it difficult to assess” the quality of nutrition. Apparently, such difficulties are connected with the lack of information of parents regarding the nutrition of their children. At the same time, the share of those who found it difficult to assess the quality of the nutrition of their child at school is growing in parallel with the increase in the age of the child. So, if among parents of primary school students, only a few find it difficult to estimate (3.8% of parents); then among parents of primary school students, every fifth is already (20.3%); and among parents of high school students, almost every third one (30,4%; $p=.0001$).

4. Conclusion

The data presented suggests that both Russian and international studies indicate the presence of a number of medical and social problems in the nutritional behavior of children. Moreover, adolescence is clearly a sensitive period for the formation of a culture of healthy eating and eating habits, which are subsequently consolidated and are basic attitudes towards nutrition at subsequent age stages. However, the problem lies in the fact that such healthy behavior at the level of everyday activities is transmitted mainly in the family, and research data show that as the child grows up, parents become less and less aware of the nature and quality of their nutrition.

In modern socio-economic realities, the organization of school feeding only partly preserves the role of a meaningful measure of social support and demographic policy of the state, although this function of school feeding is undoubtedly and fundamentally important.

The consolidation of efforts of interdepartmental interaction in the field of public health and the formation of a healthy lifestyle are becoming increasingly important at the present stage in the development of school feeding. At the same time, it seems that the school, as a social institution, is the only integration center that can simultaneously be an information source on public health issues, unite the interests of organizers/producers of school meals, children and parents and, at the same time, fulfill all others that are historically embedded in the concept of social nutritional sociocultural functions.

5. Acknowledgments

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