ASSESSING THE EATING BEHAVIOUR IN A GROUP OF CHILDREN AND ADOLESCENTS WITHIN THE COUNTY OF SIBIU – FRUIT AND VEGETABLE CONSUMPTION

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Keywords: obesity, food behaviour, children behaviour, children behaviour behaviour. Children acquire food preferences within the family and the organizational culture they grow up in, usually by observation and imitation. Health education for the families with young children on nutrition can have a positive impact on obesity risk in children. If the genetic and social factors cannot be changed in preventing the occurrence of obesity risk in children, focusing the attention on behaviour changes, especially on straightening the eating habits will increase the likelihood of having a healthy adult population.

Cuvinte cheie: obezitate, comportament alimentar, copii

Rezumat: Prevalența problemelor legate de o alimentație nesănătoasă are o tendință ascendentă, în lipsa unor modificări profunde în atitudinea și comportamentul adulților. Copiii dobândesc preferințele culinare în cadrul culturii organizaționale și familiale în care se dezvoltă, de obicei prin observație și imitație. Educația pentru sănătate a familiilor cu copii mici privind nutriția poate avea un impact pozitiv asupra riscului obezității la copii. Dacă factorii genetici și sociali nu pot fi modificați în prevenirea apariției riscului obezității la copii, focalizarea atenției asupra schimbărilor comportamentale, în special asupra îndreptării obiceiurilor alimentare va crește probabilitatea unei populații de adulți sănătoși.

INTRODUCTION

The World Health Organization recognizes that the eating habits are acquired even from the first stage of childhood and are mostly kept during adulthood, as well. Family environment, parent nutrition are therefore the first condition in acquiring healthy eating behaviours.

The social factors influence the food intake, especially during adolescence, when the change of the eating habits may be associated with the need for expression of freedom, getting out of the parents' control, building their own personalities, exercising a negative influence from peers. These outbreaks of independence may manifest through a high consumption of "fast food", refreshments, giving up breakfast or eating fruits and vegetables.

In Romania, the number of cases of obesity in primary school has doubled in the last 8 years. According to the study conducted by the Institute of Public Health of Bucharest (1), the main cause is the unhealthy lifestyle of pupils, particularly through the increased consumption of sweets, snacks, "fast food", carbonated soft drinks. The study shows a higher growth of obesity by age groups in primary school children. If in 2001, in the IVth grade, the nonendocrine obesity was of 1.6%, in 2008, it reached 3.6%.

Obesity is the most common nutritional disorder of children, representing one of the major public health problems in many parts of the world. This phenomenon progresses alarmingly bearing extraordinary medical, social and economic implications. Currently, there is an increasing trend in the epidemic character of obesity and overweight frequency, which worldwide affects approximately 20-25% of children and 45-45% of adolescents.(2)

PURPOSE

The purpose of this study is to assess the eating behaviour in a group of children and adolescents within Sibiu county, an essential determinant of health and also, a determinant of overweight and obesity status.

METHODS

The study was a descriptive, transversal one, conducted on a sample of 206 school pupils aged 11, 13 and 15 years old, respectively the V, VII and IX grades, from several schools within Sibiu county, both from the urban and rural environment.

As a tool for data collection, we used a questionnaire that included a small number of items that focused only on the eating behaviour, adapted from those included in the questionnaire used for the Health Behaviour in School-aged Children (HBSC) study, validated and standardized for the Romanian children and adolescences population and used for HBSC surveys carried out during 2005/2006 (3) and 2009/2010 (4) in our country.

The data regarding the food behaviour aimed at the frequency of fruits and vegetables consumption.

Statistical analysis was performed with SPSS software, version 19.

The results obtained were compared with the results obtained at national level through the HBSC 2010 study. We also compared the results obtained on food behaviour taking into

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account the age groups (11, 13 and 15 years old) and the origin environment (urban and rural).

RESULTS AND DISCUSSIONS

The distribution of the study group on origin environments and gender showed that in the urban areas, there were 128 school pupils included in the study of which 41 were aged 11 years old (of which 23 girls and 18 boys), 36 pupils aged 13 years old (15 girls, 21 boys) and 51 pupils aged 15 years old (25 girls and 26 boys).

Figure no. 1. School pupils' distribution on age groups and gender



In the rural areas, the children included in the study were numerically lower as against those in the urban areas; this is due to the fact that the school-age population is lower, not all the population go to school and last but not least, because the pupils aged 15 years old cannot be found in the rural schools as there is only secondary education. Thus, in the rural areas, food behaviour was studied on a total number of 78 school pupils, 42 of them aged 11 years old (26 girls and 16 boys) and 36 pupils aged 13 years old (19 girls and 17 boys).

Figure no. 2. School pupils' distribution per age groups and gender



It can be observed that girls predominate in rural areas in the age groups of 11 and 13 years old and in urban areas in the age group of 11 years old, while boys are more numerous in urban areas in the age groups of 13 and 15 years old.

Eating behaviour was assessed by the daily and weekly consumption of fruits and vegetables. For a healthy diet, it is important to include in the children's daily menu a variety of fruits and vegetables to provide all the necessary nutrients for the body, having in view that every fruit and vegetable contains minerals, antioxidants and vitamins to balance the blood sugar, increase energy and strengthen the immune system.

Increasing fruit and vegetable consumption among children and adolescents is a factor which optimizes health and reduces the risk for cardiovascular disease and some forms of cancer. In this regard, the World Health Organization recommends 5 portions of fruit and vegetables daily.(5) The percentage of school pupils who eat fruits at least once a week is higher among boys in all studied age groups, and fruit consumption increases with age in both genders, the highest values occurring in the children of 15 years old (69, 23% for boys and 52% for girls). This is probably due to increased awareness and knowledge level along with age (figure no. 3).





The daily consumption of fruits decreases significantly with age from 11 years old to 15 years old, for both boys and girls, and boys consume significantly less fruits than girls in all age groups (figure no. 4).

Figure no. 4. Percentage of school pupils who eat fruits daily, per age groups and gender



The percentage of children who consume fruits less than once a week or not at all is low (7.31% in the children of 11 years old, 0% in those of 13 years old and 3.92% in those of 15 years old).

Fruit consumption curve in the boys and girls taken in our study in 2012, show the maintenance of the same trend recorded in the HBSC surveys of 2006 and 2010 (figure no. 5), at a much higher level, except for the boys of 15 years old, where the fruit consumption downward trend is more pronounced.

Figure no. 5. The daily consumption of fruits in children per age groups and gender, compared to the results of the HBSC studies



Regarding the consumption of vegetables at least once a week (1 day per week, 2-4 days or 5-6 days), the trend is upward in girls along with age (from 43.47% in the girls of 11 years old to 64% in those of 15 years old), while in boys, the

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tendency of vegetables consumption is decreasing with age so that, from 50% in the boys of 11 years old, it reaches 18% in those of 15 years old.

Figure no. 6. Percentage of school pupils who consume vegetables at least once a week, per age groups and gender



Regarding the daily consumption of vegetables (once or several times a day), the trend is reversed to that above, the boys recorded an increased consumption in vegetables along with age, the highest value occurring in the children of 13 years old (33.34%), while in girls, the vegetable consumption decreases along with age, the lowest rates being also found in the school pupils of 13 years old (20%) (figure no. 7).

Figure no. 7. Percentage of school pupils who eat vegetables daily, per age groups and gender



Making the comparison with the percentage of pupils who consume vegetables daily within the HBSC/2006 study, respectively HBSC/2010, we can see that the trend remains the same with the exception of the boys of 11 years old and of the girls of 13 and 15 years old, where the percentage of those who consume vegetables daily tends to decrease (figure no. 8).

Figure no. 8. The daily consumption of vegetables per gender and age groups, compared to the results of the HBSC study



The percentage of pupils who do not eat vegetables or consumes vegetables less frequently than once a week is higher than in the case of fruits consumption, both for girls and for boys in all age groups (19.51% pupils of 11 years old, 22.23% pupils of 13 years old, or 7.83% pupils of 15 years old).

We believe that the reason for the low fruit and vegetable consumption among children and adolescents is mostly related to the lack of nutritional education from parents, who themselves do not consume enough vegetables and fruits.

Basically, eating fruits and vegetables is a matter of educating the taste and of applying certain principles of healthy eating within family and the environment the children learn and live in. Parents should therefore act on two levels: to explain to children with simple but relevant arguments why it is good to eat fruits and vegetables daily, and on the other to give a personal example by consuming themselves the 5 portions of fruits and vegetables daily. The education received from parents should convergently act with the education received in schools regarding the fruit and vegetable consumption.

Although, there are governmental programmes to support the fruit consumption in schools, their impact on the food behaviour of school pupils is not the desired one.

CONCLUSIONS

- 1. The distribution of the study subjects taking into account the origin environment showed a prevalence in the urban areas.
- 2. Female subjects predominate in rural areas in the age groups of 11 and 13 years old and in the urban area in the age group of 11 years old, and the male subjects are more numerous in the urban areas in the age groups of 13 and 15 years old.
- 3. Fruit consumption decreased significantly with age and is more common among the girls and in the urban areas.
- 4. Vegetable consumption decreases with age in boys and increases in girls, being higher in rural than in urban areas; it is more reduced than fruits consumption, both in girls and boys in all age groups.

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