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ASPECTS CONCERNING THE FOOD INTAKE OF SOME POPULATION GROUPS IN BIHOR COUNTY IN THE PERIOD 2010 - 2013

*** Laslău Monica, *Rahotă Daniela, *Adriana Constăngioară, *Corina Şuteu**

* University of Oradea, Faculty of Medicine and Pharmacy, 1 Decembrie St., no.10, Oradea, Romania,
e-mail: caterinalaslau@yahoo.com

Abstract

The study looks at how the food ratio of individuals from population groups in Bihor county was covered during a period of four years. The size of groups ranged between 57 and 100 people, of both sexes and different ages, including individuals with different degrees of physical effort.The method employed was that of the individual food survey, for 24 hours. The average rations consumed by the four population groups were deficient with regards to both calories and nutrients, but they were properly prepared as a ratio between trofines. Too little vegetable fat was consumed as compared to animal fat. Meat and grain derivatives exceeded the recommended amounts, vegetables and fresh fruit were consumed in very limited amounts while fish was almost absent from the diet. Elderly persons's diets were closer to recommendations. Many subjects have not had either breakfast or snaks/light meals, compensating these with lunches and dinners exceeding in calories.

Key words: behavior, nutrition, obesity, malnutrition, prevention, risk

INTRODUCTION

People's lifestyles or specific behavior may be an important risk factor for health and the cause of frequent physical and mental imbalances. Some feeding habits become dangerous human „practices" that threaten both the health of individuals adopting them and the prosperity of the communities to which they belong, triggering significant social costs (Ionac N, 2003). Characteristic of the second half of the twentieth century is a polarization of mankind in terms of food intake, at one extreme being the millions of people living on the edge of survival, while at the other extreme, there are hundreds of millions of people for whom food is not a problem, neither as concern nor as regards their financial means (Olinescu R, 2002).

Thus the world oscillates between these two extreme situations: the one hand malnutrition, and on the other hand, excessive nutrition. Both affect health: malnutrition generates both deficiency diseases (anemia, rickets, dystrophy, blindness) and infectious diseases (tuberculosis), while overeating leads to chronic diseases related to nutrition (Popescu O, V Achim, AL Popescu, 2004).

A good balance between intake and the nutritional needs of a person is reflected in the possibility to maintain a good health. When there is a

deviation between the intake and needs, one can speak of malnutrition, which has direct and indirect consequences on health (Ionuţ C et al, 2004). Projections for 2015 and 2030 show that 576 million people will suffer from malnutrition in 2015 and 400 million by 2030, in developing countries (FAO, 2005).

Over 2 billion people have iron deficiency anemia (WHO, 2001). Data from N.H.S. show that more than 700 million people are affected by iodine deficiency, most of them living in less developed countries (WHO/UNICEF/ICCIDD,1999). The percentage of chronic degenerative diseases is estimated to increase to 57% of all diseases in 2020, with enormous costs for companies and governments (Epping-Jordan J et al, 2001).

In 1995 there were 84 million diabetics in developing countries, a number that will increase by more than 2.5 times, to 228 million by 2025 (Aboderin I et al, 2001). 70% of deaths caused by diabetes will occur in developing countries (WHO, 2003; WHO, 1998).

The premature labelling of chronic diseases as "diseases of affluence" is a misnomer, as they are encountered both in poorer countries and in less affluent population groups in developed countries. This change in the pattern of disease incidence takes place at an accelerated rate; moreover, it occurs at a faster rate in developing countries, as compared to what happened half a century ago in industrialized regions of the world (WHO, 2002; Popkin BM, 2002).

Teenagers, rather than children, are able to make more choices for themselves; social pressure to be thin and the stigma of obesity can lead to unhealthy eating behaviors (Baric I, R Kajfez , S Cvijetic, 2000) and a bad opinion about their body image. As they grow, their choices and preferences gain priority over the eating habits acquired in the family, as they have more control over what they eat, where and when they eat (Shepherd R, Dennison CM, 1996; Thomas J, 1991; Spear B, 1996).

The combination of an unhealthy diet and a sedentary life, with other risk factors, such as tobacco, has an additive or multiplicative effect, able to accelerate the speed at which chronic degenerative diseases are spreading throughout the world [WHO, 2002]. Physical inactivity is reported in developing countries as much as in the industrialized ones, the sedentary lifestyle being a risk factor for many chronic diseases. (WHO, 2003; Matsudo V et al, 2002).

MATERIAL AND METHOD

Between 2010-2013, the staff of the Department of Food Hygiene within the Public Health Administration Bihor has conducted annual surveys (in autumn), as part of the National Health Programmes, in urban

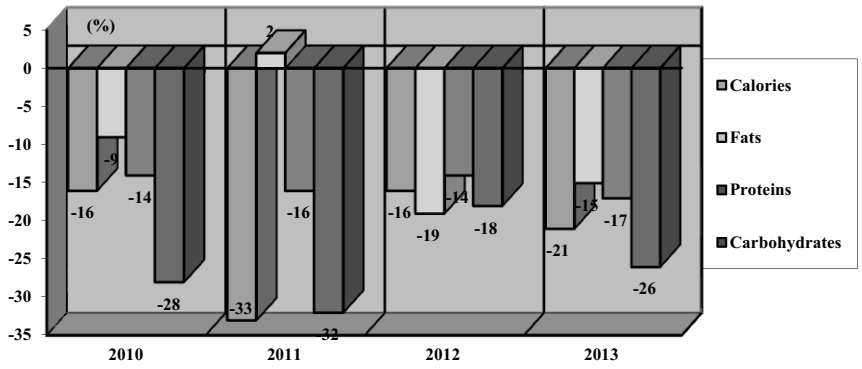
and rural communities in Bihor - Sălard (2010) Beiuş (2011), Sântandrei (2012), Oradea (2013), evaluating food intake and the declared feeding behavior, using the method of the individual food survey for 24 hours, in accordance with methodological specifications, developed by specialists of the Regional Centre for Public Health in Cluj Napoca.

The size of groups was different in the 4 years, ranging between 57 and 100 people, of both sexes, aged over 20 years. The structure of groups was homogeneous and, in the interpretation of the results, the amount of physical activity performed was taken into account, measured in degrees of effort. Tables of food composition were used in order to calculate the average daily calorie and trofin content of the menus consumed,.

Recommended values on food requirements, energy needs and the nutrients taken from meals were completed by the Regional Public Health Administration Cluj-Napoca, depending on age, sex, degree of effort, in accordance with the recommendations of the FAO / WHO and national recommendations.

RESULTS AND DISCUSSIONS

1. The average annual value (caloric and nutritional) of the consumed diet – deviations %



3)

4) Fig.1. Percentage of deviations recorded in relation to caloric intake and the nutrients

5)

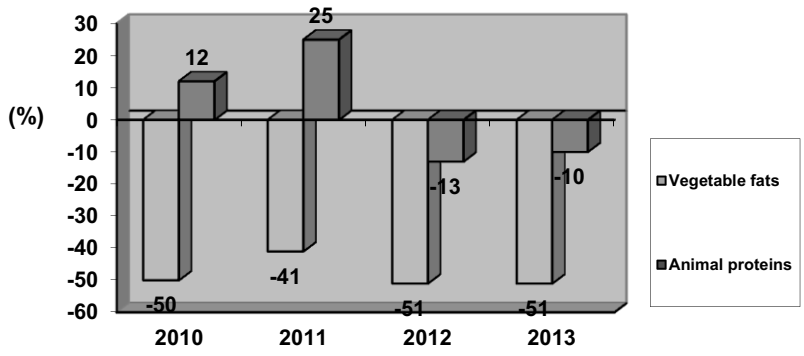
6) Every year, except 2001, one can observe an average caloric deficit and a global nutritional deficiency. In 2011, a slight excess of fat was

recorded in the average ration consumed by the groups included in the study (fig.1).

7)

2. Coverage of food needs in terms of quality of rations consumed during the period studied

Throughout the period mentioned above, food rations, as declared by the people in the studied groups, proved to be qualitatively unbalanced, with a significant deficit of vegetable fat, excess of animal protein in the first two years and a deficiency of animal proteins in the following years (fig.2).



8) Fig.2. Percentage of deviations recorded in the rations of lipids and proteins consumed

3. Coverage rates of food intake, calculated with regards to nutrients

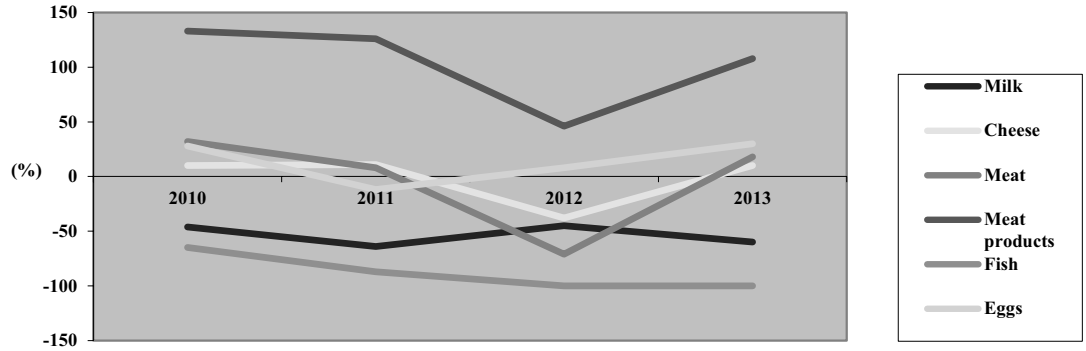
Table 1

Percentages of caloric rations consumed

Year		Lipids	Proteins	Carbohydrates
	Recommended	**20 – 35%**	**10 – 15%**	**50 – 70%**
2010	Consumed	33%	**14,4%**	**52,6%**
2011	Consumed	34,44%	**15,41%**	**51,01%**
2012	Consumed	30%	**14,4%**	**55,6%**
2013	Consumed	33%	**15%**	**52%**

A positive aspect that emerged refers to the fact that recommended proportions between nutrients were observed, despite the overall deficitary characteristic of rations (table1).

4. Average consumption on food groups



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10) Fig.3. Percents of deviations registered in the ration of animal food consumed

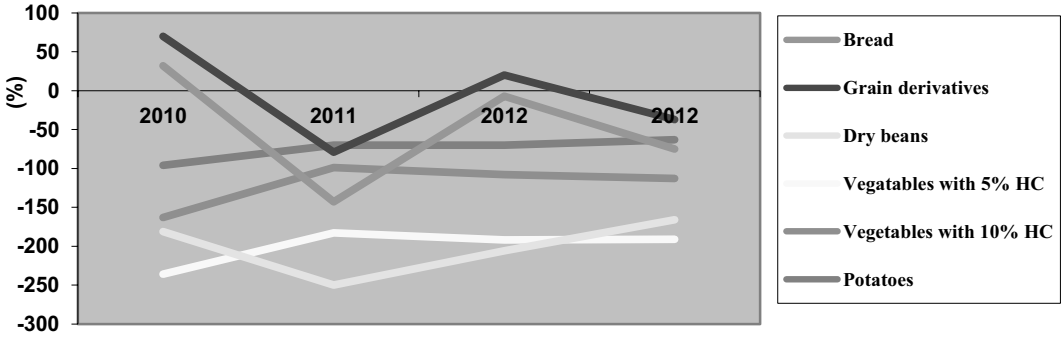

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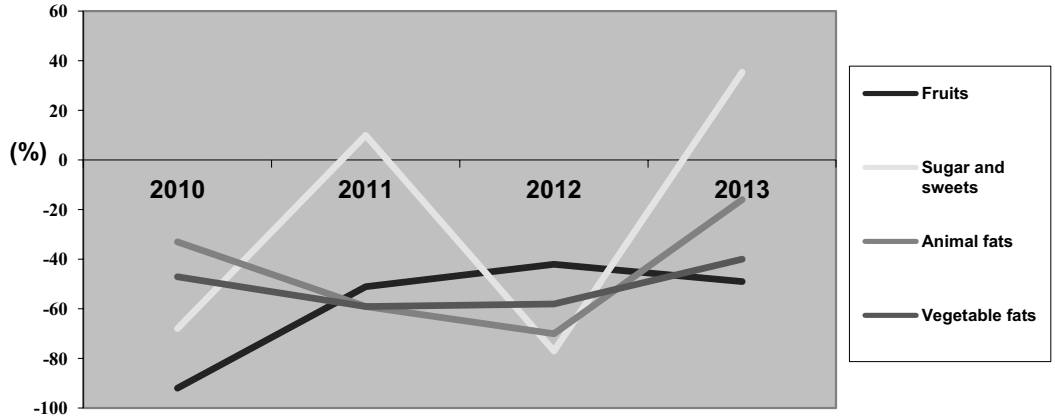
Fig.4. Percents of deviartions registered in the ration of vegetable food consumed



12)

Fig.5. Percents of deviations recorded in the ration of fruits, sugar and fats consumed

From among animal foods, mainly those derived from meat were consumed (large positive deviations recorded in all years), rather than meat

(for which there have been excesses, however, with the exception of 2012), cheese and eggs, or milk, which was consumed in very little quantities (deficit in all years), while fish was almost never consumed (fig.3).

Among vegetable foods, mainly those derived from cereals were consumed, alongside bread and potatoes (less); of vegetables those with 10% HC were eaten in larger percents than those with 5% HC, the largest deficit being recorded in the case of pulses/beans (fig. 4).

A consumption of sugar and sweets in excess was registered only in two years, animal and vegetable fats were used in very little quantities, as well as fresh fruit (fig. 5).

5. Coverage of the daily average energy (caloric) needs by age, sex and degree of effort

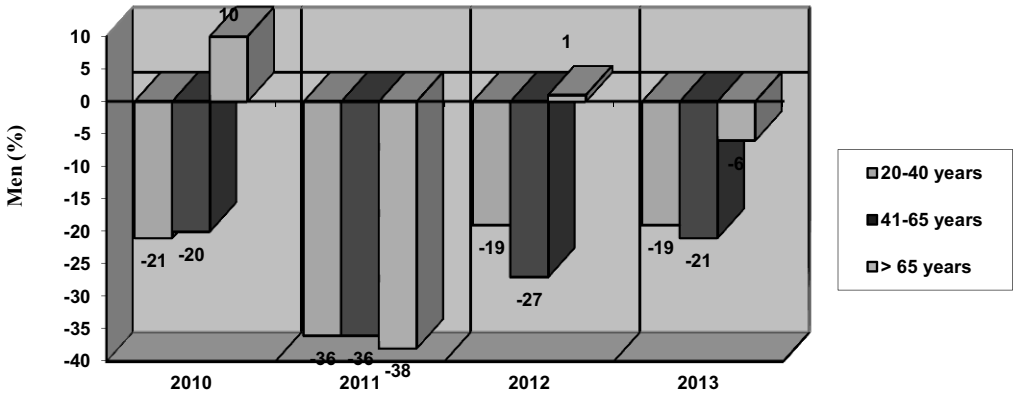


Fig.6. Men's caloric intake by age groups

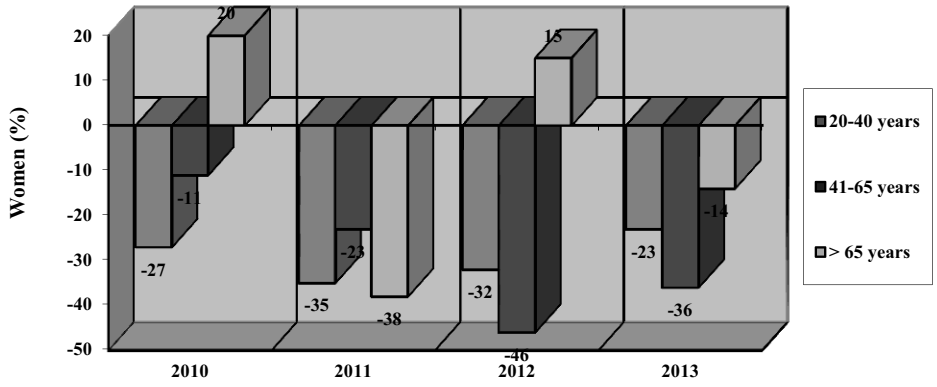


Fig.7. Women's caloric intake by age groups

For both sexes and during the entire period evaluated, there have been some caloric defficiencies, except 2010 and 2012, for persons aged above 65 (women and men).

The most significant defficiency was registered in 2011 and 2012 respectively, in the case of young women (20-65 years) (fig.6 and fig.7).

6. Percentage distribution of menues on meals

If the annual average caloric value for breakfast and light meals was reached, lunches and dinners were generally over-abundant.

In the past 3 years, about 20% of the subjects did not have breakfast. Most often they did not have light meals as well, the year that distinguishes in this respect being 2010 (fig.8 and fig.9).

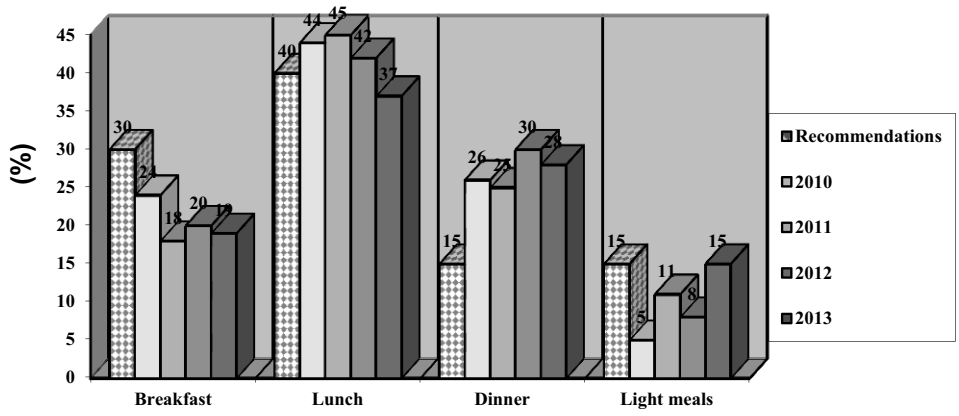


Fig.8. Daily percentage distribution on meals of food consummed

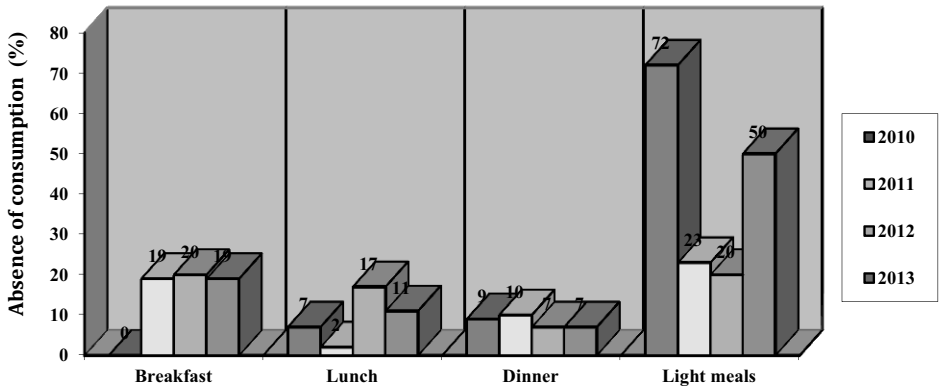


Fig.9. Absence of food consumption at the main meals

CONCLUSIONS

Overall, the population groups evaluated had a poor diet throughout the period taken into consideration, calorie rations being insufficient to cover nutritional and trofic needs (as regards quality as well), but were judiciously structured in terms of calorie macronutrients.

The diet was based mainly on meat and cereals, while vegetables were consumed in small quantities, either raw and cooked.

The fish was not among the consumers' preferences (and there is no tradition or education in this respect in our area), and fresh fruit were consumed in quantities that are not appropriate.

Elderly persons' rations were closer to recommended values (these being however slightly too rich in relation to physical effort).

A significant proportion of subjects did not serve breakfast or snacks, compensating this absence with lunches and dinners too rich in calories.

It is necessary to continue insisting on the correct and complete information of the population, especially as regards disadvantaged groups, who have more difficult access to education and information through the Internet and mass media.

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