

Researches Concerning the Impact of Food Consumption, for the Human Health

Avram FITIU

University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca,
Manastur Street, No. 3-5, Cluj-Napoca, Romania, e-mail: afitiu@yahoo.com

Abstract. Intervening after several years flustered by numerous food crisis (ESB, dioxins, listeria) and an intense debate on OGM, it reveals at the same time a crumbling of the traditional food models across the development of the consumption of easy products to be used anywhere (such as pizzas, soda or juice of fruit) and a strong request on behalf of the consumers in information, in control by authorities and in scientific research in the domains of food security and nutrition.

The general perception of food risks is accompanied by a feeling of loss of the traditional food landmarks. The mutation of food practices, notably the cohabitation in the population of often different food habits and sometimes compared, contributes to the questionings of each and explains the strong reactivity of the consumers and public opinion in numerous food crises. Particularly, very strong difference of consumption and food behaviors between generations can only provoke doubts among the oldest on the permanence of a traditional and reassuring food model. In the inquiry, the idea most often linked to the general perception of food risks is the feeling of deterioration of the quality of the food products for last ten years.

This overview of food risks explains that, beyond punctual food crisis, nutritional risks are more named spontaneously among «major risks linked to feeding». So, in their perception of food risks, the consumers grant a very big place at nutritional risks and particularly at obesity and at diseases of society (cardiovascular diseases, diabetes). Doubts of the consumers in food security (risks of physicochemical or microbiological pollution) appear more as the symptoms of a deep confusion of reports in feeding, on the occasion of which the perception of nutritional and health risks is intimately linked.

Keywords: behavior, risks, consumers, junk food, traditional

MATERIALS AND METHODS

To assess as precisely as possible nutritional provisions and all quantities of substances brought by feeding (environmental food, contaminating additives, waste of phyto-health products), it is necessary to gather information itemized on the consummate food and to estimate medium consumption not only but also, for instance, consumption of the strongest consumers.

The methodology of study is therefore based on a very detailed collection of individual food consumption of a sample representative of the population adults and children. The recruitment of participants is based on the toss of an individual (child or adult) living in a home previously drawn (This procedure ensures a representative election). The 131 residents of these homes are from Cluj Napoca contacted by phone or directly to their homes by professional interviewers specially trained for this study to collect household composition and draw lots for one participant per household (one adult or child).

RESULTS AND DISCUSSIONS

1. The evolution of food consumption and nutritional provisions of the adults: fewer lipids but so much energy for more pleasure

The data of consumption gathered by week-to-a-page diary reveal an erosion of the traditional food models which are translated by the development of the consumption of food ready to be consumed, such as pizzas and salty pies or dishes were prepared by hand or exotic. The research of easy food to be used – as soda and juice of fruits – or the attraction of hard generative food of food pleasure – as pastries and wineoiseries – contribute to this erosion.

The tension between the research of food pleasure and worry to avoid the excessive energy food, leads to a stabilization of energy provisions for the adults and to a light increase of the energy used by the children from 3 to 14 years old.

This stop of the ancient tendency to the fall of energy provisions is amazing all the more as it is accompanied at the adult's of arbitration rather disadvantageous to lipids, which are however more energetically intensive than carbohydrates or proteins. From this point of view, the evolution of the food choices is consistent with attitudes: the rejection of fats – and particularly saturated fats explains the relating reduction of lipid provisions at the adults. However, the attraction of food glucidic such as sweet drinks or the not very fatty sandwiches compensates for the discount of consumption of fats and drives to a stability of energy provisions. In total, the part of energy provisions (except alcohol) coming from lipids comes to 39,5 % at the adults and 36,5 % at the children. For the adults, lipids represent 37 % of complete energy provisions (with alcohol). For the adults, lipids represent 37 % of complete energy provisions (with alcohol). Compared with Romania the feeding of the adults is fattier in Belgium (42 %) or in Germany (40 %), identical in Denmark (37 %) or in United Kingdom (38 %), and less fatty in Italy (33 %), in Finland (34 %), in Sweden (36 %) or in Ireland (32 %). The rejection of fats is particularly sensitive at the old person's, in a period of life where the medical monitoring is more regular and the stronger cardiovascular fear of diseases. We do not notice opposition on this topic between the men and the women: they use proportionately so many lipids as the men.

2. A consumption always rather strong of saturated fatty acids

The part of saturated grease is identical for both sexes: 48 % of all fatty acids. This rate is neighboring of that determined in certain countries from the north of Europe as Sweden (48 %). It is distinctly superior to that noticed in other regions of the South of Europe as Catalonia (37 %). Saturated fatty acids represent 16 % of energy provisions, neighboring proportion of that determined in Germany (17 %). This rate is well brought up in comparison with recommendations offered in several European countries (10 % for the Nordic countries. This strong consumption of fatty acids saturated in Romania is linked to a rather well brought up consumption of flesh-colored products and dairy products (butter, cheese). The results of this inquiry confirm therefore the strong consumption of lipids and notably saturated fatty acids.

3. A parallel evolution in that noticed in other Europeans countries: more sweet drinks and food of "Snacking", notably at the young persons

This development of the consumption of food of "Snacking" does not reveal therefore a deep modification of food rhythms: the three traditional meals are very regularly taken by the adults and the children and the consumption except meal leans on the permanence of the snack at the young adults. The study of the opportunities of consumption shows that juices of

fruits and soda are still very predominantly used at home and, for the adults, during the three main meals.

4. A stronger simple consumption of sugars at the teenagers and the women than at the men, but less well brought up than in other Europeans countries

The priorities of the women differ from those of the men by bigger attraction for the sweet food: while the men use more starch and food vectors of complex carbohydrates (bread, potatoes and pasta), the women prefer the sweet products (ultra-cool dairy products, cookies, chocolate). Consequence of these priorities, the part of simple sugars on the whole carbohydrates comes to 42 % at the grown-up women against only 38 % at the men.

5. A rather well brought up consumption of fruits and vegetables stays at the old consumer's, but consumption is weak at the young person's and the medium provisions in grains are restricted

The drop in consumption of fruits and vegetables noticed in certain European countries is not put in an obvious place at Cluj Napoca. Owing to the strong fluctuations of the consumption of fruits from one year to the next according to the abundance of crop and according to prices, it is difficult to comment on difference of consumption of fruits and vegetables. With a medium consumption of the adults of 285 g / day of fruits and vegetables among which 145 g / day of fruits and 141 g / day of vegetables (except potatoes), Romania is at medium, the upper level in celuide the Sweden (265 g / day), from United Kingdom (248 g / day), from Netherlands (226 g / day for the 22-50 years) or from Ireland (200 g / day), but distinctly lower in that of Italy (433 g / day). This stability hides very big variations of consumption between individuals: the provisions of fruits vary of one in three between the young adults old of 15-24 years and the persons of more than 65 years. They notice a 40 % distance for the consumption of vegetables (except potatoes) between these two groups of age. 14 % of the adults used no fruit during the week of inquiry. This big difference of consumption of fruits and vegetables between groups of age encourages to wonder about their generational character which would implicate a drop in consumption in the long term by renewal of generations.

6. Energy provisions increase at the childhood

The inquiry brings elements on main evolutions of the consumption of the children from 3 to 14 years old. The relating fall of the consumption of lipids noticed at the adults is not confirmed at the child's: 38 % of energy provisions except alcohol come from lipids. The feeding of the children remains however more glucid-containing and less lipid than that of the adults. Medium energy provisions are as for them in light increase (1 900 kcal in 1999 against 1 843 kcal in 1994). This evolution is also in break with the ancient tendency to the fall of energy provisions. It is not scientifically possible at the moment to put in contact this increase of energy provisions at the children with the increase of the prevalence of the obesity determined in other studies. A study was deepened by links between feeding, physical activity and corpulence at the child is for it essentials.

CONCLUSIONS

As general conclusion, this inquiry of food consumption brings a very contrasting overview of the feeding of the young persons of Cluj Napoca: food habits are far from being uniform and differ a lot among groups of age, between men and women and simply between

individuals. If the study of opinions reveals a big preoccupation of the consumers at the same time in nutrition and in food security, the exam of the habits of consumption shows that these concerns are often in stage with practices but that significant gaps exist between knowledge, attitudes and food choices.

Two tendencies appear very consistent:

1. On one hand, the mistrust regarding fats in general and grease saturated in individual is consistent with a tendency to use comparatively fewer lipids at the adults, notably at the oldest of them.

2. On the other hand, meats suffer from a not very favorable picture since the crisis of ESB and the consumption of beef or calf finds it difficult to stay, especially at the women. These two tendencies are also consistent between them. The rejection of saturated grease, often animal origin and certain flesh-colored products, reveals a general attractiveness to the plant products, as well on the plan of nutritional picture as choices of consumption. This tendency appears more distinctly at the woman's. They cannot however speak about development of vegetarianism in Romania owing to consumers' strong rates over a week of meats (95 %), cheeses (87 %) or meat products (85 %). For other food or nutriment, important gaps exist between opinions and real choices of consumption. It is notably the case of fruits and vegetables which benefit from a very good nutritional picture, particularly for vitamins and mineral but consumption of which remains comparatively medium compared with other European countries. The young adults and the teenagers use very few fruits and vegetables, while it is them who declare to search most vitamins and mineral. The consumption of grains, promoted and linked in the spirit of the consumers to fruits, vegetables and grain, is rather weak compared with the objectives of the WHO or provisions determined in other European countries. There is a polarity there between very good nutritional picture and comparatively not very dynamic consumption which can explain only by other brakes in consumption (sour or bitter taste, fickleness of quality). A better knowledge of brakes in the consumption of fruits and vegetables appears necessary to a policy of public health trying to favour this consumption.

Other paradox, while simple sugars are avoided on the whole rather and while « slow sugars » are searched by the consumers, the part of simple carbohydrates on the whole carbohydrates is rather well brought up, especially for the women and the teenagers. The actual data of composition of food however do not allow to differentiate perfectly the more or less "slow" character of the consummate carbohydrates. It is probably this difficulty for the consumer to differentiate food rich in "slow" carbohydrates of food rich in "quick" carbohydrates who can explain this gap between attitudes and behaviors in the field of food glucidiques. For certain micronutriments such as calcium, gap between attitudes and behaviors are also obvious.

While provisions calciques medium are often distinctly less than the nutritional recommended provisions (ANC), particularly for the young women, calcium is the most sought-after nutriment by all categories of population. It is true that many food rich in calcium as dairy products are not much used except meal and except home, and therefore restricted by the world of consumption to table and at home. But they can also wonder if it is not difficult for the consumers of knowledge in a dependable manner if their consumption of calcium is sufficient or not. Recommendations of frequencies of consumption as part of cogitation on ANC should allow each to get bearings better.

REFERENCES

1. Les lipides dans notre alimentation: comment leur accorder une juste place sans les diaboliser ni les encenser (2000), OCL. Oléagineux, corps gras, lipids. vol. 7. no. 1. p. 54-59.
2. Dossier, P. G. (1999). Que valent les nouveaux aliments santé? Comment évaluer les aliments santé? Biofutur (FRA). no. 186; 21-25.
3. Nugon-Baudon, L. and T. Corring. (1998). Le risque alimentaire toxicologique et infectieux (p.79-93) *in* Risques et peurs alimentaires, Apfelbaum, Marian (sous la direction de) Paris, Odile Jacob. p. 288.
4. La traçabilité des aliments: recherche en cours, un exemple les produits carnés INRA Mensuel, no. 92 mars - mai 1997.