Editorial/*Editorial*

Mediterranean Diet And Health

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Traditionally, the existence of a "Mediterranean Diet" has been considered the most important agglutinating factor for Mediterranean countries and, at the same time, as something differentiating them from other geographical regions. The concept of Mediterranean diet appeared in the late 50´s referring to the different food habits observed mainly in some parts of Southern Italy and Greece (Crete) (as well as in Spain, Portugal and Cyprus) characterized by a high consumption of fruits, vegetables, bread and other cereals, potatoes, beans, nuts and seeds; olive oil as the key monounsaturated fat source; grilled or steamed chicken and seafood (as opposed to red meat) plus a glass or two of red wine.

It was observed that the life expectancy of adults in these areas at that time was among the longest in the world. Furthermore, the incidence of certain cancers and heart diseases was among the lowest within European countries. Based on these findings, clinical trials of similar diets imposed on patients with coronary disease or after a recent myocardial infarction showed that they experienced fewer deaths and fewer coronary events than patients who had other diets. As the so-called traditional Mediterranean Diet was very close to the dietary recommendations of the American Heart Association, the concept of Mediterranean Diet-style gained ground among nutritionists and social scientists in the last decades. However, this Mediterranean Diet-style is nowadays far from being applicable to the existing diet in the 16 Mediterranean countries. Moreover, the existing diet in most countries cannot be longer identified as "Healthy" as it was in the past. In my opinion, and at least in Northern Mediterranean countries, such identification has delayed the implementation of food policies specifically addressed to improve the health status of the population.

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Several studies have analyzed food consumption patterns in the Mediterranean countries. All of them differentiate, at least, between Northern and Southern countries, being the consumption of calories from animal origin the main source of differentiation. Religious issues can only explain partially such differences, as if we eliminate pork consumption in Northern Mediterranean countries, the gap between the two shores still is very high. So, we have to rely on other factors from which, as a social scientist, I would mention income and relative prices.

In relation to income, it is well known that every process of economic development is linked to a more satisfactory situation as for the nutritional quality of the population's diet. However, such improvement, usually measured as the increasing intake of calories, is not proportional to income increases (food expenditure elasticity tend to be higher that the calorie intake elasticity). Furthermore, the latter can be negative once a given per capita income level has attained.

During the last few decades, food diets have transformed substantially as a result of multiple factors from which technical change along the food chain has played a pivotal role. In fact, the modernization of the food chain has increased productivity and resulted in three major consequences: 1) increasing excess supply and decreasing real food prices; 2) a deep industrialization of agrarian societies helping them to accumulate capital, free up labor and provide more nutritious and value added food; and 3) a substantial transformation of citizens' lifestyles as a consequence of rising income, urbanization and changes in food sector.

These changes have generated two important consequences on food demand: 1) the declining of real food prices has generated not only an increase of total calorie intake but also a shift towards a higher calorie density di-

et that is richer in cholesterol and saturated fats (i.e. higher consumption of meat, eggs, dairy products and sugar); and 2) the increasing sedentary lifestyle has made calories expenditures to decline. As a result of both trends, food diets in both developed and developing countries (Mediterranean countries not being an exception) have become clearly imbalanced with negative consequences on population's health.

How far are now food consumption patterns in Mediterranean countries from the so defined "Ideal" Mediterranean diet? Some indices have been generated in the literature to measure the adequacy of the existing diet to the "Ideal" one. Let me cite, as the most relevant, the Mediterranean Diet Score (MDS) or the Healthy Diet Indicator (HDI). Both are based on aggregating zero/one scores (if the consumption level of a specific food group is above the "ideal" average a unit value is assigned, and zero, otherwise). While MDS is based on average ideal values of the Mediterranean Diet, the HDI is based on the World Health Organization (WHO) recommendations. Both are mainly based on products rather than on nutrients, although the second one combines both aspects. Another widely used measure is the Mediterranean Adequacy Index (MAI) which is computed by dividing the sum of the percentage of total daily energy intake coming from Mediterranean food groups (bread, cereals, legumes, potatoes, vegetables, fruit, vegetable oils, fish and red wine) by the sum of the percentage coming from non-Mediterranean food groups (milk and dairy products, meat and poultry, sugar, saturated fat and eggs). The MAI has passed from 3.6 to 2.8, in Algeria, from 1960-65 ton 2000-03; from 4.9 to 4.1, in Egypt; from 3.4 to 3.3, in Morocco; from 4.6 to 2.1, in Tunisia; from 5.6 to 2.0, in Greece (the origin of the Mediterranean Diet); from 3.3 to 1.6, in Italy; and from 3.4 to 1.2, in Spain. For comparison purposes, for the last period, in United Kingdom, Sweden, Denmark and Norway the average MAI was 0.9, 0.8, 0.8 and 1, respectively.

In any case, I suggest that more research is needed in order to define more accurate indices. May be we need a lot of further multidisciplinary research in order to better quantify what we understand for the Mediterranean Diet (also I would include a discussion about the appropriateness of the name). The current Mediterranean Diet Pyramid is very vague (I believe that conscientiously vague) in order to define indices as those we have just mentioned. If we agree that indices are necessary, then we have to pay attention to different issues: 1) the balance of products and nutrients in the index; 2) to consider not only average recommended values but also minimum and maximum requirements based on current research undertaken by nutritionists; 3) indices cannot be based on simply aggregating zero/one values; and 4) how products and nutrients have to be combined within the index.

But let me come back to the traditional identification between Medierranean Diet and Health. Let us consider the prevalence of obesity as a reasonable indicator of the health status of the society for two reasons: 1) this is a topic that has generated a lot of research during the last years and, as a consequence, some comparable information among countries has been gathered; and 2) although the WHO characterizes overweight and obesity as diseases, it is also well known that both (together with smoking) are key determinants in the incidence of the most important contemporary chronic diseases, such as cancer, cardiovascular problems, certain types of diabetes, etc. For the last year the information is available, the prevalence of obesity and overweight was: 96.3% in Egypt (2005); 61.1%, in Morocco (2001), 58.2%, in Tunisia (1997); 79%, in Greece (2004); 45.4%, in Italy (2003) or 62.3%, in Spain (2003). Comparing these figures with those of the MAI, in Southern Mediterranean countries the higher MDI is associated with a higher prevalence of obesity. In relation to Northern Mediterranean countries, the case of Greece is noticeably. Additionally, in the North, the islands of Malta, Sicily, Gibraltar and Crete as well as Spain, Portugal and Italy report overweight and obesity levels exceeding 30% among children aged 7-11. In the South, the double burden of malnutrition has been reported in countries with rapid economic transition, especially in Egypt.

To conclude, let me suggest some final points. First, taking into account the current status of food diets in most Mediterranean countries, I would suggest avoiding talking about Mediterranean Diet-style. Let us talk about Healthy Diet or Recommended Diet or any alternative name. Second, the Mediterranean countries are facing big health problems associated to food consumption patterns. We can not delay the re-definition of food policies in those countries, which has to be coordinated with other agricultural and/or trade policies. And third, there is a lack of available periodic information in all countries about food diets (only data on food consumption, if existing, is available), lifestyles and health status of the population, which makes difficult to understand the real nature of the problem. A lot of effort has to be done by public authorities to improve decision making.