**IV**
Congreso
Internacional

Observatorio de la Alimentación
& Fundación Alícia

Barcelona  /  9 – 12  junio  /  2015

# OTRAS
# MANERAS
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# DETERMINANTS OF HEALTH AND FOOD CHOICE AMONG FREE-LIVING PORTUGUESE SENIORS

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## 1. Introduction

According to the latest national statistics, in Portugal around 19% of the population is 65 years or more (INE, 2011). Food intake affects the aging process but aging also determines attitudes related to health, food choices and dietary patterns of the populations.

In order to promote healthy ageing it is crucial to recognize that the so-called "elderly" do not constitute a homogeneous group, neither biologically, nor psychologically or socially. Their values, attitudes, motivations and behaviours differ and these change across the life stages (Volkert, 2005).

Scientific evidence increasingly supports that a good nutrition is essential to health and self-sufficiency, being considered one of the major determinants of successful ageing (Rush et al, 1997; Niedert et al, 2005; American Dietetic Association, 2000). Epidemiological research has shown that healthy behaviours such as healthy eating, physical activity and not smoking play a more important role than genetic factors in helping individuals to avoid the decline that occurs with ageing (Niedert et al, 2005).

The aim of this study was to identify in the Portuguese senior population, the main perceived influences on health and food choice.

## 2. Methods and sample

This project was carried out within the "Portuguese Population's Food Habits and Lifestyles". This study was designed and promoted by Sociedade Portuguesa de Ciências da Nutrição, with the support of Nestlé, within a protocol of scientific sponsorship between the two institutions. A national representative sample of 712 Portuguese citizens aged 65 plus years, living in their own homes, were interviewed in a face to face situation. Uni and multifactorial analysis were carried out to characterize the study sample. Factors associated to the main factors influencing health and food choice were identified by logistic regression, odds ratios and the respective confidence intervals. To understand if such perceptions have changed with time, we used questions previously included in the Pan EU (Institute of European Food Studies, 1996, de Almeida MDV et al, 1999).

The analysis was done using the Statistical Program for Social Sciences (SPSS) for Windows, 21.0.

## 3. Results:

Food (52.4%), was by far the most important health determinant for Portuguese elderly followed by weight control (17.1%) and smoking (15.5%) On the opposite, less than 10% believed alcoholic beverage consumption (8.6%) and physical activity (9.4%) to influence their Health (Figure 1).

*Figure 1. Distribution of perceived influences to promote long term good Health*
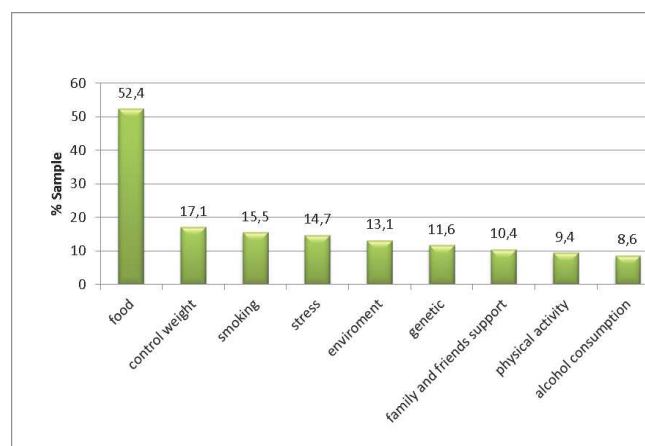
The two main factors were reported mainly by women and more educated seniors. Regular physical activity was more important to women, younger and more educated (Table 1).

*Table 1. Variables associated with the influences to promote long term good health (OR): food, control weight, family and friends support and physical activity*

| | Food | Control weight | Family and friends support | Physical activity |
|---|---|---|---|---|
| **Gender** | | | | |
| *male (ref)* | 1 | 1 | 1 | 1 |
| female | 0.85 | 1.18 | 1.37 | 0.95 |
| **Age** | | | | |
| *65-74 (ref)* | 1* | 1* | 1 | 1* |
| ≥75 | 0.65 | 1.59 | 0.78 | 0.55* |
| **Education** | | | | |
| *Less then primary (ref)* | 1 | 1 | 1 | 1* |
| primary | 1.32 | 1.13 | 2.42* | 1.71 |
| more than primary | 1.28 | 1.48 | 2.29 * | 2.86* |
| **Marital status** | | | | |
| *maried/cohabiting (ref)* | 1* | 1* | 1 | 1* |
| widow | 0.92 | 0.73 | 1.28 | 2.28* |
| single and divorced | 0.51* | 1.73 | 0.99 | 3.18* |
| **Geographical area of Portugal** | | | | |
| *North (ref)* | 1* | 1 | 1* | 1 |
| Centro | 0.64 | 0.67 | 0.86 | 1.29 |
| Lisbon area | 0.52* | 1.11 | 2.39* | 0.71 |
| Alentejo+Algarve | 0.49* | 0.62 | 1.31 | 0.23 |
| Açores+Madeira | 0.49 | 0.78 | 4.75* | 1.6 |
| *Logistic regression analysis was used, with all the other variables included in the model | | | *p<0.05 | |

The most important factors influencing food choice by the Portuguese elderly were "taste of foods" (47.5%), followed by price (35.8%) and try to eat healthy (30.2%). Conversely content in additives (2.7%), food packaging or presentation (4.7%) were less important factors (Figure 2).

**Figure 2. Distribution of perceived influences to food choice**
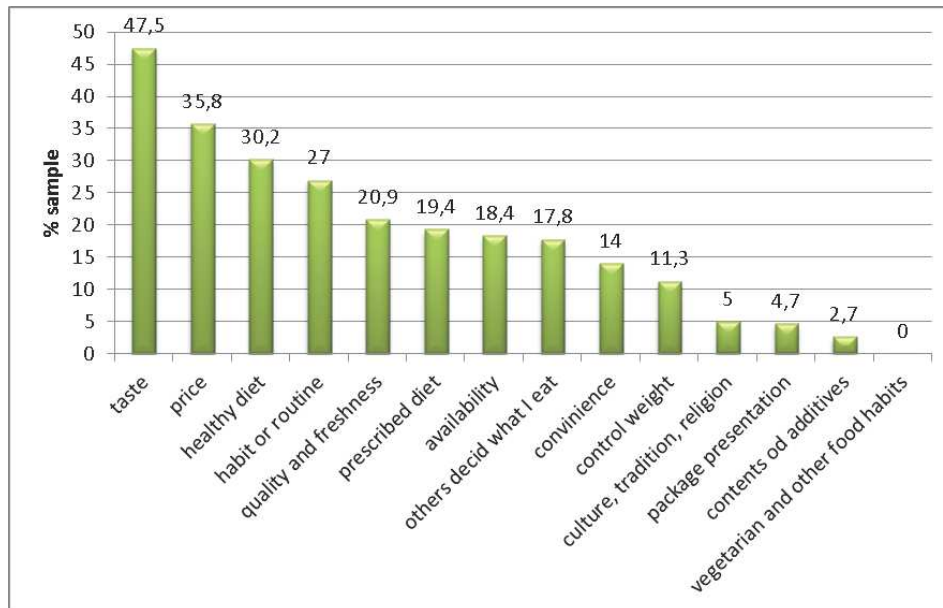


The importance of taste in food choice was similar for men and women and there were also no differences in relation to age, education and marital status. Elderly living in the north were howver more likely to identify taste as a food choice determinant. (Table 2).

The cost of foods was found to be important for women, educated at a lower level and living in the north. Younger, women and single/divorced elderly were more likely to identify a healthy diet as a food choice determinant whereas habit/routine was important for men, more educated and those living alone.

*Table 2. Variables associated with the influences to food choice (OR): taste, price, healthy diet, and habito or routine*

| | Taste | Price | Healthy diet | Habit or routine |
|---|---|---|---|---|
| **Gender** | | | | |
| *male (ref)* | 1 | 1* | 1 | 1 |
| female | 1.24 | 1.53 | 1.59* | 0.69* |
| **Age** | | | | |
| 65-74 (ref) | 1 | 1 | 1 | 1 |
| ≥75 | 0.82 | o.89 | 0.56* | 0.70 |
| **Education** | | | | |
| *Less then primary (ref)* | 1 | 1* | 1 | 1 |
| primary | 1.13 | 0.60 | 0.84 | 1.46 |
| more than primary | 1.39 | 0.34* | 0.98 | 1.70* |
| **Marital status** | | | | |
| *maried/cohabiting (ref)* | 1 | 1 | 1 | 1* |
| widow | 0.86 | 1.38 | 0.79 | 1.87* |
| single and divorced | 0.59 | 1.05 | 0.53* | 1.89* |
| **Geographical area of Portugal** | | | | |
| *North (ref)* | 1* | 1* | 1 | 1* |
| Centro | 0.56* | 0.43* | 1.21 | 2.89* |
| Lisbon area | 0.42* | 1.01 | 1.67 | 1.65* |
| Alentejo+Algarve | 0.40* | 0.66 | 0.79 | 2.73* |
| Açores+Madeira | 0.58 | 0.72 | 1.07 | 1.68 |

*Logistic regression analysis was used, with all the other variables included in the model  *p<0.05

# 4. Discussion and conclusion:

This study has shown that the Portuguese elderly population is quite diverse in regard to their perceived health and food determinants.

Previously a European study has shown that the most important factors influencing elderly's food choice were quality and freshness, trying to eat healthy and price. In both studies, health aspects were relevant but economic matters ranked third in the former whereas in the latter only ranked 6th. In this previous study (de Almeida MDV, 2001), to stay healthy, to prevent disease and to promote quality of life, were the major benefits associated to healthy eating.

In Portugal, in a earlier investigation, the elderly emphasised the importance of eating meals in nice suroundings and to keep expenditures of food as low as possible as food choice determinants (Afonso C, 2011).

In the current study, free-living Portuguese elderly identified food, to control weight and smoking as the most relevant factors to their health In general, taste, price and trying to eat healthily were the main concerns of Portuguese elderly food choice but statistical analysis showed differences in demographic groups.

These results on a representative sample of Portuguese seniors reveal the factors that should be taken into consideration to design appropriate programs to the Portuguese population and contribute to their quality of life.

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