Original Research

Information search behaviour, understanding and use of nutrition labeling by residents of Madrid, Spain

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ABSTRACT

Objetives: To describe the information search behaviour, comprehension level, and use of nutritional labeling by consumers according to sociodemographic characteristics.

Study design: Cross-sectional study of consumers recruited in five stores of the main supermarket chains in Madrid: a random sample of 299 consumers (response rate: 80.6%).

Methods: Interviewers collected information about the information search behaviour, comprehension, and use of nutritional labeling using a questionnaire designed for this purpose. Analyses examined the frequency of the variables of interest. Differences were tested using the Chi-square statistic.

Results: In this sample, 38.8% of consumers regularly read the nutritional labeling before making a purchase (45% of women vs 30% in men; $P = 0.03$) and the most common reason reported was choosing healthier products (81.3%).

The proportion of people who were interested in additives and fats was the higher, (55% and 50%, respectively).

Lack of time (38.9%), lack of interest (27.1%), and reading difficulties (18.1%) were the most common reasons given for not reading labels. Over half (52.4%) of consumers reported completely understanding the nutritional information on labels and 20.5% reported using such information for dietary planning.

Conclusions: Reported information search behaviour, comprehension, and use of nutritional labeling were relatively high among consumers of the study, and their main goal was picking healthier products. However, not only are there still barriers to reading the information, but also the information most relevant to health is not always read or understood. Thus, interventions to increase nutritional labeling comprehension and use are required in order to facilitate the making of healthier choices by consumers.

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Introduction

Non-transmissible diseases related to diet, such as obesity, diabetes, cardiovascular diseases and cancer represent the number one worldwide cause of mortality and global burden of disease.[1] The World Health Organization (WHO) adopted the 'WHO Global Strategy on Diet, Physical Activity and Health' to tackle non-transmissible diseases through the promotion of physical activity and healthy diet. This strategy recognized the importance of nutritional labeling as a key informational tool needed to facilitate the selection of healthy foods by consumers.[2] The Spanish agency for food safety and nutrition (AESAN for its Spanish acronym) published the 2011 report 'Minimum indicator set for the evaluation and follow-up of NAOS (**N**utrition, Physical **A**ctivity, and **O**besity Prevention **S**trategy'). The set of indicators include two on nutritional labeling: 1. percentage of consumers reporting using nutritional information in the selection of products to purchase, and 2. percentage of consumers reporting using nutritional information to plan their daily menus.[3] This study analyzes these indicators in consumers of Madrid.

Nutrition labeling was voluntary in the European Union until the publication of the regulation (EU) 1169/2011, which made it a compulsory part of product labeling. In 2002, available nutrition information in packaged products across European countries varied widely between 30% in Greece and 80% in the United Kingdom.[4] Between 2002 and 2010, however, nutrition labeling has become commonplace in Europe reaching an average of 85% of all products. This is in part due to the labeling requirement in products with nutrition and health claims.[5] Spain reached 95% adherence, thus becoming one of the top countries in terms of nutrition labeling.[6]

Studies on consumers' understanding and use of packaged product labeling show a high interest for nutrition information while at the same time revealing a wide range in comprehension levels.[7−15]

Unfortunately, it is not clear how this information influences either purchasing decisions at the point of sale or dietary patterns.[16] However, some studies suggest that individuals who read nutrition labels are more likely to report a diet characterized by a high consumption of fruits and vegetables and a low consumption of fats and foods with high cholesterol content.[17−21] Many specific health issues would be better addressed by improved labels and more people reading and understanding them, such as cardiovascular health related to trans fatty-acids; obesity risk, type 2 diabetes related to sugar[22,23]; hypertension related to sodium[24]: and risks for obesity, type 2 diabetes, dyslipidemia, hypertension, coronary disease, and colorectal cancer related to fiber.[23] The few existing studies on this topic in Spain[7,8] are either based on small samples or are purely informative, qualitative in nature or with poor reporting on methods and results.[7] This paper presents current quantitative information about the use of nutrition labeling in Madrid based in a relevant sample size, analysing potential associations between variables of interest (search behaviour, comprehension level, and use of nutrition information in food labels) and sociodemographic variables.

The goals of this study are to describe three key factors surrounding nutrition labeling: 1. Madrid residents' interest information search behaviour on food nutrition labeling; 2. Consumers' comprehension level of such information; and 3. Consumer's use of nutrition information to make purchasing decisions and plan their dietary menu.

Methods

Study design

This is a cross-sectional study of a sample of adults residing in Madrid, Spain. Data were collected between March and May of 2012 in five supermarkets of the main chains in the city who agreed to participate in the study. The sites were located in the following neighbourhoods: neighbourhood of El Pilar (Alcampo supermarket), Almenara (Dia supermarket), Moncloa (Eroski supermarket), and Mirasierra (Gama and Maxcoop supermarkets).

Data collection

A questionnaire based on instruments used in previous similar studies was designed.[9,25,26] Several questions were selected from those questionnaires and added some others not included about specific aspects of interest. It included

Table 1 – Sociodemographic characteristics of the sample.

	Gender		TOTAL
	Men	Women	
	n (%)	n (%)	N (%)
Supermarket name			
Alcampo	42 (34.7)	58 (32.6)	100 (33.4)
Eroski	33 (27.3)	56 (31.5)	89 (29.8)
Gama	19 (15.7)	31 (17.4)	50 (16.7)
Maxcoop	23 (19.0)	27 (15.2)	50 (16.7)
DIA	4 (3.3)	6 (3.4)	10 (3.3)
Age (years)			
18−35	42 (34.7)	53 (29.8)	95 (31.8)
36−50	31 (25.6)	54 (30.3)	85 (28.4)
51−64	33 (27.3)	53 (29.8)	86 (28.8)
>65	15 (12.4)	18 (10.1)	33 (11.0)
Nationality			
Spanish	104 (86.0)	148 (84.1)	252 (84.8)
Other	17 (14.0)	28 (15.9)	45 (15.2)
Marital status			
Single	37 (30.8)	45 (25.3)	82 (27.5)
Married/cohabiting	73 (60.8)	105 (59.0)	178 (59.7)
Separated/divorced/widowed	10 (8.3)	28 (15.7)	38 (12.8)
Household composition			
Living alone	15 (12.4)	14 (7.9)	29 (9.7)
With one or two other people	65 (53.7)	100 (56.2)	165 (55.2)
With more than two people	41 (33.9)	64 (36.0)	105 (35.1)
Children under 18			
Yes	38 (31.4)	54 (30.3)	92 (30.8)
No	83 (68.6)	124 (69.7)	207 (69.2)
Educational level			
Primary or lower	11 (9.1)	18 (10.1)	29 (9.7)
Secondary/high school	32 (26.4)	66 (37.1)	98 (32.8)
University/master	78 (64.5)	94 (52.8)	172 (57.5)
Employment status			
Employed	83 (69.2)	109 (61.2)	192 (64.4)
Unemployed	10 (8.3)	46 (25.8)	56 (18.8)
Retired	17 (14.2)	15 (8.4)	32 (10.7)
Student	10 (8.3)	8 (4.5)	18 (6.0)
TOTAL	121 (100.0)	178 (100.0)	299 (100.0)