

How Relevant Are Nutrition and Health Claims in Healthier Food Choices of Romanian Consumers?

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Abstract

In European Union, concerns for improving the legislative framework of food labeling materialized in Regulation 1924 (2006) which aims to harmonize the rules used for nutrition and health claims such as “source of vitamin D” or “calcium contributes to normal muscle function” addressed to the average consumer; these concerns were accentuated in 2012 by the adoption of Regulation 432, which approves a list of permitted health claims. In compliance with European law, this paper's goal is to examine how the use of nutrition and health claims modifies Romanian customers' dietary choices and overall health. The challenges and difficulties encountered in the implementation and enforcement of this regulation raised interest for our research. Using the advantages of a statistical survey with a sample of 200 people of different genders, ages and educational levels, we aimed to evaluate the effect of nutrition and health claims on food consumption decisions; thus, it is highlighted how the consumers use individual factors (personal eating style), product sensory characteristics (taste) and shelf-life cognitive cues (nutrition label, brand, price) in food selection, but also how this selection influences their food consumption. The results of this work can be helpful to analyze the perception of Romanian consumers about the efficiency, accuracy and consistency of these mentions present on food product labels. The research is all the more valuable as recently many studies have focused on the analysis of BOP (Back-of-pack) or FOP (Front-of-pack) labeling systems. We conclude by discussing possible opportunities to improve the comprehensiveness of these mentions so that consumers can more easily direct their choices towards nutritionally balanced foods and, thus, stimulate and support the responsible behavior of producers.

Keywords

nutrition and health claims, Romanian consumers, food consumption decisions, healthier food choice

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Introduction

The evidence so far shows that correct and complete food labeling can increase the consumption of fresh or minimally processed foods at the expense of ultra-processed products that raise many problems from an economic, social, cultural, political and environmental point of view (Monteiro et al, 2018).

Nutrition labeling is becoming a useful tool to advice consumers to make sound decisions based on relevant scientific research about their diet (Hieke and Taylor, 2012). Lifestyle and dietary changes can facilitate the success of healthy eating policies and strategies, and nutritional and health claims can modulate personal consumer decisions (Mozaffarian et al, 2001; Safefood, 2019). The rules of health claims on food labels must be supported by sound scientific evidence (EC, 2006) to have a positive influence and to bring an

optimal advantage for all parties involved. There are concerns about the validity of these claims and how they are interpreted by consumers.

Legislation states that these claims must be understood by an "average consumer" (EC, 2006), but this concept leaves room for much discussion. Our research brings more knowledge and clarifies various aspects that can create confusion in the minds of consumers related to nutrition and health claims, so that, we propose to establish:

- the influence on healthier food choices;
- the degree of understanding of these mentions, as well as the level of nutritional education of consumers;
- the need to improve the comprehensiveness of these claims for a better food consumption decision.

The utility of these mentions is still limited by factors such as: genetics, health history, environment and lifestyle and diet (Voinea et.al., 2022) but taking them into account opens research and development opportunities for all interested parties: health specialists, food industry, consumers (Barrow, Bell and Bell, 2020).

1. Review of the scientific literature

Ever since 2009, according to a study carried out by EUFIC (European Food Information Council), the spread of nutritional labeling in Europe is very large. The study was carried out with the aim of evaluating consumers' knowledge of nutrition as well as nutrition labeling when purchasing a food product in a store. The study was conducted among consumers in the UK, UE and Turkey. The results showed that most consumers have a reasonable knowledge of nutrition and are able to use the nutritional information on the label to identify a healthy food product, but only a small proportion look at this information when shopping, and this behavior is influenced of interest in their healthy nutrition (Wills et al., 2009)

According to a study published in the Public Health Nutrition Journal (Campos, Doxey and Hammond, 2011), nutrition labels can help consumers make healthier decisions about the foods they buy and eat. The study showed that nutritional labels can increase consumer awareness of food content and encourage healthier food choices. However, consumers often find it difficult to process health information to evaluate the healthiness of foods, so they rely on their intuition or beliefs to make judgments (Chan and Zhang, 2022).

A better usefulness and understanding of nutrition and health claims by all consumer segments requires the combination of marketing policies and strategies (Godden et al, 2023). The regulation of mentions is necessary and is based on assumptions that consumers can be easily misled by persuasive labeling and should therefore be protected (Orquin and Scholderer, 2015; Gov.UK, 2021). Because of this, European legislation provides for measures to ensure that any mention made on the label of food products, in promotion or presentation materials on the European Union market is clear, correct and based on evidence accepted by the scientific community. Therefore, food products bearing claims that could mislead consumers will be removed from the market. In addition, in order to carry a label, foods will need to have adequate nutritional profiles. This will enhance consumers' ability to make informed choices (EC, 2006).

In addition, in 2012, the European Commission adopted EU Regulation no. 432, establishing "a list of permitted health claims, mentioned on food products, other than those referring to the reduction of the risk of illness and the development and health of children", in order to have an overview of the nutrition and health allowed claims. (EU, 2012) (Figure no. 1).

According to the regulation:

- Nutrition claims on food labels provide information about the nutritional value of a food product; these claims include information on the content of essential nutrients such as carbohydrates, protein and fat, as well as the content of minerals and vitamins. This information can help consumers make better decisions about their diet, particularly with regard to sugar, fat, saturated fatty acids, trans-fatty acids and salt/sodium content;

- Health claims represent any voluntary commercial message or representation in any form - words, statements, images, logos - that states, suggests or implies that there is a relationship between the food product in question and health” (EC, 2006).

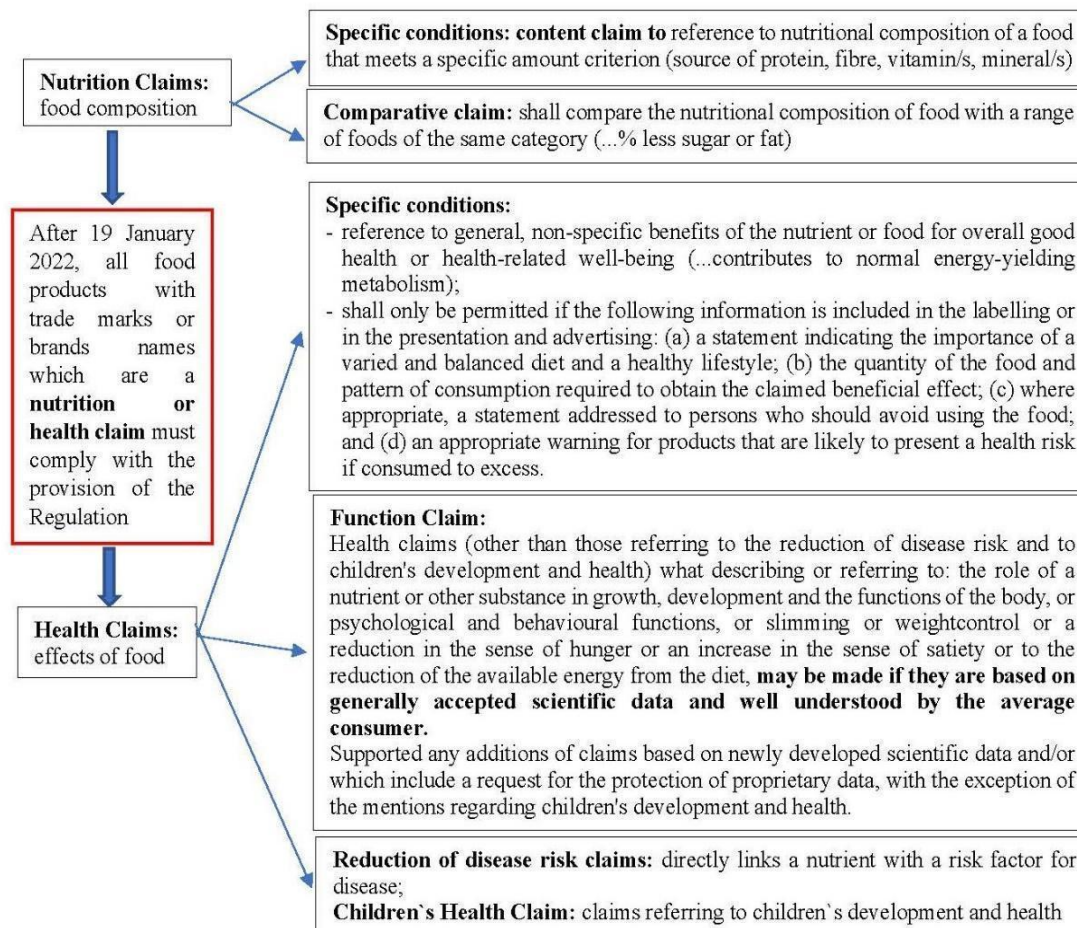


Figure no. 1. Nutrition and health claims in the EU

Source: adaptation after Collins and Verhagen, 2022 and EC, 2006

The review of the specialized literature highlights that the regulations have led to an increase in the accuracy and consistency of these mentions, and the studies presented have demonstrated the importance of knowing the nutritional profile of foods for better consumer protection and healthier food choices.

2. Research methodology

Highlighting the relevance and pragmatic implications of nutrition and health claims that modulate food consumption decisions must start from identifying the level of knowledge and understanding of them (Safefood, 2019; Hughes, 2023) by Romanian consumers. Implicitly, we express the view that these mentions can contribute to capitalizing on purchasing opportunities and to selecting healthier foods on the shelf in a diverse and changing socio-economic environment. In this framework, establishing the influence of nutrition and health claims on healthier food choices and the comprehensiveness of these claims is the aim of our research, which has two main objectives:

O1: identifying the factors that influence the decision to consume a food product and establishing the preferred place to purchase food products;

O2: determining the importance given to nutrition and health claims, highlighting the level of understanding of these mentions and linking the relevance of education level to the accuracy of interpretation.

The statistical survey method was used as a method of collecting information, with a quantitative and exploratory approach, the sources of primary information being obtained directly from various categories of consumers (Cătoiu et al., 2007; Filip, 2020).

The data were collected using a questionnaire, developed and distributed online, and the data analysis was carried out using the Microsoft Excel program. The sample, made randomly, consists of 200 respondents and can be structured according to socio-demographic criteria:

- gender - the majority is represented by women, so of the total number of participants, 132 are women (66%) and 68 are men (34%);
- age - the respondents are distributed according to the five age ranges, namely: most of the respondents are between 18 and 25 years old (respectively 57%, so 114 respondents), 19% are between 26 and 35 years old (38 respondents), 15% (30 respondents) fall between the ages of 36 and 50, and over 50 only 9% (18 respondents);
- area of origin - there is a high share of people living in the urban environment (81%), compared to people from the rural area (19%);
- level of education - 14% (28 respondents) attended a professional school, 24% have high- school education (48 respondents), 33% have university studies (66 respondents), 22% have a master's degree (44 respondents), and 7% have a PhD (14 respondents);
- income - 2% of respondents do not have a monthly income, while the rest are divided into the following categories: 9% have a monthly income below 1000 lei, 7% between 1000 lei and 2499 lei, most of the respondents (25 %) have a monthly income between 2500 lei and 3999 lei, 31% between 4000 lei and 5500 lei and 26% over 5500 lei.

The authors' assumptions regarding the foreseeable results of the research are embodied in the following hypotheses related to nutrition and health claims (NHC), as an anticipation of the respondents' answers that guide the data collection, analysis and interpretation of the data:

H1a: more than half of the respondents are aware of the influence that food consumption has on health;

H1b: the choice of food products is primarily based on their nutritional profile;

H2a: most of the Romanian consumers feel the need to be informed about the nutritional profile of the food they buy, reading the NHC on the labels, therefore more than 75% of the respondents buy their food products from supermarkets and hypermarkets;

H2b: most consumers consider NHC to be accurate and facile to understand, not ambiguous or exaggerated;

H3: consumers who attach importance to NHC better understand the benefits and risks of food consumption and make healthier purchases, so the influence is beneficial and positive;

H4: Romanian consumers are more open to buy food products that have NHC, but their importance in the purchase decision differs according to the level of education.

3. Results and discussion

In order to verify the first hypothesis, the identification of the factors that influence the decision to consume a food product was sought, the answers of the participants being analyzed (Table no. 1).

Table no. 1. Determinants of the consumption decision

Factors	Very important	Important	Little important	Not important at all
Nutritional profile	64	78	52	6
Brand	12	88	82	18
Taste	162	33	5	0
Price	140	35	17	8
Alimentary style/diet	62	96	42	0

Source: Authors' own research results

Respondents indicated the extent to which the five individual and environmental factors – nutritional profile, brand, taste, price and alimentary style/diet – influence the food consumption decision. To rank the decision-making factors, an importance scale was built, from 4 (very important) to 1 (not at all important), calculating a weighted average of the respondents' assessments with the importance given to the factors that influence the consumption decision. Thus, taste ranks first with an average of 3.78, followed by price (3.53), alimentary style/diet (3.10), nutritional profile (3.00) and brand (2.47).

Although the majority of respondents (91%) are aware of the influence of food products on health, they choose to consume food because of the taste in proportion to 81%, leaving the nutritional profile in the background, which proves that consumer choices are subjective and influenced by the hedonic character of food. These results lead to the validation of hypothesis H1a, but to the invalidation of hypothesis H1b.

Most Romanian consumers want to be informed about the nutritional profile of food, 71% of respondents always or often read nutrition and health claims. A quarter of them rarely consult those (25%), and 4% never read them. Those in the last category are between 18 and 25 years old, have finished high school and believe that the information mentioned on the label is false and unintelligible, the choice of food consumption being categorically influenced by their taste or price.

The possibility of allocating the necessary time to read the nutrition and health claims of food products makes supermarkets and hypermarkets the main place for purchasing food (78%), this choice being also justified by the diversity of the food offer, direct access to it, the preponderance of packaged food. Thus, it can be seen that the respondents devote a long time to reading the food label precisely to make the most appropriate decision that fully satisfies their needs, which validates hypothesis H2a.

Romanian consumers who rarely read the label do not understand the information, do not trust it, so the frequency of reading the nutrition and health claims of foods is influenced by the perception of the correctness of the information and the low level of their understanding. These mentions are understandable and true only for 42% of the sample, and 58% of respondents consider them exaggerated and ambiguous, which invalidates hypothesis H2b. For example, the term "naturally/natural" on food labels is not clearly regulated and can be interpreted in several ways by consumers. Furthermore, in some cases, manufacturers may use words such as "gluten-free" or "trans fat-free" to make a product appear healthier, even if these claims are not relevant to that particular product (Hartmann et al, 2018).

It is important to consider that nutrition and health claims can be influenced by commercial interests, too. For example, some companies may make exaggerated or misleading claims on food labels to make their products appear healthier than they actually are. In addition, certain claims may be legal even if they are not supported by sound scientific evidence, so it is important to seek additional reliable sources of information: scientific research papers, official government dietary guidelines and of the professional organizations (Hawkes, 2004; WHO, 2018).

Almost all respondents (97%) of the 42% who understand nutrition and health claims consider them very useful, being an additional way of informing about the nutritional profile of the food product, respectively about the level or proportion of nutrients and other substances in its composition; consumers are aware of the benefits or risks of food consumption for health, and these mentions allow the evaluation of the health of the food, but also of the degree of satisfaction of specific individual requirements, which validates hypothesis H3.

For example, claims highlighting fiber, protein, vitamin and mineral content can help consumers choose foods that provide a wide range of nutrients and provide a healthy diet. Nutrition and health claims can help reduce the risk of chronic diseases by promoting healthy eating habits, being also important for people who have a special diet (for diabetes, allergies or food intolerances) for improving the health-related quality of life (Gov.UK, 2021; Lee, 2023). In terms of establishing the influence of nutrition and health claims on purchase intention, the results show that almost all respondents (98%) are willing to buy products that have such claims compared to those without.

Among the nutrition claims most known by the respondents and which determine the choice of food, are: "LIGHT/LITE" (21%), "SOURCE OF PROTEIN" (19%) "SOURCE OF FIBRE" 17%, "SOURCE OF [NAME OF VITAMIN/S] AND/OR [NAME OF MINERAL/S]" (12%), "SUGARS-FREE" (11%), "SODIUM-FREE or SALT-FREE" (10%), "SOURCE OF OMEGA 3 FATTY ACIDS" (8%) "LOW SATURATED FAT" (2%). The results can be interpreted taking into account the structure of the sample

and illustrate the interest in maintaining a normal body weight, especially among women (66% of the sample); the importance given by men to proteins, perceived as an adjunct to muscle mass growth; interest in increasing immunity and a healthy eating style. The influence of the level of education on the importance of these mentions in the purchase decision is shown in Table no. 2.

Table no. 2. Importance of nutrition and health claims in the purchase decision according to the level of education

Level of education / Scale of importance	professional school	high-school studies	university studies	master	PhD	
1- Not at all important	0 0,00%	0 0,00%	2 3,03%	2 4,55%	2 14,29%	6 3,00%
2- Slightly Important	14 50,00%	6 12,50%	8 12,12	10 22,73%	0 0,00%	38 19,00%
3- Important	4 14,29%	14 29,17%	22 33,33%	10 22,73%	2 14,29%	52 26,00%
4- Fairly Important	8 28,57%	12 27,27	24 36,36%	16 33,33%	6 42,86%	66 33,00%
5- Very Important	2 7,14%	10 %22,73%	10 15,15%	12 25,00%	4 28,57%	38 19,00%
	28 14,00%	42 24,00%	66 33,00%	50 22,00%	14 7,00%	200 100%

Source: Authors' own research results

It is observed that for respondents with PhD and master's degree, these mentions are fairly important and very important in the purchase decision (71,43% and 58,33%, respectively), and for half of those with professional school (50%) they are slightly important. Attempts and efforts to improve nutrition knowledge are essential both for the accuracy of their interpretation and for protecting the health of consumers by increasing the ability to choose healthier products that suit their needs. According to the results presented above, hypothesis H4 is validated.

The low importance given to nutritional and health claims by Romanian consumers is not exclusively related to the level of education, but to a complex of factors, difficult to distinguish. In order to improve the comprehensiveness of nutritional and health claims, individual factors related to the consumer, but also those related to the socio-economic environment, must be identified and taken into account in the evaluation process, especially since EU legislation specifies that they must be understood by an "average consumer" (EC, 2006).

Conclusions

Our paper explores the opportunity and relevance of nutrition and health claims to better guide consumers towards balanced eating behavior and healthier choices. The results of the research show, however, that for Romanian consumers, taste and price are the priority factors of choice, to the detriment of the nutritional profile of the food. However, Romanian consumers want food products to have such mentions, because it encourages them to choose healthy foods and avoid nutritionally unbalanced ones.

These mentions are a valuable resource for Romanian consumers provided they are carefully read, interpreted and understood correctly, which forces, in the future, to find effective nutritional education solutions. In addition, their efficiency and comprehensiveness can be increased by also taking into account mandatory nutritional information, such as energy value, carbohydrate, fat and protein content, before making a decision on the purchase of a food product. It is important to consider that some claims may be exaggerated or ambiguously defined and to pay attention to the scientific research that supports these

claims. Misunderstanding them can create confusion and reluctance among consumers, which negatively affects retailers and manufacturers. The current requirements imposed by EU legislation regarding nutritional and health claims motivate producers to inform consumers (Nocella and Kennedy, 2012) in an ethical and responsible way, a concern that aligns with the new labeling rules to promote sustainable consumption (Georgescu et al., 2022).

Thus, the use of mentions can substantially increase awareness of nutritional health benefits/risks derived from the composition of food products. Food manufacturers are guided by regulations to provide correct and complete claims, but this approach involves considerable human and material efforts. However, they should be interpreted with caution by consumers as they can sometimes be unsupported by scientific evidence, incomplete or misleading.

In the face of these arguments, the Romanian consumers should be educated on how to interpret these claims and always consider all available food information before making important dietary decisions. Future studies need to identify new ways to improve consumers' nutritional knowledge to increase the accuracy of the interpretation of nutrition and health claims on the one hand. On the other hand, governments and professional associations must encourage research in the food field to be able to provide substantiated and solid scientific results to support these claims.

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