

Original scientific paper UDC 663/664:658.788.4(498)

CONSUMER PERCEPTIONS OF NUTRITION AND HEALTH CLAIMS FROM FOOD LABELS IN ROMANIA

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Abstract

Label is the most important thing when you want to buy food. When deciding which foods to buy information to labels about nutrition and health it may not be clear to many consumers. What was the best choice for healthiest? The purpose of this study is to analyses consumer's understanding and used of nutrition labels from food products.

This research is descriptive, as it attempts to describe perceptions, attitudes, and self-reported practices of consumers regarding the topic of nutrition labeling. Data for this study was obtained from consumer questionnaire, in February - June 2015, in Sibiu city from Romania. 507 questionnaires were completed from people from different sex, age, culture, education and monthly earning. The information on questionnaires were processed and interpreted used excel program.

Significant differences were found on the use and understanding of nutrition labels from Romania, 218 of respondents (~38 %) consider that the price is the most important in the decision to buy a product, 129 (~22 %) consider the nutrition value, 179 (~31%) consider the brand and 54 (~9 %) consider that packaging design influence their decision to buy a product. About the understandability of nutrition labels, the respondents considers very easy for understanding the following: the "list of ingredients" - 216 of respondents (~44%); "fat content" - 225 of respondents (~35%); "proteins" - 151 of respondents (~33%); "energy" – 202 of respondents (~33%). Consumers from Sibiu are increasingly exposed to a wide variety of messages about the relationship be tween diet and health and there is widespread interest in the nutritional content of food. Information about nutrition and health in the press can appear complex of conflicting and it may not be clear to many consumers what the healthiest choice is when deciding which foods to buy.

Key words: Nutrition and health claims, Food labelling, Health food. Perception.

1. Introduction

European consumers are becoming more interesting about the nutritional content of food. Information about nutrition and health in the press can appear complex of conflicting and it may not be clear to many consumers what the healthiest choice is when deciding which foods to buy [1].

Labels could be an instrument for reinforcing generic claims and for establishing product differentiation, differentiation across food categories and within a specific category (Caswell *et.al.*, [2]). The aim at nutrition labels are intended to help consumers choose more healthful and easy foods.

"An unhealthy diet is one of the major risk factors for a range of chronic diseases, including cardiovascular diseases, cancer, diabetes and other conditions linked



to obesity" [3]. Consumers with a health problem use offen nutrition labels while shopping (Govindasamy and Italia, [4]; Drichoutis *et al.*, [5]; Svederberg *et al.*, [6]).

There are also differences according to product category (Grunert and Wills, 2007 [7]; Mhurchu & Gorton, [8]), consumers usually to read nutrition labels more when buying certain kinds of food (Grunert and Wills, [7]; Mhurchu and Gorton, [8]).

Demographic characteristics are also quite influential in nutrition label use and affect consumers' label usage in varying magnitudes, either positively or negatively (Nayga *et al.*, [9]; Govindasamy and Italia, [4]; Marietta *et al.*, [10]; Obayashi *et al.*, [11]; Cowburn and Stockley, [12]; Satia *et al.*, [13]; Drichoutis *et al.*, [5]; Grunert and Wills, [7]; Feunekes *et al.*, [14]; Viswanathan *et al.*, [15]; FSA [16]; Grunert *et al.*, [17]).

The purpose of this study is to analyse Romanian consumers' understanding and use of nutrition labels found on packaged food products.

2. Materials and Methods

In order to obtain good and reproductible results it was necessary that the consumers interviewed to be representative for the county of Sibiu, Romania. A survey was carried out with 507 consumers for period between February - June 2015, aged 16 years and older. Respondents were almost evenly spread according to gender, social class category, and covered households which did and did not have children. To assess this issue, consumers need to complete the questionnaire with general information on: gender, age, level of education, residence, monthly income, number of dependent children, job and marital status.

Research questions for which answers are sought can be stated as follows (Gul Aygen F., [18]):

- What influences more people decision for purchase of a food?
- How much do people trust in nutrition labels?
- What is the degree of importance which people appreciate for the elements of the food labels?
- What is the level of knowledge and understanding of the information on the food labels, especially on food consumption in the according with the health?
- What is the extent to which nutrition labels can be understood?
- What are the circumstances that increase usage of nutrition labels?
- What are the most frequently used label elements?
- With respect to the above stated research questions, is there any significant difference between "male and female" respondents?

• With respect to the above stated research questions, are there significant variations across different gender, "age categories", "education levels", and "respondents living in the city or are rural resident"?

This research is descriptive in nature, as it attempts to describe the prevailing opinions, perceptions, attitudes, and self-reported practices of consumers regarding the topic of nutrition labeling.

3. Results and Discussion

We interviewed 507 person, from this 55% are women and 45% are men, 46% has age under 25 years, 20% between 25 and 40 years, 27% between 40 and 60 years and 7% up then 60 years. From point of view of level of education 46% has higher education, 50% medium education and 4% has lower level of education. The respondent live 59% in urban medium and 41% in rural medium. Montly income under 100 euro has 38%, between 100 and 250 euro 34%, between 250 and 500 euro 21% and up then 500 euro 7%. 68% has one children in household, 18% has two children in household and 14% has three children in household. From this 45% work full time, 11% was retired, 37% was student and 7% not working. By point of view of marital status 42% are married, 33% are not merried and 25% living with parents.

Data derived from questionnaire are presented below. There can be mentioned some relevant aspects: For question no. 1 namely: "What influences more your decision to purchase a food product", Figure 1 is as follows:

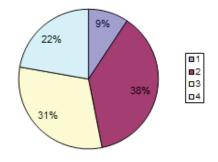


Figure 1. What influences more your decision to purchase a food product? Answers: 1- Design; 2 - Price; 3 - Brand; 4 - Energy value

On the 507 respondents from Sibiu County who answered to the questionnaire, for question no. 1, 22% felt that the energy value is very important, 31% considered that the brand is very important, 38% answered by choosing the price as very important and 9% felt that the package design is the most important. After the energy value the brand is the most important, hence the fact that consumers are well informed when it comes to food products. Package in case of food products, is a key component of the marketing mix. In Romania, consumers do not place great emphasis on the packaging. The brand will always guarantee the products quality, and will confirm the confidence shown by buyers in the quality characteristics of the purchased product (Nougadère A. *et. al.*, [19]). Price holds the largest share in rankings (38%).

Results from question no. 2: "To what extent do you consider the food labels that you eat provides accurate and complete informations?" are given in Figure 2. For this question consumers gived mark from 1 to 10.

Only 1% of respondents believe that labels provide accurate and complete information. 54% of consumers think that the presented information's on food labels are incomplete and incorrect. The consumer has become prudent and unforgiving, due to his limited available resources. In this context, the information has to reduce the uncertainty and to win the consumers confidence. Accurate and complete information is the most effective way to protect consumers against abusive practices (Oprea *et. al.*, [20]).

Regarding the 3rd question: "What is the importance that you give items on food labels", the results are shown in the Figures 3, 4, 5, 6, 7 and 8.

Country of origin of the manufacturer is important because it ensures that the entire product is traditionally manufactured entirely (prepared, processed and produced) in that area and so acquires unique properties (Oprea *et. al.*, [20]). The finding indicates that the respondents consider in a proportion of 63% important and very important the producer country of origin, while 37% considered less important and not important this issue. 71% of consumers think the net quantity as important and very important.

76% of consumers think that it is very important to know the date of minimum durability, 17% consider it important, 5% consider it less important while 2% consider that is not important. The physical life of a food product is limited in time, even if, the degradation can be slowed because their stability is determined by substances that come into contact with other component substances and the scope of environmental factors (Oprea et. al., [20]). 36% of consumers felt that it is important to know the name and address of producer, 30% that is less and not important, 13% chose that it is very important and 21% consider that this aspect is not important at all. Knowing the name and address of the manufacturer gives extra confidence to consumers regarding food quality, and in this way they can form an opinion about the product in general. Transparency and communication with the consumer is addressed through the addition on the label of this correct information in order to help them make a decision on an informed basis (Oprea et. al., [20]).

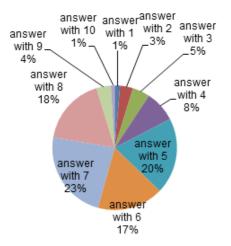
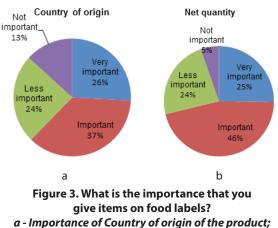
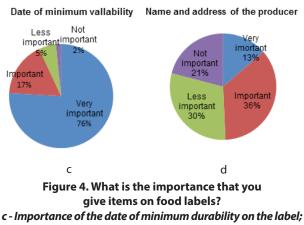
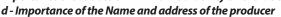


Figure 2. To what extent do you consider the food labels that you eat provides accurate and complete informations? Answers in points (1 - 10)











Healty recommendations are very important (55%) because the labels may contain health and nutrition claims only if they do not mislead. For consumers who answered our questionnaire it is very important the list of ingredients in 47%, 40% think it is important, 12% say it is less important and only for 2% consumers list of ingredients is not important.

All ingredients must be listed on the label in descending order of their amount. Food additives, added vitamins and minerals must also be included in the list of ingredients. Food additives are presented in the list of ingredients, followed by the chemical name or numeric code (Oprea *et. al.*, [20]).

People who answer at our questionnaire 66% of consumers think that the list of substances causing allergies is very important, 23% say it is important, 7% consider less important this issue and only 4% consider that is not impoortant thing. In December 13, 2014 came into force the law issued by the European Union in relation to food allergens, and thereby enhances the existing general labeling and nutrition in a single regulation to simplify and consolidate the existing labeling legislation. From statiscical point, 10 - 15% of the population suffers from allergies. In this context, the EU imposed rules on labeling is welcome because people are not at risk of consuming products containing ingredients to which they are allergic. There are patients that, for example, are allergic to peanuts. There is a big risk that the very small amounts or traces of allergic products may cause anaphylactic shock that can lead even to death. From patients with risk at allergens it is very impotant this such of substances will be write on labels at food products

Only 18% of consumers think that is very important, 32% important that the information on labels to be written in Romanian, regardless of the country of production, without excluding the presentation also in other languages. Labels must be visible, legible and printed in a way that does not allow deletion.

33% of consumers think that the energy value is very important, 47% important while 17% think it is less important and only 3% consider it is not important. 43% of respondents believe the informations regarding food storage conditions are very important, 43% consider it important, 11% say that are less and 3%

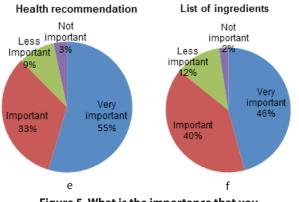
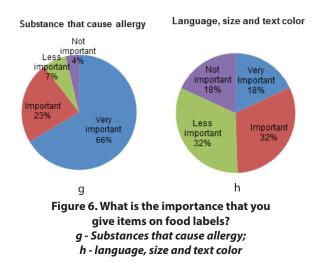
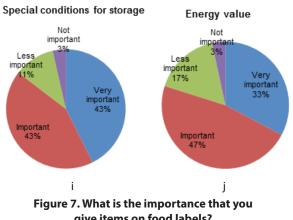
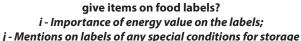
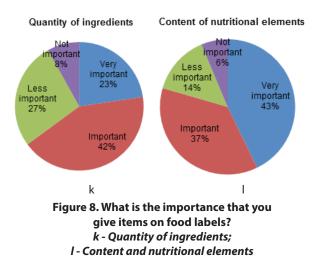


Figure 5. What is the importance that you give items on food labels? e - Importance of the health recommendations on the label; f - The list of ingredients







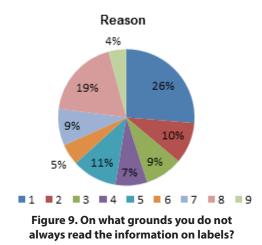




consider it not important. Special condition for storage should be made in a way to prevent process of alteration, degradation and chemical and biological contamination of food products.

42% of consumers think that the quantity of ingredients is very important, 42% consider it important, 27% consider it less important and 8% consider that think is not important. 43% consider the nutritional elements content it is very important, 37% that it is important, 14% consider it less important and for 6% this thing is not important.

In Figure 9 we present results for question no. 6 "On what grounds you do not always read the information on labels". The level of education of the consumer is very important from this point of view. Also the running advertising campaigns in the media have an important role. With one word it can create false expectations for the customer. If we interpreting the results of the questionnaire, we can say that 26% consumers choose products based on previous positive experiences (9 - from Figure 9). 10% (8 - from Figure 9) consider they have acquired confidence in a product and are happy with it, from this reason they do not hesitate to buy it a second time. Other 9% (7 - from Figure 9) haven't time, too busy to read the labels. 7% (6 - from Figure 9) of consumers consider is healthy and is not necessary to read the label. They can eat everything. From 11% (5 - from Figure 9) of our consumers consider there are many information on the labels, and is too hard to read all this. 5% (4 - from Figure 9) consider do not necessary to read the label claims, the price decided their choice.



9% (3 - from Figure 9) of consumers are not worried and are not interested to read the labels. 9% (2 - from Figure 9) of consumers buy products they like, despite the fact that they are unhealthy. Consumers have recognized that are attracted in a large extent by the presentation of the product, beautifully and colorful package. 4% (1 - from Figure 9) of consumers think that the information on the label is useless.

4. Conclusions

- From 507 respondents, different level at education, different age, married and not merried, family with children and family without children, lives in town or village, area Sibiu, 22% felt that the energy value is very important, 31% thought that the brand is important, 38% choose the price is very important and 9% considered that the package designis is very important at all. As a conclusion, it is very good that only 6% of respondents do not realize the importance of nutrition value, by choosing products either by lowest price or by brand.

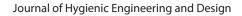
- Generally we can say that it is a must consumer to be educated regarding content on food labels. It is necessary briefings to be carried out on this content in terms of health recommendations that these labels should contain. Thus the population will have the chance to choose the right product for the health of everyone.

Acknowledgement

This paper was realized under the frame of the FP7-PEOPLE-2012-IRSES Project no. 318946-Nutritional Labeling study in Black Sea Region Countries.

5. References

- [1] Pravst I. (2011). *Risking public health by approving some health claims? The case of phosphorus*. Food Policy, doi: 10.1016/j.foodpol.2011.05.005.
- [2] Caswell J. A., Ning Y., Liu F., Mojduszka E. M. (2003). The impact of new labeling regulations on the use of voluntary nutrient-content and health claims by food manufacturers. Journal of Public Policy and Marketing, 22, (2). pp. 147-158.
- [3] WHO. Diet.<URL:http://www.who.int/ topics/ diet/en.Accessed 11 July 2011.
- [4] Govindasamy R., Italia J. (1999). The Influence of Consumer Demographic Characteristics on Nutritional Label Usage. Journal of Food Products Marketing, 5, (4), pp. 55-68.
- [5] Drichoutis A. C., Lazaridis P., Nayga R. M. (2006). Consumers' use of nutritional labels: a review of research studies and issues. Academy of Marketing Science Review, 9. <URL:http://www.amsreview.org/articles/ drichoutis09-2006.pdf. Accessed 11 July 2011.
- [6] Svederberg E., Gustaffson J. E., Reuterswärd A. L., Svensson L. (2008). Influence of previous experiences on consumers' reading and use of nutritional information on food packages. A questionnaire study involving structural equation modeling. Journal of Culinary Science & Technology, 6, (2), pp. 192-205.





- [7] Grunert K. G., Wills J. M. (2007). A review of European research on consumer response to nutrition information on food labels. Journal of Public Health, 15, pp. 385-399.
- [8] Mhurchu C. N., Gorton D. (2007). Nutrition labels and claims in New Zealand and Australia: a review of use and understanding. Australian and New Zealand Journal of Public Health, 31, (2), pp. 105-112.
- [9] Nayga R. M., Lipinski D., Savur N. (1998). Consumers' use of nutritional labels while food shopping and at home. The Journal of Consumer Affairs, 32, (1), pp. 106-120.
- [10] Marietta A. B., Welshimer K. J., Anderson S. L. (1999). Knowledge, attitudes, and behaviors of college students regarding the 1990 nutrition labeling education act food labels. Journal of the American Dietetic Association, 99, pp. 445-449.
- [11] Obayashi S., Bianchi L., Song W. (2003). Reliability and validity of nutrition knowledge, social-psychological factors, and food label use scales from the 1995 diet and health knowledge survey. Journal of Nutrition Education and Behavior, 35, (2), pp. 83-92.
- [12] Cowburn G., Stockley L. (2005). *Consumer understanding and use of nutrition labeling: a systematic review*. Public Health Nutrition, 8, (1), pp. 21-28.
- [13] Satia J. A., Galanko J. A., Neuhouser M. L. (2005). Food nutrition label use is associated with demographic, behavioral, and psychosocial factors and dietary intake among African Americans in North Carolina. Journal of the American Dietetic Association, 105, (3), pp. 392-402.
- [14] Feunekes G. I. J., Gortemaker I. A., Willems A. A., Lion R., Van Den Kommer M. (2008). Front-of-pack nutrition labeling: testing effectiveness of different nutrition labeling formats front-of-pack in four European countries. Appetite, 50, pp. 57-70.
- [15] Viswanathan M., Hastak M., Gau R. (2009). Understanding and facilitating the usage of nutritional labels by lowliterate consumers. Journal of Public Policy & Marketing, 28, (2), pp. 135-145.
- [16] Food Standards Agency. (2010). *Public attitudes towards, and use of, general food labelling*. Social Science Research Unit Oxford Evidentia, Unit Report 4.
- [17] Grunert K. G., Wills J. M., Fernández-Celemín L. (2010a). Nutrition knowledge, use and understanding of nutrition information on food labels among consumers in the UK. Appetite, doi:10.1016/j.appet. 2010.05.045.
- [18] Ful Aygen F. (2012). Turkish Consumers' Understanding and Use of Nutrition Labels on Packaged Food Products. International Journal of Business and Social Science, 3, (6), pp. 171-183.

- [19] Nougadère A., Merlo M., Héraud F., Réty J., Truchot E., Vial G., Cravedi J-P., Leblanc J-C. (2014), How dietary risk assessment can guide risk management and food monitoring programmes: The approach and results of the French Observatory on Pesticide Residues (ANSES/ORP). Food Control, 41, pp. 32-48.
- [20] Oprea O. B., Tita O., Georgeescu C. (2015). Romanian consumers behavior regarding food labeling - short analyse in the frame of irses 318946 project. Journal of EcoAgriTourism, 11, (1), pp. 70-79.