

# NUTRITION LABELLING ON PREPACKED FOODS: OPINION AND SUGGESTIONS OF PORTUGUESE FOOD AND NUTRITION PROFESSIONALS

## ROTULAGEM NUTRICIONAL DOS ALIMENTOS PRÉ-EMBALADOS: OPINIÕES E SUGESTÕES DOS PROFISSIONAIS DA ÁREA ALIMENTAR E NUTRIÇÃO

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ARTIGO ORIGINAL

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### ABSTRACT

**INTRODUCTION:** Labelling is an important tool for food and nutrition professionals since it provides information on food safety and nutrition.

**OBJECTIVES:** The aim was to analyse the differences in food and nutrition professionals' opinions regarding nutrition labelling on prepacked foods.

**METHODOLOGY:** A cross-sectional study was conducted, using a non-probabilistic sample of professionals, by contacting several Portuguese entities in food and nutrition. The eligibility criteria included being 18 years old and over, living and working in Portugal, and having a professional activity in this area. An online self-administered survey was developed, including questions about labelling (importance, reading, use, trust, satisfaction, and influence in food choices). The main changes in the European Union labelling rules about the content, presentation and legibility of the mandatory information were analysed. The present paper focuses on the answers to the open-ended question on suggestions to improve nutrition labelling.

**RESULTS:** From the 297 participants, 33 (11.1%) provided answers to the open-ended question, which were subsequently grouped into six categories. These professionals demonstrated the least satisfaction with the label information namely the specific technical terms, the quantity of information, the symbols used and the nutritional claims. They showed the least agreement with the presentation and content of the nutrition information, implemented by Regulation (EU) No 1169/2011.

Two improvements were proposed: the simplification of the labelling information and the understanding of its usefulness as it is currently presented, to provide perceptible and useful information to the consumer.

**CONCLUSIONS:** Nutrition labelling educational tools should be developed, in order to promote nutrition literacy and lead to consumer's empowerment.

### KEYWORDS

Food label use, Food legislation, Nutrition labelling

### RESUMO

**INTRODUÇÃO:** A rotulagem é uma ferramenta importante para os profissionais de alimentação e nutrição, pois fornece informações sobre segurança alimentar e nutrição.

**OBJETIVOS:** Foi analisar as diferenças nas opiniões dos profissionais de alimentação e nutrição em relação à rotulagem nutricional em alimentos pré-embalados.

**METODOLOGIA:** Um estudo transversal, com uma amostra não probabilística de profissionais, por contacto com diversas entidades portuguesas da alimentação e nutrição, foi realizado. Os critérios de elegibilidade incluíram ter idade igual ou superior a 18 anos, residir e trabalhar em Portugal e exercer uma atividade profissional na área. Foi desenvolvido um questionário disponível online de administração direta, incluindo questões sobre rotulagem (importância, leitura, uso, confiança, satisfação e influência nas escolhas alimentares). Foram analisadas as principais alterações nas regras de rotulagem da União Europeia sobre o conteúdo, apresentação e legibilidade das informações obrigatórias. Neste artigo serão apresentadas as respostas à pergunta aberta sobre sugestões para melhorar a rotulagem nutricional.

**RESULTADOS:** Dos 297 participantes, 33 (11,1%) responderam à questão aberta, tendo sido estas posteriormente agrupadas em seis categorias. Estes profissionais demonstraram uma menor satisfação com a informação presente no rótulo, nomeadamente os termos técnicos específicos, a quantidade de informação, os símbolos utilizados e as alegações nutricionais. Estes apresentaram uma menor concordância com a apresentação e o conteúdo das informações nutricionais implementadas pelo Regulamento (UE) n.º 1169/2011. Foram propostas duas melhorias: a simplificação da informação na rotulagem e a compreensão da sua utilidade, tal como se apresenta atualmente, para fornecer informações perceptíveis e úteis ao consumidor.

**CONCLUSÕES:** Ferramentas educacionais de rotulagem nutricional devem ser desenvolvidas, a fim de promover a educação nutricional e o empoderamento do consumidor.

### PALAVRAS-CHAVE

Uso de rótulos de alimentos, Legislação alimentar, Rotulagem nutricional

## INTRODUCTION

Food and nutrition labelling in prepacked foods is a source of information to the consumer in terms of food safety and nutrition (1, 2). The food product label conveys a set of mandatory information that defines it, namely the name of food, the country of origin or place of provenance, the lot number, the net quantity, the name or business name and address of the food business operator, the ingredient list, the allergens information, the type, quality and quantity of the ingredients and categories of ingredients (QUID), the nutrition labelling, the date of minimum durability, special storage conditions and/or instructions for use, as compulsory (3-6). The nutrition or health claims, the front-of-pack nutrition labelling and others are non-mandatory information (3, 7, 8). In recent years, labelling has gained significant importance as an effective tool in protecting consumers' health, since it has information that, when properly used, can lead to conscious and healthy food choices (9). The influence of food environments as a collective physical, economic, political, and socio-cultural context can influence individuals' consumption choices and nutritional status, leading to a healthier diet and general well-being through food labelling (4, 10, 11). Consequently, it must be a requirement to create food labels that are clear and can be trusted. Regarding this situation, the European Parliament and of the Council on the 25<sup>th</sup> of October 2011 implemented the Food Information to Consumers (FIC) - Regulation (EU) No 1169/2011 (3, 12, 13). The focus of the existing guidelines has been changing, in order to safeguard the consumer's well-being through transversal rules in the entire food system and its operators. Since the implementation of the FIC Regulation, food and nutrition labelling rules were harmonized and became necessary to study the possible simplification of the nutrition declaration. Therefore, a smaller risk of the prevalence of non-communicable diseases can be avoided by choosing energy-dense foods, sugar-sweetened drinks, processed and prepacked foods, encouraged by consumption trends and/or individual food choices (14-16). While the regulation was in the development stage, a series of investigations were occurring to understand how information can be used and interpreted (17). Labelling is an important tool for professionals in the food and nutrition area (12). However, the reading and usage of the label information may vary, according to the area of activity, professional backgrounds, interests, motivations, and individual knowledge. Nevertheless, there was a need to study the vision and position of the professionals in the food area regarding this matter. It is known that they can be direct or indirect intervenient in the food supply chain, directly in the food production process or in the consumption stage (with an underlining role as food educators, researchers, or regulators), or indirectly in both.

## OBJECTIVES

This paper aimed to analyse the differences in food and nutrition professionals' opinions and suggestions regarding nutrition labelling on prepacked foods, established by Regulation (EU) No 1169/2011.

## METHODOLOGY

A cross-sectional study was conducted, using an observational design (18, 19). Study population: The target population were Portuguese professionals in the food and nutrition area. The recruitment strategy for the participation of the professionals was through contacting several Portuguese entities in the food and nutrition area (N=45), namely policy decision-makers and regulatory entities (governmental and non-governmental organizations) of food-related area (N=7); public health associations in the food and nutrition area (N=5); food business associations/entities (N=3), higher education institutions with

bachelor's, post-graduate, master's, and doctoral degrees in the food area (N=18), scientific journals or other communication channels (N=5); and, certification entities (N=7)). Sampling: A non-probabilistic and convenience sampling was applied to recruit Portuguese food and nutrition professionals. This method was chosen to cover as many professionals as possible and considering that not all professionals had an equal participation opportunity. Moreover, to avoid multiple responses by the same professional, a brief warning was given at the beginning of the survey: "In case of receiving this request through different organizations/entities, please respond only once". The eligibility criteria required was being 18 years old and over, living and working in Portugal and having a professional activity in the food and nutrition area. Data collecting tool: An online self-administered survey was developed, using the software LimeSurvey® available at the Faculty of Nutrition and Food Sciences of the University of Porto. The survey, which was written in Portuguese, was organized into five sections and 24 questions (fourteen closed questions on a 5-points Likert type scale, six multiple-choice and four open-ended questions). This was developed after reviewing the relevant literature used in previous studies related to general food labelling and included the new food labelling rules (3). The five sections included: 1) Section A – The general perspective of the food professionals regarding labelling; 2) Section B – The new regulation: content, presentation, and legibility; 3) Section C – Mandatory "back-of-pack" nutrition labelling: comparisons of the main changes; 4) Section D – Future uses of "front-of-pack" nutrition labelling: additional forms of expression and presentation of the nutrition declaration; and 5) Section E – Participants' sociodemographic characteristics. The average survey completion time was twelve to fifteen minutes. It was available from December 2016 to April 2017. Participants: Using the institutional or professional contact, the food and nutrition Portuguese entities were contacted to assist in the dissemination of the study through its members, clarifying the study's setting (study objective, an academical focused investigation, target population, safeguard of the collected information and the anonymity of the participants) and appealing to their participation (via email with the survey link). Participants were instructed to give their professional opinion according to their area of activity. Evaluated data: Firstly, a general analysis of the survey answers was conducted. Secondly, for this paper, two questions were analysed in deep, namely, the question "As a food professional, do you consider that changes in the presentation and content of the nutrition information provide an accessible and clear reading/understanding for the consumer?" (a 5-points agreement Likert type scale) and the open-ended question "If you do not agree, what would you change?". The professionals' suggestions given by the open-ended question regarding nutrition labelling on prepacked food were analysed and categorized by subject. Lastly, a comparison between the group of professionals who make suggestions and those who did not, regarding the survey's answers was done. Statistical data analysis: Different methods and statistical tests were performed, using IBM SPSS® Statistics version 24 software. Statistical significance was set at 0.05. A descriptive statistical analysis was carried out. Differences between groups were assessed using the Mann-Whitney U test and the chi-square test.

## RESULTS

The sample (N=297) of Portuguese professionals who participated in the study included women (81.1%), married (53.2%), with an average age of 39 years (SD=12.1), between 18 and 75 years old, with higher education (99.9%) and 46.0% from the "Food and Nutrition Sciences" course.

## Evaluation of the Professionals' Opinion Regarding Accessibility and Clarity of Nutrition Labelling for the Consumer

Out of a total of 297 participants, 10.1% (N=30) strongly disagreed or disagreed that the nutrition labelling changes would favour a better reading and understanding by the consumers, and 11.1% (N=33) replied to the open-ended question, with suggestions for improvements in nutrition labelling.

## Analysis of the Suggestions Provided in the Open-ended Question to Improve Nutrition Labelling

The given answers (N=33) were grouped by subject (Table 1): 1) Clear, simple and concise language (N=7), 2) Difficulty in interpreting and teaching consumers (N=8), 3) Presentation of nutrition labelling (N=3), 4) Turn mandatory the optional information (N=10), 5) Improve the display using a nutrition symbol (traffic light type) (N=3), and lastly, 6) Variation of the nutritional composition of the food (N=2).

**Table 1**

Description of the open-ended question answers by subject (N=33) (free translation)

1 CLEAR, SIMPLE AND CONCISE LANGUAGE (N=7)	
	"Firstly, I would require labels to use clear language for any consumer to be able to understand them, thus preventing the use of "substitute foods" that become more harmful to their health. Example: the use of palm oil fats and its derivatives."
	"The improvement of the information through its simplification and conciseness, by changing the sequence, but it ends up losing information as it broadens, becomes more diversified and specific."
	"Language."
	"Greater transparency and clearer language."
	"Simplify because most consumers don't understand the meaning."
	"I would simplify - the language since it is too technical and not part of the popular lexical."
	"If we follow the regulation exactly, we will have to declare "Lipids", for example. Most consumers do not know the meaning of it, so I would turn it mandatory to declare "Fats"."
2 DIFFICULTY IN INTERPRETING AND TEACHING CONSUMERS (N=8)	
	"Most consumers have no idea how to read a nutrition declaration."
	"Most consumers do not have enough knowledge to be able to interpret the information available on the label and make healthy choices."
	"The quantity/ quality of the information is satisfactory. I think that the consumer does not have enough training to read and interpret this information."
	"Too much information it is difficult to interpret."
	"The consumer has a hard time understanding what the label contains and conveys, and how they can use the information to their benefit. The changes are positive for technicians and more transparent communication of the foodstuff information, but difficult for the consumer."
	"I believe it is necessary to inform the consumer to read the label."
	"I wouldn't change anything, what I would do is teaching consumers to read the labels because if they knew there would not be a war between the opportunists about sugar and fats."
	"It will always be difficult for the consumer regarding the reading of the label. More community intervention is needed in this area. I would change - larger letters, specifically in the list of ingredients, nutritional information and allergenic substances. - The traffic light scheme I believe will be the easiest method of reading for the consumer, with a more positive, clear and succinct response. - When appropriate, the nutrition information must be mandatory per serving (ex: biscuit pack)."
3 PRESENTATION OF NUTRITION LABELLING (N=3)	
	"The order of the macronutrients and the information of salt makes sense for foods that are high in fat and salt, which means, that it is a measure that focuses solely on obesity and can confuse other categories of products that have nothing to do with obesity. I give a clear example of foods for specific medical purposes, in which it is important to focus on protein and the mention of salt confuses the consumer, since they are products that have no added salt, but sodium, micronutrient."
	"Not all of the sodium in a food comes from salt, so in my opinion, it should contain the sodium content instead of salt (or both)."
	"Order of the nutrients, sodium content and fibre content."
4 TURN OPTIONAL INFORMATION INTO MANDATORY (N=10)	
	"I would make supplementary information mandatory. The regulation is general for the whole of Europe, not focusing on the deficiencies that may exist in terms of micronutrients per country. If it was mandatory, it would fill this gap."
	"It should be mandatory to mention the content of hydrogenated fats."
	"Trans fats, cholesterol and fibre are missing".
	"What is in grey should be mandatory".
	"I consider the presence of data referring to "one serving" to be important, and it should be mandatory."
	"The mention of the fibre should be mandatory."
	"The mention of the fibre content should be mandatory."
	"In my opinion, it should be mandatory depending on the fibre content of the foodstuff, as well as the different types of lipids and carbohydrates. Reference doses for an average adult (2000kcal) should not appear on the label because it misleads the notion of the amount that should be ingested by the population. Most people should consume less than 2000kcal."
	"What was indicated in the previous points of the survey."
	"A more detailed list of ingredients."
5 IMPROVE THE DISPLAY BY USING A SYMBOL (TRAFFIC LIGHT TYPE) (N=3)	
	"To complement the mandatory information, I would put a more graphic and visual form, universally used (regardless of the brand), more easily perceived by the consumer."
	"Font size or form of presentation more appealing, clearer and enlightening in the common sense (essential items - fat, salt and sugar highlighting this as an idea (Brilliant! The traffic light should become universal for all products)."
	"Using the traffic light scheme (which some foodstuffs already have) would be very advantageous for less informed consumers."
6 VARIATION OF THE NUTRITIONAL COMPOSITION OF THE FOOD (N=2)	
	"There are products in which the nutritional composition varies a lot, such as traditional processed meat, the nutritional information being merely indicative."
	"Not to add anything to question 14, but I would like to mention the following: a) The veracity of the values about the reality of each food is very fallible. There are many fluctuations throughout the year in products of animal origin (as meat and milk) and for that reason the values should have a reasonable and realistic margin, foreseen. The oscillations are higher than the recommended values; b) The vast majority of consumers do not read and do not understand the various "notes" that the tables have, DDR, RDV."

## Comparison Between the Professionals Who Gave Suggestions and Those Who Did Not

A comparison of the sociodemographic characteristics between the professionals who answered *versus* those who did not answer the open-ended question was carried out. Significant differences were not found (Table 2), except for the geographical area of residency, verifying that the probability of those who made suggestions is greater in the Lisbon metropolitan area and Islands.

The significant differences between groups of professionals who made suggestions (N=33, 11.1%) and those who did not (N=264, 88.9%) are presented in Table 3 (non-significant results were omitted for brevity). A comparative analysis of the positive survey answers (by positive it

entails only the levels of agreement 4 and 5 in the Likert scale) between both professional groups was performed.

Those who made suggestions were less satisfied with the current information on the label, namely the specific technical terms ( $p=0.019$ ), the quantity of information ( $p=0.047$ ), the symbols used ( $p=0.014$ ), and the nutritional claims ( $p=0.043$ ). They agreed less with the changes in the presentation order of the mandatory "back-of-pack" nutrition labelling ( $p=0.028$ ), as well as the fibre content being voluntary ( $p=0.005$ ). Furthermore, only a minority of those who made suggestions believed that adjustments in the presentation and content of the nutrition labelling provided a more accessible and clear reading to the consumer (9.1%) ( $p<0.001$ ).

**Table 2**

Sociodemographic characteristics of the participants who answered *versus* those who did not answer the open-ended question

	PARTICIPANTS (N=297)				p
	WHO ANSWERED		WHO DID NOT ANSWER		
	N	%	N	%	
<b>Sex</b>					
Female	28	84.8	213	80.7	0.813 <sup>#</sup>
Male	5	15.2	51	19.3	
<b>Marital status</b>					
Single	13	39.4	114	43.2	0.784 <sup>s</sup>
Married / living with a partner	18	54.5	140	53.0	
Divorced	2	6.1	10	3.8	
<b>Geographical area of residency</b>					
North	8	24.2	82	31.1	0.020 <sup>s</sup>
Centre	2	6.1	63	23.9	
Lisbon Metropolitan Area	13	39.4	69	26.1	
South (Alentejo and Algarve)	3	9.1	28	10.6	
Islands (Madeira and Azores Islands)	7	21.2	22	8.3	
<b>Educational level</b>					
Bachelor's degree	21	63.6	175	66.3	0.838 <sup>s</sup>
Master's degree	10	30.3	67	25.4	
PhD degree	2	6.1	22	8.3	
<b>Courses</b>					
Food and Nutrition Sciences (FNS)	18	58.1	115	44.6	0.294 <sup>s</sup>
Food Engineering or Food Sciences (FEFS)	8	25.8	73	28.3	
Engineering or Sciences (except Food Engineering or Food Sciences) (ES)	5	16.1	70	27.1	
<b>Occupation</b>					
Academic	2	6.1	20	7.6	0.738 <sup>s</sup>
Engineer	4	12.1	31	11.7	
Nutritionist/ Dietitian	18	54.5	105	39.8	
Food quality & safety	4	12.1	58	22.0	
Management	2	6.1	26	9.8	
Food technician	1	3.0	6	2.3	
Others	2	6.1	18	6.8	
<b>Main area of activity</b>					
G1 - Clinical care	2	6.3	40	15.2	0.332 <sup>s</sup>
G2 - Primary health care, community and public health	7	21.8	38	14.4	
G3 - Food industry, innovation, marketing and laboratory analysis	6	18.8	69	26.2	
G4 - Food service	1	3.1	21	8.0	
G5 - Research, education and training	6	18.8	32	12.2	
G6 - Quality control, food safety, inspection and consulting	10	31.2	63	24.0	
Unemployed	1	3.1	21	8.0	

Analyse Descriptive Statistics-Crosstabs <sup>s</sup>(X2) Pearson or <sup>#</sup> Fisher's Exact Test

**Table 3**

A comparative analysis of the positive survey answers between those professionals' who suggested and those who did not suggest in the open-ended question

SECTIONS OF THE SURVEY	QUESTIONS	PARTICIPANTS (N=297)				p
		POSITIVE ANSWERS AMONG THOSE WHO SUGGESTED (N = 33)		POSITIVE ANSWERS AMONG THOSE WHO DID NOT SUGGEST (N = 264)		
<b>Section A - General perspective of the food professionals regarding labelling</b>	<b>Question 7:</b> The following aspects are pointed out as difficulties in the usage of labelling. From the perspective of a professional in the food field, express your degree of satisfaction with each of these aspects: <sup>1</sup>					
	Specific technical terms	10	30.3	116	43.9	0.019*
	Quantity of information	13	39.3	111	42.0	0.047*
	Symbols used	9	27.2	100	37.9	0.014*
	Nutrition claims	9	27.3	108	40.9	0.043*
<b>Section C - Mandatory "back-of-pack" nutrition labelling: comparisons of the main changes</b>	<b>Question 12:</b> The example above shows the main changes in the nutrition information that came into force with Regulation (EU) No. 1169/2011. Compare the "old composition/ nutritional information" with the new one and mark your opinion as a professional in the face of statements: <sup>2</sup>					
	<b>2<sup>nd</sup> Item -</b> The mandatory nutrition declaration, per 100g / 100mL of the foodstuff, presents the energy, fat, saturated fatty acids, carbohydrates, sugars, proteins and salt, instead of the energy value, proteins, carbohydrates, lipids, fibre and sodium.	23	69.7	200	75.7	0.028*
	<b>Question 13:</b> Regulation (EU) No. 1169/2011 introduces several changes in the content of the nutrition declaration. Considering your professional practice, give your opinion regarding the statements: <sup>2</sup>					
	<b>1<sup>st</sup> Item -</b> The indication of the fibre on the nutrition information becoming voluntary.	6	18.2	75	28.4	0.005*
	<b>Question 14:</b> As a food professional, you consider that changes in the presentation and content of the nutrition information provide an accessible and clear reading for the consumer. <sup>2</sup>	3	9.1	205	77.7	<0.001*

\*Analyse Descriptive Statistics - Mann-Whitney Test.

<sup>1</sup>The values presented correspond to the sum of all positive answers namely "satisfied" and "highly satisfied".

<sup>2</sup>The values presented correspond to the sum of all positive answers namely "agree" and "strongly agree".

**DISCUSSION OF RESULTS**

The professionals' suggestions given by the open-ended question regarding nutrition labelling on prepacked food were analysed, resulting in six categories which were grouped by subject. From these categories, two sets of suggestions were proposed. The first one was to simplify the information of the nutrition labelling, in order to promote the reading and usage by the consumers with low nutritional literacy (subject 1, 2 and 5). These professionals suggested that it is necessary to turn the language into a clearer, simpler, and more concise one as presented "would simplify the language" (subject 1) and improve the display by using a symbol as cited "The traffic light should become universal for all products" (subject 5) since the current form of presentation is difficult to interpret (subject 2). This information has to be explained to the consumer "to inform the consumer to read the label" (subject 2) or the consumer should be instructed on how to read, interpret and use the information available "I would do is teaching consumers to read the labels" (subject 2). Both suggested actions focus on the consumer's education and its empowerment regarding the use of food and nutrition labelling, as it had already been mentioned (1, 12, 20). The difficulties on label usage have been previously reported, mainly in studies with consumers (21-24). While the EU regulation harmonizes food labelling rules, it is necessary to improve the reading, usage and understanding of the available information to the consumer. Given the complexity of the information and the low nutritional literacy, the most favourable option becomes a symbol on the front-of-pack, as a means of simplifying nutritional information and leading conscious food choices (25, 26).

The second improvement included the need to promote the accuracy and the usefulness of the nutrition labelling as it is currently presented (subject 3, 4 and 6). In this case, it was advocated the adjustment of the presentation of the nutrition labelling (subject 3), to turn optional

information into mandatory (subject 4), and to consider the variation of the nutritional composition of the food (subject 6). All these suggestions tend to propose more detailed information related to the nutritional presentation as mentioned "it should be mandatory depending on the fibre content of the foodstuff, as well as the different types of lipids and carbohydrates" in subject 4 and "Order of the nutrients, sodium content and fibre content" in subject 3). The aspects listed (what to present in the nutrition declaration, optional and/or mandatory presence of certain nutrients, forms of presentation, the indication of the portion, DDR) lead to the discussion of issues such as the type, content, and presentation of the information that appears on the label. Since December 2014, the implementation of the mandatory nutritional information by the FIC regulation showed that there is no relevant data that allows the evaluation of the usefulness and relevance of it in the back-of-pack (25, 27). The previous studies before the implementation of the regulation raised a series of needs, expectations and uses regarding the information available to the consumers (28-30). It was assumed that having unanimous information would be difficult, but the commitment would be to simply the information considered most important on a first phase. In the second phase, the public health goal was the priority, it aimed to provide accurate and easy-to-understand front-of-pack nutrition information (26, 31). The analysis of the mandatory information on labelling became a secondary matter (25). In this study, a relevant concern was "the nutritional composition varies a lot, such as traditional processed meat ..." and "The veracity of the values about the reality of each food is very fallible. There are many fluctuations throughout the year in products of animal origin (as meat and milk) and for that reason the values should have a reasonable and realistic margin, foreseen.", demonstrating a need to consider the nutritional variation of the food composition.

Regarding the differences between the group of food and nutrition professionals who made suggestions and those who did not, it was found that those who gave suggestions were less satisfied with the current information on the label, namely the specific technical terms, the quantity of information, the used symbols, and the nutritional claims. Comparably, this group of professionals showed less agreement with the changes implemented by Regulation (EU) No. 1169/2011, such as the presentation order of the mandatory nutrition information and the optional indication of the fibre content. They also presented less agreement with the alterations in the presentation and in the content of the back-of-pack nutrition labelling, which may provide a more accessible and enlightening reading for the consumer. Some professionals are not still that satisfied with its presentation because it may provide too much detail for the consumers (the specific technical terms, the quantity of information, the used symbols, and the nutritional claims), possibly because they may have low nutrition literacy.

This study had several methodological considerations.

In the study design, the collection of data resulted in a convenience sample, thus non-probabilistic. Since the total number of professionals working in the food and nutrition area in Portugal is unknown and there is no practical way to contact them, it is not possible to guarantee that all professionals were reached. Nevertheless, the main entities in this area were contacted to reach the largest possible number of professionals. The choice of entities in the food and nutrition area was done by researching the ones that would be relevant and representative of the sector, authorities, and food' associations, which could reach a larger spectrum of professionals.

Limitations regarding the data collection procedure were related to using an online self-administered survey since the comprehension errors could not be clarified. This might constitute an accessibility limitation for some professionals, on one hand, but on the other hand, as an advantage, an online procedure allowed the collection of a larger sample from different geographic locations of the country quickly and conveniently (1, 32).

Concerning the nature of the sampling, it is important to consider the possible bias associated with the results obtained, since the opinion/suggestions may have been given by a minority "interested" on this topic, which chose to respond to the survey and presented an answer to the open question.

Even though the mentioned limitations, some strong points should also be considered as the web-based surveys became a common and reliable method for information gathering and the target population (food and nutrition professionals), who has not been the focal point of many investigations on food consumption and nutrition. These professionals can bring relevant health-related and political inputs, as users of the food and nutrition labelling information.

## CONCLUSIONS

This analysis contributed to the understanding of the professionals' concerns regarding the changes in food and nutrition labelling scope since they have the ability to see and perceive food and nutrition labelling as an important tool as users, as to be used by the consumer.

According to the suggestions of the food and nutrition professionals about the presentation and content of the nutrition information established by Regulation (EU) No 1169/2011, two sets of suggestions were proposed. The simplification of the nutrition labelling information and the promotion of the accuracy and the usefulness of the nutrition labelling as it is currently presented, provide more perceptible and useful information to the consumer. The development of nutrition labelling educational tools, as a way of promoting consumer's empowerment, which ultimately leads to healthier food choices and improves nutrition literacy.

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