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NUTRITIONAL LABELING: ANALYSIS OF THE IMPORTANCE FOR HIGHER EDUCATION STUDENTS OF IFUSLDEMINAS – CAMPUS MACHADO

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Abstract: The compression of nutritional labeling can be considered as an important tool for the individual to have greater detention of information, as well as the best choice for a balanced and healthy diet. In this context, the present study aimed to evaluate the importance given to the information contained in the labels by higher education students at IFSULDEMINAS – Campus Machado. To this end, a questionnaire was designed and applied to obtain information and assess the level of understanding of the information contained in the labels of food products. The analysis of the data obtained led to the conclusion that the information conveyed on the labels of industrialized foods is not well understood by the interviewees and that, among the interviewed consumers, it was possible to verify that women are more attentive to the information contained in the nutrition label. The main reported factors that discourage reading the label are directly related to the inappropriate presentation of the label, which involve the small size of the letters and the complexity of the information that make understanding difficult.
Keywords: Nutrition education; Regulation of labels; Nutritional information.

INTRODUCTION

According to the National Health Surveillance Agency (ANVISA), the label is a form of communication between the consumer and the product. There is mandatory information on the labels that allow the traceability of the products and basic information, namely: list of ingredients, expiry date, origin, batch and liquid content. Even if the information on the labels is relevant to the consumer, it is worth noting that research indicates that most consumers do not read the labels or do not understand them (CAMARGO, 2018).

In view of this, the present work aims to evaluate the understanding of higher education students at the Federal Institute of Education, Science and Technology of Southern Minas Gerais (IFSULDEMINAS) – Campus Machado about the information contained in the labels of food products. In addition, it seeks to understand the main reasons that lead consumers to seek information on labels, their knowledge of such information, in addition to the main difficulties in understanding labels.

THEORETICAL FOUNDATION

The present work aims to evaluate consumers' understanding of the information contained in food product labels. Taking this into account, the literature review will address works on nutrition labeling and consumer knowledge, the most relevant points of the legislation that regulates labeling in the current present.

IMPORTANCE OF NUTRITION LABELING

Unhealthy eating is considered by the World Health Organization (WHO) as a risk factor for chronic diseases. The WHO understands that the adequacy of labels, in order to offer standardized, simple, clear and consistent nutritional information, according to the guidelines of the *Codex Alimentarius* is one of the measures that can be a facilitator for obtaining a balanced diet (SILVA; SENGER, 2014).

Camara et al. (2008) state that the Consumer Defense Code ensures the right to nutritional information and determines that information about the correct specification of quantity, characteristics, composition, quality and price, in addition to the risks offered by the product, must be made explicit on the label. In addition, the authors state that the label can be defined as:

> "[...] any inscription, caption or image, or any descriptive or graphic material, written,

> printed, stamped, engraved, embossed or lithographed or pasted on the food packaging. Such information is intended to identify the origin, composition and nutritional characteristics of the products, allowing their tracking, and thus constituting a fundamental element for public health" (CÂMARA et al.; 2008, page 52)

Labels are elements that make it possible to identify the composition of foods, that is, in addition to their advertising function, they must help consumers with purchases, increasing market efficiency and consumer well-being. However, most consumers do not have the habit of reading or do not understand the information there, which represents a challenge for the food industry to expose the information (CAMARGO, 2018).

Even though the importance of the information contained in labels is undeniable, few studies have been carried out in the world on the consumer experience with the use of nutritional information on food labels and, in Brazil, studies carried out with consumers reveal concern with the amount of calories in food labels. products, in addition to presenting little understanding of the information found on the labels (SILVA; SENGER, 2014).

According to Cassemiro, Colauto and Linde (2008), the interpretation of nutritional information on the label can be impacted by consumer characteristics such as education, gender and age, in addition to characteristics such as label design.

NUTRITION LABELING LEGISLATION

According to Ferreira and Lanfer-Marquez (2007), the first laws related to food were published in the 1960s, but only in 1969, through Decree 986 which, although establishing definitions for labeling, did not address nutritional labeling. The authors reveal that the aforementioned decree describes the identity and characteristics of processes involved in food processing.

> "[...] it determines the creation of an identity standard for each type of food, being mandatory to include its description, hygiene procedures and manufacturing practices, permitted additives and their respective limits, sampling procedures for their analysis, as well as the labeling." (FERREIRA; LANFER-MARQUES, 2007, p.85)

Normative Resolution Number: 12/78, of the Technical Food Chamber (CTA), was the first to define information that must be presented on packaged food labels (BRASIL, 1978). The resolution, according to Ferreira and Lanfer-Marquez (2007, p.86) defined *which must appear on the front panel (name, brand, content and specific declaration) and on the side panels (list of ingredients, intentional additives and name of the country of origin).*

In 1992, with Law 8543, information on the presence of gluten in food became mandatory, in order to guarantee food safety for consumers that contain varying degrees of celiac disease. Even though there are rules regarding information about gluten in foods, Law nº 10.674, published in 2003, determines that all foods must have the inscription on their labels: "contains Gluten" or "does not contain Gluten" (BRASIL, 2003).

Ferreira and Lanfer-Marquez point out that 1998 saw important publications on labeling, namely:

- Ordinance Number: 41, published in the same year, referred to nutritional labeling, regulated the declaration of nutrient content, but made such declaration mandatory only for products that had some outstanding nutritional property and must include information on the energy value on the label, proteins, carbohydrates, lipids and dietary fiber and this information must be related to each 100g or 100 mL of food. Ordinance Number: 41 was complemented by

Ordinance Number: 27 SVS/MS, which regulates the presentation of complementary nutritional information, mandatory in cases where the label alleges nutritional properties.

- Ordinance Number: 42 of the Sanitary Surveillance Secretariat of the Ministry of Health (SVS/MS) revoked Resolution Number: 12/78, but maintained the guidelines of the previous document and made it mandatory to identify the batch, expiration date and instructions on the preparation and use of food and established that the labels must not contain information about misleading and doubtful aspects for consumers who carry out the reading when purchasing the product.
- Ordinances number 29 and number 31 of the SVS/MS, still in force, bring specific regulations for food labels intended for people with special metabolic or physiological conditions and determine the same regulations as for nutritional labeling, in addition to specific regulations for such foods, seeking consumer safety.
- Ordinance Number: 33 SVS/MS determined the presentation of "Recommended Daily Intake" (RDI) values.

Ordinance Number: 41 was revoked by Resolution of the Collegiate Board (RDC) Number: 94 of 2000, but maintained the obligation to present the information determined by Ordinance Number: 33 the values of "Recommended Daily Intake" (RDI) and Number: need for information that was not previously available, such as the amount of saturated fat, cholesterol, calcium, iron and sodium present in food compounds.

In addition to adding mandatory information to labels, RDC Number: 94 extended mandatory nutritional labeling to all packaged foods and beverages. The nutritional information on the labels must be indicated per 100g or 100mL of food and per serving, and the label must inform the number of servings on the package (BRASIL, 2000).

RDC nº 94 was replaced by RDC nº 40, from 2001, which maintained the requirements of RDC nº 94 and added the % daily value (DV) to the mandatory information, based on a diet with values of 2500kcal (BRASIL, 2001).

In 2002, Ordinance Number: 42 of 1998 was revoked and replaced by RDC Number: 259, similar to Ordinance Number: 42, updating the definitions of such ordinance. RDC number 259 determines that the brand, list of ingredients, liquid content, identification of origin, expiration date, batch identification, date of manufacture and expiration and instructions on preparation must appear on the labels. of food, when necessary (BRASIL, 2000).

Ferreira and Lanfer-Marquez analyze collegiate board resolutions number 359 and number 360. RDC nº 360 defines that nutritional labeling includes both the mandatory declaration of energy and nutrient value and the complementary nutritional information related to the optional declaration of nutritional properties. It also states that the declaration of vitamins and mineral salts is optional, provided that each portion of the food contains at least 5% of the RDI. It is important to note that the declaration of iron, calcium and cholesterol has become optional since, even though they are important information for both consumers and health professionals, the declaration of trans fats has become mandatory. RDC number 360 exempts foods such as vinegar, salt, coffee, yerba mate, teas, bulk products, fruits, vegetables, fresh meat, among others, from the nutritional information declaration. RDC number 359, among other modifications, reduces the basis of the Brazilian daily diet from 2500 kcal to

portions weighing 2000 kcal.

GOALS

GENERAL GOAL

Evaluate the importance given to the information contained in the labels by higher education students at IFSULDEMINAS – Campus Machado, taking into account the frequency of reading and interpretation of such information.

SPECIFIC GOALS

- Determine the profile of consumers who consult the nutritional declaration on food labels, that is, associate this consultation with sociodemographic variables.
- Question the reasons that lead consumers to read the nutritional information on labels.
- Identify consumers' main difficulties in interpreting labels.

MATERIAL AND METHODS

This study aimed to evaluate the understanding of the information contained in the labels of food products by students of higher education at IFSULDEMINAS – Campus Machado.

For this, students enrolled in the first half of 2020 were interviewed, seeking to include students from all classes of daytime higher education courses. The research subjects answered a questionnaire that included questions about the consumer's profile, the reading and understanding of information contained in food product labels. An analysis of each of the questions asked to the participants was performed using Descriptive Statistics.

RESULTS AND DISCUSSIONS

72 individuals from the Administration, Food Science and Technology, Agronomic Engineering, Information Systems and Animal Science courses at the Federal Institute of Sciences and Technologies - Campus Machado/MG were interviewed, ranging from the 1st, 3rd, 4th, 5th, 7th and 9th period.

Most respondents were female (58.3%) and predominantly young people between 19 and 25 years old (76.39% of the sample). With regard to marital status, the majority of respondents (94.4%) declared themselves to be single, a fact that is due to the young age of the respondents. This fact is seen in Souza et al., (2018), in a similar study, but carried out in the city of Salvador-BA, predominantly with 68% of the female sex, and most of the interviewees were aged between 20 and 25 years old, with 43% of the sample (SOUZA et al, 2018).

When investigating the habit of reading labels, it was observed that a large part of the sample consisted of non-readers and sporadic readers, with 15.3% and 55.5%, respectively. Thus, only 29.2% of respondents declared having the habit of reading food product labels. The results are different from the results of a study carried out by Gonçalves et al. (2016) concluded that most respondents read labels (54.28%), followed by consumers who do not read (35.71%) or do so infrequently.

Respondents mentioned the unattractive look provided by the packaging, emphasizing characteristics such as font size, information contained in places that are not very visible, such as on the sides and folds, as well as a very technical writing that, consequently, causes difficulty in reading and understanding the information. of labelling. The main problems identified related to labeling were: font size (47.20%), followed by the location of information on the sides and folds (27.80%). Most respondents (94.4%) stated that if the information contained on the labels were better presented and more understandable,

they would read it more frequently.

The ever-increasing amount of information required on food labels by legislation makes industries adopt measures that lead to compressing the information and, consequently, reducing the font size, especially in the case of smaller packages, allowing thus little emphasis on the nutritional table and lack of interest in the information described (SILVA; SENGIR, 2014).

It was also possible to verify that almost half of the interviewees (48.60%) do not read the information contained in the labels because they already know and purchase the product, without considering the possibility of changes or insertion of new information in the labeling.

Regarding the possibility of adopting emerging technologies to aid in reading mandatory nutritional labels, which would lead to better clarification and understanding, it was observed that there is more interest in the use of computerized resources such as QR Code and links. In Acioly (2016), the use of the virtual system showed better results compared to the physical system, capable of complementing or even highlighting the informational content of physical labels.

The information that the participants considered most relevant were: the batch, the validity or the weight of the content. This may be due to a question of availability of financial resources and the age group. A study carried out by Souza et al (2018) indicated that the most relevant questions were the economic aspect (price and/or promotion) and the shelf life of the product.

It was also noted that 11.10% of respondents noted whether there are traces or the presence of elements that could cause allergies and/or food intolerance. Questions seen in research by Souza et al (2018), point to the importance of paying attention to specific groups that contain some allergy and/or food intolerance, with some health problem (diabetes, hypertension, high cholesterol, obesity).

Since food has a direct relationship with treatment and/or prevention, and accentuating the need to be careful with the products to be prepared, as the label is an important tool to help make a safe choice of food.

This way, we can also observe a contradiction regarding the purpose of food labeling, that is, while it represents a link between the consumer and the product, it is only deciphered by those who are more capable. Data collected when asked about the degree of understanding of current legislation on food packaging labeling, using a 9-point hedonic scale (where 1 indicates that you are extremely unaware and 9 indicates that you have full understanding of the subject).

When asked about the degree of understanding of current labeling legislation, 73.6% claim to be completely unaware. The study carried out by Silva and Sengir (2014), point out that the content on the packaging is considered complex and difficult to understand by all participants, including health professionals and government and industry technicians.

If the content is already difficult to understand on the packaging for professionals in the area, having simplified information and apparently of better understanding for the consumer, imagine the legislation that is not abbreviated and composed of boring texts and with different conceptualizations.

CONCLUSIONS

Although women are the most attentive to information on nutrition labels, these descriptions are still not well understood by most of the interviewees, and the inadequate way of presenting the labels, the unattractive look, small letters and the complexity of the information were the main main factors mentioned. In view of this, it is necessary to

educate consumers in addition to encouraging them to read the information contained on labels. For this, it is important to adapt the layout of the packaging, in order to optimize the provision of mandatory information and, at the same time, facilitate the consumer's understanding.

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