FRONT-OF-PACK NUTRITION LABELLING AND THE NECESSARY DISCUSSION

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Imagine that one day the European Union took the decision to allocate a simplified label to the books we buy. A green color for books to absolutely read. A yellow color for moderately interesting books and a red color for books with poor literary quality. The attribution of these colors would be based on criteria previously defined by a group of experts in literature and publicly disclosed. The use of this algorithm and the mention of this label and its color would not be mandatory, but publishers or authors would be able to use it if they intend to use it. The great advantage of using this nomenclature would be to facilitate the choice at the time of purchase, preventing many poor-quality books from being purchased (In fact, we buy many books due to the aesthetics of the cover, as well as considering a literary critic, whose "algorithm" we do not know, or by mentioning any prize whose criteria are also unknown). On average, our bookshelves would be filled with books of higher quality and books marked in red would tend to reduce their sales, not least because any self-respecting bookstores would not place them for sale. On the other hand, publishers and writers would be tempted to identify what makes a book worthy of showing a green color and would try to create works that followed the established algorithm, realigning their production according to the criteria previously advertised for the construction of the algorithm such as, for example, creativity/imagination/innovation or the coherence and cohesion of the text or even obedience to the characteristics of the genre in question. In this sense, new or old books should include these ingredients in the appropriate doses so that the book, submitted to an algorithmic test, could bear the mention of "absolutely reading" and have its green dot on the cover. In the long run, most of the books on sale would have a green mention or, quite simply, would have no symbol at all, as some authors or publishers would not adhere to this voluntary scheme to improve "literary quality".

We now leave the fantasized world of literature (where reading a bad book does not, in principle, cause serious health problems) to the real world of "supermarket foods", where up to 18,000 food products are stacked to be chosen and bought any weekend, in a short time that goes from one to two hours. Unhealthy diet or inadequate food choices every weekend are the main determinants of the years of healthy life lost by the Portuguese. In this very short time frame, the quality of life we want to have in the medium term is decided. The high intake of salt, sugar and saturated fat, the

deficiency of dietary fiber or the absence of fruit, vegetables or pulses are examples of consumption that can "kill us early" or, on the opposite way, can give us more years of healthy life or greater resilience to disease.

And how do we choose? How do we make the decision to buy the most nutritionally appropriate foods? The reading of labels has been consistently pointed out by experts as a good way for consumers to inform themselves about the foods' nutritional composition and to make more informed choices (we know, however, that other factors as price, convenience, flavor… must also be placed in this equation that determine food choices). Despite the importance of reading food labels, when analyzing the nutritional declaration, mandatory at European level and currently present in all packaged foods, we easily concluded that it is very difficult to read and understand by a common consumer who buys large quantities of food in a short time. In addition, it requires great mathematical literacy to convert, for example, quantities of salt per 100g of food to the weight of the portion you buy and to the individual daily limit of 5g. This calculation is almost impossible to achieve at the time of buying and, even more, it is a factor that contributes to health inequalities. In fact, the majority of the Portuguese population, who are older and have lower levels of education, have greater difficulties in understanding and using this information. In other words, the population that already has greater difficulty in accessing health care, which generally has a higher proportion of chronic diseases, who has to spend proportionally more on the disease control and on food, is also the one with the greatest difficulty in understanding information central to preventing the disease or its progression.

To overcome this challenge and create a front-of-pack nutrition labeling, which everyone can easily understand, regardless of their social condition, a nutritional algorithm has been proposed and is already being used in several countries such as France, Belgium and more recently Spain. This algorithm, when applied to packaged foods it allows to assign a color that ranges from green (food product considered to have better overall nutritional profile) to red (for food products considered to have a worse overall nutritional profile). Actually, it is a rectangular logo to be placed on the front of the packaging, divided into five colors (green, light green, yellow, orange and red), linked, in turn, to the letters A to E. This scale is intended to briefly describe the overall nutritional quality of food and, at the same time, encourage an easy and quick interpretation by consumers. Multinational companies such as Nestlé, Danone, Auschan, Leclerc, Intermarché, Bonduelle or McCain support this information model and are already labeling and advertising the food they produce with these symbols. According to those responsible, in the medium term, most of the food products sold by these companies will be reformulated and will show significant nutritional improvements. From cookies to breakfast cereals and even chocolate products. Many packaged foods may have a green color or close to it. A large part of the processed products sold by these multinationals will be easily reformulated - just remove or sparingly add 3 or 4 nutrients and they will bear a label that will not be red, certainly. Other companies or producers that do not want to join, not least because they can sell fresh products without the right to a label or others that have a reduced capacity for reformulation

should not want to join this voluntary scheme to improve nutritional quality through these good practices of "food literacy".

The process is ongoing and in the near future, supermarket shelves may increasingly have foods packaged with colorful labeling, making consumer choices easier on a daily basis, regardless of their social status. This will be one of the gains of this information model. Most likely, the availability of foods packaged with lower amounts of salt and sugar and more fiber and protein will increase. However, if there is no careful monitoring of these processes, the consumption of many food products that do not fit the nutritional profile model recommended by nutritionists may be encouraged, as we will see below:

1. The current nutritional labeling, which in recent years has been intensively studied in the Portuguese population, thanks to the efforts of the Directorate-General for Health and PNPAS, does not seem to fulfill the role of helping consumers to make the right decisions. Thus, **the studies carried out suggest the need to adopt front-of-pack nutrition labelling** such as those already adopted in Australia, Chile and other countries. The work carried out for the Portuguese population does not highlight any front-of-pack nutrition labelling scheme. All the models studied seem to have a good performance compared to the existing one (mandatory nutritional declaration).

2. In the case of **Nutriscore, which we have analyzed in greater detail here, as it is the model suggested to be adopted in the European Union**, the attribution of a position from A (green) to E (red) to a food depends on an algorithm, that is, of a mathematical calculation, where the presence or absence of certain nutrients has implications for the final color to be assigned. In this way, adding fiber and removing fat makes it possible to add value to a food, even if it contains considerable amounts of sugar. This is true, for example, of yogurts and breakfast cereals. The same can happen with salt or other nutrients. In this context, **one of the questions to be considered is whether we currently have sufficient evidence to define complex nutritional profile models that allow us to classify the overall nutritional quality of foods, without incurring great risks.** We have scientific evidence to support that a food product with 29g of sugar and 7g of fiber per 100g classified with the letter C (yellow) can be classified with the letter B (green) after being removed 4g of sugar and increased 1g of fiber, per 100g? This question certainly deserves reflection by professionals.

3. Another question that is closely related to the previous point is considered to **the impact of this FOP nutrition labeling model on consumer perception**, regardless of any food education campaigns that may be carried out. In other words, the process will improve the general quality of many packaged foods, but it can give a misleading indication, since a food classified with a green color will be perceived by consumers as a healthy food, encouraging its consumption. For example, for some food categories, the line that separates a C (yellow) product from a B (green) one, can be a very thin line in terms of the food nutritional quality, while the impact on consumer perception may surely be significant. In this regard, it would be interesting to carry out a "risk-benefit" analysis.

4. Unfortunately, **these imperfections identified in the Nutriscore algorithm are more common in the categories of yogurts and breakfast cereals**. Categories that are mostly aimed at children and that are often advertised using nutrition claims. Evidence has shown us that parents of young children are particularly susceptible to the nutrition-related claims on food labels or advertising, as they are often motivated to ensure a healthy diet for their children.

5. It will also be important to analyze the reasons that have led big food companies to adopt this model, after some initial resistance. Certainly, for the corporate social responsibility, changing the nutritional composition to improve many foods, which is great. On the other hand, the process will allow, with minor changes in the composition of 3 or 4 ingredients, to rewrite the nutritional history of foods and the public perception of it, transforming products previously perceived as bad nutritional choices into good nutritional quality foods. This is a subject that should deserve the attention of Nutritionists. We will be able to find on supermarket shelves minimally processed cereals such as oat flakes with the same simplified nutritional classification of highly industrially processed cereals due to the intense manipulation of their ingredients and certainly with a nutritional profile that is not the same (with about 24x more sugar for example). That is, chocolate-flavored cereals with the same classification as oat flakes. This creates a great opportunity for the marketing strategies of these companies. The experience of [Australia and New Zealand](#), which have already implemented FOP nutrition labeling models that have some similarities to Nutriscore, has shown just that. **These models have frequently inadvertently contradicting dietary recommendations and can promote the marketing of these foods that may not fit a healthy eating pattern. And with that, there will be another great challenge for those who are trying to increase nutrition education and for educators in general and that should deserve attention.**

6. An analysis carried out by us on December 17, 2020, in a sample of 91 food products available on the Portuguese market already labeled with Nutriscore, shows that 57% are classified with letter A or B ("green"). If we look specifically at the two most critical food categories, where we consider Nutriscore to perform less efficiently, this percentage rises to 80% and 87% for yogurts and breakfast cereals, respectively. For breakfast cereals, food products labeled A or B have an average sugar content of 17.3g (min = 9g and max = 27g). And for yogurts, products labeled with A and B have an average sugar content of 7.1g (min = 0.7g and max = 13g).

7. **These reflections become even more relevant if we consider that, in parallel to the discussion on the adoption of Nutriscore within the EU, the possibility of establishing a common nutritional profile model for the regulation of food advertising to children is also discussed.** The nutrition profile model based on the Nutriscore algorithm could expose many food products, whose advertising is currently banned according to the World Health Organization's nutrient profile criteria.

FOP nutrition labeling is a public health measure that can represent very important gains for the literacy and populations' health, and we have always favored its implementation in Portugal (including the Nutriscore option). However, **these tools need improvements in the algorithm and**

constant reflection by nutritionists, so that we can guarantee, one of the basic principles of the implementation of any public health measure - "first do no harm". Our value as professionals also depends on the ability to contribute to an in-depth discussion based on quality scientific evidence, on these and other topics.

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