NOVA in the definition of public policies in Latin America

NOVA en la definición de políticas públicas en Latinoamérica

NOVA na definição de novas políticas públicas na América Latina

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The fast-paced increase of the prevalence of overweight and obesity, as well as of chronic non-communicable diseases, calls into question governments and societies throughout the Latin America. In response, the region offers a number of public policies and theories in an attempt to manage this problem [1]. It started with the NOVA classification system [2] in the last decade, and was followed by the establishment of special taxes on sugar-sweetened beverages, restrictions on the offer of ultra-processed products in the school environment, designing of nutritional guidelines that expressly recommend avoiding the consumption of ultra-processed products, as well as the adoption of front-of-package nutrition labels, in order to discourage the intake of those products.

We talked to two individuals directly involved in the formulation of recommendations and public policies to review how the NOVA was implemented in the agenda adopted by different locations in the Latin America. Simón Barquera is director of the Research Area on Nutrition Policies and Programs of Mexico's National Institute of Public Health. As a co-investigator of *Mexico's National Nutrition and Health Survey*, he attempted, along with his Brazilian peers involved in the creation of the NOVA classification, to understand why rates of chronic diseases, especially diabetes, were increasing among Mexicans [3]. Barquera directly participated in the formulation of the scientific evidence that grounded two public policies intended to discourage the consumption of ultra-processed foods. First, Mexico created a special tax on sugar-sweetened beverages [4]. More recently, it adopted a front-of-package nutrition label system in the format of warns, inspired by the model created in Chile [5]. The nutritional profile implemented in Mexico to define which products should be stamped with octagon-shaped black seals is that of the Pan-American Health Organization (PAHO) [6]. This system was conceived in clear harmony with the NOVA.

Ximena Moratorio, coordinator of the Nutrition Program of the Uruguayan Ministry of Health, was an active participant of the elaboration of the *Nutritional Guidelines for the Uruguayan Population* [7]. The latter, although also being the golden rule of the Brazilian guidelines, discloses one of the key messages of the Uruguayan version: always prefer in natura or minimally processed food, as well as culinary preparations to ultra-processed foods. Based on the guidelines, the government enacted several public policies aimed at fulfilling the purpose of the guidelines. In 2018, the country adopted a front-of-package nutrition labels system in the form of warns, which is still in the implementation phase. In the midst of the COVID-19 pandemic, the Ministry of Social Development issued official guidance to limit the donation of ultra-processed by the food industry [8].

Dr. Simón Barquera (photo: personal archive).

Dr. Ximena Moratorio (photo: personal archive).

João In your view, what are the strengths and weaknesses of the NOVA classification? How would you rate its contribution to scientific research? What do you still perceive as points to be improved in the classification?

Ximena For us, in the Uruguayan scope, it was a classification that was gradually adapted, of course. Personally, as a nutritionist trained in another logic to analyze food, I believe that this new paradigm made us change. When I graduated, I was thinking about consumption guidelines, calculating nutrients, and what mattered most was that it was perfect: calcium, iron, vitamins. This totally changes the focus from turning the new focus not only to nutrients, but also to food, sustainability of food, on how it is produced, consumed and marketed. So, to me it seems a much broader, more complete view. I also believe that the NOVA classification named those types of food, which sometimes we did not know how to name. I always make the comparison, when I am delivering a talk on the nutritional guidelines, which I have had to draft several times, about how our focus changed. For example, we used to divide the food groups into cereals, sweets... and it did not matter much what was inside them. Today, we have a different view that approaches other food components, which not only have to do with how much sugar they provide, but which ones are really ingredients, and how many are in some way extracts or by-products of ingredients and food.

And, specifically, I think the main contribution is this: it changed the food paradigm with a much more comprehensive view on the theme. I think it brings together different views linked to environmental sustainability, with marketing and industrialization processes, rather than only nutritionists, looking at nutrients.

In the light of weaknesses, what have been our difficulties in adopting this classification? We have included in the guide one of our messages that specifically talks about avoiding, on a daily basis, the intake of ultra-processed foods with excessive amounts of fat, sugar and salt. And we surely had to face many obstacles to introduce that classification. We began the process of discussing the guide in 2015, when this classification was still relatively new, when it had not yet been adopted at a more international level. Of course, there were many detractors, mainly detractors linked to the industry where, I can tell you specifically that they even sent a note to the Minister of Health to request the non-inclusion of the term "ultra-processed" in our guide.

So, it seems to me that a weak point in the classification is that there is no coincidence about what classifications are. This is more visible here than in the chemical or even regulatory point of view, because if one looks for the term ultra-processed, for example, in our bromatological regulations it is not there. Moreover, food processing, from the perspective of those who work in food production at the industrial level, has a different meaning. It seems to me that we have to advance a little more in what has to do with the classification in regulatory terms, in the nomenclature, and also look for other nomenclatures that may have the same coincidences with the more chemical classifications, right? Because chemists and those who dealing with the food industry are generally our main detractors. That is so because they argue that industrial processing is being associated to negative connotation and this, many times, of course, makes food more innocuous or offer some sensory advantages, right?

Simón We work in a research center that advises the government. It is a think tank, rather than a group to implement food policy. So, what happened to us is that we spent years working in national nutrition and health surveys, gathering dietary data and, well, struggling a lot with that old paradigm, where you make a questionnaire, a diary of what the person ate the whole day before, and then that is converted into preparation, and preparations are converted to nutrients and micronutrients and then, based on that, you try to make some inference about the diets. That has a gigantic number of challenges and a gigantic amount of error, not only because of the method to gather information, but then how that information is converted to micronutrients. But, well, that would be one of the traditional methods that was in fashion, I would say usual 30 years ago, right? As we advanced a little in our effort to identify determinants of obesity, we saw, among some of the things relevant to us, this fashion of analyzing more dietary patterns than nutrients. And, well, some of the studies we started to carry on to understand dietary patterns, set processed and unprocessed food apart. And we became very interested in that way of looking at things. When the NOVA classification emerged, I think we were waiting for something like that. I think it really is a simple way of being able to classify and analyze the relationship between what populations consume and their health or disease patterns. Well, in our first attempts to use this system, we quickly found that it allowed us to identify very clear associations between some ways of food intake and certain patterns, especially of chronic diseases. I think that another thing that helped a lot was to understand how to identify policies to improve nutrition, and that is the profile adopted by PAHO, evaluating food in an integral way. So, in a way, ultra-processed food is not the preferred food because of the high amounts of critical ingredients compared to what that food effectively offers. This is also something that seems to us to be very appropriate, now that we are concerned about improving diets, implementing strategies such as warning labeling or taxes.

Therefore, this profile turns out to be very useful and Mexico adopts it. Moreover, we were fortunate that so far the whole process has favored this positioning. We participated in the design here in Mexico, and it has already been authorized at the level of law, and at the level of regulation, although it is not yet in place. It seems to us that it is an extremely practical classification and, as Ximena mentioned, there is lot of room for improvement. We see problems, for example, depending on the decisions one makes as to where some products fit. For example, here in Mexico tortillas are widely consumed, but the way they are made varies a lot. There are tortillerías that would be the equivalent of bakeries on every corner, all over Mexico. Some use industrialized flours that have even cellulose, made of corn fiber added with cellulose to keep the moisture or add colors; other tortillerías use a little processed corn flour, locally processed. So, as it is the basis of the diet, ranking the tortilla in a big survey as processed, ultra-processed, or as unprocessed does not help us much, because the way toritllas are prepared widely varies.

João I would like to talk a little more about this topic, about the criticism against NOVA, first in the light of the industry. What is your opinion about the opposition made by the industry, especially of this term "ultra-processed"?

Ximena We see an opposition mainly from the industry side because, of course, they are affected in products that are increasingly consumed by the population, mainly in Uruguay, but I think that consumption is very strong in the whole region. So, in a way, they feel it as a threat. In our country, for example, in the PAHO study that reviewed a period up to the year 2000, Uruguay reported the most upward trend in the consumption of ultra-processed products, compared to the other countries of the region [9]. Consumption has virtually doubled during the study period, with growing consumption of sugar-sweetened beverages in particular, but also of other types of ultra-processed products,

reaching more than 140kg a year. This consumption is particularly important, so clearly the industry is impacted by the type of products, because it also seems to me that the classification reveals many truths nowadays.

All these product lines that, behind a healthy image because they are reduced, because they are added, because they have a given label that includes, I don't know, that these are organic products. All this line of products that, unfortunately, many times the population associates with healthier products, are also negatively affected by this classification. Uruguay also adopted the front-of-package nutrition labels, initially taking the PAHO nutrient profile, with somewhat more flexible thresholds. And, of course, the population is surprised to find that there are many products reduced in sugars, in sodium, in fat, but that, nevertheless, have the labeling. So, I believe that this is a classification that reveals many truths, abolishing many myths. These products that, through advertising, through a very aggressive marketing, induce us to believe they are really healthy foods and, many times, even necessary to maintain health or proper growth and development in the case of children. Marketing is very aggressive and the products that are advertised, where the industry somehow tries to drive you, are ultra-processed products, superfluous products, whose consumption has to be induced through advertising. We do not see advertising of vegetables, fruit, at least in our country, milk, fruit, vegetables, unprocessed meats. There are absolutely not advertised. The marketing and investment of the industry are aimed at expanding the consumption of these other, based on few raw materials, surely of very little cost. Here, most of the investment is targeted to marketing and to create added value, based on the creation of a positive image of products that are not selling their nutritional value, but other issues that have nothing to do with food. So, it seems to me that the industry, in some way, perceives a threat to its most precious sales areas that have reported the highest growth in recent years. I also believe that technicians and professionals linked to product development feel somehow, I wouldn't say threatened, but they do not properly value the term 'ultra-processed' because many of them are dedicated to product processing. So, they indirectly see as if they are being attacked, because the word itself, they associate it to a negative connotation about their work. I think this is a matter of being able to find common ground. It is a classification that is still relatively new in some sectors. So, it seems to me, it is why I tell you that the weakness rests on the chemical classification. Somehow, we could approach, or find, a point that would get us closer to those who work in product development, so that they can also be part of this classification.

Simón Yes, I think that one of the problems is that these products have a clear impact on health. So, it becomes an issue that involves several rights of greater weight in decision-making, and I think that is the crux of the situation. In many other industries, when it comes to ruling in the country, they have every right to defend their positions and propose the most convenient ways of doing business. Here, in Mexico, what is very concerning for us is that this type of response from the industry, or from professionals engaged in this food technology, is basically a posture of defending their business in detriment of health, against the right to information, against the right to non-marketing. So, it does become a problem, a conflict. However, I believe it is a conflict where, undoubtedly, the trend and what has to happen for us to get out of this problem, which, in addition, as you have seen, has been worsened with this COVID-19 [10] epidemic, is that we have to change the model. I believe that this NOVA classification is very helpful for that.

I see this discussion here too, this discussion held by food technologists, where they say: "*it does not mean 'ultra-processed'; I can show you that olive oil also undergoes many, many processes*". And, well, I think it is a semantic discussion. No matter what we call it, we know very well, from public health and public opinion side, what we mean by "ultra-processed", its current effects on health, and we do not want it. I believe it is uncontroversial. There may be semantic controversies about the terms we use, but I think it is very clear what measures we have to adopt as public health professionals, and what should not happen. These products that population consume in such high quantities must change. Here, Mexico is also a jewel as an example, because of the low rates of exclusive breastfeeding at early ages of life due to the very early introduction of sugary drinks and, later, the replacement of traditional food by food such as instant soups, canned foods, which have very high amounts of these critical ingredients, is of concern. Another dream that I think food technologists have, I think it doesn't have much of a future anymore, in this new global trend toward healthy lives, was that of: "*Why not? So, tell us what you need and we will give it to you with technology. Do you want something sweet that is not fattening? We can devise a*

sweet flavor and offer you very sweet and not fattening food, because it has no calories". No, this is not a model that I believe has a future, this thing of replacing all sugar with non-caloric sweeteners, whose effects we do not know, but we know that they are not metabolically inert. This thing of putting caffeine in beverages so that they have some effect. It is not something we can build consensus with this type of industry. Now, I do see an opportunity for the industry. The industry has to adapt, and has to seek for less processed foods, as well as more sustainable forms of storage, packaging, and that it can market to subsist. But definitely not. This is not the model we have had in recent years.

Ximena I would like to add something on the topic. He said it was a semantic discussion, and I agree with that. It seems to me that it is a problem we have among technicians, not among population. This is nothing but a technical discussion. When we drafted the food guide, messages were validated. It was a work developed by two research groups of the republic University, Uruguay, and applied quantitative and qualitative methodologies [11]. The quantitative one was mainly through online surveys, because it was a fast and cheap method, low-cost, and Uruguay has a very comprehensive connectivity coverage. We handled those surveys in quite large databases with active workers. It comprised all kinds of workers, and when people were asked, both in the online survey and in the focus groups which were also done, people in general do not know how to define what an "ultra-processed product" is, that is true. However, when one asks them to place foods within that group, there are no major mistakes, i.e., there is really no misunderstanding in relation to which food matches. Surely, this classification is not perfect, but it is quite close, accurate, i.e., it seems to me that people understand well what we mean when we talk about "ultra-processed" food [11].

João I would like to ask about this trend toward reformulation. We see in some countries, even in the industry, sectors reformulating products so that they have few ingredients, no additives, no artificial additives. But these are still few products. And often expensive. So, what is your view about this trend toward reformulation? In fact, in 10-15 years will we have healthier products, or this is nothing more than another trend of appropriating something that comes from a societal demand for healthier products?

Simón I think they are taking it seriously, I mean, I have seen the reports they prepare, because they analyze the global trends. So, when this fitness market and all that, well, they follow it. They see this trend and, obviously, they are trying to find the formula for it. I am sure that those who first find products that comply with what this trend is looking for, well, they are going to have benefits. I see, for example, that criticisms are much more focused on exceptions. All systems have their flaws, i.e., there is no perfect system to classify. And what happens is that they look for the most extreme case, the one that may seem the most absurd, and that is used as a standard to criticize the system, isn't it? So, I think this is one of the should be identified. How to be able in exceptional cases, on the one hand, to defend the system and, on the other hand, not to punish products that are exceptional? For example, in Mexico there is a lot of discussion about wanting to increase the intake of oilseeds, because consumption is really very low. Suddenly the system, as we designed it, if there were some almonds and they were smoked, they could be qualified, the product is qualified in an integral way, as high in fat. Something that would not happen to natural almonds, because natural almonds are not assessed as it is a commodity. These types of exceptions make it complex, and render the system susceptible to criticism. In this first stage we did not to evaluate smoked almonds this way, as they would not be high in fat, they would not be evaluated in their totality. That is something I think. What if the industry goes from 3 seals to 2 seals, or to one seal, i.e., if in the reformulation they improve the profile, that will benefit them, because the public health message that one should convey is something like that of Chile: choose seal-free products or products with fewer seals. If there is no seal, even better. I believe that, in any case, even if in the end we succeed in having products with less critical ingredients, the future, not to say the immediate, but the medium term will be even more ultra-processed. Not thinking so much, if they have a lot of salt or sugar or fat, it is ultra-processed, it is not so convenient.

Ximena Because of a little bit of this criticism and the validation process, when we incorporated the message into the food guide we did not talk about ultra-processed in general, but ultra-processed with excessive amount of fat, sugar and salt, because it was a way to overcome some criticism. At a time when the battle to incorporate the term into the food guide was really hard, there was a lot of pressure, that was a fairly Solomon formula to be able to transcend, and at the same time look for a way to identify them. We have to move towards a front-of-package nutrition label system that can

tell us which are the products with excess, I am not saying that this was the only origin of the front labeling policy, but, well, it also helped. What we see is that reformulations, at least so far, are more focused on avoiding the seals than on improving the product in qualitative terms.

João Simón, how did the decision to adopt the PAHO nutrient profile, as well as the profile for seals, come about among you, and how it was compared with other nutrient profiles? What has been discovered in its practical application? What are the strengths and weaknesses?

Simón When we were in the process of evaluating a front-of-package nutrition label system for Mexico, which we started in 2007, i.e., many years ago, even before the emergence of warning labeling, we were already looking for a system. We started trying one of those seals that positively qualify 20% of the products in the market, of the *Choices International* type. So, it means that he products that have the best profile will be rated very well and will get this seal, which the industry did not want either. Now, oh, they would have loved it. They would not change it. However, in the meantime, when we were exploring possibilities in Mexico, we were evaluating the food environment and one of the things we did was to take pictures of products. So, we have more than 18,000 products in the last two or three years, collected from all types of ultra-processed products in Mexico, which are very many, and that has allowed us to evaluate the profiles a little bit. Then, we may evaluate a hypothetical labeling system and how it would qualify products, etc. On the other hand, a very good thing that happens in Latin America is that we have the networks and the Internet. And with all that, there is very close communication, I would say that it is real-time communication between Latin American countries, including Brazil, Argentina, Chile, Uruguay, Mexico, Colombia, Peru. All these countries have close communication, and the Academy does not disappoint, since we all communicate very well with our academic peers. So, we saw how this whole paradigm has developed in Brazil, we used it, we used the classifications, we were among the first countries to apply it in Mexico and see how it worked. Regarding the warning labeling, what we did was to establish a quick international committee on the Internet. We brought experts who had some experience in the implementation of front-of-package nutrition label. So, they came from Peru, Ecuador, Uruguay, Chile and they told us all the problems. They also came from Brazil. And this committee told us all their experiences, the problems they faced, what the industry was going to tell us. They told us before the industry: look, they are going to tell you, this is very difficult to defend. With all that information we could draft a very solid proposal, we were very ready to defend it, we had the material.

Another thing we did was to run the models and compare the Chilean profile, for example, with the PAHO profile, with the profile of different classification systems. We saw, for example, that the Chilean profile is much better than the profile we had in Mexico for classifying problematic foods, but undoubtedly, if we applied the PAHO profile, it would be much better. That is, it identified problematic foods. An example is that in Chile, in order to label a product as high in calories, there is a cut-off point that is indistinct for liquids and solids. So, a soft drink, for example, Coca-Cola has only one seal that it is high in sugar, but a yogurt could be high in sugar, high in calories and could even say high in fat. Three seals a liquid yogurt and Coca-Cola one seal. So, someone might think that Coca-Cola is better, because it has less seals, according to the policy recommendation that less seals, the better. Well, what we did in Mexico was, on the one hand, to change the cut-off point for liquids. So, soft drinks or any beverage, if it has the equivalent of more than 5g per cup, i.e., 5g x 250mL or 2.5 per 100mL, 2g per 100mL, it would be high in calories. Therefore, Coca-Cola would have two seals and it would also have a legend that it contains caffeine, and that no, this product is not recommended for children. So that was part of modeling and observing how ingredients looked in this large database we had of more than 18,000 products. Another thing that this database allowed us to do is that when the industry said no, you are creating a system according to which all our products will be full of seals, and they said so in the media and in the newspaper. Then, we quickly told them no, we have a database of 18,000 products here, and what do you think? Thirteen percent of the products, or 14% of the products, will have no seal. About 14% will have one seal and lots will have 2 and 3 seals, while almost none will have four seals. In addition, since our system has more seals, it has seals for trans fats, for sweeteners, for caffeine; the Mexican system has 8 seals. No system in the world has 8 seals. But, well, we proved them using this, this evidence, that most of the products would not have more than four seals. That also helped a lot.

Ximena [Here a paragraph was removed because lost part of the sense, due to context-related changes]. Unlike Mexico, our proposal for front-of-package nutrition label, the one that is currently in force, although there is a decree extending the enforcement of the decree, includes 4 seals as follows: sugars, fats, saturated fats and sodium. We have no warning for sweeteners. So, a possible risk is the replacement of sugar for sweeteners, clearly. Therefore, although we have been in standstill since the decree was drafted, we always thought that the campaign should not only be aimed at consuming foods with fewer seals, but that somehow it had to be accompanied by a message. Thus, we thought about the campaign we conducted last year, to value homemade food and natural food, because otherwise we run the risk of ending up consuming reformulated food, which may have an advantage when compared to the original food, but is still an ultra-processed product. And what we need to encourage the population to do is to base their diet on natural food, and that this type of products is the exception and not the rule. So, this is where the efforts have been somewhat focused. It is a great challenge, to be able, on the one hand, to establish and advocate for the front-of-package nutrition label, arguing that this will obviously have a benefit for the population, especially in terms of information and of enabling informed decisions. On the other hand, to continue defending the return to more traditional culinary practices, to defend natural food, local production, and, well, local trade and home-cooked meals.

We have to work on both things at the same time, because otherwise the message ends up being: consume ultra-processed food, but with fewer seals. I also understand that our labeling is not, it does not have as many features as other models where other seals are introduced, and we miss these seals. We wanted to introduce a warning, not with the same meaning and the same format of the excess of critical nutrients for sweeteners. It was simply to place the presence of sweeteners in clearer lettering on the front of the package. However, there was no consensus, especially because it was not understood the advantage at Mercosur level. Especially because we obviously belong to that region.

João In the case of the guide, how have other government sectors, Agriculture, Social Development, Economy, etc., interacted with the document? Have other public policies been created from the document?

Ximena We had a fairly broad consensus group that comprises, if you go through the guide, many sectors. Of course, the Ministry of Social Development, the Ministry of Education, Livestock, Agriculture and Fisheries and several governmental institutions related to the subject, academia and civil society have participated. In a way, we are trying, and of course it is a great challenge, to transcend the food guide as a merely educational tool. Rather, we want to adapt it as a public policy guideline. And in that fight we are, of course, we also have a decree that sets a commission to address overweight and obesity, to develop public policies to address this problem. And one of the lines of work is the implementation of the guidelines issued by the food guide in other public policies. And one of the great challenges is clearly to create healthy educational environments. In that line, once the decree is enforced, we must reword what is the list of foods recommended for sale in educational centers. We have a law, Law 19.140, which assigns to the Ministry of Health the competence to elaborate the list of recommended foods, where we have a group 1, which are natural food; group 2, which are more homemade preparations; and group 3, which are packaged products with high content of critical nutrients. Based on the labeling, we were going to reword this list that already includes the NOVA classification, but which could be further developed based on the incorporation of labeling. In fact, there publications available on the Ministry's website, where the exclusion of ultra-processed products with high fat, sugar and sodium content from this list has already been introduced.

In this context of COVID, the Ministry of Social Development has issued some protocols in terms of what are donations. This is also a kind of opportunity for the food industry to channel products that we do not want to be further introduced into the family and then become a habit. Therefore, a protocol is established to evaluate donations and, in the case of ultra-processed products, a committee analyzes the relevance of accepting the donation. If accepted, what would be the destination of the donation? In order not to interfere precisely with the food that is intended to be promoted.

Contributors

J. Peres participated in the drafting of the text and revision of the final version to be published. S. Barquera and X. Moratorio revised the final version to be published.

Additional informations

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