


### Are we talking about food? Journalists' speech and content analysis of popular news


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Healthy eating is one of the main themes of health promotion and source of journalistic information. The research analyzes the content of a popular Rio de Janeiro regional newspaper and the discourse of the collective subject of its journalists. With a quantitative, descriptive and exploratory methodology, it was observed that the paper focuses on the effects of specific foods and recommendations of the Dietary Guidelines for the Brazilian Population, and prioritizes information on *in natura* foods, to the detriment of the ultra-processed ones. There is, however, little room for commensality and predominance of the voice of experts. The journalists' speech confirms the findings in the print and highlights that part of the texts analyzed is configured as service journalism with aspects related to health promotion.

**Keywords:** Health in mass media. Health promotion. Journalism. Food. Health communication.

## Introduction

Mass media is a space for health promotion, informing behavior change and pointing out the social, economic, and political causes for good health<sup>1</sup>.

Analyzing what is disclosed in the press enables an assessment of the sources of information for people to decision-making<sup>2</sup>. Journalists are singled out as reliable sources of information, only behind the medical profession<sup>3</sup> and Health is among the main topics of interest<sup>4</sup>. Among the focuses of the National Policy on Health Promotion (PNPS)<sup>5</sup>, healthy food permeates the whole population and is a frequent topic in the press, sometimes dictating more or less healthy foods according to research, fads or market interests<sup>6</sup>. The health and diet pattern of the population has changed in recent decades, based on social inclusion policies and poverty reduction, but there is also an increase in sedentary lifestyle, weight excess and inadequate consumption choices that bring new health problems<sup>7,8</sup>.

People do not guide their diet based exclusively on their individual choices, but that decision also reflects the family, economic, and social issues - hence the challenge of promoting healthy eating. In the midst of fast, canned and industrialized foods, it is important to rescue, preserve and encourage healthy eating habits and practices. Among the different nutritional references, the Dietary Guidelines for the Brazilian Population guides the food for health promotion, with simple and accessible language, indicating the preference for *in natura* foods in detriment of the ultraprocessed, as well as tips for the act of eating<sup>9</sup>. It considers not only the nutrients, but includes the commensality and sustainability. Although fruits and vegetables are present in the Brazilian routine, only a quarter of the population (24.1%) consumes at least 400 grams daily as recommended by the World Health Organization<sup>10</sup>, while increasing numbers of people are in search of healthy food. Reducing the consumption of ultraprocessed foods in Brazil is a way to promote healthy eating, since "the diet of the 20% of Brazilians with the lower ultraprocessed food consumption approximates the international recommendations regarding nutritional indicators of the diet"<sup>11</sup> (p. 8).

Health professionals and governments can use the media to reach the population<sup>12-13</sup>, due to its capacity to create habits and consumption needs. There is, however, a conflict among the decision for a specific type of food, the influence of the media and the recommendations of the promotion of healthy eating<sup>14</sup>.

Between biological food and the pleasure of its social representations, it is necessary to reflect if the media information about food is favorable or not to health and if the decisions of consumption are based on individual will or just social norms<sup>15,16</sup>.

One of the obstacles to healthy eating is the amount of information that people receive daily. Quality is dubious, ultraprocessed advertising predominates and is not always correct and complete information, reaching especially children and young people. One of the research axes of food anthropology refers to the analysis of the transformations of food behavior and the social and economic pressures that interfere with it<sup>17</sup>. The media is understood as a component of this pressure system that acts on the alimentary behavior. In the midst of the "cacophony of nutritional claims", it is necessary to rediscover proper feeding<sup>18</sup>.

Cultural references have been lost in alimentary decision-making, and therefore, people are more susceptible to pressures from the media. These pressures are interpreted as a phenomenon in the line of gastronomy, an increase of conflicting views

about what “we need to” eat, while there is a desire to balance food all the time<sup>18,19</sup>. The large amount of information therefore can confuse people over every nutritional novelty - not always coincidental - like diets and miracle formulas. Healthy eating is present in the speeches of the people. For North Americans, under strong medical discourse, health is directly related to food. For Europeans, health is present as one of the necessary effects of eating much more than the very substance of the food<sup>20</sup>. In Spain, the analysis of the coverage of the main printed forms of the country and the electronic version of the New York Times showed that food was the fourth theme with the highest number of texts<sup>21</sup>. In 2015, the Spanish print media brought more than 20 thousand health information pieces, and more than half of them, with food-related topics<sup>22</sup>. In Canada, it was noted that there is much research on food and its risks as well as food safety<sup>23</sup>. In Italy, it was observed that the five main Italian newspapers have food as the main theme (36.7%) and the information is more localized in the health section of the newspaper<sup>24</sup>.

In Brazil, there is a debate on aspects of quality of life, the role of the media in combating poor eating habits and the challenges of malnutrition, transgenic and food security<sup>25</sup>. A certain focus has already been observed on the promotion of health, risk factors for illness and also on association with aesthetics, using colloquial language that escaped the scientific character<sup>26</sup>.

There are publications with a conservative dimension of health promotion, where a healthy life appears as the sole responsibility of the individual and the interpretation of epidemiological data becomes something restricted to the regulatory bodies, government and health professionals, disregarding the specificities of each subject<sup>27</sup>. Food for a healthy life is associated with the compulsory consumption of products by normalizing life by food<sup>28</sup>. There are recommendations for diets with reduced supply of energy and nutrients, excluding important vitamins and minerals and inadequate nutritional values, not regarding the individual attention to diet as well as skipping the care of qualified professionals<sup>29</sup>.

Do the popular, heavily service-oriented<sup>30</sup> newspapers follow these standards when it comes to health and nutrition?

A popular regional newspaper of the state of Rio de Janeiro, in 2015 had an editorship of Health and knowledgeable staff. It had a readership among social classes B and C, a penetration of more than 20% in the municipalities of the state of Rio de Janeiro, in the west and suburbs, and it presented an online edition similar to the printed one with 5 million visitors and a circulation of 40,000 copies<sup>31</sup>. We are therefore interested in understanding how this journal brings the topic of nutrition in the health editorship, not only by analyzing the published content, but also considering the perspective of its journalists. Although health promotion was mentioned as a responsibility not only in the health sector but also in the press, no research was found that encompasses the theme of Health Promotion and healthy eating in the press and that includes the perspective of information producers.

## Health promotion and journalism

The concept of health promotion is not a consensus in the scientific literature. There are authors who relate it to the change of habits and individual responsibility

of the people, others understand it in the extended perspective, related to the social determinants of health.

In 1986, the Charter of Ottawa, Canada, was drafted during the 1st International Conference on Health Promotion to meet the expectations of a new public health. In the Charter, health promotion was defined as “a process of empowering the community to work on improving their quality of life and health, including greater participation in the control of this process”<sup>31</sup>. The document brought the need for media support in order for the health promotion policy to be applied<sup>32</sup>.

More recently, new theoretical developments have emerged from this expanded concept of health promotion, among other objectives, to propose models of evaluation, considering social determinants of health that influence as much or more than the individual decisions of people, a concept defended by the so-called new health promotion. Brazil did not participate in the Ottawa Conference, but adhered to the proposal and participated in other conferences. And after the 8th National Health Conference in 1986, much was said about health promotion in the country.

In the late 1990s, WHO published a set of principles for evaluating health promotion actions<sup>33</sup>, adapted and tested in Brazil in the early 2000s<sup>34</sup>. More recently, a matrix of descriptors has been proposed, based on health promotion to reduce the fragility of population groups, combat inequities and incorporate participation in health management<sup>35</sup>.

The first Brazilian National Health Promotion Policy (PNPS), launched in 2006, already proposed the dissemination, sensitization and mobilization and defined specific actions for priority themes, healthy eating among them, citing actions such as campaigns and articulations to increase the number of information on health promotion in the media<sup>36</sup>.

In 2014, the Policy was revised with broader social participation and democratic representation, problematizing health promotion practices and capturing the country's diversity<sup>37</sup>. This redefinition of the PNPS maintains its base in the expanded concept of health and according to ordinance 2446, of 2014, refers to

[..] a set of strategies and ways of producing health, in the individual and collective scope, characterized by articulation and intra and intersectoral cooperation, through the formation of the Health Care Network, seeking to articulate its actions with other social protection networks, with broad participation and social control”<sup>35</sup>. (p. 1)

The new text reinforces the PNPS 2006 objective and innovates bringing values such as happiness, ethics, solidarity, respect for diversity, co-responsibility, justice and social inclusion. Among the principles (later developed in eight guidelines) one can perceive the link with the international literature on health promotion, based on equity, social participation, autonomy, empowerment, intersectoriality, intrasectoriality, sustainability, comprehensiveness and territoriality. It is interesting to note that the above mentioned ordinance lists topics considered transversal to PNPS, namely the social determinants of health, equity and respect for diversity, sustainable development, humanized health and care production according to local needs,

popular, traditional and scientific and healthy territories, life at work, culture of peace and human rights.

The text also presents eight priority themes, one referred to food, and proposes the need for actions that promote adequate and healthy food and food and nutritional security, contributing to poverty reduction, social inclusion and the guarantee of the right to adequate and healthy food.

The communication appears in the new PNPS as part of its specific objectives: “to establish social and media strategies aimed at strengthening the principles and actions in health promotion and the defense of healthy public policies” and “to stimulate the research, production and diffusion of knowledge and strategies in the field of health promotion actions “. One of its axes is the dissemination through the formal or popular media to listen to different groups “contemplating information about the planning, execution, results, impacts, efficiency, efficacy, effectiveness and benefits of the actions”, as well as the production of publicity materials to socialize information and actions of health promotion<sup>9</sup>.

These elements give us clues to reflect on the possibility of journalism promoting health. To be considered as a health promoter, a journalistic text about nutrition should at least spell out some aspect of health promotion. Even trying to avoid to make journalistic work more stiff, because it has its own dynamics, specificities and logic, it is considered important to reflect that if the texts bring some of these elements, we could consider it as an auxiliary in health promotion.

There is recognition that communication is key to health promotion, because changing individual habits and visibility of the impact of social determinants on health can be achieved through persuasion, not coercion. On the other hand, there are criticisms stating that discussions about health are far from the population. The population, in this view, is poorly informed by the government about the meanings, technological advances and their risks and the management processes in an understandable language, rendering impossible the decision making. This allows the influence of the media dictating what is good for health<sup>32</sup>. The promotion of health can be assumed by the press without focusing on the medicalized scientific-technical solution, which does not consider individual aspects of each person, but includes health in a promotional way that includes “education, housing, food, income, environment, social justice and even peace” as its determinants<sup>38</sup> (p. 74).

The media are creators of new consumer habits and needs, whether through food advertising or through often contradictory journalistic information, which emphasize from the lowest calorie diet possible to keep the body lean having consequences for those who eat less (or more) than necessary. “The discussion of supposed freedom in the choice of food and eating reflects conflicts between free choice, the influence of the media and the recommendations of promoting healthy eating”<sup>12</sup> (p. 101). One may question, even if the food decisions are the will of the people or a response to social norms of commensality<sup>16</sup>.

Reducing the issue of diet and nutrition to individual control of nutrients and calories absorbed only seems to aggravate the cacophony in which consumers debate, further trivializing the eating act - in a word: disenchanting food<sup>20</sup>. (p. 138)

It is therefore complex to try to translate what would be healthy eating, because as in the case of Health Promotion, there is no consensus among experts, and it depends on different cultural, social and economic factors already reported above. In this study, these aspects were inserted in the history of debates in the scope of the federal public health manager, synthesized in the National Food and Nutrition Policy and in the Dietary Guidelines for the Brazilian Population.

This Policy seeks to ensure the quality of food, promote healthy habits, prevent and control foodborne diseases and their actions require popular participation throughout the process, diagnosis and objectives to implement actions<sup>39</sup>. It was the first policy to use the Health Promotion benchmarks when presenting the concept of food and nutritional security, translated into a guarantee of access to quality basic food in sufficient quantity, in a permanent way and without compromising access to other basic needs such as health, education, housing, work, leisure [...], based on eating practices that contribute to a dignified existence, in a context of integral development of the people. On the other hand, the Guidelines presents as one of the obstacles to healthy eating, the amount of information about the subject to which people are daily submitted, of dubious quality, as well as the advertising of ultraprocessed foods, which predominates in food and do not always convey correct and complete information, forming the opinion of children and young people in particular.

## Material and methods

The descriptive, exploratory, qualitative and quantitative study<sup>40,41</sup> aims to know the reality of healthy eating in the perspective of the press. The research was based on the triangulation to elucidate the reality in different knowledge with interdisciplinary discussion of the data<sup>42</sup>.

The documentary sample is composed of journalistic texts presented by the Rio de Janeiro newspaper *O Dia*, published in 18 consecutive months (January 2014 to June 2015) in the health editorial, with the food theme. The texts were collected at the Observatório Saúde em Mídia, from the Fundação Oswaldo Fiocruz and in the newspaper's online collection. The journalists who worked at the time of the interview or previously in this edition were included as subjects of research.

The newspaper does not belong to a hegemonic group of communication nor it counted on specific equipment for the subjects of health. Our focus is on how the newspaper brings food information from a health perspective, excluding texts that refer to food or food, but have no relation to human health or were presented in other spaces of the newspaper other than the Health Editorial.

For the collection of data in the forms, a content analysis form was created<sup>43</sup> containing variables that describe who talks about food in the newspaper, topics, types of food, positioning in the texts in relation to health, information public, sources of information, references made to SUS, and frequency of published texts. The data were organized in Units of Information (UI) whose frequency was counted and its content evaluated according to a key question for the text sample. Each UI represented an idea or subject to be evaluated by the encoder (one word, phrase, or several paragraphs). Once the sample was selected, during the reading of each text and verification of the UI, each time it was a topic, sub-theme or any other categories that make up the

content analysis form created, a new UI was delimited. This unit ends when any of the elements to be coded changes, creating a new UI for analysis<sup>43</sup>. The advantage of this method identifying several UIs in the same text in relation to other type of analysis such as Bardin's<sup>44</sup>, is that various subjects are treated in different ways and can be classified and categorized individually.

The content analysis form was created in Google Form and then the data were transported to the q-Health application, designed to streamline the collection and visualization of data on the Bluemix platform, connected to artificial intelligence *IBM Watson*.

The Morin-Chartier analysis is based on the frequency results of the variables and their weight-trend, considering the engagement of each UI on the subject of food and health. It was considered favorable, information about food that is presented according to the Dietary Guidelines for the Brazilian Population, unfavorable, information contrary to what is described in the guide and neutral, when the theme is not explored in the Guide, or without qualifying elements. Based on the results of the Engagement category, we worked with the weight-trend indices, which specify the influence that each category has on the total sample (the total of the favorable units, referring to that subject and the total of the unfavorable ones, divided by the sum of them, multiplied by 100)<sup>43</sup>.

The collection of data from health journalists was done through interviews in a structured script with questions about the process of producing journalistic information in health promotion and healthy eating. The professionals who worked in the publishing house were located before or during the analyzed period. The key expressions of the statements were synthesized in central ideas, constructing a Collective Subject Discourse (CSD), observing approximations and distances between the information reported by the press workers and the content analysis of the newspaper<sup>45</sup>. In both steps, the data collection instruments were pre-tested.

This study is part of the Research Project entitled "Health promotion in the press: is it possible? Daily voices of community health agents and journalists" approved by the Ethics Committee under the number 49097715.8.0000.0030 e 49097715.8.3001.5279.

## Results and discussion

Five journalists, all women, with at least one year's experience in the newspaper's Health department were contacted. One of them did not accept to participate of the research, and the CSD was constructed from the report of the other four interviewees between the ages 30 to 45 y.o.; half of them with postgraduate studies and more than 15 years in journalism. None of them did any specific course on health journalism. The central ideas and their respective Collective Subject Discourses are given in Chart 1.



**Chart 1.** Discourses of the Collective Subject on Food and Health Promotion

Central Ideas	Discourse of the collective subject
1. Promotion of health as service provision	Various attitudes can be considered health promoters, such as healthy eating, physical exercise, getting enough sleep every night, not smoking, not drinking too much, etc. It is important the role of the press in promoting health because people need information about prevention, the newspaper is very focused on services to the reader, on how they should do things. Whenever any disease is addressed, there is concern in showing how this problem can be prevented.
2. Focus on recommendations	The theme is very broad: infant feeding, the benefit of some specific food for health, a balanced diet, new discoveries in the area always have a good agenda focused on food and health of the body. Diets, how to make food healthier, which foods should be cut / included. Attitudes not recommended in food, recommended foods to treat / prevent health / illness problems, the danger of certain food groups. In addition, research that uncovers a benefit on food always yields interesting materials.
3. Healthy eating based on food intake (or not), with no space for commensality	Healthy eating, it is a diet based on natural foods that includes all the nutrients (proteins, carbohydrates, vitamins and minerals), you need to put all food groups, eat little, the healthy part is to try to control yourself, balance the things that you like to eat with things that are good for your body. For healthy eating we should drink plenty of water, avoid frying, fat, refined sugar, ultra-processed foods and alcohol.
4.Alert for trend news	Healthy eating is what we know, but every day a novelty is invented, about what is healthy or not. There is also a lot of divergent information among the doctors themselves.
5. Absence of public health in health Editorial	We had to stop doing public health, because you have to be on the street, go to the hospital, health station, UPA, you have to be on the sun, rain, it's that same classic reportage thing. This other health that we started to do, which is the health of the office, is something that could be done over the phone. It is not to do something terrible, a SUS problem. It is to be a lighter matter even, usually for health promotion.
6. Priority of scientific discourse	The text should be scientifically grounded and supported by experts who study the subject. Scientific articles are a good starting point because they give the journalist a technical overview and it avoids mistakes. Always work the research, the data, the numbers, listening to a specialist, an orientation of an accredited professional, university, or some respected entity, because this will stamp information. It is important to listen to specialists such as nutritionists, and doctors from other specialties that study the subject (endocrinologists, general practitioners, etc.)
7. The population as a character gives credibility to the text	Real stories make people believe what's being told, makes them try to follow the example. Overcoming stories are very good because they show that it is possible, it helps in health promotion, having examples that show that it is important, it humanizes the text.
8. Criticism on the work that in theory, promotes health	The promotion of health configures all actions aimed at disease prevention. Reports published on websites, newspapers, magazines often reach more the population than educational actions and health promotion, it is without a doubt a strategic vehicle for promoting the health of the population. There are grains and chaff regarding feed materials. There are excellent reports, scientifically based, showing pros and cons. Most of the health news is for food. Pro: truthful information that will help the reader to eat healthily. Con: the trendy diet, liquid diet, upside down diet. In this case, there is no concern in promoting the reader's health, but in selling newspapers / magazines or increasing the number of clicks on the site.

Source: Own authorship (2017)

Regarding the texts, 439 content on nutrition was found in the Health magazine. Of these, 70 were excluded, classified as advertising. Those who spoke about food, albeit not for dietary purposes were excluded. In all, the sample contained 341 texts; of them, 110 notes, 29 news stories, 141 articles, 50 reader letters and 11 tests were analyzed. Most of the content featured only text while 124 others brought photos, four illustrations, 15 used the infographic feature and three brought more than one of these visual aids to supplement the information.

A total of 1668 UI were identified with specific food content. The majority of them in the informational genre, being notes (10%), news (9%) and most identified in reports (73%), as predicted, considering that the report allows for a broader debate on a



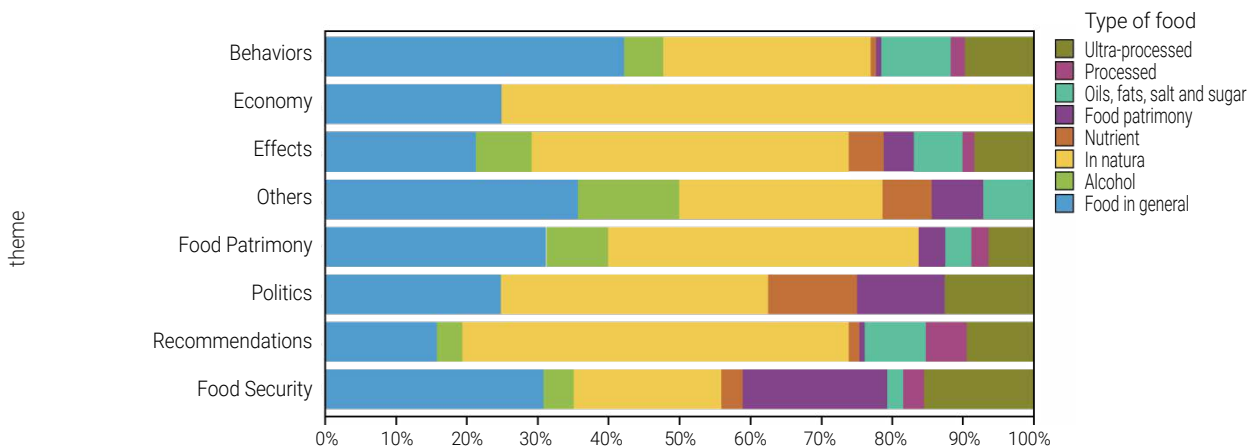
given topic and, consequently higher number of UIs on food possible to be identified. The opinative genre presented only reader's letters, totaling 6% of the sample, while the tests were 2%. Most food information was on odd pages in 2014, at 74%; and there was a majority in the even (less valued), pages in 2015, with 84%. The themes were classified, mostly as Effects (45%), followed by Recommendations (26%).

In describing these effects of food, more than half of the UIs focus on the consequences of diet on the body and metabolism (66%), followed by disease prevention (14%). In part of the sample the effect appears in the title: "eating watermelon controls the pressure"; "Colorful rice prevents diseases". The effects of food have news value, because this information drives decision making of those on consumption, and readers' behavior is influenced by this information in the press<sup>46</sup>. This allows to take up more space in the newspaper. Several texts with this theme present foods as heroes, sometimes as villains, which confuses more than inform the population, and can hide advertisements in it. In a report on detox products, for example, titled: "Capsules, liquid or powder - detox for all tastes", there are quotes for detox products, as well as a photo of the packaging and a woman consuming the product. The focus of the matter seems to be the artificial detoxifiers, despite the expert's talk about the importance of naturally seeking this detoxification, with recipes produced *in natura*. It was noticed an imbalance between the alternative medicine and the natural diet, especially the artificial one.

In another text, an example could be considered a health promoter to some extent: "Replacing common white rice by the colored types - black or red - can retard aging." There is not a deterministic relationship of consumption need to achieve certain effect, but a suggestion. The media are interested in information that promotes health and well being, since it is a topic that attracts the public<sup>47</sup>. Prevention is complementary to health promotion, and sometimes the concepts are confused among journalism professionals, as presented in CSD-1, which interprets health promotion as service delivery.

With regard to recommendations, the most frequent theme is that half of them involve the use of *in natura* foods (50%), followed by the minimum use of oils, fats, salt and sugar (9%) and the need for avoiding the ultra-processed products (9%) following the Dietary Guidelines as in the units "The nutritionist adds that fatty foods should be an exception in the diet"; and "acrylamide is not added to the food, but formed during the production process and there is still no safe limit for consumption, so it is best to avoid". The press can inform what is expected of a behavior in health as well as which conduct is disapproved<sup>48</sup>. It was observed here the active journalism as a stimulus to the healthy life with divulging of healthy goods and behaviors<sup>49</sup>. The most frequent foods in the sample were *in natura* (present in 714 UI) and food in general (408 UI), while ultra-processed foods appear in only 154 UI.

Breaking down the relationship of food by subject, *in natura* products are not predominant only when the UI refers to behaviors and attitudes or food and nutritional security, according to Figure 1.



**Figure 1.** Relationship between theme and type of food presented by “O Dia” in the period of Jan. June 14 to June 15

Source: Own authorship.

When the newspaper gives more space for *in natura* foods, it suggests consumption in the decision making of the people, besides promoting more spaces of speech about them. The CSD-2 confirms this finding focusing the texts in the alimentary recommendations. It is well known the importance of consuming less ultra-processed foods<sup>9,11</sup> and if these are to a lesser extent in health editorship, compared to fresh food, it can be considered that in this regard the paper promotes health to some extent, also meeting the Dietary Guidelines for the Brazilian population.

Recommendations that do not refer directly to food but to the habits had little expression in the identified UIs. Eating regularly and with attention and in company (8%) had more recurrence in texts with sayings such as: “do not give up breakfast”; “eat every three hours”; and even texts that mention the Dietary Guidelines itself. Attention to commensality is important for better digestion of food, more efficient control of how much is eaten, more interaction and pleasure with food<sup>9</sup>.

Buying in places with pure food offerings (1%) had its greatest expression in the text of the Dietary Guidelines when it was still in public consultation. The other recommendations in the Guide were punctual in a few UIs. Such recommendations encompass: developing and sharing culinary skills (5%), planning the use of time for food (6%), giving preference to places that serve meals on time (1%) and being critical about information in commercials (5%). In fact, a central idea identified in CSD-3 was the concept of healthy eating presented by journalists based only on the ingestion (or not) of certain food groups and not on commensality aspects, which may explain the low frequency of the theme in the texts.

The speech of the journalists also sends an alert regarding fashion news, according to CSD-4. In fact, there is not one but several healthy food products when it is considered that food has several determinants and food does not have an accurate and objective category. Cultural variations and different metabolisms make it difficult to determine how much of each nutrient should be eaten regularly, because what is good for one person is bad for another<sup>17</sup>.

Thinking about food for health promotion requires going beyond the clinical prescription of good or bad food, but understanding the individual's culture, economic conditions, symbolic value in the choice of food, among other factors. One must therefore understand how people interpret what they eat<sup>50</sup>.

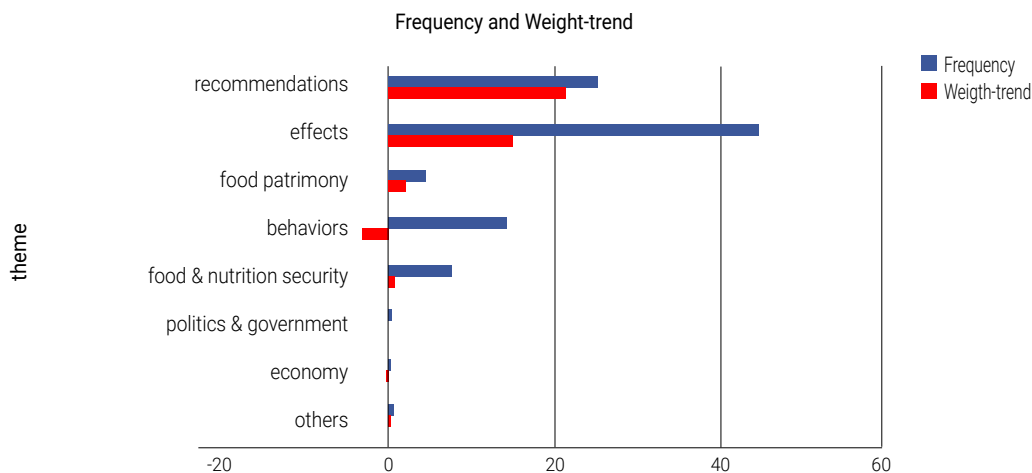
The UI's related to the SUS presented two main themes: food security; and politics and government, with sources from the government itself. This is justified by CSD-5, which confirms the shortage of professionals to cover public health and the search for lighter news in this newspaper space.

Regarding speaking in the texts, health professionals were the only source in the tests and reader letters. In the global sample, they occupied 27% of the units. Most of them were classified as unidentified sources (53%). Science was the source in 11% while the population was in only 2% of the texts. Government (5%), media and private sector were the source in less than 1%.

In the units with an identified source, there was a predominance of health professionals and science and little space for the population in the texts. It is necessary to take into account the strength of the specialized knowledge that legitimates the information in health, since its professionals have authority on scientific subjects<sup>51</sup>. Although ordinary people were also cited, the priority of scientific discourse in the verification of texts was confirmed in CSD-6. According to the Ottawa Charter, health promotion was defined as "a process of empowering the community to act to improve their quality of life and health, including greater participation in the control of this process." We can infer that journalism could bring more frequently the voice of the population, with examples of healthy eating, which according to CSD-7 gives credibility to the text. Journalists should not cover health like other subjects, considering only the accuracy and clarity of the texts, but showing if there are conflicts of interest, and with contextualized information, giving voice to the experiences of the people<sup>52</sup>.

The gender of sources, for the most part, cannot be identified (65%). The remainder shows that female sources (24%) were more than double those of men (11%). It has been observed that women are responsible for choosing the food of most families and that their opinion has the most impact on the adoption of health standards and eating habits. They access the media more than men to seek food and nutrition information, and find information on the subject in the press useful<sup>53,54</sup>.

Analyzing the UI engagement, it was observed that 53% of them brought a favorable tone to food, 24% unfavorable tone and 23% neutral. In all subjects there was a more favorable approach to food, except in the theme Behaviors and attitudes, with negative value, revealing a higher amount of UI classified as unfavorable to health, when compared to the favorable ones, according to figure 2.



**Figure 2.** Relationship between frequency and weight-trend of the analyzed information units

Source: Own authorship (2017)

Expressions such as: “Those who are stressed feed themselves worse, drink less fluid and even brush their teeth less often”; and “People want to eat fat every day” are examples of UIs classified as unhealthy behaviors and attitudes. This population discourse has already been observed in a previous study and is repeated here<sup>55</sup>. It is also worth mentioning that the CSD-8 brings the role and the critique of the press that in theory promotes health.

## Final considerations

The CSD confirms the findings of the analysis of the paper, as content predominantly refers to food effects and recommendations, a greater presence of fresh produce at the expense of ultra-processed ones, and little space for commensality. This prioritization can bring journalism closer to health promotion, insofar as it presupposes helping people's choices. There are not only one, but also several healthy diets, and the needs of each stage of life and each culture must be considered, as the policies of the Ministry of Health and the Dietary Guidelines cite. Both documents, however, are accessible to a restricted audience, and the press is one of the spaces through which these values can reach people. It can be inferred by the CSD, the central idea of a popular press that seeks to promote health as a service. It offers recommendations to the population, although not always, perhaps due to the confusion between the concept of health promotion and disease prevention.

It is worth mentioning that, although to some extent part of the content is consonant with the Dietary Guidelines for the Brazilian Population, contents only recommend this or that food and talk about its effects in the body. However, it may not promote health, rather, it serves interests or reduce food to a drug, without considering the pleasure that must be present in food or its family, economic and social context.

With more and more information on health and food and involvement of health professionals, journalists and legislators, it would be possible to improve the quality of life of men and women, reduce government spending with curative actions and alert governments and the scientific community about what deserves space on the public agenda. Therefore, it is necessary to invest more on research, monitoring and awareness among health professionals and the news in relation to power issues. It is also important that governments have a political concern with the dissemination of information on health, promoting programs and policies for training journalists and researchers in the area of communication and health and encouraging those already in existence.

### Authors' contributions

MS Oliveira-Costa participated in the design and delineation of the research, data collection, discussion of results and writing of the manuscript. DRT Costa was responsible for the development of q-Health and interpretation of results, L Renaud participated in the research design and approval of the final version of the manuscript, AVM Mendonça was the guideline of the research, participated in the design and delineation of research and approval of the version end of the manuscript.

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