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Online Influencers: Healthy Food or Fake news

Abstract

Today we live in a globalized world, with no boundaries, and where we can be updated of any information by the minute. This globalization phenomenon has a lot of advantages as well as disadvantages. It is wonderful to know the news by the minute, however the easiness and swiftness real news spreads, and same goes to the fake news. Tools, such as search engines like *Google*, *Bing*, *Yandex*, etc. and Social Media (i.e. *Facebook*, *Instagram*, and *Twitter*) or Blogs, are turning information sharing easier, but uncontrolled. Since it is very difficult to assess the reliability of online news or information, this study seeks to understand the reliability of these new diet trends, who are these people that shared the information, and the impact of it on the society. Findings show that even though the society is being influenced by the brands, this increasing awareness for a “healthy diet” could be something positive for the society, however the conclusions are that it is not.

Keywords: Online advertising, marketing, international knowledge transfer, sponsorship.

INTRODUCTION

We are living in a world of constant change, the ideas spread so easily and quickly that we do not have the time to determine the impact that they can cause. People all over the world are in constant contact among themselves and able to discuss ideas and news by the second. This is what we like to call “globalization”.

A few decades ago, before the internet explosion all over the world, when someone needed to learn more about something there were two options. One was to read books, articles, scientific research, among other published material. The other option was to consult a specialist on the research field and ask about it. Both options are considered good and reliable, because in both cases the information came from someone well informed about it who studied the subject.

Now, with the internet explosion and the existence of social media, it is possible to find any information everywhere anytime. However, while the old fashion way of research is

reliable, this new trendy way is not. The information available online can be written by anyone, with little or no proven knowledge or studies on the subject, so it cannot be totally reliable.

By the time people started to adopt this new way of research, whenever someone needs to know something, the source is always online search. It could be for instance news, academic research, health issues, diet issues, astrology, finance, politics, among any other topics. The online publications do not follow any prior check or ethical rules. Let's take the case of a journalist who found something and wants to publish it on the newspaper/magazine she/he works for. She/he needs to have real evidence/facts of it to show to her/his director prior to its publication. Online is pretty different. They can publish anything, anytime, anywhere, true or false, and it can even go viral. There is little ethics online.

With the lack of online rules, the so called "fake news" emerged, and by fake news we mean stories, developed as being a genuine piece of news, yet not true with some hidden agendas to deceive people. Curiously false news normally goes viral and has a certain impact on the society. One remarkable case happened in the United States 2016 elections when multiple false news, with the view to manipulate the opinion of the voters.

Following the previous example of fake news, it is defended by many people, that this fact changed the election, I ask myself how many more fake news we are reading daily, thinking that it tells the truth. How can we tell it's true or it's false? And if in the end it affects our life? As far as we can see, managers and marketers already saw an opportunity for marketing activities with online options and take advantage of this fact.

In Portugal, there is a growing trend for "healthy diets". Everywhere people are talking more and more about it and are showing an increasing concern about what to eat. However, this concern is more visible online, for instance the social media sites are full of influencers talking about new diets, "superfoods", where to buy it and how to eat better.

The idea of being healthier by changing our eating habits and eat cleaner is great, yet the majority of those who promote it on social media or publish articles on blogs do not hold any degree in nutrition or medicine, so maybe they are not the best people to advise anyone on this topic. Nevertheless, people still think of these sources as reliable and keep following their ideas and suggestions.

Knowing the lack of exploratory work about the topic and that although there is research about a few details but almost nothing linking everything and connecting the dots, this study is developed with the goal to understand the entire scenario. Therefore, the theoretical objective is to combine all the research work about every subject and connect it. Then, the empirical objective is to confirm the theoretical conclusions with Portuguese nutritionists and the general public.

In the end, the goal is to contribute to the improvement of knowledge within the scope of the study, which is the impact of false news on health. Moreover, even though the empirical research is based on the Portuguese society, it can be a starting point for further investigations.

FRAMEWORK

Healthy food, or healthy diet, is a very wide concept. When we use the word “healthy” before food or diet, is implied that is something that promotes good health and reduces the risks of chronic diseases (Cannon, 1992).

These days there are several predispositions to healthier diets, and some nutritionists argue that if a diet has a name it is not reliable. Yet, named diets are increasing. One of the oldest ones is the Functional Diet, based on the Hippocrates (father of medicine) saying “Let food be thy medicine and medicine be thy food”. This diet suggests that if we consumed some products in certain quantities, because of their biologically active compounds, it can reduce the risk of some diseases.

Another well-known diet is the Macrobiotic. This one is not only a diet but also a lifestyle, following “healthy mind in a healthy body” motto. This diet claims that we should eat daily cereals and vegetables, weekly fish, seeds and fruits, and monthly meat, eggs and dairy products (Portuguese Macrobiotic Institute, 1985).

A very popular and wide-spread diet in the current days is the vegetarianism. Vegetarianism is only a diet, it can excludes meat and fish but includes eggs and dairy products, or excludes every animal product. Whereas veganism, is a way of living, where the diet is vegetarianism strict and excludes every animal product (Berkeley, 2017).

In 2019 we have five popular diets, all with a name (Matthews, 2019). One is the Paleo Diet, the basis of this diet is what de Paleolithic man ate. Knowing that in the Paleolithic the agriculture was not discovered, they only ate meat, fish, fruits and vegetables. Another is the Ketogenic Diet, a high-fat, low-carb diet that is responsible

for some impressive weight loss changes but is also difficult to follow. The main proposition is that by lowering carb consumption, the body will be forced into a state of ketosis, which means it burns fat instead of carbohydrates for energy. The Whole30 is other popular diet of the year. It was developed as an elimination diet to help people figure out how food impact them physically and mentally. The core foundation is to eat nothing but vegetables, fruit, nuts and meat for 30 days. And, at the end of the 30 days, supporters claim you will feel transformed. Follows the DASH (Dietary Approach to Stop Hypertension) diet, developed to prevent and lower high blood pressure. This diet is heart healthy and may help in losing weight and lower heart disease risk too, with no strange rules, and no food groups eliminated.

The last popular diet the *Mediterranean diet*, one followed in countries around the Mediterranean Sea and emphasize a plant-based eating approach, loaded with vegetables and healthy fats, including olive oil and omega-3 fatty acids from fish.

Historical Data

About 10,000 years ago, the agriculture was not developed, and human beings got their food through hunting, gathering, and fishing. “Most recently, as farming emerged, nomadic hunter-gatherers gradually disappear, and the society had the idea that we are trapped in Stone Age bodies in a fast-food world, what is driving the existing enthusiasm for Paleolithic diets” (Gibbons, 2013).

According to Gibbons (2013) the notion that we stopped evolving in the Paleolithic period cannot be true since our teeth, jaws, and faces have gotten smaller, and our DNA has changed since the invention of agriculture. Such as Wrangham (2013), a Harvard primatologist argues that “the biggest revolution in the human diet came not when we started to eat meat but when we learned to cook. (...) Today we can’t survive on raw, unprocessed food alone, he says.”

All these historical data prompt a twist on “you are what you eat” motto, it is more accurate to say, “You are what your ancestors ate”. “There is tremendous variation in what foods humans can thrive on, depending on genetic inheritance” (Gibbons, 2013).

The food industry influencers

For decades we are listening and are aware of the influence of pharmaceutical companies on health care and treatment of diseases, on the other hand it is not obvious the influence of food companies on healthy eating habits of the population as well as the consequences of bad eating habits. One of the causes is the fact that the society sees food in a totally different way from medicines, although the public in general knows how food can affect the health. Only the fact that to get hold of medicines we need a physician's prescription and to buy food we have full responsibility with direct access, which turns food into a lot more "casual" matter (Wiss, 2016).

In what concerns medicine, people are more aware and cautious. They look for sources of information and trust mostly recognized specialists, such as certified medical doctors and pharmacists. But then in what respects food people do the opposite, they do not consult or seek specialists, even though there are well known certified specialists. People in general trust anything they read, mostly online, that looks like a good idea for what they need at that moment. The problem is that the consequences of today's bad food choices are not shown in the immediate future, will be shown later. Now, in the immediate future, it can look like it does improve the health or reduce weight, but in some years' time it can trigger some serious diseases (Wiss, 2016).

Food Politics

For centuries the industries are defining diets, but what we believe is that is our choice, and Nestle (2003) explained how this happens; in order "to satisfy stock holders, food companies must convince people to eat more of their products or to eat their products instead of those of competitors. They do so through advertising and public relations, of course, but also by working tirelessly and to convince government officials, nutrition professionals, and the media that their products promote health—or at least do no harm." And to do it, "they go right to the heart of nutrition as a profession. Indeed, co-opting experts - especially academic experts - is an explicit corporate strategy. A guide to such strategies explains that this particular tactic "is most effectively done by identifying the leading experts and hiring them as consultants or advisors or giving them research grants and the like."

This strategy is applied by food companies "to engage nutritionists as allies in various ways, some evident but some less so. They routinely provide information and funds to academic departments, research Institutes, and professional societies, and they

support meetings, conferences, journals, and other such activities.” Commonly food companies “sponsor the educational activities of nutrition professional societies as well as the research of individual investigators, and nutrition academics routinely consult for food companies on these and more product-oriented matters.” *The Center for Science in the Public Interest* made a survey in the mid-1970s in order to “identified frequent payments by food companies to agriculture and nutrition faculty for consulting services, lectures, membership on advisory boards, and representation at congressional hearings”, and more recently a similar British study found out that “58 of 46 members of national committees on nutrition and food policy to consult for or receive funding from food campaigns.”

The problem about food companies funded and sponsor this kind of studies is that in the great majority the studies will support the idea of the company, no matter the results they will find a way to match the expectations. The author Marion Nestle (2003) made an experiment about it and explained that she “had collected 168 studies sponsored by food companies or conducted by investigators with financial ties to food companies. Of there, 156 reported results favoring sponsor’s interests; only 12 did not.”

But this strategy is not only about health specialist and funding, in a documentary named *What the Health?* , the producers found out a link between the major diseases’ associations and some companies. American associations such as the *Susan G. Komen Association* (Pink Ribbon), and other related to diabetes, cancer, or heart diseases are promoting on those websites foods that are not recommend in order to prevent those diseases. An example given was that the *World Health Organization* advertised: “The experts conclude that each 50 gram portion of processed meat eaten daily increase the risk of colorectal cancer by 18%”, whereas in *American Cancer Association* website there is an area with suggestions of foods we should eat and one of them is processed meat. Then, the documentary producers dig a little deeper and found out that this specific association is sponsored by companies such as *Tyson* (meat), *Yum!* (Owner of *KFC*, *Pizza Hut* and *Taco Bell*). Also *Susan G. Komen Association* is sponsored by *KFC*, *Dietz & Watson* (processed meet) and *Yoplait* (yogurts).

Fake News

Fake News are pieces of news in an article that are intentionally and verifiably false, with the purpose to mislead readers, and can be published in several types of websites. The main motivation for most of the fake news producers is that news articles that go

viral on social media can draw significant advertising revenue when users click to the original site. The growing problem related with fake news nowadays is directly correlated with the increasing access to information. The society now has access to all kind of information, this information is always updated and most of the times is not verified. Now, if someone read an online article, does not verify the sources, but because it is interesting shares it on social media, consequently this article will have a lot of views despite lack of any scientific support, and this is the basics of fake news (Lazer *et al.*, 2018).

In what concerns the fake news topic, several articles speak about political issues, but the information can be applied to all the areas, as Lazer *et al* (2018: 1094) says in *Science of Fake News*, “fake news has primarily drawn recent attention in a political context but it also has been documented in information promulgated about topics such as vaccination, nutrition, and stock values.” In this same article the authors define *Fake News* as a news “fabricated information that mimics news media content in form but not in organizational process or intent (...) Fake news overlaps with other information disorders, such as misinformation (False or misleading information) and disinformation (false information that is purposely spread to deceive people)”, this definition of *Fake News* can be applied to all subjects, from politics, to economic, to food.

Social Media Network

Nowadays, “advertising through social media has become an essential part of the integrated marketing communication efforts of companies in marketing their products and services” (Gaber, 2014). Most of the companies are increasing their advertising budget for social media. In 2013 was made by Nielsen (2013) a survey about that where “Most of the marketers surveyed indicated that they are planning to shift a part of their advertising budget from traditional media to social media. Moreover, the study showed that 89% of the marketers are adopting the free social media tools and 75% of them are adopting the paid advertisements together with the free tools on social media” (Nielsen, 2013).

Social Media are having a giant impact on advertising and have a better impact near the consumers because not only people see more advertisements of what they like (advertisements on Social Media can have a criteria such as gender, age, likes, dislikes, etc.), but because it “enables consumers to have more of a say in the products and

services that marketers create to meet their needs. Thus, social media marketing added a fifth P to the traditional 4Ps which is the Participation” (Tuten & Solomon, 2013). Adding the fact that on Social Media people can share the advertisements and that is free marketing for the companies.

Although it is a great opportunity for marketers, for the general public it can be a threat. In 2018 a study was made in “the University of Liverpool, presented at the *European Congress on Obesity* today (Wednesday, 23 May), highlights the negative influence that social media has on children's food intake. Current research shows celebrity endorsement and television advertising of unhealthy foods increases children's intake of these foods. However, children are increasingly exposed to marketing through digital avenues, such as on social media, and the impact of marketing by *YouTube* video bloggers (vloggers) on these outcomes has, until now, not been known.” My conclusion of this study is the real problem lies in that young people see those Social Media “influencers” and celebrities as role models and persons who know everything, and if they stand behind these foods it is because it is true. So, if these people promote a certain diet (independently whether it is healthy or not and whether they know anything about nutrition and health conditions or not), young people will follow their message. And this, on the long run is a problem.

Social media are largely unregulated platforms, like a depository of all sorts of ideas and comments about diets that are regularly shared, and believed as right, by millions of internet-users. “In a recent survey, US dieticians said *Facebook* was the main source of confusion on nutrition for patients seeking a quick fix for their dietary dilemmas. Professor Louis Levy, head of nutrition science at Public Health England, says: ‘We’re very concerned because we’re trying to help people make the right choices, and conflicting messaging makes this so much harder” (McFarlane, 2018).

THEORETICAL APPROACH

From the previous section, a set of key questions emerged. They will be driving the following discussion.

The very first question is to understand before the remaining research is what really means the concept of “healthy diet”. And this question is very important because a “healthy diet” is very commonly confused with a diet to get fit where the results are checked on a short term. But, as Cannon (1992) explains, a “healthy diet” is a diet that improves health in a long term, not related with esthetical benefits.

This is a very relevant question because nowadays when people in general talk about “healthy diets”, in most of the cases, they are pertaining to esthetical benefits. The general commonplace idea is; if my goal is losing weight, and the diet makes me lose weight it is a “healthy diet”. And most of the time those diets do not improve health in a long term, even on the other hand, such as Gibbon (2013) refer for *National Geographic*, some of those “healthy diets” cause health issues on the long term. So, understanding the true concept of “healthy diet” is the best starting point for this research. - What is “healthy diet”?

Understanding the true concept of “healthy diet”, the next goal is to recognize if the influence of the industries in what we, as society, consider healthy food is an actual problem. This question arises because people easily believe in all diets, promoted online or on social media (González-Vaqué, 2018), without confirmed sources or the veracity of the information, and apply it immediately to their daily diet without second thoughts. And as Kearns et al. (2016) explains, this is not a current problem, it happened before the internet boom.

Then as Wiss (2016) explains, the challenge is the way people see diets and food. If the topic were medicines, people will talk with specialists, confirm sources and ask for second opinions. One could conclude until here, this is a very actual problem, and an example of it is the fact that for decades we hear about the need to eat a little bit of everything in order to be health; less sugars (Kearns et al., 2016) and processed foods and more fruits and vegetables, but always a little bit of everything. Yet, in the past few years a lot of diets that promote the avoidance of certain products appeared online, and in the long term those avoidances will provoke some serious health issues that people do not take in consideration. - Is the industry’s influence a current problem?

Following the previous point, arises the question about what are the recent food tendencies? A lot of new diets arose in the last few years, such as to avoid gluten and lactose, do low carb diets, to avoid meat or other proteins. Although the authors disagree, which new diets are good or bad, all agree in one thing, all new diets require the avoidance of one certain product.

The most popular food avoidances nowadays are the lactose and gluten. Although, in the case of gluten, such as Gaesser *et al.* (2012) explains, if a person is not truly gluten intolerant, this avoidance in the long term can cause severe health issues such as decrease immunities. And, in what concerns lactose, although a huge amount of people claims to be lactose intolerant, Yantcheva (2015) and his colleagues developed a

study were it was conclude that almost no one really made the test to know it for certain. These results were presented by Andersen and Kunn (2017) in their documentary *What the Health?*

A very popular diet is the Paleo Diet that could be a great diet if well explained. The goal of this diet is to eat like the cave man, but what people are doing is to eat meat and meat products in every meal, and in the long term it will have undesirable consequences. But, as Gibbons (2015) explained for *National Geographic*, the cave man did not eat meat every day, they needed to hunt, and in some days they succeeded and in others not at all. So, this amount of protein consumption is not consistent with the cave man's diet and in the long term it is not healthy.

Another popular tendency nowadays are the "Detox Diets", where the goal is to detox our body with a mix of fruits and vegetables that together do the detox function. But, as Dixon (2005) explains with her research, this miraculous idea of doing a detox to our body is not possible, the only way to detox is the natural one, through our liver. - Which are the latest food tendencies?

The information above leads me to the question of how the industries influence the society. As Nestle explained among her 2003 and 2018 books, and some other authors corroborated the information over the years, when we read a study about something, it is of the utmost importance to check who the sponsors are, because it says everything. Big companies such as *Nestlé*, *Coca-Cola*, *Danone*, among others, are sponsoring specialists and academics to develop studies to prove that what these companies are selling is not harmful to our health.

An important point to highlight is the difference between what science is and what marketing is, and a great example of that are the "superfoods". Through the research, and knowing that at least once we were faced online with a new trend diet or a campaign for "super-foods", and knowing that companies are using the online tools to promote their own products, the question that emerge is if we, as society, are becoming healthier by adopting these new diets and products, or if it is only marketing

Such as Nestle (2018) explained, the "superfoods", a widely promoted online as very healthy products that we must add to our daily diet, but on the other hand, very expensive products, are "a nutritionally meaningless term. "Superfoods" is an advertising concept." So, in what concerns single products, this online promotion is pure marketing. Nevertheless the products can be good for the health, but they are not the ultimate tool to be healthy. - Which are the methods used to influence?

Knowing that is important to understand what a fake news is and how to identify it. All authors agree that fake news are fabricated news, commonly spread online, that does not reflect the reality. And, by this definition, an important question emerged related with the reliability of online news. It is subscribed by all authors that the online information is not reliable, and that people believe in the first thing they see online without confirmation of the sources.

It is very easy and cheap for companies to manipulate information in order to sell more of their products (Tuten & Solomon, 2013). And, with the online world it is not even necessary a study to make people believe, there are a lot more tools available such as real people talking about it and showing it, and these tools are cheaper and quicker. And better than it, is the fact that people share the news, so a single online publication could travel around the world (Lazer *et al.*, 2018).

Knowing what a fake news is and how easily it can spread, the big question is how can we identify it, and in this point the majority of authors, such as Gonzalez-Vaqué (2018), recommend a simple thing that is to always check the sources, if it is a news, one ought to check the newspaper or website that shared it and one ought not just read the title. In case of scientific studies, besides the sources and who made it, it is very important to check who fund it, which company or institution, because it can tell a lot about the conclusions. - What is fake news, how to identify it, and how it spreads?

The last, but not least, question that emerged from this literature review, was a direct correlation between this part of the online promotion and with the new diets, is if the fake/manipulated news have real impact in what we, as society, eat. This is the core question of this entire research, understand the true impact of false news in our daily diet. And on that question, all authors agree that there is a real impact, and the cause of that lies in the internet in general.

Reau (2013) made a research were conclude that 46% of people check food news and news trend diets only online and more than 30% claims that check both online and offline. The fact is that the online information is very credible, and one of the reasons that people love to check information online is because of what Liu & Lopez (2014) called word-of-mouth (WOM). WOM is the capability to discuss a certain piece of information online in order to give real time feedback, and it made people feel safe to try a new thing.

Another evidence of the real impact of that manipulated news is, such as Kelly (2015) explains, the Social Media. If there would not be a real impact, the companies

would not pay to “influence” people to promote their products on their social media. And the reality is that day by day we can see an increasing number of “influence” people promoting on their social media several products. – Has the industry’s influence real impact?

METHODOLOGY

Research model

In what concerns this investigation, the model adopted is the pragmatic model that not pursuit the truth in itself but try to move from doubts to certainties (Piece, 1877), with a inductive character, where we do not aim to get conclusions from true premises or already validate data, but get to a conclusion trough research, interviews, and comparisons among them. Throughout the investigative process there is an interaction between theory and empirical research, mutual feedback (Vieira-Tenreiro, 1999).

This investigation was conducted with a convenience sample, focused on people with a specific knowledge and experience to answer the interviews. The first sample comprised Portuguese people with a bachelor of Nutrition Science. These people were personally invited to participate in an interview according to their availability. The second sample comprised any Portuguese person who has an account on social media networks and usually does the monthly shopping. In total, 18 interviews were made for the first sample, and 38 for the second.

However, it is important to mention that both samples were intentionally formed for the purpose of this project, the chosen participants were those who best represented the research question in terms of knowledge and access to the information. The response rate is considered satisfactory, knowing that the minimum for a satisfactory response rate is 15 interviews, however the conclusions must be read carefully because the sample is not so big and it can only be considered in respect of the population of Portugal. Accordingly, given the impossibility of realizing generalizations, this factor is the main limitation of this investigation, with the proper reassurance that generalization was not a primary objective.

In both cases, the applied character resulted from the attempt to investigate a contemporary phenomenon in the real-life context, which was assisted by the presentation of an exploratory section, given the lack of a great systematized knowledge about the research question. In what concerns the way, the present investigation was

based on a set of primary sources, from the application of surveys on the form of structured interviews to Portuguese nutritionists and Portuguese people with account on social media, and from secondary sources, through bibliographical research and information processing, included in the systematic study developed in books, magazines, scientific articles and electronic networks.

In terms of the qualitative methodology used, knowing that this is a social research method that uses descriptive data collection techniques and is characterized by a careful analysis. This technique is different from statistical research and the scientific experiment. The qualitative methodology resulted from the analysis of a set of interviews, which looks to measure the phenomenon of study and understanding the real impact of food fake news in people's real life. To interpret the data founded in the interviews, it was translated into a content analysis, attempting to relate the semantic (meaningful) structures to the sociological structures (meanings) of the statements, in order to articulating the surface of the texts with the factors that determine their characteristics.

The information was analyzed in an inductive way, this method begins with particular questions until gets generalized conclusions, which can only be achieved by observing, collecting and analyzing the scientific facts in loco.

Such as explained in the *Content Analysis* of Bardin (1977), first space was given to the organization of ideas, then we explored all the material and data founded, and at the end the treatment and the respective interpretations of the obtained results. Having in mind the goal of this research, it was recognized that this topic is recent with scarce scientific research. The interviews were the most suitable method for the primary data collection. Although all the scientific research can provide a lot of information about it, the interviews are the only method that can prove whether the theory is applicable to the Portuguese society or not. Plus, the fact that, only with the nutritionists' interviews we could really confirm the theory about the reliability of some diets.

For the interviews the technique chosen was structured because this is a theme that we could easily move away from the topic. Hence we pre-defined some open questions and some other close ones, and at the end space was given for the interviewee to give his/her additional opinion, comments or place other questions. This technique can be seen as more formal and inflexible, yet the results are more uniform and it is easier and clearer to compare results among the interviewed individuals.

In conclusion, the present investigation had four steps: the first step, which was based on bibliographical research and information treatment; the second one consisted in transferring the theoretical construct to the field of observation in order to obtain the best possible confidence in terms of results; the third step, concerns the collection of data from interviews; and the fourth, which consisted of a qualitative analysis of data collected from the interviews.

Table 1. Objectives and research questions

Objective	Research Question	Literature Review
<u>Objective 1.</u> Understand the concept of “healthy diet”	Q1. What is “healthy diet”?	Cannon (1992); Gibbons (2013)
<u>Objective 2.</u> Analyze the industry influence in what we consider healthy	Q2. Is the industry influence a current problem?	Kearns et al. (2016); Gonzalez-Vaqué (2018); Wiss (2016)
	Q3. Which are the most actual food tendencies?	Dixon (2005); Gaesser <i>et al.</i> (2012); Gibbons (2013); Yantcheva <i>et al.</i> (2015); Andersen and Kunn (2017)
<u>Objective 3.</u> Understand the influence process	Q4. Which are the methods used to influence?	Nestle (2003); Nestle (2018);
<u>Objective 4.</u> Analyze the concept of fake new	Q5. What is a fake new, how to identify it, and how it spreads?	Tuten & Solomon (2013); Lazer <i>et al.</i> (2018); Gonzalez-Vaqué (2018);
<u>Objective 5.</u> Understand the impact of fake news on the diet	Q6. They have real impact?	Reau (2013); Liu & Lopez (2014); Kelly (2015)

Sample

This investigation was developed under a structure base, where the questions among people were the same, with the exact equivalent order. These interviews were made with nutritionists or people with a bachelor’s degree in Nutrition Sciences, in order to understand the technical part, everything related with diet and health, of this subject. And, with the support of a known nutritionist that put me in contact with several university colleagues and professional-peers, was possible to have different testimonials of professionals with different ages, experiences and areas of expertise.

First of all, we made an analysis of all the variables that could statistically characterize the sample objectively, especially in terms of current profession, age, gender and academic background, in order to understand the existing sample with respect to its nature and the dimension of professional experience and knowledge. Then, we analyzed the content of the answers, in order to obtain analytical data that allowed us to draw theoretical and empirical conclusions. 18 interviews were conducted to nutritionists. And, in what concerns the socio demographic questions, the ages of the interviewed were between 23 and 59 years old, 17 (94, 9%) female and 1 (5, 6 %) male. The academic habilitations were mostly bachelor's degree, 15 (83, 3%), and 3 master's degrees (16, 7%). All with a degree in nutrition sciences, and 14 (77.8%) working in their field of studies. From this 77, 8%, 9 (64, 3%) work in their field of studies for less than 2 years, 3 (21, 4%) between 2 and 5 years and 2 (14, 3%) for more than 5 years. The 4 (22, 2%) who do not work in their field of studies work in similar industries such as pharmaceutical industry or health care.

From the people with an account on social media and usually do the monthly shopping interviews, were made 38 interviews were people were selected by convenience. Concerning the socio demographic questions, the ages of the interviewed persons were between 21 and 60 years old, 28 (73, 7%) female and 10 (26, 3 %) male. The academic habilitations were mostly bachelor's degree, 21 (55, 3%), 8 master's degrees (21, 1%), 9 other (23, 6%) such as professional courses or compulsory education.

Categorization and coding of the interviews

In order to get the expected conclusions for the purpose, four generic categories were defined to explore in order to answer all my research questions. The generic categories are equal in both interviews, for nutritionists and for general public, and what changes is the type of questions, for the first sample the questions are more specific and tailor-made for professionals. In the second sample are more generic and specific for the general society no matter the education degree or occupation. Yet, such as the generic categories, the subcategories behind the questions are the same.

The first category was named *Diets with name* arose, which is linked with the Objective 1. Understand the concept of “healthy diet”. This category was developed in order to conclude if the interviewees were aware of what is an healthy diet, whether they realized what are the most actual food tendencies, whether in the case of sample

one it is healthy or not, and in sample two whether people were aware of them or not. And, for the first sample, if the food industry communication is effective to the point that people are believing in it without feeling the need to consult a nutritionist.

Aligned with Objective 4, the concept of fake news was analyzed in order to understand if sample 1 agreed with search for information on social media and similar sources, and from where sample 2 looked for such information.

Then follows the *Food intolerance* category, directly linked with the Objective 2. It was analyzed the industry's influence in what we consider healthy diet. The objective was to understand whether the food industry has a real influence or not. We chose the food intolerances topic because it is a heatedly discussed one and a great example to understand this kind of influence. The first sample intended to realize whether patients are doing exams to know their intolerances or not, and to understand if for a non-intolerant it is healthy to eat food without gluten or lactose. Then, for the second sample, the goal was to understand how many people consider themselves intolerant without the proper exams and if they consider healthier to eat food without lactose or gluten.

To finish, the last category was *The Social Media Network*, and this one is aligned with the Objective 3. To understand the influence process. This category is developed to understand the real impact of online communication. In the first sample the goal is to realize whether this communication is fake news or not, and in the second to understand how fast this spreads and in which forms people find it.

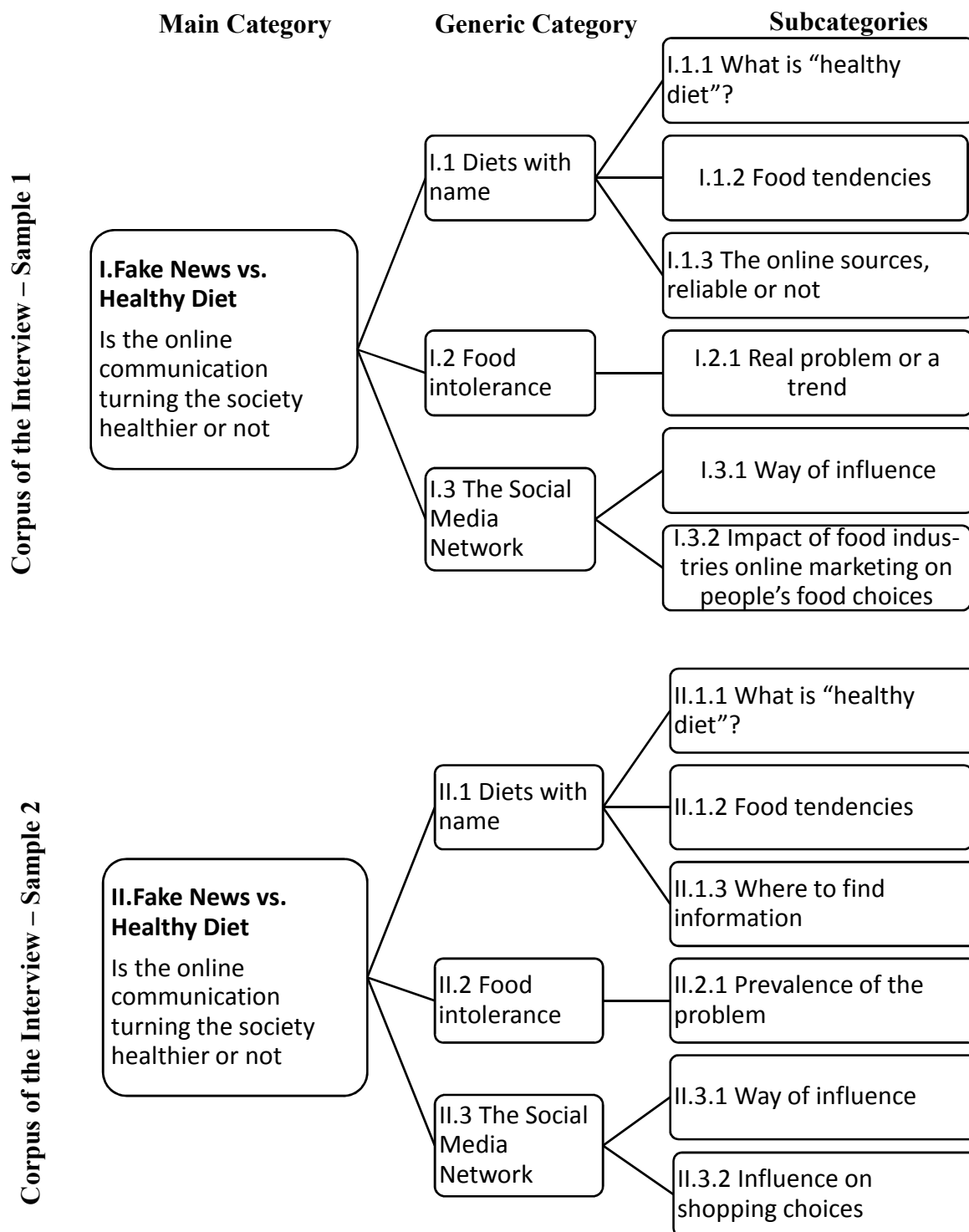


Figure 1. Interviews structure and the basis for content analysis

RESULTS AND DISCUSSION

As referred two different interview types were conducted for two different samples, with the same research questions. There was a need for two different interviews because

the goal was not only to compare the previously information with professionals, but also confirm the impact on the society. Therefore, for the first sample, nutrition specialists, the interviews intended to determine whether the specific nutritional information obtained from the literature review was true or not, and which aspects are more relevant. With the second sample, general public, we wanted to realize whether it is true or not that the society is being influenced by this new form of communication from food industries, and whether people are aware of the reliability of the information.

In the general context both authors and interviewed persons have similar conclusions. There are some different opinions in what concerns some specific topics, but the general idea among authors and the sample 1 is the same, and sample 2 turns out to prove it.

Briefly, 88.9% of the sample agrees that these new diets are not healthy mostly because of the nutrient restrictions, and the major problem as agreed by 94% of the sample 1 is that people do not get proper information after trying it and the great amount of information they look for is on social media what is a big concern, which could bring undesired health problems. 100% consider this source of information not reliable. Yet, only 50% of the sample considers that people are being their own nutritionist.

In what concerns the sample 2, as expected, all the sample already has heard about one or more of these diets and 100% heard about it on social media. However, only 39.5% of the sample already tried one of these diets. Yet, almost half of this 39.5% tried it to lose weight and not for health reasons.

Table 2. Sample 1 answers

Main answers sample 1	Number of times	Interviewees	Generic Category	Sub Category
It is not healthy to adopt diets with group restrictions are not healthy	16	All except number 1 and 7	I.1	I.1.1
People do not get the proper information after applying a new diet	17	All except number 10	I.1	I.1.2
The great majority of people get information about diets on social media	17	All except number 3	I.1	I.1.3
Online information is not reliable	18	All	I.1	I.1.3
People are being their own nutritionists	9	1,4,5,11,12,14,15,16,17	I.1	I.1.3

Food intolerances are becoming a trend	13	1, 2, 3, 4, 5, 6, 7, 8, 9, 13, 14, 16, 17	I.2	I.2.1
In 10 people only 0-2 really do the intolerance exam	12	1, 2, 4, 5, 7, 9, 10, 11, 14, 15, 16, 17	I.2	I.2.2
For a non-intolerant is not healthy to remove gluten/lactose from the daily	12	2, 4, 5, 7, 8, 9, 13, 14, 15, 16, 17, 18	I.2	I.2.3
Online communication have a real impact on the final consumer	18	All	I.3	I.3.1
The impact on the final consumer of online communication is negative	16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15,	I.3	I.3.2
People who promote food products online have a minimal knowledge about what they are talking about	14	1, 2, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 16, 18	I.3	I.3.3
Main answer sample 2	Number of times	Interviewees	Generic Category	Sub Category
I already heard about Diets with a name	38	All	II.1	II.1.1
I heard about it on Social Media	38	All	II.1	II.1.1
I apply it to my regular diet	15	3, 8, 11, 15, 16, 17, 20,22, 23, 27, 28, 31	II.1	II.1.1
I have a food intolerance	13	1, 3, 8, 9, 11, 16, 19, 22, 24, 27, 30, 33, 38	II.2	II.2.1
I did the exam to know my food intolerance	0	None	II.2	II.2.1
Normally I eat products gluten and lactose free	16	1,3,8,9,11,15,16,19,20, 22,24,27,30,32,33,38	II.2	II.2.1
I consider the products without gluten and lactose healthier	15	3,4,5,8,10,11,13,16,19, 22,24,27,30,31,38	II.2	II.2.2
I already bought a product because of the Social Media	11	2, 4, 10, 11, 20, 23, 27, 30, 32, 37	II.3	II.3.1

What is “healthy diet”?

Starting from the concept of “healthy diet” that Cannon (1992) describes as a diet to promote good health in a long term, and Gibbons (2013) defends that should be the most diversify possible. During the interviews we explored this topic with focus on the new diets such as gluten/lactose free diets, paleo diet, and vegetarian, among others.

In what concerns sample 1, they have the same judgment as the authors. In 88.9% of the sample’s opinion, those diets with group restrictions are not healthy, especially when done without the proper guidance, since in the long term those restrictions can develop food intolerances and other more serious health issues. Yet,

sample 2 does not consider those diets unhealthy, on the other hand some of them had already tried them because they think is healthier or to lose weight.

In conclusion, although for specialists such as sample 1 and the authors, a healthy diet should be balanced and designed in order to avoid health issues. So, a diet with group restriction for an individual without special needs is not the healthier choice. For sample 2, diets with food restrictions are seen as healthy and the concept of “healthy diet” is commonly associated with losing weight instead of preventing diseases.

Table 3. Sample 1 content analysis – Interviews - Diets with group restrictions on daily basis

Interviewees	Answer	G.C	S.C
1	Can be beneficial, depended on the condition	I.1	I.1.1
2	Too restrictive for a balanced diet	I.1	I.1.1
3	It is not healthy to restrict something in our diet, but yes do the right choices according the individual needs	I.1	I.1.1
4	It can provoke food shortages	I.1	I.1.1
5	Does not have the macronutrients and micronutrients that we need on our daily diet	I.1	I.1.1
6	They are not healthy	I.1	I.1.1
7	In the short term can have beneficial effects	I.1	I.1.1
8	Our diet should be balanced and also diversified. The different food groups offer us different nutrients, all equal important for our health. By doing a restriction, we are contributing to a certain nutrient deficit	I.1	I.1.1
9	All food groups are equally important in our diet	I.1	I.1.1
10	All diets and restrictions should be individually adapted	I.1	I.1.1
11	The core of a good diet is the nutritional education in order to achieve a healthy lifestyle. By restricting food groups, we are taking off some macronutrients and micronutrients that are essential to not only a good physiological functioning, but also social functioning	I.1	I.1.1
12	They are very limitative nutritionally	I.1	I.1.1
13	Good if well guided by nutritionists	I.1	I.1.1
14	Depends on the individual	I.1	I.1.1
15	Most of the times we lost the nutritional diversity by restrict food groups, what provoke food shortages	I.1	I.1.1
16	It cannot fit the individual. The great majority is very restrictive and should be only used in very specific situations	I.1	I.1.1

17	All food groups are important, and we should not restrict it, unless if we have some real food intolerance	I.1	I.1.1
18	A healthy diet should be complete, diversified and balanced. In other words, we should eat a little bit of everything in the right proportion and with diversification. Only by doing this we can achieve all the necessary nutrients for a healthier life.	I.1	I.1.1

Table 4. Sample 2 content analysis – Interviews - Diets with group restrictions, the reason of trying

Interviewees	Answer	G.C	S.C
3	I try to be guided by a paleo base diet, preferring fresh products and choosing less for packaged products	II.1	II.1.1
8,11,17,23,27,35	I tried it in order to lose weight	II.1	II.1.1
15	I heard about the benefits of a paleo diet	II.1	II.1.1
16	To be healthier	II.1	II.1.1
20	I did some research and I think that is benefic in order to achieve my goals	II.1	II.1.1
22, 28	I am vegan because of the planet and the animals	II.1	II.1.1
31	I tried low carb and low fat at different times in my life to check if it worked out in terms of energy and fat burning by speeding up metabolism	II.1	II.1.1
32	I consider the paleo diet healthier	II.1	II.1.1
34	I adapted what I found most appropriate in order to have a healthy and balanced diet, in order to have a better quality of life and health	II.1	II.1.1

Is the industry influence a current problem?

The samples' 1 opinion, this online communication developed by the industries has a true influence on the final consumer and is not positive, so it is a real current problem. The reason of it is because in their professional view people do not get the appropriate information about the diet before they try it, and this is the same thing that Wiss (2016) states, if we were talking about a medicine, people ask more about it to the specialists, regarding food people try it without second thoughts.

Also, some of sample 1 consider that with all information available people are becoming their own nutritionists, and this is a negative thing. Although as Kearns (2016) clarifies that this food industry influence is not a current problem, the social media are increasing a lot the impact of it, now is very easy to spread those communications on social media and it appears very trustworthy (González-Vaqué,

2018). The problem is, as almost all the sample 1 agrees, the people with some online influence that promotes those diets on their social media know the minimum about what they are talking about.

In fact great part of sample 1 (72%) agrees with the authors, that the news boom of people with food intolerances is a trend and not a real health problem. According to them people nowadays do auto diagnostics instead of consulting a specialist. Therefore, people are cutting substances because of symptoms and not based on real diagnostics. The fact is that, as 66.7% of the sample reach agreement, only between 0-2 people did the medical exam to know their food intolerances. The same percentage declares that for a non-intolerant is not healthy to remove those substances from their diets.

The results from the interviews with sample 2 came to prove both sample 1 and authors perspectives. 100% of sample 2 declares to have food intolerances but did not do medical exam in other do get the diagnostic. All of them are buying products without gluten or lactose because of symptoms. A fewer percentage buy those products because consider it healthier, even without the intolerance.

Table 5. Sample 1 content analysis – Interviews - Food intolerance, real problem or trend

Interviewees	Answer	G.C	S.C
1	It is a trend because even though they are not intolerant or allergic, they eventually stop eating these foods, sometimes opting to consume foods with low nutritional value (gluten-free products: such as gluten-free cookies with a high sugar / fat content, instead of consuming for example cookies such as "marinheiras")	I.2	I.2.1
2, 4,6,7,9,13	It is for sure a trend	I.2	I.2.1
3	It is increasingly a matter of marketing, which can lead people to join these products for lack of knowledge	I.2	I.2.1
5	It is undoubtedly a trend, as there are few cases of intolerant people and even fewer cases of allergic people	I.2	I.2.1
8	Nowadays with so much publicity and full supermarket shelves people are eventually influenced by trends	I.2	I.2.1
10	I do not consider it a trend	I.2	I.2.1
11	Food intolerances are in no way a trend. However, looking for “different” foods such as gluten-free can be considered trend.	I.2	I.2.1
12	It has awakened people to their symptomatology which is sometimes not directly related but helps to overcome some of	I.2	I.2.1

	the problems they feel. I don't consider it a trend.		
14	It may indeed be a trend due to the disclosure of bad information. The harmful effect is a reality	I.2	I.2.1
15	In fact there are people with food intolerances who should consume these products. Another fact is that there are a lot of people who consume these products without having food intolerances but by trend	I.2	I.2.1
16	It can be considered a trend since a large part of the population has chosen to eliminate the consumption of products that contain these components in their composition, most often without having a medical reason	I.2	I.2.1
17	More than trend, lobbying.	I.2	I.2.1
18	Nutritional development has also allowed a nutritional variety, especially for those with restrictions, as mentioned above. The problem was that the transmitted message is that everyone have some intolerance, And yes, it turns out to be a trend.	I.2	I.2.1

Table 6. Sample 1 content analysis – Interviews -Food intolerances, the consumption without the problem

Interviewees	Answer	G.C	S.C
1	If you are followed by a nutritionist, we respect your dietary choices, so we guide you to a healthy choice, indicating products that are nutritionally similar. If unfollowed, it may have consequences	I.2	I.2.3
2	Unnecessary nutritionally restriction	I.2	I.2.3
3	If by choice, need to follow a good food plan	I.2	I.2.3
4	Over time if you want to reverse the situation and consume these products again, your body will reject	I.2	I.2.3
5	If not followed by a professional, you may ingest products that replace these nutrients with others, such as simple sugars and saturated fats, which are directly linked to the onset of cardiovascular disease and weight gain among other complications.	I.2	I.2.3
6	Does not make sense	I.2	I.2.3
7	Puts the body into bankruptcy. They will be deprived of vitamins and minerals important to metabolism	I.2	I.2.3
8	The body gets used to not having to digest those nutrients. When ingested again, understands them as aggressors	I.2	I.2.3
9	It can improve food intolerances	I.2	I.2.3
10	Gluten or lactose free diets in individuals without any problem	I.2	I.2.3

	with these nutrients can mean very significant dietary restrictions which in turn can lead to other health issues		
11	By making a diet essentially gluten and / or lactose free, the ability to digest these components is lost, which is not necessarily a serious consequence, but has a significant impact	I.2	I.2.3
12	Not a problem if you are properly educated for substitutes	I.2	I.2.3
13	Not knowing how to properly choose food products and eating a restrictive diet that can lead to nutritional deficiencies	I.2	I.2.3
14	Why exclude products that can be healthy and nutritious	I.2	I.2.3
15	You may develop nutritional deficits if you make severe dietary restrictions. By eliminating lactose from your diet once and for all you can lose the lactase enzyme because it is not stimulated. And so it truly becomes lactose intolerant	I.2	I.2.3
16	If people have a balanced and varied diet the consequences in principle will not be serious. However, dairy products are an excellent source of protein and calcium and if you do not eat other foods rich in these components you may have a deficiency. On the other hand, gluten free foods usually contain a higher fat and sugar content and most consumers are unaware of this information.	I.2	I.2.3
17	Then you may have some difficulty tolerating food with these elements. Apart from that you are depriving yourself of important foods for a balanced diet for no good reason.	I.2	I.2.3
18	Can lead to diabetes type 2, cardiovascular problems, osteoporosis and osteopenia	I.2	I.2.3

Table 7. Sample 2 content analysis – Interviews - Food intolerance, shopping choices

Interviewees	Answer	G.C	S.C
6,7,12,14,15,17, 18,20,21,23,25,26, 27,32,34,35,36	I do not consume because I am not intolerant	II.2	II.2.2
1,3,8,9,11,16,19,22, 24,27,30,33,38	I consume because I am intolerant	II.2	II.2.2
37	I opt for fresh and “basic” products, I do not usually consume gluten-free products, however without extremism and without resorting to specifically “gluten-free” products.	II.2	II.2.2
4, 5, 10, 13, 31	I am not intolerant, but I think those products healthier	II.2	II.2.2
2, 29	I do not consume lactose because of the animals	II.2	II.2.2

Which are the most actual food tendencies?

As previously mentioned, the latest food tendencies involve group restrictions, and an example of it is the increasing avoidance of gluten and lactose. Other example is the new diets that all involve to cut one or more groups. The goal was to realize which are those food tendencies and if people are trying it with or without proper guidance.

In what concerns the sample 1, more than half of the nutritionists interviewed declare that only between 0 to 2 people do the proper exam to know their food intolerance, however the fact is that of all people of the sample 2 who declare to have an intolerance, none have done the medical exam. And this is a reality previously present by Ander and Kunn (2017) and Yantcheva et al. (2015) , that in the specific case of lactose people cut off lactose because they have symptoms, but they do not know in reality whether it is an intolerance or not. The same thing happens with gluten (Gaesser et al., 2012).

To confirm it, from the sample 2, 34% for the sample claims to have a food intolerance but no one really did the medical exam, almost all claim it because of symptoms and start cutting gluten and/or lactose without the medical exam. 39.5% consider the products without gluten or lactose healthier than the others, 67% of this 39.5% consider it because they consider themselves intolerants, and the other 33% is not intolerant but consider it healthier.

Besides that, all the other diets previously explained involve some food restrictions too, even if it is not the goal, what Gibbons (2013) explains giving the example of the Paleo Diet, or Dixon (2005) with the example of the Detox Diets. In both cases, authors and nutritionists agree that by adopting a diet with food restrictions without the proper guidance, on a long term could bring health issues. As predicted sample 2 came to prove that people are trying those food restrictions without the proper guidance.

Table 8. Sample 1 content analysis – Interviews - Diets with a name

Interviewees	Answer	G.C	S.C
1	It can have advantages and disadvantages depending on how people implement it	I.1	I.1.4
2	There are very few literacy and tests to know whether these diets are healthier or not and how to implement it	I.1	I.1.4
3	It can be a good choice depending on the goal and with the right guidance	I.1	I.1.4
4	I consider it a growing misinformation that needs to be stopped in some way, this not only denigrate the profession, but it eventually brings health problems to those who rely on unscientific sources and adopt a diet without a professional opinion	I.1	I.1.4
5	There should be a greater awareness among the media and food businesses about these issues	I.1	I.1.4
6	These diets are not reliable	I.1	I.1.4
7	The information available is very dangerous and not reliable	I.1	I.1.4
8,9,10,12,13, 14,17	Very dangerous with serious impact for the health	I.1	I.1.4
11	The ease access to information is positive, but searching in the wrong places (such as blogs of influencers that have nothing to do with nutrition) generates a lot of misinformation	I.1	I.1.4
15	Today there are a lot of food "trends" that are created without any evidence and people are joining it. It is necessary to have attention and consult a health professional to avoid health risks	I.1	I.1.4
16	In my opinion the information provided should have some kind of control. It often leads individuals to make choices that are not appropriate or suited to their case	I.1	I.1.4
18	People are becoming more aware and open to positive change. At the same time, it brought a lot of misinformation, and false information	I.1	I.1.4

Which are the methods used to influence?

Previously, in order to influence people to follow a certain diet or to eat a certain product, food companies need to develop a lot of studies with the purpose of prove the reliability of their products (Nestle, 2003). Now, with the development of technology and the increasing boom of social media, companies just need to pay to the certain people to promote their products (Nestle, 2018). Evidence that this kind of promotion is

working is the fact that the entire sample 2 had already read about this new diets on social media.

In what respect the interviews with sample 2, less than half of the sample had already tried one of these new diets. However, great part tried it in order to lose weight and not to become healthier as main concern. In the other hand, all of them already heard about, at least, one of these diets, and the same amount heard about it on social media. So, besides what were formerly discussed, the percentage of people trying it is not so high, however people with all ages and backgrounds already know about it and the main source is the social media.

What is a fake new, how to identify it, and how it spreads?

Knowing that fake news are fabricated news, and as Tuten and Solomon (2013) elucidate, through social media is very easy and cheap for companies to manipulate information in order to sell their products or services more and it can be applied to all areas and contexts (Lazer et al., 2018). The major concern is that fake news look very reliable, such as Silverman and Singer-Vine (2016) concluded after their research for Buzz Feed News, “75% of American adults who were familiar with a fake news headline viewed the story as accurate”.

Therefore, although people consider this online information reliable, such as the author Gonzalez Vaqué (2018), the entire sample 1 agreed that online sources are not. In general they explained that it is not reliable and has a negative impact since the one who spread the news does not have a nutrition background, the diets have a lot of restrictions that can cause health issues on the long term.

In this section 100% of the sample agrees that online communication has a true impact on people food choices and 88.9% considers this impact negative because is business motivated and is promoting diets and products that could be not proper for everyone. Plus the fact that this promotion is presented mostly by people with no background in nutrition or health, so 77.8% agrees that the people who did those online promotions have a minimum knowledge about what they are talking about.

Table 9. Sample 1 content analysis – Interviews - The Social Media Network

Interviewees	Answer	G.C	S.C
1	Often the food products are not the most appropriate. And I do not agree with the promotion on social media.	I.3	I.3.2
2	Business motivation may not be based on scientific evidence, do not agree with this promotion	I.3	I.3.2
3	It can be negative because people are different, although it is a good marketing strategy	I.3	I.3.2
4	They are not health professionals and are advising on health, it should have more control and regulation from the competent entities	I.3	I.3.2
5	Influencers have not the slightest background in the area, you can recommend products that are not best suited to the viewing audience. This is very profitable for businesses but inexpensive for nutritional professionals who are trying to promote a truly balanced diet	I.3	I.3.2
6	Because sometimes influence and the choice is not healthy, although this promotion could be advantageous	I.3	I.3.2
7	Because not all products are tailored to all people. There are no eating plans for life. An eating plan must be individualized, rigorous and tailored to the person. I consider this promotion pure marketing	I.3	I.3.2
8	Negative because they are leading people to make food restrictions without having to, it is as excessive promotion	I.3	I.3.2
9	Each person is a case, so there is no generalized disease, the diet need to be tailor-made, it is ridiculous the kind of promotion	I.3	I.3.2
10	Many influencers have no training in nutrition science or dietetics, and sometimes recommend products or "food tips" in the wrong way. Yet, this promotion could be well developed if the brands bet on influencers with nutrition background, if not it is a mistake.	I.3	I.3.2
11	Most of the time it is advertising without any scientific basis that proves what the product claims to do. This could be a good campaign if well developed	I.3	I.3.2
12	Creates a false sense of security and limited product information, what is dangerous and limitative	I.3	I.3.2
13	Most influencers do not promote nutrition properly, so I do not agree with this kind of marketing	I.3	I.3.2
14	They often encourage the consumption of products or the adoption of habits that are not the most appropriate and can have negative consequences. There must be a lot of care in this	I.3	I.3.2

	area		
15	Many times people end up buying certain products they don't need. These campaigns have a great impact on the society what can be prejudicial to the health	I.3	I.3.2
16	The consumer ends up making a choice based on what the influencer is sharing without being critical. If these campaigns were not paid in any way it could be a different and reliable story	I.3	I.3.2
17	I would say it can go both ways. It depends on who influences and with what knowledge it does. But if I had to choose between the two, I would say the impact is more negative than positive. But I also believe that this trend can be reversed. These campaigns need more legislation and control	I.3	I.3.2
18	Positive if it is someone with knowledge (health professional) and also by promoting healthy eating. But in the other hand it can have negative consequences when people assume they can eat the same products. These campaigns are a way of reaching a large number of people, can have negative consequences because it is not individualized. And many people do not know what is and is not right for them and their goals.	I.3	I.3.2

They have real impact?

This false news about food and diets are having a real impact, the key cause of it, such Kelly (2015) and Liu & Lopez (2014) supports, is the social media. As previously mentioned, both samples refer to social media as the primary source of information relative to this topic. Reau (2013) concluded during his research, 46% of people check food news and new trend diets only online.

Yet, sample 1 participants do not consider this source a reliable one, since it is spread by people with no background in nutrition or health. So sample 1 participants consider it as a trend, people are being manipulated in order to think that gluten or lactose is bad for health, is unnecessary and to cut it if they have symptoms. 61% of the sample 1 participants do not consider all of this online movement to promote new healthy diets and products a way to turn the society healthier.

Table 10. Sample 1 content analysis – Interviews – Impact on society

Interviewees	Answer	G.C	S.C
1	This is not turning the society healthier because they do not understand what a healthy diet is	I.3	I.3.3
2	I have doubt if this is turning the society healthier	I.3	I.3.3
3	It can promote another way of see the diet	I.3	I.3.3
4	It can have a positive effect, yet with all misinformation people believe in what is wrong and right	I.3	I.3.3
5	In my way of view this increase the consciousness of people about healthy diet	I.3	I.3.3
6	Sometime not	I.3	I.3.3
7	Does not have a positive effect, has a negative	I.3	I.3.3
8	Make people more aware and concerned, but not healthier	I.3	I.3.3
9	Does not have impact	I.3	I.3.3
10	I think it has contributed to raising society's awareness of the need to adopt healthier lifestyle habits. I don't think it necessarily contributed to a healthier society. Because the population often adopts wrong behavior due to information shared on social networks	I.3	I.3.3
11	Whether society is in fact healthier or not only long-term studies can prove it. However, it is already possible to notice a greater concern with food	I.3	I.3.3
12	It has increased the attention of the population to the importance of food. But from here there is good information but mostly bad information	I.3	I.3.3
13	Perhaps because it encourages the preparation of meals and colored dishes with fruit, vegetables, seeds and nuts	I.3	I.3.3
14	There is more awareness of healthy eating, but there is also a growing prevalence of poor food relations and eating disorders	I.3	I.3.3
15	This is not turning the society healthier	I.3	I.3.3
16	Most of times has the opposite effect	I.3	I.3.3
17	Perhaps it has made society healthier in the sense that there is awareness and change in behavior. But I do not know if the awareness means a change in the way of life	I.3	I.3.3
18	It contributes for an increase sensibility and motivation	I.3	I.3.3

Final Considerations

Given what is described throughout this article it is clear that the food promotion made by people with influence on social media can be described as fake news. As Lazer *et al.* (2018) described among their studies, fake news can mislead readers which main

motivation generate a specific result, in this case revenue. Having the author's ideas in mind and given the fact that the great majority of sample 1 participants agreed that almost anyone who advertises these new diets and products does not know the minimum about the topic. The society is being influenced by the brand and not by the "online influencers".

Even though the society is being influenced by the brands, this increasing awareness for a "healthy diet" could be something positive for the society, however the conclusions are that it is not. All of the new diets currently promoted have the particularity to include several restrictions, and not only authors such as Yantcheva *et al.* (2015) or Gaesser *et al.* (2012), but also sample 1 defended that to apply restrictions without a real food intolerance could bring health issues in the long term.

One of the trendiest diets is the one without gluten or lactose, and the fact is that if we look around there are a significant number of people who claim being intolerant to one of these things. During my research with sample 2 I could conclude what some authors claim too, that almost no one do the proper medical exam in order to know whether it is in fact intolerant. What people are doing is an auto diagnose based on symptoms, and as any other food restriction, it could bring health issues.

Another important consideration is the fact that the concept of "healthy diet" is being passed as something to lose weight and not to avoid health issues. And this is not a positive consequence for the society in the long term. There are a few people that tried one of these new diets in order to be truly healthy, yet the great majority tried it in order to lose weight.

Conclusions and Implications

In conclusion, given the fact that the number of people promoting diets and food online is increasing, and the impact of it on society is negative and will bring health issues in the long term. It is agreed that there should be some kind of regulation to this type of promotion. People who do not have a background on nutrition should not be able to promote diets or food products, because they cannot answer questions properly or explain the consequences of it. Plus, the fact that a diet is something very personal, so no one can promote a specific diet as the right one to everyone.

Our research has shown that there is a feeling of mistrust of online sources. Although this result contradicts recent studies (Gonzalez-Vaqué, 2018), it was possible to understand the reason for this. Thus, it was found that it is unreliable and has a

negative impact because influencers have no nutritional background, diets have many restrictions that can cause long-term health problems.

Another important conclusion is related to the false news about food and diets and their impact on real life. Thus, the main cause is social networks, as Kelly (2015) and Liu and Lopez (2014) state. Both samples of the study state that social networks are the main source of information on this topic.

This research also allows identifying some managerial implications. First, the influencers need to focus on credibility. Influencers, despite not having a background in nutrition, can partner with professionals in the field, which not only increases users' confidence but also limits possible public health damages and legal problems.

Another implication is related to the use of social networks, since they are a source of discredibility. Thus, it is suggested that influencers combine activity on social networks with other means or channels. For example, the use of an informative website or even offline physical activities may contribute to reduce the negative effect of social media presence.

Limitations and Future Research

Although this qualitative research ensures the appropriate quality parameters, with a high level of saturation resulting from the interviews carried out, it will always be interesting to expand the sample in order to allow comparison with the results of a quantitative survey.

By obtaining a representative sample it will be interesting to use moderating variables that allow one to perceive the variation according to demographic data (e.g. age, gender) or behavioral data (e.g. brand loyalty, degree of health or environmental concern).

Our study also opens interesting possibilities for future research. First of all it will be important to test in other countries or with different products in order to understand the role of influencers in a wider perspective. The use of quantitative studies, namely through structural equations, will allow us to understand the relationship architecture between the variables, as well as their influence on performance variables such as brand loyalty, willingness to buy or willingness to recommend. In essence, current buyers may be the influencers of the future.

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