Analysis of posts contents on food posted by digital influencers on the Instagram social media

Análise de conteúdos de posts sobre alimentação divulgados por influenciadoras digitais na rede social Instagram

Abstract

Objective: Analyze of contents about food and nutrition published by digital influencers on Instagram social media. Method: A qualitative study carried out by means of observation between June and September in 2018. Was analyzed publications about food and nutrition of three influencers identified as A, B and C, which were submitted to the program Iramuteq and analyzed by means of descending hierarchical classification. Then the three publications were analyzed with a larger number of reviews and tanned, as well as the interaction of followers from reviews and the hashtags more evident in the period of collection. Results: After the analysis, we obtained 5 classes of words: health, pq, recipe, diet and mix, resulting from the speeches of the digital influencers. In the reviews analyzed showed a great interaction of followers besides them see the digital influencers as a model of inspiration, in the analysis of the hashtags were found advertising content which is characterized
Analysis of posts on the Instagram social media

INTRODUCTION

Beauty ceased to be something natural and began to be achieved through aesthetic procedures, diets and products that enhance it. Aesthetics has become a factor of growing concern, and there has been a significant increase in the number of themes that address health, well-being and physical fitness disseminated in the different types of media.

Among the social media, we highlight Instagram, a social network created in 2010 by Michael Krieger and Kevin Systrom to be a tool for photo sharing for Android and iPhone users, in which you can take photos, apply effects to the images, and share with friends. In the app, users can like and comment on the posted photos, as well as use hashtags to filter images related to the same theme.

Instagram is the fastest growing social network in the world, with more than 500 million accounts, of which 35 million belong to Brazilians, which makes Brazil one of five countries that most use the app, contributing to the wide audience of the social network. In addition, due to its practical use, the app offers greater interaction among followers.

In this virtual environment, there are Internet personalities who stand out for generating audience and contributing to the opinion-forming of their followers—they are the so-called digital influencers. With the ability to engage a large number of people, through opinions, ideas, personal tastes and exposure of behaviors, the digital influencer is defined as a person who creates content, whether in text, video or images, and who uses Internet channels to promote a brand or product. In addition to increasing the exposure, this activity becomes a source of income.

Through their discourse, it is possible to trace a profile of each influencer, generating an identification of the follower with the exposure practiced by the Influencer, through diversified publications, associated with several niches, i.e. certain segments.

Lifestyle is a very popular and diverse niche, and may be associated with clothing, accessories, body practices, sports and healthy eating, generating a desire for imitation in Internet users. One lifestyle that has been gaining many followers is fitness. For Brachtvoegel, the term fitness is related to balance, physical fitness, competence and overcoming.

Resumo

Objetivo: Analisar os conteúdos de posts sobre alimentação divulgados por influenciadoras digitais na rede social Instagram. Método: Estudo de caráter qualitativo realizado por meio de observação no período de junho a setembro de 2018. Foram analisados posts sobre alimentação e nutrição de três influenciadoras identificadas como A, B e C, que foram submetidas ao programa Iramuteq e analisados por meio da classificação hierárquica descendente. Em seguida, foram analisadas as três publicações com maior número de comentários e curtidas, assim como a interação dos seguidores a partir dos comentários e as hashtags mais evidentes no período da coleta. Resultado: Após a análise, foram obtidas hierarquicamente cinco classes de palavras: “saúde”, “pq”, “receita”, “dieta” e “misturar”, resultantes dos discursos das influenciadoras. Nos comentários analisados, observou-se grande interação dos seguidores, visto que estes tomam as influenciadoras como modelo de inspiração.

Em relação à análise das hashtags, constataram-se conteúdos publicitários, o que caracteriza patrocínio. Discussão: O estilo de vida evidenciado pelas influenciadoras no Instagram se dá através de uma alimentação denominada saudável, e que para ter saúde, é necessária uma dieta baseada em determinados componentes alimentares, através de receitas ou preparações que fazem parte do perfil alimentar. Além disso, as influenciadoras apresentam relação com determinadas marcas de produtos alimentícios. Conclusão: A análise dos perfis permitiu entender que suas publicações superestimam a saúde no sentido estético, reforçando algumas práticas alimentares, produtos dietéticos entre outros, atuando como importante formador de opinião para os seguidores em relação à alimentação e aspectos de consumo.
and the body is its central point. Influencers of this universe are people who dedicate their
time to post photos and videos of their defined bodies, suggesting products, considered by
them to be healthy, and aesthetic products, making this activity a profession.7

With regard to the dietary aspects of the fitness lifestyle, they can be characterized
as restrictive practices associated with diets without lipids, carbohydrates, gluten and laco-
tose. They also encourage the use of food supplements, overestimate the biological aspects
of food in relation with the psychosocial aspects of the individual, without considering the
pleasure of eating, and use food in the synthesis of the perfect body.8 It is also important
to emphasize that, among the posts, there are those that indicate the sponsorship of the
industry of food, supplements and/or cosmetics, often hidden in the posted message and
that generates a need for consumption.9

In this context, we find on the Internet several guidelines on diets, demonstrating how
to follow them, as well as how to maintain them.10 Considering the role of the nutritionist as
the professional able to prescribe dietetic planning, such an approach on social networks
becomes worrying, in particular when it is performed by professionals who validate their
discourse by their own education.11

According to the code of ethics of the professional nutritionist, it is their duty to use in-
formation based on technical-scientific knowledge, and, by sharing such information in the
media, it must have as purpose health promotion as well as food and nutrition education.12

The frequent exposure of images of slim bodies leads to the belief that slimness is
synonymous with health, beauty, and success;7 and can influence the dissatisfaction with
the body image. In the same way, the exposure to images,13 practices and guidelines on
nutrition can also contribute to the adoption and strengthening of a dysfunctional relation
to food, generally associated with restrictive feeding practices.4

In order to broaden knowledge in this field, this study aims to analyze the contents of
posts on food disseminated by digital influencers in the social network Instagram, as well as
analyze the comments and likes made by their followers.

**METHOD**

This is a qualitative research of direct observation in the app Instagram, of the publica-
tions of digital influencer profiles, which took place in the period from June to September 2018.

We selected as object of study three digital influencers who have a large number of fol-
lowers and several publications associated with food. In order to maintain the confidentiality
of the identity of the influencers evaluated in the present study, these were called A, B and C.

Influencer A has 3.8 million followers, is a businesswoman and host of a YouTube chan-
nel. Influencer B, with 3.3 million followers, is graduated and master student on Nutrition; and
influencer C, with 1.8 million followers, is a businesswoman.

For the analysis of the contents posted by the influencers, we selected publications on
food and nutrition posted during the research period. The profiles of each influencer were
monitored in a control performed daily at different times. It was used a function of the app
that allowed us to be notified for the publications of those influencers. The data were recorded
using the software programs Excel and Word (version 2010).

Publications on food and nutrition were selected, and transformed into textual corpus,
i.e., into a set of texts, later submitted to the software Iramuteq, through the method of Des-
cending Hierarchical Classification (DHC).

To analyze the interaction with the followers, we selected the three publications of each
influencer that obtained the highest number of comments and likes. After the selection, the
comments were quantified and analyzed qualitatively. In order to prevent the identification
of people and places cited by the influencers and their followers in the evaluated posts, the
names were omitted and replaced by generic identifications followed by an explanation in
parentheses about the textual change.

The identification and analysis of the hashtags mostly used by the influencers were also
performed, as well as the identification of sponsored publications.

In order to maintain the confidentiality of the brands and avoid conflicts of interest,
the profiles and hashtags associated with the brands were identified using @followed by the
description of the profile and the hashtag (#) followed by the description of the brand, res-
pectively.

For the identification of brand profiles corresponding to the same market segment, the
description was maintained after @, plus the sequential numerical identification in parenthe-
ses, allowing the identification of different profiles.

**RESULTS**

For the analysis of the contents, we gathered the group discourses of the three digital
influencers, which totaled up 738 publications in the period. Among these publications, 80 were
related to food and nutrition and were transformed into textual corpus to be recognized by
Iramuteq and submitted to the DHC method, which establishes word classes that stand out
related to food and nutrition and were transformed into textual corpus to be recognized by
Iramuteq and submitted to the DHC method, which establishes word classes that stand out
the most in the text. It is worth mentioning that, during the research period, Influencer B has
reached the highest number of posts on food.
In this total of textual corpus, we observed 5,724 occurrences of words, among which 180 are text segments, excerpts of text generated by Iramuteq itself due to the size of the textual corpus. Of all text segments generated, only 131 were selected by the software for analysis, which corresponds to 72.78% of utilization. Iramuteq needs to have 70% of the segments used to obtain a consistent analysis.

Figure 1 shows the dendogram with five classes of words coming from the analyzed discourse of the influencers. When the word is at the top of the list, it has more influence on the class. Note that class 5 has 34 text segments and corresponds to 25.9% of the analyzed segments, standing out over the other classes and establishing a superior hierarchy superior.

Class 5 highlights an important characteristic of the influencers in the social networks, represented by the dissemination of a lifestyle in which the word “health” has a strong focus. This word is found in the posts of the three influencers, but is more present in the publications of influencers B and C, and is associated with the word “pregnant”, which stood out in second place in this class, because the two influencers were in the gestational period during the research. The excerpts of the publication analyzed by Iramuteq that exemplify the use of the words “health” and “pregnant”, performed by the influencers, are presented below:

Genetic tests are fantastic for guiding us in relation to what better serves us based on polymorphisms and risks to nutrition and health [...] (Influencer B).

I have just arrived from a lecture by health professionals focused on pregnancy where a doctor shares much of what I believe, that a healthy pregnant woman shouldn’t put on more than 30 pounds, after all eating real food she wouldn’t even be able to. (Influencer C).

For a baby to be born healthy, without the risk of diseases in the future, he or she needs that mommy feeds the best way during the period in which she is generating this life, eating well is generating life with health (Influencer C).

Class 1 corresponds to 18.3% of segments analyzed. It includes food aspects of influencers, and the word that stands out in the class is “recipe”. Sometimes, in the visualizations in these profiles, followers are motivated to prepare recipes that represent practices adopted by the influencer that are disclosed to the public as healthy preparations and that are generally industrialized products. The word “recipe” is found in particular in influencer B’s discourse, according to the excerpts below analyzed by software Iramuteq from the posts.

Today is Friday and we have a delicious healthy and easy recipe with milk from cashew nuts from Brazil. 1 cup cashew milk, 3 tablespoons of frozen raspberry or red fruits. (Influencer B).

Take a sit because here comes a recipe, so delicious this chocolate with coconut, made without sugar, with ingredients @ [oil trading company (coconut oil)] super easy and requires no oven, write down the fit ingredients [...]. (Influencer B).
“bc” is exemplified in the posts of influencer A, as shown in the following excerpts:

*Press play, if you want an easy recipe of pancake, write down: 1 scoop of whey @ [supplement and food products company associated with the practice of physical activity (1)], 1 egg, 1 handful of sugar-free chocolate drops, 1 teaspoon of yeast. (Influencer B).*

Class 3 obtained 16% of segments of analyzed texts and is hierarchically united to class 1, when it refers to the word “mix”, which is related to the promotion the influencer do of certain recipes. The word “mix” represents a stage in the preparation process associated with putting the ingredients together in some recipes available in the profiles of the influencers, in which they demonstrate the practicality in obtaining the desired preparation. The word is often found in the discourse of influencer B, as can be seen in the following excerpts, taken from the posts.

[*(...) melt the chocolate and mix the already crushed avocado and add whey and xylitol, make little balls and then [...] (Influencer B).*]

[*(...) mix well to the mixture 3 tablespoons of xylitol, 1 pinch of salt, 3 full tablespoons of almond flour [...] (Influencer B).*]

[*(...) mix all the ingredients and put the dough in a mug and then put it in the microwave [...] (Influencer B).*]

Class 2 has 22.9%, and class 4, 16.8% of the segments analyzed and forming a subclass of class 5. In the analysis of class 2, it can be verified the abbreviation of the word “bc”, widely used in social networks and which is used to justify the consumption of food products that improve your health. Dissemination of products by influencers can be characterized as a publipost (in Portuguese), i.e., a type of sponsorship in which the influencers gain funding or even products to advertise in their profiles. The use of the terminology publipost is exemplified in the posts of influencer A, as shown in the following excerpts:

*I just love @ [exclusive formula trading company for the preparation of tea, developed by nutritionists] bc 1 sachet has abetter and more potent herbal mixture bc it's all there, it's practical and healthy, it takes 5 min to prepare and bc I always drink tea every day of my life. (Influencer A).*

*Good morning, very delicious my smoothie, got even better with the cashew nut drink from @ [company that commercializes products based on milky extract of cashew nut] it is more full-bodied and tasty it has many more nuts than the traditional 85 nuts per liter (Influencer A).*

In relation to the analysis of the comments and likes of the three posts whose content is associated with food, we observed that the same publication that obtained the highest number of comments was the one that obtained the highest number of likes for the three
analyzed influencers. The post by influencer A that was the most commented obtained 902 comments and 87,211 likes; influencer B, 2,060 comments and 32,000 likes; influencer C, 320 comments and 50,800. The analyzed publications can be seen below:

I haven’t eaten meat in a long time, and a few months ago I naturally stopped to feel the urge to eat chicken and fish. It’s crazy not to see animals as food and for a long time I wasn’t doing that connection. Suddenly it’s a part of me with total sense and purpose. I go to steakhouses, Japanese restaurant etc., and my choices are the same: leaves, vegetables, roots and grains (and sometimes pizza, chocolate, French fries, yes). I discovered other flavors, other pleasures, and a huge peace. It’s another energy! Here at the “Japanese restaurant” [replacing the name of the restaurant] I always order the spinach salad with truffles, the crispy shiitake, vegetable temaki, cauliflower with jalapeño. Delicioussss! Eat Your Greens #WhereverYouAre #choices #lifestyle #connection #intuition #Russia (I posted more of the dishes in Stories!) (Influencer A).

I doubt that you won’t stay for “my daughter” [replacing the name of the influencer’s daughter] watching from beginning to end #blogger! Finally the recipe that filled my inbox of questions is already on the air! Learn how to make the delicious sugar-free protein cookie with whey from @ [supplement and food products company associated with physical activity (1)]. Watch the full video on the IGTV of @ [supplements and food products company associated with physical activity (2)]. And then tell me if the recipe worked. Around here, everyone loved it and there’s nothing left, not even half a cookie @ [nameofthecompanybrand2] @ [nameofthecompanybrand1] #whey #healthsnack #cookie (Influencer B).

My breasts now have their true function in effect. They are ready to nurture my daughter @ [influencer C’s daughter’s profile] of the best food in the world, just like they nourished my son @ [influencer C’s son’s profile] and, a few moments, @ [profile of the daughter of the friend of the influencer C], who is the daughter of a long-time friend of mine. My friend and I got pregnant at the same time and we had our own babies almost at the same time. My milk was used as a complement to her baby, who became a beautiful woman today. Breastfeeding and donating milk to the milk banks is a great act of love. The only thing we need to pay attention to in these donations is that they must be done the right way so that no disease is transmitted through the milk. However, just like me, the mothers who also have a lot of milk can help other mommies and other babies… #BreastfeedingBasedLife #SMAM2018 #SupportBreastMilk…” (Influencer C).

It’s beautiful to see that! And read it! Congratulations! Compassion always! For them, for the planet and for our health! Always! [-]

“You daughter” [a term that replaces the name of the influencer’s daughter] is the best part of the video.

I’d like your help with healthy eating during pregnancy, please.

It can also be observed that her followers feel enthusiastic about her posts and turn the practice stimulated by the influencer into a model of inspiration. As the analyzed excerpts show, in the comments there are words written by the followers such as “body goal”, when referring to the body of influencer A, besides “I want to have this belly” “beautiful” and “wonderful”. In the same way, the comments that interact with the posts of influencer B declare: “you are pure willpower”, “passionate about the recipes”, “we love your practical recipes”, “I have doubts about the heavy cream, is it healthy to a diet? And also for influencer C, in the comments of her followers: “look at this 4-month belly”, “beautiful, powerful and inspiring”, “I really wanted to be like that”.

Followers’ comments receive some feedback from the influencers and are usually answered in the first comments due to their large amount.

In relation to advertising or digital marketing made by influencers in Instagram, it was observed that this practice occurs in a similar way among the three influencers. All of them identify their posts with tags using @ and hashtags, which are search engines commonly identified by the word “publi” (ad) or “publicidade” (advertisement) in these profiles, characterizing pubilposts (sponsored posts). It should be noted that virtual celebrities use the online platform as a means of work, creating links with several companies by obtaining sponsorship. Below are some examples of posts by influencers that have an advertising character.

The best bar / candy / chocolate that you will taste in your life. I SWEAR! For those who already love Power Crunch, now we have it improved! In the perfect size, a little smaller, 11 g of protein, 8 g of carbohydrates, and crunchy! In addition, they are enriched with folic acid and thiamine. (vitamin B1)! In the flavors peanut butter, chocolate and birthday cake! Try leaving it in the freezer for a few minutes, it will taste great. I showed in
The hashtags on food and nutrition most commonly used by digital influencers were:

- For influencer A, #vitalgastronomy, that reproduces a very common practice in her posts, the sponsored posts stood out in the publications in which she publicized a clinic and spa, associated with vegan and/or vegetarian products. One of the publications in which #vitalgastronomy stood out can be seen below.

> Nature’s food is happy food! So this is the energy that I emit! Everything is connected #vitalgastronomy (Influencer A).

- For influencer B, the hashtag that stood out was #braziliancashewtree, associated to sponsored posts in which she recommended the use of certain products of the brand related to food products. The publication can be verified below.

> PRESS PLAY! A recipe of vegan ice cream without added sugar - excellent for those who love a healthy dessert! Super easy and practical! I used the cashew nut milk from @a company that sells products using milky cashew nut extract which is 100% natural and rich in good fat. Just mix all the ingredients and blend them in a food processor and then freeze for about 2 hours. You will love it! 

- For influencer C, the highlight was #rawism, an eating practice which refers to the consumption of fresh food (raw) of vegetable origin. Excerpts from the publication are presented below.

> [...] STRAWBERRY

> It fights the aging of the skin; it helps to prevent heart diseases; improves mental capacity; prevents cancer; helps fighting inflammation. #rawism #health #healthpregnancy (Influencer C).

**DISCUSSION**

The posts by the analyzed influencers base their dietary practices in a frequency of consumption of processed food in the context of diet, light or fiber-rich products, representing, in many cases, sponsored posts. This publication profile places these foods on the level of necessary food to compose a healthy diet, especially when directed to specific stages of life, such as pregnancy, period experienced by two of the influencers during the research.

According to the Food Guide for the Brazilian Population, alimentation goes beyond the act of eating, because it involves biological, emotional and socioeconomic factors. In addition, the guide advises to give preference to the consumption of fresh food and avoid the use of ultra-processed food.

According to Koritar & Alvarenga, in a study carried out among Nutrition students about relevant factors to healthy eating, Nutrition professionals are considered references when it comes to healthy eating. Since one of the influencers analyzed is a nutritionist, it is important to highlight the important role of this professional in the practice of healthy eating.

In the profile of this influencer analyzed here, it was verified the overvaluation of the nutritional quality of food, as well as its physiological role, overestimating the nutritional quality of the diet without taking into account the emotional and social relationship that the individual has with the food. It is worth mentioning that this type of posture can reinforce dysfunctional behaviors related to eating.

In this sense, for the guidance of the professional, the new code of ethics establishes that it is the duty of the nutritionist, when sharing information on food and nutrition in the...
various media, to base their approach in technical-scientific knowledge, in a critical and contextualized way, reinforcing that the results of a given practice may not occur in the same way for everyone.12

Lesnovski & Costa,7 in their study, cite that the Internet has become a repository of information on food and recipes related to diet, and that these determine which foods are beneficial or not to our health. These feeding practices made by influencers may not take into account the individuality of each human being. Therefore, guidance from a trained and skilled professional is required.

Sant’anna13 points out that, as the access to information and the diversity of formulas advance, some meals have gained an aspect of doses of medicine, attributing, in a way, a prescriptive and inflexible aspect to the act of cooking. This is an issue present in the publication profile of the analyzed influencers, which reinforces, in the act of cooking, the practice of mixing products associated with a distorted concept of healthy eating and closer to current aesthetic standards.

For Jacob,7 the profiles that are most successful among the common public are those of women with a good socioeconomic level, who expose their lives as a model of perfection to be followed, in which the exposure of their lifestyles, experiences, opinions and personal tastes ends up influencing aspects related to health, aesthetics and consumption. These women are examples for thousands of followers and use this channel to generate the subjectivity of their appreciators.

Sant’anna13 argues that the body currently plays a specific role, and has become one of the main ways of demonstrating individual personality. Physical appearance is one of the notorious ways of showing what every human being has to offer in contemporary society. The body has become a central element, both for those who expose themselves and for those who judge. Thus, the body remains as a showcase for the collective and as a tool of self-esteem for each individual.

According to Wimmer & Greggianin,17 after analyzing the profile of a digital influencer in Instagram, it was found in the various posts that they had some kind of sponsorship and that the influencer in question used as marketing strategy the association of products to her image and body. In this context, it can be observed in the profiles of the analyzed influencers a practice similar to that described in the study above.

Knowing their importance, these virtual celebrities benefit from the online platform and turn it into a means of work, creating links with various companies from the sponsorship of their posts.20

It is in this scenario of intense exposure that the digital influencers call attention and add value to their publications, becoming a model to be followed. At the same time that influencers propagate a lifestyle, companies commercialize goods and give relevance to the addressed subject.3

For Nicolleti & Capra,9 consumption helps in the formation of the identity that “we become what we consume”. In this perspective, followers are interested in using products advertised by web celebrities. Like publications, hashtags are used to name or emphasize some type of advertising and used as a search tool, generating interest of their followers, making their publications relevant.

This feature is also used in the dissemination of products. The tagging through hashtags corroborates so that the possible consumer is directed to other posts made by various users, thus transforming Instagram into an infinite network of dissemination.21

In addition, because they are influencers of thousands of people, they use their digital fame to provide more value to a brand or service. Thus, influential marketing boosts 31% of sales, reaching the third place of Internet sales. Similarly, 65% of brands apply influence marketing as a strategy, and 52% of companies have a specific amount to invest in social media.22

CONCLUSIONS

The analysis of the profile of digital influencers showed that many of their publications were related to the overvaluation of health in the aesthetic sense, including diets, aesthetic products, and dietetics, among others. It can be observed that these personalities exert a lot of influence on consumption, because in the profiles analyzed, the advertising of certain products and brands was always present - they take advantage of the great notoriety they have in Instagram to disseminate such products. Thus, it is possible to state that they contribute to the intellectual behavior of consumers, since they are opinion makers and act with standards charged by society.

These strategies are established by digital influencers and accepted by their followers, who sometimes end up consuming the products recommended by them. This aspect is very relevant and needs to be considered in nutritional monitoring. Understanding the use that the individual has made and how this relates to social networks is fundamental to understand some of the relationships involved in eating behavior.

In this context, it is even more worrying the performance of professional nutritionists who use social networks, either as a technician or as a digital influencer for self-promotion.
associated with the propagation of a nutritional discourse that reinforces beauty standards and distorted eating practices.

The insertion of the aspects related to the use of social networks in the new Code of Ethics and Conduct of the Professional Nutritionist is an advance, but the professional exercise in the universe of social media needs to be accompanied by educational and control actions by the class council.

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Contributors

Mota JJO worked in all stages, from the conception of the study to the revision of the final version of the article; Almeida LC worked in all stages, from the conception of the study to the revision of the final version of the article. Neves VHS worked in all stages, from the conception of the study to the revision of the final version of the article.
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