Estudos de Psicologia

Estudos de Psicologia, 25(2), abril a junho de 2020, 144-156

Social representations of Coronavirus in Brazil: first months of the pandemic

Elson Ferreira Costa. Universidade do Estado do Pará
Dalízia Amaral Cruz. Prefeitura Municipal de Barcarena-PA
Lilia Iêda Chaves Cavalcante. Universidade Federal do Pará

Abstract

This study aimed to analyze the social representations of Internet users, from comments to reports on Coronavirus in the first months of the pandemic in Brazil. The research has an analytical-exploratory character, with a quantitative and qualitative approach. The data was processed by textual analysis software for subsequent examination of the content. From the selected speeches, three classes emerged - Coronavirus: politics, health and society, Distrust of statistics and Disregard for the president. The results highlight different ways of anchoring these social representations and suggest the vitality of a theoretical classification paradigm that gives value to objects, people or phenomena, ranking them in order of importance. In this study, social representations were based on negative values, and their senses converged to a unique image of discredit in institutions, governments and the media. This scenario is especially worrying because of the gravity of the crisis resulting from the pandemic in Brazil and says a lot about the past and the future of the country.

Keywords: social representation; virus; Brazil.

Resumo

Representações sociais sobre o Coronavírus no Brasil: primeiros meses da pandemia. Este estudo objetivou analisar as representações sociais de internautas, a partir de comentários a reportagens sobreo Coronavírus no Brasil. A pesquisa tem caráter analítico-exploratório, com abordagem quanti-qualitativa. Os dados foram processados por software de análise textual, para posterior exame de conteúdo. Dos discursos selecionados, emergiram três classes -Coronavírus: política, saúde e sociedade, Desconfiança das estatísticas e Desprestígio do presidente. Os resultados ressaltam diferentes sentidos de ancoragem dessas representações sociais e sugerem a vitalidade de um paradigma teórico classificatório que confere valor a objetos, pessoas ou fenômenos, hierarquizando-os em ordem de importância. Neste estudo, as representações sociais foram assentadas em valores negativos, convergindo seus sentidos para uma imagem única de descrédito em instituições, governantes e mídia. Esse cenário se mostra, especialmente, preocupante em razão da gravidade da crise decorrente da pandemia no Brasil e diz muito sobre o passado e o futuro do país.

Palavras-chave: representação social; vírus; Brasil.

Resumen

Representaciones sociales sobre el Coronavirus en Brasil: primeros meses de la pandemia. Este estudio tuvo como objetivo analizar las representaciones sociales de los usuarios de Internet, a partir de los comentarios a los informes sobre el Coronavirus en Brasil. La investigación tiene un carácter analítico-exploratorio, con un enfoque cuantitativo-cualitativo. Los datos fueron procesados por un software de análisis textual, para el posterior examen del contenido. De los discursos seleccionados, surgieron tres clases -Coronavirus-: política, salud y sociedad, Desconfianza en las estadísticas y Desprestigio del presidente. Los resultados ponen de relieve diferentes formas de cimentar estas representaciones sociales y sugieren la vitalidad de un paradigma de clasificación teórica que da valor a los objetos, personas o fenómenos, jerarquizándolos por orden de importancia. En este estudio, las representaciones sociales se basaron en valores negativos, convergiendo sus sentidos en una imagen única de descrédito en las instituciones, los gobiernos y los medios de comunicación. Este escenario se muestra especialmente preocupante ante la gravedad de la crisis resultante de la pandemia en Brasil y dice mucho sobre el pasado y el futuro del país.

Palabras-clave: representacion social; virus; Brasil.

As of December 2019, a new threat to the health and life of the Chinese population began to be reported on the news. It was related to the epidemic generated by SARS-CoV-2 or Coronavirus, which caused the COVID-19, a disease with a varied clinical picture, from asymptomatic infections to severe symptoms. This virus spread to several countries and evolved into a pandemic (Depoux et al., 2020; H. M. Silva, Pereira, Gritz, Simões, & Porto, 2020).

In Brazil, in early 2020, the population became an easy target of various information about the pandemic, many of them recognized as fake news, which mixed political and health issues in various communicative segments. In this context, information on the evolution of COVID-19 in the country and measures to contain the spread of the virus were disseminated, with the power to influence the level of adherence of individuals and institutions to proposals of social isolation and confinement by quarantine (Burki, 2020; Kirby, 2020).

In this way, this context has provided fertile ground for the formation of social representations about the new Coronavirus and its repercussions in different areas of quality of life. The social representations circulate and intersect, continuously, through words and gestures, with influence on the relationships lived, the objects produced and consumed. In other words, through social representations, objects, people and situations lived in daily life are conventionalized, differentiating them and embracing them as elements of a specific model shared in society. They appear, therefore, as a way of communication and comprehension of the elements that surround people (Moscovici, 2000).

Behind the social representations, there is an implicit theory, in which people create a system of classification and denotation. According to Moscovici (2015), social representations are created to make familiar phenomena, beings and objects unfamiliar. Two processes that generate social representation are triggered: anchoring and objectification. In the process of anchoring, abstract ideas about a given phenomenon, for example, are grouped and categorized from a given paradigm. These are then transformed into concrete ideas through objectification. To aim, thus, is to uncover the iconic quality of an inaccurate idea about a phenomenon, reproducing it in an image (Moscovici, 2015). One sees that, according to the author, social representations are not simple "opinions about" or "images of", they are particular collective theories, based on concepts and values. Representative activity, therefore, constitutes a mental process that allows people to become familiar with and materialize something unfamiliar.

It is also important to emphasize that social representations are constituted from the intertwining of two matrices of thought in society: the reified universe, where the ideas produced by science, media, politics, among others, circulate; and the consensual universe, where daily interactive practices are found, a fertile field for the formation of social representations, considered common sense theories (Guareschi, 2013; Moscovici, 2015; Oliveira, & Werba, 2013).

This way, it is emphasized that the unfamiliar is often generated in the reified universe of science, politics, media and intertwines with the consensual universe of daily life, through various scientific disseminators, such as journalists and politicians who use the mass media as a resource (Guareschi, 2013; Moscovici, 2015; Oliveira & Werba, 2013). Thus, when diluted in day-to-day interactive practices, the concepts generated in the reified universe are replaced by common sense theories.

In view of the above, the study of social representations allows the understanding of historical phenomena, generating great social impact. And discussing the knowledge built on a given theme is of fundamental importance for the understanding of the degree of influence of the universe reified in the consensual, where practices and interactions are established, on a daily basis, to meet the challenges posed by COVID-19. In this sense, this study aims to analyze the social representations of Internet users, from comments to reports on Coronavirus in the first months of the pandemic in Brazil.

Method

This is a study with analytical-exploratory character and quantitative and qualitative approach in data treatment. Secondary data were used, obtained from the examination of comments from Internet users who accessed the UOL website. This is a Brazilian company of internet content, products and services, founded by Grupo Folha in April 1996 with the slogan "The Best Content". This portal was chosen because it is among the 10 most visited websites in Brazil, according to the Similar Web platform in 2017. Furthermore, it was considered by IBOPE Nielsen Online to be the largest portal in Brazil, with over 50 million visitors and 6.7 billion pages visited monthly (Valor Online, 2010). Its content is available for free.

The research was conducted in May 2020, through Google's research system, from key terms for this study,

namely “Coronavirus”, “SARS-CoV-2” and “COVID-19”, checked individually with the term “UOL”. Thus, the “tools” menu was selected and the option “custom range” was checked to delimit three specific time periods for the selection of comments. The first period began on 02/06/2020, when the Quarantine Law was promulgated in Brazil, until 03/16/2020; the second period began on 03/17/2020, when the first death by COVID-19 was registered in the country and it went until 04/15/2020; and the third period was 04/16/2020, when all the states registered death by COVID-19, extending until 05/01/2020. These three periods of time are justified due to the objective of comparing social representations, based on significant events that marked the pandemic in Brazil. It is worth mentioning that comments directly related to the article published on the aforementioned portal were selected, excluding those that were off-topic, such as announcements, bible passages, among others.

Procedures

Data Collection. The first step marked the general reading of the comments in the reports and the selection of those that would be included in the analysis. Then, the content of the selected comments was transcribed in full and separated by command lines, according to the guidelines for textual data processing in the IRaMuTeQ software (*Interface de R pour les Analyses Multidimensionnelles de Textes et de Questionnaires*) for structuring the corpus of analysis (Camargo & Justo, 2018). It should be noted that the corpus was composed only of the texts of the comments of the internet users and not of the content of the reports.

Data Analysis. The content analysis technique was applied to analyze the data, which allowed the examination of the transcribed comments and to infer, systematically-descriptively, on the theme co-mented (Bardin, 2011). In this sense, the Word Cloud was initially generated from the comments of Internet users in each period, in order to present an exploratory summary of the content analyzed. This technique randomly groups the words and organizes them, graphically, according to their frequency in the text. The second technique used was the Descending Hierarchical Classification (DHC), which promotes the analysis of lexical roots and offers the contexts in which the classes are inserted (Camargo & Justo, 2018). It should also be noted that the processing done by IRaMuTeQ provides a quantitative and qualitative approach to the data, since the content of the corpus is processed from the frequency and the *chi-square* statistical test (A. M. B. Silva & Enumo, 2017).

Results and discussion

A total of 228 comments were selected, 83 of them from 22 reports in Period 1; 84 comments from 24 reports in Period 2; and 61 comments from 14 reports in Period 3.To compose the analysis of the Word Cloud, the average frequency of active forms (different words) of each period (Period 1=4.1; Period 2=3.8; Period 3=3.7) was adopted as cutoff point. In view of this, the graphic image (Figure 1) presents the most evoked words in each period: Coronavirus (*f*=71), Brazil (*f*=49), Country (*f*=31), Government (*f*=26) and Carnival (*f*=26), referring to Period 1; COVID-19 (*f*=33), Coronavirus (*f*=30), Bolsonaro (*f*=23), Quarantine (*f*=22) and social isolation

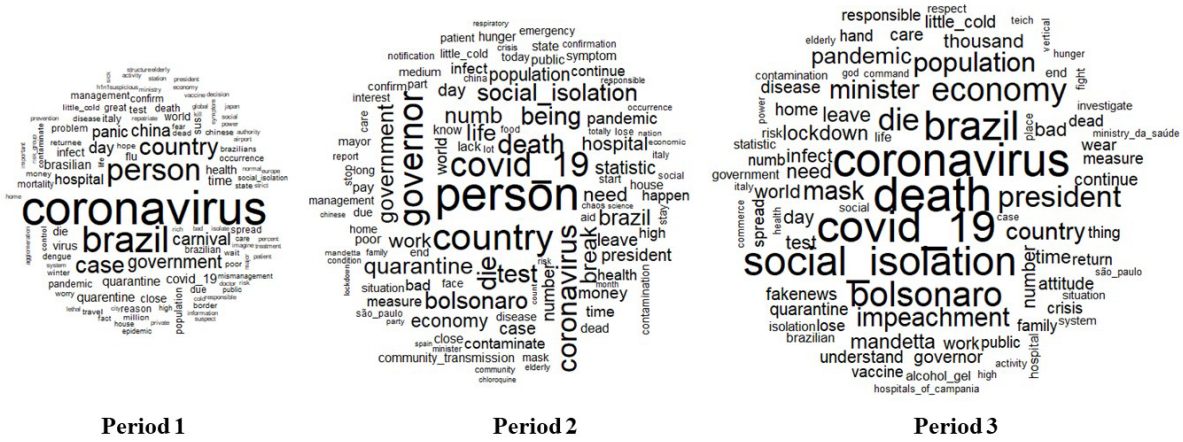


Figure 1. Word Cloud Representation: Comparison between the three periods.

(*f*=21), corresponding to Period 2; and Coronavirus (*f*=23), COVID-19 (*f*=22), Bolsonaro (*f*=17), Economy (*f*=16) and Social Isolation (*f*=15), equivalent to Period 3.

From the exploratory analysis of the textual content by the Word Cloud, the difference in content between the three periods is signaled. The word "Carnival", which appears more frequently in Period 1, alludes to the possible cases of Coronavirus contamination already during Carnival here in Brazil. There is also a decrease in the frequency of the expression "social isolation" in Period 3 in relation to Period 2, suggesting a tendency to make the measure more flexible. On the other hand, the result also points to cohesion of content between the comments in the three periods for the subject. It is observed that the word "Coronavirus" appears more frequently in the comments found in the three periods, while the words "Bolsonaro" and "Government" suggest a common semantic content in the periods. In this sense, the set of words, highlighted in each period, reveals the meanings of anchoring social representation in the illustrative comments.

> It is necessary to demand that the government presents an emergency plan for the production of test kits for the Coronavirus right away, because even so, it will be long before they realize what this pandemic will be (...) (Comment 76, Period 1).

> Bolsonaro already knew that this would happen since last year and kept joking and saying that it was all a big hysteria. China made hospitals within 10 days and Bolsonaro did absolutely nothing to support healthcare during the COVID-19 pandemic (...) (Comment 14, Period 2).

> According to president Bolsonaro, COVID-19 is just a small flu. Soon the dis-government will manipulate the data again. Negationists will only learn when close relatives start dying (Comment 24, Period 3).

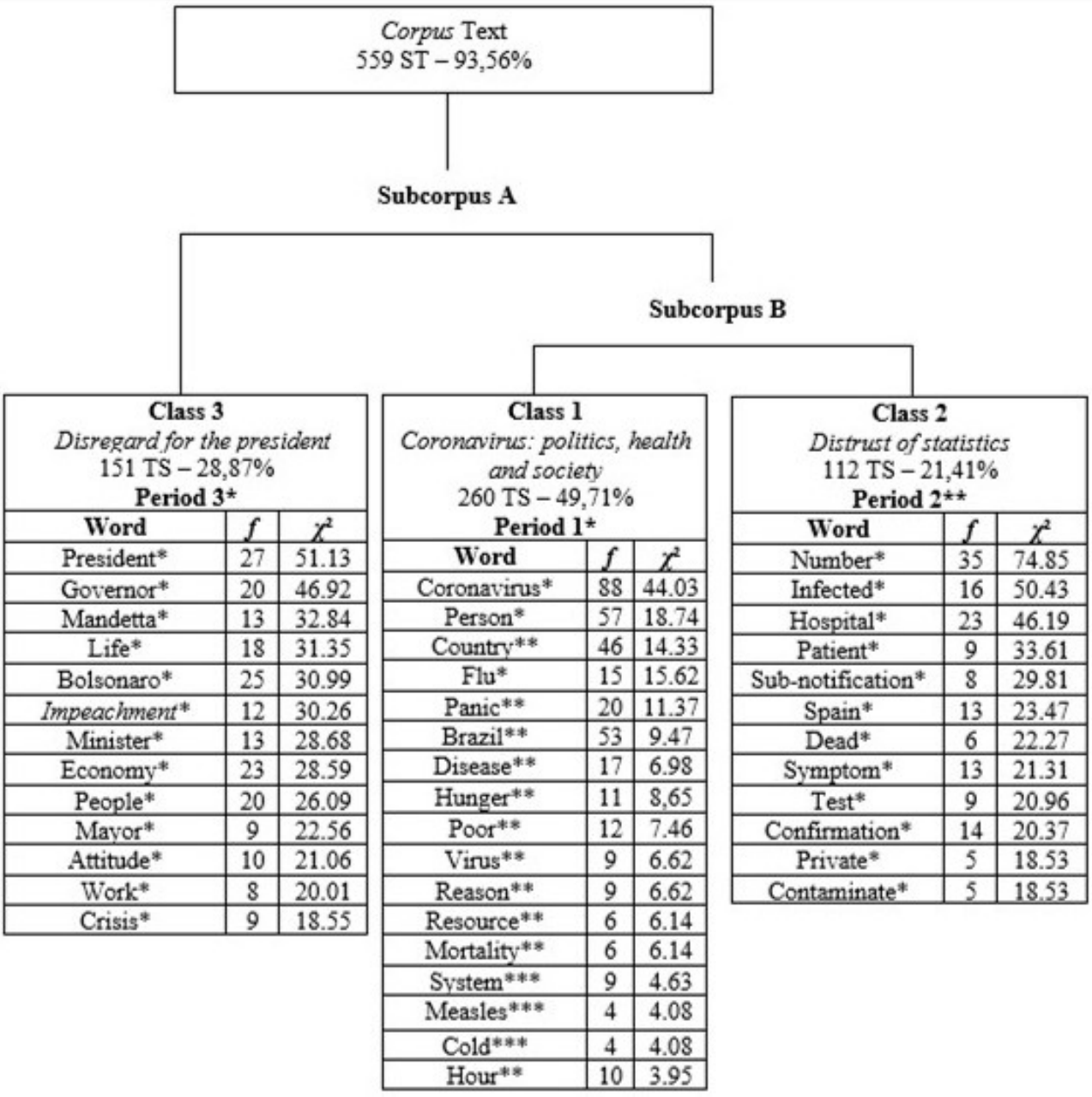
It should be noted that the senses of anchorage in each period fall on the attitudes and behaviors of president Bolsonaro, associated, above all, with the central contents that emerged from the classes generated by DHC. Thus, according to the DHC's analysis, the general corpus was composed of 228 texts separated into 559 text segments (TS), taking advantage of 523 TS (93.56%)[1]. There were 15,145 occurrences (words, shapes or expressions), being 3,117 distinct words and 1,089 with a single occurrence.

The analyzed content was categorized into three classes: Class 1, with 260 TS (49.71%); Class 2, with 112 TS (21.41%) and Class 3, with 151 TS (28.87%). It should be noted that the three classes were divided into two branches (A and B) of the total corpus under analysis. Subcorpus A is composed by Class 3 (Disregard for the president) and subcorpus B contains the texts corresponding to Classes 1 (Coronavirus: politics, health and society) and 2 (Distrust of statistics). It is important to point out that the analysis was carried out from the outermost class (Class 3, subcorpus A) to the inmates (Classes 1 and 2, subcorpus B). It is observed that the content of Class 3 branches from subcorpus A and subcorpus B, the content is distributed in Classes 1 and 2. These, despite being divergent from each other, have common content and, therefore, are presented in a separate branch of Class 3. For better visualization, the dendrogram (Figure 2) presents the list of component words of each Class, whose cutoff point was the expressive *chi-square* ($\chi 2 \geq 3.80$) and statistical significance ($p \leq 0.05$).

In a complementary way, it is also possible to visualize a Factorial Correspondence Analysis (FCA) graph generated by DHC. The cutoff point established was the length of the text, proportional to the frequency of at least five and at most 40 words, as well as the length of the text, proportional to the *chi-square* between seven and 70, according to Camargo and Justo (2018). Thus, it is observed how the words and their frequencies, in class, were organized in the Cartesian plan (Figure 3).

Because they have more specific semantic content, the words of Class 3 (Disregard for the President) tended to cluster on the right horizontal axis and did not exceed the upper, lower and left quadrants of the plane, where the words of Classes 1 and 2 are located. This result confirms the emergence of Class 3, from subcorpus A, as shown in Figure 2.

The words of Class 1 (Coronavirus: politics, health and society) and Class 2 (Distrust of statistics) were distributed peripherally, occupying different quadrants. However, according to Figure 2, both classes emerged from subcorpus B, suggesting common semantic content, that is, they expressed the discredit of Internet users regarding information and actions to combat COVID-19. Therefore, there are words from both Class 1 (Government, Because, Problem) and Class 2 (Official, Mortality) that migrate toward each other. In addition, as they emerged from Class 3, the words that make up the semantic field of Class 1 (Coronavirus, Necessity,



Class 3
Disregard for the president
151 TS – 28,87%
Period 3*

Word	*f*	χ^2
President*	27	51.13
Governor*	20	46.92
Mandetta*	13	32.84
Life*	18	31.35
Bolsonaro*	25	30.99
*Impeachment**	12	30.26
Minister*	13	28.68
Economy*	23	28.59
People*	20	26.09
Mayor*	9	22.56
Attitude*	10	21.06
Work*	8	20.01
Crisis*	9	18.55

Class 1
Coronavirus: politics, health and society
260 TS – 49,71%
Period 1*

Word	*f*	χ^2
Coronavirus*	88	44.03
Person*	57	18.74
Country**	46	14.33
Flu*	15	15.62
Panic**	20	11.37
Brazil**	53	9.47
Disease**	17	6.98
Hunger**	11	8,65
Poor**	12	7.46
Virus**	9	6.62
Reason**	9	6.62
Resource**	6	6.14
Mortality**	6	6.14
System***	9	4.63
Measles***	4	4.08
Cold***	4	4.08
Hour**	10	3.95

Class 2
Distrust of statistics
112 TS – 21,41%
Period 2**

Word	*f*	χ^2
Number*	35	74.85
Infected*	16	50.43
Hospital*	23	46.19
Patient*	9	33.61
Sub-notification*	8	29.81
Spain*	13	23.47
Dead*	6	22.27
Symptom*	13	21.31
Test*	9	20.96
Confirmation*	14	20.37
Private*	5	18.53
Contaminate*	5	18.53

Figure 2. Dendrogram Representative of the Breakdown in Classes, Frequency, Association and Significance Level of the Words in relation to the Class.

Note: **p*≤0.0001 ***p*≤0.01 ****p*≤0.05

Airport) and 2 (Being, Hunger) tended to migrate to the vertical axis, to meet the words of Class 3 (Responsible, Little-cold, Pandemic), whose focus of the speeches in the comments was president Bolsonaro.

Class 3 (Disregard for the President) was responsible for 28.87% of the TS, regarding the president's lack of credibility in face of the public health emergency. The sense of anchoring social representation falls on the behavior of the president of the republic who, according to Internet users, acted irresponsibly and even mocked the situation, especially at the beginning of the COVID-19 pandemic. It is also observed that Period 3 presented greater affinity with this class, with statistically significant association ($\chi 2$=72.3; $p \leq 0.0001$).

In Brazil, the municipalities are responsible for executing the actions and services of the Brazilian

Unified Health System (SUS). The states coordinate and plan SUS at the state level. However, the federal government is the major normalizer and funder of this system, and the Brazilian Ministry of Health (MS) is responsible for formulating national health policies. Therefore, the articulation in this triad is important to control epidemics

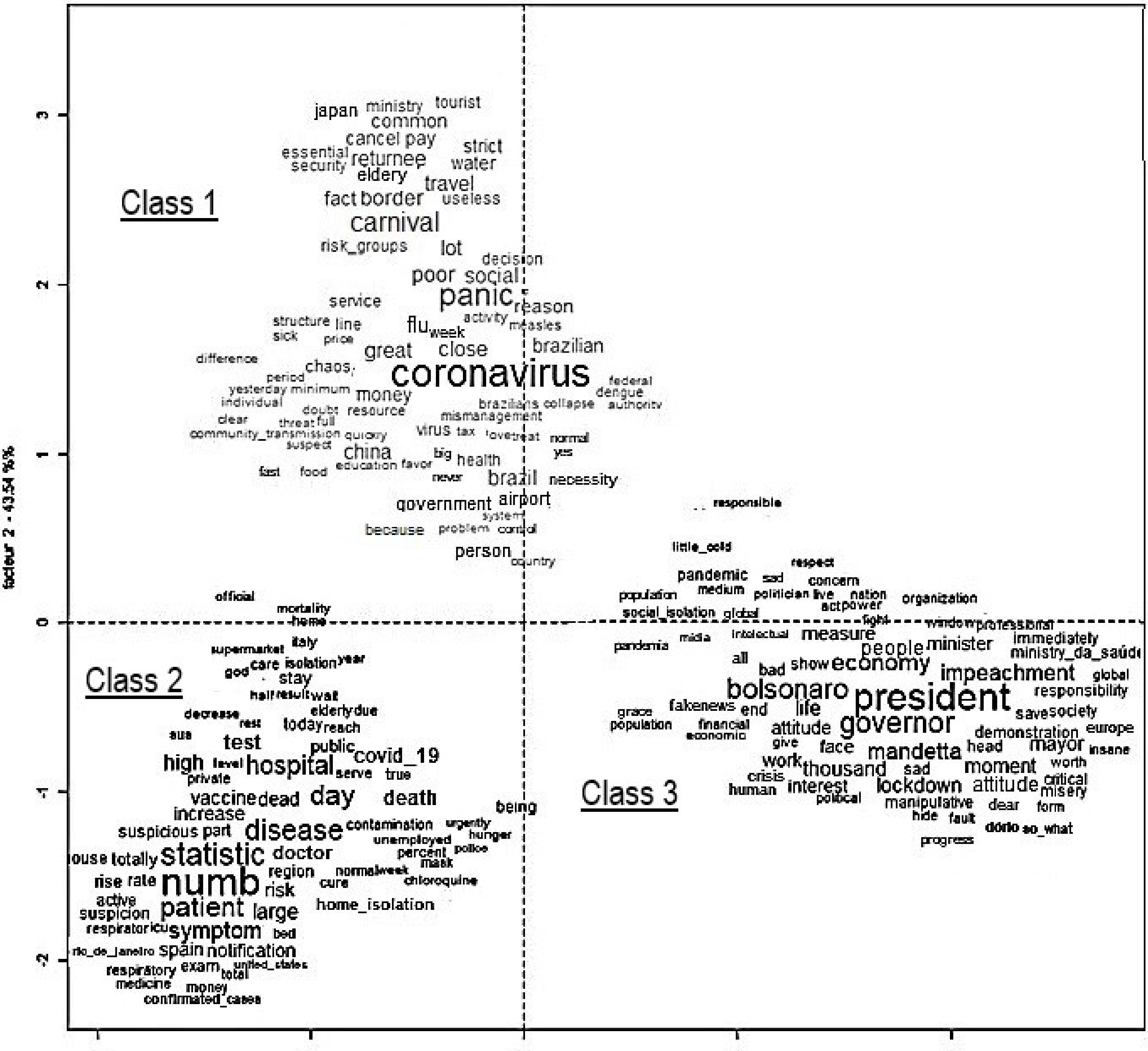


Figure 3. Organization of the Words per Class in the Factorial Plan.

such as Coronavirus, but the management and posture of President Bolsonaro, in face of the COVID-19 crisis, have been criticized nationally and internationally (Burki, 2020; Ricard & Medeiros, 2020; The Lancet, 2020).

In light of this, the president has been facing protests against his administration in the current health emergency. According to Internet users' speeches, Bolsonaro has minimized the threat of COVID 19, even calling it "a little cold" in addition to attacking the efforts of governors

and mayors to establish non-pharmacological interventions to confront the disease, defined by the World Health Organization (WHO) as the main control strategies.

From the contents analyzed, we observe the interweaving of universes reified and consensual in the constitution of social representation (Guareschi, 2013; Moscovici, 2015; Oliveira & Werba, 2013). The Coronavirus pandemic, as an unfamiliar phenomenon to thousands of Brazilians, has been massively spread by politics since it began in the country. In this scenario, the figure of Bolsonaro gained prominence by using the media to convey his ideas about the disease. Such transmission, as it is diluted in daily interactive practices, gives way to common sense theories. Thus, it can be seen from the Internet users' speeches that they have placed themselves against the content of the ideas propagated by the president.

> While the world is taking all measures to contain the escalation of COVID-19, Bolsonaro goes in the opposite direction, focusing only on the losses to the economy and underestimating COVID-19, calling it "a little cold" (...). He has been behaving in an intractable and irresponsible manner, besides being incompatible with his duties as president, criticizing the governors who are adopting the necessary quarantine measures to prevent the growth of Coronavirus in their respective states (Comment 33, period 2).

> I would like to know when Mr. President will be held responsible for these deaths? He mocks, he has even said "so what?". He says that at some point we will all get COVID-19. He hides his own test, fires Mandetta during the pandemic, treats even his voters as puppets, promoting friction and rage, and denies that he is a part of it. It's a lack of respect, he deserves to be impeached! (Comment 60, period 3).

Similar results were found in studies on the social representation of people regarding the COVID-19 (Rosati, Domenech, Chazarreta, & Maguire, 2020) and H1N1 (Sy & Spinelli, 2016) pandemics in Argentina and Ebola in Spain (Idoiaga, Gil de Montes, & Valencia, 2017). The researchers found social representations of villains to political and health authorities, that is, people blamed managers for failures in the administration of their health crises, in addition to corruption, which hindered investments in the health system and facilitated the spread of these diseases.

From the comments of Internet users, we can also see that in addition to the health crisis, the government of Bolsonaro has faced a political crisis, in which it lost Luiz Henrique Mandetta, the health minister who had good political and social acceptance. In an attempt to follow the scientific evidence and WHO guidelines, Mandetta often had to contradict the president (Dyer, 2020; Kirby, 2020). The minister was then replaced by Nelson Teich, who initially demonstrated ideas that were aligned with the presidency. However, after scientific differences, mainly about the use of the drug Chloroquine and social isolation measures, Teich was also exonerated (Dyer, 2020).

> Health Minister Mandetta and the resto f the world say that the best prevention is for the population to be in social isolation, but Bolsonaro encourages the population to go out as if nothing were happening. Who will they believe? In the science of scientists, who are doing everything they can to guide society towards prevention, or in an irresponsible president incapable of getting around a deep crisis? (...) (Comment 34, period 2).

> This Teich minister doesn't know what he's saying! What is lacking is fear, because people are already quitting quarantine in many places, stimulated by the president and fake news spread by Bolsonaro supporters on social networks against governors who defend the quarantine. I want to know who will take responsibility for the crime of genocide happening in Brazil due to the inconsequent ending of social isolation and the opening of non-essential businesses (Comment 42, period 3).

It should be noted that, although the sense of anchoring social representation falls on the behavior of the president of the republic, the contents analyzed invalidate the opinion of president Bolsonaro and validate the scientific discourse. It is also important to highlight the contradictions pointed out by these speeches. On the one hand, there are clashes between members of the government, and between the government and science, constituting what is understood as a reified universe. This knowledge, in turn, when intertwined with the consensual universe, generates diverse representations. In the case of Internet users' opinions, Coronavirus is implicitly pointed out as something bad, which must be fought through quarantine and social isolation. However, at the same time, such discourses allude to behaviors that validate the president's attitude toward the pandemic, when they refer to those that discourage adherence to quarantine and compliance with

measures of social isolation, with increased trade and other economic activities.

In this perspective, according to Jaspal and Nerlich (2020), the portrayal that social isolation is necessary in the COVID-19 pandemic points to a change in behavior regarding lifestyle and routine, through the practice of social distance. On the other hand, the denial of the severity of COVID-19 was understood by the authors as a maladaptive strategy. That is, the representation that isolation is a threat to rights and freedom causes some people to disobey such measures in daily life. However, those who do not respect these measures can be labeled as selfish and irresponsible, images that are observed in Internet users' speeches about the behavior of Bolsonaro and his followers.

Concerning the political confrontation of Bolsonaro with other spheres of government, especially the clash between health interventions, to the detriment of the economy, the ways of anchoring social representations analyzed here go back to periods in the history of health and public health crisis, following the example of the Black Death. According to Nascimento (2020), before the Black Death arrived in Brazil, there was the notification of its existence in the city of Porto. The establishment of quarantine for ships coming from Portugal as a sanitary measure raised great debate in the country under the justification that the measure would negatively affect the Brazilian economy. According to the author, this debate between health and economy is recurrent in some epidemic contexts. Similarly, in the study by Idoiaga et al. (2017), the anchoring process emerged from feelings of anger to authorities, who had interests in pleasing entrepreneurs and not harming the economy, instead of prioritizing Ebola prevention actions.

It is known that most measures against COVID-19 have direct socio-economic implications, which makes it difficult for governments to minimize the impact on both sectors simultaneously. However, the country's economic recovery will depend on the success of the measures adopted to prevent the spread of COVID-19, the time of social isolation and how companies prepared themselves during and after the pandemic (Fernandes, 2020).

Class 1 (Coronavirus: politics, health and society) was responsible for 49.71% of TS. It refers to the deficient attendance in the health area, where the anchorage sense falls on the government actions to fight Coronavirus and the helplessness of the most vulnerable social segments. It is worth mentioning that Period 1 presented higher affinity with the class, and this association is statistically significant ($\chi 2$=75.7; p≤0.0001).

On January 27, 2020, the WHO admitted an error in the global risk assessment of COVID-19, which was initially classified as moderate risk. However, it already presented a very high risk in China and with a great probability of becoming a pandemic. For Croda et al. (2020), this may have interfered in time for the implementation of interventions and contributed to the spread of SARS-CoV-2 in Brazil and worldwide. That same week, the first suspected case of Coronavirus in the country was identified, and from that, epidemiological surveillance guidelines were established to face the pandemic (Croda et al. , 2020) and Law 13,979 (Quarantine Law) was approved, which defined coping strategies, such as social isolation, quarantine, epidemiological study, among others (Lei N° 13.979, 2020).

The first confirmed case of Coronavirus in Brazil was registered on February 26, 2020 in São Paulo. As a result, the implementation of isolation measures intensified and many cities adopted the lockdown practice. As for pharmacological treatment, interim health minister Eduardo Pazuello made official the use of chloroquine and hydroxychloroquine, as a complementary measure to COVID-19 patients in the light and severe forms, with the mass distribution of these drugs.

Nevertheless, these measures were criticized by governments, scientific entities and society, mainly because of the possible delay in making decisions, since the pandemic was already widespread. Moreover, the current epidemiological scenario has concomitant infections, such as measles, dengue and H1N1, which makes public health measures difficult (Fernandes, 2020). Social representations, identified in Class 1, are associated with the above-mentioned events of the beginning of the pandemic in the country and were anchored and assimilated from pre-existing conceptions on the ineffectiveness of health services in epidemics or previous outbreaks, such as dengue.

> Those who go to hospitals with all the mild symptoms are medicated and instructed to return home and stay in home isolation without undergoing any test. It would be important if we had enough tests but, unfortunately, in Brazil, they are scarce (Comment 25, period 1).

> The government tells us not to panic, doesn't that mean it will be a catastrophe? If they can't even contain the dengue epidemic or give a quick and efficient service, they certainly won't be able to

> handle the Coronavirus. In other words, we will die in lines trying to get the assistance at SUS (Comment 23, period 1).

The above passages point to the historical analysis of the process of eradication of diseases such as dengue, smallpox and polio, in order to show the intersection between science, politics and society. Science needs to have an effective and efficient tool against the disease, and a strong and cohesive political decision is important to guarantee the necessary resources for the implementation of sanitary measures capable of containing a certain epidemic (Nascimento, 2020).

There are also concerns about the availability of diagnostic tests, the amount of active health professionals, Ready Care Units (UPA), Intensive Care Units (UTI) and ventilators. In the first months of the pandemic, the Brazilian public health system had about 7.6 UTI beds per 100,000 inhabitants and 2 hospital beds per 1,000 citizens – it became necessary to increase this quantity, as well as to provide the construction of campaign hospitals (Canabarro, Ten, Martins, & Chaves, 2020; Croda et al., 2020; Kirby, 2020). In this perspective, Canabarro et al. (2020) and H. M. Silva et al. (2020) suggested that, for the Brazilian scenario, the combination of pharmacological and non-pharmacological strategies can prevent the collapse of the health system. Even so, due to the low proportion of the number of beds for the number of severe cases, only the intensification of social isolation measures, such as the adoption of the lockdown, would be sufficient to avoid calamity in the system (Tarrataca, Dias, Haddad, & Arruda, 2020).

Another point discussed at the beginning of the pandemic was that the first cases of Coronavirus in the country were from upper-middle-class people, who made international trips. However, SARS-CoV-2 quickly crossed the social hierarchy and spread to the lower socio-economic classes. This is worrying because it is estimated that approximately 55 million people live in Brazil in poverty conditions and 13.5 million in extreme poverty (Instituto Brasileiro de Geografia e Estatística, 2017), with the majority living in the large peripheries. This content was present in the evokes of Internet users.

> Send the repatriated people back to China! Brazil is a country where people die in the SUS line waiting for health care. So to see in the newspapers that repatriated people are quarantined with all possible privileges is outrageous, at the expense of the poor (...) (Comment 09, period 1).

> The pandemic will fall on the poorest, who have no right to hospitals. As in other epidemics in Brazil, poor areas will suffer more, i.e., almost all Brazil (Comment 22, period 1).

> These damned Chinese destroy wildlife for meat consumption (...) and still spread these damned diseases around the world with their Chinese virus killing inocent people (Comment 53, period 1).

From the speeches above, there are representations anchored in social thought that emerge, as discussed by Idoiaga et al. (2017), on Ebola and, by Joffe (2013), on trans-cultural social representations of AIDS. In the speeches here presented, the social representations on Coronavirus are similar to the representations of these diseases, whose content is the "foreign condition" and the "other". In other words, the representations on Coronavirus bring the foreign condition as a composition of a projective strategy – that is because, in the face of these threats, the feeling of powerlessness can be evoked in a period of crisis (Joffe, 2013). In the same way, the results are compliant with the representations that emerged during the propagation of Ebola. In that case, foreigners, mainly Africans, were held responsible for the spread of the disease (Idoiaga et al., 2017).

Thus, in this study, the reference to the repatriated people, "the damned Chinese", as well as the possibility of people in poverty suffering more from the pandemic, calls for defense standards as a means of protection. And these defensive patterns, according to Joffe (2013) appear as the driving force behind the formation of the Coronavirus social representations, in which the threat posed by the "other" shifts all the attention to it (repatriated people, "the damned Chinese" and people in situation of poverty).

Furthermore, Jaspal and Nerlich (2020) consider that Moscovici's theory of social representations helps people's understanding of the COVID-19 pandemic. For the authors, the process of anchoring and objectifying the new Coronavirus also resembles that of HIV/AIDS, in the use of war metaphors, such as combating "biological agents" and fighting the "invisible enemy" or "homosexual plague" (Joffe, 2013). Thus, the use of the metaphors "cursed diseases" and "Chinese virus", in commentary 53, period 1, makes the unknown more familiar (Coronavirus). In other words, the metaphors objectify the threat of the Coronavirus in the Chinese.

Finally, Class 2 (Distrust of statistics) was responsible for 21.41% of the TS and refers to the disbelief of Internet

users regarding the number of cases of COVID-19, in which the sense of anchorage lies in government conduct and information conveyed by the media. It is noteworthy that Period 2 presented greater affinity with this class – a statistically, significant association ($\chi 2$=8.43; p=0.003).

In this context, China has managed to reduce Coronavirus transmission mainly with three measures, namely, protecting health professionals with individual protection equipment; performing mass tests to identify symptomatic cases and isolate them; detecting asymptomatic cases and quarantining them. However, in Brazil, the population has insufficient access to testing, due to logistical and geographical difficulties. The official laboratories were overloaded and there was a reduction in the budget for science and technology, which encouraged universities and research institutes. As a result, there was a slowness in testing the suspect cases, since about 80% of the cases were mild and not all reached the health service, in addition to the Ministry of Health not having a concrete database, due to the number of underreported cases (Kirby, 2020; Ribeiro & Bernardes, 2020; Tarrataca et al., 2020).

From this perspective, a study by Imperial College in the United Kingdom, which analyzed the transmission rate of COVID-19 in 48 countries, showed that Brazil is the country with the highest transmissibility (R0=2.81) (The Lancet, 2020). Besides, the underreporting of cases in the country was also pointed out in the study by Ribeiro and Bernardes (2020), which indicated that the number of cases is possibly 7.7 times higher than those reported. Thus, the COVID-19 Brazil platform (https://ciis.fmrp.usp.br/covid19), integrated by scientists from several Brazilian universities, reported, from the Coronavirus lethality rate, that if 70% of the Brazilian population is infected, there could be 1.8 million deaths, data similar to the prediction model elaborated by Canabarro et al. (2020).

The Class 2 representative content presents this contradiction between official data and underreporting. Moreover, this class emerged from the same subcorpus that constituted Class 1 (subcorpus B), which suggests the mention of government as common semantic content, and the discrediting of the information and actions to combat Coronavirus propagated by it.

> The COVID-19 statistics are liars! We have countless confirmed cases in private hospitals and this number of infected people and deaths is much higher than those announced by the government (Comment 05, period 2).

> I distrust these statistics. The number of deaths is very low and there are reports in hospitals that people are dying because of suspicion of COVID-19, but the tests have not yet been carried out, that is, the total number of cases of Coronavirus in Brazil is not being counted. And the official government statistics may be totally detached from reality (Comment 23, period 2).

> Before the pandemic arrived in Brazil, the government said that Coronavirus could kill by pneumonia and pulmonary complications. It was even reported that the virus caused problems in the nervous system and convulsions. Now that we have at least one case in Brazil, the government says it is just a flu and that there is no reason to panic, besides there is no specific treatment (Comment 25, period 1).

This result corroborates that presented by Do Bú, Alexandre, Bezerra, Sá-Serafim and Coutinho (2020), which points out the symbolic and pivotal role of the heads of state and their positions regarding the crisis and dissemination of SARS-CoV-2. In the Brazilian context, according to the authors, the evoking of the term "president" may or may not be linked to the positions of the Bolsonaro government. In the present study, it can be affirmed, based on the context of the analyzed contents, that the evokes of the term "president" were not linked to the positions of the government of Bolsonaro, i.e., the Internet users are contrary to the statements of the president.

At the moment, the main tools available to combat COVID-19 are non-pharmacological interventions such as quarantine and social isolation. Therefore, the media should be used to spread correct news, with preventive, epidemiological and clinical information and the clarification of fake news. However, a few weeks after the appearance of the new Coronavirus in China, rumors and conspiracy theories about its origin, such as a Chinese biological weapon, were already circulating. In this context, some social media profiles started associating images of Chinese people and products with SARS-CoV-2, leading to widespread mistrust, racism and xenophobia against Asians (Depoux et al., 2020; Pennycook, Mcphetres, Zhang, & Rand, 2020).

Healing theories and alternative treatments were also reported. The shortage of products was also the target of fake news. This way, not only the virus spread quickly, but also misleading information about it, resulting in an infodemic. The following contents bring social representations, which can be anchored in the phenomenon of fake news, which, according to Do Bú et al.

(2020), generates a set of misinformation about social objects, like Coronavirus, and contributes to the construction of dysfunctional representations.

> This statistic of confirmed cases is an overstatement. The confirmation tests are only done in those patients in a severe state (...) there are no test kits, according to some reports and by the speech of the doctors, to perform tests in sufficient number. And, in fact, there are not (...) anyway, be aware that the number of infected people is infinitely higher. Our care must be doubled! (Comment 27, period 2).

> The media makes all the fuss, the people think that everyone will die. It's the journalists' fault, they should inform us better instead of propagating panic. Look for data of how many people died just this year for dengue, measles and common flu. Who is dying due to Coronavirus? I think it's normal for people over 70 or 80 years old to die of a cold, it's always been like that. Now, the majority of those who had COVID-19, where are they? What did they feel? Most of them are at home feeling fine, they felt a slight cold and it was not a big deal (Comment 34, period 2).

Moreover, one notices the interweaving of the reified universe with the consensual. For Moscovici (2017), in the context of the formation of social representations, the media is fundamental when transmitting normative codes of communication and conduct. In this sense, it is observed in the most varied media the propagation and exchange of formal and informal information about SARS-CoV-2 and COVID-19. This information can influence the way Brazilians create and share representations about the mentioned social objects (Do Bú et al., 2020).

Similar results were found in the study by Félicien, Fabrice and Fabrice (2020) on the social representations of Coronavirus. The authors' analyses indicate that the core of the representations was structured around elements of a "conspiracy theory" and prejudice against Asians. In addition, the social media was portrayed as the villain for spreading fake news and generating panic among the population. From this perspective, the results of the study by Pennycook et al. (2020) pointed out that the reason people believe in fake news about COVID-19 is related to difficulties in cognitive skills, such as lower criticality regarding the truthfulness of information and reduced capacity of discernment in decision making regarding its sharing. That is, the decrease in reflective thinking leads to an increase in belief in fake news. In the cases of COVID-19, where truthful and quality information can save lives, the impetus to develop interventions to combat misinformation becomes essential.

Final considerations

The present study aimed to analyze the social representations of Internet users, from comments to reports on Coronavirus in the first months of the pandemic in Brazil. Through the Word Cloud and the FCA, we obtained a synthesis of the content of the speeches, based on the frequency of the most evoked words and the cohesion among them, in the three periods, on the subject. In this sense, the set of words revealed the meanings of anchorage of representations that emerged from Internet users' comments.

Regarding DHC, three Classes were obtained, which emerged from the total content in the three periods of time. Class 3 (Disregard for the President) addressed the president's lack of credibility in face of the public health emergency. The sense of anchoring social representation fell on the behavior of the president of the republic in the context of the COVID-19 pandemic, especially during Period 3.

In Class 1 (Coronavirus: politics, health and society), the deficient attendance in the health area was approached. The sense of anchorage fell on government actions to combat Coronavirus and the helplessness of the most vulnerable social segments, especially in Period 1. Finally, Class 2 (Distrust of Statistics), addressed the disbelief of Internet users regarding the information on the number of cases of COVID-19, especially during Period 2.

For all these reasons, the different ways of anchoring the researched social representations suggest the strength and influence of a system of classification, supported by a current theoretical paradigm, which attributes value to each object, person or phenomenon, organizing them in a hierarchical order of importance. Thus, the social representations found were supported by negative values, building a unique image for the senses of anchorage: disbelief in the institutions, rulers and the media. Faced with the magnitude of the crisis experienced by Brazilians as a result of the COVID-19 pandemic, it is considered that the current days are marked by negative images, which generally disqualify and discredit institutions and their representatives, as historical reminiscences of a country that has done little to encourage reflexive and critical thinking, including about itself, and

that sees itself as unable to plan its future, based on positive meanings such as trust and credit.

Regarding the limitations found during the elaboration of the study, the difficulty in organizing the textual corpus of analysis is highlighted, due to the delimited periods and the number of reports and comments contained in them. With the percentage of 93.56% of text segments, it was not possible to use all the representative segments of each Class. However, it should be noted that the type of research and data processing chosen proved adequate to understand the social representations during the period of social isolation, in which, at the present time, *in loco* research is limited.

It is known that the sample analyzed was not representative. However, there was convergence in the evocations analyzed concerning the senses of anchorage apprehended. Thus, one can reflect, from the findings of this research, that measures of social isolation, investment in health technologies and political leadership are essential to combat COVID-19 in Brazil.

On the other hand, there is no doubt that many of these strategies may cause an alarming socio-economic impact, which will have repercussions on another social crisis in the country. However, it is necessary to reflect that this consequence on health and economy is a product of Brazilian public management and the capitalist and neoliberal system, one that has been generating social inequalities and difficulties of access to the health system, employment and income, which have been potentiated by the pandemic.

Therefore, governments must develop strategies adapted to the Brazilian scenario, also considering the scientific knowledge, which can have repercussions in the decrease of negative social representations already consolidated and promote new anchorages. In other words, the importance of the convergence of the science-politics binomial to confront public calamities is undeniable.

References

Bardin, L. (2011). *Content analysis*. São Paulo: Edições.

Burki, T. (2020). COVID-19 in Latin America. *The Lancet Infectious Diseases*, *20*(5), 547-548. doi: 10.1016/s1473-3099(20)30303-0

Camargo, B. V., & Justo, A. M. (2018). *Tutorial para uso do software de análise textual IRaMuTeQ.* Universidade Federal de Santa Catarina. Retrieved from http://www.iramuteq.org/documentation/fichiers/tutoriel-en-portugais

Canabarro, A., Ten, E., Martins, R., Martins, L., & Chaves, R. (2020). Data-driven study of the COVID-19 pandemic via age-structured modelling and prediction of the health system failure in Brazil amid diverse intervention strategies. *MedRxiv(April),* 1-8. doi: 10.1101/2020.04.03.20052498

Croda, J., Oliveira, W. K., Frutuoso, R. L., Mandetta, L. H., Baia-da-Silva, D. C., Brito-Sousa, J. D., … Lacerda, M. V. G. (2020). COVID-19 in Brazil: Advantages of a socialized unified health system and preparation to contain cases. *Revista da Sociedade Brasileira de Medicina Tropical*, *53*, e20200167, 1-6. doi: 10.1590/0037-8682-0167-2020

Depoux, A., Martin, S., Karafillakis, E., Preet, R., Wilder-Smith, A., & Larson, H. (2020). The pandemic of social media panic travels faster than the COVID-19 outbreak. *Journal of Travel Medicine*, *27*(3), 1-4. doi: 10.1093/jtm/taaa031

Do Bú, E. A., Alexandre, M. E. S., Bezerra, V. A. S., Sá-Serafim, R. C. N., & Coutinho, M. P. L. (2020). Representations and social anchorages of the new coronavirus and the COVID-19 treatment by Brazilians. *Estudos de Psicologia, 37*, 1-13. doi:10.1590/1982-0275202037e200073

Dyer, O. (2020). COVID-19: Brazil's president rallies supporters against social distancing. *The Bmj*, *1589,* 1-1. doi: 10.1136/bmj.m1589

Félicien, K. K., Fabrice, D. A., & Fabrice, S. A. (2020). Social representations of Covid-19 and stigmatization of healthcare personnel and people attained by abidjanese populations, Cote d'Ivoire. *Technium Social Sciences Journal, 9*(1), 352-363. Retrieved from https://techniumscience.com/index.php/socialsciences/article/view/879

Fernandes, H. (2020), Would the lockdown really be necessary for the control of COVID-19 in Brazil? *SSRN Electronic Journal, Elsevier BV,* (*Abril 17*), 1-8. doi: 0.2139/ssrn.3578627

Guareschi, P. A. (2013). "Sem dinheiro não há salvação": ancorando o bem e o mal entre neopentecostais. In P. A. Guareschi & S. Jovchelovitchi (Eds.), *Textos em representações sociais* (pp. 153-181). Petrópolis: Vozes.

Idoiaga, N. M., Gil de Montes, L., & Valencia, J. (2017). Understanding an Ebola outbreak: Social representations of emerging infectious diseases. *Journal of Health Psychology*, *22*(7), 951-960. doi: 10.1177/1359105315620294

Instituto Brasileiro de Geografia e Estatística (2017). *Síntese de indicadores sociais: uma análise das condições de vida da população brasileira*. Rio de Janeiro: IBGE. Retrieved from https://biblioteca.ibge.gov.br/visualizacao/livros/liv101459.pdf

Jaspal, R., & Nerlich, B. (2020). Social representations, identity threat, and coping amid COVID-19. *Psychological Trauma: Theory, Research, Practice, and Policy*, *12*(S1), 249-251. doi: 10.1037/tra0000773

Joffe, H. (2013). "Eu não", "O meu grupo não": representações sociais transculturais da AIDS. In P. Guareschi & S. Jovchelovitch (Eds.), *Texto em representações sociais* (pp. 239-261). Petrópolis: Vozes.

Kirby, T. (2020). News South America prepares for the impact of COVID-19. *The Lancet Respiratory*, *2019*(20), 2019-2020. doi: 10.1016/S2213-2600(20)30218-6

Lei Nº 13.979 (2020, 6 de fevereiro). Dispõe sobre as medidas para enfrentamento da emergência de saúde pública de importância internacional decorrente do coronavírus responsável pelo surto de 2019. Retrieved from http://www.planalto.gov.br/ccivil_03/_ato2019-2022/2020/lei/L13979.htm

Moscovici, S. (2000). *Social representations: explorations in social psychology*. Cambridge: Polity Press.

Moscovici, S. (2015). *Representações sociais: investigações em psicologia social*. Petrópolis: Vozes.

Moscovici, S. (2017). *A Psicanálise, sua imagem e seu público*. Petrópolis: Vozes.

Nascimento, D. R. (2020). *Entre o medo e o enfrentamento das epidemias: uma reflexão motivada pela COVID-19*. Retrieved from http://coc.fiocruz.br/index.php/pt/todas-as-noticias/1788-entre-o-medo-e-o-enfrentamento-das-epidemias-uma-reflexao-motivada-pela-covid-19.html#.Xygr4ChKjIU

Oliveira, F. O., & Werba, G. C. (2013). Representações Sociais. In M. G. C. Jacques, M. N. Strey, N. M. G. Bernardes, P. A. Guareschi S. A., Carlos, & T. M. G. Fonseca (Eds.), *Psicologia Social Contemporânea* (pp. 104-117). Petrópolis: Vozes.

Pennycook, G., Mcphetres, J., Zhang, Y., & Rand, D. G. (2020). Fighting COVID-19 misinformation on social media: Experimental evidence for a scalable accuracy nudge intervention. *PsyArxiv(April),* 1-24. doi:10.31234/osf.io/uhbk9

Ribeiro, L. C., & Bernardes, A. T (2020). *Estimate of underreporting of COVID-19 in Brazil by Acute Respiratory Syndrome hospitalization reports*. Retrieved from https://www.cedeplar.ufmg.br/noticias/1244-nota-tecnica-atualizacao-da-estimativa-de-subnotificacao-em-casos-de-hospitalizacao-por-sindrome-respiratoria-aguda-e-confirmados-por-infeccao-por-covid-19-no-brasil-e-estimativa-para-minas-gerais

Ricard, J., & Medeiros, J. (2020). Using Misinformation as a Political Weapon: COVID-19 and Bolsonaro in Brazil. *Harvard Kennedy School Misinformation Review, 1*(2), 1-7. doi: 10.37016/mr-2020-013

Rosati, G., Domenech, L., Chazarreta, A., & Maguire, T. (2020). Capturing and analyzing social representations. A first application of Natural Language Processing techniques to reader's comments in COVID-19 news. Argentina. *SocArxivPaper(May),* 1-10. doi: 10.31235/osf.io/3pcdu

Silva, A. M. B., & Enumo, S. R. F. (2017). Descrição e análise de uma intervenção psicológica com bailarinos pelo software IRaMuTeQ. *Temas em Psicologia, 25*(2), 577-593. doi: 10.9788/TP2017.2-11Pt

Silva, H. M., Pereira, R. S., Gritz, R. A., Simões, A., & Porto, F. A. (2020). *Projection of hospitalization by COVID-19 in Brazil following different social distances policies*. *MedRxiv(May),* 1-4. doi: 10.1101/2020.04.03.20052498

Sy, A., & Spinelli, H. (2016). Dimensiones políticas de una epidemia: el caso de la gripe A (H1N1) em la prensa escrita de Argentina. *Cadernos de Saúde Pública, 32*(3), e00188414. doi: 10.1590/0102-311X00188414

Tarrataca, L., Dias, C., Haddad, D., & Arruda, E. F. (2020). Flattening the curves: on-off lock-down strategies for COVID-19 with an application to Brazil Flattening the curves: on-o ff lock-down strategies for COVID-19 with an application to Brazil, (April). *ArXiv(April),*1-8. doi: 10.13140/RG.2.2.25956.32644

The Lancet. (2020). COVID-19 in Brazil: "So what?". *The Lancet*, *395*(10235), 1461. doi: 10.1016/S0140-6736(20)31095-3

Valor Online (2010). *João Queiroz Filho, da Hypermarcas, vai comprar 29% do UOL*. O Globo. Retrieved from https://oglobo.globo.com/economia/joao-queiroz-filho-da-hypermarcas-vai-comprar-29-do-uol-2903475

[1.] In order for the material to be consistent for the analysis, the manuals indicate that the retention of text segments used is at least 70%.

Elson Ferreira Costa, Doutor em Teoria e Pesquisa do Comportamento pela Universidade Federal do Pará (UFPA)., Docente da Universidade do Estado do Pará (UEPA). Endereço para correspondência: Tv. Perebebuí, 2623 - Marco, Belém - PA, CEP 66.087-662. Telefone:(91) 98192-7195. Email: elsonfcosta@gmail.com

Dalízia Amaral Cruz, Doutora em Teoria e Pesquisa do Comportamento pela Universidade Federal do Pará (UFPA), é Psicóloga do Espaço de Acolhimento de Crianças e Adolescentes do município de Barcarena (EACA-PA). Email: liz.amaralcruz@gmail.com

Lilia Iêda Chaves Cavalcante, Doutora em Teoria e Pesquisa do Comportamento pela Universidade Federal do Pará (UFPA); Pós-doutora em Psicologia pela Universidade Federal do Rio Grande do Sul (UFRGS), Docente do Programa de Pós-Graduação em Teoria e Pesquisa do Comportamento (PPGTPC) da Universidade Federal do Pará (UFPA). Email: liliaccavalcante@gmail.com

Received in 25.may.20
Revised in 11.aug.20
Accepted in 01.dec.20