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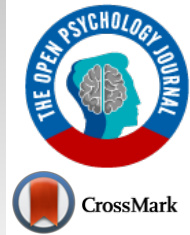
The Social Representation of Coronavirus during the First French Lockdown

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Abstract:

Introduction:

More than two years ago, the world was hit by the health crisis of COVID-19. This crisis has had many impacts, some of which are not yet fully visible. Publications have increased in this field, but some subjects remain to be studied in depth, such as the question of territorial or social inequalities in the face of this health crisis and its illustration in the field of social thinking.

Methods:

This qualitative research is based on the hierarchical free association method used in Social Representations Theory (SRT). The survey was conducted on a French sample during the first lockdown between March and May, 2020. Different groups and social categories were questioned, including rural/urban, executives, employees, or unemployed people.

The results showed a social representation of the coronavirus that differs in certain groups, with, for example, a greater perception of risk in the unemployed group.

Results:

These results confirm that the consequences of this health crisis since the first lockdown in March, 2020, had already impacted representations that reflected social and territorial inequalities.

Conclusion:

These results are discussed in the light of international experience and, in particular, that of Brazil, one of the countries most affected by the health crisis.

Keywords: COVID-19, Social representations, Lockdown, Social and territorial inequalities, Qualitative research, Health crisis.

1. INTRODUCTION

More than two years ago, the world faced the health crisis of COVID-19. This crisis has had many impacts, some of which are not yet fully visible. Publications have increased in this field, but some subjects remain to be studied in depth, such as the question of territorial or social inequalities in the face of this health crisis and its illustration in the field of social thinking. The originality of this study lies in the analysis of social thinking during the first French lockdown, which was the first and last strict lockdown. The social representation of COVID and the communicative practices are thus anchored in this particular period, and they are analyzed from the territorial and social category point of view.

In this research, after presenting the health crisis and the theoretical framework of social representations, the tools and the population will be presented, followed by an analysis of the results and a discussion.

2. THEORETICAL FRAMEWORK

2.1. The Health Crisis

The global COVID-19 (SARS-CoV-2) crisis has resulted in 468 809 377 confirmed cases worldwide and 6 062 536 deaths (as of 18th March, 2022) [1]. This crisis, caused by the COVID-19 virus and its consequences, has a profound impact on different lifestyles. Indeed, shortly after the beginning of this crisis, many governments implemented measures for the lockdown of their populations. During periods of lockdown, everyone's habits and practices were altered.

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According to the census conducted in 2017 by INSEE[1] and published in 2020, 20.8% of the French population is outside an urban unit (rural population), and 79.2% of the population lives in an urban unit [2]. According to INSEE, an urban unit is "a municipality or a group of municipalities with a continuously built-up area (no break of more than 200 meters between two buildings) that has at least 2,000 inhabitants". Regarding unemployment figures, according to INSEE, in the third quarter of 2020, the number of unemployed reached 2.7 million people or 9% of the active population [3][2]. In France, the first lockdown took place from March 16th to May 10th, 2020. On the other hand, for more than a year, COVID-19 has become the most important subject in the daily media news of the French and people around the world. While the number of deaths in France had surpassed the 100,000 mark by April 15th, 2021 [4], even after taking the measures to slow the spread of the virus . Indeed, the French population experienced three different lockdowns from March, 2020, to April, 2021. However, it should be noted that after the first strict lockdown of March, 2020, the next two were more flexible, and many modifications were made, notably for economic reasons.

As a backup to these travel and trade restrictions, on December 27th, 2020 [5], the French authorities launched the first phase of their vaccination campaign. However, this campaign was primarily reserved for the most vulnerable people before gradually being extended to a wider public.

Geographic studies have examined the differences between urban and rural areas, particularly in the spread of the virus. Lockdown and geographical distance between territories would therefore be indicators that would make it possible to measure the rate of spread of the virus. The "countryside" appears relatively less affected" [6]. However, with the changes in measures and the need to travel to reach services in urban areas, individuals residing in rural areas were eventually also affected by the COVID virus.

In France, the health crisis we are going through only sheds more light on the importance and multidimensional nature of the inequalities that run through our country [7]. Indeed, there are strong social inequalities within the population regarding exposure to the risk of contamination, the risk of developing severe forms of COVID-19 infection and death, and access to care.

Brazil is the second most bereaved state after the United States. As of January 4th, 2021, according to the Brazilian Institute of Geography and Statistics projections, the total population was 212,895,611. Of this total, about 84% of the population lives in urban areas and about 16% in rural areas [8][3]. Data from the Brazilian institute, referring to the fourth quarter of 2020, reports the following figures: 13.9 million unemployed (a category defining people who are not working but have taken action to find a job); 5.8 million discouraged (people who want to work but have not looked for work because they believe they would not find one); and 28.7% are "underemployed" (workers with a work week of fewer than 40 hours which would like to work more). The data was impacted by the COVID-19 pandemic throughout 2021. In just under

three months since the beginning of 2021, more than 28,000 Brazilians have died from COVID-19 without going to an intensive care unit (ICU). This means that 38% of the victims, out of a total of 73,105 deaths recorded this year, could not be hospitalized. In some regions, the rate is even higher: in Santa Catarina, for example, the rate of COVID-19 victims who did not pass through the ICU did not go below 53% for four weeks. In the Rio Grande, this rate exceeded 50% in early March, while in São Paulo and Rio de Janeiro, this rate reached 41% and 35%, respectively [9]. These data reinforce the observation of a collapse of the Brazilian health system, a fact that was already foreseeable due to the increase in cases since December, 2020 and the slowness of the federal government in adopting actions to fight COVID-19 in the country [4]. The Ministry of Health launched the National Plan to operationalize the vaccination against COVID-19 on December 16th, 2020 [10]. This federal plan was delayed because, for a large part of the year 2020, the federal government has adopted a "denial attitude" towards the pandemic, while the cases of contamination and the number of deaths resulting from COVID-19 have increased. It is also observed that people have difficulty respecting the rules of social distancing. This is because, despite the set of state and municipal laws determining social distancing, there has been a lack of effective commitment by the general population regarding social distancing since there has been no decree of lockdown.

2.2. Social Representations Theory

The theory of social representations (SRT) developed by Moscovici [11] has as its mission to reintroduce a "social focus" into the study of social psychology, to re-establish, as it were, the primacy of collective concepts, to consider more social psychology [12]. Moscovici's theory, known as the sociogenetic approach, paved the way for other currents, such as the central core theory (CCT) or structural approach [13].

According to this approach, social representation (SR) is organized around two entities: a central core (CC) and a periphery (P). The central core represents the consensus; it includes non-negotiable elements and has an organizing and meaning-generating function. The periphery, on the other hand, is conditional, linked to individual practices, and has the function, in particular, of encouraging adaptation to concrete reality and protecting the central core [12, 14, 15]. What happens in the periphery also makes it possible to identify subgroups or potential zones of change.

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[1]   Institut National de la Statistique et des Études Économiques. https://www.insee.fr/fr/statistiques/4806684

[2] https://www.insee.fr/fr/statistiques/4930129

[3]   Instituto Brasileiro de Geografia e Estatística. //www.ibge.gov.br/apps/populacao/projecao/index.html?utm_source=portal&utm_medium=popclock&utm_campaign=novo_popclock

[4] https://olhardigital.com.br/2021/03/28/medicina-e-saude/covid-19-trinta-e-oito-por-cento-dos-brasileiros-mortos-neste-ano-nao-passaram-por-utis

SR is inseparable from practices and is defined by Moscovici [11] as "a preparation for action" in its function as a guide to behavior, but also "insofar as it remodels and reconstitutes the elements of the environment in which the behavior is to take place". Flament and Rouquette [16] defined several meanings of the word "practice" by recognizing the difficulty of differentiating them in the processes of genesis and transformation of social representations. The question of practices explains that the study of an object of SR requires taking into account the "experience" of the group being studied; SR does indeed express a particular relationship with the object.

In the literature, we identify a number of studies that have used the free association method. Campos [17] was interested in the relationship between educators and street children in Brazil. In his thesis, he studied the object "street child" among educators. He posits that the elements of "poverty" and "exclusion" are central and that the elements related to delinquency are peripheral. Gaymard [18] started with the problem of young women of North African origin who had broken away from their families and were housed in a residential and social rehabilitation center. To understand the bicultural issue, she compared their social representations to those of another group of the same origin but well integrated into the family context and pursuing higher education. Using a multi-methodological approach, both quantitative and qualitative, the author showed that the group in disarray expresses a rejection of its origins, whereas the integrated group is in a situation of negotiation of cultural values. These results provided a lead for social workers who are confronted with these issues of bicultural belonging and who are concerned about social exclusion. Gaymard and Lethielleux [19] were interested in the quality of life (QoL) of retired women and their SR of neighborhood life, depending on their residence. The collection was done in neighborhood houses in Angers (a city in western France). The results showed that the SR of neighborhood life among retired women is based on the physical and social environment. Thus, this SR is different and reflects specific practices depending on the structure of the neighborhood (travel, leisure activities, *etc*).

Although publications on the SR of COVID-19 have multiplied since the advent of this crisis, allowing us to establish that coronavirus is an object of social representation [20], the question of territorial or social inequalities despite this health crisis and its illustration in social thinking has received little attention. The objective here is, therefore, to focus on this issue.

3. METHODOLOGY

3.1. Tool

The tool is a questionnaire comprising a hierarchical free association test, a measure of attitudes toward governmental recommendations, and a collection of sociodemographic variables. In the context of social representations, the free association method is a reference method used in many works [21 - 25]. Historically, its application can be found in the work of Di Giacomo [26], Le Bouedec [27], and Vergès [28]. This method makes use of spontaneous representation and is considered to be "the most open" method [26]. The collection was done in two steps: the first one asks the person to write the words or expressions that come to mind ("When you are told about the Coronavirus, what are the 5 words or expressions that come to mind?"); the second one asks to classify these words ("Classify these words from the most to the least important"); this is what is called hierarchical evocation, which is always based on a double principle, the frequency of the quoted words not being a sufficient criterion. By crossing the frequency of the words and the average importance rank, we obtained a four-box table (Table **1**): the central core, which includes the most frequent words and appears in the first importance ranks and the first periphery, which includes the elements frequently quoted in the last importance ranks, or the elements less quoted in the first importance ranks; the second periphery, which includes the elements of low frequency and of low importance. According to the principle of the structural approach, we speak and represent the same social context if the core includes exactly the same terms.

Table 1. Table of cross-linking between word frequency and average rank of importance (originating in Gaymard and Bordarie, 2015).

Central core	**First periphery**
Words with high frequency and in the first ranks of importance	Words with high frequency and in the last ranks of importance
First periphery	**Second periphery**
Words with low frequency and in the first ranks of importance	Words with low frequency and in the last ranks of importance

In addition to the free association stage, respondents were asked to rate themselves on three 6-point scales regarding government recommendations (do they follow the recommendations ? do they think people follow the recommendations ? do they think the recommendations are an effective way to fight the coronavirus ?). The sociodemographic variables collected were: age, gender, socio-professional category (SPC), department, living environment, and level of education.

The questionnaire was shared on different social networks for 3 months, from March 16th to May 6th, 2020.

The consent of the participants with a declaration of confidentiality was taken by specifying that the respondents could withdraw from the survey at any time.

3.2. Population

The population is a French sample of 232 individuals (mean age = 33.87; SD = 15.46) in a lockdown situation at the time of the survey. This sample is composed of 183 women (79% ; mean age = 35.03, SD = 14.72) and 49 men (21%; mean age = 29.53, SD = 12.63). Details of the SPC are shown in Appendix **1**. The respondents came from several regions of France (details in Appendix **2**). Of those, 86 lived in rural areas

(37%) and 146 in urban areas (63%). The details of the level of education can be found in Appendix **3**.

3.3. Analyses Strategies

We used the program "Evoc" (for evocations). This software was designed by Vergès [29, 30] (1997, 2005); it allows us to establish the four-quadrant table identifying central and peripheral words.

The analysis of the evocations requires a minimum number of people in the groups, this minimum being between 15 and 20, but with these numbers, it is sometimes impossible to obtain the structure of the SR. In the interest of methodological rigor, the same criteria were applied to all groups [31]. The high frequency was set at 20%, and the average rank was below 2.6 (for 5 words, the average is at 2.5). These criteria led to the elimination of some comparisons, for example, men/women, since there was no central structure in men with these criteria. A minimum frequency of 10% was retained. Among all the possible comparisons respecting this criterion of minimum number in the categories, the choice was made to present only the results, highlighting a structure of the SR that could bring elements of reflection to the question of inequalities.

The results of the scales on the recommendations were analyzed with the non-parametric Mann-Whitney test.

4. RESULTS

4.1. The Social Representation of the Coronavirus According to the Place of Life (Urban or Rural)

The "urban" group is composed of 108 women (74%) and 38 men (26%). The average age is 32.2 years (SD=13.6). The "rural" group is composed of 75 women (87.2%) and 11 men (12.8%). The average age is 36.7 years (SD=15.5).

The comparison of groups is an important perspective in studying social representations (Gaymard, 2021a). As can be seen in Tables **2** and **3**, the social representation of the coronavirus is identical in the groups: urban [URB] and rural [RUR], with a core consisting of the elements, such as "virus", "pandemic" and "disease". The most cited element is lockdown (1st periphery). We find an element specific to the rural environment, *i.e.*, the word "solidarity".

4.2. The Social Representation of the Coronavirus According to the Socio-professional Category (SPC)

The "unemployed" group is composed of 12 women (75%) and 4 men (25%). The average age is 35.7 years (SD = 10.8). The group of employees also includes many young people. The "employees" group is composed of 37 women (74%) and 13 men (26%). The average age is 33.5 years (SD = 11.3). The "intermediate" group is composed of 20 women (76.9%) and 6 men (23.1%). The average age is 42.7 years (SD=12.7). The "executive" group is composed of 39 women (86.7%) and 6 men (13.3%). The average age is 42.1 years (SD=13.1).

Contrary to the urban/rural comparison, we note that the SR of the coronavirus is specific to each SPC presented. The unemployed [UNEM] is well-structured despite the small number of respondents. It is formed by a CC made up of four elements: "virus," "pandemic," "danger," and "epidemic" (Table **4**). The SR of employees [EMP] is formed by a CC with two elements: "virus" and "pandemic" (Table **5**). The SR of intermediate professions [INT] includes three central elements: "virus", "pandemic", and "danger" (Table **6**) and that of executives [EXE] is articulated around the central elements: "virus", "pandemic", and "disease" (Table **7**). The term "lockdown" is always the one with the highest frequency (1st periphery). We also note specificities in the 1rst periphery, such as the terms capitalism [UNEM], danger [EMP], fear [INT], and China [EXE].

Table 2. The social representation of coronavirus in the urban population [URB] (N=146).

Average Important Rank							
	-	-	Frequencies (%)	First ranks <2.6	-	Frequencies (%)	Last ranks >2.6
Frequency	High ≥ 20%	**Central core** Virus Pandemic Disease	41,1 32,2 26	1.67 1.83 2.37	**First periphery** Lockdown Death	52,7 22,6	3.42 3.30
	Low ≤ 20%	**First periphery** Outbreak	16,4	2.04	**Second periphery** Danger China Contagion Fear	15,1 12,3 14,3 11	2.86 3.72 3.00 3.13

Table 3. The social representation of coronavirus in the rural population [RUR] (N=86).

			Average Important Rank				
	-	-	Frequencies (%)	First ranks <2.6	-	Frequencies (%)	Last ranks >2.6
Frequency	High ≥ 20%	**Central core** Virus Pandemic Disease	37,2 23,2 23,2	1.75 2.15 2.40	**First periphery** Lockdown Death	54,6 28	3.53 3.17
	Low ≤ 20%	**First periphery** Outbreak Contagion	11,6 12,8	1.80 2.54	**Second periphery** Danger China **Solidarity** Fear	12,8 16,3 12,8 12,8	2.73 3.71 4.00 3,27

Table 4. The social representation of coronavirus among the unemployed [UNEM] (N=16).

			Average Important Rank				
	-	-	Frequencies (%)	First ranks <2.6	-	Frequencies (%)	Last ranks >2.6
Frequency	High ≥ 20%	**Central core** Virus Pandemic **Danger** Outbreak	31,2 25 25 37,5	1.60 2.25 2.25 1.50	**First periphery** Lockdown Disease	56,2 31,2	3.44 3.20
	Low ≤ 20%	**First periphery** **Capitalism**	12,5	2.50	**Second periphery** Death China Contagion **Isolation** Lie Fear Irresponsible- people Protection **Solidarity**	18,7 18,7 12,5 12,5 12,5 12,5 12,5 12,5 12,5	3.67 5.00 3.00 3.00 3.50 3.50 3.00 4.50 3.00

Table 5. The social representation of coronavirus among the employees [EMP] (N=50).

			Average Important Rank				
	-	-	Frequencies (%)	First ranks <2.6	-	Frequencies (%)	Last ranks >2.6
Frequency	High ≥ 20%	**Central core** Virus Pandemic	44 20	2.00 1.80	**First periphery** Lockdown Death Disease Contagion	42 28 24 20	3.73 3.57 2.67 2.60
	Low ≤ 20%	**First periphery** **Danger** Outbreak Sick people	18 16 12	2.44 1.62 2.50	**Second periphery** Fear **Solidarity**	14 12	2.71 3.33

Table 6. The social representation of coronavirus among the intermediate professions [INT] (N=26).

			Average Important Rank				
	-	-	Frequencies (%)	First ranks <2.6	-	Frequencies (%)	Last ranks >2.6
Frequency	High ≥ 20%	**Central core** Virus Pandemic **Danger**	26,9 53,8 23,1	2.00 2.00 2.33	**First periphery** Lockdown Death **Fear**	69,2 23,1 26,9	4.00 2.83 2.71
	Low ≤ 20%	**First periphery** Disease Covid-19	19,2 11,5	2.20 1.00	**Second periphery** Crisis	11,5	2.67

Table 7. The social representation of coronavirus among the executives [EXE] (N=45).

			Average Important Rank				
	-	-	Frequencies (%)	First ranks <2.6	-	Frequencies (%)	Last ranks >2.6
Frequency	High ≥ 20%	**Central core** Virus Pandemic Disease	35,5 35,5 22,2	1.25 2.06 1.90	**First periphery** Lockdown Death China	55,5 22,2 22,2	3.44 3.00 3.70
	Low ≤ 20%	**First periphery**	-	-	**Second periphery** **Solidarity** Contagion Spread	15,5 13,3 11	4.14 3.17 3.80

Table 8. Summary of scale averages (1: not at all; 6: completely).

Groups	Do you Follow Government Recommendations?	Do others Follow Them?	Are the Recommendations an Effective Way to Fight the Coronavirus?
Urban	5.50	3.53	5.15
Rural	5.53	3.49	5.42
Unemployed	5.25	3.87	4.87
Employees	5.66	3.34	5.46
Intermediate	5.54	3.77	5.23
Executives	5.49	3.86	5.13

4.3. Evaluation of Government Recommendations

Overall, the groups declare to follow the governmental recommendations (the lowest average is that of the unemployed), but they think that the others follow them less. Overall, the recommendations are considered an effective way to fight the coronavirus (the lowest average is that of the unemployed) (Table **8**).

Some significant differences could be identified. Urban people found the measures significantly less effective than rural people (Mann-Whitney: p = 0.048).

For the question concerning the follow-up of governmental recommendations, a significant difference was reported in the Mann-Whitney test between the unemployed and employed groups (p = 0.021).

For the question concerning the follow-up of governmental recommendations by others, a significant difference was reported in the Mann-Whitney test between the executive and employee groups (p = 0.029).

For the question concerning the evaluation of the effectiveness of government recommendations, there was a tendency towards significance among employees and executives (Mann-Whitney: p = 0.066).

5. DISCUSSION

This study on the SR of the coronavirus was based on data collected during the first lockdown in France (March-May, 2020), which was the "hardest". This lockdown started exactly on March 17th, 2020, leading to space-seeking Parisians leaving the capital. During the first days of lockdown, supermarket shelves were looted, and the country had to learn to live with the restrictions and certificates.

The analysis of an SR requires the use of a specific methodology, which has been proposed here with the

hierarchical free association method [12, 32]. It is also important to consider the homogeneity criterion [15]. The main one in this study is the situation of lockdown experienced by the population. Furthermore, this term is the most quoted and peripheral in each representational structure because this entity, complementary to the CC, is linked to individual practices [15]. This lockdown situation being the first one, it is not surprising that the lockdown does not appear as a central element in the SR of the coronavirus. Moreover, at that time, the wearing of masks was not compulsory as it became later; therefore, it is not part of the SR.

Regarding the "urban" and "rural" groups, which have the same CC, a fairly similar periphery is observed except for the presence of the term "solidarity" in the second periphery of the "rural" group. The actions of solidarity, in a period of crisis, are thus more salient in this group. [33]. The COVID-19 pandemic forced a large part of the world's population to shut themselves in and led to the deployment of solidarity actions. All systems have been affected, and vulnerabilities exacerbated. The High Council on Public Health has recommended strengthening the principle of territorialization. The notion of proximity has become central in the reflection in relation to inequalities despite the pandemic. This notion is defined in the social sciences as the link in the relationships maintained between different individuals (members of organizations, organizations, *etc*.) and the space in which activities are performed [34].

The health crisis has generated a stream of thought about the relationship between geographical space and social practices. Indeed, the lockdown, mobility restrictions or the restriction of travel abroad have led to an evolution in the relationship between space and mobilities in general [35]. The pandemic seems to have contributed to strengthening and tightening the link with the territory, as people are able to circulate in the immediate vicinity, *i.e*., just outside their homes. While many factors can influence the vulnerability of certain populations, the spatial environment is one of them. The crisis may have affected urban and rural populations differently. The former is probably more exposed to the virus, as evidenced by the greater increase in deaths in densely populated areas, even though the population there is, on average, younger. In addition, living conditions during lockdown may have been more difficult in these areas since overcrowding is more frequent in Paris and in large urban areas, which explains some geographic mobility before or during lockdown [36]. Conversely, in rural areas, social isolation or poorer access to care may have led to other difficulties [7].

In fact, the pandemic has profoundly reinforced the link between individuals and their respective territories. This change in travel has had an impact on relational practices with the geographical environment and particularly with vulnerable people. This period is marked by a surge of solidarity. More specifically, the commitment of the least at-risk groups to solidarity with the most vulnerable groups increased significantly during this period. In this context, "women, the elderly, inactive or unemployed, individuals living alone, financially weak, with a little habit of going out, more often

residents of rural municipalities, were more likely to receive help" [37]. In addition, as rural areas are less populated than large metropolitan areas, population density influences the likelihood of receiving help. It has been found that "those who live in a rural commune are more likely to have mobilized to help others" [37], a mobilization necessitated by lack of access to services or support [38].

If we consider the situation of Brazil, one of the most affected countries and one that did not experience lockdown, in the urban environment, a rough practice of social solidarity was observed. In fact, many gathering spaces, such as parties and clandestine meetings, persisted. COVID-19 had very devastating effects in the slums of several Brazilian states. In addition to the many people infected, there have been many deaths and financial losses. CUFA[5] (Unique Central of the Favelas) [39] is a nationally and internationally recognized Brazilian organization in the political, social, sports, and cultural fields, which has existed for 20 years. It was founded from the union between young people from different favelas, who were looking for places to express their opinions, questions, or simply their will to live [39].

This organization has carried out various actions to implement social solidarity. For example, it has distributed baskets of basic foodstuffs, masks, and hydroalcoholic gel to slum dwellers in several municipalities. In rural areas, the actions of EMATER[6] (Technical Assistance and Rural Promotion Organization, which aims to promote sustainable rural development through the provision of technical assistance, rural and social promotion, classification, and certification services), which exist in various Brazilian states, inform farmers about the health crisis, the forms of contagion, and the precautions that farmers should follow. "Virtual family farming fairs" have also been organized. The family farming sector has been one of the most affected by the loss of income. Factors, such as the suspension of open markets and the reduction of places for selling food, have strongly contributed to the income reduction of families living in the Brazilian countryside.

In addition to these crises, there are difficulties in using distance learning, which in the case of students in rural areas is manifested by the lack of access to computer tools and internet access. Rural populations are also seriously affected by the lack of access to the health system, mainly due to the lack of infrastructure for medium-complexity care and the distance from referral hospitals for the treatment of COVID-19 in cases that require specialized care. Faced with this scenario since the beginning of the pandemic, the National Confederation of Rural Workers and Family Farmers (CONTAG) has started several initiatives with a dual objective: to reduce the effects of the pandemic on the lives and incomes of farming families and to raise awareness of the importance of following the safety protocols recommended by the World Health Organization (WHO) and experts to avoid contamination and proliferation of the disease [40].

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[5] Cental Unica das Favelas. http://cufa.org.br/sobre.php.

[6] http://www.emater.tche.br/site/fevaf/covid/transporte#.

When we choose to analyze SR according to the place of life (urban or rural), the solidarity element that appears in the periphery of the rural group reminds us that the pandemic has had unequal effects on the territories. The SPC analysis confirms that the crisis has exacerbated social inequalities; solidarity can be found among the unemployed, employees, and executives. With the break in activity, the health crisis has pushed some French people into poverty. Contrary to the analysis according to the place of life, when the criterion is that of the SPC, there is not "a" social representation but several social representations of the coronavirus. This criterion thus appears to be the most differentiating and attests that the groups were affected differently.

The group of unemployed with the smallest number of individuals shows a perfectly structured SR, which is rare with a number of individuals lower than 20. We also notice that the SR of the unemployed is more complex. With the same thresholds, we obtain 16 terms in the structure of the SR against 11 for employees and 9 for intermediate professions and executives. This aspect of the content of the SR has already been observed in the work of Gaymard [41], which focused on the SR of the elderly. This greater complexity of SR among the unemployed can be interpreted through the exacerbation of their precarious situation. According to the International Labor Organization [42] (2020), "working poverty has returned to 2015 levels". Women, who comprise the largest part of our sample (75% of the unemployed), have been disproportionately affected by the crisis, as seen by their employment fall by 5% in 2020, compared to 3.9% for men.

This is reflected in the presence of the term "danger" in the CC, which is also found in the CC of the "intermediate professions" group, 76.9% of whom are women, and in the first periphery of the "employees" group, 74% of whom are women. This means that the perception of danger is more pronounced among the unemployed, the intermediate professions, and employees. The place of this term in the first two groups reflects a central concern, given that the CC has two functions: it generates the meaning of the representation, and it determines its organization [14]. For the unemployed group, the health crisis exacerbated their financial difficulties and their precariousness. For the group of intermediate professions, we know that the people in this group have continued to work for the most part. The group of employees was one of the most affected [36]. Employees and workers appear to be the most affected by the crisis; 42% and 43% of them were no longer working at the beginning of May, 2020. Moreover, when they do work, it is almost always on-site, where exposure to infection is greater". Statistically, executives were most likely to be telecommuters and therefore less exposed to the danger of infection in the workplace. The word "fear" was also found in the first periphery of the intermediate professions and in the second periphery of the unemployed and employees. This element confirms the fear shared by these three groups, although it should be noted that its presence in the first periphery for the intermediate professions reflects a "proximity gradient" in the SR, *i.e.*, that this feeling of fear is more palpable in this group. Another particularity of the "unemployed" group is the presence of the term "isolation" in the second periphery. Berhuet *et al.* [43] (2020) performed a detailed analysis of the situation of isolated people. In broad trends, it is observed that isolation goes hand in hand with poverty. The authors demonstrated that there is a reinforcement between gender inequalities and isolation. They point to an increase in relational isolation, which can be explained by a generalized increase in mistrust of others. This is in line with the observations we made in the evaluation of the government's recommendations since we observed that the unemployed are more critical of the government's recommendations. They are also the only ones to associate the term "capitalism" with the coronavirus and thus directly associate political aspects with the SR of the coronavirus.

According to SPC, no data is directly related to the perception of COVID-19 risks in Brazil. However, a study conducted by the Data Favela Institute in partnership with "Locomotiva - Pesquisa e Estratégia" and the CUFA[7] highlights that almost 70% of favela residents do not have money for food [39]. The survey was conducted among 2,0[8]7 people over the age of 16 in 76 favelas in several regions of Brazil from February 9th to February 11th, 2021. In addition to hunger and reduced income, people in these communities also faced increased health risks from having to expose themselves to the virus for a living. According to the data, 32% attempted to follow COVID-19 prevention measures, 33% attempted but did not always succeed, 30% did not follow, and 5% did not attempt to follow. Not surprisingly, most infection research indicates that the number of infections in the favela is roughly double that of more affluent areas [8]. The data showed that unemployed and discouraged people, mainly in Brazil, live in the favelas. Before worrying directly about the dangers related to COVID-19, the concern is focused on survival, precisely because of the reduction or loss of income of the residents of each house located in the large favelas that are typical of the large cities of Brazil, such as Rio de Janeiro, São Paulo, Belo Horizonte, Porto Alegre, among others.

This study has a few limitations to mention. First, from a methodological point of view, the collection of free associations linked to spontaneous evocations has the disadvantage of interpreting the words given because, especially in certain cases, they are polysemous. Thus, the term "danger" in the CC of the unemployed, in the first periphery of the employees, certainly expresses concern, but in different contexts. This is also the case for the term "solidarity," which does not have the same meaning among the unemployed and executives (one group may be more beneficiaries of aid and the other committed to giving it). It is, therefore, necessary to rely on data to interpret these associations. The other limitation concerns all humanities and social science surveys. There is a systematic disparity in the respondents, with women being more committed to responding to the surveys. In this study, it is important to bear in mind that if we took only the 49 male respondents, we would not be able to observe the structure of SR with the criteria determined. Finally, with the benefit of hindsight, we could have asked the respondents about their intentions to be vaccinated, as this point has become essential and the subject of much debate [21, 22, 44].

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[8] Agencia Brasil, 2021. https://agenciabrasil.ebc.com.br/direitos - humanos/noticia/2021-03/quase-70-dos-moradores-de-favelas-nao-tem-dinheiro-para-comida.

CONCLUSION

This research aimed to study the social representation of the coronavirus during the first French lockdown and compare the places of life (urban *vs*. rural) as well as the social categories. The results showed the initial social representation before the use of masks. As social representations are constructed in a context linked to practices, the term "lockdown" appears in the periphery, an entity directly linked to individual practices. The exacerbated vulnerability of certain social categories was already perceptible at the time, as were the solidarity actions implemented. The originality of this study is a parallel reflection of Brazil, one of the most affected countries, which has not experienced a lockdown.

In France, since March 14th, 2022, the obligation to wear a mask indoors (except in transport, health establishments, and places of care) has been revoked, and the vaccine pass has been suspended.

In Brazil, during March, 2022, considering its political-administrative structure by member states, there is a flexibilization of the mandatory use of the mask outdoors, but its use is still mandatory indoors. A vaccine pass has been required in some exceptional cases, such as concerts or access to football stadiums.

LIST OF ABBREVIATIONS

SRT	=	Social Representations Theory
QoL	=	Quality of Life
WHO	=	World Health Organization

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Not applicable.

HUMAN AND ANIMAL RIGHTS

Not applicable.

CONSENT FOR PUBLICATION

Not applicable.

AVAILABILITY OF DATA AND MATERIAL

The authors confirm that the data supporting the findings of this study are available within the article.

CONFLICT OF INTEREST

The authors declare that there are no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

APPENDIX 1

SPC	Frequencies	%	% cumulated
Farmers	1	0.431	0.431
Craftsmen, merchants, and company managers	11	4.741	5.172
Other people without professional activity	16	6.897	12.069
Executives and higher intellectual professions	45	19.397	31.466
Employees	50	21.552	53.017
Students	72	31.034	84.052
Workers	1	0.431	84.483
Intermediate professions	26	11.207	95.690
Retired	10	4.310	100.000
Total	232	100.000	

APPENDIX 2

Areas	Frequencies	%	% cumulated
Île-de-France	11	4.741	4.741
Other	1	0.431	5.172
Auvergne-Rhône-Alpes	72	31.034	36.207
Bourgogne-Franche-Comté	2	0.862	37.069
Bretagne	6	2.586	39.655
Centre-Val de Loire	7	3.017	42.672
Grand Est	3	1.293	43.966
Hauts-de-France	2	0.862	44.828
Normandie	2	0.862	45.690
Nouvelle-Aquitaine	6	2.586	48.276
Occitanie	5	2.155	50.431
Pays de la Loire	109	46.983	97.414

contd.....

Areas	Frequencies	%	% cumulated
Provence-Alpes-Côte d'Azur	6	2.586	100.000
Total	232	100.000	

APPENDIX 3

Level of education	Frequencies	%	% cumulated
Bachelor's Degree	39	16.810	16.810
BEPC	1	0.431	17.241
BT	1	0.431	17.672
Brevet des collèges	14	6.034	23.707
CAP, BEP	7	3.017	26.724
DEUG, DUT, BTS, BM (BAC+2)	22	9.483	36.207
Doctorat (BAC+8)	6	2.586	38.793
Licence (BAC+3)	58	25.000	63.793
Maîtrise (BAC+4)	39	16.810	80.603
Master (BAC+5)	45	19.397	100.000
Total	232	100.000	

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