A new decade for social changes
Social representations of Covid-19 and stigmatization of healthcare personnel and people attained by abidjanese populations, Cote d’Ivoire

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Abstract. The present study aims to identify the structure of coronavirus social representations in order to understand the stigmatization of people with Covid-19 and of healthcare personnel by populations in Abidjan. To do this, we have drawn up a sample made up of the unemployed, pupils and students and workers. There are 325 participants, including 177 men and 148 women, with an age that varies between 16 and 59 years. These people are subjected to the evocation questionnaire according to the structural approach of social representations (Abric, 1994). Analysis of the data using evoc2005 and simi2005 shows that the evocations "containment", "death" and "invention" constitute the main components (central core) of the social representations of coronavirus. These elements, which reflect a lived experience of negative feelings, will generate the construction of negative prejudices and common beliefs that encourage avoidance behaviours among participants to flee the feared situation. It takes place inward withdrawal and rejection of the other which constitutes for the individual a danger. Hence the stigmatization of people who visibly "embody" danger, death (the object of fear), namely people with Covid-19 and caregivers. The results therefore suggest that in the fight against Covid-19 the psychological aspect is also important and must be taken into account.

Keywords. Social representations, Covid-19, stigma, people affected, healthcare staff, Abidjan

1. Introduction
For several months now, the whole world has been facing the coronavirus (or Covid-19) pandemic. The current extremely dangerous pandemic is a special and unusual reality. This can affect people both physically and psychologically. Thus, medical teams are hard at work to
provide an appropriate response and assistance to people infected or tested positive for the virus. These are the people on the front lines of the fight against the pandemic. This is a difficult time that the whole world is going through right now. Faced with the psychosis linked to the pandemic which is gaining ground, the World Health Organization (WHO) is concerned about the stigma and profiling of people affected by Covid-19 at its meeting of February 18, 2020 in Geneva, urging everyone to show solidarity in the face of the Covid-19 pandemic. For its part, UNAIDS requests to be kind and not to stigmatize or discriminate. Because people affected by Covid-19 are an integral part of the solution and must receive our support.

Despite these recommendations, we unfortunately note that certain behaviours of people are not likely to develop such solidarity. Thus, RTBF (Radio Télévision Belge Francophone), whose report was broadcast by TV5 monde on April 04, 2020, was interested in the experience of a doctor and a nurse, both Belgian. In fact, the doctor was notified by the trustee of the city where his health center is located which received certain patients that he would have to close it if not relocate it. For her part, the nurse had threats from neighbors who urged her to park her car away from theirs. These facts, it should be noted, can have harmful psychological impacts on these health workers. In addition to the risks involved in taking care of the sick, the healthcare personnel will have to face the distrustful gaze of society.

This kind of behaviour, which is synonymous with stigma, is not unique to Europe. Thus, the psychiatrist Laure Menguene Mviena, in charge of the psychological response to Covid-19 in Yaoundé, reveals that the healthcare personnel are "doubly stigmatized". At work, where staff from other departments sometimes refuse to "speak to them or use the same toilet as them" and, at home, where they are sometimes "seen as plague victims". Cameroonian nurses were left by their husbands, driven from their homes because they worked in coronavirus units, she says.

For his part, giving the reasons why his service did not reveal the identity of people affected by Covid-19 but also of those who had been cured, Professor Eholié Serge, Head of the infectious diseases department of the Treichville University Center, noted that "the sick people are not meant to be seen. Here, we turned our Covid-19 patients into culprits rather than victims. We made it a shameful disease". He thus expresses his fear of a stigmatization of people tested positive as well as all those directly linked to the disease, in particular healthcare personnel, hence the myth created around the identity of patients.

This is precisely the case of this lady, a sub-prefectural authority who said on the air of Ivorian national television that she was rejected by her relatives after having been found positive for the disease. Armed with this painful experience, she urges people to avoid the stigmatization of people infected with coronavirus. Because, according to her, stigma is much more painful and kills faster than the disease itself.

This feeling of rejection emanating from the stigma could be a source of demotivation or even traumatic or post-traumatic disorder among healthcare staff, but also a negative impact on the healing of patients. It is in this sense that stigma can hinder recovery (Drake and Whitley, 2014) and the social integration of people with mental illness (Dorvil, 2007), here, from Covid-19.

In his study, Huot (2018) raises a problem of the stigma of mental disorders, by addressing, among other things, the question of the public image of mental illness. It highlights the older terms of madness or insanity that are still present in the collective imagination (Dorvil, Kirouac and Dupuis, 2015; Giordana, 2010; Schulze and Angermeyer, 2003). The author reports on several research studies that have examined the close relationship between "social representations of mental illness (insanity) and attitudes and behaviours toward people with mental health issues" (Giordana, 2010, p. 8). On this line, she refers to Schulze and Angermeyer
(2003, p. 310) who underline the existence of a correlation between the beliefs of the public on mental illness and the lived experience of stigmatization.

Dorvil et al. (2015, p. 142) specify on this subject that “the behaviours of individuals and groups are hardly determined by scientific knowledge and the reality of things, but by their representations of a situation, a common belief. The age-old stigma that strikes people with mental health problems in any society is based on negative prejudices, extremely pejorative and marginalizing received ideas applied to all these people regardless of individual particularities”.

Although we are not faced with a mental illness with regard to Covid-19, we are able to maintain, in view of the findings made above, that the distrust of the healthcare personnel and people affected would be in line with the beliefs that populations are developing with regard to the pandemic. These beliefs and other negative prejudices are said to be the cause of certain mistrust among the populations in the face of certain decisions by the Ivorian authorities. It was then that in trying to justify the breakage of the screening center under construction in the commune of Yopougon, people advanced the arguments according to which it would be advisable to build the center in Cocody or Marcory, where the largest is recorded number of people tested positive for Covid-19. Others even argue that it is a strategy for the authorities to spread the virus in other municipalities and using the alibi for screening.

Faced with all these preconceived ideas, people flee public health establishments, according to the Ministry of Health and Public Hygiene. Thus, according to the daily newspaper Inter in its publication of April 27, 2020, "the ministry notes a fall in the attendance of health structures, going up to 50%. This drop in attendance is particularly marked in the city of Abidjan and concerns all services, particularly those of vaccination and prenatal consultations”.

From the above, it can be postulated that the social representations of the pandemic by the populations determine their attitude towards the healthcare staff and those affected. So, we can ask the question of what is the structure of the social representations of Covid-19 which predispose Abidjanese to stigma.

The objective here is to identify the elements structuring the speeches of the populations concerned in order to understand the stigmatization of healthcare staff and people with Covid-19 in Abidjan by the latter.

2. Methodology
Like any scientific research, this part will be devoted to the description of the process leading to identifying the participants of the study, to specifying the material of data collection as well as the method of analysis of these data.

2.1. Participants
Abidjan, the economic capital of Cote d’Ivoire, is home to the spread of coronavirus. According to the ministry in charge of health, almost all of people affected are in Abidjan, apart from a few isolated cases in certain towns in the interior of the country. Moreover, the response from the administrative and health authorities made it possible to contain the pandemic following a measure of isolation in greater Abidjan. Therefore, we believe that the breeding ground for such a study can only be Abidjan. Thus, for the collection of data, participants come exclusively from Abidjan. We considered three categories of people (male and female). These are the unemployed (96), pupils and students (120) and workers (public / private) (108). They come from Cocody, Marcory, Yopougon and Bingerville, the municipalities most affected by the pandemic in Cote d’Ivoire.

In summary, the study included 325 participants, including 177 men and 148 women, whose ages varied between 16 and 59 years. The particular situation of mistrust leads us to have the
free and informed consent of participants. It is therefore after their membership that we submit them to the questionnaire developed for this purpose. These are the people who gave free and informed consent to join the study. The sample is therefore drawn up using the on-site sampling technique which seems to us the most appropriate, since we do not have up-to-date statistics on the study population. It is to this sample that the questionnaire is administered from April 26 to May 15, 2020.

2.2. Data collection material
The study aims to assess representation data. We use an evocation questionnaire which seems best suited. This hierarchical evocation questionnaire (Vergès, Tyszka & Vergès, 1994) to ask participants, from "Coronavirus" to produce five words that come to mind. They are then asked to rank these words or expressions from most important to least important. Three centrality indicators are then used: frequency of evocation, rank of appearance, their importance.

Then, thanks to a similarity analysis, we show the organization of the representation from the systematic observation of relationships between the responses. The other axis of the questionnaire concerns the socio-demographic situation of individuals. It highlights the different levels of results according to the different categories of participants. As this material to be used is standardized, it was administered to participants in the same way by the face-to-face procedure, taking into account barrier measures relating to the pandemic, in particular the wearing of a mask and respect for social distancing at least one meter.

2.3. Data analysis method
For the definition of the elements of the central core of social representation, we used on the one hand, lexicographic analysis and, on the other hand, the definition of categories. This processing is carried out using Evoc2000 software, version 2005 and Simi2005, and gives the following results.

3. Search results
The presentation of the study results revolves around the components of the social representations of coronavirus in the participants as well as the structural organization of these representations.

3.1. Components of the social representations of Coronavirus in the global sample
The social representations of the coronavirus consists of a central nucleus and peripheral elements. The central core of Coronavirus social representation is made up of words whose frequency is greater than or equal to 10 and whose rank is less than 2.5. The analysis table below established by evoc2005 reveals that it is about Containment-Death- Invention. The other words or expressions mentioned which also have a frequency greater than or equal to 10 but whose rank is greater than 2.5 constitute the peripheral elements of representations. Thus, all the elements constituting the structure of social representations of Coronavirus are recorded in the analysis table below according to whether they belong to the central core or to the periphery.

Table 1: Elements of the Social Representation of Covid-19 among all participants
It is noted that the three elements of the central core, containment, death and invention have a psychosocial dimension. The populations express through these elements their experience of the imbalance of the social environment by negative feelings. For the participants, behind this pandemic hides a "conspiracy theory" with the aim of eliminating a category of people for ulterior reasons. The evocation of death and containment (which translates a kind of restriction, of deprivation of liberties) are only the result of the consequences of this human "invention" perceived by the participants as a kind of "punishment" for humanity all whole. This is why the evocation "Chinese" is revealing and seems to situate the responsibilities of this invention according to the participants.

### 3.2. Structural organization of the social representations of Covid-19

Through the similarity analysis, we want to assess here the degree of connectedness between the elements structuring the social representation of the Covid-19. This analysis is made from a similarity graph below, both at the level of all participants and at the level of the different categories.

#### 3.2.1. Similarity analysis of all participants

*Source: Kouamé et al. 2020, evoc2005 software*
When analyzing the similarity graph in all of the participants, there are strong connections between the 15 elements making up the social representations of Coronavirus. The connectedness being the intensity of the association between two elements established by the participants. Thus, the graph reveals among others the following degrees of connectivity: health crisis and fear-panic (66), health crisis and Chinese (59), health crisis and global problem (59), unemployment and impotence-state (59), pandemic and death (52), pandemic and containment (52), etc. Indeed, these strong connections translate a representation whose organization is strongly structured around the 15 components.

This analysis of the graph also reveals a high intensity (very high similarity index) of the similarity relationship between these components. In other words, the strong connectivity between these different elements explains, so to speak, the experience of the populations, which is why the central core takes on a psychological dimension through death or confinement perceived here as a deprivation of liberty.

3.2.2. Similarity analysis of the unemployed

At the level of the unemployed subcategory, we observe in the analysis of the graph strong connections between pandemic and death (60), pandemic and confinement (54), unemployment and social-environmental imbalance (50), social-environmental imbalance and impotence-state...
(50). In this category, these strong connectivities indicate a representation which is structured mainly around six components with two poles. On the one hand, we note the pandemic which will lead to death and confinement and, on the other hand, the state’s powerlessness in the face of the imbalance of the social environment which generates or amplifies unemployment. Thus, the very high similarity index means that the elements mentioned here are associated by the greatest number of unemployed subjects.

3.2.3. Similarity analysis of pupils and students

Figure 3: Pupil and student similarity graph

Source: Kouamé et al. 2020, simi2005 software

Analysis of pupils and students similarity graph reveals very strong connections between pandemic and death (66), between pandemic and protective measures (60), between pandemic and containment (50) and between protective measures and health (52). From this graph, we note that the representation of coronavirus in the pupils and students is strongly structured around the elements of pandemic, death, protective measures, containment and health. One could thus say that for them, the health of people is severely shaken by the pandemic which leads to death and imposes containment and protective measures. In this sense, the protective measures would be perceived as binding for pupils and students, an obstacle to their freedom, too many restrictions. It was then that the lifting of certain protection measures, notably the decontainment announced by the government, was welcomed by the populations as an act of liberation "of prisoners". People immediately stormed, shouting for joy and dancing in all the streets of the capital.

3.2.4. Similarity analysis of workers

Figure 4: worker similarity graph

Source: Kouamé et al. 2020, simi2005 software
The worker similarity graph suggests strong connections between protective measures and death (100), protective measures and health crisis (82), death and health crises (82), death and pandemic (82), pandemic and unemployment (62), pandemic and containment (62), state powerlessness and pandemic (54), containment and state powerlessness (54), state powerlessness and change in the social environment (54) and between lack of money and change in the social environment (52). In this category, it is important to underline the very strong connection between all the 9 elements which structure the social representations of coronavirus. It should be noted here the extremely strong connection between death and protective measures. In other words, for workers, failure to adopt protective measures is synonymous with death. This could be understood when we know the mode of spread of the virus and the strong interaction that the worker has with others in the workplace. Thus, for workers, the lack of rigor in the strict observance of protective measures would expose them more to danger, to death. We can therefore maintain that all of the workers' anxiety and stress is at this level, contact with others (colleagues, clients, partners, etc.). This is, moreover, the category in which the connections are strongest, which implies that the associations are practically all the fact of all if not almost all the workers. They feel more exposed and therefore more concerned by the virus according to the results of the study with regard to the different graphs.

3.2.5. Similarity analysis of women

Figure 5: women’s similarity graph

Source: Kouamé et al. 2020, simi2005 software

The similarity graph of the women who participated in the research establishes strong links between pandemic and containment (64), fear-panic and death (62), imbalance in the social environment and human solidarity (50). To a lesser extent, there are connections between death and divine punishment (48), death and pandemic (48) then between human solidarity and increase in food prices (46) or between death and Chinese (44). The connection which makes the particularity of this subcategory is that established between the imbalance of the social environment and human solidarity. Would they be urging all of humanity, in the face of disaster, to solidarity through this association of evocations? This is what we think.
3.2.6. Similarity analysis of men

We observe on the graph of similarity of men, strong connections between death and pandemic (65), death and Chinese (60), Chinese and conspiracy / invention (55) and between health crisis and fall of the economy (54). Thus, the 6 evocations of pandemic, death, Chinese, conspiracy / invention, health crisis and fall of the economy, constitute the main components of the social representations of coronavirus among the participants in the study. Analysis suggests that the death caused by the pandemic was the result of a Chinese conspiracy / invention for them. In this case, we could issue that the construction of their representation would surely be linked to the origin of the pandemic, the city of Wuhan in China.

4. Discussion of results

In carrying out this study, we set ourselves the objective of identifying the elements structuring the discourse of the populations concerned in order to understand the stigmatization of the healthcare personnel and people with Covid-19 in Abidjan. At the end of the analysis, it appears that the main components which constitute the central core of the social representations of the coronavirus in the populations of Abidjan who took part in the study are the evocations "containment", "death" and "invention ". Thus, the analysis highlights that the Covid-19 is a conspiracy, an invention that causes the containment or even the death of "innocent" people. Thus, the strong connections recorded in all the categories making up the sample and particularly among workers indicates that the various associations of evocations are the responsibility of almost all of the participants.

The question is how do we go from such a structuring to stigmatization instead of adopting a behaviour of solidarity or human solidarity in the face of the imbalance of the social environment due to Covid-19, as revealed in the structuring of the social representations of the women in the sample for example?

It will be difficult for us to establish a correlation or a causal relationship. However, we can initiate a hypothetical explanation based on certain facts. Indeed, during awareness campaigns aimed at bringing people to respect containment measures, one of the messages was worded: "the virus does not move but it is the people who in their movement go towards it". Suddenly, faced with the dangerousness of the virus as conveyed by the media and social networks, it is built in the popular imagination that all those who contract the disease (people with Covid-19) as well as those who are supposed to providing the necessary care (healthcare staff) are the vectors of transmission and therefore perceived as real threats; they are carriers of...
death. So these are people to avoid if you want to stay alive. This is all the more so since the remedy is slow to reveal itself and at the same time we are powerlessly witnessing a strong controversy over the origin of the virus. This is how, based on fear-panic and psychosis, the feelings of rejection of participants are born and amplified, rather than benefit from the assistance of those around them. They are to be avoided, at the risk of being contaminated in turn.

Consciously or unconsciously, people make them responsible for their condition and the spread of the virus, making them ashamed of the sick. This social rejection could generate or develop the feeling of guilt in these two categories, who find themselves having to face two challenges: 1) coping with the disease and 2) managing the accusing eyes and fingers of others. Anything that accentuates their psychological imbalance and increases their vulnerability (mental suffering in addition to physical suffering due to the symptoms caused by the manifestations of the virus in the body). We can almost understand the words of the lady who indicated on national television that "stigma is much more painful and kills faster than the disease itself".

We can therefore argue that confusion and lack of information, and above all emotional shock, are favorable grounds for building negative prejudices against the virus. Thus, faced with the uncertainty of an adequate treatment and growing mistrust, the avoidance behavior of populations towards people with Covid-19 and the healthcare staff is based on negative prejudices enriched by rumors and fake-news that abound on social networks. And the fact that the connections are so strong reflects the tendency for participants to develop common beliefs about Covid-19. At this level, although the research does not relate to the same diseases, the results of the present study corroborate in this sense those of Dorvil et al. The authors argue that the age-old stigma that strikes people with mental health problems in any society is based on negative prejudices, extremely pejorative and marginalizing preconceptions applied to all these people regardless of individual characteristics. Our analysis leads to the conclusion that in both cases, the negative prejudices and common beliefs are more the nature of "incurable" of desease or without an appropriate remedy that can reassure a potential victim. Below is the idea of invalidity, of certain death that bewitch people and create psychosis.

It develops a kind of thanatophobia in populations facing the Covid-19. In this specific case, the anxiety caused by exposure to a situation linked to death, hence the strong pandemic-death connection in the structuring of the social representations of Covid-19 among the study participants. This is, moreover, what leads to avoidance behavior linked to an "unreasonable" fear of death in general, of the death of one's loved ones and of one's own death, as Roupioz (2018) suggests, even if she was not particularly referring to the Covid-19 which, moreover, had not yet appeared. He develops obsessive behaviours and ideas around the end of death, for the individual and for others. This phobia was triggered by the abundant communication which was made in almost all the media of the world on the number of people reached and especially of deaths every day; a traumatic event for the populations. This fear is accentuated by the fact that the virus has broken down all barriers of categorization or social class and affects everyone without any distinction. This is surely the reason why in the graph of similarity of the women in the sample, we note a strong connection between the evocations of imbalance in the social environment and human solidarity. This association could be understood in the sense that, given the imbalance in the social environment caused by the pandemic, the populations would benefit from further developing human solidarity.

In our humble opinion, without this solidarity, it will be difficult to cope with the consequences of Covid-19 which can be social, family or even professional, and they can manifest themselves in symptoms such as 1) avoidance of anything that could cause, accelerate
death or endanger (being in contact with people with Covid-19 and the healthcare staff, leaving the house or even going to a hospital); 2) insomnia for fear of dying in sleep; 3) permanent anxiety about dying (because of others); 4) panic attacks during the evocation or confrontation with death; 5) depression and withdrawal (favored by social distancing as a barrier measure to deal with Covid-19).

From the above, it appears that the health crisis imposed by the Covid-19 ended up imposing a great fear of death on the populations, which disrupts their daily life. This disturbance is reflected both physically and by the imbalance in the social and psychological environment, the feeling of anxiety. The results therefore suggest that in the fight against Covid-19 the psychological aspect which is also important and deserves to be taken into account. At this level, it will be a question of developing strategies to deconstruct the negative prejudices and common beliefs around the coronavirus which encourage populations to adopt the avoidance behaviour and the stigmatization of people with Covid-19 and of healthcare staff.

Conclusion
At the end of our analysis, we note that the social representations of Covid-19 are structured strongly around the main elements which constitute its central core. These are the evocations of containment, death and invention. It therefore appears that these social representations are fundamentally built around negative feelings that generate in populations, thanatophobia, that is to say, the fear of death. This phobia of death which governs the social representations of the populations will generate the construction of negative prejudices and common beliefs favoring avoidance behaviours in the participants to flee the dreaded situation, to be contaminated by the coronavirus. Suddenly, it puts in place the withdrawal into oneself and the rejection of the other which constitutes for the individual a danger. Hence the stigmatization of people who, visibly "embody" danger, death (the object of fear), namely people with Covid-19 and caregivers.

In such a situation, the psychological dimension turns out to be important and deserves special attention if we ultimately want to achieve effective management of this health crisis.

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