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Perceptions of COVID-19 among communities of Conakry (Guinea): a qualitative study exploring the context of the ANRS COV33 Coverage-Africa therapeutic trial

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ABSTRACT

Objectives To explore communities' perceptions about COVID-19 in the context of the ANRS COV33 Coverage-Africa clinical trial evaluating the efficacy of treatments in preventing clinical worsening of COVID-19.

Design Descriptive qualitative study using semistructured in-depth individual interviews conducted by telephone in French and Soussou between May and September 2021. Data were transcribed, translated in French when applicable and analysed with the thematic analysis method.

Setting The eight neighbourhoods most affected by COVID-19 in Conakry's urban context, capital of Guinea.

Participants 4 community leaders acting as key informants—providing insights regarding population's opinions—and six community members, who were exposed to an information session conducted as part of Coverage-Africa.

Results According to participants, community members have heterogeneous viewpoints about COVID-19: it exists and is dangerous; it is benign ('bad cold'); or it is fictitious (eg, government conspiracy). The fear of stigmatisation and social isolation of those sick or cured of COVID-19 was largely reported by participants, with illustrations of distressing situations for the victims. To avoid stigma, many patients seem to adopt strategies of discretion (eg, lying/hiding about the disease). Although community attitudes were reported to have evolved since the beginning of the epidemic, stigma remained a pervasive concern for many people.

Conclusions Community perceptions about COVID-19 in Conakry may be partly explained by the Guinean context of Ebola history and of sociopolitical tensions. Stigmatisation of COVID+ people seems to be aimed at protecting others against contamination. However, social avoidance can greatly affect the morale of stigmatised people, especially in collectivist cultures like Guinea. Further investigating stigma, including its role on seeking COVID-19 screening and treatment services, and its consequences on mental health among affected/exposed people, would contribute to identifying improved prevention and care interventions in preparation for future health threats, and to promoting participation in health research.

Trial registration number NCT04920838 (Pre-results stage).

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ This research is the first to explore community experiences, opinions and perceptions related to COVID-19 in Guinea. A key strength of this study is that it was designed and implemented by an international multidisciplinary team both from France (outsiders) and Guinea (insiders), potentiating complementary strengths to enrich data collection and interpretation.

⇒ We included deductive and inductive coding, allowing for the emergence of unanticipated themes.

⇒ Saturation of themes was likely achieved, showing that our sample size was sufficient to comprehensively explore the perceptions of the members of the target communities.

⇒ We were not able to recruit as many participants as planned due to, among other things, logistical difficulties.

⇒ Despite efforts to diversify the profiles of potential participants, interviewees were mainly male and highly educated: we were therefore less able to explore in greater depth the perspectives of women and of people with little or no education.

INTRODUCTION

The COVID-19 pandemic is a major public health and social issue due to its high contagiousness and its lethal potential, its impact on health systems and its massive societal impact due to lockdown measures, travel bans and economic hardship.[1] A considerable number of studies, including in West Africa, have described the health status of patients

and evaluated the effectiveness of new treatments and vaccines.[2] Studies are also aiming at assessing the long-term impacts of COVID-19 on physical and mental health, as well as its social consequences within communities.[2]

One of the particularities and specificities of COVID-19 research is that it is carried out in an epidemic context. Epidemics are often challenging events, during which negative opinions and feelings are expressed, such as refusal to believe that the disease exists; circulation of rumours; expression of mysticoreligious beliefs; fear and anxiety; stigmatisation of those who are ill or cured; distrust of governments; or reluctance towards clinical trials.[3 4] Lack of knowledge about an emerging and epidemic-prone disease, fears about treatment and distrust of the research team can be barriers to acceptance of participation in a study.[5] Communities' positive perceptions and acceptability are key for individual participation in clinical trials, including participants' adherence to treatment.[6] Community sensitisation activities carried out before and during research are intended to improve the links between the researchers on the one hand and the beneficiary communities on the other hand, and thus the acceptability and feasibility of the research.[7] In West Africa, such strategies usually include the training of influential people, who then proceed to sensitise community members by informing them through informal channels and offering pragmatic arguments based on their realities, values and ways of functioning.[8]

While 37 652 confirmed cases and 449 deaths associated with COVID-19 were reported in Guinea as of 30 September 2022,[1] it is estimated that 65.1% of Africans were exposed to the virus causing COVID-19.[9] Coverage-Africa (ANRS|MIE COV33, ClinicalTrials.gov identifier: NCT04920838), implemented in Burkina Faso and Guinea (2020–2022)—and part of ANTICOV, an international multicentre platform clinical trial—is currently evaluating the efficacy of early administered treatments to prevent clinical worsening among patients with COVID-19. During the first year of the study, community information sessions were carried out in Burkina Faso and Guinea as part of the implementation of this trial.

Studies have explored the perceptions, experiences and attitudes related to COVID-19 globally and in sub-Saharan Africa, highlighting a phenomenon of stigmatisation or fear of being stigmatised.[10–12] However, most studies have explored the perspectives of health professionals[12–14] and/or used quantitative survey-type methods[15 16]; very few explored the perspectives of community members and used qualitative methods such as semistructured interviews.[10 11]

Guinea has a recent history of country-wide epidemics, including the Ebola outbreak, with several studies documenting high levels of stigmatisation towards sick people and those who recovered from the infection.[17] However, to our knowledge, there are no published studies on the perception of Guinean communities regarding COVID-19, including the exploration of the stigma phenomenon. We therefore sought to explore the experiences, opinions and perceptions regarding COVID-19 of community members living in the urban context of Conakry, the capital of Guinea, to contextualise the implementation of the Coverage-Africa clinical trial.

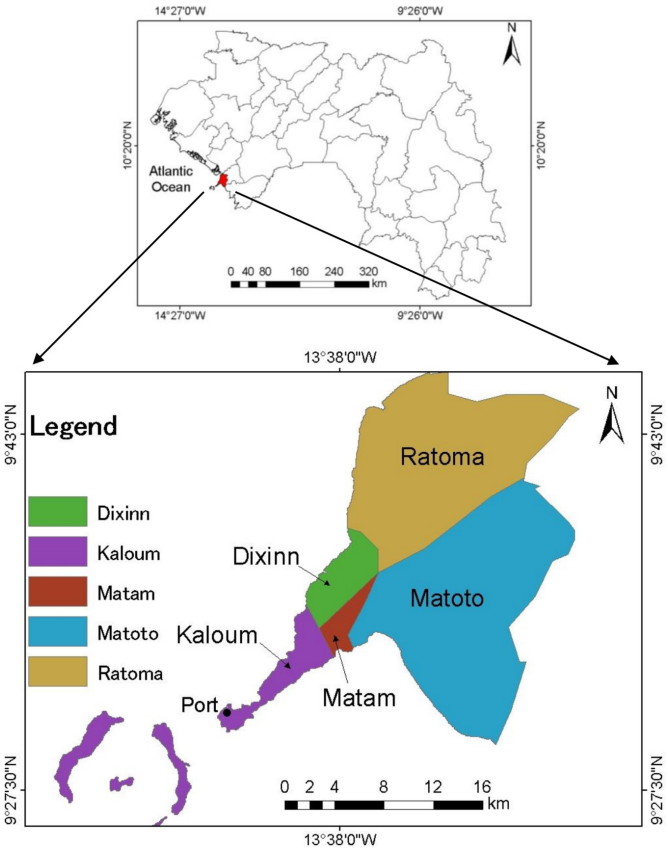

Figure 1 Map of Conakry and its five communes. (adapted from Traore *et al*,[55]).

METHODS

Study design

To achieve this in-depth exploration, we conducted a descriptive qualitative study in conjunction with a community information session carried out prior to and during the implementation of the Coverage-Africa trial in Conakry, Guinea. The community information session in Conakry included information and advocacy meetings with key community stakeholders in the eight neighbourhoods most affected by COVID-19, that is, in four neighbourhoods in each of the Ratoma and Matoto communes (figure 1). A total of 28 activities, led by 'health promoters', were organised between October 2020 and September 2021 (table 1).

Selection and recruitment of participants

We included community association leaders who acted as key informants providing their insights regarding opinions of the general population, as well as community members who participated in at least one Coverage-Africa information session. Participants were reached through the activity attendance lists. It should be noted

Table 1 Coverage-Africa trial community information activities (2020–2021)

Type of activity	Participants	Meetings (n)
Information and advocacy	Mayor +2 counsellors of the communes of Ratoma and of Matoto (n=6 in total)	1 meeting per commune × 2 communes
Information and advocacy	Members of the district administrative office (n=58 in total)	1 meeting per neighbourhood × 8 neighbourhoods
'Awareness day' training	Heads of neighbourhoods or their deputies, leaders of women's and youth groups, charismatic leaders and people in charge of community information activities in communal medical centres (n=31 participants)	1 meeting (6.5 hours)
Information and advocacy	Community leaders of groups of women, young people and biker-taxi from the neighbourhoods (n=410 participants)	17 meetings
Total	505 participants	28 meetings

that the information provided during these sessions was not exhaustive. We purposively selected participants[18] to cover a diversity of profiles—by age, gender and education level—so that a variety of perspectives could be explored. We did not select participants on the basis of having had COVID-19 or of knowing someone with COVID-19.

Data collection

A Guinean interviewer trained in social sciences conducted in-depth semistructured individual interviews (see interview guides in the online supplemental appendix), exploring the following domains, among others: general opinions on COVID-19; behaviours and attitudes of patients with COVID-19 and of community members; and evolution of the local social context related to COVID-19 since the beginning of the epidemic. Interviews with community leaders focused on their perceptions of the opinions and behaviours of people in their communities, and interviews with community members focused on their own experiences and perspectives. Interviews were conducted between 17 May and 6 September 2021 in the participants' preferred language (in this case French and Soussou), and by telephone, in order to respect COVID-19 social distancing measures. Interviews lasted an average of 60 min and were digitally recorded. Interviews conducted in French were transcribed verbatim. Interviews conducted in Soussou were transcribed directly in French (including the sociocultural meaning when relevant). All transcripts were anonymised. Verbatim excerpts included in this publication have been translated into English. Relevant information gathered by interviewers, project manager and researchers from informal discussions, that is, fortuitous conversations happening during fieldwork,[18] was also noted; these included discussions with the study's 'health promoters' and social scientists present in Conakry to work on other studies related to COVID-19.

Data analysis and interpretation of results

We analysed the data using the thematic analysis method,[18] which highlighted the main experiences, opinions and perceptions of the participants. This analytical process included the following steps: (1) reading of interview transcripts; (2) deductive (based on the themes of the interview guide) and inductive (themes emerging from the data) coding of the transcripts (using the MAXQDA software); (3) identification of the main themes and subthemes; (4) summary of each theme; and (5) interpretation of findings using the themes summaries, which were triangulated with informal discussions, knowledge of the sociocultural and political situations in Conakry and literature. These analyses revealed likely data saturation.

Trustworthiness

Various measures were taken to ensure the rigour of the study. Data were triangulated by validating the results of the individual interviews with information collected in the field during informal conversations with key individuals. Thematic summaries were also verified by going back into the raw data (transcribed interviews). Excerpts from participants' interviews were included in the Results section of the paper, so the readers can have confidence in interpretations.[18] Finally, the interpretations were validated by the Guinean coresearchers and team members based on the field (mainly CTS, AD and CM), acting as 'cultural brokers' ('expert checking').[19 20]

Ethical considerations

The study's 'health promoters' informed the participants of the objectives of the study and invited them to read the information leaflet. All participants freely signed the consent form to confirm their agreement to participate in the study and to have their interviews recorded. A code was assigned to the interviews in order to anonymise them. The data were stored on a secure server protected by a password with access restricted to study researchers.

Patient and public involvement

Patients or members of the public per se were not involved in the design or conduct of the research. However, the 'health promoters', who were involved in community information sessions and in seeking consent from potential participants, acted as intermediaries in reporting to the research team the views of the community regarding the conduct of the study.

Table 2 Profile of participants in the Coverage-Africa trial community perceptions study (2021)

No	Participant type	Study level
1	Community leader	University
2	Community leader	Professional
3	Community leader	Professional
4	Community leader	Professional
5	Community member	University
6	Community member	University
7	Community member	College
8	Community member	University
9	Community member	University
10	Community member	None

Professional occupations covered the following areas: health (n=2), education (n=2), telecommunications (n=1), geography (n=1), administrative management (n=1), housekeeping (n=1) and two retired participants.

Report

The study is reported using the Standards for Reporting Qualitative Research guidelines.

RESULTS

Description of the sample

A total of 10 people (n=8 men), aged between 29 and 70 years, agreed to participate in the individual interviews (table 2). Of these, four were key informants (community leaders) and six were community members. Six participants were from the Ratoma commune and four were from the Matoto commune.

Theme 1: convictions/knowledge about COVID-19

A real and dangerous disease

According to some participants, many people in Conakry are convinced of the reality of COVID-19, are afraid of being infected and feel that the disease should not be trivialised.

> About COVID-19 in our neighborhood, people [believe] that the disease exists, and that it should not be overlooked. […] Some people are afraid of catching the disease […] and they protect themselves […]. People who believe that the disease exists think it's a serious disease. (Participant 3)

For many, the disease is real because they have seen people with COVID-19.

> What makes me believe [that COVID-19 exists], if you go to the hospital, where people who have COVID-19 are hospitalized, you'll see them. (Participant 7)

Some referred to COVID-19 as an infectious disease that exists just '*like malaria, polio, etc*' (Participant 2). However, the majority of participants did not report an opinion about the factors that cause COVID-19—neither their own beliefs nor those of people around them. Anecdotally, some referred to the 'virus' (without naming it), others to unsanitary environments and dirty clothes (Participant 5), '*dust raised by vehicles and motorcycles*' or food contaminated by flies (Participant 2) as vectors of the disease.

A benign or foreign illness

Because symptoms were reported as being often mild (eg, runny nose), COVID-19 was largely perceived as a 'bad cold'—a common, mild and transient condition—but not as a dangerous new illness per se. However, some people sometimes expressed a fear of aggravation that could lead to a need for medical assistance.

> The common cold often catches us. It's our disease. When you have a cold, as soon as you take Paracetamol, it heals. But, the cold that can catch you [COVID-19], you take the medicine [Paracetamol] but it doesn't heal [right away], you have to go to the hospital. (Participant 7)

Additionally, it appears that many Guineans do not feel concerned about the disease, as several respondents mentioned that COVID-19 is considered a 'white man's disease', originating in the West and imported to Guinea by Westerners, affecting and killing Westerners more than Africans.

A factitious disease

You have to see to believe

Following the same reasoning as above, many people do not believe in the existence of COVID-19 because they do not know anyone who has had COVID-19 and they do not see sick people around them. Furthermore, social distancing measures and barrier gestures are hardly respected in Conakry (eg, several people share the same taxi), which reinforces beliefs of an unreal disease.

> People don't respect barrier measures, so if the disease existed, they would get sick. (Participant 8)

In addition, according to participants, authorities have a policy of not reporting national and local statistics on the course of the epidemic to protect patients from stigmatisation: this, however, seems to contribute to making the disease virtually 'invisible'. It also emerged from the speeches of several participants—particularly among the most educated—that people with little education or who are illiterate have difficulty believing in the existence of the disease.

> Most of the population is not literate, many believe that [COVID-19] is an invention and that it doesn't exist. (Participant 8)

A conspiracy rather than a real disease

Several participants mentioned a suspicion of manipulation or scam related to COVID-19 to the detriment of the Guinean people. In particular, a large section of the

Guinean population would have interpreted the concomitance in March 2020 of sociopolitical protests and the occurrence of COVID-19 in Guinea as an attempt by the government to muzzle them, thus deeming COVID-19 to be a fake disease.

> The Guinean political context doesn't allow us to believe 100%. Isn't this a way of barring people so that they stay [home], to impose that people do not go out when there is a protest while the elections are not over…? (Participant 6)

Or that it is a manipulation of Westerners to promote the use of their pharmaceuticals.

> All these problems that occur in our country are made by Westerners. For example, we are being vaccinated at all times. […] these are things that come to us from outside. Fortunately, they are the ones who have the means, as soon as they drop things on us [ie, a disease], they also create the counterpart, that is, elements to counter what they have dropped on us [eg, vaccination]. (Participant 2)

This mistrust may cause some people who have tested positive for COVID-19 to be suspicious of the veracity of the test: they deny the test result and thus refuse to believe that they have the disease.

> My thought is that they refuse to get tested [because] whether you are negative or positive, they will always say that you are positive. They keep you in the hospital, to give you the medicines […]. (Participant 7)

The importance of community sensitisation

Several participants mentioned the importance of implementing awareness-raising activities to inform communities about COVID-19. In their opinion, this must be done primarily within neighbourhoods, in person—for example, through 'door to door' or educational talk approaches—by trustworthy people (eg, community leaders), in local languages and with plain language messages. Community outreach seems particularly important for people who are illiterate or have little schooling.

> The disease exists, but what does it take for the people to believe? […] You have to go through awareness training workshops, otherwise people necessarily doubt… They don't have enough information, they say it's not something that is real. (Participant 9)

Theme 2: social behaviours/attitudes towards COVID+ people, the healed and their families

Stigmatisation of patients

Despite testimonies of non-belief in the existence of COVID-19, several participants reported stigmatisation of patients with COVID-19. However, no insult to patients with COVID-19 was mentioned.

> As soon as we know that a person has this disease, as soon as he passes by, people start indexing him or talking about his disease. (Participant 2)

Ostracism towards the sick, the healed and their families

The fear of being infected by the person diagnosed with COVID-19 often generates mistrust among members of the entourage, who put the patient aside, sometimes for several weeks or months, even after recovery. In particular, they avoid visiting him/her, as well as sharing meals and utensils (eg, bowl, cup) with him/her.

> People didn't even go to his yard to draw water, they didn't want to draw water from the same well anymore. They took him out of the social circuit completely for 2–3 months. (Participant 9)

Some participants mentioned that sidelining is usually temporary: face-to-face contact usually resumes after a while when suspicion of contamination has passed.

Family members or people of the patients' entourage may also be targeted for discrimination.

> […] they move away from family members. They say: 'Oh be careful!! The sick person lives with these people in the same yard, so if you keep in touch with these people, it leads them to dangers…' […] they will segregate him, they hide from him, he is isolated. […] they did not hang out with him as they used to, they no longer come to his house. There is a bodily divorce between them, people are afraid. (Participant 9)

Consequences of stigmatisation for patients: psychological suffering

Some participants mentioned a feeling of shame in patients or recovered people who have experienced stigma or social exclusion, which has consequences on their morale. Some recovered people even moved away because they felt they no longer had a place in their usual social environment.

> I called him to ask him why he moved? He replied: 'Hah, it's kind of hard… My friends that I thought were supporting me, nobody called me the whole time I was in the hospital, so really I can't stay in the neighbourhood, I'm going to go and live elsewhere'. […] even his best friends didn't call him anymore […]. (Participant 8)

Strategies to avoid stigma and ostracism

Discretion (lying or concealing)

Several participants reported that patients with COVID-19 try to avoid being stigmatised by remaining discreet about their infection. Some patients chose to lie to avoid revealing their COVID-19 status: many make believe that they have 'gone on a trip' (eg, in another region of the country) while in fact they are hospitalised in a treatment centre.

> After they tested positive, they didn't tell people. They said they're out of town […] so they wouldn't get segregated or their family, so they don't get singled out, that people talk in the neighbourhood. (Participant 9)

Others conceal their status hoping people will forget they have been infected, or pretend they don't have COVID-19.

> [He] doesn't even show up [so he doesn't have] to say that he had COVID-19 and that he's cured. He does not engage in any behavior that can show you he has COVID-19. He pretends not to have COVID-19 […]. (Participant 7)

Presenting a certificate of recovery

When they are discharged from the treatment centre, those cured from COVID-19 obtain a 'certificate of recovery' signed, stamped and transmitted by the National Agency for Health Security. This 'COVID-19 pass' allows them to resume working. Some present this certificate to avoid being sidelined by members of their entourage following their infection.

> There is the example of the boy who had COVID-19 and when he left the [treatment] center, he showed me his recovery paper. I was going out in the morning for work, he showed me his certificate and when I got back at 2:00 p.m. I found him, he was sitting around tea with some friends, people even took turns passing the paper to see if exactly he got sick or not. (Participant 8)

Others who have recovered from COVID-19 are also proactive, reaching out to people around them to let them know that they are cured from COVID-19. They feel that this facilitates their reintegration into their usual social environment.

Protection from contamination and moral support

Some participants reported observing empathetic behaviour towards patients with COVID-19, moral support for relatives during illnesses being a central element of Guinean culture.

> They do not provide material support but moral support, such as greeting them, as we are used to doing, as we are accustomed to. Moral support is a custom for us. If I am sick, those around me will be informed and will come to support me morally. (Participant 5)

Some reported ways in which they were personally able to provide support to a friend/relative with COVID-19 who was hospitalised in a treatment centre (with a ban on visits), or to have contact with him/her at home while preventing being infected, that is, either by phone or by video calls, by staying at a distance at the window to talk to each other or by wearing a mask and respecting physical distancing.

> Sometimes I spoke with him, I put him on a video call, together with friends we chat, we joke, sometimes we sent him money to his account, or credits. It reduced his stress a bit because he was there [and] had nothing. (Participant 8)

Evolution of stigmatising attitudes/behaviours since the beginning of the pandemic

Several participants referred to the recent Ebola outbreak experience in Guinea, and mentioned that some initially thought that COVID-19 could be a similar disease, as in the early stages of the COVID-19 pandemic, the government and health authorities used similar infection control measures as those used to fight against Ebola. In particular, the homes of the sick were sprayed with disinfectant, which attracted attention in the neighbourhoods. These underlying fears and official health responses, combined with the lack of knowledge and information about COVID-19 in the community, are considered by our participants to have contributed to the stigmatisation and exclusion of people affected by this new virus.

> Don't forget that we came out of Ebola. There is this experience that is in some minds, COVID-19 is not that different from Ebola, the measures taken during Ebola and COVID-19 almost corroborate… (Participant 1)

The gradual dissemination of scientific data has led to a better understanding of the modes of transmission of the virus and of the means to prevent contamination, which in turn has led to a change in behaviour and attitudes towards sick and cured people—at least by part of the population.

> At the beginning it was a big problem. If it was known that someone had COVID in a family, no one went there, people avoided greeting them, neighbors avoided them. There was a stigma that was very, very serious. Over time, people have understood that we can come and go without problem, we can greet each other and visit each other without being contaminated by respecting the barrier measures. (Participant 8)

In addition, the growing perception that COVID-19 is not a severe and lethal disease has greatly reduced the fear of contamination, thereby reducing the stigma towards the sick, the cured and their families.

> The reluctance [ostracism towards COVID+ people] has decreased. Many are informed about the disease, it's not a fatality, you can have the disease and recover from it. (Participant 8)

However, despite interviewees' testimonies suggesting that stigmatisation has decreased since the beginning of the epidemic, the data seem to show that people are still discreet about their COVID+ status. It is therefore unclear whether the stigma associated with COVID-19 has really dissipated in Conakry.

DISCUSSION

Our study provides feedback about community perceptions, opinions and experiences regarding COVID-19.

Distrust and resistance to COVID-19 in a complex historical, political, economic, sociocultural and health context

The emergence of COVID-19 in Conakry has taken place in a context of successive historical events and overlapping contemporary events, which has influenced community experiences, reactions, behaviours, attitudes and perspectives on the epidemic,[21] as evidenced in this study.

Participants reported that COVID-19 is perceived by some community members as a conspiracy orchestrated by the Guinean government, rather than an actual disease. The occurrence of COVID-19 in March 2020[22] coincided with sociopolitical movements and protests in Guinea in response to the presidential desire to modify the Guinean constitution.[23] Concomitantly, following the example of other countries, the Guinean government decreed a ban on gatherings (and therefore on protests) in March 2020, as a means to contain the COVID-19 pandemic. This led a portion of the Guinean population to express significant mistrust about the existence of COVID-19, as well as distrust of state leaders.[21] As a side note, public dissatisfaction with the president let to the coup d'état of 5 September 2021, during which the president was arrested, the constitution suspended and the government dissolved.[24] The distrust in the government apparatus is not new in Guinea. The country's heavy historical-political past has, among others, influenced how communities reacted to the Ebola epidemic in 2014–2016, including acting violently towards Ebola response humanitarians.[3 25] This phenomenon of suspected conspiracy regarding COVID-19 is not unique to Guinea, as conspiracy theories have widely circulated in social media around the world.[26] Popular distrust is often a reaction to so-called 'top-down' approaches, especially when governments impose strict rules to contain the spread of an epidemic.[25 27] The mistrust of Guineans towards 'the Whites', mentioned by some participants, is not a new social phenomenon either.[25] Furthermore, because our participants reported a perception that the COVID-19 epidemic spread in the West before reaching the African continent, the disease might be seen as a danger to the survival of Guinean communities that came from outside. This could potentially foster prejudice against foreigners as they are perceived to be the importers of the virus[28]—hence explaining the representation of COVID-19 as a 'white man's disease' and blame towards Westerners.

Moreover, COVID-19 does not seem to be the highest priority in the minds of Guineans in terms of health risks. According to our data, it seems that several Guineans consider that they are not concerned by the serious nature of the disease. Guinea also had to deal with a resurgence of Ebola in early 2021, as well as epidemics caused by Lassa fever, measles, meningitis and yellow fever.[27] Malaria, which is ubiquitous and the leading cause of mortality in Guinea, causes more deaths annually (over 8000[29]) than COVID-19 has caused so far nationwide since the beginning of the epidemic in March 2020 (388 deaths related to COVID-19 as of 7 December 2021[1]). While the prevalence of COVID-19 is low in Guinea (30 798 confirmed cases[1] for a population of nearly 13 million people[24]=0.2%), seroprevalence studies indicate that at least 25% of West African population have developed anti-SARS-CoV-2 antibodies,[30] which suggests that additional undetected cases would have been asymptomatic or paucisymptomatic, contributing to the 'invisibility' of the disease or to the perception that COVID-19 is a 'bad cold'. It is therefore not surprising in this context that a part of the Guinean population has trivialised the COVID-19 epidemic, relaxed barrier gestures and complained about social distancing measures such as the ban on gatherings, or even denied the existence of the disease.

COVID-19 stigmatisation and the sociocultural context of Conakry: a collectivist society that stigmatises to protect the community

The phenomenon of stigmatising patients with COVID-19 was widely reported by study participants, and was also previously observed around the world.[31] Stigmatisation appears to be particularly common and important in Conakry as per our data—because of the apparent persistence of COVID+ individuals wanting to be discreet about their status—as well as in Guinea overall[17 32] and more broadly in sub-Saharan Africa and low and middle-income countries.[17] The fight against stigmatisation of patients with COVID-19 has become a priority for the authorities of many African countries, such as Senegal and Kenya, as well as of international organisations such as WHO and UNICEF.[33–35] The concern of the Guinean government and health authorities to protect the population from stigmatisation was reported by several participants in our study.

According to participants, stigma and ostracism associated with COVID-19 appear to be of limited duration, and thus would be a 'social interruption'—during the infectious phase and sometimes longer after recovery—rather than a 'social death'.[36] Stigma and avoidance of the person with an infectious disease are usually temporary, ceasing when the person is cured (unlike other kinds of stigma).[37] Stigmatisation of people with (or recovered from) an emerging infectious disease is not specific to the current COVID-19 pandemic. Fear of Ebola has given rise to stigma, exclusion, humiliation and violence against many of those who have recovered.[38–40] According to Goffman,[41 42] stigma occurs when individuals are significantly different and this difference is unwanted by other members of their social context.[43] Because of the dangers that these persons represent, they may be subject to negative attitudes, judgements and various forms of discrimination such as ostracism—which limit their life opportunities and social relationships.[42 43] In Conakry, stigma seems a priori to serve a (more or less conscious) purpose of protection against contamination

by sidelining COVID+ people (and sometimes cured people). Avoidance and social exclusion would therefore be adaptive responses serving to prevent the spread of the virus and to protect uninfected people from the disease.[28] However, this social avoidance creates tension for individuals living in collectivist societies like Guinea. The need for social ties is indeed particularly important in these interdependent societies,[44] especially in the face of illness,[37] as affected individuals expect to receive the solidarity support of their close ones.[45]

In addition to the suffering of being socially isolated, hurtful social attitudes and behaviours add to the burden of those who are stigmatised.[35 46 47] Participants in our study spoke of shame and moral suffering experienced by those who are stigmatised and ostracised by other members of their social group. People living in collectivist cultures such as in Guinea indeed seem to be particularly sensitive to the reactions of people in their social environment[48] and thus are more vulnerable to criticism, negative looks leading to a strong sense of shame.[49] Distance/deprivation from daily social interactions and lack of social support can therefore greatly affect the moral and psychological well-being of stigmatised and ostracised people.[42 50] The prevention of stigmatisation and its deleterious consequences for individuals should be anticipated in future epidemics. Providing moral support to contagious people while preventing the transmission of the virus, assessing the mental health of victims of discrimination and facilitating their access to psychological resources should also be key measures of pandemic responses.

In addition to the *actual* traumatic experiences of discrimination and social exclusion, the *anticipation* of stigmatisation, that is, the fear of being stigmatised,[31] may lead individuals to modify their actions to avoid stigmatisation—such as the phenomenon of discretion mentioned by the participants. Discretion is a strategy used in other contexts in Conakry to avoid family and social sanctions in the event of non-compliance with certain sociocultural norms.[51 52] Furthermore, the strategy of concealment or lying is a 'ruse' to avoid stigmatisation, a phenomenon previously observed in Conakry in another context.[51] Circumventions to avoid disclosing the reality at all costs are strong evidence that the collectivist culture prevailing in Conakry imposes heavy burden on people who are not considered as being 'normal', and that the social price to pay is too high for many. In particular, they may seek to avoid being tested for COVID-19,[31] thereby posing a public health risk due to increased viral transmission.[28 31 35] The anticipation of stigmatisation can also have significant consequences on the physical health of the infected persons by increasing the risk of disease worsening (morbidity/mortality) if they delay seeking clinical consultation with health services.[28 31 35] Additionally, according to our data, individual discretion on COVID-19 status and public non-dissemination of local COVID-19 statistics as a strategy to avoid stigmatisation appear to have had a counterproductive consequence in making COVID-19 'invisible'. By possibly impacting the convictions of many people as to the reality of the epidemic, this might reduce people's willingness to comply with barrier gestures, to seek testing and treatment and their intention to participate in clinical trials.

Anticipation and information are known to be the most effective responses to prevent disease denial and fear in the event of epidemics.[3] Our study highlights that avoiding misconceptions and preventing stigmatisation of infected people may rely on a clear, transparent and non-discriminatory communication about the disease (eg, number of cases in the community, contagiousness) and the anxiety-inducing potential that such situations can generate.[28 31] We also suggest that health response strategies include the psychosocial dimension of epidemics, including the risk of stigmatisation and its deleterious consequences, and the ways to avoid it.[28 31] Some participants pointed out a link between low levels of education and beliefs. The lack of education indeed limits the ability to be informed and to look critically at the information and rumours that circulate.[53] Stigmatisation is thus more common among subpopulations characterised by lower education levels.[17] Our data support the recommendations that community sensitisation—especially through face-to-face meetings with trusted individuals—is a strategy to be advocated in settings with low literacy rates,[3 25] such as Guinea.[54] Finally, more research should be carried out within collectivist societies to better understand and document the phenomenon of stigma, its consequences on mental health, and to highlight the best solutions for prevention and intervention. This recommendation is applicable both to the current COVID-19 pandemic and as a preventive measure for future infectious disease outbreaks. Preventing stigma associated with an emerging infectious disease would also contribute to promoting the acceptability of participation in clinical trials, such as the Coverage-Africa study.

Strengths and limitations of the study

This research is the first to explore community experiences, opinions and perceptions related to COVID-19 in Guinea. A key strength of our study is that it was designed and implemented by an international multidisciplinary team both from France (outsiders) and Guinea (insiders) potentiating complementary strengths: the first suggested the interview questions and provided a more 'external' analytical approach to explain the sociocultural phenomena found in the data; and the latter provided access to the field, enhanced the richness of data collected and validated the sociocultural interpretation of the data through their in-depth knowledge of the local culture. Furthermore, in addition to deductive coding, we performed inductive coding of the data to allow for the emergence of unanticipated themes. Our study had some limitations. We faced recruitment difficulties, in particular due to the lack of motivation because participation was not financially compensated (four refusals), logistical difficulty in going to the field to collect written consent

during the rainy season and confinement in the context of sociopolitical tensions and the coup d'état. However, this limitation does not seem to have biased the results since data saturation was likely reached, showing that our sample size was sufficient to comprehensively explore the perceptions of the members of the target communities. Additionally, despite efforts to diversify the profiles of potential participants, interviewees were mainly male (8/10) and highly educated (university level: 5/10): we were therefore less able to explore in greater depth the perspectives of women and of people with little or no education.

CONCLUSIONS

Community viewpoints about COVID-19 in Conakry are heterogenous. Denial of the disease and negative perceptions about COVID-19 can be partly explained by the Guinean history of Ebola epidemics and sociopolitical tensions. Stigmatisation of people with COVID-19 could be intended to protect against contamination. However, social avoidance can greatly affect the morale of stigmatised individuals, especially in collectivist cultures like Guinea. Additional research on stigma—including its impact on individuals' health-seeking behaviours, and consequences on mental health among those affected/exposed—would contribute to: (1) identifying improved prevention and care interventions in anticipation of future health threats and (2) promoting the acceptability of participation in clinical trials, such as ANRS COV33 Coverage-Africa.

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