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COVID-19-related attitudes, risk perceptions, preventive behaviours and economic impact in Sub-Saharan African countries: Implementing a longitudinal phone-based survey protocol in rural Senegalese households

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Abstract

Introduction. Rural areas are considered safe havens against the increased spread of COVID-19 and associated restrictive measures, especially in contexts where public authorities are not in a position to systematically and substantially ease COVID-19-induced economic shocks. In the current Sub-Saharan Africa context, still marked by uncertainty surrounding the spread of COVID-19, we present the protocol of an ongoing longitudinal study aimed at investigating COVID-19-related attitudes, risks perceptions, preventive behaviours, and economic impact in rural areas in Senegal.

Methods and analysis. A prospective randomized longitudinal study of 600 households located in three semi-urban villages and nine randomly selected rural villages in the Niakhar area (located 135 km East of Dakar). Three ad hoc phone surveys are administered to 600 heads of households, their housewives in charge of managing the household and a relative living temporarily in the household, respectively. In addition to sharing identical sets of questions on several topics (risks perceptions, attitudes to curfew, attitudes to vaccines, beliefs about COVID-19 infection), the three separate survey questionnaires also include other topics (economic impact, local preventive strategies) whose related questions differ between questionnaires. As analysing evolutions is the study's primary focus, data on all the topics covered will be collected in three waves unless the spread of COVID-19 by mid-2021 justifies extending data collection. The present article presents the study protocol and details about the implementation of the first wave of data collection which started in July 2020. The decision to wait before presenting the protocol was based on the unprecedented context the COVID-19 pandemic.

Ethics and dissemination. The survey's protocol was approved by the Senegalese National Ethical Committee for Research in Health (131/MSAS/CNERS/Sec) and received authorisation from both the Senegalese Ministry of Health (619/MSAS/DPRS/DR) and the French Commission on Information Technology and Liberties (CNIL 2220771).

Keywords: COVID-19; attitudes; risk perceptions; preventive behaviours; economic impact; Sub-Saharan African ; longitudinal ; survey protocol.

Article Summary

- The current Sub-Saharan African (SSA) context is still marked by uncertainty surrounding the spread of the COVID-19 pandemic and the scarce availability of individual data.
- This ongoing longitudinal study aims to investigate COVID-19-related attitudes, risk perceptions, preventive behaviours, and the economic impact in Senegalese rural areas.
- Three waves of data collection are planned (the first wave started in July 2020). However, this number may increase if the spread of COVID-19 by mid-2021 justifies extending data collection over a longer period of time.
- In the unprecedented context of the COVID-19 pandemic, the generalizability of the study's results needs to be explored.

Introduction

After spreading from China to other Asian countries in late 2019, COVID-19 appeared in Western Europe in January 2020 where it rapidly led to overwhelmed hospitals and an exponential increase in deaths (COVID-19 data repository of the Johns Hopkins Center for Systems Science and Engineering, Baltimore, MD, USA). While most European countries adopted lockdown measures only several weeks after the first COVID-19 cases were reported (e.g., a 6-week delay in Italy and a 7-week delay in France), many Sub-Saharan African (SSA) countries decided to act sooner before the outbreak spread.

Spread of COVID-19 still limited in SSA, but uncertainties remain about how the pandemic will evolve

The COVID-19 pandemic spread to SSA in February/March 2020. Senegal implemented restrictive measures (curfew, closing schools, banning of public gatherings, and cancellation of major national and religious celebrations) three weeks after the first COVID-19 cases had been reported in the country, whereas in Nigeria, a street publicity awareness campaign on COVID-19 preventive measures was launched in the capital Lagos, two days after the first cases had been identified. Concerns were expressed, especially in Senegal and Burkina Faso, with respect to the sharp increases in both these countries in the number of COVID-19 cases soon after the first cases were confirmed there [1].

The announcements of restrictive measures led to mass movements of people from big cities to rural villages, both caused by fear of COVID-19 and the impact it could have in terms of economic losses. However, as time went by, it increasingly appeared that the outbreak was much less devastating than initially anticipated [2], and the mass movements of people mentioned above were gradually reversed. Apart from the early adoption of restrictive measures, the most widely proposed hypothesis for the much lower spread of COVID-19 in SSA than in most other world regions is that different demographic characteristics (younger average ages, lower

population densities, and lower urbanization rates) [3-6], and a higher immune response in relation with more highly solicited immune systems [7] hamper the spread. Recently, another strong hypothesis has been put forward, suggesting that the extensive implementation of local preventive strategies may have played a crucial role in substantially lowering the spread of the disease [8 9].

Nevertheless, the possibility cannot be ruled out that the COVID-19 pandemic could spread throughout Sub-Saharan African countries [2 10], as it did (and still continues to do) in North African and European countries (i.e. in all the countries north of SSA (Johns Hopkins Coronavirus world map: https://www.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6). Such a development is of great concern because of the associated risk of overwhelming already fragile healthcare systems [1 11], in a context where the pandemic has brought about a worldwide economic crisis whose consequences might be severe for Sub-Saharan Africa [12].

Few COVID-19 data are available from an individual perspective

Most published analyses to date on the COVID-19 pandemic in Sub-Saharan African countries have not been supported by collected data, except for data on the numbers of confirmed cases and deaths. Nevertheless, two studies assessed COVID-19-related knowledge, attitudes and practices in Nigeria, and in both Ghana and South Africa, respectively. An online survey was used in both studies (April-May 2020 and March-April 2020, respectively). Both showed that personal COVID-19 prevention measures against COVID-19 and the disease's main symptoms were well-known by study participants [13 14]. However, the Nigerian study also showed that approximately half of the surveyed individuals believed that only elderly people with comorbidities were likely to develop severe COVID-19, whereas 85% were unaware of the risk of being infected by asymptomatic individuals. Consistent with this finding and given that the participants in the Nigerian study were relatively young (69% aged between 21 and 30 years

old), only 22.5% of surveyed individuals reported wearing a face mask when they went out. Furthermore, other published studies have emphasized individuals' fear of serious COVID-19-related economic repercussions (notably people living in urban Ghanaian neighbourhoods with their own business in the informal economy [15] and farmers working in the Ethiopian vegetable sector [16]).

Study Objectives

The present ongoing study was designed in a setting marked by both uncertainty about the spread of COVID-19 in Sub-Saharan Africa and the scarce availability of individual data. Given the continued risk that the spread of COVID-19 will increase substantially in SSA, the memory of mass movements of people from big cities in March 2020 highlights the role that rural areas could play if such an event were to reoccur. This role could be major in a context where public authorities may not be in a position to systematically and substantially ease the economic shock induced by the pandemic[17-19]. While this role could evolve depending on rural populations' attitudes to such mass movements aeasend their perceptions of the associated risks, we hypothesized that evaluating the evolution of individuals' perceived impact of COVID-19 pandemic could provide invaluable information about the potential pressure of the COVID-19 pandemic on these rural areas.

Accordingly, the present ongoing longitudinal study was designed to investigate the attitudes, risk perceptions and preventive behaviours of people living in a Senegalese rural area in terms of COVID-19, as well as their perceptions of the related economic impact. As rural areas often have limited access to the internet and given the increased risk of COVID-19 transmission during close contact interactions, the only available option was to conduct a phone-based survey.

Methods and analysis

Population

This study includes adults (18 years old and over) living in all 30 villages of the rural Niakhar area covered by the Niakhar Health and Demographic Surveillance System (HDSS) [20]. The Niakhar HDSS, which is the oldest HDSS in Senegal (created in 1962) and one of the oldest in Western Africa, gathers regular data for the population covered, including demographic and health data. The Niakhar area itself is located 135 km East of Dakar and covers 203 km2 with a population of 50 355 inhabitants (January 2018 census). More specifically, it is located in the 'department' (an administrative area) of Fatick (there are 45 departments in Senegal) which covers three different healthcare districts (including the Niakhar healthcare district). Most of the population (96.4%) living in this area belongs to the Serere ethnic group. The main economic activity is agriculture with food cultivation (millet) and a cash crop (peanuts), in addition to small-scale cattle breeding.

Representativeness of Niakhar area with respect to COVID-19

As the Niakhar area has been a site for research for several years, especially for infectology and epidemiology of infectious diseases, including malaria, meningitis and hepatitis [20], the question arises as to how much the people living in the area are still truly representative of other Senegalese rural populations, especially regarding their knowledge of diseases that have long been studied there. However, given that COVID-19 is a new disease, we hypothesized that the Niakhar healthcare district would likely be comparable with other such districts in the country with a similar population density, age distribution and poverty index [21].

To assess this hypothesis, we performed a multivariable Poisson regression on the numbers of confirmed COVID-19 cases at the district level (Senegalese Minister of Health: http://www.sante.gouv.sn/Pr%2525C3%2525A9sentation/coronavirus-informations-officielles-et-quotidiennes-du-msas). While standardized residuals represent variations in the data that cannot be explained by the model, residual plots enabled us to identify outliers (see

Appendix 1). As a result, the Niakhar healthcare district could not be considered an outlier in terms of the number of declared cases of COVID-19 (standardized residuals= -0.53). Furthermore, at the time the study began, the prevalence of COVID-19 in the department of Fatick was comparable with that in other Senegalese departments with similar population densities (Figure 1).

Study design and procedure

Study participants were randomly selected using a two-stage stratified sampling design. All 30 villages in the Niakhar area were previously identified as rural (n=27) or semi-urban villages (n=3), depending on their infrastructure and equipment [20]. The participating villages selected in the first stage (n=12) of the present study comprised the three semi-urban villages and a simple random sample of nine rural villages. In the second stage of sampling, 600 households from all the 1756 households in these 12 participating villages were selected, again using simple random sampling.

This figure of 600 households was not arrived at from a calculation to determine the optimal number of households to be included, but was the result of a trade-off between the budgetary and logistic constraints of surveying up to three members in each household (i.e., a potential maximum of 1800 individuals) in three successive waves of data collection (the first wave started on July 27, 2020). An attrition rate of 15% was anticipated, resulting in an estimated 500 surveyed households by the end of the third wave (scheduled for mid-2021). In the planned analyses, potential selection bias will be assessed and reduced by using sampling weights computed as reciprocals of the probabilities of selection of each household. Final weights will be calculated using an iterative process (ranking ratio estimation) involving sociodemographic data collected regularly by the Niakhar HDSS.

Longitudinal phone survey in multi-adult households

Data collection is expected to last at least until end-2021, unless the spread of COVID-19 at that time justifies extending data collection. The study is funded until March 2022 (Inserm-ANRS, grant number ECTZ147735). Given that any application for funding for possible subsequent waves of data collection needs to occur well in advance, the decision about this issue has been postponed until mid-2021. For each wave, data are collected by surveying participants over their mobile phone. Participants' telephone numbers were recorded by community health workers (Badjanou Gokh) prior to the first survey. Phone interviews are conducted using Computer assisted telephone interviews (CATI) software. To achieve higher response rates, 15 calls (1 initial and 14 callbacks) are planned at different times of the day and on different days before discarding a non-responsive telephone number.

The COVID-19 sanitary context makes the implementation of the survey at each wave and the collection of data more complex than usual. Although this study protocol was the result of a close collaboration between Senegalese and French researchers, travelling restrictions prevented some of the latter from being physically present for the training of the CATI interviewers, for data collection preparatory meetings, for field meetings and for feedback sessions. Accordingly, the Senegalese research team is in charge of coordinating data collection and organizing CATI schedules, although regular internet-based meetings with the French research team ensure joint decision-making.

The lack of the possibility to train interviewers up on CATI in Senegal because of the international travel restrictions meant that only experienced bilingual (French and Serere) interviewers already present in Senegal could administer the CATI surveys. As Serere is an oral only language, practice sessions to administer the questionnaires were performed by the interviewers in order to reach a consensus on the specific words to be used when performing the interviews in Serere. Consequently, the relevance and ease of understanding of each questionnaire item was assessed before the interviews took place in Serere. A total of seven

interviewers collected data in the first wave. They were supervised by another senior interviewer whose specific role, in addition to supervision, was to share feedback on data collection with the two (Senegalese and French) research teams. In many aspects, the data collection process greatly benefits from long-term existing experience the interviewers have in administering research-based surveys.

Data collection

The first data collection wave began on July 27, 2020 and interviewing lasted six weeks. Furthermore, parallel data collection about local preventive strategies implemented in villages since July 2020 is about to be completed. Figure 2 summarizes the major steps of data collection and presents the study sample to be followed in our longitudinal design.

For the first wave, phone interviews took place with three different persons in each participating household as follows: the head of the household, his wife (for those who had more than one wife, the wife responsible for managing the household), and a relative from a city who had decided to come and live momentarily in the rural household because of the risk of COVID-19 and the fear of associated economic consequences. Specifically, heads of households had to decide which wife and which temporary visiting relative would be surveyed, and to provide their names and mobile phone numbers during the first phone interview. When interviewing heads of households, their designated wives and visiting relatives on their mobile phones, the interviewers first presented the study and informed them about its longitudinal design, obtained their consent to participate, and then interviewed them. As a way of thanking households for their participation, the community health workers provided them with a personal protection kit including hydroalcoholic gel and a face mask at the end of the first wave of data collection.

As regards relatives temporarily living in the household, those individuals interviewed in the first wave of data collection will be surveyed in successive waves. New visiting relatives identified between two different waves of data collection will also be included in the study

design by interviewing them in all data collection waves subsequent to their inclusion. As we wanted to ensure that our study design and protocol were feasible given current national and international restrictive measures due to COVID-19, we chose to wait until the first wave of data collection neared completion before presenting the study design here.

Questionnaires

Three questionnaires were constructed (one each) for the heads of the selected households, their designated wives in charge of managing the household, and their designated relative temporarily living with them. In addition to sharing identical sets of questions on several topics (risks perceptions, attitudes to curfew, attitudes to vaccines, beliefs about COVID-19 infection), the three separate survey questionnaires also contain other questions on other topics (economic impact, local preventive strategies). These questions differ between questionnaires. For example, with regard to local preventive strategies, household heads are asked about the local COVID-19 prevention strategies implemented in their village, while their wives are asked about anti-COVID-19 private prevention measures in the household, and newcomers about personal preventive measures in the household and possibly asked to implement when they first arrived (e.g., quarantine). While this study involves collecting data at different moments in time, the same topics and associated sets of questions presented below will be used throughout the study in order to evaluate evolutions.

Measures

Sociodemographic characteristics

As the study's framework provides for collected data to be matched with existing data in the Niakhar HDSS [20] database, only individual sociodemographic data needs to be collected during the telephone interviews, including marital status, educational level, number of children, the latter's ages and type of schooling (public or religious school), as well as the respondent's level of access to the internet. With regard to employment at the time of the survey, participants are

invited to answer open-ended questions whose responses are consequently recoded into nine different standard categories (Farmers, Craftsmen, Workers, Employees, Intermediate professions, Managers and higher intellectual professions, Students, Pensioners, Not engaged in active employment).

Risk perceptions

Collecting data on the perceived risks of COVID-19 is of crucial importance in understanding individuals' related attitudes and behaviours. In line with previous survey studies, the assessment of risk perceptions in the present study involves collecting information on introspective judgements [22 23]. After asking surveyed individuals whether they have heard about COVID-19 pandemic before being surveyed, an assessment is performed using a scale from 0 (not at all) to 10 (extremely) to measure how worried they are about getting the disease, and how contagious and severe they perceive it to be [24]. In addition, perceived mortality of COVID-19 is assessed based on a question about what the participant believes with be the number of deaths out of every 100 people with COVID-19. To provide greater insight into participants' COVID-19 risk perceptions, all the questions mentioned above are asked again for malaria, a well-known and common viral infection in Sub-Saharan African countries which also starts with flu-like symptoms.

Finally, respondents are invited to self-assess their perceived absolute and relative risks of COVID-19 infection [25] by ranking their level of self-perceived risk (four-point Likert scale from "very low" (=1) to "very high" (=4)) and by positioning their own perceived risks with respect to others of the same age and gender (five-point Likert scale from "much lower" (=1) to "much higher" (=5)). The questionnaires also include items measuring the extent of the respondent's fear that the visiting relative is unknowingly infected with COVID-19 and asymptomatic.

Other questionnaire items assessing risk perceptions include asking heads of households (/their surveyed wife) to adopt their spouse's perspective and to report the extent to which they believe their spouse is worried about COVID-19. Similarly, both individuals are asked to report the extent to which they believe their spouse perceives that she (/he) is at risk of COVID-19 and how she (/he) places this level of perceived risk in relation to that of other wives (/husbands) of the same age and gender. Accounting for the potential impact of respondents' current health state on their perceived risks, respondents are asked how they feel in terms of their state of health at the time of the survey (eleven-point Likert scale from "very poor" (=0) to "very well" (=10)).

Attitudes

Given the unprecedented context of COVID-19 pandemic, assessing individual attitudes to the disease necessitates using ad-hoc questions. Considering the restrictive measures adopted in Senegal from March 2020 onward, attitudes to curfews in general, whether implemented in rural or urban areas are assessed in the present study. With regard to health issues, surveyed individuals are invited to report how worried they are about buying counterfeit drugs, their attitudes to vaccination in general and to (unavailable at the time of the first wave of data collection) the anti-COVID-19 vaccine. In addition, participants are asked whether they would consider having anti-COVID-19 vaccine for themselves and for their children if it were free of charge (four-point Likert scale from "certainly yes" (=1) to "definitely not" (=4) in all cases). Finally, individuals' agreement (agree/disagree) is assessed regarding statements circulating on the internet and reflecting rumour-related fake information on COVID-19 transmission and cure.

Preventive behaviours

It has been recently suggested that locally implemented COVID-19 preventive strategies could potentially explain, at least in part, the as yet slow spread of COVID-19 in SSA [8 9] . The present

study collected data which could shed some more light on this issue. In our ongoing longitudinal study, preventive behaviours cover individual protection measures by the study's participants and collective prevention strategies implemented by administrative, religious or medical authorities in the area covered by the survey. With regard to the former, the study's questionnaires include items measuring how much the COVID-19 pandemic had led to changes in everyday life in the participating households, in changes in journeys to and from the local market or the closest city, and in changes in the way relatives from cities are welcomed, especially in terms of possible quarantine upon their arrival. In order to compare participant recall with objective data on locally implemented collective preventive strategies, from the outset of the study, specific data has been gathered to document the dates, duration and nature of all collective actions implemented by local authorities in the study's 12 study villages. These data will continue to be collected over the whole data collection period.

Economic impact on everyday life

One primary concern about the spread of COVID-19 in Sub-Saharan African countries is a possible resulting economic shock [12 17-19]. Supposing that urban areas would most likely be the first to be highly impacted by the COVID-19 pandemic, rural areas could indeed be in position to soften, at least in part, the economic consequences of COVID-19 pandemic. In this respect, our ongoing study assesses the pandemic's impact with questions about the main sociodemographic characteristics of relatives from cities currently living in the household because of COVID-19, and questions about the perceived burden on the rural household (e.g., having to provide food for more people) as well as the benefits (e.g., larger labour force for agricultural work) associated with their arrival in the household. In addition, the study examines possible assistance from administrative authorities or neighbours locally implemented, as well as possible assistance given to neighbours because of the COVID-19 pandemic. Furthermore, possible COVID-19 pandemic-related financial difficulties are explored concerning everyday

purchases and sales of crops in local markets. Finally, relatives from cities temporarily living in the household because of their fear of COVID-19 and induced economic losses are asked to self-assess the extent to which the pandemic has impacted their own life as well as everyday life in the household. In terms of financial support provided to the household, heads of households are asked about those relatives currently living with them and whether these relatives provided support before they arrived to temporarily stay. Similarly, they are asked about the extent to which relatives who left the household to go back to cities currently financially support the household.

Ethics and dissemination

COVID-19 is currently (as of February 2021) spreading relatively slowly in SSA although a sharp increase in its spread cannot be excluded. Given the current context, the present ongoing longitudinal study protocol aims to provide data on the attitudinal, behavioural and economic consequences of the disease in a rural area in Senegal at a time when very few data are available. Since rural areas may likely be seen as safe refuges, our study collects data from heads of rural households, their wives (in charge of managing the household) and relatives who leave cities to temporarily live in these households, specifically because of the COVID-19 pandemic. The study protocol was approved by the Senegalese National Ethical Committee for Research in Health (131/MSAS/CNERS/Sec) and received authorisation from the Senegalese Ministry of Health (619/MSAS/DPRS/DR) and the French Commission on Information Technology and Liberties (CNIL 2220771).

As regards the COVID-19 preventive strategies implemented at the village and household levels, it is possible that the experience gained from the Ebola and HIV/AIDS pandemics have helped in managing the risk of COVID-19 [10]. In the present study, we hypothesize that accurate recall of local prevention strategies currently in place is higher in villages with more prevention strategies implemented. We also hypothesized that implementing preventive strategies at the

village level might have a positive impact on adopting strategies at the household level. Exploring the relationship between collective and individual preventive behaviours could be very useful to evaluate the impact of locally implemented prevention measures on slowing the spread of COVID-19. Using prospectively collected data, the dynamics of this relationship can therefore be analysed over time with respect to attitudes and risk perceptions.

To conclude, this ongoing study benefits greatly from close previously established research relationships between the researchers and the interviewers involved. Now that data collection for the first wave is nearing completion, and that data collection has been proven to be feasible despite COVID-19 restrictions, we believe that the primary benefit of our longitudinal design will be to provide data which could help to analyse evolutions in risk perceptions, attitudes, and preventive behaviours of the disease, as well as its economic impact on everyday lives.

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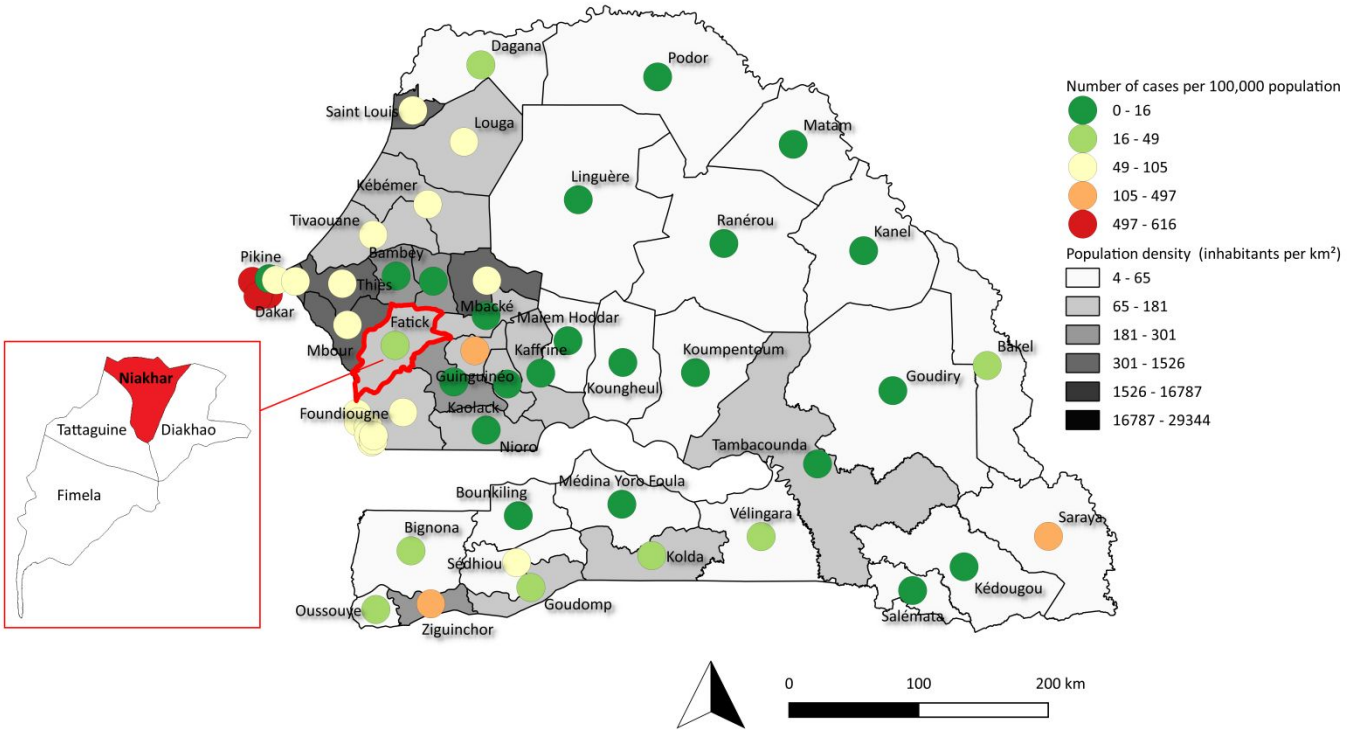
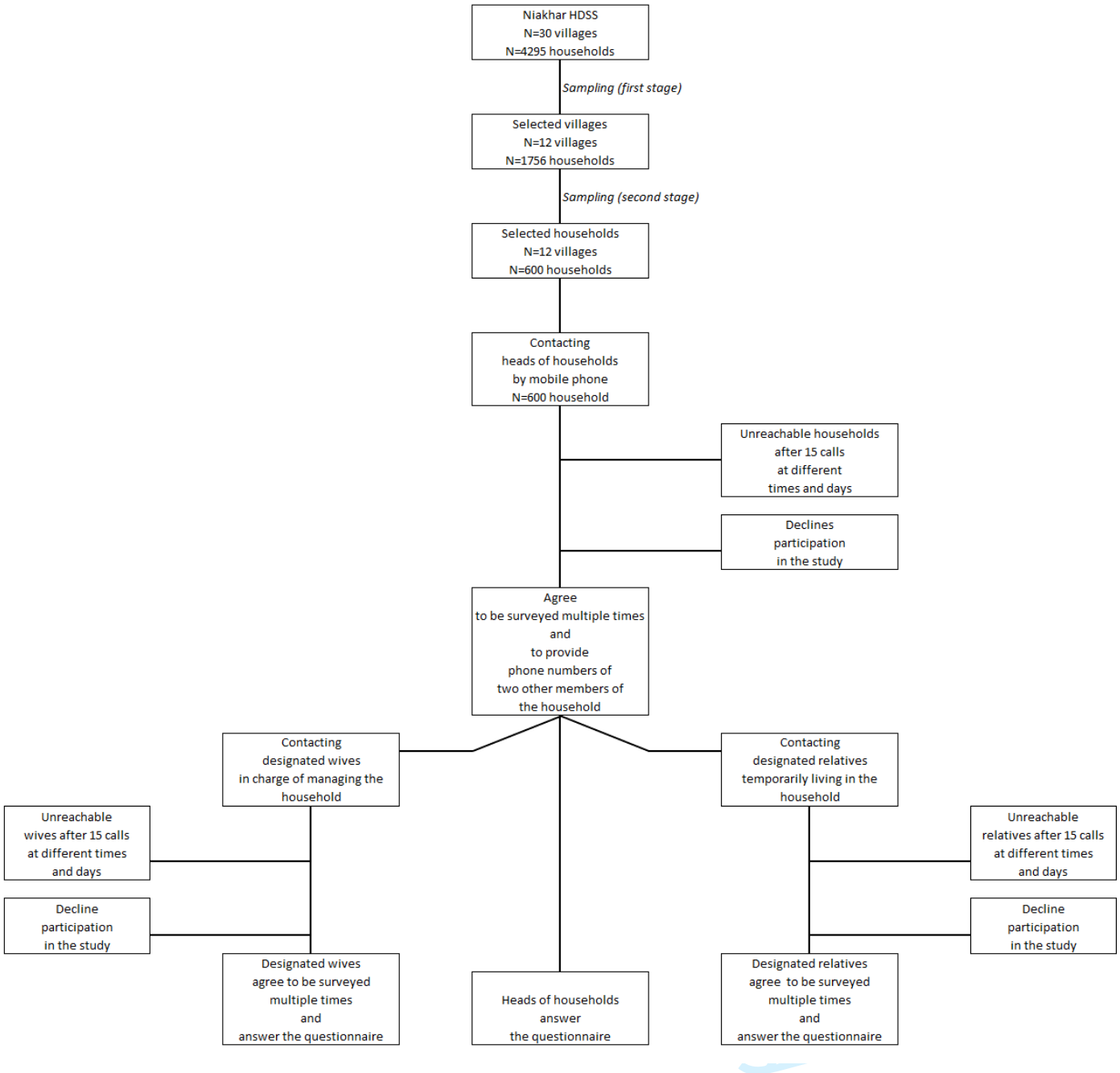
Figure 1. Number of COVID-19 confirmed cases at the department level (n=45)



Source: http://www.sante.gouv.sn/Pr%2525C3%2525A9sentation/coronavirus-informations-officielles-et-quotidiennes-du-msas; data accessed on November 26, 2020.

Note: The administrative 'department' of Fatick covers different healthcare districts, including the Niakhar healthcare district).

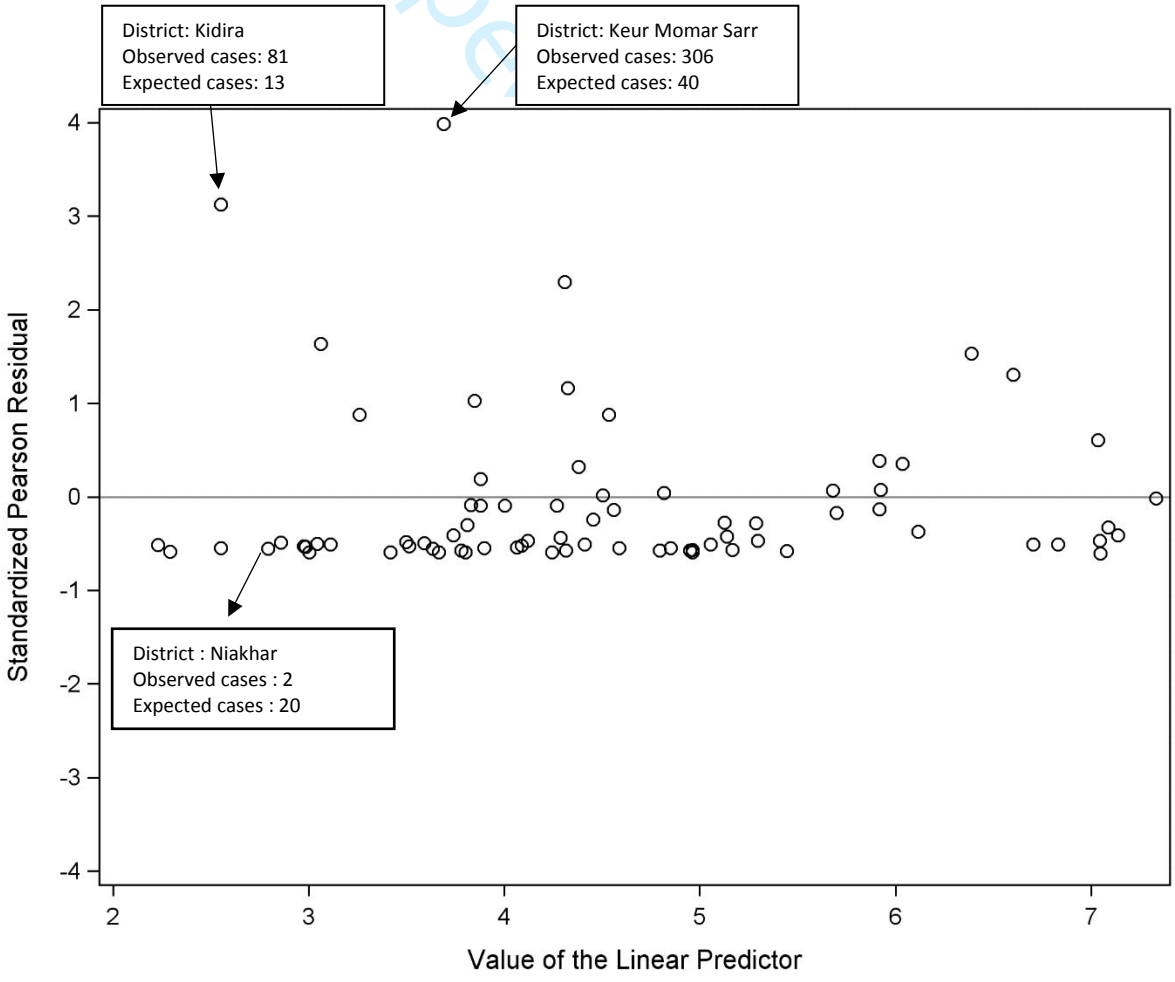
Figure 2. Study flow diagram



Note: Mobile phone numbers provided by community health workers (Badjanou Gokh).

Appendix 1. Multivariable Poisson regression at the district level and residual dependence plot (n=79).

- Outcome: number of confirmed COVID-19 cases at the healthcare district level (data accessed on November 26, 2020: http://www.sante.gouv.sn/Pr%2525C3%2525A9sentation/coronavirus-informations-officielles-et-quotidiennes-du-msas)
- Offset: total population of the healthcare district
- Covariates:
  - Urbanization rates (%)
  - Poverty index (%)
  - Rates of people aged 50 and older (%)



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COVID-19-related attitudes, risk perceptions, preventive behaviours and economic impact in Sub-Saharan African countries: Implementing a longitudinal phone-based survey protocol in rural Senegalese households

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COVID-19-related attitudes, risk perceptions, preventive behaviours and economic impact in Sub-Saharan African countries: Implementing a longitudinal phone-based survey protocol in rural Senegalese households

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Abstract

Introduction. Rural areas are considered safe havens against the increased spread of COVID-19 and associated restrictive measures, especially in contexts where public authorities are not in a position to systematically and substantially ease COVID-19-induced economic shocks. In the current Sub-Saharan Africa context, still marked by uncertainty surrounding the spread of COVID-19, we present the protocol of an ongoing longitudinal study aimed at investigating COVID-19-related attitudes, risks perceptions, preventive behaviours, and economic impact in rural areas in Senegal.

Methods and analysis. A prospective randomized longitudinal study of 600 households located in three semi-urban villages and nine randomly selected rural villages in the Niakhar area (located 135 km East of Dakar). Three ad hoc phone surveys are administered to 600 heads of households, their housewives in charge of managing the household and a relative living temporarily in the household, respectively. In addition to sharing identical sets of questions on several topics (risks perceptions, attitudes to curfew, attitudes to vaccines, beliefs about COVID-19 infection), the three separate survey questionnaires also include other topics (economic impact, local preventive strategies) whose related questions differ between questionnaires. As analysing evolutions is the study's primary focus, data on all the topics covered will be collected in three waves unless the spread of COVID-19 by mid-2021 justifies extending data collection. The present article presents the study protocol and details about the implementation of the first wave of data collection which started in July 2020. The decision to wait before presenting the protocol was based on the unprecedented context the COVID-19 pandemic.

Ethics and dissemination. The survey's protocol was approved by the Senegalese National Ethical Committee for Research in Health (131/MSAS/CNERS/Sec) and received authorisation from both the Senegalese Ministry of Health (619/MSAS/DPRS/DR) and the French Commission on Information Technology and Liberties (CNIL 2220771).

Keywords: COVID-19; attitudes; risk perceptions; preventive behaviours; economic impact; Sub-Saharan African ; longitudinal ; survey protocol.

Article Summary

- The current Sub-Saharan African (SSA) context is still marked by uncertainty surrounding the spread of the COVID-19 pandemic and the scarce availability of individual data.
- This ongoing longitudinal study aims to investigate COVID-19-related attitudes, risk perceptions, preventive behaviours, and the economic impact in Senegalese rural areas.
- Three waves of data collection are planned (the first wave started in July 2020). However, this number may increase if the spread of COVID-19 by mid-2021 justifies extending data collection over a longer period of time.
- In the unprecedented context of the COVID-19 pandemic, the generalizability of the study's results needs to be explored.

Introduction

After spreading from China to other Asian countries in late 2019, COVID-19 appeared in Western Europe in January 2020 where it rapidly led to overwhelmed hospitals and an exponential increase in deaths (COVID-19 data repository of the Johns Hopkins Center for Systems Science and Engineering, Baltimore, MD, USA). While most European countries adopted lockdown measures only several weeks after the first COVID-19 cases were reported (e.g., a 6-week delay in Italy and a 7-week delay in France), many Sub-Saharan African (SSA) countries decided to act sooner before the outbreak spread.

Spread of COVID-19 still limited in SSA, but uncertainties remain about how the pandemic will evolve

The COVID-19 pandemic spread to SSA in February/March 2020. Senegal implemented restrictive measures (curfew, closing schools, banning of public gatherings, and cancellation of major national and religious celebrations) three weeks after the first COVID-19 cases had been reported in the country, whereas in Nigeria, a street publicity awareness campaign on COVID-19 preventive measures was launched in the capital Lagos, two days after the first cases had been identified. Concerns were expressed, especially in Senegal and Burkina Faso, with respect to the sharp increases in both these countries in the number of COVID-19 cases soon after the first cases were confirmed there [1].

The announcements of restrictive measures led to mass movements of people from big cities to rural villages, both caused by fear of COVID-19 and the impact it could have in terms of economic losses. However, as time went by, it increasingly appeared that the outbreak was much less devastating than initially anticipated [2], and the mass movements of people mentioned above were gradually reversed. Apart from the early adoption of restrictive measures, the most widely proposed hypothesis for the much lower spread of COVID-19 in SSA than in most other world regions is that different demographic characteristics (younger average ages, lower

population densities, and lower urbanization rates) [3-6], and a higher immune response in relation with more highly solicited immune systems [7] hamper the spread. Recently, another strong hypothesis has been put forward, suggesting that the extensive implementation of local preventive strategies may have played a crucial role in substantially lowering the spread of the disease [8 9].

Nevertheless, the possibility cannot be ruled out that the COVID-19 pandemic could spread throughout SSA countries [2 10], as it did (and still continues to do) in North African and European countries (i.e., all the countries north of SSA (see the Johns Hopkins Coronavirus world map: https://www.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6)). Such a development is of great concern because of the associated risk of overwhelming already fragile healthcare systems [1 11] in a context where the pandemic has brought about a worldwide economic crisis whose consequences might be severe for SSA [12].

Few COVID-19 data are available from an individual perspective

Most published analyses to date on the COVID-19 pandemic in SSA countries have not been supported by collected data, except for data on the numbers of confirmed cases and deaths. One study conducted in seven English-speaking countries (Ghana, Kenya, South Africa, Tanzania, Uganda and the English-speaking regions of Cameroon) assessed the extent to which these populations were exposed to COVID-19-related misinformation. Using an online survey (April-May 2020), it showed that false beliefs were shared by between 15 and 30% of the respondents, depending on the false statement assessed, with a higher likelihood of false beliefs in older and unemployed respondents [13]. In addition, three studies assessed COVID-19-related knowledge, attitudes and practices in Nigeria, in Ghana/South Africa, and in the Republic of Chad (April-May 2020, March-April 2020, and May-August 2020, respectively) using online surveys. All three showed that study participants were very familiar with personal preventive measures against COVID-19 and the disease's main symptoms [14-16]. However, the Nigerian study also

showed that approximately half of the surveyed individuals believed that only elderly people with comorbidities were likely to develop severe COVID-19, and 85% were unaware of the risk of being infected by asymptomatic individuals. Consistent with this finding and given that the participants in the Nigerian study were relatively young (69% aged between 21 and 30 years old), only 22.5% of surveyed individuals reported wearing a face mask when they went out [14]. More generally, the study conducted in the Republic of Chad showed significantly lower uptake of preventive practices in individuals with lower educational levels and precarious employment [16]. Furthermore, other published studies emphasized individuals' fear of serious COVID-19-related economic repercussions (notably people living in urban Ghanaian neighbourhoods with their own business in the informal economy [17] and farmers working in the Ethiopian vegetable sector [18]).

Study Objectives

The present ongoing study was designed in a setting marked by both uncertainty about the spread of COVID-19 in Sub-Saharan Africa and the scarce availability of individual data. Given the continued risk that the spread of COVID-19 will increase substantially in SSA, the memory of mass movements of people from big cities in March 2020 highlights the role that rural areas could play if such an event were to reoccur. This role could be major in a context where public authorities may not be in a position to systematically and substantially ease the economic shock induced by the pandemic[19-21]. While this role could evolve depending on rural populations' attitudes to such mass movements and their perceptions of the associated risks, we hypothesized that evaluating the evolution of individuals' perceived impact of COVID-19 pandemic could provide invaluable information about the potential pressure of the COVID-19 pandemic on these rural areas.

Accordingly, the present ongoing longitudinal study was designed to investigate the attitudes, risk perceptions and preventive behaviours of people living in a Senegalese rural area in terms

of COVID-19, as well as their perceptions of the related economic impact. As rural areas often have limited access to the internet and given the increased risk of COVID-19 transmission during close contact interactions, the only available option was to conduct a phone-based survey.

Methods and analysis

Population

This study includes adults (18 years old and over) living in all 30 villages of the rural Niakhar area covered by the Niakhar Health and Demographic Surveillance System (HDSS) [22]. The Niakhar HDSS, which is the oldest HDSS in Senegal (created in 1962) and one of the oldest in Western Africa, gathers regular data for the population covered, including demographic and health data. The Niakhar area itself is located 135 km East of Dakar and covers 203 km2 with a population of 50 355 inhabitants (January 2018 census). More specifically, it is located in the 'department' (an administrative area) of Fatick (there are 45 departments in Senegal) which covers three different healthcare districts (including the Niakhar healthcare district). Most of the population (96.4%) living in this area belongs to the Serere ethnic group. The main economic activity is agriculture with food cultivation (millet) and a cash crop (peanuts), in addition to small-scale cattle breeding.

Representativeness of Niakhar area with respect to COVID-19

As the Niakhar area has been a site for research for several years, especially for infectology and epidemiology of infectious diseases, including malaria, meningitis and hepatitis [22], the question arises as to how much the people living in the area are still truly representative of other Senegalese rural populations, especially regarding their knowledge of diseases that have long been studied there. However, given that COVID-19 is a new disease, we hypothesized that the Niakhar healthcare district would likely be comparable with other such districts in the country with a similar population density, age distribution and poverty index [23].

To assess this hypothesis, we performed a multivariable Poisson regression on the numbers of confirmed COVID-19 cases at the district level (Senegalese Minister of Health: http://www.sante.gouv.sn/Pr%2525C3%2525A9sentation/coronavirus-informations-officielles-et-quotidiennes-du-msas). While standardized residuals represent variations in the data that cannot be explained by the model, residual plots enabled us to identify outliers (Figure 2). As a result, the Niakhar healthcare district could not be considered an outlier in terms of the number of declared cases of COVID-19 (standardized residuals= -0.53). Furthermore, at the time the study began, the prevalence of COVID-19 in the department of Fatick was comparable with that in other Senegalese departments with similar population densities (Figure 1).

Study design and procedure

Study participants were randomly selected using a two-stage stratified sampling design. All 30 villages in the Niakhar area were previously identified as rural (n=27) or semi-urban villages (n=3), depending on their infrastructure and equipment [22]. More specifically, unlike rural villages, the three semi-urbanised villages have health facilities, a weekly market, daily buses to the Senegal's capital Dakar, and several shops. The participating villages selected in the first stage (n=12) of the present study comprised the three semi-urban villages and a simple random sample of nine rural villages. In the second stage of sampling, 600 households from all the 1756 households in these 12 participating villages were selected, again using simple random sampling.

This figure of 600 households was not arrived at from a calculation to determine the optimal number of households to be included, but was the result of a trade-off between the budgetary and logistic constraints of surveying up to three members in each household (i.e., a potential maximum of 1800 individuals) in three successive waves of data collection (the first wave started on July 27, 2020). Taking into account the design of previous surveys conducted in the same area [24], we assumed a response rate of 90% for the first wave of data collection and an

attrition rate of 15% over the data collection period, resulting in an estimated 500 surveyed households by the end of the third wave (scheduled for mid-2021). In the planned analyses, potential selection bias will be assessed and reduced by using sampling weights computed as reciprocals of the probabilities of selection of each household. Final weights will be calculated using an iterative process (ranking ratio estimation) involving sociodemographic data collected regularly by the Niakhar HDSS.

Longitudinal phone survey in multi-adult households

Data collection is expected to last at least until end-2021, unless the spread of COVID-19 at that time justifies extending data collection. The study started in March 2020 and it is funded until March 2022 (Inserm-ANRS, grant number ECTZ147735). Given that any application for funding for possible subsequent waves of data collection needs to occur well in advance, the decision about this issue has been postponed until mid-2021. For each wave, data are collected by surveying participants over their mobile phone. Participants' telephone numbers were recorded by community health workers (locally called *Badjanou Gokh*) prior to the first survey. Phone interviews are conducted using Computer assisted telephone interviews (CATI) software. To achieve higher response rates, 15 calls (1 initial and 14 callbacks) are planned during the several weeks of data collection, at different times of the day and on different days, before discarding a non-responsive telephone number. While 12 to 15 calls and 6 to 10 calls are generally recommended for landline and mobile CATI surveys respectively [25], we opted for a maximum of 15 calls given the frequency of poor telephone connections in the area.

The COVID-19 sanitary context makes the implementation of the survey at each wave and the collection of data more complex than usual. Although this study protocol was the result of a close collaboration between Senegalese and French researchers, travelling restrictions prevented some of the latter from being physically present for the training of the CATI interviewers, for data collection preparatory meetings, for field meetings and for feedback

sessions. Accordingly, the Senegalese research team is in charge of coordinating data collection and organizing CATI schedules, although regular internet-based meetings with the French research team ensure joint decision-making.

The lack of the possibility to train interviewers up on CATI in Senegal because of the international travel restrictions meant that only experienced bilingual (French and Serere) interviewers already present in Senegal could administer the CATI surveys. As Serere is an oral only language, practice sessions to administer the questionnaires were performed by the interviewers in order to reach a consensus on the specific words to be used when performing the interviews in Serere. Consequently, the relevance and ease of understanding of each questionnaire item was assessed before the interviews took place in Serere. A total of seven interviewers collected data in the first wave. They were supervised by another senior interviewer whose specific role, in addition to supervision, was to share feedback on data collection with the two (Senegalese and French) research teams. In many aspects, the data collection process greatly benefits from long-term existing experience the interviewers have in administering research-based surveys.

Data collection

The first data collection wave began on July 27, 2020 and interviewing lasted six weeks. Furthermore, parallel data collection about local preventive strategies implemented in villages since July 2020 is about to be completed. Figure 3 summarizes the major steps of data collection and presents the study sample to be followed in our longitudinal design.

For the first wave, phone interviews took place with three different persons in each participating household as follows: the head of the household, his wife (for those who had more than one wife, the wife responsible for managing the household), and a relative from a city who had decided to come and live momentarily in the rural household because of the risk of COVID-19 and the fear of associated economic consequences. Specifically, heads of households had to

decide which wife and which temporary visiting relative would be surveyed, and to provide their names and mobile phone numbers during the first phone interview. When interviewing heads of households, their designated wives and visiting relatives on their mobile phones, the interviewers first presented the study and informed them about its longitudinal design, obtained their consent to participate, and then interviewed them. As a way of thanking households for their participation, the community health workers provided them with a personal protection kit including hydroalcoholic gel and a face mask at the end of the first wave of data collection.

As regards relatives temporarily living in the household, those individuals interviewed in the first wave of data collection will be surveyed in successive waves. New visiting relatives identified between two different waves of data collection will also be included in the study design by interviewing them in all data collection waves subsequent to their inclusion. As we wanted to ensure that our study design and protocol were feasible given current national and international restrictive measures due to COVID-19, we chose to wait until the first wave of data collection neared completion before presenting the study design here.

Questionnaires

Three questionnaires were constructed (one each) for the heads of the selected households, their designated wives in charge of managing the household, and their designated relative temporarily living with them (Supplementary file 1, 2 and 3, respectively). In addition to sharing identical sets of questions on several topics (risks perceptions, attitudes to curfew, attitudes to vaccines, beliefs about COVID-19 infection), the three separate survey questionnaires also contain other questions on other topics (economic impact, local preventive strategies). These questions differ between questionnaires. For example, with regard to local preventive strategies, household heads are asked about the local COVID-19 prevention strategies implemented in their village, while their wives are asked about anti-COVID-19 private prevention measures in the household, and newcomers about personal preventive

measures in the household and possibly asked to implement when they first arrived (e.g., quarantine). While this study involves collecting data at different moments in time, the same topics and associated sets of questions presented below will be used throughout the study in order to evaluate evolutions.

Measures

Sociodemographic characteristics

As the study's framework provides for collected data to be matched with existing data in the Niakhar HDSS [22] database, only individual sociodemographic data needs to be collected during the telephone interviews, including marital status, educational level, number of children, the latter's ages and type of schooling (public or religious school), as well as the respondent's level of access to the internet. With regard to employment at the time of the survey, participants are invited to answer open-ended questions whose responses are consequently recoded into nine different standard categories (Farmers, Craftsmen, Workers, Employees, Intermediate professions, Managers and higher intellectual professions, Students, Pensioners, Not engaged in active employment). While these categories are consistent with those adopted in some Northern countries, they will be grouped into broader categories if necessary (such as Employed, Seeking employment, and Other, inactive (Students, Pensioners)), and then considered in relation to educational level [26].

Risk perceptions

Collecting data on the perceived risks of COVID-19 is of crucial importance in understanding individuals' related attitudes and behaviours. In line with previous survey studies, the assessment of risk perceptions in the present study involves collecting information on introspective judgements [27 28]. After asking surveyed individuals whether they have heard about COVID-19 pandemic before being surveyed, an assessment is performed using a scale from 0 (not at all) to 10 (extremely) to measure how worried they are about getting the disease, and

how contagious and severe they perceive it to be [29]. In addition, perceived mortality of COVID-19 is assessed based on a question about what the participant believes with be the number of deaths out of every 100 people with COVID-19. To provide greater insight into participants' COVID-19 risk perceptions, all the questions mentioned above are asked again for malaria, a well-known and common viral infection in Sub-Saharan African countries which also starts with flu-like symptoms.

Finally, respondents are invited to self-assess their perceived absolute and relative risks of COVID-19 infection [30] by ranking their level of self-perceived risk (four-point Likert-type scale from "very low" (=1) to "very high" (=4)) and by positioning their own perceived risks with respect to others of the same age and gender (five-point Likert-type scale from "much lower" (=1) to "much higher" (=5)). The questionnaires also include items measuring the extent of the respondent's fear that the visiting relative is unknowingly infected with COVID-19 and asymptomatic.

Other questionnaire items assessing risk perceptions include asking heads of households (/their surveyed wife) to adopt their spouse's perspective and to report the extent to which they believe their spouse is worried about COVID-19. Similarly, both individuals are asked to report the extent to which they believe their spouse perceives that she (/he) is at risk of COVID-19 and how she (/he) places this level of perceived risk in relation to that of other wives (/husbands) of the same age and gender. Accounting for the potential impact of respondents' current health state on their perceived risks, respondents are asked how they feel in terms of their state of health at the time of the survey (eleven-point Likert-type scale from "very poor" (=0) to "very well" (=10)).

Attitudes

Given the unprecedented context of COVID-19 pandemic, assessing individual attitudes to the disease necessitates using ad-hoc questions. Considering the restrictive measures adopted in Senegal from March 2020 onward, attitudes to curfews in general, whether implemented in rural or urban areas are assessed in the present study. With regard to health issues, surveyed individuals are invited to report how worried they are about buying counterfeit drugs, their attitudes to vaccination in general and to (unavailable at the time of the first wave of data collection) the anti-COVID-19 vaccine. In addition, participants are asked whether they would consider having anti-COVID-19 vaccine for themselves and for their children if it were free of charge (four-point Likert-type scale from "certainly yes" (=1) to "definitely not" (=4) in all cases). Finally, individuals' agreement (agree/disagree) is assessed regarding statements circulating on the internet and reflecting rumour-related fake information on COVID-19 transmission and cure.

Preventive behaviours

It has been recently suggested that locally implemented COVID-19 preventive strategies could potentially explain, at least in part, the as yet slow spread of COVID-19 in SSA [8 9] . The present study collected data which could shed some more light on this issue. In our ongoing longitudinal study, preventive behaviours cover individual protection measures by the study's participants and collective prevention strategies implemented by administrative, religious or medical authorities in the area covered by the survey. With regard to the former, the study's questionnaires include items measuring how much the COVID-19 pandemic has led to changes in everyday life in the participating households, in changes in journeys to and from the local market or the closest city, and in changes in the way relatives from cities are welcomed, especially in terms of possible quarantine upon their arrival.

In order to compare participant recall with objective data on locally implemented collective prevention strategies, specific data has been gathered from the outset of the study to document

the dates, duration and nature of all collective actions implemented in the study's 12 study villages. To do this, the interviewers who conduct the phone surveys have also been in charge of conducting face-to-face interviews in each village, with the village chief, the healthpost nurses, the community health workers *(Badjanou Gokh)*, and representatives from both the town hall and the subprefecture, local associations involved in the fight against Covid-19 spread (e.g., former military personnel, student and youth associations), and non-governmental organizations (e.g., local branches of the Red Cross). At the regional level, interviews have also been conducted on a regular basis with representatives of the healthcare districts. The preventive measures identified mainly consist in the distribution of leaflets, antiseptic soap and face masks, as well as the installation of hand washing facilities in schools, markets, village entrances, households, churches and mosques. These data will continue to be collected over the whole data collection period.

Economic impact on everyday life

One primary concern about the spread of COVID-19 in Sub-Saharan African countries is a possible resulting economic shock [12 19-21]. Supposing that urban areas would most likely be the first to be highly impacted by the COVID-19 pandemic, rural areas could indeed be in position to soften, at least in part, the economic consequences of COVID-19 pandemic. In this respect, our ongoing study assesses the pandemic's impact with questions about the main sociodemographic characteristics of relatives from cities currently living in the household because of COVID-19, and questions about the perceived burden on the rural household (e.g., having to provide food for more people) as well as the benefits (e.g., larger labour force for agricultural work) associated with their arrival in the household. In addition, the study examines possible assistance from administrative authorities or neighbours locally implemented, as well as possible assistance given to neighbours because of the COVID-19 pandemic. Furthermore, possible COVID-19 pandemic-related financial difficulties are explored concerning everyday

purchases and sales of crops in local markets. Finally, relatives from cities temporarily living in the household because of their fear of COVID-19 and induced economic losses are asked to self-assess the extent to which the pandemic has impacted their own life as well as everyday life in the household. In terms of financial support provided to the household, heads of households are asked about those relatives currently living with them and whether these relatives provided support before they arrived to temporarily stay. Similarly, they are asked about the extent to which relatives who left the household to go back to cities currently financially support the household.

Main relationships to be tested

In this unprecedented COVID-19 pandemic sanitary context, while the present study serves a descriptive purpose, its primary aim is to assess various relationships. In line with the economic-based approach recently published in the French context of COVID-19 [31], our study should enable the calibration of individual risk perceptions to be assessed based on the consistency between perceived mortality of COVID-19 and epidemiological information available at the time of data collection. Furthermore, a greater understanding of calibration should be gained by the fact that we are taking perceived worry, severity and contagiousness of COVID-19 into account, and conducting comparisons with introspective judgements relating to malaria. In addition, taking participants' socio-demographic characteristics into account should provide greater insight into the determinants of risk perceptions. Following on from Attema et al. (2021), we will examine the calibration, heterogeneity and determinants of risk perceptions, accounting for the temporal dynamics of the COVID-19 pandemic in Senegal. Finally, by focusing on the extent to which interviewed persons (husbands, wives) assess their spouse's perceived risk of getting COVID-19, this study could also help to estimate the potential impact of discrepancies in couples' risk perceptions regarding the extent of preventive measures actually adopted in households.

As regards the COVID-19 preventive strategies implemented at the village and household levels, it is possible that experience gained from the Ebola and HIV/AIDS pandemics has helped people manage the risk of COVID-19 [10]. In the present study, we hypothesize that accurate recall of local prevention strategies currently in place is higher in villages with more prevention strategies implemented. We also hypothesize that implementing preventive strategies at the village level might have a positive impact on adopting strategies at the household level. Exploring the relationship between collective and individual preventive behaviours will therefore enable us to evaluate the impact of locally implemented preventive measures on slowing the spread of COVID-19. Using the prospectively collected data will also allow us to analyse the dynamics of this relationship over time with respect to attitudes and risk perceptions.

With regard to the economic impact of COVID-19 pandemic on everyday lives, adopting a descriptive approach will be useful given the scarce data available. In addition, accounting for the sociodemographic characteristics of both heads of households and relatives who temporarily left big cities will allow us to assess the size of any possible gradient in the economic pressure of the COVID-19 pandemic on rural areas and its evolution over time. In the unprecedented context of the COVID-19 pandemic, the generalizability of the study's results will however remain to be explored.

Patient and public involvement

No patient involved. We plan to disseminate results to the study participants and all the villagers interested in the study in participating villages at the end of the study (currently March 2022). If restrictive measures against the gathering of people are no longer in place, dissemination is planned to be held in the open air and in the presence of each village chief, healthpost representatives, and the *Badjanou Gokh*. In addition, restitution workshops are planned to be organised at the sanitary district and regional level and to involve administrative and sanitary

authorities. Lastly, the main findings from the study are planned to be complied in a document distributed at sub-national and national levels to the administrative and sanitary authorities.

Ethics and dissemination

COVID-19 is currently (as of February 2021) spreading relatively slowly in SSA although a sharp increase in its spread cannot be excluded. Given the current context, the present ongoing longitudinal study protocol aims to provide data on the attitudinal, behavioural and economic consequences of the disease in a rural area in Senegal at a time when very few data are available. Since rural areas may likely be seen as safe refuges, our study collects data from heads of rural households, their wives (in charge of managing the household) and relatives who leave cities to temporarily live in these households, specifically because of the COVID-19 pandemic. The study protocol was approved by the Senegalese National Ethical Committee for Research in Health (131/MSAS/CNERS/Sec) and received authorisation from the Senegalese Ministry of Health (619/MSAS/DPRS/DR) and the French Commission on Information Technology and Liberties (CNIL 2220771).

To conclude, this ongoing study benefits greatly from close previously established research relationships between the researchers and the interviewers involved. Now that data collection for the first wave is nearing completion, and that data collection has been proven to be feasible despite COVID-19 restrictions, we believe that the primary benefit of our longitudinal design will be to provide data which could help to analyse evolutions in risk perceptions, attitudes, and preventive behaviours of the disease, as well as its economic impact on everyday lives. In the unprecedented context of the COVID-19 pandemic, the generalizability of the study's results needs to be explored.

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Figure 1. Number of COVID-19 confirmed cases at the department level (n=45)

Source: http://www.sante.gouv.sn/Pr%2525C3%2525A9sentation/coronavirus-informations-officielles-et-quotidiennes-du-msas; data accessed on November 26, 2020.

Note: The administrative 'department' of Fatick covers several healthcare districts, including the Niakhar healthcare district).

Figure 2. Multivariable Poisson regression at the district level and residual dependence plot (n=79).

Note: Outcome: number of confirmed COVID-19 cases at the healthcare district level (data accessed on November 26, 2020: http://www.sante.gouv.sn/Pr%2525C3%2525A9sentation/coronavirus-informations-officielles-et-quotidiennes-du-msas). Offset: total population of the healthcare district. Covariates: Urbanization rates (%), Poverty index (%), and Rates of people aged 50 and older (%).

Figure 3. Study flow diagram

Note: Mobile phone numbers provided by community health workers (Badjanou Gokh). 500 surveyed households were expected to participate by the end of the third wave of data collection (scheduled for mid-2021), given a 90% response rate for the first wave and a 15% attrition rate at each subsequent wave.

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Word Count: 4633 words.

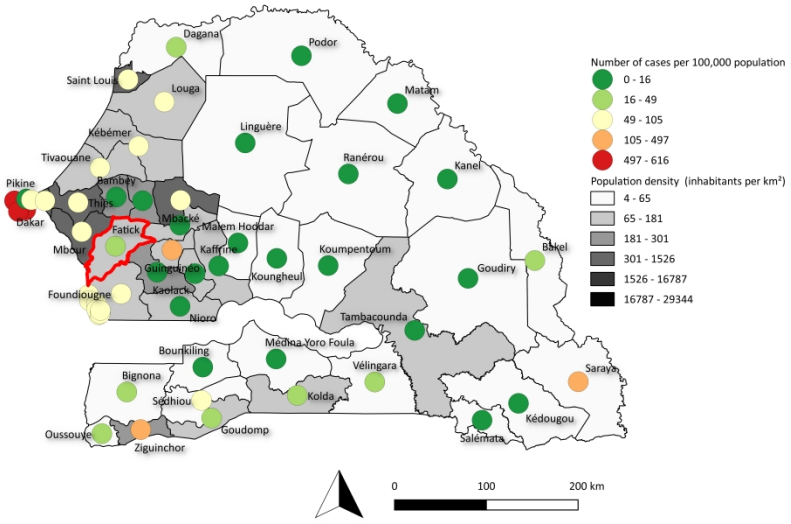

Figure 1. Number of COVID-19 confirmed cases at the department level (n=45)

593x419mm (300 x 300 DPI)

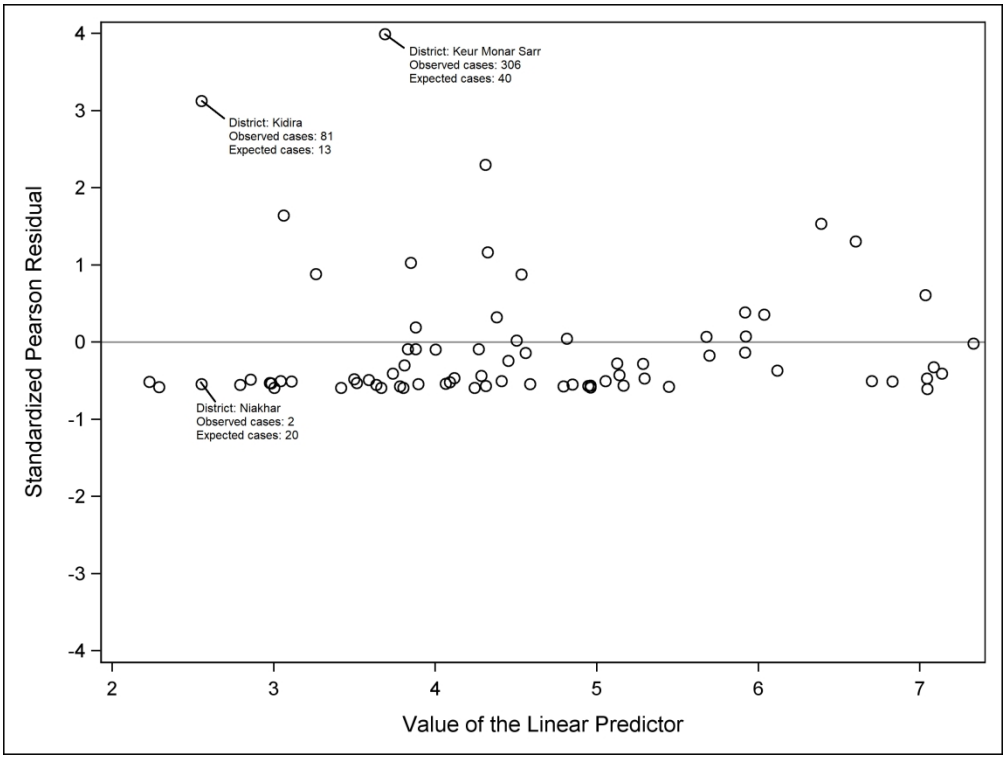

Figure 2. Multivariable Poisson regression at the district level and residual dependence plot (n=79).

225x169mm (300 x 300 DPI)

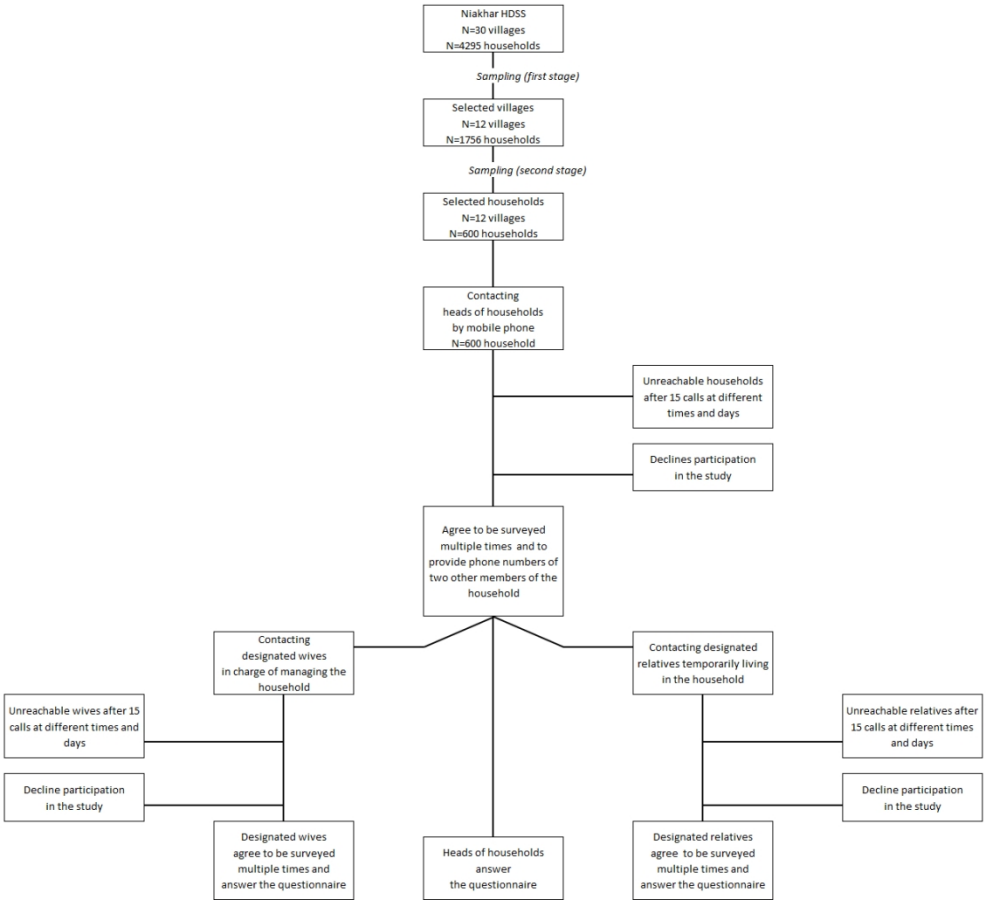

Figure 3. Study flow diagram

107x98mm (300 x 300 DPI)

Chef de famille : A PROPOS DU CORONAVIRUS…

C1. Avez-vous déjà entendu parler du Coronavirus ?

❑ 1. Oui ❑ 2. Non ➔ **Aller à la question IC1**

C2. Quand avez-vous appris qu'il y a une épidémie de Coronavirus ?

❑ 1. Quand l'épidémie était en Chine ou en Asie
❑ 2. Quand l'épidémie est arrivée en Europe
❑ 3. Quand l'épidémie est arrivée en Afrique
❑ 4. Quand l'épidémie est arrivée au Sénégal
❑ 5. Autre : _____

C3. Comment avez-vous appris qu'il y a une épidémie de Coronavirus ?

❑ 1. Par la radio ou la télévision
❑ 2. Par Internet
❑ 3. Par des membres de la famille en ville
❑ 4. Par des voisins
❑ 5. Par le chef du village
❑ 6. Par le Centre de santé
❑ 7. Par votre représentant religieux (l'imam ou le curé)
❑ 8. Par les relais communautaires
❑ 9. Par les Badienou Gokh
❑ 10. Autre : _____

C4. Avez-vous accès à Internet ?

❑ 1. Très facilement ❑ 2. Plutôt facilement ❑ 3. Plutôt difficilement ❑ 4. Très difficilement

C5. Si C4=1 à 3 : Est-ce que vous allez sur Internet pour avoir des informations sur le Coronavirus ?

❑ 1. Oui, tous les jours
❑ 2. Oui, quelques fois par semaine
❑ 3. Oui, de temps en temps
❑ 4. Non, jamais

C6. Etes-vous inquiet qu'un membre de votre cuisine attrape le coronavirus ?

❑ 1. Très inquiet ❑ 2. Plutôt inquiet ❑ 3. Plutôt pas inquiet ❑ 4. Pas inquiet du tout

C7. Avez-vous changé vos habitudes pour éviter que le Coronavirus arrive dans votre cuisine ?

❑ 1. Oui ❑ 2. Non

C8. Est-ce que le Chef du village a pris des mesures pour éviter que les habitants attrapent le Coronavirus ?

❑ 1. Oui ❑ 2. Non

↳ **Lesquelles ?** _____

C9. Est-ce que le Centre de santé a pris des mesures pour éviter que les habitants attrapent le Coronavirus ?

❑ 1. Oui ❑ 2. Non

↳ **Lesquelles ?** _____

C10. Pour vous-même, pensez-vous que votre risque d'attraper le Coronavirus est ?

- ❑ 1.Très faible
- ❑ 2.Plutôt faible
- ❑ 3.Plutôt élevé
- ❑ 4.Très élevé

C11. Par rapport aux hommes de votre âge, est-ce que vous pensez que votre risque d'attraper le Coronavirus est ?

- ❑ 1.Beaucoup moins importants que pour les autres hommes de mon âge
- ❑ 2.Moins importants que pour les autres hommes de mon âge
- ❑ 3.Ni plus ni moins importants que pour les autres hommes de mon âge
- ❑ 4.Plus importants que pour les autres hommes de mon âge
- ❑ 5.Beaucoup plus importants que pour les autres hommes de mon âge

C13A. Si vous ou un membre de votre famille attrapait le Coronavirus, où iriez-vous pour les soins ?

❑ 1. Poste de Sante ❑ 2. Guérisseur ❑ 3. Autre ; Préciser_____

C13B. Pensez-vous à un médicament pour soigner le coronavirus ?

❑ 1. Oui ❑ 2. Non

C13C. Si oui, lequel ? _____.

C14. En général, craignez-vous d'acheter de faux médicaments ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C15. En général, êtes-vous réticent à l'idée de vous faire vacciner ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C16. Si un vaccin contre le Coronavirus était disponible et gratuit, est-ce que vous voudriez vous faire vacciner ?

❑ 1. Oui, certainement ❑ 2. Oui, probablement ❑ 3. Non, probablement pas ❑ 4. Non, certainement pas

Si C16=3ou4 : C16A. Pour quelles raisons ne vous feriez-vous pas vacciner ?

- ❑ 1. Vous êtes contre la vaccination en général
- ❑ 2. Vous pensez qu'un vaccin élaboré dans l'urgence est trop dangereux
- ❑ 3. Vous pensez que c'est inutile parce que le COVID-19 est peu dangereux
- ❑ 4. Autre : _____

C17. Connaissez-vous des personnes dans votre famille, ou parmi vos amis ou connaissances, qui sont, ou qui ont été malades du Coronavirus ?

❑ 1. Oui, dans la famille ❑ 2. Oui, parmi les amis ou connaissances

❑ 3. Oui, à la fois dans la famille et parmi les amis ou connaissances ❑ 3. Non

C18. Si C17=1,3 : Est-ce qu'il s'agit de personnes qui vivent actuellement avec vous ?

❑ 1. Oui ❑ 2. Non

C19. Selon vous, est-ce que le couvre-feux <u>dans le bassin de Niakhar</u> est nécessaire pour limiter l'épidémie de Coronavirus ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C20. Selon vous, est-ce que le couvre-feux <u>dans les villes</u> permet de limiter l'épidémie de Coronavirus ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C21. Selon vous, qu'est-ce qui est préférable ?

❑ 1. Imposer le couvre-feu seulement dans les zones où il y a des malades du Coronavirus

❑ 2. Imposer le couvre-feu dans tout le Sénégal pour que tous les citoyens vivent la même chose

❑ 3. Ne pas imposer de couvre-feu du tout parce qu'il y a très peu de malades au Sénégal

C22. Selon vous, dans combien de temps est-ce que l'épidémie de Coronavirus sera terminée au Sénégal ? (en mois ou en semaines) ? |__|__| mois **OU** |__|__| semaines

QUELLE EST VOTRE PERCEPTION DES RISQUES DE CORONAVIRUS ?

PR1. A quel point la possibilité d'attraper le Coronavirus vous inquiète-t-elle ?
Donnez une note entre 0 et 10 : la note 0 signifie que ça ne vous inquiète pas du tout, et la note 10 que ça vous inquiète énormément.

0	1	2	3	4	5	6	7	8	9	10

PR2. Selon vous, quelle est la contagiosité du Coronavirus, c'est-à-dire la facilité avec laquelle ce virus peut se transmettre d'une personne à l'autre ?
Donnez une note entre 0 et 10 : la note 0 signifie que ça le Coronavirus est très peu contagieux et la note 10 qu'il est vraiment très contagieux.

0	1	2	3	4	5	6	7	8	9	10

PR3. Selon vous, quelle est la gravité du Coronavirus ?
Donnez une note entre 0 et 10 : la note 0 signifie qu'attraper le Coronavirus n'est pas du tout grave et la note 10 que c'est vraiment très grave.

0	1	2	3	4	5	6	7	8	9	10

PR4. Selon vous, sur 100 personnes qui attrapent le Coronavirus, combien d'entre elles pourraient mourir des suites de la maladie ?
Donnez un nombre entre 0 et 100 : /__/__/__/ personnes

ET POUR LE PALUDISME ?

PR1BIS. A quel point la possibilité d'attraper le paludisme vous inquiète-t-il ?
Donnez une note entre 0 et 10 : la note 0 signifie que ça ne vous inquiète pas du tout, et la note 10 que ça vous inquiète énormément.

0	1	2	3	4	5	6	7	8	9	10

PR3BIS. Selon vous, quelle est la gravité du paludisme ?
Donnez une note entre 0 et 10 : la note 0 signifie qu'attraper le paludisme n'est pas du tout grave et la note 10 que c'est vraiment très grave.

0	1	2	3	4	5	6	7	8	9	10

PR4BIS. Selon vous, sur 100 personnes qui attrapent le paludisme, combien d'entre elles pourraient mourir des suites de la maladie ?
Donnez un nombre entre 0 et 100 : /__/__/__/ personnes

QUEL IMPACT DU CORONAVIRUS SUR VOTRE CUISINE ?

IC1. Combien de personnes vivent actuellement dans votre cuisine, y compris vous-même ?

/__/__/__/ personnes

IC2. Est-ce que des personnes qui <u>vivent avec vous actuellement</u> sont venus vous rejoindre à cause du Coronavirus ou du couvre-feu ?

- ❑ 1. Oui, à cause du Coronavirus
- ❑ 2. Non, pour les récoltes ou le travail de la ferme
- ❑ 3. Non, personne n'est venu nous rejoindre ➔ Aller directement à la question IC7

↳ **IC3. Si oui, combien ?** /__/__/__/ personnes

Combien d'adultes ? /__/__/__/ adultes

Combien d'enfants de moins de 15 ans ? /__/__/__/ enfants

IC4. Quand ces personnes sont arrivées dans votre cuisine, avez-vous craint qu'elles soient malades du Coronavirus sans le savoir ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

IC5. Qui sont ces personnes qui sont venus vous rejoindre et sont-elles toujours là ? Les questions suivantes

Personne 1 (adulte principal) :

A. Est-ce qu'il s'agit d'un homme ou d'une femme ? ❑ 1. Homme ❑ 2. Femme

B. Quel est son âge ? |__|__| ans

C. D'où venait cette personne ? _____

D. Quand cette personne est-elle arrivée ? (ou depuis combien de temps est-elle là ?)

Arrivée le |__|__| **OU** présente depuis |__|__| mois / |__|__| semaines

E. Est-ce que cette personne est étudiante ?

❑ 1. Oui ❑ 2. Non

F. Est-ce que cette personne avait un travail ou une activité économique avant de vous rejoindre ?

❑ 1. Oui ❑ 2. Non

↳ **F1. Quelle était son activité principale (celle qui lui prend le plus de votre temps) ?** ____

_____

F2. Est-ce que cette personne aidait la cuisine en envoyant de l'argent ?

❑ 1. Oui, régulièrement ❑ 2. Oui, quand elle le pouvait ❑ 2. Non

G. Est-ce que cette personne est arrivée <u>seule</u> dans votre cuisine ?

❑ 1. Oui ❑ 2. Non

↳ **G1. Combien d'adultes de 15 ans et plus l'accompagnait ?**

/__/__/

G2. Pour chaque adulte, quel est le lien de parenté avec la Personne 1 ? _____

G3. Combien d'enfants de moins de 15 ans l'accompagnait ?

/__/__/

G4. Quel âge ont les enfants ? /__/__/ /__/__/ ……

<u>H. Est-ce que d'autres adultes, seuls ou accompagnés de leurs conjoints et enfants, sont venus vous rejoindre ?</u>

❑ 1. Oui ❑ 2. Non

<u>Pour chaque adulte</u>, remplir une nouvelle fiche « Personne 2 » si d'autres sont présents

IC6. Est-ce que des personnes qui <u>étaient venues vous rejoindre</u> à cause du Coronavirus sont reparties dans leur vie habituelle ?

❑ 1. Oui ❑ 2. Non

↳ **Si oui, combien ?** /__/__/__/ personnes

……Pourquoi sont-elles reparties ?

❑ 1. La menace du Coronavirus était moins forte qu'on l'avait craint

❑ 2. Autre : _____

Personne 1 (adulte principal) :

A. Est-ce qu'il s'agit d'un homme ou d'une femme ? ❑ 1. Homme ❑ 2. Femme

B. Quel est son âge ? |__|__| ans

C. Combien de temps cette personne est-elle restée dans votre cuisine ?

D. Est-ce que cette personne est étudiante ?

❑ 1. Oui ❑ 2. Non

E. Où est reparti cette personne ? _____

F. Pourquoi est-ce que cette personne est repartie ?

❑ 1. **La menace du Coronavirus était moins forte qu'on l'avait craint**

❑ 2. **Autre :** _____

F. Est-ce que cette personne a un travail ou une activité économique qu'elle a retrouvé ?

❑ 1. Oui ❑ 2. Non

↳ **F1. Quelle est son activité principale (celle qui lui prend le plus de votre temps) ?** ____

_____

F2. Actuellement, est-ce que cette personne aide la cuisine en envoyant de l'argent ?

❑ 1. Oui, régulièrement ❑ 2. Oui, quand elle le peut ❑ 2. Non

F2. Est-ce que cette personne aidait d'avantage la cuisine avant le Coronavirus ?

❑ 1. Oui ❑ 2. Non

G. Est-ce que cette personne est repartie seule ?

❑ 1. Oui ❑ 2. Non

↳ **G1. Combien d'adultes de 15 ans et plus l'accompagnait ?**

/__/__/

G2. Pour chaque adulte, quel est le lien de parenté avec la Personne 1 ? _____

G2. Combien d'enfants de moins de 15 ans l'accompagnait ?

/__/__/

G3. Quel âge ont les enfants ? /__/__/ /__/__/ .....

<u>H. Est-ce que d'autres adultes, seuls ou accompagnés de leurs conjoints et enfants, sont venus vous rejoindre ?</u>

❑ 1. Oui ❑ 2. Non

<u>Pour chaque adulte</u>, remplir une nouvelle fiche « Personne 2 » si d'autres sont présents

IC7. Est-ce que la vie dans votre cuisine est plus compliquée à cause du Coronavirus ?

- ❑ 1. Oui, parce que nous sommes plus nombreux dans la cuisine
- ❑ 2. Oui, parce qu'il est difficile de vendre notre production au marché
- ❑ 3. Oui, parce qu'on a moins d'argent pour acheter ce dont on a besoin
- ❑ 4. Non, parce que nous sommes assez peu nombreux à vivre dans la cuisine
- ❑ 5. Non, parce que nous sommes plus nombreux à travailler
- ❑ 6. Autre : _____

IC8. Avez-vous reçu une aide du gouvernement parce que vous étiez en difficulté à cause du Coronavirus ?

❑ 1. Oui ❑ 2. Non

↳ **Si oui, ...**

IC9. Avez-vous reçu une aide du maire parce que vous étiez en difficulté à cause du Coronavirus ?

❑ 1. Oui ❑ 2. Non

↳ **Si oui, de quoi s'agissait-il ?** _____

IC10. Avez-vous reçu une aide de personnes de bonne volonté ou de vos voisins parce que vous étiez en difficulté à cause du Coronavirus ?

❑ 1. Oui ❑ 2. Non

↳ **Si oui, de quoi s'agissait-il ?** _____

IC11. Vous-même, avez-vous aidé une autre cuisine qui était en difficulté à cause du Coronavirus ?

❑ 1. Oui ❑ 2. Non

↳ **Si oui, de quoi s'agissait-il ?** _____

IC14. A propos du Coronavirus, on entend beaucoup de choses. Etes-vous d'accord avec les affirmations suivantes ?

IC104A. Le COVID-19, c'est surtout une maladie de blanc.

❑ 1. D'accord ❑ 2. Pas d'accord

IC14B. Le COVID-19, c'est surtout une maladie des villes.

❑ 1. D'accord ❑ 2. Pas d'accord

IC14C. Le COVID-19, c'est juste une grippe.

❑ 1. D'accord ❑ 2. Pas d'accord

IC104D. Le COVID-19, c'est une punition divine.

❑ 1. D'accord ❑ 2. Pas d'accord

IC14E. On peut se protéger ou guérir du COVID-19 en mangeant certains aliments (ail, gingembre, citron vert…).

❑ 1. D'accord ❑ 2. Pas d'accord

IC14F. On peut se protéger ou guérir du COVID-19 grâce à la prière.

❑ 1. D'accord ❑ 2. Pas d'accord

IC104G. On peut se protéger ou guérir du COVID-19 grâce à la médecine traditionnelle.

❑ 1. D'accord ❑ 2. Pas d'accord

IC14H. On peut se protéger ou guérir du COVID-19 grâce à des antibiotiques.

❑ 1. D'accord ❑ 2. Pas d'accord

IC14I. Le COVID-19 se transmet par les moustiques.

❑ 1. D'accord ❑ 2. Pas d'accord

IC14J. Le COVID-19 se transmet par l'air.

❑ 1. D'accord ❑ 2. Pas d'accord

IC14K. Le COVID-19 se transmet par les ondes 5G.

❑ 1. D'accord ❑ 2. Pas d'accord

IC14L. Le COVID-19 disparaît au soleil ou quand il fait chaud.

❑ 1. D'accord ❑ 2. Pas d'accord

POUR TERMINER…

D1. Comment vous sentez-vous aujourd'hui, sur une échelle de 0 à 10 (indiquez votre réponse entre 0 (Tout à fait mal) et 10 (Tout à fait bien)

Tout à fait mal — Tout à fait bien

0 1 2 3 4 5 6 7 8 9 10

D2. Quel est votre statut matrimonial ?

- ❑ 1. Marié(e)
- ❑ 2. Célibataire
- ❑ 3. Veuf(ve)
- ❑ 4. Divorcé(e)

D3. Si vous êtes marié(e), êtes-vous dans une union…

- ❑ 1. Polygame
- ❑ 2. Monogame
- ❑ 3. Non concerné (non marié)

D4. Est-ce que votre (première) épouse est inquiète qu'un membre de votre cuisine attrape le coronavirus ?

❑ 1. Très inquiète ❑ 2. Plutôt inquiète ❑ 3. Plutôt pas inquiète ❑ 4. Pas inquiète du tout

D5. Comment votre (première) épouse voit-elle son risque d'attraper le Coronavirus ? Est-ce que pour elle, il est ?

- ❑ 1.Très faible
- ❑ 2.Plutôt faible
- ❑ 3.Plutôt élevé
- ❑ 4.Très élevé

D6. Par rapport aux femmes de son âge, comment votre (première) épouse voit-elle son risque d'attraper le Coronavirus est :

- ❑ 1.Beaucoup moins importants que pour les autres femmes de son âge
- ❑ 2.Moins importants que pour les autres femmes de son âge
- ❑ 3.Ni plus ni moins importants que pour les autres femmes de son âge
- ❑ 4.Plus importants que pour les autres femmes de son âge
- ❑ 5.Beaucoup plus importants que pour les autres femmes de son âge

D7. Combien d'enfants avez-vous ? |__|__|

D8. A propos des enfants, êtes-vous d'accord pour qu'ils retournent à l'école ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

Si D8=3ou4, Pourquoi ? _____

D9. Vous-même, êtes-vous allé à l'école publique (quelquefois appelée école « française ») ?

❑ 1. Oui ❑ 2. Non

↳ **Jusqu'à quelle classe ? _____ OU Jusqu'à quel âge ? _____ OU Combien d'années ? _____**

D10. Etes-vous allée à l'école coranique ?

❑ 1. Oui ❑ 2. Non

↳ **Pendant combien d'années ? _____**

D11. Quelle est votre activité principale (celle qui vous prend le plus de votre temps) : _____

D12. Dans cette activité, vous travaillez comme : (une seule réponse possible)

❑ 1. Fonctionnaire
❑ 2. Salarié avec un contrat écrit
❑ 3. Salarié avec un accord oral
❑ 4. Indépendant à votre compte et sans employé
❑ 5. Entrepreneur ou patron, avec employé(s)
❑ 6. Apprenti
❑ 7. Aide familiale

D13. Si, au cours des 12 derniers mois, vous n'avez pas travaillé et vous n'avez pas eu d'activité économique, quelle est votre situation actuelle ?

❑ 1. En recherche d'emploi
❑ 2. Personne âgée ne travaillant plus/ retraité(e)
❑ 3. Etude/ formation
❑ 4. Invalidité/ handicap permanent/ longue maladie
❑ 5. Autre sans occupation (personne au foyer)

Epouse en charge : A PROPOS DU CORONAVIRUS…

C1. Avez-vous déjà entendu parler du Coronavirus ?

❑ 1. Oui ❑ 2. Non ➔ **Aller à la question IC1**

C3. Est-ce que vous allez sur Internet pour avoir des informations sur le Coronavirus ?

❑ 1. Oui, tous les jours
❑ 2. Oui, quelques fois par semaine
❑ 3. Oui, de temps en temps
❑ 4. Non, jamais

C4. Avez-vous acheté des masques au cours des 2 dernières semaines ? (plusieurs réponses possibles)

❑ 1. Oui, combien ? _____
❑ 2. Non, on a bénéficié de la distribution de masques
❑ 2. Non, on en a fabriqué nous-mêmes
❑ 3. Non et on n'en porte pas

C5. Avez-vous acheté du gel hydroalcolique au cours des 2 dernières semaines ?

❑ 1. Oui
❑ 2. Non, mais j'aimerais en trouver
❑ 2. Non et je n'en ressens pas le besoin

C6. Actuellement, êtes-vous inquiète qu'un membre de votre cuisine attrape le coronavirus ?

❑ 1. Très inquiète ❑ 2. Plutôt inquiète ❑ 3. Plutôt pas inquiète ❑ 4. Pas inquiète du tout

C7. Avez-vous changé vos habitudes pour éviter que le Coronavirus arrive dans votre cuisine ? (plusieurs réponses possibles)

❑ 1. Vous n'avez rien changé à vos habitudes
❑ 2. Chacun doit se laver les mains à chaque fois que vous revenez à la cuisine
❑ 3. Chacun doit se laver les mains seulement quand vous revenez du marché ou du magasin
❑ 4. Chacun doit porter un masque pour aller au marché ou au magasin
❑ 5. Vous utilisez du désinfectant pour nettoyer la cuisine
❑ 6. Autre : _____

C8. Pour vous-même, pensez-vous que votre risque d'attraper le Coronavirus est ?

❑ 1.Très faible
❑ 2.Plutôt faible
❑ 3.Plutôt élevé
❑ 4.Très élevé

C9. Par rapport aux femmes de votre âge, est-ce que vous pensez que votre risque d'attraper le Coronavirus est ?

❑ 1.Beaucoup moins importants que pour les autres femmes de mon âge
❑ 2.Moins importants que pour les autres femmes de mon âge
❑ 3.Ni plus ni moins importants que pour les autres femmes de mon âge
❑ 4.Plus importants que pour les autres femmes de mon âge
❑ 5.Beaucoup plus importants que pour les autres femmes de mon âge

C10. Est-ce que des personnes qui <u>vivent avec vous actuellement</u> sont venus vous rejoindre à cause du Coronavirus ?

❑ 1. Oui, à cause du Coronavirus
❑ 2. Non, pour les récoltes ou le travail de la ferme
❑ 3. Non, personne n'est venu nous rejoindre

Si C10=1,2 ou 3 : C10A. Quand ces personnes sont arrivées dans votre cuisine, avez-vous craint que certaines d'entre elles soient malades du Coronavirus sans le savoir ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C11. Avez-vous pris des précautions pour éviter le Coronavirus dans votre cuisine ?

❑ 1. Oui ❑ 2. Non

↳ **Si oui, lesquelles ?** _____

C12. Si vous ou un membre de votre famille attrapait le Coronavirus, où iriez-vous pour les soins ?

❑ 1. Poste de Sante ❑ 2. Guérisseur ❑ 3. Autre ; Préciser_____

C13. Pensez-vous à un médicament pour soigner le coronavirus ?

❑ 1. Oui ❑ 2. Non

C13A. Si oui, lequel ? _____.

C14. En général, craignez-vous d'acheter de faux médicaments ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C15. En général, êtes-vous réticente à l'idée de vous faire vacciner ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C16. Si un vaccin contre le Coronavirus était disponible et gratuit, est-ce que vous voudriez vous faire vacciner ?

❑ 1. Oui, certainement ❑ 2. Oui, probablement ❑ 3. Non, probablement pas ❑ 4. Non, certainement pas

Si C16=3ou4 : C16A. Pour quelles raisons ne vous feriez-vous pas vacciner ?

❑ 1. Vous êtes contre la vaccination en général
❑ 2. Vous pensez qu'un vaccin élaboré dans l'urgence est trop dangereux
❑ 3. Vous pensez que c'est inutile parce que le COVID-19 est peu dangereux
❑ 4. Autre : _____

C17. Si un vaccin contre le Coronavirus était disponible et gratuit, est-ce que vous voudriez faire vacciner les enfants ?

❑ 1. Oui, certainement ❑ 2. Oui, probablement ❑ 3. Non, probablement pas ❑ 4. Non, certainement pas

C18. Connaissez-vous des personnes dans votre famille, ou parmi vos amis ou connaissances, qui sont, ou qui ont été malades du Coronavirus ?

❑ 1. Oui, dans la famille ❑ 2. Oui, parmi les amis ou connaissances
❑ 3. Oui, à la fois dans la famille et parmi les amis ou connaissances ❑ 3. Non

C19. Si C18=1 à 3 :, est-ce qu'il s'agit de personnes qui vivent actuellement avec vous ?

❑ 1. Oui ❑ 2. Non

↳ **C19.A. Quel est votre lien de parenté avec cette ou ces personnes ?** _____

C19.B. Avez-vous pris des précautions pour éviter d'être contaminés à votre tour par le Coronavirus ?

❑ 2. Non, et personne l'a attrapé dans la cuisine

❑ 2. Non, mais une ou plusieurs personnes de la cuisine ont attrapé le Coronavirus

❑ 1. Oui : Lesquelles ? _____

C19.C. Est-ce que la ou les personnes malades sont allées dans un centre de traitement ?

❑ 1. Oui, toutes sont allées dans un centre de traitement

❑ 2. Non, certaines ont refusé d'aller dans un centre de traitement

❑ 2. Non, aucune n'est allée dans un centre de traitement

C19.D. Est-ce que la ou les personnes malades sont aujourd'hui guéries ?

❑ 1. Oui, toutes ❑ 2. Non, certaines ont des séquelles ❑ 2. Non, certaines sont décédées

↳ **C19.F. Comment est-ce que cette/ces personnes ont été soignées ?**

❑ 1. Toutes par Chloroquine

❑ 1. Certaines par Chloroquine et d'autres par médecine traditionnelle

❑ 2. Toutes par médecine traditionnelle

❑ 3. Autre : _____

C20. Selon vous, est-ce que le couvre-feux <u>dans le bassin de Niakhar</u> est nécessaire pour limiter l'épidémie de Coronavirus ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C21. Selon vous, est-ce que le couvre-feux <u>dans les villes</u> permet de limiter l'épidémie de Coronavirus ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C22. Selon vous, qu'est-ce qui est préférable ?

❑ 1. Imposer le couvre-feu seulement dans les zones où il y a des malades du Coronavirus

❑ 2. Imposer le couvre-feu dans tout le Sénégal pour que tous les citoyens vivent la même chose

❑ 3. Ne pas imposer de couvre-feu du tout parce qu'il y a peu de malades au Sénégal

C23. Selon vous, dans combien de temps est-ce que l'épidémie de Coronavirus sera terminée au Sénégal ? (en mois ou en semaines)

|__|__| mois **OU** |__|__| semaines

QUELLE EST VOTRE PERCEPTION DES RISQUES DE CORONAVIRUS ?

PR1. A quel point la possibilité d'attraper le Coronavirus vous inquiète-t-elle ?
Donnez une note entre 0 et 10 : la note 0 signifie que ça ne vous inquiète pas du tout, et la note 10 que ça vous inquiète énormément.

0	1	2	3	4	5	6	7	8	9	10

PR2. Selon vous, quelle est la contagiosité du Coronavirus, c'est-à-dire la facilité avec laquelle ce virus peut se transmettre d'une personne à l'autre ?
Donnez une note entre 0 et 10 : la note 0 signifie que ça le Coronavirus est très peu contagieux et la note 10 qu'il est vraiment très contagieux.

0	1	2	3	4	5	6	7	8	9	10

PR3. Selon vous, quelle est la gravité du Coronavirus ?
Donnez une note entre 0 et 10 : la note 0 signifie qu'attraper le Coronavirus n'est pas du tout grave et la note 10 que c'est vraiment très grave.

0	1	2	3	4	5	6	7	8	9	10

PR4. Selon vous, sur 100 personnes qui attrapent le Coronavirus, combien d'entre elles pourraient mourir des suites de la maladie ?
Donnez un nombre entre 0 et 100 :

/__/__/__/ personnes

ET POUR LE PALUDISME ?

PR1BIS. A quel point la possibilité d'attraper le paludisme vous inquiète-t-il ?
Donnez une note entre 0 et 10 : la note 0 signifie que ça ne vous inquiète pas du tout, et la note 10 que ça vous inquiète énormément.

0	1	2	3	4	5	6	7	8	9	10

PR3BIS. Selon vous, quelle est la gravité du paludisme ?
Donnez une note entre 0 et 10 : la note 0 signifie qu'attraper le paludisme n'est pas du tout grave et la note 10 que c'est vraiment très grave.

0	1	2	3	4	5	6	7	8	9	10

PR4BIS. Selon vous, sur 100 personnes qui attrapent le paludisme, combien d'entre elles pourraient mourir des suites de la maladie ?
Donnez un nombre entre 0 et 100 :

/__/__/__/ personnes

QUEL IMPACT DU CORONAVIRUS SUR VOTRE CUISINE ?

IC1. Comment évaluez-vous l'impact de l'épidémie de Coronavirus sur votre vie personnelle en général ?

- ❑ 1. C'est très négatif
- ❑ 2. Il y a plus de mauvais que du bon
- ❑ 3. En fait, ça ne change pas grand chose par rapport à ma vie d'avant
- ❑ 4. Il y a plus de bon que de mauvais
- ❑ 5. C'est très positif

IC2. Comment évaluez-vous l'impact de l'épidémie de Coronavirus sur la cuisine ?

- ❑ 1. C'est très négatif
- ❑ 2. Il y a plus de mauvais que du bon
- ❑ 3. En fait, ça ne change pas grand chose par rapport à avant
- ❑ 4. Il y a plus de bon que de mauvais
- ❑ 5. C'est très positif

IC3. Est-ce qu'à cause du couvre-feu, il est plus difficile qu'avant d'acheter ce dont vous avez besoin ?

- ❑ 1. Oui, parce que les prix ont augmenté
- ❑ 2. Oui, parce qu'on trouve plus difficilement ce qu'on cherche
- ❑ 3. Oui, pour d'autres raisons ; Lesquelles : _____
- ❑ 4. Non

IC4. Est-ce qu'à cause du couvre-feu, il est plus difficile qu'avant de vendre votre production ?

- ❑ 1. Oui, parce que les gros marchés sont fermés
- ❑ 1. Oui, parce que vous n'arrivez pas à vendre vos produits au prix qu'ils devraient avoir
- ❑ 3. Oui, pour d'autres raisons ; Lesquelles : _____
- ❑ 4. Non

IC5. Actuellement, est-ce que c'est compliqué de nourrir tout le monde dans la cuisine ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

IC6. Si IC3=1à 3 : Selon vous, est-ce que vous avez ces difficultés à cause du Coronavirus ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

IC7. On entend beaucoup de choses à propos du Coronavirus. Etes-vous d'accord avec les affirmations suivantes ?

IC7A. Le COVID-19, c'est surtout une maladie de blanc.

❑ 1. D'accord ❑ 2. Pas d'accord

IC7B. Le COVID-19, c'est surtout une maladie des villes.

❑ 1. D'accord ❑ 2. Pas d'accord

IC7C. Le COVID-19, c'est juste une grippe.

❑ 1. D'accord ❑ 2. Pas d'accord

IC7D. Le COVID-19, c'est une punition divine.

❑ 1. D'accord ❑ 2. Pas d'accord

IC7E. On peut se protéger ou guérir du COVID-19 en mangeant certains aliments (ail, gingembre ...).

❑ 1. D'accord ❑ 2. Pas d'accord

IC7F. On peut se protéger ou guérir du COVID-19 grâce à la prière.

❑ 1. D'accord ❑ 2. Pas d'accord

IC7G. On peut se protéger ou guérir du COVID-19 grâce à la médecine traditionnelle.

❑ 1. D'accord ❑ 2. Pas d'accord

IC7H. On peut se protéger ou guérir du COVID-19 grâce à des antibiotiques.

❑ 1. D'accord ❑ 2. Pas d'accord

IC7I. Le COVID-19 se transmet par les moustiques.

❑ 1. D'accord ❑ 2. Pas d'accord

IC7J. Le COVID-19 se transmet par l'air.

❑ 1. D'accord ❑ 2. Pas d'accord

IC7K. Le COVID-19 se transmet par les ondes 5G.

❑ 1. D'accord ❑ 2. Pas d'accord

IC7L. Le COVID-19 disparaît au soleil ou quand il fait chaud.

❑ 1. D'accord ❑ 2. Pas d'accord

POUR TERMINER…

D1. Comment vous sentez-vous aujourd'hui, sur une échelle de 0 à 10 (indiquez votre réponse entre 0 (Tout à fait mal) et 10 (Tout à fait bien)

Tout à fait mal — Tout à fait bien

0 1 2 3 4 5 6 7 8 9 10

D2. Est-ce que votre mari est inquiet qu'un membre de votre cuisine attrape le Coronavirus ?

❑ 1. Très inquiet ❑ 2. Plutôt inquiet ❑ 3. Plutôt pas inquiet ❑ 4. Pas inquiet du tout

D3. Comment votre mari voit-il son risque d'attraper le Coronavirus ? Est-ce que pour lui, son risque est ?

❑ 1.Très faible
❑ 2.Plutôt faible
❑ 3.Plutôt élevé
❑ 4.Très élevé

D4. Par rapport aux hommes de son âge, comment votre mari voit-il son risque d'attraper le Coronavirus ? Est-ce que pour lui, son risque est ?

❑ 1.Beaucoup moins importants que pour les autres hommes de son âge
❑ 2.Moins importants que pour les autres hommes de son âge
❑ 3.Ni plus ni moins importants que pour les autres hommes de son âge
❑ 4.Plus importants que pour les autres hommes de son âge
❑ 5.Beaucoup plus importants que pour les autres hommes de son âge

D5. A propos des enfants, êtes-vous d'accord pour qu'ils retournent à l'école ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

Si D5=3ou4, Pourquoi ? _____

D6. Vous-même, êtes-vous allée à l'école publique (quelquefois appelée école « française ») ?

❑ 1. Oui ❑ 2. Non

↳ **Jusqu'à quelle classe ?** _____ **OU Jusqu'à quel âge ?** _____ **OU Combien d'années ?** _____

D7. Etes-vous allée à l'école coranique ?

❑ 1. Oui ❑ 2. Non

↳ **Pendant combien d'années ?** _____

Nouvel arrivant : A PROPOS DU CORONAVIRUS…

C1. Confirmez-vous que vous vivez actuellement dans la cuisine à cause du Coronavirus ?

❑ 1. Oui ❑ 2. Non

↳ **C1A. Quelle est la principale raison qui vous a poussé(e) à rejoindre la cuisine ?**

❑ 1. La peur d'attraper le Coronavirus
❑ 2. La peur de ne plus gagner assez d'argent pour vivre
❑ 3. Autre : _____

C2. Etes-vous étudiant ?

❑ 1. Oui ❑ 2. Non

↳ **C2A. Quelle est la principale raison qui vous a poussé(e) à rejoindre la cuisine ?**

❑ 1. La peur d'attraper le Coronavirus
❑ 2. La peur de ne plus gagner assez d'argent pour vivre
❑ 3. Autre : _____

Si C1=2 et C2=2, alors STOP.

C3. Est-ce que vous allez sur Internet pour avoir des informations sur le Coronavirus ?

❑ 1. Oui, tous les jours
❑ 2. Oui, quelques fois par semaine
❑ 3. Oui, de temps en temps
❑ 4. Non, jamais

C4. Quand vous êtes arrivé(e) dans la cuisine, est-ce que vous aviez-vous peur d'être malade du Coronavirus sans le savoir ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C5. A votre arrivée, est-ce que des précautions ont été prises pour éviter le Coronavirus ?

❑ 1. Oui ❑ 2. Non

↳ **C5.A. Est-ce que vous dormiez à l'écart des autres membres de la famille ?**

❑ 1. Oui ❑ 2. Non

C5.B. Est-ce que vous preniez vos repas à l'écart des autres membres de la famille ?

❑ 1. Oui ❑ 2. Non

C5.C. Au bout de combien de temps avez-vous pu vous joindre au reste de la famille ?

/__/__/ jours

C5.D. Est-ce que cette expérience a été difficile ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C6. Actuellement, êtes-vous inquiet qu'un membre de la cuisine attrape le coronavirus ?

❑ 1. Très inquiet ❑ 2. Plutôt inquiet ❑ 3. Plutôt pas inquiet ❑ 4. Pas inquiet du tout

C7. Pour vous-même, pensez-vous que votre risque d'attraper le Coronavirus est ?

❑ 1.Très faible
❑ 2.Plutôt faible
❑ 3.Plutôt élevé
❑ 4.Très élevé

C8. Par rapport aux hommes/femmes de votre âge, est-ce que vous pensez que votre risque d'attraper le Coronavirus est :

❑ 1.Beaucoup moins importants que pour les autres hommes/femmes de mon âge
❑ 2.Moins importants que pour les autres hommes/femmes de mon âge
❑ 3.Ni plus ni moins importants que pour les autres hommes/femmes de mon âge
❑ 4.Plus importants que pour les autres hommes/femmes de mon âge
❑ 5.Beaucoup plus importants que pour les autres hommes/femmes de mon âge

C9. Si vous ou un membre de votre famille attrapait le Coronavirus, où iriez-vous pour les soins ?

❑ 1. Poste de Sante ❑ 2. Guérisseur ❑ 3. Autre ; Préciser_____

C10. Pensez-vous à un médicament pour soigner le coronavirus ?

❑ 1. Oui ❑ 2. Non

C10A. Si oui, lequel ? _____.

C11. En général, craignez-vous d'acheter de faux médicaments ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C12. En général, êtes-vous réticent(e) à l'idée de vous faire vacciner ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C13. Si un vaccin contre le Coronavirus était disponible et gratuit, est-ce que vous voudriez vous faire vacciner ?

❑ 1. Oui, certainement ❑ 2. Oui, probablement ❑ 3. Non, probablement pas ❑ 4. Non, certainement pas

Si C16=3ou4 : C16A. Pour quelles raisons ne vous feriez-vous pas vacciner ?

❑ 1. Vous êtes contre la vaccination en général
❑ 2. Vous pensez qu'un vaccin élaboré dans l'urgence est trop dangereux
❑ 3. Vous pensez que c'est inutile parce que le COVID-19 est peu dangereux
❑ 4. Autre : _____

C14. Si un vaccin contre le Coronavirus était disponible et gratuit, est-ce que vous voudriez faire vacciner vos enfants ?

❑ 1. Oui, certainement ❑ 2. Oui, probablement ❑ 3. Non, probablement pas ❑ 4. Non, certainement pas

C16. Connaissez-vous des personnes dans votre famille, ou parmi vos amis ou connaissances, qui sont, ou qui ont été malades du Coronavirus ?

❑ 1. Oui, dans la famille ❑ 2. Oui, parmi les amis ou connaissances

❑ 3. Oui, à la fois dans la famille et parmi les amis ou connaissances ❑ 3. Non

C17. Selon vous, est-ce que le couvre-feux <u>dans le bassin de Niakhar</u> est nécessaire pour limiter l'épidémie de Coronavirus?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C18. Selon vous, est-ce que le couvre-feux <u>dans les villes</u> permet de limiter l'épidémie de Coronavirus ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C19. Selon vous, qu'est-ce qui est préférable ?

❑ 1. Imposer le couvre-feu seulement dans les zones où il y a des malades du Coronavirus

❑ 2. Imposer le couvre-feu dans tout le Sénégal pour que tous les citoyens vivent la même chose

❑ 3. Ne pas imposer de couvre-feu du tout parce qu'il y a peu de malades au Sénégal

C20. Selon vous, dans combien de temps est-ce que l'épidémie de Coronavirus sera terminée ?
(en mois ou en semaines)

|__ |__ | mois **OU** |__ |__ | semaines

QUELLE EST VOTRE PERCEPTION DES RISQUES DE CORONAVIRUS ?

PR1. A quel point la possibilité d'attraper le Coronavirus vous inquiète-t-elle ?
Donnez une note entre 0 et 10 : la note 0 signifie que ça ne vous inquiète pas du tout, et la note 10 que ça vous inquiète énormément.

0	1	2	3	4	5	6	7	8	9	10

PR2. Selon vous, quelle est la contagiosité du Coronavirus, c'est-à-dire la facilité avec laquelle ce virus peut se transmettre d'une personne à l'autre ?
Donnez une note entre 0 et 10 : la note 0 signifie que ça le Coronavirus est très peu contagieux et la note 10 qu'il est vraiment très contagieux.

0	1	2	3	4	5	6	7	8	9	10

PR3. Selon vous, quelle est la gravité du Coronavirus ?
Donnez une note entre 0 et 10 : la note 0 signifie qu'attraper le Coronavirus n'est pas du tout grave et la note 10 que c'est vraiment très grave.

0	1	2	3	4	5	6	7	8	9	10

PR4. Selon vous, sur 100 personnes qui attrapent le Coronavirus, combien d'entre elles pourraient mourir des suites de la maladie ?
Donnez un nombre entre 0 et 100 : /__/__/__/ personnes

ET POUR LE PALUDISME ?

PR1BIS. A quel point la possibilité d'attraper le paludisme vous inquiète-t-il ?
Donnez une note entre 0 et 10 : la note 0 signifie que ça ne vous inquiète pas du tout, et la note 10 que ça vous inquiète énormément.

0	1	2	3	4	5	6	7	8	9	10

PR3BIS. Selon vous, quelle est la gravité du paludisme ?
Donnez une note entre 0 et 10 : la note 0 signifie qu'attraper le paludisme n'est pas du tout grave et la note 10 que c'est vraiment très grave.

0	1	2	3	4	5	6	7	8	9	10

PR4BIS. Selon vous, sur 100 personnes qui attrapent le paludisme, combien d'entre elles pourraient mourir des suites de la maladie ?
Donnez un nombre entre 0 et 100 : /__/__/__/ personnes

D1. Comment évaluez-vous l'impact de l'épidémie de Coronavirus sur votre vie personnelle en général ?

- ❑ 1. C'est très négatif
- ❑ 2. Il y a plus de mauvais que du bon
- ❑ 3. En fait, ça ne change pas grand chose par rapport à ma vie d'avant
- ❑ 4. Il y a plus de bon que de mauvais
- ❑ 5. C'est très positif

D2. Comment évaluez-vous l'impact de l'épidémie de Coronavirus sur la cuisine ?

- ❑ 1. C'est très négatif
- ❑ 2. Il y a plus de mauvais que du bon
- ❑ 3. En fait, ça ne change pas grand chose par rapport à avant
- ❑ 4. Il y a plus de bon que de mauvais
- ❑ 5. C'est très positif

D3. A propos du Coronavirus, on entend beaucoup de choses. Etes-vous d'accord avec les affirmations suivantes ?

D3A. Le COVID-19, c'est surtout une maladie de blanc.

❑ 1. D'accord ❑ 2. Pas d'accord

D3B. Le COVID-19, c'est surtout une maladie des villes.

❑ 1. D'accord ❑ 2. Pas d'accord

D3C. Le COVID-19, c'est juste une grippe.

❑ 1. D'accord ❑ 2. Pas d'accord

D3D. Le COVID-19, c'est une punition divine.

❑ 1. D'accord ❑ 2. Pas d'accord

D3E. On peut se protéger ou guérir du COVID-19 en mangeant certains aliments (ail, gingembre, citron vert…).

❑ 1. D'accord ❑ 2. Pas d'accord

D3F. On peut se protéger ou guérir du COVID-19 grâce à la prière.

❑ 1. D'accord ❑ 2. Pas d'accord

D3G. On peut se protéger ou guérir du COVID-19 grâce à la médecine traditionnelle.

❑ 1. D'accord ❑ 2. Pas d'accord

D3H. On peut se protéger ou guérir du COVID-19 grâce à des antibiotiques.

❑ 1. D'accord ❑ 2. Pas d'accord

D3I. Le COVID-19 se transmet par les moustiques.

❑ 1. D'accord ❑ 2. Pas d'accord

D3J. Le COVID-19 se transmet par l'air.

❑ 1. D'accord ❑ 2. Pas d'accord

D3K. Le COVID-19 se transmet par les ondes 5G.

❑ 1. D'accord ❑ 2. Pas d'accord

D3L. Le COVID-19 disparaît au soleil ou quand il fait chaud.

❑ 1. D'accord ❑ 2. Pas d'accord

POUR TERMINER…

D1. Comment vous sentez-vous aujourd'hui, sur une échelle de 0 à 10 (indiquez votre réponse entre 0 (Tout à fait mal) et 10 (Tout à fait bien)

Tout à fait mal — Tout à fait bien

0 1 2 3 4 5 6 7 8 9 10

D2. Selon vous, est-ce que le chef de ménage et sa (première) épouse sont inquiets qu'un membre de la cuisine attrape le Coronavirus ?

❑ 1. Très inquiets ❑ 2. Plutôt inquiets ❑ 3. Plutôt pas inquiets ❑ 4. Pas inquiets du tout

D3. Quel est votre statut matrimonial ?

❑ 1. Marié(e)
❑ 2. Célibataire
❑ 3. Veuf(ve)
❑ 4. Divorcé(e)

D4. Si vous êtes marié(e), êtes-vous dans une union…

❑ 1. Polygame
❑ 2. Monogame
❑ 3. Non concerné (non marié)

D5. Avez-vous des enfants ?

❑ 1. Oui ❑ 2. Non

D6. Si D4=1 : Combien ? _____ de quel(s) âge(s) ? _____

D7. Quelle est votre activité principale (celle qui vous prend le plus de votre temps) : _____

D8. Dans cette activité, vous travaillez comme : (une seule réponse possible)

❑ 1. Fonctionnaire
❑ 2. Salarié avec un contrat écrit
❑ 3. Salarié avec un accord oral
❑ 4. Indépendant à votre compte et sans employé
❑ 5. Entrepreneur ou patron, avec employé(s)
❑ 6. Apprenti
❑ 7. Aide familiale

D9. Est-ce que votre activité est dans le secteur ?

❑ 1. Des transports
❑ 2. De la pêche
❑ 3. Du tourisme
❑ 3. Non, un autre secteur

D10. Si, au cours des 12 derniers mois, vous n'avez pas travaillé et vous n'avez pas eu d'activité économique, quelle est votre situation actuelle ?

❑ 1. En recherche d'emploi
❑ 2. Personne âgée ne travaillant plus/ retraité(e)
❑ 3. Etude/ formation
❑ 4. Invalidité/ handicap permanent/ longue maladie
❑ 5. Autre sans occupation (personne au foyer)

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COVID-19-related attitudes, risk perceptions, preventive behaviours and economic impact in Sub-Saharan African countries: Implementing a longitudinal phone-based survey protocol in rural Senegalese households

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COVID-19-related attitudes, risk perceptions, preventive behaviours and economic impact in Sub-Saharan African countries: Implementing a longitudinal phone-based survey protocol in rural Senegalese households

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Abstract

Introduction. Rural areas are considered safe havens against the increased spread of COVID-19 and associated restrictive measures, especially in contexts where public authorities are not in a position to systematically and substantially ease COVID-19-induced economic shocks. In the current Sub-Saharan Africa context, still marked by uncertainty surrounding the spread of COVID-19, we present the protocol of an ongoing longitudinal study aimed at investigating COVID-19-related attitudes, risks perceptions, preventive behaviours, and economic impact in rural areas in Senegal.

Methods and analysis. A prospective randomized longitudinal study of 600 households located in three semi-urban villages and nine randomly selected rural villages in the Niakhar area (located 135 km East of Dakar). Three ad hoc phone surveys are administered to 600 heads of households, their housewives in charge of managing the household and a relative living temporarily in the household, respectively. In addition to sharing identical sets of questions on several topics (risks perceptions, attitudes to curfew, attitudes to vaccines, beliefs about COVID-19 infection), the three separate survey questionnaires also include other topics (economic impact, local preventive strategies) whose related questions differ between questionnaires. As analysing evolutions is the study's primary focus, data on all the topics covered will be collected in three waves unless the spread of COVID-19 by mid-2021 justifies extending data collection. The present article presents the study protocol and details about the implementation of the first wave of data collection which started in July 2020. The decision to wait before presenting the protocol was based on the unprecedented context the COVID-19 pandemic.

Ethics and dissemination. The survey's protocol was approved by the Senegalese National Ethical Committee for Research in Health (131/MSAS/CNERS/Sec) and received authorisation from both the Senegalese Ministry of Health (619/MSAS/DPRS/DR) and the French Commission on Information Technology and Liberties (CNIL 2220771).

Keywords: COVID-19; attitudes; risk perceptions; preventive behaviours; economic impact; Sub-Saharan African ; longitudinal ; survey protocol.

Article Summary

- The current Sub-Saharan African (SSA) context is still marked by uncertainty surrounding the spread of the COVID-19 pandemic and the scarce availability of individual data.
- This ongoing longitudinal study aims to investigate COVID-19-related attitudes, risk perceptions, preventive behaviours, and the economic impact in Senegalese rural areas.
- Three waves of data collection are planned (the first wave started in July 2020). However, this number may increase if the spread of COVID-19 by mid-2021 justifies extending data collection over a longer period of time.
- In the unprecedented context of the COVID-19 pandemic, the generalizability of the study's results needs to be explored.

Introduction

After spreading from China to other Asian countries in late 2019, COVID-19 appeared in Western Europe in January 2020 where it rapidly led to overwhelmed hospitals and an exponential increase in deaths (COVID-19 data repository of the Johns Hopkins Center for Systems Science and Engineering, Baltimore, MD, USA). While most European countries adopted lockdown measures only several weeks after the first COVID-19 cases were reported (e.g., a 6-week delay in Italy and a 7-week delay in France), many Sub-Saharan African (SSA) countries decided to act sooner before the outbreak spread.

Spread of COVID-19 still limited in SSA, but uncertainties remain about how the pandemic will evolve

The COVID-19 pandemic spread to SSA in February/March 2020. Senegal implemented restrictive measures (curfew, closing schools, banning of public gatherings, and cancellation of major national and religious celebrations) three weeks after the first COVID-19 cases had been reported in the country, whereas in Nigeria, a street publicity awareness campaign on COVID-19 preventive measures was launched in the capital Lagos, two days after the first cases had been identified. Concerns were expressed, especially in Senegal and Burkina Faso, with respect to the sharp increases in both these countries in the number of COVID-19 cases soon after the first cases were confirmed there [1].

The announcements of restrictive measures led to mass movements of people from big cities to rural villages, both caused by fear of COVID-19 and the impact it could have in terms of economic losses. However, as time went by, it increasingly appeared that the outbreak was much less devastating than initially anticipated [2], and the mass movements of people mentioned above were gradually reversed. Apart from the early adoption of restrictive measures, the most widely proposed hypothesis for the much lower spread of COVID-19 in SSA than in most other world regions is that different demographic characteristics (younger average ages, lower

population densities, and lower urbanization rates) [3-6], and a higher immune response in relation with more highly solicited immune systems [7] hamper the spread. Recently, another strong hypothesis has been put forward, suggesting that the extensive implementation of local preventive strategies may have played a crucial role in substantially lowering the spread of the disease [8 9].

Nevertheless, the possibility cannot be ruled out that the COVID-19 pandemic could spread throughout SSA countries [2 10], as it did (and still continues to do) in North African and European countries (i.e., all the countries north of SSA (see the Johns Hopkins Coronavirus world map: https://www.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6)). Such a development is of great concern because of the associated risk of overwhelming already fragile healthcare systems [1 11] in a context where the pandemic has brought about a worldwide economic crisis whose consequences might be severe for SSA [12].

Few COVID-19 data are available from an individual perspective

Most published analyses to date on the COVID-19 pandemic in SSA countries have not been supported by collected data, except for data on the numbers of confirmed cases and deaths. One study conducted in seven English-speaking countries (Ghana, Kenya, South Africa, Tanzania, Uganda and the English-speaking regions of Cameroon) assessed the extent to which these populations were exposed to COVID-19-related misinformation. Using an online survey (April-May 2020), it showed that false beliefs were shared by between 15 and 30% of the respondents, depending on the false statement assessed, with a higher likelihood of false beliefs in older and unemployed respondents [13]. In addition, three studies assessed COVID-19-related knowledge, attitudes and practices in Nigeria, in Ghana/South Africa, and in the Republic of Chad (April-May 2020, March-April 2020, and May-August 2020, respectively) using online surveys. All three showed that study participants were very familiar with personal preventive measures against COVID-19 and the disease's main symptoms [14-16]. However, the Nigerian study also

showed that approximately half of the surveyed individuals believed that only elderly people with comorbidities were likely to develop severe COVID-19, and 85% were unaware of the risk of being infected by asymptomatic individuals. Consistent with this finding and given that the participants in the Nigerian study were relatively young (69% aged between 21 and 30 years old), only 22.5% of surveyed individuals reported wearing a face mask when they went out [14]. Another Nigerian study involving assessing perceived risks pointed out that despite good knowledge of COVID-19, implementing preventive behaviours would not be likely if the virus was not considered a risk (online survey in April 2020) [17]. More generally, the study conducted in the Republic of Chad showed significantly lower uptake of preventive practices in individuals with lower educational levels and precarious employment [16]. Furthermore, other published studies emphasized individuals' fear of serious COVID-19-related economic repercussions (notably people living in urban Ghanaian neighbourhoods with their own business in the informal economy [18] and farmers working in the Ethiopian vegetable sector [19]).

Study Objectives

The present ongoing study was designed in a setting marked by both uncertainty about the spread of COVID-19 in Sub-Saharan Africa and the scarce availability of individual data. Given the continued risk that the spread of COVID-19 will increase substantially in SSA, the memory of mass movements of people from big cities in March 2020 highlights the role that rural areas could play if such an event were to reoccur. This role could be major in a context where public authorities may not be in a position to systematically and substantially ease the economic shock induced by the pandemic[20-22]. While this role could evolve depending on rural populations' attitudes to such mass movements and their perceptions of the associated risks, we hypothesized that evaluating the evolution of individuals' perceived impact of COVID-19 pandemic could provide invaluable information about the potential pressure of the COVID-19 pandemic on these rural areas.

Accordingly, the present ongoing longitudinal study was designed to investigate the attitudes, risk perceptions and preventive behaviours of people living in a Senegalese rural area in terms of COVID-19, as well as their perceptions of the related economic impact. As rural areas often have limited access to the internet and given the increased risk of COVID-19 transmission during close contact interactions, the only available option was to conduct a phone-based survey.

Methods and analysis

Population

This study includes adults (18 years old and over) living in all 30 villages of the rural Niakhar area covered by the Niakhar Health and Demographic Surveillance System (HDSS) [23]. The Niakhar HDSS, which is the oldest HDSS in Senegal (created in 1962) and one of the oldest in Western Africa, gathers regular data for the population covered, including demographic and health data. The Niakhar area itself is located 135 km East of Dakar and covers 203 km2 with a population of 50 355 inhabitants (January 2018 census). More specifically, it is located in the 'department' (an administrative area) of Fatick (there are 45 departments in Senegal) which covers three different healthcare districts (including the Niakhar healthcare district). Most of the population (96.4%) living in this area belongs to the Serere ethnic group. The main economic activity is agriculture with food cultivation (millet) and a cash crop (peanuts), in addition to small-scale cattle breeding.

Representativeness of Niakhar area with respect to COVID-19

As the Niakhar area has been a site for research for several years, especially for infectology and epidemiology of infectious diseases, including malaria, meningitis and hepatitis [23], the question arises as to how much the people living in the area are still truly representative of other Senegalese rural populations, especially regarding their knowledge of diseases that have long been studied there. However, given that COVID-19 is a new disease, we hypothesized that the

Niakhar healthcare district would likely be comparable with other such districts in the country with a similar population density, age distribution and poverty index [24].

To assess this hypothesis, we performed a multivariable Poisson regression on the numbers of confirmed COVID-19 cases at the district level (Senegalese Minister of Health: http://www.sante.gouv.sn/Pr%2525C3%2525A9sentation/coronavirus-informations-officielles-et-quotidiennes-du-msas). While standardized residuals represent variations in the data that cannot be explained by the model, residual plots enabled us to identify outliers (Figure 1). As a result, the Niakhar healthcare district could not be considered an outlier in terms of the number of declared cases of COVID-19 (standardized residuals= -0.53). Furthermore, at the time the study began, the prevalence of COVID-19 in the department of Fatick was comparable with that in other Senegalese departments with similar population densities (Figure 2).

Study design and procedure

Study participants were randomly selected using a two-stage stratified sampling design. All 30 villages in the Niakhar area were previously identified as rural (n=27) or semi-urban villages (n=3), depending on their infrastructure and equipment [23]. More specifically, unlike rural villages, the three semi-urbanised villages have health facilities, a weekly market, daily buses to the Senegal's capital Dakar, and several shops. The participating villages selected in the first stage (n=12) of the present study comprised the three semi-urban villages and a simple random sample of nine rural villages. In the second stage of sampling, 600 households from all the 1756 households in these 12 participating villages were selected, again using simple random sampling.

This figure of 600 households was not arrived at from a calculation to determine the optimal number of households to be included, but was the result of a trade-off between the budgetary and logistic constraints of surveying up to three members in each household (i.e., a potential maximum of 1800 individuals) in three successive waves of data collection (the first wave

started on July 27, 2020). Taking into account the design of previous surveys conducted in the same area [25], we assumed a response rate of 90% for the first wave of data collection and an attrition rate of 15% over the data collection period, resulting in an estimated 500 surveyed households by the end of the third wave (scheduled for mid-2021). In the planned analyses, potential selection bias will be assessed and reduced by using sampling weights computed as reciprocals of the probabilities of selection of each household. Final weights will be calculated using an iterative process (ranking ratio estimation) involving sociodemographic data collected regularly by the Niakhar HDSS.

Longitudinal phone survey in multi-adult households

Data collection is expected to last at least until end-2021, unless the spread of COVID-19 at that time justifies extending data collection. The study started in March 2020 and it is funded until March 2022 (Inserm-ANRS, grant number ECTZ147735). Given that any application for funding for possible subsequent waves of data collection needs to occur well in advance, the decision about this issue has been postponed until mid-2021. For each wave, data are collected by surveying participants over their mobile phone. Participants' telephone numbers were recorded by community health workers (locally called *Badjanou Gokh*) prior to the first survey. Phone interviews are conducted using Computer assisted telephone interviews (CATI) software. To achieve higher response rates, 15 calls (1 initial and 14 callbacks) are planned during the several weeks of data collection, at different times of the day and on different days, before discarding a non-responsive telephone number. While 12 to 15 calls and 6 to 10 calls are generally recommended for landline and mobile CATI surveys respectively [26], we opted for a maximum of 15 calls given the frequency of poor telephone connections in the area.

The COVID-19 sanitary context makes the implementation of the survey at each wave and the collection of data more complex than usual. Although this study protocol was the result of a close collaboration between Senegalese and French researchers, travelling restrictions

prevented some of the latter from being physically present for the training of the CATI interviewers, for data collection preparatory meetings, for field meetings and for feedback sessions. Accordingly, the Senegalese research team is in charge of coordinating data collection and organizing CATI schedules, although regular internet-based meetings with the French research team ensure joint decision-making.

The lack of the possibility to train interviewers up on CATI in Senegal because of the international travel restrictions meant that only experienced bilingual (French and Serere) interviewers already present in Senegal could administer the CATI surveys. As Serere is an oral only language, practice sessions to administer the questionnaires were performed by the interviewers in order to reach a consensus on the specific words to be used when performing the interviews in Serere. Consequently, the relevance and ease of understanding of each questionnaire item was assessed before the interviews took place in Serere. A total of seven interviewers collected data in the first wave. They were supervised by another senior interviewer whose specific role, in addition to supervision, was to share feedback on data collection with the two (Senegalese and French) research teams. In many aspects, the data collection process greatly benefits from long-term existing experience the interviewers have in administering research-based surveys.

Data collection

The first data collection wave began on July 27, 2020 and interviewing lasted six weeks. Furthermore, parallel data collection about local preventive strategies implemented in villages since July 2020 is about to be completed. Figure 3 summarizes the major steps of data collection and presents the study sample to be followed in our longitudinal design.

For the first wave, phone interviews took place with three different persons in each participating household as follows: the head of the household, his wife (for those who had more than one wife, the wife responsible for managing the household), and a relative from a city who had

decided to come and live momentarily in the rural household because of the risk of COVID-19 and the fear of associated economic consequences. Specifically, heads of households had to decide which wife and which temporary visiting relative would be surveyed, and to provide their names and mobile phone numbers during the first phone interview. When interviewing heads of households, their designated wives and visiting relatives on their mobile phones, the interviewers first presented the study and informed them about its longitudinal design, obtained their consent to participate, and then interviewed them. As a way of thanking households for their participation, the community health workers provided them with a personal protection kit including hydroalcoholic gel and a face mask at the end of the first wave of data collection.

As regards relatives temporarily living in the household, those individuals interviewed in the first wave of data collection will be surveyed in successive waves. New visiting relatives identified between two different waves of data collection will also be included in the study design by interviewing them in all data collection waves subsequent to their inclusion. As we wanted to ensure that our study design and protocol were feasible given current national and international restrictive measures due to COVID-19, we chose to wait until the first wave of data collection neared completion before presenting the study design here.

Questionnaires

Three questionnaires were constructed (one each) for the heads of the selected households, their designated wives in charge of managing the household, and their designated relative temporarily living with them (Supplementary file 1, 2 and 3, respectively). In addition to sharing identical sets of questions on several topics (risks perceptions, attitudes to curfew, attitudes to vaccines, beliefs about COVID-19 infection), the three separate survey questionnaires also contain other questions on other topics (economic impact, local preventive strategies). These questions differ between questionnaires. For example, with regard to local preventive strategies, household heads are asked about the local COVID-19 prevention

strategies implemented in their village, while their wives are asked about anti-COVID-19 private prevention measures in the household, and newcomers about personal preventive measures in the household and possibly asked to implement when they first arrived (e.g., quarantine). While this study involves collecting data at different moments in time, the same topics and associated sets of questions presented below will be used throughout the study in order to evaluate evolutions.

Measures

Sociodemographic characteristics

As the study's framework provides for collected data to be matched with existing data in the Niakhar HDSS [23] database, only individual sociodemographic data needs to be collected during the telephone interviews, including marital status, educational level, number of children, the latter's ages and type of schooling (public or religious school), as well as the respondent's level of access to the internet. With regard to employment at the time of the survey, participants are invited to answer open-ended questions whose responses are consequently recoded into nine different standard categories (Farmers, Craftsmen, Workers, Employees, Intermediate professions, Managers and higher intellectual professions, Students, Pensioners, Not engaged in active employment). While these categories are consistent with those adopted in some Northern countries, they will be grouped into broader categories if necessary (such as Employed, Seeking employment, and Other, inactive (Students, Pensioners)), and then considered in relation to educational level [27].

Risk perceptions

Collecting data on the perceived risks of COVID-19 is of crucial importance in understanding individuals' related attitudes and behaviours. In line with previous survey studies, the assessment of risk perceptions in the present study involves collecting information on introspective judgements [28 29]. After asking surveyed individuals whether they have heard about

COVID-19 pandemic before being surveyed, an assessment is performed using a scale from 0 (not at all) to 10 (extremely) to measure how worried they are about getting the disease, and how contagious and severe they perceive it to be [30]. In addition, perceived mortality of COVID-19 is assessed based on a question about what the participant believes with be the number of deaths out of every 100 people with COVID-19. To provide greater insight into participants' COVID-19 risk perceptions, all the questions mentioned above are asked again for malaria, a well-known and common viral infection in Sub-Saharan African countries which also starts with flu-like symptoms.

Finally, respondents are invited to self-assess their perceived absolute and relative risks of COVID-19 infection [31] by ranking their level of self-perceived risk (four-point Likert-type scale from "very low" (=1) to "very high" (=4)) and by positioning their own perceived risks with respect to others of the same age and gender (five-point Likert-type scale from "much lower" (=1) to "much higher" (=5)). The questionnaires also include items measuring the extent of the respondent's fear that the visiting relative is unknowingly infected with COVID-19 and asymptomatic.

Other questionnaire items assessing risk perceptions include asking heads of households (/their surveyed wife) to adopt their spouse's perspective and to report the extent to which they believe their spouse is worried about COVID-19. Similarly, both individuals are asked to report the extent to which they believe their spouse perceives that she (/he) is at risk of COVID-19 and how she (/he) places this level of perceived risk in relation to that of other wives (/husbands) of the same age and gender. Accounting for the potential impact of respondents' current health state on their perceived risks, respondents are asked how they feel in terms of their state of health at the time of the survey (eleven-point Likert-type scale from "very poor" (=0) to "very well" (=10)).

Attitudes

Given the unprecedented context of COVID-19 pandemic, assessing individual attitudes to the disease necessitates using ad-hoc questions. Considering the restrictive measures adopted in Senegal from March 2020 onward, attitudes to curfews in general, whether implemented in rural or urban areas are assessed in the present study. With regard to health issues, surveyed individuals are invited to report how worried they are about buying counterfeit drugs, their attitudes to vaccination in general and to (unavailable at the time of the first wave of data collection) the anti-COVID-19 vaccine. In addition, participants are asked whether they would consider having anti-COVID-19 vaccine for themselves and for their children if it were free of charge (four-point Likert-type scale from "certainly yes" (=1) to "definitely not" (=4) in all cases). Assessing knowledge of COVID-19 variants and their perceived risks in comparison with the risks of the original strain is planned for subsequent waves of data collection. Finally, individuals' agreement (agree/disagree) is assessed regarding statements circulating on the internet and reflecting rumour-related fake information on COVID-19 transmission and cure.

Preventive behaviours

It has been recently suggested that locally implemented COVID-19 preventive strategies could potentially explain, at least in part, the as yet slow spread of COVID-19 in SSA [8 9] . The present study collected data which could shed some more light on this issue. In our ongoing longitudinal study, preventive behaviours cover individual protection measures by the study's participants and collective prevention strategies implemented by administrative, religious or medical authorities in the area covered by the survey. With regard to the former, the study's questionnaires include items measuring how much the COVID-19 pandemic has led to changes in everyday life in the participating households, in changes in journeys to and from the local market or the closest city, and in changes in the way relatives from cities are welcomed, especially in terms of possible quarantine upon their arrival.

In order to compare participant recall with objective data on locally implemented collective prevention strategies, specific data has been gathered from the outset of the study to document the dates, duration and nature of all collective actions implemented in the study's 12 study villages. To do this, the interviewers who conduct the phone surveys have also been in charge of conducting face-to-face interviews in each village, with the village chief, the healthpost nurses, the community health workers *(Badjanou Gokh)*, and representatives from both the town hall and the subprefecture, local associations involved in the fight against Covid-19 spread (e.g., former military personnel, student and youth associations), and non-governmental organizations (e.g., local branches of the Red Cross). At the regional level, interviews have also been conducted on a regular basis with representatives of the healthcare districts. The preventive measures identified mainly consist in the distribution of leaflets, antiseptic soap and face masks, as well as the installation of hand washing facilities in schools, markets, village entrances, households, churches and mosques. These data will continue to be collected over the whole data collection period.

Economic impact on everyday life

One primary concern about the spread of COVID-19 in Sub-Saharan African countries is a possible resulting economic shock [12 20-22]. Supposing that urban areas would most likely be the first to be highly impacted by the COVID-19 pandemic, rural areas could indeed be in position to soften, at least in part, the economic consequences of COVID-19 pandemic. In this respect, our ongoing study assesses the pandemic's impact with questions about the main sociodemographic characteristics of relatives from cities currently living in the household because of COVID-19, and questions about the perceived burden on the rural household (e.g., having to provide food for more people) as well as the benefits (e.g., larger labour force for agricultural work) associated with their arrival in the household. In addition, the study examines possible assistance from administrative authorities or neighbours locally implemented, as well

as possible assistance given to neighbours because of the COVID-19 pandemic. Furthermore, possible COVID-19 pandemic-related financial difficulties are explored concerning everyday purchases and sales of crops in local markets. Finally, relatives from cities temporarily living in the household because of their fear of COVID-19 and induced economic losses are asked to self-assess the extent to which the pandemic has impacted their own life as well as everyday life in the household. In terms of financial support provided to the household, heads of households are asked about those relatives currently living with them and whether these relatives provided support before they arrived to temporarily stay. Similarly, they are asked about the extent to which relatives who left the household to go back to cities currently financially support the household.

Main relationships to be tested

In this unprecedented COVID-19 pandemic sanitary context, while the present study serves a descriptive purpose, its primary aim is to assess various relationships. In line with the economic-based approach recently published in the French context of COVID-19 [32], our study should enable the calibration of individual risk perceptions to be assessed based on the consistency between perceived mortality of COVID-19 and epidemiological information available at the time of data collection. Furthermore, a greater understanding of calibration should be gained by the fact that we are taking perceived worry, severity and contagiousness of COVID-19 into account, and conducting comparisons with introspective judgements relating to malaria. In addition, taking participants' socio-demographic characteristics into account should provide greater insight into the determinants of risk perceptions. Following on from Attema et al. (2021), we will examine the calibration, heterogeneity and determinants of risk perceptions, accounting for the temporal dynamics of the COVID-19 pandemic in Senegal. Finally, by focusing on the extent to which interviewed persons (husbands, wives) assess their spouse's perceived risk of getting COVID-19, this study could also help to estimate the potential impact

of discrepancies in couples' risk perceptions regarding the extent of preventive measures actually adopted in households.

As regards the COVID-19 preventive strategies implemented at the village and household levels, it is possible that experience gained from the Ebola and HIV/AIDS pandemics has helped people manage the risk of COVID-19 [10]. In the present study, we hypothesize that accurate recall of local prevention strategies currently in place is higher in villages with more prevention strategies implemented. We also hypothesize that implementing preventive strategies at the village level might have a positive impact on adopting strategies at the household level. Exploring the relationship between collective and individual preventive behaviours will therefore enable us to evaluate the impact of locally implemented preventive measures on slowing the spread of COVID-19. Using the prospectively collected data will also allow us to analyse the dynamics of this relationship over time with respect to attitudes and risk perceptions.

With regard to the economic impact of COVID-19 pandemic on everyday lives, adopting a descriptive approach will be useful given the scarce data available. In addition, accounting for the sociodemographic characteristics of both heads of households and relatives who temporarily left big cities will allow us to assess the size of any possible gradient in the economic pressure of the COVID-19 pandemic on rural areas and its evolution over time. In the unprecedented context of the COVID-19 pandemic, the generalizability of the study's results will however remain to be explored.

Patient and public involvement

No patient involved. We plan to disseminate results to the study participants and all the villagers interested in the study in participating villages at the end of the study (currently March 2022). If restrictive measures against the gathering of people are no longer in place, dissemination is

planned to be held in the open air and in the presence of each village chief, healthpost representatives, and the *Badjanou Gokh*. In addition, restitution workshops are planned to be organised at the sanitary district and regional level and to involve administrative and sanitary authorities. Lastly, the main findings from the study are planned to be complied in a document distributed at sub-national and national levels to the administrative and sanitary authorities.

Ethics and dissemination

COVID-19 is currently (as of February 2021) spreading relatively slowly in SSA although a sharp increase in its spread cannot be excluded. Given the current context, the present ongoing longitudinal study protocol aims to provide data on the attitudinal, behavioural and economic consequences of the disease in a rural area in Senegal at a time when very few data are available. Since rural areas may likely be seen as safe refuges, our study collects data from heads of rural households, their wives (in charge of managing the household) and relatives who leave cities to temporarily live in these households, specifically because of the COVID-19 pandemic. The study protocol was approved by the Senegalese National Ethical Committee for Research in Health (131/MSAS/CNERS/Sec) and received authorisation from the Senegalese Ministry of Health (619/MSAS/DPRS/DR) and the French Commission on Information Technology and Liberties (CNIL 2220771).

To conclude, this ongoing study benefits greatly from close previously established research relationships between the researchers and the interviewers involved. Now that data collection for the first wave is nearing completion, and that data collection has been proven to be feasible despite COVID-19 restrictions, we believe that the primary benefit of our longitudinal design will be to provide data which could help to analyse evolutions in risk perceptions, attitudes, and preventive behaviours of the disease, as well as its economic impact on everyday lives. In the

unprecedented context of the COVID-19 pandemic, the generalizability of the study's results needs to be explored.

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Figure 1. Multivariable Poisson regression at the district level and residual dependence plot (n=79).

Note: Outcome: number of confirmed COVID-19 cases at the healthcare district level (data accessed on November 26, 2020: http://www.sante.gouv.sn/Pr%2525C3%2525A9sentation/coronavirus-informations-officielles-et-quotidiennes-du-msas). Offset: total population of the healthcare district. Covariates: Urbanization rates (%), Poverty index (%), and Rates of people aged 50 and older (%).

Figure 2. Number of COVID-19 confirmed cases at the department level (n=45)

Source: http://www.sante.gouv.sn/Pr%2525C3%2525A9sentation/coronavirus-informations-officielles-et-quotidiennes-du-msas; data accessed on November 26, 2020.

Note: The administrative 'department' of Fatick covers several healthcare districts, including the Niakhar healthcare district).

Figure 3. Study flow diagram

Note: Mobile phone numbers provided by community health workers (Badjanou Gokh). 500 surveyed households were expected to participate by the end of the third wave of data collection (scheduled for mid-2021), given a 90% response rate for the first wave and a 15% attrition rate at each subsequent wave.

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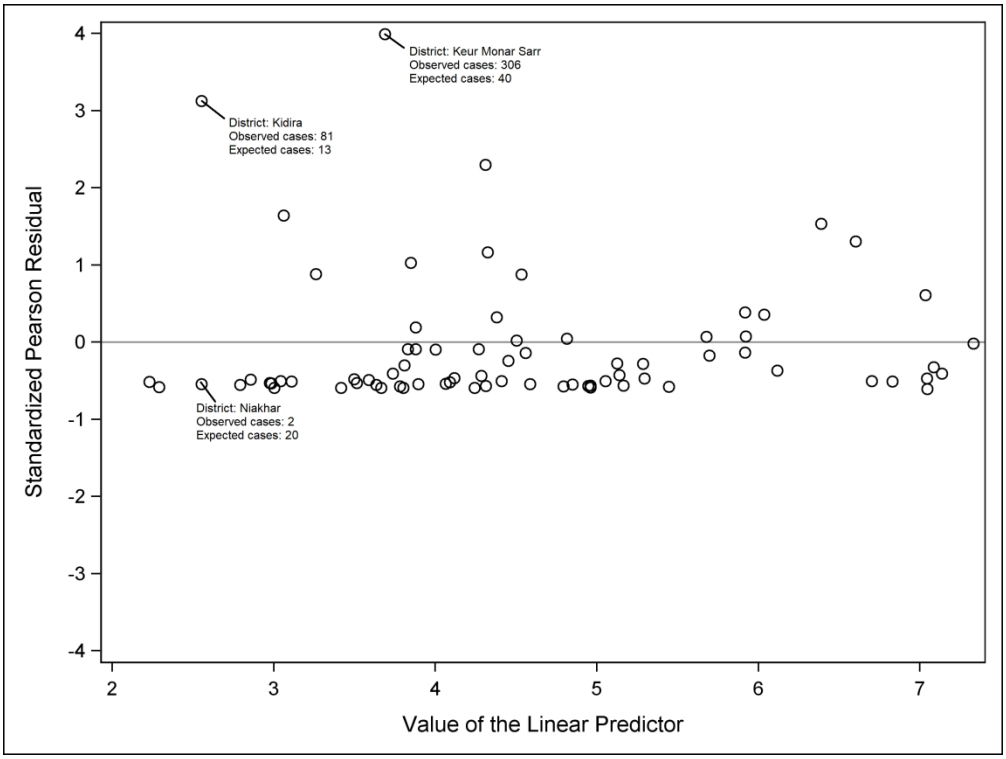

Figure 1. Multivariable Poisson regression at the district level and residual dependence plot (n=79).

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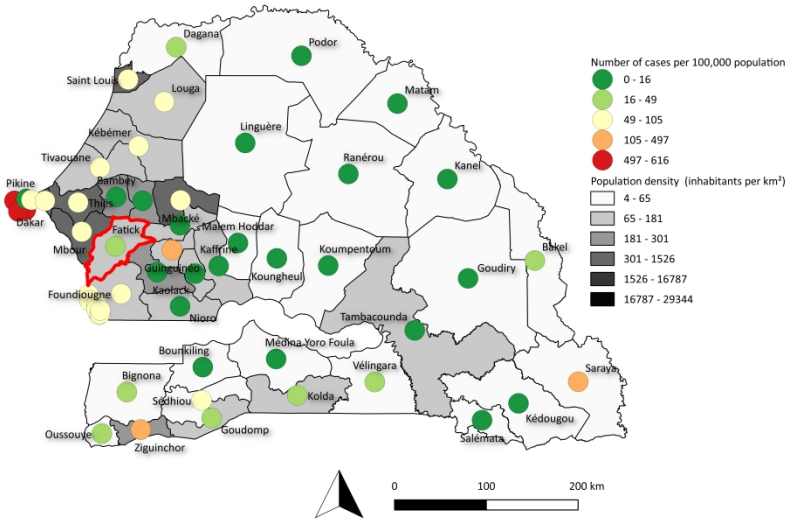

Figure 2. Number of COVID-19 confirmed cases at the department level (n=45)

593x419mm (300 x 300 DPI)

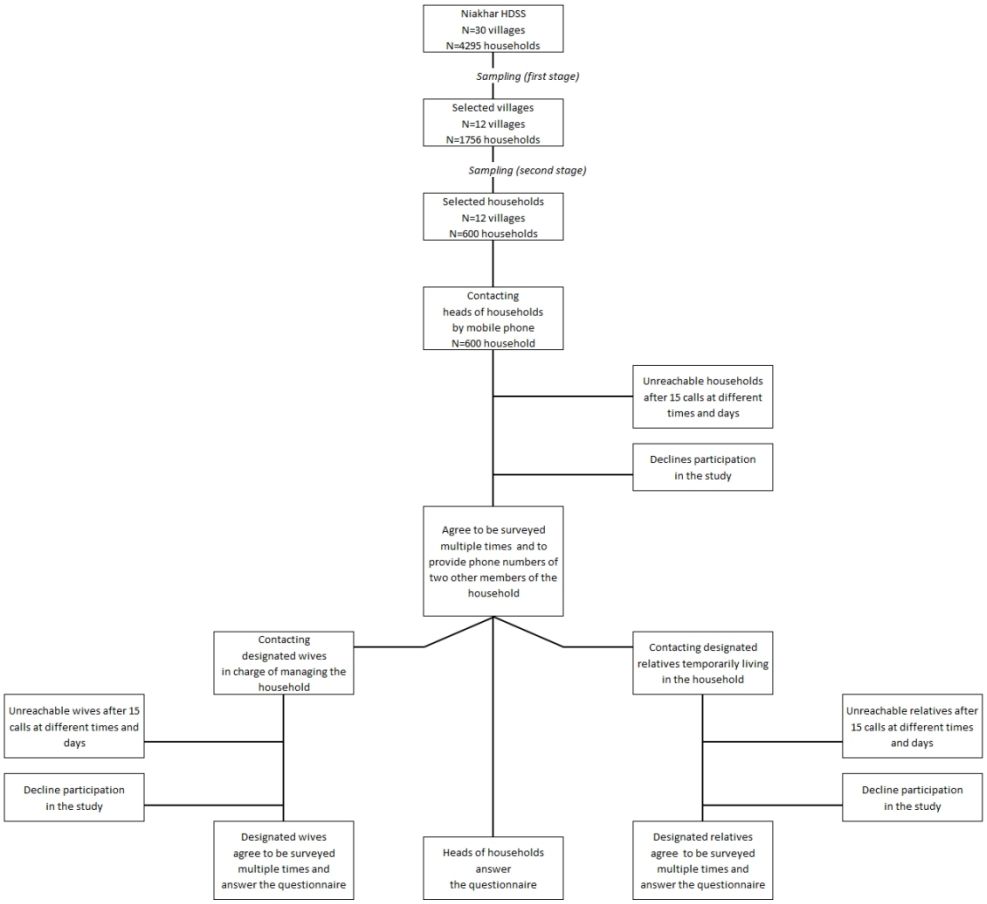

Figure 3. Study flow diagram

107x98mm (300 x 300 DPI)

Chef de famille : A PROPOS DU CORONAVIRUS…

C1. Avez-vous déjà entendu parler du Coronavirus ?

❑ 1. Oui ❑ 2. Non ➔ **Aller à la question IC1**

C2. Quand avez-vous appris qu'il y a une épidémie de Coronavirus ?

❑ 1. Quand l'épidémie était en Chine ou en Asie
❑ 2. Quand l'épidémie est arrivée en Europe
❑ 3. Quand l'épidémie est arrivée en Afrique
❑ 4. Quand l'épidémie est arrivée au Sénégal
❑ 5. Autre : _____

C3. Comment avez-vous appris qu'il y a une épidémie de Coronavirus ?

❑ 1. Par la radio ou la télévision
❑ 2. Par Internet
❑ 3. Par des membres de la famille en ville
❑ 4. Par des voisins
❑ 5. Par le chef du village
❑ 6. Par le Centre de santé
❑ 7. Par votre représentant religieux (l'imam ou le curé)
❑ 8. Par les relais communautaires
❑ 9. Par les Badienou Gokh
❑ 10. Autre : _____

C4. Avez-vous accès à Internet ?

❑ 1. Très facilement ❑ 2. Plutôt facilement ❑ 3. Plutôt difficilement ❑ 4. Très difficilement

C5. Si C4=1 à 3 : Est-ce que vous allez sur Internet pour avoir des informations sur le Coronavirus ?

❑ 1. Oui, tous les jours
❑ 2. Oui, quelques fois par semaine
❑ 3. Oui, de temps en temps
❑ 4. Non, jamais

C6. Etes-vous inquiet qu'un membre de votre cuisine attrape le coronavirus ?

❑ 1. Très inquiet ❑ 2. Plutôt inquiet ❑ 3. Plutôt pas inquiet ❑ 4. Pas inquiet du tout

C7. Avez-vous changé vos habitudes pour éviter que le Coronavirus arrive dans votre cuisine ?

❑ 1. Oui ❑ 2. Non

C8. Est-ce que le Chef du village a pris des mesures pour éviter que les habitants attrapent le Coronavirus ?

❑ 1. Oui ❑ 2. Non

↳ **Lesquelles ?** _____

C9. Est-ce que le Centre de santé a pris des mesures pour éviter que les habitants attrapent le Coronavirus ?

❑ 1. Oui ❑ 2. Non

↳ **Lesquelles ?** _____

C10. Pour vous-même, pensez-vous que votre risque d'attraper le Coronavirus est ?

- ❑ 1.Très faible
- ❑ 2.Plutôt faible
- ❑ 3.Plutôt élevé
- ❑ 4.Très élevé

C11. Par rapport aux hommes de votre âge, est-ce que vous pensez que votre risque d'attraper le Coronavirus est ?

- ❑ 1.Beaucoup moins importants que pour les autres hommes de mon âge
- ❑ 2.Moins importants que pour les autres hommes de mon âge
- ❑ 3.Ni plus ni moins importants que pour les autres hommes de mon âge
- ❑ 4.Plus importants que pour les autres hommes de mon âge
- ❑ 5.Beaucoup plus importants que pour les autres hommes de mon âge

C13A. Si vous ou un membre de votre famille attrapait le Coronavirus, où iriez-vous pour les soins ?

❑ 1. Poste de Sante ❑ 2. Guérisseur ❑ 3. Autre ; Préciser_____

C13B. Pensez-vous à un médicament pour soigner le coronavirus ?

❑ 1. Oui ❑ 2. Non

C13C. Si oui, lequel ? _____.

C14. En général, craignez-vous d'acheter de faux médicaments ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C15. En général, êtes-vous réticent à l'idée de vous faire vacciner ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C16. Si un vaccin contre le Coronavirus était disponible et gratuit, est-ce que vous voudriez vous faire vacciner ?

❑ 1. Oui, certainement ❑ 2. Oui, probablement ❑ 3. Non, probablement pas ❑ 4. Non, certainement pas

Si C16=3ou4 : C16A. Pour quelles raisons ne vous feriez-vous pas vacciner ?

- ❑ 1. Vous êtes contre la vaccination en général
- ❑ 2. Vous pensez qu'un vaccin élaboré dans l'urgence est trop dangereux
- ❑ 3. Vous pensez que c'est inutile parce que le COVID-19 est peu dangereux
- ❑ 4. Autre : _____

C17. Connaissez-vous des personnes dans votre famille, ou parmi vos amis ou connaissances, qui sont, ou qui ont été malades du Coronavirus ?

❑ 1. Oui, dans la famille ❑ 2. Oui, parmi les amis ou connaissances

❑ 3. Oui, à la fois dans la famille et parmi les amis ou connaissances ❑ 3. Non

C18. Si C17=1,3 : Est-ce qu'il s'agit de personnes qui vivent actuellement avec vous ?

❑ 1. Oui ❑ 2. Non

C19. Selon vous, est-ce que le couvre-feux dans le bassin de Niakhar est nécessaire pour limiter l'épidémie de Coronavirus ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C20. Selon vous, est-ce que le couvre-feux dans les villes permet de limiter l'épidémie de Coronavirus ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C21. Selon vous, qu'est-ce qui est préférable ?

❑ 1. Imposer le couvre-feu seulement dans les zones où il y a des malades du Coronavirus

❑ 2. Imposer le couvre-feu dans tout le Sénégal pour que tous les citoyens vivent la même chose

❑ 3. Ne pas imposer de couvre-feu du tout parce qu'il y a très peu de malades au Sénégal

C22. Selon vous, dans combien de temps est-ce que l'épidémie de Coronavirus sera terminée au Sénégal ? (en mois ou en semaines) ? |__|__| mois **OU** |__|__| semaines

QUELLE EST VOTRE PERCEPTION DES RISQUES DE CORONAVIRUS ?

PR1. A quel point la possibilité d'attraper le Coronavirus vous inquiète-t-elle ?
Donnez une note entre 0 et 10 : la note 0 signifie que ça ne vous inquiète pas du tout, et la note 10 que ça vous inquiète énormément.

0	1	2	3	4	5	6	7	8	9	10

PR2. Selon vous, quelle est la contagiosité du Coronavirus, c'est-à-dire la facilité avec laquelle ce virus peut se transmettre d'une personne à l'autre ?
Donnez une note entre 0 et 10 : la note 0 signifie que ça le Coronavirus est très peu contagieux et la note 10 qu'il est vraiment très contagieux.

0	1	2	3	4	5	6	7	8	9	10

PR3. Selon vous, quelle est la gravité du Coronavirus ?
Donnez une note entre 0 et 10 : la note 0 signifie qu'attraper le Coronavirus n'est pas du tout grave et la note 10 que c'est vraiment très grave.

0	1	2	3	4	5	6	7	8	9	10

PR4. Selon vous, sur 100 personnes qui attrapent le Coronavirus, combien d'entre elles pourraient mourir des suites de la maladie ?
Donnez un nombre entre 0 et 100 : /__/__/__/ personnes

ET POUR LE PALUDISME ?

PR1BIS. A quel point la possibilité d'attraper le paludisme vous inquiète-t-il ?
Donnez une note entre 0 et 10 : la note 0 signifie que ça ne vous inquiète pas du tout, et la note 10 que ça vous inquiète énormément.

0	1	2	3	4	5	6	7	8	9	10

PR3BIS. Selon vous, quelle est la gravité du paludisme ?
Donnez une note entre 0 et 10 : la note 0 signifie qu'attraper le paludisme n'est pas du tout grave et la note 10 que c'est vraiment très grave.

0	1	2	3	4	5	6	7	8	9	10

PR4BIS. Selon vous, sur 100 personnes qui attrapent le paludisme, combien d'entre elles pourraient mourir des suites de la maladie ?
Donnez un nombre entre 0 et 100 : /__/__/__/ personnes

QUEL IMPACT DU CORONAVIRUS SUR VOTRE CUISINE ?

IC1. Combien de personnes vivent actuellement dans votre cuisine, y compris vous-même ?

/__/__/__/ personnes

IC2. Est-ce que des personnes qui <u>vivent avec vous actuellement</u> sont venus vous rejoindre à cause du Coronavirus ou du couvre-feu ?

- ❑ 1. Oui, à cause du Coronavirus
- ❑ 2. Non, pour les récoltes ou le travail de la ferme
- ❑ 3. Non, personne n'est venu nous rejoindre ➔ Aller directement à la question IC7

↳ **IC3. Si oui, combien ?** /__/__/__/ personnes

Combien d'adultes ? /__/__/__/ adultes

Combien d'enfants de moins de 15 ans ? /__/__/__/ enfants

IC4. Quand ces personnes sont arrivées dans votre cuisine, avez-vous craint qu'elles soient malades du Coronavirus sans le savoir ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

IC5. Qui sont ces personnes qui sont venus vous rejoindre et sont-elles toujours là ? Les questions suivantes

Personne 1 (adulte principal) :

A. Est-ce qu'il s'agit d'un homme ou d'une femme ? ❑ 1. Homme ❑ 2. Femme

B. Quel est son âge ? |__|__| ans

C. D'où venait cette personne ? _____

D. Quand cette personne est-elle arrivée ? (ou depuis combien de temps est-elle là ?)

Arrivée le |__|__| **OU** présente depuis |__|__| mois / |__|__| semaines

E. Est-ce que cette personne est étudiante ?

❑ 1. Oui ❑ 2. Non

F. Est-ce que cette personne avait un travail ou une activité économique avant de vous rejoindre ?

❑ 1. Oui ❑ 2. Non

↳ **F1. Quelle était son activité principale (celle qui lui prend le plus de votre temps) ?** ____

_____

F2. Est-ce que cette personne aidait la cuisine en envoyant de l'argent ?

❑ 1. Oui, régulièrement ❑ 2. Oui, quand elle le pouvait ❑ 2. Non

G. Est-ce que cette personne est arrivée <u>seule</u> dans votre cuisine ?

❑ 1. Oui ❑ 2. Non

↳ **G1. Combien d'adultes de 15 ans et plus l'accompagnait ?**

/__/__/

G2. Pour chaque adulte, quel est le lien de parenté avec la Personne 1 ? _____

G3. Combien d'enfants de moins de 15 ans l'accompagnait ?

/__/__/

G4. Quel âge ont les enfants ? /__/__/ /__/__/ .....

<u>H. Est-ce que d'autres adultes, seuls ou accompagnés de leurs conjoints et enfants, sont venus vous rejoindre ?</u>

❑ 1. Oui ❑ 2. Non

<u>Pour chaque adulte</u>, remplir une nouvelle fiche « Personne 2 » si d'autres sont présents

IC6. Est-ce que des personnes qui <u>étaient venues vous rejoindre</u> à cause du Coronavirus sont reparties dans leur vie habituelle ?

❑ 1. Oui ❑ 2. Non

↳ **Si oui, combien ?** /__/__/__/ personnes

.....Pourquoi sont-elles reparties ?

❑ 1. La menace du Coronavirus était moins forte qu'on l'avait craint

❑ 2. Autre : _____

Personne 1 (adulte principal) :

A. Est-ce qu'il s'agit d'un homme ou d'une femme ? ❑ 1. Homme ❑ 2. Femme

B. Quel est son âge ? |__|__| ans

C. Combien de temps cette personne est-elle restée dans votre cuisine ?

D. Est-ce que cette personne est étudiante ?

❑ 1. Oui ❑ 2. Non

E. Où est reparti cette personne ? _____

F. Pourquoi est-ce que cette personne est repartie ?

❑ 1. **La menace du Coronavirus était moins forte qu'on l'avait craint**

❑ 2. **Autre :** _____

F. Est-ce que cette personne a un travail ou une activité économique qu'elle a retrouvé ?

❑ 1. Oui ❑ 2. Non

↳ **F1. Quelle est son activité principale (celle qui lui prend le plus de votre temps) ?** ____

_____

F2. Actuellement, est-ce que cette personne aide la cuisine en envoyant de l'argent ?

❑ 1. Oui, régulièrement ❑ 2. Oui, quand elle le peut ❑ 2. Non

F2. Est-ce que cette personne aidait d'avantage la cuisine avant le Coronavirus ?

❑ 1. Oui ❑ 2. Non

G. Est-ce que cette personne est repartie seule ?

❑ 1. Oui ❑ 2. Non

↳ **G1. Combien d'adultes de 15 ans et plus l'accompagnait ?**

/__/__/

G2. Pour chaque adulte, quel est le lien de parenté avec la Personne 1 ? _____

G2. Combien d'enfants de moins de 15 ans l'accompagnait ?

/__/__/

G3. Quel âge ont les enfants ? /__/__/ /__/__/ .....

<u>H. Est-ce que d'autres adultes, seuls ou accompagnés de leurs conjoints et enfants, sont venus vous rejoindre ?</u>

❑ 1. Oui ❑ 2. Non

<u>Pour chaque adulte</u>, remplir une nouvelle fiche « Personne 2 » si d'autres sont présents

IC7. Est-ce que la vie dans votre cuisine est plus compliquée à cause du Coronavirus ?

- ❑ 1. Oui, parce que nous sommes plus nombreux dans la cuisine
- ❑ 2. Oui, parce qu'il est difficile de vendre notre production au marché
- ❑ 3. Oui, parce qu'on a moins d'argent pour acheter ce dont on a besoin
- ❑ 4. Non, parce que nous sommes assez peu nombreux à vivre dans la cuisine
- ❑ 5. Non, parce que nous sommes plus nombreux à travailler
- ❑ 6. Autre : _____

IC8. Avez-vous reçu une aide du gouvernement parce que vous étiez en difficulté à cause du Coronavirus ?

❑ 1. Oui ❑ 2. Non

↳ **Si oui, ...**

IC9. Avez-vous reçu une aide du maire parce que vous étiez en difficulté à cause du Coronavirus ?

❑ 1. Oui ❑ 2. Non

↳ **Si oui, de quoi s'agissait-il ?** _____

IC10. Avez-vous reçu une aide de personnes de bonne volonté ou de vos voisins parce que vous étiez en difficulté à cause du Coronavirus ?

❑ 1. Oui ❑ 2. Non

↳ **Si oui, de quoi s'agissait-il ?** _____

IC11. Vous-même, avez-vous aidé une autre cuisine qui était en difficulté à cause du Coronavirus ?

❑ 1. Oui ❑ 2. Non

↳ **Si oui, de quoi s'agissait-il ?** _____

IC14. A propos du Coronavirus, on entend beaucoup de choses. Etes-vous d'accord avec les affirmations suivantes ?

IC104A. Le COVID-19, c'est surtout une maladie de blanc.

❑ 1. D'accord ❑ 2. Pas d'accord

IC14B. Le COVID-19, c'est surtout une maladie des villes.

❑ 1. D'accord ❑ 2. Pas d'accord

IC14C. Le COVID-19, c'est juste une grippe.

❑ 1. D'accord ❑ 2. Pas d'accord

IC104D. Le COVID-19, c'est une punition divine.

❑ 1. D'accord ❑ 2. Pas d'accord

IC14E. On peut se protéger ou guérir du COVID-19 en mangeant certains aliments (ail, gingembre, citron vert…).

❑ 1. D'accord ❑ 2. Pas d'accord

IC14F. On peut se protéger ou guérir du COVID-19 grâce à la prière.

❑ 1. D'accord ❑ 2. Pas d'accord

IC104G. On peut se protéger ou guérir du COVID-19 grâce à la médecine traditionnelle.

❑ 1. D'accord ❑ 2. Pas d'accord

IC14H. On peut se protéger ou guérir du COVID-19 grâce à des antibiotiques.

❑ 1. D'accord ❑ 2. Pas d'accord

IC14I. Le COVID-19 se transmet par les moustiques.

❑ 1. D'accord ❑ 2. Pas d'accord

IC14J. Le COVID-19 se transmet par l'air.

❑ 1. D'accord ❑ 2. Pas d'accord

IC14K. Le COVID-19 se transmet par les ondes 5G.

❑ 1. D'accord ❑ 2. Pas d'accord

IC14L. Le COVID-19 disparaît au soleil ou quand il fait chaud.

❑ 1. D'accord ❑ 2. Pas d'accord

POUR TERMINER…

D1. Comment vous sentez-vous aujourd'hui, sur une échelle de 0 à 10 (indiquez votre réponse entre 0 (Tout à fait mal) et 10 (Tout à fait bien)

Tout à fait mal — Tout à fait bien

0 1 2 3 4 5 6 7 8 9 10

D2. Quel est votre statut matrimonial ?

- ❑ 1. Marié(e)
- ❑ 2. Célibataire
- ❑ 3. Veuf(ve)
- ❑ 4. Divorcé(e)

D3. Si vous êtes marié(e), êtes-vous dans une union…

- ❑ 1. Polygame
- ❑ 2. Monogame
- ❑ 3. Non concerné (non marié)

D4. Est-ce que votre (première) épouse est inquiète qu'un membre de votre cuisine attrape le coronavirus ?

❑ 1. Très inquiète ❑ 2. Plutôt inquiète ❑ 3. Plutôt pas inquiète ❑ 4. Pas inquiète du tout

D5. Comment votre (première) épouse voit-elle son risque d'attraper le Coronavirus ? Est-ce que pour elle, il est ?

- ❑ 1.Très faible
- ❑ 2.Plutôt faible
- ❑ 3.Plutôt élevé
- ❑ 4.Très élevé

D6. Par rapport aux femmes de son âge, comment votre (première) épouse voit-elle son risque d'attraper le Coronavirus est :

- ❑ 1.Beaucoup moins importants que pour les autres femmes de son âge
- ❑ 2.Moins importants que pour les autres femmes de son âge
- ❑ 3.Ni plus ni moins importants que pour les autres femmes de son âge
- ❑ 4.Plus importants que pour les autres femmes de son âge
- ❑ 5.Beaucoup plus importants que pour les autres femmes de son âge

D7. Combien d'enfants avez-vous ? |__|__|

D8. A propos des enfants, êtes-vous d'accord pour qu'ils retournent à l'école ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

Si D8=3ou4, Pourquoi ? _____

D9. Vous-même, êtes-vous allé à l'école publique (quelquefois appelée école « française ») ?

❑ 1. Oui ❑ 2. Non

↳ **Jusqu'à quelle classe ? _____ OU Jusqu'à quel âge ? _____ OU Combien d'années ? _____**

D10. Etes-vous allée à l'école coranique ?

❑ 1. Oui ❑ 2. Non

↳ **Pendant combien d'années ? _____**

D11. Quelle est votre activité principale (celle qui vous prend le plus de votre temps) : _____

D12. Dans cette activité, vous travaillez comme : (une seule réponse possible)

❑ 1. Fonctionnaire
❑ 2. Salarié avec un contrat écrit
❑ 3. Salarié avec un accord oral
❑ 4. Indépendant à votre compte et sans employé
❑ 5. Entrepreneur ou patron, avec employé(s)
❑ 6. Apprenti
❑ 7. Aide familiale

D13. Si, au cours des 12 derniers mois, vous n'avez pas travaillé et vous n'avez pas eu d'activité économique, quelle est votre situation actuelle ?

❑ 1. En recherche d'emploi
❑ 2. Personne âgée ne travaillant plus/ retraité(e)
❑ 3. Etude/ formation
❑ 4. Invalidité/ handicap permanent/ longue maladie
❑ 5. Autre sans occupation (personne au foyer)

Epouse en charge : A PROPOS DU CORONAVIRUS…

C1. Avez-vous déjà entendu parler du Coronavirus ?

❑ 1. Oui ❑ 2. Non ➔ **Aller à la question IC1**

C3. Est-ce que vous allez sur Internet pour avoir des informations sur le Coronavirus ?

❑ 1. Oui, tous les jours
❑ 2. Oui, quelques fois par semaine
❑ 3. Oui, de temps en temps
❑ 4. Non, jamais

C4. Avez-vous acheté des masques au cours des 2 dernières semaines ? (plusieurs réponses possibles)

❑ 1. Oui, combien ? _____
❑ 2. Non, on a bénéficié de la distribution de masques
❑ 2. Non, on en a fabriqué nous-mêmes
❑ 3. Non et on n'en porte pas

C5. Avez-vous acheté du gel hydroalcolique au cours des 2 dernières semaines ?

❑ 1. Oui
❑ 2. Non, mais j'aimerais en trouver
❑ 2. Non et je n'en ressens pas le besoin

C6. Actuellement, êtes-vous inquiète qu'un membre de votre cuisine attrape le coronavirus ?

❑ 1. Très inquiète ❑ 2. Plutôt inquiète ❑ 3. Plutôt pas inquiète ❑ 4. Pas inquiète du tout

C7. Avez-vous changé vos habitudes pour éviter que le Coronavirus arrive dans votre cuisine ? (plusieurs réponses possibles)

❑ 1. Vous n'avez rien changé à vos habitudes
❑ 2. Chacun doit se laver les mains à chaque fois que vous revenez à la cuisine
❑ 3. Chacun doit se laver les mains seulement quand vous revenez du marché ou du magasin
❑ 4. Chacun doit porter un masque pour aller au marché ou au magasin
❑ 5. Vous utilisez du désinfectant pour nettoyer la cuisine
❑ 6. Autre : _____

C8. Pour vous-même, pensez-vous que votre risque d'attraper le Coronavirus est ?

❑ 1.Très faible
❑ 2.Plutôt faible
❑ 3.Plutôt élevé
❑ 4.Très élevé

C9. Par rapport aux femmes de votre âge, est-ce que vous pensez que votre risque d'attraper le Coronavirus est ?

❑ 1.Beaucoup moins importants que pour les autres femmes de mon âge
❑ 2.Moins importants que pour les autres femmes de mon âge
❑ 3.Ni plus ni moins importants que pour les autres femmes de mon âge
❑ 4.Plus importants que pour les autres femmes de mon âge
❑ 5.Beaucoup plus importants que pour les autres femmes de mon âge

C10. Est-ce que des personnes qui <u>vivent avec vous actuellement</u> sont venus vous rejoindre à cause du Coronavirus ?

❑ 1. Oui, à cause du Coronavirus
❑ 2. Non, pour les récoltes ou le travail de la ferme
❑ 3. Non, personne n'est venu nous rejoindre

Si C10=1,2 ou 3 : C10A. Quand ces personnes sont arrivées dans votre cuisine, avez-vous craint que certaines d'entre elles soient malades du Coronavirus sans le savoir ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C11. Avez-vous pris des précautions pour éviter le Coronavirus dans votre cuisine ?

❑ 1. Oui ❑ 2. Non

↳ **Si oui, lesquelles ?** _____

C12. Si vous ou un membre de votre famille attrapait le Coronavirus, où iriez-vous pour les soins ?

❑ 1. Poste de Sante ❑ 2. Guérisseur ❑ 3. Autre ; Préciser_____

C13. Pensez-vous à un médicament pour soigner le coronavirus ?

❑ 1. Oui ❑ 2. Non

C13A. Si oui, lequel ? _____.

C14. En général, craignez-vous d'acheter de faux médicaments ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C15. En général, êtes-vous réticente à l'idée de vous faire vacciner ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C16. Si un vaccin contre le Coronavirus était disponible et gratuit, est-ce que vous voudriez vous faire vacciner ?

❑ 1. Oui, certainement ❑ 2. Oui, probablement ❑ 3. Non, probablement pas ❑ 4. Non, certainement pas

Si C16=3ou4 : C16A. Pour quelles raisons ne vous feriez-vous pas vacciner ?

❑ 1. Vous êtes contre la vaccination en général
❑ 2. Vous pensez qu'un vaccin élaboré dans l'urgence est trop dangereux
❑ 3. Vous pensez que c'est inutile parce que le COVID-19 est peu dangereux
❑ 4. Autre : _____

C17. Si un vaccin contre le Coronavirus était disponible et gratuit, est-ce que vous voudriez faire vacciner les enfants ?

❑ 1. Oui, certainement ❑ 2. Oui, probablement ❑ 3. Non, probablement pas ❑ 4. Non, certainement pas

C18. Connaissez-vous des personnes dans votre famille, ou parmi vos amis ou connaissances, qui sont, ou qui ont été malades du Coronavirus ?

❑ 1. Oui, dans la famille ❑ 2. Oui, parmi les amis ou connaissances
❑ 3. Oui, à la fois dans la famille et parmi les amis ou connaissances ❑ 3. Non

C19. Si C18=1 à 3 :, est-ce qu'il s'agit de personnes qui vivent actuellement avec vous ?

❑ 1. Oui ❑ 2. Non

↳ **C19.A. Quel est votre lien de parenté avec cette ou ces personnes ?** _____

C19.B. Avez-vous pris des précautions pour éviter d'être contaminés à votre tour par le Coronavirus ?

❑ 2. Non, et personne l'a attrapé dans la cuisine

❑ 2. Non, mais une ou plusieurs personnes de la cuisine ont attrapé le Coronavirus

❑ 1. Oui : Lesquelles ? _____

C19.C. Est-ce que la ou les personnes malades sont allées dans un centre de traitement ?

❑ 1. Oui, toutes sont allées dans un centre de traitement

❑ 2. Non, certaines ont refusé d'aller dans un centre de traitement

❑ 2. Non, aucune n'est allée dans un centre de traitement

C19.D. Est-ce que la ou les personnes malades sont aujourd'hui guéries ?

❑ 1. Oui, toutes ❑ 2. Non, certaines ont des séquelles ❑ 2. Non, certaines sont décédées

↳ **C19.F. Comment est-ce que cette/ces personnes ont été soignées ?**

❑ 1. Toutes par Chloroquine

❑ 1. Certaines par Chloroquine et d'autres par médecine traditionnelle

❑ 2. Toutes par médecine traditionnelle

❑ 3. Autre : _____

C20. Selon vous, est-ce que le couvre-feux <u>dans le bassin de Niakhar</u> est nécessaire pour limiter l'épidémie de Coronavirus ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C21. Selon vous, est-ce que le couvre-feux <u>dans les villes</u> permet de limiter l'épidémie de Coronavirus ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C22. Selon vous, qu'est-ce qui est préférable ?

❑ 1. Imposer le couvre-feu seulement dans les zones où il y a des malades du Coronavirus

❑ 2. Imposer le couvre-feu dans tout le Sénégal pour que tous les citoyens vivent la même chose

❑ 3. Ne pas imposer de couvre-feu du tout parce qu'il y a peu de malades au Sénégal

C23. Selon vous, dans combien de temps est-ce que l'épidémie de Coronavirus sera terminée au Sénégal ? (en mois ou en semaines)

|__|__| mois **OU** |__|__| semaines

QUELLE EST VOTRE PERCEPTION DES RISQUES DE CORONAVIRUS ?

PR1. A quel point la possibilité d'attraper le Coronavirus vous inquiète-t-elle ?
Donnez une note entre 0 et 10 : la note 0 signifie que ça ne vous inquiète pas du tout, et la note 10 que ça vous inquiète énormément.

0	1	2	3	4	5	6	7	8	9	10

PR2. Selon vous, quelle est la contagiosité du Coronavirus, c'est-à-dire la facilité avec laquelle ce virus peut se transmettre d'une personne à l'autre ?
Donnez une note entre 0 et 10 : la note 0 signifie que ça le Coronavirus est très peu contagieux et la note 10 qu'il est vraiment très contagieux.

0	1	2	3	4	5	6	7	8	9	10

PR3. Selon vous, quelle est la gravité du Coronavirus ?
Donnez une note entre 0 et 10 : la note 0 signifie qu'attraper le Coronavirus n'est pas du tout grave et la note 10 que c'est vraiment très grave.

0	1	2	3	4	5	6	7	8	9	10

PR4. Selon vous, sur 100 personnes qui attrapent le Coronavirus, combien d'entre elles pourraient mourir des suites de la maladie ?
Donnez un nombre entre 0 et 100 :

/__/__/__/ personnes

ET POUR LE PALUDISME ?

PR1BIS. A quel point la possibilité d'attraper le paludisme vous inquiète-t-il ?
Donnez une note entre 0 et 10 : la note 0 signifie que ça ne vous inquiète pas du tout, et la note 10 que ça vous inquiète énormément.

0	1	2	3	4	5	6	7	8	9	10

PR3BIS. Selon vous, quelle est la gravité du paludisme ?
Donnez une note entre 0 et 10 : la note 0 signifie qu'attraper le paludisme n'est pas du tout grave et la note 10 que c'est vraiment très grave.

0	1	2	3	4	5	6	7	8	9	10

PR4BIS. Selon vous, sur 100 personnes qui attrapent le paludisme, combien d'entre elles pourraient mourir des suites de la maladie ?
Donnez un nombre entre 0 et 100 :

/__/__/__/ personnes

QUEL IMPACT DU CORONAVIRUS SUR VOTRE CUISINE ?

IC1. Comment évaluez-vous l'impact de l'épidémie de Coronavirus sur votre vie personnelle en général ?

- ❑ 1. C'est très négatif
- ❑ 2. Il y a plus de mauvais que du bon
- ❑ 3. En fait, ça ne change pas grand chose par rapport à ma vie d'avant
- ❑ 4. Il y a plus de bon que de mauvais
- ❑ 5. C'est très positif

IC2. Comment évaluez-vous l'impact de l'épidémie de Coronavirus sur la cuisine ?

- ❑ 1. C'est très négatif
- ❑ 2. Il y a plus de mauvais que du bon
- ❑ 3. En fait, ça ne change pas grand chose par rapport à avant
- ❑ 4. Il y a plus de bon que de mauvais
- ❑ 5. C'est très positif

IC3. Est-ce qu'à cause du couvre-feu, il est plus difficile qu'avant d'acheter ce dont vous avez besoin ?

- ❑ 1. Oui, parce que les prix ont augmenté
- ❑ 2. Oui, parce qu'on trouve plus difficilement ce qu'on cherche
- ❑ 3. Oui, pour d'autres raisons ; Lesquelles : _____
- ❑ 4. Non

IC4. Est-ce qu'à cause du couvre-feu, il est plus difficile qu'avant de vendre votre production ?

- ❑ 1. Oui, parce que les gros marchés sont fermés
- ❑ 1. Oui, parce que vous n'arrivez pas à vendre vos produits au prix qu'ils devraient avoir
- ❑ 3. Oui, pour d'autres raisons ; Lesquelles : _____
- ❑ 4. Non

IC5. Actuellement, est-ce que c'est compliqué de nourrir tout le monde dans la cuisine ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

IC6. Si IC3=1à 3 : Selon vous, est-ce que vous avez ces difficultés à cause du Coronavirus ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

IC7. On entend beaucoup de choses à propos du Coronavirus. Etes-vous d'accord avec les affirmations suivantes ?

IC7A. Le COVID-19, c'est surtout une maladie de blanc.

❑ 1. D'accord ❑ 2. Pas d'accord

IC7B. Le COVID-19, c'est surtout une maladie des villes.

❑ 1. D'accord ❑ 2. Pas d'accord

IC7C. Le COVID-19, c'est juste une grippe.

❑ 1. D'accord ❑ 2. Pas d'accord

IC7D. Le COVID-19, c'est une punition divine.

❑ 1. D'accord ❑ 2. Pas d'accord

IC7E. On peut se protéger ou guérir du COVID-19 en mangeant certains aliments (ail, gingembre ...).

❑ 1. D'accord ❑ 2. Pas d'accord

IC7F. On peut se protéger ou guérir du COVID-19 grâce à la prière.

❑ 1. D'accord ❑ 2. Pas d'accord

IC7G. On peut se protéger ou guérir du COVID-19 grâce à la médecine traditionnelle.

❑ 1. D'accord ❑ 2. Pas d'accord

IC7H. On peut se protéger ou guérir du COVID-19 grâce à des antibiotiques.

❑ 1. D'accord ❑ 2. Pas d'accord

IC7I. Le COVID-19 se transmet par les moustiques.

❑ 1. D'accord ❑ 2. Pas d'accord

IC7J. Le COVID-19 se transmet par l'air.

❑ 1. D'accord ❑ 2. Pas d'accord

IC7K. Le COVID-19 se transmet par les ondes 5G.

❑ 1. D'accord ❑ 2. Pas d'accord

IC7L. Le COVID-19 disparaît au soleil ou quand il fait chaud.

❑ 1. D'accord ❑ 2. Pas d'accord

POUR TERMINER…

D1. Comment vous sentez-vous aujourd'hui, sur une échelle de 0 à 10 (indiquez votre réponse entre 0 (Tout à fait mal) et 10 (Tout à fait bien)

Tout à fait mal — Tout à fait bien

0 1 2 3 4 5 6 7 8 9 10

D2. Est-ce que votre mari est inquiet qu'un membre de votre cuisine attrape le Coronavirus ?

❑ 1. Très inquiet ❑ 2. Plutôt inquiet ❑ 3. Plutôt pas inquiet ❑ 4. Pas inquiet du tout

D3. Comment votre mari voit-il son risque d'attraper le Coronavirus ? Est-ce que pour lui, son risque est ?

❑ 1.Très faible
❑ 2.Plutôt faible
❑ 3.Plutôt élevé
❑ 4.Très élevé

D4. Par rapport aux hommes de son âge, comment votre mari voit-il son risque d'attraper le Coronavirus ? Est-ce que pour lui, son risque est ?

❑ 1.Beaucoup moins importants que pour les autres hommes de son âge
❑ 2.Moins importants que pour les autres hommes de son âge
❑ 3.Ni plus ni moins importants que pour les autres hommes de son âge
❑ 4.Plus importants que pour les autres hommes de son âge
❑ 5.Beaucoup plus importants que pour les autres hommes de son âge

D5. A propos des enfants, êtes-vous d'accord pour qu'ils retournent à l'école ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

Si D5=3ou4, Pourquoi ? _____

D6. Vous-même, êtes-vous allée à l'école publique (quelquefois appelée école « française ») ?

❑ 1. Oui ❑ 2. Non

↳ **Jusqu'à quelle classe ?** _____ **OU Jusqu'à quel âge ?** _____ **OU Combien d'années ?** _____

D7. Etes-vous allée à l'école coranique ?

❑ 1. Oui ❑ 2. Non

↳ **Pendant combien d'années ?** _____

Nouvel arrivant : A PROPOS DU CORONAVIRUS…

C1. Confirmez-vous que vous vivez actuellement dans la cuisine à cause du Coronavirus ?

❑ 1. Oui ❑ 2. Non

↳ **C1A. Quelle est la principale raison qui vous a poussé(e) à rejoindre la cuisine ?**

❑ 1. La peur d'attraper le Coronavirus
❑ 2. La peur de ne plus gagner assez d'argent pour vivre
❑ 3. Autre : _____

C2. Etes-vous étudiant ?

❑ 1. Oui ❑ 2. Non

↳ **C2A. Quelle est la principale raison qui vous a poussé(e) à rejoindre la cuisine ?**

❑ 1. La peur d'attraper le Coronavirus
❑ 2. La peur de ne plus gagner assez d'argent pour vivre
❑ 3. Autre : _____

Si C1=2 et C2=2, alors STOP.

C3. Est-ce que vous allez sur Internet pour avoir des informations sur le Coronavirus ?

❑ 1. Oui, tous les jours
❑ 2. Oui, quelques fois par semaine
❑ 3. Oui, de temps en temps
❑ 4. Non, jamais

C4. Quand vous êtes arrivé(e) dans la cuisine, est-ce que vous aviez-vous peur d'être malade du Coronavirus sans le savoir ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C5. A votre arrivée, est-ce que des précautions ont été prises pour éviter le Coronavirus ?

❑ 1. Oui ❑ 2. Non

↳ **C5.A. Est-ce que vous dormiez à l'écart des autres membres de la famille ?**

❑ 1. Oui ❑ 2. Non

C5.B. Est-ce que vous preniez vos repas à l'écart des autres membres de la famille ?

❑ 1. Oui ❑ 2. Non

C5.C. Au bout de combien de temps avez-vous pu vous joindre au reste de la famille ?

/__/__/ jours

C5.D. Est-ce que cette expérience a été difficile ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C6. Actuellement, êtes-vous inquiet qu'un membre de la cuisine attrape le coronavirus ?

❑ 1. Très inquiet ❑ 2. Plutôt inquiet ❑ 3. Plutôt pas inquiet ❑ 4. Pas inquiet du tout

C7. Pour vous-même, pensez-vous que votre risque d'attraper le Coronavirus est ?

❑ 1.Très faible
❑ 2.Plutôt faible
❑ 3.Plutôt élevé
❑ 4.Très élevé

C8. Par rapport aux hommes/femmes de votre âge, est-ce que vous pensez que votre risque d'attraper le Coronavirus est :

❑ 1.Beaucoup moins importants que pour les autres hommes/femmes de mon âge
❑ 2.Moins importants que pour les autres hommes/femmes de mon âge
❑ 3.Ni plus ni moins importants que pour les autres hommes/femmes de mon âge
❑ 4.Plus importants que pour les autres hommes/femmes de mon âge
❑ 5.Beaucoup plus importants que pour les autres hommes/femmes de mon âge

C9. Si vous ou un membre de votre famille attrapait le Coronavirus, où iriez-vous pour les soins ?

❑ 1. Poste de Sante ❑ 2. Guérisseur ❑ 3. Autre ; Préciser_____

C10. Pensez-vous à un médicament pour soigner le coronavirus ?

❑ 1. Oui ❑ 2. Non

C10A. Si oui, lequel ? _____.

C11. En général, craignez-vous d'acheter de faux médicaments ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C12. En général, êtes-vous réticent(e) à l'idée de vous faire vacciner ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C13. Si un vaccin contre le Coronavirus était disponible et gratuit, est-ce que vous voudriez vous faire vacciner ?

❑ 1. Oui, certainement ❑ 2. Oui, probablement ❑ 3. Non, probablement pas ❑ 4. Non, certainement pas

Si C16=3ou4 : C16A. Pour quelles raisons ne vous feriez-vous pas vacciner ?

❑ 1. Vous êtes contre la vaccination en général
❑ 2. Vous pensez qu'un vaccin élaboré dans l'urgence est trop dangereux
❑ 3. Vous pensez que c'est inutile parce que le COVID-19 est peu dangereux
❑ 4. Autre : _____

C14. Si un vaccin contre le Coronavirus était disponible et gratuit, est-ce que vous voudriez faire vacciner vos enfants ?

❑ 1. Oui, certainement ❑ 2. Oui, probablement ❑ 3. Non, probablement pas ❑ 4. Non, certainement pas

C16. Connaissez-vous des personnes dans votre famille, ou parmi vos amis ou connaissances, qui sont, ou qui ont été malades du Coronavirus ?

❑ 1. Oui, dans la famille ❑ 2. Oui, parmi les amis ou connaissances

❑ 3. Oui, à la fois dans la famille et parmi les amis ou connaissances ❑ 3. Non

C17. Selon vous, est-ce que le couvre-feux <u>dans le bassin de Niakhar</u> est nécessaire pour limiter l'épidémie de Coronavirus?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C18. Selon vous, est-ce que le couvre-feux <u>dans les villes</u> permet de limiter l'épidémie de Coronavirus ?

❑ 1. Oui, tout à fait ❑ 2. Oui, plutôt ❑ 3. Non, plutôt pas ❑ 4. Non, pas du tout

C19. Selon vous, qu'est-ce qui est préférable ?

❑ 1. Imposer le couvre-feu seulement dans les zones où il y a des malades du Coronavirus

❑ 2. Imposer le couvre-feu dans tout le Sénégal pour que tous les citoyens vivent la même chose

❑ 3. Ne pas imposer de couvre-feu du tout parce qu'il y a peu de malades au Sénégal

C20. Selon vous, dans combien de temps est-ce que l'épidémie de Coronavirus sera terminée ?
(en mois ou en semaines)

|__ |__ | mois **OU** |__ |__ | semaines

QUELLE EST VOTRE PERCEPTION DES RISQUES DE CORONAVIRUS ?

PR1. A quel point la possibilité d'attraper le Coronavirus vous inquiète-t-elle ?
Donnez une note entre 0 et 10 : la note 0 signifie que ça ne vous inquiète pas du tout, et la note 10 que ça vous inquiète énormément.

0	1	2	3	4	5	6	7	8	9	10

PR2. Selon vous, quelle est la contagiosité du Coronavirus, c'est-à-dire la facilité avec laquelle ce virus peut se transmettre d'une personne à l'autre ?
Donnez une note entre 0 et 10 : la note 0 signifie que ça le Coronavirus est très peu contagieux et la note 10 qu'il est vraiment très contagieux.

0	1	2	3	4	5	6	7	8	9	10

PR3. Selon vous, quelle est la gravité du Coronavirus ?
Donnez une note entre 0 et 10 : la note 0 signifie qu'attraper le Coronavirus n'est pas du tout grave et la note 10 que c'est vraiment très grave.

0	1	2	3	4	5	6	7	8	9	10

PR4. Selon vous, sur 100 personnes qui attrapent le Coronavirus, combien d'entre elles pourraient mourir des suites de la maladie ?
Donnez un nombre entre 0 et 100 : /__/__/__/ personnes

ET POUR LE PALUDISME ?

PR1BIS. A quel point la possibilité d'attraper le paludisme vous inquiète-t-il ?
Donnez une note entre 0 et 10 : la note 0 signifie que ça ne vous inquiète pas du tout, et la note 10 que ça vous inquiète énormément.

0	1	2	3	4	5	6	7	8	9	10

PR3BIS. Selon vous, quelle est la gravité du paludisme ?
Donnez une note entre 0 et 10 : la note 0 signifie qu'attraper le paludisme n'est pas du tout grave et la note 10 que c'est vraiment très grave.

0	1	2	3	4	5	6	7	8	9	10

PR4BIS. Selon vous, sur 100 personnes qui attrapent le paludisme, combien d'entre elles pourraient mourir des suites de la maladie ?
Donnez un nombre entre 0 et 100 : /__/__/__/ personnes

D1. Comment évaluez-vous l'impact de l'épidémie de Coronavirus sur votre vie personnelle en général ?

- ❑ 1. C'est très négatif
- ❑ 2. Il y a plus de mauvais que du bon
- ❑ 3. En fait, ça ne change pas grand chose par rapport à ma vie d'avant
- ❑ 4. Il y a plus de bon que de mauvais
- ❑ 5. C'est très positif

D2. Comment évaluez-vous l'impact de l'épidémie de Coronavirus sur la cuisine ?

- ❑ 1. C'est très négatif
- ❑ 2. Il y a plus de mauvais que du bon
- ❑ 3. En fait, ça ne change pas grand chose par rapport à avant
- ❑ 4. Il y a plus de bon que de mauvais
- ❑ 5. C'est très positif

D3. A propos du Coronavirus, on entend beaucoup de choses. Etes-vous d'accord avec les affirmations suivantes ?

D3A. Le COVID-19, c'est surtout une maladie de blanc.

❑ 1. D'accord ❑ 2. Pas d'accord

D3B. Le COVID-19, c'est surtout une maladie des villes.

❑ 1. D'accord ❑ 2. Pas d'accord

D3C. Le COVID-19, c'est juste une grippe.

❑ 1. D'accord ❑ 2. Pas d'accord

D3D. Le COVID-19, c'est une punition divine.

❑ 1. D'accord ❑ 2. Pas d'accord

D3E. On peut se protéger ou guérir du COVID-19 en mangeant certains aliments (ail, gingembre, citron vert…).

❑ 1. D'accord ❑ 2. Pas d'accord

D3F. On peut se protéger ou guérir du COVID-19 grâce à la prière.

❑ 1. D'accord ❑ 2. Pas d'accord

D3G. On peut se protéger ou guérir du COVID-19 grâce à la médecine traditionnelle.

❑ 1. D'accord ❑ 2. Pas d'accord

D3H. On peut se protéger ou guérir du COVID-19 grâce à des antibiotiques.

❑ 1. D'accord ❑ 2. Pas d'accord

D3I. Le COVID-19 se transmet par les moustiques.

❑ 1. D'accord ❑ 2. Pas d'accord

D3J. Le COVID-19 se transmet par l'air.

❑ 1. D'accord ❑ 2. Pas d'accord

D3K. Le COVID-19 se transmet par les ondes 5G.

❑ 1. D'accord ❑ 2. Pas d'accord

D3L. Le COVID-19 disparaît au soleil ou quand il fait chaud.

❑ 1. D'accord ❑ 2. Pas d'accord

POUR TERMINER…

D1. Comment vous sentez-vous aujourd'hui, sur une échelle de 0 à 10 (indiquez votre réponse entre 0 (Tout à fait mal) et 10 (Tout à fait bien)

Tout à fait mal — Tout à fait bien

0 1 2 3 4 5 6 7 8 9 10

D2. Selon vous, est-ce que le chef de ménage et sa (première) épouse sont inquiets qu'un membre de la cuisine attrape le Coronavirus ?

❑ 1. Très inquiets ❑ 2. Plutôt inquiets ❑ 3. Plutôt pas inquiets ❑ 4. Pas inquiets du tout

D3. Quel est votre statut matrimonial ?

❑ 1. Marié(e)
❑ 2. Célibataire
❑ 3. Veuf(ve)
❑ 4. Divorcé(e)

D4. Si vous êtes marié(e), êtes-vous dans une union…

❑ 1. Polygame
❑ 2. Monogame
❑ 3. Non concerné (non marié)

D5. Avez-vous des enfants ?

❑ 1. Oui ❑ 2. Non

D6. Si D4=1 : Combien ? _____ de quel(s) âge(s) ? _____

D7. Quelle est votre activité principale (celle qui vous prend le plus de votre temps) : _____

D8. Dans cette activité, vous travaillez comme : (une seule réponse possible)

❑ 1. Fonctionnaire
❑ 2. Salarié avec un contrat écrit
❑ 3. Salarié avec un accord oral
❑ 4. Indépendant à votre compte et sans employé
❑ 5. Entrepreneur ou patron, avec employé(s)
❑ 6. Apprenti
❑ 7. Aide familiale

D9. Est-ce que votre activité est dans le secteur ?

❑ 1. Des transports
❑ 2. De la pêche
❑ 3. Du tourisme
❑ 3. Non, un autre secteur

D10. Si, au cours des 12 derniers mois, vous n'avez pas travaillé et vous n'avez pas eu d'activité économique, quelle est votre situation actuelle ?

❑ 1. En recherche d'emploi
❑ 2. Personne âgée ne travaillant plus/ retraité(e)
❑ 3. Etude/ formation
❑ 4. Invalidité/ handicap permanent/ longue maladie
❑ 5. Autre sans occupation (personne au foyer)