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Tijan L. Bah
University of Navarra, NCID and NOVAFRICA

Catia Batista
Nova School of Business and Economics and NOVAFRICA

Flore Gubert
IRD, DIAL, PSL, U. Paris-Dauphine, CNRS, and Paris School of Economics

David McKenzie
Development Research Group, the World Bank

ISSN 2183-0843
Working Paper No 2107
April 2021
Revised in December 2021

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COVID-19 and Intentions to Migrate from The Gambia:

Survey Evidence and a Salience Experiment [#]

Tijan L. Bah, *University of Navarra, NCID and NOVAFRICA*
Catia Batista, *Nova School of Business and Economics and NOVAFRICA*
Flore Gubert, *IRD, DIAL, PSL, U. Paris-Dauphine, CNRS, and Paris School of Economics*
David McKenzie, *Development Research Group, the World Bank*

December 2021

Abstract

The COVID-19 pandemic has resulted in border closures in many countries and a sharp reduction in overall international mobility. However, this disruption of legal pathways to migration has raised concerns that potential migrants may turn to irregular migration routes as a substitute. We examine how the pandemic has changed intentions to migrate from The Gambia, the country with the highest pre-pandemic per-capita irregular migration rates in Africa. We use a large-scale survey conducted in 2019 and 2020 to ask about changes in intentions to migrate to Europe and to neighboring Senegal. We find the pandemic has reduced the intention to migrate to both destinations, with approximately one-third of young males expressing less intention to migrate. The largest reductions in migration intentions are for individuals who were unsure of their intent pre-pandemic, and for poorer individuals who are no longer able to afford the costs of migrating at a time when these costs have increased and their remittance income has fallen. We also randomly vary the salience of the COVID-19 pandemic before eliciting intentions to migrate. We find no impact of this added salience, which appears to be because knowledge of the virus, while imperfect, was already enough to inform migration decisions. Nevertheless, despite these decreases in intentions, the overall desire to migrate the backway to Europe remains high, highlighting the need for legal migration pathways to support migrants and divert them from the risks of backway migration.

Keywords: Migration intentions; COVID-19 Pandemic; Priming and Salience Experiments; Backway migration; The Gambia.
JEL Classification codes: F22, O15, J61, C93

[#] This work was supported by the European Union grant number AMIF-2017-AG-INFO 824432. Ethical approval was granted by the Nova School of Business and Economics on March 1, 2019. We thank the editor, two anonymous referees, and Moritz Meyer for helpful comments, and Vitor Cavalcante and Mam Jarra Njie for excellent research assistance.

1. Introduction

Irregular migration from Africa to Europe has become increasingly visible in recent years. Images of young African men on crowded rubber boats in the Mediterranean Sea cast a spotlight on the strong desire of many youth to migrate, and on the tragic consequences that can occur when these journeys through the "backway" go awry.

The COVID-19 global pandemic has resulted in travel bans, the shutting of consular services, and border closures in many countries (OECD, 2020). The pandemic has in this way disrupted legal pathways to international migration, and raised concerns that more people may turn to irregular or backway migration as a substitute (Yayboke, 2020; Sanchez and Achilli, 2020). Indeed, while European border agencies reported an initial dip in Mediterranean crossing, this seemed to pick up later in the year.[1] Despite further restrictions introduced by Maltese and Italian governments on disembarkation in their ports, migrants have continued to leave Libyan shores since the pandemic outbreak, and the number of people attempting the crossing from North Africa to Italy reached 34,000 in 2020, almost three times the number of irregular sea arrivals recorded in 2019.[2] Overall arrivals to Spain in 2020 also increased by 29% to 41,681 arrivals, although there was a diversion in the migration routes used. Arrivals to mainland Spain, Ceuta and Melilla via the Western Mediterranean route dropped to 18,656 arrivals, who were predominantly citizens from Algeria and Morocco, whereas arrivals to the Canary Islands kept accelerating during 2020, reaching 23,025 arrivals (two-thirds of which in the last quarter of 2020), mostly from Morocco, but also Mauritania, Senegal and The Gambia.[3] These facts alone do not provide a full picture of the COVID-19 impact on irregular migration flows, but they do suggest irregular migration attempts from Northern Africa to Europe through the Mediterranean Sea continue to be an issue, despite the border closures and travel bans.

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[1] See https://www.iom.int/news/covid-19-control-measures-gap-sar-capacity-increases-concern-about-invisible-shipwrecks [accessed 29 January, 2021].

[2] Mixed Migration Centre "Quarterly Mixed Migration Update Q4 2020: West Africa", January 2021. http://www.mixedmigration.org/resource/quarterly-mixed-migration-update-wa-q4-2020/ [accessed 29 January, 2021].

[3] See UNHCR data available at https://data2.unhcr.org/en/documents/download/84312 and FRONTEX data available at https://frontex.europa.eu/along-eu-borders/migratory-map/ [accessed 29 January, 2021].

Missing from this discussion has been information on how COVID-19 has affected the ability and intent of African men to migrate. Such data are rare, since another consequence of the pandemic was to shut down data collection efforts in most countries. We use a large-scale panel survey of Gambian households fielded in 2019 (pre-pandemic) and again in September and October 2020 (during the COVID-19 global pandemic) to examine how intentions to migrate of males aged 18 to 33 have changed due to COVID-19, directly asking about the effect of COVID-19. We take a comparative perspective, examining changes in intentions to migrate to Europe, and changes in intentions to migrate to neighboring Senegal. We provide a simple model to illustrate the main channels through which migration intentions will be affected, noting that the reduction in home income is likely to increase the desire to migrate, while lower income-earning opportunities and worsening health conditions abroad will act to reduce this desire, and higher costs and lower wealth may make liquidity constraints more binding. Our first empirical result is that the net effect has been to reduce the intention to migrate to Europe for 31 percent of youth, and to Senegal for 34 percent of youth; with fewer than 4 percent increasing this likelihood.

We then use our survey questions and model to examine the channels through which this reduction in migration intentions occurs, and to examine which youth have had their migration intentions most affected by the pandemic. We find the largest reduction in the intention to migrate for individuals who were uncertain about their migration intentions pre-COVID-19. For these youth, the expected utility of different destinations was not that different from one another, so that the reductions in earnings opportunities abroad and increase in migration costs would be enough to change their migration decision. In contrast, those who had little intention to migrate to begin with are less affected, while a small number of those who definitely wanted to migrate appear to have doubled-down on their decision and become even more likely to move. Our results also highlight the importance of liquidity constraints, as we find youth from poorer households and those who stop receiving remittances are more likely to have reduced their intention to migrate. The overall reduction in migration intentions is slightly larger for intentions to migrate to Senegal than for Europe, although liquidity constraints seem more important in explaining changes in intentions to migrate to Europe. These results suggest that the first-order effect on migration intentions is not something specific to irregular migration to Europe, but more general impacts of the pandemic on the ability and desire to move to any destination.

We also use a salience experiment and information experiment to examine whether further emphasizing the pandemic changes migration intentions. Priming or salience experiments have been used in social psychology and economics to bring an idea or concept to the top of mind when answering subsequent questions or carrying out a subsequent task. We randomize the ordering of modules in our survey, so that some respondents get asked about migration intentions before getting asked about COVID-19, and others get asked about COVID-19 first. A further group gets both shown an information video about COVID-19 and asking questions about the virus before getting asked migration intentions. We find that making COVID-19 more salient does not affect migration intentions, despite the strong impact of the pandemic on intentions to migrate discussed above. The reason appears to be that the virus was already very salient in people's minds, and knowledge of the virus, while imperfect, was perhaps enough to already well-informed migration decisions.

This paper contributes to a broader literature on how COVID-19 has affected migration. Several studies have examined how the occupations that immigrants typically work in have been affected differentially by the crisis, and the implications of this for immigrant unemployment (Borjas and Cassidy, 2020; Fasani and Mazza, 2020) and the exposure of natives to COVID-19 health risks (Bossavie et al, 2020). Efforts to examine impacts in migrant-sending countries have been hampered by a shortage of data. One approach has been to use convenience-based internet samples to provide some basic summary information on migration intentions, as was done by IOM (2020), who report Central Americans and Mexicans saying they had postponed migration plans or changed their minds about migrating. One of the few studies to collect more representative survey data is Barker et al. (2020) who use phone surveys in Bangladesh and Nepal to show that migrant households experienced a greater fall in income and more food insecurity than non-migrant households. We complement this literature by directly looking at how COVID-19 has affected intentions for new migration, using an in-person survey that also provides the opportunity to conduct our salience experiment.

We focus on changes in migration intentions rather than actual migration behavior during the pandemic. One reason for this is that migration is a rare event, and there is much less variation in observed behavior. A second is that migration intentions are more forward-looking, providing a view on how the pandemic might shape migration in the coming years. Examining migration

intentions has become increasingly popular in the recent literature due to the inclusion of these questions in the Gallup World Poll, with papers using these data to assess the role of networks (Docquier et al, 2014; Bertoli and Ruyssen, 2018; Manchin and Orazbayev, 2018), migrant selectivity (Clemens and Mendola, 2020), economic incentives at destination (Docquier et al, 2014) or wealth at origin (Dustmann and Okatenko, 2014). The obvious concern with using such data is whether migration intentions are useful predictors of actual migration. The existing evidence does suggest a strong association between migration intentions and eventual migration behavior at both the macro level (e.g. Tjaden et al, 2019, Docquier et al, 2014, Bertoli and Ruyssen, 2018), and micro level (e.g. Chort, 2014; Creighton, 2013; Van Dalen and Henkens, 2013). For example, Tjaden et al. (2019) find that a 1 per cent increase in migration intentions in the Gallup World Poll data is associated with a 0.8 per cent increase in actual bilateral migration, while Chort (2014) finds that migration intentions in the 2002 wave of the Mexican Family Life Survey predict subsequent moves collected in the second wave (2005–06). She nevertheless finds a much weaker link between stated intentions and actual migration for women than for men, which she attributes to female-specific mobility constraints. Since our focus is on young males migrating, migration intentions are likely to be informative for future migration behavior.

The remainder of the paper is organized as follows: Section 2 provides a simple theoretical model of how COVID-19 might affect migration intentions, which we then use to guide our empirical analysis; Section 3 describes our setting, survey data, and the details of the salience experiment; Section 4 provides the empirical results, and Section 5 concludes. An appendix provides more details of the COVID-19 informational video.

2. Theory: How might we expect COVID-19 to affect migration intentions?

2.1 Pre-COVID-19 Migration Intentions

We model individuals in our context as choosing between staying in their home village in The Gambia (G), moving to Senegal (S), or migrating to Europe (E).[4] At home they derive income

[4] A fourth alternative would be to migrate internally. We abstract from this choice since our survey questions do not directly ask about how internal migration intentions have changed with the pandemic. Bah et al. (2021) report that job losses due to COVID-19 were higher in urban areas and the capital city region, making internal migration less appealing during this time.

from two sources: agricultural labor, from which they receive income I^G, and remittances received from other migrants abroad, R^G. Their utility also depends on health conditions at home, H^G, and from other amenities in their home village, A^G. We view these amenities as capturing a range of other factors that enter into the migration decision, such as the presence of family members and friends, cultural and leisure opportunities, weather, etc.

Migration to another country requires them to pay the costs of migrating C, which are much higher for going the backway to Europe than for moving to Senegal ($C^E > C^S$). Individuals are liquidity constrained, and so can only move if their wealth W exceeds these costs. If they move, the probability they find a job at destination is given by p^E in Europe and p^S in Senegal respectively. Conditional on finding a job, incomes abroad are higher than at home, and higher in Europe than in Senegal ($I^E > I^S > I^G$). Remittance income received abroad is R^E in Europe and R^S in Senegal, and is likely to be negative (i.e. they send more remittances than they receive). Their utility abroad also depends on the health conditions (H^E or H^S) and other amenities (A^E, A^S).

The location decision problem for an individual is then to choose the destination d that maximizes expected utility $EU(.)$, subject to the budget constraint of being able to pay the cost of migration:

$$\max_{\{d \in G,S,E\}} EU(p^d I^d + R^d, H^d, A^d)$$

$$\text{Subject to } C^d \leq W \qquad (1)$$

All of the inputs into this decision problem may differ by individual. Differences in risk preferences and in how individuals trade off income, health, and other amenities will result in differences in migration intentions even when facing the same income-earning opportunities, costs, and health conditions. But individuals will also differ in the incomes they can earn at home and abroad, and potentially also in the costs they face of migrating, or in other parameters.

Per-capita GDP in 2019 was $778 in The Gambia, about half that in Senegal ($1,447), and 1/42 the level in Italy ($33,228).[5] While GDP differences overstate the income gains migrants can achieve, reported earnings of Gambian migrants in Italy of 2-3 euros per hour would still enable migrants to earn as much in a week as a construction worker earns in Dakar in a month (6,000-

[5] Source: World Development Indicators, https://data.worldbank.org/indicator/NY.GDP.PCAP.CD [accessed 20 January, 2021].

9,000 Gambian dalasi[6]), and about as much in a day in Italy as mean monthly income earned by youth in our sample villages (1,044 Gambian dalasi).[7] While earnings were lower in Senegal than in Europe, the cost and ease of migration were also much less. A bus ticket from our villages to Dakar costs approximately 1,200 GMB ($24), whereas the cost of traveling the backway to Europe is typically in the $2,000 to $5,000 range. Migration via the backway is also risky, with the chance of getting attacked, robbed, and death during the journey, and of being deported. In our model these could be captured as reducing the likelihood of finding employment abroad, p^E, and in lowering the health conditions associated with migration to Europe, H^E.

Prior to COVID-19, this calculation still resulted in many youth having the intention to migrate, as our data will show in the next section. We now discuss how COVID-19 may affect this decision.

2.2 How might COVID-19 change these intentions?

There are several channels through which the COVID-19 pandemic can influence these migration intentions. First, the economic consequences of the pandemic in The Gambia are likely to lower the income-earning opportunities at home, while lower earnings for household members who are migrants abroad may reduce remittances.[8] This should reduce $p^G I^G + R^G$, and be a push factor increasing the desire to migrate.

Offsetting this, there is likely to also be a reduction in the pull factor to migrate, as COVID-19 increases unemployment and potentially lowers incomes to be earned in both Senegal and Europe. That is, $p^S I^S + R^S$, and $p^E I^E + R^E$ should fall. The net change in expected earnings gain from migrating is therefore uncertain since both income at home and income abroad are likely to have fallen. The Gambia and Senegal have experienced lower COVID-19 infection rates than the main destinations for Gambians in Europe, and lockdowns have been imposed more stringently in Europe. Evidence from both the U.S. (Borjas and Cassidy, 2020) and Europe (Fasani and Mazza, 2020) suggests that immigrants in both regions have been particularly at risk of unemployment,

[6] At the time of our baseline survey in 2019, the exchange rate was 56 Gambian Dalasi (GMD) = 1 Euro, and 50 GMD = 1 USD.

[7] Differences in the cost-of-living across locations will reduce these gaps, but the relative rankings will still hold, and *I* can then be interpreted as the income net of living costs.

[8] Avdiu and Meyer (2021) report that remittances as reported in the balance of payments showed record growth in 2020, whereas household surveys show a decrease in remittances. In their surveys, between March and August 2020, 84.6 percent of households reported a decline of international remittances, and only 1.3 percent witnessed an increase. The increase in remittances in the macro data likely reflects a shift from informal to formal channels, whereas it is the decline in total remittances from formal and informal sources that should affect households in our model.

suggesting that the income to be earned from migrating to Europe is likely to have fallen. In contrast, COVID-19 is expected to have had less effect on the income gains from migrating to Senegal.

A second channel that COVID-19 has affected is the cost of migrating and the ability of individuals to pay this cost. The Senegal-Gambia border was officially closed, and European countries also closed their borders. This reduces legal avenues for migration. Sanchez and Achilli (2020) note that border controls redirect migrants "into more perilous and deadly landscapes, where the likelihood of receiving humanitarian support and rescue is slim at best". This increases the costs of migrating, C^S and C^E. At the same time costs are increasing, wealth levels in The Gambia are likely to have fallen as households need to use their assets to smooth consumption in wake of lower home earnings. Likewise the earnings and wealth of other community members who might be willing to lend money to help pay these costs is also likely to have fallen. More individuals will thus hit the budget constraint that prevents them from being able to migrate even if they would gain income from doing so.

Third, COVID-19 changes the health conditions H. The risk of COVID-19 lowers health conditions at both home and abroad, but is likely to have done so most in Europe, where infection rates are highest. Finally, the pandemic may have changed the way in which people value some elements of the amenities at home and abroad, A. In particular, Greenfield et al. (2021) argue that the survival threat induced by the pandemic narrows worldviews towards the family household, increasing the importance of the family. This will tend to reduce the incentive to migrate more for those living with close family members at home, but may induce migration to re-unite with family members abroad for those with family who have already migrated.

Taking these pieces together, COVID-19 has lowered earnings opportunities at home, but this is offset by lower earnings opportunities abroad, higher costs of migrating, less ability to pay these costs, worse health conditions abroad, and a potential greater desire to be close to family. The overall impact on the intention to migrate is hence theoretically ambiguous. This theory also offers suggestions of which youth will have their intentions most affected. Youth from poorer households are more likely to find the increase in costs and reduction in wealth to make the budget constraint binding. Youth who were never planning on migrating in the first place should only have this intention reinforced, and youth for whom the gain in utility from migrating was extremely high

may still find their migration decision unaffected. This appears more likely to occur for Europe as a destination, given the gains from Senegal migration are more modest. The largest change in migration intention should therefore be for youth for whom the initial migration decision is close - e.g., those who are at the margin of wanting to migrate to Europe, or who are considering migrating to Senegal, where the gains are not as large.

3. Data and Experimental Methodology

3.1 Setting and Sample

The Gambia provides a useful setting for studying how migration intentions have changed with the COVID-19 pandemic. Prior to the pandemic, it was the African country with the highest rate of irregular migration to Europe according to Frontex data. This migration typically takes place through what is referred to as "the backway" – an overland journey through West Africa, across the Sahara Desert, into Libya, and then across the Mediterranean to Italy and other European destinations. This is a costly and dangerous journey, but, as noted above, the potential earnings gains if successful are very high. An alternative migration destination for Gambians is neighboring Senegal. Prior to COVID-19, many Gambians would seasonally migrate to nearby rural areas of Senegal for agricultural work, while migrating to the capital city of Dakar would be a more major move, that would yield the possibility of access to better paying urban jobs. Gambians were allowed to migrate to Senegal without a passport, and could work in most jobs without work permits.

In 2019, we used Census and labor force survey data to select districts in the Upper River Region (URR) and Central River Region (CRR) that had high levels of irregular migration. These regions are largely rural, and have a driving distance of around 300km or more from the capital city of Banjul, and 450km from Dakar. We then randomly chose 391 settlements in these districts and did a door-to-door listing exercise to identify households with males aged 18 to 33, the prime age for migration. We cluster standard errors at the settlement level in our descriptive analysis to allow for this sampling structure, so that the resulting descriptions are representative of migration patterns in these two districts of the Gambia. A face-to-face baseline survey in April and May 2019 collected demographic and labor force information, previous migration experience, and migration intentions of 3,641 youth. In September and October 2020, an in-person follow-up survey was

conducted. We were able to re-interview 2,757 of the youth (76% of the original sample), which form the sample used for this paper.[9]

The first column of Table 1 provides baseline summary statistics for the sample interviewed at follow-up. This sample consists of males with an average age of 23, who are almost all working in agriculture, with only 28 percent having worked for pay in the past month. Schooling levels are low, with an average of just over 3 grades of schooling, and 31 percent are married. Only 3 percent made a previous unsuccessful attempt to migrate to Europe, but 22 percent have relatives in Europe, and on average they know 3 people who have died going the backway and 10 people who have made it. 29 percent were receiving remittances at baseline. The initial desire to migrate to Europe is high. We asked at baseline "Ideally, if you had the opportunity, would you be willing to migrate and live elsewhere outside The Gambia?" If respondents said yes, they were asked which country they would ideally like to move to. 55 percent said they would like to move to somewhere in Europe, and 7 percent would ideally like to move to Senegal. This "ideal" destination may be different from where they intend to migrate given the costs and difficulty of moving, and we will examine migration intentions and their measurement in the next section.

3.2 The COVID-19 Pandemic and the Gambia

The Gambia registered its first case of COVID-19 on March 17, 2020 when a female traveling back from the UK tested positive for the virus and the first fatality was registered on March 23, 2020.[10,11] In response to the outbreak, the Gambian government enacted several measures, including border closure on March 23, 2020[12], a State of Public Emergency, closure of schools and universities, places of worship and non-essential businesses, restricting public gatherings to not more than 10 people, and limiting passengers on public transportation.[13] Bah et al. (2021)

[9] We collected some information about the youth's location and occupation from other household members for almost all of the youth that we could not interview in person, but these proxy reports do not include migration intentions, and so are not used in this paper.

[10] The Chronicle (2020). "The Gambia Confirms First Case of Covid-19". https://www.chronicle.gm/gambia-confirms-first-case-of-coronavirus/ [accessed 25 January, 2021].

[11] The Standard (2020). Gambia Registers First COVID-19 Death". https://standard.gm/gambia-registers-first-covid-19-death/ [accessed 25 January, 2021].

[12] The Chronicle (2020). "Gambia Finally closes Land Borders and Flight as COVID-19 Fear Intensifies". https://www.chronicle.gm/gambia-finally-closes-land-borders-and-fights-as-covid-19-fear-intensifies/ [accessed 25 January, 2021].

[13] The Chronicle (2020). "The Gambia Declares State of Emergency to Curb Coronavirus". https://www.chronicle.gm/gambia-declares-state-of-emergency-to-curb-coronavirus/ [accessed 25 January, 2021].

report that lockdown policies were more stringent around the capital city of Banjul, and employment rates declined more there during the pandemic than it did in more rural areas such as the communities in our sample.

Our fieldwork began on September 23, and ended on October 20, 2020. At the beginning of the survey, the country registered 3,555 confirmed cases, 110 total deaths, 2,034 recoveries and 1,521 active COVID-19 cases.[14] Committing to recommended guidelines of wearing masks, providing hand sanitizers to all fieldworkers, ensuring social distancing and interviewing in outdoor spaces, we were granted clearance from the Ministry of Health to conduct the face-to-face survey. During the fieldwork, schools and local weekly markets *(lumos[15])* were closed but places of worship were opened, and business restrictions were also lifted by October 6, 2020.

Our data suggests that almost 90 percent know the government recommended guidelines (washing hands, wearing masks and social distancing) of preventing the spread of COVID-19. However, in reality these measures were not practiced in the visited settlements. Shaking hands, social gatherings (naming or wedding ceremonies), and other social interactions were visibly practiced. While everyone knows or has heard about COVID-19, some respondents believe that the virus does not exist in rural places (our study setting), but lamented about the direct impact of some of the restrictions imposed by the government. These include closing of places of worship, closure of weekly markets and schools, and prohibiting two people riding on the same motorcycle.

The COVID-19 pandemic hit the two main European destinations for Gambian migrants, Italy and Spain, hard and early. As of the time of our survey, Italy had over 317,000 confirmed cases and almost 36,000 confirmed deaths from COVID-19, and Spain over 778,000 confirmed cases and almost 32,000 confirmed deaths.[16] In contrast, Senegal has been lauded for its policy response to the pandemic (e.g. Chakamba, 2020) and had fewer than 15,000 confirmed cases and only 311 confirmed deaths. On a per capita basis, The Gambia had 0.05 deaths per 1,000, Senegal 0.02 deaths per 1,000, Italy 0.6 deaths per 1,000, and Spain 0.7 deaths per 1,000. While testing rates differ across countries, death rates are less likely to be underreported, and the fatality rates in the

[14] Ministry of Health (2020). "The Gambia Covid-19 Outbreak Situational Report. http://www.moh.gov.gm/wp-content/uploads/2020/09/Gambia_The_COVID-19_Sitrep-23rd-Sept-2020.pdf [accessed 25 January, 2021].
[15] These are weekly markets that are organized in one settlement and people from neighboring settlements participate in the buying and selling of goods.
[16] Data for October 1, 2020 from Our World in Data (2020). "Data on COVID-19 (Coronavirus)". https://github.com/owid/covid-19-data/blob/master/public/data/owid-covid-data.xlsx [accessed 25 January, 2021].

main European destinations were at least ten times that of The Gambia and Senegal. In addition, the responses to containing the virus were also stricter in Europe compared to The Gambia and Senegal, where total lockdown was never implemented.

The COVID-19 migration policy responses of some EU countries have implications on irregular entry, and its associated risks (Sanchez and Achilli, 2020). The closure of ports, quarantine at sea[17], and reduced presence of search and rescue[18], have increased irregular migration risks and also alter migration routes, with a rising number of African migrants trying to reach Europe through the Western Mediterranean route.[19]

3.3 Identifying the Impact of COVID-19 on Migration Intentions

Although we do not have time series data on migration intentions, data on migration movements show that the likelihood of emigrating from the Gambia to Europe was changing from year to year even in the absence of COVID-19. Figure 1 shows a similar pattern of migration when using macro data on recorded irregular migration from the European border agency Frontex, and when using micro data from our baseline survey in which we asked households whether they knew of a family member or close friend who had migrated to Europe and the year they had left. Emigration rates surged between 2014 and 2016, and then fell sharply back to 2013 levels by 2018, the last year before our study. This surge in migration accompanied turbulent political events in The Gambia, where there was an attempted coup in 2014 against the long-time autocratic president, President Jammeh, who was eventually ousted from office in early 2017. Gambian migrants who had claimed asylum in Europe on the basis of political repression were less able to do so in 2017 and 2018 following the transition to a democratic government.

The result is that intentions to migrate are likely to have been declining, even in the absence of the pandemic. This would cause problems if we asked individuals their attempt to migrate to Europe

[17] European Council on Refugees and Exiles (2020). "Med: 150 Stranded at Sea as Malta and Italy Declare Ports "unsafe" ". https://www.ecre.org/med-150-stranded-at-sea-as-malta-and-italy-declare-ports-unsafe/ [accessed 29 January, 2021].
[18] IOM (2020). "Covid-19 Control Measures, Gap Measures in SaR Capacity Increases Concern About 'Invisible Shipwrecks' ". https://www.iom.int/news/covid-19-control-measures-gap-sar-capacity-increases-concern-about-invisible-shipwrecks [accessed 29 January, 2021].
[19] IOM (2020), "Irregular Migration Towards Europe: Western African Route: Migration to the Canary Islands". https://reliefweb.int/report/world/western-african-route-migration-canary-islands-irregular-migration-towards-europe. [accessed 29 January, 2021].

at baseline, and then again at endline, and attempted to attribute any changes in intentions over this period solely to the pandemic.[20] Instead, we explicitly ask our sample to consider the effect of the pandemic alone on their migration intentions, and do not calculate before-after changes in migration intentions.[21]

We do this by means of the following question:

"Taking into account all the different effects of COVID-19/Coronavirus on your ability to earn money in your home village, to finance travel, to find work abroad, and on your health risks in either place, what is the overall effect of COVID-19 on your likelihood of wanting to migrate to Europe?"

This was followed by a similar question asking about likelihood of wanting to migrate to Dakar, Senegal. Although the backway to Europe does involve crossing through Senegal, those travelling from Eastern Gambia typically do not travel through Dakar, instead going inland through Mali and Burkina Faso. It is also not common for migrants to first work in Dakar as a stepping stone en route to Europe. We therefore instead view Dakar as an alternate destination choice.

3.4 A COVID-19 Priming or Salience experiment

A priming experiment exposes individuals to some stimuli designed to activate a mental concept, and then measures the impact of this primed concept on subsequent responses or behaviors. This approach was first used in psychology and social psychology, with Bargh and Chartrand (2000) providing a guide. Priming can involve prompting individuals to think about specific concepts directly, or implicitly through having them unscramble sentences and/or correct errors in a paragraph about a subject. It can also involve the use of other senses through exposure to odors, music, or temperature.

Cohn and Maréchal (2016) note that conceptual priming has also become an increasingly popular tool in economics by making salient aspects such as cultural identity, the role of markets and competition, and exposure to conflict, and then examining how this salience affects economic preferences. For example, Callen et al. (2014) conducted a priming experiment in Afghanistan in

[20] Likewise the fact that the surveys took place in different months of the year could cause smaller changes in intentions if people express a different attitude towards migrating during different parts of the agricultural season.
[21] We also changed the format in which we asked the intention to migrate at endline compared to baseline, since we tried asking probabilistic expectations at baseline and found clumping of responses at focal answers. It is therefore also not possible for us to calculate the before-after change.

which they asked participants to describe a fearful experience (e.g. a bomb explosion) and then elicited willingness to take risks, finding that making the fear of violence more salient through priming increased preferences for certainty. Priming experiments have not been used in migration studies to our knowledge, although there are several primary experiments which examine how making more salient issues such as national identity (Wojcieszak and Garrett, 2018) and shared human experiences (Motyl et al. 2011) affect attitudes towards immigrants.

In addition to directly asking how the COVID-19 pandemic affects intentions to migrate, we conducted a priming experiment to test whether making the pandemic more salient affects expressed intentions to migrate. Our follow-up questionnaire began for everyone by asking about their current occupation, location, and health. We then randomized the ordering of questions about COVID-19 and how COVID-19 had affected their desire to migrate (*COVID-19 questions)*, questions about migration intentions (*Migration intentions)*, and an informational video about COVID-19 (Appendix 1) (*Video)*. Individuals were randomized at the individual level into the following three groups:

- *(A) Non-salient group:* 916 youth had the ordering Migration intentions; COVID-19 questions; Video.
- *(B) COVID-19 Salience group:* 922 youth had the ordering COVID-19 questions; Migration intentions; Video.
- *(C) COVID-19 Salience + Video group:* 919 youth had the ordering Video; COVID-19 questions; Migration intentions.

Table 1 shows that randomization resulted in the characteristics of the youth in the three groups being similar on average on baseline characteristics, and so any difference in responses to the migration intentions questions should reflect the effect of making COVID-19 more salient in their minds at the time of answering these questions through just having answered questions about COVID-19 (group B), and through also having just watched a video about COVID-19 (group A).

We can estimate the impacts of this salience experiment through regressions of the form:

$$MigrationIntentions = \alpha + \beta(COVID19Salience) + \gamma(COVID19Salience + Video) + \varepsilon \quad (2)$$

Our base specification does not include any further controls, since the randomization was done at the individual level and not stratified. To potentially improve power and account for any chance

imbalances in baseline observables, we also re-estimate equation (2) using the post-double-selection lasso approach of Belloni et al. (2014). This selects control variables that either strongly predict migration intentions or that predict treatment status. Robust Eicker-White standard errors are used, since randomization was at the individual level.

4. Results

4.1 How has COVID-19 Affected the Intention to Migrate?

We begin by reporting on how the Gambians in our survey directly state the impact of COVID-19 on their migration intentions. Figure 2 displays the results. We see that two-thirds of respondents say they have not changed the likelihood of wanting to migrate to Europe, 30.6 percent say they have become less likely to want to migrate, and only 3.5 percent have become more likely. The responses are similar for Dakar, although there is an even stronger effect towards a lower intention to migrate: 64 percent have not changed the likelihood, 34.3 percent have reduced it (a paired t-test rejects equality of means with the 30.6 percent reduction in intent to migrate to Europe with $p<0.0001$) and only 1.9 percent say they have become more likely to want to migrate to Dakar. The modal response for both Europe and Senegal is no change in migration intention. For those that report a change in intentions towards at least one of these two destinations, only 47 percent report the same change for both.

We directly asked how COVID-19 had affected various inputs into the decision problem in equation (1). Table 2 shows the results and provides strong support for the main mechanisms in our simple theoretical framework.[22] We see that 87 percent believe it has worsened their ability to earn money at home, 85 percent say it has made it harder to finance travel to another city, 92 percent say it has increased the cost and reduced the ease of travelling the backway to Europe, 84 percent say it is harder to find a job in Europe, and 83 percent say it has reduced the amount that can be earnt in Europe. Just over two-thirds believe the risk of contracting COVID-19 would be higher for them in Italy than in their village. These responses are not that different in magnitude for those who say they have become less likely to want to migrate to Europe versus those who have not become any less likely to migrate: those who have reduced the likelihood of migration

[22] We did not ask how the pandemic has affected their desire to be closer to family. Greenfield et al. (2021) find that appreciation of family has increased in surveys of Americans.

are significantly more likely to believe the amount they can earn in Europe has fallen, and that their ability to earn money in their home village has fallen, but the difference is only 3 percentage points.

4.2 Who reduces their intentions to migrate most?

Since most Gambians agree that income earning opportunities in Europe have fallen, that Europe is riskier for health than COVID-19 and the backway has become more costly and difficult, COVID-19 is likely to have affected $p^E I^E$, H^E, and C^E for everyone - with Table 2 showing little variation by change in migration intentions.

Our theoretical discussion suggests that we should expect to see more of a change in the likelihood of migrating from these changes for individuals for whom the initial migration decision was a close one, that is, for individuals whose $EU(p^d I^d + R^d, H^d, A^d)$ was not that different in The Gambia versus if they were to migrate. To investigate this, we asked "Before the COVID-19/Coronavirus, did you intend to migrate to Europe/[Dakar]?" with possible responses of not planning to migrate, maybe planning to migrate, and planning to migrate. We should expect to see the least reduction in the likelihood of migrating for those not planning on migrating in the first place, and the greatest change for those who were unsure.

Table 3 provides some descriptive statistics by this pre-COVID-19 migration status, so that we can see what observable characteristics differ across groups. We see those who were more interested in migrating to Europe to begin with were less likely to be married or have children, were wealthier, had a bigger network of people they knew who had gone the backway, and had taken more steps towards migrating. Those who were interested in migrating to Senegal were older, less educated, spoke English less well, were poorer, and did not have family or relatives in Europe.

Figure 3 splits the elicited change in the likelihood of migrating by this pre-COVID-19 migration intent. In accordance with our theory, we see the largest changes in the likelihood of wanting to migrate for those who were in the "maybe" category. For Europe, 36 percent of those who were uncertain about migration intentions say they have become less likely to migrate, compared to 26 percent who were not that interested pre-COVID-19; while for Senegal the percentages are 47 percent versus 27 percent, respectively. We also see a reduction in the likelihood of migration for

those who were more certain in migration intentions at baseline, with slightly smaller magnitudes than the change for those who were unsure (although the difference is not statistically significant).

In addition to initial migration intentions, our theory suggests that other characteristics will also determine whose migration decisions are most affected by COVID-19. A key factor from this theory will be the extent to which wealth constraints bind ($C^d > W$). We measure household wealth through two baseline variables: an indicator of whether someone in the household went hungry in the past month due to lack of funds, and a household asset index, formed as the first principal component of 26 household asset indicators that capture characteristics of the dwelling, ownership of different types of livestock, and ownership of different durables. We also consider the term $p^G I^G + R^G$ by measuring whether they are working for pay at home, the income earned, and whether they receive remittances from abroad. In addition to these variables, we consider age, English language ability, and level of schooling, as measures of human capital that may determine the income that can be earned abroad. We also consider three measures of the strength of family ties at home and abroad: whether they have any children, whether their father is the household head (as opposed to an uncle or other less close relative), and whether they have friends or family in Europe.

We then examine which characteristics correlate with changes in migration intentions through probit analysis, with the results reported in Table 4. The first four columns examine changes in intentions to migrate to Europe, where the dependent variable is either becoming less likely to migrate because of COVID-19 (columns 1 and 2), or becoming more likely (columns 3 and 4). Columns 5 to 8 present the corresponding estimates for changes in intentions to migrate to Senegal. We view this as descriptive analysis, guided by the theoretical model in equation (1).[23] In the odd-numbered columns we only use variables that are pre-determined. The even-numbered columns use our panel data to add indicators of whether the household has stopped or started receiving remittances, and whether the youth has stopped or started working for pay at home. These additional variables capture important potential channels through which COVID-19 can affect migration intentions, but also could be endogenously determined (for example, relatives abroad

[23] If this were a purely predictive exercise, one might wish to use lasso or another variable reduction method to reduce the number of covariates. In practice using lasso does not make any difference to our conclusions, and we prefer to show the full range of variables suggested by our theory, in order to also see which covariates are not strongly predictive of changes in migration intentions.

may stop sending remittances intended to finance migration if they learn the recipient is no longer planning on migrating).

Consider the predictors of becoming less likely to want to migrate (columns 1, 2, 5 and 6 of Table 4). First, we see that the relationship in Figure 3 continues to hold after controlling for other variables: individuals who were uncertain about their migration intention pre-COVID-19 are the ones most likely to have reduced migration intentions, with the magnitude larger for intentions to migrate to Senegal (a 0.20 increased chance of being less likely to migrate) than to Europe (a 0.10 increased chance of being less likely to migrate). Those who had planned to migrate also have reduced their intent to migrate relative to those who initially did not plan to migrate, but not by as much as those who were less certain of their migration intentions. Second, we see evidence that binding wealth constraints are likely to be a key reason for the reduction in migration likelihood. Households where someone missed a meal at baseline due to lack of funding, and which owned fewer assets, are more likely to have reduced their incentives to migrate. The influence of wealth constraints appears larger for migration to Europe, since skipping a meal has twice the magnitude (0.08 vs 0.04) than for migration to Senegal, while the coefficients on the asset index are similar. We see that individuals in households that stopped receiving remittances from abroad have become less likely to migrate to both Europe and Senegal. In our model, lower remittances should reduce the earnings at home, and thus, all else equal, increase the incentive to migrate. However, remittances are often used to also finance the costs of migrating, and thus implicitly also appear in the term W, and it appears this binding wealth constraint effect dominates. We see some role for the presence of family, with those whose father is the household head being more likely to reduce their migration intentions to Europe. Finally, we see very little heterogeneity in the reduction in migration likelihoods by baseline human capital, baseline income, or changes in working for pay at home.

Table 4 also enables us to examine the correlates of being in the very rare group who say that COVID-19 has made them more likely to want to migrate to Europe (3.5 percent) or to Senegal (1.9 percent). Given how few individuals make this decision, it is not surprising that there are few significant predictors. There is evidence of a "doubling-down" effect, where some individuals who already intended to migrate say they are even more likely to as a result of COVID-19. These may be individuals for whom the migration push factor at home was the main factor in their initial

attitudes, and so that worsening conditions at home have reinforced this desire to leave. This push factor view is consistent with the coefficients on changes in remittances, with individuals in households that stop receiving remittances (lowering home income) being more likely to want to migrate to Europe, and individuals that start receiving remittances (increasing home income) being less likely to want to migrate to Senegal. Finally, while having your father as the household head is associated with becoming less likely to migrate, it also helps predict who is more likely to migrate- suggesting heterogeneity in the extent to which close family connections affects changes in migrant intentions.

Taken as a whole, these results show that COVID-19 has had most impact on reducing the desire to migrate for two groups of individuals: those who were uncertain about their initial migration status (suggesting that the expected utility between home and abroad were not that different to start with), and poorer individuals for whom COVID-19 made wealth constraints on paying the costs of migration more binding. The fact that this occurs for both intentions to migrate to Europe and for intentions to migrate to Senegal suggests that lower migration intentions are not just a consequence of the backway becoming more costly and expensive, or of higher COVID-19 health risks in Europe, but rather of the general gains from migrating falling and of the ability to meet the costs of migrating being lower for both Europe and Dakar, Senegal.

4.3 Does making COVID-19 more salient affect migration intentions?

The above analysis explicitly asked individuals to consider how COVID-19 had affected their intentions to migrate. We now examine the results of our priming and salience experiment to see whether making COVID-19 more salient affects responses to a standard intention to migrate question. The non-salient treatment group (group A in section 3.3) where asked the following question before they were asked anything about COVID-19 or shown the video:

How likely are you to **move to Europe** in the next five years? (0-5 scale)

0 = Will surely not move, 1= Likely not to move, 2= Maybe not move, 3= Maybe move, 4 = Likely move

5 = Will surely move

They were then also asked if they would consider taking the backway to Europe, how much they would expect to earn if they migrated to Europe, and how likely they were to migrate to Senegal. The salience treatment group (B) and salience and video treatment group (C) were asked these

same questions only after first being asked directly about COVID-19, and seeing the video about it in the case of group C. If COVID-19 was not already top-of-mind and being considered by individuals when giving their migration intentions, making it more salient should affect elicited intentions.

Table 5 shows the results of estimating equation (2) to examine these salience treatment effects. We see that the non-salient treatment group expresses strong migration intentions, with 28 percent saying they are very likely to move to Europe, 53 percent saying they are very likely or likely to move to Europe, 12 percent saying they are very likely to move to Senegal, and 25 very likely or likely to move to Senegal. However, we see that making COVID-19 more salient has very little impact on these intentions, with the addition of further baseline controls in panel B not changing this conclusion. The point estimates on intentions to migrate lie between -2 and +3 percentage points, with 95 percent confidence intervals approximately +/- 4 percentage points. These are thus small effects relative to the 30 to 34 percent of respondents in Figure 2 who said that COVID-19 had made them less likely to want to migrate when asked directly.

One possibility is that this lack of average impact of the salience treatments masks much larger treatment effects for certain subgroups. In Appendix 2 we allow for treatment heterogeneity by characteristics found to predict migration intentions in Table 4: age, skipping a meal at baseline, household asset index, and pre-COVID migration intentions. We find that the interactions are typically small in magnitude, and only 3 out of 20 interactions are significant at the 10 percent level, with none of these interactions remaining significant after correcting for multiple hypothesis testing with Romano-Wolf FWER-adjusted p-values.

Why did the salience intervention not have more effect? One potential reason is that we asked about migration intentions over a five-year time horizon, and so COVID-19 might affect when individuals expect to migrate within this window, but not whether they will migrate. However, we believe the more important reason is that COVID-19 was likely already very salient to individuals even without the priming and salience treatment, and that the video appears to have not resulted in new knowledge accumulation.

Table 6 looks at awareness, knowledge, and risk perceptions about COVID-19, and compares them for the salience (B) and salience plus video (C) treatment groups. Comparing these responses gives the treatment effect of the video. First, there is almost universal awareness of COVID-19: 99.7

percent of respondents say they had heard of COVID-19 before our visit. Second, while knowledge is incomplete, especially with regard to some health issues (only 39 percent knew that the virus is not mainly spread by infected food, and only 50 percent knew that young children are not most at risk), 90 percent or more know social distancing is important, that the borders have closed with Senegal, and that Italy and Spain have been badly affected. That is, they already knew many of the key facts that influenced migration decisions. Finally, while 40 percent thought there was some risk that a household member in the village could get infected, 72 percent believed the risk in the village was either negligible or very low, and the video resulted in only a small increase in the perceived risk. These findings are very much consistent with the small effect of the salience intervention.

5 Conclusions and Implications

In order to assess the impact of COVID-19 on migration intentions, we use a large-scale panel survey of Gambian young males conducted in May 2019 (pre-pandemic) and 18 months later. Consistent with a simple theoretical framework describing the different channels through which the COVID-19 pandemic may have changed migration intentions, we find that migration intentions to both Europe and especially to Senegal decreased. We find that the desire to migrate decreased especially for two groups of individuals: those who were at the margin, i.e. those who were unsure about migrating pre-COVID-19; and poorer individuals for whom COVID-19 may have made liquidity constraints more binding. Even though the pandemic crisis did not affect income at home as much as expected income at destination, the pandemic generated a negative shock by lowering remittances received by most households at home. This reduction may prevent potential migrants from affording the costs of moving – which seem to have increased with border closing and higher smuggling fees.

Despite this reduction in intentions to migrate, the desire to migrate to Europe is still incredibly high amongst these young men, with 65 percent saying they are likely or very likely to try to migrate, and 58 percent saying they would consider the backway. This suggests the need for exploring policy options to open up legal migration alternatives, given the risks of backway migration.

Finally, this paper also illustrates how priming and salience experiments can be used to investigate the impact of different factors on migration intentions. In our case, the COVID-19 pandemic was

already so well-known and salient that our salience experiment did not change intentions. But we believe this tool could be useful for examining impacts of other important trends and factors that may not be so top-of-mind, and which are hard to themselves randomize, on migration intentions. For example, respondents could be randomly primed to think about climate change by recalling recent droughts, floods, and hurricanes, or by being given a passage to read or translate about this issue before being asked migration intentions. A second example would be to investigate how important being close to family members is for migration intentions by randomly priming some respondents to talk about family traditions, how parents help with childcare, or other activities that make feelings of closeness to family more salient before asking migration intentions. We look forward to seeing more applications in future work.

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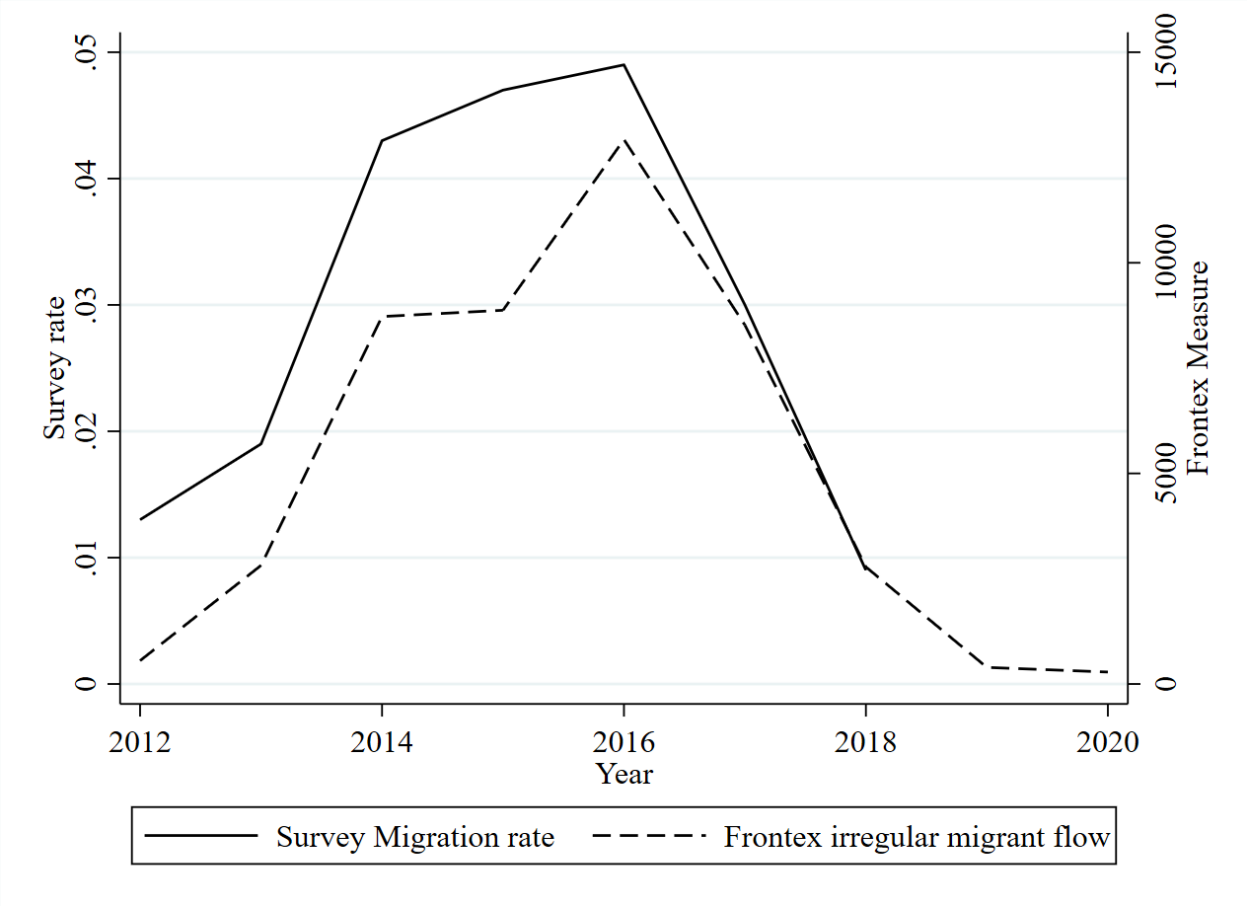
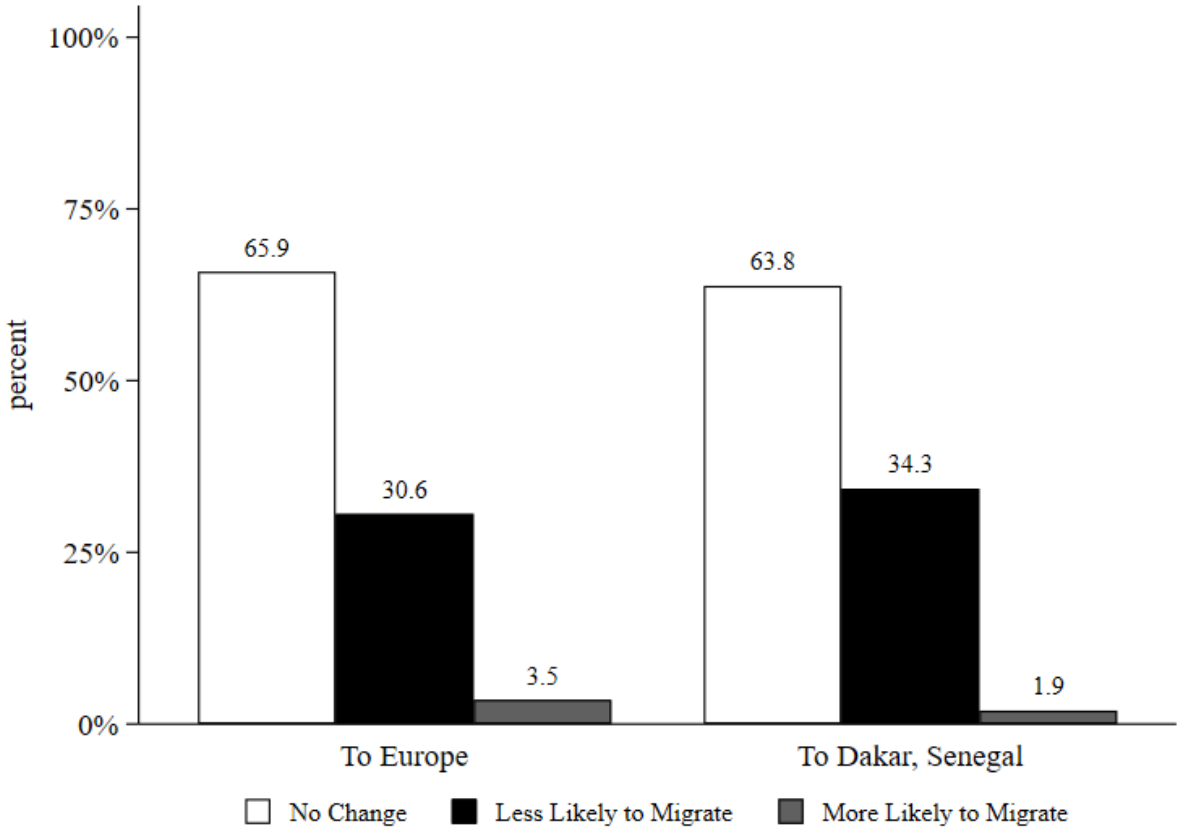
Figure 1: Trends in Gambian Migrant Flows to Europe 2012-2020



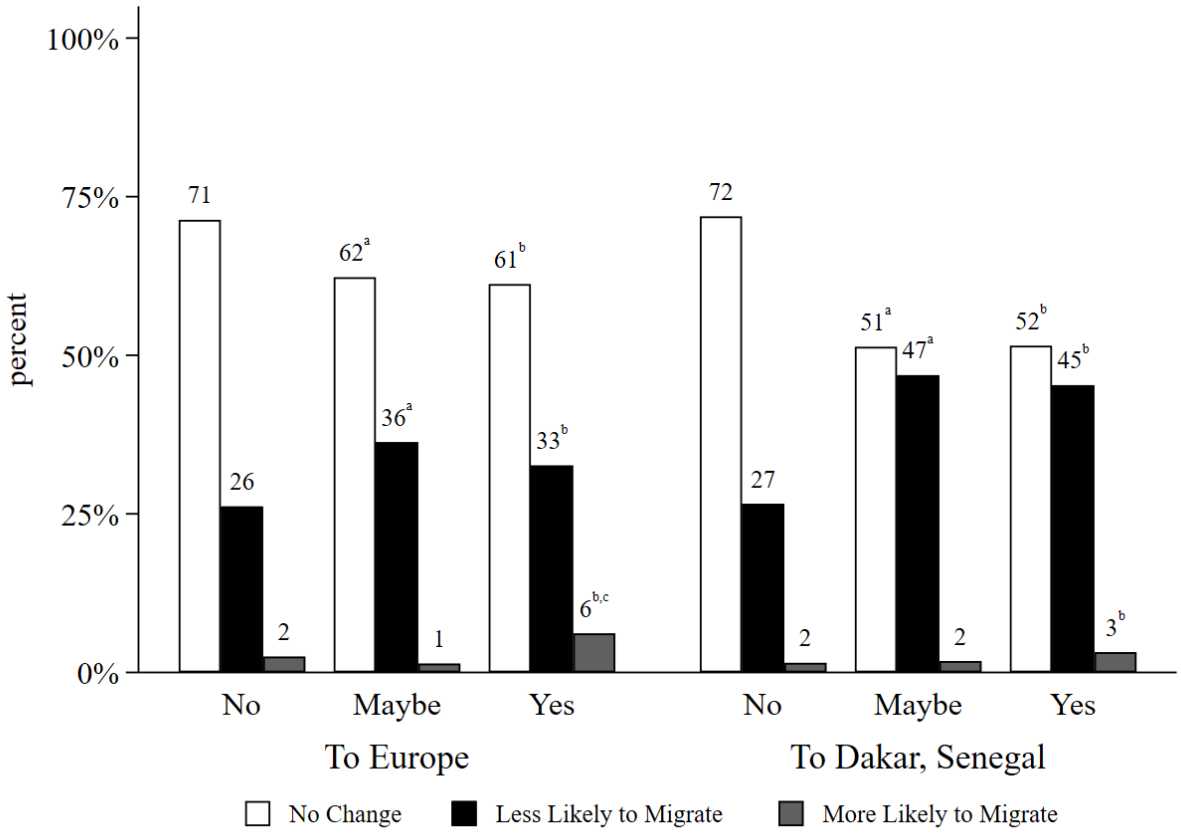
Notes: Survey migration rate is the proportion of households in the baseline survey that know a family member or close friend who migrated to Europe in the specified year. Frontex irregular migrant flow are the number of Gambians recorded as irregular migrants to Europe by the European border agency FRONTEX in a given year.

Figure 2: Reported Effect of COVID-19 on Intention to Migrate to Europe and to Dakar



Notes: Figure shows responses for 2,661 Gambian male youth aged 18-33 to the question "Taking into account all the different effects of Covid-19/Coronavirus on your ability to earn money in your home village, to finance travel, to find work abroad, and on your health risks in either place, what is the overall effect of Covid-19 on your likelihood of wanting to migrate to [*destination*]".

Figure 3: Reported Effect of COVID-19 on Intention to Migrate to Europe and to Dakar by Pre-COVID-19 Migration Intentions



Notes: Figure shows responses for 2,661 Gambian male youth aged 18-33 to the question "Taking into account all the different effects of Covid-19/Coronavirus on your ability to earn money in your home village, to finance travel, to find work abroad, and on your health risks in either place, what is the overall effect of Covid-19 on your likelihood of wanting to migrate to [*destination*]". Responses are separated by whether they say their pre-COVID-19 migration intention was to not migrate to this destination ("No"), there was a chance they would migrate ("Maybe") or whether they were planning to migrate to this destination ("Yes"). The percent of observations in the No/Maybe/Yes categories are 44/22/35 for Europe as a destination, and 60/17/23 for Dakar as a destination.

Superscripts: *a* denotes a t-test of equality of means for the "No" and "Maybe" groups has p-value<0.05; *b* denotes a t-test for equality of means of the "No" and "Yes" groups has p-value<0.05; and *c* denotes a t-test for equality of means of the "Yes" and "Maybe" groups has p-value<0.05.

Table 1: Baseline Characteristics and Sample Balance on Covid-Salience Experiment

	Pooled	Treatments			
	Sample	Video+Salience	Salience	Non-Salient	P-value
Age	23.0	22.8	23.0	23.0	0.587
Speaks English well enough for work	0.24	0.24	0.26	0.23	0.251
Highest grade of schooling completed	3.40	3.39	3.55	3.27	0.327
Married	0.31	0.30	0.32	0.31	0.749
Has children	0.23	0.22	0.24	0.23	0.590
Father is the household head	0.59	0.6	0.58	0.59	0.812
Main occupation in rainy season is non-agricultural	0.05	0.06	0.06	0.05	0.332
Worked for pay in past 30 days	0.28	0.26	0.28	0.30	0.178
At least one member of household skipped a meal for in past month due to no funds	0.11	0.12	0.11	0.12	0.826
Household Asset Index	-0.03	-0.08	-0.05	0.03	0.518
Has migrated within Gambia since age 12	0.36	0.36	0.34	0.39	0.080
Has previously made unsuccessful migration attempt to Europe	0.03	0.03	0.02	0.04	0.245
Number of people they know who died going the backway	3.21	3.12	3.25	3.25	0.900
Number of people they know who have made it going the backway	10.3	10.0	9.6	11.3	0.138
Have family or relatives in Europe	0.22	0.21	0.22	0.21	0.746
Received remittances from abroad	0.29	0.28	0.29	0.29	0.911
Would ideally like to migrate to Europe	0.55	0.56	0.55	0.54	0.815
Would ideally like to migrate to Senegal	0.07	0.07	0.07	0.06	0.752
Number of steps taken towards migrating to Europe	0.41	0.37	0.41	0.44	0.37
Would ideally like to migrate to Europe and would go the backway	0.15	0.14	0.14	0.17	0.109
Sample Size	2757	919	922	916	

Notes: P-value tests for equality of means across the three treatment groups, clustering standard errors at the settlement level.
Omnibus test p-values of joint significance are: Video+Salience = Salience (p=0.964), Video+Salience=Non-Salient (p=0.845), Salience = Non-Salient (p=0.066). Multinomial logit p-value for testing joint orthogonality across all three treatments is 0.650.

Table 2: Mechanisms through which COVID-19 has affected Intentions to Migrate

	Effect of COVID-19			Proportion who say "*Worse*" by change in Europe migration intent		
	Worse	No Change	Better	Less Likely to Migrate	Not Any Less Likely to Migrate	p-value
Ability to earn money in home village	0.87	0.12	0.01	0.89	0.86	0.031
Ability to finance travel to another city	0.85	0.10	0.05	0.87	0.85	0.203
Ease and cost of travelling the backway	0.92	0.05	0.03	0.93	0.92	0.321
Ability to find a job in Europe	0.84	0.05	0.11	0.85	0.84	0.655
Amount that can earn in Europe	0.83	0.08	0.09	0.85	0.82	0.057
COVID-19 risk in Italy vs village	0.68	0.25	0.07	0.66	0.68	0.504

Notes: p-value tests that the proportion saying this mechanism has worsened is equal for those who say they are now less likely to migrate to Europe because of COVID-19 versus those who say they are not any less likely to migrate.

Table 3: Comparisons of Means by Pre-Covid Migration Intentions

	Pre-Covid Europe Intentions to Migrate				Pre-Covid Senegal Intentions to Migrate			
	Yes	Maybe	No	P-value	Yes	Maybe	No	P-value
Age	22.9	23.2	22.9	0.385	23.5	23.0	22.8	0.001
Speaks English well enough for work	0.22	0.24	0.26	0.114	0.20	0.18	0.27	0.000
Highest grade of schooling completed	3.51	3.25	3.40	0.477	3.04	2.80	3.70	0.000
Married	0.29	0.30	0.34	0.020	0.32	0.34	0.30	0.317
Has children	0.21	0.23	0.25	0.056	0.23	0.25	0.23	0.514
Father is the household head	0.60	0.58	0.59	0.565	0.58	0.60	0.59	0.681
Main occupation in rainy season is non-agricultural	0.07	0.06	0.05	0.197	0.06	0.05	0.05	0.648
Worked for pay in past 30 days	0.30	0.30	0.25	0.037	0.33	0.29	0.26	0.003
At least one member of household skipped a meal for in past month	0.13	0.12	0.10	0.051	0.12	0.14	0.10	0.077
Household Asset Index	0.05	0.13	-0.16	0.016	-0.16	-0.20	0.07	0.016
Has migrated within Gambia since age 12	0.38	0.39	0.34	0.034	0.36	0.37	0.37	0.894
Has previously made unsuccessful migration attempt to Europe	0.04	0.02	0.03	0.174	0.03	0.02	0.03	0.693
Number of people they know who died going the backway	3.74	3.78	2.56	0.000	3.82	3.62	2.89	0.013
Number of people they know who have made it going the backway	11.4	11.5	8.9	0.001	11.6	10.2	9.9	0.124
Have family or relatives in Europe	0.19	0.16	0.26	0.000	0.18	0.17	0.24	0.004
Received remittances from abroad	0.30	0.33	0.26	0.022	0.29	0.26	0.29	0.352
Number of steps taken towards migrating to Europe	0.52	0.46	0.30	0.000	0.46	0.43	0.38	0.212
Sample Size	934	578	1241		602	446	1705	

Notes: Yes denotes Pre-Covid-19 intention was to migrate, maybe that there was a chance they would migrate, and No that they were not planning on migrating. P-value is for an F-test of equality of means across the three groups, from a regression of the variable on treatment dummies, clustering standard errors at the settlement level.

Table 4: Correlates of Changing Migration Intentions due to COVID-19

	Change in Europe Migration Intention				Change in Senegal Migration Intention			
	Less Likely		More Likely		Less Likely		More Likely	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Age	0.008***	0.007***	0.001	0.000	0.005*	0.004*	0.000	0.000
	(0.002)	(0.002)	(0.001)	(0.001)	(0.003)	(0.003)	(0.001)	(0.001)
Has at least one child	-0.036	-0.036	-0.007	-0.008	-0.036	-0.036	-0.010	-0.011
	(0.023)	(0.023)	(0.011)	(0.011)	(0.024)	(0.024)	(0.008)	(0.008)
Father is household head	0.047**	0.047**	0.016**	0.015**	0.023	0.022	0.006	0.006
	(0.020)	(0.020)	(0.007)	(0.007)	(0.018)	(0.018)	(0.006)	(0.006)
Speaks English	-0.023	-0.019	-0.016	-0.015	-0.032	-0.028	-0.001	-0.001
	(0.033)	(0.033)	(0.012)	(0.012)	(0.031)	(0.031)	(0.009)	(0.009)
Schooling Grade	0.003	0.003	0.002	0.002	0.006*	0.006*	-0.001	-0.001
	(0.003)	(0.003)	(0.001)	(0.001)	(0.003)	(0.003)	(0.001)	(0.001)
Skipped a Meal at Baseline	0.081***	0.081***	0.004	0.004	0.046	0.045	0.010	0.011
	(0.029)	(0.029)	(0.011)	(0.011)	(0.031)	(0.031)	(0.008)	(0.008)
Asset Index	-0.008	-0.008*	-0.001	-0.001	-0.012**	-0.012**	0.005***	0.004***
	(0.005)	(0.005)	(0.002)	(0.002)	(0.005)	(0.005)	(0.001)	(0.001)
Have family or relatives in Europe	0.011	0.008	-0.006	-0.006	0.051**	0.048**	-0.006	-0.005
	(0.022)	(0.022)	(0.009)	(0.009)	(0.021)	(0.021)	(0.007)	(0.007)
Baseline: received remittances	0.013		0.022***		0.012		-0.008	
	(0.020)		(0.007)		(0.023)		(0.007)	
Baseline: worked for pay	-0.028		0.002		-0.017		-0.002	
	(0.024)		(0.008)		(0.024)		(0.007)	
Baseline: income earned	0.000		0.000		0.000		0.000	
	(0.000)		(0.000)		(0.000)		(0.000)	
Intended to Migrate pre-COVID-19	0.063***	0.061***	0.030***	0.030***	0.179***	0.179***	0.015**	0.014**
	(0.020)	(0.020)	(0.009)	(0.009)	(0.022)	(0.022)	(0.007)	(0.007)
Maybe would migrate pre-COVID-19	0.099***	0.098***	-0.019	-0.019	0.195***	0.195***	0.003	0.003
	(0.024)	(0.024)	(0.012)	(0.012)	(0.025)	(0.025)	(0.008)	(0.008)
Stopped receiving remittances		0.061***		0.027***		0.044*		-0.013
		(0.024)		(0.009)		(0.026)		(0.009)
Started receiving remittances		0.003		0.001		-0.035		-0.031**
		(0.029)		(0.013)		(0.031)		(0.015)
Stopped working for pay		-0.002		0.011		0.021		0.000
		(0.023)		(0.008)		(0.024)		(0.007)
Started working for pay		-0.014		0.001		-0.007		-0.022
		(0.030)		(0.013)		(0.031)		(0.014)
Sample Size	2661	2661	2661	2661	2627	2627	2627	2627
Dependent Variable Mean	0.31	0.31	0.04	0.04	0.34	0.34	0.02	0.02

Notes: Coefficients shown are marginal coefficients from probit estimation. Robust standard errors clustered at the settlement level in parentheses. *, **, *** denote significance at the 10, 5, and 1 percent levels respectively.
Odd-numbered columns only use pre-determined variables pre-COVID-19; even-columns add changes in some variables between 2019 and 2020.

Table 5: Impact of COVID-19 Salience on Migration Intentions

	Intent to Migrate to Europe				Intent to Migrate to Senegal	
	Very Likely to Move	Likely or Very Likely	Considers Backway	Expected Earnings	Very Likely to Move	Likely or Very Likely
PANEL A: No Controls						
Video + Salience Treatment	0.008	-0.020	0.017	-0.121	0.021	0.031
	(0.021)	(0.023)	(0.023)	(0.089)	(0.016)	(0.021)
Salience Treatment	0.029	-0.016	-0.006	-0.017	0.027*	0.020
	(0.021)	(0.023)	(0.023)	(0.091)	(0.016)	(0.020)
P-value: Both Salience Effects Zero	0.382	0.654	0.578	0.358	0.187	0.312
PANEL B: Controls Chosen by PDS Lasso						
Video + Salience Treatment	0.009	-0.015	0.022	-0.121	0.021	0.032
	(0.021)	(0.023)	(0.023)	(0.089)	(0.016)	(0.020)
Salience Treatment	0.030	-0.010	0.001	-0.017	0.027*	0.023
	(0.021)	(0.023)	(0.023)	(0.091)	(0.016)	(0.020)
P-value: Both Salience Effects Zero	0.346	0.805	0.555	0.357	0.186	0.268
Sample Size	2757	2757	2757	2757	2757	2757
Non-Salient Group Mean	0.28	0.53	0.39	10.81	0.12	0.25

Notes: Robust standard errors in parentheses. *, **, *** denote significance at the 10, 5, and 1 percent levels.
Treatment effects are shown from a regression Outcome = a + b1*Video&SalienceTreatment + b2*Salience Treatment
Panel A includes no other controls, while Panel B uses post-double-selection lasso to choose baseline covariates.
Outcomes are: **Very likely to move:** respondent answers they will surely move in the next five years; **Likely or very likely:** respondent answers they will surely move or likely move in the next five years; **Considers backway** denotes the respondent considers taking the backway to Europe; **Expected earnings** is the inverse hyperbolic sine of the earnings they expect to earn in Europe should they migrate.

Table 6: Knowledge of COVID-19 and Perceived Risk of Infection

	Video + Salience	Salience	P-value
Awareness			
Had Heard of COVID-19 before survey	1.00	1.00	1.000
Knowledge			
Knows Coronavirus not mainly spread by infected food	0.38	0.39	0.740
Knows fewer than 100 Gambians had died of COVID-19	0.29	0.30	0.540
Knows social distancing is a good way to prevent virus spread	0.92	0.90	0.270
Knows border with Senegal closed due to virus	0.96	0.96	0.990
Knows that young children are not the most at risk	0.51	0.50	0.560
Knows Italy and Spain among worst affected countries in Europe	0.95	0.91	0.000
Knows you cannot tell if someone has COVID-19 by looking	0.79	0.78	0.450
Number of Knowledge Questions Correct (out of 7)	4.80	4.74	0.280
COVID-19 Risk Perception			
Believes there is a risk someone in family could get infected	0.44	0.40	0.060
Believes risk in village is no risk or low	0.71	0.72	0.730
Believes risk in village is high or very high	0.12	0.13	0.260
Sample Size	919	922	

Appendix 1: Details of the Information Intervention

The information provided in the COVID-19 video are facts about the virus, how it is spread, how to protect oneself and others from the virus and who is at risk of contracting the virus. This message was conveyed using a 2-minute long video played in either English or one of the three main local languages (Mandinka, Fulani, and Wolof). Respondents chose their preferred language, and the corresponding video was then played (as shown in the first screenshot below). The video was played at different points of the survey depending on the random assignment for the salience intervention.

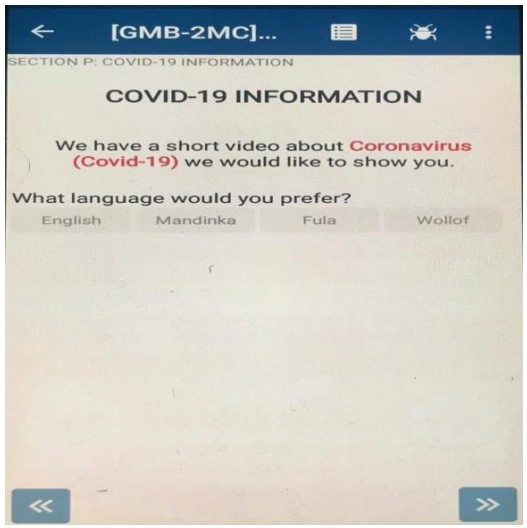
Below we provide snapshots from the videos. In the second picture, we explain what respondents should know about Coronavirus. We explained that "COVID-19 is an illness caused by a virus that can spread from person to person. The virus that causes COVID-19 is a new coronavirus that has spread throughout the world". In the third picture, we explained that "COVID-19 symptoms can range from mild (or no symptoms) to severe illness. You cannot tell whether someone has coronavirus just by looking at them". Furthermore, we highlighted that "the first case in Gambia was reported on March 17, 2020, in someone who had travelled to the Gambia from Europe".

We provide statistics at the time in the fifth picture saying, "as of the 13th of August 2020, there were 1,246 confirmed cases and 43 confirmed deaths in the Gambia from COVID-19". Furthermore, in the sixth, we highlighted that "Italy, Spain and the United Kingdom are the countries in Europe with the most deaths from Covid-19, with over 90,000 deaths in total across these three countries".

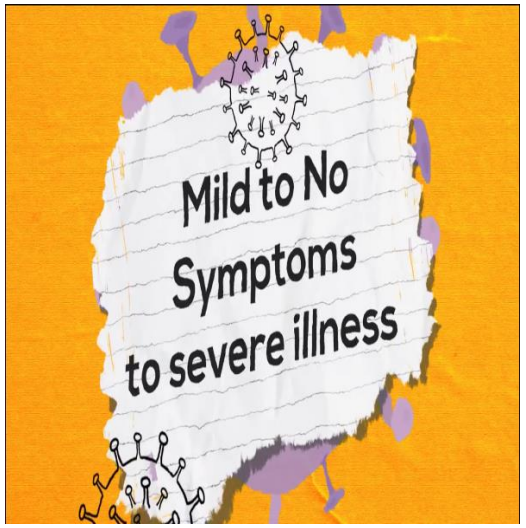
In pictures six through ten, we explained how COVID-19 is spread. We explained that "You can become infected by coming into close contact (about 2 meters or two arm lengths) with a person who has COVID-19. COVID-19 is primarily spread from person to person". Furthermore, "you can become infected from respiratory droplets when an infected person coughs, sneezes, or talks. You may also be able to get it by touching a surface or object that has the virus on it, and then by touching your mouth, nose, or eyes".

In addition, we explained how individuals can protect themselves and others from COVID-19. Noting that "there is currently no vaccine to protect against COVID-19. The best way to protect yourself is to avoid being exposed to the virus that causes COVID-19". Moreover, "Stay home if you are sick, except to get medical care. Wear a cloth face covering that covers your nose and mouth in public settings. Clean and disinfect frequently touched surfaces. Wash your hands often with soap and water for at least 20 seconds, or use an alcohol-based hand sanitizer that contains at least 60% alcohol".

Finally, we highlighted that "everyone is at risk of getting COVID-19". And that "older adults and people of any age who have serious underlying medical conditions may be at higher risk for more severe illness".

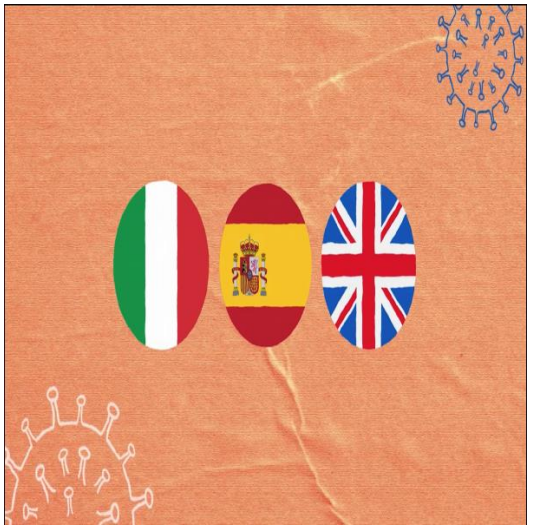

[GMB-2MC]...
SECTION P: COVID-19 INFORMATION
COVID-19 INFORMATION
We have a short video about Coronavirus (Covid-19) we would like to show you.
What language would you prefer?
English
Mandinka
Fula
Wollof


What you should Know about Covid-19


Mild to No Symptoms to severe illness


First Case:
17th March
2020


No. of cases
Mid-August
2020
COVID-19
Case Update
1,246
Active Cases
79
New Cases
184
New Tests
1,556
Total Confirmed
267
Recovered
43
Deaths
947
609

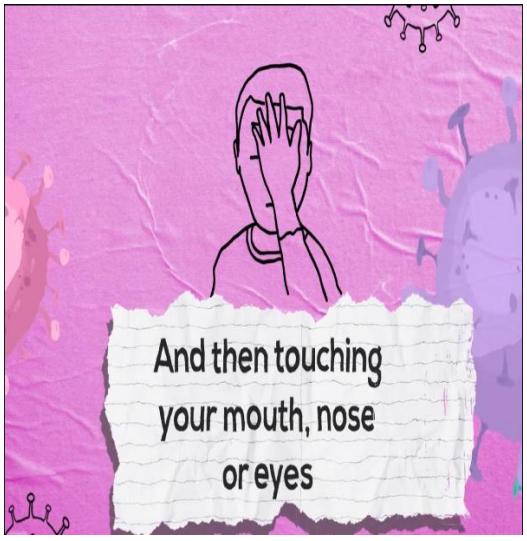



Know how
Covid-19
is Spread


1
Close contact
with an
infected person


2
Respiratory
droplets from an
infected person


3
Touching an
infected surface


And then touching
your mouth, nose
or eyes


Protect yourself
and others from
Covid-19


Stay home
when sick


Wear a face mask
or cloth in public


Clean & disinfect
frequently
touched
surfaces


Wash your hands
with soap / water
for at least 20sec


KNOW
YOUR
RISK!

Appendix 2: Treatment Effect Heterogeneity and Salience Intervention

Table A2.1: Heterogeneity in Impact of COVID-19 Salience on Intent to Migrate to Europe
Dependent Variable: Will surely move to Europe in next five years

	(1)	(2)	(3)	(4)	(5)
Video + Salience Treatment	0.107	0.015	0.009	0.003	0.010
	(0.122)	(0.022)	(0.021)	(0.021)	(0.024)
Salience Treatment	0.080	0.034	0.029	0.034	0.029
	(0.124)	(0.022)	(0.021)	(0.022)	(0.024)
Video + Salience Treatment*Age	-0.004				
	(0.005)				
	[0.962]				
Salience Treatment*Age	-0.002				
	(0.005)				
	[0.991]				
Video + Salience Treatment*Skipped a Meal		-0.065			
		(0.067)			
		[0.949]			
Salience Treatment*Skipped a Meal		-0.044			
		(0.069)			
		[0.991]			
Video + Salience Treatment*Asset Index			0.021*		
			(0.011)		
			[0.398]		
Salience Treatment*Asset Index			0.013		
			(0.011)		
			[0.855]		
Video+Salience Treatment*Intended to Migrate				0.000	
				(0.045)	
				[1.000]	
Salience Treatment*Intended to Migrate				0.026	
				(0.046)	
				[0.991]	
Video+Salience Treatment*Maybe would migrate					-0.012
					(0.050)
					[0.991]
Salience Treatment*Maybe would migrate					-0.005
					(0.051)
					[0.992]
Sample Size	2757	2757	2757	2757	2757

Notes: Robust standard errors in parentheses. *, **, *** denote significance at 10, 5, and 1 percent levels.
Square brackets contain Romano-Wolf FWER-adjusted p-values.
All regressions also include level effects of interacting variable.

Table A2.2: Heterogeneity in Impact of COVID-19 Salience on Intent to Migrate to Senegal
Dependent Variable: Will surely move to Senegal in next five years

	(1)	(2)	(3)	(4)	(5)
Video + Salience Treatment	-0.009	0.032*	0.020	0.004	0.014
	(0.095)	(0.017)	(0.016)	(0.014)	(0.017)
Salience Treatment	-0.067	0.034**	0.027*	0.009	0.024
	(0.096)	(0.017)	(0.016)	(0.014)	(0.018)
Video + Salience Treatment*Age	0.001				
	(0.004)				
	[0.928]				
Salience Treatment*Age	0.004				
	(0.004)				
	[0.868]				
Video + Salience Treatment*Skipped a Meal		-0.089*			
		(0.049)			
		[0.488]			
Salience Treatment*Skipped a Meal		-0.054			
		(0.053)			
		[0.868]			
Video + Salience Treatment*Asset Index			0.005		
			(0.008)		
			[0.928]		
Salience Treatment*Asset Index			0.013		
			(0.008)		
			[0.601]		
Video+Salience Treatment*Intended to Migrate				0.040	
				(0.048)	
				[0.880]	
Salience Treatment*Intended to Migrate				0.087*	
				(0.051)	
				[0.538]	
Video+Salience Treatment*Maybe would migrate					0.048
					(0.042)
					[0.853]
Salience Treatment*Maybe would migrate					0.020
					(0.041)
					[0.928]
Sample Size	2757	2757	2757	2757	2757

Notes: Robust standard errors in parentheses. *, **, *** denote significance at 10, 5, and 1 percent levels.
Square brackets contain Romano-Wolf FWER-adjusted p-values.
All regressions also include level effects of interacting variable.