

Diversity Impact on Vaccine Equity in Algeria

This bulletin continues our research on language, ethnicity and Covid-19 vaccine confidence among Amazigh communities in Algeria. The first instalment was published in February 2022.¹

KEY FINDINGS

There were dramatically different levels of official information available in Tamazight (an official national language, albeit one that was recognized as such relatively recently), compared to Arabic (an official national language) and French (not an official national language), discussed in the first bulletin and below.

The process of identifying content posted by Amazigh users on social media was more difficult than we had hoped for, for reasons explained in the bulletin. This indicates that the results are complex and not definitive, but they lead to preliminary indication that **language and ethnicity do matter** when using social media to convey vaccination information and pro-vaccination campaigns.

Posts by social media users who were identifiably Amazigh were significantly more likely to express no confidence in Covid-19 vaccines (28 per cent compared to 18 per cent). However, when no and low confidence scores are added together, the proportions even out (54 per cent of Amazigh posts no or low confidence versus 55.5 per cent among general posts).

Reasons for reservations concerning the vaccine also differ. Content posted by identifiably Amazigh individuals was half as likely to revolve around vaccine safety (15 per cent compared to 32.5 per cent) and twice as likely to involve conspiracy theories (25 per cent compared to 13 per cent). This was in spite of the fact that identifiably Amazigh comments did not indicate higher level of distrust in authorities than comments by general social media users.

The research revealed that distrust in political authorities in Algeria is in general extremely high for all groups, with over 80 per cent of the comments discussing this issue, amounting to 42.5 per cent of the entire sample (n=510 comments total sample). In focus group discussions, distinctions were made between political authorities and medical authorities, with trust in the latter reported as being higher.

In some Southern Amazigh areas, effective local government systems have been established where distrust in political authorities captured in our research appeared dramatically lower (26 per cent² expressing distrust for the Ghardaia governorate, compared to 79 per cent expressing distrust for Amazigh from all governorates and 88 per cent for comments posted by those with no ethnicity or language markers).

Unlike reports from some other African settings,³ our data does support the view

that in Algeria vaccine confidence may be a more important barrier to vaccine uptake than access restrictions.

Research overview

The research was more challenging than planned: due to the limited use of Tamazight online, it was often not possible to use language as a differentiator. Reliance on surnames, placenames and other content mentions required a more manual data analysis approach. The research was a rapid and not exhaustive effort designed to generate results in time to be useful during the ongoing vaccination effort. At the start of the research (1 November 2021) approximately 15 per cent of Algeria's population had received at least one dose of the vaccine; as of 18 March 2022, the proportion has risen to 23 per cent.⁴

Between January and March 2022, building on a first bulletin⁵ released in February 2022, Minority Rights Group conducted further research to monitor social media discourse around Covid-19 vaccination in Algeria, including access, confidence and uptake among the entire population, and with particular reference to the Amazigh community.

During the second phase of the research, we strengthened the social media monitoring of Facebook conducted through CrowdTangle on a data set covering the period between January 2021 and January 2022. A total sample of 510

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Facebook comments were collected, which were later analyzed with respect to their sentiments on: (1) Covid-19 vaccine confidence, (2) reservations towards the vaccine, (3) access to vaccines, and (4) distrust in health and other government authorities regarding the administration and dissemination of information related to the vaccine. The comments were further broken down to identify those that included a marker of ethnicity or language linked to Amazigh or Tamazight (including language of post and comments, but also names and other identity-related traits).

The social media findings were also triangulated with the findings of four focus group discussions (FGDs) in Algeria or with diaspora representatives. This research selected four specific sub-groups, Kabyle (the largest Amazigh group living mostly in northern Algeria), Chaouis (mostly eastern Algeria), Mozabite (mostly central and southern Algeria, who maintain separate religious traditions and follow Ibadism) and a focus group with Amazigh women, to highlight potential differences or discrimination in access and confidence in Covid-19 vaccination by language, ethnicity, region, gender and socio-economic conditions. All the participants to FGDs were selected because of their professional involvement: health workers, education staff, translators and civil society representatives who were in a good position to comment on the availability of information and access to vaccination for the Amazigh population. A total of 22 participants (14 men, 8 women) attended four FGDs. Despite having invited several Chaouis participants and Amazigh women from different regions, those sub-groups were more reluctant to participate, and there ended up being a much higher participation of Kabyle (17) as well as men overall (14), as well as a minimal representation of Mozabite (4). FGD

participants were asked to report for the wider community that they were in regular touch within Algeria and not base their responses purely on their own personal experiences.

We also conducted an additional search on the social media networks of the Ayaane's council from the southern *wilaya* (governorate) of Ghardaia, representing the Mozabite (locally referred as M'zab) sub-group of the Amazigh in order to ensure balanced data on the basis of ethnicity and to gather some interesting findings from the FGD with representatives from this community.

Language analysis and limitations

Amazigh are indigenous inhabitants of North Africa, and an ethno-linguistic group with its own language, Tamazight. They belong to different linguistic sub-groups within the overall Tamazight grouping. However, many Amazigh (particularly younger people and men) in Algeria often use Arabic and French, especially on social media. The hope had initially been to rely on language to identify Amazigh posting on social media. As discussed below, Amazigh who would, at least to some extent, post on social media in Tamazight reported switching language when discussing the health crisis. As a result, a low proportion of relevant online comments in Tamazight were collected compared to Arabic and French.

Other factors that were used in identifying Amazigh users were personal names, placenames and the content of the posts itself. It is not the case that all or most Amazigh have different names than other Algerians so this was successful in identifying some Amazigh but will have by no means identified all. It is possible that inclusion of place names was also not a perfect fit, although the team were careful to include only those that were at least 90 per cent populated by Amazigh communities. The use of Tamazight was confirmed through both FGDs and other anecdotal evidence whereby several

Amazigh informants reported a mixed language pattern when posting on social media, and even lower use of Tamazight to discuss the pandemic.

Common reasons reported for the low use of Tamazight are: lack of agreement about the alphabet (Latin, Arabic or Tifinagh); limited technical tools to be able to use it on social media (such as keyboard and automatic corrector); exclusively oral knowledge of Tamazight and limited reading/writing skills of a large proportion of the population; poor language trainings in school; and social media communication involving Arab Algerians who do not speak Tamazight.

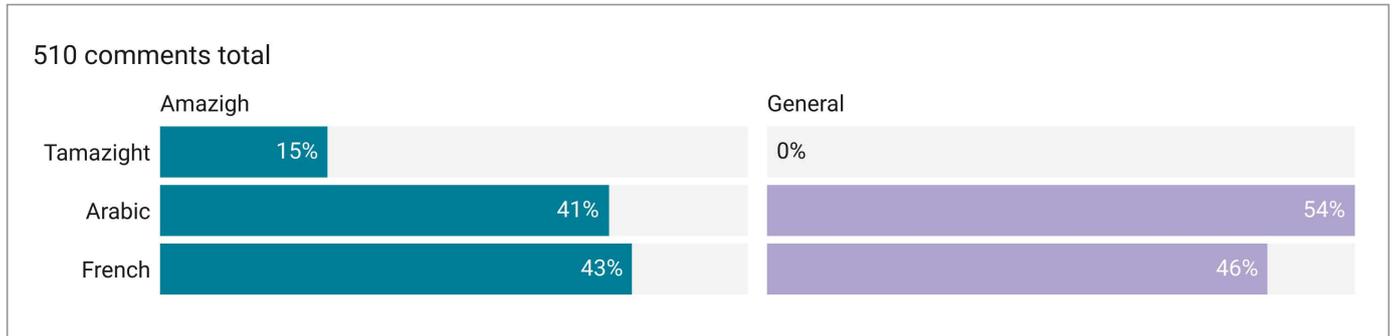
In this research, a total of 143 comments (28 per cent) out of 510 were marked as 'Amazigh user', while 369 (72 per cent) were classified as 'unknown/cannot access', which, based on the previous acknowledgements, does not exclude the possibility that some of the users could be Amazigh, but that could not be confirmed. Throughout this bulletin the two sets of comments are referred to as 'Amazigh users' and 'general users'.

Based on our data, general users tend to use Arabic slightly more than French (54 per cent Arabic versus 45 per cent French) compared to Amazigh users (41.2 percent Arabic versus 43.3 percent French). However, as *Figure 1* indicates, the use of both French and Arabic is much higher than the use of Tamazight (15.3 per cent) among Amazigh social media users.



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Figure 1: Breakdown of the use of language by ethnicity



KEY FINDINGS

The previous bulletin discussed the government’s centralization and limited share of information, their fight against fake news and general crackdown on civil society in general, and Amazigh activism in particular. The researchers had monitored the official Algerian news site, Algérie Presse Service (APS) through the **social media listening software tool**: while this remains the main source of information on Covid-19, with no function to allow users to comment on their website, there is a widespread negative reaction towards information on vaccines shared through their social media platforms, especially during the period that the vaccine was first introduced to the public.

Of the total sample of relevant comments (i.e. those that mentioned the Covid-19

vaccine) from the CrowdTangle search between January 2021 and January 2022, 91.5 per cent of the sample comments were related to conversations on Covid-19 vaccine confidence, 88.4 per cent to reservations about the vaccine, 12 per cent to access to vaccines, and 50 per cent to distrust in health and other government authorities.

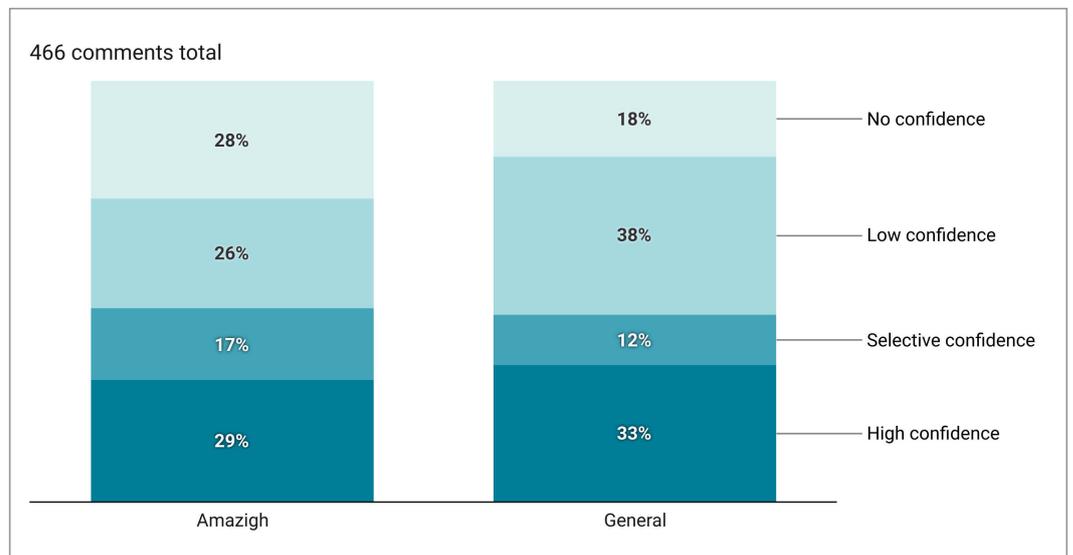
Confidence in Covid-19 vaccination

Out of 510 comments collected, 466 comments (91.1 per cent) related to vaccine confidence. Amazigh social media users were significantly more likely to have no confidence in the Covid-19 vaccination (28 per cent compared to 18 per cent). However, this is partially offset by general users being more likely to have low

confidence (38 per cent versus 26 per cent). This means that the picture for low and no confidence taken together is roughly equal (55.5 per cent general users compared to 54 per cent of Amazigh users). Nonetheless, this suggests that overcoming the ‘no confidence’ of more than one quarter of Amazigh users presents a very serious hurdle to those aiming to build confidence in the Covid-19 vaccine across the whole of Algeria.

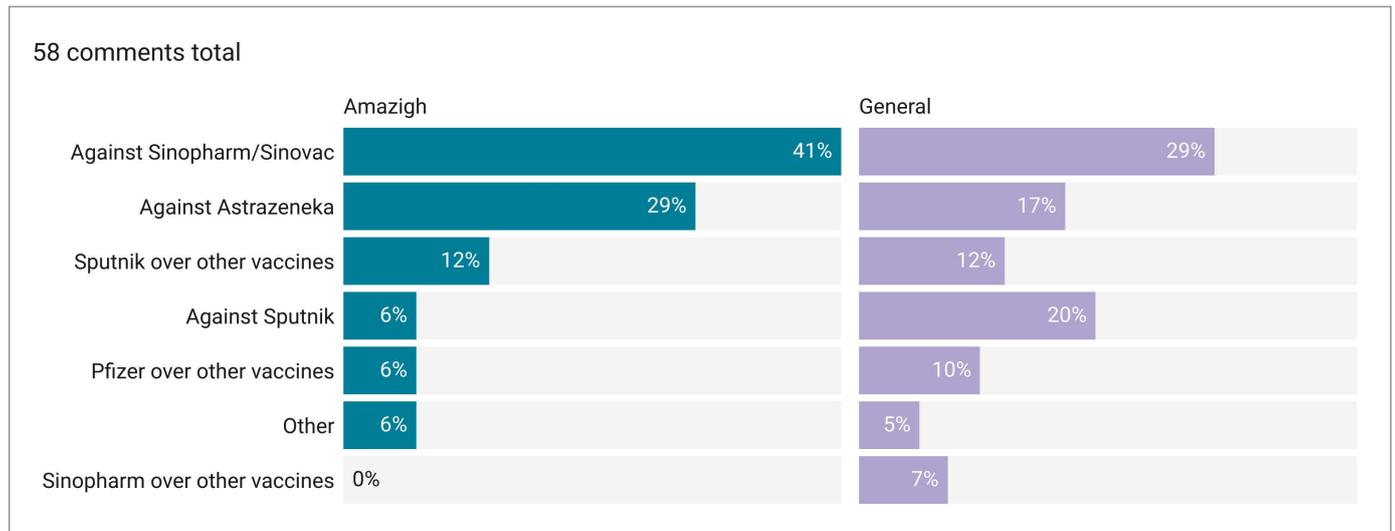
It is interesting that Amazigh users indicated more often selective confidence towards or against specific vaccines: for example, a larger proportion were against China-produced vaccines (41 per cent Amazigh and 29.3 per cent general) and AstraZeneca (29 per cent and 17 per cent respectively) (*Figures 2 and 3*).

Figure 2: Breakdown of confidence levels by ethnicity



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Figure 3: Breakdown of selective confidence sample by ethnicity



Relevant qualitative findings (quotes from comments)

Translation Tamazight (M'zab):
'May God take away the stubbornness of this new generation (understood not to want to be vaccinated)'
 Facebook user, Amazigh

Translation from Arabic: **'To spread more panic and fear in the society and make them rush behind the blindness and leadership of doctors behind the World [Health] Organization'** Facebook user, Amazigh

During FGDs, most representatives from the Kabyle community reported confidence in the vaccination campaign in this area of Algeria. On the other hand, Mozabite and female respondents reported a lack of confidence within the population, mainly due to the overload of and contradictions within the information circulating on social media, as well as lack of confidence (especially among the youth) towards the government. On this last point, informants stressed the lack of confidence in the figures provided by the government (for example, regarding levels of infection, hospitalization and deaths), but that they were still confident in the work of Algerian doctors, medical staff and

local authorities, which encourages them to get vaccinated.

Reservations towards Covid-19 vaccination

Based on 510 collected comments, 420 (88.4 per cent) were conversations relevant to reservations. Out of those, over a third of comments from the sample showed no reservations towards Covid-19 vaccines (36 per cent), with most of those comments corresponding with those showing high confidence in vaccines (32 per cent).

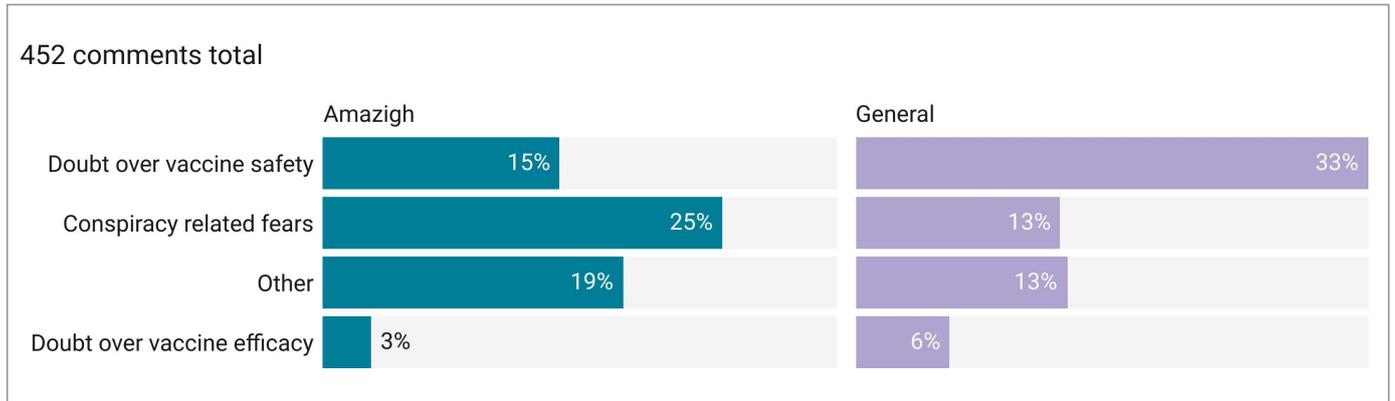
The most common reservations for both groups were 'doubt over vaccine safety' and 'conspiracy related fears', with significant differences between Amazigh and general users.

Only 15 per cent of Amazigh social media users indicated 'doubt over vaccine safety' as their main reservation, while 32.55 of general users did so. On the other hand, conspiracy related fears constituted the main reservation for 25.3 per cent of Amazigh users but only 13 per cent of general users.

Other reservations include 'religious reasons', 'trust in natural immunity', 'freedom of choice', and 'affect fertility/sexual functioning', each at less than 2 per cent (Figure 4).

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Figure 4: Breakdown of reservations by ethnicity



Relevant qualitative findings (quotes from comments)

Translation from Arabic:
‘Tell us a little bit on the vaccine. Did you take the dose of the vaccine or not yet? What will its complications in the future be? Will it be beneficial or negative?’
 Facebook user, Amazigh

Translation from Arabic:
‘Most European countries rejected this type of vaccine [referring to AstraZeneca] because it causes blood clots’ Facebook user, ethnicity unknown

Translation from Tamazight:
‘On the one hand you criticize the state, in which you do not trust... And on the other side you go make the vaccine. I don’t understand and I don’t know. May God heal sick people’
 Facebook user, Amazigh

Access to Covid-19 vaccines, including access to information

Most comments (88 per cent) from the Facebook query did not contain reference to ease of or barriers to access to vaccines and therefore could not be assessed. However, those who did mention access were primarily expressing concerns around this: that vaccine was not available in the area (3.3 per cent), limited options for vaccines (2.5 per cent) or a lack of information on vaccine distribution (2.3 per cent).

On the other hand, respondents to all FGDs confirmed that in their experience

the vaccination is usually available, although slightly less in more remote regions, and that what is lacking most are appropriate awareness campaigns, especially in Tamazight. When it came to information sharing on national television channels in Tamazight, respondents felt that this is not equitable (for instance, there is only one national television channel in Tamazight compared to several in Arabic). Lack of information in Tamazight may have affected the low level of confidence in the campaign, as well as the spread of conspiracy-related theories among the Amazigh communities mentioned above. It must be however acknowledged that Tamazight was introduced relatively recently as an official language (2016) and proper language planning to make this equally available as the older one requires time, financial and human resources, and technical skills. (That said, these practical considerations should

not be used to justify avoidable ongoing delays in implementing that decision fully.)

There are probably two main arguments as to why provision of information in Tamazight language would be helpful in this situation. Given that a significant proportion of the Amazigh population do have a working knowledge of French or Arabic (or both), Tamazight is important to deliver information directly to those who do not. The numbers of those who do not speak French or Arabic are disputed and hard to ascertain, but it is known that older and uneducated women (who are already at risk of being left behind in many ways socially) are less likely to speak Arabic and French and would be the main practical beneficiaries of Tamazight language television and radio broadcasts.

In addition to these beneficiaries, a wider Tamazight speaking group could benefit

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through their culture and language being respected, valued, and thereby gaining in dignity and equality with other Algerians. There is an argument that Tamazight language broadcasts would be trusted more by Tamazight speakers, though this appears not to be the case in practice, with community members skeptical of Tamazight language broadcasts initiated by the (highly distrusted, see below) government.

FGD respondents also indicated that the language used in Tamazight television channels is not suited to the main practical beneficiary group as the language is too complex, mixing a variety of dialects and using terms that uneducated older women would not understand. On the other hand, local radio stations made a significant effort to share information about Covid-19 and the vaccination campaign in Tamazight, especially in Tizi, Béjaïa, Bouira and Ghardaïa. Local associations distributed leaflets as well, according to FGD respondents, although their value

may have been limited by low Tamazight literacy levels.

Our previous research on APS's Facebook pages (French, Arabic and Tamazight) indicated zero⁶ posts in Tamazight, and while the rest were roughly divided between French and Arabic.

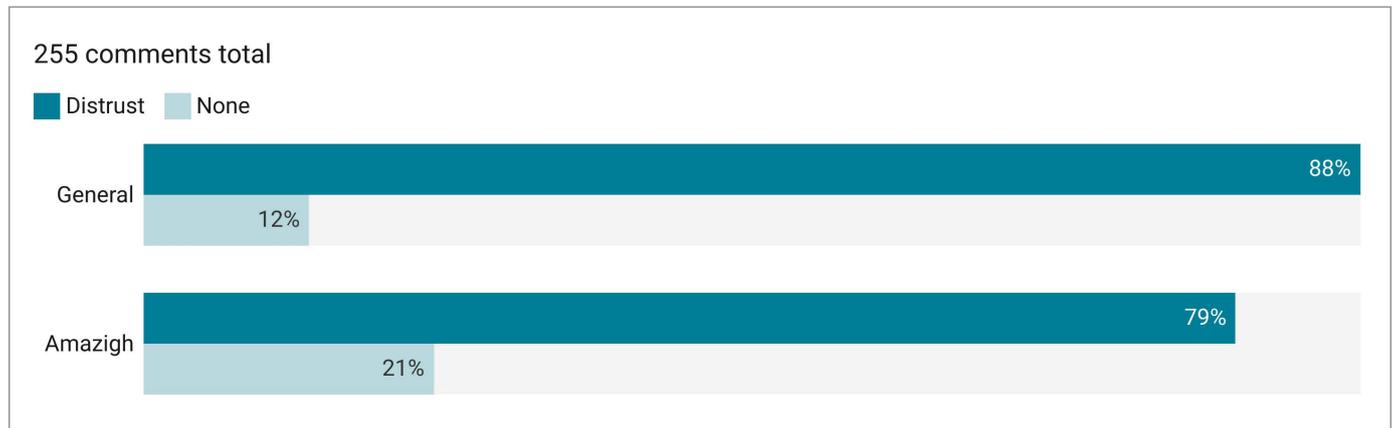
Female FGD participants reported a general lack of gender equality in the country but did not report witnessing any gender-based discrimination cases in access to health care facilities and vaccines. One female respondent, a public-school Tamazight teacher, stressed that they received vaccination directly in their school (which is situated in a remote village 1,000 metres above sea level) and were exposed to awareness-raising campaigns because of a ministerial decree making vaccinations compulsory for school employees, where women represent the majority in the sector. In contrast with the FGDs findings, four Amazigh informants anecdotally reported

that access to Covid-19 vaccination is complicated for women. However, despite attempting to solicit further details on this, the researchers were unable to investigate this further.

Distrust in authorities

Half the comments from the social media monitoring (50 per cent) did not refer to distrust in authorities. Surprisingly, those that did so (n=255 comments of 510) indicated that Amazigh have a lower percentage of distrust compared to general users (79 per cent against 88 per cent). This contrasts with FGD findings, as well as government general trends of repression against Amazigh activism. It is possible that Amazigh feel the need to self-censor their public social media statements concerning the government more than the Algerian population in general. But the overall finding remains that distrust is widespread across Algerian society currently, including as a result of the government response to the *Hirak*⁷ movement (Figure 5).⁸

Figure 5: Breakdown of distrust in authorities by ethnicity among the comments that could be assessed for distrust



Several attendees to the FGD with Kabyle representatives underlined a general socio-political context in Algeria, with a significant part of the population mistrusting authorities and official discourse, especially in their region. In all FGDs, people reported that they had limited trust in the information shared by the authorities when it comes to official data, in the way authorities are tackling

misinformation or simply the amount of information shared. However, a significant difference emerged in the FGD with Mozabite representatives (M'zab), who live in a remote area of Southern Algeria and rely quite heavily on a local authority structure: the Ayaane Council of Ghardaïa. In addition to speaking a specific variety of the Tamazight language, M'zab are also a religious minority who follow the Ibadi

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school of Islamic teachings, and the Council has a role in supervising the application of those teachings among the community and in securing respect of the local culture. Consisting of religious leaders, doctors and businessmen, this Council is respected by the community and unofficially accepted by the state. Its members have their own channels, with significant local visibility,⁹ where they share information in the local variety of the Tamazight language which many residents rely on.

Our manual research into their channels found that they have a website with a Covid-19 crisis unit¹⁰ that attracts an average of 1,000 readers per post (Ghardaïa has a population of 93,423 according to the 2008 census). Various publications focus on Covid 19, including the evolution of the pandemic, and awareness raising, where written content is mostly in Arabic, while Tamazight is mostly present in video content. The videos include frequent interventions by people with religious authority in the section of the Covid-19 crisis unit, for instance a respected local Sheikh (Mohamed Ben Aissa Said) releases regular episodes on the subject (entitled 'nothing to fear', these videos are however in standard Arabic due to the strong reference to Qur'anic verses).¹¹ There are also messages from doctors, such as Bab Ali Nourredine Ben Mohamed,¹² to popularize the information concerning protective measures, in Algerian Arabic, Tamazight and French, attesting to the different language used based on the purpose of the communication.

Out of 510 comments analyzed, 56 comments concerned the Ayaane Council information sites. Of these 56 comments, just under half contained elements allowing us to assess trust in authorities (48 per cent), and most of these reported trust in the [local, not national authorities (36 per cent)

a noteworthy difference from the overall levels of trust towards national authorities analyzed above. There is a well-developed literature considering the relationships between trust in [health] authorities and vaccine confidence, with the common assumption being that higher trust results in higher confidence and in particular the willingness to critically assess misinformation. The data on the Ayaane Council differ from this generalized finding. Despite the significantly higher trust in local authorities (with responsibility for vaccine delivery) here, one third of the comments showed conspiracy-related fears for vaccine reservation, which is slightly higher than and not, as might be expected, significantly less than the overall Amazigh level.

CONCLUSION

Before the start of this research project, the availability of evidence on difference in access to and confidence in Covid-19 vaccinations by ethnicity and language in Algeria affecting the Amazigh indigenous population was 0 or close to 0. During the project we conducted social media monitoring, mostly Facebook, as well as targeted Algerian websites, and collected evidence on factors influencing vaccine confidence and uptake in Algeria.

Our research demonstrated that provision of information about the pandemic and the vaccine in Algeria's official national languages was starkly uneven in official channels, with French (which is not a national language) used in official communication far more than Tamazight (an official national language), with local authorities and radio stations partially intervening to fill this gap.

We found significant differences in levels of vaccine confidence, in reasons for reservations about vaccines and in selective preferences for different vaccines between social media users identifiable as Amazigh and others.

Findings concerning trust in authorities showed extremely high levels of distrust in

national political authorities. In contrast, examination of one local authority provision (Ayaane Council of Ghardaia) showed much lower levels of mistrust. Despite the high level of reservations due to conspiracy beliefs here, it is still worth investigating for Algeria specifically the added value of siting interventions at a local or governorate level, rather than branding them as national efforts.

RECOMMENDATIONS

This research shows that **ethnicity and language** do matter when it comes to designing and rolling out vaccination information campaigns. A one-size-fits-all approach that disregards language and ethnicity is therefore at high risk of being partially ineffective and leaving groups behind. Lack of accessibility or linguistic disparities in health care and in particular fact-based information on vaccines contributes to the risk of minorities having a less well-informed understanding of the issue and as a result lacking facts to counter misinformation. This may impact particularly the most vulnerable groups within the indigenous community, namely older Amazigh women; while youth and men are generally comfortable with receiving information also in the two other languages used in Algeria (Arabic and French), this could potentially increase also gender disparities. While this research does not provide proof for correlation of existing reservations among Amazigh and lack of accessible information in Tamazight, we can conclude that such unbalanced linguistic representations may contribute to the spread of misinformation.

In the current Algeria context, our research suggests that investing in national level efforts may reap low results and that a more effective approach would be to invest in local level efforts, with the visible involvement of trusted health professionals, religious leaders and others not associated with national politics which carries high risk of wholesale discounting or disregarding of information as a result of high distrust.

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- 1 Minority Rights Group (2022) 'Diversity impact on vaccine equality in Algeria', February, available at: <https://minorityrights.org/publications/dive-algeria/>
- 2 The analysis here is based on the sample collected from Aayane Council Facebook page. This sample contains only 56 relevant posts and comments, and of that sample only 27 comments were about distrust to authorities.
- 3 Menezes, N.P., *et al.* (2021) 'What is driving Covid-19 vaccine hesitancy in sub-Saharan Africa?', World Bank, 11 August, available at: <https://blogs.worldbank.org/africacan/what-driving-covid-19-vaccine-hesitancy-sub-saharan-africa>
- 4 IHME (2022) 'Covid-19 projections: Algeria', available at <https://covid19.healthdata.org/algeria?view=cumulative-deaths&tab=trend>
- 5 For intermediary findings as well as general context about Covid-19 in Algeria, see Minority Rights Group (2022) 'Diversity impact on vaccine equality in Algeria', February, available at: <https://minorityrights.org/publications/dive-algeria/>
- 6 Algerian government announced on 21 December 2020 the launch of the vaccination campaign in January 2021. Algérie Presse Service, 'Covid-19: des instructions pour lancer la vaccination dès janvier', 21 December 2020. <https://www.aps.dz/sante-science-technologie/114669-covid-19-le-premier-ministredonne-instructionde-commencer-la-vaccination-des-janvier>
- 7 Two years of peaceful protests known as Hirak (Arabic for 'movement') started in 2019 and caused by Abdelaziz Bouteflika announcing his candidacy for a fifth presidential term.
- 8 Algérie Presse Service, 'Coronavirus: Tebboune ordonne l'interdiction de la diffusion de toutes statistiques en dehors du ministère de la Santé', 22 March 2020. <https://www.aps.dz/algerie/103331-coronavirus-tebboune-ordonne-l-interdiction-de-la-diffusion-de-toutes-statistiques-endehors-du-ministere-de-la-sante>
- 9 By March 2022, they had over 8,000 followers on Facebook, more than 3,300 on YouTube and over 1,000 on Instagram.
- 10 Coronavirus Crisis Unit - The website of Ait Isguen Aayan Council, aayaneisguen.com
- 11 'There is no fear for them, nor will they grieve', Series: Episode 1. The website of Ait Isguen Aayan Council, aayaneisguen.com
- 12 Online lecture: Coronavirus after the quarantine, Questions & Responses.
- 13 "Vaccination and Trust - World Health Organization." World Health Organization, https://www.euro.who.int/__data/assets/pdf_file/0004/329647/Vaccines-and-trust.PDF and Trust is a core predictor, with distrust in vaccines in general and mistrust in government raising vaccine hesitancy. *Vaccines* 2021, 9(6), 593; <https://doi.org/10.3390/vaccines9060593>

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