Covid-19 vaccine hesitancy in South Africa: Summary of existing studies

(*Sara Cooper, Cochrane South Africa, South African Medical Research Council)*

UJ-HSRC Covid-19 Democracy Survey [1-4]

The University of Johannesburg's Centre for Social Change and Human Sciences Research Council's (HSRC) Developmental, Capable and Ethical State (DCES) division conducted an online survey among South Africans with the overarching aim to determine public perceptions of the economic, social and political impact of Coronavirus on life across the country. The survey was conducted online, using the #datafree Moya Messenger App and through links from social media adverts on Facebook and Twitter. The third round of the survey, conducted between 29 December 2020 and 6 January 2021, explored people's willingness to take a Covid-19 vaccine. It included the question: 'If a Covid-19 vaccine became available to you, would you take it?' This was followed by a simple, open-response question: 'please explain your answer.' Only adults living in South Africa were included. The analysis was based on 10,618 completed questionnaires that were weighted by race, education and age, making findings broadly representative of the total adult population. The qualitative findings were based on an analysis of a random sub-sample of 1,960 responses taken from the main sample.

Main findings

Vaccine acceptance

- 67% said they would definitely or probably take a vaccine; 18% said they would definitely not or probably not take the vaccine and 15% were unsure if they would take the vaccine.

Factors influencing vaccine acceptance:

- Race: White adults were least accepting, with only 56% willing or probably willing to be vaccinated, compared to 69% for Black African adults, 68% for Indian adults and 63% for Coloured adults.
- Education: Those with less than matric-level education were generally more open to receiving a vaccine (72%) than those who have completed matric (62%) or have a tertiary education (59%).
- Age: Support for vaccination increases with age- people 55 and older were more likely to report that they would take a vaccine than those aged 18 to 24 (74% versus 63%). However, issues pertaining to age may be more complex, as acceptance was 78% for those aged 54 to 64 but dropped off sharply to 48% among those 65 and older.
- Political factors
    - Political party support: Supporters of the African National Congress (ANC) were significantly more likely to demonstrate a willingness to vaccinate (78%) than those of the Democratic Alliance (DA) (65%), Economic Freedom Fighters (EFF) (62%), and other parties (67%). Vaccine acceptance decreased to 48% amongst those who said they would not vote.
    - Political discontent/disillusionment: People who think President Ramaphosa and national government are doing a bad job are much less likely to want vaccination, only 36%, compared to 73% for those stating he was doing a good job. Similarly, only 45% of those rating the national government's Covid response poorly were favourably disposed to vaccination, compared with 73% of those who were positive about the government's performance

The findings did not reveal any clear or consistent influence of gender, proximity to Covid-19 infections, income and subjective class status (although lowest levels of acceptance were among the middle categories of both income and subjective class).

Reasons for vaccine acceptance and nonacceptance

- The most common explanations given for wanting to vaccinate were: to protect oneself (29%), closely followed by the desire to protect others (25%)
- The most common explanations given for not wanting to vaccinate were: concerns about side-effects (25%) and concerns about the overall effectiveness of the vaccine (18%). Explanations related to conspiracy theories or the occult did not appear frequently, 7% and 4% respectively.

Three rounds of Ipsos online surveying [5-7]

Ipsos, on behalf of the World Economic Forum, conducted three rounds of online surveys on its Global Advisor online survey platform- one in August [5] another in October [6] and the third in December 2020 [7]. All three rounds included a sample from South Africa. The surveys asked the following question in relations to vaccine acceptance: "If a vaccine for Covid-19 were available, I would get it". Answers were captured on a scale ranging from strong agreement to strong disagreement. The August survey round was conducted with nearly 20,000 adults from 27 countries, with a sample of approximately 500 from South Africa. The October survey round was conducted with more than 18,000 adults from 15 countries, with a sample of approximately 1000 from South Africa. The December survey round was conducted in 15 countries among 13,500 adults, with a sample of approximately 500 from South Africa. The samples in South Africa in all three rounds were individuals aged 18-74, who were more urban, more educated, and/or more affluent than the general population. The data was, however, weighted so that the sample composition best reflects the demographic profile of the adult population according to the most recent census data.

August round: Main findings for South Africa [5]

- 64% said that they will get the vaccine if it were available, below the global average (74%) of people who would accept the Covid-19 vaccine.
- The most common reasons given by those who indicated they would not get a vaccine was worry about side effects (53%), followed by doubt about its effectiveness (24%), followed by the perception of not being enough at risk from COVID-19 (16%).
- Almost a quarter (23%) of South Africans who do not intend to take the vaccine when available, indicated that they are opposed to vaccines in general.

October round: Main findings for South Africa [6]

- 68% said that they will get the vaccine if it were available, below the global average (73%) of people who would accept the Covid-19 vaccine.
- The most common reasons given by those who indicated they would not get a vaccine was worry about side effects (30%), followed by concerns that a vaccine is moving through clinical trials too fast (23%), followed by the perception of not being enough at risk from COVID-19 (10%)
- Almost a quarter (21%) of South Africans who do not intend to take the vaccine when available, indicated that they are opposed to vaccines in general.

December round: Main findings for South Africa [7]

- 53% said that they will get the vaccine if it were available, below the global average (66%) of people who would accept the Covid-19 vaccine. While there was a global decline in acceptance from the October round, the change in perceptions in South Africa (together with France) saw the largest decline in the global survey.
- The most common reasons given by those who indicated they would not get a vaccine was worry about side effects (65%), followed by doubt about its effectiveness (24%), followed by the perception of not being enough at risk from COVID-19 (17%)
- Almost a quarter (23%) of South Africans who do not intend to take the vaccine when available, indicated that they are opposed to vaccines in general.

South African Social Attitudes Survey (SASAS) [8]

The South African Social Attitudes Survey (SASAS), administered by the Human Sciences Research Council (HSRC) since 2003, is a nationally representative sample survey of adults aged 16 and older conducted annually to investigates public's attitudes, beliefs, behaviour patterns and values. The latest survey round (Round 17) included three vaccination-related questions, taken from the health module designed by the International Social Survey Programme (www.issp.org). These question sought to gauge the views of South Africans towards vaccination in general: How much do you agree or disagree with the following statements about vaccine safety?: 1) "Vaccinations can lead to severe health conditions"; 2) "It is better to develop immunity by getting sick than by getting a vaccination"; and 3) "I believe that vaccinations prevent the disease they are supposed to prevent". A standard five-point agreement scale was used for responses, ranging from 'strongly agree' to 'strongly disagree'. The survey was administered face-to-face, with approximately 40% completed in February/March 2020 and due to the national lockdown brought about by Covid-19, the remaining surveying was completed between November 2020 and mid-February 2021. This unplanned two fieldwork periods provided an opportunity to examine patterns of variation in vaccination attitudes before and after Covid-19. The total sample size was 2844, with the data benchmarked and weighted to Statistics South Africa's most recent mid-year population estimates.

Main findings

- Worries over side-effects is a salient concern among the public in South Africa: approximately a third of South African adults (34%) believed that vaccination could result in serious health side-effects, while only 28% were dismissive of this viewpoint.
- Regarding views about immunity, a larger share of the public is inclined to believe that infection-acquired immunity is preferable to vaccine-acquired immunity (40% agreeing with this while 26% disagreed).
- In relation to vaccine effectiveness, 58% reported that they believe that vaccinations prevent the disease they are intended for, in contrast to 10% who were skeptical about vaccine effectiveness.
- Regarding a potential COVID-19 effect on vaccination attitudes, the survey found a statistically significant increase in the anti-vaccine responses in the case of side effects and immunity beliefs: the percentage of people who agreed that vaccinations can lead to severe health conditions increased by 8%, while the percentage of people who agreed that infection-acquired immunity is preferable to vaccine-acquired immunity increased by 12%.
- The observed change in attitudes towards vaccine effectiveness before and after Covid-19 was not statistically significant, suggesting that public perceptions of the effectiveness of vaccines has remained in a positive light.

The Ask Afrika Covid-19 Tracker study [9-12]

Ask Afrika, an independent South African market research company, has been conducting the 'Covid-19 Tracker study' since April 2020. The study is a pro-bono study which aims to better understand the socio-economic impact that the coronavirus, lockdown and gradual re-opening of the economy has on South Africans. The study comprises 15-minute questionnaires, administered in English and through online interviews, Computer Aided Telephonic Interviews (CATI) and Ask Afrika's power panel platform. Between 3 –11 February 2021 the questionnaire included questions around vaccines. A sample size of 403 respondents, that was proportionally distributed according to the South African demographic profile, was included in the analysis on vaccines. Between 23 –30 June 2020 and 1 –7 July 2020 the questionnaire included questions about COVID-19 behavioural change influencers. Here a sample size of 601 respondents was included in the analysis.

Main findings: Vaccines (3 –11 February 2021 survey)

- Citizens are torn in their intention to be vaccinated- there is willingness and yet simultaneous concerns.
- Just over half of respondents (52%) said they planned to get vaccinated when the vaccine roll-out programme reaches them, while 19% of respondents said they did not plan to get vaccinated and 28% said they were unsure whether they would get vaccinated.
- Nearly three quarters of taxpayers surveyed do not want to pay more tax to fund the vaccines, while just under half of all respondents are willing to pay for the vaccines themselves. Of those who have a domestic worker or gardener –70% would be willing to fund their vaccine.
- Vaccine safety and efficacy are the biggest priority for respondents: In response to the question "*Which of the following five aspects are the most important to you with regards to the vaccine?",* 44% of respondents indicated 'safety of the vaccine', 22% said 'efficacy of the vaccine', 14% indicated 'thoroughness in developing the vaccine' and 11% and 9% said 'the speed of delivery to South Africa' and 'the speed of the roll-out' respectively.
- Concern around the vaccine is relatively high, with 53% of respondents saying they had concerns.
- Participants younger than 34 years had significantly more concerns about getting vaccinated than those older 35 years
- There is a was a correlation between fear and willingness to get vaccinated: of those respondents who indicated that they are NOT concerned about getting vaccinated, 71.5% indicated that they will get vaccinated when the vaccine roll-out reaches them; of those respondents who indicated that they ARE concerned about getting vaccinated, 45,6% indicated that they will get vaccinated when the vaccine roll-out reaches them, compared to 31,6% who said they are unsure whether they will get vaccinated when the vaccine roll-out reaches them.
- 47% of respondents said they had trust in the vaccines.
- Stopping the roll out of the AstraZeneca vaccine in South Africa reduced levels of trust in the safety of vaccines as well as confidence in the process.
- The study found certain gender differences in perceptions of vaccines: Males are less trusting of the vaccine safety, but more willing to vaccinate, whilst women show greater concern over getting vaccinated.
    - there is a significantly higher sense of distrust of vaccines among males than females (39% compared to 26% '*distrust the safety of the vaccine'*).
    - Yet of the 39% of men who distrust the safety of the vaccine, 45% said they will not get vaccinated, whereas of the 26% of females who distrust the safety of the vaccine, 60% said they will not get vaccinated
    - Similarly, of the 39% of men who distrust the safety of the vaccine, 60% say they are concerned about getting vaccinated; whereas of the 26% of females who distrust the safety of the vaccine, 72% say they are concerned about getting vaccinated
    - The concern females have about getting vaccinated is significantly higher among those who distrust the safety of the vaccine compared to those who trust the vaccine (72% versus 42%) , while the same is not seen among males –concerns about getting vaccinated are reasonably consistent between those wo distrust and trust the vaccine (60% versus 54%)
    - Among those males who trust the safety of the vaccine –the speed of delivery to SA becomes more important, while for females who trust the safety of the vaccine –the efficacy becomes more important.

Main findings: Behaviour change influencers (23 –30 June and 1 –7 July 2020 surveys)

- Health experts, the World Health Organisation (WHO) and the Government were found to carry the most weight with regards to COVID-19 behaviour change.
- Celebrity influencers, traditional healers and leaders were found to be the least likely to influence COVID-19 behavioural change.
- Behavioural change influencers varied by population groups:

- People living in townships, the GCIS segment "City Seekers"; Females and Youth (aged 16 –34-years) were significantly more likely to change their behaviour based on Government messaging. Higher income groups were significantly less likely to change their behaviour based on Governments' messaging as compared to lower income groups.
- WHO was more likely to change behaviour among Females and "Metro Mobiles"
- Police Forums and Social Media Influencers were more likely to change behaviour among the Black population than the White population
- Street Committees, Ward Councillors and Ward Committees were more likely to change behaviour among Black population than the Coloured population
- Traditional leaders and healers were more likely to change behaviour among those living in rural areas (small holding/ farms)

COVID-SCORE Global Survey [13]

This study analyzed two questions from the COVID-SCORE survey study pertaining to COVID-19 vaccine acceptance: 1) 'If a COVID-19 vaccine is proven safe and effective and is available to me, I will take it' and 2) 'I would follow my employer's recommendation to get a COVID-19 vaccine once the government has approved it as safe and effective'. Responses were recorded on a five-point Likert scale ('completely disagree', 'somewhat disagree', 'neutral/no opinion', 'somewhat agree' and 'completely agree'). The data were collected from June 16 to June 20, 2020, from an online panel of 13,426 respondents aged 18 years or older from 19 countries. Participants were recruited by Consensus Strategies through multiple international online panel providers for each country. Sampling was random. The sample size in South Africa was 619 participants, with 51.5% of participants having a bachelor's degree and 64.7% being between 25 and 54 years of age.

Main findings for South Africa

- 81.58% of South African responded positively ('somewhat agree' or 'completely agree') to the question "If a COVID-19 vaccine is proven safe and effective and is available to me, I will take it", higher than the global average (71.5%).
- 45.6% of South African responded positively ('somewhat agree' or 'completely agree') to the question "I would follow my employer's recommendation to get a COVID-19 vaccine once the government has approved it as safe and effective"

Council for Medical Schemes (CMS) Covid-19 Vaccine Survey [14]

The Council for Medical Schemes (CMS) conducted a cross-sectional, self-administered anonymous online survey from 4 February- 8 March 2021 to gauge support for Covid-19 vaccination amongst medical scheme members. Various platforms were used to advertise and circulate the survey, including distribution amongst industry associations, medical schemes and administrators to their members. The survey included a range of questions related to support for Covid-19 vaccination, including trust in the vaccine, acceptability, intention to get vaccinated, reasons for not getting the vaccine, effect and influence of employer in getting vaccinated, effect and influence of someone that members know who get vaccinated, and awareness and communication around vaccines. A total of 75 518 medical scheme members completed the survey. Regarding sample characteristics, 51% of respondents were female, 37% were older than 60 years (with a weighted average age of 50.57 years), 87% resided in an urban suburb setting (although urban townships accounted for only 7%), 72% of respondents resided in the Gauteng or Western Cape Provinces, 42% of respondents were employed in the private sector and over 40% had chronic health conditions.

Main findings

- Regarding Covid-19 vaccine acceptance, intention and trust, 82% of respondents reported that they would get vaccinated, 76% indicated that they would trust the vaccine if someone close to them would vaccinate and 71% indicated that they trust that the vaccine will prevent them from contracting COVID-19.
- With regards to the potential influence or effect of the employer recommending vaccination, 58% of participants answered that they would accept the COVID-19 vaccine if their employer would recommend it, while 20% gave a neutral/no opinion response, and 8% completely disagreed.
- The survey found vaccine acceptance, intention and trust varied by certain demographics. The statistical significance of these difference is not reported and therefore need to be viewed with caution.
    - For example, participants in the Northern Cape had lower rates on all three dimensions (acceptance, intention, trust) in comparison to other provinces;
    - 83% of participants in an urban suburb area indicated they would get vaccinated compared to between 73% and 78% in other settings;
    - Compared other employment categories, government and public sector employees had the lowest intent of getting vaccinated (79%), while pensioners had the highest response rate of 87%.
- On the preferred vaccination site, the study showed that general practitioners (GPs) and pharmacists were the preferred vaccination sites as these accounted for 50% and 33% respectively. The balance of 17% chose hospitals, clinics, community centres and other types of settings as their preferred vaccination sites.
- In terms of a preferred vaccine, Johnson and Johnson's vaccine accounted for 48% of preferences, followed by Pfizer/BioNTech Vaccine at 25%, Moderna at 10%, AstraZeneca/University of Oxford Vaccine at 10%, Sinopharm vaccine (China) at 2% and Other 5%.
- Amongst those respondents who indicated an intent not to get vaccinated, the main reason (34%) for not getting inoculated was that the vaccines were too new and they preferred waiting to see how it would work on other people. This reason was followed by worries about the possible side effects (21%) and not trusting the government to make sure the vaccine is safe and effective (14%). These three factors accounted for just over two-thirds of all the reasons respondents gave for not wishing to get inoculated. Belief that politics had played too much of a role in the vaccine development process and not trusting vaccines in general accounted for 8% and 6% of the reasons respectively.
- Regarding awareness and information about the COVID-19 vaccines, 43% of participants indicated that there was adequate information, 41% to the contrary and 16% were unsure.
- On the question of funding, 53% of participants thought it was appropriate for medical schemes to cross-subsidise non-members for the COVID-19 vaccine while 27% were against cross-subsidisation and 20% were unsure.

Africa Centres for Disease Control and Prevention (Africa CDC) Survey [15, 16]

ORB International, in collaboration with the Vaccine Confidence Project at the London School of Hygiene & Tropical Medicine on behalf of Africa CDC conducted a survey to investigate public knowledge and perceptions of both the Covid-19 pandemic itself and Covid-19 vaccine acceptance among adults in 15 African countries, including South Africa. In South Africa, face-to-face interviews were conducted from 17 September 2020 until 16 October 2020 with a total sample of 1,056 adults (over the age of 18). The sample was broadly representative in terms of age and gender.

Main findings

- More than three quarters of respondents (76%) said they would take a new Covid-19 vaccine if it were publicly available
- A total of 81% of respondents agree ("strongly agree" or "tend to agree") that the Covid-19 vaccine is important, 73% agree that the Covid-19 vaccine is effective and 70% of respondents agree that the Covid-19 vaccine is safe.

- Acceptance of a new Covid-19 vaccine was influenced by age, employment status, urbanicity and regional location:
  - Respondents older than 35 years were more willing to take a new vaccine than respondents younger than 35 years (78% versus 73%)
  - People who are employed are much more likely to think a new vaccine would be safe (72%) in comparison to students (61%).
  - Those who live in big cities were more willing to take a new vaccine compared with those who live in villages (79% versus 69%)
  - Those in the Eastern Cape (98%), Northern Cape (95%) and Limpopo (81%) Provinces were more willing to take a new vaccine compared with those in the Western Cape (68%), Free State (68%) and Mpumalanga (68%) Provinces.
  - Willingness to accept a Covid-19 vaccine was consistent across genders, although men were more skeptical about the safety of Covid-19 vaccine (66%), compared to 74% of women who think the Covid-19 vaccine is safe.
- Reported willingness to accept a COVID-19 vaccine was also higher among those who think vaccines in general are safe; those who do not think that the threat of COVID-19 has been exaggerated; those who do not believe Covid-19 related conspiracy theories; those who know someone with a positive COVID 19 test, and those who do not rely on social media as a trusted source of information.
- Half of respondents believed that coronavirus is linked to 5G (49%) and 27% believe that COVID-19 is man-made.
- Regarding trusted sources and sources of information:
  - the WHO was identified by respondents as the trusted body to approve the safety and efficacy of a new COVID-19 vaccine.
  - 24% of respondents rely on newspapers for information on the virus.
  - Online sources are among the most frequently mentioned trusted information sources, with 49% consulting online platforms to get their news about Covid-19
  - 31% of people who would refuse to take the COVID19 vaccine trust social media as a source of information and 35% of people living in villages trust social media as a source of information (compared to 20% of those in big cities).
- Regarding the relationship between acceptance of vaccines generally and Covid-19 specifically:
  - confidence in vaccines in general and confidence in the Covid-19 vaccine were relatively similar. For example, 24% of respondents think vaccines in general are unsafe, a similar proportion (26%) say the same about a COVID-19 vaccine. Similarly, 80% of respondents agree ("strongly agree" or "tend to agree") that vaccines in general are important, a similar proportion (81%) of respondents who agree that the Covid-19 vaccine is important
  - at least 1 in 5 respondents reported that they are now less inclined to vaccinate in general than before the pandemic
  - willingness to accept a Covid-19 vaccine is closely linked to perceived vaccine safety generally- those who think vaccines in general are safe are more willing to take the vaccine (84%), whereas only half of those who think vaccines are unsafe would take a COVID-19 vaccine (51%).

<u>Overarching insights/conclusions</u>

There is some variability in the levels and determinants of Covid-19 vaccine acceptance/hesitancy reported in existing surveys (e.g. vaccine acceptance levels ranging from 82% to 52% in different surveys). Some of the studies also have very small sample sizes, nonrepresentative samples and/or unclear methods. **The findings reported here therefore need to be interpreted with some caution.**

The results from the UJ-HSRC survey, the largest and most comprehensive study to-date on this topic, suggests that about two thirds of South Africans are in favour of the vaccine. This comes close to the widely cited 67% required to reach a level of population 'herd immunity' for Covid-19. Concerns about vaccine hesitancy should therefore not be exaggerated. That said, the survey suggests that about a third of the adult population is hesitant towards the vaccine, a proportion that is higher than for most countries globally. Moreover, the SASAS survey found a statistically significant increase in vaccine concerns and hesitancy predispositions before and after Covid-19 national lockdown. **Strategies to address vaccine hesitancy and sustain acceptance in the country are therefore needed.**

The UJ-HSRC, Ask Afrika, CMS and Africa CDC studies all revealed various factors that may play a role in shaping Covid-19 vaccine attitudes. The UJ-HSRC, Ask Afrika and Africa CDC studies found that age may be important, with younger adults in all three studies having more concerns and/or being less accepting of Covid-19 vaccine. The UJ-HSRC found that race may play a role in shaping Covid-19 vaccine acceptance, with white adults being less accepting. The Ask Afrika found that gender may be influencing Covid-19 vaccine. However, the relationship between gender and vaccine acceptance was somewhat complex and ambiguous in this study, and the UJ-HSRC and Africa CDC surveys did not find any clear or consistent influence of gender on Covid-19 vaccine acceptance. The UJ-HSRC survey found that those with higher levels of education (i.e. those who have completed matric) were less accepting of the vaccine. Both the CMS and Africa CDC studies found that Covid-19 vaccine acceptance may vary by urbanicity (with participants in urban suburb areas or bigger cities having greater acceptance) and by Province (although there were discrepant findings between the studies regarding which Provinces were more willing). The CMS survey also found that there may be preferences for different Covid-19 vaccines, with nearly half of the respondents having a preference for Johnson and Johnson's vaccine. **Taken together, these findings suggest that more targeted strategies, which focus on certain population groups (and potentially specific vaccines) and are tailored to their specific concerns, may be important. More studies are, however, needed to determine which specific population groups and vaccines may need to be targeted.**

Both the UJ-HSRC and CMS studies also found that political factors play a role in shaping attitudes around Covid-19 vaccination. The UJ-HSRC suggested that political discontent or disillusionment may be significant here- those who had positive attitudes towards government generally and its handling of Covid-19 specifically were more favourably disposed to vaccination. Relatedly, the CMS found that not trusting the government to make sure the vaccine is safe and effective and the belief that politics had played too much of a role in the vaccine development process accounted for respectively 14% and 8% of the total reasons for not wanting to get vaccination. **Strong leadership, transparency and thoughtful communication around responses to the Covid-19 pandemic, including but not limited to vaccines, is therefore important for enhancing public trust and associated vaccination acceptance. Greater involvement of non-government and civil society organisations, as well as influential faith and cultural leaders, in responses to Covid-19, including vaccine roll-out, could also help to build trust and vaccine acceptance.**

Across a number of the surveys, the most common reasons for hesitancy/nonacceptance were concerns about vaccine side-effects and effectiveness. Much media and public health attention has focused on issues such as misinformation, disinformation, conspiracy and occult theories as drivers of Covid-19 vaccine hesitancy [2]. This is indeed a trend amongst understandings and responses to vaccine hesitancy more generally [17]. While these issues are not unimportant, the surveys suggest that more attention needs to be placed on the legitimate worries people have about the effectiveness of the Covid-19 vaccine and the possibility of it having an adverse impact on their health. **Education campaigns, public health communication and messaging, and other forms of community engagement that are responsive to these concerns and associated information needs could help build people's confidence in the safety and effectiveness of vaccines.** In this regard, recent global evidence

from systematic reviews suggest that it is important for communications around vaccine safety and effectiveness to be open, balanced and transparent, including about potential adverse effects, evidence gaps and uncertainties surrounding the vaccine [18, 19].

Global evidence from systematic reviews also suggest that vaccine communications should be delivered by trusted sources, which frequently differ between contexts and population groups [18-20]. Moreover, it is proposed that, while it may be helpful to have one main source of information, it is beneficial to consider providing information through a variety of trusted sources [20]. The Ask Afrika study found that health experts, the World Health Organisation (WHO) and the Government carry the most weight with regards to COVID-19 behaviour change The study also found, however, that behaviour change influencers varied by population groups, with for example higher income groups being significantly less likely to change their behaviour based on Governments' messaging. In the Africa CDC study, respondents identified the WHO as the trusted body to approve the safety and efficacy of a new COVID-19 vaccine. **Understanding the specific sources that are trusted and perceived as credible amongst target population groups, and involving these in the provision of Covid-19 vaccine information, is therefore important.** The Wellcome Global Monitor, which explored global attitudes to science and health amongst nationally representative samples from 140 countries in 2018/2019 (N= 1000 in South Africa), also provides potentially useful insights into who might be trusted sources of information in South Africa [21]. In particular, the Global Monitor suggested that doctors and nurses may be additional sources of trust in South Africa: 77% of South Africans indicated that they trust doctors and nurses in South Africa "a lot" or "some" and 68% indicated that they trust medical and health advice from the doctors or nurses "a lot" or "some". Regarding scientists and Government, 51% of respondents indicated that they trust scientists in South Africa "a lot" or "some" and 63% indicated that they trust medical and health advice from the Government "a lot" or "some".

Finally, the UJ-HSRC, SASAS, Africa CDC, CMS surveys, and all three rounds of Ipsos online surveying, suggest that for some South Africans, their hesitancy towards the Covid-19 vaccine is part and parcel of their more general reticence towards vaccination. **As such, efforts to address Covid-19 vaccine hesitancy should align with, and help build, efforts to reduce vaccine hesitancy and promote vaccine demand more generally.** The Covid-19 pandemic provides a unique opportunity for critical public engagement around science and scientific evidence, as well as social mobilisation around vaccination demand [22], with potential positive effect on vaccine acceptance in the country during and beyond the Covid-19 pandemic.

References

1. Narnia, B., et al., *A hesitant nation? Survey shows potential acceptance of a Covid-19 vaccine in South Africa*, in *Maverick Citizen [Internet]*. 2021 January 24 [cited 2021 Mar 17].
2. Runciman, C., et al., *SA survey sheds some light on what lies behind coronavirus vaccine hesitancy*, in *Daily Maverick [Internet]*. 2021 January 27 [cited 2021 Mar 17].
3. Runciman, C., et al., *UJ-HSRC Covid-19 democracy survey. Willingness to take a Covid-19 vaccine: A research briefing*. 2021, UJ-HSRC: South Africa.
4. Human Sciences Research Council. *UJ-HSRC Covid-19 democracy survey summary findings*. 2020 [cited 2021 Mar 17]; Available from: http://www.hsrc.ac.za/uploads/pageContent/11849/UJ-HSRC%20Covid-19%20Democracy%20Survey%20Summary%20Findings.pdf.
5. Ipsos [Internet]. *Three in four adults globally say they would get a vaccine for COVID-19*. 2020 August 31 [cited 2021 Mar 17] Available from: https://www.ipsos.com/en-us/news-polls/WEF-covid-vaccine-global.
6. Ipsos [Internet]. *COVID-19 vaccination intent is decreasing globally*. 2020 November 5 [cited 2021 Mar 17] Available from: https://www.ipsos.com/en/global-attitudes-covid-19-vaccine-october-2020.
7. Ipsos [Internet]. *U.S. and U.K. are optimistic indicators for COVID-19 vaccination uptake*. 2020 December 29 [cited 2021 Mar 17] Available from: https://www.ipsos.com/en/global-attitudes-covid-19-vaccine-december-2020.
8. Roberts, B., N. Bohler-Muller, and J. Struwig, *South African Social Attitudes Survey (SASAS) (Round 17) Brief report. Summary findings: Attitudes towards vaccination*. 2021 March 12 [cited 2021 Mar 17], South Africa: Developmental, Capable and Ethical State (DCES) research division, Human Sciences Research Council (HSRC).
9. Rademeyer, A., *Study finds that not enough South Africans are prepared to be vaccinated against Covid-19*, in *BizCommunity [Internet]*. 2021 February 19 [cited 2021 Mar 17].
10. Ask Afrika, *COVID-19 Tracker: A gender report on South Africa. South African adjusted level 3 lockdown: week 1, 2021 results (3 –11 February 2021)*. 2021, South Africa: Ask Afrika.
11. Ask Afrika, *COVID-19 Tracker: Unpacking the significant social change brought on by the COVID-19 pandemic. Vaccines: week 1, 2021 results (3 –11 February 2021)*. 2021, South Africa: Ask Afrika.
12. Ask Afrika, *Personal agency. Ubuntu (23-20 June 2020). COVID 19 influencers and behavioural change (23-30 June 2020 and 1-7 July 2020)*. 2020, South Africa: Ask Afrika.
13. Lazarus, J.V., et al., *A global survey of potential acceptance of a COVID-19 vaccine.* Nature Medicine, 2020: p. 1-4.
14. Willie, M. and E. Skosana, *Medical Scheme Member COVID-19 Vaccines Survey 2021*. 2021 (March), South Africa: Policy, Research and Monitoring, Council for Medical Schemes.
15. Africa Centres for Disease Control (CDC) [Internet]. *Majority of Africans would take a safe and effective COVID-19 vaccine*. 2020 December 17 [cited 2021 Mar 17]; Available from: https://africacdc.org/news-item/majority-of-africans-would-take-a-safe-and-effective-covid-19-vaccine/.
16. Africa Centres for Disease Control (CDC), *COVID-19 vaccine perceptions: A 15-country study*. 2021 (February), Addis Ababa, Ethiopia: Africa Centres for Disease Control (CDC).
17. Cooper, S., et al., *Knowledge advances and gaps on the demand side of vaccination.* The Lancet Infectious Diseases, 2019. **19**(1): p. 13-15.
18. Glenton, C. and S. Lewin. *Communicating with the public about vaccines: Implementation considerations. Brief prepared for Norad.* 2020 October [cited 2021 Mar 17]; Available from: https://epoc.cochrane.org/our-reviews/summaries-selected-reviews/covid-19-relevant-summaries.
19. Glenton, C. and S. Rosenbaum. *Vaccination communication between healthcare workers and older adults: implementation considerations*. 2020 March [cited 2021 Mar 17]; Available from: https://epoc.cochrane.org/our-reviews/summaries-selected-reviews/covid-19-relevant-summaries.

20. McMaster Health Forum. *COVID-19 Rapid Evidence Profile #24: What is known about strategies for encouraging vaccine acceptance and addressing vaccine hesitancy or uptake?* 2020 (17 November); Available from: https://www.mcmasterforum.org/find-evidence/products?ProductTypes=Rapid%20evidence%20profile (Access 21 March 2021).
21. Wellcome Trust, *Wellcome Global Monitor: How does the world feel about science and health?* 2018, London, United Kingdom: Wellcome Trust. Available from: https://wellcome.org/reports/wellcome-global-monitor/2018/appendix-country-level-data.
22. Heywood, M., *Civil Society Watch: Vaccine activism takes off under broad new alliance*, in *Maverick Citizen [Internet]*. 2021 January 15 [cited 2021 Mar 17].