

# A Qualitative Analysis of the Impact of Political Trust in the Uptake of COVID-19 Vaccine in Three Nigerian Geopolitical Zones

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**Abstract:** The issue of COVID-19 vaccination is an important step in the control of the COVID-19 infection in the community. There have been different adopted strategies in the control of the infection and the best public intervention has been getting vaccinated for now. The most likely solution to ending the current pandemic remains through achieving a better community reach, and the frank acceptance of the availed WHO-approved COVID-19 vaccine in communities. In this study, the reason for the COVID-19 vaccine uptake was evaluated across 3 geopolitical zones in Nigeria with differential political affiliation. This study utilized a qualitative sample collection methodology to qualify the prevalence of different views on COVID-19 vaccine acceptability, access, and political trust. The data was gathered utilizing pre-tested in-depth interviews, which were transcribed and analyzed thematically through the transcripts obtained from the open-ended key informant interviews. The findings from the qualitative studies indicated that the fear of the side effects, apathy/lack of interest, scarce logistics, people's opinion, and self-denial were more of the pertinent issue around the poor COVID-19 vaccine uptake among the respondents. Government needs to ensure that health interventions rolled are adequately accessible to the targeted people and should consider the community culture while rolling out health interventions.

**Keywords:** COVID-19 Vaccine Uptake, Political Trust, Vaccine Hesitancy, Vaccine Acceptance

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## 1. Introduction

Belief in the protection and effectiveness of vaccines, confidence in the people giving the vaccines or providing guidance about vaccination, and believe in the larger health system, are all valuable circumstances which affect the process of vaccine resolutions [1].

Following the confirmation of the initial COVID-19 case by the World Health Organization (WHO) in Wuhan, China towards the end of 2019, the number of confirmed cases of COVID-19 in Nigeria exceeded 214,000 by November 2021 with more than 2900 deaths [2]. On the 30th of January 2020, the WHO declared COVID-19 outbreak, a Public Health Emergency of International Concern (PHEIC) and was subsequently declared a pandemic by

the 11th of March 2021 [3].

Since the declaration of the pandemic, there seem to have been a race to create a safe and efficient COVID-19 vaccine that would be quickly distributed globally with perfect acceptability rate all over the world for an effective control of the pandemic.

The expected COVID-19 Vaccines have been addressed by the UK health secretary Matt Hancock, as “the way out of this pandemic” [4]. It is however becoming very apparent in recent times that the vaccines alone will not be enough to put an end to the pandemic except when it is combined with non-pharmaceutical interventions for a while longer [5].

The yardstick for measuring an accomplished vaccination system in any country remains in its ability to open and keep its international borders open, safely to improve people’s lives and wellbeing. It becomes a very sensitive discussion when trying to weigh hesitancy in areas, regions, and countries against individual and national ideals. The National vaccination coverage could be largely difficult even in the case where a large proportion of the nation’s populace want to have a jab [6], irrespective of the proportion of the opposing views to the vaccine, could still affect a nationwide roll-out of the vaccination program [7].

There are lots of literature understudying the forces causing vaccine hesitance in developed nations [8; 9] but not much has been written about developing nations especially Nigeria which has over 370 ethnic groups with unique ideologies to national issues like vaccination programs. Nigeria is chiefly known for its dependence on vaccines produced in other nations. This according to Krebs et al [10] would lead to vaccine hesitance as studies reveal that vaccines produced elsewhere has poor acceptance rate. Rachel Casiday [11] made an important point about how people’s culture affects the kind of sociopolitical view that these certain group of people might have. Irrespective of the existent cultural disagreement included in any vaccine roll-out, the most important point remains the fact that conflicting views that emanates from differential cultures which is usually related to socio-ethnic classes constitute the nature of the risks including technological, economic, or socially - people fear.

Even though the vaccine roll-out has been largely successful in certain countries, the legality and safety of specific vaccines, or of vaccination campaigns wholly, have been questioned in multiple contexts. Screening and discussions about vaccine and vaccination reports, and “trust” – in government, public health systems, and in society generally – do have crucial function in public confidence in vaccines.

The SAGE Working group [12] on vaccine hesitancy reported in June 2020 that lots of drivers that affect vaccine decisions, vital influencers of public confidence in vaccines were determined to be trust in the relevance, safety, and efficacy of vaccines, in addition to its alignment with religious beliefs.

In the management of public health emergencies and approaching related socio-economic implications, sensible

policy action is needed that would keep a working health system, ensure the continuity of values, and sustain a stable of financial system. It is pertinent to note that a political leadership at the center is an important force that maintains the balance of measures that minimize the impact of the pandemic on the society while ensuring the provision of essential services. In Africa and Nigeria mostly, such kind of government is required to obtain public confidence.

Ozili [13] admitted that certain Nigerian citizens have various disbeliefs about the COVID-19 virus. This disbelief which influenced their hesitancy in taking maximum protective measures was in fact worsened when the government is at the center of propagating this information.

This study sought to evaluate the reason for the uptake of the COVID-19 vaccine among the inhabitants in 3 Nigerian Geo-political zones relative to their political trust.

## 2. Methods

### 2.1. Study Setting

This research was conducted in three states in the three different Nigerian geo-political zones. For this study, Borno, Enugu, and Lagos state was used. This is especially considering the level of influence to the National Politics and the ethnical opinion in the geopolitical zones.

### 2.2. Data Collection Methods

This study employed a qualitative data collection method with the use of Key Informant Interview (KII) guides and administered to a randomly selected of 5 persons for the in-depth interview.

### 2.3. Study Participant

The study population was consenting adults who reside either in Lagos, Enugu, or Borno state.

### 2.4. Sampling Frame

A Random sampling technique was used in the selection of participants. The selection of participants was mostly individual resident either in Borno, Enugu, or Lagos State.

### 2.5. Ethical Considerations

The Research approval was obtained from the Nigerian Health Research and Ethics Committee of the Federal Ministry of Health prior to the commencement of the data collection. Participants were made to give their consent or otherwise to the study. Only participants who consented were involved in this study and their anonymity, privacy and confidentiality was respected.

### 2.6. Data Analysis

The Data was analysed both manually and with SPSS program. It was then, presented in form of tables and pie charts. 95% confidence limit was applied in all the statistical tests.

Respondents within similar locations were interviewed by trained research assistants with the purpose of further discussion and gaining deeper insight about the subject matter.

The selection of respondents for the interview was through a systematic random sampling. The interviews were conducted in different locations within the 3 states. To avoid disrupting the randomness, the systematic approach was unique for each location. For instance, schools, churches, mosques, and public offices were chosen for different locations but the randomness of people selection would be adopted.

For the analysis of the qualitative study, a content analysis approach was utilized in the analysis of the qualitative data collected. The texts were converted to codes and then, a visualizable analysis of the collected data was made.

### 3. Results

A total of fifteen interviews were held in the 3 geopolitical zones under review and about 75 minutes of interviews were recorded. The interviews were of different lengths between 3 minutes and 5 minutes, depending on the amount of information that the respondent is willing to share. Usually, the experiences of respondents are unique, and the age selections were in such way to enable them share enough of their COVID-19 experiences relative to other "similar" experiences and their location of residence.

The transcripts of the 15 respondents served as the raw data to be processed for the qualitative aspect of this research. The data collected from each respondent consisted of the entire length of the interview questions which aligned with the research objectives.

The analysis of the data acquired involved the reduction of the bulk information that was gathered into meaningful cluster units for further interpretation relative to the specific objectives of this research. The aim of the analysis was to organize and systematically arrange the information in a sensible manner, utilizing a cluster method itemizing the main idea of the respondents.

#### 3.1. Stages in the Analysis of the Collated Data

##### 3.1.1. Stage 1- Transcription of the Interview Recording

The transcription of the recording was done manually due to the multiple misinterpretation errors associated with automated transcription. This research work did not

incorporate the use of automated transcription for this sole reason.

##### 3.1.2. Stage 2- Editing of the Transcripts

Editing of the transcripts in such a way as to reduce the data to a more logical and manageable size for subsequent clustering.

This second stage was aimed at identifying and itemizing what can be seen as the most relevant parts of the interview. In the words of Marshall [14], lots of meaning were relatively obvious and can stand out adequately in any circumstance. The method of reduction chosen for this study was in the identification, isolation, and systematic arrangement (coding) of the data into a more analysable format consistent with the intentions of this study. All the highlighted key words were included in further analysis and were reviewed in line with the research objectives that were being addressed rather than as just a word.

##### 3.1.3. Stage 3- Categorization of the Data

The need for categorization was required to arrange the collated key words which were identified during the editing of the transcripts, due to the absence of categories would result in disarray of data [15]. This study aims at evaluating the uptake of COVID-19 vaccine relationship among inhabitants in the 3 Nigerian geo-political zones. Cluster headings were then generated based on the specific research objectives which were inferred from the interview responses. The responses from the interview were then categorized under the response clusters addressing the specific research objectives.

Many of the clusters generated responses seemed to be quite similar and so were edited to make the clusters into a manageable level to allow for better contextualization and reduce repetition. The responses were grouped into response clusters that addressed the specific research objective. For this study, validity testing involved which involved the rating of the same statements using a final list of categories that have been generated. In the case where there are disagreements in the choice of cluster, a new cluster is created to make up for the new response. The approach allowed for adequate inclusion of new data as much as possible across the respondents.

A summary of the findings related to the uptake of COVID-19 vaccine in Nigeria can be found below.

From respondents, the likely reason for the low uptake of COVID-19 vaccine in Nigeria:

*Table 1. Cluster Analysis of the Uptake of COVID-19 Vaccine in Nigeria.*

Cluster 1 Fear of perceived side-effects	Cluster 2 Apathetic attitude/lack of interest	Cluster 3 Logistics	Cluster 4 People's opinion	Cluster 5 Self-denial of COVID's existence
Fear of adverse reaction after vaccination (5)	Lack of interest (2)	Lack of opportunity for vaccination (1)	No known COVID-19 positive person around (2)	COVID-19 does not exist (1)
Fear of the unknown about vaccine (2)	Vaccination not necessary (1)	Vaccination process hectic (1)	Citizens have issues with vaccination (1)	
Vaccine causes sickness/death (1)	Vaccination is a waste of time (1)	Not around during vaccination (1)		
Lack of trust in vaccine's safety (1)				

**3.2. Collated Opinions on the Likely Reasons for the Poor COVID-19 Vaccine Uptake**

Following the qualitative studies conducted among the study populace, it was analysed into simpler respondent cohorts. The stand-out themes which represent respondents’ opinion that were generated and classified, consisted of the following:

**3.2.1. Fear of Perceived Side-Effects**

The respondents during interview opined that their major reason for not getting a jab of the vaccine is due to their perceived fear of the side effects. There are inadequately strategized health promotion activities for the COVID-19 vaccine in Nigeria and this could have contributed to the poorly construed view.

In the event of the introduction of interventions such as a vaccine, it is important to educate citizens adequate of how this was arrived at. This will help in allaying anxiety associated with such new health intervention.

**3.2.2. Apathetic Attitude/Lack of Interest**

It must be noted that there needs to be some level of interest in one’s health to be able to seek out available solutions to these issues. Among the unvaccinated respondents, there was a notable apathy towards the idea of being vaccinated. This can be deduced as a lack of interest and an obvious poor attitude towards one’s health.

**3.2.3. Logistics**

Some of the respondents perceived the availability of logistics to access vaccination facilities as a major factor to

being unvaccinated. Due to the distance of health care facilities to residents, it is important to note that this factor can ensure that hardworking residents may be unable to create an appropriate time to get a job.

The storage of these vaccines would also mean that vaccinators are unable to just move around vicinities to get people vaccinated in addition to providing them with vaccination papers. Logistics was explained by some of the respondents, as a major reason for being unvaccinated.

**3.2.4. Public Opinion**

Nigerians are highly sentimental when it comes to health interventions and tend to listen to fellow residents rather than professionals. These are usually stemmed from beliefs held by people that their neighbour holds the fact about issues based on the “words in the street”.

These are ideologies that can be hard to disrupt and so, entails the more reason why adequate community sensitization and mobilization is required. Respondents agreed that public opinion about the vaccine is the main reason why they remain unvaccinated.

**3.2.5. Self-denial of COVID’s Existence**

It is not unusual that some of the respondents seem to deny the existence of the COVID-19 virus. The pandemic to them was seen as a fluke and was not a thing to be taken seriously. This remains a big issue and the main reason why some of the respondents remain unvaccinated.

Among the interview respondents, some of the factors influencing decision on the current uptake in Nigeria.

*Table 2. Cluster Analysis of the Factors Influencing thr Decision on the Current uptake in Nigeria.*

Cluster 1 Fear of perceived side-effects/consequences	Cluster 2 Logistics	Cluster 3 Lackadaisical attitude/lack of interest	Cluster 4 Lack of political trust	Cluster 5 Peer-group and family influence (vaccinated)
Perceived problems associated with vaccine (3)	Vaccination location too far (2)	No time for vaccination (2)	Lack of trust in political leaders (1)	Peer-group and family influence (vaccinated) (1)
Vaccine unsafe (2)	Vaccination process hectic (1)	Vaccination is waste of time		
Fear of consequences (1)	Large crowd and long queue (1)	Personal decision		
	Vaccines not available (1)			

**3.3. Collated Factors Influencing Decision on the Current Uptake in Nigeria**

The following were the collated factors influencing decision on the current uptake in Nigeria.

**3.3.1. Fear of Perceived Side-Effects/Consequences (N-3)**

There were respondents who felt that the side effect of the vaccine could be grossly underestimated and so could be their main reason for being unvaccinated. This could explain the reason for the current level of uptake of COVID-19 vaccines in Nigeria.

There appeared to be issues raised concerning the safety of the vaccines. As this opinion was contextualized from an opinion about the “unspoken truths” about the vaccine, this statement could be interpreted in different ways. The

paranoia about safety of vaccines is just a pointer about how much people are been misinformed.

Along in this cluster, is the issue about the fear of the consequence from getting vaccinated. The implication of this could be the case where there is gross disinformation about the likely result of getting vaccinated. This cluster seems to reflect in so many ways, the imminent possibility of misinformation goldmines in communities. The purported likely reason for this sort of information campaign in the community could be to evade government interventions which are well intentioned.

**3.3.2. Logistics (N-4)**

Generating the likely factor that could have led to the level of responses among the respondents seemed to be embracing along the lines of this reason. The respondents were all the opinion that they had poor logistical support to get access to

these vaccines considering that the locations of the vaccinators were far and largely inaccessible.

This data generated from each respondent seemed to highlight that the process of getting the jab appeared to be unnecessarily hectic especially with the crowded reception and inadequate number of seats at the reception areas of these facilities. These eventually lead to delays and exceptionally long queues which are never respecting the safe distance principle of the disease prevention.

One of the respondents recounted how going through the long processes and long queues but did not get the vaccine because the vaccines finished prior to her turn. This can be essentially frustrating especially considering that their time was being wasted with nothing to show for it. Comparing the potency of this experience rippling into being the cause of vaccine hesitance is quite troubling.

### 3.3.3. Lackadaisical Attitude/Lack of Interest (N-3)

Some of the respondents seemed to attach no level of importance to the need to getting vaccinated. This can be seen in the responses of having “no time” to get the jab. This reason appeared to be common especially among the businesspeople encountered. The importance of getting vaccinated has probably not being properly spelt out to them, as was identified by some of the respondents.

One of the respondents simply told us that “I am not

interested”. This sort of personal decision about getting vaccinated is not uncommon among residents in Nigeria and may not necessarily have any scientific background, as was added by one of the respondents.

### 3.3.4. Lack of Political Trust (N-1)

The role of political trust in the current uptake of the vaccine is not unrecognized. The respondents seemed to agree that lack of trust in the political leaders contributes to their not being vaccinated. According to them, the corrupt nature of politicians that they can even accept anything just to be enriched led to their mistrust of the COVID-19 vaccine.

The role of trust in vaccines relative to trust in politicians seems to be a very common phenomenon. It was not unsurprising when the respondents narrated how bad leadership of the country has ruined their trust in the vaccine.

### 3.3.5. Peer-Group and Family Influence (Vaccinated)

The Nigerian community plays a key role in the decision making of most families and residents. It is very important to identify that the major reason that most of the respondents chose to get vaccinated was due to peer pressure and family influence. The respondents that got vaccinated seemed to agree that they were vaccinated due to family influences.

Association of the uptake of COVID-19 vaccine with social determinants:

*Table 3. Cluster Analysis of the Associations of the COVID-19 Vaccine Uptake with Social Determinants.*

Cluster 1 Poverty/logistics	Cluster 2 Link with lifestyles	Cluster 3 No challenges with accessibility
Difficult transportation due to lack	Association with lifestyles	No challenges, vaccination accessible

## 3.4. The Associations of the Uptake of COVID-19 Vaccine with Social Determinants

According to the respondents, the associations of the uptake of COVID-19 vaccine with social determinants.

### 3.4.1. Poverty/Logistics

The social determinants existent in communities play a huge role in the effective uptake of the health interventions made available to the community. Difficulty getting access to the health facilities could play a huge role in the uptake of vaccines in any community.

### 3.4.2. Link with Lifestyles

There was no clear link established between the level of COVID-19 uptake and lifestyle among all the 3 geopolitical zones under review. The uptake of the vaccine could not be completely associated to the lifestyle of the respondents. However, one of the respondents who were a health worker

agreed that getting jabbed was a “matter of duty to his family and patients”.

It is refreshing to know that healthcare workers are considering the possibility of being a potential super-spreader between their patients and their communities. This especially places them at a position with limited choice of getting vaccinated as was posited by one of the respondents.

### 3.4.3. No Challenges with Accessibility

The respondents residing in urban areas opined that they had no issues with their access to getting vaccinated. They also added to know exactly where and how to get vaccinated. The notable differences in the access to vaccines for urban and rural dwellers should be a cause that should always be considered in the planning for vaccination programs.

From the respondents, the following are the associations of the uptake of COVID-19 vaccine with political trust.

*Table 4. Cluster Analysis of the Association between uptake of COVID-19 Vaccines with Political Trust.*

Cluster 1 Government's incompetence	Cluster 2 Lack of trust in government/vaccine	Cluster 3 Government's ulterior motive	Cluster 4 Pandemic exaggeration	Cluster 5 Trust in government COVID efforts
Government's incompetence (1)	Lack of trust in government (7) Lack of trust in vaccine (1) Government hates citizens (1)	Government using pandemic for selfish gains (1)	Government exaggerating COVID (1)	Trust the government (6)

### **3.5. The Associations of the Uptake of COVID-19 Vaccine with Political Trust**

#### **3.5.1. Government's Incompetence**

It is easy to misconstrue the role of politics in the context of health interventions. For the sake of this research, the respondents described the term of political trust in the light of different opinion. One of the respondents, mentioned the term, "Government's incompetence" as a reason for being unvaccinated. A proper dissection of this statement could be, the continued below par performance of the government in terms of provision of adequate mechanisms to ensure its citizens get vaccinated.

#### **3.5.2. Lack of Trust in Government/Vaccine**

The absence of trust in the existent government could be a driver to the suspicion of a good-intentioned health intervention. This could be due to the fact vaccines are not viewed in isolation a great disease preventer but as one of the socio-demographic intervention by the Government. This, in part, can be the cause of unvaccinated citizens.

Also within same cluster is the lack of trust in the vaccine which is also a phenomenon which is relative to other factors especially neighborhood. The issue of lack of trust is not unrelated to the lack of trust in the Government as was stated by one of the respondents.

There are unpopular opinions of the Government's hate of certain sect of citizens in a certain part of the nation. This could be perceived, according to the respondent, because of the poor and sometimes, inexistent government effort towards ensuring adequate reaches in Government health intervention in those parts of the country.

#### **3.5.3. Government's Ulterior Motive**

The presence of doubt in any health intervention places the citizen in a situation of being largely unvaccinated. This can be dangerous for both the Nigerian and global health systems. One of the respondents queried the Government's ulterior motive in giving out these vaccines. This is most likely an analogy following the previous track record of the existent Government.

#### **3.5.4. Pandemic Exaggeration**

Some of the respondents believed that the Government is unnecessarily exaggerating the pandemic, making the issue of political mistrust a public health problem. The respondent believed that they have never seen anyone who had the virus and are, of the opinion that it is probably "a hoax to siphon more public funds".

#### **3.5.5. Trust Government COVID-19 Vaccination Efforts (Vaccinated/Willing to Get Vaccination)**

Among the vaccinated and willing to be respondents, the majority agreed that trusting in the Government vaccination efforts should be encouraged. The believed that that is a civic responsibility of the citizens irrespective of how the performance of the Government is. The main driver to this decision seems to stem from their understanding of how

serious the COVID-19 infections can possibly be.

## **4. Discussions**

The findings from this study which is aimed at ascertaining the impact of political trust in the uptake of COVID-19 vaccine among the inhabitants in 3 Geopolitical zones in Nigeria, provides enough evidence of the political and systemic decay in the approach to health interventions in Nigeria. Using the interview data, collected from 3 different states within 3 geopolitical zones mostly made up of the 3 major tribes in Nigeria, 15 interviewees, were acquired.

Some of the findings from the qualitative studies of this research indicated that the fear of the side effects, apathy/lack of interest, scarce logistics, people's opinion, and self-denial. These were more of issue around the poor uptake of the respondents.

The theme of government's incompetence has always been a significant reason for mistrust in vaccines for marginalized groups. A study done by Harris et al [16] described how participants from a marginalized group of respondents had total mistrust for their health institutions. These could be related to the findings from this research.

A similar finding from Catherine King [17] in Australia highlighted how public confidence in vaccines was markedly reduced due to a rise in the adverse events to influenza vaccine. Relating this to the findings from this research, this recorded high vaccine hesitancy due to fear of perceived side effects of the vaccine.

The level of vaccine hesitancy among the study participants could also be due to inadequate advice or actions from healthcare workers as was reported by Ly et al [18]. The respondents reported to be spending long period queuing for vaccines which could be a deterrent to being vaccinated especially for people with busy schedules.

## **5. Conclusion**

This research work provided an insight into the level of trust in the COVID-19 vaccine among the 3 major tribes in Nigeria. The role this plays in the decision to be vaccinated helped to ascertain how the interplay in the degree of interest in politics affected vaccination uptake. The level of social interaction with health is a complex mechanism that is not necessarily straight forward.

Considering that the result from this research indicated the poor interest in the vaccine, tells a tale of a longstanding poor Government performance especially in the aspect of health intervention.

## **6. Limitations of the Study**

The study would have benefited more if the respondents emanated from all the states within the Geopolitical zones. This study utilized only a state out of 3 states within the Nigerian Geopolitical zone under review.

## 7. Recommendations

The research findings will highly recommend the following interventions to the Government:

### 1) Health interventions need to be more accessible to people

From the findings of this research, people found the health services inaccessible. Government needs to ensure that health interventions rolled are adequately accessible to the targeted people and should consider the community culture while rolling out health interventions. For instance, avoiding days of prayers and market days would be helpful in getting the maximum number of people for a health intervention.

### 2) Acknowledgement of the diversity in the Nigerian populace in health and political interventions

For proper designing of health interventions, the differing Nigerian diversity should be greatly considered while planning health projects. There are obvious varying degrees of acceptance, and the best methodologies should be adopted uniquely and independently for a proper reach of health interventions.

### 3) Collaborate better with international community

There are obvious gaps in the Nigerian health systems and opportunities to learn from other countries should be part of every health project. Understanding the reason behind the successes of similar health interventions should be understudied and applied to suit the Nigerian context. Active collaboration with international communities will ensure proper and effective use of scarce resources. However, the issues of political affiliations and worldviews may play a key role in how much collaboration is agreed upon [19].

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## References

- [1] Paterson P, Meurice F, Stanberry LR, Glismann S, Rosenthal SL, Larson HJ. (2016): Vaccine hesitancy and healthcare providers. *Vaccine*. 2016 20; 34 (52): 6700–6. doi: 10.1016/j.vaccine.2016.10.042.
- [2] Nigeria Center for Disease Control (2021): Nigerian Weekly COVID-19 Update. (Accessed online on 30<sup>th</sup> November 2021).
- [3] World Health Organization. WHO Director-General's opening remarks at the media briefing on COVID-19—11 March 2020 <https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020> (2020).
- [4] BBC News. (2021). Covid-19: Study showing Oxford vaccine slows virus spread 'superb' -Hancock. Retrieved 03. 02. 2021 from <https://www.bbc.com/news/uk-55913913>
- [5] International Federation of Red Cross. (2021): COVID-19: Vaccines alone will not end pandemic, warns IFRC. Retrieved 11. 01. 2021 from <https://media.ifrc.org/ifrc/press-release/covid-19-vaccines-alone-will-not-end-pandemic-warns-ifrc/>
- [6] McDonnell, A. (2020): How many Britons are willing to take a coronavirus vaccine? YouGov. Retrieved 16. 10. 2020 from <https://yougov.co.uk/topics/health/articles-reports/2020/11/16/how-many-britons-are-willing-take-coronavirus-vacc>
- [7] Center for Countering Digital Hate. (2020). The Anti-Vaxx Industry: How Big Tech powers and profits from vaccine misinformation. [https://252f2edd-1c8b-49f5-9bb2-cb57bb47e4ba.filesusr.com/ugd/f4d9b9\\_6910f8ab94a241cfa088953dd5e60968.pdf](https://252f2edd-1c8b-49f5-9bb2-cb57bb47e4ba.filesusr.com/ugd/f4d9b9_6910f8ab94a241cfa088953dd5e60968.pdf) Center for Economic and Social Research (CESR, Accessed online Nov 14, 2022).
- [8] Loomba, S., de Figueiredo, A., Piatek, S. J. (2021): Measuring the impact of COVID-19 vaccine misinformation on vaccination intent in the UK and USA. *Nat Hum Behav* 5, 337–348 (2021). <https://doi.org/10.1038/s41562-021-01056-1>
- [9] Callaghan, T. et al. (2021): Correlates and disparities of covid-19 vaccine hesitancy. *Soc. Sci. Med.* 272, 113638.
- [10] Krebs E, Zang X, Enns B, Min JE, Behrends CN, Del Rio C, Dombrowski JC, Feaster DJ, Gebo KA, Golden M, Marshall BDL, Metsch LR, Schackman BR, Shoptaw S, Strathdee SA, Nasyk B; Localized Economic Modeling Study Group. The impact of localized implementation: determining the cost-effectiveness of HIV prevention and care interventions across six United States cities. *AIDS*. 2020 Mar 1; 34 (3): 447-458. doi: 10.1097/QAD.0000000000002455. PMID: 31794521; PMCID: PMC7046093.
- [11] Casiday R, Cresswell T, Wilson D, Panter-Brick C. A survey of UK parental attitudes to the MMR vaccine and trust in medical authority. *Vaccine*. 2006; 12; 24 (2): 177–84. <https://doi.org/10.1016/j.vaccine.2005.07.063>
- [12] SAGE Working Group on Vaccine Hesitancy (2014): Report of the SAGE working group on vaccine hesitancy. [https://www.who.int/immunization/sage/meetings/2014/october/1\\_Report\\_WORKING\\_GROUP\\_vaccine\\_hesitancy\\_final.pdf](https://www.who.int/immunization/sage/meetings/2014/october/1_Report_WORKING_GROUP_vaccine_hesitancy_final.pdf) (Oct 1, 2014).
- [13] Ozili, P. (2022), "COVID-19 in Africa: socio-economic impact, policy response and opportunities", *International Journal of Sociology and Social Policy*, Vol. 42 No. 3/4, pp. 177-200. <https://doi.org/10.1108/IJSSP-05-2020-0171>
- [14] Marshall, I. (1981). Making sense as a personal process. In: P. Reason & I. Rowan (Eds.) *Human enquiry*. Chichester: Wiley.
- [15] Jones, S. (1985). Depth interviewing. In: R. Walker (Ed.), *Applied qualitative research*. Hants: Gower.
- [16] Harris LM, Chin NP, Fiscella K, Humiston S. Barrier to pneumococcal and influenza vaccinations in Black elderly communities: mistrust. *J Nat Med Assoc*. 2006 Oct; 98 (10): 1678.
- [17] King C, Leask J. The impact of a vaccine scare on parental views, trust and information needs: a qualitative study in Sydney, Australia. *BMC public health*. 2017 Dec; 17 (1): 106. doi: 10.1186/s12889-017-4032-2.
- [18] LY F, Zimet GD, Latkin CA, Joseph JG. Associations of trust and healthcare provider advice with HPV vaccine acceptance among African American parents. *Vaccine*. 2017; 1; 35 (5): 802–7. doi: 10.1016/j.vaccine.2016.12.045.
- [19] Gollust, S. E., P. M. Lantz, and P. A. Ubel. 2009. The polarizing effect of news media messages about the social determinants of health. *American Journal of Public Health* 99 (12): 2160–2167.