

**AUDIENCE RESPONSE TO COVID-19 VACCINE CONSPIRACY THEORIES:
A STUDY OF FEDERAL CIVIL SERVANTS IN SOUTHEAST NIGERIA**

ILOEGBU, UKAMAKA JOY
Department of Mass Communication
Nnamdi Azikiwe University, Awka
Phone:234(0)8037786508
Email:amakailo12@gmail.com

&

DUNU, IFEOMA VIVIAN
Professor of Mass Communication
Department of Mass Communication
Nnamdi Azikiwe University, Awka
Phone: 234(0)8036732718
Email:ifeomadunu@yahoo.com

ABSTRACT

The outbreak of COVID-19 pandemic in late 2019 though not now a health threat as before was a serious health challenge of global proportions. Hence, discovery and rolling out of vaccines was anticipated to be a significant breakthrough in the effort to tame the pandemic. However, as countries rolled out COVID-19 vaccines, so much controversy trailed this effort. Incidentally, these controversies and conspiracy theories, rather than subsiding with time, had escalated among both healthcare professionals and ordinary people (El-Elimat, Abu AlSamen, Almomani, Al-Sawalha & Alali, 2021), which potentially threatened vaccination compliance among the populace. Against this backdrop, this study examined audience response to COVID-19 vaccine conspiracy theories. The research was anchored on the Reception Theory. The thesis of this study was to examine the extent of audience awareness and response to these controversies vis-a-vis taking health responsible decision. As argued by the reception theory messages are not swallowed hook line and sinker by the audience but rather the audience respond to them through three ways – Dominant/Hegemonic, Negotiated and oppositional positions. Using a mixed method approach comprising survey and focus group discussion (FGD), this study interrogated federal civil servants response to the COVID-19 vaccine conspiracy theories. The area of study was Southeast Nigeria and the population was federal civil servants numbering 2, 488 according to data sourced from the office of the Head of Service of the respective states of the zone. A structured questionnaire was employed to collect data from 345 respondents selected via the multi-stage approach, while qualitative data were obtained via five focus group discussion (FGD) sessions of six participants each. Quantitative data were analysed using simple percentages while the descriptive thematic approach was employed for analysing the qualitative data. Findings showed that there was high exposure to the COVID-19 vaccine conspiracy theories among federal civil servants in Southeast Nigeria. However, the civil servants, in most cases, did not believe the conspiracy theories. Similarly, they were not significantly influenced by the vaccine conspiracy theories in considering whether to get vaccinated or not. This aligns with one of the arguments of the reception theory that the audience has the power to negotiate. So they were not significantly influenced by the vaccine conspiracy theories in considering whether to get vaccinated or not. The study concluded that COVID-19 vaccine conspiracy theories did not have significant influence on the vaccination decision taken by federal civil servants in Southeast Nigeria. It among others, recommended that future vaccine campaigns should anticipate and plan ahead against conspiracy theories based on the COVID-19 experience and similar incidents such as seen with the polio vaccine previously. Such a proactive approach will ensure better management of such issues whenever they arise.

Key words: COVID-19, vaccines, conspiracy theories, federal civil servants

Introduction

The outbreak of COVID-19 pandemic in late 2019 was bound to pose a formidable health challenge to the world. While a range of non-pharmaceutical measures, such as social distancing and self-isolation, were quickly adopted as a response, discovery of vaccines was considered a significant breakthrough in the effort to tame the highly infectious virus (Albrecht, 2022;). However, as countries rolled out COVID-19 vaccines, so much controversy trailed this effort. Incidentally, these controversies and conspiracy theories, rather than subsiding with time, had escalated among both healthcare professionals and ordinary people (El-Elimat, AbuAlSamen, Almomani, Al-Sawalha & Alali, 2021).

One source of the controversies is the argument that the vaccines do not actually protect one from COVID-19 infection as the vaccinated can still be infected with the virus, hence those vaccinated still have to use protective measures or safety protocols (Albrecht, 2022; El-Elimat et al., 2021). In a preliminary work, one team observed a significant drop in viral load in small number of people infected with COVID-19 in two to four weeks after the injection. The data is certainly intriguing and suggestive that vaccination may reduce the infectiousness of COVID-19 cases even if it does not prevent infection altogether (Mallapaty, 2020). Nonetheless, whether these observed reductions in viral load are sufficient to make one less infectious is not yet clear.

There were also concerns from some quarters as to the safety of the vaccines; what are their possible side effects? In fact, there was the theory that the vaccines are not safe and can lead to other illnesses or even death. Some had attributed the vaccine with negative health conditions such as impotency in men and possibly death within a few years of those who took them (Sadiq, Croucher & Dutta, 2023). There have been reports of cases where persons who took shots of the vaccine developed certain health conditions such that they had their lower and upper limbs amputated due to mutation. Whether the COVID-19 shots they took were responsible for this is what has not been medically explained (Afolabi & Ilesanmi, 2021). These controversies may be among the reasons people may disregard taking the vaccine.

Other conspiracy theories have it that COVID-19 vaccines were a ploy to inject certain microchips into human body and that it was part of a grand agenda by some interests to depopulate the world. Claims were also made that the vaccines contain agents that alter human DNA (Carmichael & Goodman, 2020). There were also claims emanating from some religious circles that the vaccines were a surreptitious way of giving people the biblical mark of the beast (Dwoskin, 2021).

Other claims tending to challenge the necessity of COVID-19 vaccination are those suggesting alternative ways of preventing infection through consumption of certain foods or drugs. Numerous online posts, especially on social media, had recommended eating of garlic to prevent COVID-19 virus. Some also contend that regular consumption of natural fruits that contain antibiotics such as garlic and ginger could eliminate possible chances of contacting the virus (Digon, 2020). The same goes for consumption of vitamin and zinc tablets. These particular claims were among the very strong ones that held sway among Nigerians especially during the lockdown. Many people bought Vitamin C and Zinc tablets in large quantities such that these medications became scarce and the cost skyrocketed (Muanya, 2020).

While it may be tempting to dismiss such beliefs out of hand as fringe ideas promoted by conspiracy theorists, the reality is that they had gained enough traction such that some medical establishments felt the

need to address it head on (Halsted, 2020). In the light of this it became imperative to interrogate how COVID-19 vaccine conspiracy theories influenced people's attitude and action towards the vaccination.

Study objective

While COVID-19 vaccines were rolled out as a critical component of the effort to confront the SARS-COV-2 virus, the conspiracy theories that trailed this effort became a potential obstacle to getting people to cooperate with the vaccination efforts of the authorities (El-Elimat et al., 2021). This raises the question as to how much people would comply with the request to get vaccinated in the face of these claims against the vaccines.

Even though there have been scholarly inquiries (such as Sadiq, Croucher & Dutta, 2023; Adeyemi, 2021) into people's response to COVID-19 vaccine conspiracy theories and its possible effect on their attitude to vaccination, it appears there is a dearth of studies focusing on civil servants who were the group specifically mandated by the government to take the vaccines or risk sanction. This made this study imperative. This study investigated audience response to COVID-19 vaccine conspiracy theories with particular reference to federal civil servants in Southeast Nigeria under the following objectives:

1. To find out the extent federal civil servants in Southeast Nigeria were exposed to COVID-19 vaccine conspiracy theories.
2. To ascertain how much federal civil servants in Southeast Nigeria believed COVID-19 vaccine conspiracy theories.
3. To evaluate the extent the conspiracy theories influenced the civil servants' decision on vaccination.

A Review of Literature

Sadiq, Croucher and Dutta (2023) engaged the Theory of Planned Behaviour to analyse the tone of Nigerian YouTube headlines/titles, and the tone of YouTube users' comments to examine the causes of COVID-19 vaccine hesitancy. YouTube videos uploaded between March 2021 and December 2022 were analysed using a content analytic approach. Results show 53.5% of the videos had a positive tone, while 40.5% were negative, and 6% neutral. Second, findings indicate most of the Nigerian YouTube users' comments were neutral (62.6%), while 32.4%, were negative, and 5% were positive. From the anti-vaccine themes, analysis showed the people's lack of trust in the government on vaccines (15.7%) and the presence of vaccine conspiracy theories mostly related to expressions of religion and biotechnology (46.08%) were the main causes of COVID-19 vaccine hesitancy in Nigeria. The study presents implications for theory and recommends ways for governments to develop better vaccination communication strategies.

Talabi, Ugbor, Talabi, Ugwuoke, Oloyede, Aiyesimoju and Ikechukwu-Ilomuanya (2022) examined the role played by social media-based counselling intervention in countering fake news on COVID-19 vaccine in Nigeria. The research was designed as an experimental study. The first experiment involved exposure of the treatment group to fake news on COVID-19 vaccine through a WhatsApp group chat while the control group was not. The effectiveness of such fake news on their perception was then tested. In the second experiment, the treatment group was exposed to a social media-based counselling intervention wherein an attempt was made to counter the earlier fake news on COVID-19 vaccine which they were exposed to. It was found that respondents who were exposed to fake news reported greater negative perception about COVID-19 vaccine than their counterparts in the control group. Results also showed that as a result of the counselling intervention, the respondents in the treatment group reported more positive perception regarding COVID-19 vaccine while their counterparts in the control group who were earlier exposed to fake news on COVID-19 did not significantly change their perception. While this study focused on role of social media-based counselling in countering COVID-19-related fake news, the present research focused on audience response to COVID-19 controversies.

Adeyemi (2021) evaluated some claims about COVID-19 including vaccine conspiracy theories among Nigerians with factors influencing it. An online structured questionnaire was designed to collect one-time data from voluntary participants. Demographically, major respondents were; bachelor: 284 (75.1%), age-group between 18 and 30 years: 312 (82.5%) and male: 207 (54.8%). Those that do not know the range of infected population in the country accounted for 260 (72.2%). Regarding opinion, 57 (15.1%) supported that SARS-COV-2 cannot survive the warm climate of African continent, and 41 (10.8%) believed the hoax theory about COVID-19. Unapproved herbal medication was reported to be used by 251 (66.4%) of the respondents while 92 (24.3%) made use of Chloroquine. For transmission related conceptions, 52 (13.8%) indicated that an asymptomatic carrier cannot spread the virus to another healthy individual. About half of the respondents 182 (48.1%) suspected that SARS-COV-2 was an engineered virus and 173 (45.8%) supported that there are underlying negative intentions on the clinical trial of COVID-19 vaccines on Africans. The study concluded that there was a weak correlation between the demographic data of the respondents and the claims, and that the level of misconception Nigerians have about COVID-19 is a major concern.

Adejumo et al. (2021) examined the perceptions of the COVID-19 vaccine and willingness to receive vaccination among health workers in Nigeria. They aimed to examine health workers' perceptions of the coronavirus disease 2019 (COVID-19) vaccine in Nigeria and their willingness to receive the vaccine when it becomes available. The multi-center cross-sectional study used non-probability convenience sampling to enroll 1,470 hospital workers aged 18 and above from 4 specialized hospitals. A structured and validated self-administered questionnaire was used for data collection. Data entry and analysis were conducted using IBM SPSS ver. 22.0. The mean age of respondents was 40±6 years. Only 53.5% of the health workers had positive perceptions of the COVID-19 vaccine, and only slightly more than half (55.5%) were willing to receive vaccination. Predictors of willingness to receive the COVID-19 vaccine included having a positive perception of the vaccine (adjusted odds ratio [AOR], 4.55; 95% confidence interval [CI], 3.50-5.69), perceiving a risk of contracting COVID-19 (AOR, 1.50; 95% CI, 1.25-3.98), having received tertiary education (AOR, 3.50; 95% CI, 1.40-6.86), and being a clinical health worker (AOR, 1.25; 95% CI, 1.01-1.68). The study concludes that Perceptions of the COVID-19 vaccine and willingness to receive the vaccine were sub-optimal among this group. The scholars recommended that educational interventions to improve health workers' perceptions and attitudes toward the COVID-19 vaccine are needed. The authors addressed the Perceptions of the COVID-19 vaccine among health workers in Nigeria and how willing they are to receive vaccination but this current study, having recognized vaccination intake as one of the controversies, sought to interrogate the various ways the audience perceive and respond to these controversies in Nigeria.

Adeyemi (2021) evaluated how Nigerian Internet users have responded to misinformation about COVID-19 including vaccine conspiracy theories. An online structured questionnaire was designed to collect one-time data from voluntary participants. Demographically, major respondents were bachelors (75.1%), age-group between 18 and 30 years (82.5%) and male (54.8%). Those that do not know the range of infected population in the country accounted for 260 (72.2%). In opinion, 57 (15.1%) supported that SARS-COV-2 cannot survive the warm climate of African continent, and 41 (10.8%) believed the hoax theory about COVID-19. Unapproved herbal medication was reported to be used by 251 (66.4%) of the respondents while 92 (24.3%) made use of Chloroquine. For transmission-related conceptions, 52 (13.8%) indicated that an asymptomatic carrier cannot spread the virus to another healthy individual. About half of the respondents (48.1%) suspected that SARS-COV-2 was an engineered virus and 173 (45.8%) supported that there are underlying negative intentions on the clinical trial of COVID-19 vaccines on Africans. There was a weak correlation between the demographic data of the respondents and the claims. The study concluded that the level of misconception among Nigerians about COVID-19 was a major concern. However, while the study under review focused on how audience respond to COVID-19-related misinformation, the present research was concerned with their response to COVID-19 controversies. The foregoing literature

review reveals that scholars have been engaging the issue of COVID-19 vaccine conspiracy theories and audience response to them. However, one gap observed by the researcher was a seeming dearth of studies focusing on civil servants in general and those of them in Southeast Nigeria in particular. Investigating the attitude of this demographic to COVID-19 vaccination in view of the conspiracy theories is arguably very germane given that these are critical opinion leaders in society and were incidentally the group particularly targeted by the government's move to enforce compulsory vaccination in the height of the pandemic fear in Nigeria (Tolu-Kolawole, Odeniyi, Ajaja & Ede, 2021).

Theoretical Framework

This research was anchored on the Reception Theory as propounded by Paul Stuart-Hall in his seminal essay, "Encoding-Decoding in the Television Discourse," where he explained how audience can either accept, negotiate with or reject a message depending on certain prevailing variables (Hall, 1973). The theory suggests that the audience derive their own meaning from media texts. Stated differently, receivers actively read media texts and do not just accept them passively; they interpret media text according to their own cultural background and experiences.

Hall (1973) argues that decoding of a media messages can unfold in three ways. First is dominant reading where audience takes the connoted meaning of communication, like in a television newscast or a current affair programme full and straight, and decode the message in terms of the reference code in which it has been encoded. Second is **negotiated reading whereby** audience engage with a message in a way that embodies both acceptance and opposition. The last, according to Hall is oppositional reading where audience perfectly understand both the literal and the connotative meaning of a media message but go on to decode the message in their own way.

In relation to the subject matter of this study, Reception Theory will be relevant for interrogating how civil servants in Southeast Nigeria engaged with COVID-19 vaccine conspiracy theories. Will they accept them as they are (dominant reading)? Will they reflect on them to try sieve out wheats from chaff (negotiated reading)? Or will they reject these claims outright (oppositional reading)?

Methodology

This work adopted a mixed method approach comprising survey and focus group discussion (FGD) to assess audience response to COVID-19 vaccine conspiracy theories. The two research methods were chosen to complement each other to ensure a robust exploration of the phenomenon in question. While the survey was aimed at achieving some empirical precision, FGD was adopted to facilitate an in-depth exploration of the respondents' response to COVID-19 vaccine controversies.

The study area was Southeast Nigeria and the population was federal civil servants numbering 2, 488 according to data sourced from the office of the Head of Service of the respective states in the zone. For the survey, a sample of 345 determined through Taro Yamane's formula was selected via a multi-stage approach, while for the focus group discussion, the researcher constituted five FGD groups of six participants each, resulting in a total of 30 discussants. This decision was based on the recommendation by Braun and Clark (2006) that 15 to 30 participants would amount to the saturation point for effective qualitative analysis. A structured questionnaire and an FGD guide were used for data collection. Data analysis was both quantitative and qualitative. The quantitative data were analyzed using simple percentages while the descriptive thematic approach was employed for analyzing the qualitative data.

Data Presentation and Analysis

The researcher distributed a total of the 345 copies of questionnaire out of which 574 representing 98.4% were recovered, while 4 representing 1.6% were not. Thus, 98.4% response rate was recorded as against 1.6% non-recovery rate. Analysis of demographic data shows that 41.6% of the respondents are male while

58.4% are female; 22.6% were 18 – 28 years, 30.2% were 29 – 39 years, 31.7% were 40 – 50 years, while 31.7% were above 50 years. Also, 38.4% of the respondents were single, 55.1% were married, 1.5% were separated, 1.8% were divorced, while 3.2% were widowed; 11.4% had basic education as their highest qualification, 14.1% held OND/NCE/pre-degree diploma, 45.5% held first degree/HND, while 29% held postgraduate qualifications. Furthermore, 11.4% were on grade level 1 – 5, 78.6% were on 6 – 14, while 10% were on 15 – 17 grade level; 1.8% were below one year in service, 24.9% were 1 – 5 years, 30.5% were 6 – 10 years, 31.4% were 11 – 15 years, 3.2% were 16 – 20 years, while 8.2% were above 20 years in civil service.

Exposure to COVID-19 vaccine conspiracy theories

Data were collected on respondents regarding their exposure to COVID-19 vaccine conspiracy. The generated data are in Table 1.

Table 1: Respondents’ Exposure to COVID-19 Vaccine Conspiracy Theories

	Are you aware of the claim that COVID-19 vaccine does not prevent one from getting infected?	Are you aware of the claim that COVID-19 vaccine kills?	Are you aware of the claim that COVID-19 vaccine leads to certain health conditions?	Are you aware of the claim that COVID-19 vaccine is a mere cover for injection of certain chips into people’s body?	Are you aware of the claim that COVID-19 vaccine is associated with the biblical mark of the beast?
Yes	74.8% N = 255	65.4% N = 223	77.1% N = 263	71.0% N = 242	64.8% N = 221
No	25.2% N = 86	34.6% N = 118	22.9% N = 78	29.0% N = 99	35.2% N = 120
Total	100% N = 341	100% N = 341	100% N = 341	100% N = 341	100% N = 341

Table 1 shows data related to respondents’ exposure to COVID-19 vaccine conspiracy theories. The data indicate that majority of the respondents were aware of these theories. Precisely, they admitted their awareness of the claim that the vaccine does not have any preventive effect (74.8%); that it kills (65.4%); that it leads to certain health conditions (77.1%); that it is a mere cover for injection of chips into the body (71%); and that it is associated with the biblical mark of the beast (64.8%). The awareness of these conspiracy theories among a significant majority of the respondents may be attributable to the fact that these claims were rife not only in Nigeria but globally and were widely propagated via both traditional media and the Internet (Apuke & Omara, 2021).

The FGD responses indicated that the participants were, to a quite appreciable extent, familiar with these theories. For example, Participant 7 (Group 2) stated:

I heard many things about COVID-19 including ... about the vaccine not being safe, that people received them and died, and that people would still get infected after being vaccinated (Male, 39yrs).

Similarly, Participant 18 (Group 3) informed:

There was also a rumour that the vaccines could cause one’s body to be electrified. I remember a video of a man who was said to have taken the vaccine and a bulb was placed on his shoulder and it lighted... Too many things were said about this pandemic (Female, 40yrs).

Observable from the above extracts is the fact that the participants were using the words “many” or “too many” to describe their impression of the rampancy of these dissenting claims about COVID-19 vaccine. Some of them used words that, in the context, conveyed a similar meaning as the above expressions. The words include “several”, “numerous”, “copious”, and “so much”. This pattern was noticeable across the five FGD sessions conducted, and its implication is that the respondents’ encounter with these theories was frequent and continuous.

The participants’ responses tend to validate the findings in the survey component of the study which indicate a high level of awareness of COVID-19 controversies among the respondents (see Tables 1). Instructively, the dissenting claims known to the FGD participants in the main correspond to the ones known to the survey respondents. Arguably, this pattern is a reflection of the sheer volume and frequency of dissenting claims about COVID-19 both in Nigeria and globally (see Sadiq, 2023; Afolabi & Ilesanmi, 2021).

Believability of COVID-19 vaccine conspiracy theories

Data collected regarding the extent the respondents believed COVID-19 vaccine conspiracy theories are as presented in Table 2.

Table 2: Respondents’ Belief of Controversies Related to COVID-19 Vaccine

	Did you believe the claim that COVID-19 vaccine does not prevent one from getting infected?	Did you believe the claim that COVID-19 vaccine kills?	Did you believe the claim that COVID-19 vaccine leads to certain health conditions?	Did you believe the claim that COVID-19 vaccine is a mere cover for injection of certain chips into people’s body?	Did you believe the claim that COVID-19 vaccine is associated with the biblical mark of the beast?
I believed	45.5% N = 155	25.2% N = 86	22.6% N = 77	19.6% N = 67	8.2% N = 28
I did not believe	31.4% N = 107	49.9% N = 170	48.7% N = 166	55.4% N = 189	66.9% N = 228
I was undecided	23.2% N = 79	24.9% N = 85	28.7% N = 98	24.9% N = 85	24.9% N = 25
Total	100% N = 341	100% N = 341	100% N = 341	100% N = 341	100% N = 341

Table 2 presents data on believability of COVID-19 vaccine conspiracy theories. Figures in the table show that all the theories were disbelieved by majority of the respondents. The number of those persuaded by the claims was most significant in regard to the assertion that the vaccine leads to certain health conditions (48.7%) and that it does not prevent one from getting infected (45.5%). So in all, the above data indicate that the respondents largely did not find these conspiracy theories about COVID-19 vaccine convincing. Stated differently, they seemed to have been more persuaded by the vaccine messages coming from traditional bodies like the World Health Organisation (WHO), Nigeria Centre for Disease Control (NCDC), and the Federal Ministry of Health.

Responses from the FGD participants indicate that the extent the participants believed conspiracy theories about COVID-19 vaccine is not exactly straightforward. First, their responses across the five FGD sessions indicate that their extent of belief tended to differ based on the particular claim in question. Participant 13 (Group 3), for example, said:

I found some of the claims believable while others sounded more like folktales. For example, it was easy for me to believe that vaccines could lead to some adverse health conditions because this is something natural with drugs, adverse reaction is always a possibility. On the contrary, when people talked about the vaccine being a mark of the beast, I found the claim too fantastic to be real (Male, 50yrs).

The foregoing reflects a particular tendency that ran through the responses of the participants – they evaluated the factuality of the conspiracy theories based on their previous knowledge and beliefs as well as how realistic the claims sounded. Hence, most of them stated that they never found the mark of the beast claim about COVID-19 vaccines really believable. On the contrary, most believed that the vaccines could lead to adverse health conditions as also exemplified in the response by Participant 4 (Group 1):

I think I am convinced that the vaccines can cause health problems; I have heard of people receive other vaccines and developing some problems. In fact, I know of a family friend that got one of his legs disfigured by a vaccine he received at his infancy. So, I don't need to experience COVID-19 vaccine to know this is possible. But then regarding the idea that when you are vaccinated you have received the mark of the beast, I don't find it credible at all (Female, 51yrs).

Interestingly, the theory believed by the least number of the survey respondents (8.2%) was the claim that associated the vaccines with the biblical mark of the beast (see Table 2). Like Participant 4, some other participants related their belief or disbelief of the conspiracy theories to their previous knowledge and experience. This concurs with literature evidence that has identified existing knowledge and experience as powerful determinants of persuasion in communication. Communication effect scholars have established that one's biases, including as constituted by their previous experience and knowledge, are a critical predictor of their reaction to a message (McQuail & Deuze, 2020; Baran, 2010).

Another significant pattern that emerged in the course of the FGD sessions was that source of the conspiracy theories was a factor that determined belief, albeit among just a few of the participants. These participants mentioned that the fact that these claims came mainly through social media made them suspicious. Participant 19 (Group 4) was one of them:

The main thing that made me suspect them (the conspiracy theories about COVID-19 vaccine) was the fact that they were coming just from social media and street gossip. I tried to research some of those claims and discovered that you don't find them just on credible sites, and when I did find them, it was just for purpose of disputing them. For instance, I visited the WHO site several times and read a lot of write-ups disputing these claims especially the ones about [the] vaccines (Male, 47yrs).

Importantly, for many of the participants, their belief or disbelief of the dissenting claims did not follow any consistent pattern all the way; their belief tended to change at different times. But this was also dependent on the particular claim in question Participant 2 (Group 1) recalled as follows:

I did not take these claims serious (sic) at the beginning. I heard and read a lot about the virus and the vaccines and my attitude initially was to dismiss them as conspiracy theories that would still fizzle out soon. But then when these claims and stories began to persist, I began to have a rethink. The stories were everywhere, and I saw videos of some foreign personalities questioning the vaccine. All this began to make me change my mind (Male, 32yrs).

Persistent exposure to a message is a critical factor in persuasion. When audience gets repeatedly exposed to a particular idea or information over an extended period of time, the continued exposure may begin to create a picture of validity around the message; a picture of factuality is created in the mind of the audience not necessarily as a result of the nature of a message but simply as a result of their repeated exposure to it (McQuail, 2020). This is one pattern of reaction by human mind which advertisers invariably seek to exploit (Singh & Nayyar, 2015).

While respondents like Participant 2 (see above) initially dismissed dissenting COVID-19 claims and only to start rethinking some of them later, a few others, conversely, tended to believe them from the beginning but later began to question their validity. For example, Participant 16 (Group 3) stated:

I initially was like “these things might be true.” Honestly I saw sense in some of them, such as the idea that the virus does not exist in our country. I don’t trust our government. However, as time went on I started seeing those I know, those close to me, going to take the vaccine without none of those things we read and watched on the Internet happening to them, like your body generating electric light. It made me start doubting these stories. Eventually I had to receive the vaccine myself, and this sort of strengthened my conviction that all these may actually be conspiracy theories (Female, 31yrs).

Another instructive pattern observable in the way the participants approached COVID-19 pandemic is the ambivalence reported by some of them. These respondents pointed out how they, in some cases, battled with the conflicting information coming from the conventional authorities (such as government and WHO) and the dissenting claims coming from elsewhere. Stated differently, it was for them not always a case of outright belief or disbelief. Participant 13 (Group 3), for instance, said “regarding whether the vaccines are actually safe, I at a point did not know what to believe actually. Everything became confusing” (Male, 50yrs).

Nonetheless, despite the apparent non-consistent and non-straightforward nature of the participants’ belief of COVID-19 vaccine conspiracy theories, what became clear at the end was that the dissenting claims did not definitely and conclusively influence the respondents’ belief about the vaccines. Many of the participants, as a matter of final opinion, stated that in spite of moments of doubts and change of views on their part at different times, they could not affirm with any confidence that the conspiracy theories ultimately and decisively persuaded them.

Influence of conspiracy theories on vaccination decision

Data were collected regarding the extent vaccine conspiracy theories influenced the respondents’ vaccination decision. These data are as presented in Table 3.

Table 3: Influence of COVID-19 Vaccine Conspiracy Theories on Respondents’ Vaccine Decision

	Did the claim that COVID-19 vaccines are ineffective and/or harmful affect your decision about taking the vaccines?	Did the claim that COVID-19 vaccines are a ploy to reduce the population of the world affect your decision about taking the vaccines?	Did the claim that COVID-19 vaccines contain agents that alter human DNA affect your decision about taking the vaccines?	Did the claim that COVID-19 vaccines are associated with the biblical mark of the beast affect your decision about taking the vaccines?	Did the claim that measures like drinking hot water, taking ginger and vitamin C prevents COVID-19 affect your decision about taking the vaccines?
To a large extent	6.2% N = 21	7.6% N = 26	11.7% N = 40	5.6% N = 19	13.2% N = 45
To some extent	20.2% N = 69	16.1% N = 55	19.9% N = 68	10.9% N = 37	18.2% N = 62
To a little extent	24.9% N = 85	19.4% N = 66	5.0% N = 17	14.4% N = 49	23.5% N = 80
Never	48.1% N = 166	56.9% N = 194	63.3% N = 216	69.2% N = 236	45.2% N = 154
Total	100% N = 341	100% N = 341	100% N = 341	100% N = 341	100% N = 341

Table 3 presents data related to the extent COVID-19 vaccine conspiracy theories influenced the respondents’ vaccination decision. Figures in the table indicate that some of the respondents were influenced by the conspiracy theories. However, these people were in minority, as majority said they were not exactly influenced by these theories. Precisely, only in regard to the claim that vaccines are ineffective and/or harmful and the claim that measures like drinking hot water, taking ginger and vitamin C prevents COVID-19 that up to 50% said they were influenced. In the other instances, majority stated otherwise.

The FGD data equally suggest that these vaccine conspiracy theories influenced the participants’ vaccination decision but not to a significant extent. For instance, some of the responses indicate some form of conformism whereby they were willing to comply with the prescribed health actions (including vaccination) being that a lot of persons around them were doing so. In other words, this tended to moderate the effect of the conspiracy theories on their health practice. For example, Participant 29 (Group 5) stated:

I still took the vaccine even though I feared about the possibility of some of the claims about it being true. I just decided to take it being that we were being persuaded and I saw a lot of persons close to me doing same (Female, 23yrs).

Similarly, Participant 11 (Group 2, Female, 28yrs) agreed that she was somewhat “perplexed” that while people peddled some of the dissenting claims, they still complied with recommended health actions like use of facemasks and even vaccination. This, she said, motivated her to comply irrespective of what she had read and heard. “No one would want to be made the scapegoat, so I did what every other person was trying to do, perhaps out of fear,” she said.

While it may be suggested that most of the respondents were not exactly influenced by the theories, this may not be said for a few of them based on their responses. For instance, Participant 19 (group 4) submitted:

Regarding the vaccine, all the issues being raised about it made me fear getting vaccinated, to be honest. This at last made me not to take the vaccine. You know of all the stories about people dying after taking the vaccine or developing one illness or the other... While I don't think I believed these stories hundred percent, something in me still dreaded going to take the vaccine (Male, 47yrs).

Given that the respondents who said they avoided vaccination due to the controversies still admitted that they complied with some other recommended actions like use of facemasks and physical distancing, it would appear what was motivating vaccine avoidance was more of anxiety and fear as against any real belief of the dissenting claims. For example, Participant 28 (Group 5) said she did not take the vaccine because she was too afraid but "not that I believe these stories being told. You know when it comes to matters of life and death, you are pushed to be careful even to the extent of becoming too careful because a lost life cannot be retrieved" (Female, 45yrs). However, like other participants that avoided vaccination, she was willing to use facemasks and maintain physical distancing in compliance with the officially recommended health actions.

On the whole, the foregoing suggests strongly that the conspiracy theories had influenced the participants' attitude to vaccination in some way but that this influence was limited. This tends to corroborate the survey finding (see Table 3) which revealed a similar tendency.

Findings

Research Question 1: To what extent were federal civil servants in Southeast Nigeria exposed to COVID-19 vaccine conspiracy theories?

From Table 1 it is observed that majority of the respondents had encountered all the conspiracy theories in listed in the questionnaire. This tendency is reinforced by the responses from the FGD participants. All this points to the fact that there was high exposure to the COVID-19 vaccine conspiracy theories among federal civil servants in Southeast Nigeria. This finding is consistent with results of previous studies such as Adeniran and Oso (2023), Talabi et al. (2022), Wonodi et al. (2022), Apuke and Omara (2021), and Ijioma and Odu (2020). Revealingly, the conspiracy theories which the civil servants were found to have been aware of correspond exactly to those ones highlighted in literature. Conclusively, this study validates the position in extant literature as far as popularity of COVID-19 vaccine conspiracy theories are concerned.

Research Question 2: How much did federal civil servants in Southeast Nigeria believe COVID-19 vaccine conspiracy theories?

Data in Table 2 indicate that majority of the respondents did not believe the conspiracy theories about COVID-19 vaccine. This position was reinforced by the submissions of the participants during the FGD sessions. Therefore, it can be stated that the federal civil servants in Southeast Nigeria did not, in most cases, believe the COVID-19 vaccine conspiracy theories. This finding is supported by literature evidence as seen in results of studies like Tabi et al. (2022), Adeyemi (2021), and Adejumo et al. (2021). Generally, studies on believability of dissenting claims about COVID-19 has revealed that audience tended to believe such claims in certain cases (Adeyemi, 2021; Ekwebene et al., 2020) while disbelieving them in other cases (Igbिनovia, Okuonghae & Adebayo, 2021).

Research Question 3: To what extent did conspiracy theories influence the civil servants' decision on vaccination?

Table 3 shows that in most cases the respondents were not influenced by the conspiracy theories in their vaccination decision. Significant number were influenced only regarding the claim that vaccines are

ineffective and/or harmful and the claim that personal measures like drinking hot water, taking ginger and vitamin C prevents COVID-19. FGD responses suggest that the participants were not so much influenced by these controversies in deciding whether to take jabs or not. For instance, some of them stated that they became convinced that some of the claims were not accurate having known persons who were vaccinated and did not experience consequences like ailments and death as bandied in the conspiracy theories. Therefore, it may be stated that federal civil servants in Southeast Nigeria were not significantly influenced by COVID-19 vaccine conspiracy theories in taking their vaccination decision. Some literature evidence (such as Sadiq et al., 2023) supports this finding while others (such as Adeniran & Oso, 2023) did not support it. While the former study found that conspiracy theories contributed to vaccine hesitancy among the people, the latter found that people complied with vaccination despite the dissenting claims. However, these discrepancies may be accounted for by the fact that these studies were conducted among different demographics. Instructively, neither of the studies was conducted among civil servants.

Conclusion

In view of the findings of this study, it is concluded that COVID-19 vaccine conspiracy theories did not have significant influence on the vaccination decision taken by federal civil servants in Southeast Nigeria. In other words, their decision to get vaccinated or not may have been more significantly influenced by some other variables besides from these theories.

Viewed against the backdrop of the Reception Theory, it can be said that these civil servants gave oppositional (or at best negotiated reading) to these conspiracy theories about COVID-19 vaccines. This conclusion is in particular supported by the finding that the civil servants, in most instances, did not believe the conspiracy theories. Probably, it is this disbelief that eventually translated to the failure of the theories to influence their choices regarding vaccination.

Recommendations

Based on the findings of this study, the following recommendations are put forward:

1. In view of potential influence of conspiracy theories on people's vaccination decision, health communicators should, as a matter of priority, integrate strategies for debunking possible conspiracy theories as they implement vaccine communication. This is relevant for both COVID-19 and any other future health issues.
2. Future vaccine campaigns should anticipate and plan ahead against conspiracy theories based on the COVID-19 experience and similar incidents such as seen with the polio vaccine previously. Such a proactive approach will ensure better management of such issues whenever they arise.
3. Media regulatory agencies should enact policies and implementation frameworks towards assuring that media messages on sensitive issues like COVID-19 vaccines are based on factual and constructive information such that audience are rightly informed towards better and safe decision making.

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