ATTITUDE OF ENUGU SOUTH CITIZENRY TOWARDS COVID-19 VACCINATION

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Key Words: Attitude, Vaccination, Cognitive, Affective, Behavioural, Cultural	**Abstract:** This study investigated the attitude of Enugu South citizenry towards COVID-19 vaccination. Four research questions and four hypotheses guided this research study. The population for the study was 427 teachers in 9 secondary schools of Enugu South. A sample of 366 respondents was drawn from the Local Government Area. The instrument used for data collection was a structured questionnaire developed by the researcher. Mean and standard deviation were used to answer the research questions. The results of the findings indicated that Enugu South citizenry had a negative cognitive, affective, behavioural and cultural attitude towards COVID-19 vaccination. It is therefore recommended that there should be enlightenment, enforcement and clarification of some of the misconception surrounding COVID-19 vaccination in Enugu South Local Government Area of Enugu State

Introduction

The entire globe was recently faced with challenge brought about by the deadly disease known as Corona virus. This Corona virus brought untold hardship and innumerable economic losses to the world. Diseases over the years and from pre-historical times have taken a toll on man. Diseases have lead to loss of lives, disability in individuals, effects on the economy and general well being of people in a given society (Ajai, Singh and Shakuntala, 2008). A virus is a submicroscopic infectious agent that replicates only inside the living cells of an organism (Wu, 2020). Viruses infect all life forms, from animals and plants to microorganisms, including bacteria and archaea (Zimmer, 2021). Viruses have been implicated in many diseases and pandemics (Towner, Khristov, Sealy, Vincent, Erickson and Bawiec, 2006, Eisinger *and* Fauci, 2018,). Currently the world is battling with a Global pandemic caused by a new strain of corona virus known as SARS-COV-2 which is thought to have originated from Wuhan in China (Ashour, Elkhatib, Rahman and Elshabrawy, 2020).

Corona viruses are a family of viruses that cause illness in human and animals. There are seven variants of corona viruses that can infect humans with the one that causes SARS emerging from southern China in 2002 and quickly spread to 28 other countries (Wu, Zhao and Yu, 2020). Viruses from varying animal sources may swap genes owing to the packed nature of the wet markets and may mutate and begin to infect and spread among people (Andersen, Rambaut, Lipkin, Holmes, Garry, 2020).

Developing an effective and safe vaccine was a promising hope since the early days of the pandemic. Vaccination is considered one of the most effective strategies to control the pandemic along with other measures such as social distancing, masks, and the use of sanitizers (Harapan; Wagner; Yufika; Winardi; Anwar; Gan, Setiawan; Rajamoorthy, Sofyan, Mudatsir, 2020). Among the COVID-19 vaccines are a number of RNA vaccines that are being developed to combat the COVID-19 pandemic and some have been approved or have received emergency use authorization in some countries. The Pfizer-BioNTech vaccine is approved for use in adults, while the Moderna mRNA vaccine has emergency use authorization in the US (Kim and Liau, 2010). Vaccination is the most effective approach of stopping infectious diseases such as polio, measles, tetanus, rubella, mumps, chickenpox, and typhoid (Orenstein, Papania and Wharton. 2004).Vaccines prevent or ameliorate the effects of a future infection by a natural or "wild" pathogen, or fight a disease that has already occurred (Melief, van Hall, Arens, Ossendorp and van der Burg, 2015, Bol, Aarntzen, Pots, Olde Nordkamp, van de Rakt, Scharenborg, de Boer, van Oorschot, Croockewit, Blokx, Oyen, Boerman, Mus, van Rossum,

van der Graaf, Punt, Adema, Figdor, de Vries, and Schreibelt, 2016). During vaccinations, mild reactions may occur and side effects depend on the vaccine in question, and the host factors such as genetics, health status, immune competence and age. Some common side effects are fever, pain around the injection site, and muscle aches (Dudley, Halsey, Omer, Orenstein, O'Leary, Limaye and Salmon 2020).

Vaccines can cause side effects, most of which are mild or moderate and go away within a few days on their own There have been concerns about COVID-19 vaccines transmitting COVID-19 and could lead to death. But none of the approved vaccines contain the live virus that causes COVID-19, which means that COVID-19 vaccines cannot transmit COVID-19 (WHO, 2022). The development of COVID-19 vaccine is surrounded by politics, conspiracies and controversies. How governments handle the COVID-19 response is a key influencer of public confidence and attitude in vaccination. If the government was perceived to be handling the pandemic response well, willingness to accept COVID vaccination was higher; for those who felt that their government was handling the response badly, their willingness to vaccinate was much lower. Since the beginning of the pandemic, there have been various remarks on the virus, its origin, different cures and availability of effective vaccines. In some places, people do not believe in COVID-19 existence, the virus is intangible and not very concrete and for some individuals, it is really hard to accept that a "flu-like illness" could be life-threatening. Some believe that COVID-19 is a business for health care workers (HCWs) and doctors are diagnosing every fever as COVID-19 for their benefits. Ironically, in some places, people attacked HCWs in the hospitals for not handing over the dead body immediately to the family (Ullah, Khan, Tahir, Ahmed and Harapan, 2021). Myth about the origin of virus emerged and people also believe that government is providing false number of COVID-19 cases because a large number of cases will get more profit and donation. Many people also believe that it is from God as a punishment, the 5G technology directly transmits the virus and weaken the human immunity, and some consider that the virus is a bio-warfare weapon (Bolsen, Palm and Kingsland, 2020). In addition, the video "Plandemic" that shows that COVID-19 pandemic is a conspiracy of pharmaceutical companies to sell their

products also have become viral through social media platforms adding to the list of conspiracy theories All these raise the question: will people believe the COVID-19 vaccine and will they accept it? There are other factors that may lead to the formation of attitude to COVID-19 vaccination, they include safety of the vaccine, fear of getting the virus and the quality of the vaccine. Attitude is a psychological construct, a mental and emotional entity that is inherent in or characterizes a person (Richard, 2016). The structure of attitude according to the classic, tripartite view offered by Rosenberg and Hovland is that an attitude contains cognitive, affective, and behavioral components (Kaiser and Wilson, 2019).

Studies by (Kenneth, Shiva, Siddharth & Vijayaprasad (2021) had indicated positive attitude to vaccination among respondents. Kishore; Venkatesh;Ghai; & Kumar (2021) and Islam, Siddique, &Akter, (2021) reported willingness to get vaccinated among respondents. Muhammad, Muhammad, Waleed, Summaiya, Steven, Tan, Nasir , Irfan and Ali (2021) reported in their study that less than half (48%) of the respondents will refuse to get vaccinated if government officials made it compulsory. Ijaz, Ashraf &Miah (2021) found out that about 64.86% of the respondents would delay the vaccination until they are confirmed about the vaccine's efficacy and safety or COVID-19. Islam, Siddique, &Akter, (2021) also reported in their study of negative attitude towards COVID-19 vaccination. Attitude of the people Enugu South citizenry is the emphasis of this research. These attitudes were studied under the cognitive, behavioural, affective and cultural components of the citizens towards COVID-19 vaccination.

Research Method
The study was carried out in Enugu South L.G.A. Enugu South is a Local Government Area in Enugu State, Nigeria. The population for the study consisted of 619 teachers in the 14 public secondary schools of Enugu South Local Government Areas. The sample for the study comprised of 366 teachers in 9 secondary Schools from Enugu South L.G.A. Nine (9) secondary schools were randomly sampled by simple balloting. The sample from Enugu South was 427 teachers (52 male and 375 female). The instrument for data collection was a structured questionnaire titled "Attitude of Citizen towards Covid-19 Vaccine Questionnaire" (ACCVQ) which was designed by the researcher. The instrument was face

validated by three experts from Enugu State University of Science and Technology (ESUT), Enugu, two of the experts are from Department of Adult and Continuing Education, and one expert was from the Measurement and Evaluation option from the Department of Mathematics and Computer Education. The administration and the collection of the questionnaire were done with the assistance of research assistants in the secondary where the questionnaires were distributed. For this study, mean and standard deviation were used to analyse the data collected.

Results

Research question 1: What is the cognitive attitude of Enugu South citizenry towards COVID-19 vaccine

Table 1: Mean Response scores of Enugu South Citizens on their Cognitive Attitude towards COVID-19 Vaccine

SN	COVID-19 Vaccine?	Enugu South = Total 366		
		$\bar{X}$	SD	Dec.
1	Protect people from COVID 19 infection	1.99	1.08	D
2	Help our immune system fight COVID 19	1.98	0.97	D
3	Reduce the rate of transmission of COVID 19	2.99	0.93	A
4	Is effective in reducing COVID 19 disease mortality	1.86	1.04	D
5	Are meant for people travelling abroad	2.03	1.07	D
6	Are for people who frequent crowded setting	2.08	0.90	D
7	Changes the human genome	2.39	0.90	D
8	Are safe	2.48	0.90	D
9	Have side effects	2.75	0.91	A
10	Are not effective	2.71	0.98	A
11	Do not cure COVID 19 properly	2.84	0.99	A
12	Have not been tested thoroughly	2.86	0.85	A
13	Are political and financial gain and not for people's health	2.75	0.99	A
14	Cause serious problem in children	2.61	0.95	A
	Grand Mean	**2.45**	**0.96**	**D**

From the table 1, it was revealed that citizens in Enugu South L.G.A agreed with items 3, 9, 10, 11, 12, 13 and 14 as their mean scores for these items were greater than the criterion mean cut off point of 2.50 benchmark set for the study. However, they disagreed with items 1, 2, 4, 5, 6, 7 and 8 as their recorded mean scores were less than 2.50 benchmark set for the study. This shows that they display negative cognitive attitude towards COVID-19 vaccine, because they believe that COVID-19 vaccines are not effective, have side effects, do not cure COVID-19 properly, have not been tested thoroughly, are political and financial gain and not for people's health, cause serious problem in children, do not protect people from COVID 19 infection, do not help our immune system fight COVID 19, is not effective in reducing COVID 19 disease mortality, not safe among others. The answer to research question 1 is that Enugu South citizens have negative cognitive attitude towards COVID-19 vaccine.

Research question 2: What is the behavioural attitude of Enugu South citizenry towards COVID-19 vaccine?

Table 2: Mean Response scores of Enugu South Citizens on their Behavioural attitude towards COVID-19 Vaccine

SN	Behavioural attitude towards COVID-19 vaccine	Enugu South = 366		
		$\bar{X}$	SD	Dec.
15	I have concerns about the unexpected effects of COVID 19 vaccines	3.19	0.83	A
16	I don't trust the benefits of the vaccine	2.83	0.97	A
17	Unknown effects are barriers for me getting vaccinated	3.13	0.79	A
18	Natural immunity is better than the COVID 19 vaccine	3.18	0.94	A
19	Vaccines developed by pharmaceutical companies are better and effective	2.44	1.02	D
20	Vaccines made in Europe or	2.45	1.01	D

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SN		X̄	SD	Dec.
	USA are much safer than those produced in other countries			
21	Traditional vaccines are not effective	2.41	0.96	D
	Grand Mean	**2.80**	**0.93**	**A**

In table 2 above, the data is used to answer research question two which sought to determine the behavioural attitude of Enugu South citizen towards COVID-19 vaccine. From the table, Enugu South citizens agreed with items 15, 16, 17, and 18 as their mean scores for these items were greater than 2.50 benchmark set for the study. However, they disagreed with items 19, 20 and 21as their recorded mean scores are less than 2.50 bench mark set for the study. This shows that believe vaccines developed by pharmaceutical companies are not better and effective, vaccines made in Europe or USA are not much safer than those produced in other countries and do not believe that traditional vaccines are not effective. Thus the answer to research question 2 is that Enugu South citizens have negative behavioural attitude towards COVID-19 vaccine.

Research question 3: What is the affective attitude of Enugu South citizenry towards COVID-19 vaccine?

Table 3: Mean Response scores of Enugu South Citizenry on their Affective attitude Towards COVID-19 Vaccine

SN	I will not get vaccinated?	Enugu South = 366		
		X̄	SD	Dec.
22	Because of its side effects	3.16	0.8	A
23	Since I always wear face mask and wash my hands regularly	2.83	0.90	A
24	Even if it is mandatory	2.84	0.89	A
25	Even if it is free	2.51	1.04	A
26	At all cost	2.61	1.03	A
27	Even if I see the opportunity	2.72	0.94	A
28	Even if I am being forced to do so	2.70	0.99	A
	Grand Mean	**2.77**	**0.95**	**A**

Data in table 3 shows mean responses of Enugu South citizenry on affective attitude towards COVID-19 vaccine. From the table, it was revealed that citizens in Enugu South L.G.A agreed with all the items as their mean scores for these items are greater than mean cut off point of 2.50 benchmark set for the study. The total response indicate that they agreed to all the items except item 25 which had mean score of 2.45, which less than mean cut off point of 2.50 set for the study. This shows that they will not vaccinated because of its side effects, they always wear face mask and wash their hands regularly, even if it is mandatory, see the opportunity and being forced to do so.

Research question 4: What is the cultural attitude of Enugu South citizenry towards COVID-19 vaccine?

Table 4: Mean Response scores of Enugu South Citizenry on their Cultural Attitude towards COVID-19 vaccine

SN	I believe that	Enugu South = 366		
		X̄	SD	Dec.
29	Vaccines are propaganda to control the world population	2.84	0.92	A
30	I don't go to hospital if I fall sick, hence I will not be vaccinated	2.40	0.92	D
31	COVID 19 pandemic is a conspiracy hence I will not get vaccinated	2.69	0.95	A
32	Vaccination does not stop death	3.25	0.84	A
33	Vaccination does not prevent falling sick	3.24	0.83	A
34	Roots and herbs are better than COVID 19 vaccines	2.64	0.96	A
35	COVID 19 vaccines is a mean for government officials to embezzle public funds	3.01	1.06	A
	Grand Mean	**2.87**	**0.93**	**A**

Data in table 4 shows mean responses of Enugu South citizenry on cultural attitude towards COVID-19 vaccine. From the table, it was revealed that citizens in Enugu South L.G.A agreed with all the items as their mean scores for these items are greater than mean cut off point of 2.50 benchmark set for the study except item 30 which had mean score of 2.40. This shows that they strongly believe that vaccines are propaganda to control the world population, COVID 19 pandemic is a conspiracy, COVID 19 vaccines is a mean for government officials to

embezzle public funds and it doesn't stop death or prevent falling sick and roots and herbs are better than COVID 19 vaccines.

Discussion

Discussions of the findings were presented according to research questions and hypotheses. Research question one sought to find out the cognitive attitude of Enugu South citizens towards COVID-19 vaccine. The finding revealed that Citizens in Enugu South had negative cognitive attitude towards COVID-19 vaccine. This shows that they believe that COVID-19 vaccines are not effective, have side effects, do not cure COVID-19 properly, have not been tested thoroughly, and are for political and financial gain and not for people's health. They also believed that it causes serious problem in children, do not protect people from COVID 19 infection, do not help our immune system fight COVID 19, is not effective in reducing COVID 19 disease mortality, not safe among others. This finding do not tally with the findings of Kenneth, Shiva, Siddharth & Vijayaprasad (2021), who found out that More than 50% of the respondents in urban and rural communities in Tamil Nadu, India had positive attitudes towards the COVID 19 vaccines. This is because they had high trust in vaccines and low preference for natural immunity. The finding also disagreed with the finding Muhammad, Muhammad, Waleed, Summaiya, Steven, Tan, Nasir, Irfan and Ali (2021) who found out that there is positive attitude towards vaccination among citizens in Pakistan. In like manner the finding disagreed with the finding of Mesesle (2021) who found out positive attitude towards COVID-19 vaccination among citizens in Ethiopia.

Another finding revealed that Citizens in Enugu South demonstrate negative behavioural attitude towards COVID-19 vaccine. This shows that they have concerns about the unexpected effects of COVID 19 vaccines, don't trust the benefits of the vaccine, unknown effects are barriers for me getting vaccinated and they believe that natural immunity is better than the COVID 19 vaccine. Also, they believe that vaccines developed by pharmaceutical companies are not better and effective, vaccines made in Europe or USA are not much safer than those produced in other countries and do not believe that traditional vaccines are not effective. This finding disagreed with the findings of Kenneth, Shiva, Siddharth &Vijayaprasad (2021), that the respondents in urban and rural communities in Tamil Nadu, India had positive attitudes towards the COVID 19 vaccines. This is because they had high trust in vaccines and low preference for natural immunity. However, the finding agreed to the submission of Sultan, Md, Ijaz, Ashraf &Miah (2021)who found out 64.86% of respondents in Bangladesh would delay the vaccination until they are confirmed about the vaccine's efficacy and safety or COVID-19. This is because they have concerns about the unexpected effects of COVID 19 vaccines and don't trust the benefits of the vaccine.

In one of the findings, the result shows that Citizens in Enugu South display negative affective attitude towards COVID-19 vaccine. This shows that they will not vaccinated even if it is mandatory, see the opportunity and being forced to do so because of its side effects and they always wear face mask and wash their hands regularly. This shows lack of trust on the vaccine. This finding totally disagreed with the finding of Kishore; Venkatesh;Ghai; & Kumar (2021) who found that adult population of India showed a willingness to get vaccinated and are willing to get their children vaccinated. These maybe because they don't practice wearing of face mask and regular washing of their hands. Also the finding do not upheld the report of Islam, Siddique, &Akter, (2021) that 60% of the respondents in Bangladesh are willing to have the vaccination, recommend it to family and friends and thought that everyone should be vaccinated. The finding do not tally with the finding of Muhammad, Muhammad, Waleed, Summaiya, Steven, Tan, Nasir , Irfan and Ali (2021) that less than half (48%) of the respondents will refuse to get vaccinated if government officials made it compulsory. The key reason for the refusal of the vaccine may be due to the dogma of being naturally immune to COVID-19.

The last finding revealed that Citizens in Enugu South demonstrated negative cultural attitude towards COVID-19 vaccine. This shows that they strongly believe that vaccines are propaganda to control the world population, COVID 19 pandemic is a conspiracy, COVID 19 vaccines is a mean for government officials to embezzle public funds and it doesn't stop death or prevent falling sick and roots and herbs are better than COVID 19 vaccines. This finding do not tally with the findings of Kenneth, Shiva, Siddharth &Vijayaprasad (2021), who found out that More than 50% of the respondents in

urban and rural communities in Tamil Nadu, India had positive attitudes towards the COVID 19 vaccines. This is because they strongly believe that vaccines are propaganda to control the world population, and a mean for government officials to embezzle public funds. Because of that they will not recommend for their family and friends and everyone to get vaccinated as reported by Islam, Siddique, &Akter, (2021). The finding do not tally with the finding of Muhammad, Muhammad, Waleed, Summaiya, Steven, Tan, Nasir , Irfan and Ali (2021) that less than half (48%) of the respondents will refuse to get vaccinated if government officials made it compulsory. The key reason for the refusal of the vaccine may be due to the dogma of being naturally immune to COVID-19.

Conclusion
Since the outbreak of COVID 19 virus the entire world, concerted efforts were made and are being made across the globe to bring about a solution to this global pandemic. The most effective of all the solutions was through vaccination. Vaccination however is surrounded with some challenges that could lead to attitudes towards vaccination. From the findings of the study, it was revealed that citizens in Enugu South citizens had negative cognitive, behavioural, affective and cultural attitude towards COVID-19 vaccination exercise in the state.

Recommendation
Based on the research findings, the following are recommended:
1. Massive public enlightenment campaigns should be carried out in the communities using the right channels of communication to disseminate correct information about COVID 19 vaccine.
2. Authorities in the local government councils should strengthen their enforcement strategies to ensure strict adherence to COVID 19 prevention.
3. There is need to leverage on the opportunities of social media platforms to create friendly contents that will be used to conduct consistent sensitization about COVID 19 vaccine.
4. Public awareness campaigns with the engagement of traditional, religious and community leaders will also play a major role in consistent sensitization about COVID 19 vaccine.

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