AVAILABILITY AND ACCEPTABILITY OF COVID-19 VACCINE AMONG NON-TEACHING STAFF OF LAGOS STATE UNIVERSITY, OJO, LAGOS

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ABSTRACT

The main objective was to determine the availability and acceptability of the COVID-19 vaccine among non-teaching staff. The study formulated four research questions and four null hypotheses to direct the research. The descriptive survey research method was used, and a random sampling technique was used to select 300 non-teaching staff. The researchers used a questionnaire called the Accessibility and Acceptability of COVID-19 Vaccine Questionnaire (AACVQ) to collect data. The AACVQ contained two sections: demographic data and hypothesis-related items. The demographic data was analyzed using descriptive statistics, and the hypothesis-related items were assessed using a four-point Likert-type rating scale questionnaire. The reliability of the instrument was evaluated using the test-retest method, and the Cronbach's alpha coefficient was calculated to be 0.85. The hypotheses were tested using the chi-square analytical tool with a significance level of 0.05. The study revealed that the level of knowledge about the availability, accessibility, and acceptability of the Covid-19 vaccine among non-teaching staff was influenced by factors such as age, gender, tribe, marital status, and educational qualification. The study also found that the non-teaching staff were aware of the vaccine's availability and were willing to take it. Therefore, the study recommended that the university make the Covid-19 vaccine easily accessible to non-teaching staff.

Introduction

According to the Global Alliance for Vaccines and Immunizations (2021), the outbreak of COVID-19 pandemic in late 2019 marked the beginning of a global pandemic that has had profound and far-reaching impacts on societies, economies, and health systems worldwide. The virus, caused by the novel coronavirus SARS-CoV-2, rapidly spread from its initial outbreak in Wuhan, China to become a global health crisis, prompting widespread lockdowns, travel restrictions, and the development of vaccines and treatments. The pandemic has reflects the unity in humanity that cuts across that cuts across different countries all over the world and the importance of unity together to fight a common course and restore public health challenges. As the pandemic continues to evolve, it underscores the need for ongoing vigilance, preparedness, and innovation in addressing infectious diseases (WHO, 2020). As Richardson et al. (2020) noted, the disease can manifest in a wide range of symptoms, from asymptomatic to severe or even fatal. To curb the spread of SARS-CoV-2, countries have implemented various control measures, such as social distancing, lockdowns, school and business closures, and the mandatory use of face masks in public. Although such measures have helped reduce the number of cases, there has been a resurgence of COVID-19 cases after reopening economies and societies, as reported by Devi (2020) and Shimizu et al. (2020).

In order to combat COVID-19, there is an urgent need for long-term preventive measures. Achieving herd immunity through natural infection has been deemed unethical and unachievable, making inoculation campaigns critical in the fight against the virus (Orlowski & Goldsmith, 2020). As of 26th October 2021, there were 211,330 confirmed cases of COVID-19 in Nigeria, with vaccines playing a crucial role in preventing and controlling infectious diseases (NCDC, 2021; Harrison & Wu, 2020). However, vaccine hesitancy can cause delays, refusals, and contribute to disease outbreaks, as seen in the 2003 boycott of polio vaccination in northern Nigeria (Larson et al., 2013; Ghinai et al., 2013). Despite the success of immunization in reducing the global burden of illness and death, public trust is still a challenge for polio eradication efforts in Nigeria (Larson & Ghinai, 2011). Nevertheless, scientists have raced to develop safe and effective coronavirus vaccines in 2020, some of which have been licensed to handle sudden situation currently being used the World Health Organization (WHO, 2020).

Moreso, Le et al. (2020) have emphasized the varied technology platforms that are being explored for the development of the COVID-19 vaccine, such as “nucleic acid, virus-like particles, peptide, viral vector, recombinant protein, live attenuated virus, and inactivated virus approaches”. Recently, two vaccines utilizing distinct technologies have been authorized for use in several countries. The AstraZeneca vaccine, which utilizes viral vector technology, necessitates two doses separated by a 4-week interval and demonstrates 62% efficacy in preventing symptomatic infection, with 100% efficacy in preventing severe forms of COVID-19 (Le et al., 2020).

According to NCDC (2021), the Moderna vaccine, which utilizes mRNA technology, necessitates two doses given at a 4-week interval and has been proven to be 94% effective in intervention that is capable of preventing occurrence of noticeable signs and symptoms of a disease or infection in an individual and has a 100% success rate in preventing severe diseases. Although the NPHCDA started the vaccination process in Nigeria in March 2021 with priority groups like people working in the hospital, important leaders in the society, and those responsible for the safety of the people. Nigeria Health Watch (2021) reports concerns about people refusing to take vaccine based on unfounded rumour regarding the COVID-19 vaccination exercise, despite the government's goal of ensuring widespread vaccination.

Oku and colleagues (2017) suggest that the effective and continuous promotion of COVID-19 vaccination is crucial for its successful implementation. The key stakeholders in this process are the people working in the hospitals, key leaders in the society, and employees of the government who typically influence healthcare decisions within their respective communities. However, it is often the case that health interventions fail due to the lack of proper engagement with these individuals during

planning and implementation (Majid et al., 2018). Conversely, research has shown that gaining the trust of these stakeholders, understanding their perspectives, and considering their concerns during intervention planning and implementation can significantly contribute to the success of health initiatives (Oku et al., 2017).

According to a recent study by Ilesanmi and Afolabi (2020), a contributing factor to the rise and persistence of COVID-19 cases in Nigeria is the denial of its existence by many individuals who also believe it to be a political strategy. Despite the approval of COVID-19 vaccines for use in Nigeria, the vaccination rates remain low, and the government is implementing measures to encourage its citizens to get vaccinated. The study in question investigates the accessibility, availability, and acceptability of COVID-19 vaccines among non-teaching staff at Lagos State University.

Statement of Problems

Overtime, it has been observed that the covid-19 pandemic seems to have persisted, as new variant cases are being confirmed on daily basis. The quality of education in the country could be worsened if urgent and concerted efforts are not made to eliminate the COVID-19 pandemic. Interestingly, COVID-19 vaccination has proven to boost immune system against the novel corona virus and have been approved for use in Nigeria. Despite the approval of COVID-19 vaccines for use in Nigeria for some months now, not many individuals have been vaccinated and government seems to be forcing citizens to get vaccinated. The likely reason for this could be that Nigerians are unwilling to accept the COVID-19 vaccines. It could also come to light that the vaccines are not available and accessible to all citizens in the country.

The purpose of the study includes the following.

1. Assess the availability of COVID-19 vaccine amongst the non-teaching employees of Lagos State University.
2. Access the acceptability of COVID-19 vaccine amongst the non-teaching employees of Lagos State University.

The study provided answered to the following research questions:

1. What is the availability of COVID-19 vaccine among the non-teaching staff in Lagos State University?
2. What is acceptability of COVID-19 vaccine amongst non-teaching staff in Lagos State University?

The following research hypotheses were formulated and tested for the study:

1. There will be no noticeable variance in the availability of COVID-19 vaccine among non-teaching staff in Lagos state University.
2. There is no notable variance in the acceptability of covid-19 vaccine among non-
3. teaching staff of Lagos State University.

Methodology

A descriptive research design was implemented, and the participants were non-teaching staff at Lagos State University. The sample size consisted of 300 non-teaching staff, who were randomly selected. The data was collected through a modified questionnaire named the Availability and Acceptability of COVID-19 Vaccine Questionnaire (AACVQ), which comprised two sections - A and B. Section A captured demographic information, while section B contained opinion questions rated on a four-point Likert scale. The validity of the questionnaire was approved by the researcher's supervisor and other lecturers in the Department of Human Kinetics, Sports, and Health Education. Additionally, the test-retest method of reliability was used, resulting in a Cronbach alpha technique with an r-value of 0.86. Data were collected through personal administration by the researcher and three

trained research assistants, and analyzed using descriptive statistics of frequency counts, percentages, and Chi-Square statistics to test hypotheses at a significance level of 0.05.

Results

Data Presentation

Table 1: Distribution of Respondents by Age.

Age	Frequency	Percentage %
21-30	24	8.0
31-40	133	44.3
41-50	143	47.7
Total	300	100.0

In the study, it was revealed in Table .1 that around 8.0% of the participants belonged to the age bracket of 21-30 years, while 44.3% fell within the range of 31-40 years, and 47.7% were aged between 41-50 years.

Table 2: Distribution of Respondents by Gender.

Gender	Frequency	Percentage %
Male	156	52.0
Female	144	48.0
Total	300	100.0

Table 2 showed that approximately 156 (52.0%) of the respondents were males while approximately 144 (48.0%) of the respondents were females.

Table 3: Distribution of Respondents by Marital Status.

Marital Status	Frequency	Percentage %
Single	33	11.0
Married	236	78.7
Widow	31	10.3
Total	300	100.0

Table 3 showed that 33 (11.0%) of the respondents are single, while 236 (78.7%) of the respondents were married and 31 (10.3%) of the respondents were widow.

Table 4: Distribution of Respondents by Level of Education.

Level of Education	Frequency	Percentage %
SSCE	31	10.3
NCE	80	26.7
BSC	189	63.0
Total	300	100.0

Table 4 showed that approximately 31 (10.3%) of the respondents had SSCE, while approximately 80 (26.7%) of the respondents had NCE and approximately 189 (63.0%) of the respondents had BSC.

Table 5: Distribution of Respondents by Religion.

Religion	Frequency	Percentage %
Christianity	143	47.7
Islam	126	42.0
Traditionalist	31	10.3
Total	300	100.0

Table 5: showed that approximately 143 (47.7%) of the respondents belongs to

Christianity, while approximately 126 (42.0%) of the respondents belong to Islam and an approximate 31 (10.3%) were traditionalist.

Table 6: Distribution of Respondents by Tribe.

Tribe	Frequency	Percentage %
Yoruba	259	86.3
Igbo	41	13.7
Hausa	0	0
Others	0	0
Total	300	100.0

Table 6 showed that approximately 259 (86.3%) of the respondents were Yorubas while appropriately 41 (13.7%) of the respondents were Igbo and 0 (0%) of the respondents were Hausa and Other tribes respectively.

Hypothesis One

According to the first hypothesis, there will be no noticeable variance in the accessibility of the COVID-19 vaccine among non-teaching personnel in Lagos State University. To verify this hypothesis, a Chi-square test was performed at a significance level of 0.05, and the outcomes are presented in Table 7.

Table 7: Chi-square analysis on the availability of COVID-19 Vaccine among non-teaching staff in Lagos state University.

Responses	FRQ	%	DF	LS	Cal X^2	P value	RMK
SA	234	78.0					
A	33	11.0	1	0.05	269.340	0.000	Sig
D	33	11.0					
SD	0	0					
TOTAL	300	100.0					

According to Table 7, the results obtained from hypothesis one indicated that a majority of the respondents strongly agreed with the items, with 234 (78.0%) of the respondents strongly agreeing. Additionally, 33 (11.0%) of respondents agreed, out of the total respondents, 11.0% disagreed with the given statement, while none of the respondents strongly disagreed, indicating a generally favorable response. Additionally, the researchers calculated a statistically significant $\chi 2$ value of 269.340 at one degree of freedom, with a p-value of 0.000<0.05. These results led to the rejection of the null hypothesis and indicate a noticeable variance in the availability of the COVID-19 vaccine among non-teaching staff in Lagos State University.

Hypothesis Two

According to hypothesis one, there is no noticeable variance between the level of approval of the COVID-19 vaccine amongst non-teaching personnel at Lagos State University. A Chi-square test was conducted at a significance level of 0.05, and the findings are displayed in the table underneath.

Table 8: Chi-square analysis on the acceptability of COVID-19 vaccine among non-teaching staff in Lagos state University.

Responses	FRQ	%	DF	LS	Cal X^2	P value	RMK
SA	0	0					
A	175	58.3	1	0.05	8.333	0.004	Sig
D	125	41.7					
SD	0	0					
TOTAL	300	100.0					

According to the findings presented in Table 8, which summarizes the responses obtained from the study participants in relation to hypothesis one, it was found that none of the respondents (0%) strongly agreed with the given statements, while the majority of the respondents, comprising 175 (58.3%) individuals, agreed with the statements. Conversely, 125 (41.7%) respondents disagreed with the statements, and none of the participants (0%) strongly disagreed. The calculated X2value was determined to be 8.333, which was found to be statistically significant at p= 0.004<0.05 at one degree of freedom. Therefore, based on these results, the null hypothesis was rejected. This indicates that there was a noticeable variance in the acceptability of the COVID-19 vaccine among non-teaching staff in Lagos State University.

Discussion

According to the hypothesis one stated above, it was proposed that there would be no noticeable variance in the availability of COVID-19 vaccine among non-teaching staff in Lagos State University. However, the chi-square (χ2) analysis revealed a statistically significant value of 269.340 with one degree of freedom, and the rejection of the hypothesis due to a p=0.000<0.05. The Center for Disease Control (2021) found that rural areas have lower COVID-19 vaccination coverage for the primary vaccination series compared to urban areas, with disparities increasing more than twice since April 2021. Sparks et al. (2021) reported that healthcare providers are the main source of vaccination information for 76% of parents in rural areas. The World Health Organization (2021) stresses the importance of COVID-19 vaccines in changing the course of the pandemic, with many vaccine candidates in evaluation. Adebisi et al. (2020) also highlighted the urgency in developing precise diagnostic techniques, efficient therapies, and immunizations due to the virus's rapid spread. Although nearly 40% of rural parents did not receive a COVID-19 vaccine recommendation from their child's pediatrician, healthcare providers' recommendations are still a strong predictor of COVID-19 vaccination. Therefore, it can be inferred that there will be no significant difference in COVID-19 vaccine availability among non-teaching staff at Lagos State University.

According to the stated hypothesis two, there is a noticeable variance in the acceptability of the COVID-19 vaccine among non-teaching staff at Lagos State University (Okoli et al. (2019) and Quinn et al., 2019). However, the chi-square analysis conducted by Buchan and Kwong (2016), Schmid et al. (2017), and Mesch and Schwirian (2015) showed that the non-teaching staff had a high level of vaccine acceptability. Despite this, vaccine hesitancy has been a significant problem in disease prevention, as seen in the seasonal influenza and the 2009 H1N1 pandemic, as reported by Adane et al. (2022).Also, Adane et al. (2022) found that healthcare workers in northeastern Ethiopia had a high level of vaccine acceptability, with 62.5% of them having good knowledge about the COVID-19 vaccine. However, Chiara et al. (2021) reported a decrease in people's trust in science and vaccination between the first and second phase of the pandemic in Italy, with a low proportion of citizens showing willingness to get the vaccine.

Therefore, consistent with the research conducted by Olive et al. (2018) and Hammond (2020), it can be concluded that the level of knowledge, acceptability, and accessibility of the COVID-19 vaccine differs significantly among non-teaching staff at Lagos State University. he reluctance to get vaccinated continues to pose a significant problem for public health professionals. This issue results in lower vaccination rates among various populations, as observed by both Okoli et al. (2019) and Quinn et al. (2019). Moreover, the WHO admitted the existence of rejection of vaccines based on rumour and that one of the ten most pressing global health concerns in 2019. This matter has become even more pertinent during the COVID-19 pandemic since achieving high vaccination levels is essential to combat this disease.

Conclusion and Recommendation

Based on the finding, it was concluded that;

1. There was a noticeable variance in the availability of COVID-19 vaccine among non-teaching staff. To ensure the safety of everyone on campus, it is imperative that the vaccine is made readily available to non-teaching staff as well.

2. There was a noticeable variance in the acceptability of the vaccine among non-teaching staff, with those who were aware of its availability and acceptability showing greater willingness to get vaccinated. Therefore, it is importance to create consciousness and educate staff about the availability and safety of the vaccine to increase its acceptability and uptake.

Based on the conclusion of the study, the following recommendations are made:

1. Conducting seminars and workshops on the COVID-19 vaccine would be beneficial in updating the knowledge of the non-teaching staff regarding the subject matter.

2. Encouragement of vaccine confidence among the non-teaching staff in the university campus is imperative.

3. The Ministry of Health and Social Development of Lagos State can partner with the millennium goals providers such as UNICEF and WHO to make vaccines available to the university's non-teaching staff.

4. The University should collaborate with COVID-19 vaccine providers to provide vaccinations to the non-teaching staff.

5. The non-teaching staff must be encouraged to take all COVID-19 immunization shots recommended by the healthcare organization, comprising of an additional dose if advised, promptly upon their opportunity.

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