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Murtala Aliyu

muraliyu2006@mau.edu.ng

Abbas Adamu Lamido Gora

Modibbo Adama University, Yola, abbasadamu@mau.edu.ng

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ACCEPTANCE AND ATTITUDE TOWARD VACCINATION AGAINST COVID-19: A CROSS-SECTIONAL STUDY OF ACADEMIC LIBRARIANS IN NIGERIA.

By

Murtala Aliyu, PhD and Abbas Adamu Lamido Gora

Department of Library and Information Science, Modibbo Adama University, Yola, Nigeria

Abstract

This study investigated the level of acceptance and attitude toward vaccination against COVID-19 among academic librarians in Nigeria. It is guided by two objectives, two research questions and two null-hypothesis. The population of the study consisted of 7,287 certified librarians spread across Nigerian. Krejcie and Morgan's table for determining sample size for research activities was used, and a response rate of 231 was achieved out of the sample size of 364. A non-probability sampling involving purposive sampling techniques was used. Self-developed questionnaire was designed using Google Form mobile application with 4-Points-Likert scale, which was administered to respondents on several LIS professional social media platforms such as WhatsApp and Telegram. The instrument was subjected to reliability test by administering to 30 unregistered librarians in Nigeria using test-retest method. A Cronbach alpha value was obtained, $r = 0.92$. The study has established that the level of acceptance toward vaccination against COVID-19 was low and there were negative attitudes toward the vaccination among academic librarians in Nigeria. Moreover, the study found that there were significant relationship between academic librarians' socio-demographic characteristics and acceptance as well as attitudes towards COVID-19 vaccination in Nigeria. The study recommended massive public enlightenment campaign / sensitization on the importance of vaccination against COVID-19 as well as developing policies that could easily enforce taking the vaccines among the citizens.

Keywords: Acceptance, Attitudes, Vaccination, COVID-19, Academic Librarians, Nigeria.

Introduction

Over the past two years, the entire world has been bedeviled with COVID-19 pandemic. It is an infection which was first found in Wuhan city of China in late December, 2019. It is as a result of a novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Therapeutic diagnosis and findings have revealed that people tainted with COVID-19 can be symptomatic or asymptomatic in the premature stages of the virus depending on the person's immune system. It was declared as a global pandemic in March 2020 by the World Health Organization (WHO, 2020). The virus has caused disruptions in international travels, global trade and the lockdown of many countries of the world. Globally, there were over 605 million confirmed cases and 6.4 million deaths as of 11th September, 2022 (WHO, 2022). In Nigeria, a total of 264,617 cases were confirmed, 3,582 active cases, 257,880 discharged and 3,155 deaths as at 14th September, 2022 (NCDC, 2022). With the wide spread of the virus, countries had to seek for ways to curtail the spread by imposing restrictions on public spaces as well as encouraging citizens to observe non-pharmaceutical protocols. In addition, vaccines were developed to halt the spread of the virus. Vaccines reduce the risk of getting a disease by working with the body's natural defenses to build protection. When an individual is vaccinated, the person's immune system is stimulated to form

defenses against the disease. Vaccination is aimed at strategically preventing the citizens against contracting the virus. Some of the vaccines developed include: Oxford/AstraZeneca, Pfizer/BioNTech, Moderna, Johnson and Johnson, Sinopharm, Sinovac, among others. Nigeria and indeed Africa has experienced slow pace in the administration of the vaccine due to low level of acceptance and negative attitude from the citizen. Afolabi, *et. al.* (2021) reported that only 0.3% of the total population of the 15 countries in the Economic Community of West African States (ECOWAS) were fully vaccinated, three months after the commencement of COVID-19 vaccination in the region. As at 15th September, 2022, only 31,901,816 Nigerians were vaccinated representing 29.1% of the entire population (NPHCDA, 2022). Majority of Nigerians seems to accept the vaccine only when travelling out of the country or made compulsory to public figures and health care workers.

Academic librarians in Nigeria are trained in library schools in universities and polytechnics. Library schools in Nigeria train prospective librarians and keep them abreast to new technologies and trends in the 21st century. This is aimed at making them be in tune with the realities of globalization. Since they work in public institutions, they need to be safe and free from the deadly virus in order to carry out their duties in an atmosphere of safety by receiving the COVID-19 vaccine. However, the possibilities of getting the vaccination largely depends on their level of acceptance and attitudes towards the vaccine. Previous studies such as Ibrahim, *et. al.* (2022), Fakonti, *et. al.* (2021), El-Elimat, *et. al.* (2021) among others indicated low level of acceptance, while, Al-Hanawi, *et. al.* (2021), Adetayo, *et. al.* (2021) among others showed positive acceptance towards the vaccination. Similarly, Ajibola, *et. al.* (2022), Iliyasu, *et. al.* (2021), Ilori, *et. al.* (2021) among others reported that majority of health care workers in Nigeria had a positive attitude toward COVID-19 vaccination. These studies as well as other numerous ones consulted by the researchers were conducted in southern Nigeria and outside Nigeria and they focused mostly on healthcare workers and general citizens. None of these studies focused academic librarians; hence, this is the gap that this study was intended to fill to ascertain the acceptance and attitudes toward vaccination against COVID-19 among academic librarians in Nigeria.

Statement of Problem

COVID-19 vaccination is aimed to curtail the spread of COVID-19 virus among the populace. Ideally, every citizen is supposed to visit designated health centers and receive the vaccine at no cost. This is to ensure that citizens are safe and prevented from contracting and spreading the deadly COVID-19 virus. Regrettably, researchers' preliminary investigation through interaction as well as personal observation suggested that there could be low level of acceptance and negative attitudes towards the vaccination due to the negative perception among the populace. Majority of the people lacked good knowledge on the significance of getting vaccinated because of negative information they receive from social media, peer groups and even from religious and cultural leaders who portray the vaccine in bad light. In a very recent review by Sallam (2021) on the COVID-19 vaccine, it was concluded that more studies were recommended to address the scope of COVID-19 vaccine acceptance and attitude. The study further concluded that addressing the scope of COVID-19 vaccine in various countries is recommended as an initial step for building trust in the vaccination efforts. These and other factors formed the basis upon which this research was carried out to unravel the acceptance and attitudes toward vaccination against COVID-19 among academic librarians in Nigeria.

Objectives of the Study

The specific objectives of this study were to:

- i. Determine the level of acceptance towards vaccination against COVID-19 by academic librarians in Nigeria.
- ii. Ascertain the attitudes toward vaccination against COVID-19 by academic librarians in Nigeria.

Research Questions

The following research questions guided the study:

- i. What is the level of acceptance of vaccination against COVID-19 by academic librarians in Nigeria?
- ii. What are the attitudes of Academic Librarians toward vaccination against COVID-19 in Nigeria?

Research Hypothesis

Ho₁: There is no significant relationship between academic librarians' socio-demographic characteristics and acceptance towards COVID-19 vaccination in Nigeria.

Ho₂: There is no significant relationship between academic librarians' socio-demographic characteristics and attitudes towards COVID-19 vaccination in Nigeria.

Literature Review

COVID-19 has been a new issue in the entire globe. Researches have been conducted in order to find solution to the pandemic. In the Middle East, Al-Hanawi, *et. al.* (2021) studied willingness to receive COVID-19 vaccination among older adults in Saudi Arabia. The study which was a cross-sectional online survey revealed that majority (43.85%) of the respondents stated a willing-ness to accept a free COVID-19 vaccine when available and 29.10% of the participants believed that the vaccine should be mandatory in the KSA. Also, El-Elimat, *et. al.* (2021) studied acceptance and attitudes toward COVID-19 vaccines in Jordan. The public acceptability of COVID-19 vaccines was fairly low (37.4%) in Jordan. Males and those who took the seasonal influenza vaccine were more likely to accept COVID-19 vaccines. Similarly, participants who believed that vaccines are generally safe and those who were willing to pay for vaccines, once available, were more likely to accept the COVID-19 vaccines. In Europe, Fakonti, *et. al.* (2021) focused on attitudes and acceptance of COVID-19 vaccination among nurses and midwives in Cyprus. The results revealed that a small proportion of the participants would accept a vaccine against COVID-19, while 70% could be qualified as "vaccine hesitant." The main reasons for not receiving the COVID-19 vaccine were concerns about the vaccine's expedited development and fear of side effects. More females, individuals with a larger median age, and a higher number of years of working experience, intended to accept the COVID-19 vaccination, compared with those not intended to accept and undecided groups ($p < 0.01$).

In the African context, Obi, *et. al.* (2022) conducted a study to unravel the knowledge, attitudes, practices, and misconceptions towards COVID-19 among Sub-Sahara Africans. The study involved respondents from six African countries, the responses were gotten from Kenya and Sudan (representing East Africa) Nigeria and Ghana (representing West Africa), Cameroon (representing

Central Africa), and Malawi (representing Southern Africa). The result indicates that the majority have a good level of knowledge (89.9%) and attitude (97.7%) with an insufficient level of practice (61%). Also, the majority of the respondents had an acceptable level of misconception (84%). 67% of the respondents believe that 5G causes COVID-19.

In Nigeria, Eze, *et. al.* (2021) conducted a survey on determinants for acceptance of COVID-19 vaccine in Nigeria. The results of the study showed that two-thirds of them reported they would take the COVID-19 vaccine if it is recommended by healthcare workers or health agencies like WHO, NCDC, or the National Primary Healthcare Development Agency (NPHCDA) and 71 people (19.8%) said they will take the vaccine regardless of who recommends it. Eniade, *et. al.* (2021) carried out a cross sectional survey on willingness to accept COVID-19 vaccine and its determinants among Nigeria citizens. The study showed that Two-fifth (40.5%) of respondent reported their willingness to take the COVID-19 if made available. Majority (69.8%) of those that are willing to take the vaccine, would prefer it in a live attenuated form and 39.6% would prefer the vaccine administered intramuscularly. Respondents who were 40years and above, whose job put them at risk, and considered themselves to be at risk, were significantly willing to take the COVID-19 vaccine ($p < 0.05$). Josiah and Kantaris (2021) conducted a study on perception of COVID-19 and acceptance of vaccination in Delta State, Nigeria. Part of the result of the study revealed that majority (73.3%) of the respondents agreed that the COVID-19 vaccine could help in fighting the pandemic, while, 26.7% do not agree. The results further revealed that majority (51.4%) of the respondents stated that they could not accept a COVID-19 vaccine, 10% will not accept due to their believe that COVID-19 does not exist, 22% will not accept anything from western world, a whole 57% will only take the vaccine when they test positive to the virus, 57.4% were concerned about side effect of the vaccine. On attitudes of the respondents, 52.9% wanted the vaccine be taken voluntarily.

Hassan, *et. al.* (2022) dwelled on assessment of COVID-19 vaccine acceptance and willingness to pay by Nigerians. The results indicated that 34.7% ($n = 167$) are willing to accept the vaccine when given for free, 33.9% ($n = 163$) are not willing, and up to 31.4% ($n = 151$) are indifferent in their decision. Tobin, *et. al.* (2021) studied willingness to accept a COVID-19 vaccine in Nigeria. 50.2% respondents were willing to accept a COVID-19 vaccine when one becomes available in the country. In multivariate analysis, respondents who were 25-34 years were 1.66 times likely to accept a COVID-19 vaccine with acceptability increasing with advancing age. Moslems were 1.57 times likely to accept a vaccine compared with. Ibrahim, *et. al.* (2022) carried out a study on acceptance, knowledge and attitudes toward COVID-19 Vaccines in Jigawa State, Nigeria. The result revealed that 25.5% of the participants are willing to be vaccinated, 57.3% are not. A detailed written review must be shared with public on how the vaccines were produced and what it contains as reported by 60.9% of the respondents. Fear of side effect is the reason behind the vaccine rejection by 64.1% of the participants. Almost half of the participants (53.2%) agreed that is beneficial to be vaccinated against the virus while 46.8 have expressed doubt about its efficacy.

Among Nigerian healthcare workers, Ilori, *et. al.* (2021) researched on the acceptability and side effects of COVID-19 vaccine among health care workers in Nigeria. The study revealed that 238 respondents (80.3%) were willing to be vaccinated, and 117 (37.9%) were already vaccinated; the majority of whom were only one week away from the day of vaccination. The reason given by 127 (66.2%) of those who had not been vaccinated was that the vaccine was not yet available in their facility. Even if the vaccine was made available, 41 (60.3%) of respondents would not get

vaccinated because they are not just at peace with the vaccine. 168 (54.4%) of respondents had a positive attitude toward COVID-19 vaccination, while 141 (45.6%) had a negative attitude. Adejumo, *et. al.* (2021) conducted research on perceptions of the COVID-19 vaccine and willingness to receive vaccination among health workers in Nigeria. The study showed that majority of the respondents represented by 53.5% had positive perceptions of the COVID-19 vaccine, while 46.5% had negative perceptions of the vaccine. More than 80% of the health workers agreed that the vaccine would prevent the spread of infection to patients and other health workers. In total, only 55.5% of the health workers expressed willingness to receive the COVID-19 vaccine. Nomhwange, *et. al.* (2022) carried out a survey to determine COVID-19 vaccine hesitancy amongst healthcare workers: An assessment of its magnitude and determinants during the initial phase of national vaccine deployment in Nigeria. Overall, 92% of HW surveyed were confident of the COVID-19 vaccines and were already vaccinated at the time of this survey. Among survey respondents, those from the northwest of Nigeria were generally more confident of the COVID-19 vaccines. On the other hand, HWs in the north-central, and the southeast of Nigeria were less confident about the COVID-19 vaccines.

In the context of Nigerian adults, Iliyasu, *et. al.* (2021) studied correlates of COVID-19 vaccine acceptability among adults in Kano, Nigeria. The study revealed that majority of the respondents felt vaccination could reduce the risk of COVID-19 (70.3%, $n = 313$), over three fourths were concerned about side effects, efficacy, and safety, while over half were worried about the rumors relating the COVID-19 vaccine to infertility and population control. About one-half (51.1%, $n = 228$) of the respondents were willing to take the COVID-19 vaccine, and 61.9% ($n = 276$) would encourage family members and friends to take the vaccine. Ajibola, *et. al.* (2022) studied acceptance of COVID-19 Vaccine among adults in two Urban Local Government Areas of Kwara State, North Central, Nigeria. The study reveals that majority (90%) of respondents had positive attitude to COVID-19 vaccination. The main reason for COVID-19 vaccine acceptance was confidence in the efficacy of the vaccine, stated by majority (50%) of the respondents.

Tertiary institutions are among the public places that are mostly overcrowded. Uzochukwu, *et. al.* (2021) studied on COVID-19 vaccine hesitancy among staff and students in a Nigerian tertiary educational institution. Staff and students of Nnamdi Azikiwe University, staff of University Demonstration Primary School as well as staff and students of the University High School formed the population of the study. The results of the study revealed that majority of the university community were willing to receive COVID-19 vaccine when it is offered to them. Adetayo, *et. al.* (2021) conducted a study on COVID-19 Vaccine Knowledge, Attitude and Acceptance among students in Adeleke and Babcock Universities in Nigeria. The study revealed that the majority of students had positive acceptance towards the vaccine, but, had negative attitudes towards the vaccine and were concerned about the unforeseen effect of the vaccines, preference for natural immunity, general mistrust of vaccine benefit and concerns about commercial profiteering. On librarians, Idhalama (2020) conducted a study on perception and attitude of library and information professionals towards COVID 19 pandemic and the compulsory lockdown in Nigeria. 75.00% of respondents perceived that life has changed with COVID 19, 8.33% affirmed that there is no COVID 19 in Nigeria, 48.96 perceived that COVID 19 is just an avenue to embezzle money, 55.21% believed that the virus was manufactured at a laboratory in Wuhan, 34.38% stated that Corona virus is not so deadly, 12.50 think that immune system of Nigerians is stronger than the virus itself, 4.17% noted that younger people cannot contract the virus and 36.46% feel that the number being announced in Nigeria is being inflated.

Methodology

This study is an analytic cross-sectional survey research design which sought to determine academic librarians' acceptance and attitudes toward vaccination against COVID-19 in Nigeria. There were a total of seven thousand two hundred and eighty-seven (7,287) certified librarians as reported by Librarians' Registration Council of Nigeria (LRCN) during the annual induction of 502 librarians in Abuja in 2021. Due to the large number of the librarians, Krejcie and Morgan's table for determining sample size for research activities was used in determining a sample size of three hundred and sixty-four (364) sample. Out of the 364 respondents, only 231 (63.5%) responded to the instrument, thus the sample size stands at 231. A non-probability sampling involving purposive sampling techniques was used. A self-developed questionnaire was designed using Google Form mobile application with 4-Points-Likert scale. The title of the questionnaire was "QAATVACALN" and was administered by the researchers by posting the links to the respondents on several LIS professional social media platforms such as WhatsApp and Telegram. Instruction was given that only academic librarians who are certified by LRCN should fill the questionnaire. The instrument was subjected to reliability test by administering to 30 unregistered librarians in Nigeria using test-retest method. A Cronbach alpha value was obtained, ($r = 0.92$). This made the research instrument reliable and suitable to be used for the actual research. Descriptive statistics of frequency count, percentage, mean and standard deviation were used to analyze the bio-data of respondents as well as research questions. Pearson Chi-Square was used to test the 2 null-hypotheses at 0.05 level of significance. The analysis was carried out using Microsoft Excel and Statistical Package for Social Sciences (SPSS Inc., Chicago, IL) version 23.

Data Analysis

The response rate of the study was 231, which is deemed to be acceptable for the study.

Table 1: Socio-Demographic Characteristics of Respondents

S/N	Socio-Demographic Characteristics	N	%	
1	Gender:	Male	139	60.2
		Female	92	39.8
		Total	231	100
2	Working experience:	0-2	11	4.8
		3-12	93	40.3
		13-22	51	22.1
		23-32	41	17.7
		33 and above	35	15.2
		Total	231	100
3	Educational Qualification of Respondent:	BLIS/B.Tech	75	32.5
		MLIS/MTech	91	39.4
		PhD	65	28.1
		Total	231	100
4	Geopolitical zone:	North Central	36	15.6
		North East	81	35.1
		North West	47	20.3
		South East	23	10.0
		South-South	11	4.8

South West	33	14.3
Total	231	100

Source: Field survey, 2022

Table 1 shows the results of the socio-demographic characteristics of respondents. From the results, male respondents with 139(60.2%) constituted higher than the females with 92(39.8%). Respondents within 3-12 years of working experience with 93(40.3%) constituted the highest, followed by those within 13-22 years with 51(22.1%), 23-32 with 41(17.7%), 33 years and above with 35(15.2%), while those within 0-2 years with 11(4.8%) constituted the lowest. Respondents with MLIS/MTech constituted the highest with 91(39.4%), followed by those with BLIS/B.Tech with 75(32.5%), while those with PhD even though significant were the lowest with 65(28.1%). Respondents from the North East constituted the highest with 81(35.1%), followed by those from North West with 47(20.3%), North Central with 36(16.6%), South West with 33(14.3%), South East with 23(10.0%), while, South-South with 11(4.8%) constituted the lowest among the respondents.

Research Question 1: What is the level of acceptance of vaccination against COVID-19 by academic librarians in Nigeria?

Table 2: Level of acceptance of vaccination against COVID-19 by academic librarians in Nigeria

S/N	Acceptance	N	Very High	High	Low	Very Low	Mean	SD	Decision
1	I am willing to get vaccinated against COVID-19	231	23(10%)	46(19.9%)	129(55.8%)	33(14.3%)	2.26	0.82	Low
2	I believe the COVID-19 vaccine is genuine	231	0(0%)	139(60.2%)	70(30.3%)	22(9.5%)	2.51	0.67	High
3	I believe the COVID-19 vaccine is capable of treating the pandemic	231	0(0%)	105(45.5%)	80(34.6%)	46(19.9%)	2.26	0.77	Low
4	The vaccines can protect individuals against the COVID-19 infection	231	0(0%)	129(55.8%)	80(34.6%)	22(9.5%)	2.46	0.66	Low
5	I believe the vaccines can boost and strengthen my immune system	231	0(0%)	81(35.1%)	128(55.4%)	22(9.5%)	2.26	0.62	Low
6	I am at peace with the COVID-19 vaccine	231	24(10.4%)	46(19.9%)	128(55.4%)	33(14.3%)	2.26	0.83	Low
7	I believe the vaccination can stop the spread of the infection	231	0(0%)	47(20.3%)	162(70.1%)	22(9.5%)	2.11	0.54	Low
8	I have a good general knowledge of the COVID-19 vaccination	231	57(24.7%)	58(25.1%)	105(45.5%)	11(4.8%)	2.70	0.90	High
9	I am aware of the development of an effective COVID-19 vaccine	231	0(0%)	36(15.6%)	162(70.1%)	33(14.3%)	2.01	0.55	Low
10	I will get vaccinated when I have the opportunity	231	47(20.3%)	22(9.5%)	117(50.6%)	45(19.5%)	2.30	1.01	Low
11	Even if the virus is not prevalent in my area, I want to get vaccinated	231	23(10.0%)	46(19.9%)	117(50.6%)	45(19.5%)	2.20	0.87	Low
12	It is important to get a vaccine to protect people from contracting COVID-19 infection.	231	35(15.2%)	92(39.8%)	71(30.7%)	33(14.3%)	2.56	0.92	High
	Total	2772	209(7.54%)	847(30.56%)	1349(48.57%)	367(13.23%)	2.32	0.76	Low

Source: Field survey, 2022

Table 2 presents the responses on the level of acceptance toward vaccination against COVID-19 by academic librarians in Nigeria. From the Table, it was discovered that only three statements attracted a Mean benchmark of 2.5 on a four point Likert scale. They include: believe the COVID-19 vaccine is genuine ($\bar{X} = 2.51$, $SD = 0.67$), a good general knowledge of the COVID-19 vaccination ($\bar{X} = 2.70$, $SD = 0.90$) and important to get a vaccine to protect people from contracting COVID-19 infection ($\bar{X} = 2.56$, $SD = 0.92$). All other statements regarding acceptance of COVID-19 vaccination attracted less than 2.5 Mean benchmark on a four point Likert scale. On the whole,

a weighted mean of 2.32 was obtained, indicating low acceptance toward vaccination against COVID-19 by academic librarians in Nigeria. This implies that academic librarians in Nigeria have low acceptance of vaccination against COVID-19.

Research Question 2: What are the attitudes of academic librarians in Nigeria toward vaccination against COVID-19?

Table 3: Attitudes toward vaccination against COVID-19 by academic librarians in Nigeria

S/N	Attitudes	N	Strongly Agree	Agree	Disagree	Strongly Disagree	Mean	SD	Decision
1	I am concerned about the side effect of the vaccine	231	113(48.9%)	83(35.9%)	12(5.2%)	23(10.0%)	3.24	0.94	Agree
2	I like taking injections including vaccines	231	46(19.9%)	52(22.5%)	99(42.9%)	34(14.7%)	2.48	0.97	Disagree
3	I believe that the COVID-19 vaccine is not more dangerous than the virus	231	57(24.2%)	50(21.7%)	102(44.1%)	22(10.0%)	2.61	0.95	Agree
4	I want to get vaccinated because even though I am immune	231	46(19.9%)	46(19.9%)	116(50.2%)	23(10.0%)	2.50	0.92	Agree
5	I don't believe that the vaccine can change my gene	231	34(14.7%)	83(35.9%)	68(29.4%)	46(19.9%)	2.45	0.97	Disagree
6	COVID-19 is real; I believe in the vaccine	231	46(19.9%)	58(25.1%)	69(29.9%)	58(25.1%)	2.40	1.07	Disagree
7	The vaccine can kill faster than the virus as insinuated	231	12(5.2%)	81(35.1%)	81(35.1%)	57(24.7%)	2.21	0.87	Disagree
8	The vaccine itself can cause COVID-19 infection	231	47(20.3%)	59(25.5%)	79(34.2%)	46(19.9%)	2.46	1.03	Disagree
9	I believe that COVID-19 pandemic is a conspiracy	231	68(29.4%)	104(45.0%)	12(5.2%)	47(20.3%)	2.84	1.07	Agree
10	My religious belief encouraged me to get vaccinated	231	36(15.6%)	34(14.7%)	82(35.5%)	79(34.2%)	2.12	1.05	Disagree
11	My cultural belief encouraged me to get vaccinated	231	0(0.0%)	35(15.2%)	93(40.3%)	103(44.6%)	1.71	0.72	Disagree
12	I will get vaccinated when it is made compulsory	231	38(16.5%)	50(21.6%)	103(44.6%)	40(17.3%)	2.37	0.83	Disagree
13	I believe that the COVID-19 vaccine has allergic reactions or can cause death	231	58(25.1%)	80(34.6%)	59(25.4%)	34(14.7%)	2.70	1.01	Agree
14	I want to get vaccinated even though I follow all the non-pharmaceutical protocols such as social	231	47(20.3%)	58(25.1%)	81(35.1%)	45(19.5%)	2.46	1.02	Disagree

	distancing, self-isolation, personal hygiene and use of face mask								
	Total	3234	648(20.0%)	873(27.0%)	1056(32.7%)	657(20.3%)	2.47	0.96	Disagree

Source: Field survey, 2022

Table 3 presents the responses on attitudes toward vaccination against COVID-19 by academic librarians in Nigeria. From the Table, it was discovered that only five items attracted a benchmark of 2.5 on a four point Likert scale. They include: concerned about the side effect of the vaccine ($\bar{X} = 3.24$, $SD = 0.94$), believe that the COVID-19 vaccine is not more dangerous than the virus ($\bar{X} = 2.61$, $SD = 0.95$), want to get vaccinated because even though I am immune ($\bar{X} = 2.50$, $SD = 0.92$), believe that COVID-19 pandemic is a conspiracy ($\bar{X} = 2.84$, $SD = 1.07$) and believe that the COVID-19 vaccine has allergic reactions or can cause death ($\bar{X} = 2.70$, $SD = 1.01$). All other statements regarding attitudes of COVID-19 vaccination attracted less than 2.5 Mean benchmark on a four point Likert scale. On the whole, a weighted mean of 2.47 was obtained, indicating disagreement in the attitudes toward vaccination against COVID-19 by academic librarians in Nigeria. This implies that academic librarians in Nigeria have negative attitudes towards vaccination against COVID-19.

Hypothesis Testing

H₀₁: There is no significant relationship between academic librarians' socio-demographic characteristics and acceptance towards COVID-19 vaccination in Nigeria.

Table 4: Chi-Square Result on the significant relationship between academic librarians' socio-demographic characteristics and acceptance towards COVID-19 vaccination in Nigeria.

		Value	Df	Asymptotic Significance (2-sided)
Gender	Pearson Chi-Square	126.772 ^a	11	.000
	Likelihood Ratio	170.594	11	.000
	Linear-by-Linear Association	1.643	1	.200
	N of Valid Cases	231		
Working Experience	Pearson Chi-Square	426.041 ^a	44	.000
	Likelihood Ratio	371.151	44	.000
	Linear-by-Linear Association	1.341	1	.247
	N of Valid Cases	231		
Educational Qualification	Pearson Chi-Square	143.693 ^a	22	.000
	Likelihood Ratio	165.756	22	.000
	Linear-by-Linear Association	3.562	1	.059
	N of Valid Cases	231		
Geopolitical Zone	Pearson Chi-Square	634.224 ^a	55	.000
	Likelihood Ratio	506.117	55	.000
	Linear-by-Linear Association	33.968	1	.000
	N of Valid Cases	231		

Source: Field survey, 2022

Table 4 showed that there is significant relationship between academic librarians' socio-demographic characteristics and acceptance towards COVID-19 vaccination. Therefore, hypothesis one (1) is rejected, because all the probability values ($P = 0.000$) in respect of all the socio-demographic characteristics are less than the critical value at 0.05 level of significance at Chi-Square values: gender = 126.772; working experience = 426.041; educational qualification = 143.693; geographical zone = 634.224. Hence, there is significant relationship between academic librarians' socio-demographic characteristics and acceptance towards COVID-19 vaccination in Nigeria. This signifies that socio-demographic characteristics (gender, working experience, educational qualification and geopolitical zones) of academic librarians could influence their acceptance towards COVID-19 vaccination in Nigeria.

H02: There is no significant relationship between academic librarians' socio-demographic characteristics and attitudes towards COVID-19 vaccination in Nigeria.

Table 5: Chi-Square Result on the significant relationship between academic librarians' socio-demographic characteristics and attitudes towards COVID-19 vaccination in Nigeria.

		Value	Df	Asymptotic Significance (2-sided)
Gender	Pearson Chi-Square	159.066 ^a	13	.000
	Likelihood Ratio	214.993	13	.000
	Linear-by-Linear Association	12.288	1	.000
	N of Valid Cases	231		
Working Experience	Pearson Chi-Square	642.848 ^a	52	.000
	Likelihood Ratio	455.628	52	.000
	Linear-by-Linear Association	.919	1	.338
	N of Valid Cases	231		
Educational Qualification	Pearson Chi-Square	187.205 ^a	26	.000
	Likelihood Ratio	213.475	26	.000
	Linear-by-Linear Association	1.704	1	.192
	N of Valid Cases	231		
Geopolitical Zone	Pearson Chi-Square	794.994 ^a	65	.000
	Likelihood Ratio	584.555	65	.000
	Linear-by-Linear Association	16.414	1	.000
	N of Valid Cases	231		

Source: Field survey, 2022

Table 5 showed that there is significant relationship between academic librarians' socio-demographic characteristics and attitudes towards COVID-19 vaccination. Therefore, hypothesis two (2) is rejected, because all the probability values ($P = 0.000$) in respect of all the socio-demographic characteristics are less than the critical value at 0.05 level of significance at Chi-Square values: gender = 159.066; working experience = 642.848; educational qualification = 187.205; geographical zone = 794.994. Hence, there is significant relationship between academic librarians' socio-demographic characteristics and attitudes towards COVID-19 vaccination in Nigeria. This signifies that socio-demographic characteristics (gender, working experience, educational qualification and geopolitical zones) of academic librarians could influence their attitudes towards COVID-19 vaccination in Nigeria.

Discussion

This study revealed that the level of acceptance toward vaccination against COVID-19 by academic librarians in Nigeria was low. This could be attributed to the negative perception that the citizens had on COVID-19 and its vaccine. This finding confirms the findings of Idhalama (2020) on perception and attitude of library and information professionals towards COVID 19 pandemic and the compulsory lockdown in Nigeria, where 48.96% perceived that COVID 19 is just an avenue to embezzle money, 55.21% believed that the virus was manufactured at a laboratory in Wuhan. The study is also in agreement with the findings of Ibrahim, *et. al.* (2022) which revealed that majority of the people studied in Jigawa State indicated unwillingness to get vaccinated. Similarly, Fakonti, *et. al.* (2021) revealed that only a small proportion of the nurses and midwives in Cyprus could accept a vaccine against COVID-19. Also, El-Elimat, *et. al.* (2021) reported that public acceptability of COVID-19 vaccines was fairly low in Jordan. Despite these low acceptance of COVID-19 vaccine, quite a number of studies have reported high acceptance towards the vaccine which out rightly disagreed with the finding of this study (Al-Hanawi, *et. al.* (2021); Kanyanda, *et. al.* (2021); Adetayo, *et. al.* (2021) and Uzochukwu, *et. al.* (2021)).

Another finding of this study revealed that there were negative attitudes toward vaccination against COVID-19 by academic librarians in Nigeria. This finding is in consonant with the study conducted by Adetayo, *et. al.* (2021) which revealed that, students in Adeleke and Babcock Universities in Nigeria had negative attitudes towards the vaccine and were concerned about the unforeseen effect of the vaccines, preference for natural immunity, general mistrust of vaccine benefit and concerns about commercial profiteering. In contrast, some studies conducted in Nigeria disagree with this finding by reporting positive attitudes among the studied population. Ajibola, *et. al.* (2022) revealed that people of Kwara State, North Central, Nigeria had positive attitude to COVID-19 vaccination. Similarly, Iliyasu, *et. al.* (2021) reported that adults in Kano, Nigeria felt that vaccination could reduce the risk of COVID-19 and that majority of them could encourage family members and friends to take the vaccine. So also Ilori, *et. al.* (2021) revealed that majority of health care workers in Nigeria had a positive attitude toward COVID-19 vaccination.

Chi-square analysis in this study revealed that socio-demographic characteristics (gender, working experience, educational qualification and geopolitical zones) of academic librarians in Nigeria has significant relationship with their acceptance towards COVID-19 vaccine. This finding is in agreement with the study of Josiah and Kantaris (2021), which revealed that there was significant relationship between respondents' acceptance of COVID-19 vaccine and gender, employment status and monthly income, while, there was no relationship between respondents' acceptance of the vaccine and age bracket, marital status and local government. In specific, Fakonti, *et. al.* (2021) reported that more females, individuals with a larger median age, and a higher number of years of working experience, intended to accept the COVID-19 vaccination, compared with those not intended to accept and undecided groups ($p < 0.01$). Hassan, *et. al.* (2022) indicated the likelihood that education level could influence willingness to accept the vaccine. Iliyasu, *et. al.* (2021) showed significant association between COVID-19 vaccine acceptability and age, marital status, occupation, income, history of chronic medical disorders and self-perceived COVID-19 risk. While, Adejumo, *et. al.* (2021) reported that factors significantly associated with willingness to receive the COVID-19 vaccine included education level, years of work experience and one's occupation within the medical field. In contrast to this finding, Al-Hanawi, *et. al.* (2021) reported that marital status, employment status, and income level had no significant influence on the acceptability of COVID-19 vaccination among older adults in the KSA. Uzochukwu, *et. al.* (2021)

revealed that gender, occupation, previous vaccination experience, awareness of COVID-19 and previous symptoms of COVID-19 did not significantly influence respondent's willingness to be vaccinated.

Similarly, the study further revealed that socio-demographic characteristics (gender, working experience, educational qualification and geopolitical zones) of academic librarians have significant relationship with their attitudes towards COVID-19 vaccination in Nigeria. This finding conforms with the finding of Eniade, *et. al.* (2021) which showed that respondents who were married, had higher level of education, reside in urban areas, and health care workers reported more willingness to take the COVID-19 vaccine. Respondents within age group 20-29years, and age group ≥ 40 years were more likely to receive COVID 19 vaccine compared with those in younger age group.

Conclusion

COVID-19 virus despite slowing down in many countries including Africa is still ravaging some countries of the world. This has necessitated the need for all citizens to get vaccinated in order to tame its spread. This study has established that the level of acceptance toward vaccination against COVID-19 was low and there were negative attitudes toward the vaccination among academic librarians in Nigeria. This portend a dangerous trend which requires all stakeholders to raise up to the challenge in order to change the narrative. Furthermore, the study has established that socio-demographic characteristics (gender, working experience, educational qualification and geopolitical zones) of academic librarians have relationship with their level of acceptance as well as attitudes towards COVID-19 vaccination in Nigeria. This implies that, socio-demographic characteristics is a factor that influence their level of acceptance and attitudes exhibited towards vaccination against COVID-19. With this findings, different approaches need to be employed by all concerned stakeholders towards ensuring that citizens accept the vaccination as well as exhibit positive attitudes towards the vaccine.

Recommendation

Based on the findings and conclusion drawn, the following recommendations were made;

- i. Governments at all levels (federal, state and local government) should embark on massive public enlightenment campaign / sensitization on the importance of vaccination against COVID-19, through social media, television, radio as well as engaging political, religious and traditional leaders in the campaign. This could help change the negative mindset of the citizens including academic librarians in Nigeria.
- ii. Governments at all levels (federal, state and local government) should develop policies that could easily enforce taking the vaccines among the citizens, especially, by making it compulsory. Citizens should be made to show evidence of vaccination before accessing public places such as schools, hospitals, banks, motor parks and all other government buildings across the country. This could ensure that massive vaccination among the citizens including academic librarians in Nigeria.

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