

Acceptance of COVID-19 Vaccines among Health care Workers in Lokoja, Nigeria

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Abstract

Background: Equitable access to safe and effective vaccines is focal to ending the COVID-19 pandemic. There are many questions and myths to the acceptance and nonacceptance of COVID-19 vaccines among Nigerian populace including health workers. **Aim:** The aim of the study was to assess the acceptance rate and side effects of COVID-19 vaccines among the health workers of Kogi State Specialist Hospital (KSSH), Lokoja. **Materials and Methods:** This was an institutional-based descriptive study conducted over a period of two months between April 9, 2021, and June 8, 2021. The study population included all the staff that participated in the first batch of available COVID-19 vaccines at KSSH, Lokoja. We distributed a self-administered questionnaire among the first 48 staff of the hospital to collect information on their sociodemographic characteristics, cadres, reasons for acceptance of the vaccine, and side effects. Data were analyzed using the SPSS software windows version 20. **Results:** Out of the 420 staff of the hospital, 48 accepted to be vaccinated accounting for 11.4%. All the respondents were aware of the COVID-19 pandemic, and prevention of the disease was their reasons for accepting the vaccine. The sociodemographic patterns revealed that 15 (31.2%) of the respondent were within 40–49 years of age. The majority of the respondents were males 29 (60.4%), Igalas 18 (37.5%), followed by Yorubas 16 (33.3%) while Ebiras were 6 (12.5%). Medical doctors were the majority 23 (47.9%) followed by nursing staff 19 (39.58%) and no pharmacist participated. Out of the 48 respondents, 24 (50%) had mild side effects which were generalized body weakness, headaches, and fever which resolved spontaneously and there was no fatality. **Conclusions:** COVID-19 vaccine acceptability rate among health workers in KSSH, Lokoja, was 11.4%. Preventive measure was the reason for taking the vaccine, and there was no fatality among respondents. The respondents were willing to tell others to accept the vaccine as means of preventing COVID-19 infection.

Keywords: Acceptance, COVID-19 vaccine, health-care workers, Lokoja, side effects

INTRODUCTION

In March 2020, COVID-19 infection was declared a global pandemic after its emergence in Wuhan, China, in November 2019. Globally, in March 2021, there were 126,359,540 confirmed cases of COVID-19 and 2,769,473 deaths were recorded.^[1] In Nigeria, as at November 26, 2021, a total number of confirmed cases of COVID-19 infection was 213,922 and 2975 deaths have been recorded in 36 states and Federal Capital Territory.^[2] Nigeria health-care workers have not been spared the brunt of the pandemic.

Government globally has imposed several preventive measures and protocols to help halt the spread of COVID-19 such as travel bans, wearing of face masks, social distancing, and handwashing with soap and water among others. To further halt the spread of the virus, several researchers and pharmaceutical

companies have further developed safe vaccines for mass vaccination.^[1]

As of December 2020, there are over 200 vaccine candidates for COVID-19 being developed; of these, at least 52 candidates vaccine in human trials. These are currently in phase I/II which will enter phase III in few months.^[2,3] There are six approved emergency-use vaccines for COVID-19 recognized by WHO: Oxford–AstraZeneca, Pfizer–BioNTech, Moderna, Janssen, Sinopharm BBiP corona vaccine, and Johnson and Johnson.^[4]

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Although the effective and equitable distribution of COVID-19 vaccine is a key policy priority, ensuring acceptance is just as important. Trust in vaccines as well as the institutions that administer them is the key determinants of the success of any vaccination campaign.^[5] Several studies have investigated the willingness to take a potential COVID-19 vaccine in high-income countries^[6] and some studies have included middle-income countries.^[7]

Due to the inadequate supply of COVID-19 vaccines globally, government has prioritized high-risk groups to receive the initial supply of the vaccine. These high-risk groups include health-care workers, elderly persons, especially those with comorbid conditions, and those on essential services.^[4] Health-care workers are at high risk of contracting COVID-19 disease due to their direct or indirect contact with bodily secretions from COVID-19 patients, visitors, and other health-care workers who have been exposed.^[5]

As of April 2021, only 1.6% of the total vaccine doses administered globally are on Africa continent^[8] while about 3,194,938 Nigerians have been fully vaccinated accounting for 1.6% of its population as at November 11, 2021.^[9]

The Government of Nigeria has been able to procure COVID-19 vaccine for its citizenry. Health-care workers were the first set of recipient of the COVID-19 vaccine. The vaccine was made available to Kogi State Specialist Hospital (KSSH) staff on April 9, 2021. The health-care workers happen to be the most trustworthy source to help propagate the acceptance of COVID-19 vaccine compared to the general population; hence, the decision of the Nigeria Government appeared appropriate. However, the acceptance rate of the COVID-19 vaccine remains a global problem owing to the rumored untoward effects. The aim of this study was to assess the acceptance rate and side effects of COVID-19 vaccines among the health-care workers of KSSH, Lokoja.

MATERIALS AND METHODS

This was an institutional-based descriptive study conducted over a period of two months between April 9, 2021, and June 8, 2021.

The study population included all the first 48 staff of KSSH, Lokoja, that were vaccinated against COVID-19 infection from the first batch of vaccines given at KSSH, Lokoja.

We distributed a self-administered questionnaire among the first 48 staff of the hospital to collect information on their sociodemographic characteristics, cadres, reasons for acceptance of the vaccine, and side effects. Data were analyzed using SPSS windows 20 (IBM corp. Released 2011. IBM SPSS statistics for windows, version 20.0. Armonk, NY: IBM corp).

RESULTS

As at April 2021, KSSH, Lokoja, had a total of 420 staff, but 48 respondents accepted to be vaccinated with COVID-19 vaccine (AstraZeneca) to prevent COVID-19 infection, making acceptance rate for the first batch 11.2%.

The sociodemographic characteristic showed that the majority of the health-care workers 15 (31.2%) were within 40–49 years of age while 13 (27%) were within 13–39 years and 50–59 years of age each.

Majority of the staff were male 29 (60.4%) whereas females accounted for 19 (39.6%).

Thirty-eight of the staff vaccinated were married which accounted for 71.16% while 4 (8.3%) were single and 4 (8.3%) were widow.

Majority of the staff were Igalas 18 (37.5%), Yoruba accounted for 16 (33.3%) while Ebira were 6 (12.5%). The sociodemographic characteristics of the respondents is shown in Table 1.

All the 48 respondents out of the 420 staff of KSSH, Lokoja, were willing and ready to take the vaccine, accounting for 11.2%. The various reasons for accepting the vaccine are shown in Table 2.

Majority of the respondents took the vaccine to prevent COVID-19 infection, whereas five (10.4%) has no idea but received the vaccine because they noticed other staff were taking the vaccine.

Twenty-four (50%) did not observe any side effects whereas 24 (50%) did. The reported side effects are as detailed in Figure 1.

Table 1: Sociodemographic characteristic of respondents

Characteristic	Frequency (%)
Age	
20-29	3 (6.25)
30-39	13 (27.0)
40-49	15 (31.25)
50-59	13 (27.0)
≥60	3 (6.25)
Sexual distribution	
Male	29 (60.41)
Female	19 (39.6)
Marital status	
Married	38 (79.16)
Single	4 (8.3)
Widow	4 (8.3)
Divorced	2 (4.16)
Tribe	
Igala	18 (37.5)
Yoruba	16 (33.3)
Ebira	6 (12.5)
Igbo	6 (12.5)
Edo	2 (4.1)
Profession	
Medical doctor	23 (47.9)
Nurse	14 (39.58)
Pharmacist	0
Admin staff	4 (8.3)
Account	0
Attendant	2 (4.16)
Laboratory staff	0

Table 2: Reasons for vaccination among the respondents

	Frequency (%)
Prevention of COVID-19 infection	40 (88.3)
No idea	5 (10.4)
International best practice	1 (2.0)
High-risk staff	1 (2.0)
Frontline worker	1 (2.0)

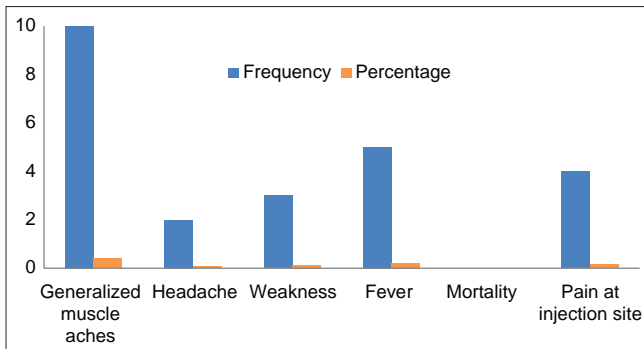


Figure 1: Side effect observed by respondents

All the 48 staff (100%) came back for the second dose and promised to tell others to do the same.

DISCUSSION

The implications of this study for policy and practice are in the fact that prevention of COVID-19 pandemic can be achieved by effective and equitable distribution of the COVID-19 vaccine. This is a major health concern due to the nonacceptance of the COVID-19 vaccine, therefore advocacy for COVID-19 vaccine acceptance would be strengthened by ensuring a successful outcome of the vaccination of the frontline health-care workers.

The study examined the acceptability of COVID-19 vaccine among health-care workers of KSSH, Lokoja, Nigeria.

The findings show that 11.2% of the workers accepted and were vaccinated. These findings are lower than the acceptance rate in Ghana which was 39%^[8] and 40% among nurses in Hong Kong as well as France, Belgium, and Canada where the acceptance rate was 40% each.^[9]

The low rate of willingness to receive COVID-19 vaccine as observed in this study could be attributed to misinformation on the quality of the vaccine as well as the possible rumored side effects. In the system, where we had 74 medical doctors, only 23 (31%) accepted the vaccine while 13 (12.7%) out of 112 nurses were vaccinated. This study has also confirmed that low acceptance of hospital or health-care workers may have a negative impact on the general population.^[10]

Sociodemographically, this study shows that majority of the respondents were within 40–49 years of age which was 31.7%, followed by 30–39 years of age that was 27%. Only 6.3% were 60 years and above and retired. The rate of male staff that

were vaccinated against COVID-19 was 60.4%, this was more than the female staff of 33.6%. This finding is consistent with empirical studies that indicate that male health-care workers are more likely to accept COVID-19 vaccine due to attributed risk perception of the disease in men compared to women where 50% of male acceptance predicted.^[11]

Regarding marital status, 79.2% of the staff that received the COVID-19 vaccines were married higher than 57% observed in Ghana.^[12]

Medical doctors formed the majority who received COVID-19 vaccination, accounting for 47.9%, followed by nurses 34.6% though only 23 (31%) out 74 accepted the vaccine while the rest declined vaccination for fear of side effects. This corroborates with studies done in middle and low-resource countries.^[13] According to Gagneux-Brunon *et al.*, the majority of nurses and midwives being female could explain why nurses and midwives are less likely to accept COVID-19 vaccine if available compared to medical doctors.^[14]

Majority of the respondents (83.3%) took the vaccine to prevent COVID-19 infections, which agrees with the aim of vaccination globally. Only 10.4% took the vaccine because they observed other staff being vaccinated. This might be due to the hesitancy of being used as scapegoats.

In terms of the ethnicity, a little over a third (37.3%) of the Igalas were vaccinated, followed by the Yorubas 33.3% and the Ebiras 12.5%. This is not surprising as Igalas were more in the population than other indigenous tribes in the State.

The side effects reported in this study by 24 (50%) of the respondents were generalized body aches which were 41.6%, fever 20.8%, and generalized body weakness 12.5%. These side effects were not different from side effects of other vaccines against childhood diseases such as polio and measles. There was no case fatality among staff vaccinated. All the staff that took the first dose received the second dose of the vaccine as well.

CONCLUSIONS

COVID-19 vaccine, AstraZeneca acceptance among staff of the KSSH was 11.2%. Prevention of COVID-19 infection was the main reason for accepting the vaccine in this study. Frontline health-care workers such as medical doctors and nurses were more in number than other hospital staff, this may be due to the fact that other health workers do not see themselves as frontline health workers and have perceived low risk of infection. The side effects observed in this study were mild like any other childhood vaccinations. More awareness is needed to ensure that more health-care workers and general populace are vaccinated so as to build up herd immunity against the deadly COVID-19 infection with its antecedent morbidity and mortality.

Study limitations

1. It was cross-sectional study limited to a single tertiary institution with a small sample size, hence results cannot be generalized, a multicenter study is therefore recommended

2. Local data on the acceptance rate of COVID-19 in tertiary institutions in developing countries are few compared to the developed world.

Recommendation

The acceptance rate of the second batch of the vaccine by health-care workers needs to be studied as a follow-up since there were no serious side effects observed in the first batch of COVID-19 vaccine.

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Conflicts of interest

There are no conflicts of interest.

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