



A QUALITATIVE ASSESSMENT OF THE KNOWLEDGE, ACCEPTANCE AND SIDE EFFECTS OF COVID-19 AND THE VACCINATION AMONGST WOMEN ATTENDING ANTENATAL CLINICS AT BUKURU, JOS-SOUTH LGA; PLATEAU STATE.

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ABSTRACT

The aim of this study was to carry out a qualitative analysis on the knowledge, acceptance and side effects of covid-19 and the vaccination amongst women attending ANC clinics at Bukuru using a Focused Group Discussion. This was done utilizing a cross-sectional study that utilized a validated data tool with over 250 participants. The participants in this study had a relatively good knowledge of covid-19 and the corona virus vaccine. Most of them who were willing to accept it had determining conditions, such as family and assurance.

KEYWORDS: Knowledge, Acceptance, Side Effect, COVID-19, Vaccine, Nigeria.

INTRODUCTION

COVID-19 is a novel disease with a clinical course that is not yet well understood. It is a new strain of coronavirus belonging to the same family of viruses that cause severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS), as well as the 4 human coronaviruses associated with the common cold. WHO declared that the SARS-CoV-2 outbreak constituted a Public Health Emergency of International Concern on 30 January 2020.^[1] SARS-CoV-2 (the virus that causes COVID-19) is primarily spread through exposure to respiratory fluids with infectious viruses. This exposure occurs in 3 principal ways: Inhalation of air that carries very small fine droplets and aerosol particles that are infectious; **Deposition** of virus carried in exhaled droplets and particles onto exposed mucous membranes by direct splashes and sprays and touching mucous membranes with hands soiled directly (by virus-containing respiratory fluids) or indirectly (touching surfaces with virus on them).^[2]

In 2020, a global cross-sectional study was done using an online survey amongst 26,852 respondents on the knowledge attitude and acceptance of the COVID 19 vaccine across 6 continents of the world and it was seen in total that about 94.1% of the population had a basic understanding of the corona virus and the vaccine. Whereas 5.4% of the population had no idea what the corona virus infection was all about as well as knowledge of the vaccine. Hence it was seen that a large proportion of persons in the world had knowledge about the COVID 19 virus and vaccine.^[3]

A cross-sectional study, done on knowledge attitude and perception of COVID 19 vaccinations amongst health care workers of the Inner-city hospital in New York, showed that 80% out of 485 respondents had a strong correlation between the knowledge of the Corona virus and increased knowledge of the vaccine as well as positive attitude towards the acceptance of the vaccine. Hence stating that those who had knowledge about the corona virus and the effect of the infection on the body were more prone to accepting the vaccine and invariably had more knowledge of the vaccine.^[4]

Furthermore, a cross-sectional study done across nine low- and middle-income countries Malaysia, Thailand, Bangladesh, Brazil and five African countries (Democratic Republic of Congo, Benin, Uganda, Malawi, and Mali) on factors affecting acceptance on COVID vaccine revealed that vaccine acceptance was also positively associated with COVID-19 knowledge, worry/fear regarding COVID-19, higher income, younger age, and testing negative for COVID-19 amongst 95% of 10,183 respondents. However, 15% refused acceptance due to concern about the effectiveness of the vaccine and 41.2% due to side effect. This showed that there was a positive link between knowing the virus, knowing the vaccine and accepting the vaccine.^[5]

The aim of this study is to carry out a qualitative analysis on the knowledge, acceptance and side effects of covid-19 and the vaccination amongst women attending ANC clinics at Bukuru using a Focused Group Discussion.

MEHTODOLOGY

STUDY AREA

Plateau is the twelfth -largest state in Nigeria. Approximately at the center of the country. It is geographically unique in Nigeria due to its boundaries of elevated hills surrounding the Jos plateau its capital, and the entire plateau itself. Plateau state is celebrated as "The Home of Peace and Tourism". With natural formations of rocks, hills and waterfalls, it drives its name from the Jos plateau and Jos a population of around 4.2 million people.

Bukuru is a city located on the Jos Plateau in Nigeria. It was previously considered separate city from the city of Jos close by, but like every other form of urbanization, the city of Jos merged with the town of Bukuru to form the Jos-Bukuru metropolis. It is the headquarters of Jos South LGA.

The major forms of transportation connecting in and out of Bukuru is by road and rail. The rail ways connect Bukuru with Bauchi, Zaria, Lago and Port Harcourt. Mainly used for business, import and export of natural minerals.^[6]

Although it has a mix of Christians and Muslims, there is a Christian majority. There is also a central mosque in Bukuru.^[7]

STUDY SITE

The study sites are three (3) Primary HealthCare Centres (PHCs) in Bukuru. According to data obtained from the Ministry of Health and utilization of scientific tools of remote sensing GPS and GIS for a better update, there are about twenty-one (21) health facilities in Bukuru. Of these, one (1) is a tertiary facility, four (4) are PHCs and the others are health center levels.^[8]

Of these 4 Primary healthcare centres, we conducted our study amongst three (3). They are, Bukuru Express Primary Healthcare Centre, Bukuru Central Primary Healthcare Centre and Ecwa Comprehensive Healthcare Centre. Both Bukuru Express and Bukuru central are Government owned primary healthcare facilities that are equipped with about 8 and 6 bed spaces, respectively. Their healthcare team comprises of a public health nurse, a Midwife and a Community Health Worker (CHEW). However, the ECWA comprehensive Healthcare Centre has 14 bed spaces and a larger facility. They have doctors (consultants) who come to run clinics on some days. It is a privately owned facility, charges more, better kept environment and has less patients visiting. They are all located within a 3-5 minutes Motorcycle or Tricycle ride away from each other, and costs about N50. Bukuru Express is located about 5 minutes from the tertiary facility, Bukuru Specialist Hospital. While Bukuru central and ECWA comprehensive Healthcare Centre is located about 15 minutes from the specialist hospital. Hence, have a longer time to patient transfer in emergency referrals.

STUDY POPULATION

The study population are the pregnant women currently attending Antenatal. These facilities are PHC Bukuru Central (BC), PHC Bukuru Express (BE), ECWA Comprehensive Health Centre (ECHC).

Inclusion Criteria

1. A Pregnant woman who is registered at a Primary Healthcare facility in Bukuru for her Antenatal care.

Exclusion Criteria

1. Any man
2. Any woman who does not fall within the inclusion criteria
3. Any woman who did not consent to participating in the study.

Sampling Technique for the Focus Group Discussion

A focus group discussion was conducted for 8 pregnant women per domain. They were selected using convenient sampling methods. There were 5 domains. 2 from the Bukuru express and Bukuru Central, and 1 from the ECWA CHC, respectively.

Instrument of Data Collection

Questionnaire

Data was collected using a focused group discussion. The questionnaire was written in English and comprises of three (3) sections, A-D.

Section A: Questions assessing the knowledge and awareness about COVID-19.

Section B: Questions on knowledge about corona virus vaccine and vaccination.

Section C: Questions on acceptance of the vaccine.

Section D: Questions on side effects of the covid-19 vaccination.

Focus Group Discussion Guide

A structured focus group discussion guide will be used to examine the knowledge, acceptance and side effects of covid-19 and the vaccination amongst women attending the ANC at Bukuru express PHC, Bukuru central PHC and ECWA CHC, respectively. A researcher facilitated the discussion using the FGD guide while the other 2 researchers took notes and recorded the responses using a recorder.

The FGD participants were picked by purposive selection and they were interviewed in a quiet environment to ensure privacy. They were 40 participants. Participation was voluntary and the session was conducted in English. The sitting arrangement in the FGD was such that there was easy eye contact and hearing between the researcher who was the principal facilitator and the participants. The participants were encouraged to talk freely and spontaneously and the session lasted for about 2 hours (30 minutes per session) as allowed by the participants. Within 24 hours after the session, the recordings were carefully translated and transcribed.

Preparation for Data Collection

Prior to data collection, permission was sought and obtained from the ethical committee Bingham University Teaching Hospital. Further consent was verbally sought from heads of each of the Primary Health Care Centers. Informed verbal consent was sought and obtained from each of the respondents after the purpose of the study was clearly explained to them. They were also informed that participation in the study was voluntary and that they could decide to withdraw their participation at any point in the interview.

ETHICAL CONSIDERATION

Ethical clearance was obtained from the Bingham University ethical committee before the commencement of the study. In addition, informed consent was taken from each study participant after purpose of the study has been clearly explained. Data collected from the study was also kept confidential.

3.8 LIMITATIONS TO STUDY AND HOW THEY WERE OVERCAME

1. Language barriers

- We utilized the aid of the public health Nurses, CHEWs and CHOs who were present to help us interpret the questions were asked them. They also helped us with interpretation of the responses the respondents gave. However, some of the women understood some level of English, though mostly vernacular.

2. Financial constraints

- To cut down on transportation costs, we travelled together to the study site. Mobile phone recorders were also used and audio files labelled. However, these and other cost demanding activities were catered for by in-pocket funding.

RESULTS

The focus group discussion was held with the pregnant women attending antenatal clinic at the primary health care centres at Bukuru express and Central, and the ECWA CHC, respectively. All the pregnant women were all opened to the questions they were asked and were willing to express themselves accordingly. It involved a total of 40 women participated in the discussion in five (5) different sessions. Each group of women was selected purposively.

This discussion covers six different domains as presented below.

Knowledge about COVID-19

This domain addresses the pregnant women level of awareness and perception as well as the understanding and misconception about the corona virus disease. Majority of the pregnant women said that, they had heard about the disease before. Although a few expressed doubts about its existence.

A participant stated that,

"Well yes, I have heard about corona virus. I heard it is a contagious disease and that it is easily spread. I heard it from an awareness campaign" ...a 25 years old housewife.

Another respondent stated,

"Yes, I have heard about corona virus, but of recent, in 2019. I heard it is a deadly disease and it is contagious and it can be easily gotten through sneezing, handshake, cough and contact through fluid" ... a 28year old student.

A participant stated that,

"Yes. I heard it is a disease that is contagious and can spread from one person to another" ... a 25year old housewife

A 32year old para 3" yes I have heard about the corona transmitted by air, can cause cough and fever."

A 25-year-old para 2 "I have heard of the people wearing face mask to protect them from covid 19. Person wey get am get headache and cough."

A 34-year-old para 1" I have, it is a disease that can be transferred by shaking hands, touching door handles and money of person that has it."

A 32-year-old para 2 trader," I have heard through social media, churches, clinics. If you maintain social distance and report to the clinic early, you will not catch the disease."

A 23 year old para 1,"I have heard of the covid. It can cause cough, bleeding but I can protect myself through social distancing and wearing my face mask."

Some also said that they heard that the virus was made up by the government and a few, about how it was not infective to black men and Africans. However, some had never heard of anything about the virus nor pandemic before. Summarily, majority of the women attending ANC at these PHCs had good knowledge of the corona virus disease.

Knowledge about the corona virus vaccine and vaccination scheme.

In this domain, their knowledge about the corona virus vaccine was accessed. We also went further to assess their knowledge about the presence of the vaccination scheme in Nigeria and where they obtained or acquired this information from. One of the participants said:

"I am aware of the corona virus vaccine. I heard about it from our social gathering for women and I also heard them talk about it on television. Furthermore, through enlightenment from healthcare workers" ... a 32years old woman in her second pregnancy.

"I am just hearing of the news, but I don't know much about it." ... a 32year old trader

"Yes, there are vaccines and medications that can help fight it the sickness once you contract it. the first time I

heard about it was from social media and word of mouth” ... a 37-year old housewife

I heard from people about 23-year old

Yes, I have heard of the vaccine. It reduces the rate of the effect of the virus on the people. 32-year-old.

I have not heard of the vaccine oh!..... 32-year-old.

Although there were those who had multiple sources of information of the vaccine, majority of them had more trust in television media and health facilities. However, none of them had heard any information concerning whether or not pregnant women were to take the vaccines.

Acceptance of the Vaccine

This domain assesses the readiness of participants to receiving the vaccines. This domain sought to find women who had received the vaccines and those who had not. We went further to inquire in to willingness to receive the vaccine if it were made available to them. Here they went further to express their desires while some their fears, concerning why they were willing or not willing to accept the vaccine if made available. One of the participants also said:

“No, I have not taken the vaccine. Because the time they were giving the vaccine, I was pregnant and afraid to take it.” a 21-year-old polytechnic student

“No, I never take am. Because for social media I see say people way take am dey die.”..... a 33-year-old vegetable trader

“No, I have not taken the vaccine. But I will take it if it is for my good.” A 30-year-old Teacher

“Yes, I have received the vaccine. I received it at plateau specialist hospital. Both doses” A 31-year-old Civil servant

“I will take the vaccine but I don't know if I can take it since I am pregnant.” A 32-year-old.

“If they give me I will take, but if I no get chance I will not take it.” a 37-year-old.

“I will not take the vaccine because I don't know if it will affect my baby”. A 32-year-old.

“I have not taken it but I go take am even if I pregnant” a 25-year-old.

“tor I don't know sha! When am ready I will get it, after I hear people around me don take am because I dey hear things” a 34-year-old.

“I will not accept it. Personally, my spirit doesn't agree with it.” A 32-year-old.

“I will not take it because my mom said so” A 23-year-old.

Most of them admitted that yes there was the vaccine, however they had either not received it because they

were pregnant at the time, or were discouraged from doing so by friends, family and work colleagues.

Side effects experienced or noticed

This domain addresses various side effects that those who had received the vaccines had experienced. It also provided room for them to share the various side effects that they may have noticed in their friends, family or work colleagues. This was important as it held the ability to significantly influence their decision to take or not take the vaccines. They had different observations and things to say in this section in varying degrees. One of the respondents stated that:

“The first one I heard about was my superior in the office, he experienced headaches and dizziness. He was sleeping all through and could not do anything. The second I heard about was my staff officer, he complained of pain at the site of the injection and heaviness of the hand. He could not lift it up, it was heavy. He also had problem with the side of his neck” 32-year-old civil servant

Another respondent also stated:

“Yes, feverish symptoms for a week or two. Then I also had pain in my hand and my hand was weak a bit” A 31-year-old Civil servant

DISCUSSION

The aim of this study was to carry out a qualitative analysis on the knowledge, acceptance and side effects of covid-19 and the vaccination amongst women attending ANC clinics at Bukuru using a Focused Group Discussion (FGD).

The FGD was done amongst 40 women from 5 domain discussion groups. 2 groups were done at the Bukuru express PHC and Bukuru central PHC respectively, with 1 domain at the ECWA CHC. In respect to knowledge, the women showed good knowledge of the virus. They showed both basic and exaggerated knowledge of the corona, such as a lady who said it caused bleeding. In respect to knowledge on the vaccine, they showed good knowledge of the vaccine. However, there were those who did not know how to access the vaccination centres, while there was one who had not heard about the vaccine at all.

Furthermore, as regards acceptance, generally they showed a good willingness to accept the vaccine. Although only a few of them had received it, some had expressed willingness to receive it especially if they were no longer pregnant. But a woman said she would take it even as she is pregnant. Nevertheless, spirituality was shown as an important factor in deciding whether or not one was to accept the vaccine. The commonest symptoms experienced or observed were headaches, feverish symptoms, pain and swelling at site of injection.

The limitation of this study was the few number of participants who contributed during the conversation, and hence has a limited pool of discussants and thus diverse opinion to help make a deductive inference.

CONCLUSION

The participants in this study had a relatively good knowledge of covid-19 and the corona virus vaccine. Most of them who were willing to accept it had determining conditions, such as family and assurance. However, others who did not take it were due to reason such as pregnancy and breast feeding. As regards side effects, the ones discussed were common non-fatal side effects often seen and reported globally, such as headaches, fever and inflammation at the injection site.

CONFLICT OF INTEREST

The authors declare no conflict of interests.

AUTHORS CONTRIBUTION

Conceptualization, Data collection and Writing = OTOBO Daniel David

Data analysis and Final editing = OKORO Ngozi Ijeoma

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REFERENCES

1. Cucinotta D, Vanelli M. WHO Declares COVID-19 a Pandemic. *Acta Bio Medica Atenei Parm* [Internet], 2020 [cited 2021 Aug 25]; 91(1): 157. Available from: [/pmc/articles/PMC7569573/](https://pubmed.ncbi.nlm.nih.gov/32665537/).
2. Stadnytskyi V, Bax CE, Bax A, Anfinrud P. The airborne lifetime of small speech droplets and their potential importance in SARS-CoV-2 transmission. *Proc Natl Acad Sci U S A*, 2020 Jun 2; 117(22).
3. Mannan DKA, Farhana KM. Knowledge, Attitude and Acceptance of a COVID-19 Vaccine: A Global Cross-Sectional Study. *SSRN Electron J* [Internet]. 2020 Dec 7 [cited 2021 Aug 26]; Available from: <https://papers.ssrn.com/abstract=3763373>
4. Ciardi F, Menon V, Jensen JL, Shariff MA, Pillai A, Venugopal U, et al. Knowledge, Attitudes and Perceptions of COVID-19 Vaccination among Healthcare Workers of an Inner-City Hospital in New York. *Vaccines* 2021, Vol 9, Page 516 [Internet], 2021 May 17 [cited 2021 Aug 26]; 9(5): 516. Available from: <https://www.mdpi.com/2076-393X/9/5/516/htm>
5. Bono SA, Villela EF de M, Siau CS, Chen WS, Pengpid S, Hasan MT, et al. Factors Affecting COVID-19 Vaccine Acceptance: An International Survey among Low- and Middle-Income Countries. *Vaccines* 2021, Vol 9, Page 515 [Internet]. 2021 May 17 [cited 2021 Aug 26]; 9(5): 515. Available from: <https://www.mdpi.com/2076-393X/9/5/515/htm>
6. Akintokunbo A Adejumo. Still on Nigeria's railway history- "Narrow gauge in Nigeria". *Nigerians in America*. Published 17 October, 2008.
7. Google Maps [Internet]. [cited 2022 Jan 15]. Available from: <https://www.google.com/maps/contrib/117110303450661788409/reviews/@9.8802085,10.0008013,9z/data=!3m1!4b1!4m3!8m2!3m1!1e1>
8. Ayuba I, Wash PM. An Assessment of the Provision and Distribution of Health Facilities in Bukuru Town, Plateau State, Nigeria. Undefined, 2016.