Assessment of Awareness, Knowledge and Related Behaviours Towards COVID-19: A Cross-Sectional Study of Clients and Health Care Workers in Obstetrics and Gynecology Clinics in Anyigba, North Central Nigeria

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ABSTRACT

Introduction: COVID-19 is a viral disease that was first seen in Wuhan China in December 2019. Nigeria had its first case of COVID 19 in February 2020.

Healthcare workers in obstetrics and gynecology clinics are front line health workers because while they are providing reproductive health services, they are prone to encountering persons with transmissible COVID19 disease.

Aim: The aim of this study is to assess awareness, knowledge and related behaviors of clients and Healthcare workers in obstetrics and Gynecology clinics towards COVID 19 and its preventive strategies.

Subjects and Methods: This is a descriptive cross-sectional study that was done among health workers in Obstetrics and Gynecology Clinics in four hospitals in Anyigba North Central Nigeria and the attendees of these clinics. The questionnaire sought to assess awareness, knowledge and related behaviors of clients and Healthcare workers in obstetrics and Gynecology clinics towards COVID 19 and its preventive strategies. Data was collected from the 1st of July to the end of September 2020.

Results: One thousand and 48 (1,048) respondents were studied. Majority of the respondents 52.3% knew of corona virus through television, followed by other media (19.7%) and from health workers (17.7%). Only 9.9% heard of corona virus through the radio. The mean percentage score for knowledge transmission and prevention of COVID-19 is 76.6% ranging between 58.9% and 90.2%.

Conclusion: The respondents demonstrated high level of awareness, knowledge, and acceptable positive behavior towards the COVID-19 pandemic necessary to guarantee service modifications to prevent person to person transmission.

Keywords: COVID-19, Health Care Workers, Awareness, Knowledge, Anyigba, Nigeria.

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I. BACKGROUND

The corona virus disease 2019 also called COVID-19 is a rapidly expanding viral disease that was first seen in Wuhan China in December 2019. It was subsequently characterized and named 2019 – nCov [1]-[3]. [0], [11].

It has since reached all the continents of the world and is posing serious challenges to health care and development [6]-[8], [12], [13], [19].

Nigeria had its first case of COVID-19 in February 2020. Since then, the cases continue to grow despite control measures put in place. While the world waited for the vaccines to halt the spread of the virus and the availability of the vaccines to everyone that needs them, the mainstay of

prevention has been the non-pharmaceutical measures.

The world Health Organization (WHO) recommended prevention of the virus to ensure that both clients/patients and health care workers are protected from infection by this highly infectious virus [10], [14].

Healthcare workers in obstetrics and gynecology clinics are front line health workers because while they are providing reproductive health services, they are prone to encountering persons with transmissible COVID-19 disease. It is therefore important that they know about COVID-19 and its preventing strategies. Pregnant women who access ANC, Women who come into labour ward, postnatal clinic and other persons encountered in the other services in obstetrics and gynecology are capable of transmission of COVID-19 to

health workers here and are also at risk of contracting it from the health workers [14], [16], [19].

Our study is assessing the awareness, knowledge, and related behavior towards COVID-19 among these health workers and their clients that visit them. The findings will enrich the body of knowledge and enhance our control measures.

II. SUBJECTS AND METHODS

This is a descriptive cross-sectional study that was done among health workers in Obstetrics and Gynecology Clinics in four hospitals in Anyigba North Central Nigeria and the attendees of these clinics. The clinics are located in Holley Memorial Hospital Ochadamu, Grimard Catholic Hospital, Neighbour Multicare Hospital and the Kogi State University Teaching Hospital all in the Anyigba axis of the Eastern Part of Kogi State, North Central Nigeria. Data was collected from the 1st of July to the end of September 2020. A self-administered structured questionnaire pretested in another clinic not involved in the study was used.

A. Study Subjects

All attendees of the clinics both male and females and the services providers in the clinics (Health care workers) were the participants in the study. A convenience sampling technique was used to select the participants. The Obstetrics and Gynecology Clinics within Anyigba environment have an estimated cumulative annual patient population of 95,000 (Ninety-five thousand) that access services.

At 95% confidence level and confidence interval of 5, we used the survey system sample size calculator to obtain a sample size of 761. This was further increased to 1250 to accommodate exclusions for incomplete response. Data collectors adhered to strict COVID-19 protocols.

B. Study Tools

A self-administered structured questionnaire pretested in another clinic not involved in the study was used. There were interpreters where the respondents did not understand the questionnaires written in English language that carried the same meanings as the questionnaires in English.

The questionnaire sort to obtain information on respondents' demographic characteristics, educational level, and their awareness and source of information about COVID-19 and went further to assess their knowledge of transmission and prevention of COVID-19. The related behavior of the respondents with the advent of COVID-19 and their level of confidence that the national government will be able to contain a national outbreak was also assessed.

C. Ethical Issues

The Ethical committees and the managements of the institutions that housed the clinics where this study was carried out gave the relevant clearance and permissions. The respondents gave verbal consent before the administration of the questionnaire.

D. Statistical Analysis

All completed questionnaires were coded and entered into statistical package for social sciences version using descriptive analysis that used numbers and percentages

mainly.

III. RESULTS

Analysis of the imputed data revealed the following: one thousand and 48 (1,048) respondents completed the questionnaire correctly. These were made up of health care workers (45.1%) and non-health care workers (54.4%) as in Table VI. 41.2% were males and 58.3% were females.

The mean age of the respondents is 33 ± 5 years with 50.4% in the age bracket below 30 years and 19.6% in the age bracket 31–40 years.

66.5% of the respondents have attained post-secondary school education; only 6.1% had no formal education.

As in Table I, 91.2% of the participants are aware of the corona virus disease while 76.2% believe that COVID-19 is in Nigeria.

Table II shows that majority of the respondents 52.3% knew of corona virus through television, followed by other media (19.7%) and from health workers (17.7%). Only 9.9% heard of corona virus through the radio.

The results of knowledge assessment of the participants for transmission and prevention of COVID-19 are shown in Table III. The mean percentage score for knowledge is 76.6% ranging between 58.9% and 90.2%.

For all items assessed, more than 50% of the participants had correct answers for knowledge assessments irrespective of their background. The least correct answer was 58.9% on the issue of asymptomatic carriers of the corona virus where the respondents were almost evenly distributed on whether people with COVID-19 “may not have any complain at all”. However, majority agreed with this thus showing good knowledge. The mean percentage of wrong answers for knowledge assessment was 22.9% among the respondents ranging between 9.1 and 40.7 with the majority below 30%. Wrong answers were higher on the issue of asymptomatic carriers of the virus (40.7%). Whether corona virus disease is curable (38%) and whether we can touch our eyes, mouth, and nose with unwashed hands (34%). These were the areas where significant knowledge gap was observed.

Table IV shows the related behaviors of the participants towards the COVID-19 pandemic. While 80.9% said the pandemic has change the way they do things, 16.7% said it has not at all while 2.9% believed there are some changes.

With respect to daily activity, 40.9% believe the pandemic has changed their daily activities a lot while 23.2% did not think so. Another 34.5% believe there are some changes in their daily activities but not a lot.

74.3% of the respondents have changed their plans a lot due to the pandemic, 19.1% did not change any plans at all but 6.2% did some changes but not a lot of it.

Majority of the respondents (57.2%) are not very confident that the federal government of Nigeria can prevent large outbreak of (COVID-19). The majority (54.7%) also are not very confident that they (themselves) are prepared for large outbreak of COVID-19 in Nigeria.

30.7% of the health workers are not confident at all that the federal government of Nigeria can prevent large outbreak of COVID-19. Similarly, 26% of the non-health workers also are not confident at all that the federal government can prevent large outbreak of COVID-19 (Tables V&VI).

TABLE I: AWARENESS OF CORONA VIRUS BY RESPONDENTS

Awareness	Score		Total
	Yes	NO	
Have you heard of Corona Virus	960(91.2)	88 (8.4)	1048 (100)
Corona Virus is in Nigeria	802 (76.2)	246 (23.4)	1048 (100)

TABLE II: HOW RESPONDENTS HEARD OF CORONA VIRUS

Medium	N	%
Radio	104	9.9
Television	550	52.3
Health Worker	186	17.7
Other Media	208	19.7
Total	1048	100

TABLE III: KNOWLEDGE OF CORONA VIRUS DISEASE TRANSMISSION AND REVEVENTION BY RESPONDENTS

Questions	Correct Answers N (%)	Wrong Answers N (%)	Total N (%)
Fever is a symptom of corona virus infection	902 (85.7)	146 (13.8)	1048 (100)
Dry cough is a symptom of corona virus infection	856 (81.3)	192 (18.3)	1048 (100)
People that cough with sputum have corona virus infection	720 (68.4)	328 (31.2)	1048 (100)
Difficulty in breathing maybe due to corona virus infection	866 (82.3)	182 (16.9)	1048 (100)
Loss of sense of smell may be due to corona virus infection	770 (73.2)	278 (26.4)	1048 (100)
Someone with corona virus may not have any complain at all	620 (58.9)	428 (41.0)	1048 (100)
Corona virus is not curable	640 (60.8)	408 (38.8)	1048 (100)
We must wear mask when we are interacting with people	864 (82.1)	184 (17.4)	1048 (100)
We must ensure at least 2 metres between us and other people	864 (82.1)	184 (17.4)	1048 (100)
We can touch our eyes, mouth and nose with unwashed hands	690 (65.5)	358 (34.0)	1048 (100)
We should be our hand with soap or use hand sanitizer	928 (88.2)	120 (11.4)	1048 (100)
We should avoid crowded places and events	952 (90.4)	96 (9.1)	1048 (100)

TABLE IV: RELATED BEHAVIOUR OF RESPONDENTS TO COVID-19

Question	A lot N (%)	Some changes N (%)	A little N (%)	Not at all N (%)
How much has corona Virus changed your way of doing things	852 (80.9)	18 (1.7)	2 (0.2)	176 (16.7)
How much has coronas virus changed your daily activity	430 (40.9)	120 (11.4)	254(24.1)	244 (23.2)
How much has Corona Virus changed your previous plans	782 (74.3)	4 (0.4)	61 (5.8)	201 (19.1)

TABLE V: RESPONDENTS CONFIDENCE IN PREPAREDNESS FOR COVID 19 OUT BREAK

Question	Very confident N (%)	Somewhat confident N (%)	Not very Confident N (%)	Not confident at all N (%)
The federal government of Nigeria can prevent large outbreak of COVID 19	156 (14.8)	194 (18.4)	602 (57.2)	96 (9.1)
I am personally prepared as a person if there is a large outbreak of COVID 19 in Nigeria	158 (15.0)	198 (18.8)	576 (54.7)	116 (11.0)

TABLE VI: RESPONDENTS CONFIDENCE IN GOVERNMENT PREPAREDNESS FOR COVID 19 OUT BREAK BY OCCUPATION

	Very confident N (%)	Somewhat confident N (%)	Not very Confident N (%)	Not confident at all N (%)
The federal government of Nigeria can prevent large outbreak of COVID 19				
Other Occupation	50 (4.8)	33 (3.1)	216 (20.5)	274 (26.0)
Health Workers	20 (1.9)	18 (1.7)	114 (10.8)	323 (30.7)
Total (%)	70 (6.7)	41 (3.9)	330 (31.4)	597 (56.7)

IV. DISCUSSION

This study was conducted between July and September 2020 about five months after the first case of COVID-19 was identified in Nigeria (February 27th, 2020). Following this, the Nigerian centre for Disease Control (NCDC) and the presidential Task Force on VID-19 (PTF) mounted aggressive campaigns to halt the spread of the virus.

A multisectoral national emergency operations centre was activated at level 3, the highest level of response in the country for the public health emergency. As at 30th of September 2020, Nigeria had a total of 58,848 confirmed cases with a total of 1,112 deaths. Every of the 36 states and Abuja has recorded cases of COVID-19. This study was to assess the level of awareness, level of correct knowledge of transmission and prevention and the related behavior of health care workers and the clients that access services at obstetrics and gynecology clinics in our environment to see whether the multisectoral approach to control the pandemic is yielding the desired result in this area.

The studies revealed that majority of the respondents are aware of COVID-19 disease (91.2%). It also revealed that 76.2% believed that the corona virus disease is in Nigeria. This majority belief is necessary for people to key into the prevention plan of government. It is important for people to adopt prevention measures. This finding is similar to that of Olayinka Victor Ojo at where there was 99.1% awareness¹⁵

In this study the respondents showed a good knowledge level regarding transmission and prevention of COVID-19 (76.6) with range of 58.9 – 90.2% and more than 50% for all items in the knowledge questionnaire. This is in agreement with the findings of Bao Liang et al (90%), ShakofehMaleki et al (99%) and Wafaa Yousif Abdel Wahed et al [1], [4], [5].

Both the health care workers and non-health care workers demonstrate good knowledge of COVID-19 transmission and prevention.

This study revealed that COVID-19 has affected the behaviour of a significant number of the participants. 80% of them agreed that the pandemic has changed the way they do things and 40.9% agreed that the pandemic has changed their daily activities. Their responses indicate a positive attitude to the pandemic believing that it is preventable.

On the other hand, majority of the participants do not have enough confidence in either the national government or themselves as individuals to handle a large-scale outbreak of the COVID-19 pandemic. Majority of both the health workers and the non-health workers are not very confident the national government can successfully handle a large outbreak. This is a sharp deviation from the study of Bao Liang et al, where the respondents had an optimistic view of their national government's ability to handle large scale COVID-19 outbreak¹.

Majority of the respondents are aware of corona virus disease and have good knowledge of its transmission and prevention and are adopting behaviours to control the spread.

The implication of these findings is that clients and services providers in obstetrics and gynecology clinics are conversant with the COVID-19 pandemic and are adopting steps and modifications that prevent the transmission of the virus from person to person.

V. LIMITATION

This study was conducted in four (4) clinics out of so many in this environment and the nation in general, so there is need for caution in using the findings for generalization.

VI. CONCLUSION

Despite observable knowledge gap in some respondents that needs further education, clients and health care workers in obstetrics and gynecology clinics in this study demonstrated high level of awareness, knowledge and acceptable positive behavior towards the COVID-19 pandemic necessary to guarantee service modifications to prevent person to person transmission.

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