KNOWLEDGE AND PRACTICE OF COVID 19 PREVENTIVE MEASURES AMONG PRIMARY HEALTH CARE WORKERS IN KANO STATE

BY

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Abstract

Knowledge and Practice of Covid 19 Preventive measures among Primary Health Care workers of Kano State State. Three numbers of research questions were raised and Three numbers of sub hypotheses were tested. Descriptive research design was adopted for the study. The population of the study comprised all primary health care workers in Kano state which was estimated to be 20900 out of which 387 participants were used as sample of the study. Simple random sampling procedures were used to select participants from various institutions. A researcher developed a questionnaire that was used as an instrument for data collection. Online copies of questionnaires were administered by the researcher with the help of five numbers of research assistants sharing the link to various WhatsApp flatform. Frequency count and percentage was used to organise and describe the demographic information of the participants, while Chi square method will be used to test the hypotheses at the 0.05 level of significance. The result reveals that there is significant knowledge and practice of covid 19 preventative measures among workers of primary health care in Kano state.

Key words: Knowledge, Attitude, Practice, Covid-19.

Introduction

The Director-General of the WHO declared the COVID-19 outbreak as a Public Health Emergency of International Concern (PHEIC) on 30 January 2020 and characterised it as a pandemic on 11 March 2020 (Li, Guan, Wu, Wang, Zhou, Tong, 2020). The outbreak was initiated from the Hunan seafood market in Wuhan city of China and rapidly infected more than 50 peoples (Parry, 2020). The live animals are frequently sold at the Hunan seafood market such as bats, frogs, snakes, birds, marmots and rabbits (Wang, C. et al 2020). On 12 January 2020, the National Health Commission of China released further details about the epidemic, suggesting viral pneumonia (Wang, Horby, Hayden, Gao, 2020). From the sequence-based analysis of isolates from the patients, the virus was identified as a novel coronavirus. Moreover, the genetic sequence was also provided for the diagnosis of viral infection (Phan, Nguyen, Luong, Nguyen, Nguyen, Le 2020).

Nigeria is one of the 210 countries affected globally. The first case was confirmed in Lagos State on 27 February 2020. This index case was a 44 year old man, an Italian citizen who returned from Milan, Italy, on 24 February and presented at a health facility on 26 February 2020 (Zhu, Zhang, Wang, Yang, Song, 2020). According NCDC (2022), In Nigeria as at 29th July 2022, 5,356,770 samples were collected from suspected and were tested in which 260,764 were confirmed positive, in which 3,147 out of them were dead, 253,592 were recovered and discharge with 4,025 active cases, in which some are on admission. In Kano State there are 5,124 confirmed positive cases in which 52 are currently on admission, 4,945 recovered and discharged, 127 dead (NCDC 2022).

Although the recorded cases and estimated mortality rate may seem low, it is important to note that Nigeria is the largest black nation with a population of>200 million people and with about 3.1% elderly population. Adjusting for this highest-risk population (i.e. older population), Nigeria has about 6.4 million people aged>65 years that are at risk of this infection. This is aside from other vulnerable populations such as those with pre-existing underlying health conditions like diabetes, high blood pressure, other cardiovascular diseases, and cancers. In addition, it is currently projected that Africa will have its fair share of the worst effects of this disease by the end of the pandemic (The Economist, 2020). Moreover, African countries are known to have fragile health systems and this remains a source of concern, especially in the event of increased outbreaks. If these cases continue to escalate, it has been estimated that between 9–11% of infected patients will eventually need critical care and require intensive care (ICU) (Africa in Focus, 2020; Remuzzi and Remuzzi, 2020).

Statement of the problems

USA president Joe Biden tests positive for Covid 19. Biden's COVID-19 diagnosis was confirmed by both antigen and PCR tests, the president's physician, Dr Kevin O'Connor, said on Thursday 21th July, 2022 in a letter to Jean-Pierre that the White House made public. White House COVID-19 coordinator said that Biden is fully vaccinated and had two booster shots (VOA Hausa 2022). The outbreak has been reported in all continents, with the first case in Africa reported in Egypt in February 2020 (CDC 2020). Globally, over 2.6 million confirmed cases and over 186,000 deaths have been recorded as of the middle of 2020 (WHO 2020).

As Nigeria is among the 210 countries affected globally with the confirmation of the index case at Lagos in February, 2020, 216 people were identified as contacts to be followed up. Of these, 45 travelled out of Nigeria and one of the remaining 176 contacts was confirmed to be positive for COVID-19 on 9 March 2020 (Singhal 2020). The country has continued to experience an increase in the number of cases, which has spread across several states. While the majority of the initial cases were imported, most of the new cases have no travel history or contact with such people. This is highly suggestive of ongoing community transmission.

Under the current circumstances, the Primary Health Care (PHC) Centres remain the most likely port of call for community members who develop symptoms that could be suggestive of COVID-19. The Primary Health Care system is the bedrock of the country's health system (Anjorin 2020) and the Community Health Workers (CHWs) are considered to be its backbone for several reasons (Aluga 2020).With the need of collaborative efforts from the World Health Organization, federal and state government health ministries, health institutes, non-governmental organisations, and researchers it becomes necessary to conduct research of this kind.

Objectives of the Study

This research is aimed to finding out the following: -

- ✓ Significant Knowledge of Covid-19 Preventive Measures Among Primary Health Care Workers in Kano State.
- ✓ Significant Practice of Covid-19 Preventive Measures Among Primary Health Care Workers in Kano State.
- ✓ Significant Relationship Between the Knowledge and Practice of Covid-19 Preventive Measures Among Primary Health Care Workers in Kano State.

Research Question

This research is aimed to answer the following research questions: -

- ✓ Is there a Significant Knowledge of Covid-19 Preventive Measures Among Primary Health Care Workers in Kano State?
- ✓ Is there a Significant Practice of Covid-19 Preventive Measures Among Primary Health Care Workers in Kano State?
- ✓ Is there a Significant Relationship Between the Knowledge and Practice of Covid-19 Preventive Measures Among Primary Health Care Workers in Kano State?

Research Hypothesis

The following null hypotheses were drawn

- ✓ There is no Significant Knowledge of Covid-19 Preventive Measures Among Primary Health Care Workers in Kano State.
- ✓ There is no Significant Practice of Covid-19 Preventive Measures Among Primary Health Care Workers in Kano State.
- ✓ There is no Significant Relationship Between the Knowledge and Practice of Covid-19 Preventive Measures Among Primary Health Care Workers in Kano State.

Literature review

In a study on Knowledge, Attitude and Practice of Clients towards COVID-19 at Primary Healthcare Facilities in Rivers State, Nigeria, out of 460 questionnaires distributed, 434 respondents participated in the survey, revealing a 94.3% response rate. The proportion of respondents with moderate and above scores in knowledge, attitude, and COVID-19 related practices are 86.6% (62.9+23.7), 80.6% (57.6+23.0), and 58.0% (30.8+27.2)

respectively. Occupation, educational level, and senatorial districts are associated with knowledge and attitude, whilst age and senatorial districts are associated with the level of adherence to preventive practices; knowledge level also has associations with both attitude and practices towards COVID-19 (Edet et al, 2020).

In a study conducted by Ahmad et al (2020), on Knowledge, Attitude and Practices (KAPs) toward COVID-19 among Health Care Workers (HCWs) at Infectious Diseases Hospital (IDH) Kano, Nigeria, the result shows that 150 participants responded to the questionnaire. 110 respondents (73.3%) were male and the remaining 40 (26.7%) were female. Regarding knowledge, 149(99.3%) had good knowledge, concerning Attitude, 80(53.3%) had a positive attitude and regarding Practices, 150 (100%) had good practices toward COVID-19. (Ahmad, etal 2020).

On cross-sectional study on Knowledge, attitudes and practices of COVID-19 among income-poor households in the Philippines: the survey was administered, a large majority (94.0%) of respondents had already heard of COVID-19. It was found that even during the earlier stages of the pandemic, people already perceived the spread of the virus as a cause for concern that could impact them directly. Only half (54.0%) of all respondents reported that their daily life had been disrupted by COVID-19, but 80.3% were worried about contracting the virus, suggesting an initial response of panic due to the information that was being circulated. However, although knowledge of transmission routes was high, appropriate preventive measures against COVID-19 were not well-identified. The majority (82.2%) of respondents recognized hand hygiene as an important preventive measure against infection, but there was a lack of identification of other key measures such as social distancing and avoiding large crowds, and despite an association between knowledge and practice, the proportion of people adopting preventive practices was relatively low. (Lincoln, etal 2020).

Methodology

Research Design

The research design adopted by the researcher was descriptive survey design. According to Njodi and Bwala (2004),descriptive survey research design is effective in generating data from a relatively large number of respondents.

Population

The population of this study consists of all people whether technical or non technical, whether posted to health facilities or headquarters (LGA, Zones or state) working in the primary health care setting. The population also is not limited to only those that are directly working under Kano State Primary Health Care Management Board, but includes those working with state, national and NGOs who are working in primary health care settings (indirectly under state primary health care management board). The population also included those working permanently, volunteer, casual, volunteer or contract. The

population is estimated to be twenty thousand nine hundred workers (20900) out of which nine thousand and seventy (9070) were permanent and pensionable and eleven thousand eight hundred and thirty (11830) which are either temporary, casual, volunteer or on contract. (HRH 2022).

Table 1 Population of the workers by cadre.

S/NO	Cadre	Permanent	Temporary	Total Population
1	Medical Officers (Doctors)	61	4	65
2	Community Health Workers	2461	1627	4088
3	Nurses/Midwives	159	194	353
4	Environmental Health Workers	1994	3785	5779
5	Medical Laboratory Scientist/Technician	427	416	843
6	Pharmacy Scientist/Technician	104	105	209
7	Health Educators	197	714	911
8	Public Health and Epidemiologist	21	295	316
9	Dental Health Workers	460	618	1078
10	Health Information/Record Workers	178	632	810
11	Nutrition & Dietetics Workers	373	523	896
12	Health Attanders	935	291	1226
13	Others	1700	2626	4326
	Total	**9070**	**11830**	**20900**

Sample and Sampling Technique

A total of 378 workers were selected from the state. By the use of an online Sample size calculator, a population of 20900 at a confidence level of 95% and confidence interval of 5%, a sample size will be 378 (calculator, 2024). A simple random sampling technique was used, in which an online questionnaire was developed and was sent to different social media platforms owned by the workers. The questionnaire was set so that immediately it received 378 responses from designated workers and stopped receiving responses.

Method of Data Analysis

The biodata data were analysed with the use of simple frequency count and percentage, Chi square was used to test the null hypothesis at 0.05 level of significance.

Results

The study investigated the knowledge and practice of Covid 19 preventive measures among primary health care workers in Kano state. The data were based on the responses from the health workers that join WhatsApp flatforms in Kano state. Three hundred and sixty four (364) valid responses retrieved by the researcher, hence used for data analysis.

Table 2 Biodata of the respondent

S/NO		VARIABLES	FREQUENCIES	PERCENTAGE
1	Gender	MALE	317	87.09%
		FEMALE	47	12.91%
		TOTAL	364	100%
2	Age	18-30 Years	76	20.88%
		31 - 40 years	136	37.36%
		41 - 50 Years	134	36.81%
		50 - 60 Years	18	4.95%
		Total	364	100%
3	Marital Status	Single	68	18.68%
		Married	292	81.32%
		Total	364	100.00%
4	Educational Status	Diploma	154	42.31%
		Bachelor Degree	167	45.88%
		Masters Degree	41	11.26%
		PhD	2	0.55%
		Total	364	100.00%
5	Cadre	Medical Officer	16	4.40%
		Community Health	173	47.50%
		Nurse/Midwife		0.80%
		Public Health	3	13.80%
		Health Education	9	22.6%
			46	19.2%
				2.5%
				3.0%
S/NO		VARIABLES	FREQUENCIES	PERCENTAGE
		Environmental Health	70	52.40%
		Medical Lab	9	
		Health Information	11	
		Dental Health	10	
		Nutrition & Dietetic	6	
		Social Development	4	
		Computer Science	7	
		Total	364	100.00%

A total of 378 primary health care workers were recruited for the study out of which 317 (87.09%) were male and 47 (12.91%) were female, Therefore majority were male. 76 (20.88%) were aged 18-30yrs, 136 (37.36%) aged 31 – 40 years, 134 (36.81%) aged 41 – 50yrs, 18 (4.95%) aged 50-60yrs. 68 (18.68%) were singled, 292 (81.32%) were married. 154 (42.31%) held diploma certificates, 167 (45.88%) held bachelor degree certificates, 41 (11.26%) held masters degree certificates, only 2 (0.55%) held Ph.D. certificates.

Table 3 Cadre of the respondent

In Terms of cadre and area of specialisation 16 (4.40%) were Medical officers, 173 (47.53%) were Community health practitioners, 3 (0.82%) were Nurses/midwife, 9 (2.47%) were Public health officers, 46 (12.64%) were Health Educators, 70 (19.23%) were Environmental Health workers, 9 (2.47%) were Medical Laboratory Technician, 11 (3.02%) were Health Information officers, 10 (2.75%) were Dental health technicians, 6 (1.65%) were Nutrition and Dietetics officers, 4 (1.10%) social development officers, 7 (1.92%) were computer Scientist.

Table 4 on Knowledge of Covid 19 Preventive Measures

	FO	FE	ƛ2	Df	P
Negative Knowledge	359	182	202.596	1	0.001
Positive Knowledge	5				
Total	**364**				

The table 4 above indicates that the chi - square value is 202.596 at degree of freedom 1 the P value is 0.001 which is less than the level of significance (0.005). And when $p < 0.005$ the null hypothesis is rejected, therefore the stated hypothesis 'there is no significant knowledge of Covid 19 among primary health care workers in Kano state' is rejected.

Table 5 on Practice of Covid 19 Preventive Measures

	FO	FE	$ƛ^2$	Df	P
Negative Practice	339	182	616.390	1	0.001
Positive Practice	25				
Total	**364**				

The table 5 above indicates that the chi - square value is 616.390 at degree of freedom 1 the P value is 0.001 which is less than the set level of significance (0.005). And when $p < 0.005$ the null hypothesis is rejected, therefore the stated hypothesis 'there is no significant practice of Covid 19 preventive measures among primary health care workers in Kano state' is rejected.

Discussions

The study investigated on knowledge and practice of Covid 19 preventive measures among primary health care workers in Kano state, above indicates that the chi - square value is 202.596 at degree of freedom 1 the P value is 0.001 which is less than the level of significance (0.005). And when $p < 0.005$, the null hypothesis is rejected. This indicated that there is significant knowledge of Covid 19 among primary health care workers in Kano state.

The table 5 above indicates that the chi - square value is 616.390 at degree of freedom 1 the P value is 0.001 which is less than the set level of significance (0.005), $p < 0.005$ therefore the null hypothesis is rejected, meaning that there is significant practice of Covid 19 preventive measures among primary health care workers in Kano state. The findings of the study is in line with the finding of the study conducted by Ahmad et al (2020), on Knowledge, Attitude and Practices (KAPs) toward COVID-19 among Health Care Workers (HCWs) at Infectious Diseases Hospital (IDH) Kano, Nigeria, which reveals that 149(99.3%) had good knowledge, 80(53.3%) had positive attitude and 150 (100%) had good practices toward COVID-19.

The finding is also in agreement with the study on Knowledge, Attitude and Practice of Clients towards COVID-19 at Primary Healthcare Facilities in Rivers State, Nigeria by Edet et al (2020) which found that the proportion of respondents with moderate and above scores in knowledge, attitude, and COVID-19 related practices are 86.6% (62.9+23.7), 80.6% (57.6+23.0), and 58.0% (30.8+27.2) respectively. The finding is also in line with the cross-sectional study on Knowledge, attitudes and practices of COVID-19 among income-poor households in the Philippines by Lincoln, et al (2020) which reveals that a large majority (94.0%) of respondents had already heard of COVID-19. the majority (82.2%) of respondents recognized hand hygiene as an important preventive measure against infection.

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