AWARENESS, PERCEPTION AND PRACTICE ON COVID-19 AMONG NON-CLINICAL HEALTHCARE WORKERS IN PLATEAU STATE SPECIALIST HOSPITAL, JOS, NIGERIA.

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ABSTRACT

Background: COVID-19 has evolved into a pandemic. Health Care workers (HCWs) are at increased risk of infection than the general public because their occupation requires them to be in contact with persons with the disease either directly or indirectly.

Objective: To determine COVID-19 knowledge, attitudes, and practice among non-clinical HCW in Plateau State Specialist Hospital (PSSH) Jos.

Design: Cross-sectional study.

Results: Only one-fifth (21%) of participants had university education, while more than one -third (33%) had only secondary school education. More than two-third of the knowledge questions were answered correctly by the non-clinical healthcare workers. The attitude of non-clinical workers was fair. Forty one percent reported that only the elderly and people with co-morbidities die from COVID-19. More than half of the participates wrongly believed that the virus cannot survive in hot weather. Of 99 participants, only 23 (23%) believed that the disease will be controlled successfully. However, more than 90% of the participates believed that they have a role to play in the fight against COVID-19. The overall practice of preventive measures among the participants was not good as less than half of the participants wore mask in the last one week to the hospital. More than one -third of them do not have a hand sanitizer and about a quarter of them do not cough or sneeze into a flexed elbow. Two of the practice measures were significantly associated with the level of education with □2 and p values of 10.56 and 0.03, 12.20 and 0.02 respectively.

Conclusion: The study showed that the knowledge of non-clinical workers on COVID-19 in the hospital was good, however, the attitude and practice measures on COVID-19 was not good. Measures must be taken to educate the non-clinical HCW on the need to have good attitude and practice, to protect them from the high risk linked to their job and environment as HCW.

Keywords: Awareness, perception, practice, non-clinical, HCW, covid-19.

INTRODUCTION

The novel virus recently discovered in China was first named 2019 novel corona virus (2019 n-CoV) in December 2019. The name of the virus was later changed to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) when the genomics of the virus was sequenced, and it showed that shared has up to 79.5% resemblance with SARS-CoV that caused the pandemic in 2002-2003.[1-4]

COVID-19 evolved into a pandemic; the infection has spread to over 200 countries including Nigeria. Globally, as of August 16th, 2020, there have been

more than 21M confirmed cases of COVID-19, including over 700,000 deaths reported by WHO.[5] Health Care workers (HCWs) are at risk of infection because apart from the community acquired infection, their occupation gives them additional risk of being exposed to persons and environmental surfaces with the virus.[6-10]

SARS-CoV-2 is spread by droplet and contact, it is therefore recommended that we ensure social distancing, routine droplet barrier precautions, environmental hygiene, and overall sound infection prevention practice is indicated.[11] The factors that have been implicated for the transmission of the disease among HCWs include overcrowding, absence of isolation room facilities, environmental contamination. Furthermore, this has been complicated by inadequate awareness of infection prevention practices.[12]

In a hospital setting, there are clinical and non-clinical staff, the clinical staff come in contact with the patients to help in diagnosis, care and treatment while the non-clinical staff do interact with patients Therefore, good infection control measure is the main intervention to reduce the spread of the virus in both health care settings and the community.[18] Knowledge of a disease can help modify HCWs' behavior and practice towards infectious diseases like Covid-19.[19-20] Educating the HCW on how prevent the transmission of a highly infectious respiratory diseases like Covid-19 will play a major role in limiting the spread of the infection. This most important in under-developed countries like Nigeria, where our health care systems are not developed and lack the capacity to deal with outbreaks like this.[21]

The education of the non-clinical staff on Covid -19 in the early stage of the pandemic will affect their attitudes and behaviours and this is important to avoid occupational exposure. The aim of this study is to investigate the Knowledge, attitude and practice of non-clinical HCW in PSSH towards Covid-19.

but do not actually provide medical care. The non-clinical staff provide services like medical billers, hospital executives, receptionists, and anyone who works behind the scenes at a hospital such as human resources, IT, biomedical technicians, administrative assistants, etc.[13]

The three main mode of transmission routes for the COVID-19 are: droplets transmission, contact transmission, and aerosol transmission. When a person infected with the disease coughs or sneezes, respiratory droplets are ingested by people in close proximity; contact transmission can occur when an individual touches a surface or object contaminated with the virus and subsequently touch their mouth, nose, or eyes, its being established that the virus can survive on objects or surfaces for 9 nine days and aerosol transmission can occur when respiratory droplets mix with air, forming aerosols which can be inhaled leading to the disease.[14-17]

As at the time of writing this report, there is no approved treatment or vaccination against Covid-19.

MATERIALS AND METHODS

This was a cross-sectional study carried out among non-clinical HCW working in PSSH from April to May 2020. A semi-structured questionnaire was used to collect the data from non-HCW who consented to the study. A total of 99 non-clinical HCW were recruited using consecutive proportionate sampling method. The data was analyzed using SPSS version 22. Variables were tabulated using frequencies and percentages. Chi-square test was used to test for any significance of association between categorical variables.

ETHICAL CONSIDERATION: Approval was obtained from the ethical committee of the Plateau State Specialist Hospital Jos.

RESULTS

The female to male ratio is 1:1.3, the age group of 41-50 years had the highest percentage of workers with 33%, while the least age group were workers who's aged were greater than 50 years with 10%. Table 1

Table 1: Demographic distribution of non- clinical staff in PSSH

Variable	Frequency	Percentage
Sex		
Male	51	51.5
Female	37	37.4
No response	11	11.1
Total	99	100.0
Age group		
<30	20	20.2
31-40	24	24.2
41-50	33	33.3
>50	10	10.1
No response	12	12.1
Total	99	100.0
Education		
Primary	9	9.1
Secondary	33	33.3
Diploma	32	32.3
B.Sc	21	21.2
Masters	2	2.0
No response	2	2.0
Total	99	100.0
Job in the hospital		
Admin/Acct	7	7.1
Physiotherapy/Lab	30	30.3
Transport/works/security	27	27.3
Attendants/radiology/records	35	35.4
Total	99	100.0

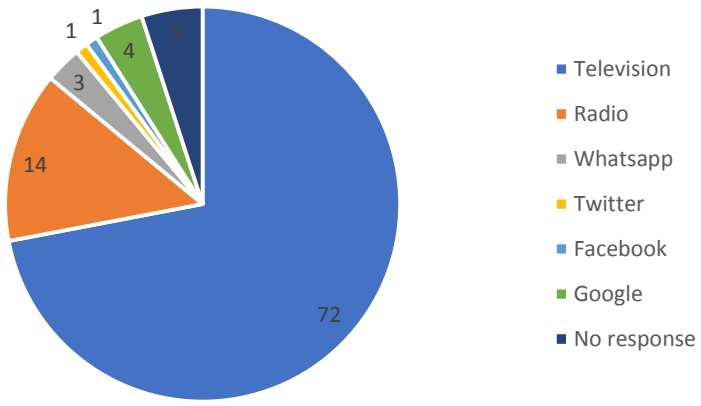

Figure 1: Source of information

The knowledge of the non-clinical HCW on COVID-19 disease being caused by a virus was good, with 87% getting the correct answer. Only 2% disagreed that COVID-19 is caused by a virus. More than 30% of the workers did not know if Chloroquine has been approved as the drug of treatment for COVID-19. Table 2

Table 2: Frequency of knowledge for non-clinical staff in PSSH.

Variables	I Agree	I don't know	I Disagree	Total
	No. (%)	No. (%)	No. (%)	No. (%)
Q2	87(87.9)	10(10.1)	2(2.0)	99(100.0)
Q3	87(87.9)	7(7.1)	5(5.0)	99(100.0)
Q4	88(88.9)	9(9.1)	2(2.0)	99(100.0)
Q5	82(82.8)	11(11.1)	6(6.1)	99(100.0)
Q6	84(84.8)	15(15.2)	0(0.0)	99(100.0)
Q7	80(80.8)	15(15.2)	4(4.0)	99(100.0)
Q8	73(73.7)	24(24.3)	2(2.0)	99(100.0)
Q9	89(89.9)	9(9.1)	1(1.0)	99(100.0)
Q10	89(89.9)	9(9.1)	1(1.0)	99(100.0)
Q11	26(26.3)	35(35.3)	38(38.4)	99(100.0)
Q12	32(32.3)	21(21.3)	46(46.5)	99(100.0)
Q13	54(54.5)	28(28.3)	17(17.2)	99(100.0)

The attitude of the workers on the role they have to play in the control of the disease was good with 94% of them believing they have a role to play. However, There was a significant association between the practice of avoiding crowded places and education, with χ^2 value of 10.6 and p value of 0.03. There was no significant association between the practice of wearing a mask to the hospital and level of education, χ^2 value of 0.97 and p value of 0.91. Table 4

the practice of the HCW was not good because 47% of the workers have not worn mask in the hospital in the last one week. Table 3

Table 3: Frequency of Attitude and practice for non-clinical staff in PSSH

Variables	Yes	No	No response	Total
	No. (%)	No. (%)	No. (%)	No. (%)
Q14	20(20.2)	79(79.8)	0(0.0)	99(100.0)
Q15	41(41.4)	57(57.6)	1(1.0)	99(100.0)
Q16	53(53.5)	45(45.5)	1(1.0)	99(100.0)
Q17	50(50.5)	48(48.5)	1(1.0)	99(100.0)
Q18	39(39.4)	10(10.1)	50(50.5)	99(100.0)
Q19	23(23.2)	68(68.7)	8(8.1)	99(100.0)
Q20	94(95.0)	3(3.0)	2(2.0)	99(100.0)
Q21	84(84.9)	2(2.0)	13(13.1)	99(100.0)
Q22	34(34.3)	61(61.7)	4(4.0)	99(100.0)
Q23	48(48.5)	47(47.5)	4(4.0)	99(100.0)
Q24	51(51.5)	33(33.3)	15(15.2)	99(100.0)
Q25	62(62.7)	33(33.3)	4(4.0)	99(100.0)
Q26	87(87.9)	9(9.1)	3(3.0)	99(100.0)
Q27	72(72.7)	25(25.3)	2(2.0)	99(100.0)

Table 4: Comparison of Practice and education for non-clinical staff in PSSH

Variable	Education							
	Primary	Secondary	Diploma	B.Sc	Masters	Total	χ^2	p
Q22								
Yes	1(3.0)	17(51.5)	9(27.3)	6(18.2)	0(0.0)	33(100.0)	10.556	0.032
No	8(13.1)	13(21.3)	23(37.7)	15(24.6)	2(3.3)	61(100.0)		
Total	9(9.6)	30(31.9)	32(34.0)	21(22.3)	2(2.1)	94(100.0)		
Q23								
Yes	4(8.7)	17(37.0)	13(28.3)	11(23.9)	1(2.2)	46(100.0)	0.972	0.914
No	5(10.6)	14(29.8)	17(36.2)	10(21.3)	1(2.1)	47(100.0)		
Total	9(9.7)	31(33.3)	30.32.3)	21(22.6)	2(2.2)	93(100.0)		
Q24								
Yes	3(5.9)	19(37.3)	20(39.2)	9(17.6)	0(0.0)	51(100.0)	9.189	0.057
No	6(18.2)	8(24.2)	8(24.2)	9(27.3)	2(27.3)	33(100.0)		
Total	9(10.7)	27(32.1)	28(33.3)	18(21.4)	2(2.4)	84(100.0)		
Q25								
Yes	9(15.0)	14(23.3)	22(36.7)	13(21.7)	2(3.3)	60(100.0)	12.204	0.016
No	0(0.0)	17(51.5)	8(24.2)	8(24.2)	0(0.0)	33(100.0)		
Total	9(9.7)	31(33.3)	30(32.3)	21(22.6)	2(2.2)	93(100.0)		
Q26								
Yes	9(10.5)	24(27.9)	31(36.0)	20(23.3)	2(2.3)	86(100.0)	9.408	0.052
No	0(0.0)	7(77.8)	1(11.1)	1(11.1)	0(0.0)	9(100.0)		
Total	9(9.5)	31(32.6)	32(33.7)	21(22.1)	2(2.1)	95(100.0)		
Q27								
Yes	9(12.9)	18(25.7)	25(35.7)	16(22.9)	2(2.9)	70(100.0)	8.223	0.084
No	0(0.0)	13(52.0)	7(28.0)	5(20.0)	0(0.0)	25(100.0)		
Total	9(9.5)	31(32.6)	32(33.7)	21(22.1)	2(2.1)	95(100.0)		

DISCUSSION

The number of workers with master's degree among the non-clinical healthcare workers were the least cadre of workers, while more than one third of the workers had only secondary school education. This could be explained by the fact that some of the non-clinical HCW do not require special training to perform their task, they provide most of the unspecialized services required in the hospital.

The workers major source of information was from television, this is expected as the disease is a novel one that has taken the world by storm being a rapidly spreading and infectious disease. A lot of the information's generated about the disease were being made available on media screens so as to rapidly educate the public about the disease. Therefore, their knowledge on COVID-19 disease was good in some aspect, with more than two-third knowing the aetiolgical agent causing the disease, the city where it was first identified, the main clinical symptoms of the disease, its incubation period, the mode of spread of the disease and ways and methods of preventing the disease. However, some technical questions on the treatment and the best apparatus for protecting oneself from the disease were not that good, which is expected as most of the non-clinical HCW are not involved in the direct care of patients.

The attitude of the non-clinical HCW on the COVID-19 was fair. Some of the workers believed that COVID-19 is a disease of the Rich, more than one-third of the workers believed that only the elderly and those with other co-morbidity die from the disease. Greater than half of the workers believed that the virus cannot survive in hot climate. However, more than 90% of them believed that they have a role to play in the fight against COVID-19. The reason why they had a good attitude towards them having a part to play could be because they work in a hospital setting and are directly or indirectly involved in the treatment of patients with the disease.

The practice of the non-clinical HCW was also fair in some aspect, because more than one-third did not avoid overcrowded places, almost half of the workers did not wear a mask to the hospital, and greater than one third of the workers did not own a hand sanitizer. Although, more than two-thirds wash their hands regularly and cough into their flexed elbows. Although, most of the non-clinical HCW are not directly involved in the care of patients with COVID-19, but studies have shown that all HCW are at greater risk of getting the infection from other infected HCW, their work environmental surfaces like contaminated office tables, door knobs, desk tops, rest areas and dispensers of sanitizers.[6-10]

Only two, out of six questions on the practice of the non-clinical HCW were significantly associated with their level of education. The avoidance of overcrowded places and having a hand sanitizer. The other practices were not significantly associated with their level of education, this could be because a lot of the non-HCW only had only secondary education. This is different from what was obtained by Zhang et al, were the level of education was positively associated with good practice of careful removal of personal protective equipment (PPE), the difference could be attributed to the difference in the type of instrument used, the different cadre of HCW that were interviewed.[22]

The result of this study has shown that there are more gaps in the attitude and practice of non-HCW than knowledge gaps. The observed gaps with these parameters draw the need for attention to be paid to the educating of all cadres of HCW, especially the non-clinical HCW on their attitude and practice on COVID-19.

RECOMMENDATION

There should be organized training and retraining of non-clinical HCW on how to have a positive attitude towards the novel corona virus disease.

Emphasizes should be placed on the risk factors of HCW in contracting the disease and therefore be reminded of good preventive practice always, especially in the hospital environment during the training sessions.

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CONFLICT OF INTEREST

No conflicts of interest.

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