

Strategies for Creating Awareness on Corona virus Disease (Covid-2019) Transmission among Health Workers in Lagos State South West Nigeria

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Abstract

The study examined the strategies for creating awareness on coronavirus disease (COVID-2019) transmission among health workers in Lagos state South West Nigeria. The design used for the study was a descriptive survey design. The population for the study was 480 and the sample size was 260. Purposive sampling technique was adopted. Structured questionnaires were the instrument used for data collection. Data collected was analyzed using mean. Findings revealed that constant seminars and workshops should be organized for Doctors, Nurses and other related health workers on ways of protecting themselves from contacting the virus, awareness on the importance of personal hygiene should be constantly created by stakeholders through radio jingles, newspaper publications and television programs, more research on this deadly coronavirus infection should be encouraged and sponsored, coronavirus vaccines should be manufactured to help in boosting immune systems. Based on the findings, it was recommended among others that good personal hygiene should be maintained constantly by individuals and family members, human to human transmission should be avoided as much as possible, individuals should avoid cross contamination through raw meats and uncooked foods, sanitizers, hand gloves and disinfectants should always be adequately provided for health workers, masks must be properly worn when attending to patients, there must be regular routine checks for health workers, droplets from cough and sneeze should be avoided. Also, direct contact with patients and their personal tools must be discouraged and avoided, persons exhibiting symptoms should be quarantined to prevent transmission and spread of coronavirus.

Keywords: Coronavirus, Transmission, Strategies, Creating, Awareness

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I. Introduction

Lagos is one of the fastest growing cities in the world and it has witnessed rapid population explosion and its consequences (Seriki-Mosadolohun, Abiamuwe, Ogbonna and Otobo, 2017). Its recent pattern of development and human activities may pose a threat especially as it relates to the novel coronavirus transmission. (Seriki-Mosadolohun et al, 2017) and with a death toll already in excess of 100 persons and confirmed cases of infection in their thousands, the world faces a formidable public health crisis in a recent outbreak of a virus infection called Coronavirus which originated from Wuhan City, Hubei Province, China which was first reported on December 31st 2019 and was declared a public health emergency of international concern on the 30th of January 2020. Then on the 11th of February 2020, the World Health Organization(WHO) announced a new name for Coronavirus disease as COVID-19. The initial cases of this virus was associated with a specific seafood and animal market in Wuhan. Additional cases have been identified in people who have not visited this market, but have visited other markets or have interacted with infected individuals. This newly identified virus is in the same family as the viruses that causes Severe Acute Respiratory Syndrome (SARS), which was first identified in Asia in 2003, and Middle East Respiratory Syndrome-Related Coronavirus (MERS-CoV) which was identified in 2012 in Saudi Arabia. Since then, the majority of human cases have been reported from the Arabian Peninsula. The main initial animal reservoir for the virus that caused SARS is believed to be civet cats. However, dromedary camels are said to be an important animal reservoir of this virus and is also currently considered as the main source of human MERS-CoV infections. The case fatality ratio of MERS-CoV infections is estimated at 35%. (Cornelia et al,2020). The reservoir for COVID 2019 is not known at this time yet. COVID-2019 is spreading from person to person in China and limited spread among close contacts has been detected in some countries outside China, including the United States South Korea, Thailand, Japan, Vietnam, Australia, Singapore, Taiwan, France and Germany. Right now, the greatest risk of infection is for

people in China or people who have traveled to China. Risk of infection is dependent on exposure. So, close contacts of people who are infected are at greater risk of exposure particularly in healthcare settings. The main route of transmission in the majority of cases are from health care workers especially human-to-human-transmission amongst them. The likelihood of travelers becoming infected while visiting any wet or live animal markets in Wuhan is considered to be high as well since the source of infection is unknown. Therefore, it is important to note that person-to-person spread can happen on a continuum and a good personal hygiene at this time is inevitable. (WHO,2019).

In a country like Nigeria already burdened by poverty and many deadly diseases, including the Lassa Fever, which is currently spreading across the states like a wildfire propelled by a harmattan wind, Nigeria cannot afford to start contending with an additional burden of the coronavirus, a disease of which very little is known for now. Although, Nigeria especially Lagos State has a very good reason to worry because China has become a very important partner with many countries across Africa. China which has become a global economic force, is now Nigeria's biggest creditor. Many Nigerian businessmen and traders now prefer to import goods from China and other Asian countries. This means greater interaction between Nigerians and Chinese at different levels. For these reasons, the Nigerian health authorities should not only give travel advice to such Nigerians but should also monitor those who have returned from that country in recent times. That is what countries in Europe, Asia and the Americas are doing in the wake of this coronavirus outbreak. Ademaluyi, 2020

Nigeria as a member of the global community has a responsibility to ensure that her citizens are not caught up in the noxious eddy that has been twirling across the globe according to the World Health Organization (WHO, 2020) health report. The novel coronavirus (COVID-2019) was first isolated from a patient with pneumonia, connected to the cluster of acute respiratory illness cases from Wuhan, China. Coronaviruses commonly cause mild to moderate respiratory and cold type symptoms, though certain strains of coronaviruses have caused more severe illnesses. (Cornelia, Agoritsa, Eeva, Sergio, Bruno, Dragoslav, Laura, Céline Katrin, Grazina, Teymur, Pasi, Diamantis and Emmanuel, 2020). Patients with COVID-2019 have reportedly had mild to severe respiratory illness with symptoms of fever, cough and shortness of breath. Many patients have pneumonia in both lungs. There is currently limited information on the epidemiological and clinical characteristics of the infection caused by COVID-2019. The incubation period observed in the current outbreak is seven days. Based on the epidemiological characteristics of respiratory infections caused by SARS-CoV and MERS-CoV, an incubation period of two to seven days and up to 14 days is plausible. Epithelial cells in the respiratory and gastrointestinal tract are the primary target cells. Viral shedding therefore occurs via these systems and transmission can be through a variety of routes such as respiratory droplets, airborne, fomites or fecal-oral and it is possible for coronavirus to be transmitted during the incubation period when the patient may not even know that he or she had been infected. Therefore, mildly sick are advised to drink a lot of liquid and observe adequate rest. (Ademaluyi 2020)

Also, it is quite encouraging that the Nigerian authorities have started taking steps to control a possible import of the disease into the country, though two cases have so far been reported in Nigeria, the first case of coronavirus was reported on 27th of February 2020 in Lagos and the second case was reported on 9th of March 2020 in Ewekoro, Ogun State. There has to also be an increase in surveillance and preparation to handle a possible outbreak which means there is a need to plan for isolation centers. Perhaps the experience of handling Ebola will become handy in this case. There are simple everyday preventive actions which can help to prevent the spread of respiratory viruses such as avoiding close contact with people who are sick, not touching one's eyes, nose, and mouth with unwashed hands, washing hands often with soap and water for at least twenty seconds, using alcohol-based hand sanitizer that contains at least 60% alcohol if soap and water are not available, staying indoors when one is sick, covering mouth when coughing or sneezing with a tissue and trashing the tissue in the trash bin, cleaning and disinfecting frequently touched objects and surfaces and staying away from crowded places to avoid unnecessary contacts. Because it is unclear how easily or sustainably this coronavirus is spreading between people and there is currently no antiviral or vaccine to protect one against COVID- 2019. Coronavirus has no known cure for now, prevention remains the best form of defense. (Ademaluyi, 2020)

Without implementation of appropriate infection prevention and control measures at the point of care for persons under investigations, vehicle parks, Railway stations and Airports, there is a moderate likelihood of outbreaks in destination countries. In the past, systematic implementation of infection prevention and control measures were effective in controlling both SARS-CoV and MERS-CoV. Consequently, the likelihood of cases of COVID-2019 being imported to Nigeria by travelers from Wuhan is considered to be high. This likelihood may be decreased by the implementation of entrance and exit screening by the local authorities in Wuhan. (Ademaluyi 2020). Travelers returning from China with a stay in Wuhan and symptoms of acute respiratory infection should be identified for testing and reported promptly to the respective public health authorities. Until more information are made available on the epidemiology and pathogenesis of this infection, recommendation

used for SARS-CoV, Ebola and MERS-CoV may be applied. It is against this background that the researcher sought to find out the Strategies for Creating Awareness Coronavirus Disease (COVID-2019) Transmission Among Health Workers in Lagos State South West Nigeria.

Purpose of the Study

The main purpose of this study was to determine the Strategies for Creating Awareness on Coronavirus Disease (COVID-2019) Transmission Among Health Workers Specifically, the study determined:

1. Different types of virus diseases
2. Modes of virus transmission among health workers in Lagos state South West Nigeria
3. Ways of reducing coronavirus transmission
4. Strategies of creating awareness on coronavirus transmission among health workers in Lagos State South West Nigeria

Research Questions

1. What are the different types of virus disease?
2. Modes of virus transmission among health workers in Lagos state South West Nigeria?
3. What are the ways of reducing coronavirus transmission?
4. What are the strategies of creating awareness on coronavirus transmission among health workers in Lagos State South West Nigeria?

II. Methodology

Research Design: The study adopted a descriptive survey design.

Area of the Study: The study was carried out in Lagos State, South West Nigeria. Lagos state was chosen because of its high level of congestion which contributes to health challenges in the city due to increased number of human activities as well as lots of health hazards caused by excessive bodily contact and lack of awareness on proper personal hygiene.

Population for the Study: The population for this study was four hundred and seven (300). This comprises of (50) health workers from Abule Nla Primary Health Centre (70) from Simpson Street Primary Health Centre, (50) from Adekunle Primary Health Centre and (30) from Otto Primary Health Centre all in Ebute-Metta in Lagos State. (Source: Lagos State Primary Care Board).

Sample and sampling Technique: Sample for this study was one hundred and fifty (150) health workers from Abule Nla Primary Health Centre, Simpson Street Primary Health Centre, Otunmara Primary Health Centre and Otto Primary Health Centre in Ebute-Metta in Lagos State. Anaekwe (2007) stated that purposeful sampling ensures that only elements that meets the desired purpose or possess the attributes desired are selected. These consist of twenty (38) health workers from Abule Nla Primary Health Centre, (35) Simpson Street Primary Health Centre, (34) Adekunle Primary Health Centre and (43) Otto Primary Health Centre.

Instrument for Data Collection: A validated questionnaire was used for data collection. The questionnaire was titled “Strategies for Creating Awareness on Coronavirus Disease (COVID-2019) Transmission (SCACT)”. The questionnaire was divided into two sections. Section A sought for demographic information while section B was based on the research questions. Section B was drawn on a four-point scale rating: SA as Strongly Agreed, A as Agreed, D as Disagreed and SD as Strongly Disagreed. Three Home Economics experts validated the instrument and it yielded reliability co-efficient of 0.73.

Method of Data Collection: One Hundred and Fifty (150) copies of the questionnaires were distributed to the respondents. Efforts were made to ensure that the items were filled correctly without omitting any of the needed information. One hundred and forty (140) copies of the distributed questionnaires were returned showing 96% return rate

Method of Data Analysis: Data collected were analyzed using mean. Mean ratings from 2.50 and above were considered as agreed upon while items with mean ratings of 2.49 and below were considered as disagreed upon.

III. Results

Table 1: Mean Responses on the different types of viral diseases

S/N	Types of viruses	Mean	Remarks
1.	Severe Acute Respiratory Syndrome (SARS)	3.5	Agreed
2.	Coronavirus disease (CoVID-2019)	3.0	Agreed
3.	Middle East respiratory syndrome coronavirus (MERS-Cov)	4.0	Agreed
4.	Small pox, chicken pox and shingles	3.0	Agreed
5.	Measles	2.5	Agreed
6.	Mumps and rubella	3.5	Agreed
7.	Polio	4.0	Agreed

8.	Ebola and hanta fever	3.5	Agreed
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Data presented on table 1 showed that all the items were accepted as the different types of viral diseases. All the items had mean ratings ranging from 4.0 to 2.5. Measles had the least mean rating of 2.5.

Table 2: Mean Responses on the and modes of virus transmission among health workers

S/N	Modes of virus transmission	Mean	Remarks
.1	By respiratory droplets	3.0	Agreed
2.	Through contaminated objects	2.5	Agreed
3.	Through stool during bowel movement	3.5	Agreed
	Personal belongings	3.0	Agreed
4.	Human to human transmission	4.0	Agreed
5.	By touching contaminated surfaces	2.8	Agreed
6.	By touching our eyes, nose with dirty hands	3.5	Agreed
7.	Environmental pollution	3.4	Agreed
8.	Waste generation and management	4.0	Agreed
9.	Waste reduction and recycling	4.5	Agreed

Data presented in table 2 showed that all the items were accepted as modes of virus transmission among health worker. All the items had mean ratings ranging from 4.5 to 2.5. Through contaminated objects on item 2 had the least mean value of 2.5

Table 3: Mean Responses on the ways of reducing coronavirus transmission among health workers

S/N	Ways of reducing coronavirus transmission	Mean	Remarks
1.	Limit human to human transmission by avoiding large crowds	3.5	Agreed
2.	Identify, isolate and care for patients early	2.5	Agreed
3.	Identify and reduce transmission from animal source	4.0	Agreed
4.	Address crucial unknowns regarding clinical severity	3.0	Agreed
5.	Communicate critical risk factors through radio jingles, television and internet	3.5	Agreed
6.	Avoid shaking hands with people as much as possible	3.0	Agreed
7.	Emergency care line should be provided easy information flow	2.5	Agreed
	Keep away from sick persons	3.5	Agreed
8.	Provide health travel history desk at the Airports, Sea ports, Bus and Railway terminals persons	4.5	Agreed
9.	Use tissue paper when coughing	2.5	Agreed
10	Never touch your face, nose and mouth with unclean hands	3.5	Agreed

Data presented on table 3 above showed that all the items were accepted as ways of reducing coronavirus transmission among health workers. All the items had mean ratings ranges from 4,5 to 2,5. Identify, isolate and care for patients early and use tissue paper when coughing both had the lowest mean ratings of 2.5.

Table 4: Mean Responses on the Strategies of creating awareness on coronavirus transmission among health workers

S/N	Strategies of creating awareness on coronavirus transmission among health workers	Mean	Remarks
1.	Promoting jingles on radio and television on the deadly nature of coronavirus	3.5	Agreed
2.	Organizing workshops and seminars on the need for personal hygiene	3.2	Agreed
3.	Organizing conferences for health workers	3.0	Agreed
4.	Religious bodies participating in the campaign for maintaining good personal hygiene	2.5	Agreed
5.	Newspapers and media houses to adequately promote coronavirus awareness	2.6	Agreed
6.	Providing hand sanitizer at the airports, bus and railway terminals	3.5	Agreed
7.	Funding research on coronavirus vaccine invention	4.0	Agreed
8.	Emergency care line to be provided easy information flow	2.5	Agreed
9.	Encouraging more result oriented research on coronavirus	4.0	Agreed
10.	Identifying and reporting returning travelers from Wuham China with symptoms of acute respiratory infection for testing and quarantine	4.5	Agreed

11.	Provision of medical mask, and a fluid resistant gown for health workers	3.5	Agreed
12.	Provision of non-sterile gloves, disposable gown and respiratory protection	3.6	Agreed
13.	Provision of disposable face shield and eye protection	2.4	Agreed
14.	Reviewing national laboratory diagnostic capacity	4.0	Agreed
15.	Enhancing procedures for transporting samples	3.5	Agreed
16.	Providing standard quarantine formalities	4.5	Agreed

All but 1 out of the 16 items presented on table 4 above were agreed upon as the strategies of creating awareness on coronavirus transmission among health workers. The mean ratings ranges from 4.5 to 2.4. Provision of disposable face shield and eye protection had the least mean rating of 2.4.

IV. Discussion of Findings

Findings revealed that the respondents agreed that the respondent agreed that Severe Acute Respiratory Syndrome (SARS), Coronavirus disease (CoVID-2019), Middle East Respiratory Syndrome Coronavirus (MERS-Cov), Small pox, chicken pox, shingles, Measles, Mumps, rubella, Polio, Ebola and hanta fever are some of the different types of viral diseases. This corroborates with the assertions of (Cornelia et al,2020) which affirms that. This newly identified coronavirus is in the same family as the viruses that causes Severe Acute Respiratory Syndrome (SARS), which was first identified in Asia in 2003, and Middle East Respiratory Syndrome-Related Coronavirus (MERS-CoV) which was identified in 2012 in Saudi Arabia. Since then, the majority of human cases have been reported from the Arabian Peninsula.

The respondents affirmed that some of the modes of virus transmission among health workers through respiratory droplets, contaminated objects, stool during bowel movement personal belongings, human to human transmission and by touching contaminated surfaces touching our eyes, nose with dirty hands. This is in line with the opinion of (Ademaluyi 2020) who asserted that it is possible for coronavirus to be transmitted during the incubation period when the patient may not even know that he or she had been infected. Epithelial cells in the respiratory and gastrointestinal tract are the primary target cells and that viral shedding therefore occurs via these systems and transmission can be through a variety of routes such as respiratory droplets, airborne, fomites or fecal-oral and the best way to prevent infection is to avoid being exposed to this virus.

Findings also revealed that the limiting human to human transmission by avoiding large crowds identifying, isolating and caring for patients early, identifying and reducing transmission from animal source, addressing crucial unknowns regarding clinical severity, communicating critical risk factors through radio jingles, television and internet, avoiding shaking hands with people as much as possible, emergency care line should be provided easy information flow, keeping away from sick persons, providing health travel history desk at the Airports, Sea ports, Bus and Railway terminals persons, use tissue paper when coughing and never touching ones face, nose and mouth with unclean hands are some of the ways of reducing coronavirus transmission among health workers. This agrees with the work of (Ademaluyi 2020) who asserted that since coronavirus has no known cure, prevention remains the best form of defence and. the best way to prevent infection is to avoid being exposed to this virus.

Results of the findings on table 4 revealed that all the listed items were agreed upon as some of the ways of the strategies of creating awareness on coronavirus transmission among health workers. This corroborates with (WHO 2020) interim guidance report which affirms that placement of suspected and confirmed cases in single rooms, implementation of contact and droplet precautions, and airborne precautions when performing aerosol generating procedures or interventions and so on are some strategies of reducing the spread of coronavirus.

V. Conclusion

The study determined the Strategies for Creating Awareness on Coronavirus Disease(COVID-2019) Transmission Among Health Workers. Results from the study revealed that Severe Acute Respiratory Syndrome (SARS), Coronavirus Disease (COVID-2019) Middle East Respiratory Syndrome Coronavirus (MERS-Cov) among others are types of viruses. Some modes of virus transmission among health workers are through respiratory droplets, contaminated objects, stool during bowel movement, human to human transmission, touching contaminated surfaces and touching our eyes, nose and mouth with dirty hands. Avoiding large crowds, identifying, isolating and caring for patients early, identifying and reducing transmission from animal source, addressing crucial unknowns regarding clinical severity were among the listed ways of reducing the spread of coronavirus among health workers.

Promoting jingles on radio and television on the deadly nature of coronavirus, organizing workshop and seminars on the need for personal hygiene, organizing conferences and religious bodies participating in the campaign for maintaining good personal hygiene were among the identified strategies for creating awareness on Coronavirus Disease (COVID-2019) Transmission Among Health Workers.

VI. Recommendations

1. Good personal hygiene should be maintained constantly by individuals and family members
2. Individuals should avoid cross contamination through raw meats and uncooked foods,
3. Sanitizers, hand gloves and disinfectants should always be adequately provided for health workers
4. Masks, gloves, eye protection or face shield and fluid resistance gowns must be provided and properly worn by health workers
5. Deferral from donation of blood, cells and tissues donors for 21 days after possible exposure to a confirmed case or after returning from Wuhan, China is essential.
6. Potential organ donors at risk of being infected should be laboratory-tested for the presence of the virus.
7. There must be regular routine checks for health workers,
8. Droplets from cough and sneeze should be avoided.
8. Direct contact with patients and their personal tools must be discouraged and avoided, persons exhibiting symptoms should be quarantined to prevent transmission and spread of coronavirus.
9. Confirmed cases of 2019-nCoV infection should be immediately reported to the Early Warning and Response System (EWRS)
10. Isolation and management of high consequence infectious disease cases, including staffing and laboratory support is crucial
11. Travelers planning to visit Wuhan should be advised to avoid visiting wet markets or places where live or dead animals are handled
12. Avoid contact with animals like cats, bats and their excretions or droppings.
13. Frequent checks on World Health Organization (WHO) websites frequently for the most updated information regarding coronavirus is essential.
14. Travelers should receive seasonal influenza vaccination at least two weeks prior to travel in accordance with their respective national recommendations.

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