# Assessment of the Level of Training and Information Sources on COVID-19 Available to Healthcare Workers (HCWs) in Oyo State, Nigeria

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## ABSTRACT

*The Corona Virus Disease 2019 (COVID-19) has reached 100 nations with more than 1,000,000 cases thus stretching healthcare facilities and workers. There are dangers for frontline healthcare workers (HCWs) working during this pandemic. The knowledge and training available to HCWs will assist in treatment, knowledge dissemination and prevention for as long as the pandemic is in effect. This survey seeks to investigate the level of training and information sources about Covid-19 that are available to HCWs in Oyo State. A self-designed questionnaire was administered electronically and by direct contact with HCWs. The online poll had 40 participants and paper survey had 100 participants. Data analysis was done using simple statistical functions such as descriptive statistics and frequency. Over 90% of the HCWs accepted that Covid-19 is genuine. Majority of HCWs depended on information from the TV, radio and Internet about Covid-19. The results affirmed that not all classes of HCWs were well informed and trained on Covid-19. Social media is a diverse and affordable platform for informing and training HCWs on Covid-19.*

**Keywords**: *Covid19, training, information sources, Healthcare Worker, Nigeria*

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## 1.    INTRODUCTION

An infectious disease outbreak reported by China, in December 2019 was declared a pandemic, according to World Health Organization (2020). The COVID-19 infection got to most countries through airline travel and has left a death toll of thousands. The clinical manifestations for the first infected patient were fever, cough, and dyspnea as reported by Du Toit (2020).

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Nigeria like other countries of the world is experiencing the COVID-19 pandemic at the moment. The first confirmed case in Nigeria was announced on 27 February, 2020 when an Italian who works in Nigeria returned form Milan, Italy through the Murtala Muhammed International Airport tested positive for the virus in Lagos. On 9th March, 2020, a second case of the virus was reported in Ewekoro, Ogun State, of a Nigerian citizen who had contact with the Italian as reported by NCDC (2020). Researchers say the disease is transmitted through air droplets that are projected during sneezing or coughing from an infected person. It also spreads when people have touched hands or surfaces that have the virus.

COVID-19 has affected almost the whole universe and there is no known remedy for the infection. Due to the impact the pandemic has on economy, banking, and social lives, the state governments provided palliatives to pad the effect of the pandemic on the masses.

A pandemic update on the number of instances of COVID-19 was being accounted for day by day in Nigeria. The investigation portrayed the current circumstance in Nigeria extending from confirmed cases, demise cases and recouped cases. The statistical information provided by the National Centre for Disease Control (NCDC, 2020) in Nigeria as at 25 September, 2020 gave 57,849 cases, 49,098 recovered and 1,102 deaths. There is an increment of COVID-19 cases every day in Nigeria. There are many hazards facing healthcare workers working during a pandemic, thus the need for relevant information using available communication channels. It is fundamental to educate HCWs on their safety as they keep on working during the pandemic. There should be techniques that reduces the worries and fears of HCWs and reduce expected hindrances to a safe work place. Adequate steps must be taken to protect HCWs from hazards related to exposure during patient treatment, stress from overtime, equipment sterilization and inadequate medical supplies.

The current widespread outbreak of this pandemic is associated with delay in diagnosis and poor infection control procedures. Early diagnosis was done by using manifested symptoms, waiting for 14 days without any test, and using a diagnosis kit whose results is available in 72 hours. Border closure and restriction of airline travel were the initial control procedures adopted globally. It took a while for prevention protocols such as washing of hands and use of facemasks to be advocated as a method to control the infection rates. Since HCWs treat people infected with COVID-19, they are part of the infection transmission chain. HCWs knowledge of COVID-19, training and access to relevant information can help break the transmission chain. The purpose of this survey is to determine the training and information sources about COVID-19 that is available to healthcare workers in Oyo State, Nigeria. The study identified the trainings HCWs have been exposed to, sources of information and their knowledge about COVID-19 symptoms and treatment.

## 2.     LITERATURE REVIEW

Coronavirus is a novel microorganism that causes respiratory disease in hosts. This is the significant medical issue faced by the public around the world and it is indicated as a world pandemic. A recent study on COVID-19 in Nigeria based on the number of cases for infection, death and recovery within a period of 5 weeks i.e. 27th Feb., to 5th April, 2020 revealed daily increase of Covid-19 cases, few numbers of recovered persons and death cases (Hassan, 2020).

Alao, Durodola, Ibrahim & Asinobi (2020) assessed the health worker's knowledge, beliefs, attitudes and the use of Personal Protective Equipment (PPE) in southwest and northwest part of Nigeria in the prevention of Covid-19 infections. The study was done using a web-based and self-administered questionnaire with 33items. The 290 respondents were selected using snowball sampling technique. 18 responses (16.2%) were excluded due to incomplete data and 272 respondents of the survey were analysed. Only 70 participants (25.7%) had adequate knowledge about PPE. This implied that their knowledge, attitude and belief about PPE were poor. Nigeria needs a nationwide training on PPE so as to reduce COVID-19 infection among HCWs.

Ayinde, Usman, Aduroja & Gbolahan (2020) did an assessment of 350 Oyo State healthcare workers' knowledge, attitudes and practices on COVID-19 using a semi-structure questionnaire. They identified 78.6% good knowledge and 64% positive attitude among respondents. Majority of the HCWs engage in washing hands, routine cleaning and high disinfection but the use of personal protective equipment (PPE) was average at 56.8%. They concluded that effective infection control requires regular training, orientation for all categories of HCWs and provision of PPEs.

A web-based study that was cross-sectional, was conducted by Bhagavathula, Aldhaleei, Rahmani,

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Mahabadi & Bandari (2020) among HCWs during the first week of March 2020 about COVID-19. The study investigated the knowledge and perceptions of HCWs with a 23-item survey instrument distributed to HCWs through social media. Descriptive analysis such as chi-square test was used for the analysis. There were 529 respondents but only 453 HCWs completed the survey giving a response rate of 85.6%. A large number (i.e. n=276, 61.0%) of HCWs had poor knowledge of COVID-19 transmission. The results indicated that parameters such as age and profession were associated with inadequate knowledge and a poor perception of COVID-19.

Draper, Wilson, Ives, Gratus, & Greenfield (2008) conducted a two-phase multi-method study, incorporating focus groups and a questionnaire survey. The range of factors associated with HCWs responses to the prospect of working during COVID-19 pandemic was determined in phase one. In phase two, a survey was used to determine the various factors enabling the estimation of the likely proportion of HCWs affected by each factor, and the probability to continue working during the COVID-19 pandemic. Their submission reveals the existence of health risks for some healthcare workers working during a pandemic. If the health risks are well managed, it should lead to strategies that will alleviate the concerns and fears of HCWs, thus removing potential barriers to working.

At the District 2 Hospital in Ho Chi Minh City (HCMC), an assessment of knowledge and attitude toward coronavirus disease (i.e. COVID-19) was performed between January 2020 and February 2020 among healthcare workers by Giao, Nguyen, Thi, Han & Khanh (2020). A systematic random sampling strategy was carried out and the data collected was through a self-administered questionnaire on the knowledge and attitude of healthcare workers regarding COVID-19. Majority of the HCWs had good knowledge and positive attitude toward COVID-19 issues. The level of knowledge and attitude was however lower than what was expected for medical care during the COVID-19 pandemic. They recommended more trainings and advocacy campaigns for the healthcare workers.

Marzieh, Bahareh & Fatemeh (2020)'s study measured the awareness level of nurses in Shiraz, Iran, during COVID-19 pandemic. A self-administered questionnaire was used for data collection. There were 85 participants. About half of the nurses (56.5%) had a good knowledge about COVID-19 transmission, symptoms, signs, prognosis, treatment, and mortality rate. The information sources for the nurses were the World Health Organization and the Ministry of Health (55.29%), social applications (48.23%), and media (42.35%). In their submission, nurses' knowledge of COVID-19 was sufficient. The researchers' however suggested on-going training for the nurses who are frontline workers during the pandemic.

Zhou, Tang, Wang & Nie (2020) analysed HCWs knowledge, practices, and attitudes about COVID-19 using a cross-sectional survey conducted between February 4th and February 8th, 2020. The sample used was 1357 HCWs across 10 hospitals in Henan, China. The analysis showed that 89% of HCWs had sufficient knowledge about COVID-19, with 85% afraid of possible infection while treating patients and 89.7% followed best practices while working with COVID-19 patients. They suggested that measures must be approved to protect HCWs from risks linked to work experience, working hours, educational attainment, and contact with patients.

Okereafor & Adebola (2020) advocating using remote information and communication technology to control the spread of COVID-19. Advances in information and communication technology have shown huge potentials to provide remote management of patients thereby protecting caregivers, medical personnel and the general public from contracting COVID-19. Technologies such as Artificial Intelligence and Data Science can help build systems and models that can stop the spread of COVID-19. Data Science can be used to handle the big amount of data taken from public health surveillance systems, real-time epidemic outbreaks monitoring, trend now-casting/forecasting, regular situation briefing and updates from governmental institutions.

Anthony (2020) in the report titled "use of telemedicine and virtual care for remote treatment in response to COVID-19 pandemic" explains how medical centers adopt digital tools and technologies such as telemedicine and virtual care for patients. When telemedicine is used to deliver timely care medical practitioners and patients exposure to infection is minimal. Anthony (2020) further revealed a practical guide on how to use telemedicine and virtual care during the COVID-19 pandemic. This study highlights the potential of virtual care solutions in healthcare.

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Akib, Muhammad, Tarannum & Mohammad (2020) did an exploratory study about the strengths, weaknesses, opportunities and threats for the containment of the COVID-19 pandemic using information and communication technology. Online data containing about 1200 electronic resources was collected, while 56 were selected for use. This study explored various digital interventions used in the process of handling COVID-19 pandemic cases. The implications for government, practitioners, doctors, policymakers and researchers included effective utilization of the existing digital interventions and the identification of potential research/technological areas.

## 3.      METHODS

### 3.1 Study Design and Data Collection

This study used the survey method with mixed data collection methods. A web-based platform, Google Forms, was used to host the questionnaire for collecting data. The link to the questionnaire was distributed using social media i.e. WhatsApp messages. The questionnaire was also produced in paper form for distribution at health organizations within Oyo State such as University Teaching Hospital. The survey was done in two weeks i.e. May 27, 2020, to June 10, 2020. Our study participants included Physicians (General Practitioners/Consultants), Health Officers, Cleaners, Health Records Officers, Nurses, Laboratory Technologists, Pharmacists, Drivers, and others who are involved in the care of COVID-19 patients. HCWs chose to complete the survey on their own time without compulsion. No identification data that relates to the participants was recorded anywhere on the questionnaire to allow freedom of expression.

### 3.2 Questionnaire and Data Processing

The questionnaire had eight sections. The first section included demographic data i.e. gender, state, marital status, highest qualification, Healthcare worker category, years of service, and current employment. The second section evaluated the healthcare workers believe on the reality of Covid-19 (yes or no). The third section of the survey collected information sources of healthcare workers on Covid-19 using yes/no questions. Fourth section of the survey evaluated their training on Covid-19. The fifth section evaluated HCWs knowledge about Covid-19 symptoms and manifestations. The sixth section evaluated their knowledge on Covid-19 security and safety. The seventh section evaluated whether they believe if a vaccine will stop the

spread of Covid-19. The eight sections evaluated the healthcare workers comments on their training, knowledge, and information sources on Covid-19. It involves four responses: (i) adequately trained and informed, (ii) fairly trained and informed, (iii) not trained but informed, (iv) not trained and not informed.

### 3.3. Data Analysis

The downloaded data was analysed using MS Excel. Descriptive statistics and frequency was used to describe the quantitative variables collected. There were 40 responses from online participants and 100 responses from the paper questionnaire. The data was analysed separately and together.

## 4. RESULTS

The results from the study are presented below using tables and charts. A discussion of the results is given after the result presentation.

### 4.1 Data about Participants

Data that could not be used to identify respondents was collected on the survey. Table 1 shows the results.

Table 1 presents data about the participants. There were 40 online respondents. 33 respondents (82.5%) were female, 26 respondents (65.0%) were single, 12 respondents (30.0%) were married and 2 respondents (5.0%) were widowed in their marital status. The highest qualification for first degree falls on 25 respondents (62.5%), 13 respondents (32.5%) had diploma, 1 respondent (2.5%) had masters while 1 respondent (2.5%) had MBBS. The healthcare workers categories were 1 respondent (2.5%) for physician, 3 respondents (7.5%) health officer, 4 respondents (10.0%) health records officer, 27 respondents (67.5%) were nurse while laboratory had 2 respondents (5.0%), pharmacist 1 respondent (2.5%) and 2 respondents (5.0%) others. Majority of these healthcare workers 1-5 years in service 28 respondents (70.0%), 6 respondents (15.0%) used between 6-15 years and 6 respondents (15.0%) used between 16-35 years of service. On their current employment, 27 respondents (67.5%) worked with private organizations while 13 respondents (32.5%) worked with Government Organization.

The paper respondents had 49 respondents (49.0%) female, 43 respondents (43.0%) were single, 56 respondents (56.0%) were married and 1 respondent (1.0%) was divorced in their marital status. From their highest qualifications, 11 respondents (11.0%) had no certificate, first degree was 45 respondents

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(45.0%), 1 respondent (1.0%) PhD, 1 respondent (1.0%) Fellowship, 23 respondents (23.0%) had diploma, 10 respondent (10.0%) masters and 8 respondents (8.0%) MBBS. Healthcare workers categories were 3 respondents (3.0%) physician, 23 respondents (23.0%) health officer, 7 respondents (7.0%) cleaners, 10 respondents (10.0%) health records officer, 26 respondents (26.0%) were nurse, laboratory 8 respondents (8.0%), pharmacist 11 respondents (11.0%), 1 respondent (1.0%) driver and 11 respondents (11.0%) others. Those that had used 1-5 years in service were 44 respondents (i.e. 44.0%), 41 respondents (i.e. 41.0%) used between 6-15 years and 15 respondents (i.e. 15.0%) used between 16-35 years in service. Their current employment, 31(31.0%) worked with private organization while 69 respondents (69.0%) worked for the Government.

The total respondents (140) had 82 respondents (58.6%) as female. 69 respondents (49.3%) were single, 68 respondents (48.6%) were married, 2 respondents (1.4%) widowed, and 1 respondent (0.7%) divorced. Highest qualifications, 11 respondents (7.9%) had no certificate, first degree 70 respondents (70.0%), 1 respondent (0.7%) had PhD, 1 respondent (0.7%) Fellowship, 36 respondents (25.7%) had diploma, 11 respondents (7.9%) masters, 9 respondents (6.4%) MBBS and 1 respondent (0.7%) for others. Healthcare worker categories were 4 respondents (2.85%) were physicians, 26 respondents (18.6%) were health officers, 7 respondents (5.0%) were cleaners, 14 respondents (10.0%) were health records officer, 53 respondents (37.9%) were nurse, laboratory 10 respondents (7.1%), pharmacist 12 respondents (8.6%), 1 respondent (0.7%) driver and 13 respondents (9.3%) fell under others. 72 respondents (51.4%) used 1-5 years in service, 47 respondents (33.6%) 6-15 years and 21 respondents (15.0%) used between 16-35 years in service. From their current employment, 58 respondents (41.4%) worked with private organization while 82 respondents (58.6%) worked for the Government.

### 4.2. Participants opinion about reality of Covid19

Table 2 indicates that over 90% of HCWs in Oyo State believe that Covid19 is real.

### 4.3 Covid19 Information Sources of Participants

Table 3 shows the responses for the information sources available to HCW. The participants rated the TV and Internet as the predominant information sources for Covid19. For the online participants, 85% searched for information on the internet, 82.5% followed the NCDC and watched TV for Covid19

information. The same pattern was repeated by paper participants and the combined responses. Social media as an information source was used by 82.5% of online participants, 94% of paper participants and 90.7% of the combined participants.

### 4.4 Covid19 Information Training of Participants

Table 4 presents details of Covid19 related training available or attended by HCWs. Participants who had Covid19 training were 67.5% of the online participants, 59% of paper participants and 61.5% of the combined participants. The training was not free, as 35% of online participants, 47% of paper participants and 43.6% of all participants confirmed. Participants were not all given a certificate of attendance or participation as reported by 60% of online participants, 61% of paper participants and 60.7 of the combined participants. The training was not face to face as confirmed by 65% of online participants, 62% of paper participants and 62.9% of combined participants. A large number of the participants understood the information provided on Covid19 with 72.5% from online participants, 63% from paper participants, and 65.7% from combined participants. The participants believed that the trainer was an expert in the field as reported by 70% of online respondents, 60% of paper participants and 62.9% of all participants. The participants expressed the need for more training as shown in Table 4.

### 4.5 Knowledge about Covid19 Symptoms and Manifestations

In Table 5, HCW's knowledge about the symptoms and manifestation of Covid19 are presented for all categories of participants. The online participants (87.5%), paper participants (97%) and combined participants at 94.3% correctly identified the symptoms for Covid19. 50% of online participants believed Covid19 is air-borne, 80% of paper participants agreed and a combined 71.4% of all participants believed Covid19 is transmitted through air. 92.5% of online participants believed that the manifestation days of Covid19 is between 2-14 days, 98% of paper participants and 96.4% of the combined participants. Majority of the participants believed that Covid19 infection could lead to pneumonia, respiratory failure, and death with 90% response of online participants, 99% of paper participants and 96.4% of combined participants.

### 4.6 Covid19 Security and Safety of Participants

Table 6 provides data as it relates to security and safety during the Covid19 pandemic.

For online participants, 57.5% knew Covid19 patients do not show physical manifestations; 92.5% knew how to protect themselves from Covid19; 80% believed the face mask protects against Covid19; 90% believed they need PPE to treat Covid19 patient; 92.5% agreed with the practice of hand washing or sanitizers to protect against Covid19.

A similar pattern is repeated for paper participants and the analysis of the combined participants follows the same pattern.

Participants' response to whether a vaccine can stop the spread of Covid19.

Figure 7a shows the number of respondents that a vaccine will stop Covid19 spread. From the figure, 35% of online participants, 52% of paper participants and 47.1% of the combined participants were sure of a vaccine stopping the spread of Covid19.

In Figure 7b, 7.5% of online participants, 3% of paper participants and 4.3% of all participants are sure that a vaccine is useless to stop the spread of Covid19.

Figure 7c shows that 57.5% of online participants, 45% of paper participants and 48.6% of combined participants are not sure of the efficacy of a vaccine.

4.8 Respondents Comments on Adequacy of Training and Information

Participants comments on Covid19 training and their information capacity about Covid19 is shown in Table 8.

Figure 8a, represents online participants opinion about their training and information capacity. 19(47.5%) of the online participants believed that they were fairly trained and informed. 10(25%) participants stated that they were neither trained nor informed about Covid19. 6(15%) participants were not trained but informed about Covid19. Only 5(12.5%) participants believed that they were adequately trained and informed.

In Figure 8b, paper participants' view of their training and information capacity is presented. 30 (30.0%) participants indicated that they are not trained and informed about Covid19. 29 (29.0%) participants however stated that they were well trained and informed about Covid19. 28 (28.0%) participants said they were fairly trained and

informed. 13 (13.0%) participants indicated they were neither trained nor informed about Covid19.

The combined data of all participants in Figure 8c indicates that 47 (33.6%) participants were fairly trained and informed, 36 (25.7%) participants were not trained but informed, 34 (24.3%) participants were trained and informed and 23 (16.4%) were not trained and not informed.

## 5.  DISCUSSION

The study used a wide spectrum of Healthcare workers across Oyo State, Nigeria. Healthcare workers included in the study were medical doctors, nurses, pharmacist, ambulance drivers, laboratory technologists, Health officers and Health record officers. A large number of the participants had spent less than 15years in service either at a private or government-owned health institutions. There were more female participants than male; this may be due to the high number of nurses who participated. Nursing is generally seen as a domain for female healthcare workers.

Over 90% of all types of participants believed that Covid19 is real. This may be due to involvement in treatment of a patient or information from colleagues involved with the treatment of Covid19 patients.

HCWs relied on information from the TV, radio, Internet and their superior to know about Covid19. The power of books, brochures and information booklets is not felt by the HCWs. This implies that the TV and radio are the only local or indigenous sources of information. Information available on the internet is global and general in nature, thus will be inadequate to meet local conditions. The practice of the boss as a source of information is still prevalent in this category of workers.

The participants agreed on being trained on Covid19 but still expressed desired for more training. This may be related to the dynamic nature of information available about Covid19. A mix of face to face and online training was used to train HCWs on Covid19. There was no certificate to document attendance at the training and this was not acceptable to the participants.

The participants knew the symptoms and manifestations of Covid19. This could be from the repeated notices and advertisements on radio, TV, and social media messages. The mode of transmission is believed to be through air but this is

yet to be confirmed by studies or a medical authority.

HCWs were aware of the security and safety precautions to be taken when treating a Covid19 patient and for individuals generally. Face masks were rated lower than the use of sanitizers and washing of hands to prevent COVID-19 infection. HCWs were not overly enthusiastic about the spread of Covid19 stopping with the production of a vaccine.

## 6. CONCLUSION

This study focused on Healthcare Workers (HCWs) in Oyo State, Southwestern Nigeria. The work confirmed that not all categories of HCWs were trained on Covid19. From the results obtained, it can be concluded that training and information sourcing about Covid19 should not be the responsibility of HCWs. HCWs relied on the TV and Internet (social media included) for information about Covid19. HCWs are committed to patient well-being but can only save lives from Covid19 if they are properly trained and informed about Covid19.

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Table 1: Data about Participants – demographics

| Variables | | Number of Respondents (%) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Online Participants | | Paper Participants | | Total Participants | |
| | | Freq. | % | Freq. | % | Freq. | % |
| Gender | Male | 7 | 17.5 | 51 | 51.0 | 58 | 41.4 |
| | Female | 33 | 82.5 | 49 | 49.0 | 82 | 58.6 |
| State | Oyo | 40 | 100 | 100 | 100 | 140 | 100 |
| Marital Status | Single | 26 | 65.0 | 43 | 43.0 | 69 | 49.3 |
| | Married | 12 | 30.0 | 56 | 56.0 | 68 | 48.6 |
| | Widowed | 2 | 5.0 | ---- | ---- | 2 | 1.4 |
| | Divorced/separated | --- | --- | 1 | 1.0 | 1 | 0.7 |
| Highest qualification | No certificate | --- | --- | 11 | 11.0 | 11 | 7.9 |
| | First degree | 25 | 62.5 | 45 | 45.0 | 70 | 50.0 |
| | PhD | --- | --- | 1 | 1.0 | 1 | 0.7 |
| | Fellowship | --- | --- | 1 | 1.0 | 1 | 0.7 |
| | Diploma | 13 | 32.5 | 23 | 23.0 | 36 | 25.7 |
| | Masters | 1 | 2.5 | 10 | 10.0 | 11 | 7.9 |
| | MBBS | 1 | 2.5 | 8 | 8.0 | 9 | 6.4 |
| | Others | --- | --- | 1 | 1.0 | 1 | 0.7 |
| Healthcare Worker Category | Physician(MBBS/Consultant) | 1 | 2.5 | 3 | 3.0 | 4 | 2.85 |
| | Health officer | 3 | 7.5 | 23 | 23.0 | 26 | 18.6 |
| | Cleaner | --- | --- | 7 | 7.0 | 7 | 5.0 |
| | Health records | 4 | 10.0 | 10 | 10.0 | 14 | 10.0 |
| | Nurse | 27 | 67.5 | 26 | 26.0 | 53 | 37.85 |
| | Laboratory | 2 | 5.0 | 8 | 8.0 | 10 | 7.1 |
| | Pharmacist | 1 | 2.5 | 11 | 11.0 | 12 | 8.6 |
| | Driver | --- | --- | 1 | 1.0 | 1 | 0.7 |

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|  | Others | 2 | 5.0 | 11 | 11.0 | 13 | 9.3 |
|---|---|---|---|---|---|---|---|
| **Years of service** | 1 to 5 years | 28 | 70.0 | 44 | 44.0 | 72 | 51.4 |
|  | 6 to 15 years | 6 | 15.0 | 41 | 41.0 | 47 | 33.6 |
|  | 16 to 35 years | 6 | 15.0 | 15 | 15.0 | 21 | 15.0 |
| **Current employment** | Government health Establishment | 13 | 32.5 | 69 | 69.0 | 82 | 58.6 |
|  | Private organization | 27 | 67.5 | 31 | 31.0 | 58 | 41.4 |

Table 2: Do you believe Covid19 is real?

|  | Yes | | No | |
|---|---|---|---|---|
|  | Frequency | % | Frequency | % |
| Online Respondents (40) | 38 | 95.0 | 2 | 5.0 |
| Paper Respondents (100) | 91 | 91.0 | 9 | 9.0 |
| Online & Paper Respondents (140) | 129 | 92.1 | 11 | 7.9 |

Table 3: Covid19 Information Sources

|  | Online Participants | | | | Paper Participants | | | | Combined | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Variables** | **Yes** | | **No** | | **Yes** | | **No** | | **Yes** | | **No** | |
|  | Freq | % | Freq | % | Freq | % | Freq | % | Freq | % | Freq | % |
| Did you read a booklet, brochure, manual about Covid19? | 30 | 75.0 | 10 | 25.0 | 71 | 71.0 | 29 | 29.0 | 101 | 72.1 | 39 | 27.9 |
| Do you visit the World Health Organization (WHO) website for information on Covid19? | 31 | 77.5 | 9 | 22.5 | 58 | 58.0 | 42 | 42.0 | 89 | 63.6 | 51 | 36.4 |
| Do you visit/follow the Nigerian Centre for Disease Control (NCDC) for information on Covid19? | 33 | 82.5 | 7 | 17.5 | 67 | 67.0 | 33 | 33.0 | 100 | 71.4 | 40 | 28.6 |
| Do you listen to the Radio for information on? Covid19? | 28 | 70.0 | 12 | 30.0 | 92 | 92.0 | 8 | 8.0 | 120 | 85.7 | 20 | 14.3 |
| Do you watch the TV for information on Covid19? | 33 | 82.5 | 7 | 17.5 | 98 | 98.0 | 2 | 2.0 | 131 | 93.6 | 9 | 6.4 |
| Does your superior/boss |  |  |  |  |  |  |  |  |  |  |  |  |

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| | Freq | % | Freq | % | Freq | % | Freq | % | Freq | % | Freq | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| give you information on Covid19? | 29 | 72.5 | 11 | 27.5 | 87 | 87.0 | 13 | 13.0 | 116 | 82.9 | 24 | 17.1 |
| Do you search for information on the Internet about Covid19? | 34 | 85.0 | 6 | 15.0 | 88 | 88.0 | 12 | 12.0 | 122 | 87.1 | 18 | 12.9 |
| Do you get information about Covid19 from social Media platforms like WhatsApp, Facebook, etc.? | 33 | 82.5 | 7 | 17.5 | 94 | 94.0 | 6 | 6.0 | 127 | 90.7 | 13 | 9.3 |

## Table 4: Covid19 Training

| | Online Participants | | | | Paper Participants | | | | Total Participants | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Yes** | | **No** | | **Yes** | | **No** | | **Yes** | | **No** | |
| **Variables** | Freq | % | Freq | % | Freq | % | Freq | % | Freq | % | Freq | % |
| Have you been trained on Covid19? | 27 | 67.5 | 13 | 32.5 | 59 | 59.0 | 41 | 41.0 | 86 | 61.4 | 54 | 38.6 |
| Was the training free? | 26 | 65.0 | 14 | 35.0 | 53 | 53.0 | 47 | 47.0 | 79 | 56.4 | 61 | 43.6 |
| Did you get a certificate for the training? | 16 | 40.0 | 24 | 60.0 | 39 | 39.0 | 61 | 61.0 | 55 | 39.3 | 85 | 60.7 |
| Was the training face to face? | 14 | 35.0 | 26 | 65.0 | 38 | 38.0 | 62 | 62.0 | 52 | 37.1 | 88 | 62.9 |
| Was the training online? | 20 | 50.0 | 20 | 50.0 | 34 | 34.0 | 66 | 66.0 | 54 | 38.6 | 86 | 61.4 |
| Did you understand the information on Covid-19? | 29 | 72.5 | 11 | 27.5 | 63 | 63.0 | 37 | 37.0 | 92 | 65.7 | 48 | 34.3 |
| Was the trainer an expert in the field? | 28 | 70.0 | 12 | 30.0 | 60 | 60.0 | 40 | 40.0 | 88 | 62.9 | 52 | 37.1 |
| After the Covid19 training, do you still need more training? | 25 | 62.5 | 15 | 37.5 | 53 | 53.0 | 47 | 47.0 | 78 | 55.7 | 62 | 44.3 |

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Table 5: Covid19 Symptoms and Manifestations

| Variables | Online Participants | | | | Paper Participants | | | | Total Participants | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Yes | | No | | Yes | | No | | Yes | | No | |
| | Freq | % | Freq | % | Freq | % | Freq | % | Freq | % | Freq | % |
| The symptoms of Covid19 are cough and malaria? | 8 | 20.0 | 32 | 80.0 | 62 | 62.0 | 38 | 38.0 | 70 | 50.0 | 70 | 50.0 |
| The symptoms of Covid19 are headache, fever, cough, sore throat, and flu | 35 | 87.5 | 5 | 12.5 | 97 | 97.0 | 3 | 3.0 | 132 | 94.3 | 8 | 5.7 |
| Is Covid19 transmitted through air? | 20 | 50.0 | 20 | 50.0 | 80 | 80.0 | 20 | 20.0 | 100 | 71.4 | 40 | 28.6 |
| Covid19 can be transmitted through contact with body fluids? | 31 | 77.5 | 9 | 22.5 | 89 | 89.0 | 11 | 11.0 | 120 | 85.7 | 20 | 14.3 |
| It takes 2-14 days for manifestation of Covid19 in a person? | 37 | 92.5 | 3 | 7.5 | 98 | 98.0 | 2 | 2.0 | 135 | 96.4 | 5 | 3.6 |
| Can Covid19 infection lead to pneumonia, respiratory failure, and death? | 36 | 90.0 | 4 | 10.0 | 99 | 99.0 | 1 | 1.0 | 135 | 96.5 | 5 | 3.6 |

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Table 6: Covid19 Security and Safety

| Variables | Online Participants | | | | Paper Participants | | | | Total Participants | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Yes | | No | | Yes | | No | | Yes | | No | |
| | Freq | % | Freq | % | Freq | % | Freq | % | Freq | % | Freq | % |
| A patient with Covid19 will always show physical manifestations | 17 | 42.5 | 23 | 57.5 | 67 | 67.0 | 33 | 33.0 | 84 | 60.0 | 56 | 40.0 |
| As a healthcare worker, I know how to protect Myself from Covid 19? | 37 | 92.5 | 3 | 7.5 | 94 | 94.0 | 6 | 6.0 | 131 | 93.6 | 9 | 6.4 |
| Can a face mask protects against Covid19? | 32 | 80.0 | 8 | 20.0 | 88 | 88.0 | 12 | 12.0 | 120 | 85.7 | 20 | 14.3 |
| You need a PPE (Personal protective equipment) to treat a Covid19 patient? | 36 | 90.0 | 4 | 10.0 | 93 | 93.0 | 7 | 7.0 | 129 | 92.1 | 11 | 7.9 |
| 6Used medical materials like gloves and facemasks should be disposed properly? | 37 | 92.5 | 3 | 7.5 | 99 | 99.0 | 1 | 1.0 | 139 | 97.1 | 4 | 2.9 |
| Hand sanitizers or soap with water to wash my hands protection against Covid19? | 37 | 92.5 | 3 | 7.5 | 97 | 97.0 | 3 | 3.0 | 134 | 95.7 | 6 | 4.3 |

Table 7: Can Vaccine stop the spread of Covid19?

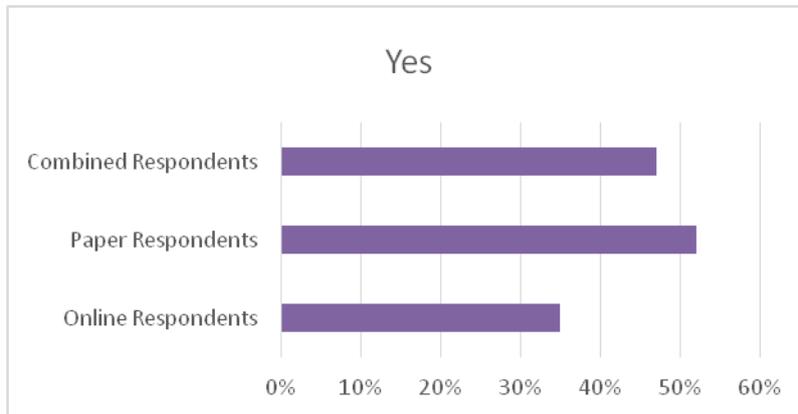| | Yes | | No | | Maybe | |
|---|---|---|---|---|---|---|
| | Frequency | % | Frequency | % | Frequency | % |
| Online Respondents (40) | 14 | 35.0 | 3 | 7.5 | 23 | 57.5 |
| Paper Respondents (100) | 52 | 52.0 | 3 | 3.0 | 45 | 45.0 |
| Online & Paper Respondents (140) | 66 | 47.1 | 6 | 4.3 | 68 | 48.6 |

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Figure 7a: Participants who responded that a vaccine can stop the spread of Covid19
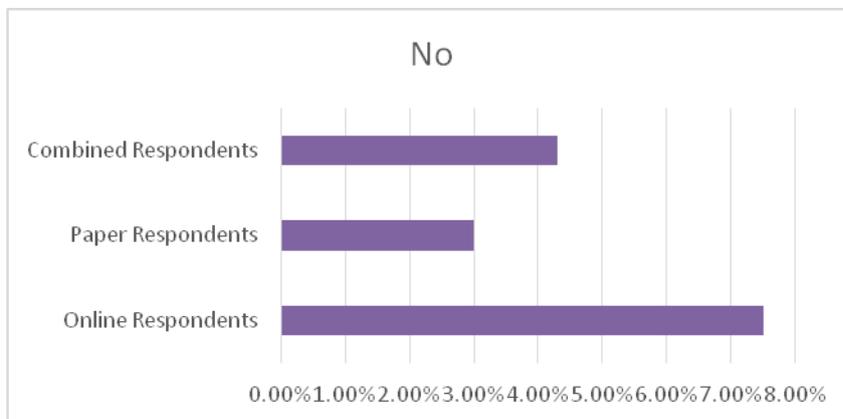


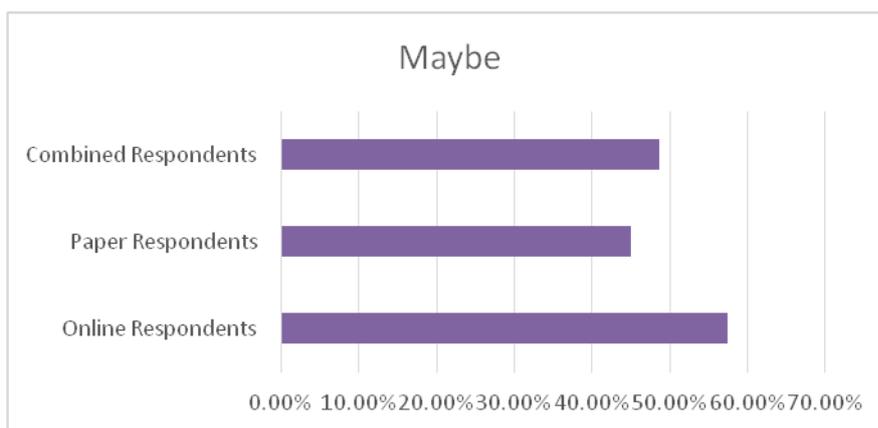Figure 7b: Participants who responded that a vaccine cannot stop the spread of Covid19



Figure 7c: Participants who responded that maybe a vaccine can stop the spread of Covid19

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Table 8: Respondents Comments

| | Online Respondents | | Paper Respondents | | Combined Respondents | |
|---|---|---|---|---|---|---|
| | Frequency | % | Frequency | % | Frequency | % |
| Adequately trained and informed | 5 | 12.5 | 29 | 29.0 | 34 | 24.3 |
| Fairly trained and informed | 19 | 47.5 | 28 | 28.0 | 47 | 33.6 |
| Not trained but informed | 6 | 15.0 | 30 | 30.0 | 36 | 25.7 |
| Not trained and not informed | 10 | 25.0 | 13 | 13.0 | 23 | 16.4 |
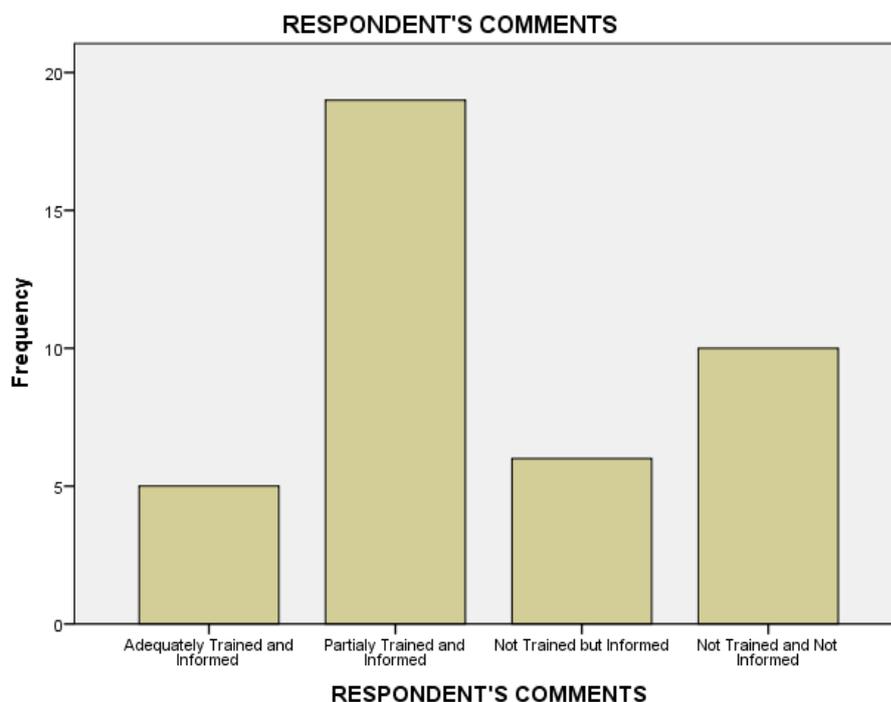


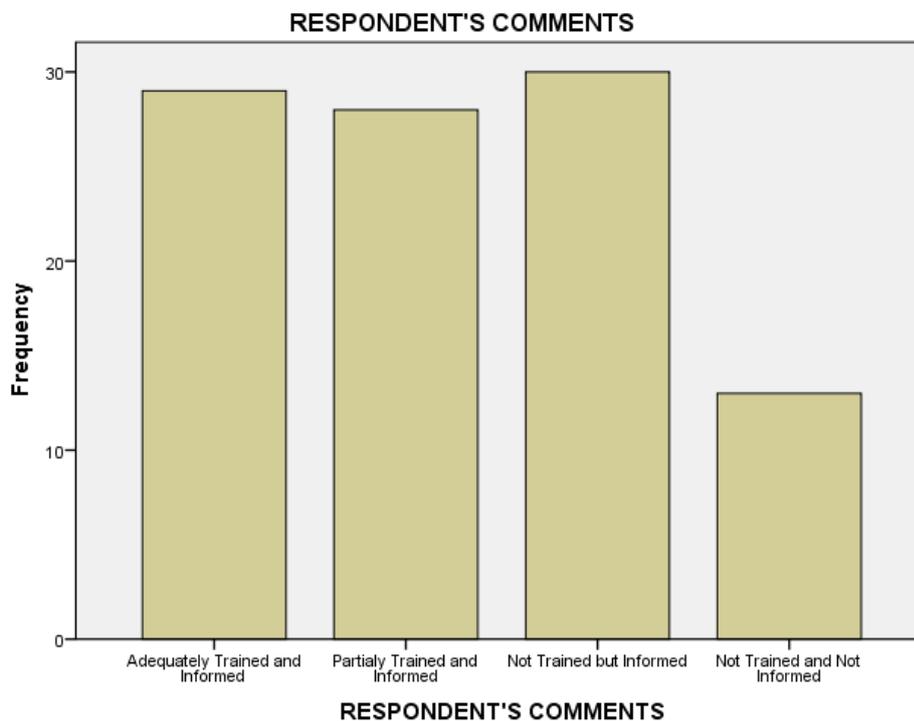Figure 8a: Training and information capacity of online participants

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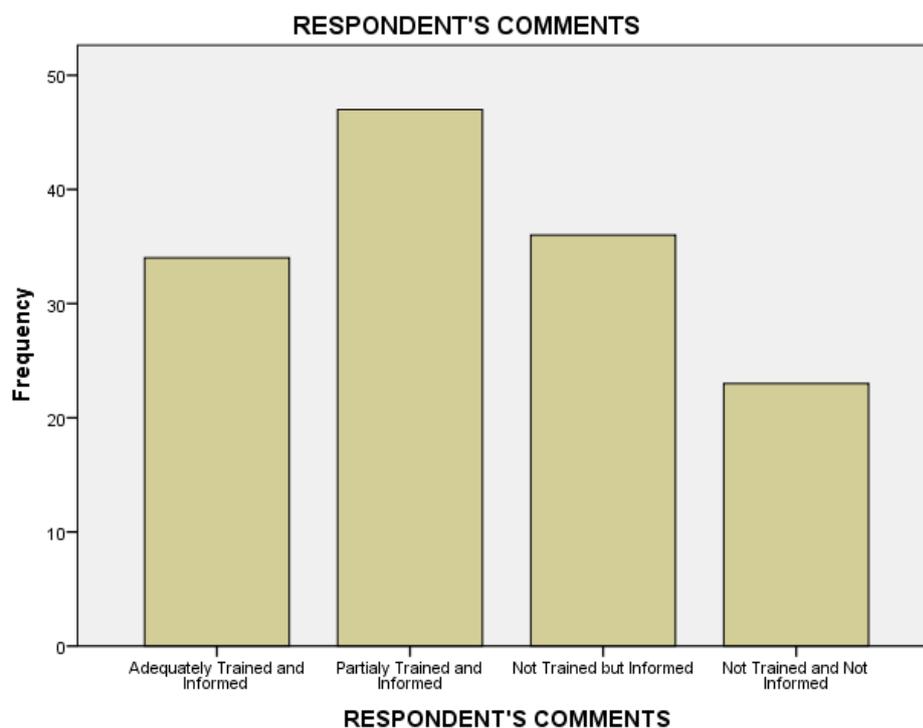Figure 8b: Training and Information capacity of Paper participants



Figure 8c: Training and Information Capacity of all participants