

Knowledge, Perception and Compliance of Facemask Use at ENT and Eye Clinics of a Tertiary Hospital in Anambra State, Nigeria during the Covid-19 Pandemic

Afiadigwe EE¹, Apakama AI², Obasikene G³, Uzozie CC⁴, Umeh US⁵, Amobi MC⁶, Emelumadu CM⁷

^{1,3,5} Department of ENT, Nnamdi Azikiwe University Teaching Hospital, Nnewi

^{2,4,6,7} Department of Ophthalmology, Nnamdi Azikiwe University Teaching Hospital, Nnewi

Abstract: COVID-19 came as an unprecedented pandemic that the whole world was not prepared for, posing serious threat to public health and global Economy since 2019 to date. The use of facemask by health workers and the general population is strongly recommended by World Health Organization (WHO) and centers for disease control as a standard for transmission-based precaution. The aim of this study is to assess the knowledge and attitude of patients and caregivers attending ENT and Eye clinics on the use of Facemasks as means of prevention of COVID-19 in a tertiary institution in south East Nigeria,

This was a cross-sectional study involving outpatients attending ENT and Eye clinics in Anambra State Nigeria during the COVID-19 pandemic. A pre-tested self-administered questionnaire was used to obtain information from the participants, after each of them had given a written consent to participate. Data analysis was done using SPSS version 23. Ethical approval was obtained from the NAUTH Research Ethics committee.

A total of 442 participants were included in this study; 62.2% were females and 37.8%, males. The mean age was 45.3 ± 18 Years. Most of the participants (69.7%) had never used facemask prior to onset of COVID-19 but 89.6% admitted to have been using it regularly since onset of the pandemic. Almost all the participants (96.2%) have heard about COVID-19, however, only 87.1% believed it was real. There a significant association between Educational qualification, occupation and the belief that Covid-19 is real were shown to influence regular use of face masks ($p < 0.05$).

Our study shows that there is good knowledge about the place of face Mask in the prevention of COVID-19 as well as other precautionary measures, however 36.4% used it because it was mandatory. This means that there is need for concerted effort and educating the public and enforcing compliance if the trending second wave of the disease is to be averted in our clime.

Keywords: COVID-19, Virus, Facemask, Face shield, SARS-CoV-2, Pandemic.

I. INTRODUCTION

In December 2019, an unknown respiratory disease broke out in the Wuhan, the most populous city of central China.¹ Increasing number of patients presented with symptoms such

as fever, dry cough with chest pain, breathlessness and malaise; most of them were asymptomatic or had mild symptoms from which they recovered, while others progressed to severe illness with complications which included pulmonary oedema, disseminated intravascular coagulopathy, acute kidney injury, pneumonia, respiratory failure and death. These Complications were common with the elderly and individuals with background chronic illnesses.^{1,2} the causative agent of this disease was subsequently identified by the Chinese Centre for Disease Control and prevention (CCDC) and named severe Acute Respiratory syndrome Corona Virus 2 (SARS-CoV-2). The WHO later named it Corona Virus Disease 2019 (COVID-19) and declared it a global pandemic.^{1,3,4} The virus has an incubation period of approximately one to fourteen days.²

An Italian citizen was the index case of COVID-19 in Nigeria and afterwards, the number of confirmed cases rose tremendously, though the figures has plateaued and appears to be falling in recent times.² Some efforts made by government agencies and civil societies to contain the spread of the virus includes enlightenment campaigns for good hand hygiene, use of face mask, social distancing, further measures included ban on public gatherings, closure of National borders, airports, schools, worship centers. Curfew was also imposed on some states. however, with the recent fall in the number of new cases, most of these restrictions has been relaxed and the Economy is opening gradually up.^{2,5}

There is a high risk of contagion for health workers and the specialties most affected are Anesthetists, Otorhinolaryngologists, Ophthalmologists, Dentists and Maxillofacial surgeons. Health workers represent between 3.8% and 20% of the infected population.^{6,7}

The primary route of spread of the virus is via respiratory droplets from cough, sneezing or contact with contaminated surfaces, therefore, the routine and proper use of face mask has been identified as one of the most important COVID-19 infection control measure.⁸ face mask works by constituting a physical barrier to prevents the disease causing agent from

gaining access into the body through the nose and mouth.⁸ The use of face mask among Health workers and the general population is strongly recommended by WHO and Centers for Disease Control and prevention (CDC) as a standard for transmission based precaution.^{1,8} However, its correct usage is of utmost importance. Standard facemasks help protect Health care workers, as well as prevent cross transmission between patients in the Hospital. WHO states that incorrect use and disposal of these masks may actually increase the disease transmission rate.^{8,9} face mask usage also helps to hinder hand contact to the mouth and nose. when face mask is used correctly by infected individual, it may help prevent household transmission by limiting the spread of infective respiratory droplets.⁹

Given the importance of knowledge of precautionary measures in infectious disease control, we hope to ascertain the level of knowledge of COVID-19 amongst our patients, as well as their perception and acceptance of facemask use as a means to curb the spread of the pandemic.

Statement of Problem

- COVID-19 is an unprecedented pandemic that the whole world was not prepared for, posing serious threat to public Health and global economy.¹⁰
- The global figures of COVID-19 as at 5th December, 2020 stands at 65,257,767 cases and 1,513,179 deaths; Nigeria has recorded 68,627 cases and 1,179 deaths.^{11,12}
- Many European countries are currently experiencing a second wave of the pandemic.¹²
- Being a novel viral infection, so much is yet to be known about it.

Justification of study

- Drugs and vaccines for Covid-19 are still at various stages of clinical trials, treatments currently are mainly supportive.² Therefore, adequate knowledge of the disease pathogenesis and relevant precautionary measures are necessary to contain its spread.
- There are circulating misconceptions and misinformation about the COVID-19 pandemic.²
- This study will help us to determine the prevalent knowledge and perception of the general public on COVID-19, so as to more properly inform them; a very important measure that may help prevent resurgence and possibly avert a second wave of the pandemic.

Aim

This study is aimed at assessing the knowledge, perception and compliance to use of face masks by outpatients attending ENT and Eye Clinics in our Tertiary Healthcare institution as a means of preventing the Covid-19 pandemic.

II. METHODOLOGY

A cross-sectional study involving outpatients seen at the ENT and Eye Clinics of Nnamdi Azikiwe University Teaching Hospital, Nnewi, Anambra state, Nigeria between 1st July, 2020 to 30th November, 2020.

All consenting patients attending our clinics within the period were recruited as they presented till the sample size was attained with provision for attrition.

Illiterate patients with significant hearing and visual impairments were excluded from this study as well as those who declined consent.

Minimum sample size was calculated using the formula below for descriptive study.¹³ The correct practice of facemask use was obtained in a similar study as 52%.¹⁴

$$n = pq \left(\frac{Z_{\alpha/2}}{d} \right)^2 = \frac{Z_{\alpha}^2 pq}{d^2}$$

$$\text{OR simply } n = z^2 \times P \frac{(1-P)}{d^2}$$

n = the minimum sample size required

z_{α} = the standard normal deviate usually set at 1.96 which corresponds to 95% confidence level.

p = prevalence rate (52%)¹⁴

d = the degree of accuracy desired, usually set at 0.05 or less.

Therefore, the calculated sample size (n) = 384

Adding 10% attrition rate, the minimum sample size was obtained as 422.

A total of 442 consenting individuals were recruited into the study.

Ethical approval was obtained from the Ethics and Research advisory committee of Nnamdi Azikiwe University Teaching Hospital, Nnewi. Data collection was done using a pre-tested, self-administered questionnaire after obtaining an informed consent from each of the participants.

The pretest was conducted with twenty eligible individuals and modifications were made on the questionnaire. Respondents that participated in the pretest were excluded from the study. Those who are not literate enough were assisted with explanation and filling of the questionnaire. Data was analyzed using Statistical Package for Social Sciences (SPSS) Version 23 and the results were presented using frequency tables and charts. Chi square was used to test for association between variables with significant p-value set at 0.05

III. RESULTS

Four hundred and forty-two (442) respondents participated in this study, out of which 62.2% were females and 37.8% were males. The mean age distribution of the participants was 45.3

±18.1 Years. A vast majority of the participants are traders (34.8%) and most of them had Secondary (38%) and Tertiary (35.3%) Educations respectively; only 6.3% of them had no formal Education as shown in *table 1* below.

Table1: Socio-demographic characteristics of the participants.

| Variables | Frequency | Percentage (%) |
|---------------------------|-----------|----------------|
| SEX | | |
| Female | 275 | 62.2 |
| Male | 167 | 37.8 |
| AGE | | |
| *1-10years | 3 | 0.7 |
| 11-20years | 38 | 8.6 |
| 21-30years | 58 | 13.1 |
| 31-40years | 92 | 20.8 |
| 41-50years | 78 | 17.6 |
| 51-60years | 71 | 16.1 |
| 61-70years | 61 | 13.8 |
| 71-80years | 34 | 7.7 |
| >=81years | 7 | 1.6 |
| OCCUPATION | | |
| Artisans | 20 | 4.5 |
| Farmers | 25 | 5.7 |
| Unemployed | 40 | 9 |
| Others | 61 | 13.8 |
| Civil Servants | 67 | 15.2 |
| Students | 75 | 16.9 |
| Traders | 154 | 34.8 |
| EDUCATIONAL QUALIFICATION | | |
| Non-formal Education | 28 | 6.3 |
| Primary Education | 90 | 20.4 |
| Secondary Education | 168 | 38.0 |
| Tertiary Education | 156 | 35.3 |
| TOTAL | 442 | 100 |

*NB: The 3 patients in the 1-10 years category were aged between 8 and 10 years, so they were able to answer the questions.

Most of the participants (69.7%) in this study had never used facemask prior to COVID19 pandemic. Amongst those who had worn facemask prior to the pandemic, reasons for which they wore it included occupations, dust prevention, foul odour and cyclists etc. Majority of the participants who admitted to wearing facemasks prior to the pandemic understood why they had to wear it, and they all think that wearing it was necessary for the purpose for which they did as shown in *Table 2* below. In comparison, 89.6 % of the participants admitted to have been wearing facemasks regularly since

onset of the pandemic, while 10.4% does not; 36.4% wear it because it was compulsory.

Table2: Assessment of Participants’ use of facemask prior to COVID19 pandemic.

| | Response | Frequency | Percentage |
|--|--------------|-----------|------------|
| Have you ever won Facemask prior to COVID19 pandemic? | | | |
| | No | 308 | 69.7 |
| | Yes | 134 | 30.3 |
| How many times have you won facemask prior to COVID19 Pandemic? | | | |
| | Once | 3 | .7 |
| | 2-5 times | 22 | 5.0 |
| | 6-10 times | 22 | 5.0 |
| | 11-15 times | 13 | 2.9 |
| | *N/A | 308 | 69.7 |
| What was the reason for which you wore Facemask? | | | |
| | *N/A | 308 | 69.7 |
| | Dust | 72 | 16.3 |
| | Occupational | 35 | 7.9 |
| | Foul odour | 13 | 2.9 |
| | Surgery | 8 | 1.8 |
| | Cyclist | 6 | 1.4 |
| Did you understand why you had to wear the mask for that reason? | | | |
| | No | 1 | .2 |
| | Yes | 133 | 30.1 |
| | *N/A | 308 | 69.7 |
| Did you think wearing of mask was necessary for that purpose you were told to wear it? | | | |
| | *N/A | 308 | 69.7 |
| | Yes | 134 | 30.3 |
| | Total | 442 | 100.0 |

*N/A: Not applicable (i.e participants who had never won facemask prior to COVID19 pandemic).

Almost all the respondents (96.2%) in this study knew about COVID19, and the means through which they learnt about it are as shown in *Table 3* below. The commonest source of information about COVID19 included Radio (68.3%), Television (61.5%) and churches (45.5%), whereas telegram (2.7%) and other Social media (10.4%) constituted the least sources of information.

Table 3: How did you get to know about Covid19?

| | Frequency | Percentage (%) |
|--------------------|-----------|----------------|
| Church | | |
| No | 241 | 54.5 |
| Yes | 201 | 45.5 |
| Radio | | |
| No | 140 | 31.7 |
| Yes | 302 | 68.3 |
| Television | | |
| No | 170 | 38.5 |
| Yes | 272 | 61.5 |
| Newspaper | | |
| No | 373 | 84.4 |
| Yes | 69 | 15.6 |
| Whatsapp | | |
| No | 369 | 83.5 |
| Yes | 73 | 16.5 |
| Facebook | | |
| No | 353 | 79.9 |
| Yes | 89 | 20.1 |
| Telegram | | |
| No | 430 | 97.3 |
| Yes | 12 | 2.7 |
| Other Social Media | | |
| No | 396 | 89.6 |
| Yes | 46 | 10.4 |
| Heard From Someone | | |
| No | 254 | 57.5 |
| Yes | 188 | 42.5 |
| Total | 442 | 100 |

In Table 4 below, 87.1% of the respondents think that COVID19 is real, 10.2% thinks it was not real, while 2.7% of them had no idea. Amongst them, 86.7% thinks that it is a serious disease, 7.5% thinks that it is not a serious disease, while 2.7% had no idea

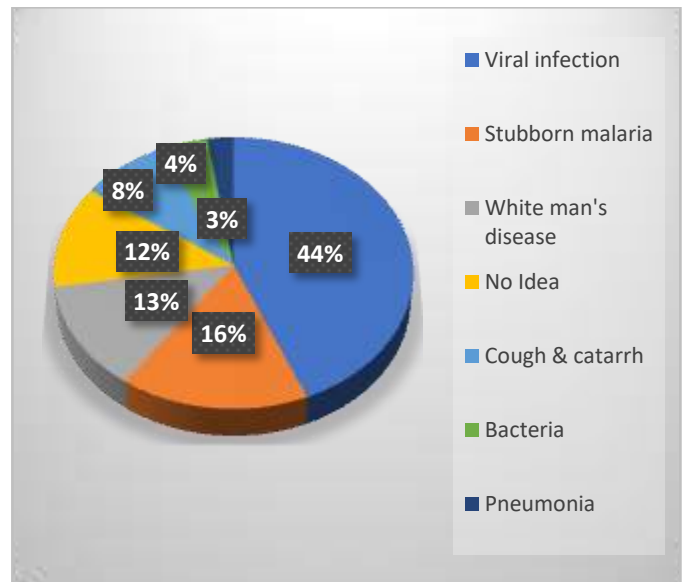
Table 4: Participants' response on whether or not they think COVID19 was real and if they think it is a serious disease.

| | Responses | Frequency | Percentage |
|--------------------------------------|-----------|-----------|------------|
| Do you believe that COVID19 is real? | | | |
| Yes | 385 | 87.1 | |
| No | 45 | 10.2 | |
| No Idea | 12 | 2.7 | |
| Is it a serious disease? | | | |

| | | | |
|--|---------|-----|-------|
| | Yes | 383 | 86.7 |
| | No | 33 | 7.5 |
| | No Idea | 26 | 5.9 |
| | Total | 442 | 100.0 |

When asked what type of disease they think that COVID19 is, 44% of the respondents thinks that it is a viral infection, 16% thinks that it is a stubborn malaria, 13% thinks that is a White man's disease, 8% thinks that it's just cough and catarrh, 4% thinks that it is a bacterial infection, 3% thinks that it is a pneumonia disease, while 12% of the respondents had no idea as shown in Fig 1 below.

Fig 1: Participants' response on the type of disease they think COVID19 is.



The different means through which the participants think that COVID19 could be acquired are as shown in Table 5.

Table 5: Response of the participants on how they think COVID19 could be contracted.

| | Frequency | Percentage |
|-----------|-----------|------------|
| Coughing | | |
| No | 125 | 28.3 |
| Yes | 317 | 71.7 |
| Sneezing | | |
| No | 141 | 31.9 |
| Yes | 301 | 68.1 |
| Handshake | | |
| No | 135 | 30.5 |
| Yes | 307 | 69.5 |
| Talking | | |
| No | 389 | 88.0 |
| Yes | 53 | 12.0 |

| | | |
|-----------------|-----|------|
| Eating | | |
| No | 380 | 86.0 |
| Yes | 62 | 14.0 |
| Touching Things | | |
| No | 293 | 66.3 |
| Yes | 149 | 33.7 |
| Drinking | | |
| Yes | 389 | 88.0 |
| No | 53 | 12.0 |
| Total | 442 | 100 |

Majority of our participant knew about the place of facemask (83.9%) and Social distancing (76.2%) in COVID-19 prevention, meanwhile believed in the efficacy of prayers (24.9%), use of holy water (8.6%), anointing oil (7.9%) and charms (1.1%), 0.2% however believed that nothing could prevent it as shown in *Table 6* below.

Table 6: Response of the participants on how they think one can avoid getting infected with Covid19?

| | Frequency | Percentage |
|--------------------------------------|-----------|------------|
| None Prevents it | | |
| No | 441 | 99.8 |
| Yes | 1 | .2 |
| Social Distancing | | |
| No | 105 | 23.8 |
| Yes | 337 | 76.2 |
| Staying indoors | | |
| No | 333 | 75.3 |
| Yes | 109 | 24.7 |
| Avoid use of cups, spoons and plates | | |
| No | 396 | 89.6 |
| Yes | 46 | 10.4 |
| Wearing face masks | | |
| No | 71 | 16.1 |
| Yes | 371 | 83.9 |
| Bathing Often | | |
| No | 381 | 86.2 |
| Yes | 61 | 13.8 |
| Charms | | |
| No | 437 | 98.9 |
| Yes | 5 | 1.1 |
| Using Holy water | | |
| No | 404 | 91.4 |
| Yes | 38 | 8.6 |

| | | |
|---------------------|-----|------|
| Using Anointing oil | | |
| No | 407 | 92.1 |
| Yes | 35 | 7.9 |
| Praying | | |
| No | 332 | 75.1 |
| Yes | 110 | 24.9 |
| Total | 442 | 100 |

As shown in *Table 7* below, 35.1% of our respondents think that wearing face shield is an alternative to facemask, however majority (46.4%) thinks otherwise and 18.6% had no idea.

Table7: Participants’ response on whether they have been wearing facemasks regularly during the pandemic and if they will continue to wear it for as long as required.

| | Frequency | Percentage |
|---|-----------|------------|
| Can you say you have adequately worn masks as stated during the pandemic? | | |
| Well done | 139 | 31.4 |
| Fairly done | 127 | 28.7 |
| Moderately done | 127 | 28.7 |
| No | 49 | 11.1 |
| Will you continue to wear marks for as long as it is required for covid-19? | | |
| Yes | 366 | 82.8 |
| No | 45 | 10.2 |
| Stop for a while | 31 | 7.0 |
| Total | 442 | 100 |

As shown in *Table 8* below, 35.1% of our participants think that using face shield alone is an alternative to facemask, 18.6% has no idea, while 46.4% thinks otherwise.

Table 8: Do you think that wearing Face shield is an alternative to wearing facemask?

| Responses | Frequency | Percentage |
|-----------|-----------|------------|
| No | 205 | 46.4 |
| Yes | 155 | 35.1 |
| No Idea | 82 | 18.6 |
| Total | 442 | 100.0 |

Table 9 shows the opinion of participants on what they think was the greatest impact of COVID-19 in Nigeria.

Table 9: What in your opinion is the greatest impact of Covid19 on Nigerians?

| | Frequency | Percentage |
|------------------------------------|-----------|------------|
| Bad Economy | | |
| No | 95 | 21.5 |
| Yes | 347 | 78.5 |
| Restriction of movement | | |
| No | 209 | 47.3 |
| Yes | 233 | 52.7 |
| Loss of Social activities | | |
| No | 219 | 49.5 |
| Yes | 223 | 50.5 |
| Poverty and hunger | | |
| No | 216 | 48.9 |
| Yes | 226 | 51.1 |
| Fear | | |
| No | 273 | 61.8 |
| Yes | 169 | 38.2 |
| Unwarranted death | | |
| No | 247 | 55.9 |
| Yes | 195 | 44.1 |
| Exposed our poor healthcare system | | |
| No | 345 | 78.1 |
| Yes | 97 | 21.9 |
| Improved hygiene | | |
| No | 311 | 70.4 |
| Yes | 131 | 29.6 |
| All of the above | | |
| No | 360 | 81.4 |
| Yes | 82 | 18.6 |
| TOTAL | 442 | 100 |

There was a statistically significant association between the belief that COVID19 is real and regular use of facemask. There was also an association between the belief that COVID19 is real and voluntary use of facemask without coercion ($p < 0.05$), *Table 10*

Table 10: The association between the belief that COVID19 is real and regular use of facemask, as well as whether or not the participants were being forced to wear facemask.

| | Do you believe that COVID19 is real? | | | |
|--|--------------------------------------|------------|-----------|---------|
| | YES | NO | NO IDEA | P-value |
| Have you been wearing facemasks regularly? | | | | |
| YES | 359 (93.2%) | 30 (66.7%) | 7 (58.3%) | .000* |

| | NO | 26 (6.8%) | 15 (38.3%) | 5 (41.7%) | |
|-----------------------------------|-------------|------------|------------|-----------|-------|
| Were you forced to wear facemask? | | | | | |
| YES | 129 (33.5%) | 30 (66.7%) | 2 (16.7%) | | .000* |
| NO | 248 (64.4%) | 12 (26.7%) | 5 (41.7%) | | |

*Statistically significant.

Educational Qualification is shown in *Table 11* below to significantly influence the belief that COVID19 is real ($p < 0.05$). However, there was no association between the sex of participants and the belief that COVID19 is real.

Table 11: Association between the belief that COVID19 is real and gender, as well as Educational qualification of the participants.

| | | Do you believe COVID19 is real? | | | p-value |
|---------------------------|------------|---------------------------------|------------|-----------|---------|
| | | YES | NO | NO IDEA | |
| Sex | | | | | |
| | Male | 144 (86.2%) | 19 (11.4%) | 4 (2.4%) | .778 |
| | Female | 241 (87.6%) | 26 (9.5%) | 8 (2.9%) | |
| Educational Qualification | | | | | |
| | Non-formal | 21 (5.5%) | 7 (15.6%) | 0 (0.0%) | .014* |
| | Primary | 76 (19.7%) | 12 (26.7%) | 2 (16.7%) | |
| | Secondary | 142 (36.9%) | 19 (42.2%) | 7 (58.3%) | |
| | Tertiary | 146 (37.9%) | 7 (15.6%) | 3 (25.0%) | |

*Statistically Significant.

As shown in *Table 12* below, those who have been using facemask regularly during the COVID19 pandemic are likely to continue using it for as long as was required ($p < 0.05$)

Table 12: Association between the regular use of facemask during the COVID19 pandemic and continuous usage for as long as it is required.

| | | Have you been wearing facemask regularly since COVID19 Pandemic? | | |
|--|--------------------|--|------------|---------|
| | | YES | NO | P-value |
| Will you continue to wear facemask for as long as it | | | | |
| | YES | 351 (88.6%) | 15 (32.6%) | .000* |
| | NO | 25 (6.3%) | 20 (43.5%) | |
| | STOP AFTER A WHILE | 20 (5.1%) | 11 (23.9%) | |

*Statistically significant.

Occupation of the participants is noted in *Table 13* below to influence the regular use of facemask during the COVID19 pandemic ($p < 0.05$).

Table13: Association between Occupation and regular use of facemask during the pandemic.

| | | Have you been wearing face mask regularly since COVID19 pandemic? | | |
|------------|----------------|---|---------------|---------|
| | | Yes | No | p-value |
| OCCUPATION | Students | 65 (16.4%) | 10 (21.7%) | .038* |
| | Unemployed | 35 (8.9%) | 5 (10.9%) | |
| | Traders | 137 (34.6%) | 17 (37.0%) | |
| | Artisans | 19 (4.8%) | 1 (2.2%) | |
| | Farmers | 24 (6.1%) | 1 (2.2%) | |
| | Civil Servants | 59 (14.4%) | 8 (17.4%) | |
| | Others | 57 (14.4%) | 4 (8.7%) | |

*Statistically significant.

IV. DISCUSSION

The Socio-demographics of our participants was dominated by traders which constituted 34.8% of the entire population. This is as expected, since the study was conducted at Nnewi and Onitsha, the two major commercial cities in Anambra state, Nigeria. Secondary school (38%) and Tertiary degree holders (35.3%) formed a bulk of the population. Almost all the participants are literate and could fill the questionnaires without any necessary assistance. Hence, we can infer that their responses are valid.

From the findings in this study, only 30.3% of our participants had worn facemask prior to COVID19 pandemic as compared 89.6% who admitted to have been wearing it regularly since onset of the pandemic. A study done by Habida et al to assess compliance of face mask use by Hajj pilgrims at Saudi Arabia during the outbreak of Pandemic influenza A (H1N1) in 2009 and middle east respiratory syndrome coronavirus (MERS-CoV) in 2013. Low compliance of 8.4% in 2009 and 0.02% in 2013 noted despite recommendations by the Ministry of health which also provided facemasks to each of them on arrival.¹⁵ Some of the reasons for poor compliance of facemask use as shown in this study included overcrowding, tedious processions, prayers and other strenuous activities that were done during pilgrimage.¹⁵ High compliance of facemask use as seen in our study could be explained by the fact that it was an order from the Government, enforced by task-force agents on major roads, markets and motor parks. More so, it was a prerequisite to see a Doctor at the health care facilities we used. Studies suggests that aside serving as a physical barrier to inhalation of respiratory disease causing pathogens, regular use of facemask is associated with positive personal hygiene practices such as handwashing, avoiding crowds and close contacts as well as reduced tendency to touch the face.^{9,16}

There was a good knowledge of COVID-19 amongst participants in this study, as 96.2% of them opined to have heard about it. This knowledge is though laden with a lot of prevalent misconceptions. In a similar study at Pakistan,

knowledge rate of 90% was obtained.¹⁷ Most common sources of information on COVID-19 in our study were Radio (68.3%), Television (61.5%) and churches (45.5%). However, in the study conducted in Egypt by Abdelhafiz et al the commonest sources of information on COVID-19 as responded by the participants included Social Media (66.9%), internet (58.3%) and Television (52.6%).¹⁸ The high knowledge of COVID-19 as seen in these studies, our's inclusive was expected as concerted efforts were made both locally and globally to inform the general population about the on-going pandemic in a bid to contain it. Majority (87.1%) of the participants believed that COVID-19 is real and 86.7% thinks that it is a serious disease. This is comparable to the results obtained by Abdelhafiz et al where 86% of their respondents also thinks that COVID-19 is a dangerous disease.¹⁸ Also in Olapegba's study, over 90% of their participants thinks that COVI-19 is highly fatal.² Only 44% of the participants in our study knew that COVID-19 is a viral infection, other responses included stubborn malaria (16%), white-man's disease (13%), cough and catarrh (8%), bacterial (4%) and pneumonia diseases (3%), while 16% had no idea.

Though the Government and some cooperate bodies made efforts to enlighten the public on the ongoing pandemic, a lot of persons were inciting fear, misinforming the public and spreading fake news on various social media platforms about the virus. In a similar local survey by Olapegba et al, approximately half of their respondents thinks that COVID-19 is a biological weapon designed by the Chinese Government.²

Our participants expressed a good knowledge of means through which COVID-19 could be contracted, as well as precautionary measures needed to prevent it. A similar trend was observed in other studies.^{2,18} However, a good number of our respondents believed that COVID-19 could be prevented by prayers (24.9%), use of anointing oil (7.9%) and holy water (8.6%), 1.1% believes in the efficacy of charms to avert the disease, while 0.2% believes that nothing could prevent it. This could be due to superstition and ignorance of the science of the disease pathogenesis, as well as prevalent fake news and misinformation.

There was a good knowledge about the place of proper facemask use as a means of COVID-19 preventive measures in our study as observed in 83.9% of the participants. Approximately ninety percent of our participant admitted to have been wearing facemasks regularly when going out to public places since onset of COVID-19 pandemic, but 36.4% of them wore it because it was compulsory. Similar observation was made by Paula Cotrin et al; 99.1% of the participants in their study reported wearing facemask during the pandemic, 34.2% of them wore it because it was mandatory, while 65.8% would continue to wear it even if it was not mandatory, reasons for poor compliance amongst some participants included discomfort, feeling of suffocation and interference with communication.¹⁹ The use of facemask for prevention of COVID-19 is very important, as studies have shown that a significant proportion of people who have

COVID-19 are asymptomatic and may spread the disease prior to development of symptoms.²⁰

On enquiries if our participants had adequately worn facemask during this pandemic, the responses are; well done (31.4%), fairly done (28.7%), moderate (28.7%) and not adequately done (11.1%); 82.8% of them will continue to wear facemask for as long as is required. A good number of our participants (35.1%) think that face-shield alone can be used as an alternative to wearing facemask. With increasing number of Nigerians, including Government officials on patrol now using face shield alone in place of facemask, Nigeria Centre for Disease control has warned that it could escalate the spread of the virus.²⁰ There is currently no published evidence on the effectiveness of face shield when used alone in preventing COVID-19. More so, no single intervention even when properly used alone could provide complete protection from COVID-19, they must be combined with other public health and social measures as recommended by the WHO and Centres for Disease control.²⁰

Our study showed a significant association between the belief that COVI-19 is real and regular use of facemask ($p < 0.05$), also those who believed that COVID-19 is real are more likely to wear facemasks without being forced by the Government tax force agents ($p < 0.05$).

Educational qualification, but not gender was shown to influence the belief that COVID-19 is real ($p < 0.05$). The study also showed that those who have been wearing facemasks regularly during the COVID-19 pandemic are likely to continue using it for as long as it is required ($p < 0.05$). Occupation of the participants was shown in this study to significantly influence how regularly they used facemask since onset of the pandemic ($p < 0.05$).

V. CONCLUSION AND RECOMMENDATIONS

Our study showed that there is a good knowledge of COVID-19, though laden with misconceptions, as well as the place of facemasks in transmission-based precaution, however a good number of the participants use facemasks because it was mandatory. If we must avert an imminent second wave of this pandemic in our clime, then concerted efforts in Educating and enforcing compliance is highly indicated, as prevalent misconceptions, wrong information and ignorance could greatly undermine our gains so far.

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KNOWLEDGE, PERCEPTIONS AND COMPLIANCE TO USE OF FACE MASKS AMONG PATIENTS AND CARE GIVERS ATTENDING ENT AND EYE CLINICS DURING COVID-19 PANDEMIC IN ANAMBRA STATE, NIGERIA.

Semi-structured Questionnaire

Serial number.....

Date.....

1. Age

- (i) <10 years []
- (ii) 11-20 years []
- (iii) 21-30 years []
- (iv) 31-40 years []
- (v) 41-50 years []
- (vi) 51-60 years []
- (vii) 61-70 years []
- (viii) 71-80 years []
- (ix) ≥ 81 years []

2. Sex: Male [] Female []

3. Educational Level;

- (i) Non-formal Education []
- (ii) Primary Education []
- (iii) Secondary Education []
- (iv) Tertiary Education []

4. Occupation;

- (i) Artisan []
- (ii) Civil servant []
- (iii) Farmer []
- (iv) Student []
- (v) Pupil []
- (vi) Trader []
- (vii) Housewife []
- (viii) Unemployed []
- (ix) Others []

5. Distance of patient’s abode from the hospital

- (i) <1km []
- (ii) 1-<5km []
- (iii) 5-<10km []
- (iv) 10-<15km []
- (v) 15-<20km []
- (vi) ≥20km []

6. Have you ever worn a mask prior to COVID-19 pandemic

Yes [] No []

7. How many times have you worn it prior to the Covid-19 pandemic

- (i) 1 times []
- (ii) 2-5 times []
- (iii) 6-10 times []
- (iv) 11-15 times []
- (v) >15 times []

8. How long in a day did you wear the mask each time

- (i) <30mins []
- (ii) 30mins-<1 hour []
- (iii) 1 hour-<5 hours []
- (iv) 5 hours-<10 hours []
- (v) >10 hours []

9. What was the reason for which you wore the mask(s)

- (i) Surgery [] (iv) Cyclist []
(ii) Occupational [] (v) Foul odor []
(iii) Dust []

10. Did you understand why you had to wear mask(s) for that reason.

Yes [] No []

11. Did you think wearing of mask was necessary for that purpose you were told to wear it.

Yes [] No []

12. Did you think there were other options that could serve same purpose

Yes [] No []

13. Were you happy to wear the mask(s) after all

Yes [] No []

14. Do you know of Covid-19.

Yes [] No []

15. How did you get to know about Covid-19

- (i) Church [] (vi) Facebook []
(ii) Radio [] (vii) Telegram []
(iii) TV [] (viii) Other social media []
(iv) Newspapers [] (ix) Heard it from someone []
(v) WhatsApp []

16. What type of disease is COVID-19.

- (i) Stubborn malaria [] (v) white man' s disease []
(ii) Pneumonia [] (vi) Bacteria []
(iii) Cough & catarrh [] (vii) Typhoid []
(iv) Viral infection [] (viii) Others []

17. Is there another name for Covid-19

Yes [] No []

18. Do you believe this COVID-19 is real.

Yes [] No []

19. If you think COVID-19 is real how do u think someone can get

- (i) Coughing [] (v) Talking []
(ii) Sneezing [] (vi) Eating []
(iii) Handshake [] (vii) Touching things []
(iv) Drinking []

20. Is it a serious disease.

Yes [] No []

21. What are the ways one can avoid getting Covid-19

- (i) None prevents it []
- (ii) Social distancing []
- (iii) Staying indoors throughout []
- (iv) Avoiding the use of same cups, spoons & plates []
- (v) Using sanitizers []
- (vi) Hand washing []
- (vii) Wearing of masks []
- (viii) Bathing often []
- (ix) Charms []
- (x) Using Holy water []
- (xi) Using Holy/anointing oil []
- (xii) Praying []

22. Have you been wearing masks since COVID-19

Yes [] No []

23. How many days have you been wearing masks weekly during this pandemic.

- (i) 1 day []
- (ii) 2 days []
- (iii) 3 days []
- (iv) 4 days []
- (v) 5 days []
- (viii) 6 days []
- (ix) 7 days []

24. What is the longest duration you have worn your mask continuously in a day.

- (i) <30mins []
- (ii) 30- <1hour []
- (iii) 1hr - <2hours []
- (iv) 2hours - <3hours []
- (v) 3hours- < 4hours []
- (viii) 4hours- <5hours []
- (ix) >5hours []

25. Were you happy to wear your masks during this Covid-19 .

Yes [] No []

26. Did you wear masks because you were forced to.

Yes [] No []

27. Do you think wearing masks during this Covid-19 has bad effects on your health

Improved hygiene

Yes [] No []

28. Can you say you have adequately worn masks as stated during this pandemic.

No [] Fairly done [] Moderately done [] Well done []

29. Will you continue to wear masks for as long as it's required for Covid-19.

Yes [] Stop for a while [] No []

30. What in your opinion is the greatest impact of COVID-19 on Nigerians.

- (i) Bad economy []
- (ii) Restriction of movement []
- (iii) Loss of social activities []
- (vi) Poverty and hunger []
- (viii) All of the above []
- (iv) Fear []
- (v) Unwarranted Death []
- (v) Exposed our poor healthcare system []
- (vii) Improved hygiene []

31. Do you still need to maintain social distancing even with your face mask?

Yes [] No []

32. In your opinion, is face shield an alternative to face mask?

Yes [] No []

33. When should you remove your face mask?

(i) I am able to safely maintain adequate physical distancing []

(ii) It becomes damp or dirty []

(iii) If I am sure my neighbour is not infected []

(vi) Whenever it becomes uncomfortable []

(viii) Whenever in the vehicle []

34. Is it advisable to share face masks?

Yes [] No []

35. For proper wearing, to which extent should the face mask cover?

(i) Nose only []

(iv) Chin only []

(ii) Nose and mouth []

(v) None of the above []

(iii) Nose, mouth and chin []