



INFLUENCE OF MASS MEDIA ON AUDIENCE COMPLIANCE WITH FEDERAL GOVERNMENT'S DIRECTIVE ON USE OF FACEMASK: A STUDY OF BOMADI LOCAL GOVERNMENT AREA, DELTA STATE, NIGERIA.

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Abstract

In the wake of COVID-19 pandemic in Nigeria, the government gave a directive on the need for citizens to put on the face masks in all public places as a means of curtailing the spread and a condition for easing the lockdown across the county. This paper assessed the awareness of residents of Bomadi Local Government Area of Delta State of mass media messages on Nigerian government's directive on compulsory use of facemask. The paper aimed at ascertaining the level of awareness and level of compliance with federal government directive on wearing of face mask during covid-19 pandemic in 2020; the extent to which face mask was used; and the challenges encountered by residents of Bomadi LGA in wearing face mask. The study was anchored on Social Cognitive Theory. The study adopted descriptive survey research design and obtained data from primary sources through a well-structured questionnaire. The population of the study comprised all the residents of Bomadi Local Government Area of Delta State and 384 respondents were randomly selected from the eleven communities that made up the study population. Data were analyzed using SPSS version 20.1. Results of analysis revealed that the citizens did not fully comply with government directive on the use of face mask during covid-19 pandemic, although their level of awareness of government directive through media campaign was high. Results also revealed that cloth-mask was the mostly used face mask by the people during the covid-19 pandemic. The study further revealed that difficulty in breathing in air, discomfort when talking, face itching/scratches, face rashes and headache were the challenges encountered by the respondents when wearing face mask. Therefore, this paper recommends among others continuous mass media campaigns by the Government on the need for compulsory use of face mask by every citizen, especially residents of Bomadi LGA.

Keywords: Coronavirus, Covid-19 pandemic, Face mask, Compliance, Media campaign.



Introduction

Coronavirus disease 2019 (covid-19) is a respiratory disease that spreads from person to person. Covid-19 is a highly infectious and pathogenic viral disease that is caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (Shereen, Khan, Kazmi, Bashir & Siddique, 2020). According to World Health Organization (2019) covid-19 belongs to the family of Middle East respiratory syndrome (MERS) with such symptoms as sore throat, cough, runny nose, fever, tiredness, body aches and difficult breathing which manifests between 2 to 14 days after exposure to it. The symptoms of covid-19 are like that of other diseases like malaria, pneumonia, flu, hence it could be mis-diagnosed as evident in the assumed Enugu index case who was mis-diagnosed of COVID-19 disease, but a later laboratory test confirmed him negative (Olisah & Chika, 2020).

The coronavirus (covid-19) pandemic was first discovered in Wuhan city of China in December 2019. As of January 24, 2020, eight-hundred and thirty (830) cases had been confirmed in nine (9) countries (Unhale, Bilal, Sanap & Thakhre, 2020). The virus was initially thought to be a disease peculiar to Chinese but later started spreading speedily from person to person and subsequently to different parts of the world in early 2020 (Wuhan Municipal, 2019). In Africa, the first case of Covid-19 was discovered in Egypt on February 14, 2020, by 31st August 2020 the number of confirmed cases increased to 1, 044 513 and 21, 722 deaths (WHO, 2020b). In Nigeria, the first case of Covid-19 was recorded in Lagos on February 27, 2020, from an Italian man who works in Nigeria and had returned from Italy on February 25, 2020; in June 28, 2020, the Nigeria Centre for Disease Control (NCDC) reported a total of 24,077 infections and 558 death (Otuya, 2020).

In the opinion of Asadi-Pooya & Cross (2020), people who are more at risk of contracting the coronavirus include persons at older age, people with diabetes mellitus, people with hypertension, people with respiratory conditions (like asthma), people with heart disease, and people with impaired immune function because of underlying conditions or drug treatment. Confirming this statement, Labban, Thallaj & Labban (2020, p.2) stressed that 'people who are at greater risk of developing severe symptoms of the coronavirus are elderly people and those with underlying ailments such as hypertension, diabetes, cardiovascular disease, chronic respiratory disease and cancer'.

The mode of transmission of this infectious virus is by direct contacts like touching an infected person or the surfaces that the person has touched, on which numerous virus-containing droplets released or passed away by the person settles (Lidia & Junji, 2020). At the surfaces, the covid-19 virus can stay for days (Doremalen, Bushmaker & Morris, 2020). The virus can also spread through particles of skin cells, hair, clothing, and bedding (Okafor, 2020). Hence, the particles could be transmitted directly to a person through physical contact or staying close to infected one. Scholars stressed that forty to seventy (40 to 70) percent of the world's population could become infected by corona virus (Baldwin R & di Mauro, 2020).



As a strategy to control the spread of the coronavirus pandemic, the Nigerian government joined other countries (China, UAS, Italy, France, Britain) and declared the national lockdown strategy on the 27th of March 2020 (Olaniyi, 2020). On March 18, 2020, the Nigerian government banned social gatherings of fifty persons and above for four weeks with a mandatory stay-at-home order (Ewodage, 2020). Other strategies adopted by the Federal government of Nigeria in control the spread of the virus included self-isolation, social distancing, and restriction of inter-state movement (Martinez-Alvarez et al, 2020; Wu, Xu, Zhou., *et al*, 2020). However, the restriction in movement was gradually relaxed in the country by federal government as the surge of the pandemic reduced, with a strict recommendation for wearing of face mask by the citizens.

Because of the contagious nature of COVID-19 pandemic, the federal government of Nigeria introduced a compulsory policy demanding everyone going out in public to wear face masks. The Nigerian Centre for Disease Control (NCDC) as reported by Ogoina (2020) stressed that the use of face masks could only be effective in controlling the SARS- COV-2 transmission if they are used and disposed properly and if they are worn in combination with other preventive measures like hand hygiene and social distancing.

As a result of the contagious nature of coronavirus and the rate at which it kills people, there have been vaccines produced all over the world to control the spread of virus. These vaccines include Pfizer-BioNTech Comirnaty, Moderna, Sinopharm, Johnson & Johnson/Janssen approved for people in United State of America. In Nigeria, NAFDAC has approved Oxford AstraZeneca vaccine for use by Nigerian citizens (NCDC, 2020). Even with these vaccines, the public have been advised to continue to take necessary precautionary measures to eradicate the coronavirus disease. The major aims are to prevent transmission and spread of SARS-COV-2 and to moderate the impact of the virus on the health system, social activities and economies of countries and communities (Ogoina, 2020; WHO, 2020c). This explains the reason for the Nigerian Federal and State government campaigns and strict directives through the mass media on the use of facemask by all citizens. However, the question that comes to mind is: Do Nigerians use face mask in their daily activities and interaction with other persons? How often do they wear the face mask? How well do they used and disposed the face mask? The residents of Bomadi LGA of Delta State Nigeria are not left out in the above questions. Therefore, whether the residents of Bomadi LGA of Delta State Nigeria complied with this directive remains uncertain. It is against this background that this study sought to ascertain how residents of Bomadi Local Government Area of Delta State have adhered to the federal government's media messages on the use of facemask.

Statement of the Problem

The World Health Organization (WHO, 2020c) acknowledged the possible advantages of the use of masks by healthy people in the society to reduce likely exposure from infected persons during the early stage of infection. In line with WHO recommendation on wearing of facemask, the Federal government of Nigeria, under the administration of President Muhammadu Buhari issued a compulsory policy of wearing of face masks by every Nigerian citizen when going out



in public places. This covid-19 prevention policy was adopted and implemented by all the State and Local Governments of the country.

The reason given by the Nigerian Centre of Disease Control (NCDC, 2020) for wearing of face masks was to prevent persons who are infected but without any symptom from spreading the disease and prevent healthy persons from being infected. During the pandemic, it was expected that when people comply and wear their face masks, the rate at which the virus spread would be reduced. Since the President of the Federal Republic of Nigeria through the Nigerian mass media, especially the television made wearing of face mask mandatory in the public places (President Federal Republic of Nigeria, 2020). There is no known evidence to show Nigerian citizen's awareness of face mask, and their compliance to the directive on the use of face mask. However, the issue that remained uncertain was whether Nigerian Citizens, especially residents of Bomadi Local Government Area of Delta State actually complied with this policy by wearing their face mask during the covid-19 pandemic. It is against this backdrop that this study sought to assess the compliance of citizens of Bomadi Local Government area of Delta State with the federal government's media campaign on the use of facemask.

Research Questions

The following research questions guided the study.

1. What was the awareness level of residents of Bomadi LGA of federal government media directive on compulsory use of face mask?
2. What was the level of compliance of residents of Bomadi LGA with government media directive on wearing of Face mask during covid-19 pandemic?
3. Which type of face mask was mostly worn (used) by residents of Bomadi LGA during the pandemic to prevent the spread of the virus?
4. What were the challenges encountered by residents of Bomadi LGA in wearing Face mask?

Literature Review

Face masks are meant to protect the persons wearing them from inhaling environmental impurities. According to Okafor (2020), the use of face mask is one of the preventative strategies that could limit the spread of corona virus. On the contrary, WHO (2020d) notes that wearing of face masks alone is not adequate to provide the necessary level of protection, hence, other essential measures (like hand hygiene practices and social distancing) should also be adopted. The agency (WHO, 2020d) also stresses that the use of face masks is part of a complete measures for the prevention and control of the spread of some respiratory viral diseases such as COVID-19. However, the protective effect of face masks recommended during the SARS-CoV-2 pandemic could be severely reduced by their inappropriate use, like improper doffing, inadequate maintenance, long or repeated use of disposable masks, no dry cleaning of fabric masks or using masks made of non-protective material (WHO,2020d).



The different types of face mask are surgical masks, N95 masks and cloth mask (Okafor, 2020). The surgical mask also known as medical mask is a loose-fitting disposable mask that protects the wearer's nose and mouth from contact with droplets, splashes, and sprays that may contain germs. It does not allow the passage of larger particle in the air (Okafor, 2020). Surgical masks also protect other people by reducing exposure to the oral and nasal secretions of the mask wearer (Okafor, 2020; Pandemic, Committee and Policy Board, 2006).

The N95 masks are disposable masks designed to block 95% of very small particles. It offers more protection than a surgical mask because it can filter out both large and small particles when the wearer inhales. Most N95 masks have valves that make them easier to breathe through (Bałazy, Toivola, Adhikari *et al.*, 2006). Cloth Masks are alternative to surgical and N95 masks. This is because the other types of masks are often unavailable and mostly expensive. Okafor (2020) observed that “cloth masks are easy to make and can be washed and reused”. MacIntyr, Chughtai, Tham and Seale (2020) emphasized that a well-designed cloth mask should have water-resistant fabric, multiple layers, and good facial fit. Observation has shown that most people wear face masks on their chin and neck, and mask wearers give no attention to covering their mouth and nose, especially when talking (Ogoina, 2020). Ogoina further noted that used face masks are kept with personal belongings or disposed indiscriminately in public spaces, resulting in self and environmental contamination (p.1). The inappropriate use and disposal of face masks in Nigeria could promote the spread of the covid-19 in the country and negate the country's efforts to contain the COVID-19 pandemic (Ogoina, 2020).

A study conducted on physical distancing, facemasks and eye protection to prevent person-to-person transmission of SARS-CoV-2 reported that masks and respirators reduced the risk of infection by 85% (aOR 0.15, 95% CI 0.07–0.34), with greater effectiveness in healthcare settings (RR 0.30, 95% CI 0.22–0.41) than in the community (0.56, 0.40–0.79; p interaction=0.049) (Chu, Akl, Duda, *et al.*, 2020). They attribute the differences in the results to the constant use of N95 respirators in health-care settings. Another study also supports universal face mask use because masks were effective in both healthcare and community settings when adjusted for type of mask use (MacIntyre, Wang, Cauchemez *et al.*, 2011).

The World Health Organization (2020d) identified some likely disadvantages of wearing face mask by healthy people in the public to include breathing difficulties/potential headache, potential increased risk of self-contamination and potential development of facial skin scratches. A study conducted on the respiratory consequences of N95- type Mask usage in pregnant healthcare workers revealed that breathing through N95 mask hinders gaseous exchange and imposes an additional workload on the metabolic system of pregnant healthcare workers (Tong, Kale, Ng *et al.*, 2015). An earlier study which assessed the impact of surgical mask induced deoxygenation during major surgery, using 53 surgeons found that pulse (breathing) rates of the surgeons increased and their SpO₂ decreased after the first hour of wearing surgical masks during operations (Beder, Büyükkoçak, Sabuncuo glu *et al.* (2008). Similarly, Kao, Huang, and Huang (2004) assessed the physiological impact of wearing N95 mask during hemodialysis as a precaution against SARS in patients with end-stage renal



disease. Their findings revealed that wearing of N95 type of mask for four hours during hemodialysis largely reduced PaO₂ and increased respiratory adverse effects in people who have end-stage renal disease.

Empirical Review

A study carried out in Poland on the use of face mask by students in Poland revealed that 1393 (60.4%) out of 2307 respondents indicated that they wear face masks and 517 (37.1%) of the respondents used different types of face masks (Kukasz, Marta, Piotr, *et al.*, 2020). Similarly, Edet, Harry, Wegbom, Raimi, Fagbamigbe and Kiri (2020) assessed face mask utilization in the Era of covid-19: Nigeria Experience, which aimed to investigate the knowledge and utilization of face masks among the Nigerian population. The study adopted cross-sectional survey conducted from July 2 to August 28, 2020, using a convenience sampling technique. Findings showed that almost all the respondents 91.9% and 94% were aware that face masks can reduce the spread of COVID-19 and should be worn in the public respectively. Finding also showed that a majority of respondents used homemade masks (70%) and 71.2% reused their masks (Edet, Harry, Wegbom *et al.*, 2020).

A similar study assessed knowledge and perceptions about covid-19 among the public in Nigeria during the initial week of the pandemic lockdown in the country. This cross-sectional survey from March 28 to April 4, 2020, used online questionnaire to collect data from respondents within Nigeria. Purposive and snowball sampling techniques were used to recruit 1357 respondents, aged 15-70 years, from 180 cities and towns within Nigeria. Their findings revealed that Nigerians have relatively high knowledge of covid-19 and its preventive measures, mostly derived from traditional media (Olapegba, Ayandele, Kolawole, 2020). Concerning the inconveniences experienced by people when using face mask, Foo, Goon, Leow, and Goh (2006) in their study on the adverse skin reactions to personal protective equipment against severe acute respiratory syndrome (SARS) epidemic in 2003 found that face rash appeared in 35.8% and itch in 51.4% of Health Care Workers (HCW) wearing the professional face protection. A similar study found that out of 876 participants, only 27 people (3.1%) did not complain of any problems related to face mask wearing (Kukasz, Marta, Piotr, 2020). Out of all reported inconveniences, difficulty in breathing appeared to be the most common one (35.9%), followed by warming/sweating (21.3%), misting up of the glasses (21.3%), and slurred speech (12.3%). In the model of logistic regression analysis, the researchers found that wearing surgical masks showed significantly lower risk for the development of most common bothersome issues, as difficulty in breathing, warming/sweating, glasses misting up, slurred speech, and itch (odds ratio [OR] = 0.42, 0.60, 0.10, 0.17, and 0.04, respectively). However, the use of cloth masks was related to higher risk of difficulty in breathing (OR = 1.56), warming/sweating (OR = 1.31), glasses misting up (OR = 1.92), slurred speech (OR = 1.86), and itch (OR = 2.99), (Kukasz, Marta, Piotr, 2020).

Okafor (2020) reported that a multidisciplinary group known as Data Evaluation and Learning for Viral Epidemics (Delve) has reviewed the evidence of face mask and concluded in favour



of public use of it, in addition to cloth coverings to attack the covid-19 pandemic. Their study suggests that the use of face mask will possibly reduce further spread by persons who have the disease but have not manifested any symptom. The recommended that if the face mask is extensively used, especially in circumstances where physical distancing could not be observed, it could significantly help in reducing the transmission of the virus (Davis, 2020; Okafor, 2020). Chu, Akl, Duda et al (2020) conducted study on physical distancing, face masks, and eye protection to prevent person-to-person transmission of SARS-CoV-2 and COVID-19. They reported that masks and respirators reduced the risk of infection by 85% (aOR 0.15, 95% CI 0.07–0.34), with greater effectiveness in healthcare settings (RR 0.30, 95% CI 0.22–0.41) than in the community (0.56, 0.40–0.79; p interaction=0.049). They attribute the differences in the results to the constant use of N95 respirators in health-care settings. In their study, MacIntyre & Wang (2020) supports universal face mask use, because masks were equally effective in both healthcare and community settings when adjusted for type of mask use.

Cheng, Wong, Chuang, Soa, Chena, Sridhar, Kai-Wang, Chand, Hunge, Pak-Leung Ho & Yuen (2020) assessed the effect of community-wide mask usage to control coronavirus disease 2019 (COVID-19) in Hong Kong Special Administrative Region (HKSAR). Patients with respiratory symptoms at outpatient clinics or hospital wards were screened for covid-19 per protocol. Epidemiological analysis was made for confirmed cases, especially persons acquiring COVID-19 during mask-off and mask-on settings. The incidence of covid-19 per million population in HKSAR with community-wide masking was compared to that of non-mask-wearing countries which are comparable with HKSAR in terms of population density, healthcare system, BCG vaccination and social distancing measures but not community-wide masking. Compliance of face mask usage in the HKSAR community was monitored. The study found that compliance to face mask usage by HKSAR public was 96.6%. the study concluded that community-wide mask wearing may contribute to the control of covid-19 by reducing the amount of emission of infected saliva and respiratory droplets from individuals with subclinical or mild covid-19.

Ogoina (2020) reported on the Need for Rational Use of Face Masks in Nigeria. Using both secondary data and personal observations, he found that some people wear face masks on their chin and neck, and mask wearers give no attention to covering their mouth and nose, especially when talking. His finding also showed that used face masks are kept with personal belongings or disposed indiscriminately in public spaces, leading to self and environmental contamination. The author concluded that inappropriate use and disposal of face masks in Nigeria could promote the spread of the novel coronavirus in the country and negate the country's efforts to contain the covid-19 pandemic. The researcher, therefore, suggested that in the implementation of the universal masking policy in Nigeria, federal and state governments should consider local applicability, feasibility, and sustainability and the need for intensive public sensitization and education on appropriate use and disposal of face masks in the country (Ogoina, 2020).

However, some studied conducted on the implication of wearing face masks revealed that it is associated with some physiological and respiratory effects. Such studies include the one by



Tong, Kale & Ng (2015) on the respiratory consequences of N95- type Mask usage in pregnant healthcare workers. They found that breathing through N95 mask hinders gaseous exchange and imposes an additional workload on the metabolic system of pregnant healthcare workers. Similarly, Beder, Büyükkoçak, Sabuncuoğlu, Keskil & Keskil (2008) earlier studied the impact of surgical mask induced deoxygenation during major surgery, using 53 surgeons. Their findings revealed that pulse (breathing) rates of the surgeons increased and their SpO₂ decreased after the first hour of wearing surgical masks during operations.

An animal model study conducted by Chan, Yuan, Zhang, Poon, Chan, Lee, Fan, Li, Liang, & Cao (2020) showed that non-contact transmission of SARS-CoV-2 (the virus responsible for COVID-19) could be reduced from 67% to 17% when surgical masks are worn. On the contrary, some pilot studies revealed that cloth masks are important in reducing the spread of covid-19 (Teslya, Pham, Godijk, Kretzschmar, Bootsma & Rozhnova, 2020; Konda, Prakash, Moss, Schmoltd, Grant & Guha, 2020).

Also, Kao, Huang & Huang (2004) assessed the physiological impact of wearing N95 mask during hemodialysis as a precaution against SARS in patients with end-stage renal disease. Their findings revealed that wearing of N95 type of mask for four hours during hemodialysis largely reduced PaO₂ and increased respiratory adverse effects in people who have end-stage renal disease. From the available literature reviewed, not many studies have assessed compliance with the federal government's media campaign on the use of facemask, particularly in Bomadi LGA of Delta State, Nigeria. It is this gap that this study sought to fill through empirical research findings.

Theoretical Framework

This paper adopted the Social cognitive theory propounded by Albert Bandura in the 1960's. This theory defines a dynamic process in which several factors co-operate and influence each other, thus, making a person to take an action or inaction (Bandura, 1989). These factors include personal factors (such as drive, instincts, traits, and other motivational forces), environmental factors (such as happening, events, hazards, change) and social factors (such as culture or values). The synergy of these factors largely influences the individual leading to some form of learning, that could in turn bring about the exhibition of certain behaviours by those individuals. The social cognitive theory was found relevant to this study because it discourses alternative forms of societal organization, the relationship of knowledge, the nature of covid-19 pandemic and its relationship to society. It was also considered relevant to this study because it talks about the social context of human actions, because people's beliefs and actions are mostly influenced by social structure and communication system. This theory explains a dynamic process whereby some factors interact and influence each other, thus, making a person to take an action or inaction against covid-19. These factors include personal factors (individual decision/motivation to act, based on the severity of the virus), environmental factors (possibility of the occurrence or vulnerability if the virus) and social factors (influence from family and friends take up an action against the virus). The synergy of these factors largely



influences the individual to exhibit certain behaviours or actions in line with government directives on compulsory use of facemask to avoid contacting covid-19 and to prevent its spread.

Methodology

Research Design

This study adopted descriptive survey design and structured questionnaire was used for collection of primary data. The study area was Bomadi Local Government Area in Delta State. The eleven (11) communities in Bomadi Local Government Area were all studied, because they were all affected by the coronavirus pandemic. These communities were: Ogriagbene, Esanma, Akugbene, Ogbein-ama, Bomadi, Kpakama, Ekamuta-gbene, Azebiri, Ogodobiri, Okoloba and Kalafuo-gbene. Also, secondary data was collected from published journal articles, conference papers, internet materials and other library materials such as books, Newspapers and Magazines.

Population of Study

The study population consists of residents of all the eleven (11) communities in Bomadi Local Government Area. The population figure of the eleven (11) communities according to 2016 estimated population census was one hundred and eighteen thousand five hundred (118,500), (NPC 2016).

Sample Size and Sampling Techniques

From the population of 118,500 a sample size of 384 was obtained using Krejcie & Morgan (1970) formula. To obtain an adequately acceptable sample size, Krejcie & Morgan (1970) cited in Keyton (2001) suggest that: "If your population falls in between one of the suggested levels use the Next larger population size and its corresponding sample size. If there is a question or doubt about sample size, it is always best to use a larger size rather than smaller sample size".

Table 1: Krejcie and Morgan's prescription of sample size for different population at 95% confidence level.

S/N	Population Size	Sample Size	S/N	Population Size	Sample Size
1	50	44	15	260	155
2	75	63	16	280	162
3	100	80	17	300	169
4	120	92	18	400	196
5	130	97	19	500	217
6	140	103	20	1000	278
7	150	108	21	1500	306
8	160	113	22	2000	322



9	170	178	23	3000	241
10	180	123	24	4000	251
11	190	127	25	5000	357
12	200	132	26	10,000	370
13	220	132	27	50,000	381
14	240	148	28	100,000 & over	384

Source: R.V.Krejcie & D.W. Morgan, (1970) Determining sample size for research activities.

Therefore, considering the suggestions of Krejcie & Morgan above and highest figure of 100,000 and its corresponding sample size of 384, the researcher used a sample size of 384. The sampling technique used in selecting samples for this study was simple random sampling technique. This sampling technique was selected because it gave each person living in Bomadi LGA equal chance of being selected for the study. The questionnaire was distributed with the help of two research assistants who were conversant with the research area. Copies of the questionnaire were administered to respondents in different places such as shops, houses, schools, restaurants etc. This process facilitated the immediate filling of the questionnaire. Data collection took a period of two weeks.

Reliability and Validity of the Instruments

To ascertain validity, care was taken in the construction of the questionnaire questions. The objectives of the study were paired with the questions. The initial outline of the questionnaire was scrutinized by two Mass Communication lecturers from Edwin Clark University, Delta State, Nigeria, who improved the content, wording, and layout of the instrument. To ensure reliability of the measuring instrument, a pilot test was conducted using 20 copies of the questionnaire that were distributed in one of the communities in Bomadi LGA (Ogriagbene). After two weeks interval, another 20 copies of the questionnaire were distributed to the same respondents in the same community. The aim was to ascertain if they understood the questions and if their responses showed some similarities. The two sets of data were analyzed in line with the objectives of the study. The essence was to know whether the respondents would answer the questions in the first and second test in the same direction. The final analysis showed uniformity in the responses, which implies that the instrument (questionnaire) is reliable.

Method of Data Analysis

Data collected during the fieldwork were analyzed using Statistical Package for Social Science (SPSS) version 20.1. These statistical methods were used to enable easy reading and ascertain accurate results in line with the research objectives. However, the demographic data of the respondents was analyzed using frequency tables and percentages.

Data Collection and Analysis

A total of 384 copies of the questionnaire were distributed to the respondents but only 370 were duly returned, giving a response rate of 96%. The presentation and analysis of data were done under the following: a table of data containing respondents' demographic information and their



% interpretations and Statistical Package for Social Science (SPSS) analysis of the data generated for purposes of generalization. The analysis was made based on how the responses helped in answering the research questions.

Table 2: Biographic Data Analysis

S/N.	Variable	Respondents' Distribution	Valid Percentage
1.	Gender	Male	47%
		Female	53%
2.	Age	18-27	20%
		28-37	26%
		38-47	22%
		48-57	18%
		58 and above	14%
3.	Marital Status	Single	32%
		Married	66%
		Divorced/Separated	1%
		Widowed	1%
4.	Educational Qualification	No formal Education	0%
		Primary Education	18%
		Secondary Education	27%
		Tertiary Education (HND/B.Sc./B.Ed.)	45%
		Other Degrees (MSc/M.Ed./PhD)	10%
5.	Religion	Muslim	0%
		Christian	99%
		Traditional Religion	1%

Source: Field Work (2021)

The biographic data of the respondents indicate that 53 percent are female, with 26 percent of the respondents being between the age range of 28 – 37 years as the highest while the lowest age range was between 58 years and above with 14 percent. The biodata representation also shows that 66 percent of the respondents are married, ninety nine percent of them being Christians, with 45 percent of the respondents having a tertiary education.

Table 3: Whether respondents have heard of Federal government directive on use of face mask

Variable	Frequency	Percentage (%)
Yes	370	100
No	-	-
Total	370	100

Source: Field Work (2021)



Data in Table 6 revealed that all (100%) the respondents have heard of federal government directives of the use of face mask. This implies that the sampled respondents were aware (knew) of Federal government directive on the use of face mask.

Table 4: Respondents' source of information on the use of face mask

Variable	Frequency	Percentage (%)
Television	51	14
Radio	60	16
Newspaper/Magazine	12	3
Social media	30	8
Family Members	51	14
Friends	20	5
Church	13	4
Hospital	35	9
School	15	4
Market	20	5
All of the above	63	18
Total	370	100

Source: Field Work (2021)

Result presented in Table 7 revealed the source of the respondent's information on the use of face mask. From the above result, the highest percentage 63(18%) indicated all the above sources as their medium of getting information on the use of face mask. This was followed by the respondents go their information from radio 60(16%). The respondents who got their information from Television and family members were 51(14%) respectively. The lowest percentage 12(3%) of the respondents go their information from newspaper and magazine. This implies that the respondents use radio as their major source of information, though they got information from other sources.

Table 5: Responses on how often the respondents heard the instruction on the use of face mask

Variable	Frequency	Percentage (%)
Very often	260	70
Not very often	59	16
Rarely	51	14
Total	370	100

Source: Field Work (2021)

Data in table 8 above revealed that more than half (70%) of the respondents heard information on use of facemask very often while 16% of the respondents did not hear the information very often. Only 51 (14%) of the respondents rarely heard information on the use of face mask.



Table 6: Level of Awareness of Residents of Bomadi LGA on government directive on wearing of face mask.

	Score Range (%)	Frequency	Frequency %	Cumulative %
		Frequency	%	%
Valid Very Low	0-10	26	5.28	5.28
Low	11-30	91	22.86	28.14
Moderate	31-50	201	53.77	81.91
High	51-70	41	15.33	97.24
Very High	71-100	11	2.76	100.00
Total		370	100.00	100

Source: Field Work (2021)

Table 3 showed the level of awareness of residents of Bomadi LGA on government directive on wearing of face masks. It can be observed that two hundred and one respondents representing about fifty four percent have a moderate awareness level. The table also showed that 91 respondents or twenty three percent of respondents have low awareness level while forty-one respondents representing fifteen percent has a high awareness level. The result implies that there is a moderate level of awareness on government directives for citizens to wear face mask in Bomadi Local Government Area of Delta State.

Table 7: Level of Compliance of Residents of Bomadi LGA of government directive on wearing of face mask during covid-19 pandemic.

	Score Range (%)	Frequency	Frequency %	Cumulative %
		Frequency	%	%
Valid Very Low	0-10	26	7.02	7.02
Low	11-30	196	52.97	59.99
Moderate	31-50	121	32.70	92.69
High	51-70	16	4.32	97.03
Very High	71-100	11	2.97	100.00
Total		370	100.00	100

Source: Field Work (2021)

Table 4 showed level of compliance of residents of Bomadi LGA on government directive on wearing of face masks during the pandemic. It can be observed one hundred and ninety-six respondents representing about fifty three percent have a low compliance level. The table also shows that one hundred and twenty-one respondents or thirty two percent of respondents have moderate compliance level. Only 11 respondents or about three percent of the residents surveyed had a high compliance level. The implication of the finding is that there was a very low compliance with the government directive on the wearing of face mask in Bomadi Local Government area of Delta State.

**Table 8: Respondents opinion on the type of face mask they mostly wore (used) during the pandemic to prevent the spread of the virus.**

Variable	Frequency	Percentage (%)
Surgical Mask	83	22
N95 mask	30	9
Cloth mask	156	42
No mask at all	101	27
Total	370	100

Source: Field Work (2021)

Table 5 shows the type of face mask worn mostly by residents of Bomadi LGA during the COVID-19 pandemic. It can be observed from the table that most residents used the cloth mask with forty two percent of the respondents falling in that category. The lowest type of face mask used was the N95 mask with only nine percent usage. 27 percent of the residents, however, did not use any form of face mask. The implication of the result is that cloth face masks were mostly used during the pandemic with a reasonable number of persons in the area of this study not using any form of masks at all.

Table 9: Responses on the challenges the respondents encounter when wearing face mask.

Variable	Frequency	Percentage (%)
Difficulty in breathing	54	15
Discomfort when talking	48	13
Itching/scratches on my face	42	11
Rashes on my face	33	9
Headache	48	13
All of the above	145	39
None of the above	-	-
Total	370	100

Source: Field Work (2021)

Table 6 showed the opinion of respondents on the challenges residents of Bomadi Local Government Area encountered when wearing face masks during the pandemic. The highest recorded challenge was difficulty in breathing accounting for about 15 percent of the respondents. The lowest response was rashes on face of the persons wearing the face mask. However, 39 percent of the respondents or 145 respondents believed that all the highlighted challenges constitute problems of wearing face mask.

Discussion

This paper assessed compliance with the federal government's television (tv) directive on the use of facemask by citizens of Bomadi Local Government Area of Delta State, Nigeria. In pursuit of this objective, the paper assessed the level of awareness of residents of Bomadi LGA of federal government directive on wearing of face mask, which revealed that 201 respondents representing about 54 percent have a moderate awareness level. 91 or 23 percent have low



awareness level while 41 respondents representing 15 percent have high awareness level. This implies that there is a moderate level of awareness on government directives for citizens to wear face mask in Bomadi Local Government Area of Delta State. According to their responses, all 100% the respondents have heard of federal government directives of the use of face mask and 16% and 14% of the respondents respectively learnt about the use of facemask through radio and television messages. In addition, 70 percent of the respondents said they got the directive on the use of face mask very often. This finding corroborated the finding of Olapegba *et al.*, (2020) which revealed that Nigerians have relatively high knowledge of covid-17 and its preventive measures, mostly derived from traditional media. Confirming this finding also, a study carried out in Poland on the use of face mask by students in Poland revealed that 1393 (60 percent) out of 2307 respondents wear face masks and 517 (37.1 percent) of the respondents used different types of face masks (Kukasz, *et al.*, (2020).

Analysis of the Level of compliance of residents of Bomadi LGA of government directive on wearing of face mask mask during covid-19 pandemic revealed that 196 respondents representing about 53 percent have a low compliance level. Also 121 respondents or 32 percent of respondents have moderate compliance level with only 11 respondents or about 3 percent of the sampled respondents had a high compliance level. The implication of this finding was that there was a very low level of compliance with the government directive on the wearing of face mask in Bomadi Local Government area of Delta State. Further responses from the residents surveyed revealed that more than half (53 percent) of the respondents indicated they did not wear face mask during covid-19 pandemic, while 56 percent of the respondents still indicated they do not wear their face mask as at present. Also, 31 percent of the respondents only wear face mask when they are going to public gathering, 25 percent respondents indicated they do not wear face mask at all whether in public or private place while 27 percent of the respondents put their face masks in their bags when they are not using it.

This finding was in line with that of Ogoina (2020) which showed that mask wearers give no attention to covering their mouth and nose, especially when talking and that used face masks are kept with personal belongings or disposed indiscriminately in public spaces, resulting in self and environmental contamination. It was, however, contrary to another Nigerian study which revealed that 90.2 percent of the participants used face masks in the public, 53 percent used it when entering restricted places, 45.5 percent when with a suspected case and 30.7 percent used a mask due to fear of arrest/punishment (Edet, *et al.*,2020).

Regarding the type of face mask mostly worn (used) by citizens of Bomadi LGA during the pandemic to prevent the spread of the virus, data gathered, and analysis made revealed that most residents used the cloth mask with 24 percent of the respondents falling in that category. 22 percent of the respondents used surgical masks while the lowest type of face mask used was the N95 mask with only 9 percent usage. The implication of this result was that cloth face masks were mostly used during the pandemic with a greater number of persons in the study area not using any form of masks at all. However, 64 percent of the respondents knew that surgical Masks, N95 mask and cloth masks were they three common types of face mask usually



available. This finding was in line with some pilot studies which revealed that cloth masks are commonly used and are important in reducing the spread of covid-19 (Teslya, Pham, Godijk, 2020; Konda, Prakash, Moss, *et al.*, (2020).

The analysis of responses to question on the challenges the respondents encounter when wearing face mask revealed that such challenges as difficulty in breathing, discomfort when talking, itching/scratches on their faces, rashes on the face and headache were encountered by citizens of Bomadi LGA when they wear face mask. From the analysis, the highest recorded challenge was difficulty in breathing accounting for about 15 percent of the responses. The lowest indicated challenge was rashes on face of the persons wearing the face mask with only 9 percent responses. However, 39 percent or 145 of the respondents believed that all the highlighted challenges constitute problems of wearing face mask. These hindrances could be the reason citizens of Bomadi LGA had low level of compliance with the federal government directives on the use of face mask.

This finding validates a 2015 study on the respiratory consequences of N95- type Mask usage in pregnant healthcare workers, which revealed that breathing through N95 mask hinders gaseous exchange and imposes an additional workload on the metabolic system of pregnant healthcare workers (Tong, *et al.*,2015). This finding also corroborates an earlier study on the adverse skin reactions to personal protective equipment against severe acute respiratory syndrome (SARS) epidemic in 2003 which revealed that face rash appeared in 35.8 percent and itch in 51.4 percent of HCW wearing the professional face protection (Foo, *et al.*, 2006). A similar study also confirmed this present finding (Kukasz, *et al.*, 2020).

Conclusion and Recommendations

Based on the findings, this paper concluded that although the citizens of Bomadi LGA had moderate level of awareness of the directive on the use of face mask, they did not comply to this directive. Their awareness of the use of facemask did not translate into their practice of using this facemask as a preventive measure to the spread of covid-19. Rather, they did not use facemask during the pandemic and still do not use it in present time. It was also concluded that the challenges of as difficult breathing, discomfort when talking, itching/scratches on the faces, rashes on the face and headache encountered by residents of Bomadi LGA of Delta State could possibly be the reason for their non-compliance to the use of facemask as directed by the government. This paper, therefore, recommends constant and continuous campaigns by the Federal Government of Nigeria, not only through television but a combination of other media on the need for compulsory use of face mask by every citizen of the country, especially residents of the studied area. Policy makers should ensure that Nigeria citizens continue to adhere strictly to other preventive measures such as maintaining social distancing, personal and hand hygiene, use of alcohol-based sanitizers, taking and vaccines and constant medical checkups to avoid further spread of the virus. The Nigerian mass media should assist in influencing people to wear face mask through constant, timely and appropriate messages on the dangers of covid-19 and the consequences of non-compliance with directives on the use of



face mask. Although, surgical masks and N95 masks are costly, however, encouraging the public to wear homemade cloth masks to a significant extent will help in reducing the spread of covid-19, especially in rural areas like Bomadi LGA of Delta State.

Approval and Consent Information

The review and Ethical approval for the study was obtained from the Health Research Ethics Committee of Federal Capital Territory, FCT Abuja, Nigeria with approval number FHREC/2021/01/12/26-02-21. Formal introductory letter accompanied the questionnaires that were sent to the participants. The participants were made to understand that participation was voluntary and there were no consequences for non-participation. Confidentiality was maintained by protecting the specific identity of the respondents in the study instrument. However, secondary data on compliance to facemask against covid-19 were obtained from Nigerian Newspapers and official website of Nigeria Centre for Diseases Control (<https://www.covid19.ncdc.gov.ng>).



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