



Assessment of Corona Virus Prevention Strategies Utilized by Rural Dwellers

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

This study is aimed at assessing corona virus prevention strategies utilized by rural dwellers. Purposive and convenient sampling technique was used for this study where the researcher relied on his own judgment when choosing members of the population to participate in the study. Thus, a total of 130 adults were interviewed for this study. An individual interview was conducted with the aid of interview guide. The interview was made up of 2 sections. The first section is for demographic characteristics and then questions to guide the interview. Data collection from this study was analyzed using thematic method of analysis. Demographic characteristics of respondents and it indicates that; the age group 30-39, 52(40%) had the highest respondents. For the Gender; 56(43%) of the total respondents were male, while 74(57%) of the total respondents were female. For the marital status; A vast majority of the respondents, 59(45%) were single and the most common religion practiced is the Christian religion, 78(60%). The level of education showed that; 22(17%) of the total respondents were illiterates, 43(33%) of the total respondents stopped at primary level of education, 35(27%) of the total respondents stopped at secondary level of education, while 30(23%) of the total respondents had both secondary degrees. For Occupation; 22(17%) of the total respondents were civil servants, 39(30%) of the total respondents were traders, 39(30%) of the total respondents were farmers, 30(23%) of the total respondents were students. The strategies for the prevention of COVID-19 among the respondents included; social distancing, wearing of face mask when going out, sniffing of tobacco and steaming of self, drinking

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of hot drink (dry gin) and hot water every morning and the reasons for utilizing these strategies by the respondents were because the Nigerian government made it mandatory, fear of exposure to the virus and cultural reasons/beliefs. This study identified that some rural dwellers in Amassoma lack adequate knowledge on corona virus prevention. However the preventive strategies include practiced include; social distancing, hand washing, avoid touching of face, restriction of movement and so more; this study has made clear the information needs, preferred prevention strategies, and the challenges that militate against the access and use of COVID information by the rural dwellers in Amassoma. Hence attention should be paid to rural dwellers to ensure strict obedience to COVID-19 prevention protocols.

Keywords: Corona virus; prevention strategies; rural dwellers; amassoma community; Bayelsa state, Nigeria.

1. INTRODUCTION

Corona Virus Disease 2019 (COVID-19) pandemic has emerged as a global health crisis, with 3,855,788 infected persons and 256,862 deaths worldwide as of May 9, 2020 [1]. It is a new and highly infectious respiratory disease caused by a novel corona virus and was first detected in December 2019 in Wuhan, China [2]. According to the European Centre for Disease Prevention and Control (ECDC) in 2020 [3], the causal virus called the Severe Acute Respiratory Syndrome Corona Virus 2 (SARS-CoV-2) is highly infectious and has recorded more than 3 million patients within a space of four months of outbreak. In 2020, WHO reported that as at May, 2020, two hundred and twelve (212) countries of the world have been affected by the highly infectious SARS-CoV-2 and it still has a high chance of reaching many new territories [4]. The global mortality rate was pegged at approximately 3.4% in early March, 2020, but a shift from this is expected to occur before the end of the pandemic [5]. Furthermore, it has become a major issue in Nigeria as patients have been confirmed in the different states of the country including the Federal Capital Territory (FCT). From an epidemiological point of view, the observed trend in incidence of newly confirmed patients in Nigeria suggests that it may take a while before the country is able to flatten the COVID-19 incidence curve [6]. Due to lack of vaccine or proven drugs for the management of COVID-19, transmission control becomes a very important intervention that can abate the spread of the disease in community and health care settings [7]. Moreover, the emergence of any infection within a community can threaten public health security as it might cause serious health impacts and has the potential to interfere with international travel and trade [8]. According to [9], many people in communities especially children and elderly are at risk of losing their lives to

pneumonia, diarrheal diseases, malaria, human immunodeficiency virus (HIV) and other preventable diseases unless urgent action is taken to mitigate the spread of COVID-19. For instance, disruptions in immunization services for fear of getting infected with the virus will result in more children dying from pneumonia, which already kills many children in rural areas. Limited resources in rural areas may result due to lack of basic hand washing facilities at home which form the fundamental mechanism to prevent COVID-19, thereby, expose already vulnerable people in rural areas to infection [9]. The Federal Ministry of Health and the Nigerian Centre for Disease Control (NCDC) worked diligently to put in place some certain control measures and guidelines for prevention of COVID-19. Despite the efforts put in place by the Nigerian government to mitigate the impact of COVID-19, poor public knowledge, attitudes and practices of people relative to COVID-19 control can foil even the best national public health control response. In a study by [9], it was revealed that preventive measures like lockdown and social distancing rules, wearing of face mask, hand washing with soap, and environmental cleanliness were slightly observed thereby, exposing the rural areas to COVID-19 infection. Nigeria is currently in the heart of COVID-19 pandemic and to guarantee a successful early containment of the disease, in the absence of vaccine, adherence to control measures determined by people's knowledge, attitudes, and practices towards COVID-19 is very important [10]. With these precedents in mind, the researcher seeks to determine corona virus preventive strategies utilized by rural dwellers in Amassoma community.

2. MATERIALS AND METHODS

Research design: A qualitative descriptive approach was utilized to obtain the information on corona virus prevention strategies utilized by

rural dwellers in Amassoma community. Qualitative design approach is the most suitable design to answer the objectives of the study and provide a unique appreciation of the reality of human experience. All ethical approval and consideration were sorted for before proceeding with this study.

Research setting: This research was carried out in Amassoma community, Southern Ijaw, Bayelsa State. Amassoma Community is the largest Community in Southern Ijaw Local Government of Bayelsa State, Nigeria where Niger Delta University is situated. It is a coastal community located approximately 10 kilometers away from Yenagoa, the capital city of Bayelsa State Nigeria. Amassoma is situated at latitude 4.97° North and longitude 6.11° East, 79 meters above sea level with a population of 6,970 (Census, 2006). It shares common boundaries with the Ijaw speaking communities, on the north with Ogobiri, south with Oporoma, east with Otuan and west with Torugbene. The Community is made up of 20 compounds commonly known as Pele or Ama. The major languages are; Izon (Ijaw) and Pidgin English like every Izon town. The people of Amassoma are characterized by a similar cultural system, norms and values. This setting was chosen because of the increasing rate of non-compliance with corona virus prevention strategies in Amassoma Community.

Target population: The target population of this study was adult indigenes living in Amassoma Community.

Study sample: The sample for this study was calculated to be one hundred and thirty (130) adult indigenes living in Amassoma Community. Although it may not reflex the size of data available or depth of investigation; thus, the researcher adopted information saturation.

The formula given below was used to calculate the sample population;

$$N = \frac{Z^2 \times P \times 1 - P}{d^2}$$

Where;

- N = minimum sample size required
- Z = Confidence level (95%)
- P = Standard deviation
- d = margin of error

Inclusion criteria: Adult indigenes living in Amassoma Community irrespective of their demographic variables.

Exclusion criteria: Non-adult indigenes living in Amassoma Community irrespective of their demographic variables (below 18 years of age).

Sample technique: Purposive and convenient sampling technique was used for this study where the researcher relied on his own judgment when choosing members of the population to participate in the study. Thus, a total of 130 Adults were interviewed for this study.

Instruments for data collection: An individual interview was conducted with the aid of interview guide. The interview was made up of 2 sections. The first section is for demographic characteristics and then questions to guide the interview.

Method of Data Analysis: Data collection from this study was analyzed using thematic method of analysis.

3. RESULTS

The results are presented in themes, categories and statements as it emerged from the transcribed information collected from the participants.

Table 1 shows the demographic characteristics of respondents and it indicates that; 22(17%) of the total respondents were of the age group 20-29, 52(40%) of the total respondents were of the age group 30-39, 39(30%) of the total respondents were of the age group 40-49, while 17(13%) of the total respondents were 50 years and above. For the Gender; 56(43%) of the total respondents were male, while 74(57%) of the total respondents were female. For the marital status; 59(45%) of the total respondents were single, 46(35%) of the total respondents were married, 15(12%) of the total respondents were divorced, 10(8%) if the total respondents were widowed. For the Religion; 78(60%) of the total respondents were Christians, 16(12%) of the total respondents were Muslims, while 36(18%) of there were totally respondents were traditionalist. The level of education showed that; 22(17%) of the total respondents were illiterates, 43(33%) of the total respondents stopped at primary level of education, 35(27%) of the total respondents stopped at secondary level of education, while 30(23%) of the total respondents had both secondary degrees. For Occupation; 22(17%) of the total respondents were civil servants, 39(30%) of the total respondents were traders, 39(30%) of the total respondents were farmers, 30(23%) of the total respondents were students.

Table 1. Demographic data

Age of Indigenes	Frequency	Percentage (%)
20-29	22	17
30-39	52	40
40-49	39	30
50 and Above	17	13
Gender	Frequency	Percentage (%)
Males	56	43
Females	74	57
Marital Status	Frequency	Percentage (%)
Single	59	45
Married	46	35
Divorced	15	12
Widowed	10	8
Religion	Frequency	Percentage (%)
Christian	78	60
Muslim	16	12
Traditionalist	36	18
Level of Education	Frequency	Percentage (%)
Illiterate	22	17
Primary	43	33
Secondary	35	27
Tertiary	30	23
Occupation	Frequency	Percentage (%)
Civil Servant	22	17
Traders	39	30
Farmer	39	30
Student	30	23

Table 2. Strategies used in the prevention of COVID-19

Theme	Category	Statement
Theme 1	Social distancing and stop working	<ol style="list-style-type: none"> 1. We did it for only a while because it was difficult to stay away from people and events. 2. We do go out because we need to look for what to eat/feed on. 3. I did it for my safety.
	Wearing of face mask when going out	<ol style="list-style-type: none"> 1. I wore face mask and I also made sure my husband and children go out with their own always; I was the face-mask police in my family. 2. Yes, because at a time government agents do chase us from street for not putting on face mask. 3. I used face-mask because it was almost like a trending fashion at the time
	Sniffing of tobacco and steaming of self	<ol style="list-style-type: none"> 1. This method is the best as you just come out fortified some-worth. 2. I don't miss the opportunity of it as it also aided.
	Taking of hot drink (dry gin) and hot water every morning	<ol style="list-style-type: none"> 1. It was commonly said that taking of alcohol is a remedy kind-off to the sickness, so I do take often. 2. I did take alcohol especially during the first few weeks.

Table 3. Reason for utilization of the strategies

Theme	Category	Statements
Theme 2	Because the government says so	1. The pressure was too high from the government 2. It was as if government agencies such as the police and Disease control officers were everywhere to caution individuals with face mask on.
	Fear of exposure	1. I didn't want to get infected so I had to do the needful 2. Yes, fear of exposure was my measure reason for avoiding public gatherings.
	Cultural reasons	1. There is no cure yet for it of course it is ideal to take natural preventive remedies.
		2. The cultural method was the best way to resolve it

Table 2 shows the theme, category and statements as they emerged from the data analysis. They were all life experiences by rural dwellers in Amassoma community. They are: social distancing, wearing of face mask when going out, sniffing of tobacco and steaming of self, drinking of hot drink (dry gin) and hot water every morning.

Theme 2 is reason for utilization of the strategies. It has three categories, they are: because the government says so, fear of exposure, and cultural reasons.

4. DISCUSSION

The study was carried out to explore Corona Virus prevention strategies utilized by rural dwellers in Amassoma Community in Bayelsa State, Nigeria. The data from the study shows that there were more female respondents than males in the study which is a contrast from the duty by [11] who carried out a study on COVID-19 information seeking strategies of rural dwellers in Delta North, Nigeria and presented more male respondents to females. The study also revealed that the majority of the respondents engage in farming and trading which is in conformity with the finding of [11].

4.1 Strategies used in the Prevention of COVID-19

The study revealed the life experiences of rural dwellers in Amassoma community. From the first category on social distancing and stop working, respondents stated that they did it for only a while as it was difficult to stay away from people and events. They go out because it is not easy staying indoors all day, more so, some persons did for their safety. From the second category, on wearing of face mask when going out, respondents stated that they wear face mask and

some of them make their entire family to wear it as well; some persons wear it because the government made it compulsory; while others find it beautiful and fashionable. Furthermore, another category was on sniffing of tobacco and steaming of self, respondents stated that this method was the best as there was no cure or vaccine for the virus as at then, while some others see it as daily routine. The last category on theme 1 was taking of hot drink (dry gin) and hot water every morning, respondents stated that this was a usual ritual for them since there was news that the virus can be killed by alcohol, while some others took it during the initial period of the outbreak of the virus.

4.2 Reason for Utilization of the Strategies

This study also shows the reason for utilization of the various strategies. The respondents in this category revealed their reasons for utilizing the strategies. For the first category said it was because the government says so and respondent stated that the pressure from government made the use the strategies such as face mask and social distancing and the law enforcement authority made sure of this as well. The second category said it was fear of exposure, respondent reported that they were scared of getting infected. Furthermore, the third category said it was because of cultural reasons. To this, respondents said the cultural method which is taking of warm water and dry gin was more effective since there was no known drug or vaccine for the treatment or prevention of the virus. From this study, it was noted that respondents did not actual practice social distancing, hand washing, use of hand sanitizers, movement restriction and observation of all other COVID-19 prevention protocol as provided by World Health Organization (WHO) and Nigeria Centre for Disease Control (NCDC) irrespective

of a higher percentage of the respondent been literate. They did sort for information on happenings and possible preventive measure outside the laid down measures by WHO and NCDC which resulted in the use of dry gin and tobacco. This goes to tell the information seeking strategies of rural dwellers is been affected by the COVID-19 pandemic. This agrees with the findings of [11] who stated that the COVID-19 pandemic as a global health crisis has affected the information seeking strategies of rural dwellers in Nigeria. The rural dwellers in Delta North, Nigeria have some gaps that prompt them to seek information on the COVID-19 disease.

5. CONCLUSION

This study identified that some rural dwellers in Amassoma lack adequate knowledge on corona virus prevention. Notably, exposure to the virus can lead to illnesses such as pneumonia and severe respiratory syndrome as common signs and symptoms. However the preventive strategies include; social distancing, hand washing, avoid touching of face, restriction of movement and so more. Some factors influencing the utilization of COVID-19 prevention strategies were also reported. The study also showed strategies utilized by rural dwellers in Amassoma and the reasons for utilizing such strategies as reported by the respondents. Hence, this study has made clear the information needs, preferred prevention strategies, and the challenges that militate against the access and use of COVID information by the rural dwellers in Amassoma.

6. RECOMMENDATION

Researchers should engage in studies that would identify and provide preventive measures for corona virus among rural dwellers. Federal and state governments can contribute in the effort to reduce the spread of corona virus providing stable funding and creating health awareness in tackling spread of corona virus. Rural dwellers should be enlightened about the consequences of not adhering to rules set by the government on preventive measures against the spread of corona virus. Local government council should develop programs that will help create more facility and also equip them with necessary personal protective equipment for the rural dwellers to use. Also, health centers in the community should teach rural dweller the proper use of personal protective equipments and also emphasize the disadvantages of not using them

properly. Since majority of the rural dwellers are quite educated, a simple language should be used and emphasis laid on them avoiding harmful health strategies for prevention of corona virus. Schools in the rural area should teach its teachers and students on effective use of personal protective equipments and also lay emphasis on effects of not using these strategies.

ETHICAL APPROVAL

The researcher collected a letter of introduction from the Institution of study and sort ethical approval before proceeding with the research study.

CONSENT

Consent was obtained from the individual respondents, before interviewing the participants to collect data via structured individual interview.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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