RESEARCH ARTICLE

PERSPECTIVE OF THE RESIDENTS ON HANDWASHING IN REDUCING THE SPREAD OF COVID-19: A CASE STUDY OF YENAGOA METROPOLIS, BAYELSA STATE, NIGERIA

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ABSTRACT

Introduction: This research assessed the perspective of the populace of Yenagoa metropolis on the efficacy of hand washing in reducing the spread of COVID-19 pandemic in Yenagoa metropolis. The objectives of this study were to examine the level of COVID-19 disease and investigate the efficacy of handwashing in reducing the spread of the diseases in Bayelsa State, Nigeria. This study design adopted the survey of Four hundred (400) randomly selected respondent with the aid of a well-structured questionnaire. Results showed that the level of COVID-19 disease in Yenagoa metropolis was low. Respondents strongly agreed that handwashing is effective in reducing the spread of COVID-19 was 65.32%. Consequent upon these findings, hand washing and other preventive measures should be sustained in reducing the spread of COVID-19.

INTRODUCTION

Globally there have been several experiences of viral epidemics that posed threat of public health concern, they included the severe acute respiratory syndrome (SARS) epidemic in 2002 with 8000 cases and 800 mortalities, the H1N1 pandemic in 2009 with over 18,000 mortalities (World Health Organisation, 2009), Middle East respiratory syndrome (MERS) epidemic in 2012 with 2500 cases and 800 mortalities, Ebola virus disease outbreak in 2014 with an incidence of 28,616 and over 11,310 deaths (World Health Organisation, 2014), and currently coronavirus disease (COVID-19) pandemic having over 9,000,000 cases and over 400,000 death and still counting (World Health Organisation, 2020). The origin of coronavirus has been traced to several animals including bats and snake (Zhang *et al.*, 2020). Notwithstanding, the virus that causes COVID-19 is a novel coronavirus that was first identified during an investigation into an outbreak in Wuhan China (Anjorin, 2020). The disease can spread directly when viral droplets are ejected from the mouth or nose of an infected person who coughs or sneeze, or indirectly when a healthy person touches surface or objects having the viral droplets of an infected person and such person further touches his body orifice without the proper washing of his hand (Zhang *et al.*, 2020; Centre for Disease Control, 2020A; Centre for Disease Control., 2020C).

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Currently nobody is immune to COVID-19 and no successful vaccine have been developed to fight against the virus. As such preventive measures including hand washing have been recommended to help reduce the spread of the outbreak. While the populace is overwhelmed by the devastating mortality and morbidity of the disease, the practice of frequent hand washing has been recommended as a measure to help limit its spread (6 – 8). This study therefore, is posed to assess the impact of frequent hand washing in reducing the spread of COVID-19 in Bayelsa, Nigeria.

MATERIALS AND METHOD

Research Design: The descriptive research survey design was adopted for the purpose of this research, this was so because it has the benefit of classifying features of a large population from cluster of individuals (9). The design was suitable for the study as the study sought to survey the effectiveness of handwashing in reducing the spread of COVID-19.

Study Area: Yenagoa is the capital and largest city of Bayelsa State, Nigeria. It lies along the Epie Creek and is located in the Niger Delta. It is a Riverine State with the River Nun as its main tributary. It has 8 Local Government Areas.

Population and Sampling: A randomized survey was adopted by the researcher in getting information on the survey the effectiveness of handwashing in reducing the spread of COVID-19.

The respondents were 400 residents of Yenagoa metropolis in Yenagoa Local Government Area. Due to large size of the target population, the researcher used the Taro Yamani formula to arrive at the sample population of the study:

$$n = \frac{N}{1 + N(e)^2}$$

n= sample size required
N= number of persons in the population
e= allowable error (0.05)

Method of data collection and Instrumentation: The research instrument used for the study was a self-designed questionnaire. The respondents were administered with the questionnaires to obtain sufficient and relevant information. The respondents were required to give specific answer to a question by ticking in front of an appropriate answer.

Method of Data Analysis: The data were collated and computed to their respective frequencies and percentages. The frequency refers to the arrangement of responses in order of magnitude of occurrence, while percentage refers to the arrangements of the responses in order of their proportion.

RESULTS AND DISCUSSION

A total of 400 copies of questionnaire were administered in the area under study and 372 copies were retrieved from the respondents. This represents 93% return rate. The demographic characteristics of the Respondents is presented in Figure 1.
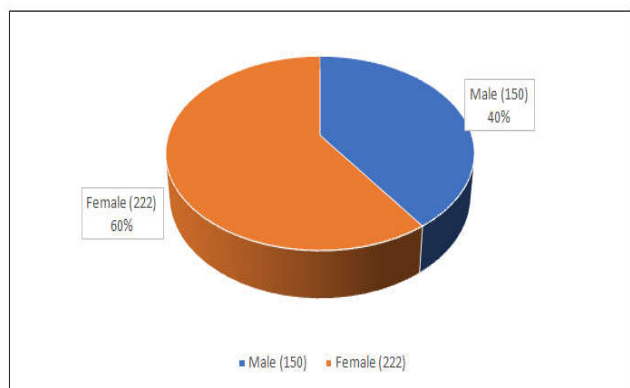

Figure 1. Sex of Respondents

Table 1. Age distribution of Respondents

Age Bracket	Frequency	Percentage (%)
20 – 29	187	50.27
30 – 29	109	29.30
40 – 49	45	12.10
50 and above	31	8.33
Total	372	100.00

Table 2. Marital status of respondents

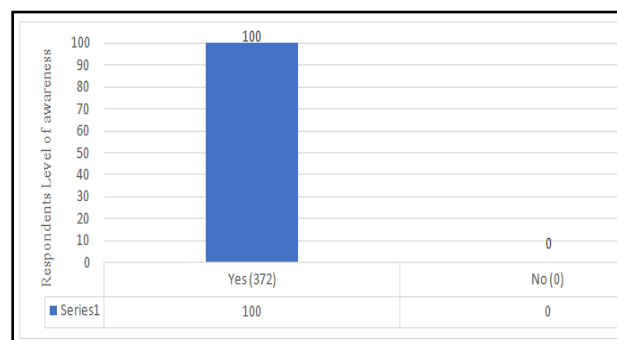| Status	Frequency	Percentage (%)
Single	265	68.83%
Married	113	30.38%
Divorcee	1	0.27%
Widow/Widower	2	0.54%
Total	372	100.00%

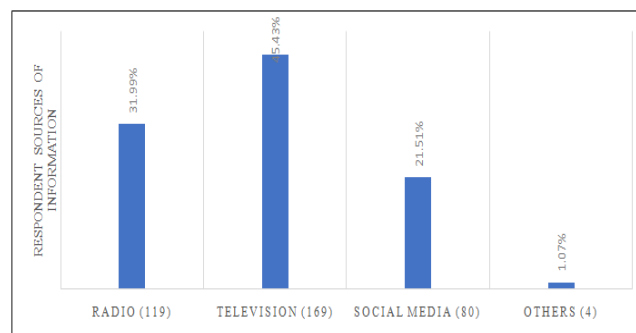**Figure 2. Respondents views on COVID-19 awareness**

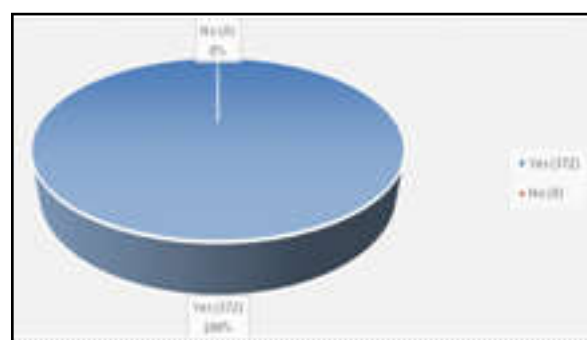**Figure 3. Respondents source of COVID-19 information**

Figure 4. Respondent admittance of hand washing for COVID-19

Table 3. Respondents views on the Level of COVID-19

Levels	Frequency	Percentage (%)
Serious	119	31.99
Normal	169	45.43
Average	80	21.51
Mild	4	1.07
Total	372	100.00

Table 4. Frequent hand washing can reduce the spread of COVID-19

Admittances	Frequency	Percentage (%)
Strongly agree		243
Agree	96	28.81%
Disagree	14	3.76%
Strongly disagree	11	2.96%
Total	372	100.00%

The response presented in Table 1 shows that 150 respondents representing 40.32% were male, while 222 respondents representing 59.68% were female (Figure 1). This shows that the female respondents were more than their male counterpart. Result presented in Table 1 below reveals that 187 respondents representing 50.27% were within the age brackets of 20 – 29, another 109 respondents representing 29.30% fell between the

age bracket of 30 – 39, 45 respondents representing 12.10% fell with the age brackets of 40 – 49 and 31 respondents representing had age bracket above 50 years. The result presented in Table 2 below for marital status of the respondents showed that 265 respondents representing 68.83% were single, 113 respondents representing 30.38% were married, 1 respondent representing 0.27% was a divorcee, while 2 respondents representing 0.54% were reported to be either a widows or widowers. This result indicates that they were more single respondents above 50%, while least (<1.00%) amongst the respondents were divorcee and widow/widower. The awareness level of coronavirus disease in Yenagoa was investigated (Figure 2). The response shows that all 372 respondents representing 100% of the agreed that they have heard of coronavirus disease. This is an indication most of the populace are aware of the COVID-19. The source of information on COVID-19 was investigated (Figure 3), and the response rate showed that 119 respondents representing 31.99% said that they heard of COVID-19 through television, 169 respondents representing 45.43% said that they heard of COVID-19 from the radio, 80 respondents representing 21.51% said that they heard of COVID-19 through the social media, while 4 respondents representing 1.07% said that they heard of COVID-19 through other means (Figure 3). Respondent views on how frequent hand washing will help reduce the spread of COVID-19 in Nigeria is presented in Figure 4. The response shows that 372 respondents representing 100% of the respondents agreed that they have heard of frequent hand washing as a means of reducing the spread of COVID-19 (Figure 4). This result is an indication that frequent handwashing have become a mainstay in preventing the spread of COVID-19. As presented in Table 3, the response shows that 119 respondents representing 31.99% opined that the level of coronavirus disease in Bayelsa as compared to other states of the Nigeria is serious, 169 respondents representing 45.43% said that the level of coronavirus disease in Bayelsa is comparable to other states is normal, 80 respondents representing 21.51% of the respondents said that the level of coronavirus disease in Bayelsa was average compared to other states, while 4 respondents representing 1.07% of the respondents said that the level of coronavirus disease in Bayelsa was mild compared to other states. This means that the level of coronavirus disease in Bayelsa is comparable to other states in Nigeria (Table 3).

The response shows that 243 respondents representing 65.32% of the agreed that frequent hand washing can help reduce the spread of COVID-19 in Yenagoa, 96 respondents representing 25.81% of the respondent agreed that social distancing and frequent hand washing can help reduce the spread of COVID-19 in Nigeria, 11 respondents representing 2.96% of the respondent disagreed that social distancing and frequent hand washing can help reduce the spread of COVID-19 in Nigeria while 14 respondents representing 3.76% strongly disagreed that social distancing and frequent hand washing can help reduce the spread of COVID-19 in Yenagoa. This implies that social distancing and frequent hand washing can help reduce the spread of COVID-19 in Nigeria. At the beginning of this research work, two research questions were developed to direct the course of this study. Also, the questions in the questionnaire were designed in a way that it tallies with the research question and at this point, the research questions of the study have been tested in relation to the responses of the respondents to the relevant questions on the questionnaire. This question was answered in Tables 3 and 4.

Table 3 showed that 119 (31.99%) of the respondents said that the level of coronavirus disease in Yenagoa was serious, 169 (45.43%) of the respondents said that the level of coronavirus disease in Bayelsa was normal, 80 (21.51%) of the respondents opined that the disease was average, while 4 (1.07%) of the respondents believed that the level of coronavirus disease was mild. These results indicate that the level of coronavirus disease was average. This was in tandem with findings of Ugochukwu *et al.*, (2015) which revealed that the epidemic resulted in increased knowledge of the disease as well as some misconceptions, increase in household and community hygiene practice and change in social interaction between affected individuals and the community. In Table 4 which provides answer to the second research question there was a strong agreement by 243 (65.32%) that frequent hand washing can help reduce the spread of COVID-19, meanwhile another 96 respondents representing 28.81% agreed to the fact that frequent hand washing can help reduce the spread of COVID-19. On the other hand, only 14 respondents representing 3.76% disagreed that frequent hand washing can help reduce the spread of COVID-19, and 11(2.96%) disagreed that frequent hand washing can help reduce the spread of COVID-19. This result means that frequent hand washing has been helpful in reducing the COVID-19 pandemic. Prompt response by the government, with the support of international partners and proactive engagement of public health measures resulted in the rapid control of the epidemic; an experience the country hopes to leverage upon in subsequent epidemics. This goes in line with the infectious disease transmission mechanism theory which assumes that infectious disease dynamics consist of transmission as the main dynamic disease process at each hierarchical level.

Conclusion

This study has underscored the efficacy of frequent hand washing in reducing the spread of corona virus disease (COVID-19) in Yenagoa. Findings from this research uncovered that the infectious epidemic has great effect on the smooth operation of Yenagoa, frequent hand washing can help reduce the spread. Prompt response by the government, with the support of international partners and proactive engagement of public health measures resulted in the rapid control of the epidemic; an experience the country hopes to leverage upon in subsequent epidemics. Beyond the public health impacts of regional or global emerging and endemic infectious disease events lay wider socioeconomic consequences that are often not considered in risk or impact assessments.

Acknowledgment

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