

Factors Militating against adherence to Lassa Fever Preventive Measures among Market Traders of Owo Local Government Area, Southwest Nigeria

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Abstract

Objective: This study sort to assess the factors militating against Lassa fever prevention programs among market traders of Owo LGA Southwest, Nigeria.

Methodology This study employed descriptive cross-sectional design guided by Precede model. A multistage sampling technique was used for the study. A total number of three hundred and sixty-two respondents were involved in the study. A validated semi-structured questionnaire with Cronbach's alpha of 0.72 was used to collect data. Frequency table, mean, standard deviation correlation, multiple and binary logistic regression analysis were conducted to give statistical responses to the research question and hypotheses using SPSS version 23.

Results: Majority of the respondents involved in this study were females 240 (66.6%) while males, 122 (33.7%) responded to the questionnaire. The respondent's level of knowledge about Lassa fever and lassa fever transmission was 6.558 ± 1.87658 . The respondent's level of attitudinal disposition towards Lassa Fever was 10.041 ± 3.40782 . Respondents' Lassa Fever preventive measures was high with a mean of 31.05 ± 14.698 . There was a significant relationship between' level of knowledge ($r=0.219$; $p < 0.05$), attitude ($r=0.0354$; $p < 0.05$) and adherence to Lassa fever prevention program in Owo LGA.

Conclusion: Findings from the study show market traders exhibit predisposing factors of religious believe and enabling factors such Lassa fever preventive measures like dispose and burn waste on daily basis, food items stored in a container at the end of each market day, regular handwashing, ensuring food is properly cooked and preserved, and fruits and drink properly washed before eating.

Keywords: ITN Lassa fever, prevention, adherences, factors.

Introduction

Lassa fever is an endemic disease which has become a public health prevailing situation in Nigeria, and this is really increasing the morbidity and mortality rate and it has serious implications on the health of the nation at large negatively. It is a zoonotic viral hemorrhagic disease that have been reported to occur frequently, constituting a serious public health concern in various communities in Africa, Nigeria in particular. This disease is generally known to be transmitted by rats, especially when in contact with these rodents, poor level of hygiene practice is also a very fast means to transmit the disease ^[1]. It is endemic in Nigeria, Guinea, Liberia, and Sierra Leone, which are part of West Africa ^[2]. It has been known since

the 1950s, but the virus was first described in 1969 from a case in the town of Lassa, in Borno State, Nigeria, when two missionary nurses died from it in the town of Lassa in Nigeria ^[3].

Lassa fever occurs in all age groups and both sexes. Persons at greatest risk are those living in rural areas where *Mastomys* are usually found, especially in communities with poor sanitation or crowded living conditions ^[4]. An outbreak of Lassa fever occurred in Nigeria in 2018 and spread to 18 of the country's states; it was the largest outbreak of Lassa recorded. As of February 25, 2018, there were 1,081 suspected cases and 90 reported deaths; 317 of the cases and 72 deaths were confirmed as Lassa, this was reported by the National Lassa fever multi-partner, multi-sectorial Emergency Operations Centre ^[4].

A study carried out among market women in Ibadan Oyo state revealed that only few of the respondents have adequate knowledge on Lassa fever prevention ^[5]. It was also reported in a study by Adebimpe, ^[6] that there is no health behavior modification among Nigerian communities in spite of the perceived awareness of the epidemic. The culture of poor refuse disposal, poor attitude to fumigation activities and poor personal and environmental hygiene persist. Ondo state has recorded the highest number of casualties with 16 deaths in January 2020.

A study on Knowledge attitude and practice of food sellers on Lassa fever in major markets in Ibadan by Adegoke et al ^[5] revealed that only few of the participants have adequate knowledge about Lassa fever disease. Most of them knows much about food handling practices but not all of them practices them. This is similar to the findings of other similar studies in Nigeria among market women in Nigeria ^[5].

A study carried out among residents in Ondo state on Lassa fever awareness and knowledge revealed that majority are aware of Lassa fever disease but their knowledge on mode of transmission is very low ^[7]. This could mirror the knowledge and attitude of doctors in general in Nigeria. Also, a study observed that both the literate and illiterate rural dwellers irrespective of gender lack proper awareness that rat is the vector of Lassa fever and the dynamics of the epidemic ^[8].

There is still need to consider study to identify why Lassa disease is still present despite efforts in creating awareness, monitoring and control measures put in place, especially among market traders of Owo.

Therefore, this study proposes the following hypothesis

1. There is a significant relationship between knowledge and adherence to Lassa fever prevention program in Owo LGA

2. There is a significant relationship between attitude and adherence to Lassa fever prevention program in Owo LGA

Materials and Methods

Study design, population and location

This was a cross-sectional study design involving different markets in Owo LGA, the study used a quantitative method of data collection. A multistage sampling technique was

used for the study to select 362 respondents. A validated semi-structured questionnaire with Cronbach's alpha of 0.72 was used to collect data. The study was conducted in Owo LGA, south west Nigeria Ikenne LGA and the study population were traders from some of the markets in the 11 wards of Owo LGA, southwest Nigeria. There are 22 markets in Owo Local governments' area of Ondo State. Owo is a city in Ondo state, Nigeria. Between 1400 and 1600 AD, it was the capital of a Yoruba city-state.

Inclusion criteria

Participants eligible for study were consenting market traders selling food stuff and above the 18 years of age.

Exclusion criteria

Participants excluded from the study were traders not selling food stuff, those below age eighteen and traders that didn't consent to answering questionnaire.

Instrument for the study

The instrument was developed in a form of structured questionnaire to collect information from the participants. Each section represented a variable to be studied. The items were developed from the objectives of the study according to the constructs of the model that guided the study. The questionnaire was in English and Yoruba language. The questionnaire was divided into four sections: section A addressed Socio-demographics of respondents such as age, gender, religion, marital status, Section B assessed the level of knowledge regarding lassa fever, Section C assessed the attitudinal disposition towards Lassa Fever, Section D measured the respondent's Lassa fever preventive measures.

Method of data collection

The instrument developed was taken to the field and used for data collection. The structured questionnaire was administered to traders in the selected sample area. Two (2) research assistants were employed for the purpose of data collection. The research assistants were trained for data collection. An informed consent letter was given to the traders, which served as permission to partake in the study. The instrument was later administered to the

respondents and was done under proper monitoring and supervision.

Ethical considerations

Ethical approval for the study was obtained from the Babcock University Health Research Ethics Committee (BURHEC) for ethical approval. Informed consent was sought from the participants before administering the instrument.

Data analysis

Data obtained from completed questionnaires will be coded and analyzed using statistical package for social science (SPSS) version 23.0. The variables were computed and scores were also allocated according to the rating scale for each variable. Descriptive statistics, frequency table, mean, standard deviation correlation was conducted to give statistical responses to the research question and hypotheses.

Results

Socio-demographic characteristics of respondents

Majority of the respondents involved in this study were females 240 (66.6%) while males, 122 (33.7%) responded to the questionnaire. Majority of the respondents were of the ages 18-28 years 141(39.0%). The ethnic origin of most of the respondents 227(62.7%) were Yoruba, 40(11.0%) were Igbo, 27(7.5%) were Hausa/Fulani. Majority 198(54.7%) of the respondents were married as at the time of this research, 131(36.2%) were still single, 15(4.1%). Most of the participants, 252(69.6%) were Christians, follow by 90(24.9%) from Islam religion while 20(5.5%) were traditionalist. This study showed that 119(32.9%) of the respondents had secondary school certificate, followed by 92(25.4%) who had primary school certificate, 82(22.7%) had non-formal education while 69(19.1%) of the respondents had tertiary certificate level of education (Table 1).

Respondents' Level of Knowledge about Lassa Fever

The knowledge about Lassa fever and transmission among the respondents in this study was measured on a 11-point rating scale with mean score of 6.558SD 0.0986 valid for 362 respondents (n=362) (Table 5). The frequency distribution showed that the majority of the respondents have heard about Lassa fever and

multimammate rat, having 63.8% adequate knowledge which was above average while only 36.2% of respondents have inadequate knowledge about lassa fever and transmission which was below average (Table 2).

Respondents' Level of Attitudinal disposition towards Lassa Fever

The level of attitudinal disposition of respondents towards Lassa fever measured on a 16 point-reference scale was a mean score of 10.041SD 0.1791 valid for 362 respondents (Table 5). The frequency distribution showed that the majority of the respondents were bothered and concerned about Lassa fever, having 60.5% positive attitude which was above average while only 39.5% of respondents have negative attitude towards Lassa fever which was below average. This translates that majority of the respondents had positive attitude towards Lassa fever (See table 3).

Respondents' Level of Lassa Fever Preventive Measures

The preventive measures of the Lassa fever practiced by respondents was measured on a 40-point rating scale and the mean score for all respondents that participated in this study was **31.05, SD 14.698** valid for 362 respondents (n=362). More than half of respondents 54.1% (196) were reported to have good preventive measure habit, 23.2% (84) has fair preventive measure habit while 22.7% (82) had poor preventive measure habit towards Lassa fever.

Discussion

Three hundred and sixty-two participants participated in the study following their consenting to participate. There were high number of female genders in this study, who fall within the age group 18-28 years with secondary school and primary school certificate. The Yoruba ethnic origin was dominant tribe due to the environment the research was carried out, and they were married as at the time this research was carried out, and Christianity was the practiced religion.

The result revealed that majority 186 (51.4%) of the respondents had fair knowledge about Lassa fever. This result contradicts a study which revealed that six months before the survey, 95% of the participants didn't attend a workshop on Lassa fever, regarding their level of

knowledge, all the participants had heard about Lassa fever [9]. For the respondent's attitude towards Lassa fever, 78 (73.6%) agreed that they were at risk of Lassa fever. After categorization, majority 191 (52.8%) of the respondents had negative attitudinal disposition towards Lassa fever.

The finding also revealed that the Lassa fever preventive measures among market traders in Owo LGA are: disposal and burning of waste on daily basis, food items storage in a container at the end of each market day, avoid contacts with suspected cases, regular hand washing, ensuring food are properly cooked and preserved, fruits and drinks properly washed before eating and reminding family and friends on Lassa fever preventive measures. This is in line with the research carried out by WHO, [1] that prevention

of Lassa fever relies on promoting good "community hygiene" to discourage rodents from entering homes. Effective measures include storing grain and other foodstuffs in rodent-proof containers, disposing of garbage far from the home, maintaining clean households and keeping cats

Conclusion

This study revealed that the respondents had adequate knowledge and positive attitude towards Lassa fever. Based on our findings in this study, it is recommended that the public health workers should sensitize market traders and increase the awareness programme of Lassa fever in Owo LGA. Market traders' associations are to encourage environmental sanitation to be observed once in the market every week.

Figures and Tables

Table 1. Socio-demographic characteristics of respondents in this study

Socio-demographic Variables	Respondents in this Study N=362	
	Frequency (N)	Percentage (%)
Age (in years)		
18-28	141	39.0
29-39	121	33.4
40-50	82	22.7
51-61	18	5.0
Ethnic Origin		
Yoruba	227	62.7
Igbo	40	11.0
Hausa/Fulani	27	7.5
Others	68	18.8
Marital status		
Single	131	36.2
Married	198	54.7
Divorced	15	4.1
Separated	5	1.4
Widowed	13	3.6
Religion		
Christianity	252	69.6
Islam	90	24.9
Traditionalist	20	5.5
Gender		
Male	122	33.7
Female	240	66.3
Level of Education		
Non-formal	82	22.7
Primary	92	25.4
Secondary	119	32.9
Tertiary	69	19.1

Traditional	2	0.8
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Table 2. Respondents Level of Knowledge about Lassa Fever

Respondents in this Study N=362		
Items	Yes (%)	No (%)
Have you ever heard of Lassa fever?	326(90.1%)	36 (9.9%)
Have you ever heard of multimammate rat?	222(61.3%)	140(38.7%)
Do you know anybody that once had Lassa or has Lassa fever?	69(19.1%)	293(80.9%)
Can Sexual intercourse transmit Lassa fever?	199(55.0%)	163(45.0%)
Talking to an infected person can transmit Lassa fever	98(27.1%)	264(72.9%)
Touching an infected person can't transmit Lassa	103(28.5%)	259(71.5%)
Eating well cooked food can transmit Lassa fever	35(9.7%)	327 (90.3%)
I heard of Lassa fever from Radio/Television	326(90.1%)	36(9.9%)
I heard of Lassa fever from the health facility	124(34.3%)	238(65.7%)
I heard of Lassa fever from family and friends	326(90.1%)	36(9.9%)
Do you think Lassa can be prevented?	98(27.1%)	264(72.9%)

Table 3. Respondents' Level of Attitudinal disposition towards Lassa Fever
N=362

Statements	Strongly agree F (%)	Agree F (%)	Undecided F (%)	Disagree F (%)	Strongly Disagree F (%)
I need to bother about Lassa fever	159(43.9%)	85(23.5%)	19(5.2%)	43(11.9%)	56(15.5%)
Health worker are the only people that needs to be concerned about Lassa fever	81(22.4%)	49(13.5%)	17(4.7%)	50(13.8%)	165(45.6%)
Lassa fever is not real, it's all scam	60(16.6%)	42(11.6%)	29(8.0%)	49(13.5%)	182(50.3%)
I can't have Lassa fever, either I destroy rat or not	88(24.3%)	58(16.0%)	30(8.3%)	67(18.5%)	119(32.9%)

Table 4. Respondents' Level of Lassa Fever Preventive Measures
N=362

Statements	Always F (%)	Very Often F (%)	Sometimes F (%)	Rarely F (%)	Never F (%)
I dispose and burn waste on daily basis	260(71.8%)	36(9.9%)	34(9.4%)	24(6.6%)	8(2.2%)
All my food items are stored in a container at the end of the day	253(69.9%)	46(12.7%)	21(5.8%)	13(3.6%)	29(8.0%)
I eat rabbits	99(27.3%)	52(14.4%)	54(14.9%)	34(9.4%)	123(34.0%)
I avoid contacts with suspected cases	173(47.8%)	49(13.5%)	39(10.8%)	40(11.0%)	61(16.9%)
I practice regular hand washing	249(68.8%)	52(14.4%)	24(6.6%)	20(5.5%)	17(4.7%)
I destroy rat in my house and market store	150(41.4%)	44(12.2%)	48(13.3%)	33(9.1%)	87(24.0%)
I ensure foods are properly cooked and preserved	286(79.0%)	20(5.5%)	16(4.4%)	32(8.8%)	8(2.2%)
I ensure fruits are properly washed before eating	278(76.8%)	28(7.7%)	20(5.5%)	27(7.5%)	9(2.5%)
I visit burials with unknown cause of death	59(16.3%)	16(4.4%)	73(20.2%)	62(17.1%)	152(42.0%)
I buy my garri from those frying on the fire	59(16.3%)	16(4.4%)	73(20.2%)	62(17.1%)	152(42.0%)

I remind family and friends on Lassa fever preventive measures	168(46.4%)	85(23.5%)	36(9.9%)	27(7.5%)	46(12.7%)
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Table 5. Summary of Descriptive Statistics of Variables Mean, Standard Deviation, and Standard error of mean of in the Study

Variables	Maximum Point on a Scale of Measure	Respondents in this study N=241	
		$\bar{x} \pm SD$	(S.E)
Level of Knowledge	11	6.558 \pm 1.87658	0.0986
Attitude	16	10.041 \pm 3.40782	0.1791
Lassa Fever Preventive Measures	40	31.05 \pm 14.698	0.1899

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